



Triumph Daytona 675, Daytona 675 R, Street Triple, Street Triple 660 cc, Street Triple R and Street Triple Rx Motorcycle Service Manual

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Introduction

This manual is designed primarily for use by trained technicians in a properly equipped workshop. However, it contains enough detail and basic information to make it useful to the owner who desires to perform his own basic maintenance and repair work. The work can only be carried out if the owner has the necessary hand and special service tools to complete the job.

A basic knowledge of mechanics, including the proper use of tools and workshop procedures is necessary in order to carry out maintenance and repair work satisfactorily. Whenever the owner has insufficient experience or doubts his ability to do the work, an authorised Triumph dealer must undertake all adjustments, maintenance, and repair work.

In order to perform the work efficiently and to avoid costly mistakes, read the text and thoroughly familiarise yourself with procedures before starting work.

All work should be performed with great care and in a clean working area with adequate lighting.

Always use the correct special service tools or equipment specified. Under no circumstances use makeshift tools or equipment since the use of substitutes may adversely affect safe operation.

Where accurate measurements are required, they can only be made using calibrated, precision instruments.

For the duration of the warranty period, an authorised Triumph dealer must perform all repairs and scheduled maintenance.

To maximise the life of your Motorcycle:

- Accurately follow the maintenance requirements of the periodic maintenance chart in the Service Manual.
- Do not allow problems to develop. Investigate unusual noises and changes in the riding characteristics of the motorcycle. Rectify all problems as soon as possible (immediately if safety related).
- Use only genuine Triumph parts as listed in the Electronic Parts Catalogue (EPC).
- Follow the procedures in this manual carefully and completely. Do not take short cuts.
- Keep complete records of all maintenance and repairs with dates and any new parts installed.
- Use only approved lubricants, as specified in the Owner's Handbook, in the maintenance of the motorcycle.

How to use this manual

To assist in the use of this manual, the section title is given at the top of each page.

Each major section starts with a contents page, listing the information contained in the section.

The individual steps comprising repair operations are to be followed in the sequence in which they appear.

Adjustment and repair operations include reference to service tool numbers and the associated illustration depicts the tool.

Where usage is not obvious, the tool is shown in use.

Adjustment and repair operations also include reference to wear limits, relevant data, torque figures, specialist information and useful assembly details.

Warnings, Cautions and Notes

Particularly important information is presented in the following form:



Warning

This warning symbol identifies special instructions or procedures which, if not correctly followed, could result in personal injury or loss of life.



Caution

This caution symbol identifies special instructions or procedures which, if not strictly observed, could result in damage to or destruction of equipment.

Note:

- **This note symbol indicates points of particular interest for more efficient and convenient operation.**

Tampering with Noise Control System Prohibited

Owners are warned that the law may prohibit:

- a) The removal or rendering inoperative by any person other than for purposes of maintenance, repair or replacement, of any device or element of design incorporated into any new vehicle for the purpose of noise control prior to its sale or delivery to the ultimate purchaser or while it is in use; and
- b) the use of the vehicle after such device or element of design has been removed or rendered inoperative by any person.

References

References to the left hand or right hand side given in this manual are made when viewing the motorcycle from the rear.

Operations covered in this manual do not always include reference to testing the motorcycle after repair. It is essential that work is inspected and tested after completion and if necessary a road test of the motorcycle is carried out particularly where safety related items are concerned.

Dimensions

The dimensions quoted are to design engineering specification with service limits where applicable.

During the period of running-in from new, certain adjustments may vary from the specification figures given in this manual. These will be reset by the dealer at the 500 mile/800 km service, and thereafter should be maintained at the figures specified in this manual.

Repairs and Replacements

Before removal and disassembly, thoroughly clean the motorcycle. Any dirt entering the engine or other parts will work as an abrasive and shorten the life of the motorcycle. Particular attention should be paid when installing a new part, that any dust or metal filings are cleared from the immediate area.

Force

Common sense should dictate how much force is necessary in assembly and disassembly. If a part seems especially difficult to remove or install, stop and examine what may be causing the problem. Never lever a component as this will cause damage both to the component itself and to the surface being levered against.

Whenever tapping to aid removal of an item is necessary, tap lightly using a hide or plastic faced mallet.

Edges

Watch for sharp edges, especially during engine disassembly and assembly. Protect the hands with industrial quality gloves.

When replacement parts are required, it is essential that only genuine Triumph parts are used.

Safety features and corrosion prevention treatments embodied in the motorcycle may be impaired if other than genuine Triumph parts are fitted. In certain territories, legislation prohibits the fitting of parts not to the manufacturer's specification.

Tightening procedure

Generally, when installing a part with several bolts, nuts or screws, they should all be started in their holes and tightened to a snug fit, evenly and in a cross pattern. This is to avoid distortion of the part and/or causing gas or oil leakage. Conversely, bolts, nuts, or screws, should all be loosened (in sequence if specified) by about a quarter of a turn and then removed.

Where there is a tightening sequence specified in this Service Manual, the bolts, nuts, or screws must be tightened in the order and by the method indicated.

Torque wrench setting figures given in this manual must be observed. The torque tools used must be of accurate calibration.

Locking devices, where specified, must be fitted. If the efficiency of a locking device is impaired during removal it must be renewed. This applies particularly to micro-encapsulated fixings which must always be replaced if disturbed. Where necessary, the text in this manual will indicate where such a fixing is used.

Introduction

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1 General Information

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General Information

Ignition System Safety Precautions



Warning

The ignition system produces extremely high Voltages. Do not touch any part of the ignition system or any cables while the engine is running. An electric shock caused by contact with the ignition system may lead to illness, injury or death.



Warning

Wearers of surgically implanted heart pacemaker devices should not be in close proximity to ignition circuits and/or diagnostic equipment. The ignition system and any diagnostic equipment may interrupt the normal operation of such devices causing illness or death.

Dangerous Substances



Warning

Many liquids and other substances used in motor vehicles are poisonous and should under no circumstances be consumed and should, as far as possible, be kept from contact with the skin. These substances, among others, include acid, antifreeze, asbestos, brake fluid, fuel, lubricants and various adhesives. Always pay close attention to the instructions printed on container labels and obey the instructions contained within. These instructions are included for your safety and well-being.

NEVER DISREGARD THESE INSTRUCTIONS!

Third Party Products



Warning

Many proprietary products, such as chemicals, solvents and cleaning agents, will cause damage to components if used incorrectly or inappropriately. Always follow the manufacturer's instructions printed on the product container's labels and obey the instructions given. These instructions are included for your safety and well-being.

Damage to the motorcycle components caused by the incorrect or inappropriate use of chemicals, solvents and cleaning agents may reduce the components efficiency, resulting in loss of motorcycle control and an accident.

Fluoroelastomers



Warning

Fluoroelastomer material is used in the manufacture of various seals in Triumph motorcycles.

In fire conditions involving temperatures greater than 315°C this material will decompose and can then be potentially hazardous. Highly toxic and corrosive decomposition products, including hydrogen fluoride, carbonyl fluoride, fluorinated olefins and carbon monoxide can be generated and will be present in fumes from fires.

In the presence of any water or humidity, hydrogen fluoride may dissolve to form extremely corrosive liquid hydrofluoric acid.

If such conditions exist, do not touch the material and avoid all skin contact. Skin contact with liquid or decomposition residues can cause painful and penetrating burns leading to permanent, irreversible skin and tissue damage.

Oils



Warning

The engine oil may be hot to the touch. Contact with hot oil may cause the skin to be scalded or burned.



Warning

Prolonged or repeated contact with engine oil can lead to skin dryness, irritation and dermatitis. In addition, used engine oil contains potentially harmful contaminants which can cause cancer. Wear suitable clothing and avoid skin contact.

Health Protection Precautions

- Avoid prolonged and repeated contact with oils, particularly used engine oils.
- Wear protective clothing, including impervious gloves where practicable.
- Do not put oily rags in pockets.
- Overalls must be cleaned regularly. Discard heavily soiled clothing and oil impregnated footwear.
- First aid treatment should be obtained immediately for open cuts and wounds. Always be aware of who your nearest First Aider is and where the medical facilities are kept.
- Use barrier creams, applying before each work period, to protect the skin from the effects of oil and grease and to aid removal of the same after completing work.
- Wash with soap and water to ensure all oil is removed (skin cleansers and nail brushes will help). Preparations containing lanolin replace the natural skin oils which have been removed.
- Do not use petrol, kerosene, diesel fuel, gas oil, thinners or solvents for cleaning skin.
- If skin disorders develop, obtain medical advice without delay.
- Where practicable, degrease components prior to handling.



Warning

Any risk of eye injury must be avoided. Always wear eye protection when using a hammer, air line, cleaning agent or where there is ANY risk of flying debris or chemical splashing.

Environmental Protection Precautions



Caution

Do not pour oil on the ground, down sewers or drains, or into water courses. To prevent pollution of water courses etc., dispose of used oil sensibly. If in doubt, contact your local authority.

Burning of used engine oil in small space heaters or boilers can be recommended only for units of approved design. If in doubt, check with the appropriate local authority and/or manufacturer of the approved appliance.

Dispose of used oil and used filters through authorised waste disposal contractors, to licensed waste disposal sites, or to the waste oil reclamation trade. If in doubt, contact your local authority for advice on disposal facilities.

Brakes



Warning

Brake fluid is hygroscopic which means it will absorb moisture from the air. Any absorbed moisture will greatly reduce the boiling point of the brake fluid causing a reduction in braking efficiency.

Replace brake fluid in line with the routine maintenance schedule. A dangerous riding condition could result if this important maintenance item is neglected!

Do not spill brake fluid onto any area of the bodywork as this will damage any painted or plastic surface.

Always use new brake fluid from a sealed container and never use fluid from an unsealed container or from one that has been previously opened.

Do not mix different brands of fluid. Check for fluid leakage around brake fittings, seals and joints.

Check regularly for brake hose damage.

FAILURE TO OBSERVE ANY OF THE ABOVE WARNINGS MAY REDUCE BRAKING EFFICIENCY LEADING TO AN ACCIDENT.

General Information



Warning

If there has been an appreciable drop in the level of the fluid in either brake fluid reservoir, consult your authorised Triumph dealer for advice before riding.

If the brake lever or pedal feels soft when it is applied, or if the lever/pedal travel becomes excessive, there may be air in the brake lines or the brake may be defective.

It is dangerous to operate the motorcycle under such conditions and remedial action must be taken by your authorised Triumph dealer before riding the motorcycle.

Failure to take remedial action may reduce braking efficiency leading to an accident.



Warning

Before installation, all internal brake components should be cleaned and lubricated with clean new DOT 4 brake fluid.

Never use solvents, petrol (gasoline), engine oil, or any other petroleum distillate on internal brake components as this will cause deterioration of the hydraulic seals in the calipers and master cylinders.

A dangerous riding condition leading to loss of motorcycle control and an accident could result if this warning is ignored.



Warning

Use only DOT 4 specification brake fluid as listed in the General Information section of this manual. The use of brake fluids other than those DOT 4 fluids listed in the General Information section may reduce the efficiency of the braking system leading to an accident.

Failure to change the brake fluid at the interval specified in the routine maintenance schedule may reduce braking efficiency resulting in an accident.



Warning

Never use mineral based grease in any part of the braking system or in any area where contact with the braking system is possible. Mineral based grease will damage the hydraulic seals in the calipers and master cylinders.

Damage caused by contact with mineral based grease may reduce braking efficiency resulting in an accident.

Safety Instructions

Jacking and Lifting



Warning

Always ensure that any lifting apparatus has adequate load and safety capacity for the weight to be lifted. Ensure the motorcycle is well supported to prevent any possibility of the machine falling during lifting or jacking, or while repairs and servicing are carried out.

Never rely on a single means of support when working with the motorcycle. Use additional safety supports and straps to prevent toppling.

Do not leave tools, lifting equipment, spilt oil, etc. in a place where they could become a hazard to health. Always work in a clean, tidy area and put all tools away when the work is finished.

Precautions against Damage

Avoid spilling brake fluid or battery acid on any part of the bodywork. Wash spillages off with water immediately.

Disconnect the battery ground lead before starting work, see **ELECTRICAL PRECAUTIONS**.

Always use the recommended service tool where specified.

Protect exposed bearing and sealing surfaces, and screw threads from damage.

Coolant



Warning

Coolant mixture, which is blended with antifreeze and corrosion inhibitors contains toxic chemicals which are harmful to the human body. Never swallow antifreeze, corrosion inhibitors or any of the motorcycle coolant.



Warning

Do not remove the radiator cap when the engine is hot. When the engine is hot, the coolant inside the radiator is hot and also under pressure. Contact with the pressurised coolant will cause scalds and skin damage.



Caution

The coolant antifreeze contains a corrosion inhibitor which helps prevent damage to the metal surfaces inside the cooling system. Without this inhibitor, the coolant would 'attack' the metals and the resulting corrosion would cause blockages in the cooling system leading to engine overheating and damage. Always use the correct antifreeze as specified in the Owner's Handbook. Never use a methanol based antifreeze as this does not contain the required corrosion inhibition properties.



Caution

Distilled water must be used with the antifreeze (see specification for antifreeze) in the cooling system.

If hard water is used in the system, it causes scale accumulation in the water passages, and considerably reduces the efficiency of the cooling system. Reduced cooling system efficiency may lead to the engine overheating and engine damage.

Cleaning Components

A high flash-point solvent is recommended to reduce fire hazard.

Always follow container directions regarding the use of any solvent.

Always use the recommended cleaning agent or equivalent.

Do not use degreasing equipment for components containing items which could be damaged by the use of this process. Whenever possible, clean components and the area surrounding them before removal. Always observe scrupulous cleanliness when cleaning dismantled components.

Lubrication

The majority of engine wear occurs while the engine is warming up and before all the rubbing surfaces have an adequate lubrication film. During assembly, oil or grease (whichever is more suitable) should be applied to any rubbing surface, which has lost its lubrication film. Old grease and dirty oil should be cleaned off. This is because used lubricants will have lost some lubrication qualities and may contain abrasive foreign particles.

Use recommended lubricants. Some oils and greases in particular should be used only in certain applications and may be harmful if used in an

General Information

application for which they are not intended. This manual makes reference to molybdenum disulphide grease in the assembly of certain engine and chassis parts. Always check manufacturer recommendations before using such special lubricants.

Joints and Joint Faces

Assemble joints dry unless otherwise specified in this manual.

If gaskets and/or jointing compound is recommended for use; remove all traces of old jointing material prior to re-assembly. Do not use a tool which will damage the joint faces and smooth out any scratches or burrs on the joint faces using an oil stone. Do not allow dirt or jointing material to enter any tapped holes.

Gaskets, O-rings

Do not reuse a gasket or O-ring once it has been in service. The mating surfaces around the gasket should be free of foreign matter and perfectly smooth to avoid oil or compression leaks.

Liquid Gasket, Non-permanent Locking Agent

Follow manufacturer's directions for cleaning and preparing surfaces where these compounds will be used. Apply sparingly as excessive amounts of sealer may block engine oil passages and cause serious damage.

Prior to re-assembly, blow through any pipes, channels or crevices with compressed air.



Warning

To prevent injury, always use eye, face and ear protection when using compressed air. Always wear protective gloves if the compressed air is to be directed in proximity to the skin.

Screw Threads

Metric threads to ISO standard are used.

Damaged nuts, bolts and screws must always be discarded.

Castellated nuts must not be loosened back to accept a split pin, except in those recommended cases when this forms part of an adjustment.

Do not allow oil or grease to enter blind threaded holes. The hydraulic action on screwing in the bolt or stud could split the housing.

Always tighten a nut or bolt to the recommended torque figure. Damaged or corroded threads can affect the torque reading.

Unless specified, threaded fixings must always be fitted dry (no lubrication).



Warning

Never lubricate a thread unless instructed to do so.

When a thread of a fixing is lubricated, the thread friction is reduced. When the fixing is tightened, reduced friction will cause over tightening and possible fixing failure.

A fixing which fails in service could cause component detachment leading to loss of control and an accident.

Locking Devices

Always release locking tabs and fit new locking washers, do not re-use locking tabs.

Fitting a Split Pin

Always fit new split pins of the correct size for the hole in the bolt or stud. Do not loosen back castle nuts when fitting split pins, except in those recommended cases when this forms part of an adjustment.

Always fit new roll pins of an interference fit in the hole.

Circlips, Retaining Rings

Replace any circlips and retaining rings that are removed. Removal weakens and deforms circlips causing looseness in the circlip groove. When installing circlips and retaining rings, take care to compress or expand them only enough to install them.

Always use the correct replacement circlip as recommended in the Triumph Parts Catalogue.

Self-Locking Nuts

Self-locking nuts can be re-used, providing resistance can be felt when the locking portion passes over the thread of the bolt or stud.

DO NOT re-use self-locking nuts in critical locations, e.g. suspension components. Always use the correct replacement self-locking nut.

Encapsulated Bolts

An encapsulated bolt can be identified by a coloured section of thread which is treated with a locking agent.

Unless a specified repair procedure states otherwise, encapsulated bolts cannot be reused and MUST be replaced if disturbed or removed.



Warning

Failure to replace an encapsulated bolt could lead to a dangerous riding condition. Always replace encapsulated bolts.

Oil and Grease Seals

Replace any oil or grease seals that are removed. Removal will cause damage to an oil seal which, if re-used, would cause an oil leak.

Ensure the surface on which the new seal is to run is free of burrs or scratches. Renew the component if the original sealing surface cannot be completely restored.

Protect the seal from any surface which could cause damage to the seal lips when it is being fitted. Use a protective sleeve or tape to cover the relevant surface and avoid touching the sealing lip.

Lubricate the sealing lips with a recommended lubricant. This will help to prevent damage in initial use. On dual lipped seals, smear the area between the lips with appropriate grease.

When pressing in a seal which has manufacturer's marks, press in with the marks facing out.

Seals must be pressed into place using a suitable driver. Use of improper tools will damage the seal.

Press

A part installed using a press or driver, such as a wheel bearing, should first be coated with oil or grease on its outer or inner circumference so that it will locate smoothly.

Ball Bearings

When installing a ball bearing, the bearing race which is an interference fit should be pushed by a suitable driver. This prevents severe stress or damage to the load carrying components. Press a ball bearing until it touches the shoulder in the bore or on the shaft.

Press or drift seals to the depth of its housing, with the sealing lip facing the lubricant to be retained if the housing is shouldered, or flush with the face of the housing where no shoulder is provided.

Chassis Bearing Lubrication

Note:

- This information relates only to bearing lubrication. For the procedures necessary to replace a bearing, always refer to the relevant section of this Service Manual.
- Bearings installed in engine and transmission applications are not covered by this information. Refer to the lubrication chapter or the relevant engine chapter for additional information.

General

For a bearing to be serviceable for its anticipated life span it must be checked, adjusted and lubricated at regular intervals, as specified in the service schedules given in the Owner's Handbook and this Service Manual.

A correctly lubricated bearing will have a film of lubrication that separates the moving parts, disperses heat and protects the bearing surfaces from corrosion.

Note:

- In all cases, use the lubricant recommended in the Service Manual.
- Grease the bearing, not the cavity where it is located.
- A bearing that is not regularly checked and lubricated will have a reduced life span.

New Bearings

New bearings are typically protected with an oil preservative to prevent corrosion etc. during storage. This is NOT the lubrication for the bearing but DOES NOT need to be washed off prior to assembly and in-service lubrication.

When lubricating a new bearing with grease the following steps should be taken:

1. Do not clean off the oil preservative.
2. Grease must be forced between the roller elements and the roller cage.
3. Rotate the bearing to ensure that the grease is distributed over the entire circumference of the internal parts.
4. Any excess grease should be smeared on the outside of the rollers.

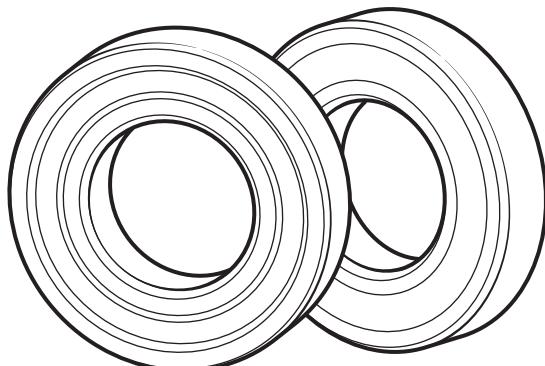
Lubrication and Checks While Servicing a Bearing

1. Disassemble parts as necessary to access the bearing. Refer to the relevant Service Manual.

General Information

2. Inspect the old grease covering the bearing, looking for signs of bearing damage, i.e. flakes or specks of metal.
3. Remove the old grease.
4. Check the bearing for smooth operation and visually check for corrosion, dents and flaking in the bearing race, rollers or cage. Replace if necessary. Refer to the relevant Service Manual.

Below/overleaf several common bearing types and the lubrication procedures for each are identified:

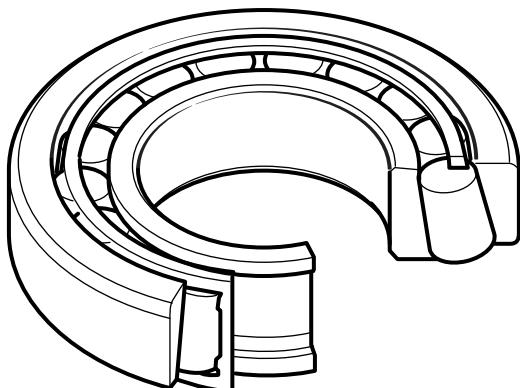


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Sealed Bearings (Wheel Bearings and Swinging Arm, Depending on the Model)

Note:

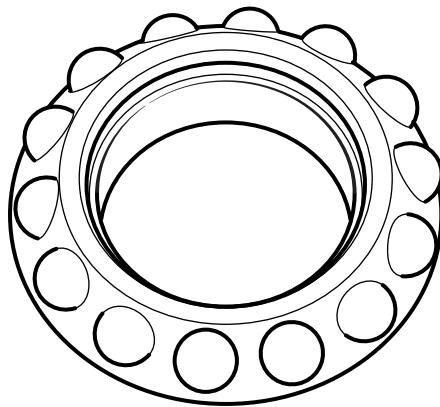
- Sealed bearings can be identified by their integrated seals.
- Sealed bearings are lubricated for life by the manufacturer.
- Any attempt to change the grease in a sealed bearing will damage the integrated seals. If the seals are damaged dirt and water will ingress and the life of the bearing will be greatly reduced.



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Taper Bearings (Swinging Arm and Headstock, Depending on the Model)

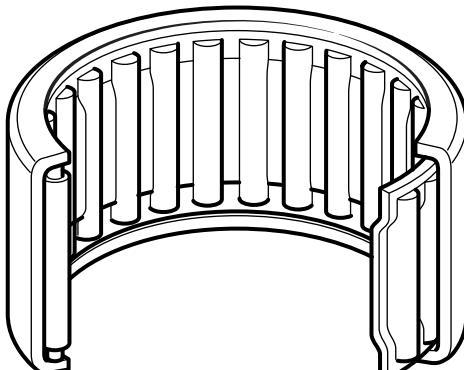
1. Grease must be forced between the inner race and the roller carrier.
2. Rotate the bearing to ensure that the grease is distributed over the entire circumference of the internal parts.
3. Any excess grease should be smeared on the outside of the rollers.



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Angular Contact and Ball Bearings (Headstock)

1. Grease the bearing races and the ball bearing carrier.
2. Rotate the bearing to ensure that the grease is distributed over the entire circumference of the internal parts.



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Needle Roller Bearings (Swinging Arm, Rear Hub, Rear Suspension Linkages, Depending on the Model)

1. Coat the needle rollers with grease.
2. Ensure the needle rollers turn so that the grease is distributed over the entire circumference of the internal parts.
3. Assemble the parts, adjust and check as necessary.

Metal bushes

1. Disassemble the parts as necessary to access the bush. Refer to the relevant Service Manual.
2. Remove the old grease.
3. Apply fresh grease to the metal bush.

Fuel Handling Precautions

General

The following information provides basic precautions which must be observed if petrol (gasoline) is to be handled safely. It also outlines other areas of risk which must not be ignored. This information is issued for basic guidance only and, if in doubt, appropriate enquiries should be made of your local Fire Officer.

Petrol - Gasoline

When petrol (gasoline) evaporates it produces 150 times its own volume in vapour which when diluted with air becomes a readily ignitable mixture. The vapour is heavier than air and will always fall to the lowest level. It can readily be distributed throughout any indoor environment by air currents, consequently, even a small spillage of petrol (gasoline) is potentially very dangerous.



Warning

Petrol (gasoline) is highly flammable and can be explosive under certain conditions. When opening the fuel tank cap always observe all the following items:

Turn the motorcycle ignition switch OFF.

Do not smoke.

Always have a fire extinguisher containing FOAM, CO₂, HALON or POWDER close at hand when handling or draining fuel or fuel systems. Fire extinguishers must also be present in areas where fuel is stored.

Always disconnect the vehicle battery, negative (black) lead first, before carrying out dismantling or draining work on a fuel system.

Whenever petrol (gasoline) is being handled, drained, stored or when fuel systems are being dismantled, make sure the area is well ventilated. All potential forms of ignition must be extinguished or removed (this includes any appliance with a pilot light). Any lead-lamps must be flame-proof and kept clear of any fuel spillage.

Warning notices must be posted at a safe distance from the site of the work to warn others that petrol is being openly handled. The notice must instruct the reader of the precautions which must be taken.

Failure to observe any of the above warnings may lead to a fire hazard which could result in personal injury.

General Information



Warning

No one should be permitted to repair components associated with petrol/gasoline without first having specialist training on the fire hazards which may be created by incorrect installation and repair of items associated with petrol/gasoline.

Repairs carried out by untrained personnel could bring about a safety hazard leading to a risk of personal injury.



Warning

Draining or extraction of petrol/gasoline from a vehicle fuel tank must be carried out in a well ventilated area.

The receptacle used to contain the petrol/gasoline must be more than adequate for the full amount of fuel to be extracted or drained. The receptacle should be clearly marked with its contents, and placed in a safe storage area which meets the requirements of local authority regulations.

When petrol/gasoline has been extracted or drained from a fuel tank, the precautions governing naked lights and ignition sources should be maintained.

Failure to observe any of the above warnings could bring about a safety hazard leading to a risk of personal injury.

Fuel Tank Removal

Fuel tanks should have a 'PETROL (GASOLINE) VAPOUR' warning label attached to them as soon as they are removed from the vehicle. In all cases, they must be stored in a secured, marked area.

Chassis Repairs



Warning

If the motorcycle is involved in an accident or collision it must be taken to an authorised Triumph dealer for repair or inspection. Any accident can cause damage to the motorcycle, which if not correctly repaired, may cause a second accident which may result in injury or death.

The frame must not be modified as any modification to the frame such as welding or drilling may weaken the frame resulting in an accident.

Electrical Precautions

The following guidelines are intended to ensure the safety of the operator whilst preventing damage to the electrical and electronic components fitted to the motorcycle. Where necessary, specific precautions are detailed in the relevant sections of this manual which should be referred to prior to commencing repair operations.

Equipment - Prior to commencing any test procedure on the motorcycle ensure that the relevant test equipment is working correctly and any harness or connectors are in good condition, in particular mains leads and plugs.



Warning

The ignition system produces extremely high Voltages. Do not touch any part of the ignition system or any cables while the engine is running.

An electric shock caused by contact with the ignition system may lead to illness, injury or death.



Warning

Wearers of surgically implanted heart pacemaker devices should not be in close proximity to ignition circuits and/or diagnostic equipment.

The ignition system and any diagnostic equipment may interrupt the normal operation of such devices causing illness or death.



Warning

The battery contains harmful materials. Always keep children away from the battery whether or not it is fitted in the motorcycle.

Do not jump start the battery, touch the battery cables together or reverse the polarity of the cables as any of these actions may cause a spark which would ignite battery gasses causing a risk of personal injury.

High Voltage Circuits - Whenever disconnecting live High Tension (H.T.) circuits always use insulated pliers. Exercise caution when measuring the Voltage on the coil terminals while the engine is running, high Voltage spikes can occur on these terminals.

Connectors and Harness - The engine of a motorcycle is a particularly hostile environment for electrical components and connectors. Always ensure these items are dry and oil free before disconnecting and connecting test equipment. Never force connectors apart either by using tools or by pulling on the wiring itself. Always ensure locking mechanisms are disengaged before removal and note the orientation to enable correct reconnection. Ensure that any protective covers and substances are replaced if disturbed.

Having confirmed a component to be faulty, switch off the ignition and disconnect the battery negative (black) lead first. Remove the component and support the disconnected harness. When replacing the component keep oily hands away from electrical connection areas and push connectors home until any locking mechanism becomes fully engaged.

Battery Disconnecting

Before disconnecting the battery, switch off all electrical equipment.



Warning

To prevent the risk of a battery exploding and to prevent damage to electrical components ALWAYS disconnect the battery negative (black) lead first. When reconnecting the battery, always connect the positive (red) lead first, then the negative (black) lead. Always disconnect the battery when working on any part of the electrical system.

Failure to observe the above warnings may lead to electrical damage and a fire hazard which could cause personal injury.

Always ensure that battery leads are routed correctly and are not close to any potential chafing points.

Disciplines

Switch off the ignition prior to making any connection or disconnection in the system. An electrical surge can be caused by disconnecting 'live' connections which can damage electronic components.

Ensure hands and work surfaces are clean and free of grease, swarf, etc. as grease collects dirt which can cause tracking or high-resistance contacts.

Prior to commencing any test, and periodically during any test, touch a good ground to discharge body static. This is because some electronic components are vulnerable to static electricity.

Electrical Wires

All the electrical wires are either single-colour or two-colour and, with only a few exceptions, must be connected to wires of the same colour. On any of the two-colour wires there is a greater amount of one colour and a lesser amount of a second colour. A two-colour wire is identified by first the primary colour and then the secondary colour. For example, a yellow wire with thin red stripes is referred to as a yellow/red wire; it would be a red/yellow wire if the colours were reversed to make red the main colour.

General Information

Electrical Testing

For any electrical system to work, electricity must be able to flow in a complete circuit from the power source (the battery) via the components and back to the battery. No circuit means no electrical flow. Once the power has left the positive side of the battery and run through the component it must then return to the battery on its negative side (this is called earth or ground). To save on wiring, connections and space, the negative side of the battery is connected directly to the frame or engine. Around the frame and engine will be various other ground points to which the wiring coming from components will be connected. In the case of the starter motor it bolts directly to the engine, which is bolted to the frame. Therefore the frame and engine also form part of the ground return path.

Ohm's Law

The relationship between Voltage, current and resistance is defined by Ohm's Law.

- The potential of a battery is measured in Volts (V).
- The flow of current in a circuit (I) is measured in Amperes.
- The power rating of a consumer is measured in Watts (W).
- The resistance (R) of a circuit is measured in Ohms (Ω).

Ohms law, for practical work can be described as -

$$\frac{\text{Voltage}}{\text{Current}} = \text{Resistance}$$

Power is calculated by multiplying Volts x Amps -

$$\text{Watts} = \text{Volts} \times \text{Amps}$$

By transposing either of these formulae, the value of any unit can be calculated if the other two values are known.

For example, if a battery of 12 V is connected to a bulb of 60 W:

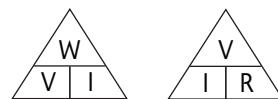
- the current flowing in the circuit can be calculated by using -

$$\frac{W}{V} = I \quad \frac{60}{12} = 5$$

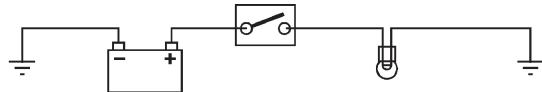
- the bulb resistance can be calculated by using -

$$\frac{V}{I} = R \quad \frac{12}{5} = 2.4$$

To use either of the following triangles, put your finger over the value you want to find. Multiply the remaining values if side-by-side, or divide if one is over the other.



Basic Electrical Circuits



Basic Circuit Diagram

In the above circuit an electrical reservoir (the battery) is connected via a cable to a terminal on the controlling device (the switch) whose contacts are either open or closed. The other terminal on the switch is connected via a cable to the consumer (the bulb), and the other side of the bulb filament is connected to ground (earth) by another cable. The ground point is usually a part of the frame or engine, to which the battery negative terminal is also connected.

When the switch contacts are open (as shown in the diagram), the circuit is broken and no current flows. When the switch contacts are closed the circuit is made and current flows from the battery positive terminal through the switch contacts and bulb filament to ground. The frame completes the circuit to the battery negative terminal and the bulb illuminates.

Although some circuits on the circuit diagram may at first seem more complicated, it will generally be found that they can be broken down into sections which do not differ greatly from the basic circuit above.

Circuit Diagrams

Circuit diagrams are created to provide a 'picture' of the electrical system and to identify the route taken by each individual wire through the system, in order to identify which components it feeds and which connectors the wire runs through. Circuit diagrams are an essential tool for fault finding, as it is possible to locate start and finish points for a circuit without having to manually trace the wire through the motorcycle itself. Circuit diagrams may look confusing at first but when they are studied closely they soon become logical.

Due to the complex circuits and the number of individual wires, Triumph uses two types of circuit diagram in its Service Manuals.

- Within the manual conventional circuit diagrams are used to show the layout of the main circuits of the motorcycle. These are: Engine management/ignition, Lighting, Starting and Charging and Auxiliary and Accessory. In these diagrams no attempt is made to show the components of the system in any particular order or position in relation to the motorcycle.
- At the back of the Service Manual a full colour layout circuit diagram is used to show the main electrical components in a position similar to the actual position on the motorcycle.

Both of these circuit diagrams use similar symbols to illustrate the various system components and will be accompanied by a key to circuit diagram components and wiring colour codes.

Circuit diagrams also depict the inner workings of a switch housing (i.e. which wire connects to which when a switch is turned from one position to another) so that a test of that switch can be made using the wire terminals in the connector instead of disassembling the switch itself.

Glossary of Circuit Diagram Symbols

The following is a description of the symbols found in the circuit diagrams used in all Triumph Service Manuals.

Connector



This illustration is used to show all multiplug type electrical connectors on Triumph circuit diagrams. The numbers in the box relate to the terminal numbers of the connector pins. On ECUs with two connectors, the number would be prefixed with the letters A or B to identify each connector. An additional number outside the box will identify the component.

Diode



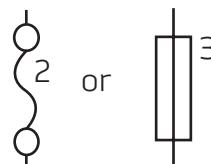
An electrical one-way valve. Diodes allow current to flow in one direction but will not allow it to return. The arrow, which forms part of the diode symbol, indicates the direction of current flow.

Electromagnetic Winding (solenoid)



An electromagnetic winding (or solenoid) is used to convert an electrical current into a lateral movement. This can then be used to operate switches (as used in relays) or other components such as fuel injectors or secondary air injection solenoids.

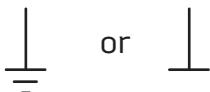
Fuse



A fuse is a device which protects a circuit in the event of a fault. The fuse will blow should a short circuit occur, protecting that circuit from further damage. The number next to the fuse on the circuit diagram indicates the position of the fuse in the fusebox.

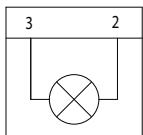
General Information

Ground or Earth Point



This symbol is used to show ground points. This is the negative connection to either the frame or engine, and is a common cause of intermittent faults due to loose or corroded connections.

Lamp or Bulb



This symbol is used to show all types of light bulbs. The numbers in the box relate to the terminal numbers of the connector pins. An additional number outside the box will identify the component.

LED (Light Emitting Diode)



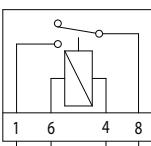
Triumph use LEDs for the alarm warning light, instrument illumination and warning lights, gear change lights and rear light/brake lights on various models.

Motor



An electric motor. This could be the starter motor or a motor within an actuator, for example within the ABS modulator.

Relay



A relay is effectively an electromagnetic switch. To close the relay contacts and complete the circuit, an electromagnet in the relay is energised which causes the relay contacts to close, making the circuit complete.

Relays are used when the electrical current is too great for a mechanical switch, usually when the switching must be done quickly to prevent arcing across the switch contacts. If a mechanical switch were used, the mechanical switch contacts would quickly burn away.

Resistor



A device placed in a cable to reduce a Voltage or restrict the maximum current a device can draw.

Splice



A hard cable joint where two or more cables are joined in the wiring harness. A potential source of both open and short circuits.

Switches

Normally
Open

Normally
Closed

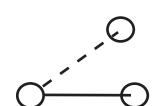
Change
Over



or

or

or

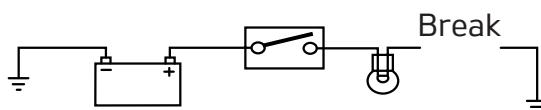


A mechanical device for completing or breaking a circuit. There are three common types of switch: Normally open, normally closed and changeover.

Tracing Circuits

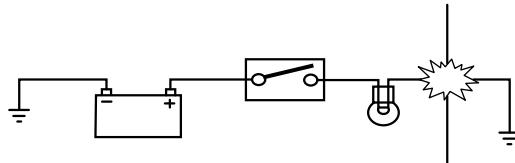
The following is a description of two types of common electrical failures, and some of the methods which may be used to find them.

Open circuit



A break in an electrical circuit - current cannot flow. Usually caused by a break in a wire or cable or by a loose connection. Open circuits can often be intermittent, making diagnosis difficult.

Short circuit



A short cut in an electrical circuit - current bypasses the intended circuit, either to ground or to another, different circuit. Often caused by failure of the cable insulation due to chafing or trapping of the wire. There are two different types of short circuit - short to ground and short to Vbatt.

A short to ground means that the current is going to ground before it reaches the component it is supposed to feed. These are often caused by chafing of the harness to the frame or wires trapped between a bolted component, and will often blow the fuse on that circuit.

A short to Vbatt is a short to battery Voltage (12 Volts) and is caused by a live power supply wire contacting an adjacent cable. Note that it is also possible for a 5 Volt sensor reference Voltage to short to an adjacent circuit, which can also cause electrical failures and DTCs (Diagnostic Trouble Code) to be stored.

When tracing a wire that is suspect, carefully check the circuit diagram before starting. Remember:

- a wire may diverge at a splice and go off to feed other circuits. If these circuits are working, check for wiring faults from the splice onwards.
- the circuit diagram is not an accurate guide to the actual location of the parts when fitted on the bike. It is a schematic diagram of the circuits.

- particularly where engine management items are concerned, the circuit is only completed by the ECM. If the ECM is not connected, the circuit may register as open.

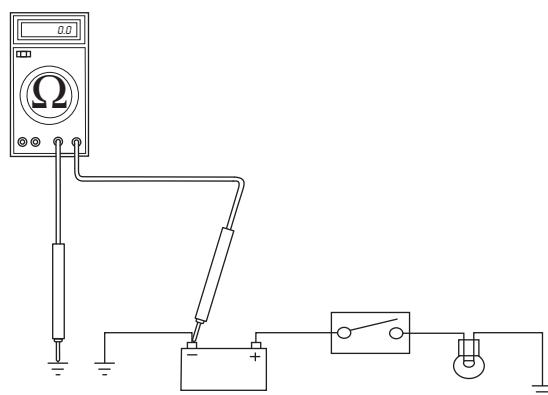
To Check Continuity:



Caution

Ensure the circuit being tested is switched off before measuring continuity. Damage to the Digital Multi Meter (DMM) may result from testing a live circuit with the meter set to resistance (Ω).

In the example below, the ground circuit continuity is being tested from the battery to the frame.



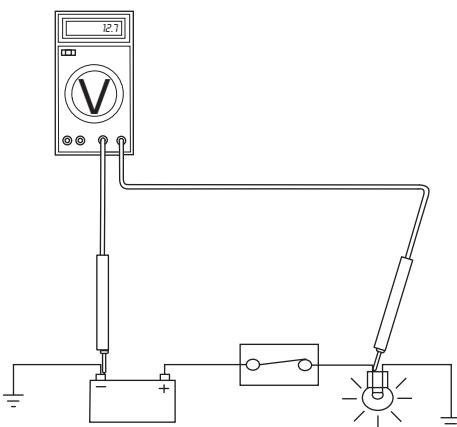
Continuity (resistance) Check

- Locate each end of the wire.
- Set the Digital Multi Meter (DMM) to resistance check (Ω).
- Probe each end of the wire.
- If there is continuity, the meter will usually beep or register the resistance of the cable.
- A high resistance figure could indicate a dirty or corroded connection.
- If there is a break in the wire, the meter will not beep or register a resistance.
- By probing the wire in various places, the position of a high resistance or break in the wire (open circuit) can be narrowed down until it is found.

General Information

To Measure Voltage:

In the example below, the circuit Voltage is being measured at the bulb positive (+) terminal.



Voltage Check

- Turn the circuit to be tested ON.
- Set the Digital Multi Meter (DMM) to Voltage check (V). Ensure the multi meter is set to DC Volts for direct current circuits (most circuits) or AC Volts for alternating current circuits (typically alternator output Voltage tests).
- Set the range of the DMM to the range best suited to the Voltage of the circuit being tested (typically 20 Volts for most DMMs). Refer to the DMM manufacturer's instructions.
- Connect the black (ground) lead of the DMM to a reliable ground connection (usually the battery or frame ground).
- Locate the positive terminal of the wire or component to be tested.
- Connect the red (positive) lead of the DMM to the positive terminal.
- Read the Voltage from the meter.

Splices

Splices are probably the most common cause of wiring faults after connectors. Splices are made where two or more wires come together and diverge in different directions, usually to feed a different circuit.

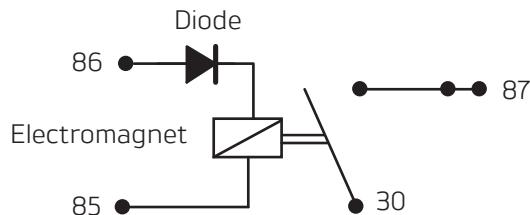
To locate a splice, it is necessary to peel back the insulation and examine the splice for its integrity. The most common fault is where one of the wires at the joint has come adrift usually causing the circuit feeds or grounds to become dead.

Switches

To check a switch, set the multimeter to resistance/continuity and probe the two pins that form a closed circuit when the switch is pushed. If the switch is working correctly, the resistance should register or the meter will beep.

Relays

All relay cases have a circuit path engraved on them showing the circuit path across the electromagnet and the switch. Before making any checks, first note the pin designations, current paths, and whether or not there is a diode in either circuit path.



Make continuity checks across the electromagnet first, usually from pin 86 (positive) to pin 85 (negative). If a diode appears in the circuit use the diode check on the multimeter (Volts scale) in the direction of current flow. If there is no diode, use the resistance check facility. An open circuit or unusually high resistance value indicates a faulty relay.

To check the switch side, apply a 12 Volt supply between pins 86 and 85. With the supply connected the relay should be heard to click and there should be continuity between pins 30 and 87. An open circuit indicates a faulty relay.

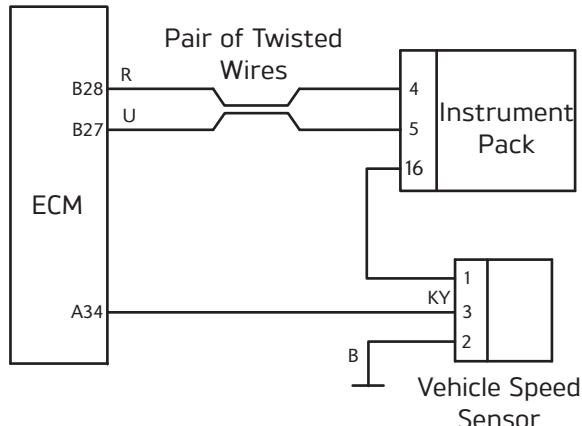
CAN (Controller Area Networking)

CAN (sometimes called CANbus) is a protocol for data communication between Electronic Control Modules (ECMs). Each ECM on the network is connected by a single pair of twisted wires (or bus) which are used for the transmission of vehicle sensor data. By using CAN, the overall number of system sensors, and the amount of cabling required to allow ECMS to communicate with each other is greatly reduced.

This saves cost, weight and space, and makes the system more reliable, as the physical number of wires and connections is reduced.

This allows for a very high speed system of communication, which is also very reliable. Should one ECM fail or transmit corrupted or otherwise incorrect messages, none of the other ECMS on the network will be affected, and after a certain time that ECM will be prevented from transmitting further messages until the fault is rectified. This stops the ECM from clogging the network with incorrect data and preventing other messages from getting through. The fault would then be reported by a DTC (Diagnostic Trouble Code).

Triumph currently use CAN for communication between the engine ECM and the instruments.



**Extract from the Circuit Diagram Showing
CAN Connection Between ECMS**

CAN works by each ECM sending out 'packets' of information (such as engine speed or fuel consumption information) on to the network bus (note that the network must be free of data before any ECM is allowed to transmit). This data is given a priority according to its importance (for example engine speed may have a higher priority than low fuel level), so that even if two ECMS send data at the same time, high priority information is always sent first. Lower priority data is then resent after the high priority data has been received by all ECMS on the network.

The receiving ECM confirms the data has been received correctly and that the data is valid, and this information is then used by the ECM as necessary. Specific data not required by an ECM will still be received and acknowledged as correct but then disregarded (for example if an ECM does not require clutch switch position information, this data packet would be ignored).

General Information

Alternator/Charging System

The charging system consists of an alternator and a rectifier/regulator assembly and the battery. The alternator is made up of two parts, the stator, which is mounted to the crankcase or the engine cover, and the rotor, mounted to the end of the crankshaft. The stator is an assembly of 18 coils, arranged into 3 phases. The rotor is a series of magnets mounted in the engine flywheel, which are arranged so as to be positioned around the outside of the stator coils. As the engine rotates the alternator produces an AC (alternating current) Voltage in each of the three phases of the alternator, typically of around 35 to 40 Volts AC at 4,000 - 5,000 rpm, although this figure varies between models. As the battery requires DC (direct current) Voltage for correct charging, this AC Voltage must be first rectified to DC current, and then regulated to the correct Voltage for the battery of 14.5 ± 0.5 Volts. This is done by the

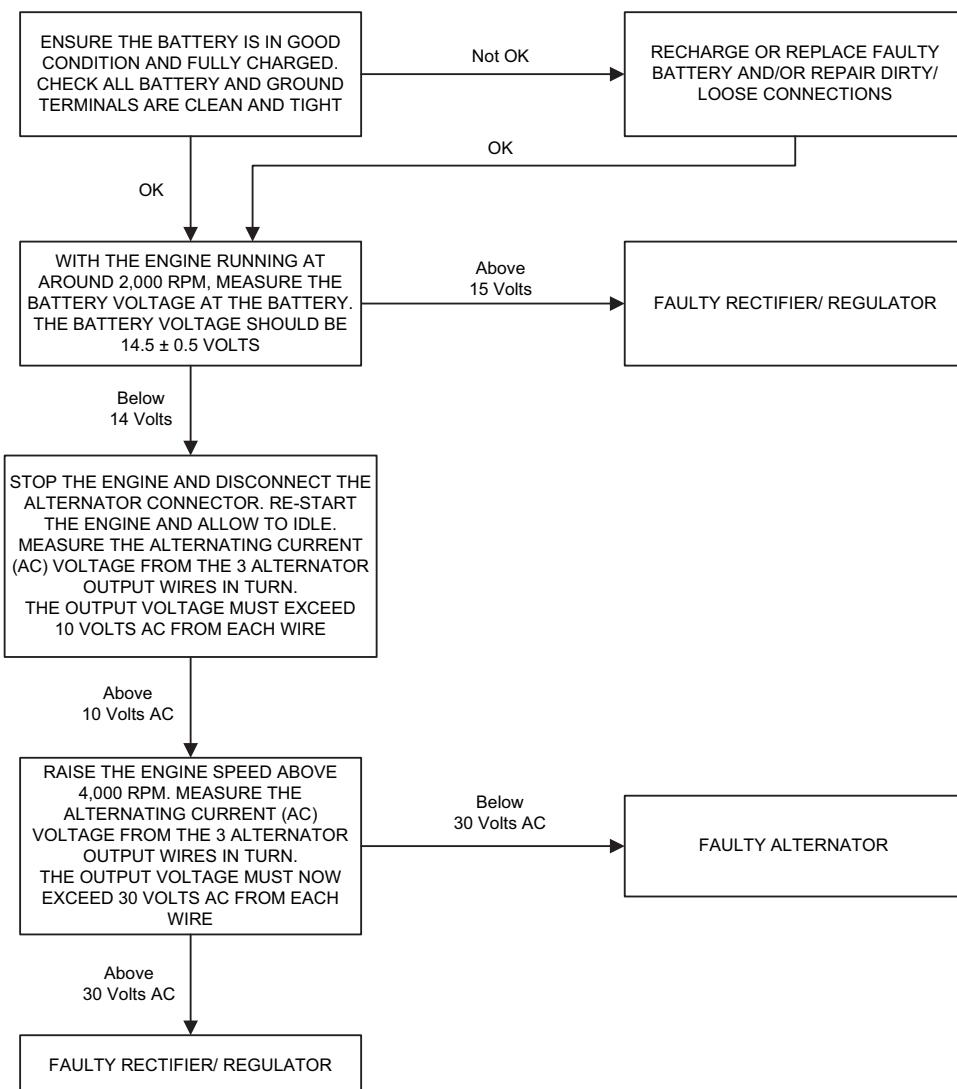
rectifier/regulator, which uses diodes to convert the alternator output to DC Volts and limit the resulting output to the correct figure required for optimal battery charging.

If the charging circuit does not operate correctly, the following basic checks must be carried out before further diagnosis is performed:

- Check the battery terminals are clean and tight.
- Check the frame and engine ground connections are clean, tight and free from corrosion.
- Ensure the battery is fully charged and in good condition.
- Check that any fuse in the circuit is not blown and is of the correct rating (see page 17-16).

Rectify any defects as necessary.

Diagnosis - Charging Circuit



Starting Circuit

All Triumph models are equipped with an electric start system. This system consists of a starter relay, starter motor, starter switch, side stand switch, engine stop switch, clutch switch and the sprag clutch. The starter motor is connected to the starter relay and the battery by heavy duty cables in order to supply the large currents required by the motor to start the engine. When the starter button is pressed the relay is energised, which then allows current to the starter motor. The starter motor will not operate unless the clutch lever is pulled in. Also, the starter will not operate if the side stand is down, unless the transmission is in neutral. If the starter motor does not operate, the following basic checks must be carried out before further diagnosis is performed:

- Check the engine stop switch is in the RUN position.

- Check the battery terminals are clean and tight.
- Check the frame and engine ground connections are clean, tight and free from corrosion.
- Ensure the battery is fully charged and in good condition.
- Check that any fuse in the circuit is not blown and is of the correct rating.
- Using the Triumph diagnostic tool, check the operation of the neutral switch or gear position sensor (if fitted), side stand and clutch switches.

Note:

- **On all new models from Daytona 675 onwards, which use a CAN connection between the instruments and the ECM, the engine will not crank if the instruments are disconnected.**

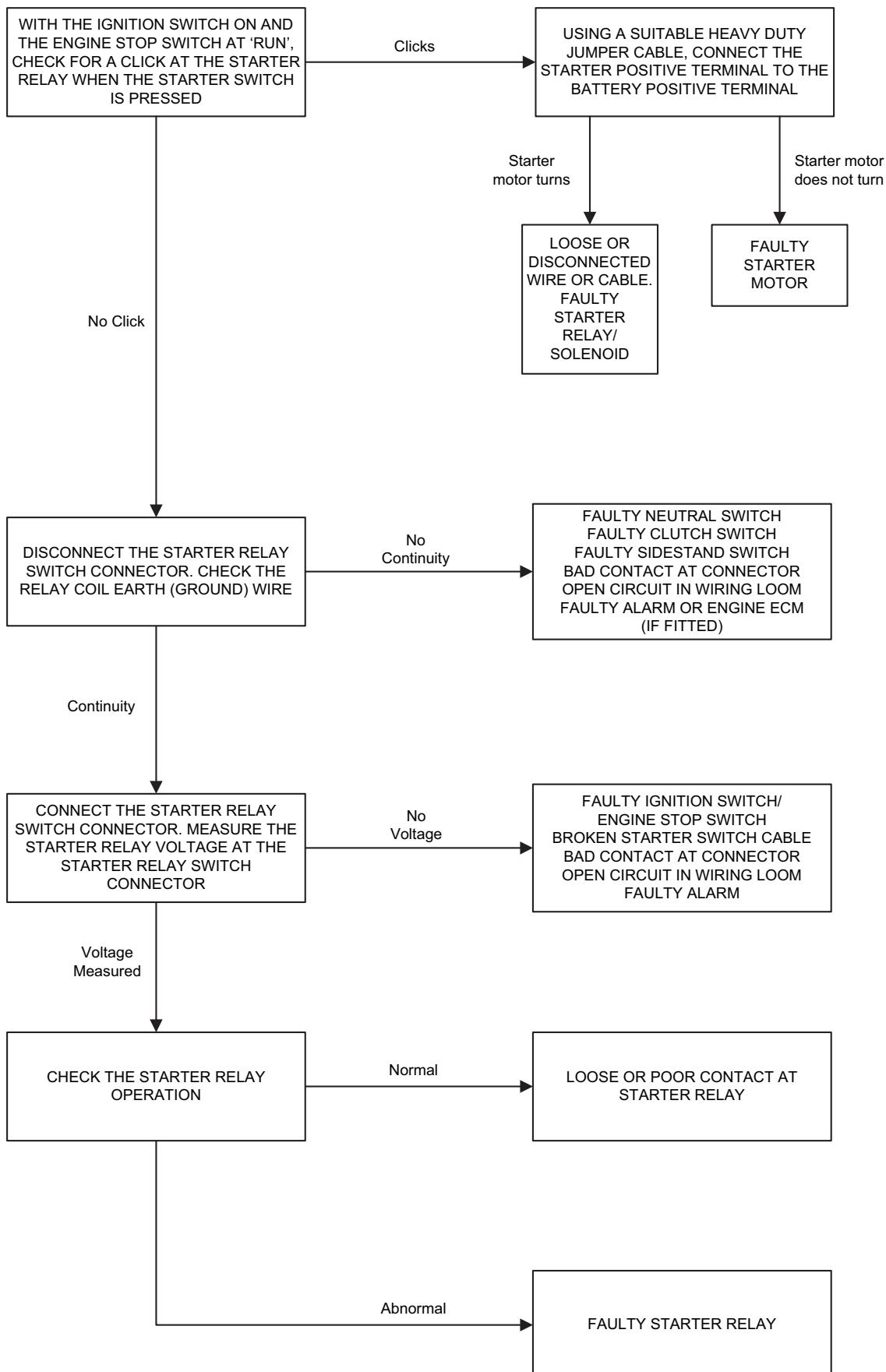
Rectify any defects as necessary.

General Fault Finding – Starter Motor and Relay

Symptom	Possible cause(s)
Starter relay does not click, starter motor does not turn	Battery discharged or defective Blown main or starter relay fuse Defective starter relay wiring or starter switch Check that the side stand, transmission and clutch lever are positioned for engine starting i.e. transmission in neutral, clutch lever pulled in and the side stand down Defective alarm system – ensure any alarm fitted is working correctly
Starter motor turns slowly	Battery discharged or defective Loose, corroded or dirty battery connections Loose, corroded or dirty starter motor or starter relay connections Defective starter motor Loose, corroded or dirty battery ground connections
Starter relay clicks but engine does not turn over	Battery discharged or defective Crankshaft does not turn due to engine defect Defective starter motor Starter cable open circuit Defective starter relay
Starter motor turns but engine does not turn over	Defective sprag clutch Defective idler gear, reduction gear or starter motor

General Information

Diagnosis - Starter Circuit



Inspection

Disassembled parts should be visually inspected and replaced with new ones if there are any signs of the following:

Abrasions, cracks, hardening, warping, bending, dents, scratches, colour changes, deterioration, seizure or damage of any nature.

Replacement Parts



Warning

Only Triumph genuine parts should be used to service, repair or convert Triumph motorcycles. To ensure that Triumph genuine parts are used, always order parts, accessories and conversions from an authorised Triumph dealer. The fitting of non-approved parts, accessories or conversions may adversely affect the handling, stability or other aspects of the motorcycle operation which may result in an accident causing serious injury or death.



Warning

Always have Triumph genuine parts, accessories and conversions fitted by an authorised Triumph dealer. The fitment of parts, accessories and conversions by a dealer who is not an authorised Triumph dealer may affect the handling, stability or other aspects of the motorcycle operation which may result in an accident causing serious injury or death.



Warning

Always have Triumph approved parts, accessories and conversions fitted by a trained technician. To ensure that a trained technician is used, have an authorised Triumph dealer fit the parts. The fitment of parts, accessories and conversions by personnel other than a trained technician at an authorised Triumph dealer may affect the handling, stability or other aspects of the motorcycle operation which may result in an accident causing serious injury or death.

Service Data

The service data listed in this manual gives dimensions and specifications for brand new, original parts. Where it is permissible to allow a part to exceed these figures, then the service limit is given.

The terms of the motorcycle warranty will be invalidated by the fitting of other than genuine Triumph parts.

All genuine Triumph parts have the full backing of the motorcycle warranty. Triumph dealers are obliged to supply only genuine Triumph recommended parts.

Specification

Triumph are constantly seeking to improve the specification, design and production of their motorcycles and alterations take place accordingly.

While every effort has been made to ensure the accuracy of this Manual, it should not be regarded as an infallible guide to current specifications of any particular motorcycle.

Authorised Triumph dealers are not agents of Triumph and have no authority to bind the manufacturer by any expressed or implied undertaking or representation.

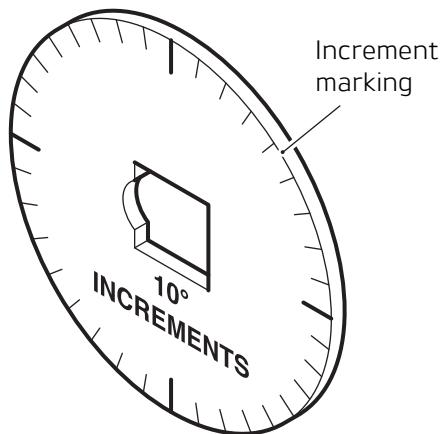
General Information

Service Tools and Garage Equipment

Special service tools have been developed to facilitate removal, dismantling and assembly of certain mechanical components in a practical manner without causing damage. Some operations in this Service Manual cannot be carried out without the aid of the relevant service tools. Where this is the case, the tools required will be described during the procedure.

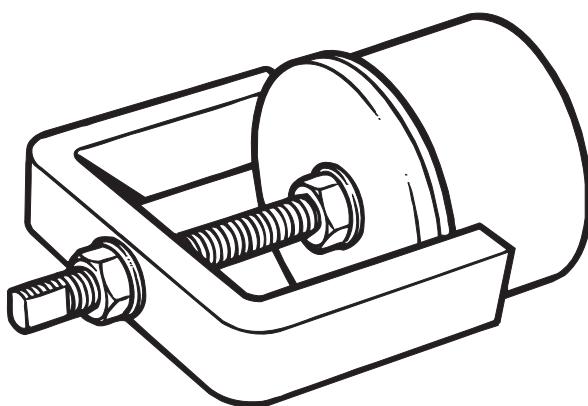
Special Service Tools

T3880105 - Angular Torque Gauge



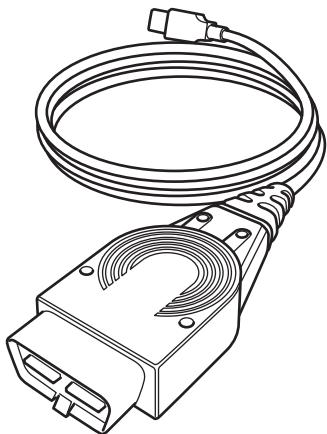
ccry

T3880315 - Cylinder Liner Extractor
(use with adaptor T3880101)

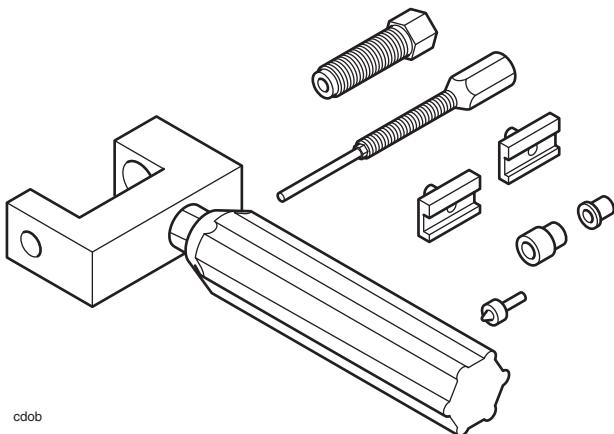


gakh

T3880057 - Triumph Diagnostic Interface



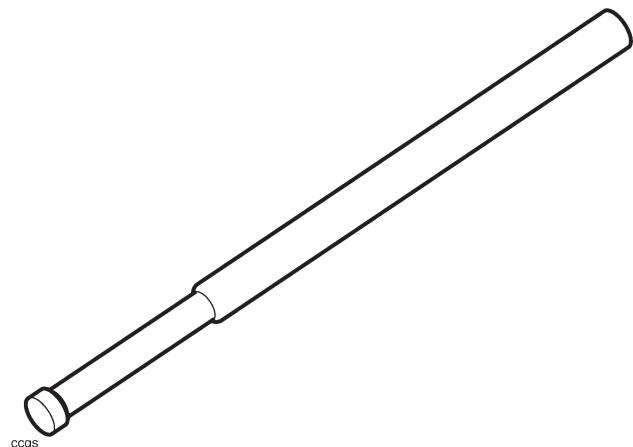
T3880027 - Chain Link Tool Kit



cdob

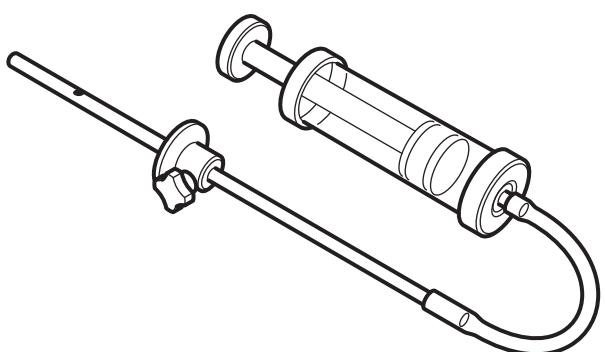
General Information

3880085-T0301 - Fork Piston Holder



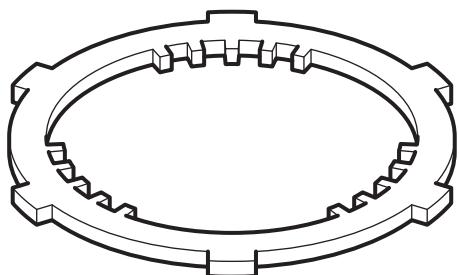
ccgs

3880160-T0301 - Fork Filler/Evacuator



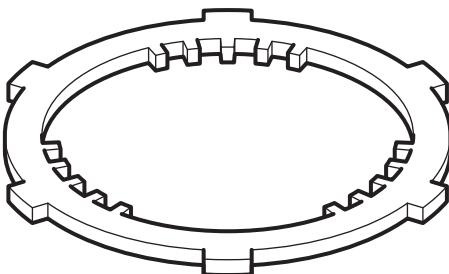
ccha

T3880306 - Clutch Anti-rotation Tool

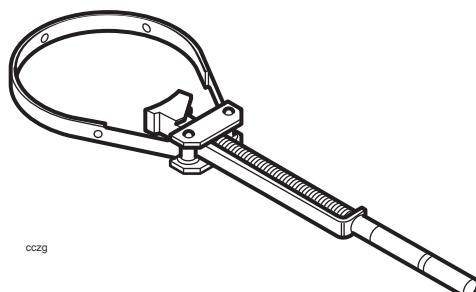


ccmi

T3880307 - Clutch Anti-rotation Tool

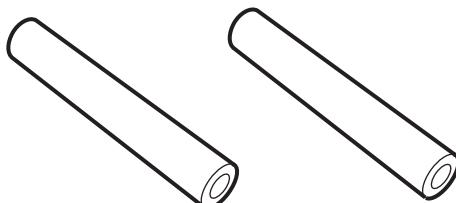


T3880375 - Alternator Rotor Holder



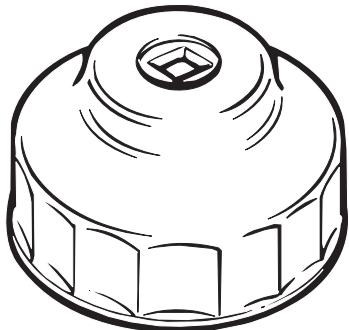
cczg

T3880308 - Cylinder Barrel Clamps



General Information

T3880313 - Oil Filter Wrench



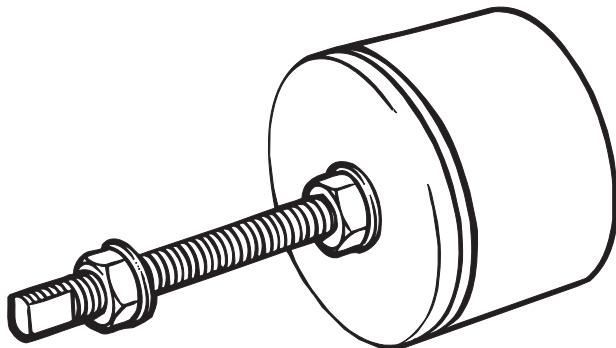
gahc

T3880365 - Alternator Rotor Puller



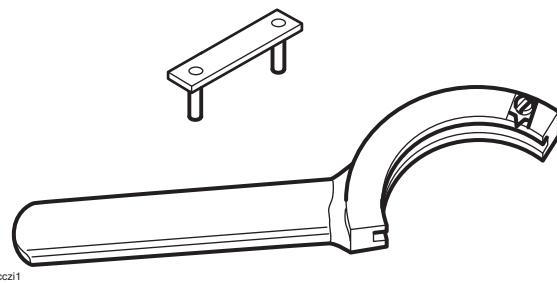
cczh

T3880101 - Extractor Cylinder Liner



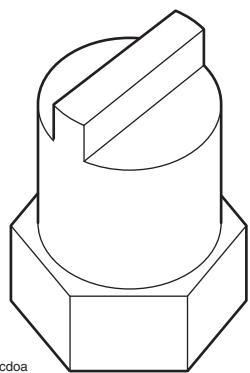
gahc_1

T3880106 - Balancer Gear Holder



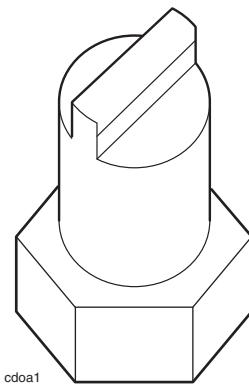
cczh1

T3880104 - Swinging Arm Adjuster Wrench



cdoa

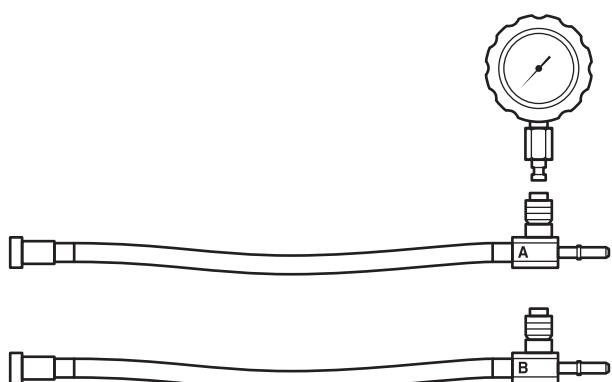
T3880103 - Engine Mounting Adjuster Wrench



cdoa1

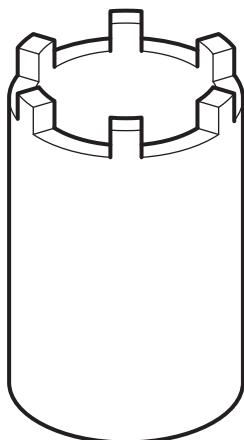
General Information

T3880001 - Fuel Pressure Gauge



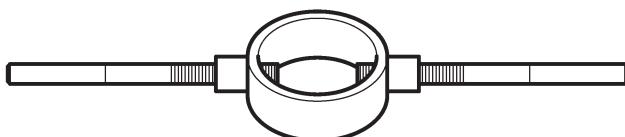
cdgh

T3880023 - Adjuster Socket 50 mm



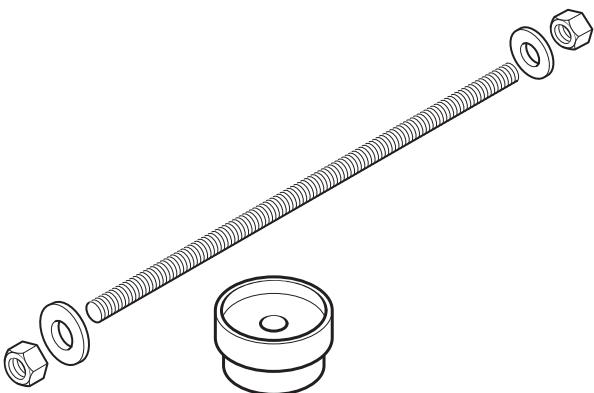
cdbp

T3880067 - Fork Spring Compressor

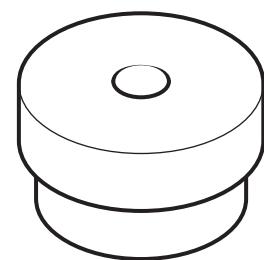


ccgw

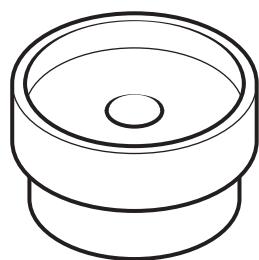
T3880053 - Wheel Bearing Extraction Kit



3880065-T0301 - Bearing Installer



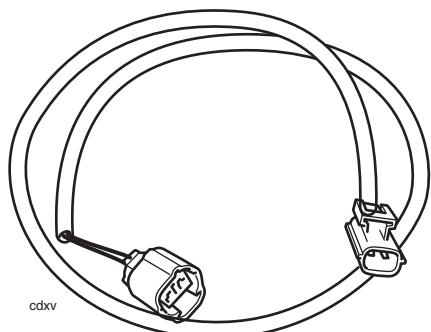
cczb1



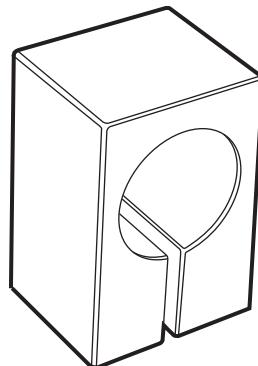
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General Information

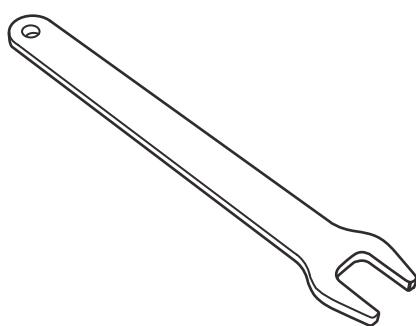
T3880123 - Extension Cable



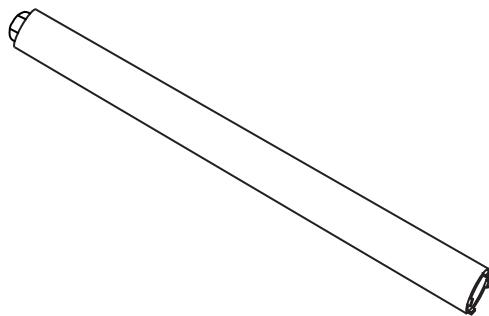
T3881003 - Öhlins Piston Shaft Clamp



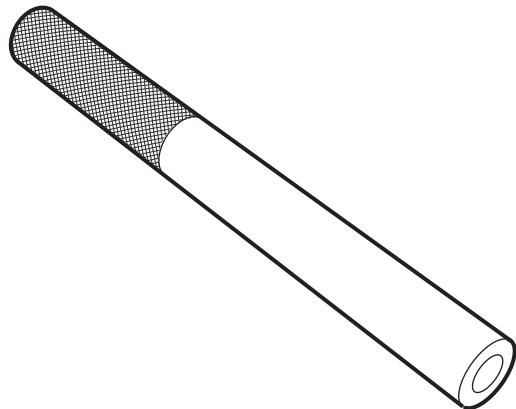
T3880162 - 17 mm U-Spanner



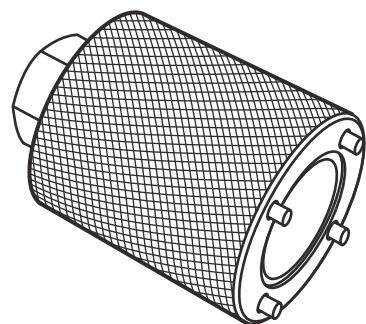
T3881005 - Öhlins Cap/Cartridge Tool



T3880163 - Rod, Pull Up



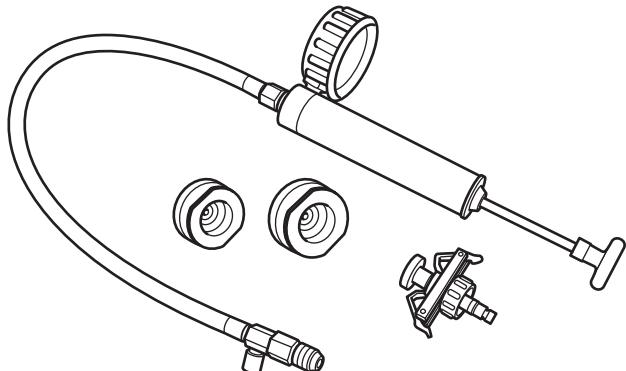
T3880161 - Top Nut Socket



General Information

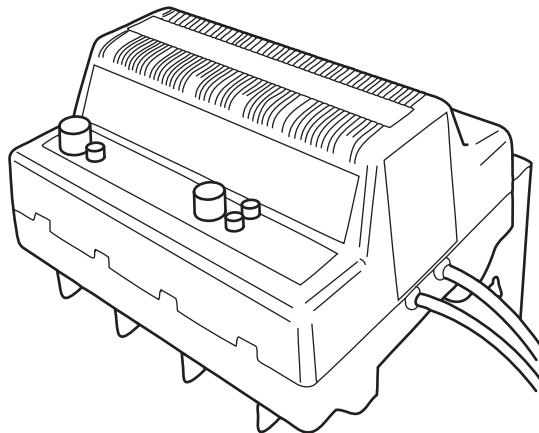
T3880147 - Radiator and Cap Tester

BatteryMate Battery Charger - See Latest Parts Catalogue for Parts Information

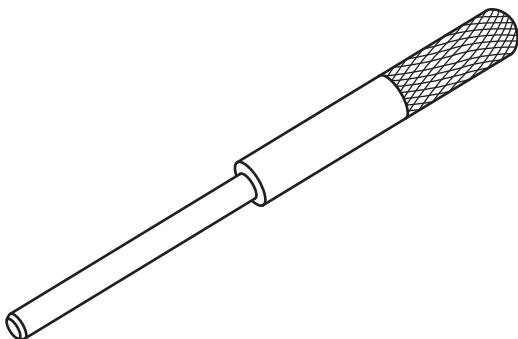


cgwp

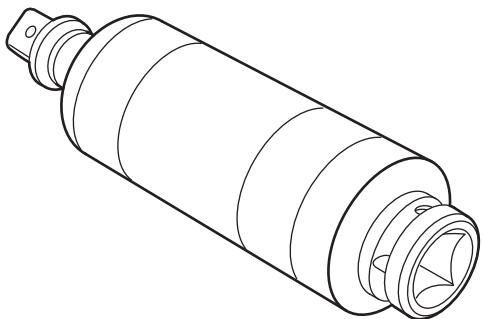
T3880601 - Crankshaft Timing Pin



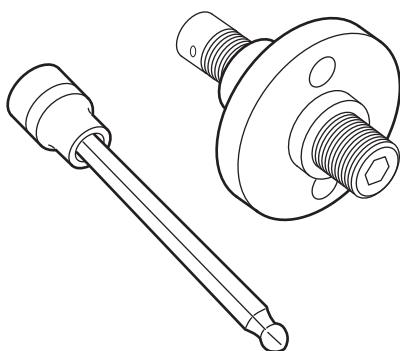
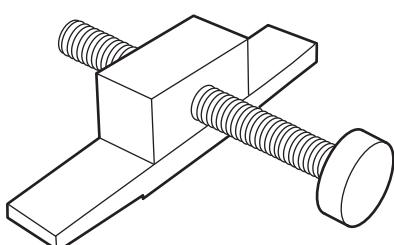
T3880609 - Torque Limiter



T3880640 - Camshaft Timing Plate

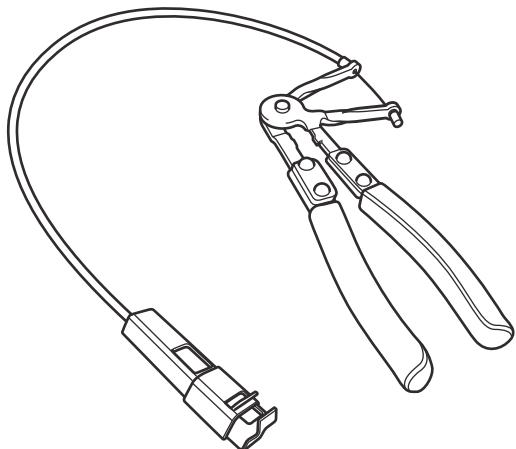


T3880607 - Camshaft Timing Tensioner

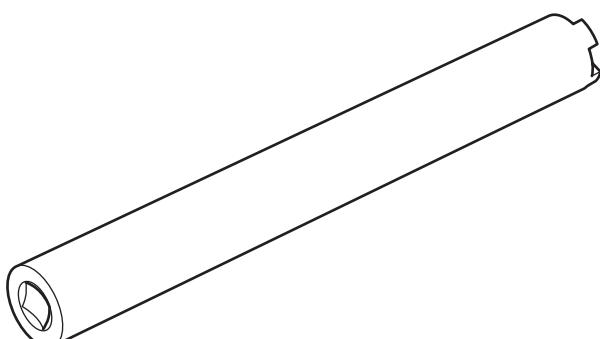


General Information

T3880207 - Hose Clip Pliers



T3880807 - Damper Assembly Tool



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Full Specification

Full Specification	Daytona 675 and Daytona 675 R	Street Triple, Street Triple R and Street Triple Rx	Street Triple 660 cc
Engine			
Engine Configuration	3 Cylinder 12 valve DOHC	3 Cylinder 12 valve DOHC	3 Cylinder 12 valve DOHC
Arrangement	Transverse in-line	Transverse in-line	Transverse in-line
Displacement	674.8 cc	674.8 cc	659.3 cc
Bore x Stroke	76 x 49.58 mm	74 x 52.3 mm	74 x 51.1 mm
Compression Ratio	13.10:1	12.85:1	10.87:1
Cylinder numbering	Left to Right (no. 3 adjacent to camshaft drive chain)	Left to Right (no. 3 adjacent to camshaft drive chain)	Left to Right (no. 3 adjacent to camshaft drive chain)
Cylinder Sequence	Number 1 at left	Number 1 at left	Number 1 at left
Firing order	1-2-3	1-2-3	1-2-3
Maximum Power (95/1/EC) (Standard)	94.12 kW (128 PS/126.2 bhp) at 12,500 rpm	78.1 kW (106.2 PS/104.7 bhp) at 11,850 rpm	40.6 kW (55.2 PS/54.4 bhp) at 9,300 rpm
Maximum Torque (Standard)	74 Nm (54.6 ft.lbf) at 11,900 rpm	68 Nm (50.1 ft.lbf) at 9,750 rpm	55 Nm (40.6 ft.lbf) at 5,100 rpm
Maximum Power (95/1/EC) (Option)	-	70 kW (95.2 PS/93.9 bhp) at 11,200 rpm (Street Triple only)	-
Maximum Torque (Option)	-	67.9 Nm (50.0 ft.lbf) at 8,350 rpm (Street Triple only)	-
Maximum Power - Brazil	94.12 kW (128 PS/126.1 bhp) at 12,500 rpm	62.5 kW (85 PS/83.8 bhp) at 11,200 rpm	-
Maximum Torque - Brazil	73 Nm (54.0 ft.lbf) at 9,750 rpm	61 Nm (45.0 ft.lbf) at 8,400 rpm	-
Maximum Power - Japan	93.77 kW (127.50 PS/125.7 bhp) at 12,500 rpm	Street Triple 62.5 kW (85.0 PS/83.8 bhp) at 10,000 rpm	-
		Street Triple R and Street Triple Rx 76.72 kW (104.30 PS/102.9 bhp) at 11,850 rpm	-
Maximum Torque - Japan	73.57 Nm (54.3 ft.lbf) at 11,900 rpm	Street Triple 61.0 Nm (45.0 ft.lbf) at 8,400 rpm	-
		Street Triple R and Street Triple Rx 68.0 Nm (50.1 ft.lbf) at 9,600 rpm	-

General Information

Full Specification		Daytona 675 and Daytona 675 R	Street Triple, Street Triple 660 cc, Street Triple R and Street Triple Rx
Cylinder Head and Valves			
Valve Head Diameter	In	30.50 mm	30.50 mm
	Ex	24.20 mm	25.50 mm
Valve Lift	In	9.40 mm	8.00 mm 6.62 mm‡
	Ex	8.70 mm	7.25 mm
Valve Stem Diameter	In	4.475 - 4.490 mm	3.975 - 3.990 mm
Service Limit		4.465 mm	3.965 mm
Valve Stem Diameter	Ex	3.965 - 3.980 mm	3.955 - 3.970 mm
Service Limit		3.955 mm	3.945 mm
Valve Guide Bore Diameter	In	4.500 - 4.515 mm	4.000 - 4.015 mm
Service Limit		4.540 mm	4.043 mm
Valve Guide Bore Diameter	Ex	4.000 - 4.015 mm	4.000 - 4.015 mm
Service Limit		4.040 mm	4.043 mm
Valve Stem to Guide Clearance	In	0.010 - 0.040 mm	0.010 - 0.040 mm
Service Limit		0.078 mm	0.078 mm
Valve Stem to Guide Clearance	Ex	0.030 - 0.060 mm	0.030 - 0.060 mm
Service Limit		0.098 mm	0.098 mm
Valve Seat Width (in head)	In	0.80 - 1.20 mm	0.80 - 1.20 mm
Service Limit		1.50 mm	1.50 mm
Valve Seat Width (in head)	Ex	1.00 - 1.40 mm	1.00 - 1.40 mm
Service Limit		1.70 mm	1.70 mm
Valve Seat Width (valve)	In	1.00 - 2.00 mm	1.27 - 1.57 mm
	Ex	1.06 - 1.93 mm	1.06 - 1.93 mm
Valve Seat Angle		45°	45°
Inlet/Exhaust Valve Spring 'Load at Length'		508 N +/-25 N at 27.5 mm	508 N +/-25 N at 27.5 mm
Valve Clearance	In	0.10 - 0.20 mm	0.10 - 0.20 mm
	Ex	0.325 - 0.375 mm	0.325 - 0.375 mm
Valve Bucket Diameter	In	25.385 - 25.399 mm	25.385 - 25.399 mm
Service Limit		25.375 mm	25.375 mm
Valve Bucket Diameter	Ex	24.185 - 24.199 mm	25.385 - 25.399 mm
Service Limit		24.175 mm	25.375 mm
Valve Bucket Bore Diameter	In	25.415 - 25.435 mm	25.414 - 25.435 mm
Service Limit		25.449 mm	25.449 mm
Valve Bucket Bore Diameter	Ex	24.215 - 24.235 mm	25.415 - 25.435 mm
Service Limit		24.249 mm	25.449 mm

‡ Street Triple 70 kW version and Street Triple 660 cc only

Full Specification		Daytona 675 and Daytona 675 R	Street Triple, Street Triple 660 cc, Street Triple R and Street Triple Rx
Camshafts			
Camshaft Timing	Inlet	Open 27.49° BTDC @ 1.0 mm lift	Open 11.23° BTDC @ 1.0 mm lift Open 0.30° BTDC @ 1.0 mm lift ‡
		Close 51.49° ABDC @ 1.0 mm lift	Close 39.23° ABDC @ 1.0 mm lift Close 28.30° ABDC @ 1.0 mm lift ‡
	Duration	258.98°	230.45° 208.60° ‡
	Exhaust	Open 43.54° BBDC @ 1.0 mm lift	Open 29.09° BBDC @ 1.0 mm lift Open 45.09° BBDC @ 1.0 mm lift ‡
		Close 23.54° ATDC @ 1.0 mm lift	Close 9.09° ATDC @ 1.0 mm lift Close 6.91° BTDC @ 1.0 mm lift ‡
	Duration	247.08°	218.18°
Camshaft Journal Diameter		23.940 - 23.960 mm	23.940 - 23.960 mm
Camshaft Journal Clearance		0.040 - 0.081 mm	0.040 - 0.081 mm
Service Limit		0.17 mm	0.17 mm
Camshaft Journal Bore Diameter		24.000 - 24.021 mm	24.000 - 24.021 mm
Camshaft End Float		0.23 - 0.33 mm	0.23 - 0.33 mm
Service Limit		0.40 mm	0.40 mm
Camshaft Run-out		0.15 mm max.	0.15 mm max.

‡ Street Triple 70 kW version and Street Triple 660 cc only

General Information

Full Specification	Daytona 675 and Daytona 675 R	Street Triple, Street Triple 660 cc, Street Triple R and Street Triple Rx
Clutch/Primary Drive		
Primary Drive Type	Gear	Gear
Reduction Ratio	1.848 (46/85)	1.848 (46/85)
Clutch Type	Wet multiplate	Wet multiplate
No. of Friction Plates	9	9
Plate Flatness	Within 0.2 mm	Within 0.2 mm
Friction Plate Thickness	3.00 mm	3.00 mm
Service Limit	2.90 mm	2.90 mm
Clutch Actuation Method	Cable	Cable
Cable Free Play (at lever)	2.0 - 3.0 mm	2.0 - 3.0 mm
Full Specification	Daytona 675 and Daytona 675 R	Street Triple, Street Triple 660 cc, Street Triple R and Street Triple Rx
Pistons		
Cylinder Bore Diameter	75.985 - 76.003 mm	74.030 - 74.050 mm
Service Limit	76.053 mm	74.100 mm
Piston Diameter (at 90° to gudgeon pin)	73.970 - 73.980 mm	73.964 - 73.980 mm
Service Limit	73.920 mm	73.920 mm
Piston Ring to Groove Clearances		
Top	0.04 - 0.08 mm	0.02 - 0.06 mm
Service Limit	0.100 mm	0.075 mm
Second	0.03 - 0.07 mm	0.02 - 0.06 mm
Service Limit	0.090 mm	0.075 mm
Piston Ring End Gaps		
Top	0.22 - 0.32 mm	0.15 - 0.30 mm
Service Limit	0.44 mm	0.42 mm
Second	0.35 - 0.50 mm	0.30 - 0.45 mm
Service Limit	0.62 mm	0.57 mm
Oil	0.20 - 0.70 mm	0.20 - 0.70 mm
Service Limit	0.84 mm	0.84 mm
Gudgeon Pin Bore Diameter in Piston	16.004 - 16.012 mm	16.004 - 16.012 mm
Service Limit	16.040 mm	16.040 mm
Gudgeon Pin Diameter	15.995 - 16.000 mm	15.995 - 16.000 mm
Service Limit	15.985 mm	15.980 mm

General Information

Full Specification	Daytona 675 and Daytona 675 R	Street Triple, Street Triple 660 cc, Street Triple R and Street Triple Rx
Crankshaft		
Crankshaft Big End Journal Diameter	35.002 - 35.018 mm	33.010 - 33.026 mm
Service Limit	34.968 mm	32.970 mm
Crankshaft Big End Bearing Clearance	0.035 - 0.065 mm	0.035 - 0.065 mm
Service Limit	0.070 mm	0.070 mm
Crankshaft Main Bearing Journal Diameter	34.984 - 35.000 mm	32.984 - 33.000 mm
Service Limit	34.960 mm	32.960 mm
Crankshaft Main Bearing Clearance	0.014 - 0.038 mm	0.020 - 0.044 mm
Service Limit	0.070 mm	0.070 mm
Crankshaft End Float	0.15 - 0.30 mm	0.15 - 0.30 mm
Crankshaft Run-out	0.02 mm or less	0.02 mm or less
Service Limit	0.05 mm	0.05 mm

Full Specification	Daytona 675 and Daytona 675 R	Street Triple, Street Triple 660 cc, Street Triple R and Street Triple Rx
Transmission		
Type	6 Speed, Constant Mesh	6 Speed, Constant Mesh
Gear Ratios	1st	2.3125:1 (16/37)
	2nd	1.857 (21/39)
	3rd	1.565 (23/36)
	4th	1.350 (20/27)
	5th	1.238 (21/26)
	6th	1.136 (22/25)
Gear Selector Fork Thickness	5.9 - 6.0 mm	5.9 - 6.0 mm
Service Limit	5.80 mm	5.80 mm
Gear Selector Groove Width	6.1 - 6.17 mm	6.1 - 6.17 mm
Service Limit	6.27 mm	6.27 mm
Gear Selector Fork to Groove Clearance	0.47 mm max.	0.47 mm max.

General Information

Full Specification	Daytona 675 and Daytona 675 R	Street Triple, Street Triple 660 cc, Street Triple R and Street Triple Rx
Final Drive		
Final Drive	Chain	Chain
Final Drive Ratio	3.133 (15/47)	2.937 (16/47)
Chain Type	RK O-ring	RK O-ring
Number of Links	113	117
20 Link Length	319 mm	319 mm
Drive Chain Play	28 - 38 mm	13 - 32 mm
Chain Lubrication	Chain spray suitable for O-ring chains	Chain spray suitable for O-ring chains

Full Specification	Daytona 675 and Daytona 675 R	Street Triple, Street Triple 660 cc, Street Triple R and Street Triple Rx
Lubrication		
Type	Pressure Lubrication, Wet Sump	Pressure Lubrication, Wet Sump
Oil Capacity (dry fill)	3.6 litres	3.6 litres
Oil Capacity (wet fill including filter)	3.2 litres	3.2 litres
Oil Capacity (wet fill excluding filter)	3.0 litres	3.0 litres
Recommended Oil Approval Rating	API SH (or higher) and JASO MA	API SH (or higher) and JASO MA
Viscosity	10W/40 or 10W/50	10W/40 or 10W/50
Type	Semi or fully synthetic	Semi or fully synthetic
Oil pressure (in main gallery)	2.07 bar (30.0 lb/in ²) min. @ 80°C oil temperature @ 5,000 rpm	2.07 bar (30.0 lb/in ²) min. @ 80°C oil temperature @ 5,000 rpm
Oil Pump Rotor Tip Clearance	0.15 mm	0.15 mm
Service Limit	0.20 mm	0.20 mm
Oil Pump Body Clearance	0.15 - 0.22 mm	0.15 - 0.22 mm
Service Limit	0.35 mm	0.35 mm
Oil Pump Rotor End Float	0.04 - 0.09 mm	0.04 - 0.09 mm
Service Limit	0.17 mm	0.17 mm

General Information

Full Specification	Daytona 675 and Daytona 675 R	Street Triple, Street Triple 660 cc, Street Triple R and Street Triple Rx
Ignition System		
Type	Digital Inductive	Digital Inductive
Electronic Rev Limiter	14,400 (rpm)	12,650 (rpm) 10,000 (rpm)‡
Pick-up Coil Resistance	0.21 KΩ +/-10% @ 20°C	0.21 KΩ +/-10% @ 20°C
Ignition Coil Type	Plug-top	Plug-top
Spark Plug Type	NGK CR9EIA-9	NGK CR9EK
Spark Plug Gap	0.9 mm	0.7 mm
† Street Triple 62.5 kW version - Japanese market only.		
The Daytona 675, Daytona 675 R, Street Triple R and Street Triple Rx motorcycles have a limited maximum engine speed of 5,000 rpm when neutral is selected - Japanese market only.		

Full Specification	Daytona 675 and Daytona 675 R	Street Triple, Street Triple 660 cc, Street Triple R and Street Triple Rx
Connecting Rods		
Connecting Rod Small End Diameter	16.016 - 16.029 mm	16.016 - 16.029 mm
Service Limit	16.039 mm	16.039 mm
Connecting Rod Big End Side Clearance	0.15 - 0.30 mm	0.15 - 0.30 mm
Service Limit	0.50 mm	0.50 mm

Full Specification	Daytona 675 and Daytona 675 R	Street Triple, Street Triple 660 cc, Street Triple R and Street Triple Rx
Fuel System		
Fuel Type	Unleaded, 95 RON (U.S. 89 CLC/AKI) (all markets except Brazil) Unleaded, 91 RON (U.S. 87 CLC/AKI) (Brazil markets only)	Unleaded, 91 RON (U.S. 87 CLC/AKI)
Fuel Tank Capacity	17.4 litres	17.4 litres
Low Level Warning Lamp	4 litres remaining	4 litres remaining
Fuel Pump Type	Submerged	Submerged
Fuel Pressure (nominal)	3.5 bar (50.8 lb/in ²)	3.5 bar (50.8 lb/in ²)
Purge Control System	Electronic, via fuel system ECM	Electronic, via fuel system ECM

General Information

Full Specification	Daytona 675 and Daytona 675 R	Street Triple, Street Triple 660 cc, Street Triple R and Street Triple Rx
Coolant System		
Antifreeze Type	Triumph HD4X Hybrid OAT coolant	Triumph HD4X Hybrid OAT coolant
Freezing point	-35°C	-35°C
Cooling System Capacity	2.1 litres	2.24 litres
Radiator Cap Opening Pressure	1.1 bar (15.95 lb/in ²)	1.1 bar (15.95 lb/in ²)
Thermostat Opening Temperature	71°C (nominal)	71°C (nominal)
Cooling Fan Switch On Temperature	103°C	103°C
Temperature Gauge Sensor Resistance	2.9 - 3.3 KΩ @ 15°C	2.9 - 3.3 KΩ @ 15°C

Full Specification	Daytona 675	Street Triple, Street Triple 660 cc, Street Triple R and Street Triple Rx
Front Suspension – all models except Daytona 675 R		
Front Fork Travel	110 mm	110 mm for Street Triple and Street Triple 660 cc 115 mm for Street Triple R and Street Triple Rx
Recommended Fork Oil Grade	Kayaba KHL15-10	Kayaba KHL15-10
Oil Level (fork fully compressed, spring removed)	95 mm	86 mm for Street Triple and Street Triple 660 cc 89 mm for Street Triple R and Street Triple Rx
Oil Volume (dry fill)	503 cc	505 cc for Street Triple and Street Triple 660 cc 483 cc for Street Triple R and Street Triple Rx
Fork Pull Through	Top of the outer tube 12 mm above the upper face of the top yoke	Top of the outer tube 28 mm above the lower face of the top yoke

Full Specification	Daytona 675 R	Street Triple, Street Triple 660 cc, Street Triple R and Street Triple Rx
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Front Suspension – Daytona 675 R only

Front Fork Travel	120 mm	-
Recommended Fork Oil Grade	Öhlins fork oil	-
Oil Level (fork fully compressed, spring removed)	150 mm	-
Oil Volume (dry fill)	Not specified by Öhlins	-
Fork Pull Through	12 mm	-

Full Specification	Daytona 675	Street Triple, Street Triple 660 cc, Street Triple R and Street Triple Rx
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Rear Suspension – all models except Daytona 675 R

Rear Wheel Travel	129 mm	124.5 mm for Street Triple and Street Triple 660 cc 135 mm for Street Triple R and Street Triple Rx
Rear Suspension Bearing Grease	Grease to NLGI 2 specification	Grease to NLGI 2 specification

Full Specification	Daytona 675 R	Street Triple, Street Triple 660 cc, Street Triple R and Street Triple Rx
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Rear Suspension – Daytona 675 R only

Rear Wheel Travel	133 mm	-
Rear Suspension Bearing Grease	Grease to NLGI 2 specification	-

General Information

Full Specification	Daytona 675 and Daytona 675 R	Street Triple, Street Triple 660 cc, Street Triple R and Street Triple Rx
Fuel Injection System		
Type	Electronic, sequential	Electronic, sequential
Idle Speed	1,250 rpm	1,250 rpm
Injector Type	Twin jet, solenoid operated plate valve	Twin jet, solenoid operated plate valve
Throttle	Cable/twist grip/electronic throttle potentiometer	Cable/twist grip/electronic throttle potentiometer
Control Sensors	Ambient air pressure, throttle position, coolant temperature, crankshaft position, vehicle speed, oxygen sensor, intake air temperature, gear position, MAP	Ambient air pressure, throttle position, coolant temperature, crankshaft position, vehicle speed, oxygen sensor, intake air temperature, gear position, MAP
Full Specification	Daytona 675 and Daytona 675 R	Street Triple, Street Triple 660 cc, Street Triple R and Street Triple Rx
Emissions Controls		
Catalysts	1, in down pipe	1, in down pipe
Oxygen sensor	Heated, in down pipe	Heated, in down pipe
Secondary Air injection	Solenoid controlled, reed valve type	Solenoid controlled, reed valve type
Evaporative Control	Activated carbon canister (Certain markets only)	Activated carbon canister (Certain markets only)

Full Specification	Daytona 675 and Daytona 675 R	Street Triple, Street Triple 660 cc, Street Triple R and Street Triple Rx
Brakes		
Front Type	Two hydraulically actuated four piston radial calipers acting on twin discs	Two hydraulically actuated twin piston sliding calipers acting on twin discs for Street Triple and Street Triple 660 cc Two hydraulically actuated four piston radial calipers acting on twin discs for Street Triple R and Street Triple Rx
Caliper Piston Diameter	4 x 32.03 mm, Daytona 675 4 x 33.96 mm, Daytona 675 R	2 x 27.00 mm, Street Triple and Street Triple 660 cc 2 x 33.96 mm and 2 x 30.23 mm, Street Triple R and Street Triple Rx
Disc Diameter	310 mm	310 mm
Disc Thickness	4.5 mm	4 mm
Service Limit	4.0 mm	3.5 mm
Disc Run-out	0.3 mm Max.	0.3 mm Max.
Master Cylinder Diameter	19.05 mm, Daytona 675 18.0 mm, Daytona 675 R	14.00 mm, Street Triple and Street Triple 660 cc 19.05 mm, Street Triple R and Street Triple Rx
Recommended Fluid	DOT 4	DOT 4
Rear Type	Hydraulically actuated single piston caliper, single disc	Hydraulically actuated single piston caliper, single disc
Caliper Piston Diameter	34 mm	34 mm
Disc Diameter	220 mm	220 mm
Disc Thickness	5.0 mm	5.0 mm
Service Limit	4.5 mm	4.5 mm
Disc Run-out	0.3 mm Max.	0.3 mm Max.
Master Cylinder Diameter	12.7 mm	12.7 mm

General Information

Full Specification	Daytona 675 and Daytona 675 R	Street Triple, Street Triple 660 cc, Street Triple R and Street Triple Rx
Wheels and Tyres		
Front Wheel Size	MT 3.5 x 17	MT 3.5 x 17
Front Tyre Size	120/70 ZR 17	120/70 ZR 17
Front Tyre Pressure	2.35 bar (34 lb/in ²)	2.35 bar (34 lb/in ²)
Recommended Front Tyre Options	Refer to Owner's Handbook	Refer to Owner's Handbook
Front Wheel Rim Axial Run-out	0.5 mm	0.5 mm
Front Wheel Rim Radial Run-out	0.5 mm	0.5 mm
Rear Wheel Size	MT 5.5 x 17	MT 5.5 x 17
Rear Tyre Size	180/55 ZR 17	180/55 ZR 17
Rear Tyre Pressure	2.48 bar (36 lb/in ²)	2.9 bar (42 lb/in ²)
Recommended Rear Tyres Options	Refer to Owner's Handbook	Refer to Owner's Handbook
Rear Wheel Rim Axial Run-out	0.5 mm	0.5 mm
Rear Wheel Rim Radial Run-out	0.5 mm	0.5 mm

General Information

Full Specification	Daytona 675 and Daytona 675 R	Street Triple, Street Triple 660 cc, Street Triple R and Street Triple Rx
Frame		
Frame Type	Twin-spar aluminium	Twin-spar aluminium
Overall Length	2,045 mm (80.5 in)	2,055 mm (80.9 in)
Overall Width	695 mm (27.4 in)	740 mm (29.1 in)
Overall Height	1,112 mm (43.8 in)	1,060 mm (41.7 in) Street Triple and Street Triple 660 cc 1,110 mm (43.7 in) Street Triple R and Street Triple Rx
Wheelbase	1,375 mm (54.1 in)	1,410 mm (55.5 in)
Seat Height	820 mm (32.3 in) Daytona 675 830 mm (32.7 in) Daytona 675 R	800 mm (31.5 in) Street Triple and Street Triple 660 cc 820 mm (31.5 in) Street Triple R and Street Triple Rx
Rake	23°	24.1° Street Triple and Street Triple 660 cc 23.4° Street Triple R and Street Triple Rx
Trail	89.1 mm	99.6 mm, Street Triple and Street Triple 660 cc 95 mm, Street Triple R and Street Triple Rx
Wet Weight	184 kg	182 kg 181 kg (Street Triple 660 cc only)
Maximum Payload (rider, passenger, luggage and accessories)	195 kg	195 kg

Full Specification	Daytona 675 and Daytona 675 R	Street Triple, Street Triple 660 cc, Street Triple R and Street Triple Rx
Electrical Equipment		
Battery Type	YTX9 - BS	YTX9 - BS
Battery Rating	12 V - 8 Amp. Hour	12 V - 8 Amp. Hour
Alternator Rating	33.5 A at 4,000 rpm	33.5 A at 4,000 rpm
Fuses*	Refer to Owner's Handbook	
* The starter solenoid has an additional 30 Amp fuse, attached directly to the solenoid, beneath the rider's seat.		

General Information

Torque Wrench Settings

Cylinder Head Area

Application	Torque (Nm)	Notes
Camshaft cover to cylinder head (Daytona 675 and Daytona 675 R)	12	Fit new bolt seals and lubricate with clean engine oil
Camshaft cover to cylinder head (Street Triple, Street Triple 660 cc, Street Triple R and Street Triple Rx)	10	Fit new bolt seals and lubricate with clean engine oil
Secondary air injection valve covers to camshaft cover	9	
Camshaft chain tensioner to cylinder head (hydraulic tensioner) (Daytona 675 and Daytona 675 R)	9	
Camshaft chain tensioner to cylinder head - hydraulic tensioner (Street Triple, Street Triple 660 cc, Street Triple R and Street Triple Rx)	8	
Camshaft bearing ladder to head	Refer to section 3	
Camshaft sprocket to camshaft	22	Use new fixings
Cylinder head to crankcase (M6 screws)	10	
Cylinder head to crankcase nuts (Daytona 675 and Daytona 675 R)	Refer to section 3	
Cylinder head to crankcase bolts (Street Triple, Street Triple 660 cc, Street Triple R and Street Triple Rx)	Refer to section 3	
Sound suppression bolt in head	12	
Spark plugs	12	
Cylinder head dry seal plug	22	Apply ThreeBond 1305 to threads
Bypass spigot	15	Fit new if spigot removed
Exhaust header studs	10	Fit new if studs are removed

Clutch

Application	Torque (Nm)	Notes
Clutch cover to crankcase (Daytona 675 and Daytona 675 R)	11	
Clutch cover to crankcase (Street Triple, Street Triple 660 cc, Street Triple R and Street Triple Rx)	8	
Clutch centre nut	98	Use new fixings. Fit new Belleville washer
Clutch pressure plate to centre	10	
Clutch lever clamp bolts to handlebar	12	
Clutch cable adjuster bracket to crankcase	9	
Clutch lever nut	3.5	

Crankshaft, Crankcase and Sprag

Application	Torque (Nm)	Notes
Crankcase upper to lower (M8 fixings)	Refer to section 5	
Crankcase upper to lower (M6 fixings)	Refer to section 5	
Connecting rod big end	Refer to section 5	
Sprag clutch to crankshaft	Refer to section 7	
Camshaft drive sprocket gear to crankshaft	27	Use new fixings
Big end bearings	Refer to section 5	
Crankcase dry seal plug	22	Apply ThreeBond 1305 to threads
Crankcase face seal plug (Daytona 675 and Daytona 675 R)	8	
Cylinder head studs (Daytona 675 and Daytona 675 R)	8	

General Information

Engine Covers

Application	Torque (Nm)	Notes
Clutch cover to crankcase (Daytona 675 and Daytona 675 R)	11	
Alternator cover to crankcase (Daytona 675 and Daytona 675 R)	10	
Crankcase cover to crankcase (Daytona 675 and Daytona 675 R)	10	
Balancer cover to crankcase (Daytona 675 and Daytona 675 R)	10	
Clutch cover to crankcase (Street Triple, Street Triple 660 cc, Street Triple R and Street Triple Rx)	8	
Alternator cover to crankcase (Street Triple, Street Triple 660 cc, Street Triple R and Street Triple Rx)	8	
Crankcase cover to crankcase (Street Triple, Street Triple 660 cc, Street Triple R and Street Triple Rx)	8	
Balancer cover to crankcase (Street Triple, Street Triple 660 cc, Street Triple R and Street Triple Rx)	8	
Sprocket cover to crankcase	9	
Breather cover	9	
Wire retainer on alternator cover	6	Use new fixings

Transmission

Application	Torque (Nm)	Notes
Output sprocket to output shaft	85	Fit new tab washer
Detent wheel to selector drum	12	Use new fixings
Detent arm spring fixing (Daytona 675 and Daytona 675 R)	12	Use new fixings
Detent arm bolt (Street Triple, Street Triple 660 cc, Street Triple R and Street Triple Rx)	12	Use new fixings
Selector drum bearing retainer	12	Use new fixings
Input shaft bearing retainer	12	Use new fixings
Selector shaft retainer	12	Use new fixings
Spring abutment bolt	15	Use new fixings
Gear position sensor	5	
Transmission linkage pinch bolt	8	
Gear pedal pivot bolt	22	Use new fixings
Gear change rod adjuster nuts - Daytona 675 R and Street Triple Rx only	4	
Gear change rod adjuster nuts - All models except Daytona 675 R and Street Triple Rx	6	
Sprag clutch	Refer to section 7	

General Information

Lubrication System

Application	Torque (Nm)	Notes
Sump to crankcase	12	
Sump drain plug to sump	25	Fit a new washer
Oil pressure relief valve to crankcase	15	Apply ThreeBond 1305 to threads
Oil filter adapter (non encapsulated)	10	Apply ThreeBond 1305 to threads (crankcase end only)
Oil filter adapter (encapsulated)	16	Fit a new oil filter adapter
Oil filter to adapter	10	
Heat exchanger (Daytona 675 and Daytona 675 R)	10	
Oil pump drive chain retainer plate (Daytona 675 and Daytona 675 R)	10	Use new fixings
Heat exchanger to crankcase (Street Triple, Street Triple 660 cc, Street Triple R and Street Triple Rx)	59	Use a new sealing washer
Oil pump drive chain retainer plate (Street Triple, Street Triple 660 cc, Street Triple R and Street Triple Rx)	9	Use new fixings
Oil pump to crankcase	12	Use new fixings
Oil pump drive sprocket to pump shaft	12	Apply ThreeBond 1374 to threads
Transmission oil feed pipes to crankcase	12	Use new fixings
Baffle plate	9	Use new fixings
Oil pressure switch	13	Fit a new washer
Breather pipe (Daytona 675 and Daytona 675 R)	10	Use new fixings
Breather pipe (Street Triple, Street Triple 660 cc, Street Triple R and Street Triple Rx)	9	Use new fixings
Oil pick up pipe	12	Use new fixings
Oil spray jets (Daytona 675 and Daytona 675 R)	10	Use new fixings
Oil pump end cap	12	

Final Drive

Application	Torque (Nm)	Notes
Rear sprocket to sprocket carrier	55	
Rear sprocket studs to sprocket carrier	30	Use new fixings
Chain guard bolts	9	
Chain rubbing strip to swinging arm	9	

General Information

Cooling System

Application	Torque (Nm)	Notes
Water pump/oil pump assembly to crankcase	12	Use new fixings
Radiator upper mountings to frame (Daytona 675 and Daytona 675 R)	6	
Radiator lower mounting bracket to engine (Daytona 675 and Daytona 675 R)	6	
Radiator lower mountings to bracket (Daytona 675 and Daytona 675 R)	6	
Radiator upper right hand mounting to frame (Street Triple, Street Triple 660 cc, Street Triple R and Street Triple Rx)	9	
Radiator upper left hand mounting to frame (Street Triple, Street Triple 660 cc, Street Triple R and Street Triple Rx)	6	
Radiator lower mounting bracket to engine (Street Triple, Street Triple 660 cc, Street Triple R and Street Triple Rx)	6	
Radiator lower mountings to bracket (Street Triple, Street Triple 660 cc, Street Triple R and Street Triple Rx)	6	
Fan to radiator	8	
Water inlet elbow to head (Daytona 675 and Daytona 675 R)	10	
Water inlet elbow to head (Street Triple, Street Triple 660 cc, Street Triple R and Street Triple Rx)	8	
Water inlet elbow to head - lower radiator mounting bracket to water inlet elbow (Street Triple, Street Triple 660 cc, Street Triple R and Street Triple Rx)	6	
Water pump outlet pipe drain bolt (Street Triple, Street Triple 660 cc, Street Triple R and Street Triple Rx)	10	
Water pump outlet pipe (Street Triple, Street Triple 660 cc, Street Triple R and Street Triple Rx)	12	Use new fixings
Water pump inlet pipe	12	Use new fixings
Coolant hose T-piece to engine (Daytona 675 and Daytona 675 R)	6	
P-clip for coolant hose (Street Triple, Street Triple 660 cc, Street Triple R and Street Triple Rx)	12	Use new fixings
Thermostat housing to head	6	
Water temperature sensor	18	Apply ThreeBond 1374 to threads
Hose clips (screw type)	3	
Expansion tank (Daytona 675 and Daytona 675 R)	3	
Expansion tank M6 bolt (Street Triple, Street Triple 660 cc, Street Triple R and Street Triple Rx)	8	Use new fixings
Expansion tank M8 bolt (Street Triple, Street Triple 660 cc, Street Triple R and Street Triple Rx)	7	Use new fixings
Radiator inner cowl lower fixing (Street Triple, Street Triple 660 cc, Street Triple R and Street Triple Rx)	7	

Application	Torque (Nm)	Notes
Radiator inner cowl upper fixing (Street Triple, Street Triple 660 cc, Street Triple R and Street Triple Rx)	4	Use new fixings
Radiator cowl (Street Triple, Street Triple 660 cc, Street Triple R and Street Triple Rx)	4	Use new fixings

Fuel System, Exhaust System and Airbox

Application	Torque (Nm)	Notes
Fuel tank to bracket (front fixing)	9	
Fuel tank to frame (rear fixing)	8	
Fuel tank front bracket to frame	9	
Fuel cap to fuel tank	4	
Fuel pump mounting plate to fuel tank	9	
Throttle body transition piece to cylinder head	8	Refer to section 10 Use new fixings
Throttle position sensor	2	
Throttle body clip	1.5	
Exhaust downpipe to cylinder head		Refer to section 10
Exhaust silencer to frame (Daytona 675 and Daytona 675 R)	19	
Exhaust silencer to right hand control plate (Daytona 675 and Daytona 675 R)	19	
Exhaust clamp - header to silencer (Daytona 675 and Daytona 675 R)	5	
Exhaust valve actuator bracket to frame (Daytona 675 and Daytona 675 R)	12	
Exhaust valve actuator to bracket (Daytona 675 and Daytona 675 R)	12	
Exhaust butterfly cables (Daytona 675 and Daytona 675 R)	5	
Exhaust valve spindle nut (Daytona 675 and Daytona 675 R)	5	
Control plate heat shield (Daytona 675 and Daytona 675 R)	5	
Exhaust silencer to frame (Street Triple, Street Triple 660 cc, Street Triple R and Street Triple Rx)	19	
Exhaust silencer to right hand control plate (Street Triple, Street Triple 660 cc, Street Triple R and Street Triple Rx)	28	
Exhaust clamp - header to silencer (Street Triple, Street Triple 660 cc, Street Triple R and Street Triple Rx)	5	
Silencer heat shields	5	
Exhaust silencer to right hand passenger footrest - Japanese market only (Daytona 675 and Daytona 675 R)	27	
Exhaust silencer to right hand passenger footrest - Japanese market only (Street Triple R and Street Triple Rx)	28	
Silencer link pipe cover clips - Japanese market only	3	

General Information

Application	Torque (Nm)	Notes
Silencer link pipe clamp - Japanese market only	10	
Catalytic converter heat shield (Daytona 675 and Daytona 675 R)	5	
Silencer heat shield (Street Triple, Street Triple 660 cc, Street Triple R and Street Triple Rx)	5	
Catalytic converter heat shield (Street Triple, Street Triple 660 cc, Street Triple R and Street Triple Rx)	5	
Airbox upper section to lower	1.5	
Airbox lower to frame	8	
Airbox trumpet to throttle body	6	
Air temperature sensor	1.5	
Ambient air pressure sensor (Daytona 675, Daytona 675 R and Street Triple Rx)	3	
Ambient air pressure sensor (Street Triple, Street Triple 660 cc and Street Triple R)	1.5	
Ambient air pressure sensor bracket (Street Triple Rx only)	1.5	
MAP sensor	2.5	
Oxygen sensor	25	Apply anti-seize compound to threads
Gear position sensor	5	
Engine coolant temperature sensor	18	Apply ThreeBond 1374 to threads
Road speed sensor (models without ABS only)	4	Use new fixings
Road speed sensor blanking plug (models with ABS only)	4	Use new fixings
Engine speed sensor	6	Use new fixings
Fall detection switch	3	Use new fixings
Throttle cable lock nut	2.5	
Throttle cable guide (Daytona 675 and Daytona 675 R)	2.5	
Throttle cable guide (Street Triple, Street Triple 660 cc, Street Triple R and Street Triple Rx)	3	
Throttle cable wire guide to underside of headstock (non-ABS models)	5	
Fuel rail to throttle bodies	3.5	
Fuel rail to airbox (Daytona 675 and Daytona 675 R only)	4	
Carbon canister	3	
Purge valve bracket	3	
Engine control module bracket	1.5	
Restrictor 78 kW (106 PS) (Daytona 675 and Daytona 675 R only)	3	
Stepper motor	3.5	

Rear Suspension

Application	Torque (Nm)	Notes
Swinging arm spindle bolt	110	
Swinging arm rubbing strip bolts	9	
Chain guard	9	
Chain adjuster lock nut	20	
Rear suspension unit upper mounting nut	48	
Rear suspension unit upper clevis to frame	52	
Rear suspension unit lower mounting bolt	48	
Drag link pivot at frame	48	
Drop links to swinging arm	48	
Swinging arm end-float adjuster sleeve	6	

Front Suspension

Application	Torque (Nm)	Notes
Top yoke pinch bolt	26	
Lower yoke pinch bolt	20	
Fork top cap	See Text	
Upper yoke centre nut	90	
Damper assembly (Daytona 675, Street Triple, Street Triple 660 cc, Street Triple R and Street Triple Rx)	See Text	Apply ThreeBond 1344 to threads
Damper rod lock nut (Daytona 675, Street Triple, Street Triple 660 cc, Street Triple R and Street Triple Rx)	See Text	
Damper assembly (Daytona 675 R)	40	
Damper rod lock nut (Daytona 675 R)	20	
Handlebar clamp to fork (Daytona 675 and Daytona 675 R)	26	
Handlebar to top yoke (Daytona 675 and Daytona 675 R)	5	
Steering damper to lower yoke (Daytona 675 and Daytona 675 R)	20	
Steering damper to air inlet duct (Daytona 675 and Daytona 675 R)	18	
Steering damper rod lock nut (Daytona 675 and Daytona 675 R)	20	
Handlebar clamp to riser (Street Triple, Street Triple 660 cc, Street Triple R and Street Triple Rx)	26	Lubricate threads with engine oil
Handlebar riser to upper yoke (Street Triple, Street Triple 660 cc, Street Triple R and Street Triple Rx)	38	
Switchgear	2.5	
Handlebar end weights	5	Use new fixings
Top yoke wire guide to handlebar riser fixings (Street Triple, Street Triple 660 cc, Street Triple R and Street Triple Rx)	20	

General Information

Wheels

Application	Torque (Nm)	Notes
Front wheel spindle/axle bolt	65	
Front wheel spindle pinch bolts (all models except Daytona 675 R)	22	
Front wheel spindle pinch bolts (Daytona 675 R only)	20	
Rear wheel spindle/axle bolt	110	

Front Brakes

Application	Torque (Nm)	Notes
Front brake caliper to fork (Daytona 675, Daytona 675 R, Street Triple R and Street Triple Rx)	55	Apply proprietary copper based grease to the first four threads
Front brake caliper to fork (Street Triple and Street Triple 660 cc)	21	
Front brake caliper half to caliper half (Street Triple R and Street Triple Rx)	22	Use new fixings
Front brake pad retaining pin (all models except Daytona 675 R)	18	
Front brake pad retaining pin plug (Street Triple and Street Triple 660 cc)	3	
Front brake caliper bleed screw (all models except Daytona 675 R)	6	
Front brake caliper bleed screw (Daytona 675 R only)	8	
Front brake hose to caliper	25	Replace sealing washer(s) if removed
Front brake master cylinder to handlebar (Street Triple, Street Triple 660 cc, Street Triple R and Street Triple Rx)	12	
Front brake master cylinder to handlebar (Daytona 675 and Daytona 675 R)	8	
Front brake master cylinder reservoir to mounting (Daytona 675 and Daytona 675 R)	10	
Front brake master cylinder reservoir to mounting (Street Triple R and Street Triple Rx)	7	
Front brake hose(s) to master cylinder	25	Replace sealing washer(s) if removed
Front brake disc to wheel	22	Use new fixings
Front brake fluid reservoir bracket to handlebar (Daytona 675 and Daytona 675 R)	10	
Wire guide for brake hose	3	
Front brake lever pivot	1	
Front brake lever pivot nut	6	
Brake light switch	1	

Application	Torque (Nm)	Notes
Front brake reservoir cover (Street Triple and Street Triple 660 cc)	1.5	
Front brake reservoir cover (Daytona 675 R)	1.5	
Front brake reservoir safety clip (Daytona 675, Street Triple R and Street Triple Rx)	1	

Rear Brakes

Application	Torque (Nm)	Notes
Rear brake caliper bleed screw	14	
Rear brake hose to caliper	25	Replace sealing washer(s) if removed
Rear brake master cylinder to control plate (includes heel guard)	16	
Rear brake lever to control plate	22	Use new fixings
Rear brake master cylinder reservoir to frame (Daytona 675 and Daytona 675 R)	6	
Rear brake master cylinder reservoir to frame (Street Triple, Street Triple 660 cc, Street Triple R and Street Triple Rx)	6	
Rear brake hose to master cylinder	25	Replace sealing washer(s) if removed
Rear brake disc to wheel	22	Use new fixings
Brake hose P-clip bolt	6	
Pushrod lock nut	18	

ABS System

Application	Torque (Nm)	Notes
ABS module mounting bracket	9	Use new fixings
ABS module to mounting bracket	9	Use new fixings
Wheel speed sensors	9	Use new fixings
ABS lines to modulator	15	
ABS brake line to headstock (Daytona 675 and Daytona 675 R)	15	Use new fixings
ABS brake line to headstock (Street Triple, Street Triple 660 cc, Street Triple R and Street Triple Rx)	9	Use new fixings
ABS brake line to bracket at rear master cylinder	9	Use new fixings

General Information

Frame, Footrests, Control Plates and Engine Mountings

Application	Torque (Nm)	Notes
Upper crankcase to frame	Refer to section 9	
Lower crankcase to frame	Refer to section 9	
Cylinder head to frame	Refer to section 9	
Engine mounting bracket to frame	Refer to section 9	
Engine mounting bracket to cylinder head	Refer to section 9	
Control plate to frame	24	
Left hand heel guard to control plate (Daytona 675 and Daytona 675 R)	9	Use new fixings
Left hand heel guard to control plate (Street Triple, Street Triple 660 cc, Street Triple R and Street Triple Rx)	12	
Rear footrest hanger to frame	27	
Rear footrest hanger to brace (Street Triple, Street Triple 660 cc and Street Triple R only) (Street Triple Rx for Japan market only)	27	
Side stand mounting bracket	45	
Side stand pivot	20	Apply ThreeBond 1360 to threads
Side stand lock nut	20	
Side stand spring retainer	7	
Side stand switch	7	
Bank angle indicator	9	Fit new bank angle indicators if removed
Swinging arm to frame adjuster	6	
Rear subframe to frame fixings	48	Lubricate the threads of the lower bolts only with a smear of proprietary high temperature copper based grease.
Seat lock to frame (Daytona 675, Daytona 675 R and Street Triple Rx)	6	
Seat lock to frame (Street Triple, Street Triple 660 cc and Street Triple R)	5	
Rear bridge to rear subframe	12	
Front bridge to rear subframe (Daytona 675 and Daytona 675 R)	5	
Rear subframe's rear fixing	20	

Application	Torque (Nm)	Notes
Front subframe (Daytona 675 and Daytona 675 R)	7	Use new fixings
Seat support to rear subframe (Street Triple, Street Triple 660 cc and Street Triple R)	3	
Front subframe (Street Triple, Street Triple 660 cc, Street Triple R and Street Triple Rx)	13	

Electrical

Application	Torque (Nm)	Notes
Alternator rotor to crankshaft	120	
Alternator stator to cover	12	Use new fixings
Alternator cable bracket	6	Use new fixings
Alternator regulator to bracket (Daytona 675 and Daytona 675 R)	4	
Alternator regulator to bracket (Street Triple, Street Triple 660 cc, Street Triple R and Street Triple Rx)	9	
Alternator regulator bracket to frame (Street Triple, Street Triple 660 cc, Street Triple R and Street Triple Rx)	12	
Starter motor to crankcase	10	
Starter motor power lead connection	3	
Starter motor solenoid bracket	4	
Spark plug to cylinder head	12	
Horn	15	
Engine control unit bracket	1.5	
Ignition switch	12	Use new fixings
Instrument pack	3	
Headlight vertical adjuster (Street Triple, Street Triple 660 cc, Street Triple R and Street Triple Rx)	15	
Headlight horizontal adjuster (Street Triple, Street Triple 660 cc, Street Triple R and Street Triple Rx)	30	
Headlight to headlight bowl (Street Triple, Street Triple 660 cc, Street Triple R and Street Triple Rx)	3	
Rear light (Daytona 675, Daytona 675 R and Street Triple Rx)	3	
Rear light (Street Triple, Street Triple 660 cc and Street Triple R)	4	
Rear light moulding	3	
Licence plate light	1	
Front indicator	3	
Rear indicator	3	
Moulding, harness retention	3	
Wiring harness ground connection (Daytona 675 and Daytona 675 R)	9	
Wiring harness ground connection (Street Triple, Street Triple 660 cc, Street Triple R and Street Triple Rx)	12	

General Information

Application	Torque (Nm)	Notes
Headlight to cockpit (Daytona 675 and Daytona 675 R)	3	
Headlight bracket to frame (Street Triple, Street Triple 660 cc, Street Triple R and Street Triple Rx)	13	
Immobiliser to air box (Daytona 675 and Daytona 675 R)	3	
Immobiliser to air box (Street Triple, Street Triple 660 cc, Street Triple R and Street Triple Rx)	1.5	
Starter lead P-clip (Street Triple, Street Triple 660 cc, Street Triple R and Street Triple Rx)	12	
Starter solenoid	5	

Bodywork

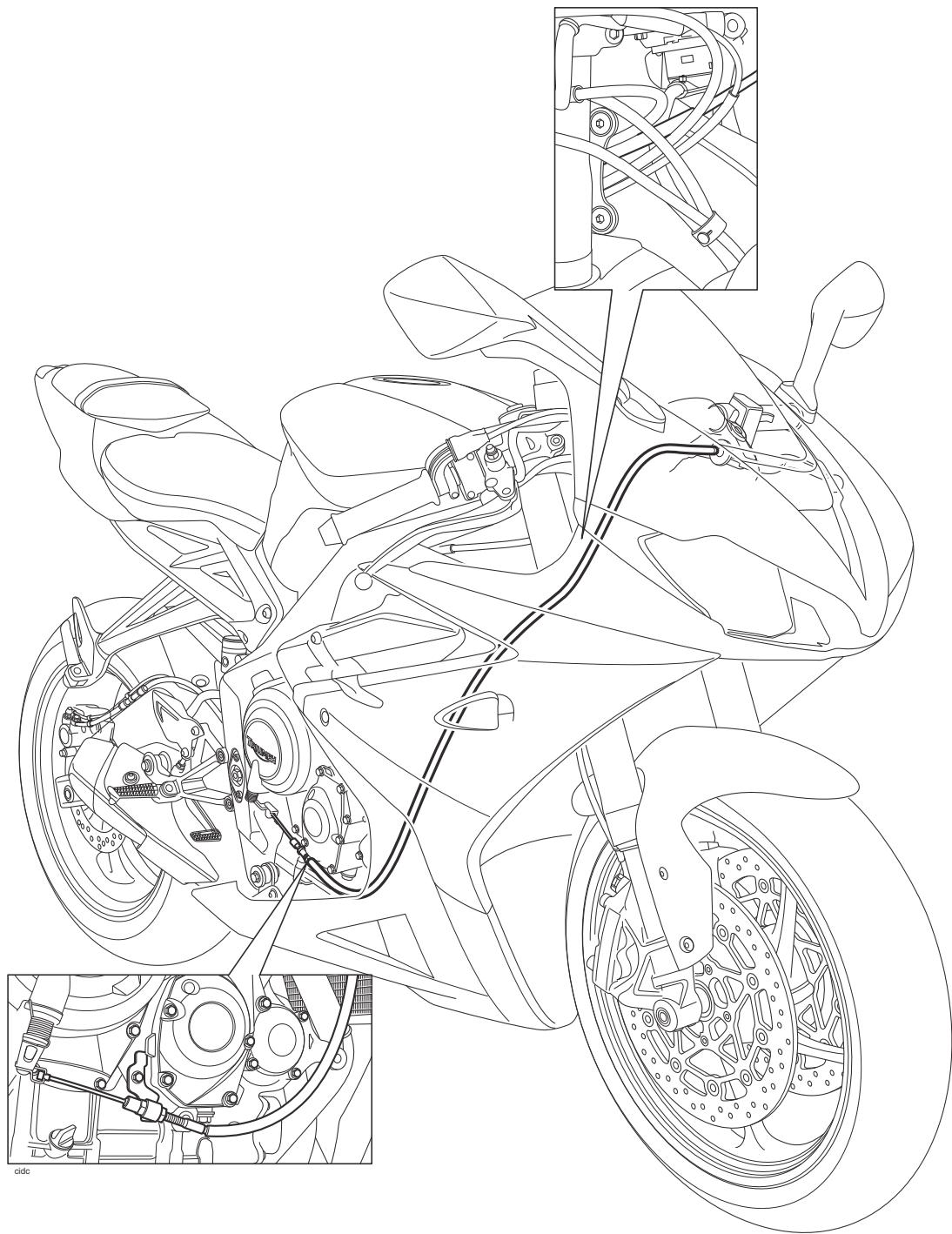
Application	Torque (Nm)	Notes
Mirror (Daytona 675 and Daytona 675 R)	8	
Rear panels to frame (Daytona 675, Daytona 675 R and Street Triple Rx)	3	
Mirror (Street Triple, Street Triple 660 cc, Street Triple R and Street Triple Rx)	25	Use new fixings
Front mudguard to forks	6	
Rear mudguard to subframe	4	Use new fixings
Rear panel front fixing (Street Triple, Street Triple 660 cc and Street Triple R)	3	
Rear panel rear fixing (Street Triple, Street Triple 660 cc and Street Triple R)	3	
Rear lower panel	3	
Rear indicator hanger	8	
Licence plate moulding to hanger lock nuts	3	
Licence plate moulding to hanger	3	
Cockpit fixings (Daytona 675 and Daytona 675 R)	Refer to section 16	
Windscreen fixings (Daytona 675 and Daytona 675 R)	1	
Cockpit subframe side fixings (Daytona 675 and Daytona 675 R)	7	
Cockpit infill panel bracket (Daytona 675 and Daytona 675 R)	6	
Air intake duct (Daytona 675 and Daytona 675 R)	1	
Cockpit front finisher (Daytona 675 and Daytona 675 R)	1.5	
Cockpit infill panels (Daytona 675 and Daytona 675 R)	3	
Cockpit lower moulding (Daytona 675 and Daytona 675 R)	3	
Main light to cockpit (Daytona 675 and Daytona 675 R)	3	
Left hand fairing finisher (Daytona 675 and Daytona 675 R)	3	
Upper to lower fairing front fixing (Daytona 675 and Daytona 675 R)	3	
Upper fairing infill panel (Daytona 675 and Daytona 675 R)	1.5	

General Information

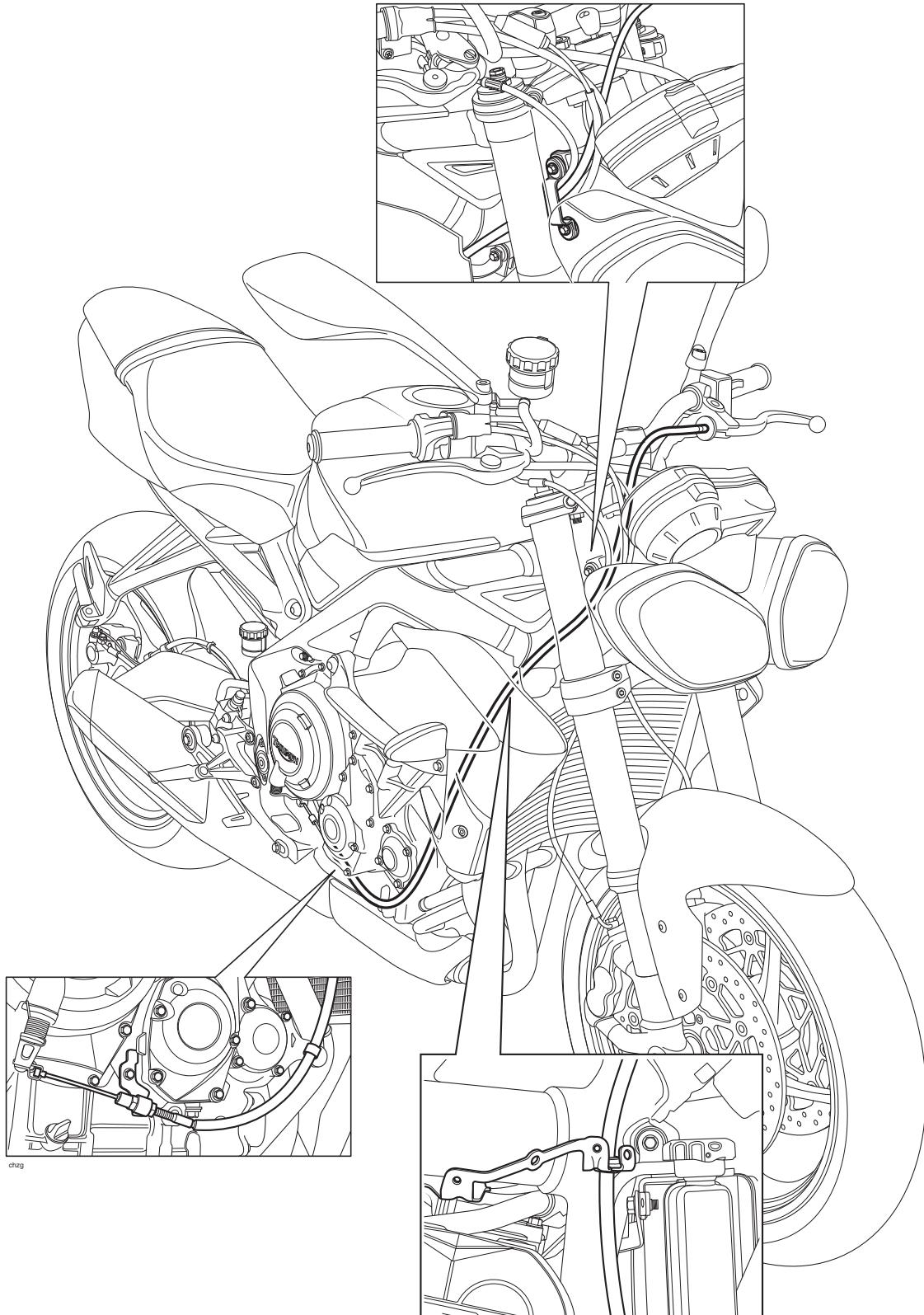
Application	Torque (Nm)	Notes
Fairing fixings (Daytona 675 and Daytona 675 R)	3	
Fairing to frame (Daytona 675 and Daytona 675 R)	5	
Rider's seat (Daytona 675, Daytona 675 R and Street Triple Rx)	9	
Seat support (Street Triple, Street Triple 660 cc and Street Triple R)	3	
Flyscreen M5 bolt (Street Triple, Street Triple 660 cc, Street Triple R and Street Triple Rx) if fitted	3	
Flyscreen M6 bolt (Street Triple, Street Triple 660 cc, Street Triple R and Street Triple Rx) if fitted	7	
Hugger (Daytona 675 and Daytona 675 R)	4	
Hugger (Street Triple, Street Triple 660 cc, Street Triple R and Street Triple Rx)	6	
Air intake moulding (Street Triple, Street Triple 660 cc, Street Triple R and Street Triple Rx)	4	Use new fixings
Radiator inner cowl upper fixing (Street Triple, Street Triple 660 cc, Street Triple R and Street Triple Rx)	4	Use new fixings
Radiator inner cowl lower fixing (Street Triple, Street Triple 660 cc, Street Triple R and Street Triple Rx)	7	
Radiator cowls (Street Triple, Street Triple 660 cc, Street Triple R and Street Triple Rx)	4	
Radiator cowls bracket (Street Triple, Street Triple 660 cc, Street Triple R and Street Triple Rx) if fitted	4	
Radiator outer cowls (Street Triple, Street Triple 660 cc, Street Triple R and Street Triple Rx) if fitted	3	
Radiator outer cowl brackets (Street Triple, Street Triple 660 cc, Street Triple R and Street Triple Rx) if fitted	4	
Left hand finisher (Street Triple, Street Triple 660 cc, Street Triple R and Street Triple Rx)	3	
Belly pan front moulding (Street Triple, Street Triple 660 cc and Street Triple R if fitted and Street Triple Rx)	2.5	
Belly pan side mouldings to brackets (Street Triple, Street Triple 660 cc and Street Triple R if fitted and Street Triple Rx)	4	
Belly pan brackets (Street Triple, Street Triple 660 cc and Street Triple R if fitted and Street Triple Rx)	7	Use new fixings
Grab rail (Street Triple, Street Triple 660 cc, Street Triple R and Street Triple Rx) if fitted	20	
Fuel tank infill panel (Street Triple, Street Triple 660 cc, Street Triple R and Street Triple Rx)	3	
Fuel tank infill panel (Daytona 675 and Daytona 675 R)	3	
Frame protection bars if fitted	48	
Headstock cable guide (Daytona 675 and Daytona 675 R)	7	
Frame finishers	3	
Front reflectors (certain markets only)	3	

General Information

Clutch Cable Routing – Daytona 675 and Daytona 675 R

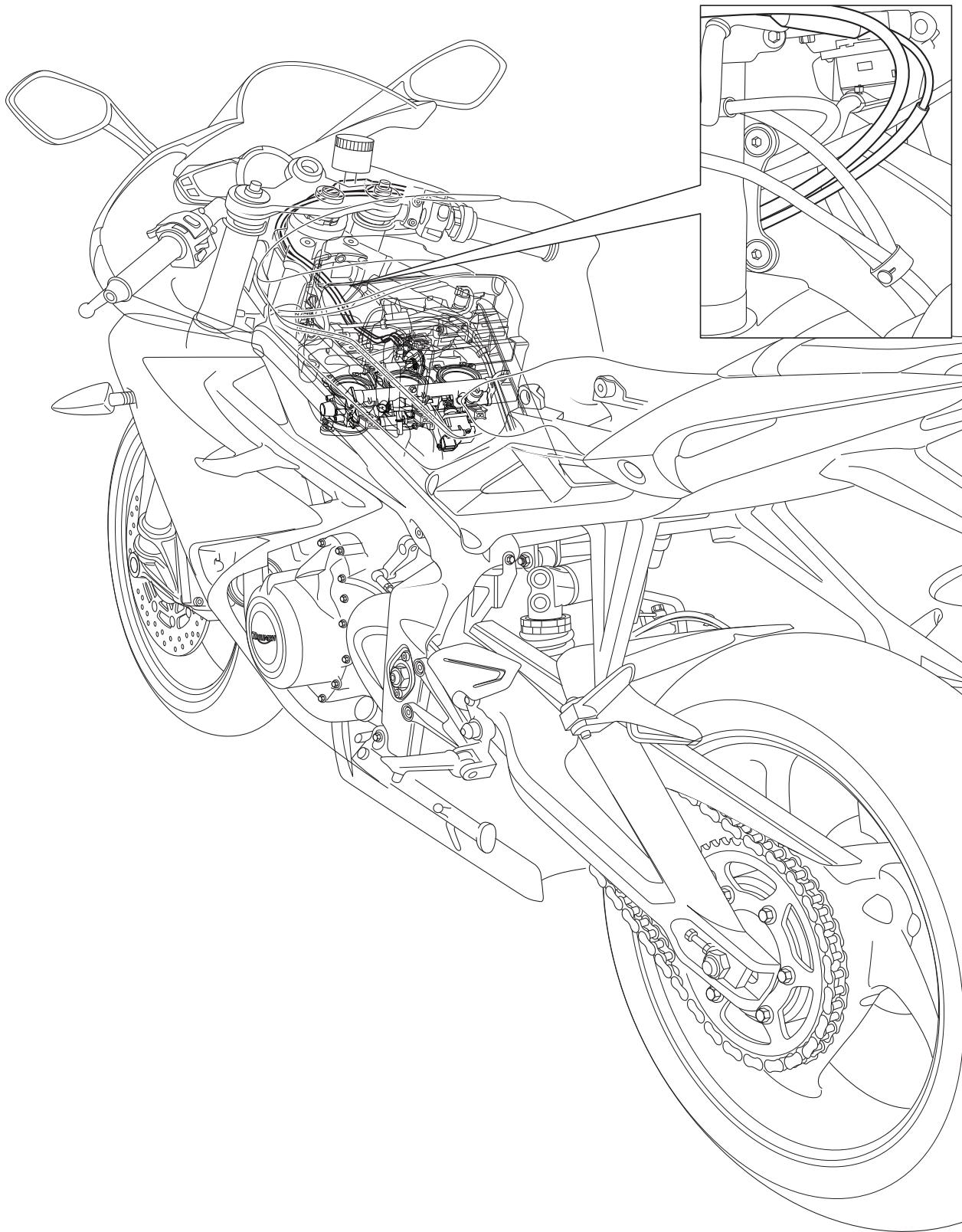


Clutch Cable Routing - Street Triple, Street Triple 660 cc, Street Triple R and Street Triple Rx



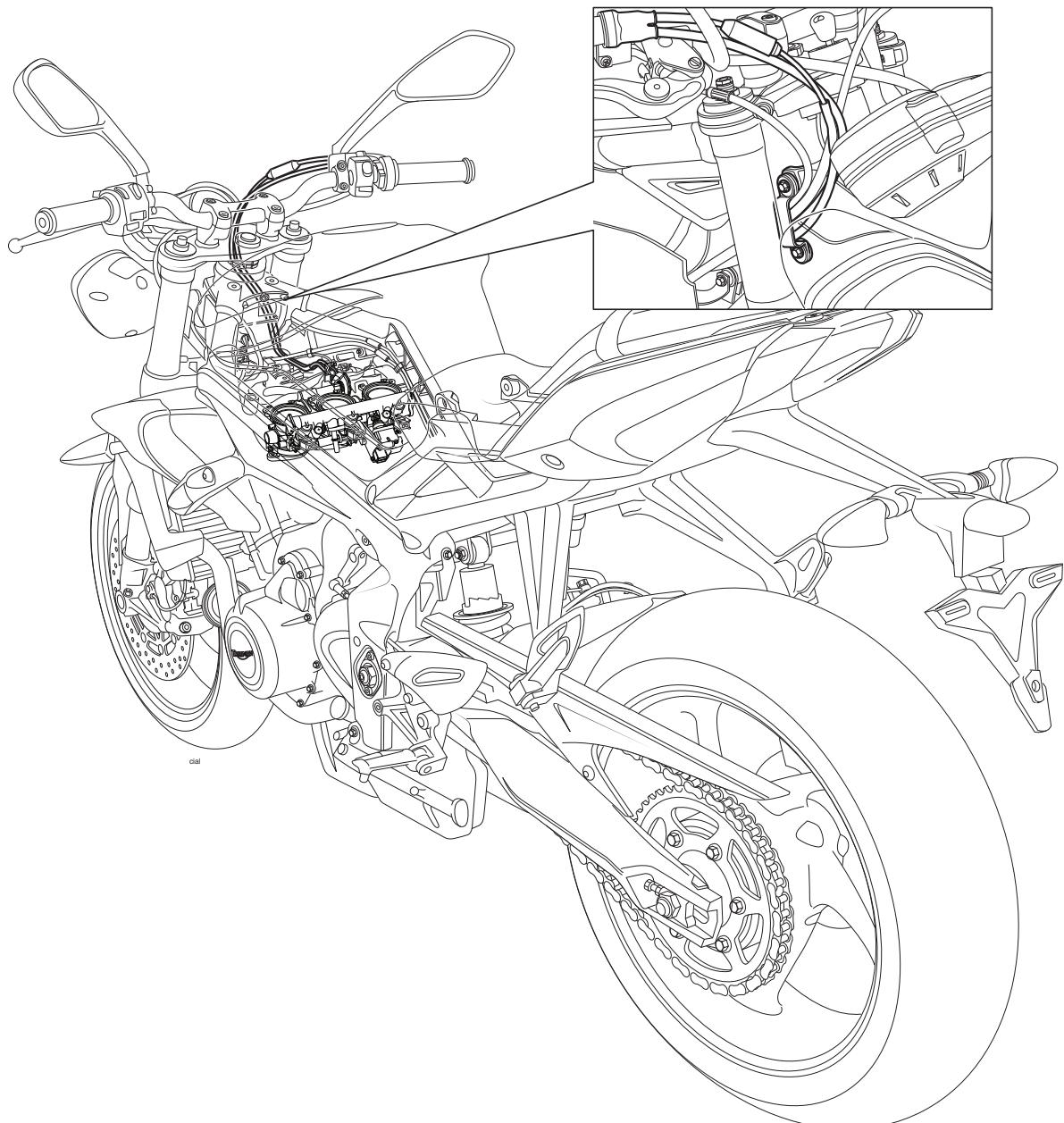
General Information

Throttle Cable Routing - Daytona 675 and Daytona 675 R



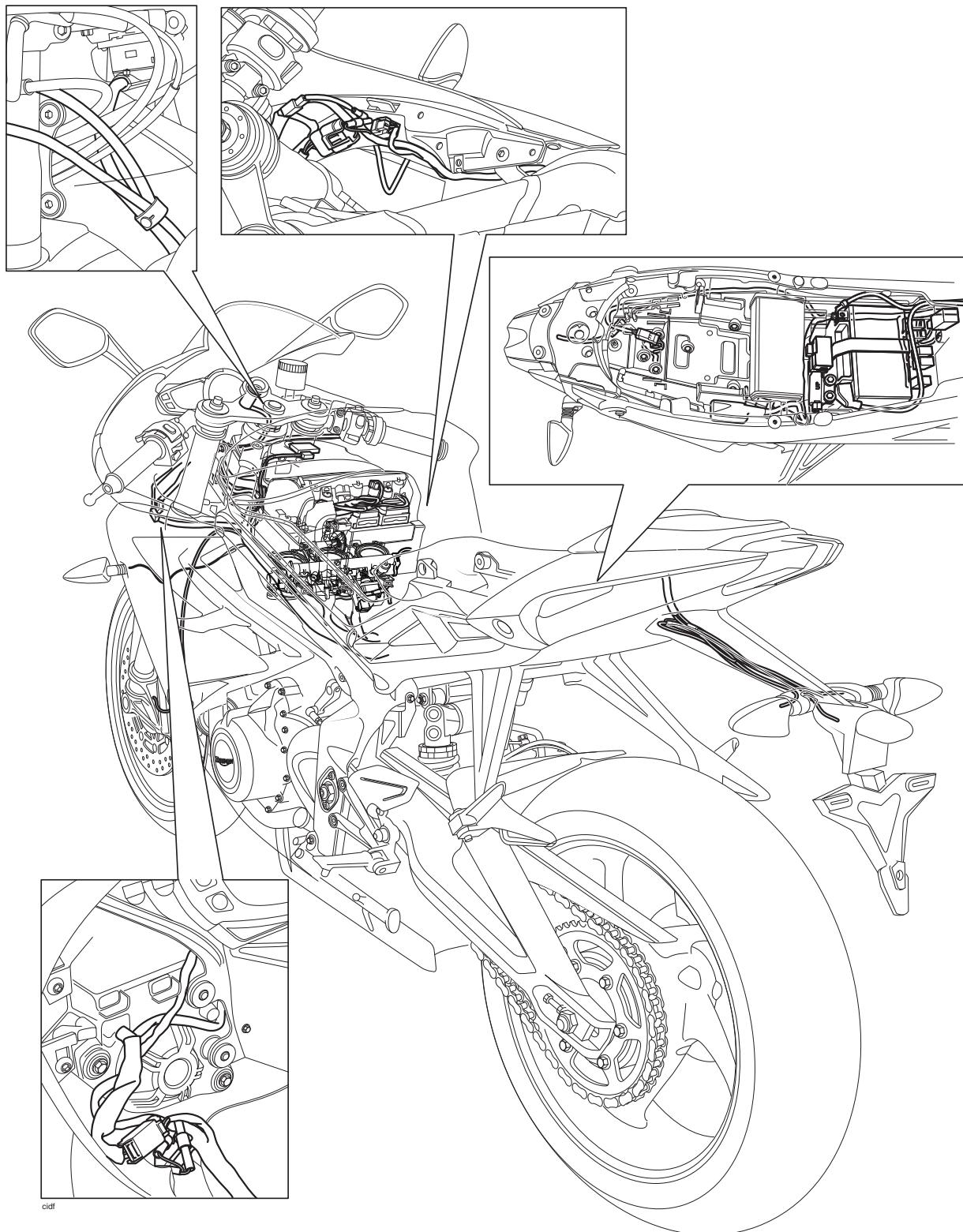
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Throttle Cable Routing - Street Triple, Street Triple 660 cc, Street Triple R and Street Triple Rx

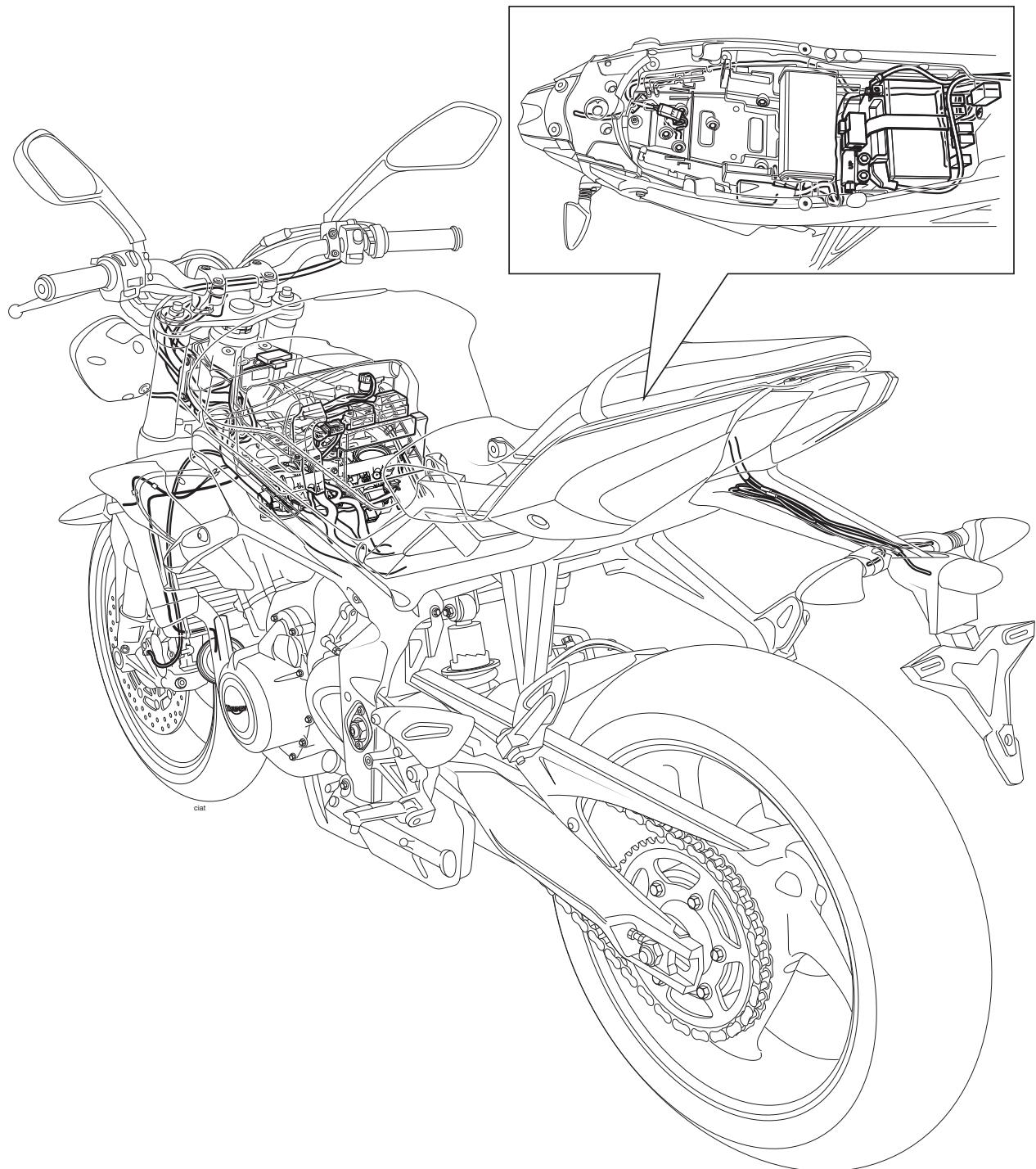


General Information

Main Wiring Harness Routing - Daytona 675 and Daytona 675 R

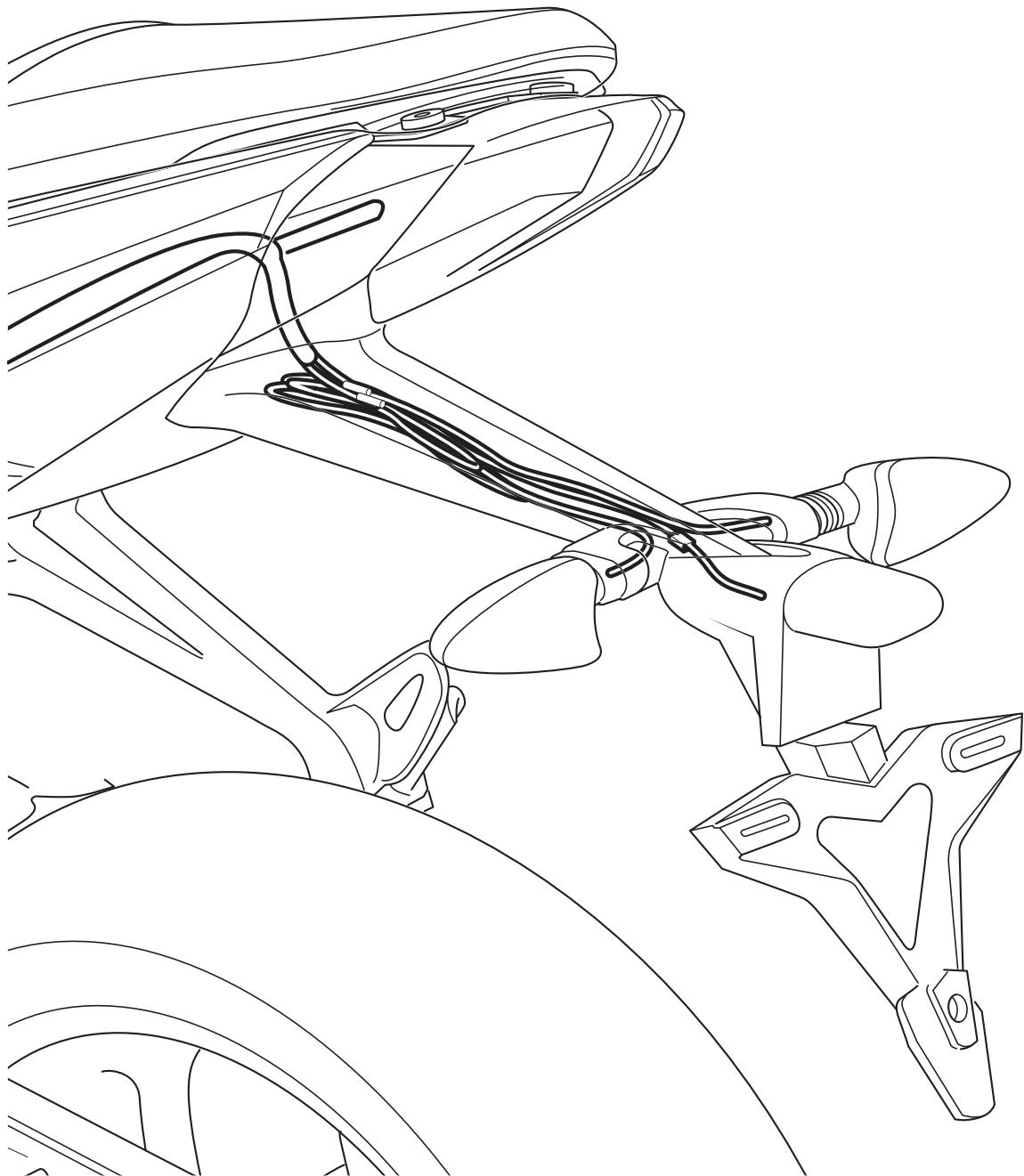


Main Wiring Harness Routing - Street Triple, Street Triple 660 cc, Street Triple R and Street Triple Rx

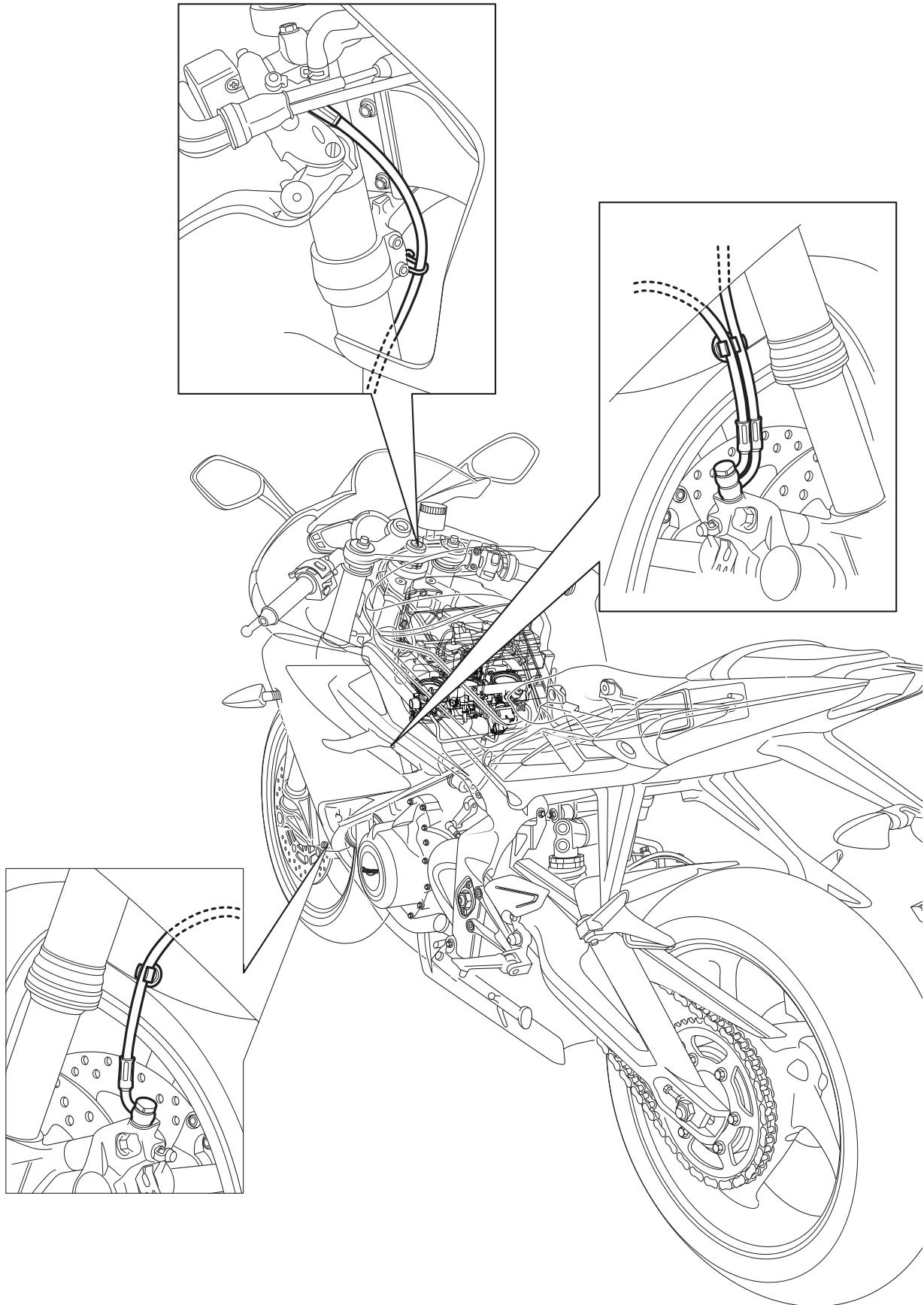


General Information

Rear Light Harness Routing



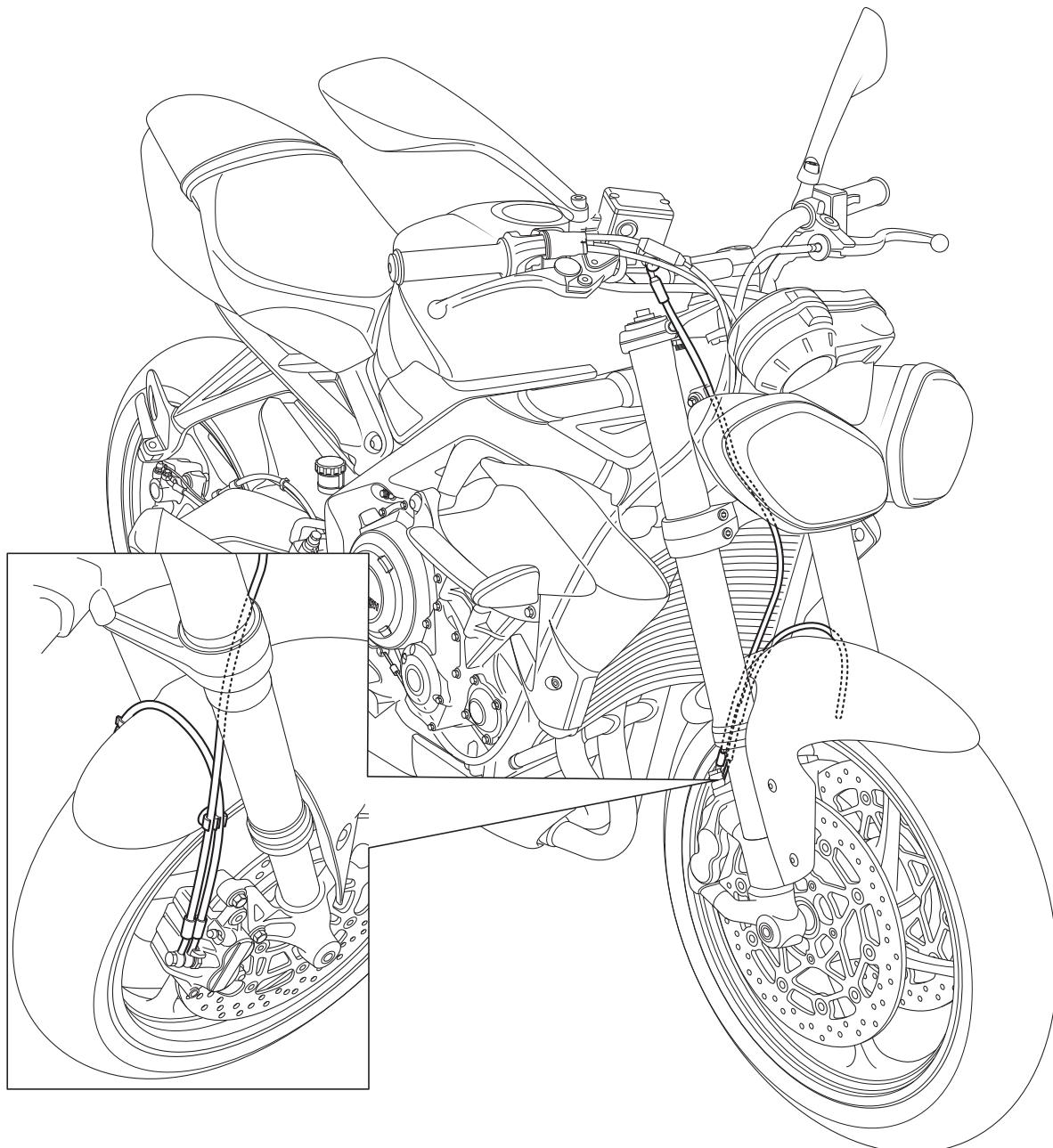
Front Brake Hose Routing - Daytona 675 and Daytona 675 R



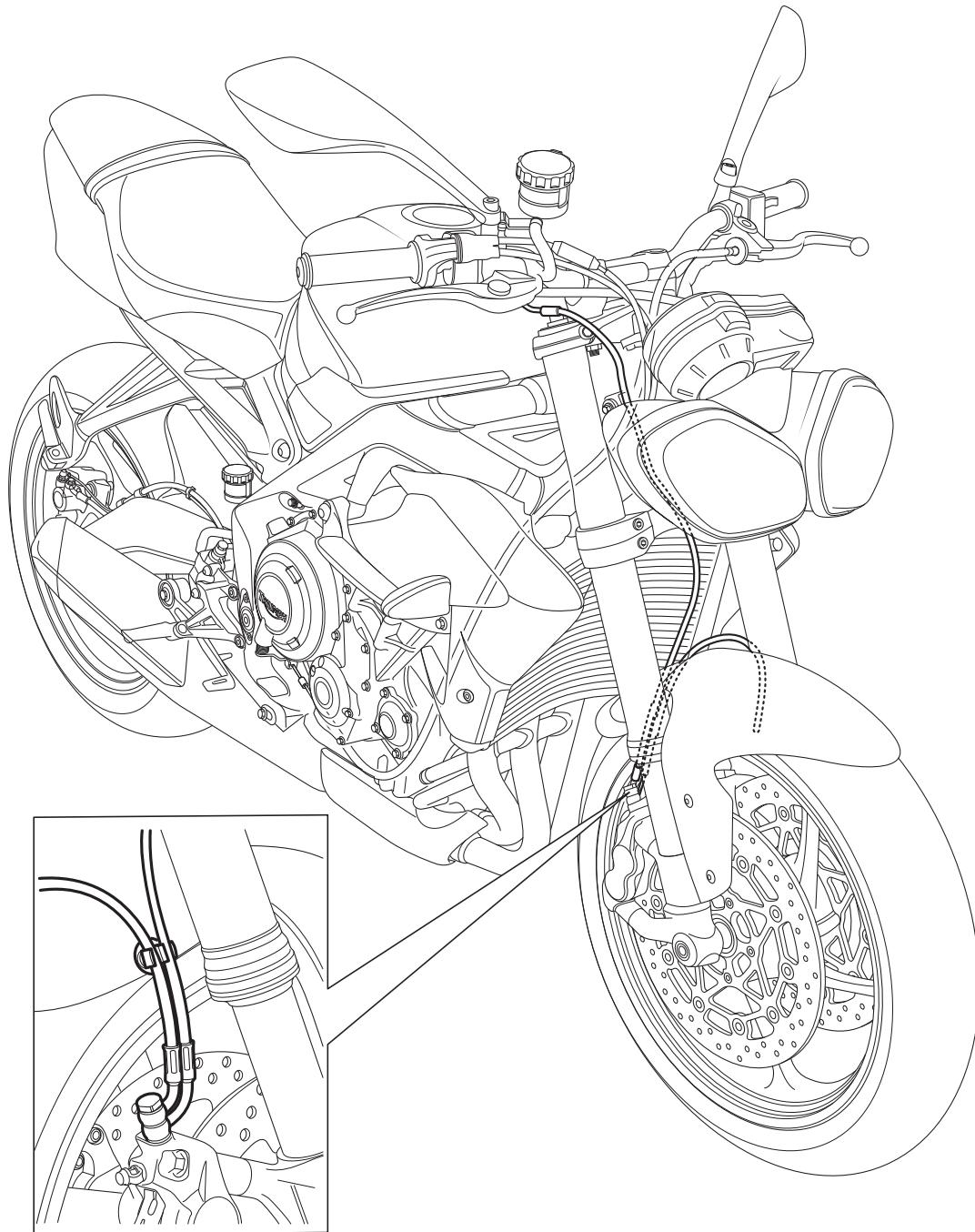
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General Information

Front Brake Hose Routing - Street Triple and Street Triple 660 cc

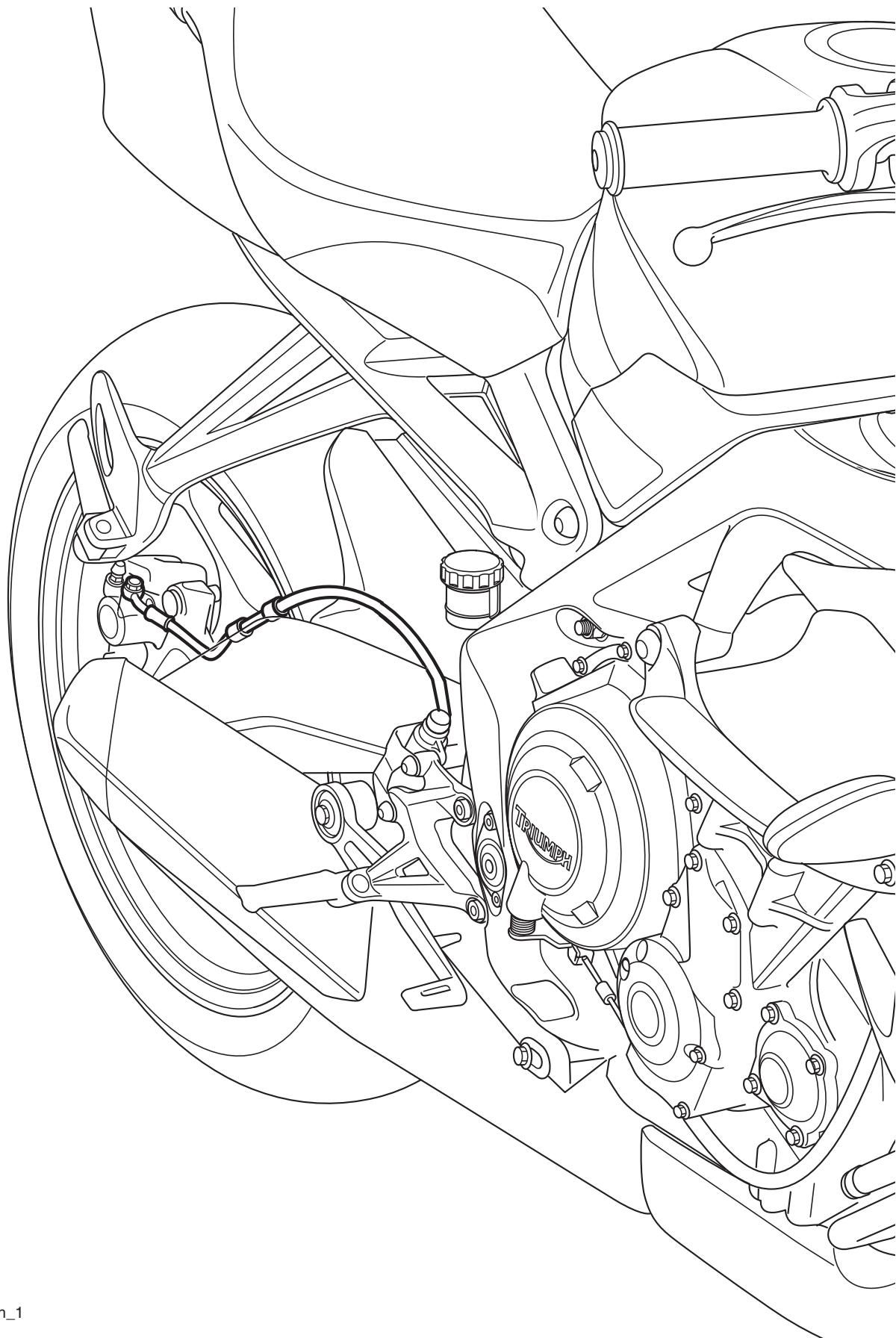


Front Brake Hose Routing - Street Triple R and Street Triple Rx



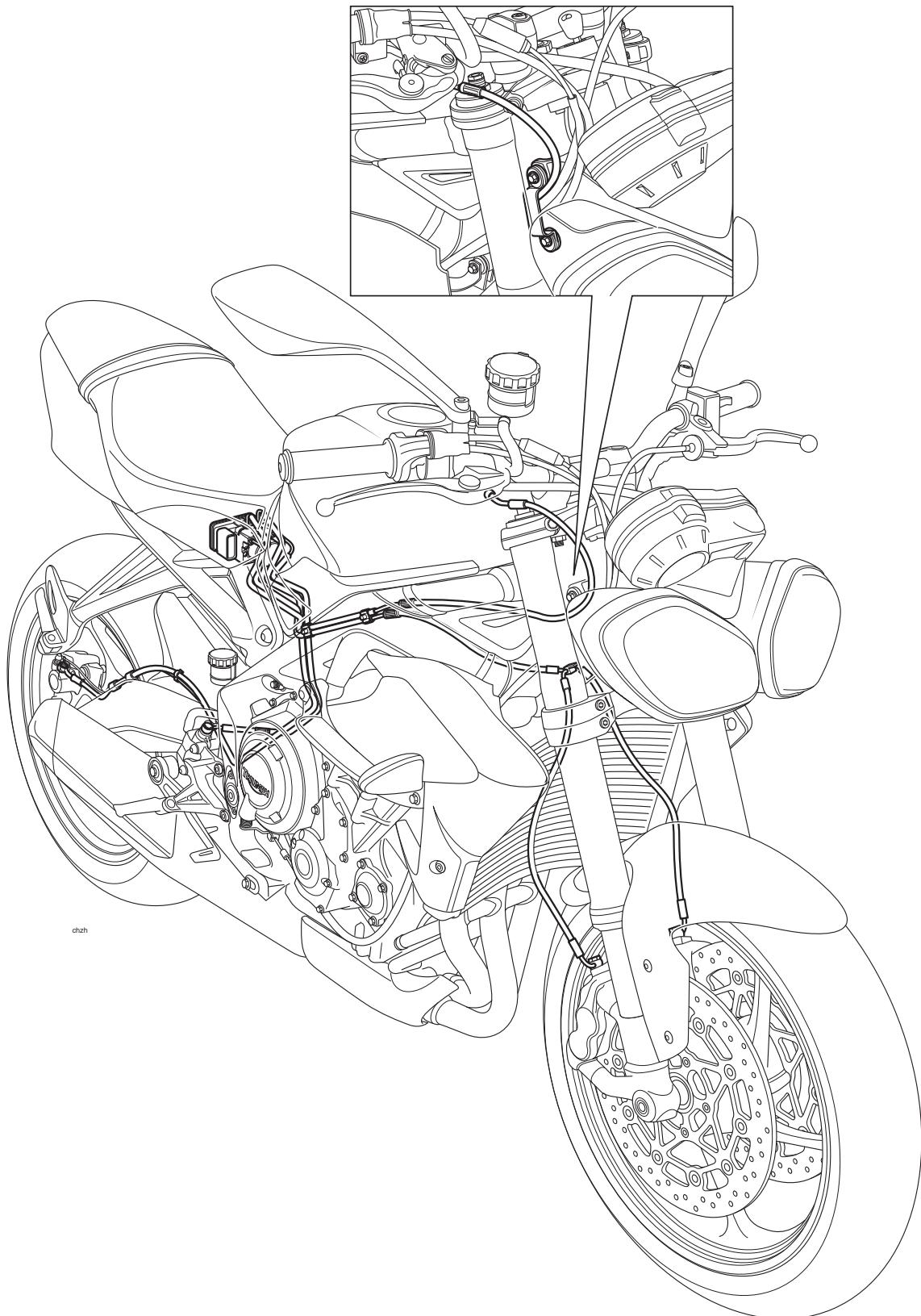
General Information

Rear Brake Hose Routing



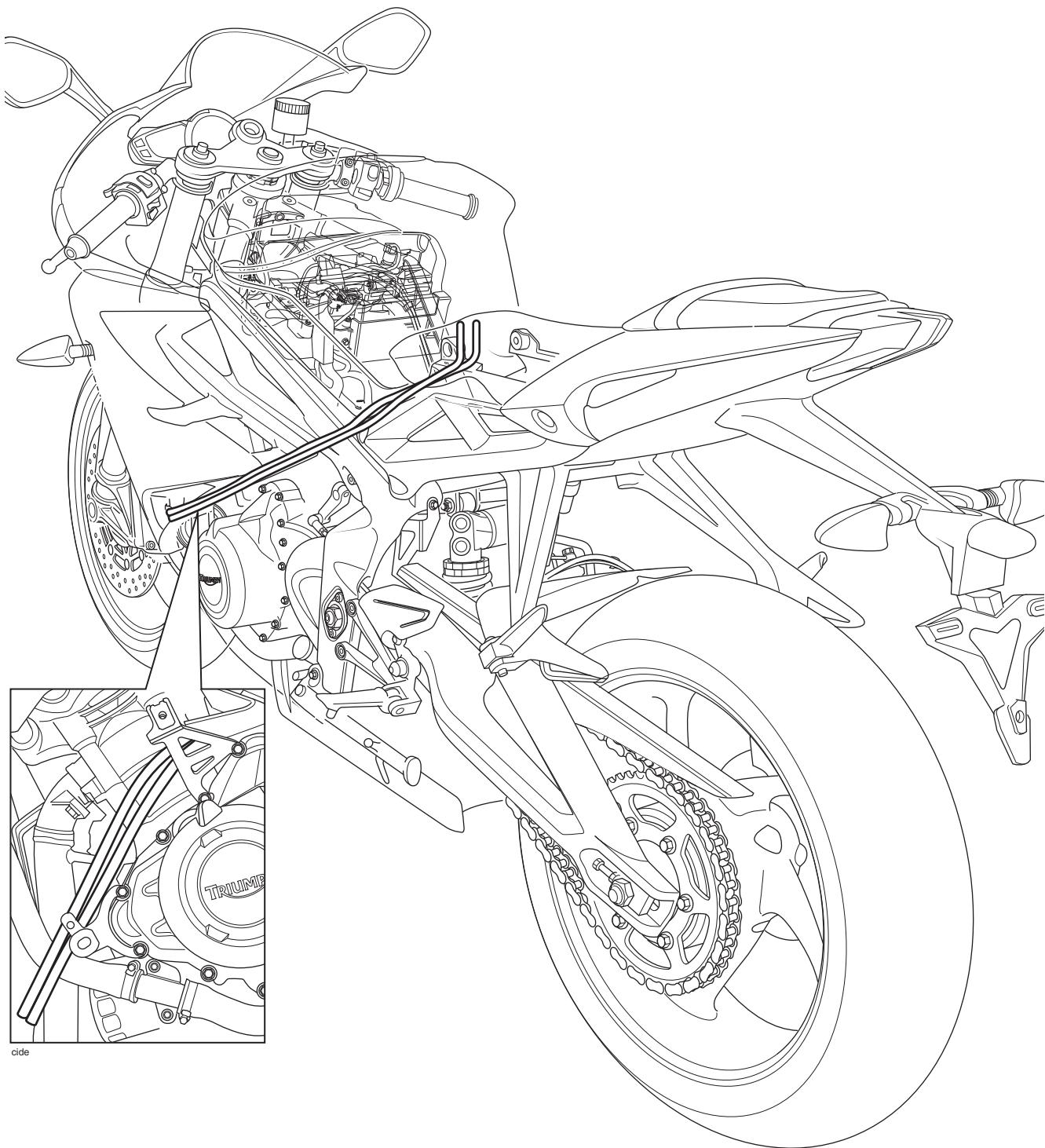
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ABS Brake Hose Routing - Street Triple R shown

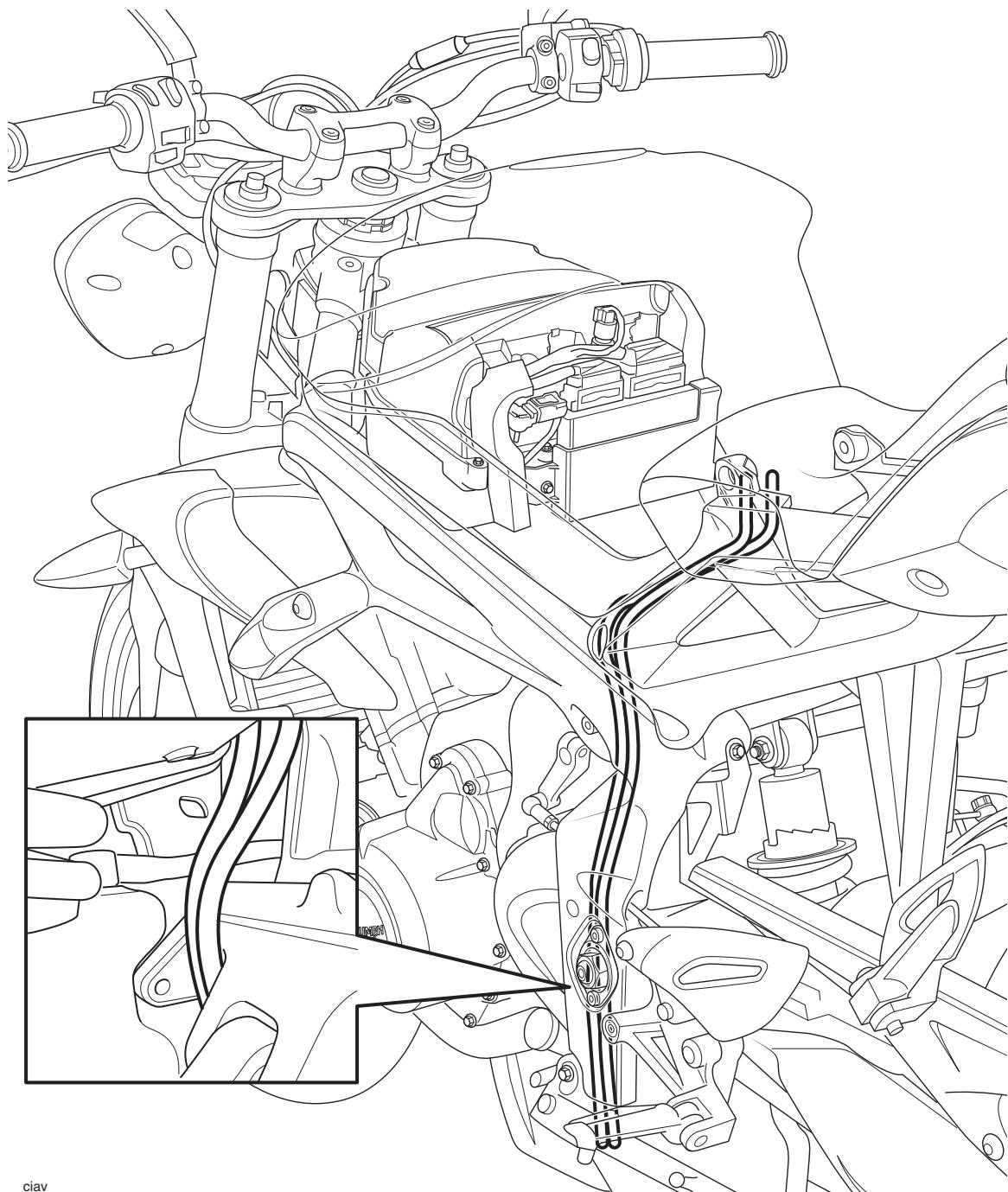


General Information

Fuel Tank Breather Hose Routing - Daytona 675 and Daytona 675 R



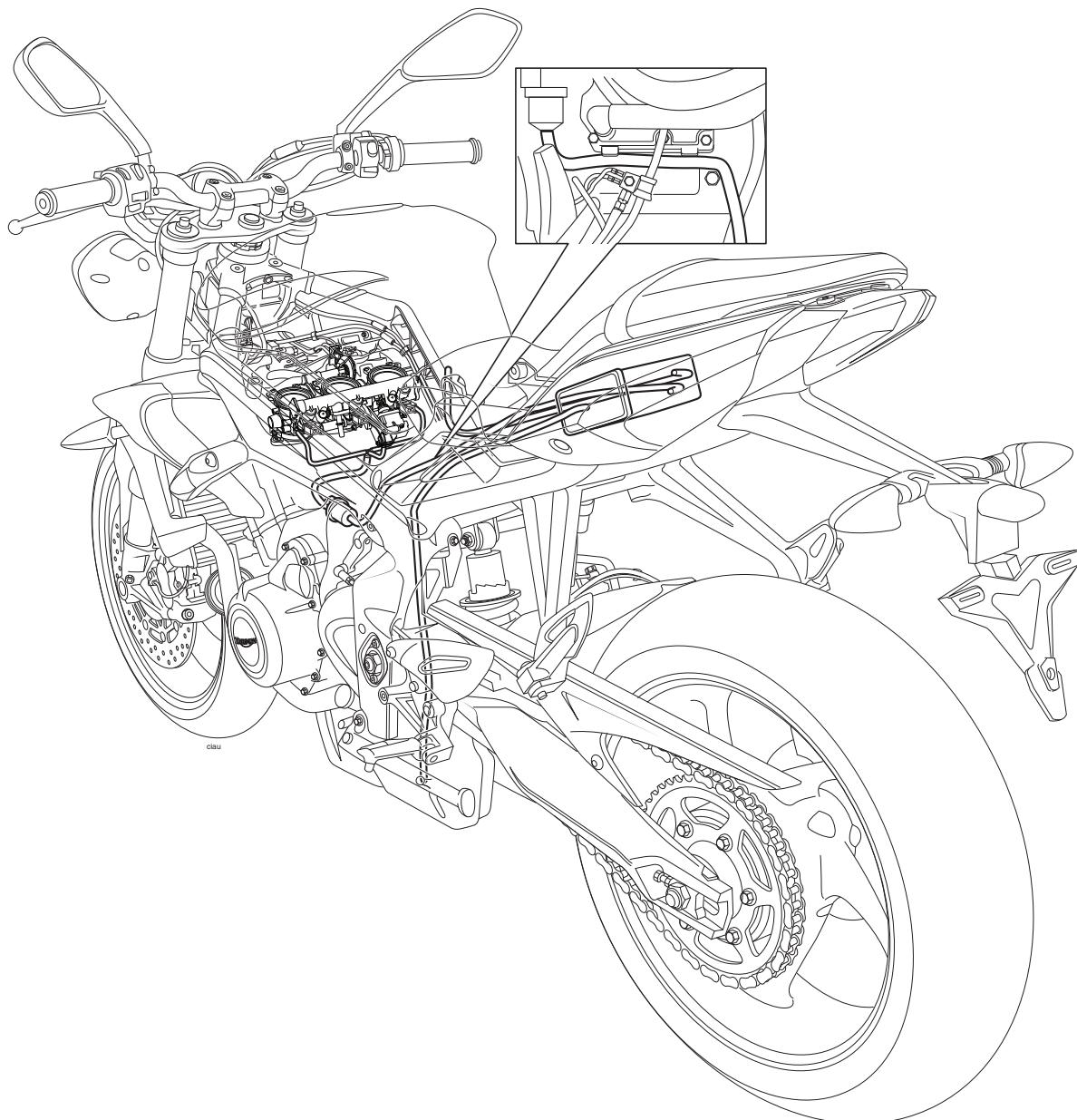
Fuel Tank Breather Hose Routing - Street Triple, Street Triple 660 cc, Street Triple R and Street Triple Rx



ciav

General Information

Fuel Tank Breather Hose Routing - Models with Evaporative Emissions



2 Scheduled Maintenance

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Scheduled Maintenance Chart	2.3

Scheduled Maintenance

Introduction

To maintain the motorcycle in a safe and reliable condition, the maintenance and adjustments outlined in this section must be carried out as specified in the schedule of daily checks, and also in line with the scheduled maintenance chart.

Weather, terrain and geographical location affect maintenance. The maintenance schedule should be adjusted to match the particular environment in which the vehicle is used and the demands of the individual owner. For advice on adjusting the service schedule, consult your authorised Triumph dealer.



Warning

In order to correctly carry out the maintenance items listed in the scheduled maintenance chart, special tools and specialist knowledge will be required. As only an authorised Triumph dealer will have this knowledge and equipment, Triumph strongly recommends that your authorised Triumph dealer carries out all scheduled maintenance.

A dangerous riding condition could result from incorrect maintenance leading to loss of motorcycle control and an accident.

Scheduled maintenance may be carried out by your dealer in three ways; annual maintenance, mileage based maintenance or a combination of both, depending on the mileage the motorcycle travels each year.

- Motorcycles travelling fewer than 6,000 miles (10,000 km) per year must be maintained annually. In addition to this, mileage-based items require maintenance at their specified intervals, as the motorcycle reaches this mileage.
- Motorcycles travelling approximately 6,000 miles (10,000 km) per year must have the annual maintenance and the specified mileage-based items carried out together.
- Motorcycles travelling more than 6,000 miles (10,000 km) per year must have the mileage-based items maintained as the motorcycle reaches the specified mileage. In addition to this, annual based items will require maintenance at their specified annual intervals.

In all cases maintenance must be carried out at or before the specified maintenance intervals shown. Consult an authorised Triumph dealer for advice on which maintenance schedule is most suitable for your motorcycle.



Warning

All maintenance is vitally important and must not be neglected. Incorrect maintenance or adjustment may cause one or more parts of the motorcycle to malfunction. A malfunctioning motorcycle is dangerous and may lead to an accident.



Warning

Triumph Motorcycles cannot accept any responsibility for damage or injury resulting from incorrect maintenance or improper adjustment carried out by the owner.

Since incorrect or neglected maintenance can lead to a dangerous riding condition, always have an authorised Triumph dealer carry out the scheduled maintenance of this motorcycle.

Scheduled Maintenance Chart

Operation Description	Odometer Reading in Miles (Km) or time period, whichever comes first					
		First Service	Annual Service	Mileage Based Service		
	Every	500 (800) one month	Year	6,000 and 18,000 (10,000 and 30,000)	12,000 (20,000)	24,000 (40,000)
Lubrication						
Engine oil cooler - check for leaks	Day	•	•	•	•	•
Engine oil - renew	-	•	•	•	•	•
Engine oil filter - renew	-	•	•	•	•	•
Fuel System and Engine Management						
Throttle cables - check/adjust	Day	•	•	•	•	•
Fuel system - check for leaks, chafing etc.	Day	•	•	•	•	•
Throttle body plate (butterfly) - check/clean	-			•	•	•
AutoScan - carry out a full AutoScan using the Triumph diagnostic tool (print a customer copy)	-	•	•	•	•	•
Exhaust clamp bolts - check/adjust	-	•	•	•	•	•
Secondary air injection system - check/clean	-				•	•
Air cleaner - renew	-				•	•
Throttle bodies - balance	-			•	•	•
Fuel hoses - renew	Every four years, regardless of mileage					
Evaporative loss hoses* - renew	Every four years, regardless of mileage					
Exhaust butterfly valve cables - check/adjust (Daytona 675 and Daytona 675 R only)	-	•	•	•	•	•
Exhaust butterfly valve cables - check/clean/grease electrical connector (Daytona 675 and Daytona 675 R only)	-	•	•	•	•	•
Ignition System						
Spark plugs - check	-			•		
Spark plugs - renew	-				•	•
Cooling System						
Cooling system - check for leaks	Day	•	•	•	•	•
Coolant level - check/adjust	Day	•	•	•	•	•
Coolant - renew	Every 3 years, regardless of mileage					
Engine						
Clutch cable - check/adjust	Day	•	•	•	•	•
Valve clearances - check/adjust	-				•	•
Camshaft timing - adjust	First 12,000 mile (20,000 km) service only					

Scheduled Maintenance

Operation Description	Odometer Reading in Miles (Km) or time period, whichever comes first					
		First Service	Annual Service	Mileage Based Service		
	Every	500 (800) one month	Year	6,000 and 18,000 (10,000 and 30,000)	12,000 (20,000)	24,000 (40,000)
Wheels and Tyres						
Wheels - inspect for damage	Day	•	•	•	•	•
Wheel bearings - check for wear/smooth operation	-	•	•	•	•	•
Tyre wear/tyre damage - check	Day	•	•	•	•	•
Tyre pressures - check/adjust	Day	•	•	•	•	•
Electrical						
Lights, instruments and electrical systems - check	Day	•	•	•	•	•
Steering and Suspension						
Steering - check for free operation	Day	•	•	•	•	•
Forks - check for leaks/smooth operation	Day	•	•	•	•	•
Fork oil - renew	-					•
Headstock bearings - check/adjust	-		•	•	•	•
Headstock bearings - lubricate	-				•	•
Rear suspension linkage - check/lubricate	-				•	•
Brakes						
Brake pad wear - check	Day	•	•	•	•	•
Brake master cylinders - check for fluid leaks	Day	•	•	•	•	•
Brake calipers - check for leaks and seized pistons	Day	•	•	•	•	•
Brake fluid levels - check	Day	•	•	•	•	•
Brake fluid - renew	Every 2 years, regardless of mileage					
Drive Chain						
Drive chain slack - check/adjust	Day	•	•	•	•	•
Drive chain - wear check	Every 500 miles (800 km)					
Drive chain - lubricate	Every 200 miles (300 km)					
Drive rubbing strip - check	-	•	•	•	•	•
Drive rubbing strip - renew	-			•	•	•
General						
Fasteners - inspect visually for security	Day	•	•	•	•	•
Bank angle indicators - inspect visually for wear	Day	•	•	•	•	•
Stand - check operation	Day	•	•	•	•	•

* Evaporative system fitted to models for certain markets only.

3 Cylinder Head

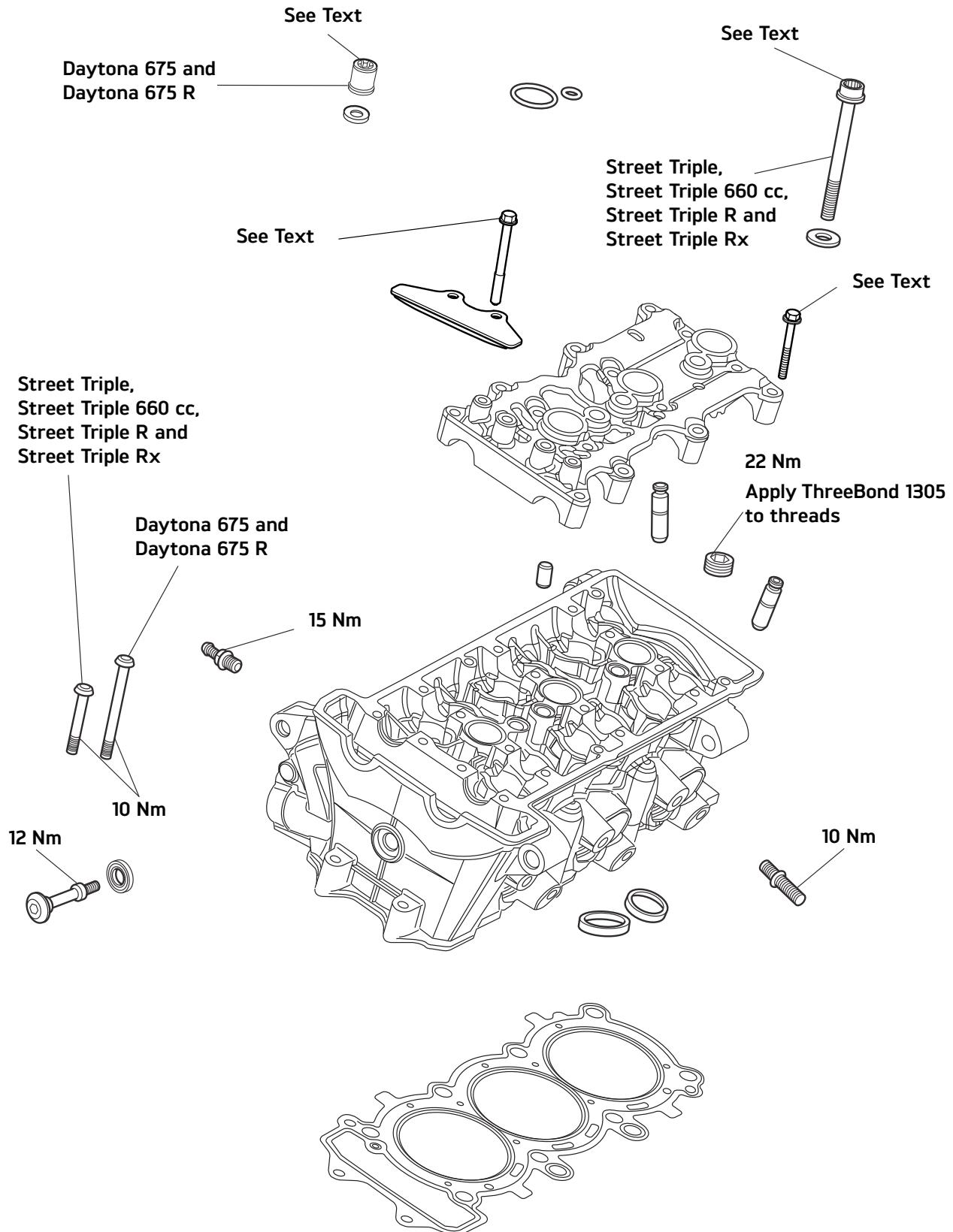
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Cylinder Head

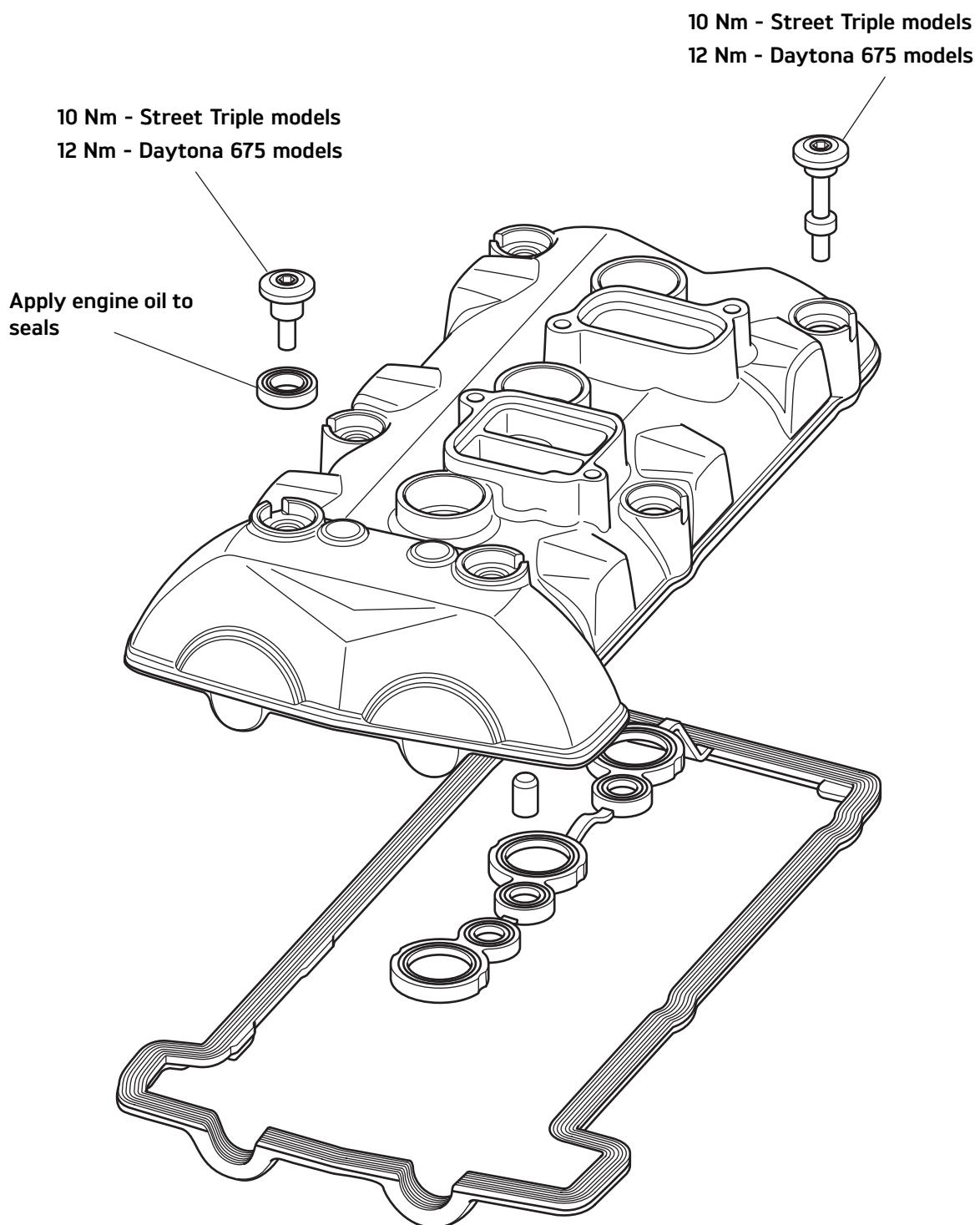
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Exploded View - Cylinder Head

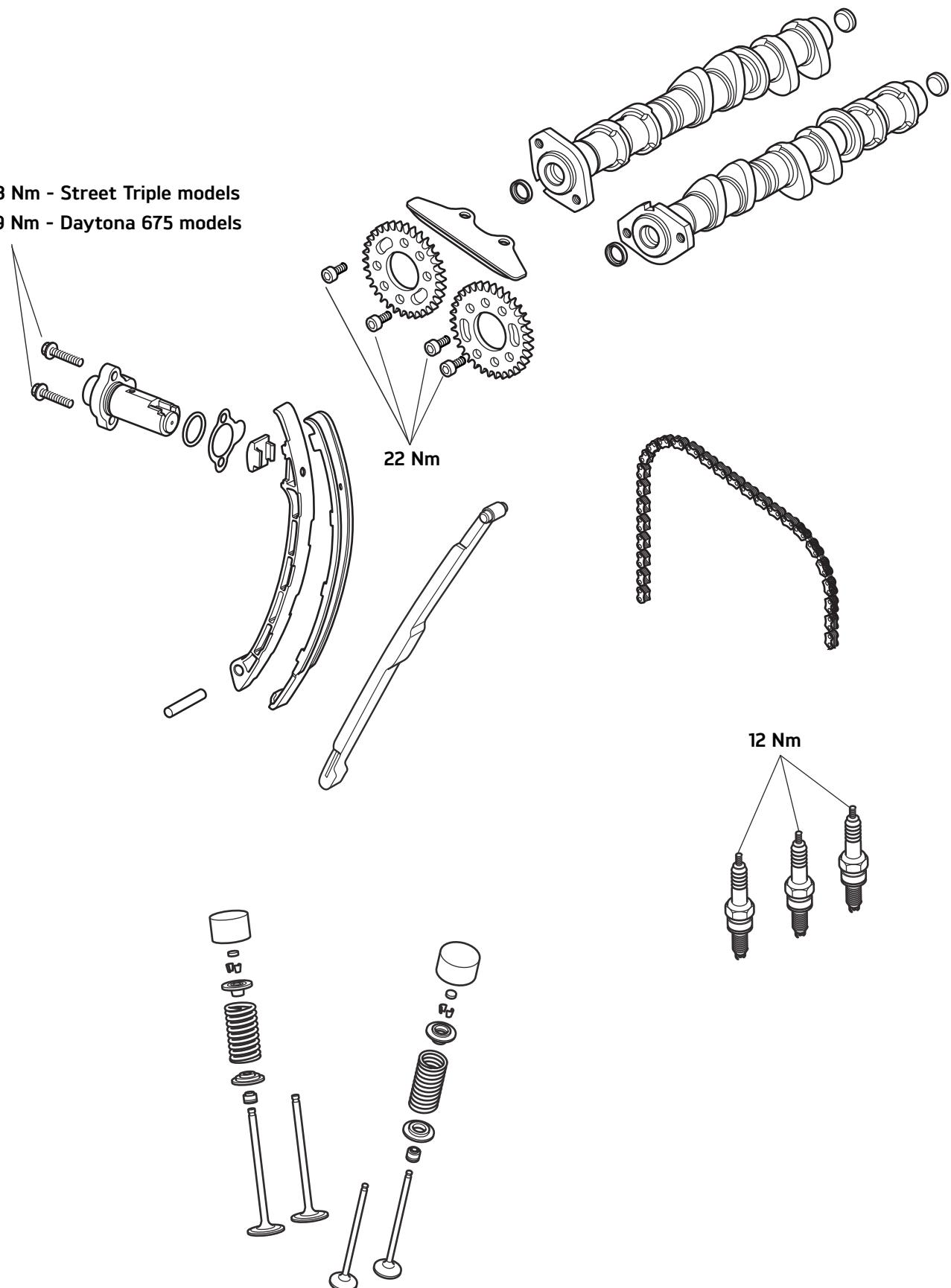


Cylinder Head

Exploded View - Camshaft Cover



Exploded View - Camshaft, Camshaft Drive and Valves



Cylinder Head

Cylinder Head Description

The engine is fitted with an aluminium alloy cylinder head, which carries the camshafts, valves and spark plugs. The cylinder head is cast as a single entity and various components are permanently added after machining.

The camshafts run directly in the head without separate bearings. Valve clearances are adjusted by changing variable thickness shims which sit between the valve tappet bucket and the valves.

The camshafts are driven by a silent-type chain. The chain is guided by two blades and is tensioned by a hydraulic tensioner.

The Hydraulic tensioner is fed oil via a gallery in the cylinder head. The combination of oil pressure and spring pressure pushes the plunger against the tensioner blade which tensions the camshaft drive chain. The hydraulic tensioner has an oil pressure relief valve located in the plunger that is set to open between 12 - 16 bar and when opens sprays oil through a drilling in the tensioner blade onto the camshaft drive chain.

Oil is supplied to the head by an internal gallery. Once supplied to the head, the oil is distributed along internal drillings within the head casting and camshaft.

Single valve springs are used to close both the inlet and exhaust valves. These valve springs have close wound coils at one end to assist in the prevention of valve bounce at high engine speed and to give a smooth valve actuation. When assembling the cylinder head it is important that the close wound, colour coded ends of the springs are fitted downwards (towards the piston). The tip of the valves are hardened to give a long service life.

Due to the methods used to assemble the valve seat and valve guides to the head, these parts cannot be replaced.



Caution

In any of the following operations which necessitate the removal or disconnection of the camshaft drive chain, NEVER turn the engine without the camshaft drive chain and tensioner correctly fitted and adjusted. In the disassembled condition, the pistons will contact the valves if the crankshaft is turned, causing severe engine damage.

Camshaft Cover

Removal

1. Remove the seat (see page 16-22 for Daytona 675, Daytona 675 R and Street Triple Rx, see page 16-23 for Street Triple, Street Triple 660 cc and Street Triple R).
2. Disconnect the battery, negative (black) lead first.
3. **For Daytona 675 and Daytona 675 R:** Remove the fairings (see page 16-33).
4. **For Street Triple, Street Triple 660 cc, Street Triple R and Street Triple Rx:** Remove the radiator cowls (see page 16-38).
5. Remove the fuel tank (see page 10-112).
6. Remove the airbox (see page 10-120).
7. Remove the secondary air injection solenoid valve (see page 10-184).
8. Remove the secondary air injection reed valves (see page 10-184).
9. Disconnect the electrical connections to the ignition coils and remove the coils.
10. Remove the throttle bodies, injectors and fuel rail from the cylinder head (see page 10-135).

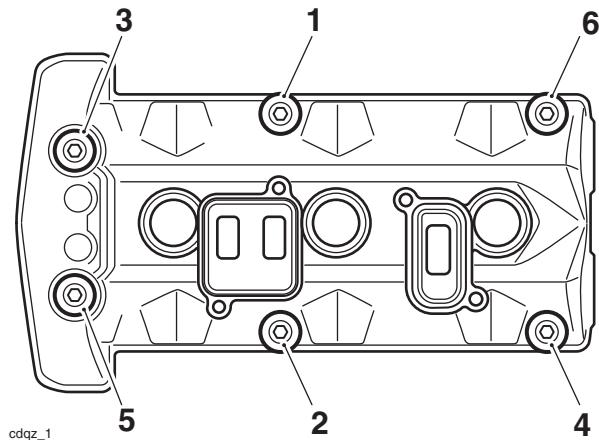
Note:

- **It is not necessary to disconnect the throttle cables. Instead, lay the assembly over the frame during the period when the engine is separated from the frame.**

11. Progressively release the camshaft cover bolts in the sequence shown below.

Note:

- Two shorter bolts are fitted at the end adjacent to the camshaft drive chain.**



Camshaft Cover Bolt Release Sequence

12. Remove the camshaft cover from the motorcycle.



Caution

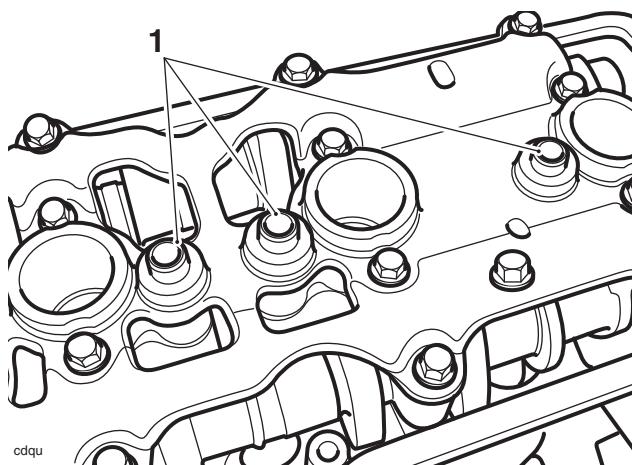
Never use a lever to remove the camshaft cover from the head.

Using a lever will cause damage to the head and camshaft cover which could lead to an oil leak.

13. Remove the camshaft cover gasket. If necessary, recover the three dowels from the secondary air injection holes in the camshaft ladder (these may come away in the camshaft cover or gasket).
14. Discard the camshaft cover gasket and bolt seals.
15. Remove any residual oil from the front of the head using a syringe or lint free cloth.

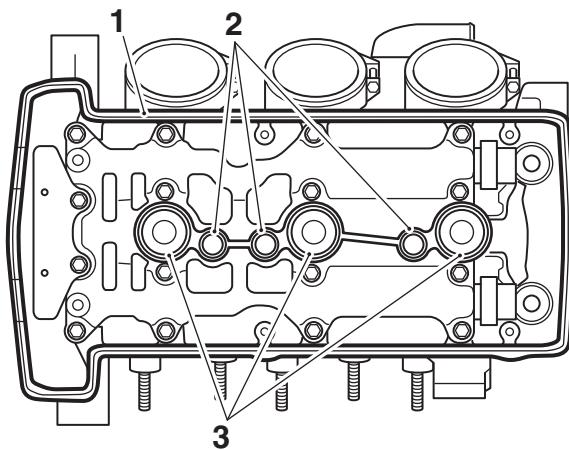
Installation

1. Refit the three dowels to the camshaft ladder.



1. Dowels

2. Fit a new camshaft cover seal to the cylinder head. Ensure the groove in the gasket is correctly seated to the head. Ensure the plug tower seals and the dowels are correctly located.



1. Camshaft cover seal

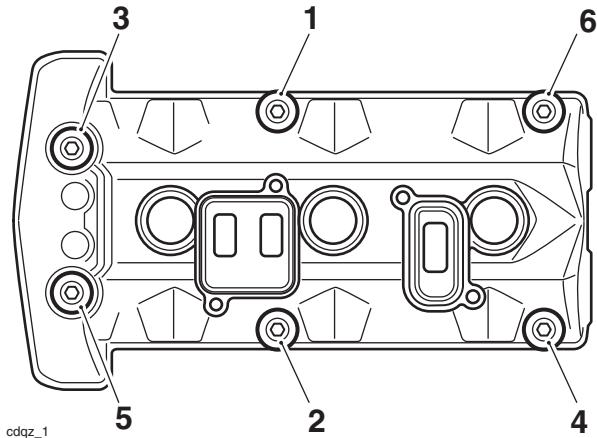
2. Dowels

3. Plug tower seals

3. Fit the camshaft cover, ensuring that the gasket remains in the correct position.
4. Lubricate the new camshaft cover screw seals with clean engine oil. Fit the camshaft cover screws and screw seals and tighten until finger tight.

Cylinder Head

5. Finally, tighten the camshaft cover screws, in the sequence shown below, to:
 - **10 Nm** - For Street Triple, Street Triple 660 cc, Street Triple R and Street Triple Rx
 - **12 Nm** - For Daytona 675 and Daytona 675 R.



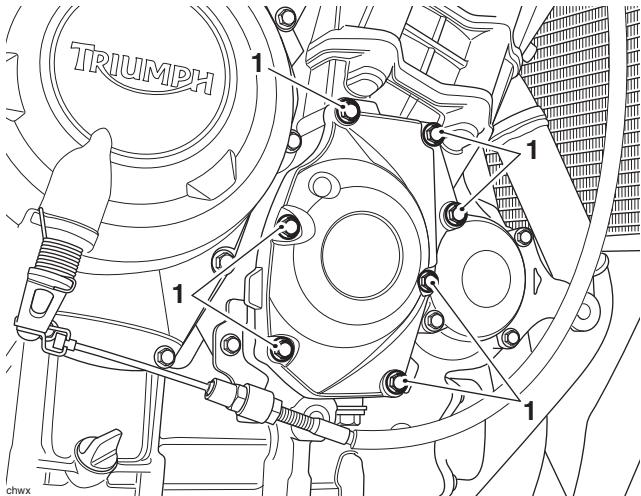
Camshaft Cover Bolt Tightening Sequence

6. Inspect the ignition coils seal for damage and replace if necessary.
7. Fit the ignition coils and reconnect the electrical connectors.
8. Refit the secondary air injection reed valves (see page 10-185).
9. Refit the secondary air injection solenoid valve (see page 10-184).
10. Refit the throttle bodies, injectors and fuel rail to the cylinder head (see page 10-136).
11. Check the throttle cable adjustment (see page 10-131).
12. Refit the airbox (see page 10-122).
13. Refit the fuel tank (see page 10-113).
14. **For Daytona 675 and Daytona 675 R:** Refit the fairings (see page 16-34).
15. **For Street Triple, Street Triple 660 cc, Street Triple R and Street Triple Rx:** Refit the radiator cowls (see page 16-39).
16. Reconnect the battery, positive (red) lead first. Tighten the battery terminals to **4.5 Nm**.
17. Refit the seat (see page 16-22 for Daytona 675, Daytona 675 R and Street Triple Rx, see page 16-24 for Street Triple, Street Triple 660 cc and Street Triple R).

Camshaft Drive Chain Tensioner

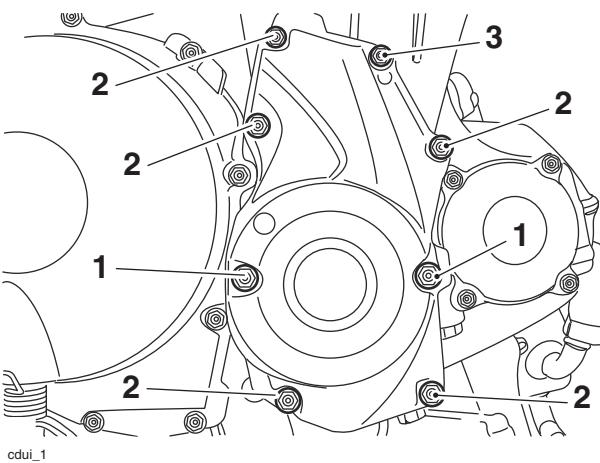
Removal

1. Remove the camshaft cover (see page 3-6).
2. **For Daytona 675 and Daytona 675 R:** Release the seven bolts and remove the right hand crankcase cover. Discard the gasket.



1. Bolts

3. **For Street Triple, Street Triple 660 cc, Street Triple R and Street Triple Rx:** Noting the position of the M6 x 25 mm bolts, the M6 x 20 mm bolts and the bolt fitted with the copper washer, remove the right hand crankcase cover. Discard the gasket and the copper washer.

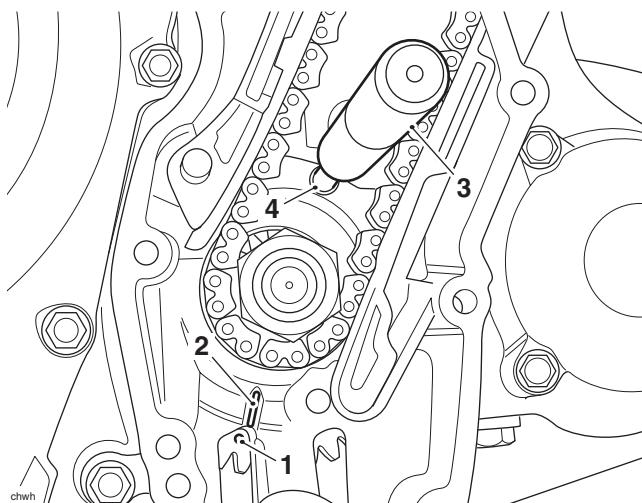


1. **M6 x 25 mm bolt**
2. **M6 x 20 mm bolt**
3. **M6 x 20 mm bolt with copper washer**

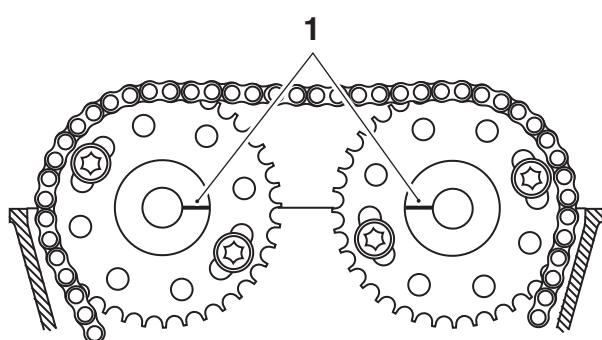
4. Rotate the crankshaft clockwise (the normal direction of rotation), using the bolt fitted to the end of the crankshaft. Stop rotation when number 1 cylinder is at Top Dead Centre (TDC), that is when the dot mark on the primary gear aligns with the line on the crankcase.

Note:

- **While rotating the crankshaft, ensure that the front camshaft drive chain rubbing blade remains in its mounting.**
 - **Before inserting the timing pin, ensure the dot on the primary gear is aligned with the line on the crankcase.**
5. Insert the T3880601 - Crankshaft Timing Pin into the timing holes in the crankcase and crankshaft.



1. Dot mark
 2. Marker line
 3. T3880601 - Crankshaft Timing Pin
 4. Timing hole in crankcase
6. In addition to the dot mark alignment, at TDC, the alignment marks on the camshaft bosses will point inwards.



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1. Camshaft alignment marks

7. Place a suitable wedge between the camshaft drive chain tensioner blade and crankcase, to hold the camshaft drive chain taut during removal of the tensioner.



Warning

The hydraulic tensioner is under spring tension. Always wear hand, eye, and face protection when withdrawing the tensioner mounting bolts and take great care to minimise the risk of injury and loss of components.

Note:

- **Note the orientation of the hydraulic tensioner.**
- 8. Evenly release the hydraulic tensioner mounting bolts until the plunger spring tension has been released.
- 9. Remove the hydraulic tensioner and discard the O-ring and gasket.

Inspection

1. Inspect the spring for damage and deformation. Renew as necessary.
2. Inspect the tip of the plunger for wear and damage. Renew as necessary.

Installation

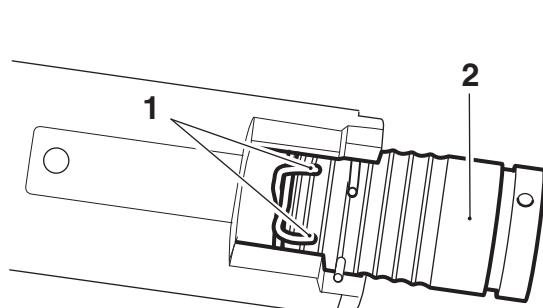
1. Check that the dot mark on the primary gear is still aligned with the line on the crankcase and the T3880601 - Crankshaft Timing Pin is installed. Ensure the crankshaft cannot rotate.
2. Ensure that the wedge fitted earlier is still holding the camshaft drive chain tensioner blade in contact with the camshaft drive chain.
3. Check that the camshaft alignment marks point inwards.
4. To set the hydraulic tensioner onto the first tooth of the ratchet (i.e. minimum extension) carry out the following:

Note:

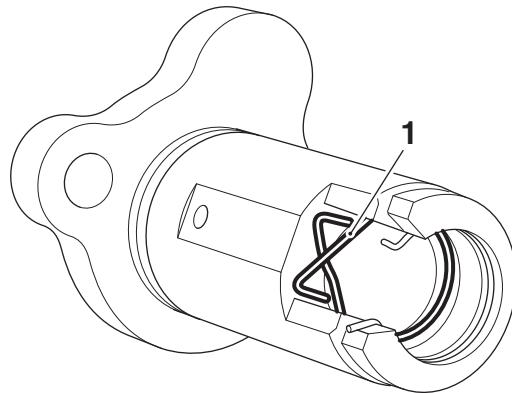
- **If installing a new hydraulic tensioner, do not release the plunger before fitting.**
- **If installing the original hydraulic tensioner, the engine oil must be drained out of the tensioner to enable the plunger to be set onto the first tooth of the ratchet.**

Cylinder Head

- a) Hold the resister ring ends together and pull out the plunger.
- d) Ensure the resister ring is correctly located as shown in the illustration below.



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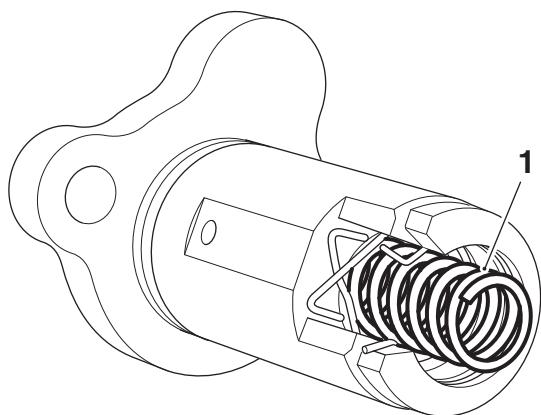


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1. Resister ring ends

2. Plunger

- b) Remove the spring.



cthp

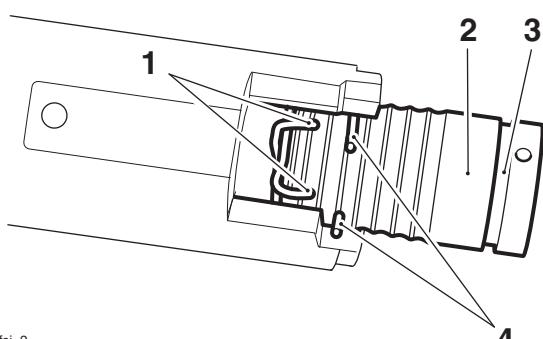
1. Spring

- c) While holding the resister ring in place, pour out the engine oil into a suitable container.

1. Resister ring

- e) Refit the spring.

- f) Hold the resister ends together and push the plunger through the resister ring until the groove for the snap ring aligns with the snap ring.



cfei_2

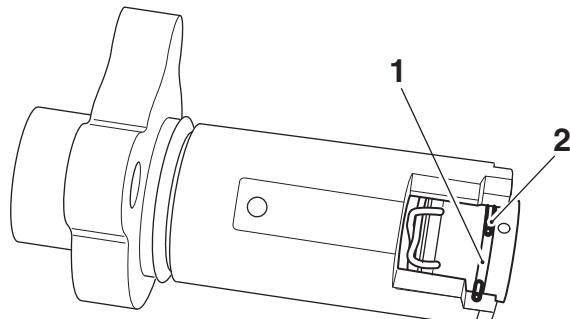
1. Resister ring

2. Plunger

3. Groove for snap ring

4. Snap ring

- g) When the groove aligns with the snap ring, release the resister ring and move one end of the snap ring into the groove. Slowly release the plunger to ensure that it is held in place.



cfej

1. Groove for snap ring

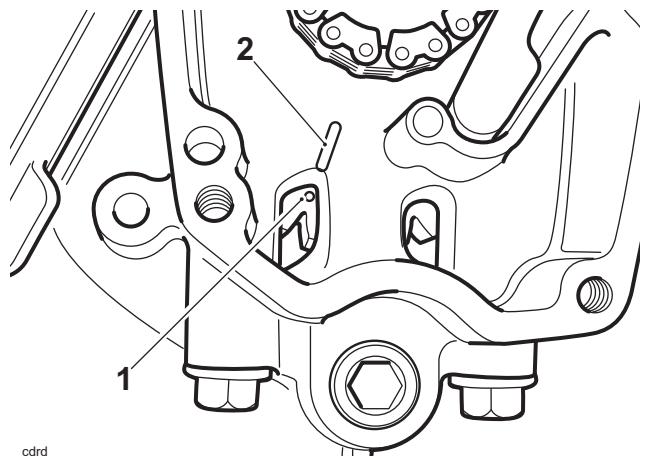
2. Snap ring

- h) Fit a new O-ring and gasket to the hydraulic tensioner.
- i) Fit the tensioner to the cylinder head as noted for removal. Tighten the bolts to:
 - **8 Nm** - For Street Triple, Street Triple 660 cc, Street Triple R and Street Triple Rx
 - **9 Nm** - For Daytona 675 and Daytona 675 R.
- j) Remove the wedge, taking care not to move or damage the tensioner blade.
- k) Remove the T3880601 - Crankshaft Timing Pin.
- l) To release the hydraulic tensioner, rotate the crankshaft 1/4 of a turn anticlockwise using the bolt fitted to the end of the crankshaft. Then rotate the crankshaft clockwise two revolutions until the 'dot' mark on the primary gear aligns with the line on the crankcase.
- m) Check that there is tension in the camshaft drive chain and the timing marks at the camshaft sprockets are correctly aligned.

Note:

- After fitting to the engine, the hydraulic tensioner will be empty of engine oil. After starting the engine, the camshaft drive chain and tensioner blade will be noisy until full pressure is felt at the tensioner plunger. This could take up to 5 seconds.

5. Check that the tensioner plunger is correctly located in the middle of the camshaft drive chain tensioner blade when viewed from above.
6. Rotate the engine through 4 full revolutions, and reset number 1 cylinder to TDC. Ensure that the dot mark on the primary gear aligns with the line on the crankcase.



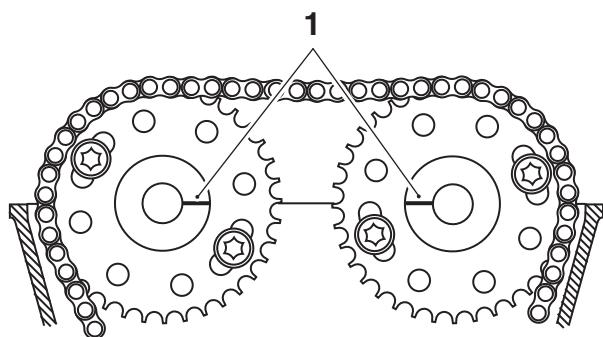
cddr

1. Dot mark

2. Marker line

Note:

- The alignment marks do not need to be perfectly in line to each other, they only need to be pointing to each other.
- 7. Check that the camshaft timing marks point as illustrated below.



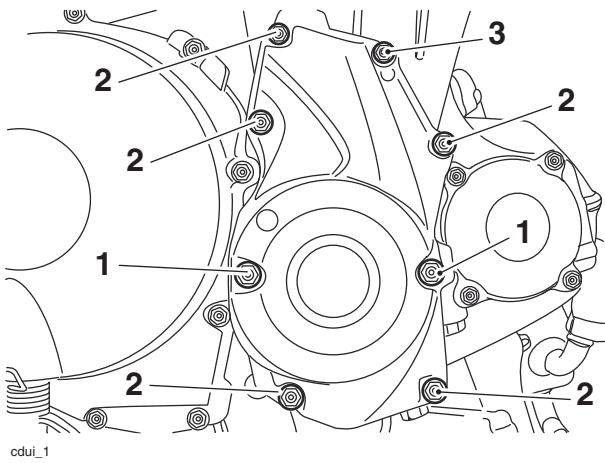
gaaa_12

1. Camshaft alignment marks

8. Re-check the tensioner plunger location against the camshaft drive chain tensioner blade.
9. Refit the camshaft cover (see page 3-7).
10. Fit a new gasket to the right hand crankcase cover.

Cylinder Head

11. For Daytona 675 and Daytona 675 R: Fit the crankcase cover and tighten its bolts to **10 Nm**.
12. For Street Triple, Street Triple 660 cc, Street Triple R and Street Triple Rx: Noting the position of the M6 x 25 mm bolts, the M6 x 20 mm bolts and the bolt fitted with a new copper washer, refit the crankcase cover, tightening the bolts to **8 Nm**.



1. M6 x 25 mm bolt
2. M6 x 20 mm bolt
3. M6 x 20 mm bolt with copper washer

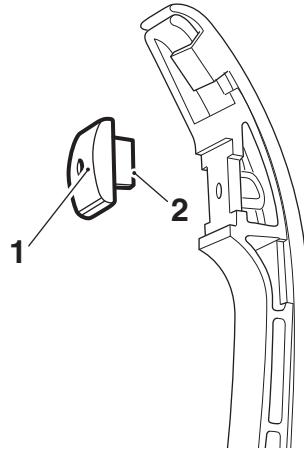
Camshaft Drive Chain Tensioner Blade

Disassembly

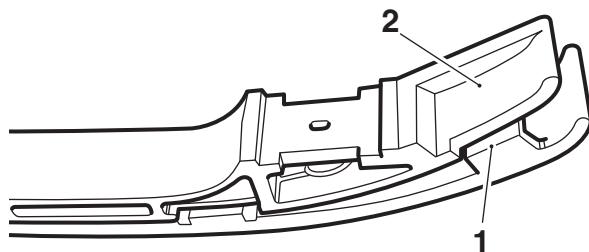
Note:

- For the purpose of this instruction, the top of the tensioner blade is where the pad is located.

1. Release the clips and remove the pad.

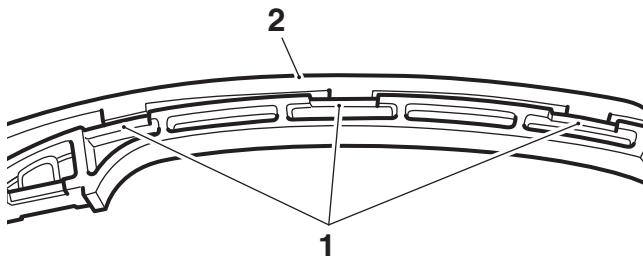


1. Pad
2. Clip (one side shown)
2. Detach the top hook from the tensioner blade.



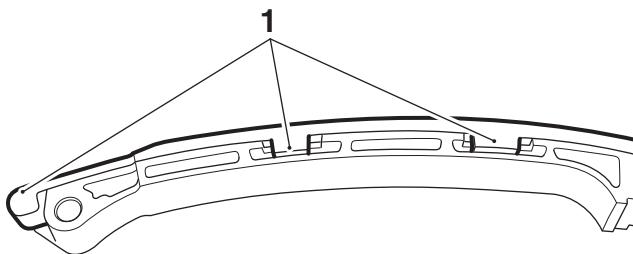
1. Top hook
2. Tensioner blade

- Release the three side locating devices.



cfg

- Locating devices**
- Facing blade**
- Release the three hooks and remove the facing blade.



cfh

- Hooks**

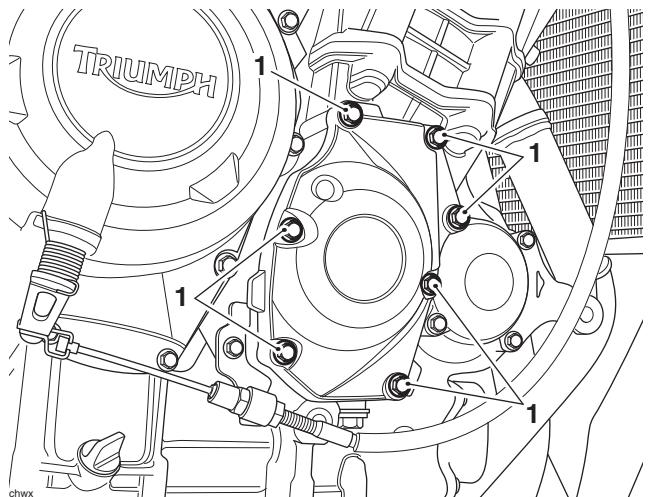
Assembly

- Assembly is the reverse of disassembly.

Camshafts and Camshaft Timing

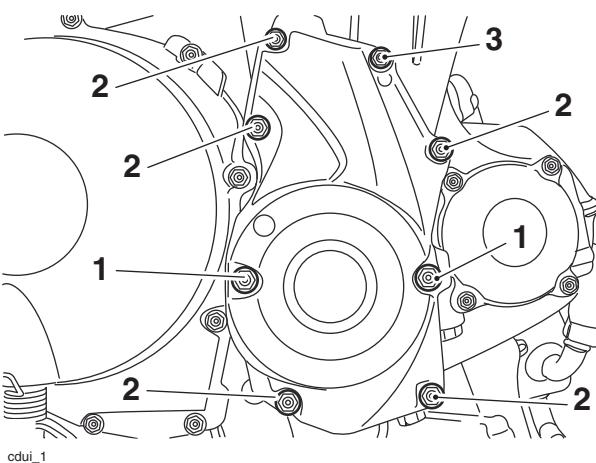
Removal

- Remove the camshaft cover (see page 3-6).
- For Daytona 675 and Daytona 675 R:** Release the seven bolts and remove the right hand crankcase cover. Discard the gasket.



- Bolts**

- For Street Triple, Street Triple 660 cc, Street Triple R and Street Triple Rx:** Noting the position of the M6 x 25 mm bolts, the M6 x 20 mm bolts and the bolt fitted with the copper washer, remove the right hand crankcase cover. Discard the gasket and the copper washer.



- M6 x 25 mm bolt**

- M6 x 20 mm bolt**

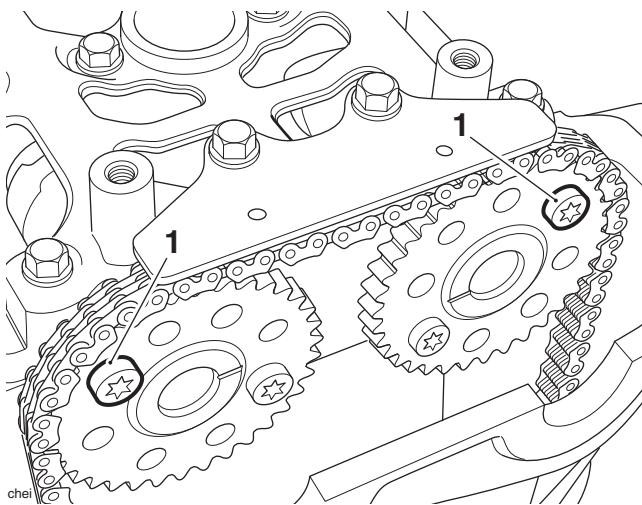
- M6 x 20 mm bolt with copper washer**

- Remove the spark plugs to reduce compression resistance when turning the engine.

Cylinder Head

Note:

- The camshaft sprocket fixings need only be loosened sufficiently to allow the sprockets to rotate on the camshafts.
 - The camshaft sprocket fixings are patch locked and must never be reused if loosened or removed; however new fixings should only be installed during final tightening after the timing procedure has been completed.
 - If the sprockets are to be removed from the camshafts, temporarily refit the sprockets for timing adjustment using the old fixings, and only install new fixings during final tightening.
5. Loosen the two camshaft sprocket fixings. Do not remove the fixings at this stage.



1. Fixings

Note:

- While rotating the crankshaft, ensure that the front camshaft drive chain rubbing blade remains in its mounting.
6. Rotate crankshaft until the remaining two fixings are accessible.



Caution

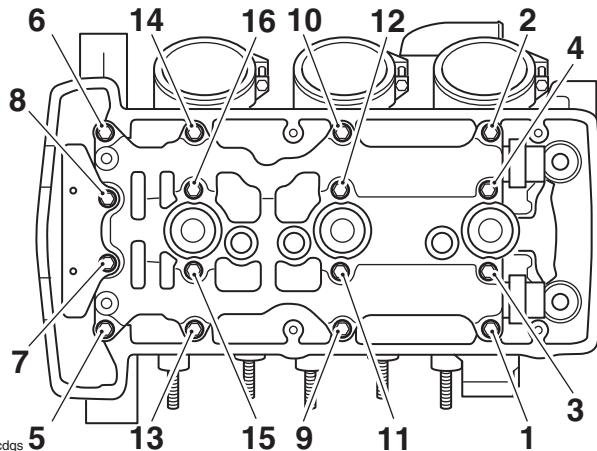
Do not rotate the engine further once the four camshaft sprocket bolts have been loosened. Rotation of the engine with the four sprocket bolts loose will result in valve to piston contact and serious engine damage.

7. Loosen the two remaining camshaft sprocket fixings. Do not remove the fixings at this stage.

Note:

- Note the orientation of the tensioner before removal.

- Evenly release the camshaft drive chain tensioner mounting bolts until the plunger spring tension has been released.
- Remove the tensioner and discard the O-ring and gasket.
- Note the orientation of the camshaft ladder in relation to the head.
- Progressively release the bolts securing the camshaft ladder to the head in the sequence shown below.



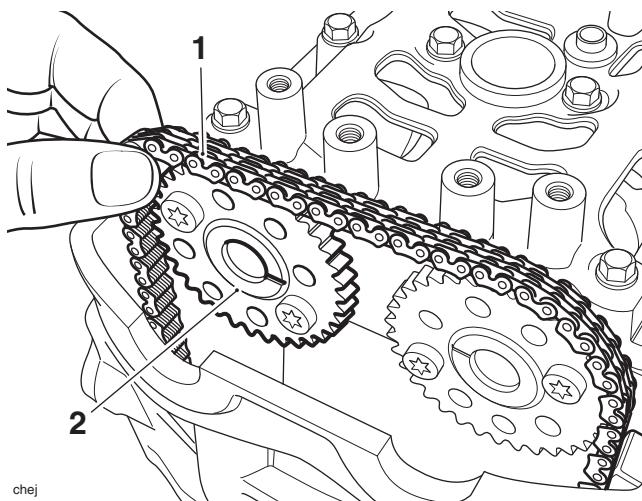
Camshaft Ladder Bolt Release Sequence

12. Remove the camshaft ladder and top pad, and collect the dowels (if loose) and spark plug tower O-rings.

Note:

- Each camshaft and sprocket is removed as an assembly.
13. Lift the camshaft drive chain from the inlet camshaft sprocket and remove the inlet camshaft.

14. Lift the camshaft drive chain from the exhaust camshaft sprocket and remove the exhaust camshaft.

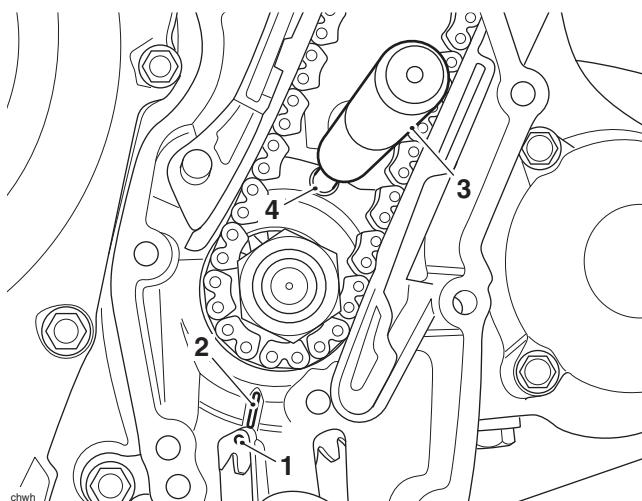


1. Camshaft drive chain
2. Inlet camshaft

15. For the removal of the camshaft drive chain (see page 3-22).
16. Rotate the crankshaft clockwise (the normal direction of rotation), using the bolt fitted to the end of the crankshaft. Stop rotation when number 1 cylinder is at Top Dead Centre (TDC), that is when the dot mark on the primary gear aligns with the line on the crankcase.

Note:

- Before inserting the timing pin, ensure the dot on the primary gear is aligned with the line on the crankcase.
17. Insert the T3880601 - Crankshaft Timing Pin into the timing holes in the crankcase and crankshaft.



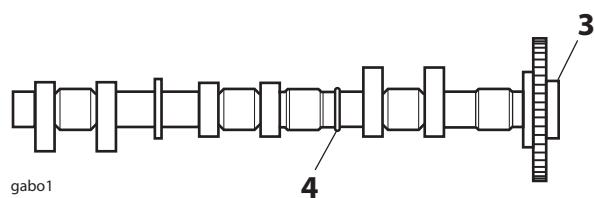
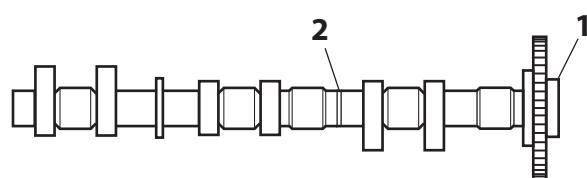
1. Dot mark
2. Marker line
3. T3880601 - Crankshaft Timing Pin
4. Timing hole in crankcase

18. At this stage the camshafts and sprockets can be separated if required.

Camshaft and Sprocket Identification

Note:

- The inlet and exhaust camshafts are different. They can be identified by a raised feature in the centre of the exhaust camshaft, which is machined off on the inlet camshaft. The camshafts can be further identified by a letter I for inlet or E for exhaust stamped on the end of the sprocket boss.



1. Inlet camshaft
2. Machined section
3. Exhaust camshaft
4. Raised section



Caution

Never fit a camshaft sprocket to a camshaft using incorrectly identified bolt holes. Severe engine damage will result from incorrect attachment.

The same sprocket is used for both inlet and exhaust camshafts, and is attached to the camshaft using slotted bolt holes. The same holes are used when fitting the sprocket to either camshaft.

Note that the mark on the camshaft boss is not a timing mark, it is used as a visual aid during the timing adjustment procedure.

Accurate camshaft timing can only be obtained using the correct timing method and service tools as described on page 3-22 in this chapter.

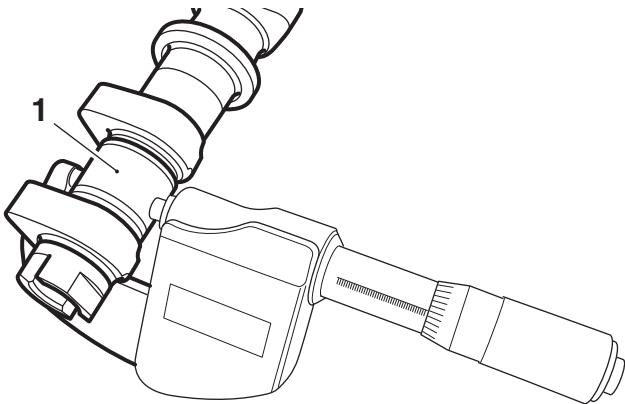
Cylinder Head

Camshaft and Bearing Cap Inspection

1. Inspect the camshaft sprockets for damaged and worn teeth. Replace as necessary.
2. Measure the camshaft journals with a micrometer. If any journal is outside the specified tolerance, replace the camshaft.

Camshaft Journal Diameters

Standard	23.940 - 23.960 mm
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cheg

1. Standard journal

3. Examine the camshaft and camshaft ladder for excessive wear and damage.
4. Check the journal-to-head clearances, using Plastigauge (Triumph part number 3880150-T0301) as follows:
 - a) Wipe the exposed areas of both the camshaft journal and a single cap area of the ladder.
 - b) Apply a thin smear of grease to the journal and a small quantity of silicone release agent to the cap.
 - c) Size a length of the Plastigauge to fit across the camshaft journal. Fit the Plastigauge to the camshaft journal using the grease to hold the strip in place.
 - d) Ensuring that the camshaft sprocket alignment marking is located as for removal, assemble one camshaft to the head and progressively tighten the camshaft ladder in the sequence shown on page 3-18.
 - e) Release the bolts and remove the camshaft ladder. Using the gauge provided with the Plastigauge kit, measure the width of the now compressed Plastigauge.

Note:

- The camshaft ladder is unique to each cylinder head and is, therefore, not available individually. If the camshaft ladder is worn or damaged, the complete cylinder head must be replaced.



Measuring the Compressed Plastigauge

5. Calculate the journal clearance using the Plastigauge chart supplied with the Plastigauge kit.

Camshaft journal clearance

Standard	0.040 - 0.08 mm
Service limit	0.170 mm

6. If the clearance measured is within the specified tolerance, clean off all traces of Plastigauge from the camshaft and ladder. Assemble the camshafts (see page 3-17).

Note:

- If the measured clearance is outside the tolerance, and the camshaft journals are within tolerance, the cylinder head must be replaced.



Caution

Although Plastigauge is oil soluble, all traces of the material must be removed to prevent blockage of the oil drillings and resultant engine damage.

Camshaft Installation and Timing



Caution

The camshaft sprockets are attached to the camshafts using slotted bolt holes. This allows for very accurate valve timing and therefore improved performance and fuel economy.

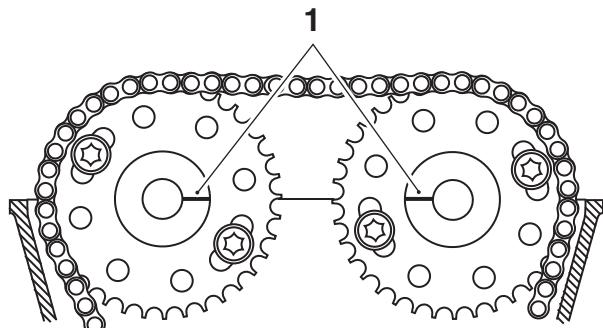
Never fit the camshaft sprockets without correctly setting the camshaft timing using the service tools and timing procedure described below. Severe engine damage will result from incorrect valve timing adjustment.

1. Check that the dot mark on the primary gear is still aligned with the line on the crankcase and the T3880601 - Crankshaft Timing Pin is installed. Ensure the crankshaft cannot rotate.
2. Thoroughly clean the camshafts and journals. Inspect the ends of the camshafts for correct fitment of the sealing plugs. Lubricate the camshafts with clean engine oil before fitting to the head.
3. If removed, refit the camshaft sprockets noting their orientation, and secure using the original bolts. DO NOT tighten the fixings at this stage; the sprockets must be free to rotate.
4. Refit the camshaft drive chain and, if removed, the tensioner blade and rubbing strip (see page 3-23).

Note:

- **Locate each camshaft to the head ensuring the camshafts are correctly identified (inlet and exhaust) and are also correctly located over their respective valve banks.**
- 5. Refit the exhaust camshaft to the cylinder head, hooking the camshaft drive chain over the sprocket as you do so.
- 6. Ensure there is no slack between the crankshaft and exhaust sprocket when the sprocket fixings are centrally located within the slotted holes. Ensure alignment marks on the end of the camshaft journals are pointing inwards.
- 7. Refit the inlet camshaft to the cylinder head, hooking the chain over the sprocket as you do so.
- 8. Ensure the fixings on the inlet sprocket are also centrally located within the slotted holes when there is no slack between the exhaust and inlet sprockets. Ensure alignment marks on the end of the camshaft journals are pointing inwards.

9. Check that the chain is correctly located around the crankshaft, and both camshaft sprockets.
10. Rotate the camshafts until the alignment marks on the end of the camshaft journals are pointing inwards.



gaaa_12

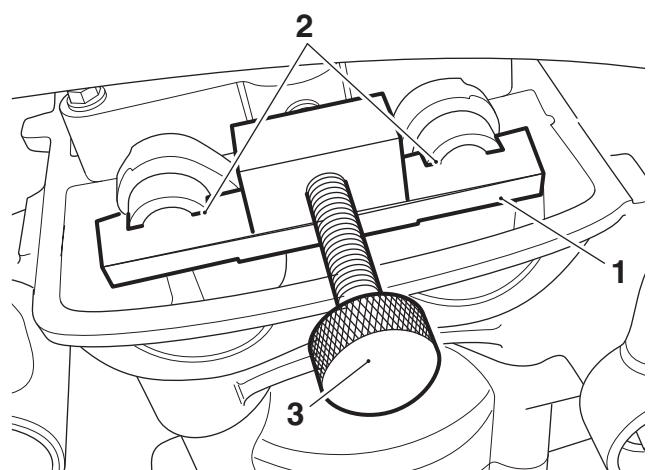
1. Camshaft alignment marks



Caution

The T3880640 - Camshaft Timing Plate must be located centrally between the camshafts. Incorrect positioning of the tool may prevent the camshaft ladder locating correctly to the cylinder head during fixing tightening, resulting in incorrect valve timing being set. Severe engine damage will result from incorrect valve timing adjustment.

11. Insert the T3880640 - Camshaft Timing Plate into the camshaft slots, ensuring the removal screw is unscrewed fully, as shown below. Ensure that the tool is centrally located between the camshafts.



1. T3880640 - Camshaft Timing Plate

2. Camshaft slots

3. Removal screw

Cylinder Head

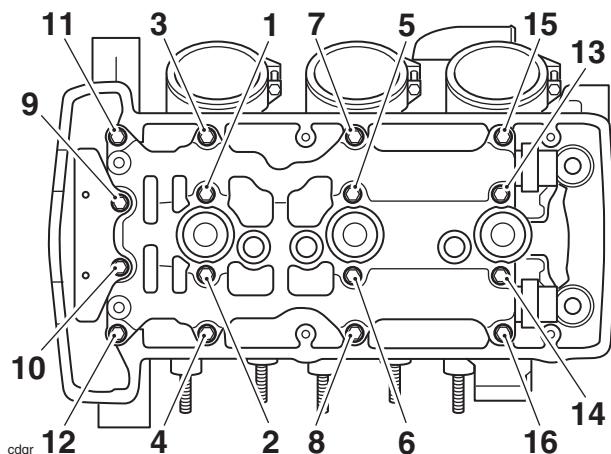
- Assemble the dowels, spark plug tower O-rings, camshaft ladder and top pad in the same location and orientation as prior to removal.

Note:

- The bolts for the camshaft cap ladder are tightened in two stages.

Stage 1

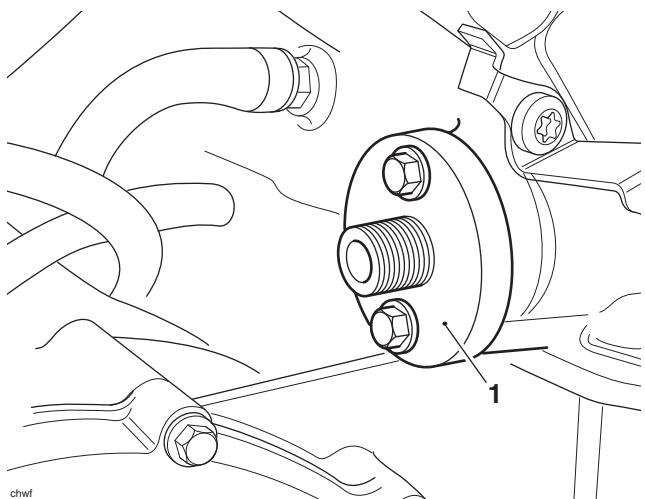
- Lubricate the threads of the camshaft cap ladder bolts with clean engine oil, then fit and evenly tighten the bolts to **5 Nm**, in the sequence shown below.



Camshaft Cap Ladder Bolt
Tightening Sequence

Stage 2

- In the sequence shown above, tighten the bolts to **10 Nm**.
- Fit the T3880607 - Camshaft Timing Tensioner using the original fixings and tighten to **8 Nm**.

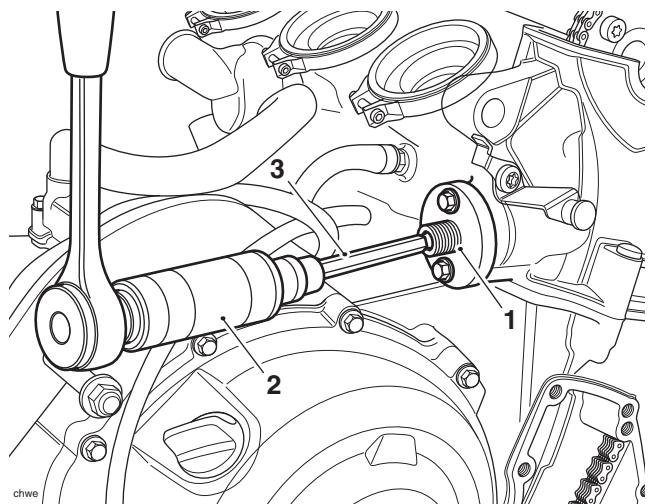


1. T3880607 - Camshaft Timing Tensioner

Caution

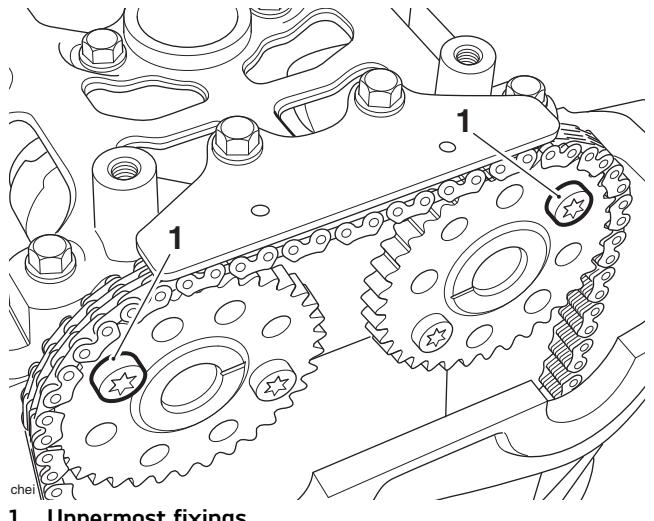
The torque value stated is very important to accurate timing. Always use the correct value of **0.6 Nm**, as set using the T3880609 - Torque Limiter. Using an incorrect torque value will result in incorrect valve timing being set, or damage to the tensioner blade or other valve train components. Either condition may result in serious damage to the engine, reduced engine performance, or reduced fuel economy.

- Using the T3880609 - Torque Limiter, and the 6 mm Ball Ended Allen Key supplied, tighten the T3880607 - Camshaft Timing Tensioner to **0.6 Nm** preset by the T3880609 - Torque Limiter.



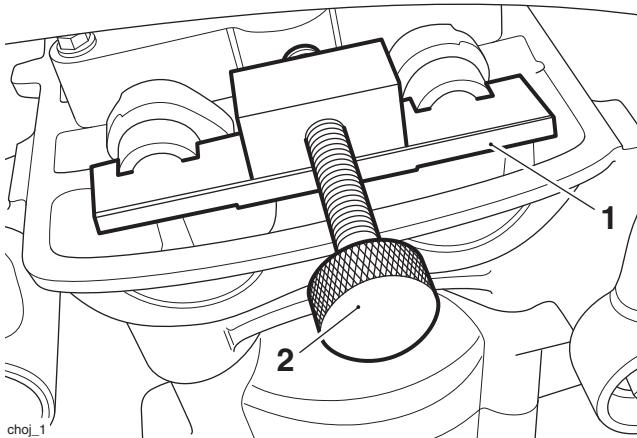
1. T3880607 - Camshaft Timing Tensioner
2. T3880609 - Torque Limiter
3. 6 mm Ball Ended Allen Key

- Remove and discard the two accessible (uppermost) camshaft sprocket fixings, and replace with new fixings. Tighten to **22 Nm**.



1. Uppermost fixings

18. Remove the T3880640 - Camshaft Timing Plate by rotating the removal screw clockwise as shown below.



1. T3880640 - Camshaft Timing Plate

2. Removal screw

19. Remove the T3880601 - Crankshaft Timing Pin.



Caution

Always check that the T3880640 - Camshaft Timing Plate has been removed before rotating the engine. Severe damage will result to the camshafts or T3880640 - Camshaft Timing Plate if engine rotation is attempted with the tool installed.

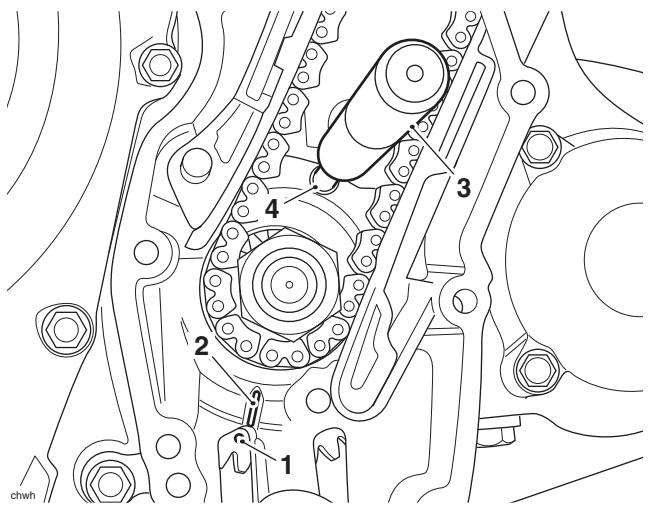
20. Rotate the engine until the remaining two sprocket fixings are accessible.
21. Remove and discard the two remaining camshaft sprocket fixings, and replace with new fixings. Tighten to **22 Nm**.
22. Place a suitable wedge between the camshaft drive chain tensioner blade and crankcase, to hold the camshaft drive chain taut during removal of the T3880607 - Camshaft Timing Tensioner.
23. Release the tension on Camshaft Timing Tensioner T3880607 and remove it.
24. Refit the timing chain tensioner, incorporating a new gasket and O-ring (see page 3-9).

25. Rotate the crankshaft clockwise 2 complete turns, using the bolt fitted to the end of the crankshaft. Stop rotation when number 1 cylinder is at Top Dead Centre (TDC), that is when the dot mark on the primary gear aligns with the line on the crankcase.

Note:

- Before inserting the timing pin, ensure the 'dot' on the primary gear is aligned with the line on the crankcase.**

26. Insert the T3880601 - Crankshaft Timing Pin into the timing holes in the crankcase and crankshaft.



1. Dot mark

2. Marker line

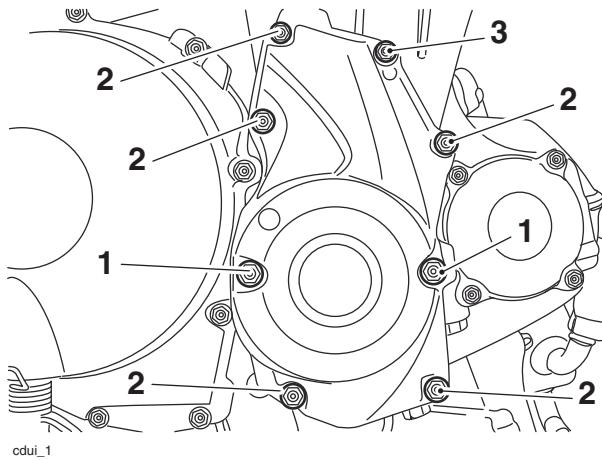
3. T3880601 - Crankshaft Timing Pin

4. Timing hole in crankcase

27. Check that the timing marks are still approximately aligned (to check that the camshaft timing has not moved during Camshaft Timing Tensioner T3880607 removal).
28. Remove the T3880601 - Crankshaft Timing Pin.
29. Check the valve clearances. Adjust as necessary (see page 3-20).
30. **For Daytona 675 and Daytona 675 R:** Fit the crankcase cover and tighten its bolts to **10 Nm**.

Cylinder Head

31. For Street Triple, Street Triple 660 cc, Street Triple R and Street Triple Rx: Noting the position of the M6 x 25 mm bolts, the M6 x 20 mm bolts and the bolt fitted with a new copper washer, refit the crankcase cover, tightening the bolts to **8 Nm**.



1. M6 x 25 mm bolt

2. M6 x 20 mm bolt

3. M6 x 20 mm bolt with copper washer

32. Refit the camshaft cover (see page 3-7).

Valve Clearances

Camshaft, valve, valve shim and valve seat wear affects the valve clearances. The effect of this wear is to change the gap between the camshaft and tappet bucket, causing engine noise and improper running. If the valve clearances become too small, permanent damage to the valve and valve seat will take place. If the valve clearance becomes too great, the engine will become noisy and will not run correctly.

Valve Clearance Measurement

Note:

- **Valve clearance measurement must be carried out with the engine cold.**

1. Remove the camshaft cover (see page 3-13).
2. Remove the spark plugs to reduce compression resistance when turning the engine.
3. Select a high gear and, using the rear wheel, turn the engine until a pair of camshaft lobes are positioned pointing away from the valves.
4. Using feeler gauges, measure and record the clearances for this pair of valves only.
5. Repeat the process until the valve clearances for all valves have been checked.

Note:

- **If the measurement does not fall within the specified range, adjustment must be made.**
- **The correct valve clearances are in the range given below:**

Inlet	0.10 - 0.20 mm
Exhaust	0.325 - 0.375 mm



Caution

If the valve clearances are not checked and corrected, wear could cause the valves to remain partly open, which lowers performance, burns the valves and valve seats and may cause serious engine damage.

6. Record the measured valve clearances on a chart similar to the example shown.

Typical Valve Clearance Chart

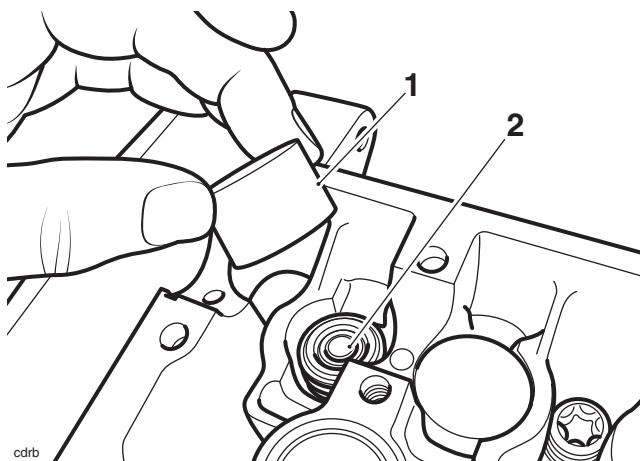
Inlet Valve No.	Gap Measured
1	as measured (mm)
2	as measured (mm)
3	as measured (mm)
4	as measured (mm)
5	as measured (mm)
6	as measured (mm)
Exhaust Valve No.	Gap Measured
1	as measured (mm)
2	as measured (mm)
3	as measured (mm)
4	as measured (mm)
5	as measured (mm)
6	as measured (mm)

Valve Clearance Adjustment

Note:

- To adjust the valve clearances the camshafts must be removed. Follow the camshaft removal procedure.

- Remove the camshafts (see page 3-13).
- Remove the tappet bucket from the cylinder head.
- Remove the shim from the valve head.



- Tappet bucket
- Shim

Note:

- The shim may withdraw with the tappet bucket.
- Measure the original shim, using a micrometer and select the appropriate new shim as required.

Clearance too small:

- Fit a thinner shim.

Clearance too large:

- Fit a thicker shim.

Note:

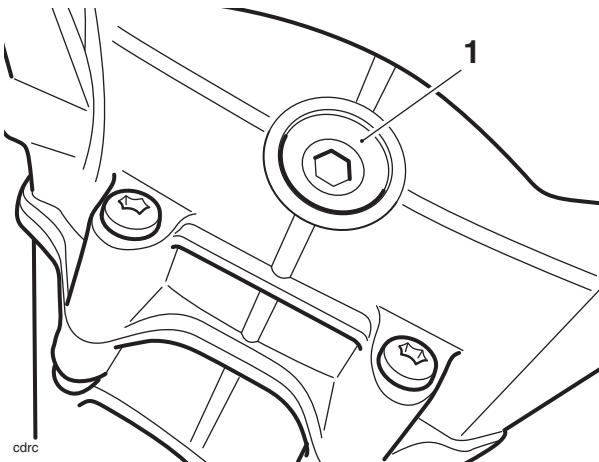
- Shims are available ranging from 1.70 mm to 3.00 mm in increments of 0.025 mm.
- Fit the new shim to the valve head.
- Lubricate the tappet bucket(s) with a 50/50 solution of engine oil and molybdenum disulphide grease.
- Refit the tappet bucket.
- Refit the camshafts (see page 3-17).
- Re-check all valve clearances.
- Repeat the procedure if the valves require further adjustment.

Cylinder Head

Camshaft Drive Chain

Removal

1. Remove the camshafts (see page 3-13).
2. Remove the bolt from the centre of the camshaft drive chain housing in the cylinder head.



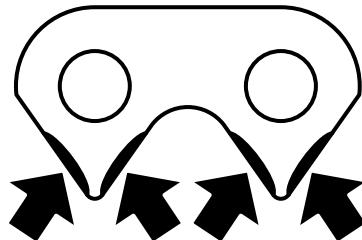
1. Centre bolt

3. Raise the front camshaft drive chain rubbing blade and detach the camshaft drive chain from the crankshaft gear.
4. The camshaft drive chain is removed from inside the head-space.

Inspection

Visual in-situ checks can also be made as follows:

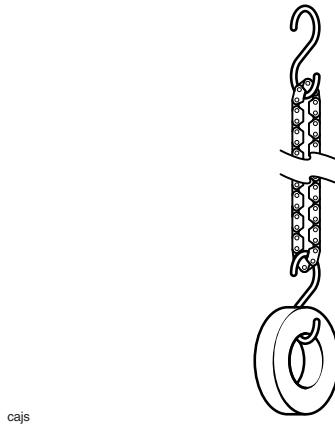
1. Check for significant blue discolouration of the chain plates indicating excessive heat build-up.
2. Examine all pins for signs of rotation.
3. Check for cracking or deep scratching of the chain plates.
4. Check for severe wear of the inner plates as indicated in the diagram below.



ccrv

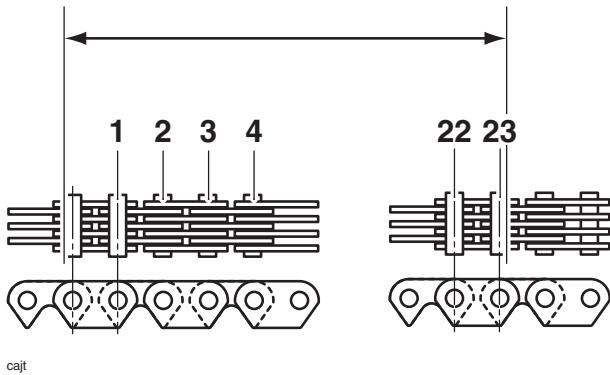
For a more thorough check, proceed as follows:

1. Remove the chain from the engine.
2. Suspend the chain from a pin or hook with a 13 kg weight attached at the lower end.

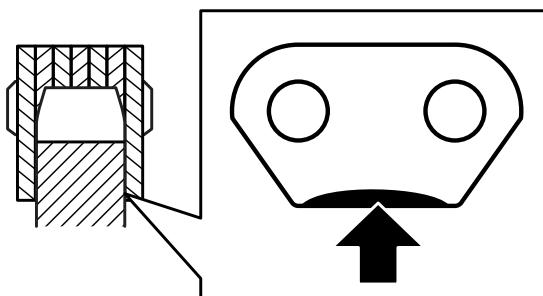


cajs

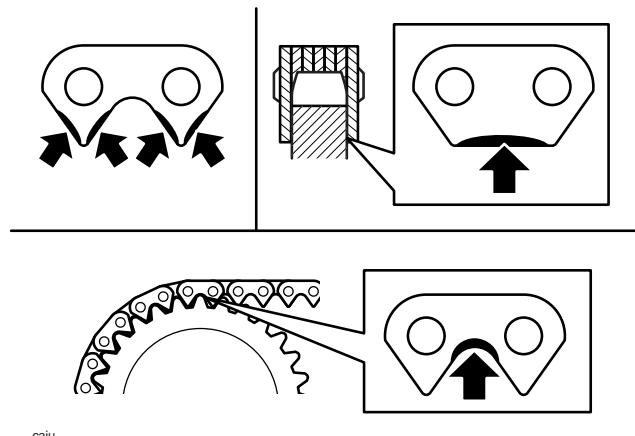
3. Measure across 23 links as shown in the diagram below. If the chain is within limits, the measurement should be no longer than 149.48 mm. Measurements beyond 149.48 mm indicate that the chain must be replaced.



4. Check for severe wear of the inner surface of the outer plates at the side-contact points with the sprocket teeth.



5. Check for signs of stiffness or kinking.
6. Check for severe wear of the plates in the area shown below.



If any of these symptoms are evident, the camshaft drive chain must be replaced.

Installation

1. Fit the camshaft drive chain and locate the lower end around the crankshaft gear.
2. Incorporating a new seal, refit the bolt to the centre of the camshaft drive chain housing in the cylinder head, tightening to **12 Nm**.
3. Refit the camshafts (see page 3-17).

Cylinder Head

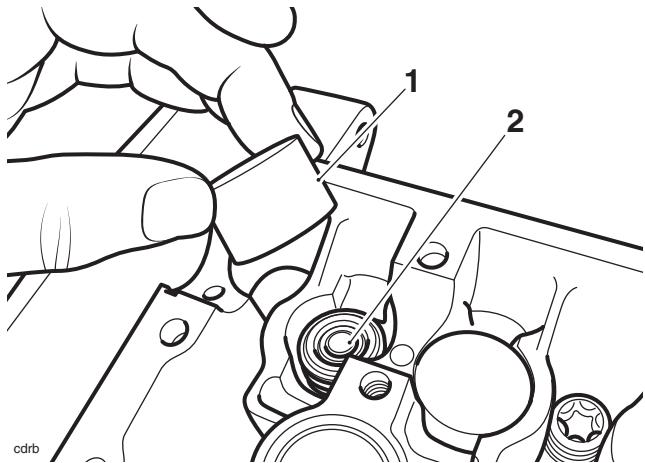
Cylinder Head

Removal

Note:

- Removal of the cylinder head is not possible with the engine in the frame.

1. Remove the engine from the frame (see page 9-4).
2. Remove the camshafts (see page 3-13).
3. Remove the camshaft drive chain (see page 3-22).
4. Remove the camshaft drive chain tensioner blades.
5. Note the position of all tappet buckets and shims such that they can be refitted in the same positions. Remove all the tappet buckets and shims.

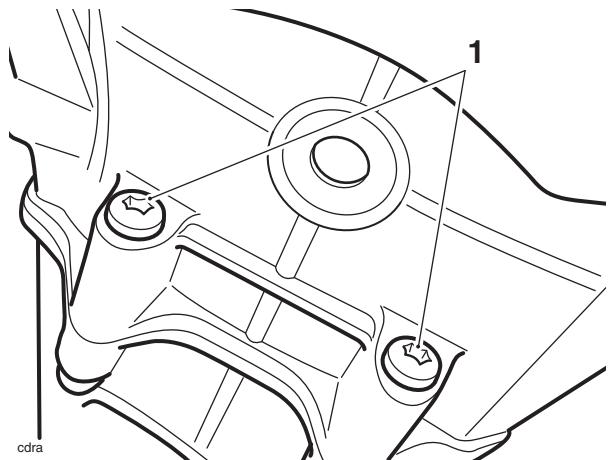


1. Tappet bucket
2. Shim

Note:

- To prevent the tappet buckets and shims from becoming mixed, place the shim and tappet together in a marked container. The components must be refitted in their original positions.
6. Disconnect the coolant bypass hose from the rear of the cylinder head.

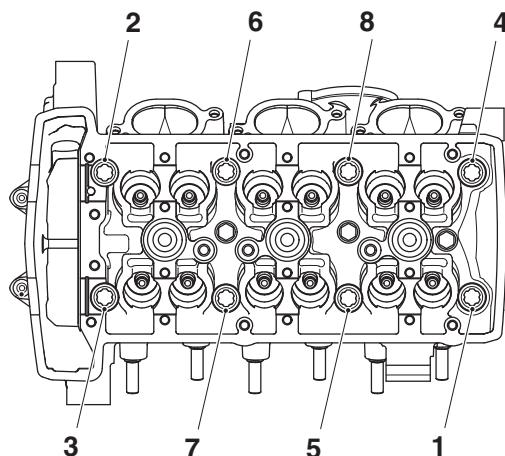
7. Release the screws securing the outside of the cylinder head to the upper crankcase.



1. Cylinder head to upper crankcase screws

Note:

- The cylinder head for Street Triple, Street Triple 660 cc, Street Triple R and Street Triple Rx is secured with bolts.
 - The cylinder head for Daytona 675 and Daytona 675 R is secured by nuts.
 - For all models, hardened washers are fitted between the cylinder head and the retaining bolts/nuts.
8. Progressively release the cylinder head bolts/nuts in the order shown below.



Cylinder Head Release Sequence

9. Lightly tap the cylinder head with a rubber mallet to break the seal of the gasket.

Note:

- For Daytona 675 and Daytona 675 R, retain two of the cylinder head nuts for the installation of the barrel.

10. Remove the cylinder head. Discard the cylinder head gasket and the bolts/nuts and washers.



Caution

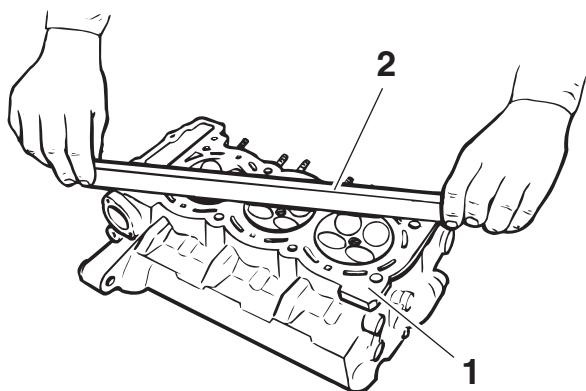
For the Daytona 675 and Daytona 675 R models only, the gasket between the barrel and the crankcase must also be replaced if the cylinder head has been removed.

Failure to replace the gasket may result in an engine oil leak between the barrel and crankcase.

11. **For Daytona 675 and Daytona 675 R:** Remove the barrel (see page 5-19) and discard the gasket.

Inspection

1. Thoroughly clean the surface of the head and check for damage and pitting of the combustion chambers.
2. Using a straight edge, check the cylinder head gasket face for warp which could lead to gasket failure. Replace the head if warped.



1. Cylinder head gasket face
2. Straight edge
3. Check the camshaft drive chain tensioner blades. Renew if worn or damaged.

Installation

1. **For Daytona 675 and Daytona 675 R:** Fit a new gasket to the barrel and refit it to the crankcase (see page 5-20).
2. Thoroughly clean the upper faces of the crankcase/barrel, taking care not to damage the mating surfaces.



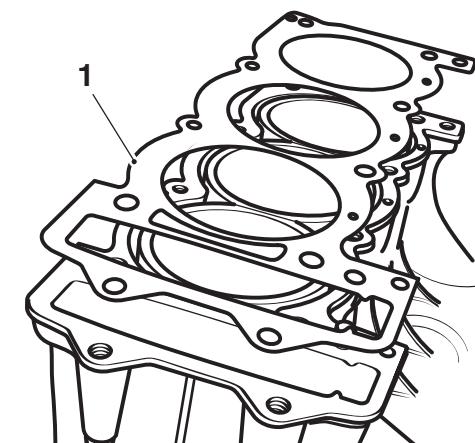
Caution

Engines fitted with the hydraulic tensioner to tension the camshaft chain, has a different head gasket compared to the engines fitted with a spring loaded tensioner.

Fitting the incorrect head gasket may affect the oil pressure supply to the cylinder head leading to engine damage.

Refer to the EPC to ensure that the correct head gasket is fitted.

3. Fit a new cylinder head gasket ensuring that the head to crankcase location dowels are correctly in place.



1. Cylinder head gasket
4. Ensure that the cylinder head face is completely clean.
5. Carefully lower the cylinder head over the camshaft drive chain and locate the head onto the dowels.

Cylinder Head

Cylinder Head Tightening Sequence

Daytona 675 and Daytona 675 R



Caution

Using the correct procedure to fit and tighten the cylinder head nuts will ensure the long term reliability of the cylinder head gasket.

Clean each stud, paying particular attention to the threads. If any of the threads are damaged, replace the stud(s).

Lubricate the threads at the upper end of the studs with engine oil, and then wipe clean with a lint-free cloth leaving minimal oil on the threads (that is, almost dry to touch).

Tighten the nuts using the three-stage procedure given below.

Failure to observe these important items may lead to engine damage through a damaged head gasket.

Note:

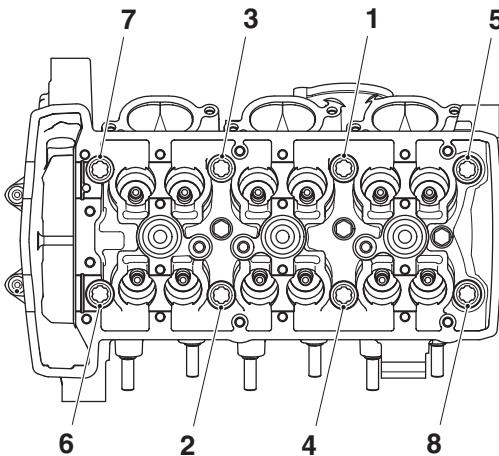
- **New cylinder head nuts and washers must be fitted.**
- 6. Lubricate the threads on the studs and the top surface of the hardened washer with clean engine oil.
- 7. Fit new nuts and washers to the cylinder head and tighten until finger tight.

Street Triple, Street Triple 660 cc, Street Triple R and Street Triple Rx

- 8. Fit new bolts and washers to the cylinder head and tighten until finger tight.

All Models

- 9. The cylinder head bolts/nuts are tightened in three stages, in the sequence shown below. This is to ensure that the cylinder head gasket seals correctly to the head and crankcase.



Cylinder Head Tightening Sequence

Note:

- For stages 1 and 2 of the cylinder head tightening operation, a torque wrench of known, accurate calibration must be used.
- For stage 3 of the cylinder head tightening operation, the bolts/nuts must be turned through a set number of degrees to reach the final setting. To accurately gauge the turn, T3880105 - Angular Torque Gauge must be used.

Daytona 675 and Daytona 675 R

Stage 1

- Tighten the head nuts, in the sequence shown on page 3-26, to **20 Nm**.

Stage 2

- Tighten the head nuts in the sequence shown on page 3-26, to **25 Nm**.

Stage 3

Fit the T3880105 - Angular Torque Gauge between the Torx socket and the drive handle and locate the Torx drive to the nut. Pick an increment point on the torque turn gauge which aligns with a suitable reference point on the head.

- In the sequence shown on page 3-26, tighten through **130°** of nut rotation as measured using the T3880105 - Angular Torque Gauge.

Street Triple, Street Triple 660 cc, Street Triple R and Street Triple Rx

Stage 1

- Tighten the head bolts, in the sequence shown on page 3-26, to **15 Nm**.

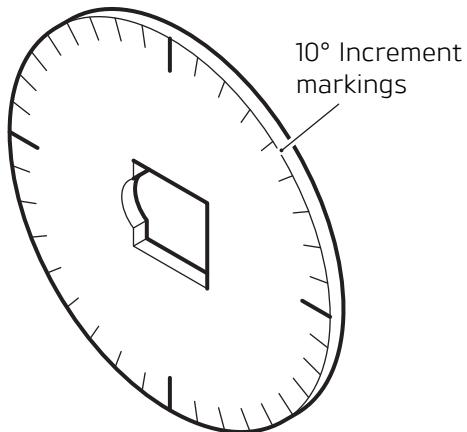
Stage 2

- Tighten the head bolts in the sequence shown on page 3-26, to **20 Nm**.

Stage 3

Fit the T3880105 - Angular Torque Gauge between the Torx socket and the drive handle and locate the Torx drive to the bolt. Pick an increment point on the torque turn gauge which aligns with a suitable reference point on the head.

- In the sequence shown on page 3-26, tighten through **120°** of bolt rotation as measured using the T3880105 - Angular Torque Gauge.

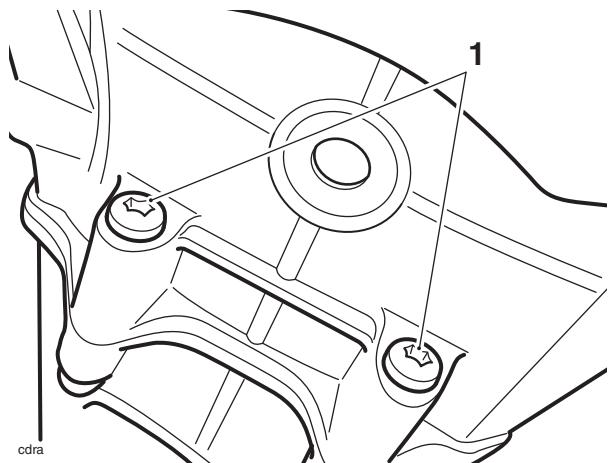


ccry

T3880105 - Angular Torque Gauge

All Models

- Fit the screws securing the side of the cylinder head to the crankcase and tighten to **10 Nm**.



1. Cylinder head to upper crankcase screws

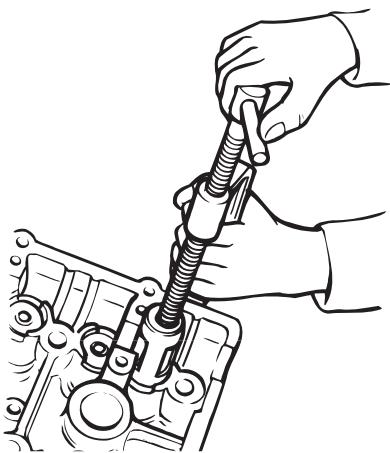
- Install the camshaft drive chain tensioner blades.
- Clean and lubricate the tappet buckets with a 50/50 solution of engine oil and molybdenum disulphide grease and refit the buckets and shims in the same locations from which they were removed.
- Refit the camshaft drive chain (see page 3-23).
- Refit the camshafts (see page 3-17).
- Install the engine to the frame (see page 9-6).

Cylinder Head

Valves and Valve Stem Seals

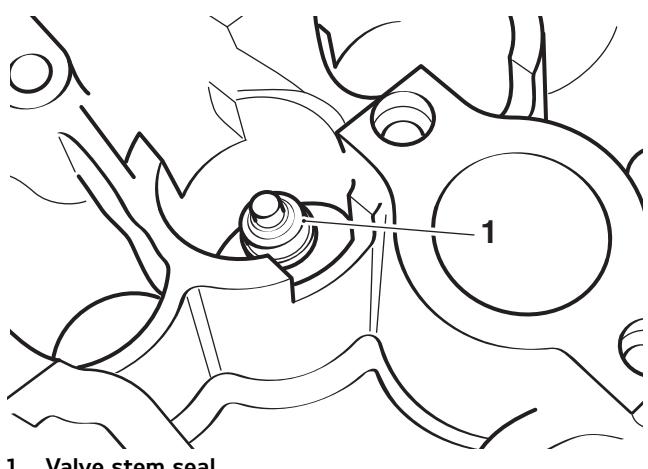
Removal from the Cylinder Head

1. Remove each valve from the head using a valve spring compressor. The compressor must act on the top cup to allow removal of the valve collets.



Valve Removal

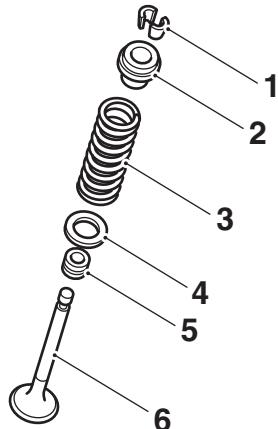
2. Once the collets are released, remove the following items:
 - valve spring retainer
 - valve spring
 - valve spring base
 - valve stem oil seal
 - valve (deburr before removal).



1. Valve stem seal

Note:

- Ensure inlet and exhaust valve components do not become mixed.



1. Collets
2. Valve spring retainer
3. Valve spring
4. Valve spring base
5. Valve stem oil seal
6. Valve

Installation

1. Lubricate the valve stems with new engine oil which meets specification API SH (or higher) and JASO MA.
2. Install the valve into the valve guide and refit the spring base to the valve spring recess in the head.
3. Fit the valve stem seal over the valve stem and, using a suitable tool, press down fully until the seal is correctly seated over the valve guide.

Note:

- During fitment of the valve stem seal, two distinctly different degrees of resistance will be noted when the seal is correctly fitted.
- Firstly, press the seal down the valve stem until the lower side of the seal comes into contact with the valve guide. Greater resistance is felt at this contact point and further gentle pressure is then required to locate the seal over the top end of the valve guide.
- On application of this pressure, the seal can be felt to positively locate over the top face of the valve guide. Once correctly positioned, the seal cannot be pushed down any further.



Caution

Incorrect fitment of the valve stem oil seals could lead to high oil consumption and blue smoke emissions from the exhaust system. Do not use excessive force in fitting the seal as this may break the seal ring.

4. Install the valve spring over the valve stem. Ensure the close wound, colour coded ends of the springs are fitted downwards (towards the piston).
5. Fit the valve spring retainer.
6. Compress the valve spring ensuring that the spring is compressed squarely to prevent damage to the valve stem and cylinder head.
7. Fit the valve collets ensuring correct collet location in the spring retainer and valve as the spring compressor is released.



Caution

Always check for correct location of the valve collets during and after assembly. If not fitted correctly, the collets may become dislodged when the engine is running allowing the valves to contact the pistons. Any such valve to piston contact will cause severe engine damage.

Valve to Valve Guide Clearance

If the valve guides are worn beyond the service limit given below, the cylinder head must be replaced.

Valve Stem to Guide Clearance

Inlet	0.010 - 0.040 mm
Service limit	0.078 mm

Exhaust	0.030 - 0.060 mm
Service limit	0.098 mm

Valve Guides

If a valve guide is found to be worn beyond the service limit, the complete cylinder head must be renewed.

Valve Face Inspection

Remove any carbon build-up from the valve head area. Examine the valve seat face, checking in particular for signs of cracking or pitting.

Cylinder Head

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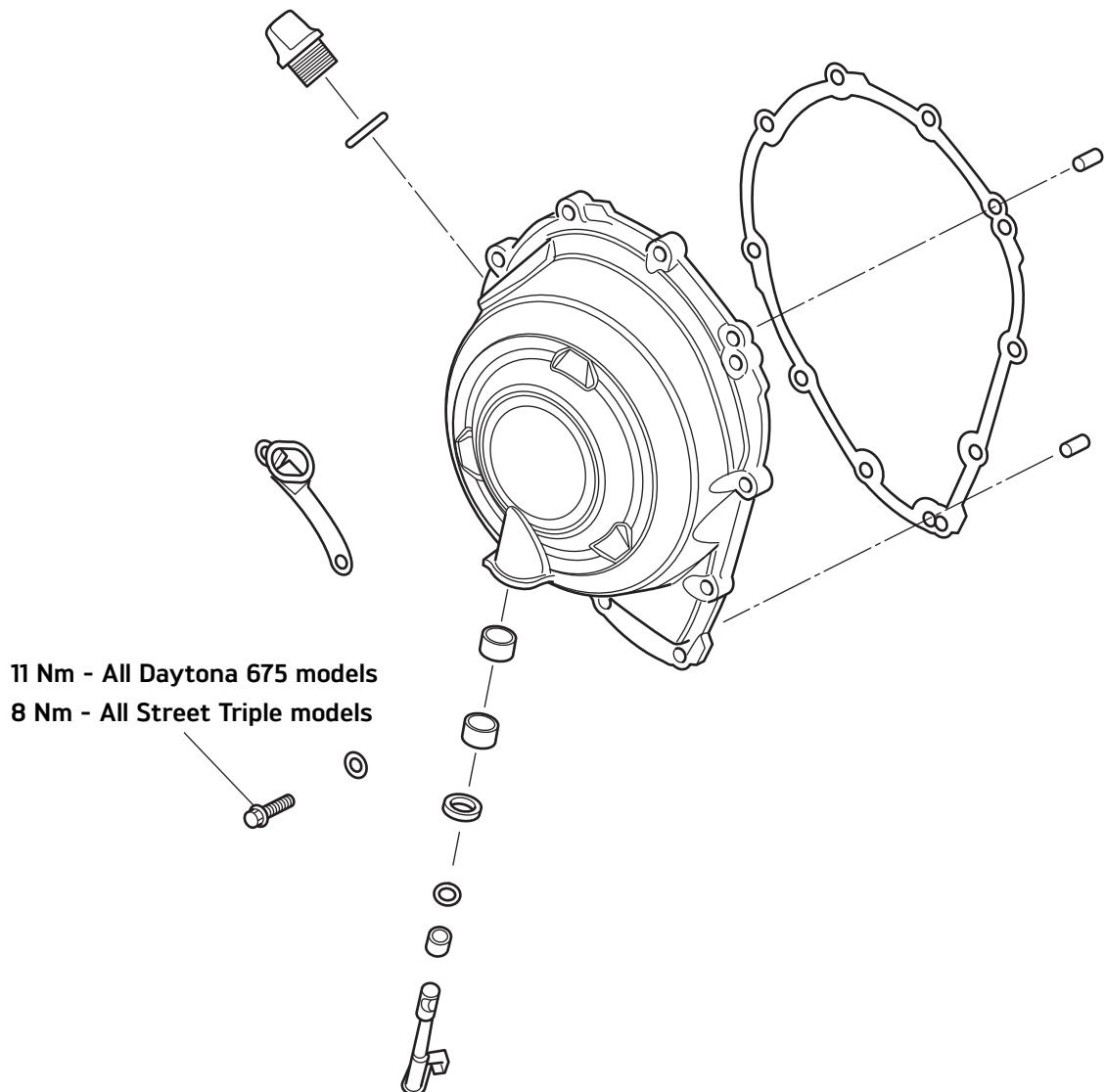
4 Clutch

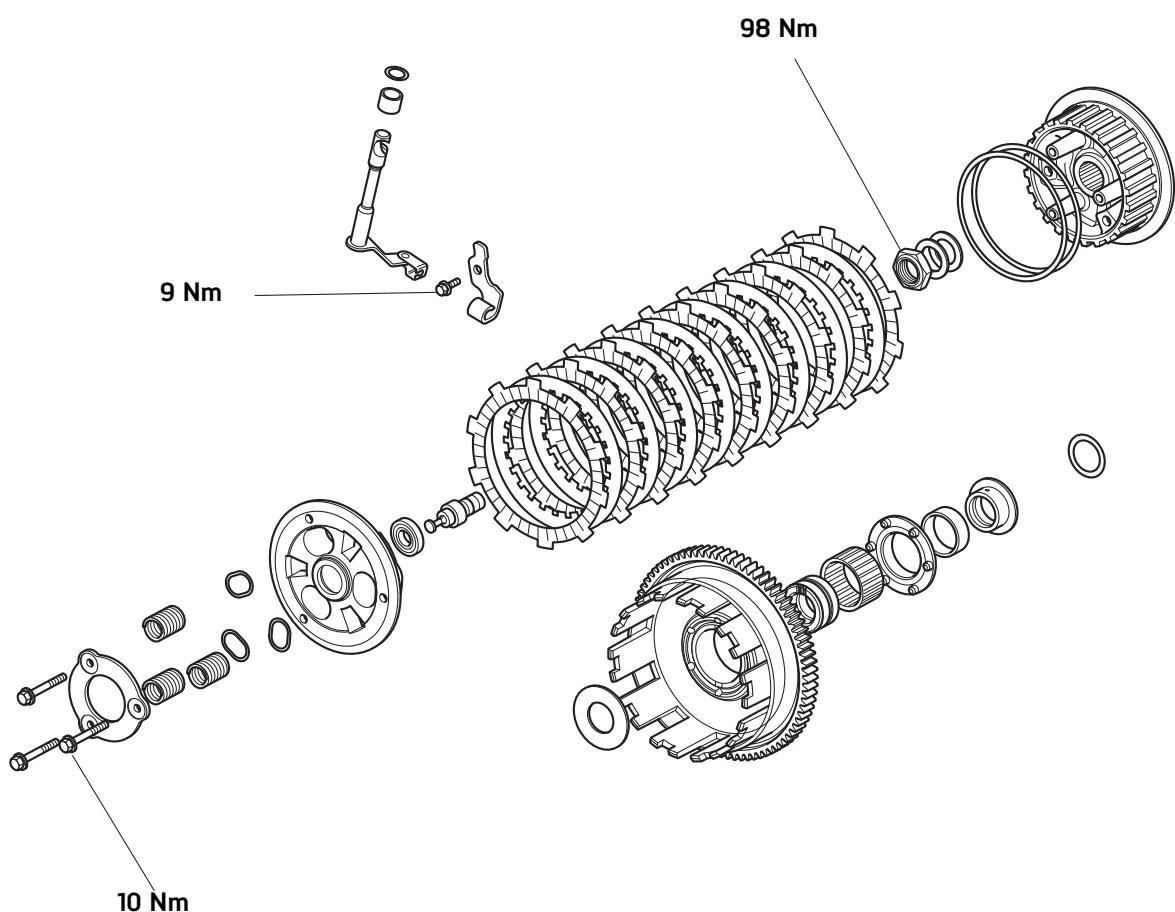
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Clutch

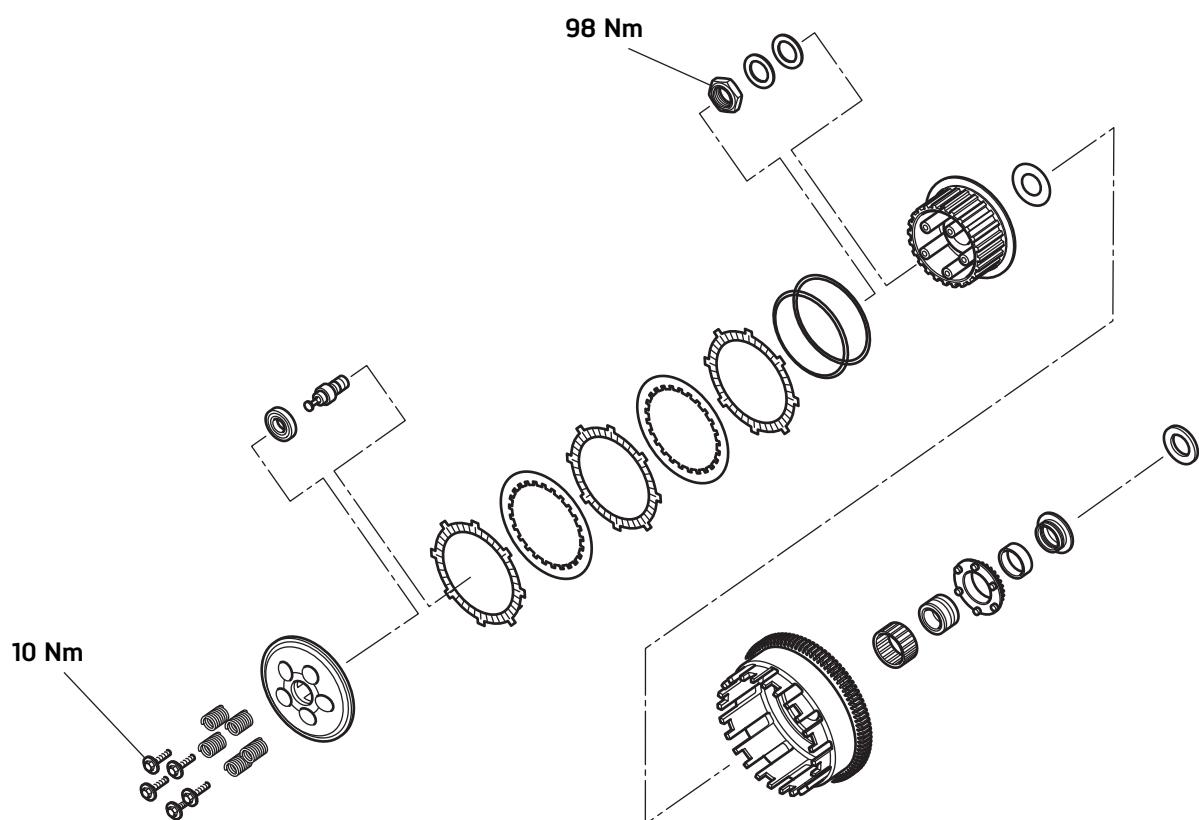
Exploded View - Clutch Cover



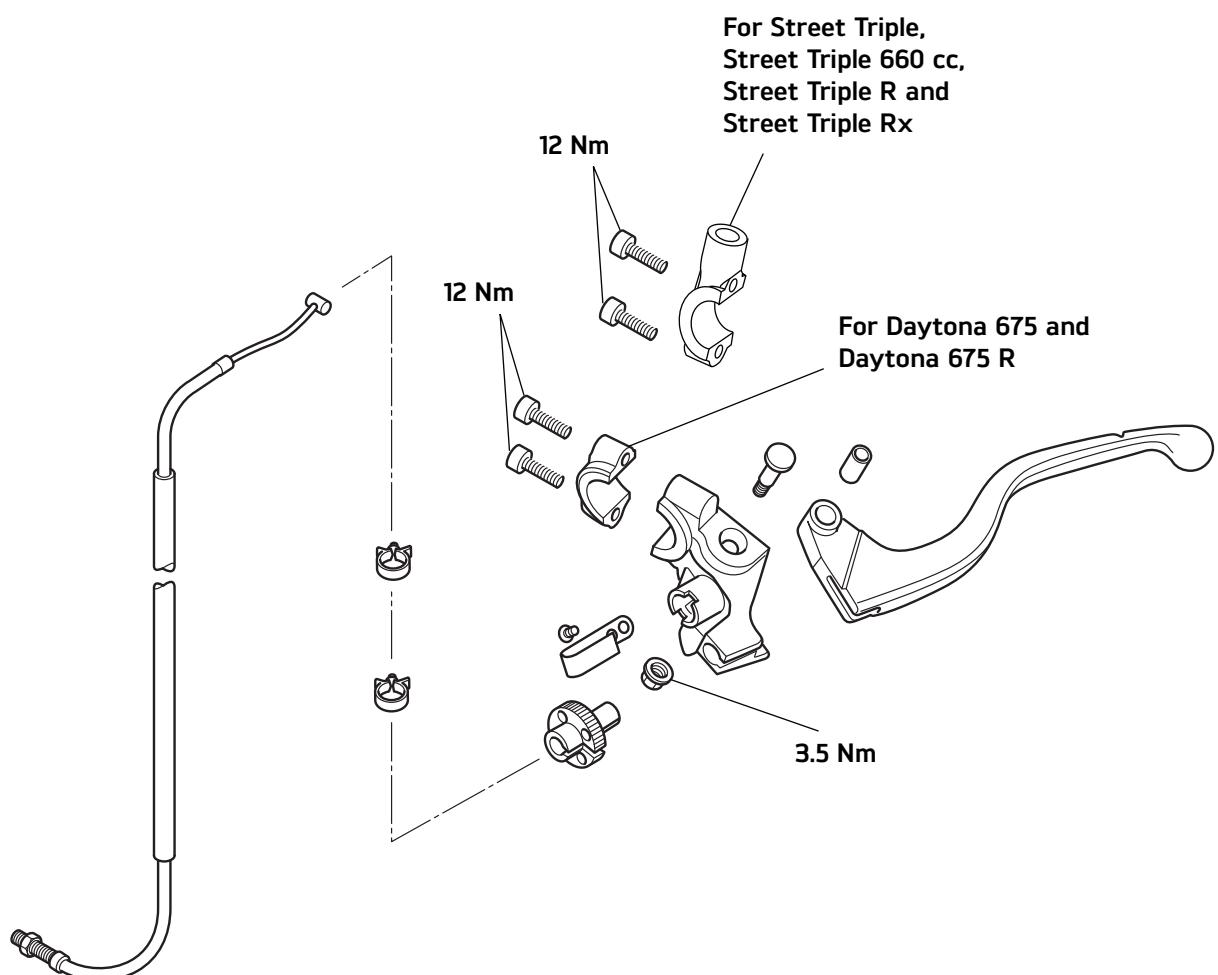
Exploded View - Clutch Assembly - Daytona 675 and Daytona 675 R

Clutch

Exploded View - Clutch Assembly - Street Triple, Street Triple 660 cc, Street Triple R and Street Triple Rx



Exploded View - Clutch Controls



Clutch

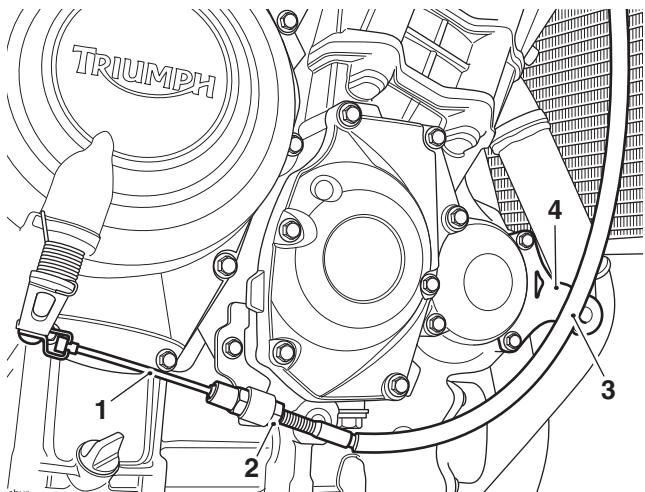
Clutch Cable

Removal

1. Remove the seat (see page 16-22 for Daytona 675, Daytona 675 R and Street Triple Rx, see page 16-23 for Street Triple, Street Triple 660 cc and Street Triple R).
2. Disconnect the battery, negative (black) lead first.
3. **For Daytona 675 and Daytona 675 R:** Remove the right hand fairing (see page 16-33).
4. **For Street Triple, Street Triple 660 cc, Street Triple R and Street Triple Rx:** Remove the right hand radiator inner and outer cowl (see page 16-38).

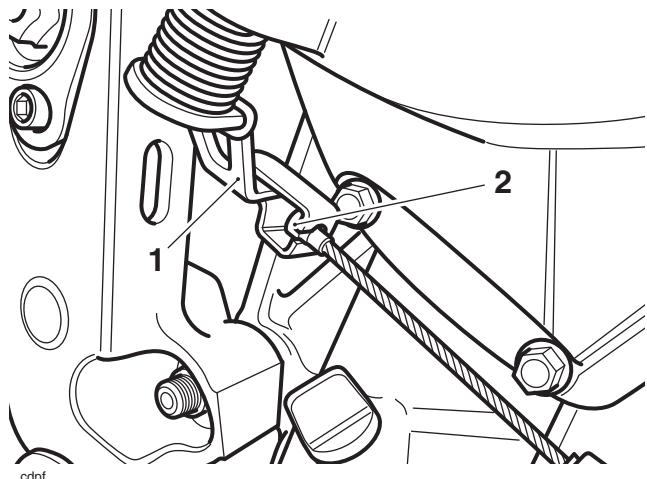
Note:

- Note the routing of the clutch cable and the position of the retaining clips/grommets for installation.
5. Detach the clutch cable retaining clip from its bracket.
 6. Loosen the cable lock nut and release the adjuster at the clutch cover end to give maximum play in the cable.

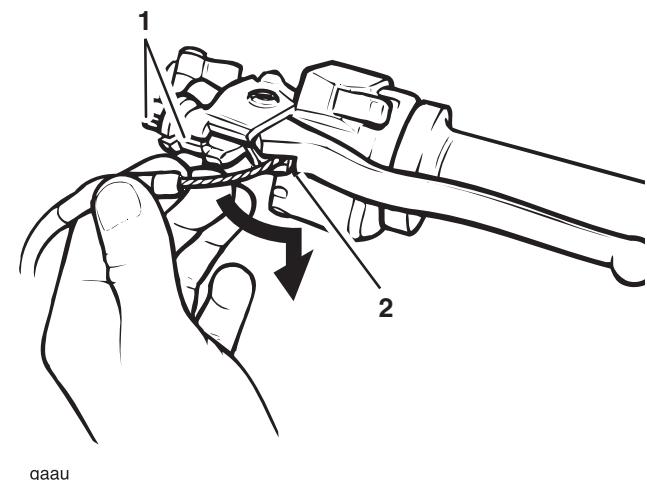


1. Clutch cable
2. Adjuster
3. Clip
4. Bracket

7. Release the clutch cable from the actuating arm by pushing the inner cable nipple through the arm and sliding the cable out of the slot. Detach the cable from the bracket.

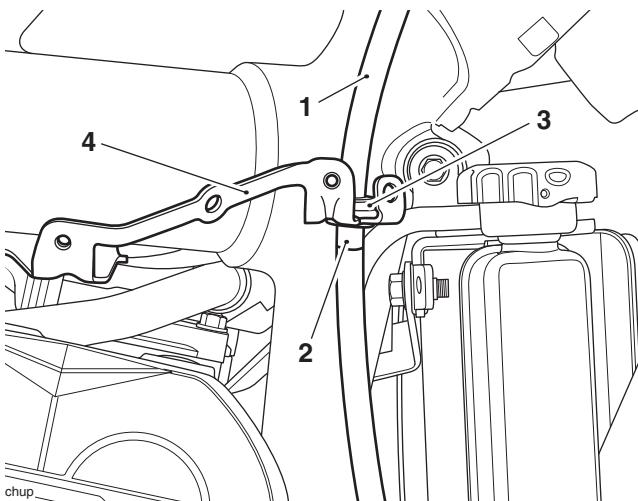


1. Actuating arm
2. Inner cable nipple
8. Align the cable adjuster and lever bracket slots.
9. Pull in the clutch lever and turn the inner cable, anticlockwise through the slots in the adjuster and lock nut, until the cable can be detached from the lever by pushing downwards.

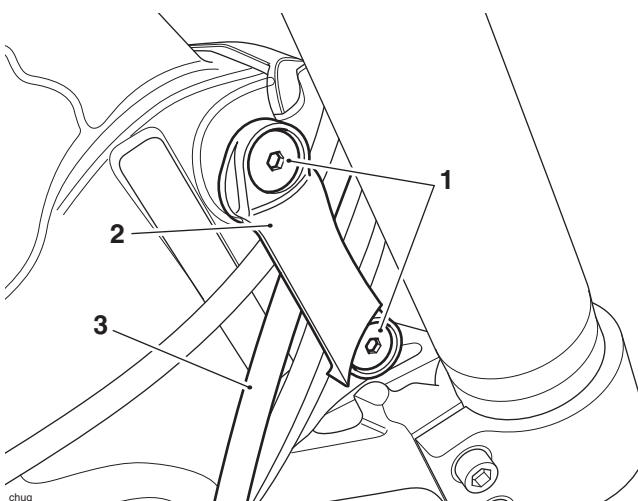


1. Cable adjuster/lever bracket slots
2. Cable release point

10. **For Street Triple, Street Triple 660 cc, Street Triple R and Street Triple Rx:** To remove the clutch cable, pull it downwards to remove it from the grommet attached to the radiator cowl bracket. Note the position of the marker tape for installation.



11. Remove one of the fixings for the cable guide and remove the clutch cable.



Inspection

- Check the inner cable for free movement through the outer cable.
- Examine the inner cable for frayed strands.
- Examine the two inner cable nipples for signs of looseness and damage. Replace the cable if necessary.

Installation

Note:

- For Street Triple, Street Triple 660 cc, Street Triple R and Street Triple Rx, ensure that the marker tape on the clutch cable is positioned near the grommet, as noted for removal.**

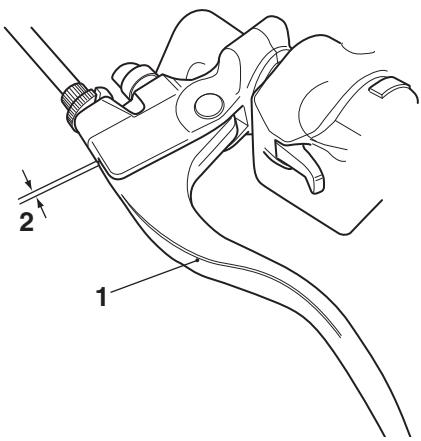
- Position the cable to the motorcycle using the same routing as noted during removal.
- Attach the inner cable to the clutch lever and actuating arm using a reversal of the removal process.
- Refit the outer cable to the adjuster bracket at the clutch end.
- Attach the clutch cable retaining clip to its bracket.
- Route the clutch cable behind the cable guide at the headstock. Secure the cable guide and tighten its fixing to:
 - 13 Nm - For Street Triple, Street Triple 660 cc, Street Triple R and Street Triple Rx**
 - 7 Nm - For Daytona 675 and Daytona 675 R.**

Note:

- Ensure that the two adjuster nuts are positioned one either side of the bracket.**
- Set the lever adjuster to a point where an equal adjustment is possible in both directions.
- Set the adjuster at the clutch end to give a preliminary setting of 2 - 3 mm of free play as measured at the lever. Tighten the lock nut.
- Operate the clutch lever several times and recheck the amount of free play present.

Clutch

9. Set the final adjustment of the cable to give 2 - 3 mm of free play at the lever by turning the adjuster nut and lock nut at the lever end.



1. Clutch lever
2. Correct setting, 2 - 3 mm
10. **For Daytona 675 and Daytona 675 R:** Fit the right hand fairing (see page 16-34).
11. **For Street Triple, Street Triple 660 cc, Street Triple R and Street Triple Rx:** Fit the right hand radiator cowl (see page 16-39).
12. Reconnect the battery, positive (red) lead first. Tighten the battery terminals to **4.5 Nm**.
13. Refit the seat (see page 16-22 for Daytona 675, Daytona 675 R and Street Triple Rx, see page 16-24 for Street Triple, Street Triple 660 cc and Street Triple R).

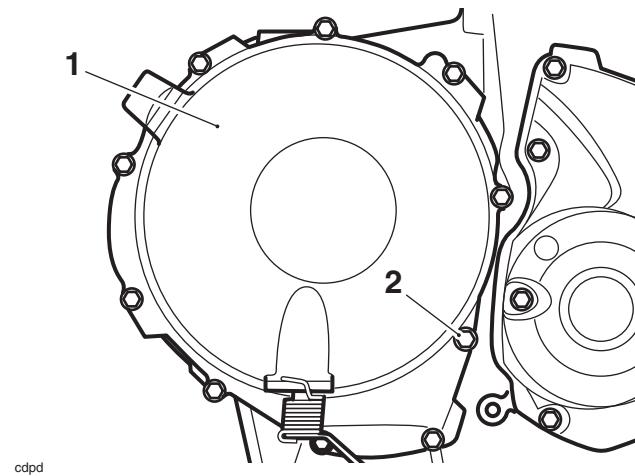
Clutch

Disassembly

1. Remove the seat (see page 16-22 for Daytona 675, Daytona 675 R and Street Triple Rx, see page 16-23 for Street Triple, Street Triple 660 cc and Street Triple R).
2. Disconnect the battery, negative (black) lead first.
3. **For Daytona 675 and Daytona 675 R:** Remove the right hand fairing (see page 16-33).
4. Release the clutch cable from the actuating arm (see page 4-6).

Note:

- **For Daytona 675 and Daytona 675 R, if fitted, note the position of the bracket for the frame protection bar trim.**
- 5. Remove the clutch cover, noting the copper washer position. Discard the clutch cover gasket and copper washer.



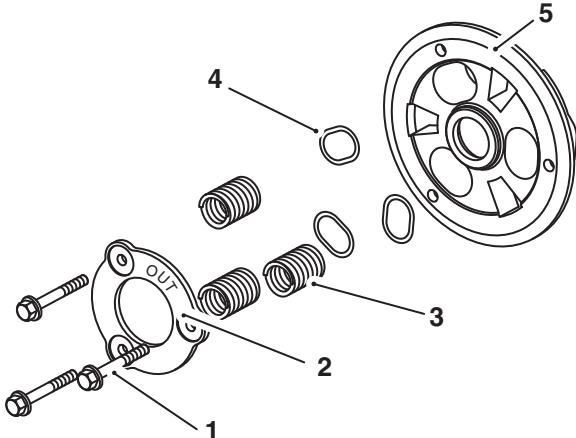
1. Clutch cover
2. Copper washer position

Daytona 675 and Daytona 675 R

Note:

- Note that the stopper plate has an OUT mark. This must face outwards when fitted.
- There are spring seats located in the pressure plate. Ensure the seats are in the pressure plate prior to fitting the springs.

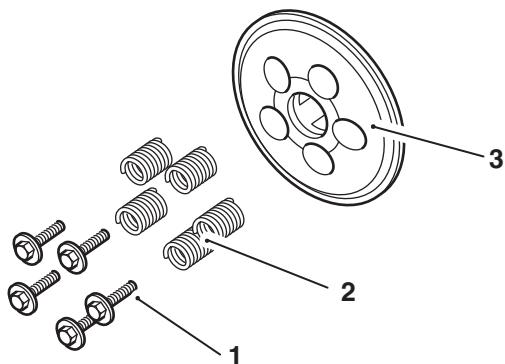
6. Release the 3 bolts, remove the stopper plate, springs, pressure plate and spring seats.



1. Bolts
2. Stopper plate
3. Springs
4. Spring seats
5. Pressure Plate

Street Triple, Street Triple 660 cc, Street Triple R and Street Triple Rx

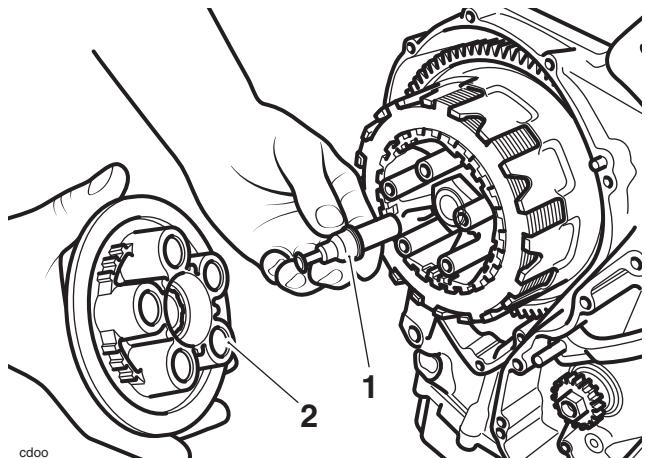
7. Release the 5 bolts and remove the springs and clutch pressure plate.



1. Bolts
2. Spring
3. Pressure plate

All Models

8. Remove the clutch pull-rod.

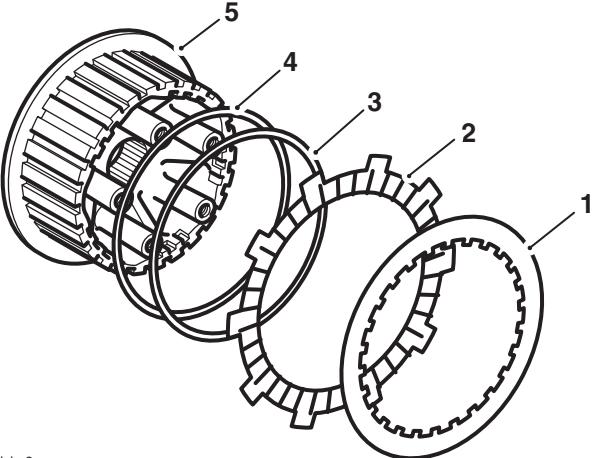


1. Clutch pull-rod
2. Clutch pressure plate (Street Triple shown)

9. Remove the clutch friction plates and steel plates together with the anti-judder spring and anti-judder seat washer.

Note:

- Record the orientation of all components as they are removed. The plates must be assembled in the same order.



1. Steel plate
2. Inner friction plate
3. Anti-judder spring
4. Anti-judder seat washer
5. Clutch inner drum (Street Triple shown)

Clutch

Daytona 675 and Daytona 675 R

Note:

- The inner and the two outermost friction plates are different to the other friction plates. They must be fitted in their noted positions.
- The outer steel plate is different to the other plates. It must be fitted in its noted position.

Street Triple, Street Triple 660 cc, Street Triple R and Street Triple Rx

Note:

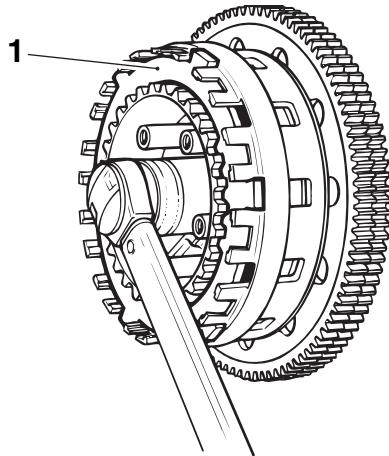
- The inner and outermost friction plates are different to the remainder and are also different to each other. They must be fitted in their noted positions.
- The two outer steel plates are different to the other plates. They must be fitted in their noted positions.

All Models

Note:

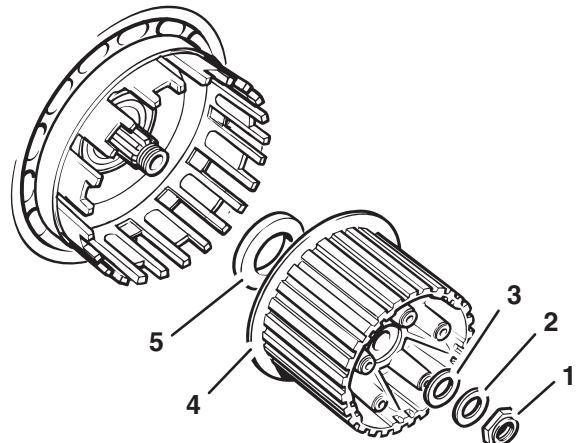
- Store all plates in their correct fitted order to avoid confusion on installation.
 - Refer to the following page of this section for details of clutch friction plate checking.
 - It is not normally necessary to disassemble the clutch further, but if the clutch inner and outer drums are to be removed, proceed as follows:
10. For Daytona 675 and Daytona 675 R: Engage second gear and lock the inner and outer clutch drums together using T3880307 - Clutch Anti-rotation Tool.

11. For Street Triple, Street Triple 660 cc, Street Triple R and Street Triple Rx: Engage second gear and lock the inner and outer clutch drums together using T3880306 - Clutch Anti-rotation Tool.



- gaaz
1. T3880306 - Clutch Anti-rotation Tool (Street Triple shown)

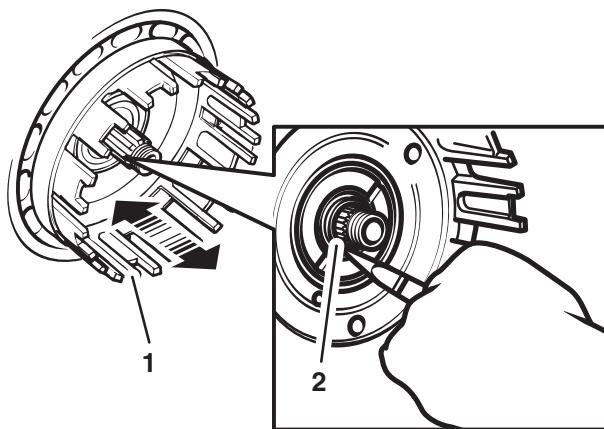
12. Depress the rear brake pedal to prevent the engine from turning, then release the clutch centre nut.
13. Remove the centre nut, Belleville washer, flat washer, clutch inner drum and thrust washer. Discard the nut and Belleville washer.



kaim_1

1. Centre nut
2. Belleville washer
3. Flat washer
4. Inner drum (Street Triple shown)
5. Thrust washer

14. Slide the clutch outer drum assembly gently backwards and forwards to dislodge the inner bearing sleeve. Carefully remove the bearing sleeve while supporting the clutch outer drum.



kaio_1

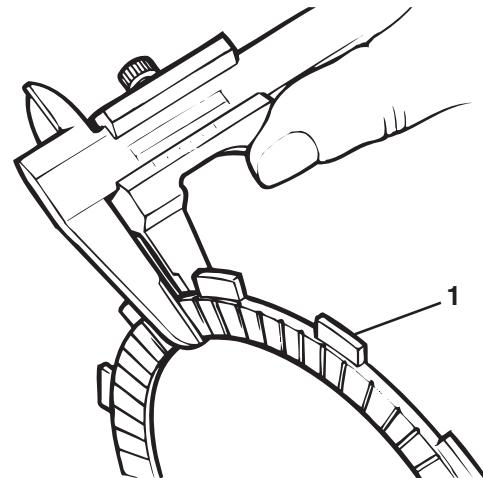
1. Outer drum
2. Bearing sleeve

15. Remove the clutch outer drum leaving the oil pump drive sprocket, bearing and sleeve in place on the input shaft.

Friction Plate Inspection

Thickness

1. If any friction plate thickness is outside the service limit, replace the friction plates as a set.



1. Clutch friction plate

Friction plate thickness - all plates

Standard	3.00 mm
Service limit	2.90 mm

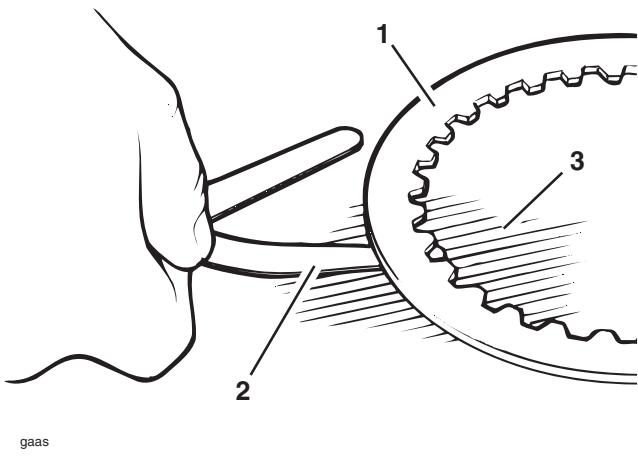
Clutch

Steel Plate Inspection

Bend/warp

Check all plates for bend and warp as follows:

1. Place the plate being checked on a clean surface plate and attempt to pass a feeler gauge of the maximum specified thickness between the steel plate and surface plate at several points around the plate. If the feeler gauge can be passed beneath the clutch plate at any point, renew the plates as a set.



gaas

1. Steel plate
2. Feeler gauge
3. Surface plate

Steel plate bend/warp

Standard	up to 0.15 mm
Service limit	0.20 mm

Clutch Pack Height

The clutch pack height should only be measured if the friction plates and the steel plates have been replaced.

The clutch pack height is critical for a smooth operation of the gear change and needs to be measured prior to installation.

If used steel plates are being fitted, the clutch pack height measurement is not necessary, as the plates may not be worn to the service limit (and are therefore still serviceable), but could fall outside the clutch pack height tolerance when measured.

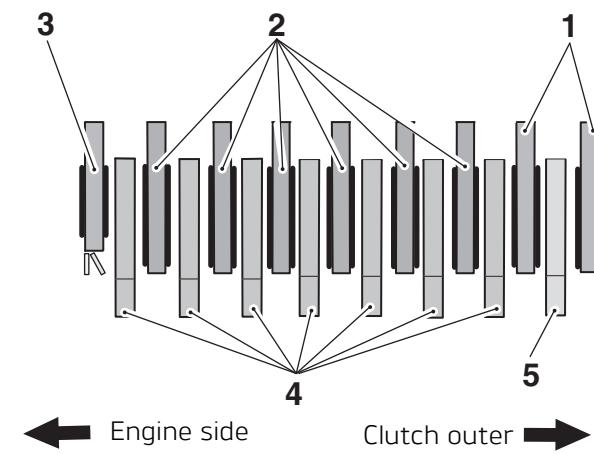
Daytona 675 and Daytona 675 R

If building a new clutch pack, its height must be correct. To achieve this, build the new clutch pack with the following:

- 2 x new outer friction plate
- 6 x new friction plates
- 1 x new inner friction plate
- 7 x steel plates, 2.0 mm thick
- 1 x outer steel plate, 2.0 mm thick.

1. Arrange the new friction and new steel plates in a stack as shown below.

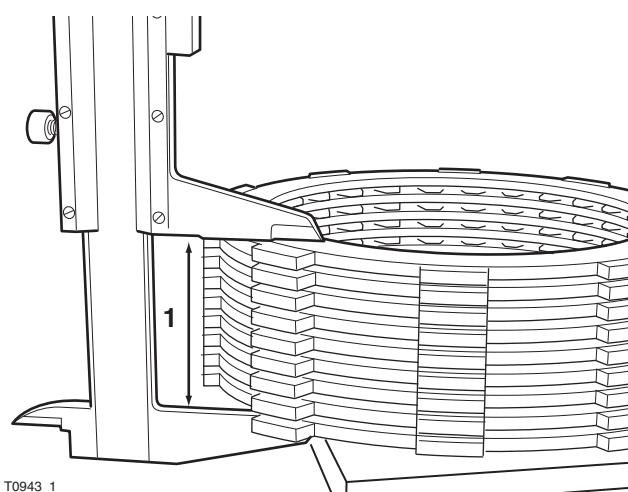
Friction plate and steel plate arrangement



T094_4

1. Outer friction plates
2. Friction plates
3. Inner friction plate
4. Steel plate, 2.0 mm thickness
5. Outer steel plate, 2.0 mm thickness

2. Place the assembled clutch pack on a flat surface and measure its height as shown below.



1. Clutch pack height

3. The correct clutch pack height for this clutch assembly is shown in the table below.

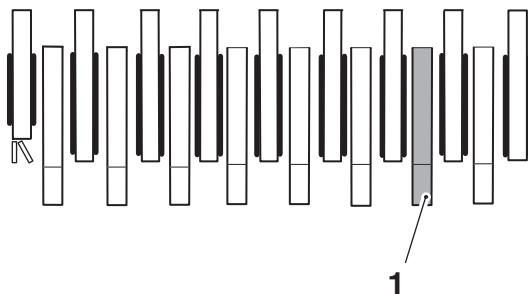
Standard height in mm	Tolerance in mm
43.00	+0.34 / -0.66

4. If the clutch pack is too high, continue from step 5, omit step 6 then continue from step 7.
If the clutch pack is too low, continue from step 6.

Note:

- **1.6 mm and 2.3 mm steel plates are available, refer to the Parts Catalogue for part numbers.**
 - **No more than one 1.6 mm thick steel plate is to be used in the clutch pack.**
5. If the clutch pack height is too high, replace the 2.0 mm steel plate indicated below with a new 1.6 mm steel plate.

← Engine side Clutch outer →

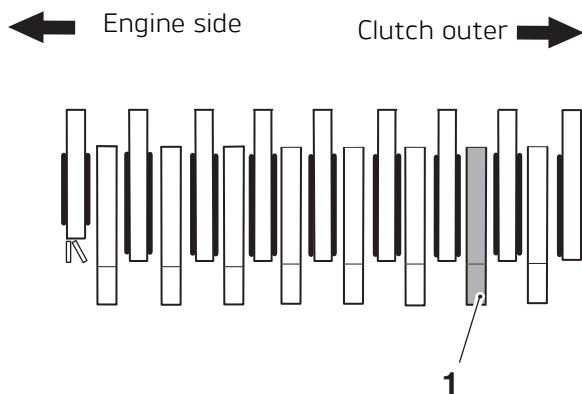


1. 2.0 mm steel plate to be replaced

Note:

- **No more than one 2.3 mm thick steel plate is to be used in the clutch pack.**

6. If the clutch pack height is too low, replace the 2.0 mm steel plate indicated below with a new 2.3 mm steel plate.



1. 2.0 mm steel plate to be replaced

7. Re-check the clutch pack height as described earlier.

Street Triple, Street Triple 660 cc, Street Triple R and Street Triple Rx

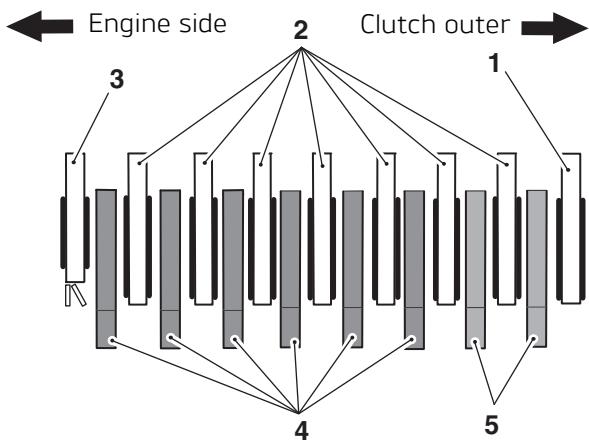
If building a new clutch pack, its height must be correct. To achieve this, build the new clutch pack with the following:

- 1 x new outer friction plate
- 7 x new friction plates
- 1 x new inner friction plate
- 6 x steel plates, 2.0 mm thick
- 2 x outer steel plate, 1.6 mm thick.

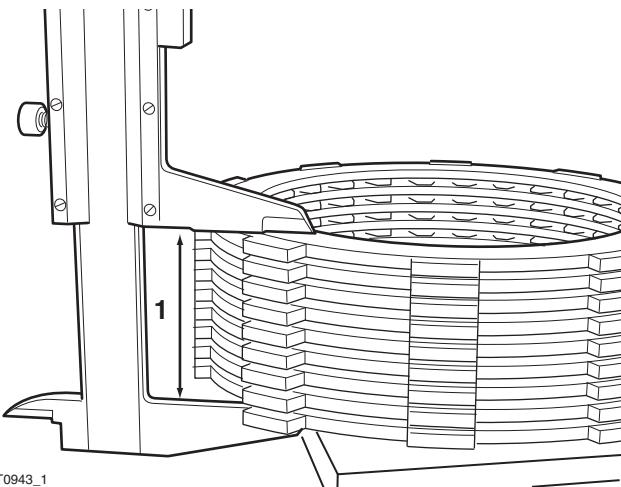
1. Arrange the new friction and new steel plates in a stack as shown below.

Clutch

Friction plate and steel plate arrangement



- Outer friction plate**
- Friction plates**
- Inner friction plate**
- Steel plate, 2.0 mm thickness**
- Outer steel plate, 1.6 mm thickness**
- Place the assembled clutch pack on a flat surface and measure its height as shown below.



1. Clutch pack height

- The correct clutch pack height for this clutch assembly is shown in the table below.

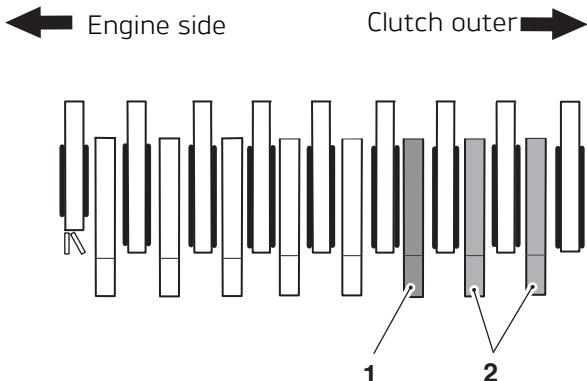
Standard height in mm	Tolerance in mm
42.20	+0.34 / -0.66

- If the clutch pack is too high, continue from step 5, omit step 6 then continue from step 7.
If the clutch pack is too low, continue from step 6.

Note:

- No more than three 1.6 mm thick steel plates are to be used in the clutch pack.**

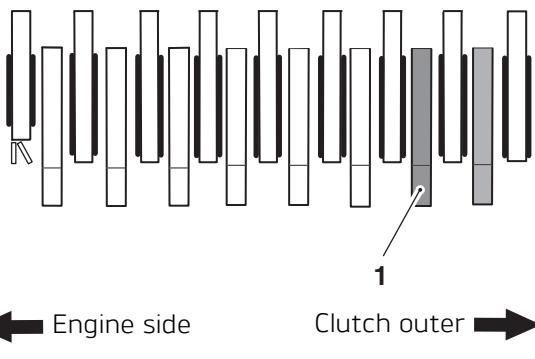
- If the clutch pack height is too high, replace the 2.0 mm steel plate next to the 1.6 mm steel plate (indicated below) with a new 1.6 mm steel plate.



- 2.0 mm steel plate to be replaced**
- 1.6 mm steel plates**

Note:

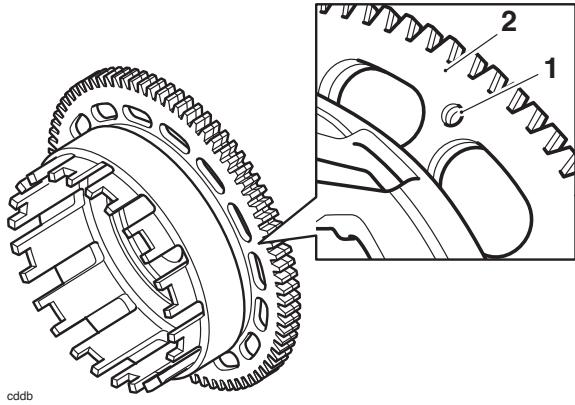
- At least one 1.6 mm steel plate must be in the clutch pack.**
- If the clutch pack height is too low, replace the 1.6 mm steel plate indicated below with a new 2.0 mm steel plate.



- 1.6 mm steel plate to be replaced**
- Re-check the clutch pack height as described earlier.

Assembly

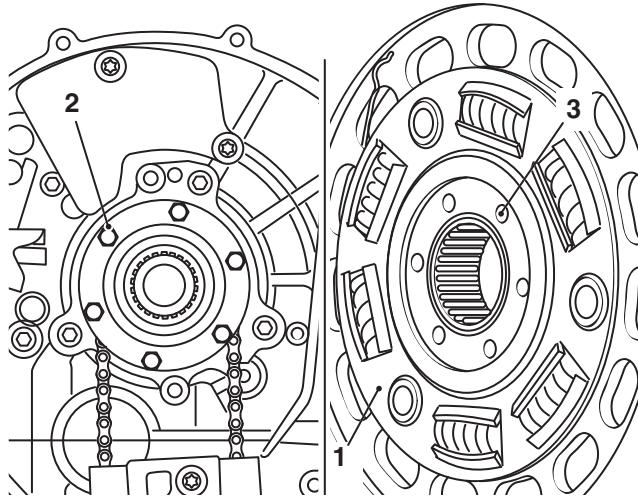
- To fully engage the outer drum, insert a suitable tool to preload and align the primary gear and backlash eliminator gear through the hole shown in the illustration below.



cddb

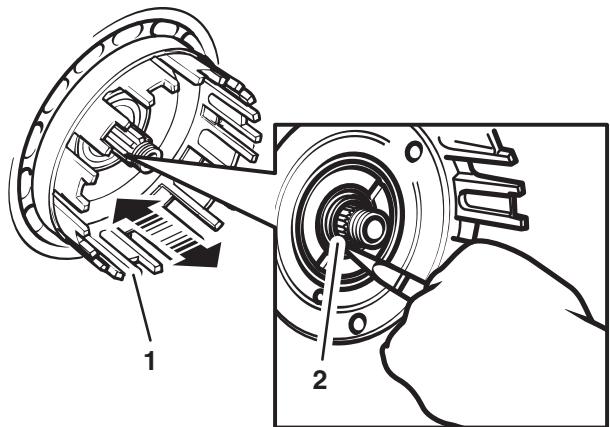
- Alignment hole**
- Outer drum**

- Position the clutch outer drum assembly to the input shaft and align the oil pump drive pegs with the corresponding holes in the rear of the clutch outer drum.



- Clutch outer drum**
- Oil pump sprocket drive pegs**
- Oil pump drive holes**

- While holding the clutch outer drum in position and ensuring correct engagement with the oil pump drive, refit the bearing sleeve and bearing.

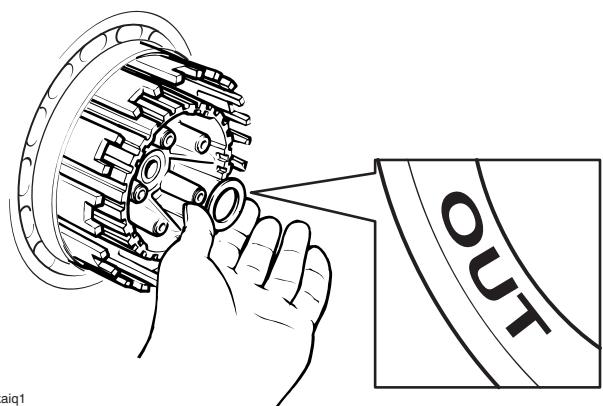


kaio_1

- Outer drum**
- Bearing sleeve**

Note:

- When the bearing sleeve is correctly fitted, it will be a flush fit with the clutch drum face.
- Fit the thrust washer to the shaft.
- Fit the clutch inner drum.
- Fit the flat washer, a new Belleville washer (OUT mark facing outwards), and fit a new centre nut.

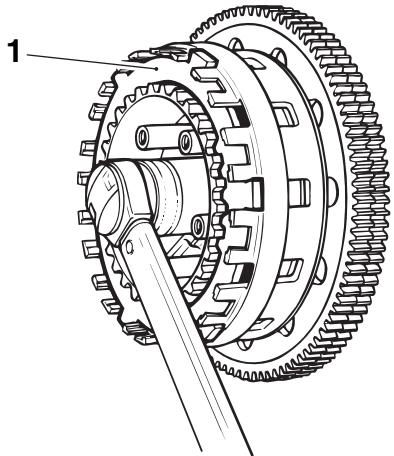


kaiq1

Belleville Washer OUT Mark

Clutch

7. Lock the inner and outer drums together using the clutch anti-rotation tool. Depress the rear brake pedal to prevent the engine turning, and tighten the centre nut to **98 Nm**. Remove the clutch anti-rotation tool.



gaaz

1. Clutch anti-rotation tool

8. Disengage second gear and check for free rotation of the clutch inner drum.
9. Using a suitable pin punch, stake the nut to the shaft.
10. Coat all clutch friction plates in clean engine oil before fitting the friction plates, steel plates, anti-judder spring and anti-judder seat washer to the clutch basket in the same order and orientation as noted during removal.

Daytona 675 and Daytona 675 R

Note:

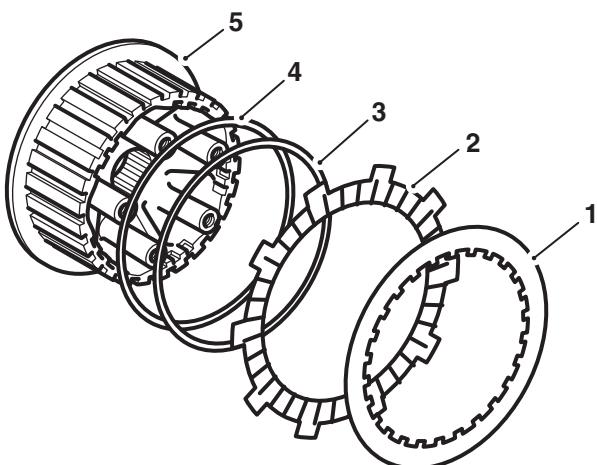
- The inner and the two outermost friction plates are different to the other friction plates. They must be fitted in their noted positions.
- The outer steel plate is different to the other plates. It must be fitted in its noted position.

Street Triple, Street Triple 660 cc, Street Triple R and Street Triple Rx

Note:

- The inner and outermost friction plates are different to the remainder and are also different to each other. They must be fitted in their noted positions.
- The two outer steel plates are different to the other plates. They must be fitted in their noted positions.

All Models



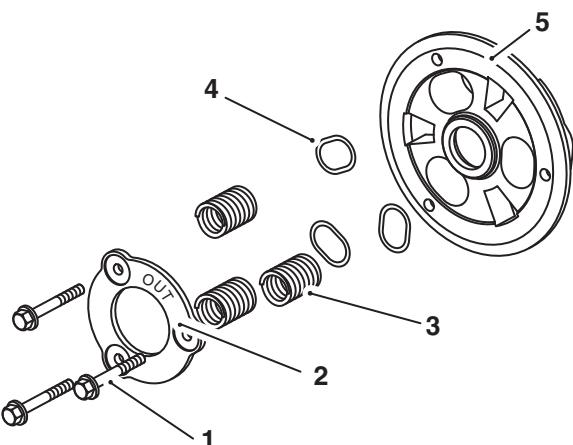
cdpb_2

1. Steel plate
2. Inner friction plate
3. Anti-judder spring
4. Anti-judder seat washer
5. Clutch inner drum (Street Triple shown)

11. Refit the clutch pull-rod.

Daytona 675 and Daytona 675 R

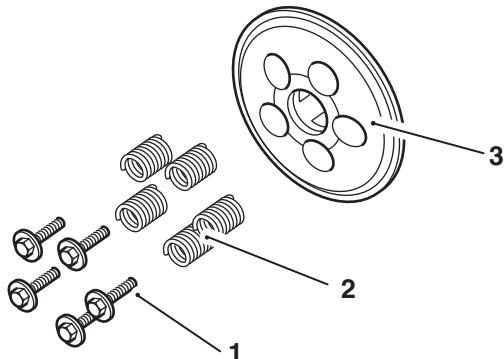
12. Fit the pressure plate. Ensure that the spring seats are fitted into the pressure plate as noted for removal.
13. Fit the springs and stopper plate, ensure that the OUT mark on the stopper plate is facing outwards. Secure with the bolts and tighten to **10 Nm**.



1. Bolts
2. Stopper plate
3. Springs
4. Spring seats
5. Pressure plate

Street Triple, Street Triple 660 cc, Street Triple R and Street Triple Rx

14. Refit the clutch pressure plate together with the springs and bolts. Tighten the bolts to **10 Nm**.



1. Bolts
2. Spring
3. Pressure plate

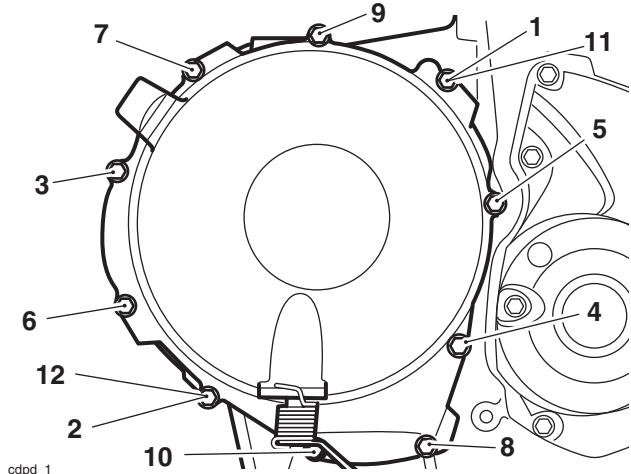
All Models

Note:

- The pull-rod should be free to move in and out and also it should be free to turn.
- The clutch cover fixings 1 and 2 are torqued twice as 11 and 12 respectively.

15. Clean and refit the clutch cover incorporating a new gasket. Install the bolt with the copper washer in the position as noted for removal. Tighten the clutch cover bolts in the sequence shown below to:

- **8 Nm** - Street Triple, Street Triple 660 cc, Street Triple R and Street Triple Rx.
- **11 Nm** - Daytona 675 and Daytona 675 R.



Clutch Cover Tightening Sequence

16. Refit the outer cable to the adjuster bracket at the clutch end (see page 4-7).
17. Set the clutch adjustment (see page 4-7).
18. **For Daytona 675 and Daytona 675 R:** Refit the right hand fairing (see page 16-34).
19. Reconnect the battery positive (red) lead first. Tighten the battery terminals to **4.5 Nm**.
20. Refit the seat (see page 16-22 for Daytona 675, Daytona 675 R and Street Triple Rx, see page 16-24 for Street Triple, Street Triple 660 cc and Street Triple R).

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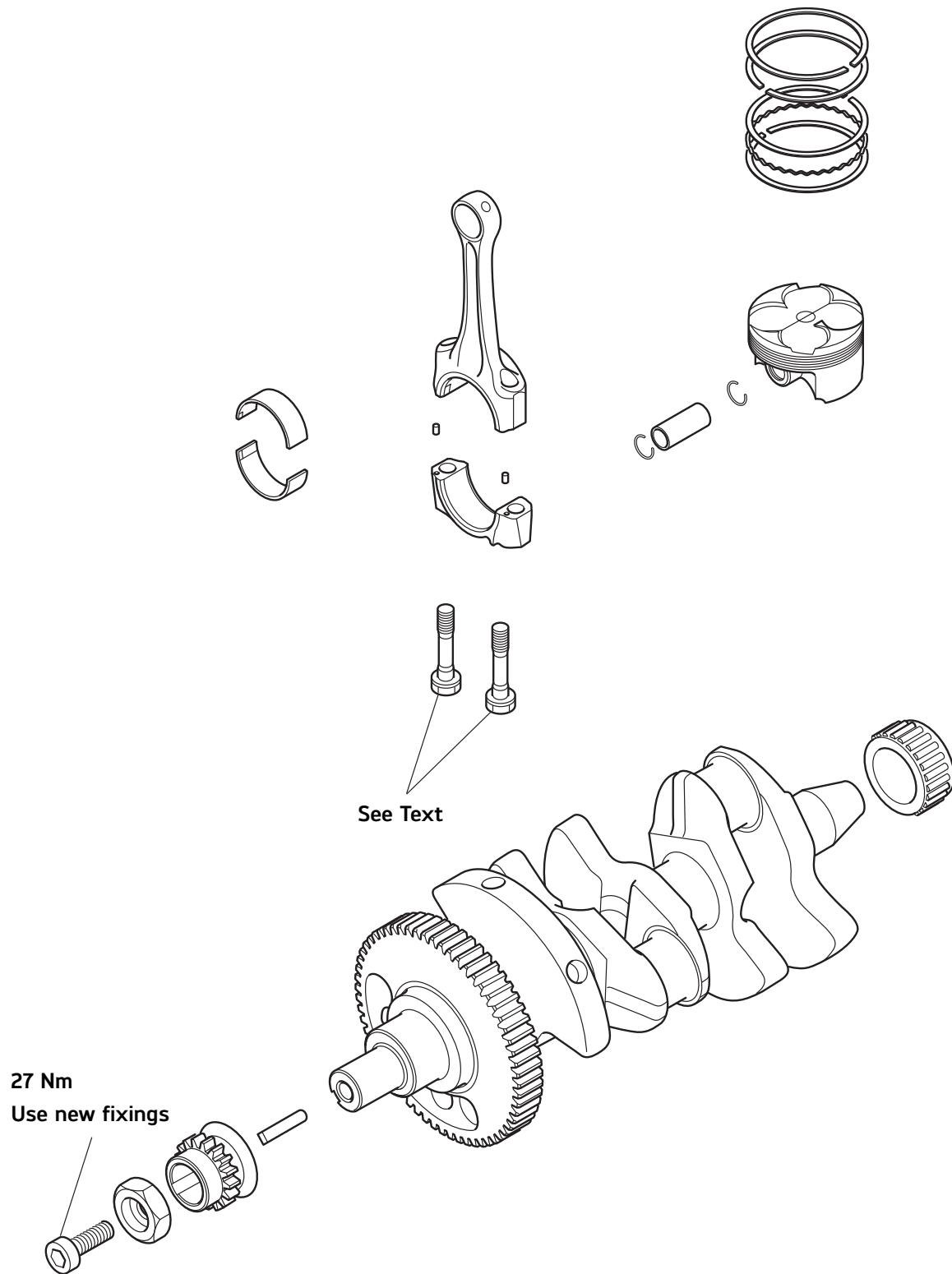
5 Crankshaft, Connecting Rods and Pistons

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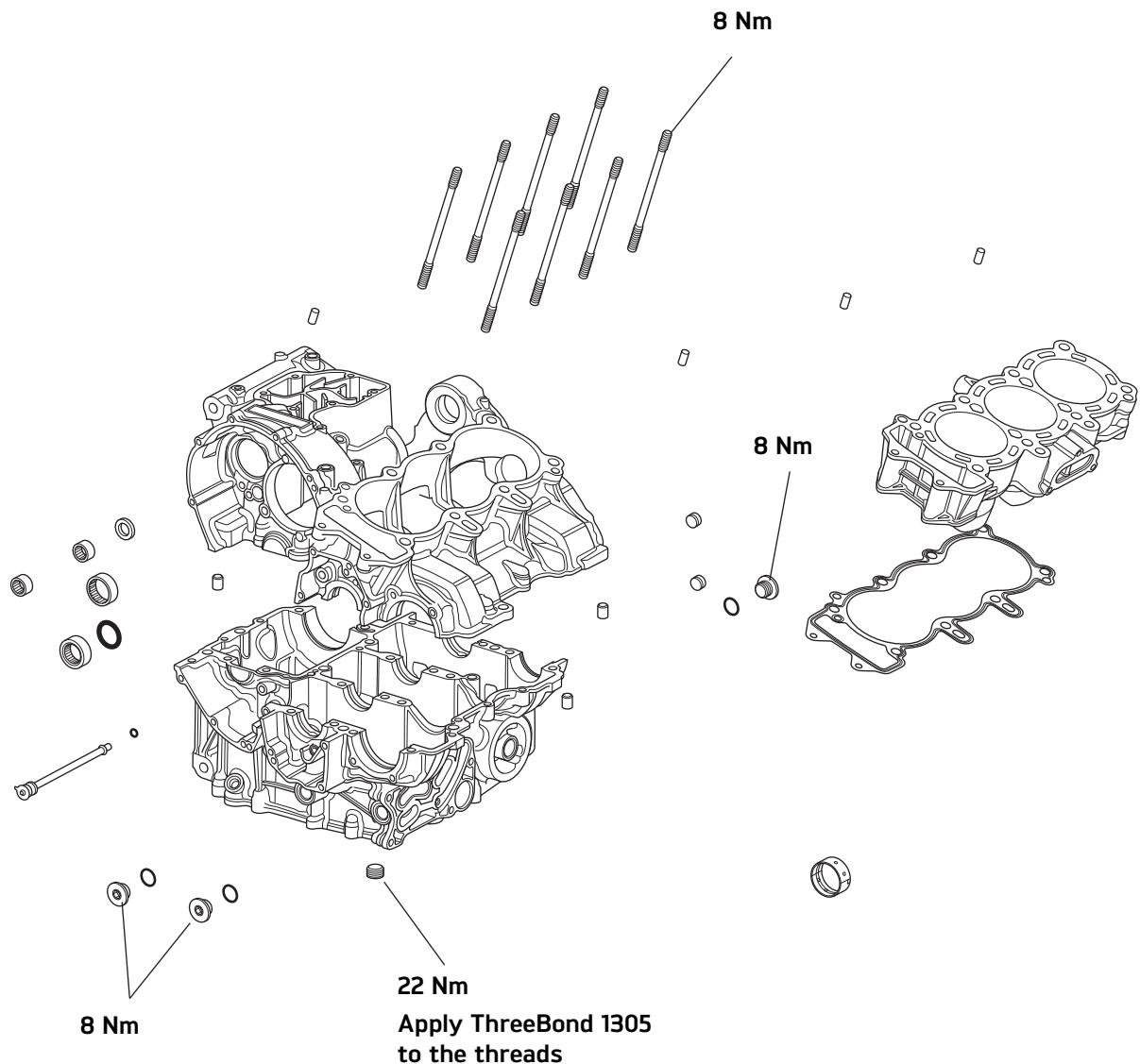
Crankshaft, Connecting Rods and Pistons

Exploded View - Crankshaft, Connecting Rod, Piston and Liner



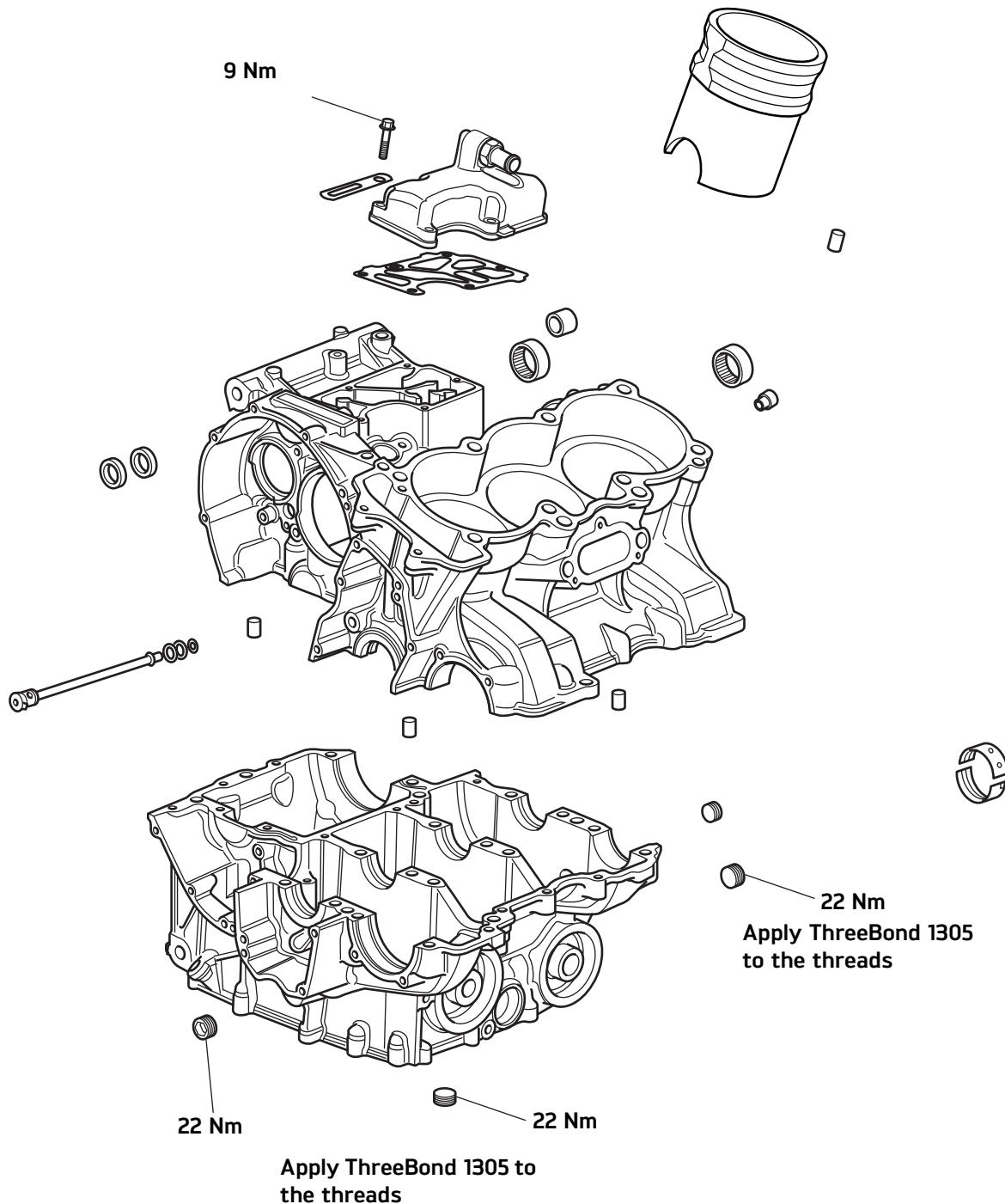
Crankshaft, Connecting Rods and Pistons

Exploded View - Crankcase - Daytona 675 and Daytona 675 R



Crankshaft, Connecting Rods and Pistons

Exploded View - Crankcase - Street Triple, Street Triple 660 cc, Street Triple R and Street Triple Rx



Crankcases

Caution

The upper and lower crankcases are machined as a matched set and must never be assembled to non-matching halves. Doing so may cause seizure of the engine.

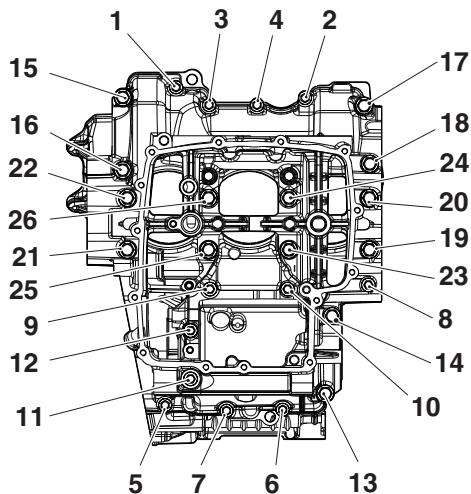
1. Remove the engine from the frame (see page 9-4).
2. Remove the sump (see page 8-24).
3. Remove the oil pump (see page 8-14).
4. Remove the clutch (see page 4-8).
5. Remove the engine covers (see pages 3-8, 7-30 and 17-33).

Disassembly

Caution

Failure to follow the correct screw release sequence may result in permanent crankcase damage.

1. Invert the engine to give access to the lower crankcase bolts.
2. Release the lower crankcase bolts in the sequence shown in the diagram below. Note the position of the hardened washers under bolts 19 to 26.



Crankcase Bolt Release Sequence

3. Separate the lower and upper crankcases ensuring that the 3 locating dowels remain in the upper crankcase.

Caution

Do not use levers to separate the upper and lower sections of the crankcase or damage to the crankcases could result.

Note:

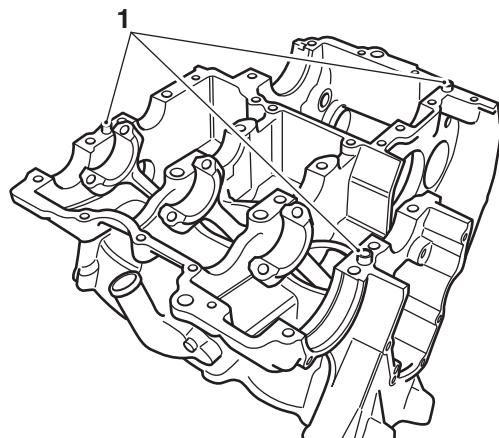
- At this point the transmission shafts, balancer, crankshaft, bearings etc. can be removed.

Note:

- The position of each individual bearing shell prior to removal.
- For Daytona 675 and Daytona 675 R: The piston cooling jets are located in the upper crankcase near the base of the barrel.
- For Street Triple, Street Triple 660 cc, Street Triple R and Street Triple Rx: Collect the piston cooling jets from below the upper main bearings.

Assembly

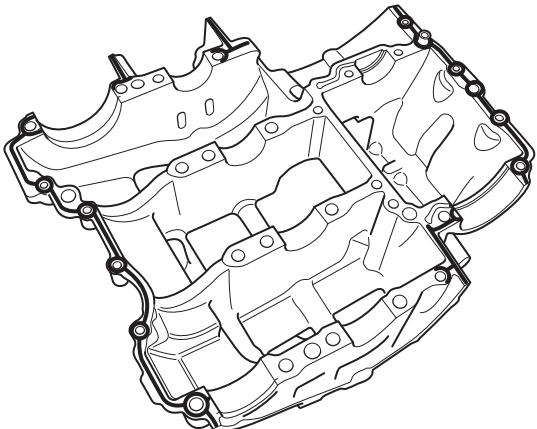
1. Use high flash-point solvent to clean the crankcase mating faces. Wipe the surfaces clean with a lint-free cloth.
2. Fit the gearbox shafts (if removed), ensuring the locating ring and dowels on the output shaft bearings are positioned correctly in the crankcase.
3. Ensure that the transmission is in neutral.
4. Ensure that the 3 locating dowels are in position in the upper crankcase.



1. Locating dowels

Crankshaft, Connecting Rods and Pistons

- Apply a thin bead of silicone sealant (at the factory, ThreeBond 1215 is used) to the lower crankcase mating faces.



cdmy

Sealer Areas



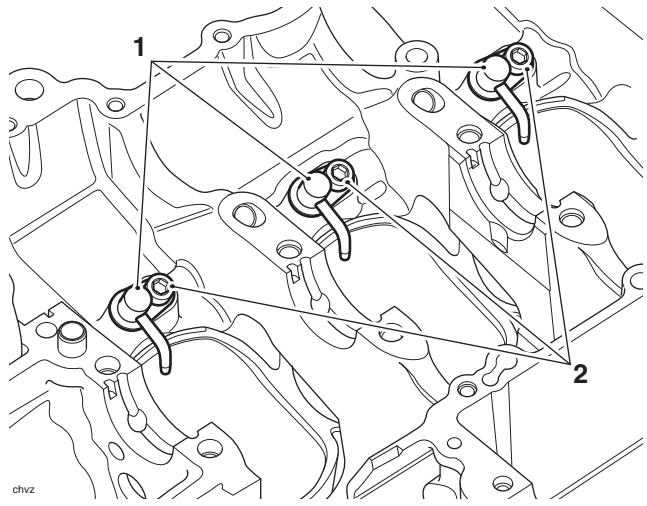
Caution

Do not use excessive amounts of sealer. The extra sealer may become dislodged and could block the oil passages in the crankcases causing severe engine damage.

Note:

- For Street Triple, Street Triple 660 cc, Street Triple R and Street Triple Rx: The piston cooling jet for number 3 cylinder is longer and has a larger diameter drilling than the piston cooling jets for number 1 and 2 cylinders. It can also be identified by its smaller outside diameter and a groove around its circumference. Piston cooling jets cannot be installed incorrectly.

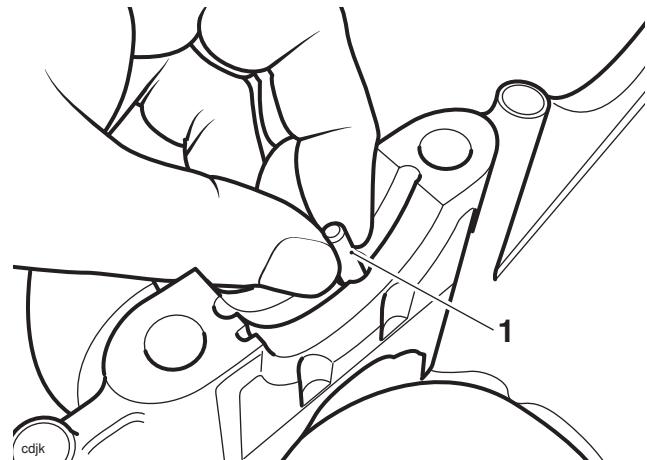
- For Daytona 675 and Daytona 675 R: If removed, fit the three piston cooling jets into the upper crankcase and tighten their fixings to **10 Nm**.



1. Piston cooling jets

2. Fixings

- For Street Triple, Street Triple 660 cc, Street Triple R and Street Triple Rx: If removed, insert the three piston cooling jets into the main bearing housing in the upper crankcase.



1. Piston cooling jet



Caution

Ensure the three piston cooling jets are installed. If the piston cooling jets are omitted, oil pressure will be reduced. Running the engine with low oil pressure will cause severe engine damage.

- Install and lubricate the crankshaft bearing shells with a 50/50 solution of engine oil and molybdenum disulphide grease (see bearing selection before proceeding).

Crankshaft, Connecting Rods and Pistons

9. Lubricate the crankshaft journals with clean engine oil.
10. Position the lower crankcase to the upper. An assistant may be required to support the crankcase during alignment.
11. Fit the screws into the lower crankcase and hand tighten until the bolt heads are near contact with the crankcase. Note the position of the hardened washers under bolts 1 to 8.

Note:

- **The crankcase screws are tightened in stages.**
- **Two different sizes of crankcase bolts are used.**
- **All bolts must be tightened in the two stages as follows:**



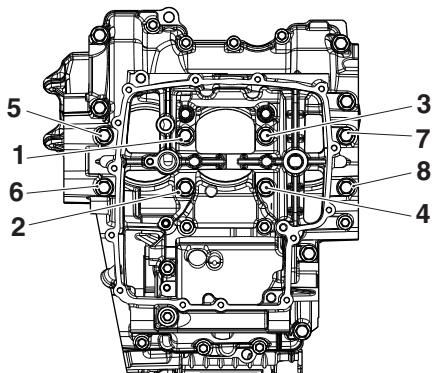
Caution

Failure to follow the correct bolt tightening sequence may result in permanent crankcase damage.

Crankcase Tightening Sequence - Daytona 675 and Daytona 675 R

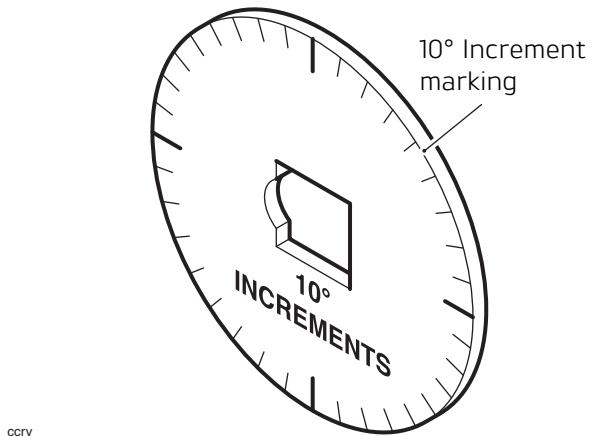
Stage 1

1. In the sequence shown below, tighten 1 to 8 crankcase bolts to **10 Nm**.



Crankcase Bolt 1 to 8 Tightening Sequence

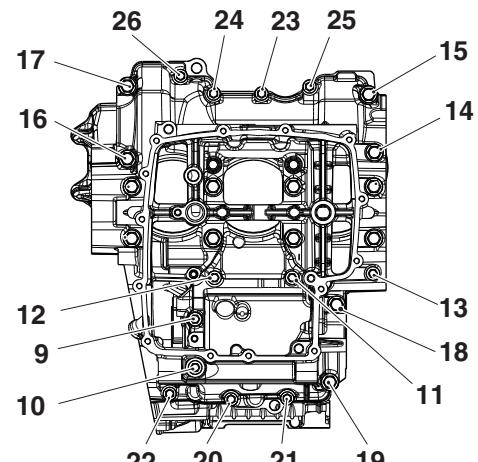
2. In the sequence shown above:
 - If fitting new bolts, tighten through **100°** of bolt rotation using the T3880105 - Angular Torque Gauge.
 - If fitting the original bolts, tighten through **80°** of bolt rotation using the T3880105 - Angular Torque Gauge.



T3880105 - Angular Torque Gauge

Stage 2

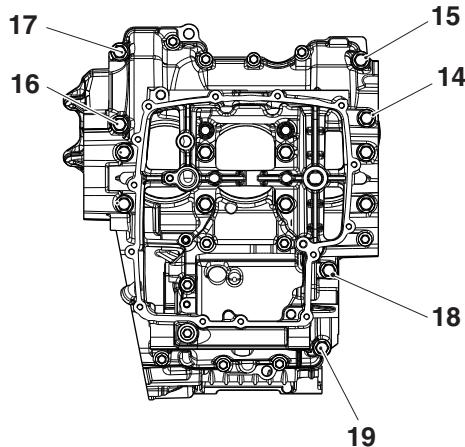
1. In the correct sequence, tighten only the M8 size crankcase screws (number 9 to 26) to **12 Nm**.



Crankcase Bolt 9 to 26 Tightening Sequence

Crankshaft, Connecting Rods and Pistons

- In the correct sequence, tighten only the M8 size crankcase screws (number 14 to 19) to **32 Nm**.

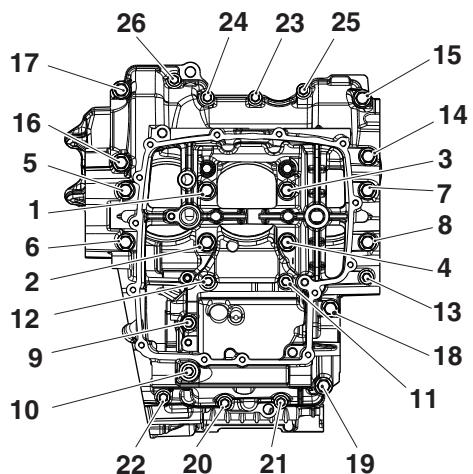


Crankcase Bolt 14 to 19 Tightening Sequence

Crankcase Tightening Sequence - Street Triple, Street Triple 660 cc, Street Triple R and Street Triple Rx

Stage 1 - all screws

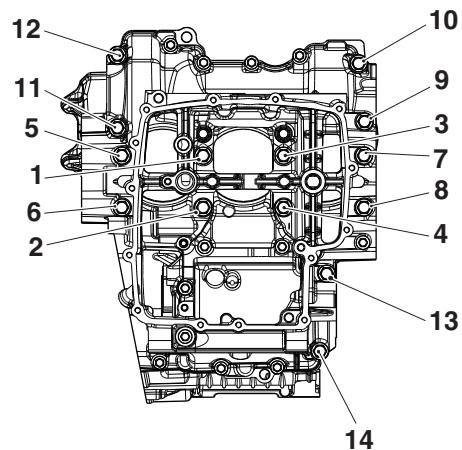
- In the sequence shown below, tighten all crankcase bolts to **12 Nm**.



Crankcase Bolt Tightening Sequence

Stage 2 - M8 screws only

- In the correct sequence, tighten only the M8 size crankcase screws (numbers 1 to 8) to **32 Nm**.
- In the correct sequence, tighten only the M8 size crankcase screws (numbers 9 to 14) to **32 Nm**.



M8 Crankcase Bolt Tightening Sequence

All Models

- Rotate the crankshaft clockwise. Check for tight spots and rectify as necessary.
- Refit the oil pump (see page 8-21).
- Refit the sump (see page 8-25).
- Refit the clutch (see page 4-15).
- Refit the engine covers (see pages 3-9, 7-32 and 17-36).
- Install the engine to the frame (see page 9-6).

Crankshaft

Removal

1. Remove the engine from the frame (see page 9-4).
2. Remove the alternator rotor from the crankshaft (see page 17-33).
3. Separate the two halves of the crankcase (see page 5-5).
4. Detach the connecting rods from the crankshaft (see page 5-10).
5. Remove the camshaft drive chain (see page 3-22).
6. Release and remove the crankshaft from the upper crankcase.

Note:

- Identify the location of each bearing shell.
- Remove all bearings and inspect for damage, wear, overheating (blue discolouration) and any other signs of deterioration. Replace the bearings as a set if necessary.
- For Street Triple, Street Triple 660 cc, Street Triple R and Street Triple Rx: Collect the piston jets from below the upper main bearings.
- If the camshaft drive chain sprocket is removed from the crankshaft for any reason, always install a new fixing. Tighten to 27 Nm.
- 7. Remove the balancer (see page 6-3).

Installation



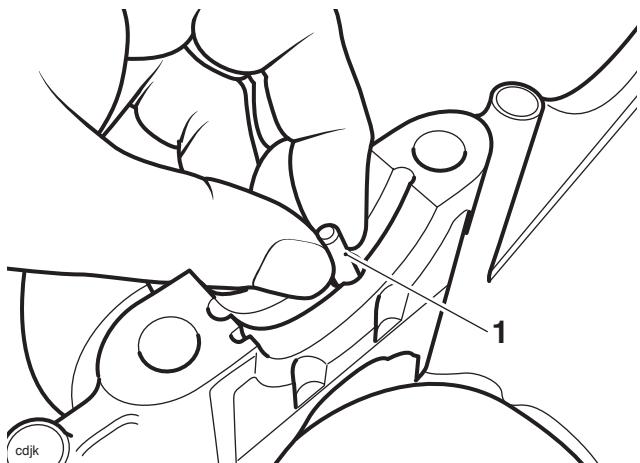
Caution

Always check the bearing journal clearance (see page 5-15), before final assembly of the crankshaft. Failure to correctly select crankshaft bearings will result in severe engine damage.

Note:

- For Street Triple, Street Triple 660 cc, Street Triple R and Street Triple Rx: The piston cooling jet for number 3 cylinder is longer and has a larger diameter drilling than the piston cooling jets for number 1 and 2 cylinders. It can also be identified by its smaller outside diameter and a groove around its circumference. Piston cooling jets cannot be installed incorrectly.

1. For Street Triple, Street Triple 660 cc, Street Triple R and Street Triple Rx: If removed, insert the three piston cooling jets into the main bearing housing in the upper crankcase.



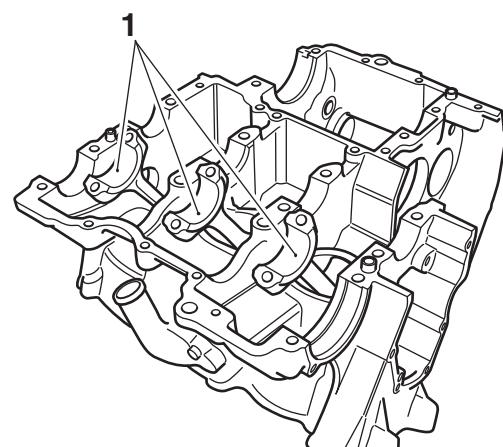
1. Piston cooling jet



Caution

Ensure the three piston cooling jets are installed. If the piston cooling jets are omitted, oil pressure will be reduced. Running the engine with low oil pressure will cause severe engine damage.

2. Select and fit new main and big end bearing shells using the selection processes detailed later in this section.

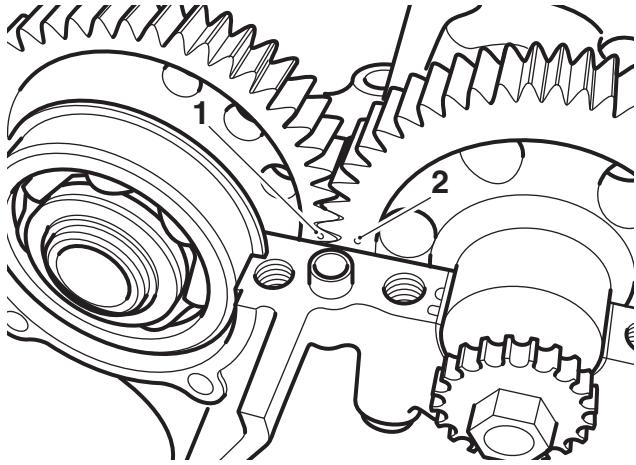


1. Big end shells

3. Lubricate all bearings with a 50/50 solution of engine oil and molybdenum disulphide grease.
4. Ensure that the crankshaft is clean, and that the oilways within the crankshaft are clean and free from blockages and debris.
5. Refit the balancer (see page 6-3).

Crankshaft, Connecting Rods and Pistons

6. Install the crankshaft ensuring that the crankshaft journals align with the big ends and that the crankshaft and balancer gear markings align as shown in the next illustration.



1. Balancer backlash and drive gear markings

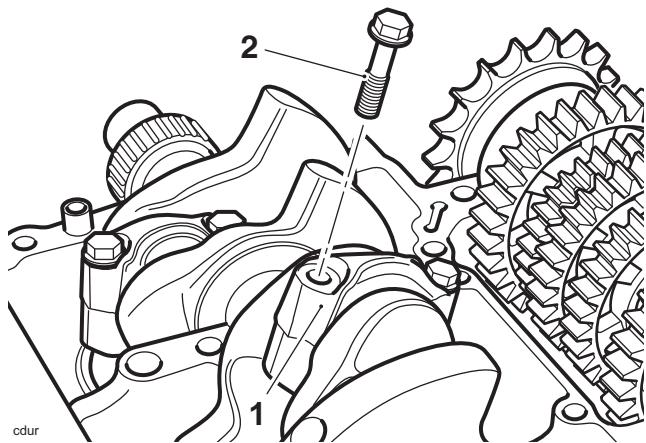
2. Crankshaft markings

7. Refit the connecting rods (see page 5-11).
8. If removed, refit the transmission shafts.
9. Assemble the crankcases (see page 5-5).
10. Assemble the alternator rotor (see page 17-36).
11. Refit the camshaft drive chain (see page 3-23).
12. Install the engine to the frame (see page 9-6).

Connecting Rods

Removal

1. Remove the engine from the frame (see page 9-4).
2. Remove the cylinder head (see page 3-24).
3. **For Daytona 675 and Daytona 675 R:** Remove the barrel (see page 5-19).
4. Separate the two halves of the crankcase (see page 5-5).
5. Mark each big end cap and connecting rod to identify both items as a matched pair and to identify the correct orientation of the bearing cap to the connecting rod.
6. Release the connecting rod bolts and remove the big end cap. Ensure that the bearing shell remains in place in the cap.



1. Big end cap
2. Connecting rod bolt

Note:

- It may be necessary to gently tap the big end cap with a rubber mallet to release the cap.
- 7. Push the connecting rod up through the crankcase and collect the piston and connecting rod from the top.
- 8. Label the assembly to identify the cylinder from which it was removed.



Caution

Never reuse connecting rod bolts. If the connecting rod cap is disturbed, always renew the bolts. Using the original bolts may lead to severe engine damage.

9. Detach the piston from the connecting rod (see page 5-16).

Installation

Note:

- Connecting rod bolts are treated with an anti-rust solution which must not be removed.
- Clean the connecting rod with high flash-point solvent.
- Remove all bearings and inspect for damage, wear and any signs of deterioration and replace as necessary.



Warning

Connecting rod bolts MUST only be used once. If the bolts are removed or undone for any reason, new bolts MUST always be used.

Re-using bolts can cause connecting rods and their caps to detach from the crankshaft causing severe engine damage, loss of motorcycle control and an accident.

Note:

- Ensure the piston is fitted correctly to the connecting rod.
- If a previously run engine is being rebuilt, always ensure that the piston and connecting rod are assembled in the same orientation, and to the same cylinder, as prior to strip-down.

1. Fit the piston onto the connecting rod (see page 5-18).
2. **For Daytona 675 and Daytona 675 R:** Fit the three piston and connecting rod assemblies into the barrel and then fit the assembly to the crankcase (see page 5-20).

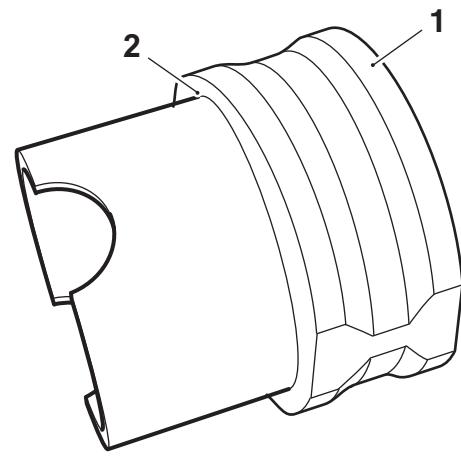
Note:

- For Daytona 675 and Daytona 675 R omit steps 3 to 7.

Street Triple, Street Triple 660 cc, Street Triple R and Street Triple Rx

3. Remove the liner using tool T3880101 (see page 5-21).

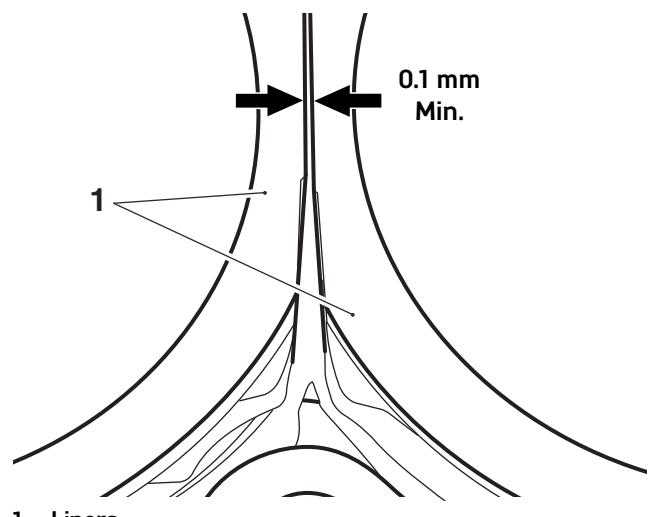
4. Apply silicone sealer to the liner-to-crankcase mating face (at the factory, ThreeBond 1215 is used).



1. Liner

2. Sealer area

5. Fit the piston and connecting rod assembly into the liner from the bottom.
6. Fit the liner into the crankcase ensuring that the 'EX' on the piston faces forward.
7. The liners must be positioned such that they do not touch each other - it must be possible to pass a 0.1 mm feeler gauge between the centre liner and its adjacent liner on either side. If the liners touch at any point, rotate the liners until there is a minimum 0.1 mm clearance.



1. Liners

Note:

- Ensure that the piston/liner/connecting rod assembly aligns correctly with the crankshaft during assembly into the crankcase.

Crankshaft, Connecting Rods and Pistons

All Models

Note:

- Connecting rod bolts are treated with an anti-rust solution which must not be removed.
- Clean the connecting rod with high flash-point solvent.
- Remove all bearings and inspect for damage, wear and any signs of deterioration and replace as necessary.

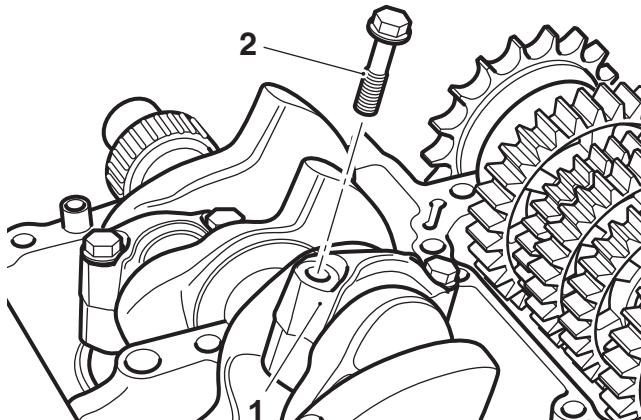


Warning

Connecting rod bolts MUST only be used once. If the bolts are removed or undone for any reason, new bolts MUST always be used.

Re-using bolts can cause connecting rods and their caps to detach from the crankshaft causing severe engine damage, loss of motorcycle control and an accident.

8. Select the big end bearing shells (see page 5-13).
9. Fit the bearing shells to the connecting rod and big end cap and lubricate with a 50/50 solution of engine oil and molybdenum disulphide grease.
10. Align the connecting rod to the crankshaft and fit the big end cap.



1. Big end cap
2. Connecting rod bolt



Caution

The torque characteristics of the connecting rod bolts are sensitive to the correct lubrication being applied. If the threads and under head areas are not lubricated with molybdenum disulphide grease, the bolts may be stretched and may become loose when in service resulting in an engine failure.

11. Lubricate the threads and under-head area of the new bolts with molybdenum disulphide grease. Tighten the bolts evenly and progressively as follows:



Caution

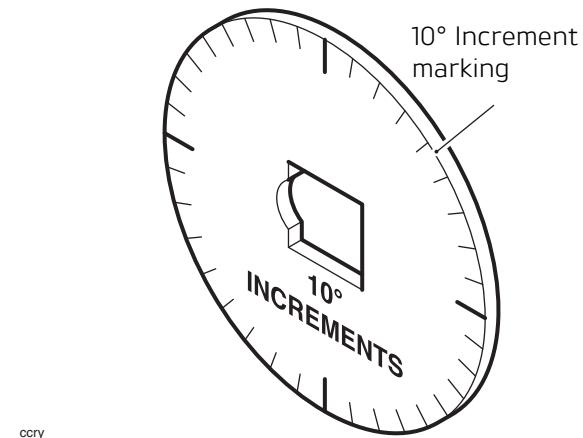
The torque characteristics of the connecting rod bolts are sensitive to the rate at which they are tightened. If all the torque is applied in one action, the bolt may be stretched and may become loose when in service resulting in an expensive engine failure.

For Daytona 675 and Daytona 675 R

- a) Tighten to **14 Nm**.
- b) Tighten through **210°** of bolt rotation as measured using the T3880105 - Angular Torque Gauge.

For Street Triple, Street Triple 660 cc, Street Triple R and Street Triple Rx

- a) Tighten to **22 Nm**.
- b) Release **120°**.
- c) Tighten to **10 Nm**.
- d) Tighten to **14 Nm**.
- e) Tighten through **120°** of bolt rotation as measured using the T3880105 - Angular Torque Gauge.



T3880105 - Angular Torque Gauge

12. Assemble the crankcases (see page 5-5).
13. Fit the cylinder head (see page 3-25).
14. Fit the engine to the frame (see page 9-6).

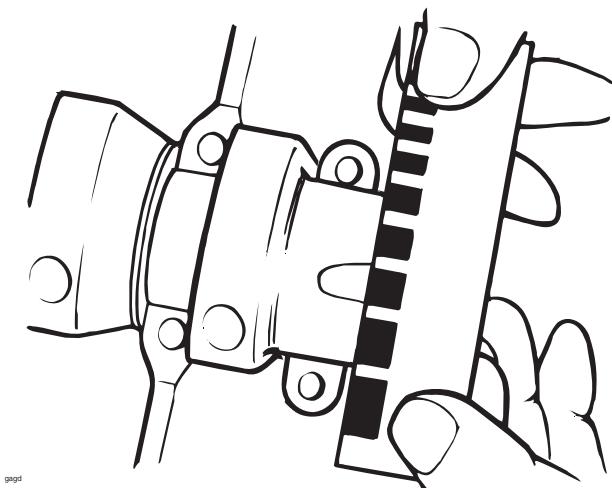
Connecting Rod Big End Bearing Selection/Crankpin Wear Check

- Measure the bearing and crankshaft journal clearance as follows.

Note:

- The crankshaft journal clearances are measured using Plastigauge (Triumph part number 3880150-T0301).
- Do not turn the connecting rod and crankshaft during the clearance measurement as this will damage the Plastigauge.

- Remove the big end cap from the journal to be checked.
- Wipe the exposed areas of the crankshaft journal, and the bearing face inside the cap.
- Apply a thin smear of grease to the journal and a small quantity of silicone release agent to the bearing.
- Trim a length of the Plastigauge to fit across the journal. Fit the strip to the journal using the grease to hold the Plastigauge in place.
- Lubricate the threads and under-head area of the bolt with molybdenum disulphide grease. Refit the bearing and cap and tighten the big end bolts (see page 5-12).
- Release the bolts and remove the cap being measured. Using the gauge provided with the Plastigauge kit, measure the width of the compressed Plastigauge.



Checking the Measured Clearance

Connecting rod big end bearing/crankpin clearance

Standard	0.035 - 0.065 mm
Service limit	0.070 mm

Note:

- If the measured clearance exceeds the service limit, measure the crankshaft journal diameter.

Crankshaft journal diameter

Daytona 675 and Daytona 675 R	
Standard	35.002 - 35.018 mm
Service limit	34.968 mm
Street Triple, Street Triple 660 cc, Street Triple R and Street Triple Rx	
Standard	33.010 - 33.026 mm
Service limit	32.970 mm

Note:

- If any crankshaft journal has worn beyond the service limit, the crankshaft must be replaced. Due to the advanced techniques used during manufacture, the crankshaft cannot be reground and no oversize bearings are available.

Connecting Rod Bearing Selection

Minor differences in crankshaft dimensions are compensated for by using selective bearings. For further information on bearing part number to colour cross-references, see the latest parts information.

- Select the correct big end bearing shell as follows:
 - Measure each crankshaft journal diameter.
 - Select the correct bearings by matching the information found with the chart below.

Note:

- All dimensions in millimetres.

Crankshaft, Connecting Rods and Pistons

Big end bearing selection chart

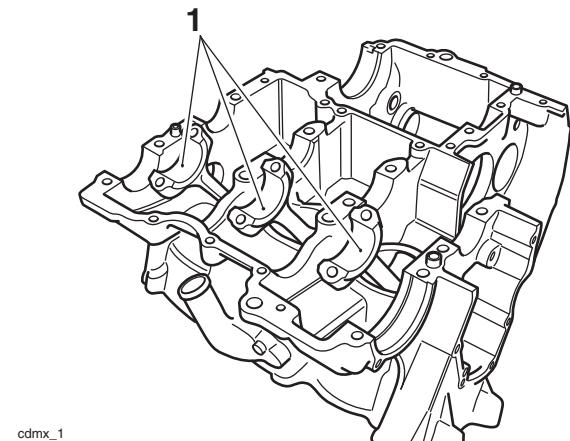
Daytona 675 and Daytona 675 R		
Shell Colour	White	Red
Connecting rod big end bore diameter	38.009 38.000	38.009 38.000
Crankshaft journal diameter	35.018 35.010	35.009 35.002
Running Clearance		0.065 0.035
Street Triple, Street Triple 660 cc, Street Triple R and Street Triple Rx		
Shell Colour	White	Red
Connecting rod big end bore diameter	36.009 36.000	36.009 36.000
Crankshaft journal diameter	33.026 33.018	33.017 33.010
Running Clearance		0.065 0.035

For instance (Street Triple):

Connecting Rod Big End
Diameter 36.002
Crankshaft journal Diameter .. 33.013
Required Bearing Red

Note:

- Repeat the measurements for all connecting rods and their respective crankshaft journals
 - It is normal for the bearings selected to differ from one connecting rod to another.
2. Install the new bearings in the connecting rod.



1. Big end bearings (Street Triple shown)

Caution

Always confirm, using the Plastigauge method, that the running clearance is correct before final assembly. Severe engine damage could result from incorrect clearance.

Crankshaft, Connecting Rods and Pistons

Crankshaft main bearing/journal wear

Main Bearing Selection Chart - Daytona 675 and Daytona 675 R (all dimensions in millimetres)						
Shell Colour	White	Red	Red	Blue	Blue	Green
Crankcase Bore	37.975 37.967	37.975 37.967	37.982 37.976	37.982 37.976	37.991 37.983	37.991 37.983
Journal Dia.	35.000 34.993	34.992 34.984	35.000 34.993	34.992 34.984	35.000 34.993	34.992 34.984
Running Clearance	0.037 0.014	0.038 0.014	0.036 0.015	0.037 0.015	0.037 0.014	0.038 0.014

Main Bearing Selection Chart - Street Triple, Street Triple 660 cc, Street Triple R and Street Triple Rx (all dimensions in millimetres)						
Shell Colour	White	Red	Red	Blue	Blue	Green
Crankcase Bore	35.982 35.973	35.981 35.973	35.989 35.981	35.988 35.981	35.997 35.989	35.997 35.989
Journal Dia.	33.000 32.993	32.992 32.984	33.000 32.993	32.992 32.984	33.000 32.993	32.992 32.984
Running Clearance	0.044 0.020	0.044 0.020	0.043 0.021	0.043 0.020	0.043 0.020	0.044 0.020

Minor differences in crankshaft and crankcase dimensions are compensated for by using selective bearings. For further information on bearing part number to colour cross-references, see the latest parts information.

- Measure the bearing to crankshaft main journal clearance using Plastigauge (Triumph part number 3880150-T0301) (see page 5-15).

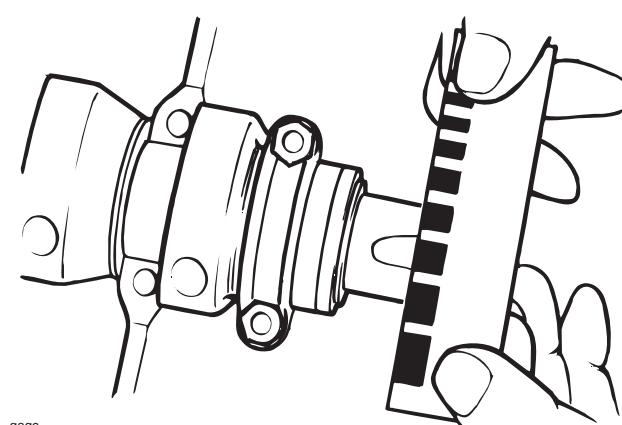
Crankshaft main bearing/journal clearance

Daytona 675 and Daytona 675 R	
Standard	0.014 - 0.038 mm
Service limit	
	0.07 mm
Street Triple, Street Triple 660 cc, Street Triple R and Street Triple Rx	
Standard	0.020 - 0.044 mm
Service limit	
	0.07 mm

If the clearance exceeds the service limit, measure the diameter of the crankshaft main journal.

Crankshaft main journal diameter

Daytona 675 and Daytona 675 R	
Standard	34.984 - 35.000 mm
Service limit	
	34.960 mm
Street Triple, Street Triple 660 cc, Street Triple R and Street Triple Rx	
Standard	32.984 - 33.000 mm
Service limit	
	32.960 mm



Checking Crankpin Clearance using Plastigauge

Crankshaft, Connecting Rods and Pistons

Note:

- If any journal has worn beyond the service limit, the crankshaft must be replaced. Due to the techniques used during manufacture, the crankshaft cannot be reground and no oversize bearings are available.

Select bearings as follows:

- Measure and record the diameter of each crankshaft main bearing journal.
- Measure and record each main bearing bore diameter in the crankcase (bearings removed).

Compare the data found with the chart above to select bearings individually by journal.

For example (Street Triple):

Crankshaft Journal diameter . . . 32.995 mm

Crankcase Bore 35.997 mm

Bearing Required Blue

Note:

- It is normal for the bearings selected to differ from one journal to another.
- It is also normal for there to be two options of bearing shell colour. In such cases, pick the shell size which gives the greater running clearance.



Caution

Always confirm, using the Plastigauge method, that the running clearance is correct before final assembly. Severe engine damage could result from incorrect clearance.

Crankshaft End Float

Standard	0.15 - 0.30 mm
----------	----------------

Note:

- Crankshaft end float is controlled by the tolerances in crankshaft and crankcase machining. No thrust washers are used. If the crankshaft end float is outside the specified limit, the crankshaft and/or the crankcases must be replaced.

Pistons

Disassembly

Note:

- For Daytona 675 and Daytona 675 R: It will be necessary to remove the connecting rods from the crankshaft.
- For Street Triple, Street Triple 660 cc, Street Triple R and Street Triple Rx: It is not necessary to remove the connecting rods from the crankshaft.

- Remove the cylinder head (see page 3-24).
- For Daytona 675 and Daytona 675 R: Remove the barrel (see page 5-19) and discard the gasket.
- For Street Triple, Street Triple 660 cc, Street Triple R and Street Triple Rx: Remove the liner, using the frame from tool T3880315, and tool T3880101 (see page 5-21).
- Remove and discard the gudgeon pin circlip from one side of the piston.



Removing the Gudgeon Pin Circlip

- Remove the gudgeon pin by pushing the pin through the piston and rod toward the side from which the circlip was removed.



Caution

Never force the gudgeon pin through the piston. This may cause damage to the piston which may also damage the liner when assembled.

Note:

- If the gudgeon pin is found to be tight in the piston, check the piston for a witness mark caused by the circlip. Carefully remove the mark to allow the pin to be removed.

Crankshaft, Connecting Rods and Pistons

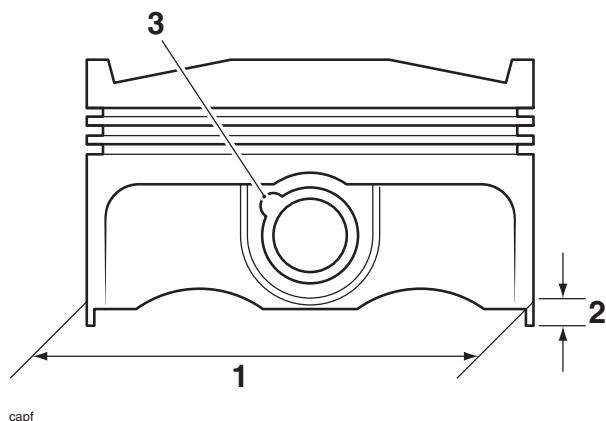
6. Piston rings must be removed from the piston using hand pressure only. Do not over-extend the piston rings during removal.

Note:

- If the piston rings are to be reused, note the orientation of the oil control rings prior to removal.

Piston Wear Check

- Measure the piston outside diameter, 8 mm up from the bottom of the piston and at 90° to the direction of the gudgeon pin.



- Piston outside diameter
- Measurement point
- Circlip removal groove

Piston diameter

Daytona 675 and Daytona 675 R	
All Pistons - standard	73.970 - 73.980 mm
Service limit	73.920 mm
Street Triple, Street Triple 660 cc, Street Triple R and Street Triple Rx	
All Pistons - standard	73.964 - 73.980 mm
Service limit	73.920 mm

Replace the piston if the measured diameter falls outside the specified limit.

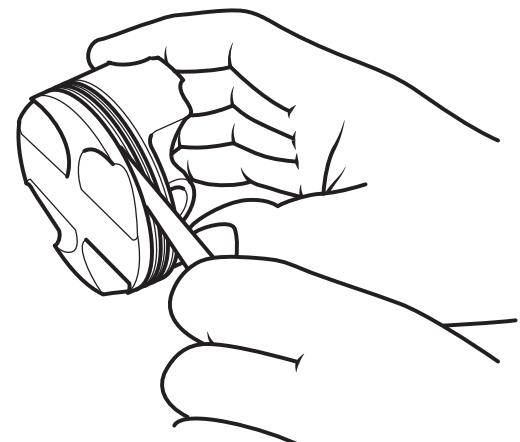
Piston Rings/Ring Grooves

Check the pistons for uneven groove wear by visually inspecting the ring grooves.

If all the rings do not fit parallel to the groove upper and lower surfaces, the piston must be replaced.

Clean the piston ring grooves.

Fit the piston rings to the pistons. Check, using feeler gauges, for the correct clearance between the ring grooves and the rings. Replace the piston and rings if outside the specified limit.



Piston Ring to Ring Groove Clearance Check

Piston Ring/Groove Clearance

Daytona 675 and Daytona 675 R	
Top ring - standard	0.040 - 0.080 mm
Service limit	0.095 mm
Street Triple, Street Triple 660 cc, Street Triple R and Street Triple Rx	
Second	0.030 - 0.070 mm
Service limit	0.090 mm
Top ring - standard	
Service limit	0.075 mm
Second	
Service limit	0.020 - 0.060 mm
	0.075 mm

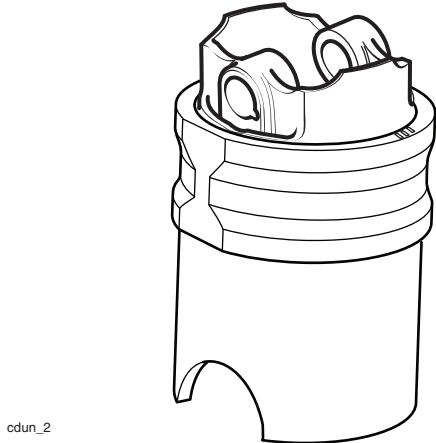
Piston Ring Gap

Note:

- The piston ring gap, with the piston ring fitted in the liner/cylinder, must be checked before final assembly.

Crankshaft, Connecting Rods and Pistons

1. Place the piston ring inside its relevant liner/cylinder.
2. Push the ring into the top of the cylinder, using the piston to hold the ring square with the inside of the bore. Continue to push the ring into the bore until the third groove of the piston is level with the cylinder top, around the full circumference of cylinder.



Aligning Piston Rings using the Piston - Liner for Street Triple Shown

1. Remove the piston and measure the gap between the ends of the piston ring using feeler gauges.

Piston Ring End Gap Tolerances

Daytona 675 and Daytona 675 R	
Top ring - standard	0.22 - 0.32 mm
Service limit	0.44 mm
Second - standard	0.35 - 0.50 mm
Service limit	0.62 mm
Oil Control - standard	0.20 - 0.70 mm
Service limit	0.84 mm
Street Triple, Street Triple 660 cc, Street Triple R and Street Triple Rx	
Top ring - standard	0.15 - 0.30 mm
Service limit	0.42 mm
Second - standard	0.30 - 0.45 mm
Service limit	0.57 mm
Oil Control - standard	0.20 - 0.70 mm
Service limit	0.84 mm

Note:

- If the end gap is too large, replace the piston rings with a new set.

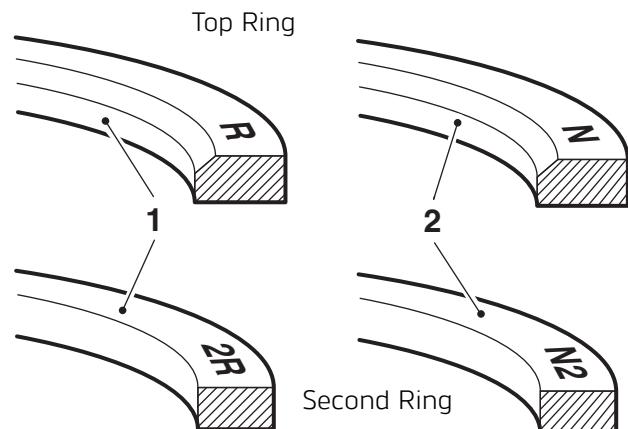
- If the gap remains too large with the new piston rings, both the pistons and liners/barrel must be replaced.
- If the gap is too small, check the cylinder bore for distortion, replacing as necessary. DO NOT FILE PISTON RINGS!

Piston Assembly

1. Clean the piston ring grooves and fit the piston rings to the piston.

Note:

- The top ring upper surface is either marked with a R or N depending on model, and can be identified by a chamfer on the inside edge.
- The second ring upper surface is either marked with a 2R or N2 depending on model, is plain on the inside edge and has a bronze appearance.
- When new, the oil control rings can be fitted with either face upward. Used oil control rings must be refitted in the same orientation as noted prior to removal. When new, the oil control rings have white paint markings on their outside edge.



Piston Ring Identification

1. Daytona 675 and Daytona 675 R
2. Street Triple, Street Triple 660 cc, Street Triple R and Street Triple Rx

1. Fit the piston onto the connecting rod.

Note:

- Connecting rods may be fitted either way around. However, ensure all three are fitted the same way.
- 2. Lubricate the piston, small end and gudgeon pin with a 50/50 solution of engine oil and molybdenum disulphide grease.

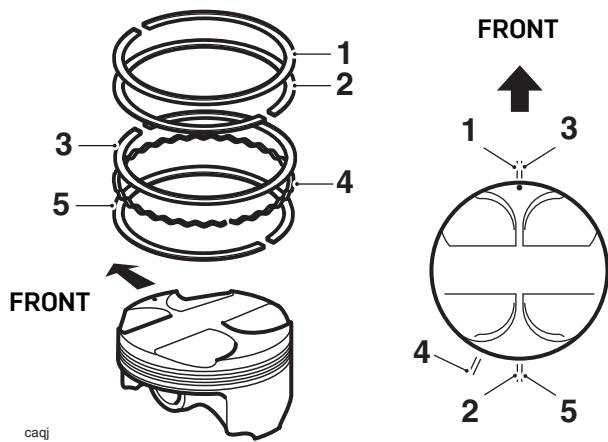
3. Align the small end in the connecting rod with the gudgeon pin hole in the piston and fit the gudgeon pin.
4. Fit new circlips on both sides of the gudgeon pin ensuring the circlips are correctly fitted in the grooves.



Warning

Failure to use new gudgeon pin circlips could allow the pin to detach from the piston. This could seize the engine and lead to an accident.

5. The piston ring gaps must be arranged as shown in the diagram below.



- 1. Top ring
- 2. Second ring
- 3. First steel oil control ring
- 4. Oil control ring expander
- 5. Second steel oil control ring

Note:

- The top ring gap should be positioned in the 12 o'clock position, and the second ring gap in the 6 o'clock position. The first steel oil control ring gap should be in the 12 o'clock position and the second steel oil control ring should be in the 6 o'clock position. The oil control ring expander should be in the 7 o'clock position.
- 6. For Daytona 675 and Daytona 675 R: Fit the piston and connecting rod assemblies to the barrel then to the crankcase (see page 5-20).
- 7. For Street Triple, Street Triple 660 cc, Street Triple R and Street Triple Rx: Fit all the piston and connecting rod assemblies to the liner then to the crankcase (see page 5-22).
- 8. Assemble the crankcases (see page 5-5).
- 9. Fit the cylinder head (see page 3-25).
- 10. Fit the engine to the frame (see page 9-6).

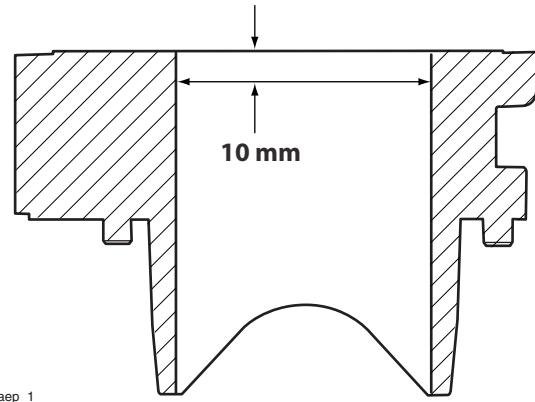
Barrel - Daytona 675 and Daytona 675 R

Cylinder Wear

Measure the inside diameter of each cylinder using an internal micrometer or similar accurate measuring equipment.

Cylinder bore diameter

Standard	75.985 - 76.003 mm
Service limit	76.053 mm



**Test Position for Bore Wear Check
(bore shown in section)**

1. Measure the inside diameter 10 mm from the top of the bore as shown above.
2. If the reading is outside the specified limits, replace the liner and piston as an assembly.

Removal

1. Remove the engine from the frame (see page 9-4).
2. Disconnect the coolant inlet hose from the barrel.
3. Remove the cylinder head (see page 3-24).

Note:

- Note the position of the DOT mark on the piston for installation.
- 4. Mark each piston and cylinder bore with a number to ensure the pistons are fitted into their original cylinders on installation.
- 5. Carefully remove the barrel. Take care to ensure that the piston/connecting rod is not allowed to fall against the inside of the crankcase.

Crankshaft, Connecting Rods and Pistons

Installation



Caution

To ensure the piston rings do not get damaged, the piston/connecting rod assemblies must be fitted into the barrel before fitting the barrel to the engine.

Damaged piston rings may result in engine failure.

1. Remove the piston and connecting rod assemblies from the engine (see page 5-10).
2. Fit the three piston and connecting rod assemblies into the barrel from the bottom as noted for removal. Ensure that the DOT mark on the piston faces forward.
3. Fit a new gasket to the base of the barrel.

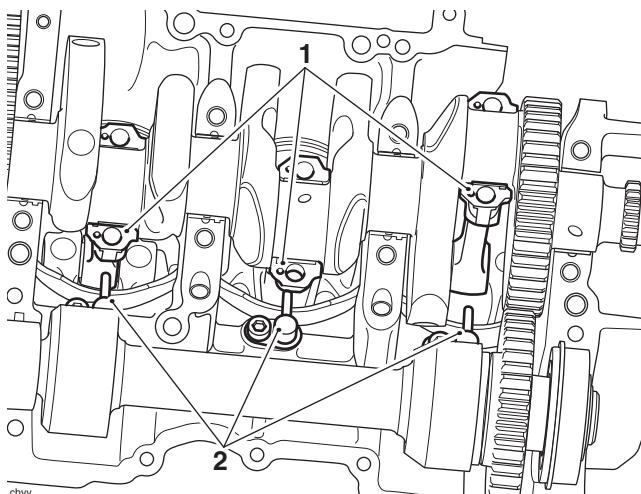


Caution

While fitting the barrel and pistons assembly, ensure that the connecting rods do not contact and damage any of the three oil jets on the crankcase.

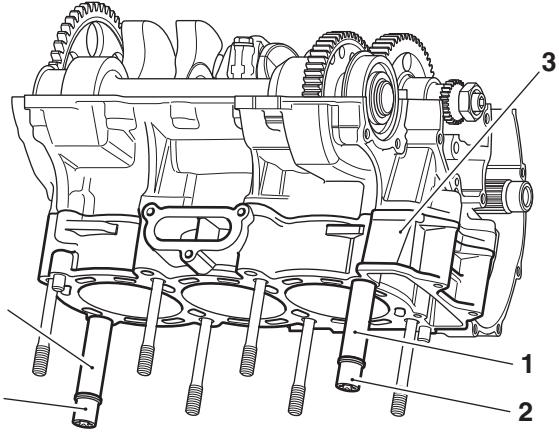
A damaged oil jet will reduce the amount of oil delivered to the underside of the piston which may result in severe engine damage.

4. With the aid of an assistant, carefully fit the barrel to the crankcase ensuring that:
 - the connecting rods fit through the crankcase without contacting any of the three oil jets
 - the big ends correctly align onto the crankshaft.



1. Connecting rods
2. Oil Jets

5. To hold the barrel in position, fit the T3880308 - Cylinder Barrel Clamps to two of the cylinder head studs and secure using two of the original retaining nuts for the cylinder head.



1. T3880308 - Cylinder Barrel Clamps

2. Cylinder head nut

3. Barrel

6. Connect the connecting rods to the crankshaft (see page 5-12).
7. Assemble the crankcase halves (see page 5-5).
8. Invert the engine, remove the two cylinder head nuts and the two T3880308 - Cylinder Barrel Clamps. Discard the two nuts.
9. Fit the cylinder head (see page 3-25).
10. Refit the coolant bypass hose to the barrel and tighten the clip to **3 Nm**.
11. Fit the engine to the frame (see page 9-6).

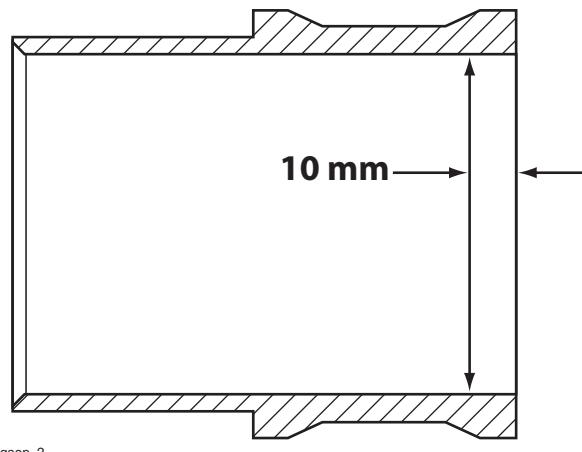
Cylinder Liners - Street Triple, Street Triple 660 cc, Street Triple R and Street Triple Rx

Cylinder Wear

Measure the inside diameter of each cylinder using an internal micrometer or similar accurate measuring equipment.

Cylinder bore diameter

Standard	74.030 - 74.050 mm
Service limit	74.100 mm

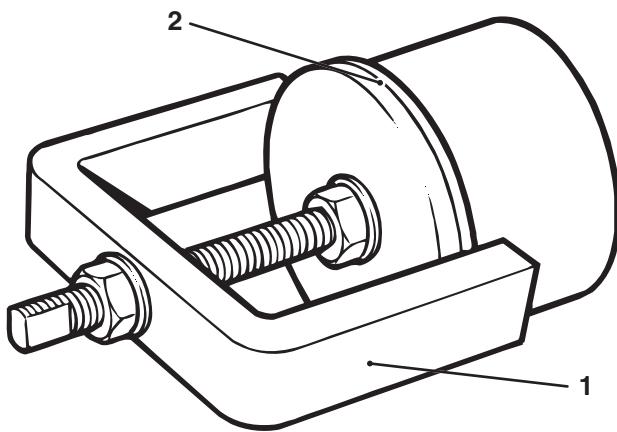


**Test Position for Bore Wear Check
(bore shown in section)**

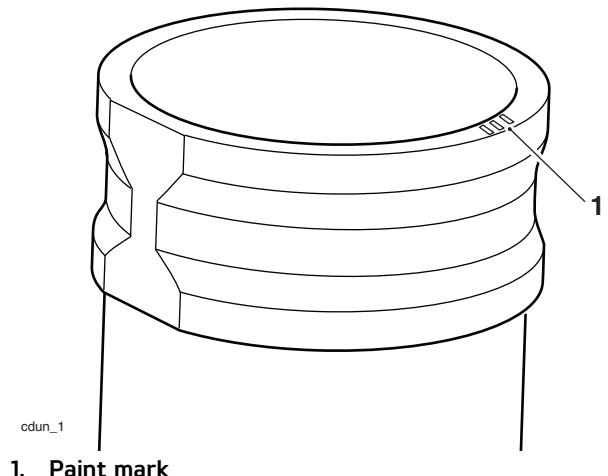
1. Measure the inside diameter 10 mm from the top of the bore as shown above.
2. If the reading is outside the specified limits, replace the liner and piston as an assembly.

Removal

1. Assemble the frame from T3880315 - Cylinder Liner Extractor to T3880101 - Extractor Cylinder Liner as shown below.



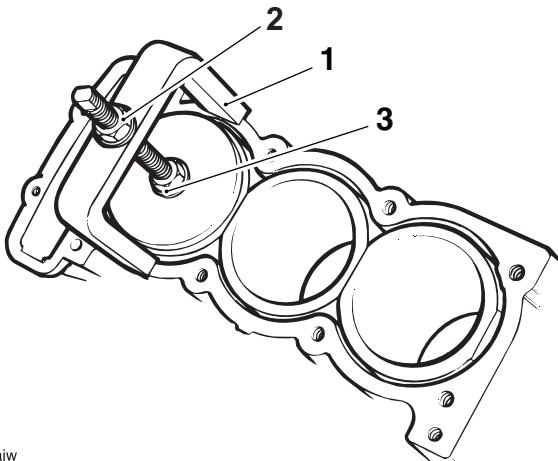
1. Frame from T3880315 - Cylinder Liner Extractor
2. T3880101 - Extractor Cylinder Liner
2. Mark each liner to identify correct orientation and the cylinder number from which it has been removed.



1. Paint mark

Crankshaft, Connecting Rods and Pistons

- Turn the crankshaft until the piston in the liner to be removed is at the bottom of its stroke.



1. T3880315 - Cylinder Liner Extractor and T3880101 - Extractor Cylinder Liner

- Extraction nut
- Locking nut

- Check that the locking nut on T3880101 - Extractor Cylinder Liner is loose, then fully unscrew the extraction nut.
- Carefully fit the tool fully into the cylinder bore, positioning the tool legs on the crankcase. Turn the locking nut clockwise until the rubber sleeve on the tool tightly grips the bore of the liner.
- Check that the tool legs are positioned to allow withdrawal of the liner, then turn the extraction nut clockwise to extract the liner. Take care to ensure that the piston/connecting rod is not allowed to fall against the inside of the crankcase.
- Turn the locking nut anticlockwise to release the liner.

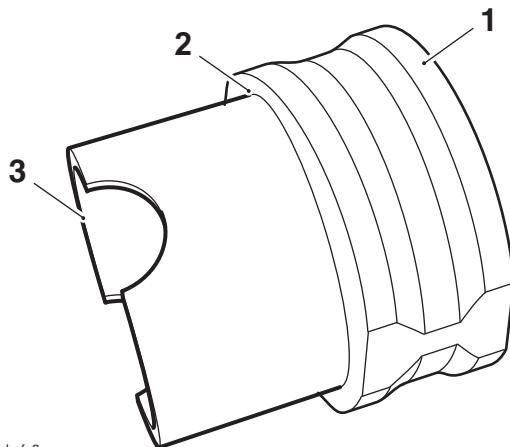
Note:

- The tool must be used to release the seal between the liner and the crankcase.
- It is not intended that the tool is used to fully extract the liner. Once the seal is released, the tool must be removed and the liner extracted by hand.

Installation

- Thoroughly clean the liner removing all traces of old silicone sealer.
- Remove all traces of sealer from the crankcase bores.

- Apply silicone sealer to the liner to crankcase mating face (at the factory, ThreeBond 1215 is used).
- Fit each liner over the piston using a gentle rocking motion to allow compression of the piston rings.



- Liner
- Sealer area
- Chamfer

Note:

- The liners have a large chamfer at the bottom of the bore enabling fitting of the piston without need for a piston ring compressor.

Caution

Fit each liner over whichever piston is at TDC. When turning the engine, do not allow the pistons to contact the inside of the crankcase and also do not allow fitted liners to lift off the crankcase base.

- Continue fitting each liner in turn until all are fitted and sealed.

Note:

- When the liners have been fitted, they should not be disturbed. If it is necessary to remove the liner after fitting, the sealer must be re-applied.

Crankcase Breather

The upper crankcase is fitted with a labyrinth type breather system, which requires no maintenance. During engine disassembly and overhaul, check the oil drain tube for blockage and contamination.

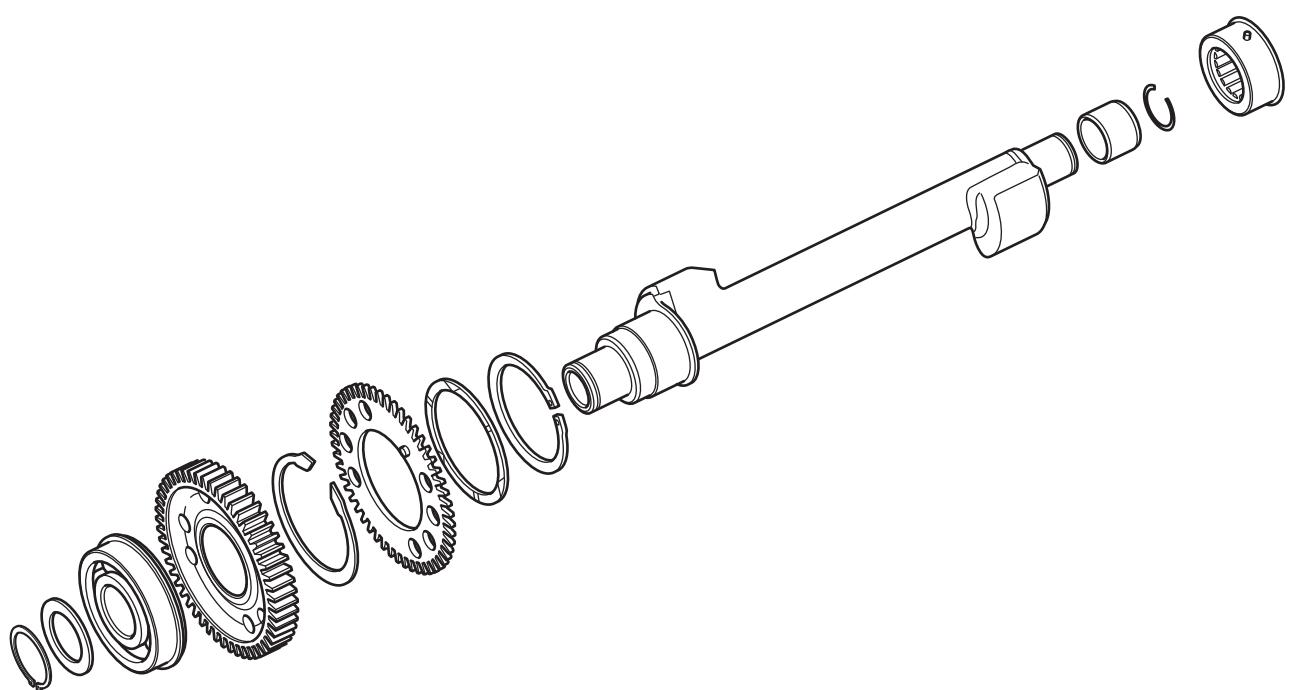
6 Balancer

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Balancer

Exploded View - Balancer Shaft



Balancer

The balancer is fitted to control pulsing within the engine. Without any form of balancer, the engine would pulse each time the crankshaft rotated. This pulsing would be felt as a vibration which would amplify as the engine speed was increased.

The balancer has the effect of a pair of counterbalance weights which create an equal amount of energy in the opposite direction, and at the same time as that produced by the crankshaft, pistons and connecting rods. Because the opposing pulses occur at the same point of crankshaft rotation, and are of an equal magnitude, a state of equilibrium or balance is reached.

Removal

1. Separate the crankcase halves (see page 5-5).
2. With the crankcase halves separated, lift out the balancer shaft complete with the shaft bearings/circlips.

Note:

- **As the shaft is released from the crankcase, the backlash eliminator gear will spring out of alignment with the crankshaft.**
3. To remove the left hand bearing, slide the bearing, circlip and bearing sleeve from the balancer shaft. Note the orientation of the bearing prior to removal.
 4. To remove the right hand bearing, remove the circlip and washer, and, using a press and press bars remove the bearing race from the shaft, ensuring the inner bearing race is supported. Note the orientation of the bearing prior to removal. DO NOT remove the drive gear from the shaft.



Warning

When using a press, always wear overalls, eye, face and hand protection. Objects such as bearings frequently break-up under load and the debris caused during break-up may cause damage and injury to unprotected parts of the body.

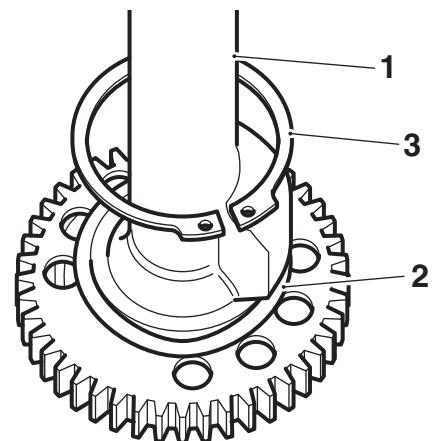
Never wear loose clothing, which could become trapped in the press and cause crushing injury to the hand, arms or other parts of the anatomy.



Caution

Do not remove the drive gear from the balancer shaft. The drive gear is aligned to the shaft. If the balancer and drive gear are not correctly aligned, severe engine vibration will occur leading to damage to components.

5. To strip the backlash eliminator from the drive gear, release the circlip and remove the wave-washer, backlash gear and spring.



cdon

1. Balancer shaft
2. Wave washer
3. Circlip

Inspection

1. Inspect all gears for chipped or missing teeth.
2. Inspect all bearings for signs of overheating (blue discolouration), seized or damaged rollers, and any other damage.
3. Inspect the backlash spring for deformities, damage etc.
4. Inspect the gear teeth for overheating (blue discolouration).

Assembly/Installation

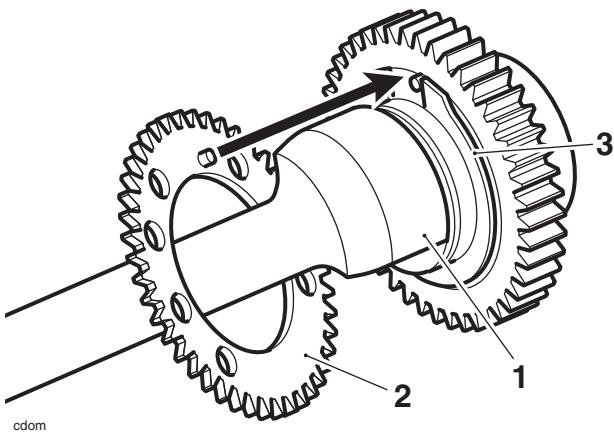
Note:

- **Before assembling the backlash gear to the balancer shaft, lubricate all contact surfaces of the balancer drive gear, backlash spring and backlash gear with new engine oil which meets specification API SH (or higher) and JASO MA.**

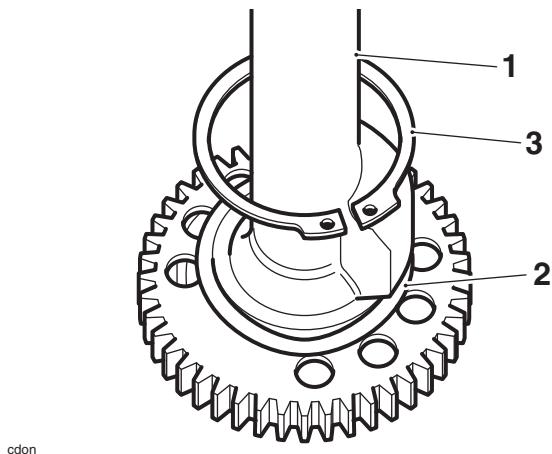
1. If the backlash gear was disassembled, fit the backlash spring over the shaft and position to the balancer drive gear, positioning the spring ends on either side of the peg.

Balancer

- Fit the backlash gear, ensuring its peg is located anticlockwise (viewed from the left hand bearing end of the shaft) of the balancer gear peg and also between the spring ends.



- Balancer shaft**
- Backlash gear**
- Backlash spring**
- Fit the wave washer and secure all components in position with the circlip.



- Balancer shaft**
- Wave washer**
- Circlip**
- Using a press and press bars, fit the right hand bearing to the shaft, with the circlip positioned nearest to the drive gear. Ensure the inner race of the bearing is supported when installing the bearing.

! Warning

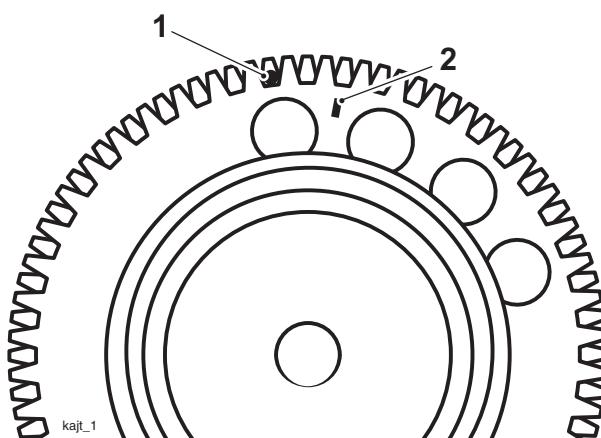
When using a press, always wear overalls, eye, face and hand protection. Objects such as bearings frequently break-up under load and the debris caused during break-up may cause damage and injury to unprotected parts of the body.

Never wear loose clothing, which could become trapped in the press and cause crushing injury to the hand, arms or other parts of the anatomy.

- Refit the washer and a new circlip to the shaft.
- Lubricate and fit the left hand bearing and install a new circlip in the same orientation as noted prior to removal.

Note:

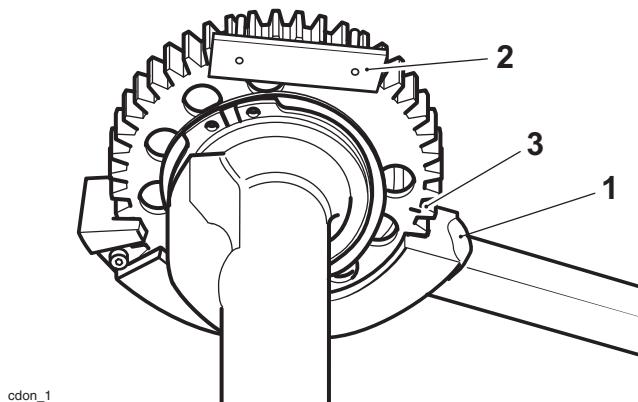
- Prior to installation in the crankcase, it is essential that the markings on the backlash eliminator and drive gears are brought into alignment against the tension of the spring. This will facilitate correct positioning of the balancer in relation to the crankshaft when both are installed in the crankcase.



- Drive gear dot**
- Backlash gear line**
- Using T3880106 - Balancer Gear Holder, bring the backlash and drive gear marks into alignment against the backlash spring as follows:
 - Engage the peg of T3880106 - Balancer Gear Holder into a tooth of the backlash gear.
 - Rotate the backlash gear against the spring until the marks align.

Note:

- When in alignment, the line on the backlash gear must be located directly above the drive gear tooth marked with a dot.
- Since the drive gear dot cannot be seen when the backlash gear is in alignment, always mark the dot-marked gear tooth with a paint mark in order that it can always be identified.
- 8. Secure the backlash gear in position with the fixture supplied with T3880106 - Balancer Gear Holder by placing the fixture pegs across two gear teeth (ensure that the fixture will not be in the way when assembling the balancer to the crankshaft).

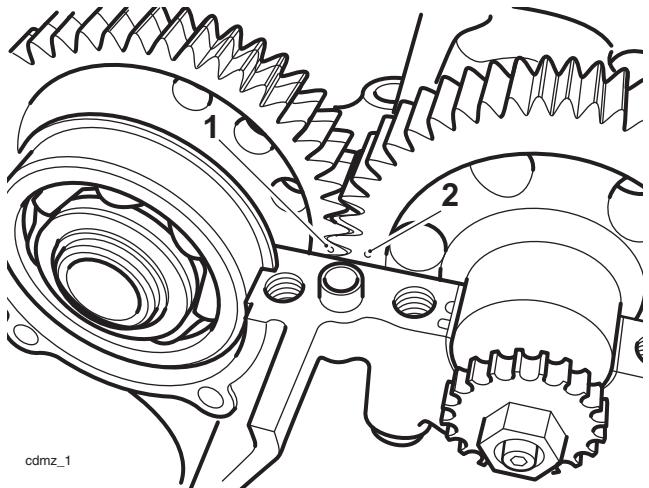


1. T3880106 - Balancer Gear Holder
2. Securing fixture
3. Balancer backlash gear marking

**Caution**

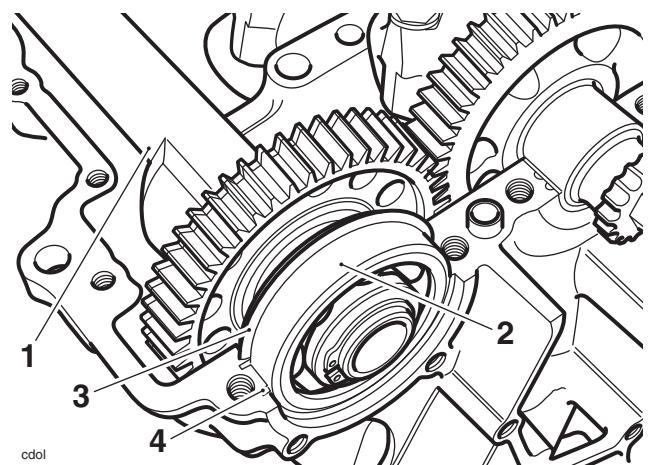
If the balancer and crankshaft are not correctly aligned, severe engine vibration will occur leading to damage to components.

9. With the drive and backlash eliminator gear still correctly aligned, locate the balancer to the crankcase. Align the balancer gears and crankshaft as shown in the illustration below.



1. Balancer gear marking
2. Crankshaft markings

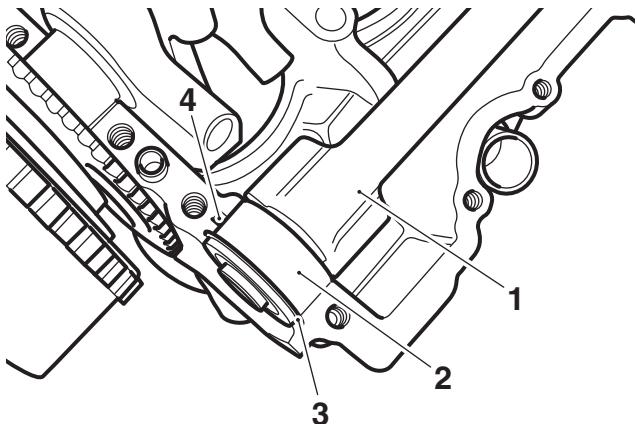
10. Ensure that the right hand bearing circlip and dowel locate correctly in the corresponding groove in the crankcase.



1. Balancer shaft
2. Right hand bearing
3. Circlip
4. Dowel

Balancer

11. Ensure that the left hand bearing circlip and dowel locate correctly in the corresponding groove in the crankcase.



cdok

1. Balancer shaft
2. Left hand bearing
3. Circlip
4. Dowel

12. Remove the securing fixture.
13. Check that the balancer and crankshaft are correctly aligned before continuing to assemble the crankcase halves.
14. Assemble the crankcase halves (see page 5-5).

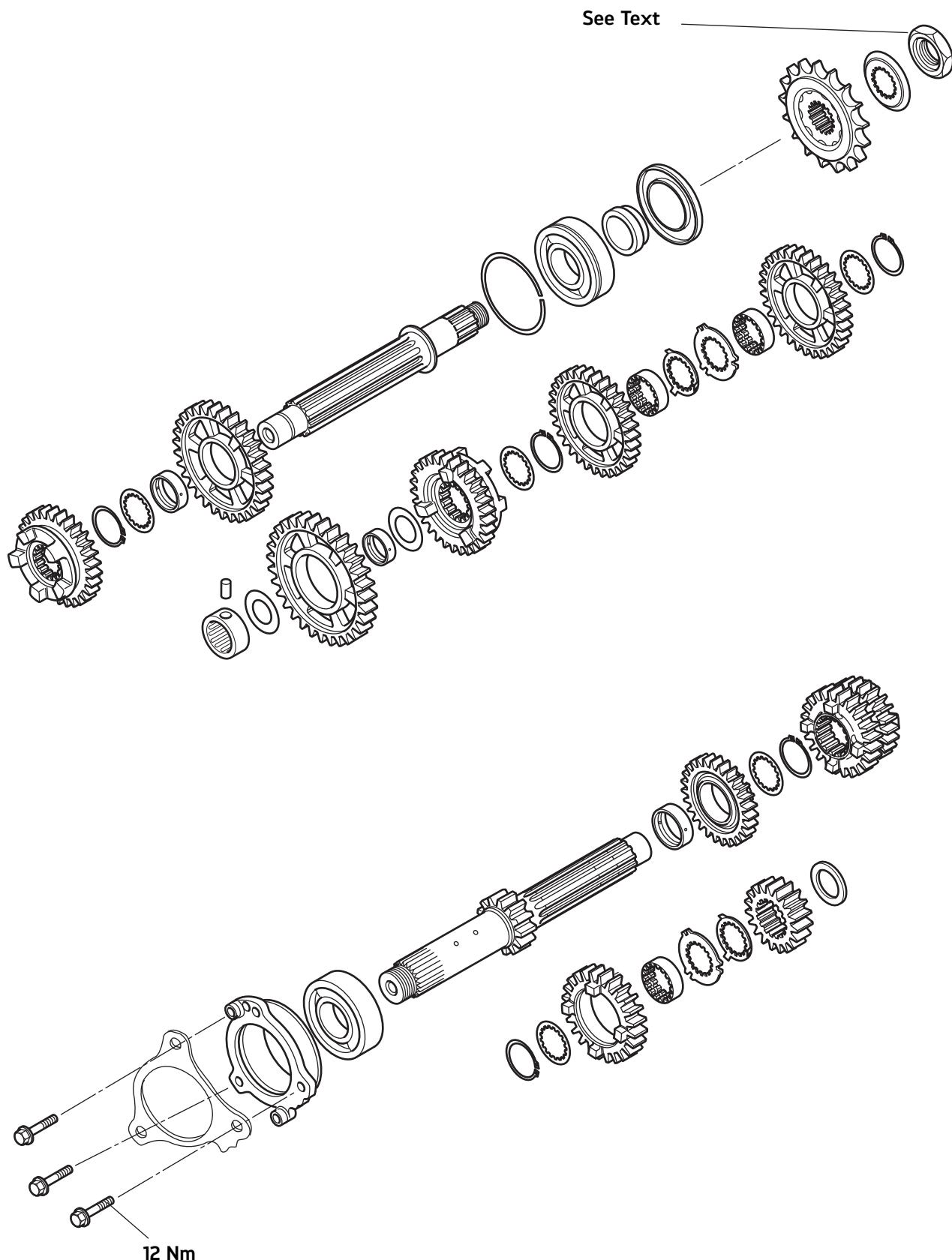
7 Transmission

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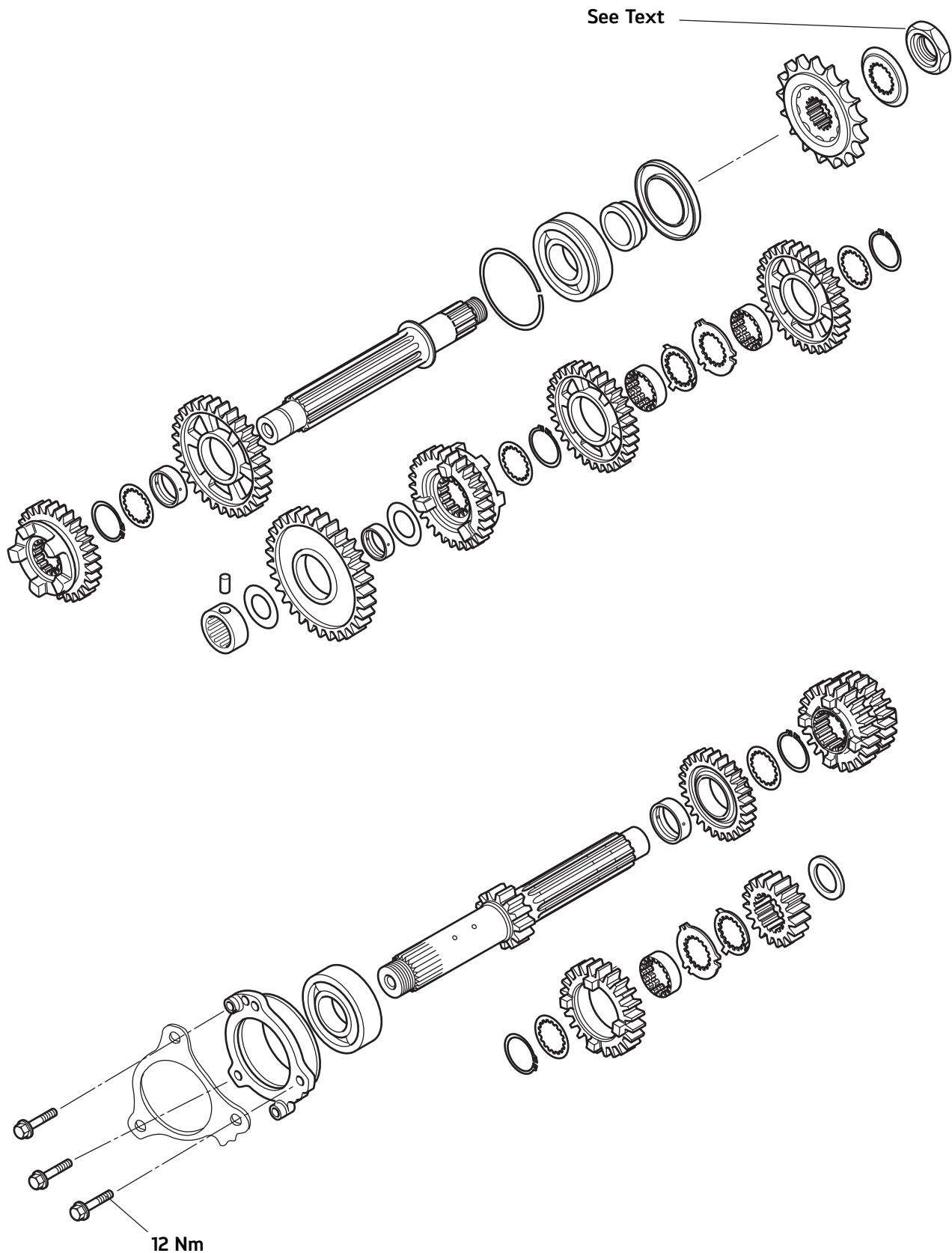
Transmission

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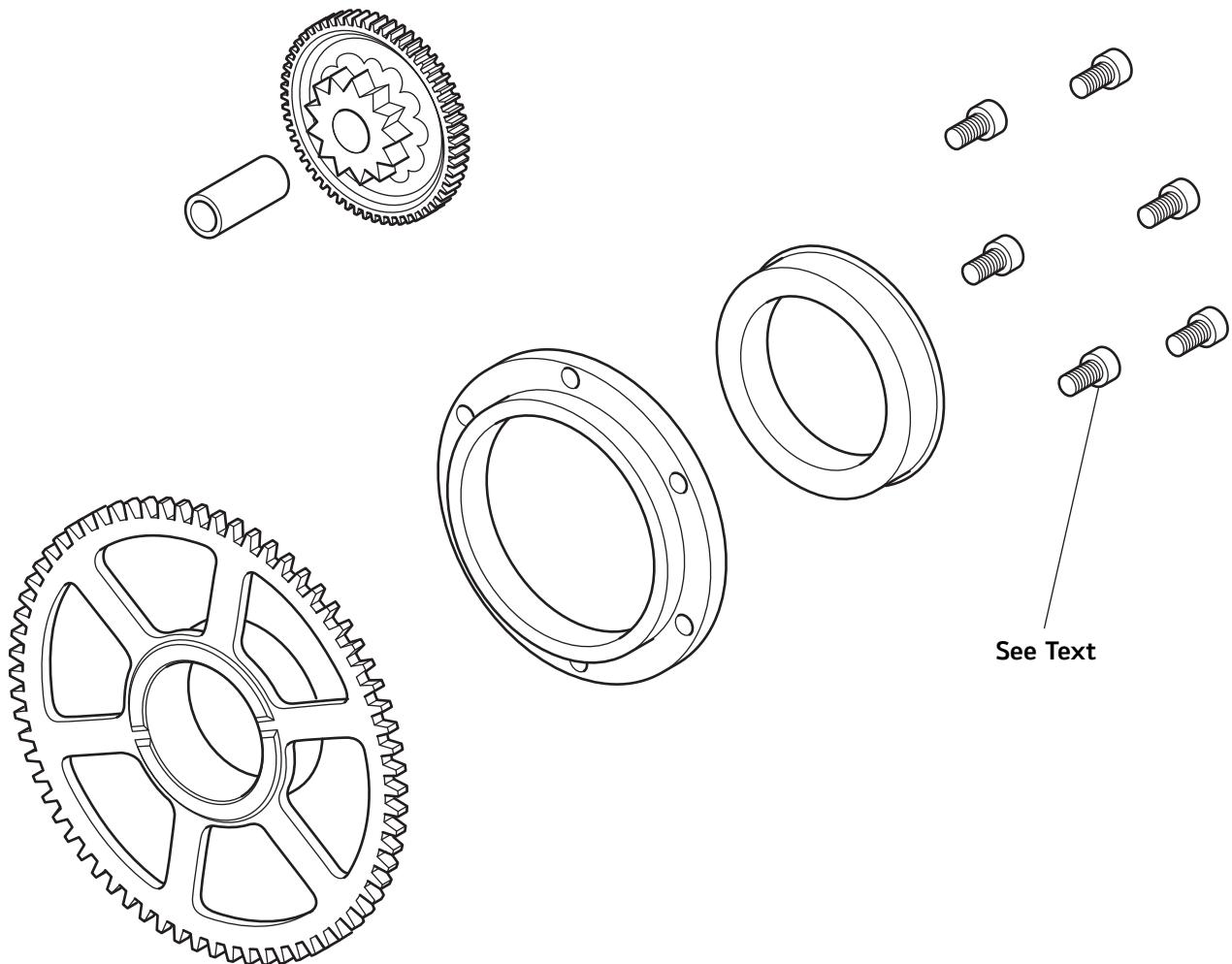
**Exploded View - Input and Output Shafts - Street Triple, Street Triple 660 cc,
Street Triple R and Street Triple Rx**

Transmission

Exploded View - Input and Output Shafts - Daytona 675 and Daytona 675 R

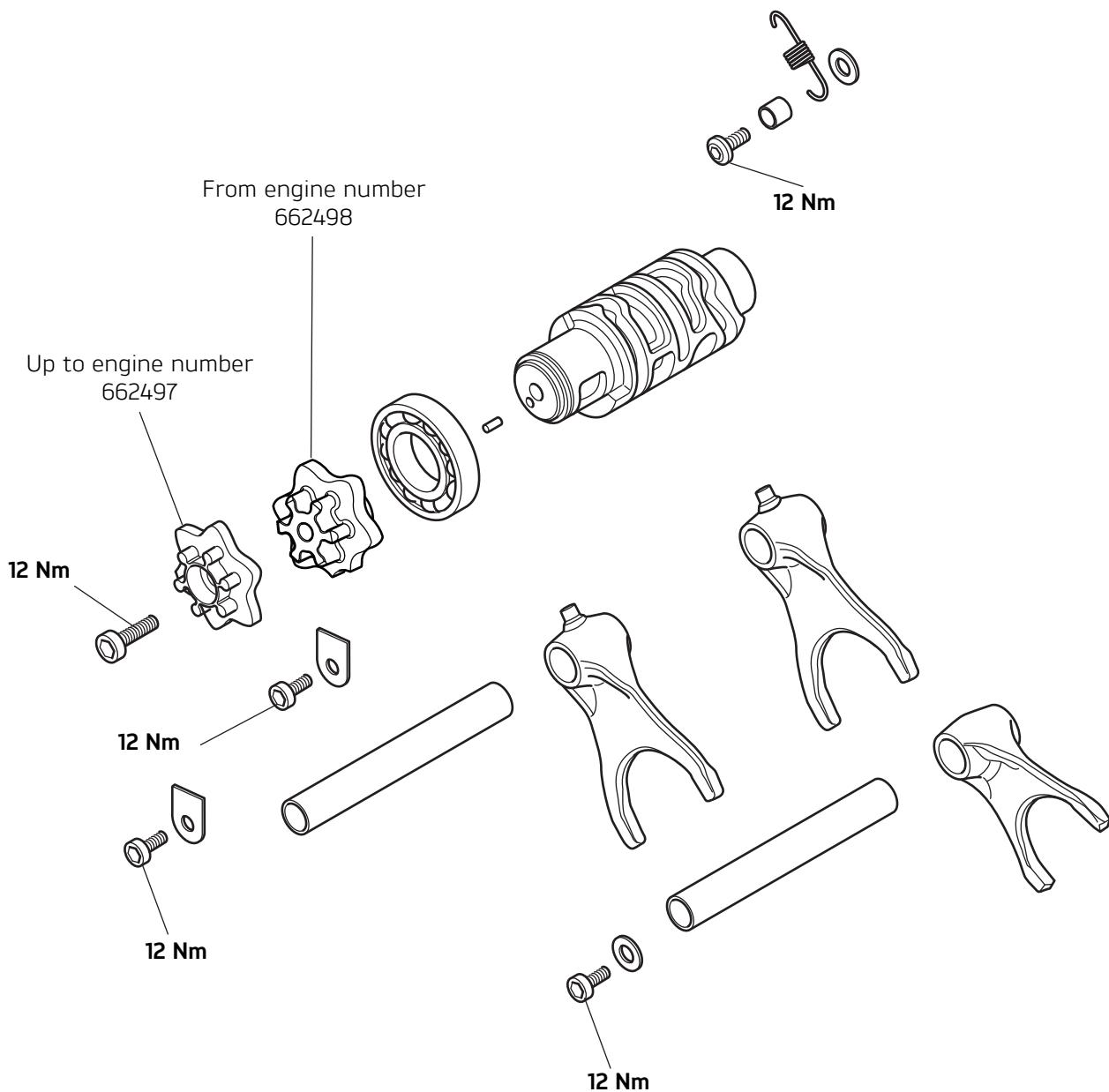


Exploded View - Sprag Clutch and Starter Gears

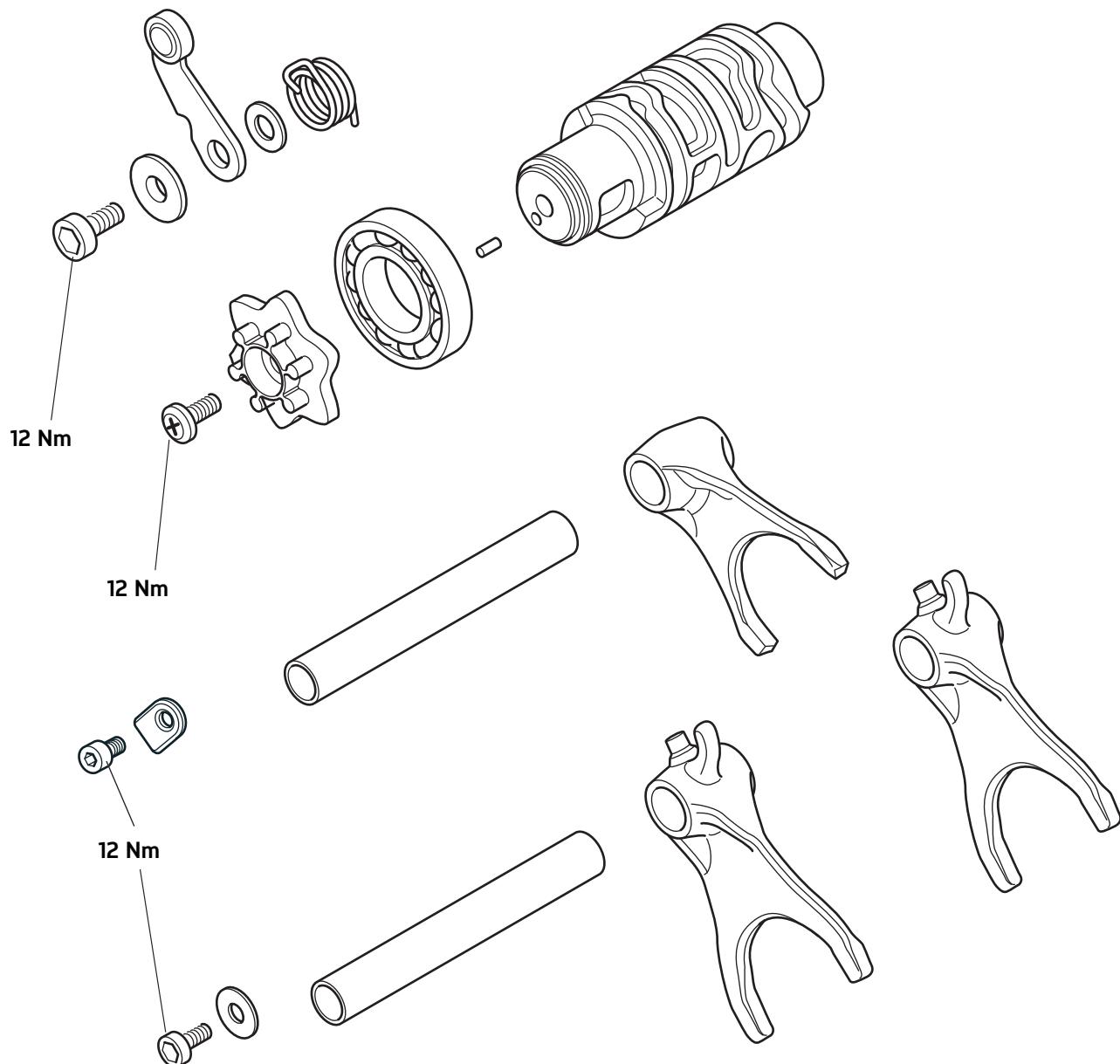


Transmission

Exploded View - Gear Selectors and Drum - Daytona 675 and Daytona 675 R

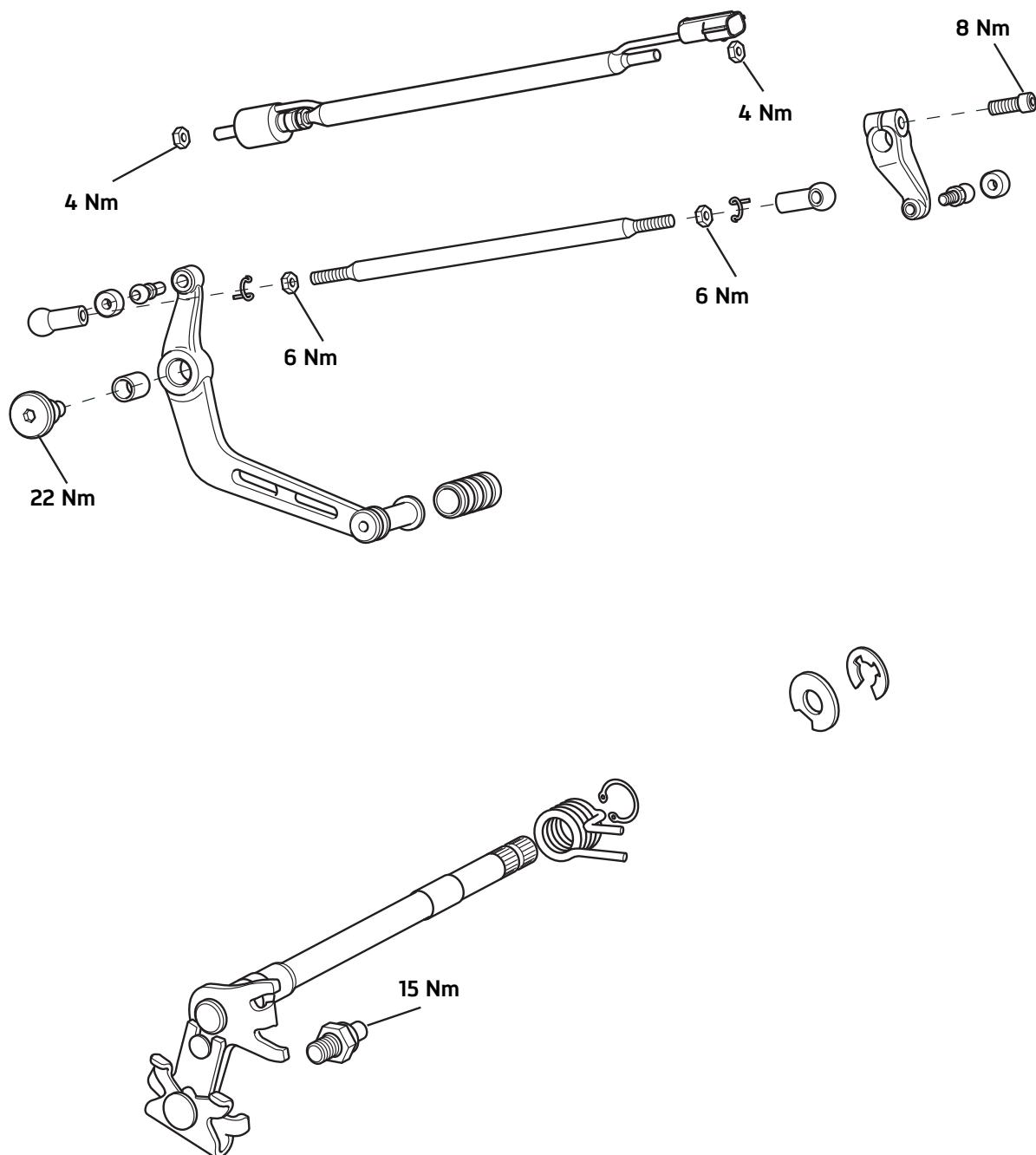


**Exploded View - Gear Selectors and Drum - Street Triple, Street Triple 660 cc,
Street Triple R and Street Triple Rx**

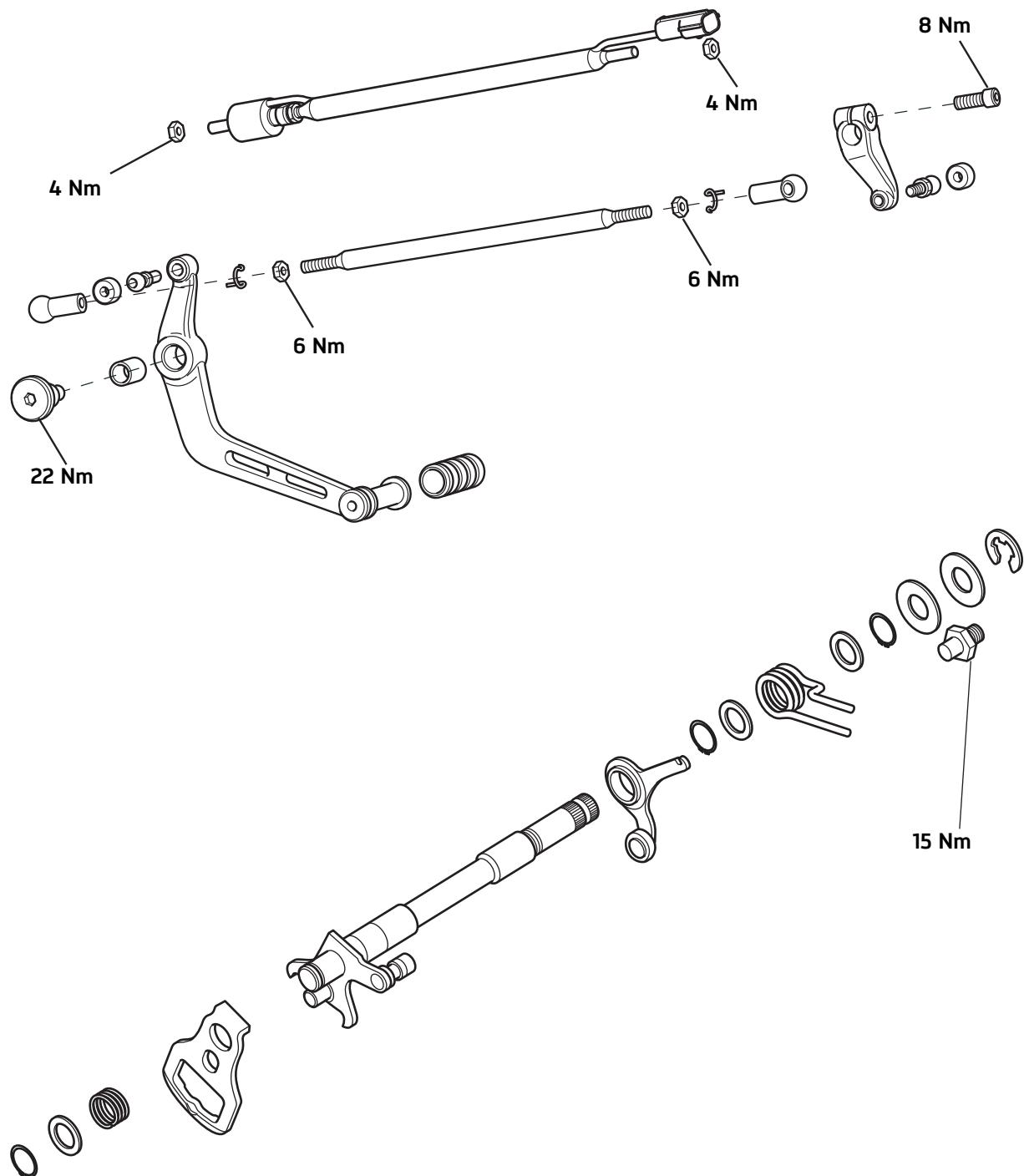


Transmission

Exploded View - Gear Change Mechanism - Street Triple, Street Triple 660 cc, Street Triple R and Street Triple Rx



Exploded View - Gear Change Mechanism - Daytona 675 and Daytona 675 R



Transmission

Gear Change Linkage

Removal

Note:

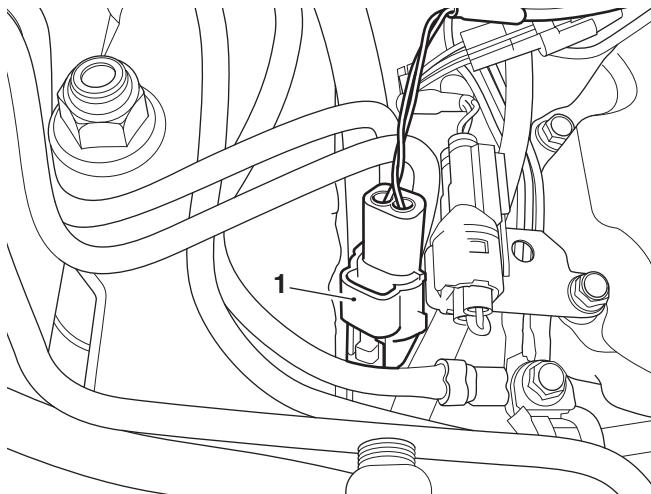
- For models with a quickshifter fitted, continue from step 1.
- For models with a standard gear change linkage, omit steps 1 to 4.

Models with a Quickshifter Fitted

1. Remove the seat (see page 16-22 for Daytona 675, Daytona 675 R and Street Triple Rx, see page 16-23 for Street Triple, Street Triple 660 cc and Street Triple R).
2. Disconnect the battery, negative (black) lead first.
3. Remove the fuel tank (see page 10-112).

Note:

- Note the routing of the quickshifter cable for installation.
- 4. Disconnect the quickshifter multiplug from the main harness.



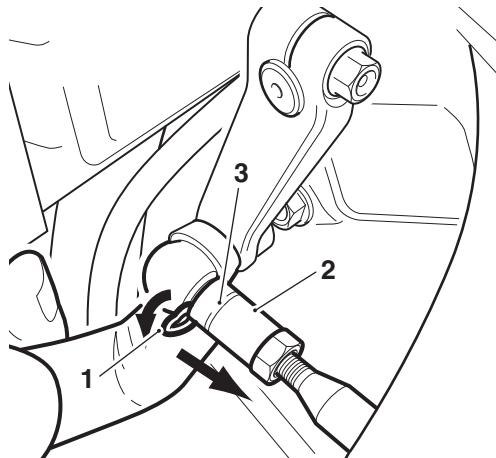
1. Quickshifter multiplug

All models

Note:

- For models with the quickshifter fitted, note the position of its sensor for installation.
- For models with a standard gear change linkage, note the position of the machined ring on the front ball joint or gear change linkage for installation.

5. Remove the wire clips retaining the quickshifter/gear change linkage front and rear ball joints, as shown below.



1. Wire clip
2. Front ball joint
3. Machined ring (Street Triple shown)
6. Remove the quickshifter/gear change linkage.

Installation

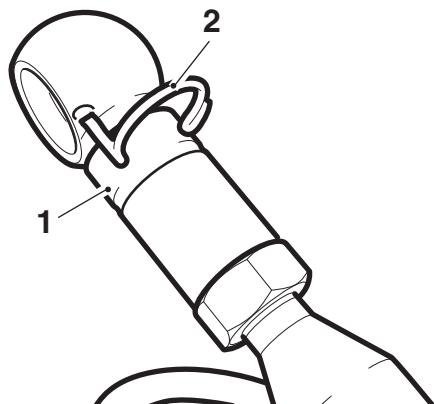
Note:

- For models with a standard gear change linkage, omit steps 5 to 8.

All Models

1. Locate the quickshifter/gear change linkage through the frame as noted for removal.
2. Attach the front ball joint to the transmission linkage.
3. Attach the rear ball joint to the foot control.

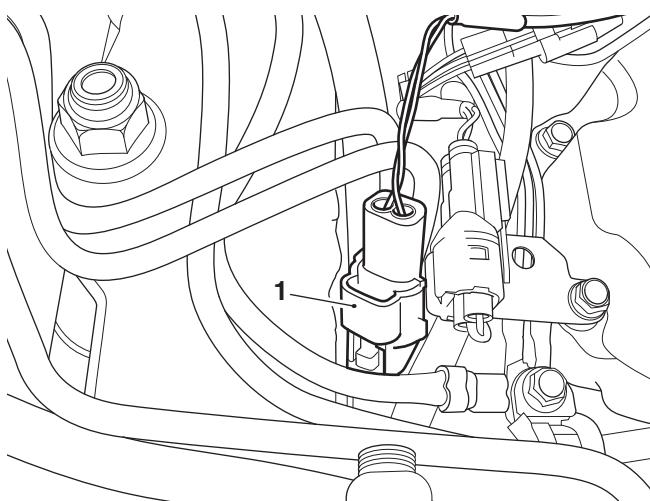
- Refit the wire clips to retain the ball joints. Ensure the wire clips locate correctly in the ball joints before rotating the clips to lock in place.



- Ball joint
- Wire clip

Models with a Quickshifter Fitted

- Connect the quickshifter multiplug to the main harness. Route the cable as noted for removal.



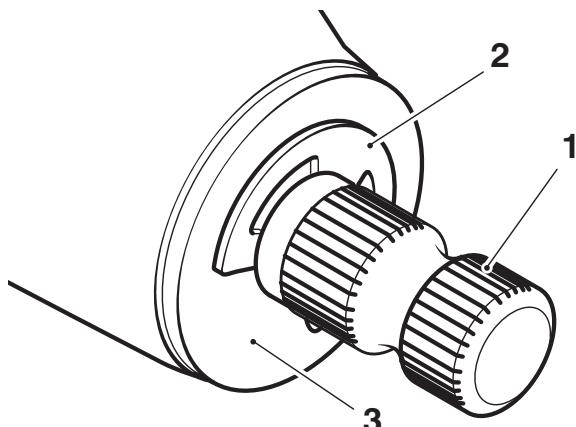
- Quickshifter multiplug

- Refit the fuel tank (see page 10-113).
- Reconnect the battery, positive (red) lead first. Tighten the battery terminals to **4.5 Nm**.
- Refit the seat (see page 16-22 for Daytona 675, Daytona 675 R and Street Triple Rx, see page 16-24 for Street Triple, Street Triple 660 cc and Street Triple R).
- Carefully withdraw the gear change shaft and detent arm from the clutch end of the crankcase. Ensure the washer fitted to the inner end of the shaft remains on the shaft.

Gear Change Shaft - Daytona 675 and Daytona 675 R

Removal

- Remove the right hand fairing (see page 16-33).
- Note the position and orientation of the gear pedal crank in relation to the shaft, then remove the crank.
- Remove the E-clip and washer from the gear pedal end of the gear change shaft.



kakhi

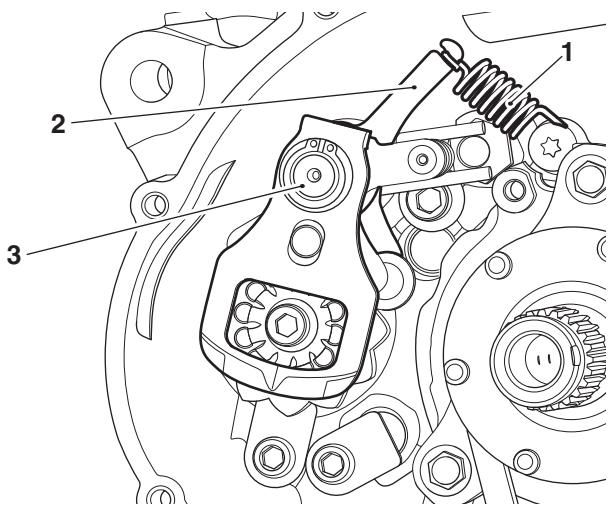
- Gear change shaft
- E-clip
- Washer
- Remove the clutch (see page 4-8).
- Un-hook the spring from the detent arm.



Caution

Take care to ensure that the washer fitted to the inner end of the selector shaft remains in position during removal of the shaft. Should the washer become dislodged during removal, it is possible for it to drop into the engine. Should this happen, it will be necessary to disassemble the crankcase to recover the washer.

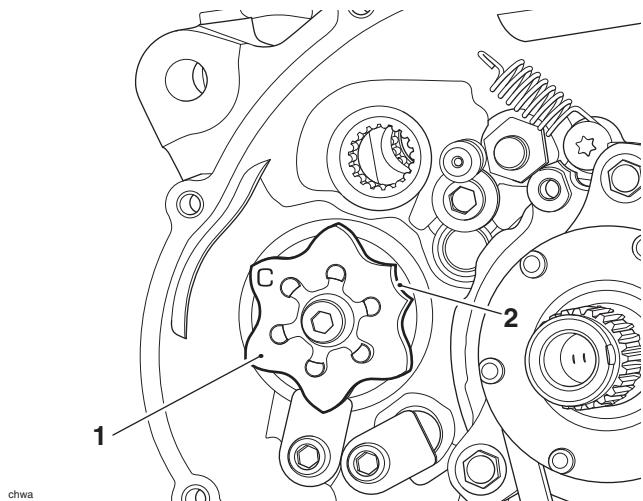
Transmission



1. Detent arm spring
2. Detent arm
3. Gear change shaft
7. Collect the detent arm spring.

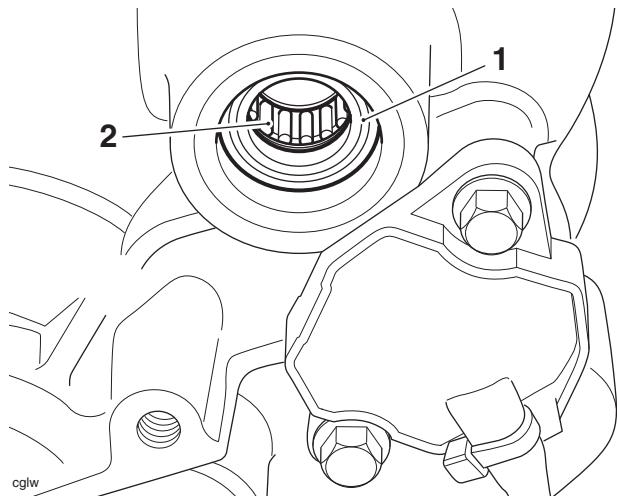
Installation

1. Rotate the selector drum to the neutral position.



1. Detent wheel
2. Neutral position

2. Using grease to NLGI 2 specification, lubricate the lip of the seal for the gear change shaft.



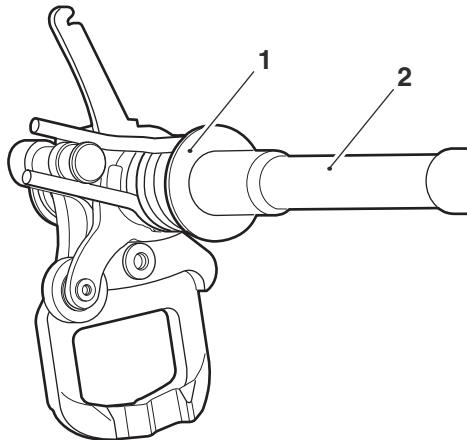
1. Gear change shaft seal
2. Gear change shaft bearing



Caution

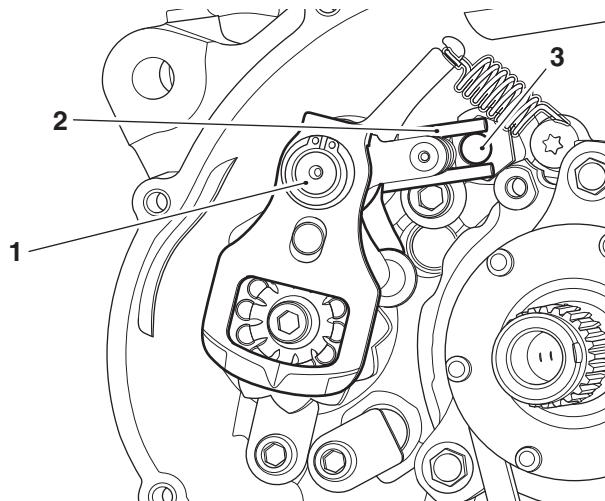
Take care to avoid damaging the lip of the seal when inserting the gear change shaft into the crankcase. A damaged seal will lead to oil loss and could result in engine damage.

3. Ensure that the inner washer is fitted to the shaft and carefully insert the gear pedal end of the shaft through the bearings and lip seal in the crankcase.



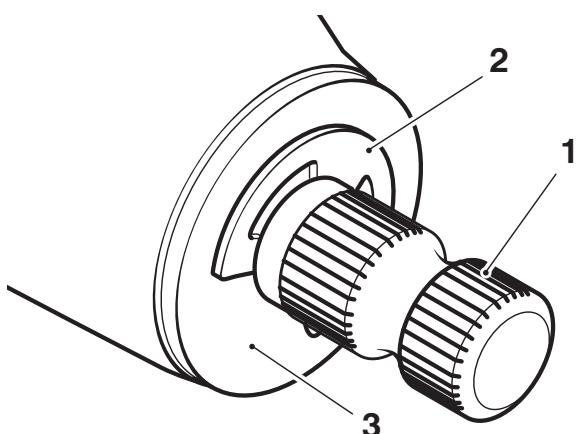
1. Washer
2. Gear change shaft

- Support the detent arm bearing clear of the selector drum as the selector shaft is fully installed, and ensure the selector shaft spring fits either side of the abutment bolt.



1. Gear change shaft
2. Spring
3. Abutment bolt

- Fit the washer and E-clip to the gear pedal end of the gear change shaft.



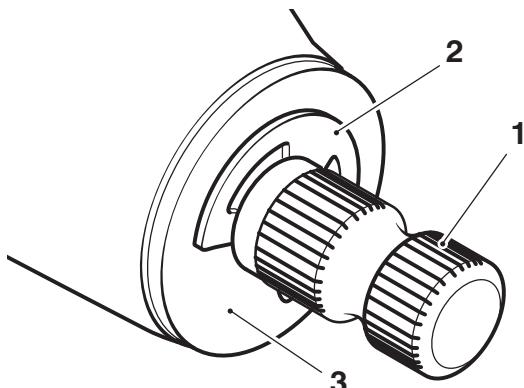
1. Gear change shaft
2. E-clip
3. Washer

- Fit the gear pedal crank to the shaft in the same orientation as noted for removal. Ensure the dot mark on the shaft aligns with the split line on the gear pedal crank. Tighten the fixing to **8 Nm**.
- Refit the detent arm spring.
- Refit the clutch (see page 4-15).

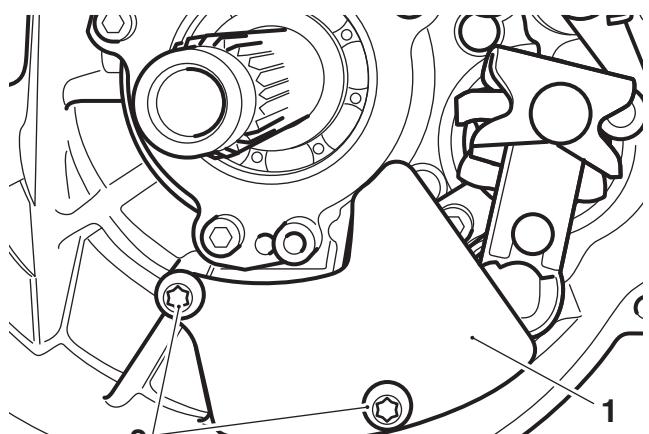
Gear Change Shaft - Street Triple, Street Triple 660 cc, Street Triple R and Street Triple Rx

Removal

- Note the position and orientation of the gear pedal crank in relation to the shaft, then remove the crank.
- Remove the E-clip and washer from the gear pedal end of the gear change shaft.



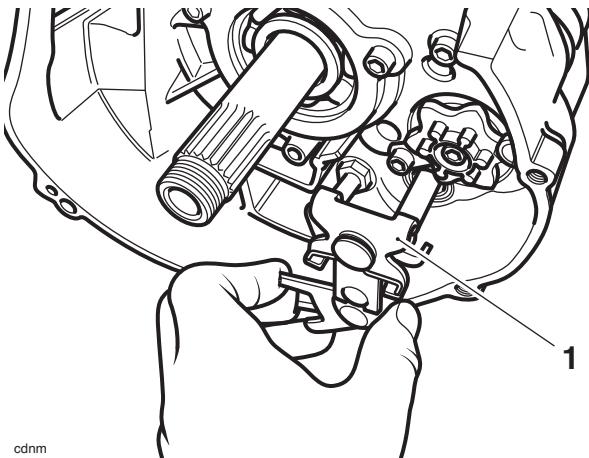
- kakh1**
- 1. Gear change shaft**
 - 2. E-clip**
 - 3. Washer**
 - Remove the clutch (see page 4-8).
 - Release the two fixings and remove the baffle plate from the crankcase breather. Discard the fixings.



1. Crankcase breather baffle plate
2. Fixings

Transmission

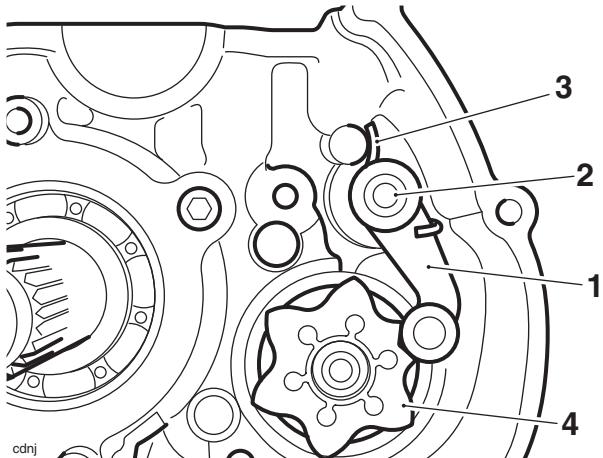
5. Withdraw the gear change shaft from the clutch end of the crankcase.



1. Gear change shaft

Note:

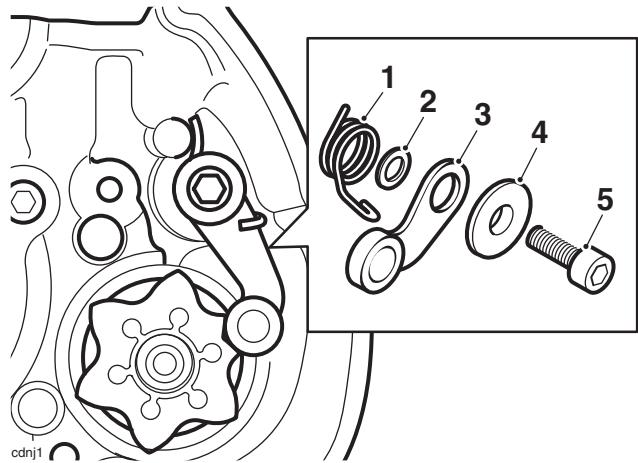
- The detent arm is held in position under spring pressure. Prior to removal, note the orientation of the detent arm, fixing and spring, relative to the selector drum detent wheel. The same orientation must be retained on assembly.
6. Remove and discard the fixing securing the detent arm.
7. Withdraw the detent arm complete with its flanged sleeve, spring and washer.



1. Detent arm
2. Fixing
3. Spring
4. Detent wheel

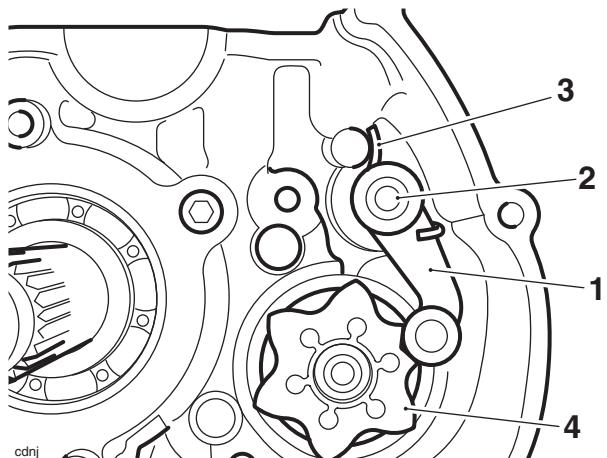
Installation

1. Assemble the detent arm as noted on removal with a new fixing and place up to the crankcase.



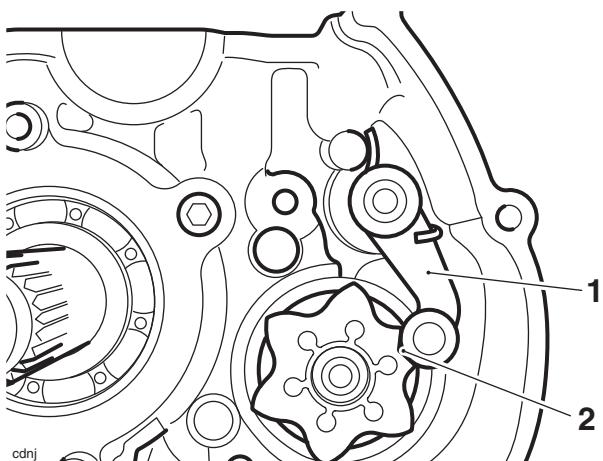
1. Spring
2. Washer
3. Detent arm
4. Flanged sleeve
5. Fixing

2. Hold the detent arm assembly in position and insert a new fixing. Start the thread and push the detent arm, using finger pressure only, to locate on the selector drum detent wheel. Ensure the detent arm remains correctly located on the detent wheel and the spring is correctly seated in the recess in the crankcase. Ensure the shoulder of the flanged sleeve is located in the bore of the detent arm and tighten the fixing to **12 Nm**.



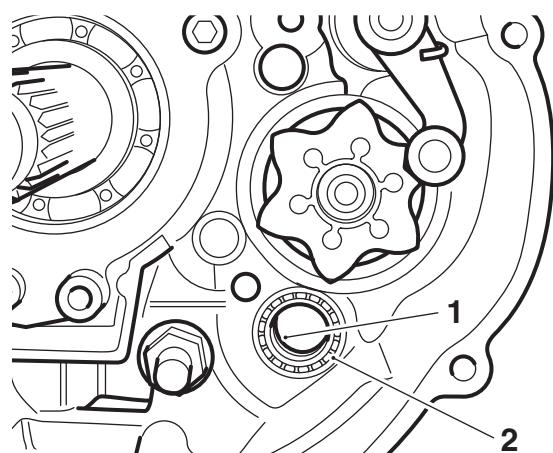
1. Detent arm
2. Fixing
3. Spring
4. Detent wheel

3. Rotate the selector drum to the neutral position. Ensure that the detent arm locates in the raised profile in the detent wheel (neutral position).



1. Detent arm
2. Neutral position

4. Using clean engine oil, lubricate the lip of the seal on the gear change shaft.



1. Gear change shaft seal
2. Gear change shaft bearing

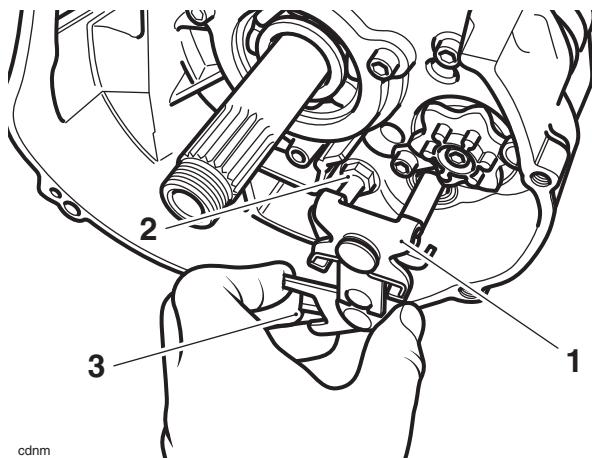
5. Lubricate both sides of the forks and the slider plates of the selector mechanism on the gear change shaft with new engine oil which meets specification API SH (or higher) and JASO MA.



Caution

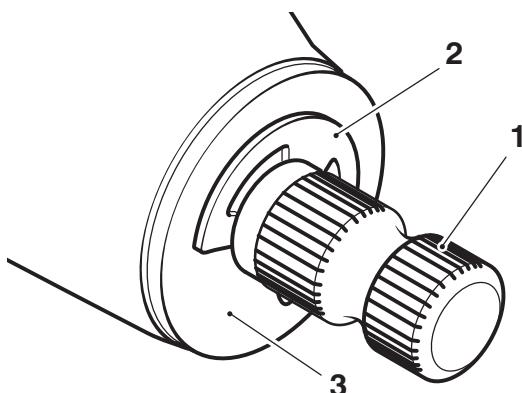
Take care to avoid damaging the lip of the seal when inserting the gear change shaft into the crankcase. A damaged seal will lead to oil loss and could result in engine damage.

6. Insert the gear change shaft into the crankcase. Gently push the gear pedal end of the shaft through the bearing and lip seal at the clutch side of the crankcase, and the sealed bearing, located at the gear pedal side of the crankcase.



1. Gear change shaft
2. Abutment bolt
3. Spring

7. Ensure that the gear change shaft fingers locate in the detent wheel/arm and that the spring fits either side of the abutment bolt.
8. Fit the washer and E-clip to the gear pedal end of the gear change shaft.



1. Gear change shaft
2. E-clip
3. Washer

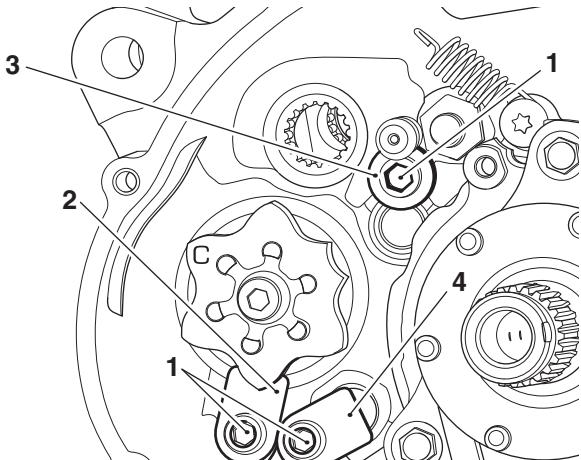
Transmission

9. Fit the gear pedal crank to the shaft in the same orientation as noted prior to removal. Ensure the dot mark on the shaft aligns with the split line on the gear pedal crank. Tighten the fixing to **8 Nm**.
10. Incorporating new fixings, refit the baffle plate to the crankcase breather. Tighten the fixings to **9 Nm**.
11. Refit the clutch (see page 4-15).

Selector Forks and Drum

Removal

1. Remove the engine from the frame (see page 9-4).
2. Separate the two halves of the crankcase (see page 5-5).
3. Remove the output shaft from the crankcase (see page 7-20).
4. Remove the gear change shaft (see page 7-11 for Daytona 675 and Daytona 675 R, see page 7-13 for Street Triple, Street Triple 660 cc, Street Triple R and Street Triple Rx).
5. **For Daytona 675 and Daytona 675 R:** Remove and discard the fixings for the selector drum, input and output keeper plates/washer. Note the position of the washer and keeper plates for installation.



1. Fixings
2. Selector drum keeper plate
3. Input selector shaft washer
4. Output selector shaft keeper plate
6. **For Street Triple, Street Triple 660 cc, Street Triple R and Street Triple Rx:** Remove and discard the two selector shaft retaining fixings, noting the position of the washer and the selector drum keeper plate.

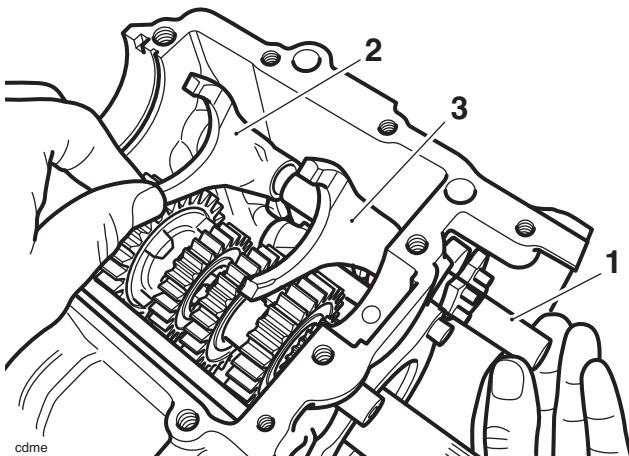


Caution

The two output shaft selector forks can be fitted incorrectly. Ensure the position and orientation of the selector forks are marked prior to removal. Incorrect fitting of the selector forks will cause gearbox damage.

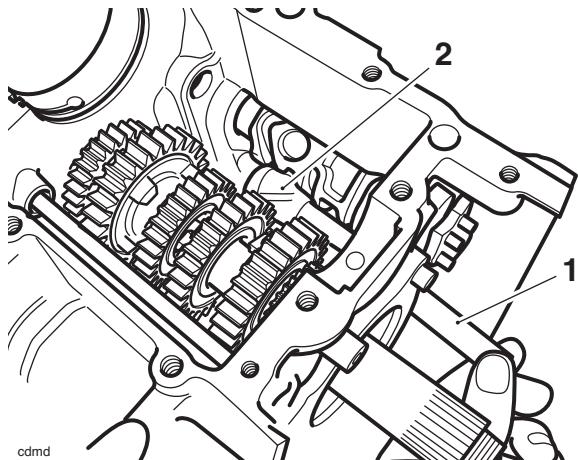
Note:

- For Daytona 675 and Daytona 675 R: All selector forks have a special molybdenum coating.
 - For Daytona 675 and Daytona 675 R: There are identification markings on one side of the fork. These markings must face the alternator side of the engine when installed.
 - For Street Triple, Street Triple 660 cc, Street Triple R and Street Triple Rx: The fifth gear selector fork, located nearest to the clutch, has a special molybdenum coating on the selector forks. This special coating is identified by its dull grey colour, when compared to the sixth gear selector fork which is chromed.
 - Note the orientation of the selector forks for installation.
7. Slide the output selector shaft from the crankcase in the direction of the clutch. Collect the two selector forks as they are released by the selector shaft.



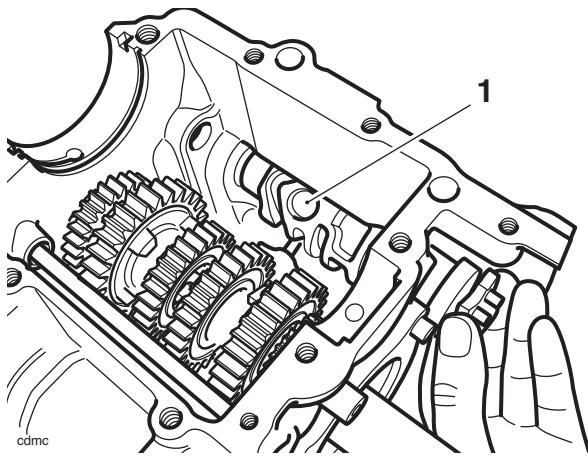
1. Output selector shaft
2. Sixth gear selector fork
3. Fifth gear selector fork

8. Noting the position of the selector fork, remove the input selector shaft, leaving the selector fork in the gearbox.



1. Input selector shaft
2. Selector fork

9. Withdraw the selector drum from within the crankcase.



1. Selector drum removal

10. Collect the input shaft selector fork from the crankcase.

Transmission

Inspection

1. Examine all components for damage and/or wear, paying particular attention to the selector forks and selector drum. Replace any parts that are damaged and/or worn.

Gear selector fork thickness

Standard	5.90 - 6.00 mm
Service limit	5.80 mm

Gear selector groove width

Standard	6.10 - 6.17 mm
Service limit	6.27 mm

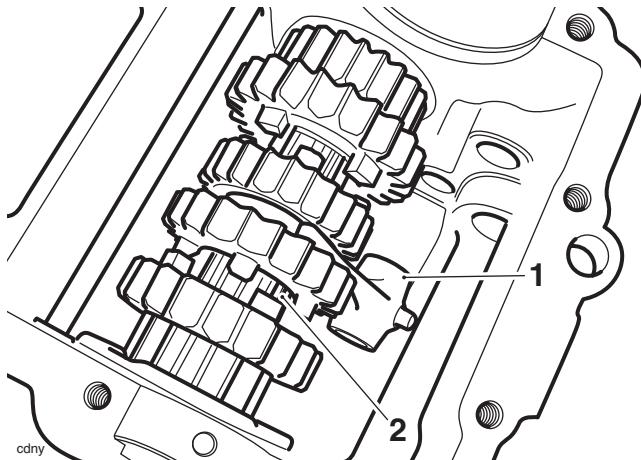
Selector fork to groove clearance

Service limit	0.47 mm max
---------------	-------------

2. Examine the gear change shaft seal for damage and/or wear. Replace the seal if damaged and/or worn.

Installation

1. Position the input shaft selector fork into the crankcase, locating the fork into the selector groove on the input shaft. Ensure the fork is fitted in the position noted during removal.

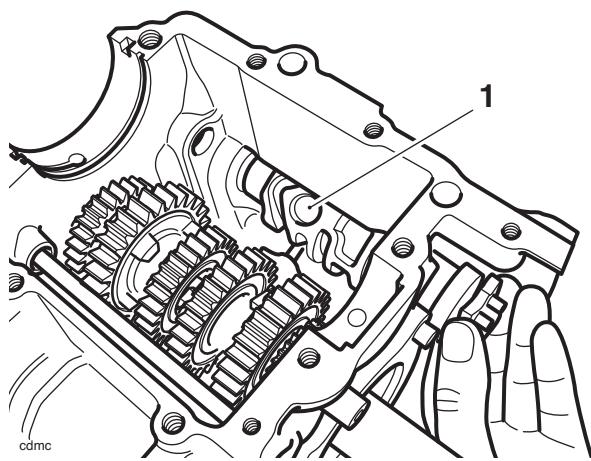


1. Input shaft selector fork

2. Input shaft

2. Using clean engine oil, lubricate the selector drum bearings. Lubricate the selector drum tracks with new engine oil which meets specification API SH (or higher) and JASO MA.

3. Position the selector drum into the crankcase.



1. Selector drum

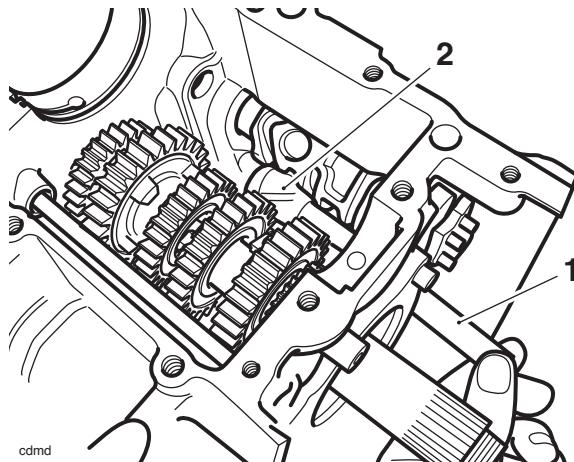
4. Rotate the selector drum and ensure a smooth movement. Rectify as necessary.



Caution

The selector forks can be fitted incorrectly. Ensure the position and orientation of the selector forks are the same as noted during removal. Incorrect fitting of the selector forks will cause gearbox damage.

5. Push the input selector shaft into the crankcase from the clutch end. As the shaft is inserted, locate the selector fork onto the shaft. Ensure the fork is fitted in the position noted during removal.

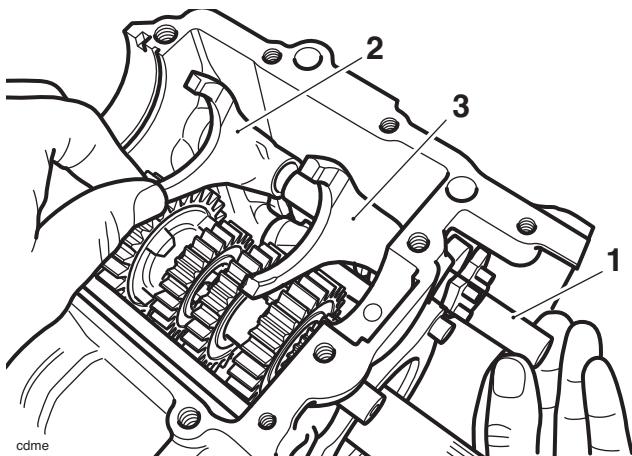


1. Input selector shaft

2. Selector fork

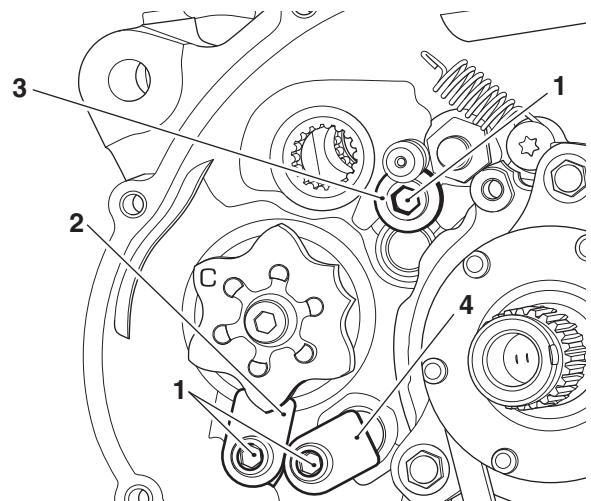
Note:

- For Street Triple, Street Triple 660 cc, Street Triple R and Street Triple Rx: The fifth gear selector fork, located nearest to the clutch, has a special molybdenum coating on the selector forks. This special coating is identified by its dull grey colour, when compared to the sixth gear selector fork which is chromed.
- For Daytona 675 and Daytona 675 R: All gear selector forks have a special molybdenum coating.
- 6. Push the output selector shaft into the crankcase from the clutch end. As the shaft is inserted, locate the selector forks. Ensure the selector forks are fitted in the positions and orientation as noted during removal.

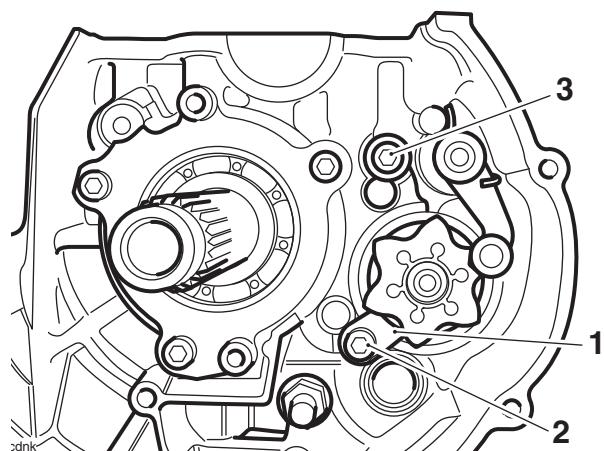


1. Output selector shaft
2. Sixth gear selector fork
3. Fifth gear selector fork
7. For Daytona 675 and Daytona 675 R: Fit new fixings for the selector drum, input and output keeper plates/washer, ensuring the washer

and the keeper plates are fitted in the positions noted during removal. Tighten the fixings to **12 Nm**.



1. Fixings
2. Selector drum keeper plate
3. Input selector shaft washer
4. Output selector shaft keeper plate
8. For Street Triple, Street Triple 660 cc, Street Triple R and Street Triple Rx: Fit two new selector shaft retaining fixings, ensuring the washer and the selector drum keeper plate are fitted in the positions noted during removal. Tighten the fixings to **12 Nm**.



1. Selector drum/shaft keeper plate
2. Fixing
3. Output selector shaft fixing and washer
9. Refit the gear change shaft (see page 7-12 for Daytona 675 and Daytona 675 R, see page 7-14 for Street Triple, Street Triple 660 cc, Street Triple R and Street Triple Rx).
10. Refit the output shaft (see page 7-20).
11. Assemble the two halves of the crankcase (see page 5-5).
12. Refit the engine to the frame (see page 9-6).

Transmission

Input and Output Shaft Assemblies

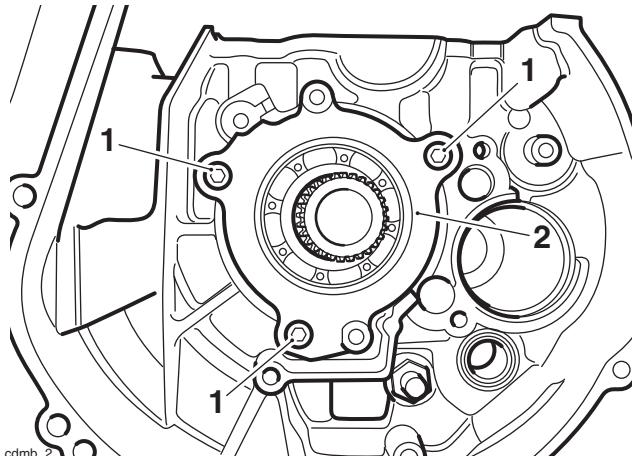
Removal

Note:

- The input and output shafts may be removed from the upper crankcase after first separating the lower crankcase from the upper.
 - The rear needle roller bearing on the input shaft remains in the crankcase on removal of the shaft.
- Remove the engine from the frame (see page 9-4).
 - Separate the two halves of the crankcase (see page 5-5).
 - Lift the output shaft from the upper crankcase, noting the orientation of each bearing, their circlips and dowels.
 - Remove the selector shafts, forks and selector drum (see page 7-16).

Note:

- The input shaft bearing housing fixings may not be reused but should be retained for use during installation of the input shaft.
- Release the three fixings securing the input shaft bearing housing to the upper crankcase.



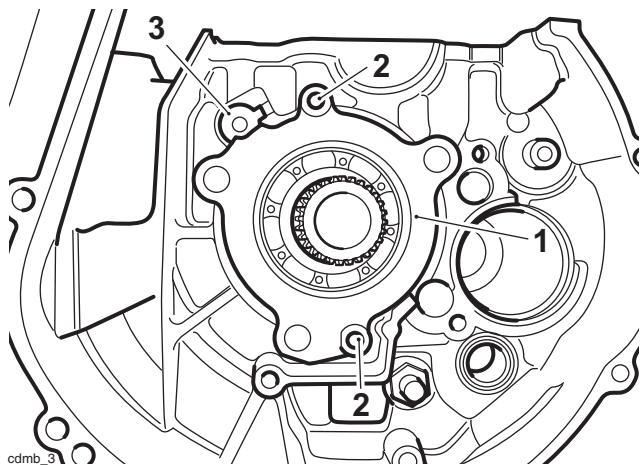
1. Fixings

2. Bearing housing (Street Triple shown)

Note:

- Note the orientation of the bearing housing for installation.

- Insert two M6 bolts into the two threaded holes at the periphery of the bearing housing. Evenly and progressively tighten both bolts to draw the bearing housing and input shaft from the crankcase.



1. Bearing housing (Street Triple shown)

2. M6 threaded holes

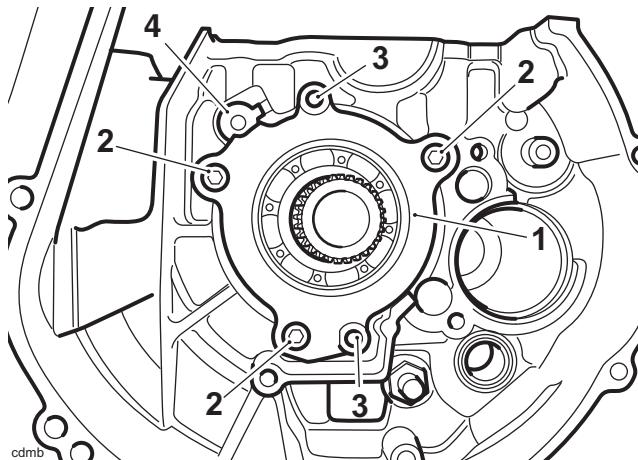
3. Transmission oil tube

- If required, the transmission oil tube can now be removed. Remove and discard the three oil tube O-rings.

Installation

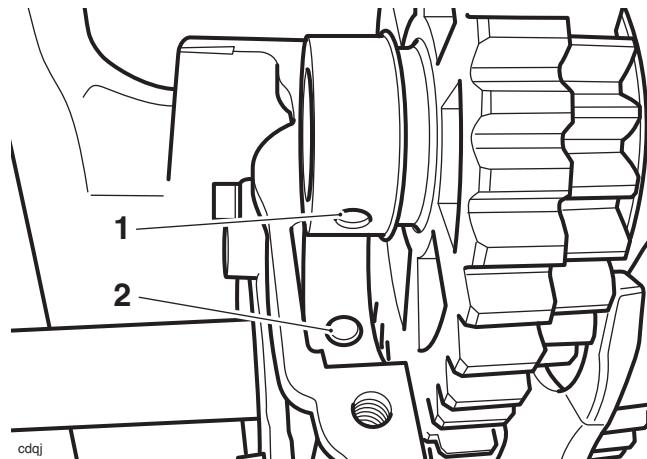
- If removed, check the transmission oil tube for blockages and contamination. Carefully fit new O-rings to the transmission oil tube and insert the tube into the crankcase, ensuring the tag on the tube locates in the slot in the crankcase.
- Locate the input shaft to the upper crankcase, installing it through the aperture for the bearing housing.
- Align the fixing holes to the threaded holes in their crankcase and fit the bearing housing into the aperture, by hand, as deeply as possible.

4. Using the old fixings, evenly and progressively tighten them to draw the bearing housing into the upper crankcase until fully home as noted for removal. Remove and discard the fixings.
9. Ensure the hole in the output shaft needle roller bearing outer race is positioned to locate onto the dowel provided in the upper crankcase.

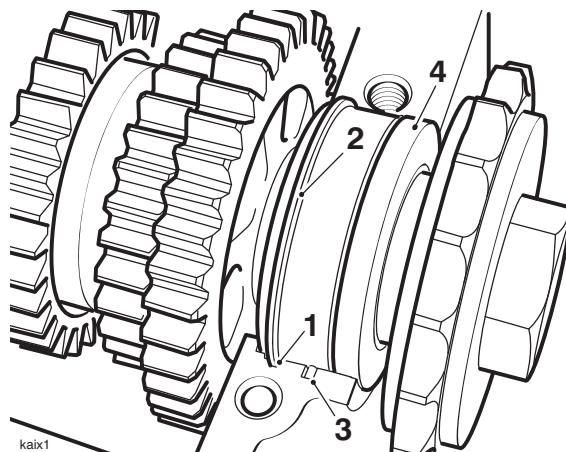


1. Bearing housing
2. Fixings
3. M6 threaded holes
4. Transmission oil tube

5. Install new fixings to the bearing housing and tighten to **12 Nm**.
6. Refit the selectors and shafts (see page 7-18).
7. Refit the output shaft to the crankcase ensuring the snap-ring locates in the corresponding groove in the crankcase, and the dowel locates in the slot in the upper crankcase.
8. Ensure the output shaft seal aligns with its recess in the crankcase.



1. Roller bearing
2. Dowel
10. Assemble the two halves of the crankcase (see page 5-5).
11. Refit the engine to the frame (see page 9-6).



1. Groove in crankcase
2. Snap ring
3. Dowel
4. Seal

Transmission

Input Shaft

Disassembly

Note:

- The numbers in brackets in the following text refer to the exploded view on page 7-23.

Working from the opposite end to where the clutch assembly is fitted, dismantle the input shaft as follows:

- Slide off the plain thrust washer (1).
- Mark one side of second gear to denote its correct orientation. Remove second gear (2).
- Remove the splined lock washers (3 and 4).
- Mark one side of sixth gear to denote its correct orientation. Remove sixth gear (6), complete with the splined bush (5) which runs inside the gear.
- Note their orientation and remove the splined thrust washer (7) from in front of the circlip between sixth and third/fourth gear.
- Remove the circlip (8) from the shaft.
- Mark one side of the combined third/fourth gear to denote its correct orientation. Remove the combined third/fourth gear (9).
- Remove the circlip (10) from in front of fifth gear.
- Remove the splined thrust washer (11) adjacent to fifth gear.
- Mark one side of fifth gear to denote its correct orientation. Remove fifth gear (12), complete with the plain bush (13) which runs inside the gear.

Note:

- Unless the bearing at the clutch end of the input shaft is damaged or worn, it is not normally necessary to remove it from the shaft. The bearing is pressed onto the shaft and is also pressed into its housing. The bearing and housing are removed from the shaft together and are then separated.

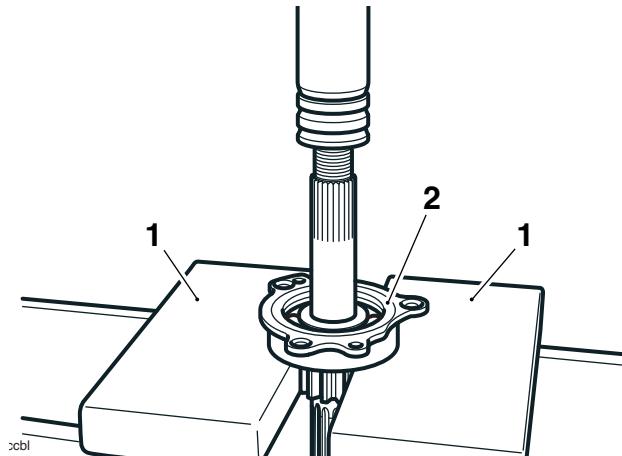


Warning

When using a press, always wear overalls, eye, face and hand protection. Objects such as bearings frequently break-up under load and the debris caused during break-up may cause damage and injury to unprotected parts of the body.

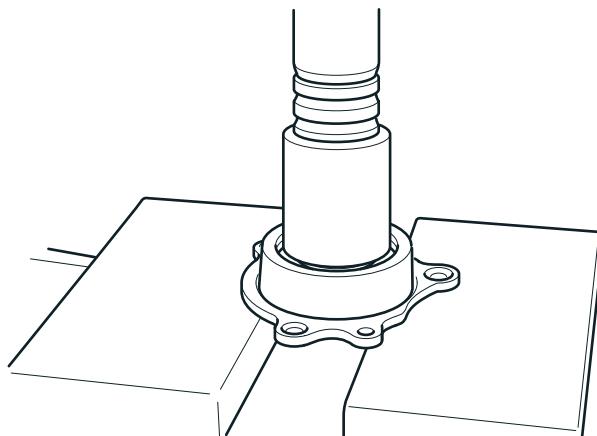
Never wear loose clothing, which could become trapped in the press and cause crushing injuries to the hand, arms or other parts of the anatomy.

- Support the bearing and housing (15 and 16) on press bars, then press the shaft (14) through the bearing and housing as shown below.



- Press bars
- Bearing/housing

- Support the outer circumference of the bearing housing on press bars, then press the bearing through the housing.

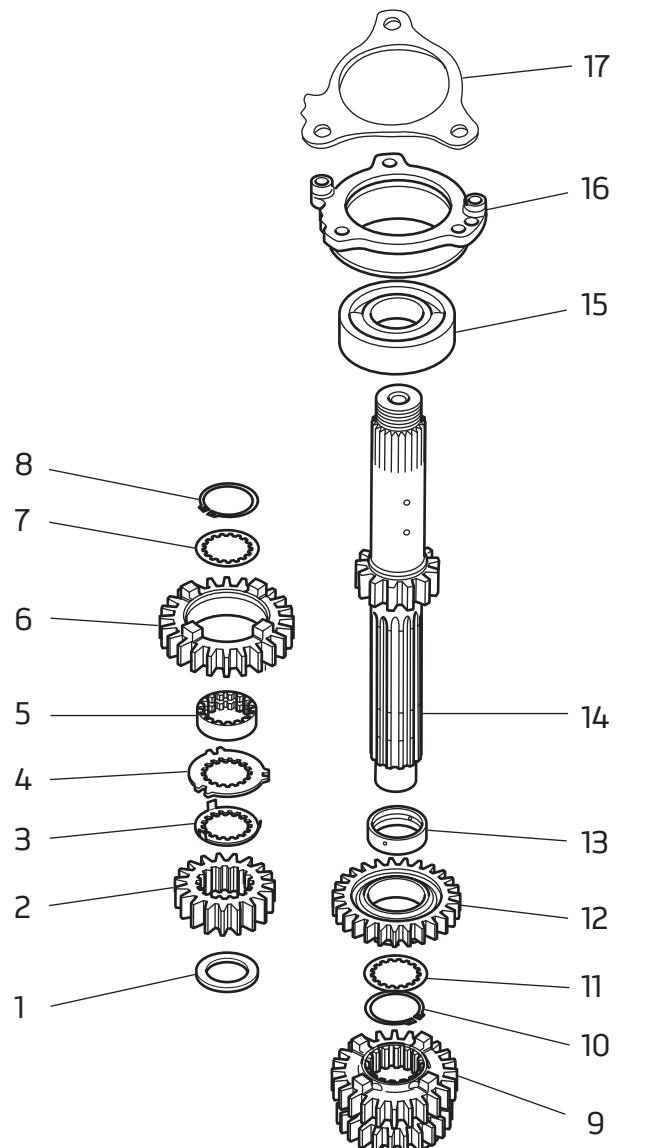


Pressing out the Bearing

Inspection

- Examine all gears, bearings and bushes and thrust washers for damage, distortion, chipped teeth and wear beyond the service limits. Replace all defective components and always use new circlips to assemble the shaft.
- Thoroughly clean the bearing housing and inspect for damage, scoring and cracks. Replace the housing if necessary.

Exploded View - Input Shaft



- | | |
|--------------------------|---------------------------|
| 1. Thrust washer | 10. Circlip |
| 2. Second gear | 11. Splined thrust washer |
| 3. Lock washer | 12. Fifth gear |
| 4. Splined washer | 13. Plain bush |
| 5. Splined bush | 14. Input shaft |
| 6. Sixth gear | 15. Bearing |
| 7. Splined thrust washer | 16. Bearing housing |
| 8. Circlip | 17. Bearing retainer |
| 9. Third/fourth gear | |

Transmission

Assembly

Note:

- The numbers in brackets in the following text refer to the exploded view on page 7-23.
- Lubricate each gear, thrust washer and bush with clean engine oil during assembly.



Warning

When using a press, always wear overalls, eye, face and hand protection. Objects such as bearings frequently break-up under load and the debris caused during break-up may cause damage and injury to unprotected parts of the body.

Never wear loose clothing, which could become trapped in the press and cause crushing injuries to the hand, arms or other parts of the anatomy.



Caution

Bushes and gears with oil holes must always be **MISALIGNED** with the corresponding oil holes in the input shaft. Reduced oil pressure and gear lubrication may result from alignment of the oil holes, which would cause premature wear of engine and transmission components.



Caution

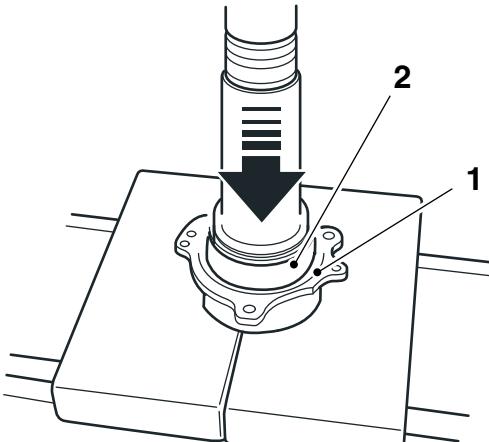
Removing the input shaft bearing from the shaft and its housing will damage the bearing and snap ring. Never reuse removed bearings or snap rings as use of damaged or weakened components could lead to engine and transmission damage. Also, check for damage to the housing itself.



Caution

Press only on the bearing outer race to prevent bearing damage.

- Support the housing on press bars as shown below and press the bearing fully into the housing in the direction of the arrow.



1. Bearing housing

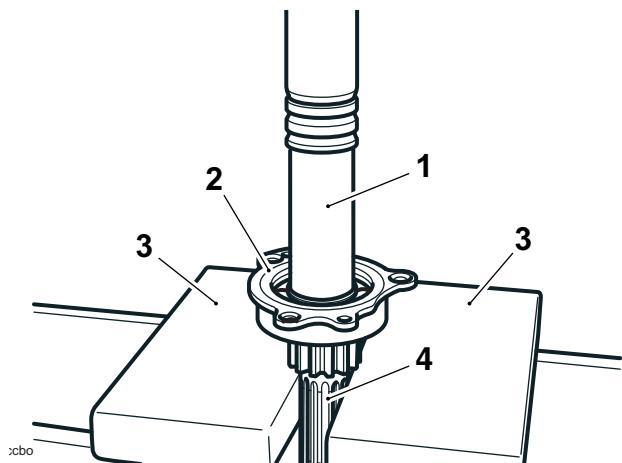
2. Bearing



Caution

Press only on the bearing inner race to prevent bearing damage.

- Locate the bearing and housing to the input shaft. Carefully support the shaft on the press bed, and using a suitable sleeve over the input shaft to ensure the bearing is pressed only on the inner race, press the bearing onto the shaft.



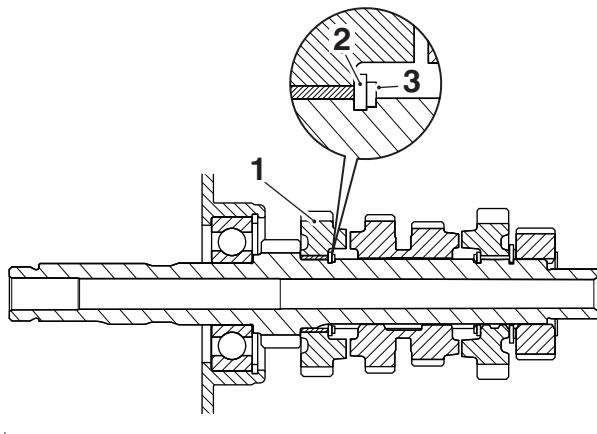
1. Sleeve

2. Bearing/housing

3. Press bars

4. Input shaft

3. Fit the plain bush (13) to the shaft.
4. Fit fifth gear (12) to the input shaft as noted during disassembly, with the dog teeth pointing away from the input shaft bearing.
5. Slide on the splined thrust washer (11).
6. Fit a new circlip (10) to the input shaft ensuring that the clip is located in the circlip groove as shown below.



cdmo

1. Fifth gear
2. Thrust washer
3. Circlip

7. Fit the combined third/fourth gear (9) as noted during disassembly, with the larger gear facing toward fifth gear. Ensure that the oil hole in the input shaft DOES NOT align with the oil hole in the gear.

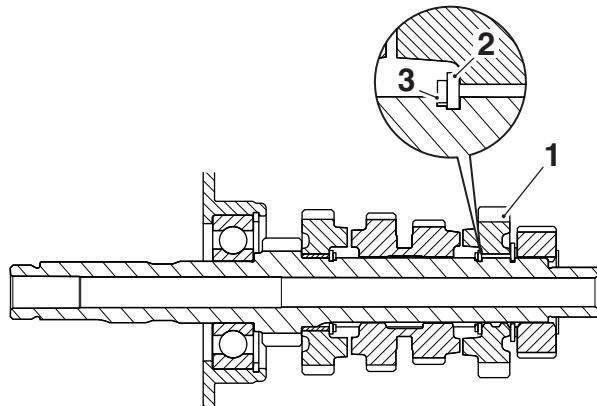


Warning

If the oil hole in the third/fourth gear is aligned with the corresponding hole in the input shaft, engine oil pressure and gear lubrication will be reduced.

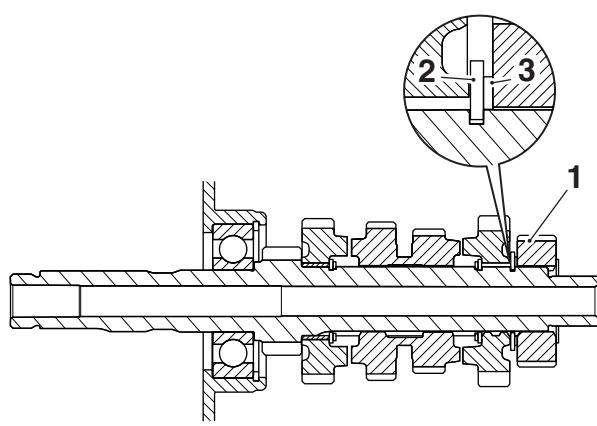
Reduced oil pressure and gear lubrication will cause engine damage and could also lead to engine seizure resulting in loss of motorcycle control and an accident

8. Fit a new circlip (8) to the input shaft ensuring that the circlip is located in the circlip groove as shown below.



- cdmp
1. Sixth gear
 2. Thrust washer
 3. Circlip

9. Fit the splined thrust washer (7) to the input shaft and slide up the shaft until in contact with the circlip.
10. Fit the splined bush (5) from sixth gear. Ensure that the oil hole in the input shaft DOES NOT align with the oil hole in the gear.
11. Fit sixth gear (6) as noted during disassembly, with the dog teeth facing third/fourth gear.
12. Fit the splined and lock washers (4 and 3), ensuring the tabs in the smaller washer (3) locate in the slots in the larger (4) washer.



- cdmq
1. Second gear
 2. Large splined lock washer
 3. Small splined lock washer

13. Fit second gear (2) to the shaft as noted during disassembly.
14. Fit the plain thrust washer (1) adjacent to second gear.

Transmission

Output Shaft

Note:

- The numbers in brackets in the following text refer to the exploded view on page 7-27.

Working from the opposite end to the drive sprocket, dismantle the output shaft as follows.

Disassembly

1. Remove the output shaft bearing (1) and plain thrust washer (2).
2. Mark one side of first gear to denote its correct orientation. Remove first gear (3 or 4) from the shaft, complete with the plain bush (5) which runs inside the gear.
3. Remove the plain thrust washer (6).
4. Mark one side of fifth gear to denote its correct orientation. Remove fifth gear (7) from the shaft.
5. Remove the circlip (8) and splined thrust washer (9) from in front of fourth gear.
6. Mark one side of fourth gear to denote its correct orientation. Remove fourth gear (10) complete with the splined bush which runs inside the gear (11).
7. Note their orientation and remove the splined lock washers (12 and 13).
8. Mark one side of third gear to denote its correct orientation. Remove third gear (15) off the shaft complete with the splined bush (14) which runs inside the gear.
9. Remove the splined thrust washer (16).
10. Remove the circlip (17) from in front of sixth gear.
11. Mark one side of sixth gear to denote its correct orientation. Remove sixth gear (18) from the shaft.
12. Remove the circlip (19) from in front of second gear.
13. Remove the splined thrust washer (20).
14. Mark one side of second gear to denote its correct orientation. Remove second gear (22) from the shaft, complete with the plain bush (21) which runs inside the gear.
15. Position the output shaft (23) in a vice with soft jaws fitted. Tighten the vice to prevent the shaft from turning and release the tab washer (29) from the output sprocket nut (30), then release the nut.

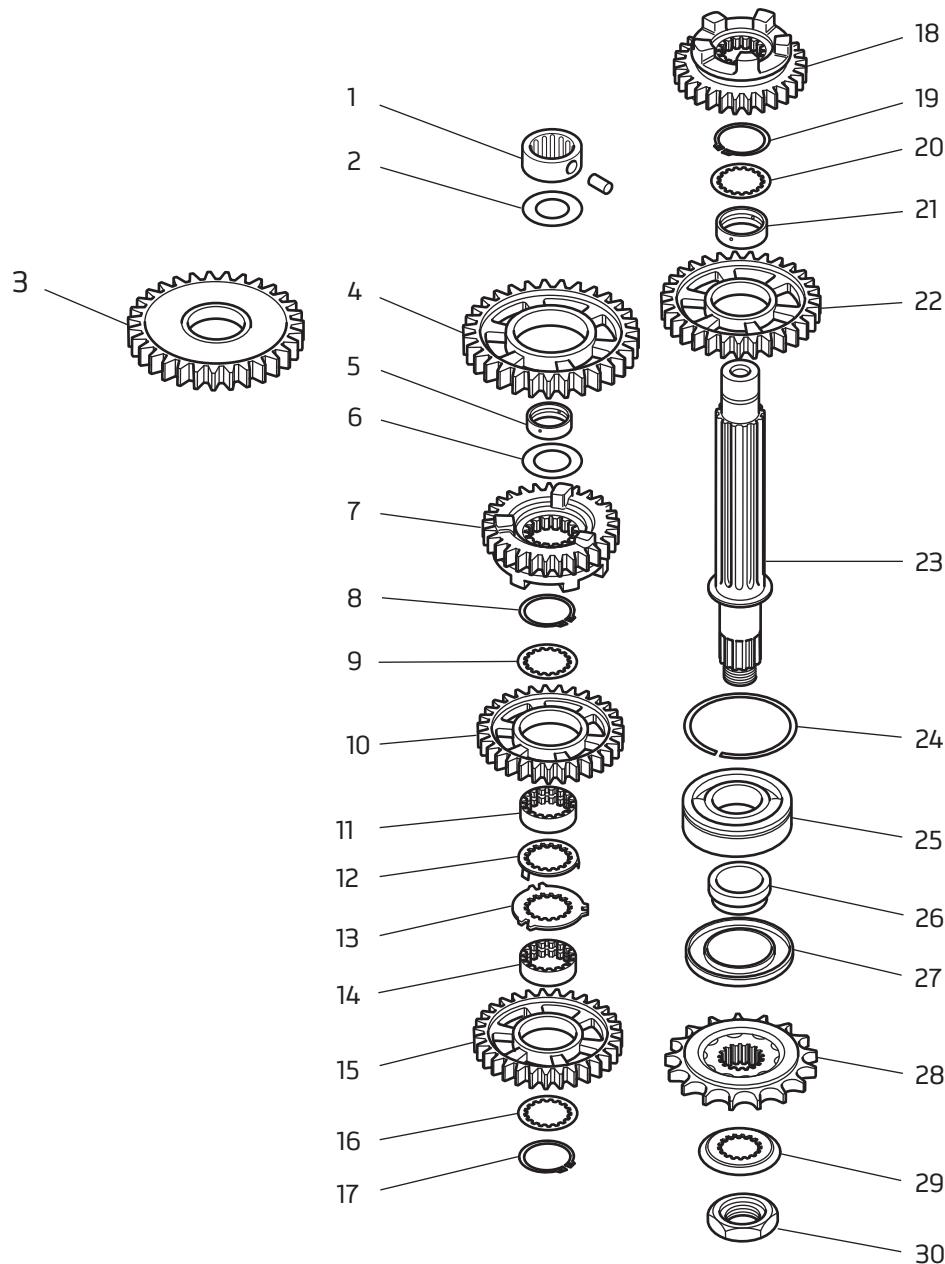
16. Remove the output sprocket nut (30), tab washer (29) and sprocket (28).
17. Collect the output shaft seal (27).
18. If it is found necessary to replace the large bearing (25) at the end of the shaft, use a press to remove both the bearing and output shaft sprocket spacer (26) together.



Warning

When removing the output shaft bearing, always wear overalls, eye, face and hand protection. The bearing races are hardened and are liable to splinter if broken. Debris from broken bearings could cause injury to eyes, face and any unprotected parts of the body.

Exploded View - Output Shaft



- 1. Bearing
- 2. Thrust washer
- 3. First gear, Daytona 675 and Daytona 675 R
- 4. First gear, Street Triple, Street Triple 660 cc, Street Triple R and Street Triple Rx
- 5. Plain bush
- 6. Thrust washer
- 7. Fifth gear
- 8. Circlip
- 9. Splined thrust washer
- 10. Fourth gear
- 11. Splined bush
- 12. Lock washer
- 13. Splined washer
- 14. Splined bush
- 15. Third gear
- 16. Splined washer
- 17. Circlip
- 18. Sixth gear
- 19. Circlip
- 20. Splined thrust washer
- 21. Plain bush
- 22. Second gear
- 23. Output shaft
- 24. Snap ring
- 25. Bearing
- 26. Sprocket spacer
- 27. Output shaft seal
- 28. Output sprocket
- 29. Tab washer
- 30. Output sprocket nut

Transmission

Assembly

Note:

- The numbers in brackets in the following text refer to the exploded view on page 7-27.
- Lubricate each gear and bush with clean engine oil during assembly.
- Examine all gears, bearings and sleeves for damage, chipped teeth and wear beyond the service limits. Replace all suspect components and always use new circlips, a new output shaft seal and a new sprocket tab washer to assemble the shaft.



Warning

When using a press, always wear overalls, eye, face and hand protection. Objects such as bearings frequently break-up under load and the debris caused during break-up may cause damage and injury to unprotected parts of the body.

Never wear loose clothing, which could become trapped in the press and cause crushing injuries to the hand, arms or other parts of the anatomy.



Caution

Bushes and gears with oil holes must always be **MISALIGNED** with the corresponding oil holes in the output shaft. Reduced oil pressure and gear lubrication may result from alignment of the oil holes, which would cause premature wear of engine and transmission components.



Caution

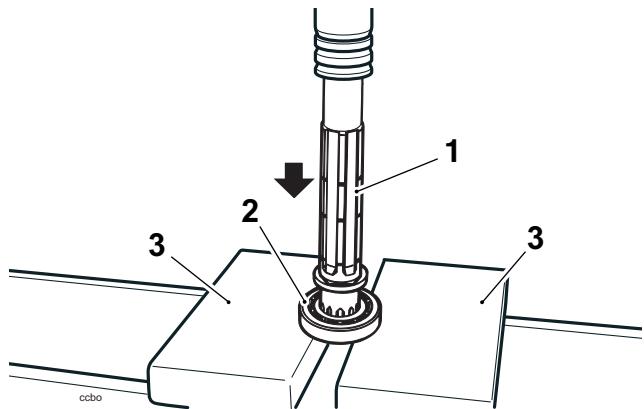
Removing the output shaft bearing from the shaft will damage the bearing and snap ring. Never reuse removed bearings or snap rings as use of damaged or weakened components could lead to engine and transmission damage.



Caution

Press only on the bearing inner race to prevent bearing damage.

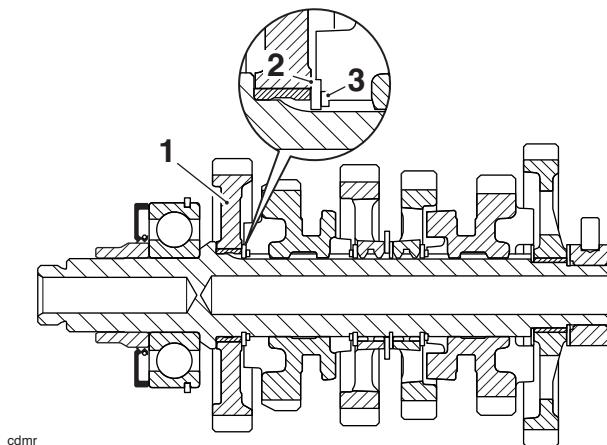
- Working from the output sprocket end of the shaft, fit a new bearing (25) and a new sprocket spacer (26) to the shaft using a press and press bars. Fit the sleeve with the large chamfer facing outwards.



- Output shaft**
- Bearing**
- Press bars**

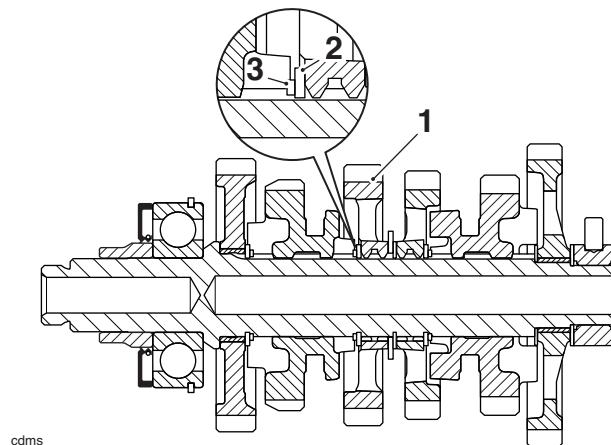
- Lubricate and fit a new output shaft seal (27).
- Transfer the shaft to the vice and secure between soft jaws. Fit the output sprocket (28), new tab washer (29) and nut (30). Tighten the nut to **85 Nm**. Close the tab washer.
- Withdraw the shaft from the vice and continue to assemble from the opposite end to the output sprocket.
- Fit the plain bush (21) to the shaft.

6. Locate second gear (22) to the shaft as noted during disassembly, with the large step side facing towards the output sprocket end. Fit the splined thrust washer (20) and retain with a new circlip (19) as shown below.



1. Second gear
2. Thrust washer
3. Circlip

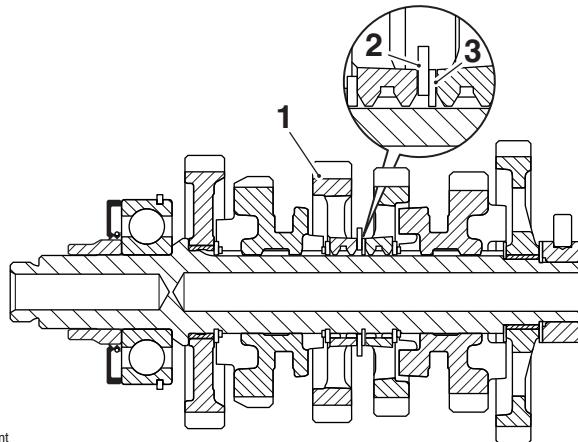
7. Fit sixth gear (18) as noted during disassembly, with the selector fork groove facing away from the output sprocket end. Ensure that the oil holes in the gear DO NOT align with the corresponding oil hole in the output shaft.
8. Fit a new circlip (17) to retain sixth gear. Fit the splined thrust washer (16) to the rear of third gear as shown below.



1. Sixth gear
2. Splined thrust washer
3. Circlip

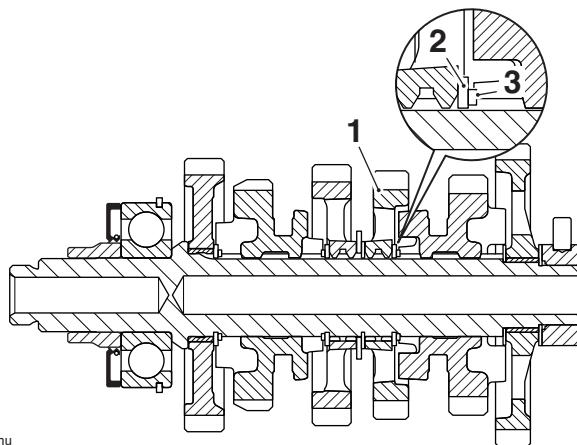
9. Fit the splined bush (14) for third gear. Ensure that the oil holes in the gear DO NOT align with the corresponding oil hole in the output shaft. Fit third gear (15) to the shaft with the large step side facing away from the output sprocket.

10. Fit the splined lock washers (13 and 12), ensuring the tabs in the smaller washer (12) locate in the slots in the larger washer (13) as shown below.



1. Third gear
2. Large splined lock washer
3. Small splined lock washer

11. Fit the splined bush (11) from fourth gear. Ensure that the oil holes in the gear DO NOT align with the corresponding oil hole in the output shaft.
12. Fit fourth gear (10) as noted during disassembly, with the larger step side facing towards the output sprocket.
13. Fit the splined thrust washer (9) and retain with a new circlip (8) as shown below.



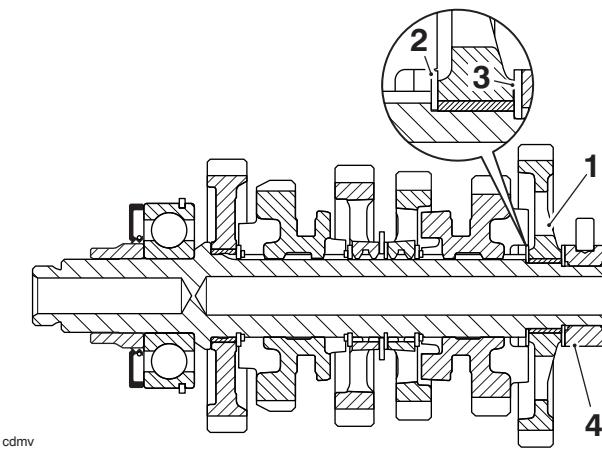
1. Fourth gear
2. Splined thrust washer
3. Circlip

Transmission

14. Fit the fifth gear (7) to the shaft with the groove facing towards the output sprocket. Ensure that the oil holes in the gear DO NOT align with the corresponding oil hole in the output shaft.
15. Fit the first gear thrust washer (6) and plain bush (5).

Note:

- If first gear for Daytona 675 and Daytona 675 R is being fitted, ensure the solid side of the gear faces the clutch.
16. Fit first gear (3 or 4) to the shaft as marked during disassembly as shown below.



1. First gear
2. Thrust washer
3. Thrust washer
4. Needle roller bearing

17. Finally fit the thrust washer (2) and needle roller bearing (1) to the end of the shaft.

Starter Drive Gears/Sprag Clutch

Removal

Note:

- The sprag clutch may be detached after first removing the rider's seat and the battery (disconnect the negative (black) lead first). The left hand lower fairing (Daytona 675 and Daytona 675 R only) and the alternator must also be removed. Refer to the relevant sections for removal procedures.

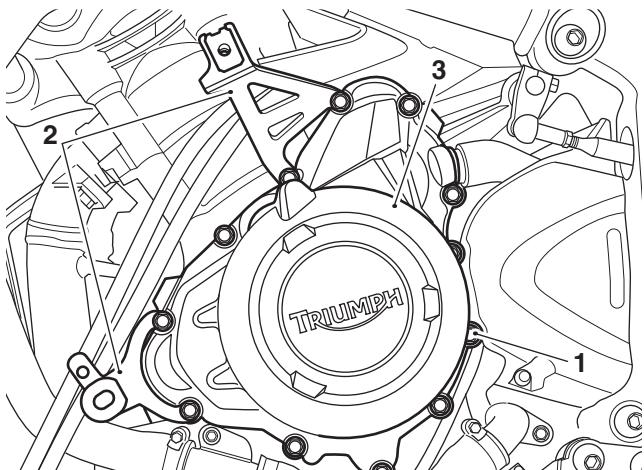
1. Remove the seat (see page 16-22 for Daytona 675, Daytona 675 R and Street Triple Rx, see page 16-23 for Street Triple, Street Triple 660 cc and Street Triple R).
2. Disconnect the battery, negative (black) lead first.

Daytona 675 and Daytona 675 R

3. Remove the left hand fairing (see page 16-33).

Note:

- Note the position of the two brackets for the fairing.
- 4. Release the fixings securing the left hand engine cover. Collect the fairing brackets.

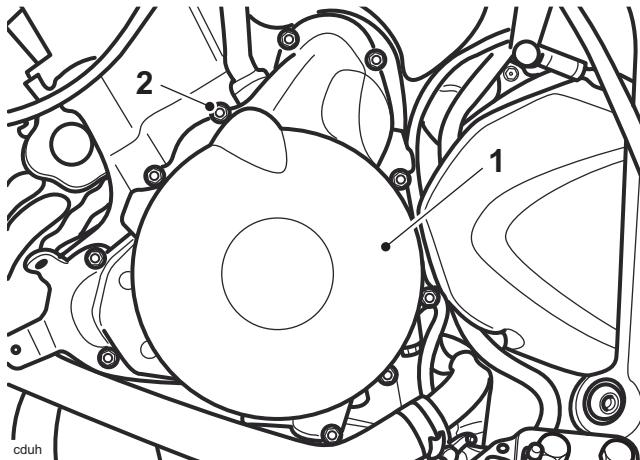


1. Fixings
2. Brackets
3. Left hand engine cover

Street Triple, Street Triple 660 cc, Street Triple R and Street Triple Rx

Note:

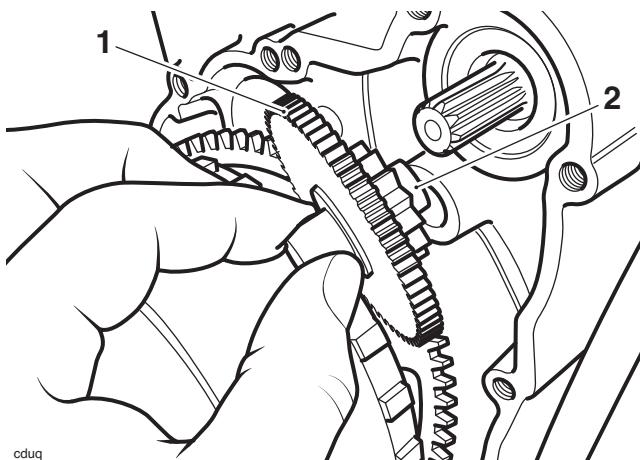
- Note the position of the copper washer under the head of one of the upper bolts.
- 5. Release the bolts securing the left hand engine cover.



1. Left hand engine cover
2. Copper washer position

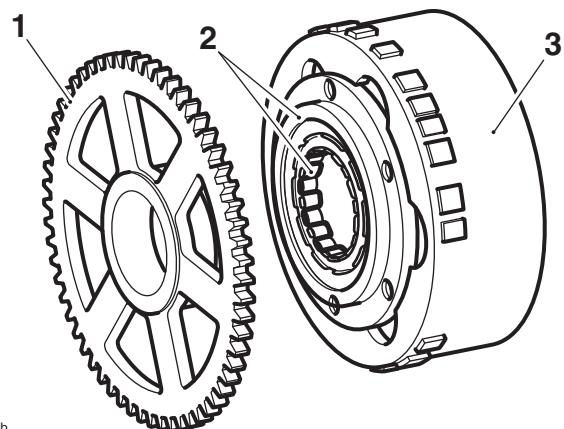
All Models

6. Withdraw the starter idler gear and shaft, noting the fitted position of the components.

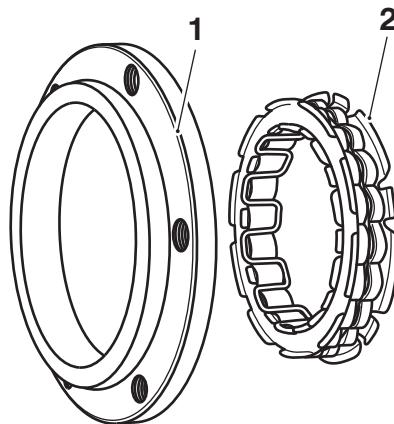


1. Idler gear
2. Idler shaft

7. Remove the alternator rotor (see page 17-33).
8. Withdraw the starter drive gear from the sprag clutch.



1. Starter drive gear
2. Sprag clutch/housing
3. Alternator rotor
9. Remove and discard the fixings securing the sprag clutch housing to the alternator rotor. Withdraw the sprag clutch housing.
10. Remove the sprag clutch from the housing.



1. Sprag clutch housing
2. Sprag clutch assembly

Inspection

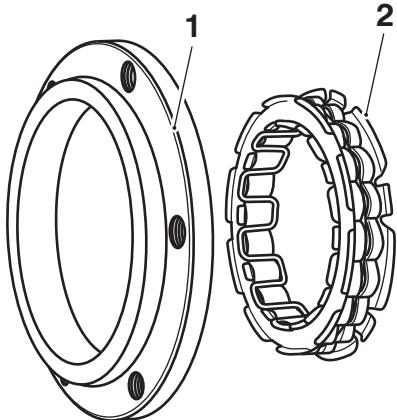
1. Check the sprag clutch bearings for overheating, wear and/or non-smooth operation. Replace the sprag clutch if overheating, wear and/or non-smooth operation is found.
2. Examine all gears for chipped teeth, overheating (blue discolouration) and for any other damage.

Transmission

- With the sprag clutch mounted in the housing, check the sprag clutch for smooth, free movement in one direction only (as indicated by the arrow marked on the sprag clutch body).

Installation

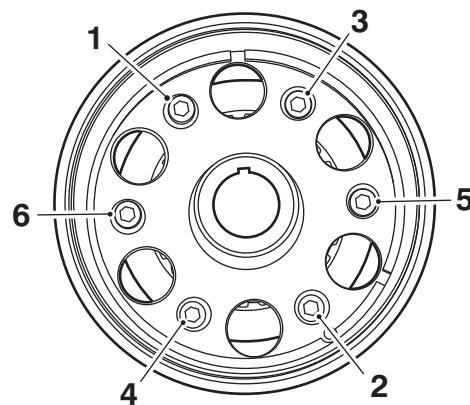
- Locate the sprag clutch to the housing as shown below. Push firmly until the lip seats in the recess provided in the housing.



- Sprag clutch housing**
- Sprag clutch assembly**

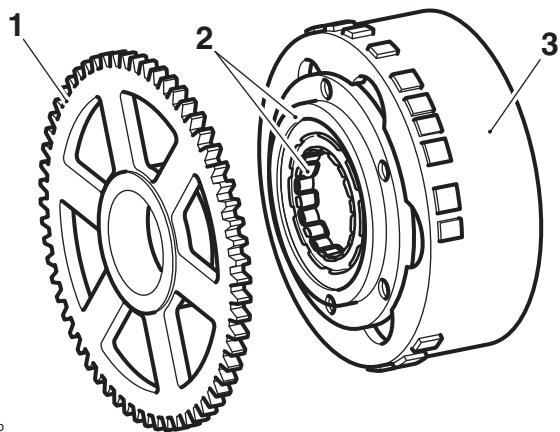
- Fit the housing to the alternator rotor.
- Ensure that the housing is squarely seated and is not jammed on the rotor. Install new fixings.

- Working in the sequence shown, tighten the bolts to **16 Nm**. Once all six bolts have been tightened, go around again in sequence and recheck each bolt is correctly torqued, if any bolt moves, go around again. Repeatedly check the bolts in sequence until all are correctly torqued and do not move when checked, this will ensure the sprag clutch housing is correctly seated on the rotor.



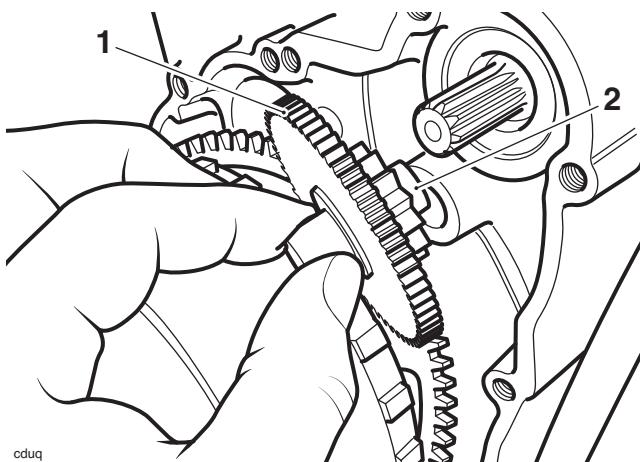
Bolt Tightening Sequence

- Fit the starter drive gear to the sprag clutch.



- Starter drive gear**
- Sprag clutch housing**
- Alternator rotor**
- Refit the alternator rotor (see page 17-36).
- Lubricate the idler gear shaft with new engine oil which meets specification API SH (or higher) and JASO MA.

8. Fit the starter idler gear and shaft to the crankcase.

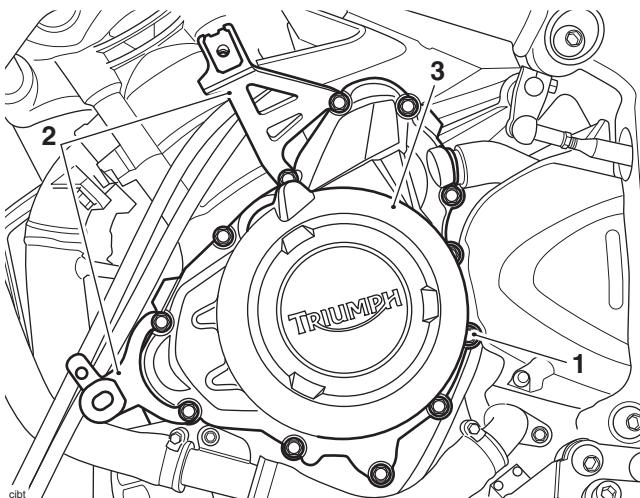


1. Idler gear
2. Idler shaft

9. Thoroughly clean the left hand engine cover.
10. Position a new gasket to the crankcase dowels then refit the left hand engine cover.

Daytona 675 and Daytona 675 R

11. Refit the fairing brackets as noted for removal. Tighten the cover bolts to **10 Nm**.

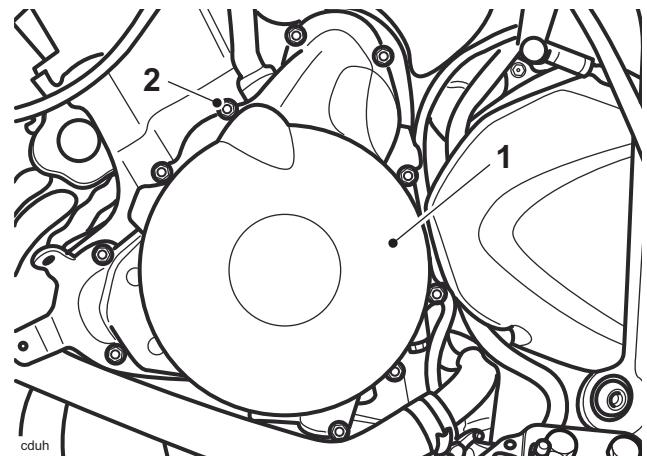


1. Fixings
2. Brackets
3. Left hand engine cover

12. Refit the left hand fairing (see page 16-34).

Street Triple, Street Triple 660 cc, Street Triple R and Street Triple Rx

13. Ensure the bolt with the copper washer is correctly located. Tighten the cover bolts to **8 Nm**.



1. Left hand engine cover
2. Copper washer position

All Models

14. Reconnect the battery, positive (red) lead first. Tighten the battery terminals to **4.5 Nm**.
15. Refit the seat (see page 16-22 for Daytona 675, Daytona 675 R and Street Triple Rx, see page 16-24 for Street Triple, Street Triple 660 cc, Street Triple R and Street Triple Rx).

Transmission

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8 Lubrication

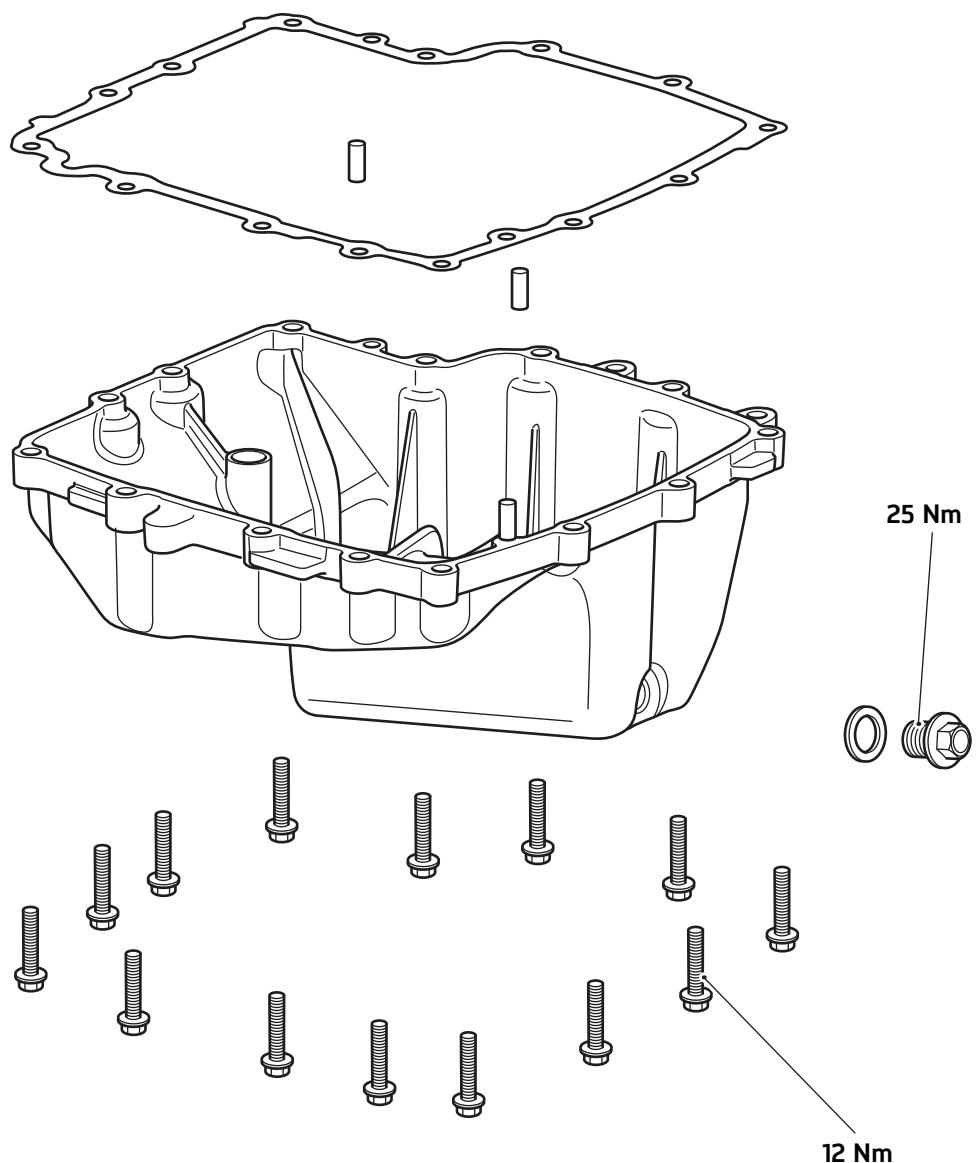
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Lubrication

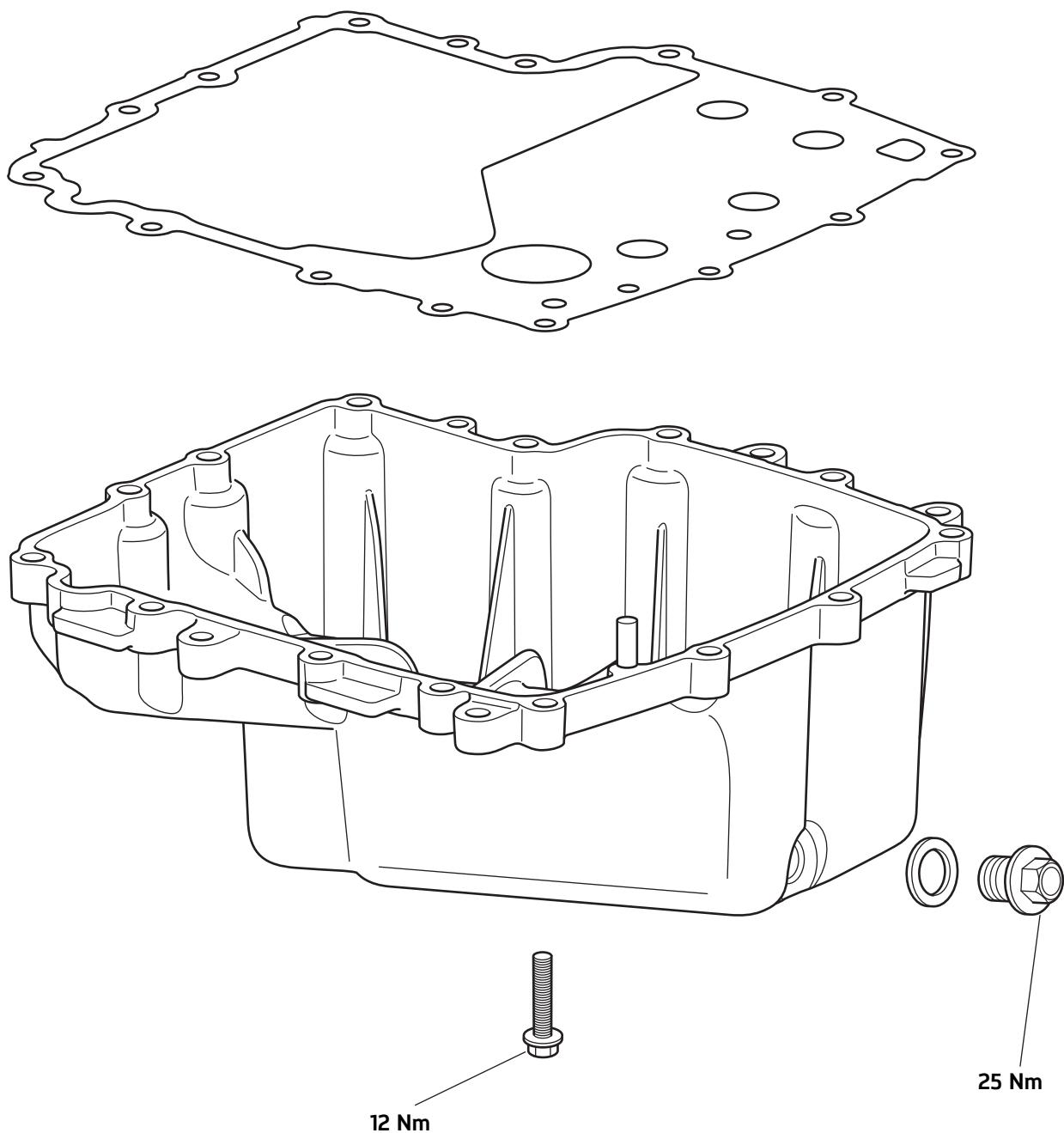
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Exploded View - Sump - Daytona 675 and Daytona 675 R

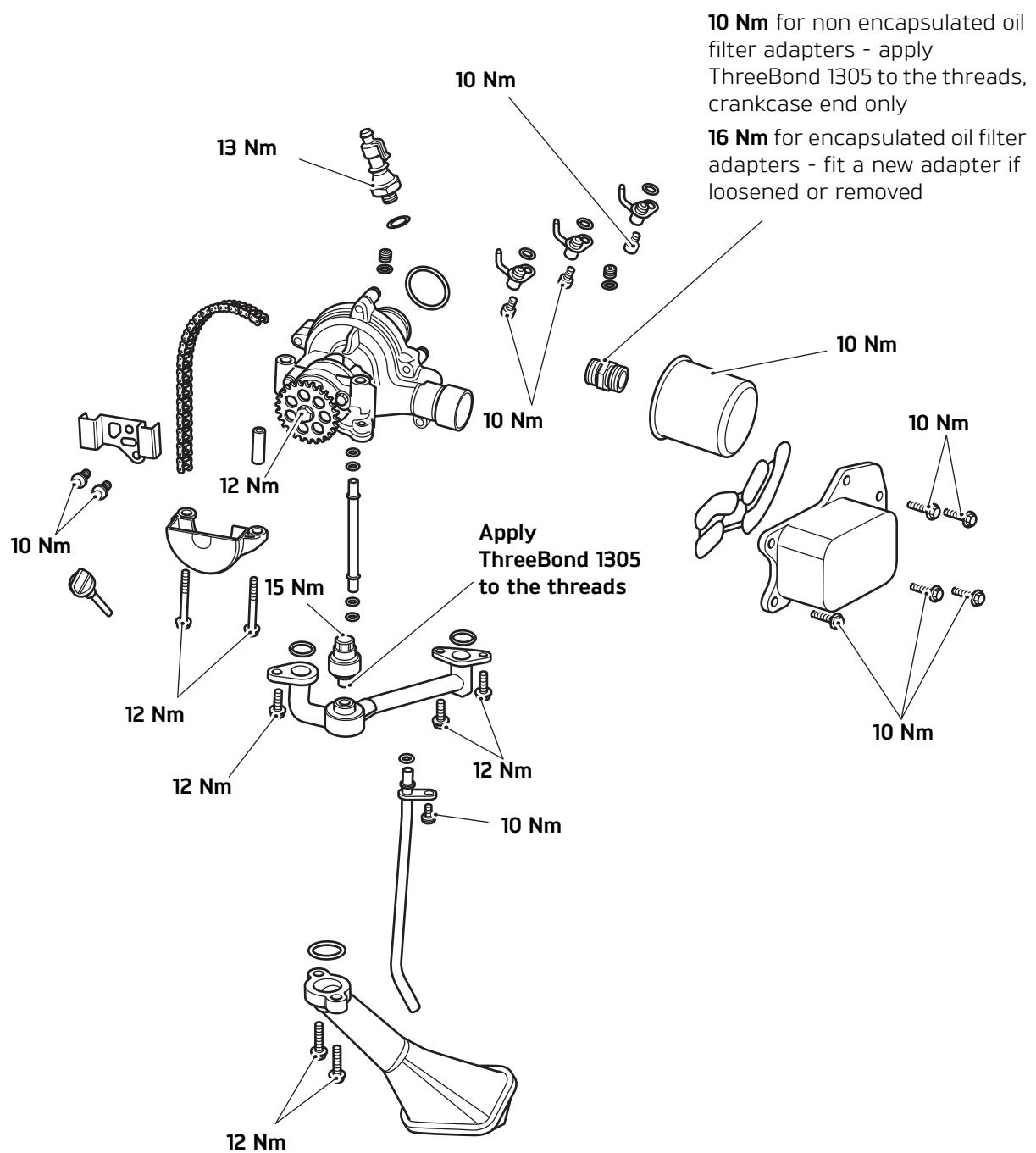


Lubrication

Exploded View - Sump - Street Triple, Street Triple 660 cc, Street Triple R and Street Triple Rx



Exploded View - Oil Pump/Water Pump, Gears and Heat Exchanger - Daytona 675 and Daytona 675 R

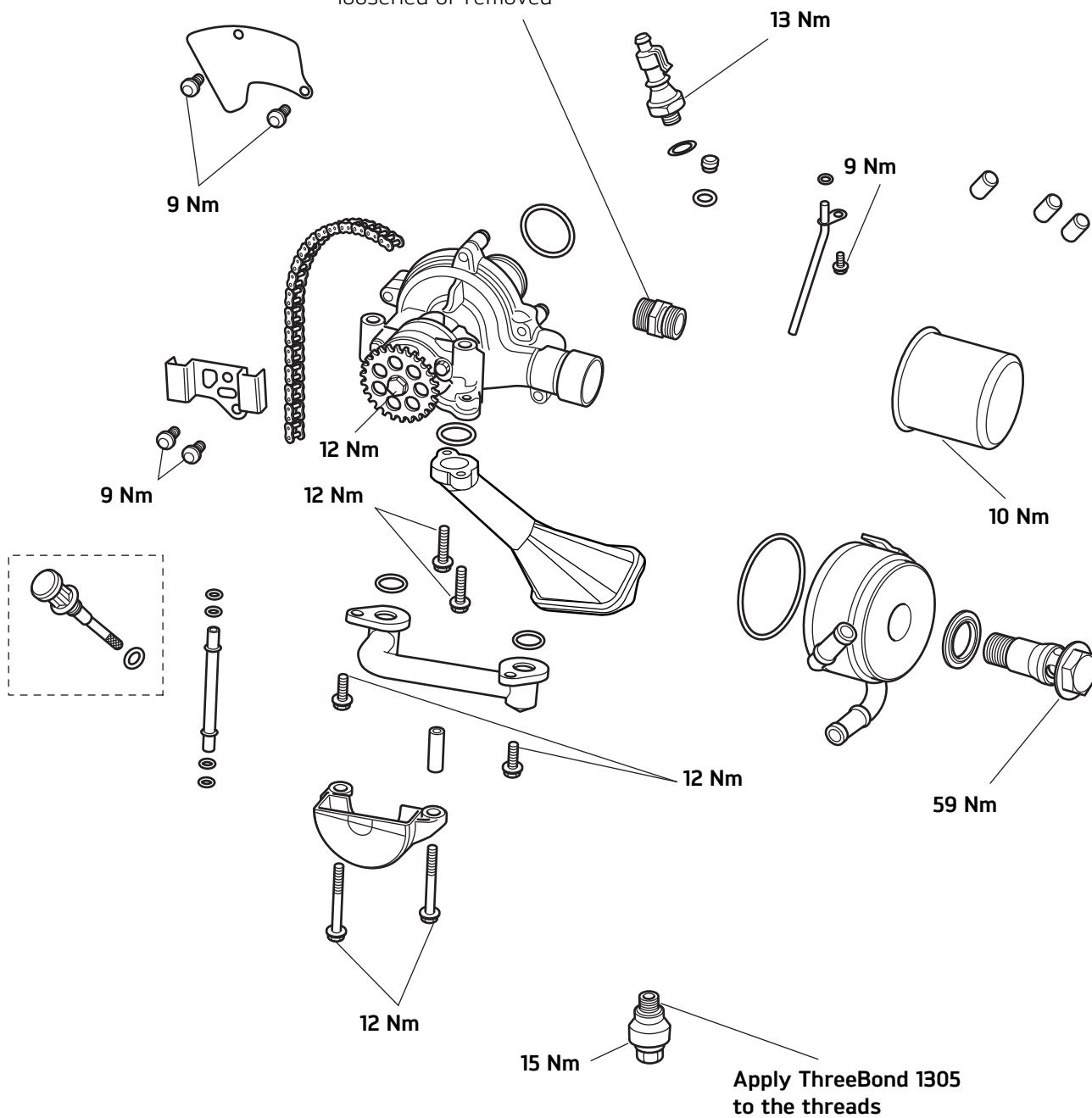


Lubrication

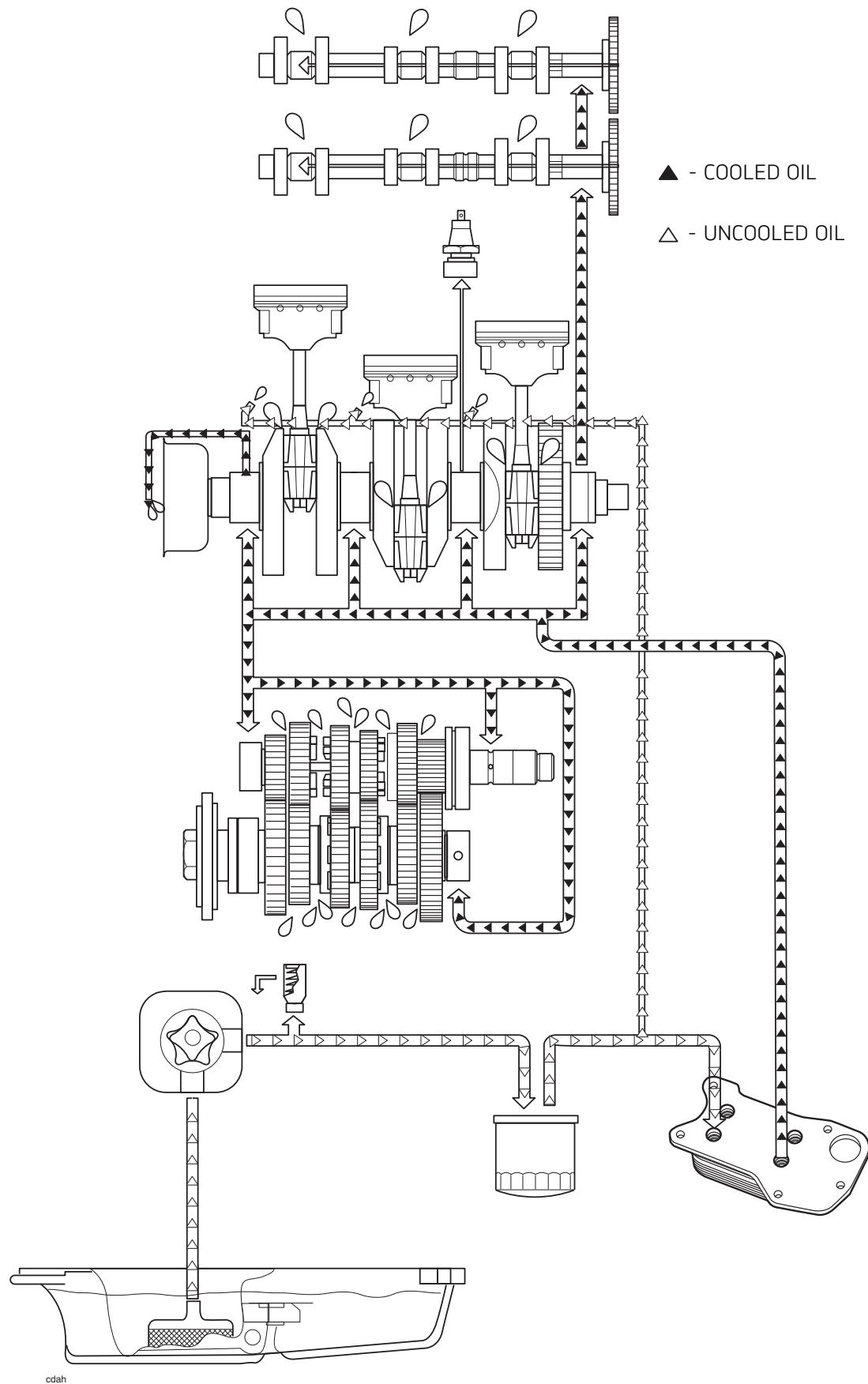
Exploded View - Oil Pump/Water Pump, Gears and Heat Exchanger - Street Triple, Street Triple 660 cc, Street Triple R and Street Triple Rx

10 Nm for non encapsulated oil filter adapters - apply ThreeBond 1305 to the threads, crankcase end only

16 Nm for encapsulated oil filter adapters - fit a new adapter if loosened or removed

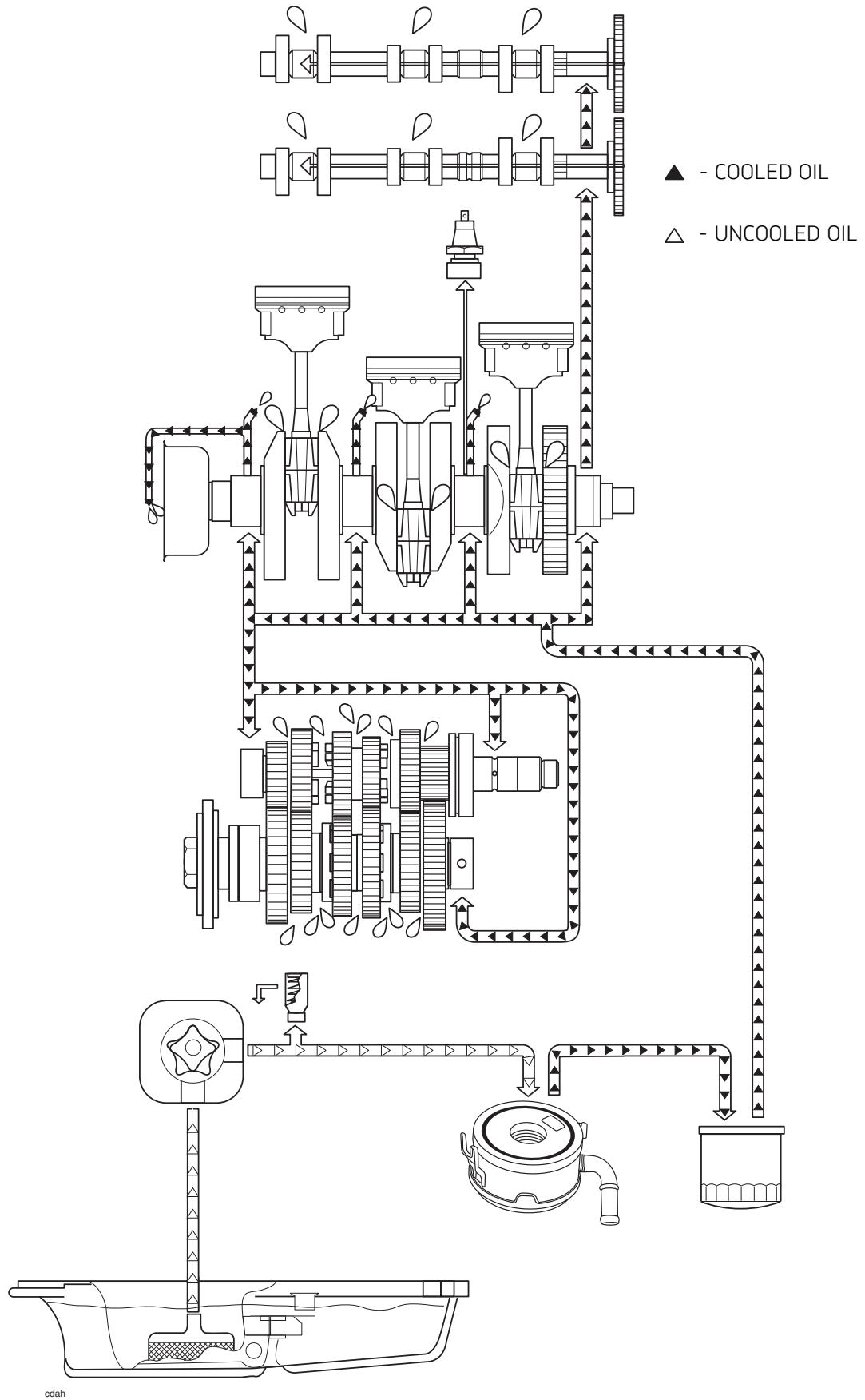


Engine Oil Circuit - Daytona 675 and Daytona 675 R



Lubrication

Engine Oil Circuit - Street Triple, Street Triple 660 cc, Street Triple R and Street Triple Rx



Engine Oil Circuit Description

Oil is collected from the sump and is drawn through a mesh strainer into the oil pump rotor. The oil pump is fitted with a single pumping rotor which supplies pressurised oil to the lubrication circuit via the oil pressure relief valve. The relief valve is set to open at 5.1 bar (75 lb/in²) and when open, returns high pressure oil direct to the sump.

Daytona 675 and Daytona 675 R

The pressurised oil is delivered to the outside rim of the oil filter, where it is filtered by passing through the filter membrane. Filtered oil is then fed into the water heat exchanger (mounted on the front of the engine), where it is cooled.

Street Triple, Street Triple 660 cc, Street Triple R and Street Triple Rx

Pressurised oil is delivered to the oil to water heat exchanger (mounted on the front of the engine), where it is cooled.

The cooled oil is then delivered to the outside rim of the oil filter, where it is filtered by passing through the filter membrane. Filtered oil is then fed into the lower crankcase gallery.

- Oil is fed to the gearbox via internal oil pipes and drillings that supply oil directly to the end of each shaft. Oil is circulated along the gearbox shafts to exit holes that feed directly to the bearings, gears and selectors.
- **For Daytona 675 and Daytona 675 R:** Oil is also fed to the alternator to aid cooling of the alternator components. The oil is taken from the crankshaft oil feed and directed to the alternator via a drilling in the bolt that secures the alternator rotor to the crankshaft.
- **For Street Triple, Street Triple 660 cc and Street Triple R up to VIN 614940:** Oil is also fed to the alternator to aid cooling of the alternator components. The oil is taken from the crankshaft oil feed and directed to the alternator via a jet, located above the alternator rotor, in the upper crankcase.
- **For Street Triple, Street Triple 660 cc, Street Triple R and Street Triple Rx from VIN 614941:** Oil is also fed to the alternator to aid cooling of the alternator components. The oil is taken from the crankshaft oil feed and directed to the alternator via a drilling in the bolt that secures the alternator rotor to the crankshaft.

All Models

After the oil has passed through the oil filter and oil cooler, it is distributed around the engine:

- Oil is delivered to the crankshaft main bearings and, via drillings in the crankshaft, to the big end bearings.
- **For Daytona 675 and Daytona 675 R:** Spray jets located in the upper crankcase, near the base of the barrel, lubricate the pistons and connecting rod small ends. These jets are fed oil from the oil gallery before the oil goes through the oil cooler.
- **For Street Triple, Street Triple 660 cc, Street Triple R and Street Triple Rx:** Spray jets located in the upper crankcase, behind the main bearing shells, lubricate the pistons and connecting rod small ends. These jets are fed oil from the crankshaft oil feed.
- A low oil pressure warning light switch is also located in the upper crankcase gallery.
- Some oil is sent directly to the cylinder head via an internal gallery. Oil that arrives at the cylinder head is fed to both cams via a gallery in the cylinder head casting that delivers oil directly to the sprocket end of the camshafts. Oil is then fed through the hollow camshafts to the other camshaft bearings, the tappet buckets and the valves.

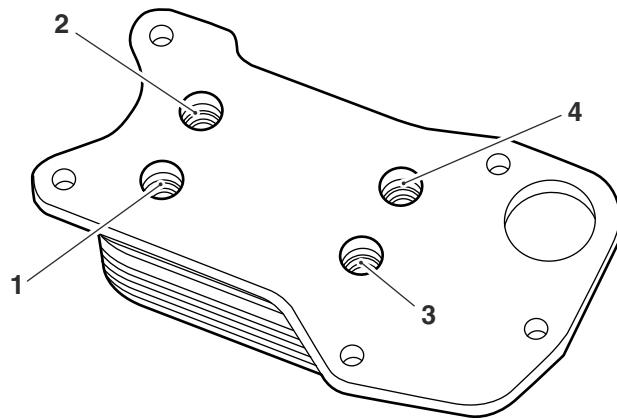
Lubrication

Heat Exchanger

The heat exchanger is used to transfer heat from the engine oil into the coolant.

Daytona 675 and Daytona 675 R

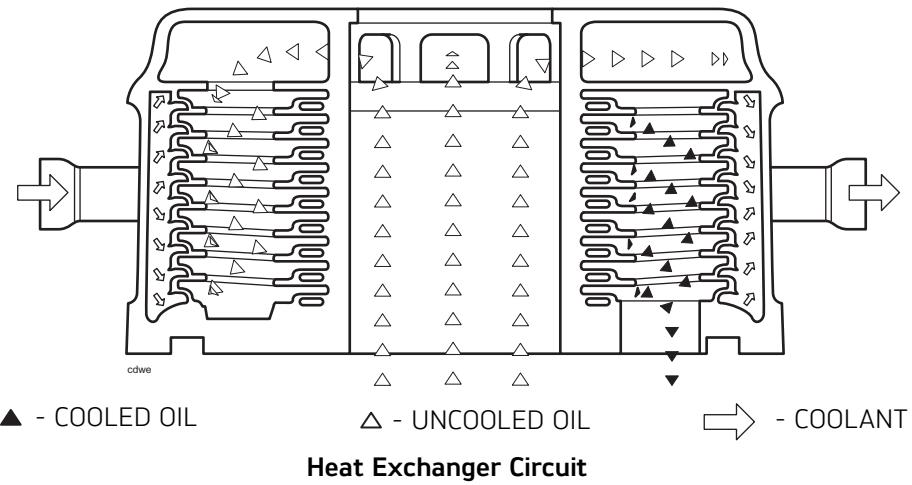
Filtered oil is delivered to the heat exchanger via an opening (1) where it is circulated through the heat exchanger core. Coolant is pumped through a similar opening (3) into the heat exchanger core to cool the oil. The cooled oil then exits the heat exchanger (2) and flows to the main oil gallery. The coolant then flows out of the heat exchanger (4) and through the rest of the cooling system.



1. Oil in
2. Coolant in
3. Oil out
4. Coolant out

Street Triple, Street Triple 660 cc, Street Triple R and Street Triple Rx

Oil is delivered to the heat exchanger via a hollow centre bolt, after which it flows around the end tank and into the heat exchanger core, where it is circulated. Coolant is pumped around the outside of the heat exchanger core to cool the oil. The cooled oil then exits the heat exchanger and flows to the oil filter.



All Models

An additional benefit of the heat exchanger is that, as the engine coolant reaches its operating temperature more quickly than the engine oil, the oil is heated by the engine coolant at lower engine temperatures; this allows the engine oil to reach its optimum operating temperature more quickly, thereby helping to improve engine oil life, reduce exhaust emissions and reduce engine wear.

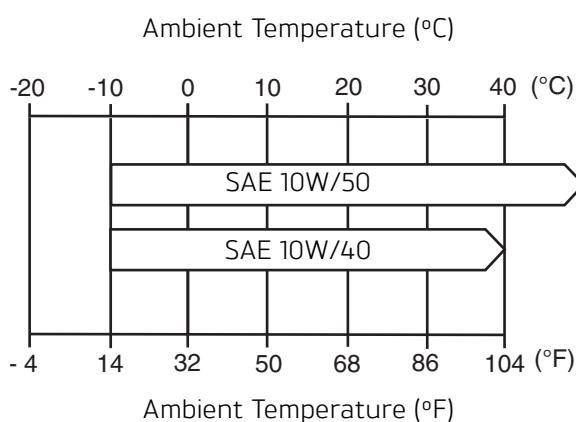
Engine Oil

Specification

Use semi or fully synthetic 10W/40 or 10W/50 motorcycle engine oil which meets specification API SH (or higher) and JASO MA, such as Castrol Power 1 Racing 4T, sold as Castrol Power RS Racing 4T in some countries.

Triumph recommends the fully synthetic 10W/40 motorcycle engine oil for most conditions. The oil viscosity may need to be changed to accommodate the ambient temperatures in your riding area.

Refer to the chart below for the correct oil viscosity (10W/40 or 10W/50) to be used in your riding area.



Oil Viscosity Temperature Range



Caution

Triumph high performance fuel injected engines are designed to use semi or fully synthetic motorcycle engine oil which meets specification API SH (or higher) and JASO MA.

Do not add any chemical additives to the engine oil. The engine oil also lubricates the clutch and any additives could cause the clutch to slip.

Do not use mineral, vegetable, non-detergent oil, castor based oils or any oil not conforming to the required specification. The use of these oils may cause instant, severe engine damage.

Ensure no foreign matter enters the crankcase during an oil change or top-up.

Triumph Engine Oil

Your Triumph motorcycle is a quality engineered product which has been carefully built and tested to exacting standards. Triumph Motorcycles are keen to ensure that you enjoy optimum performance from your machine and with this objective in mind have tested many of the engine lubricants currently available to the limits of their performance.

Castrol Power 1 Racing 4T (sold as Castrol Power RS Racing 4T in some countries) consistently performed well during our tests and has become our primary recommendation for the lubrication of all current Triumph motorcycle engines.

Castrol Power 1 Racing 4T (sold as Castrol Power RS Racing 4T in some countries), specially filled for Triumph, is available from your authorised Triumph dealer.

Lubrication

Oil Level Inspection

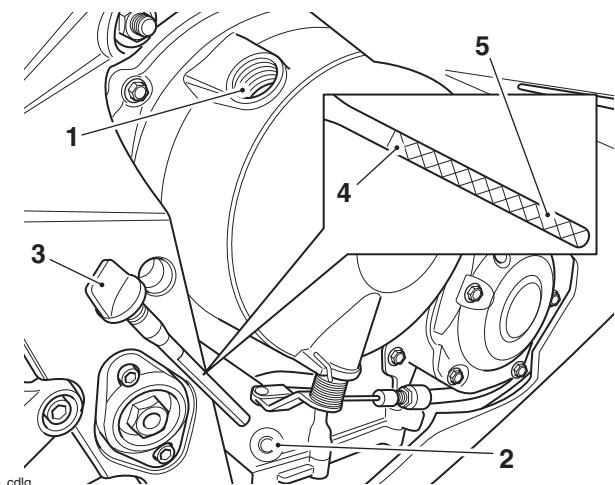
In order for the engine, transmission, and clutch to function correctly, maintain the engine oil at the correct level, and change the oil and oil filter in accordance with scheduled maintenance requirements.



Warning

Motorcycle operation with insufficient, deteriorated, or contaminated engine oil will cause accelerated engine wear and may result in engine or transmission seizure. Seizure of the engine or transmission may lead to loss of motorcycle control and an accident.

1. Start the engine and run at idle for approximately five minutes.
2. Stop the engine, then wait for at least three minutes to allow the oil to settle.
3. Remove the dipstick, wipe clean and screw fully home in the crankcase.



1. Filler (Street Triple shown)
2. Dipstick location in crankcase
3. Dipstick
4. Upper marking
5. Lower marking

Note:

- The actual level is indicated when the motorcycle is level and upright, not on the side stand, and when the dipstick has been screwed fully home.
- Do not add oil through the dipstick hole in the crankcase.

Oil and Oil Filter Change



Warning

Prolonged or repeated contact with engine oil can lead to skin dryness, irritation and dermatitis. In addition, used engine oil contains potentially harmful contamination which can cause cancer. Wear suitable clothing and avoid skin contact.

The engine oil and filter must be replaced in accordance with scheduled maintenance requirements.

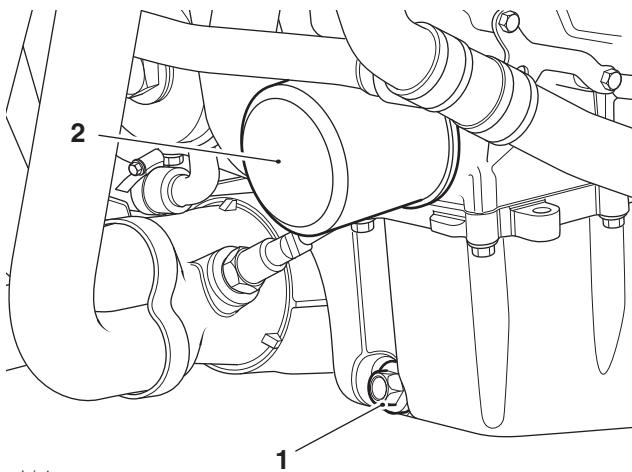
1. Warm up the engine thoroughly, and then stop the engine.
2. **For Daytona 675 and Daytona 675 R:** Remove the fairings (see page 16-33).
3. Place an oil pan beneath the engine.



Warning

The oil may be hot to the touch. Contact with hot oil may cause the skin to be scalded or burned.

4. Remove the oil drain plug.

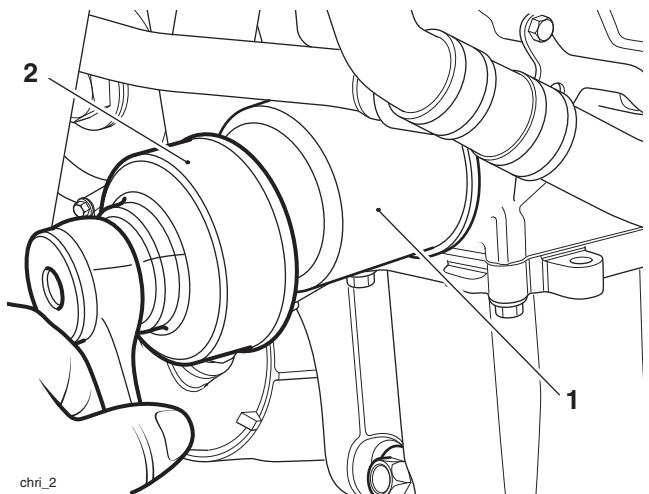


1. Oil drain plug (Street Triple shown)

2. Oil filter

5. With the motorcycle on level ground, and on the side stand, allow the oil to completely drain.

6. Unscrew and remove the oil filter using T3880313 - Oil Filter Wrench.



1. Oil filter (Street Triple shown)

2. T3880313 - Oil Filter Wrench

7. Discard the oil filter.
8. Apply a smear of clean engine oil to the sealing ring of the new oil filter.
9. Fit the oil filter and tighten to **10 Nm** using T3880313 - Oil Filter Wrench.
10. After the oil has completely drained out, fit a new sealing washer to the drain plug. Fit and tighten the plug to **25 Nm**.
11. Fill the engine with new oil of the type and grade listed previously and in the specification section.
12. Start the engine and allow to idle.



Caution

Racing the engine before the oil reaches every part can cause engine damage or seizure.

13. Ensure that the oil pressure warning light extinguishes shortly after starting.



Caution

If the engine oil pressure is too low, the low oil pressure warning light will illuminate. If this light stays on when the engine is running, stop the engine immediately and investigate the cause. Running the engine with low oil pressure will cause engine damage.

14. Stop the engine and check the oil level. Adjust if necessary.
15. **For Daytona 675 and Daytona 675 R:** Refit the fairings (see page 16-34).

Lubrication

Disposal of Used Engine Oil

To protect the environment, do not pour oil on the ground, down sewers or drains, or into water courses. Dispose of used oil sensibly. If in doubt contact your local authority.

Oil Pump

Warning

Prolonged or repeated contact with engine oil can lead to skin dryness, irritation and dermatitis. Furthermore, used engine oil contains potentially harmful contaminants which can cause cancer.

When handling used engine oil, always wear protective clothing and avoid any skin contact with the oil.

Caution

Do not pour engine oil on the ground, down sewers or drains, or into water courses. To prevent pollution of water courses etc., dispose of used oil sensibly. If in doubt contact your local authority.

Removal

Note:

- The oil pump and water pump are supplied as an assembly and cannot be separated. This procedure covers the removal of the oil and water pump assembly.
1. Remove the seat (see page 16-22 for Daytona 675, Daytona 675 R and Street Triple Rx, see page 16-23 for Street Triple, Street Triple 660 cc and Street Triple R).
 2. Disconnect the battery, negative (black) lead first.
 3. Drain the coolant (see page 11-8 for Daytona 675 and Daytona 675 R, see page 11-9 for Street Triple, Street Triple 660 cc, Street Triple R and Street Triple Rx).
 4. Drain the engine oil (see page 8-13).
 5. **For Daytona 675 and Daytona 675 R:** Remove the heat exchanger (see page 8-26).

Warning

The oil may be hot to the touch. Contact with hot oil may cause the skin to be scalded or burned.

Warning

Prolonged or repeated contact with engine oil can lead to skin dryness, irritation and dermatitis. In addition, used engine oil contains potentially harmful contaminants which can cause cancer. Wear suitable clothing and avoid skin contact.

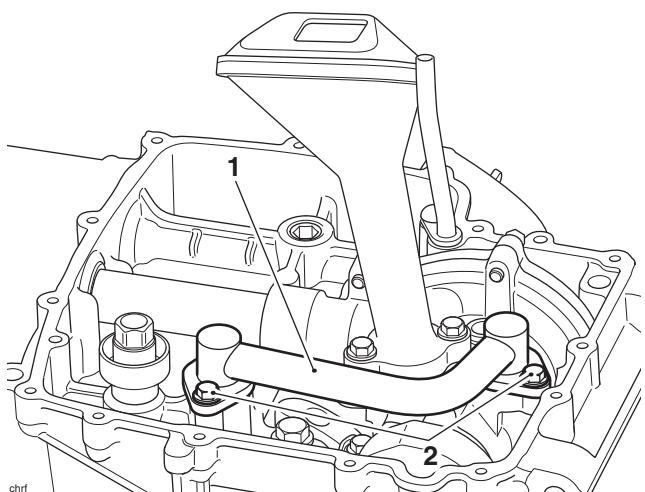
6. Remove the sump (see page 8-24).
7. Remove the clutch (see page 4-8).

Note:

- For Street Triple, Street Triple 660 cc, Street Triple R and Street Triple Rx, continue from step 8 to step 10. Then continue from step 16.
- For Daytona 675 and Daytona 675 R, continue from step 11.

Street Triple, Street Triple 660 cc, Street Triple R and Street Triple Rx

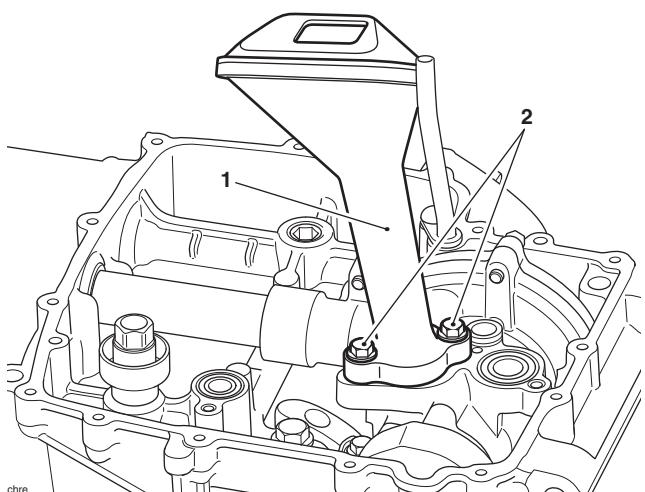
8. Release and discard the two fixings and remove the oil transfer pipe. Remove and discard the two O-ring seals.



1. Oil transfer pipe

2. Fixings

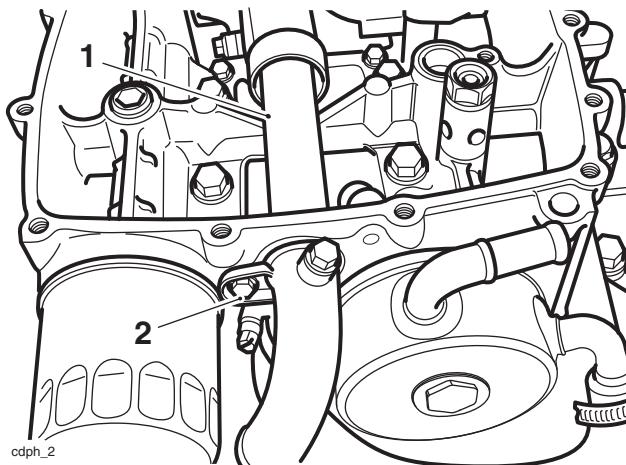
9. Release and discard the two fixings and remove the oil pick-up. Remove and discard the O-ring seal.



1. Oil pick-up

2. Fixings

10. Remove and discard the bolt securing the coolant outlet pipe to the crankcase and withdraw the pipe. Remove and discard the three O-rings from the pipe.



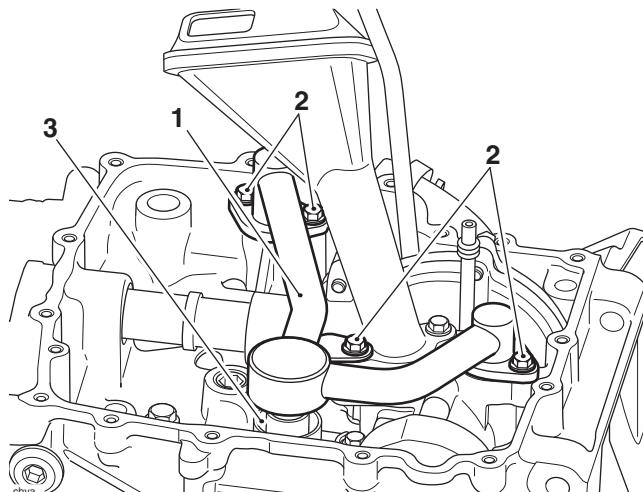
1. Coolant outlet pipe

2. Fixing

Daytona 675 and Daytona 675 R

Note:

- The oil pressure relief valve is fitted to the oil transfer pipe.
 - One of the fixings for the transfer pipe also secures the pick up pipe.
11. Release and discard the three fixings and remove the oil transfer pipe. Remove and discard the two O-ring seals.



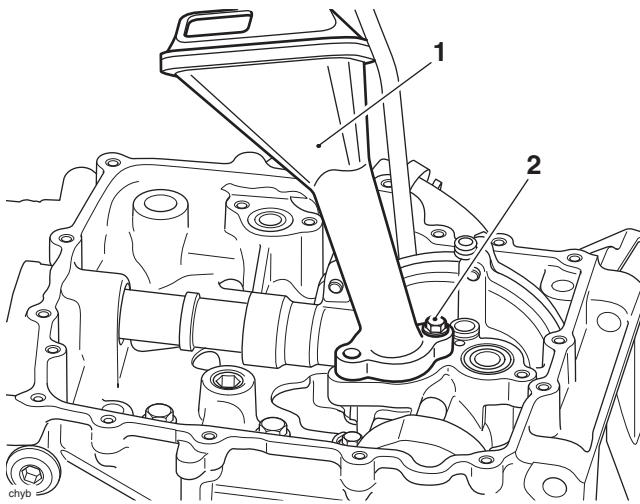
1. Oil transfer pipe

2. Fixings

3. Oil pressure relief valve

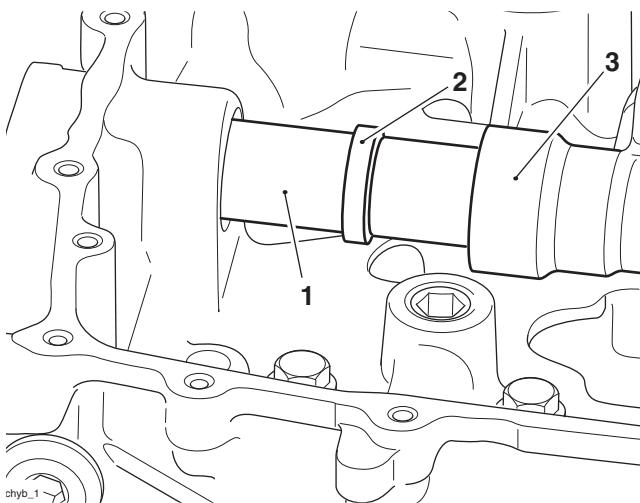
Lubrication

12. Release and discard the remaining fixing and remove the oil pick-up. Remove and discard the O-ring seal.



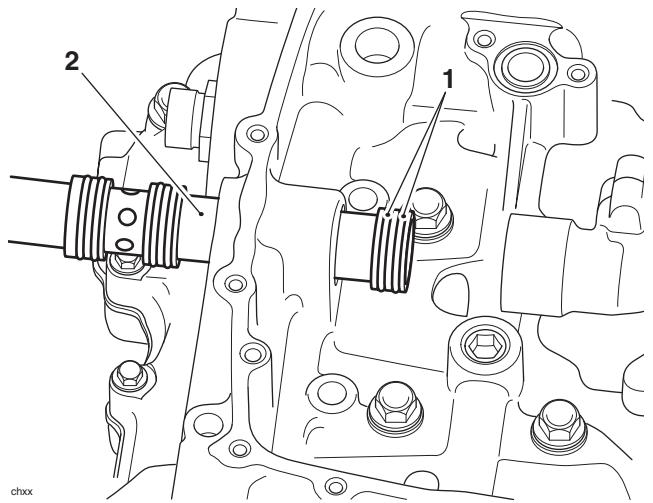
- 1. Oil pick-up**
2. Fixing

13. Using a suitable punch, carefully tap the raised ring on the coolant pipe to detach it from the water pump.



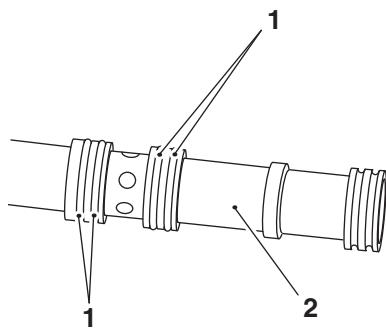
- 1. Coolant pipe**
2. Raised ring
3. Water pump

14. Remove and discard the two inner O-rings and remove the coolant pipe from the crankcase.



- 1. O-rings**
2. Coolant pipe

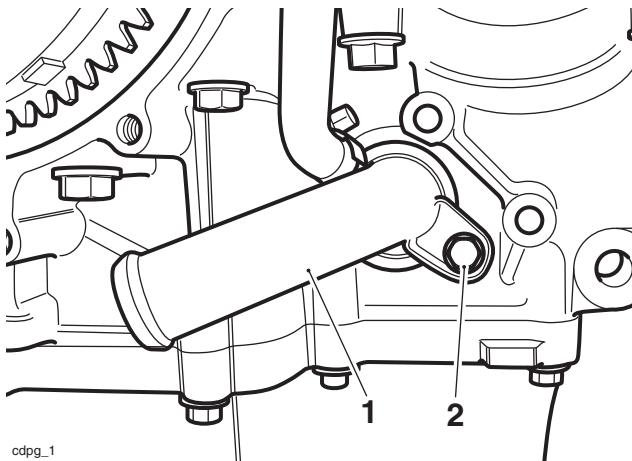
15. Remove and discard the four remaining O-rings from the coolant pipe.



- 1. O-rings**
2. Coolant pipe

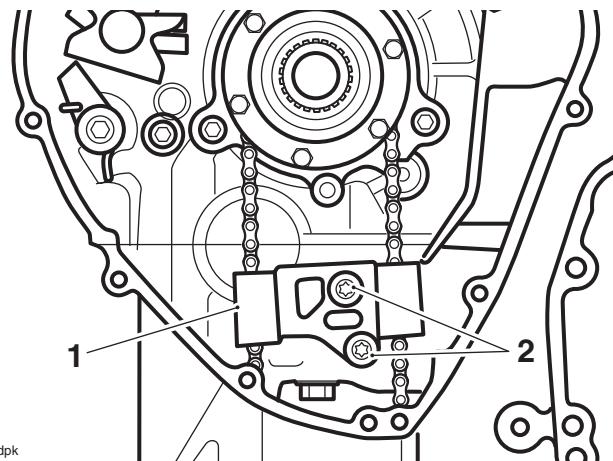
All Models

16. Remove and discard the bolt securing the coolant inlet elbow to the crankcase and withdraw the elbow. Remove and discard the O-ring from the elbow.



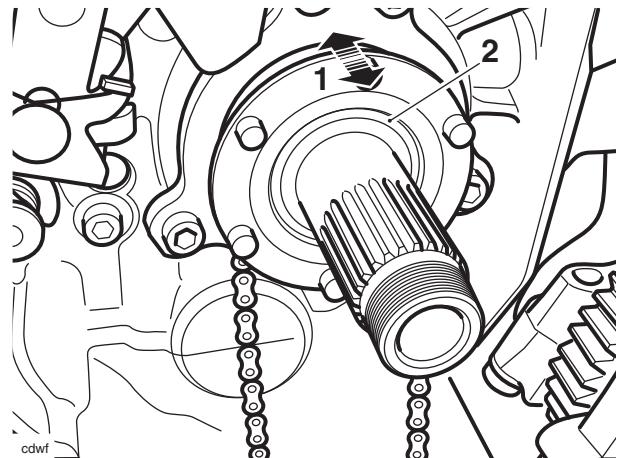
1. Coolant inlet elbow
2. Fixing

17. Release the fixings securing the drive chain guide to the crankcase and remove the guide.



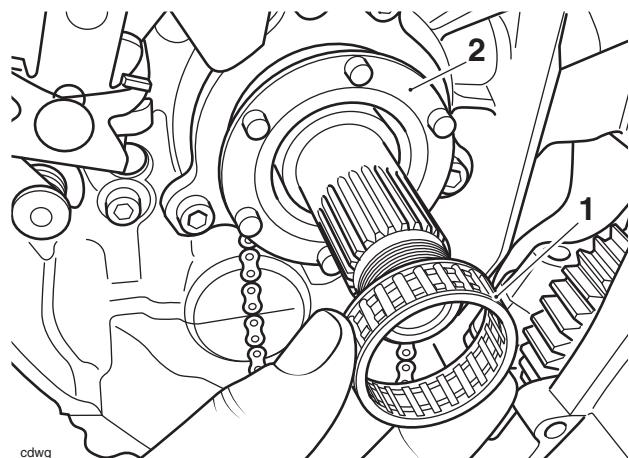
1. Oil pump drive chain guide
2. Fixings

18. Slide the oil pump drive sprocket gently backwards and forwards to dislodge the inner needle roller bearing.



1. Oil pump drive sprocket
2. Needle roller bearing

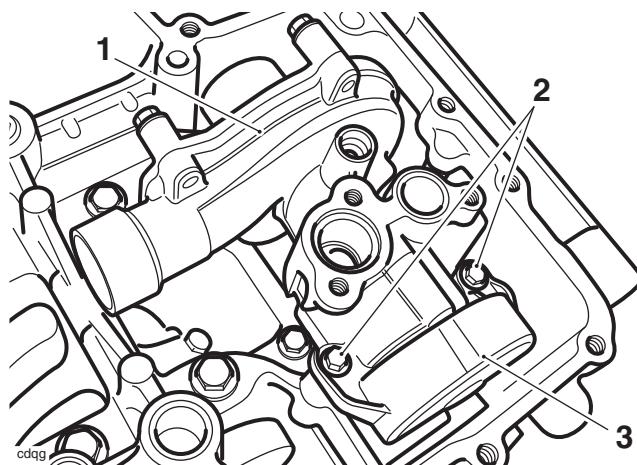
19. Carefully remove the bearing while supporting the oil pump drive sprocket.



1. Needle roller bearing
2. Oil pump drive sprocket

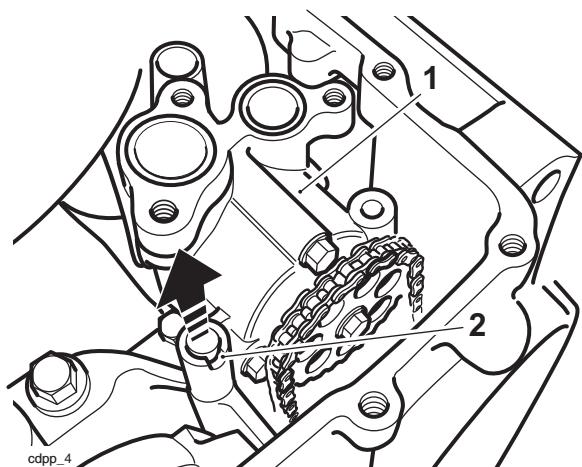
Lubrication

20. Release the fixings securing the drive chain cover to the oil pump. Remove the drive chain cover.



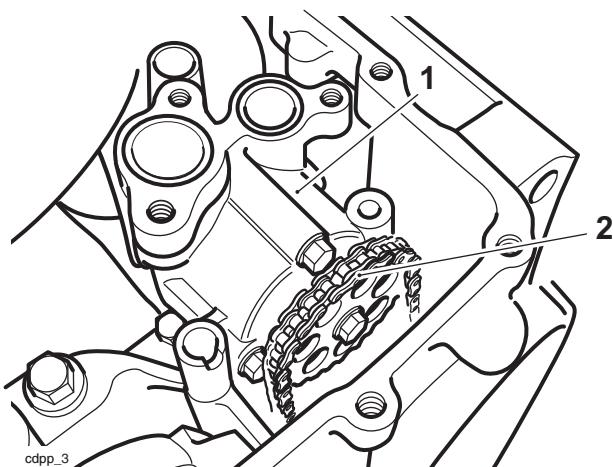
- 1. Oil pump
- 2. Fixings
- 3. Drive chain cover

21. Using a suitable tool, slide the dowel upwards to release the oil pump from the crankcase. It is not necessary to remove the dowel completely from the oil pump.



- 1. Oil pump
- 2. Dowel

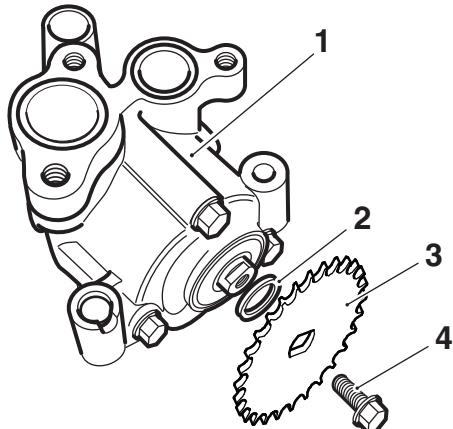
22. Detach the drive chain from the oil pump.



- 1. Oil pump
 - 2. Drive chain
23. Carefully withdraw the oil pump from the crankcase.
24. Remove and discard the O-ring from the inlet sleeve on the water pump body.

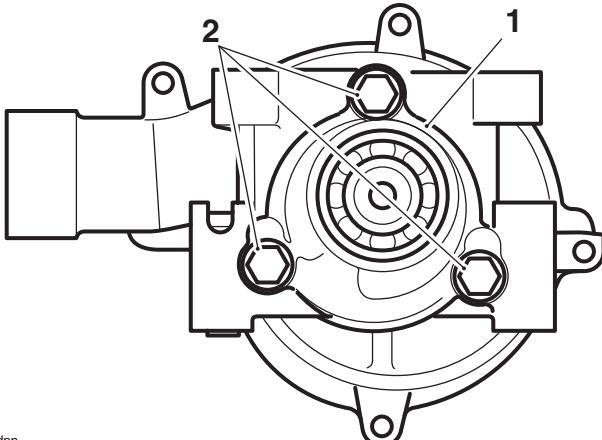
Inspection

1. Release the fixing and remove the drive sprocket and spacer washer.

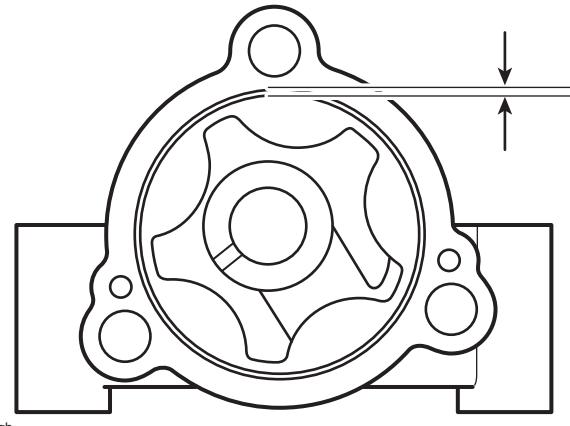


- 1. Oil pump
- 2. Spacer washer
- 3. Drive sprocket
- 4. Fixing

2. Release the three fixings and withdraw the oil pump cover.
4. Measure the pump body clearance using feeler gauges.



1. Oil pump cover
2. Fixings



Pump Body Clearance



Caution

If any part of the oil pump is found to be outside the service limit, the complete pump must be replaced. Severe engine damage may result from the continued use of a faulty oil pump.

3. Measure the rotor tip clearance using feeler gauges.

Pump Body Clearance

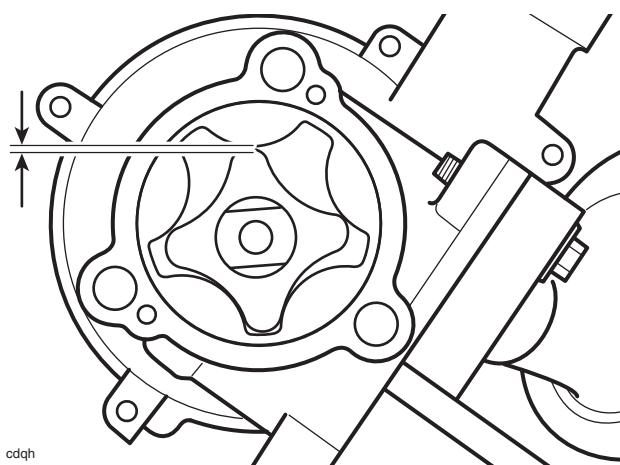
Standard	0.15 - 0.22 mm
Service limit	0.35 mm

Pump End Clearance

Standard	0.04 - 0.09 mm
Service limit	0.17 mm

Rotor Tip Clearance

Standard	0.15 mm
Service limit	0.20 mm

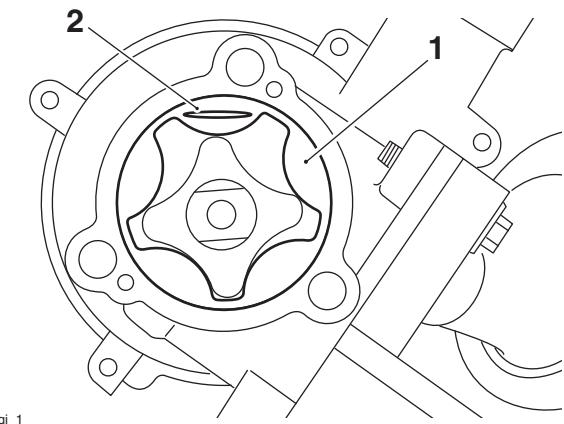


Rotor Tip Clearance

Lubrication

5. Check the pump end clearance, using 'Plastigauge' (Triumph part number 3880150-T0301) as follows:

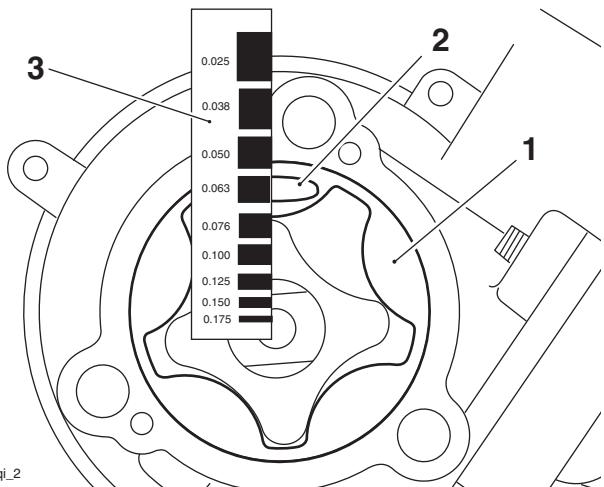
- Wipe the exposed areas of both the outer rotor and the oil pump cover.
- Apply a thin smear of grease to the outer rotor and a small quantity of silicone release agent to the oil pump cover.
- Size a length of the Plastigauge to fit across the one of the lugs on the outer rotor, as shown below. Fit the Plastigauge to the outer rotor using the grease to hold the strip in place.



- Outer rotor
- Plastigauge

- Without any twisting action, refit the oil pump cover and tighten its fixings to **12 Nm**.
- Release the fixings and remove the oil pump cover.

f) Using the gauge provided with the Plastigauge kit, measure the width of the now compressed Plastigauge.



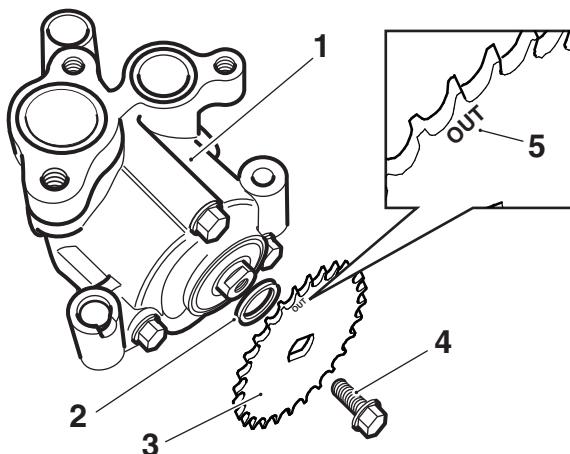
- Outer rotor
- Plastigauge
- Gauge, in millimetres

- If the clearance measured is within the specified tolerance, clean off all traces of Plastigauge from the outer rotor and oil pump cover. Assemble the oil pump (see page 8-20).

Assembly

- If all clearances are within service limits, liberally apply clean engine oil to all internal components and refit the oil pump body to the oil pump rotor. Refit the fixings and tighten to **12 Nm**.
- If any clearance measured is outside the service limits, renew the complete pump.
- Inspect the sprockets and chain for wear and/or damage. Replace the sprockets and chain if wear and/or damage is found.
- Check the water pump shaft and shaft bearings for side and end float. Renew if necessary.
- Check for corrosion and scale build-up around the impeller and in the pump body. Renew if necessary.
- Check the oil pump location dowel for damage. Renew if necessary.

- Refit the spacer washer and drive sprocket. Ensure that the OUT mark is facing outwards. Apply ThreeBond 1374 to the fixing and tighten to **12 Nm**.



- Oil pump**
- Spacer washer**
- Drive sprocket**
- Fixing**
- OUT mark**

Installation



Caution

Before fitting the oil pump to the crankcase ensure the pump internal surfaces have been wetted with clean engine oil. The pump may fail to pick-up oil from the sump if the surfaces have not been wetted. This will cause the engine to run without engine oil pressure and will lead to severe engine damage.

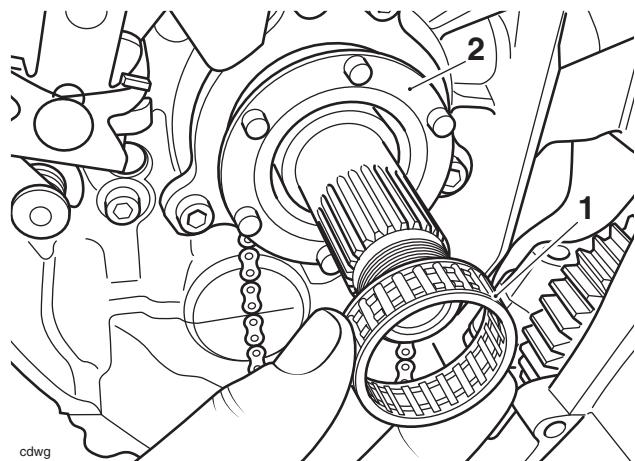
- Install a new O-ring to the inlet sleeve on the water pump body.
- Fill the oil pump with new engine oil, turning the pump rotor as the oil is poured in to ensure all surfaces are coated with oil.
- Position the oil pump to the crankcase and insert the water pump inlet sleeve into the opening in the crankcase.
- Fit the oil pump to the crankcase, ensuring the oil pump dowel correctly locates into the bolt hole in the crankcase.



Caution

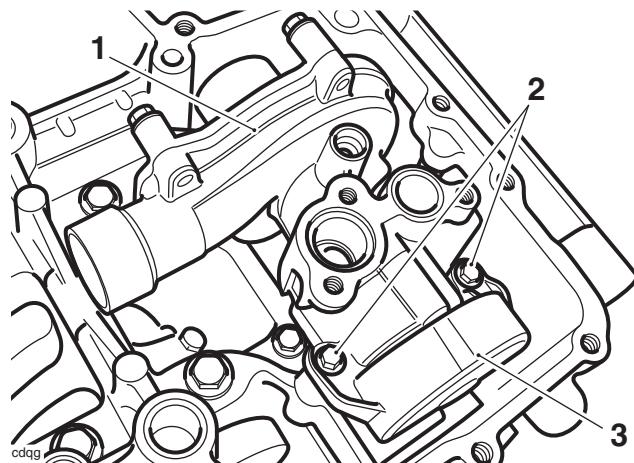
Do not use excessive force to insert the dowel into the crankcase. Severe dowel or crankcase damage may result from the use of excessive force.

- Using a suitable pin punch, gently tap the dowel downwards into the crankcase until it seats.
- Feed the drive chain over the transmission input shaft and fit to the sprocket.
- Fit the drive chain to the sprocket on the oil pump.
- Support the oil pump drive sprocket and carefully refit the needle roller bearing.



- Needle roller bearing**
- Oil pump drive sprocket**

- Refit the oil pump drive chain cover to the oil pump and fit new fixings. Tighten the fixings to **12 Nm**.

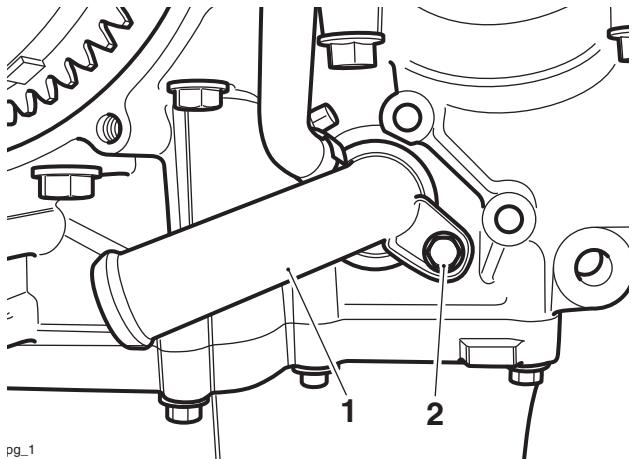


- Oil pump**
- Fixings**
- Drive chain cover**

- Refit the oil pump drive chain guide. Install new fixings and tighten to:
 - 10 Nm** For Daytona 675 and Daytona 675 R
 - 9 Nm** for Street Triple, Street Triple 660 cc, Street Triple R and Street Triple Rx.

Lubrication

11. Install a new O-ring to the coolant inlet elbow and position the elbow to the water pump inlet. Fit a new bolt and tighten to **12 Nm**.



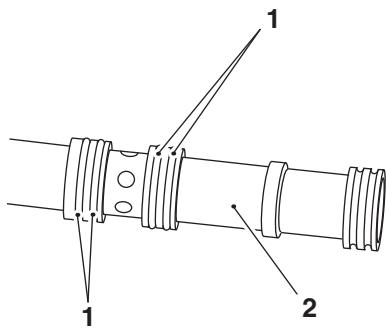
- 1. Coolant inlet elbow**
2. Fixing

Note:

- For Street Triple, Street Triple 660 cc, Street Triple R and Street Triple Rx, omit steps 12 to 14.

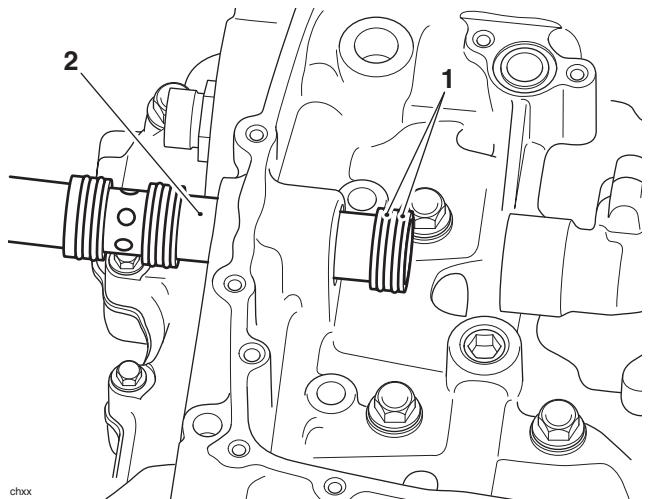
Daytona 675 and Daytona 675 R

12. Install four new O-rings to the coolant outlet pipe as shown in the illustration below.



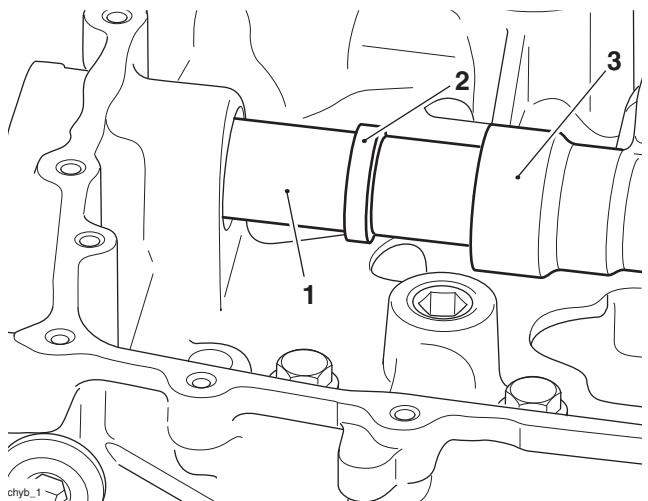
- chxx_1**
1. O-rings
2. Coolant pipe

13. Position the coolant pipe through the crankcase and fit two new O-rings to the pipe.



- chxx**
1. O-rings
2. Coolant pipe

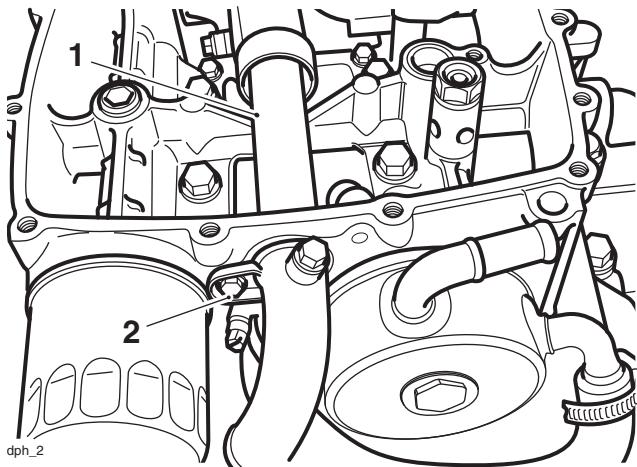
14. Align the pipe to the water pump and using a suitable punch, carefully tap the raised ring on the pipe to engage it fully into the water pump.



- chyb_1**
1. Coolant pipe
2. Raised ring
3. Water pump

All Models

15. **For Street Triple, Street Triple 660 cc, Street Triple R and Street Triple Rx:** Install three new O-rings to the coolant outlet pipe and position the pipe through the crankcase, locating it to the water pump outlet. Install a new fixing and tighten to **12 Nm**.



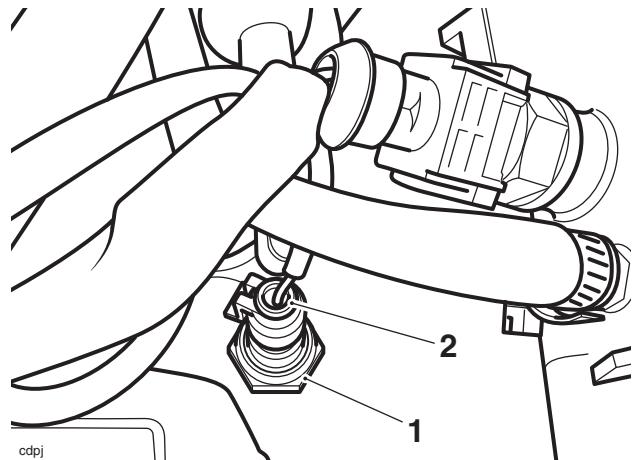
1. Coolant outlet pipe

2. Fixing

16. Install a new O-ring to the oil pick-up and refit the oil pick-up. Fit new bolts and tighten to **12 Nm**.
17. Install two new O-rings to the oil transfer pipe and refit the oil transfer pipe. Fit new bolts and tighten to **12 Nm**.
18. Refit the clutch (see page 4-15).
19. Refit the sump, ensuring the water pump drain tube is correctly installed (see page 8-25).
20. **For Daytona 675 and Daytona 675 R:** Refit the heat exchanger (see page 8-27).
21. Reconnect the battery, positive (red lead) first. Tighten the battery terminals to **4.5 Nm**.
22. Refit the seat (see page 16-22 for Daytona 675, Daytona 675 R and Street Triple Rx, see page 16-24 for Street Triple, Street Triple 660 cc and Street Triple R).
23. Refill the engine with oil (see page 8-13).
24. Refill the cooling system (see page 11-8 for Daytona 675 and Daytona 675 R, or page 11-10 for Street Triple, Street Triple 660 cc, Street Triple R and Street Triple Rx).

Low Oil Pressure Warning Light Switch

The low oil pressure warning light switch is located in the upper crankcase, behind the cylinder head.



1. Low oil pressure warning light switch

2. Electrical connection

1. Remove the seat (see page 16-22 for Daytona 675, Daytona 675 R and Street Triple Rx, see page 16-23 for Street Triple, Street Triple 660 cc and Street Triple R).
2. Disconnect the battery, negative (black) lead first.
3. Disconnect the electrical connection to the switch.
4. Remove the switch and collect the copper washer.

Installation

1. Incorporating a new copper washer, fit the switch and tighten to **13 Nm**.
2. Refit the electrical connection.
3. Reconnect the battery, positive (red) lead first. Tighten the battery terminals to **4.5 Nm**.
4. Refit the seat (see page 16-22 for Daytona 675, Daytona 675 R and Street Triple Rx, see page 16-24 for Street Triple, Street Triple 660 cc and Street Triple R).

Lubrication

Sump

Removal

1. Remove the seat (see page 16-22 for Daytona 675, Daytona 675 R and Street Triple Rx, see page 16-23 for Street Triple, Street Triple 660 cc and Street Triple R).
2. Disconnect the battery, negative (black) lead first.
3. Drain the engine oil (see page 8-13).



Warning

The oil may be hot to the touch. Contact with hot oil may cause the skin to be scalded or burned.



Warning

Prolonged or repeated contact with engine oil can lead to skin dryness, irritation and dermatitis. In addition, used engine oil contains potentially harmful contaminants which can cause cancer. Wear suitable clothing and avoid skin contact.

4. Remove the exhaust system (see page 10-149 for Daytona 675 and Daytona 675 R, see page 10-161 for Street Triple, Street Triple 660 cc, Street Triple R and Street Triple Rx).

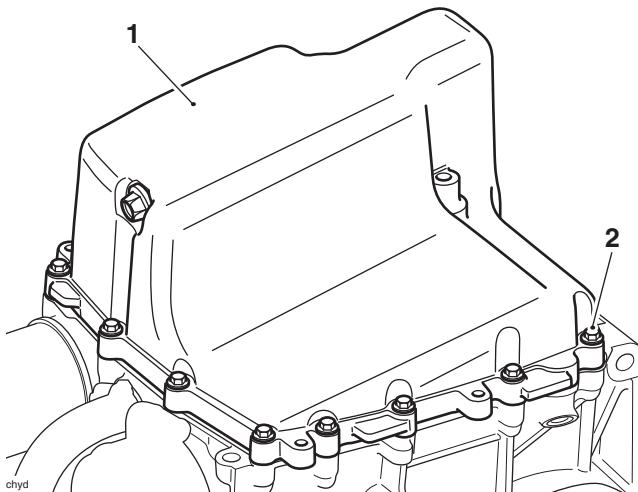


Warning

The exhaust system will be hot if the engine has recently been running. Always allow sufficient time for the exhaust to cool before working on or near the exhaust system.

Contact with a hot exhaust could result in burn injuries.

5. Release the bolts securing the sump to the lower crankcase.



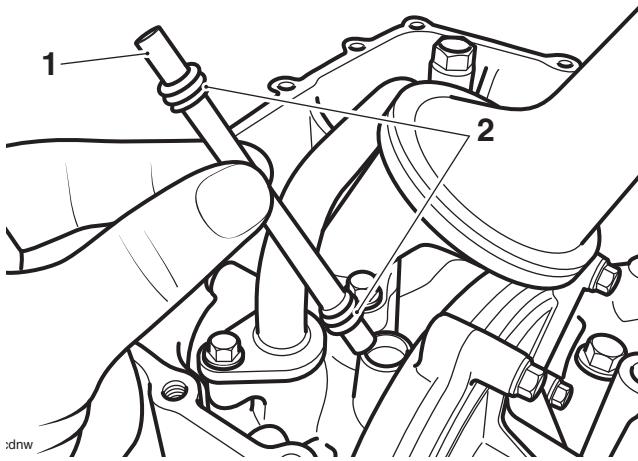
1. Sump

2. Fixings

6. Detach the sump and collect the water pump drain tube. Remove and discard the four drain tube O-rings.

Note:

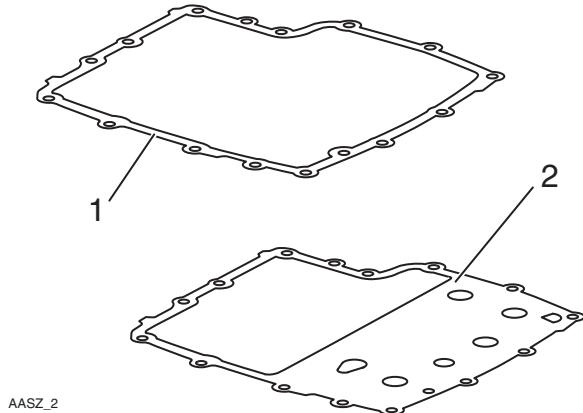
- The water pump drain tube may remain attached to the water pump or become detached with the sump.



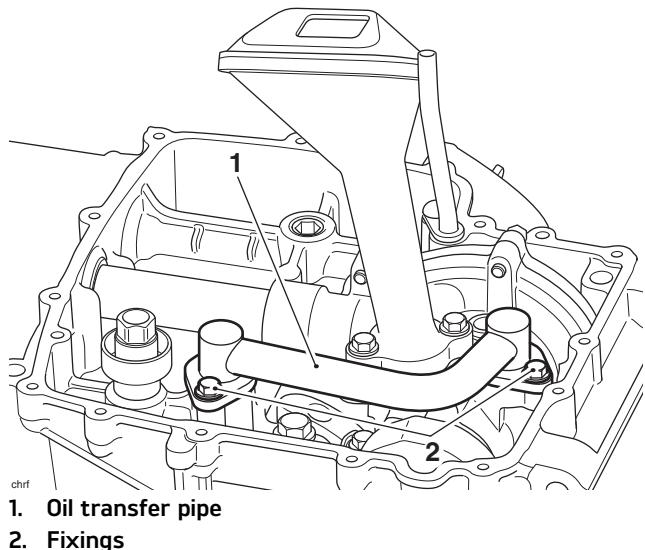
1. Water pump drain tube

2. O-rings

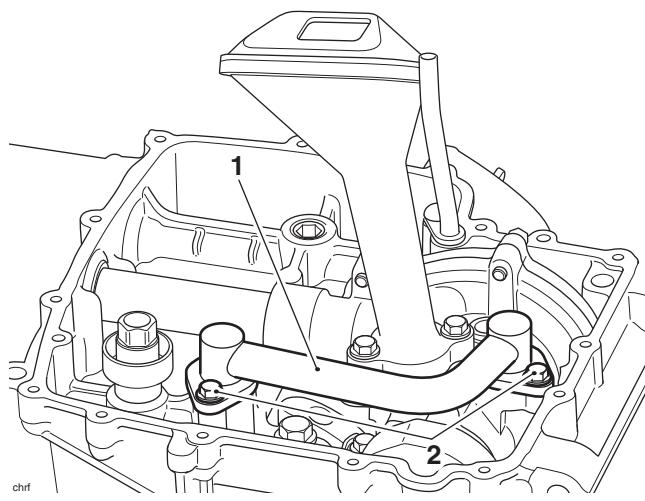
7. For Daytona 675 and Daytona 675 R: Remove and discard the sump gasket.
8. For Street Triple, Street Triple 660 cc, Street Triple R and Street Triple Rx: Remove the sump gasket/baffle.



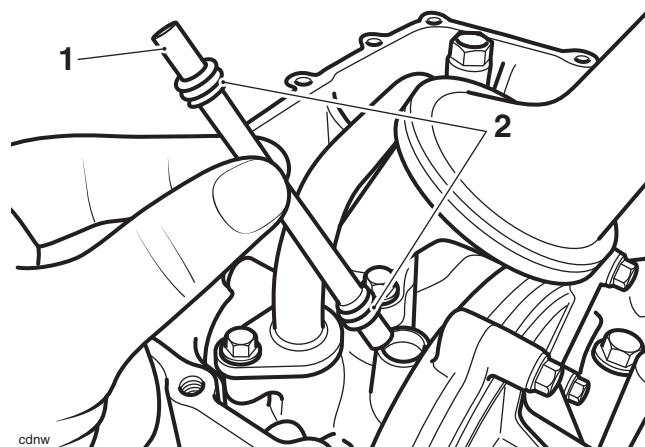
1. Gasket, Daytona 675 and Daytona 675 R models
2. Gasket/baffle, Street Triple, Street Triple 660 cc, Street Triple R and Street Triple Rx
9. If necessary, release and discard the oil transfer pipe fixings and remove the oil transfer pipe. Remove and discard the two O-rings from the crankcase.



Installation



1. If removed, fit the oil transfer pipe incorporating new O-rings. Fit new fixings and tighten to **12 Nm**.
2. Incorporating new O-rings, position the water pump drain tube to the oil pump.



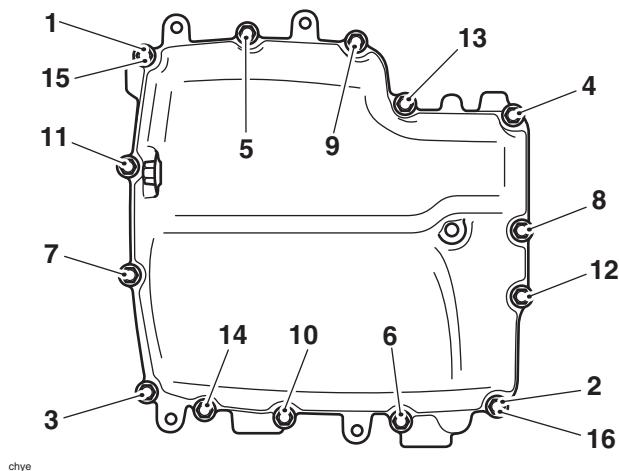
3. For Daytona 675 and Daytona 675 R: Incorporating a new sump gasket, position the sump to the lower crankcase.
4. For Street Triple, Street Triple 660 cc, Street Triple R and Street Triple Rx: Check the sump gasket/baffle for wear or damage, replace if necessary. Position the sump to the lower crankcase.

Note:

- The sump fixings 1 and 2 are torqued twice as 15 and 16 respectively.

Lubrication

5. Tighten the sump fixings to **12 Nm** in the sequence shown below.



Tightening Sequence

Note:

- Use new exhaust gaskets at the downpipe connections with the cylinder head.
6. Refit the exhaust system (see page 10-153 for Daytona 675 and Daytona 675 R, or page 10-163 for Street Triple, Street Triple 660 cc, Street Triple R and Street Triple Rx).
 7. Fill the engine with the correct grade of engine oil (see page 8-13).
 8. Reconnect the battery, positive (red) lead first. Tighten the battery terminals to **4.5 Nm**.
 9. Start the engine and ensure that the low oil pressure warning light goes out shortly after starting.
 10. Stop the engine and check the engine oil level. Adjust if necessary (see page 8-12).
 11. **For Daytona 675 and Daytona 675 R:** Refit the fairings (see page 16-34).
 12. Refit the seat (see page 16-22 for Daytona 675, Daytona 675 R and Street Triple Rx, see page 16-24 for Street Triple, Street Triple 660 cc and Street Triple R).

Heat Exchanger - Daytona 675 and Daytona 675 R

Removal

Note:

- Prior to disassembly of the coolant hose, note the orientation and position of the hose clip to help ensure that it is returned to the same position and orientation on assembly.

1. Position the motorcycle on level ground on the side stand.
2. Remove the seat (see page 16-22).
3. Disconnect the battery, negative (black) lead first.
4. Remove the fairings (see page 16-33).
5. Drain the coolant (see page 11-8).
6. Drain the engine oil (see page 8-13).



Warning

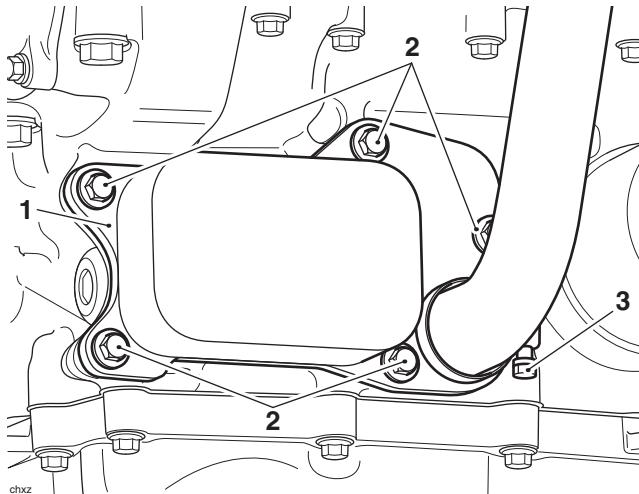
The oil may be hot to the touch. Contact with hot engine oil may cause skin to be scalded or burnt.



Warning

Prolonged or repeated contact with engine oil can lead to skin dryness, irritation and dermatitis. In addition, used engine oil contains potentially harmful contaminants which can cause cancer. Wear suitable clothing and avoid skin contact.

7. Disconnect the coolant hose from the heat exchanger.
8. Release the fixings and remove the heat exchanger.



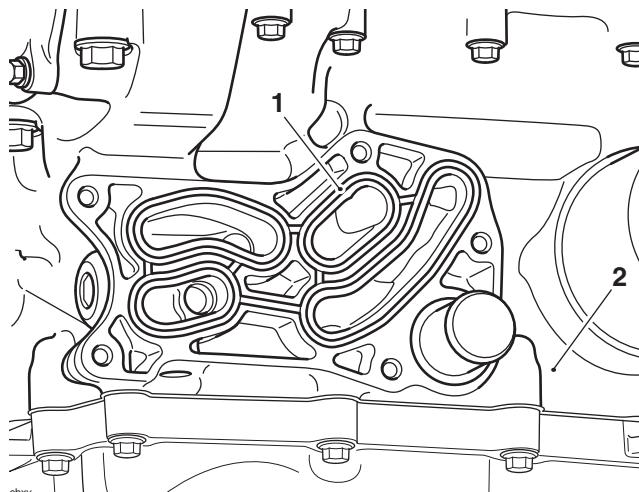
- 1. Heat exchanger
- 2. Fixings
- 3. Coolant hose clip

Inspection

1. Check the heat exchanger body for corrosion and/or damage.

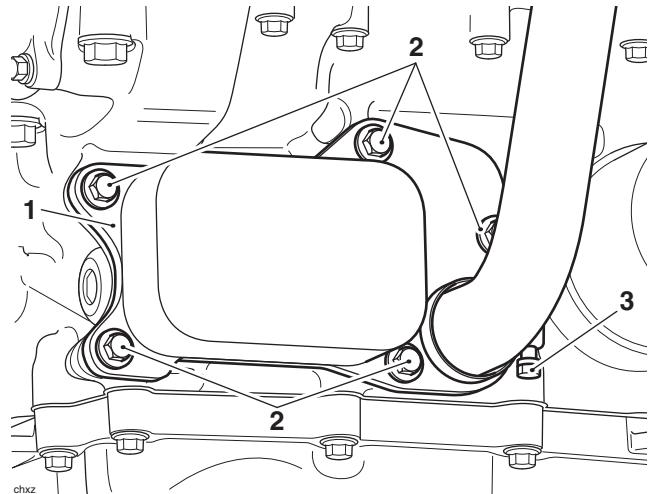
Installation

1. Fit a new seal for the heat exchanger to the lower crankcase.



- 1. Seal
- 2. Lower crankcase

2. Fit the heat exchanger to the crankcase and tighten its fixings to **10 Nm**.
3. Fit the coolant hose to the heat exchanger and tighten the coolant hose clip to **3 Nm**.



- 1. Heat exchanger
- 2. Fixings
- 3. Coolant hose clip

4. Refill the cooling system (see page 11-8).
5. Refill the engine with oil (see page 8-13).
6. Refit the fairings (see page 16-34).
7. Reconnect the battery, positive (red) lead first. Tighten the battery terminals to **4.5 Nm**.
8. Start the engine and check for oil leaks. Once a leak check has been made, stop the engine and allow to stand for 3 minutes.
9. Adjust the engine oil level (see page 8-12).
10. Refit the seat (see page 16-22).

Lubrication

Heat Exchanger - Street Triple, Street Triple 660 cc, Street Triple R and Street Triple Rx

Removal

Note:

- Prior to disassembly of the coolant hoses, note the orientation and position of the hose clips to help ensure that they are returned to the same positions and orientation on assembly.

- Position the motorcycle on level ground on the side stand.
- Remove the seat (see page 16-23 for Street Triple, Street Triple 660 cc and Street Triple R, see page 16-22 for Street Triple Rx).
- Disconnect the battery, negative (black) lead first.
- Drain the coolant (see page 11-9).
- Drain the engine oil (see page 8-13).



Warning

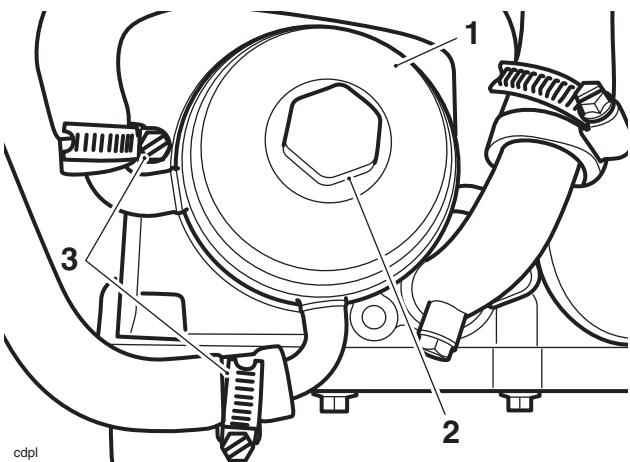
The oil may be hot to the touch. Contact with hot engine oil may cause skin to be scalded or burnt.



Warning

Prolonged or repeated contact with engine oil can lead to skin dryness, irritation and dermatitis. In addition, used engine oil contains potentially harmful contaminants which can cause cancer. Wear suitable clothing and avoid skin contact.

- Disconnect the coolant hoses from the heat exchanger.
- Remove the centre bolt from the heat exchanger and withdraw it from the crankcase. Remove and discard the heat exchanger O-ring and the centre bolt sealing washer.



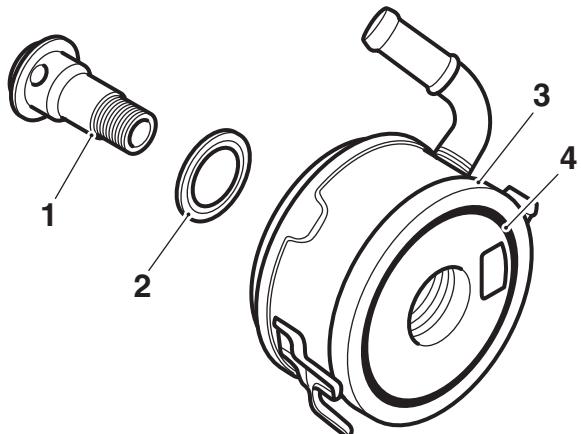
1. Heat exchanger
2. Centre bolt
3. Coolant hose clips

Inspection

- Check the heat exchanger body for corrosion and/or damage.

Installation

- Fit a new O-ring to the heat exchanger, and a new sealing washer to the centre bolt.



- Centre bolt
- Sealing washer
- Heat exchanger
- O-ring

Note:

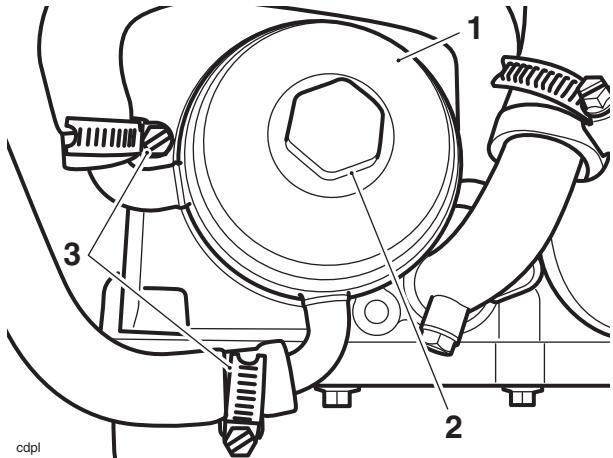
- To ensure correct positioning, ensure that the tab on the heat exchanger locates in the boss provided in the crankcase.



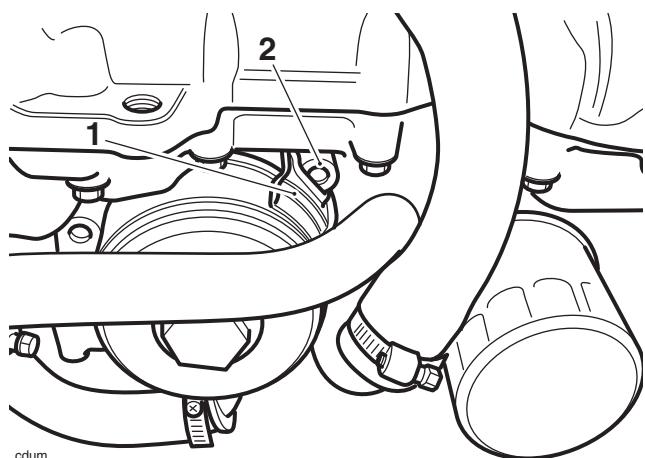
Caution

Do not rely on the tab to hold the heat exchanger in position while tightening the centre bolt. The tab will bend and will not prevent the heat exchanger from turning. Instead, firmly hold the heat exchanger in position by hand.

- Fit the heat exchanger to the crankcase and tighten the centre bolt to **59 Nm**.
- Fit the coolant hoses to the heat exchanger and tighten the coolant hose clips.



- Heat exchanger
- Centre bolt
- Coolant hoses
- Refill the cooling system (see page 11-10).
- Refill the engine with oil (see page 8-13).
- Reconnect the battery, positive (red) lead first. Tighten the battery terminals to **4.5 Nm**.
- Start the engine and check for oil leaks. Once a leak check has been made, stop the engine and allow to stand for 3 minutes.
- Adjust the engine oil level (see page 8-12).
- Refit the seat (see page 16-23 for Street Triple, Street Triple 660 cc and Street Triple R, see page 16-22 for Street Triple Rx).



- Heat exchanger tab
- Crankcase boss

Lubrication

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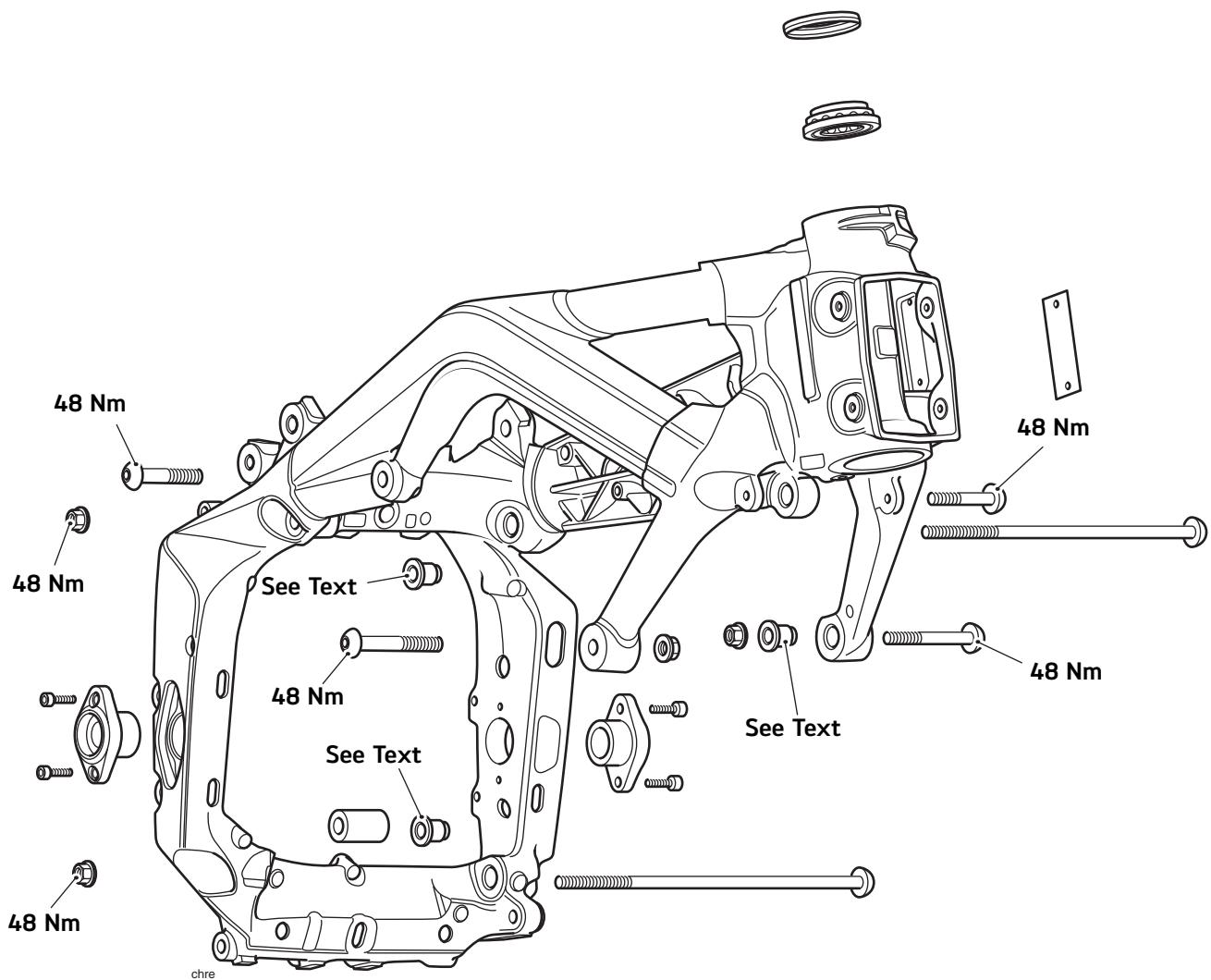
9 Engine Removal/Refit

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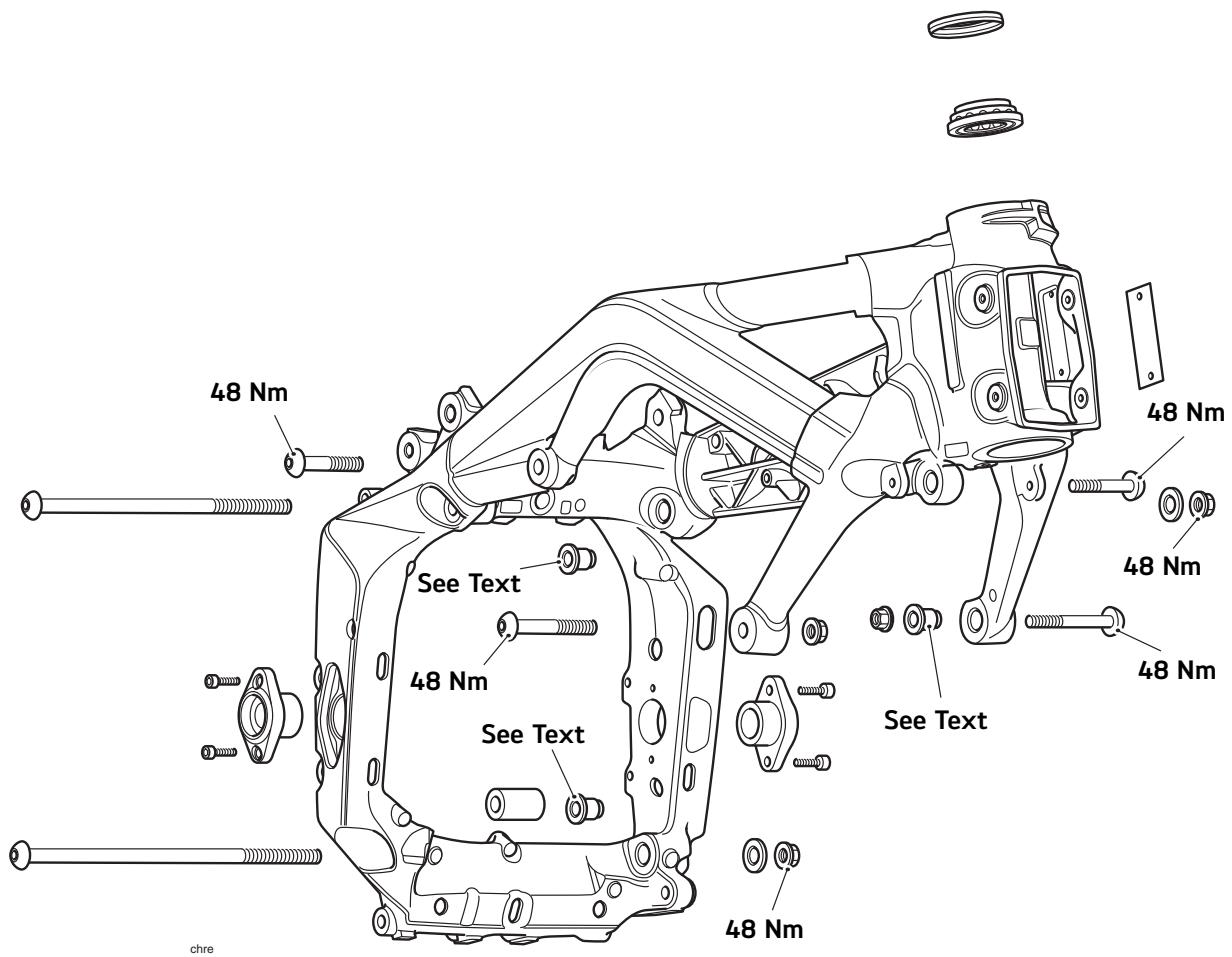
Exploded View - Frame Fixings Daytona 675 and Daytona 675 R up to VIN 617993 and Street Triple, Street Triple 660 cc, Street Triple R and Street Triple Rx up to VIN 629221.....	9.2
Exploded View - Frame Fixings Daytona 675 and Daytona 675 R from VIN 617994 and Street Triple, Street Triple 660 cc, Street Triple R and Street Triple Rx from VIN 629222.....	9.3
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Engine Removal/Refit

Exploded View - Frame Fixings Daytona 675 and Daytona 675 R up to VIN 617993 and Street Triple, Street Triple 660 cc, Street Triple R and Street Triple Rx up to VIN 629221



Exploded View - Frame Fixings Daytona 675 and Daytona 675 R from VIN 617994 and Street Triple, Street Triple 660 cc, Street Triple R and Street Triple Rx from VIN 629222



Engine Removal/Refit

Engine Removal/Refit

Removal

1. Remove the seat (see page 16-22 for Daytona 675, Daytona 675 R and Street Triple Rx, see page 16-23 for Street Triple, Street Triple 660 cc and Street Triple R).
2. Disconnect the battery, negative (black) lead first and remove the battery (see page 17-13).
3. Place the motorcycle on a paddock stand.



Warning

Before starting work, ensure the motorcycle is stabilised and adequately supported. This will help prevent it from falling and causing injury to the operator or damage to the motorcycle.

4. **For Daytona 675 and Daytona 675 R:** Remove the fairings (see page 16-33).
5. **For Street Triple, Street Triple 660 cc and Street Triple R (if fitted) and Street Triple Rx:** Remove the belly pan (see page 16-40).
6. Remove the fuel tank (see page 10-112).
7. Remove the airbox (see page 10-120).
8. Remove the throttle bodies (see page 10-135).
9. Drain the engine oil (see page 8-13).
10. Drain the coolant (see page 11-8 for Daytona 675 and Daytona 675 R, or page 11-9 for Street Triple, Street Triple 660 cc, Street Triple R and Street Triple Rx).
11. Remove the radiator (see page 11-16 for Daytona 675 and Daytona 675 R, or page 11-18 for Street Triple, Street Triple 660 cc, Street Triple R and Street Triple Rx).

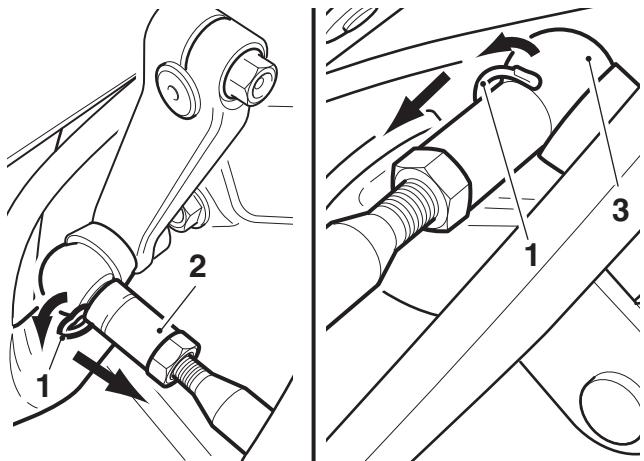
Note:

- **Secure the coolant hoses to prevent damage as the engine is removed.**
12. Remove the exhaust system completely (see page 10-149 for Daytona 675 and Daytona 675 R, see page 10-161 for Street Triple, Street Triple 660 cc, Street Triple R and Street Triple Rx).
 13. Set the drive chain adjustment to allow maximum free play in the chain (see page 13-10).

Note:

- **If the quickshifter gear selector rod is fitted, note the routing of its harness for installation.**

14. Remove the wire clips retaining the gear selector rod front and rear ball joints. Remove the gear selector rod.

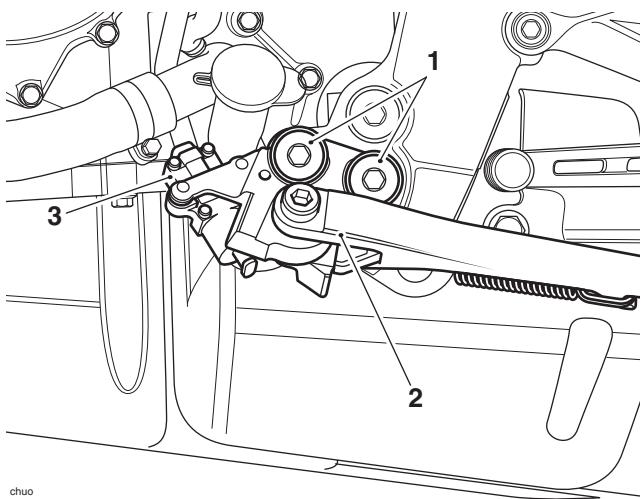


1. Wire clips
2. Ball joint, front
3. Ball joint, rear

15. Remove the gear change linkage from the gearbox shaft.
16. Remove the sprocket cover.

Note:

- **Note the routing of the side stand harness for installation.**
17. Follow the route of the side stand harness and disconnect it from the main harness.
 18. Release the fixings and remove the side stand and switch assembly.



1. Fixings
2. Side stand
3. Side stand switch

19. **For Street Triple, Street Triple 660 cc, Street Triple R and Street Triple Rx:** Remove the coolant expansion tank (see page 11-20).



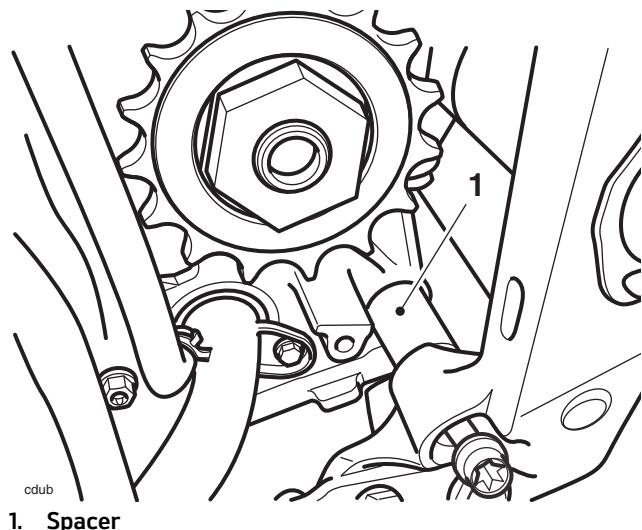
Caution

To prevent chain damage, do not allow the chain to come into contact with dirt, road grit etc.

20. Disconnect all electrical connections from the main harness to the engine.
21. Disconnect the clutch cable (see page 4-6).
22. Place a support beneath the engine and ensure that the frame is still adequately and securely supported.

Note:

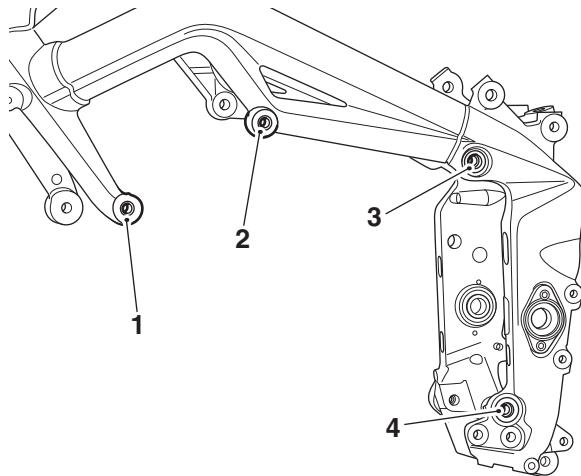
- For Daytona 675 and Daytona 675 R up to VIN 617993 and Street Triple, Street Triple 660 cc, Street Triple R and Street Triple Rx up to VIN 629221, the gearbox mounting bolts are fitted from the left hand side.
 - For Daytona 675 and Daytona 675 R from VIN 617994 and Street Triple, Street Triple 660 cc, Street Triple R and Street Triple Rx from VIN 629222, the gearbox mounting bolts are fitted from the right hand side and a washer is fitted between the nut and the frame.
 - Note the position of the spacer installed to the lower gearbox bolt, left hand side of the engine.
23. Release the nuts securing the rear gearbox mounting bolts and remove the two bolts. Collect the washers if fitted and collect the spacer from the lower bolt.



24. Release the nut securing the left hand front engine mounting bolt and remove the bolt.
25. Remove the left hand centre engine mounting bolt.

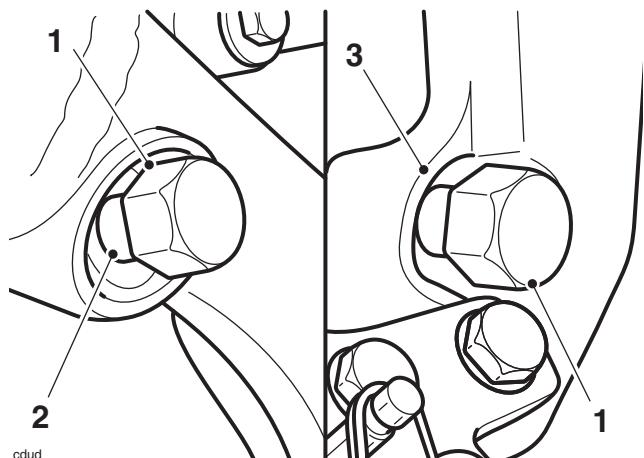
Note:

- The frame is fitted with four frame adjuster sleeves, located on the left hand side of the frame, as shown below.



1. Front frame adjuster position
2. Centre frame adjuster position
3. Rear upper frame adjuster position
4. Rear lower frame adjuster position

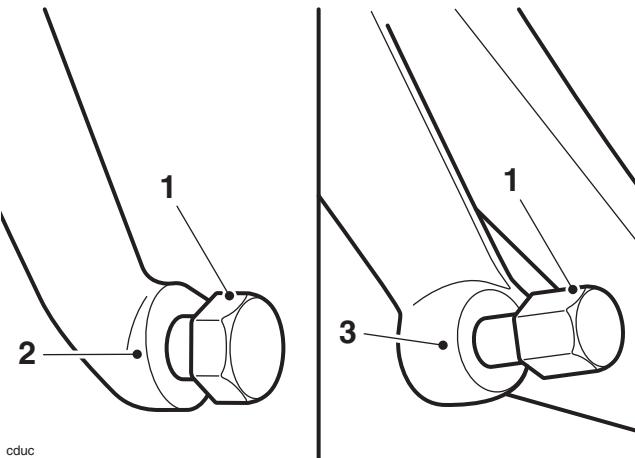
26. Using T3880103 - Engine Mounting Adjuster Wrench, loosen the two rear frame adjuster sleeves.



1. T3880103 - Engine Mounting Adjuster Wrench
2. Rear upper frame adjuster
3. Rear lower frame adjuster

Engine Removal/Refit

27. Using T3880103 - Engine Mounting Adjuster Wrench, loosen the centre and front frame adjuster sleeves.



1. T3880103 - Engine Mounting Adjuster Wrench
 2. Front frame adjuster
 3. Centre frame adjuster
28. Remove the two remaining (right hand) engine mounting bolts and lower the engine sufficiently to allow the drive chain to be detached from the output sprocket.
29. Remove the engine from the frame.



Caution

To prevent damage to components, lower the engine very carefully.

Installation

1. Position the engine beneath the frame.
2. Raise the engine, looping the drive chain over the output sprocket as it is raised.



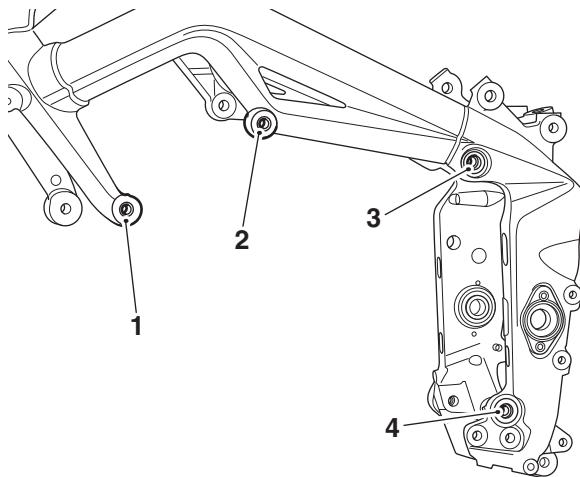
Caution

Unless the following engine mounting bolt installation/tightening sequence is precisely followed, severe frame damage can occur.

3. Align the engine to the frame.
4. Lubricate the threads of the mounting bolts for the cylinder head rear mountings **only** with a smear of proprietary high temperature copper based grease.
5. Fit the right hand centre engine mounting bolt (located at the rear of the cylinder head) ensuring the engine is still adequately and securely supported. Do not tighten the bolt at this stage.

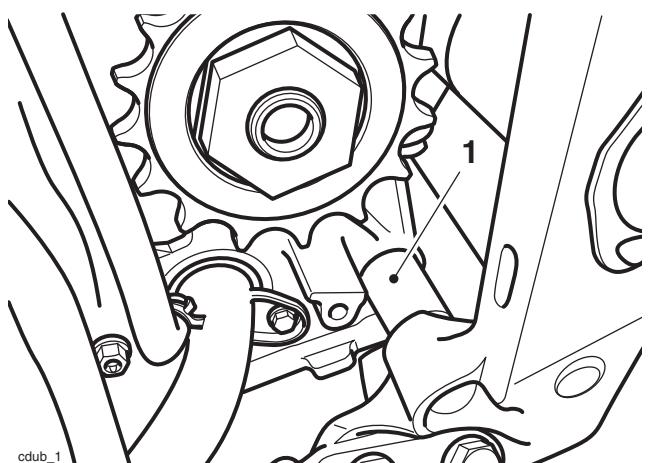
Note:

- The frame is fitted with four frame adjuster sleeves, located on the left hand side of the frame, as shown below.



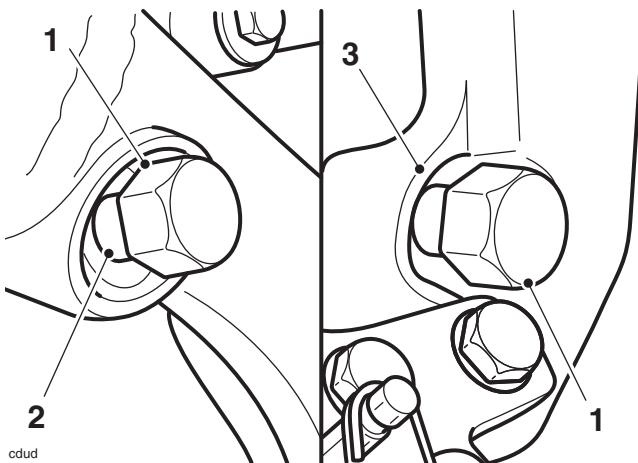
qty

1. Front frame adjuster position
 2. Centre frame adjuster position
 3. Rear upper frame adjuster position
 4. Rear lower frame adjuster position
6. Align the left hand centre engine mounting and using T3880103 - Engine Mounting Adjuster Wrench, tighten the frame adjuster to **3 Nm**. Fit the left hand centre engine mounting bolt but do not fully tighten at this stage.
7. Insert the lower and upper rear (gearbox) bolts from the right hand side, ensuring the spacer is installed as noted during removal.



1. Left hand spacer

8. Using T3880103 - Engine Mounting Adjuster Wrench, tighten the two rear frame adjuster sleeves to **10 Nm**.

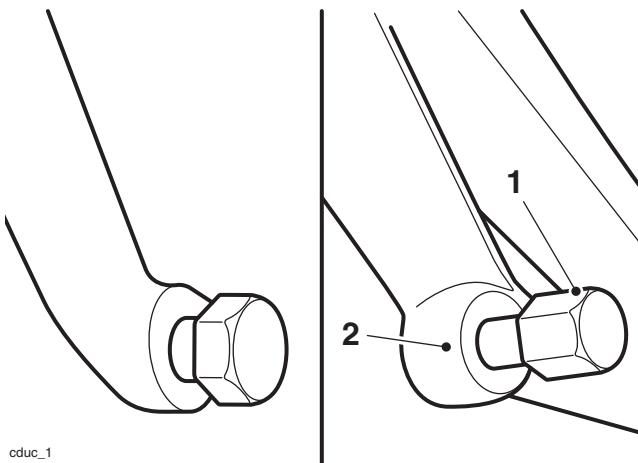


1. T3880103 - Engine Mounting Adjuster Wrench

2. Rear upper frame adjuster

3. Rear lower frame adjuster

9. Fit the right hand front engine mounting bolt (located at the front of the cylinder head), fit a new nut and tighten to **48 Nm**.
10. Remove the left hand centre engine mounting bolt fitted earlier and recheck the torque on the frame adjuster using T3880103 - Engine Mounting Adjuster Wrench. Re-tighten the adjuster to **3 Nm**. Refit the bolt, and tighten to **48 Nm**.



1. T3880103 - Engine Mounting Adjuster Wrench

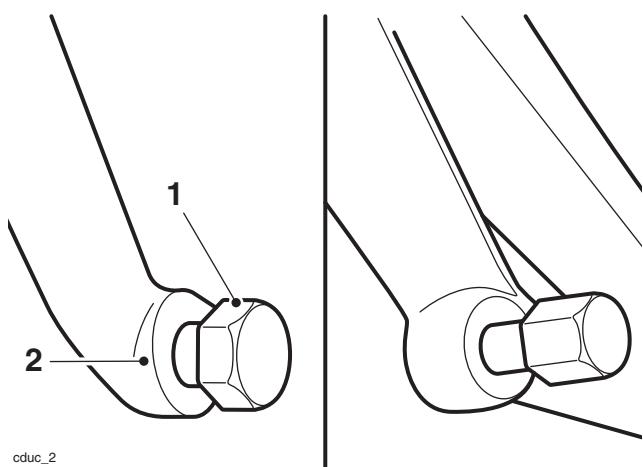
2. Centre frame adjuster

11. Tighten the right hand centre engine mounting bolt to **48 Nm**.

12. **For Daytona 675 and Daytona 675 R up to VIN 617993 and Street Triple, Street Triple 660 cc, Street Triple R and Street Triple Rx up to VIN 629221:** Remove the lower rear (gearbox) bolt from the right hand side and insert it from the left hand side. Fit a new nut and tighten to **48 Nm**.

13. **For Daytona 675 and Daytona 675 R from VIN 617994 and Street Triple, Street Triple 660 cc, Street Triple R and Street Triple Rx from VIN 629222:** Fit the washer and a new nut to the lower rear (gearbox) bolt and tighten to **48 Nm**.

14. Using tool T3880103, tighten the front frame adjuster to **3 Nm**.



1. Tool T3880103

2. Front upper frame adjuster

15. **For Daytona 675 and Daytona 675 R up to VIN 617993 and Street Triple, Street Triple 660 cc, Street Triple R and Street Triple Rx up to VIN 629221:** Remove the upper rear (gearbox) bolt from the right hand side and insert it from the left hand side. Fit a new nut and tighten to **48 Nm**.

16. **For Daytona 675 and Daytona 675 R from VIN 617994 and Street Triple, Street Triple 660 cc, Street Triple R and Street Triple Rx from VIN 629222:** Fit the washer and a new nut to the upper rear (gearbox) bolt and tighten to **48 Nm**.

17. Fit the left hand front engine mounting bolt and fit a new nut. Tighten to **48 Nm**.

18. Remove the support from beneath the engine.

19. Refit the clutch cable (see page 4-7).

20. Reconnect all electrical connections to the engine.

21. Set the drive chain adjustment (see page 13-10).

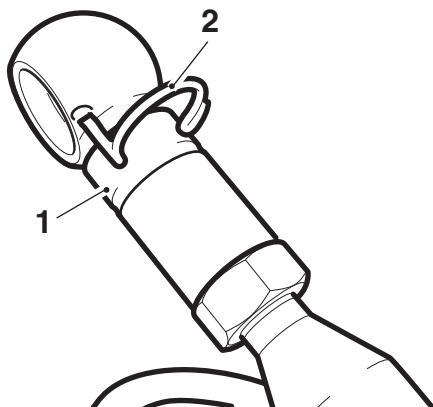
22. **For Street Triple, Street Triple 660 cc, Street Triple R and Street Triple Rx:** Refit the coolant expansion tank (see page 11-21).

Engine Removal/Refit

23. Refit the side stand and switch assembly and tighten its fixings to **45 Nm**.
24. Route the harness for the side stand switch as noted for removal and connect it to the main harness.
25. Refit the sprocket cover and tighten the bolts to **9 Nm**.
26. Refit the gear change linkage.

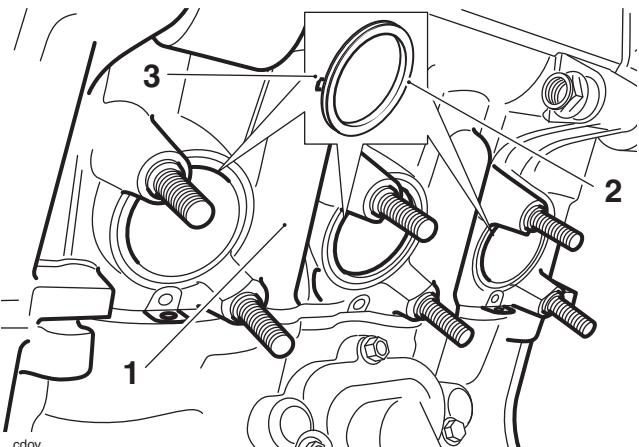
Note:

- **If the quickshifter gear change rod is being fitted, route its harness as noted for removal.**
- 27. Refit the gear selector rod. Ensure the wire clip locates correctly in the ball joint, before rotating the clip to lock in place.



1. Ball joint
2. Wire clip

28. Fit new seals to the cylinder head. Ensure that the face of the seal with the tab is facing the cylinder head.



1. Cylinder head
2. Seal
3. Seal tab

29. Refit the exhaust system (see page 10-153 for Daytona 675 and Daytona 675 R, see page 10-163 for Street Triple, Street Triple 660 cc, Street Triple R and Street Triple Rx).
30. Refit the radiator (see page 11-17 for Daytona 675 and Daytona 675 R, see page 11-20 for Street Triple, Street Triple 660 cc, Street Triple R and Street Triple Rx).
31. Fill the engine with oil of the correct grade and viscosity (see page 8-13).
32. Refit the throttle bodies (see page 10-136).
33. Check the throttle cable adjustment (see page 10-131).
34. Refit the airbox (see page 10-122).
35. Refit the fuel tank (see page 10-113).
36. Refit the battery to the battery box and reconnect, positive (red) lead first (see page 17-13).
37. Refill the cooling system (see page 11-8 for Daytona 675 and Daytona 675 R, see page 11-10 for Street Triple, Street Triple 660 cc, Street Triple R and Street Triple Rx).
38. **For Daytona 675 and Daytona 675 R:** Refit the fairings (see page 16-34).
39. **For Street Triple, Street Triple 660 cc and Street Triple R (if fitted) and Street Triple Rx:** Refit the belly pan (see page 16-40).
40. Remove the motorcycle from the paddock stand and place on the side stand.
41. Refit the seat (see page 16-22 for Daytona 675, Daytona 675 R and Street Triple Rx, see page 16-24 for Street Triple, Street Triple 660 cc and Street Triple R).

10 Fuel System/Engine Management

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Fuel System/Engine Management

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Fuel System/Engine Management

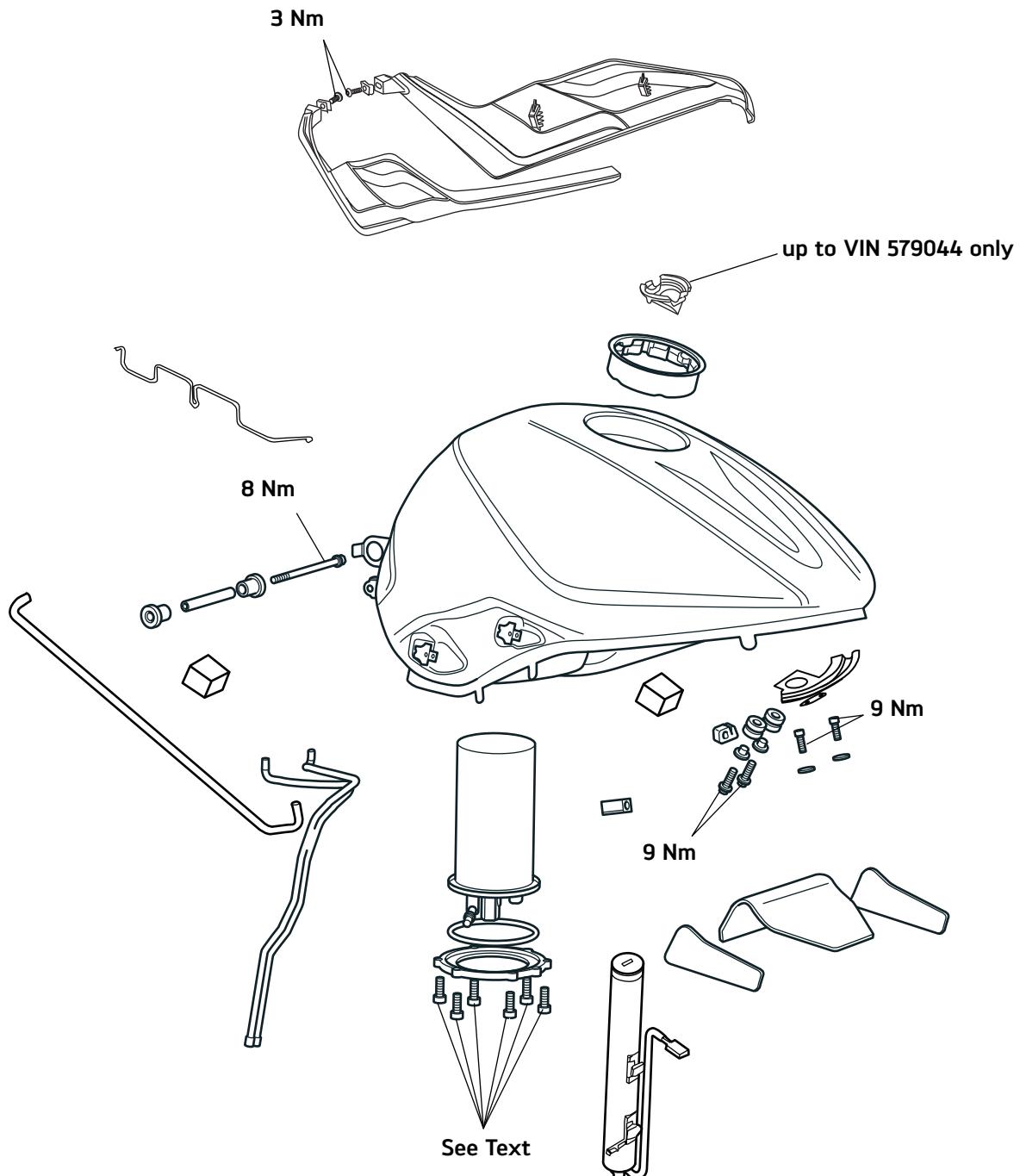
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Fuel System/Engine Management

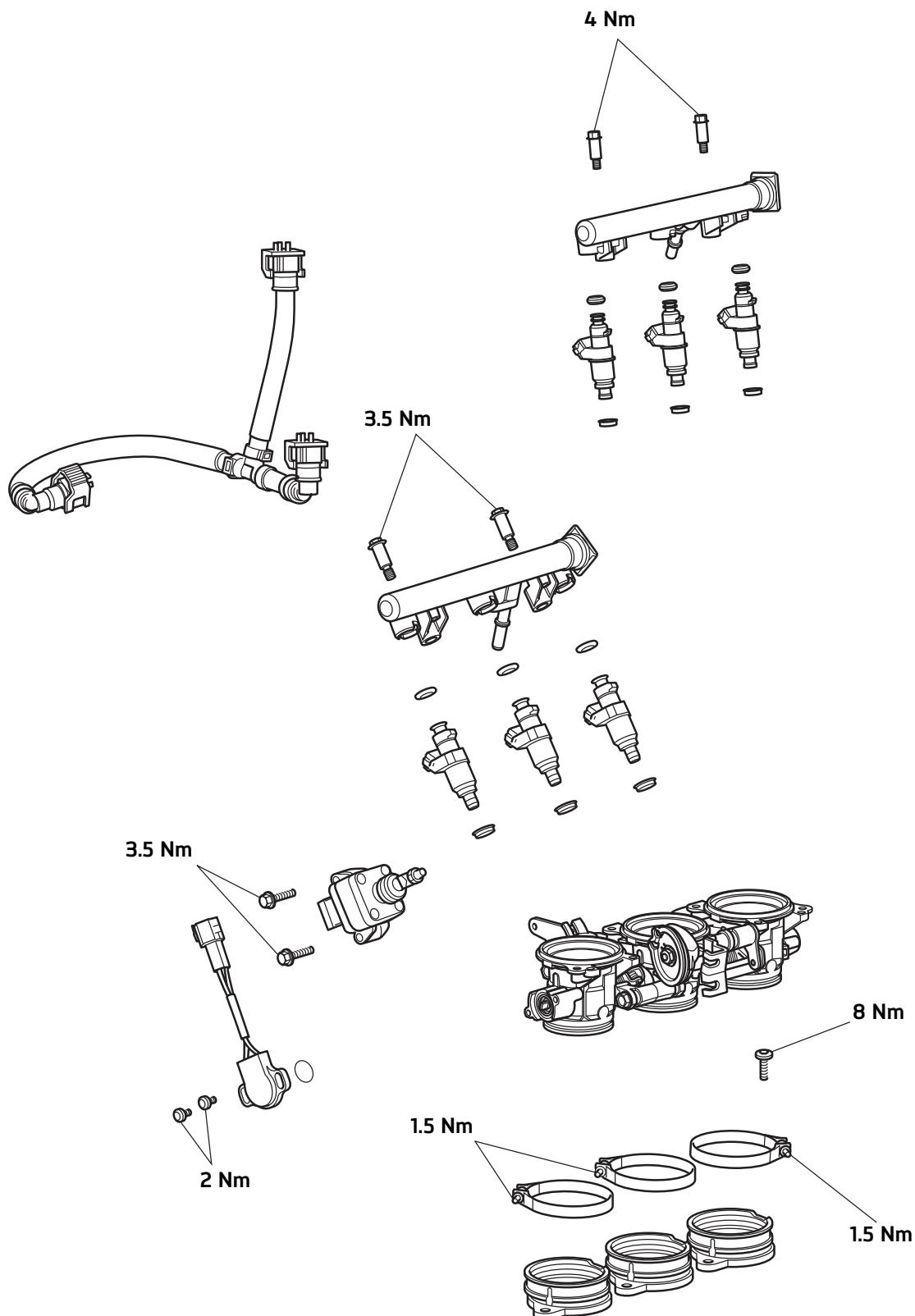
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Fuel System/Engine Management

Exploded View - Fuel Tank and Fuel Pump

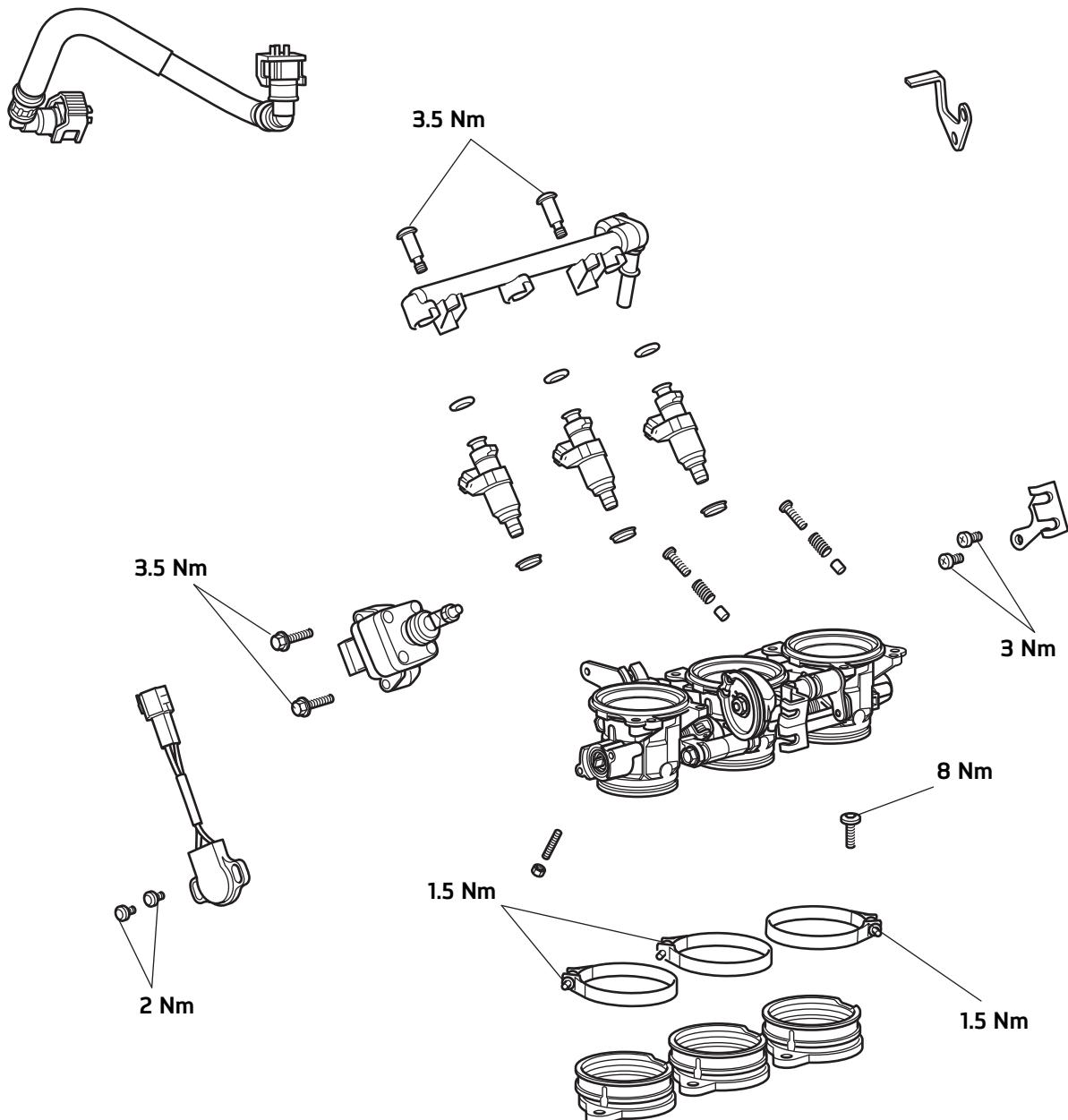


Exploded View - Fuel Rail, Throttles and Injectors - Daytona 675 and Daytona 675 R

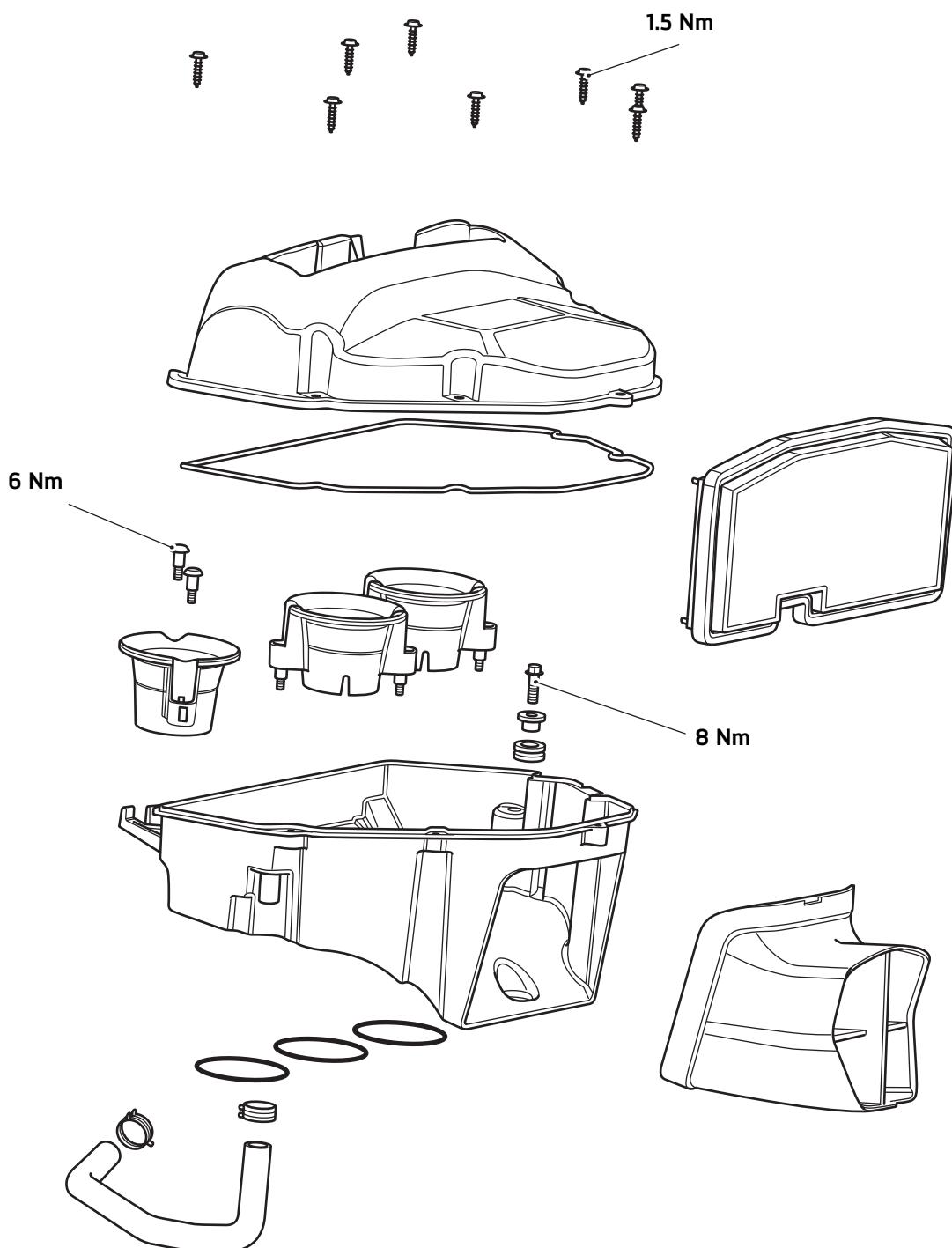


Fuel System/Engine Management

Exploded View - Fuel Rail, Throttles and Injectors - Street Triple, Street Triple 660 cc, Street Triple R and Street Triple Rx

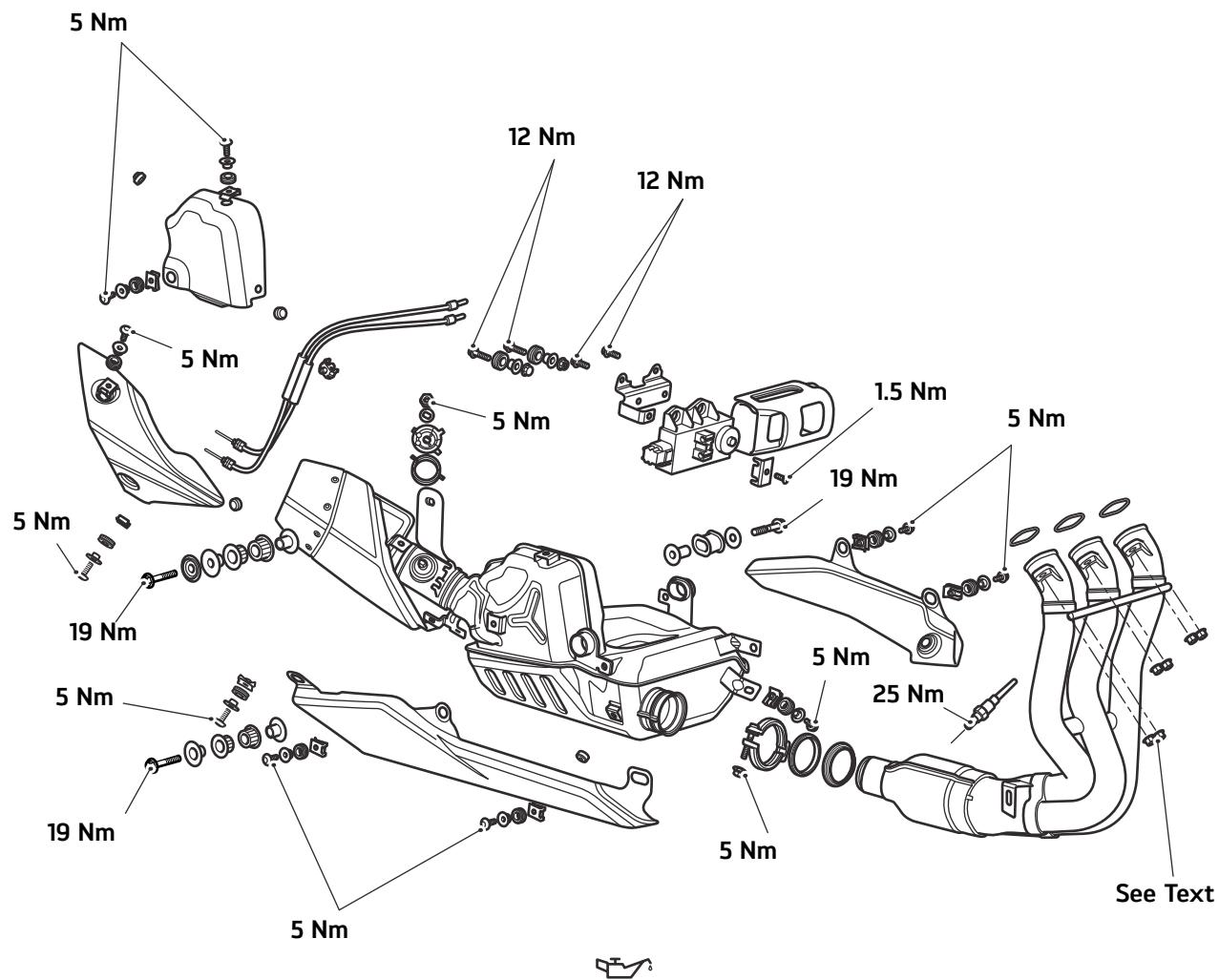


Exploded View - Airbox

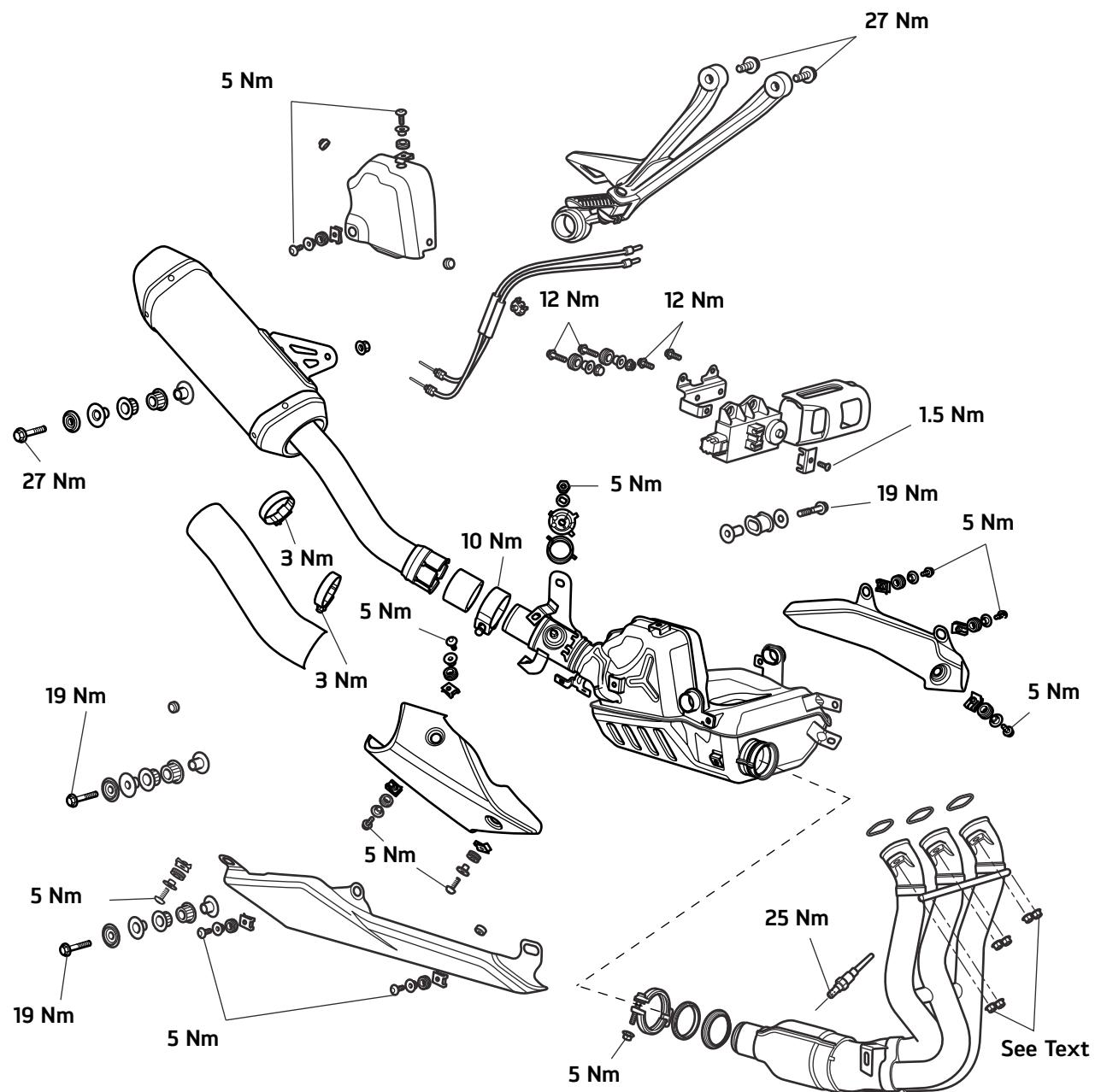


Fuel System/Engine Management

Exploded View - Exhaust System - Daytona 675 and Daytona 675 R - All Markets Except Japan

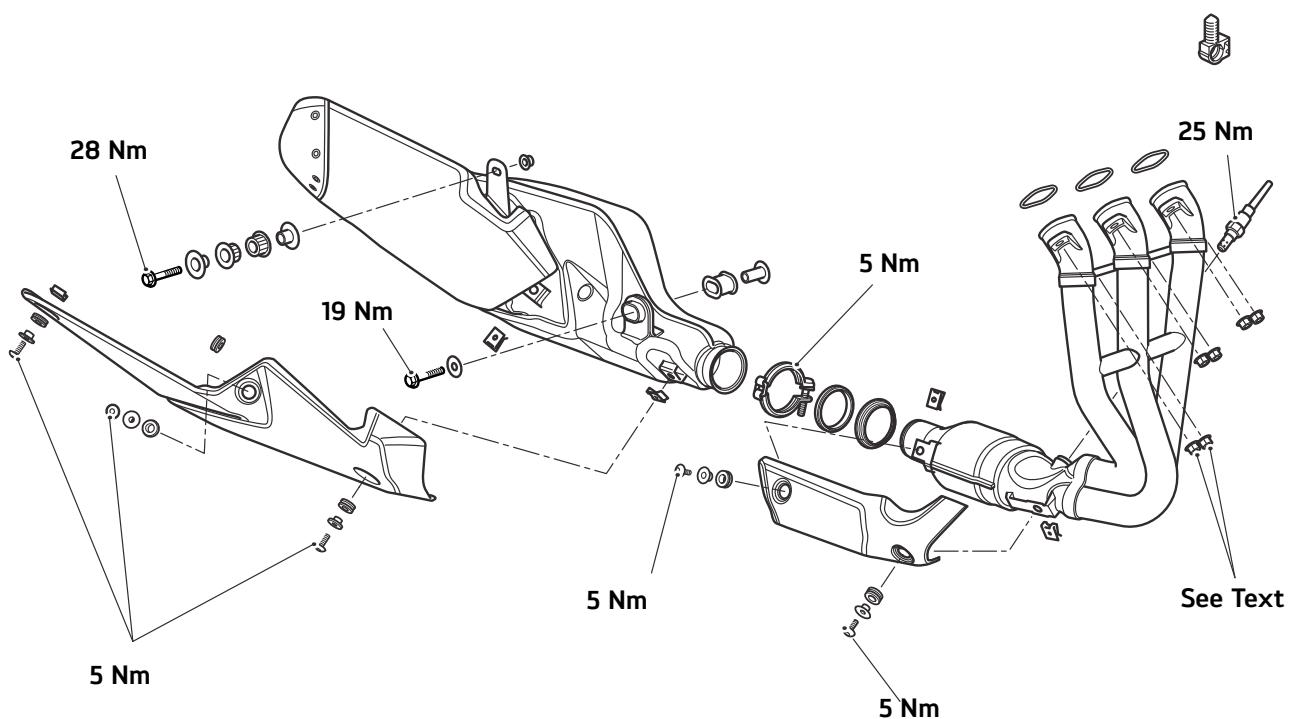


Exploded View - Exhaust System - Daytona 675 and Daytona 675 R - Japanese Market Only

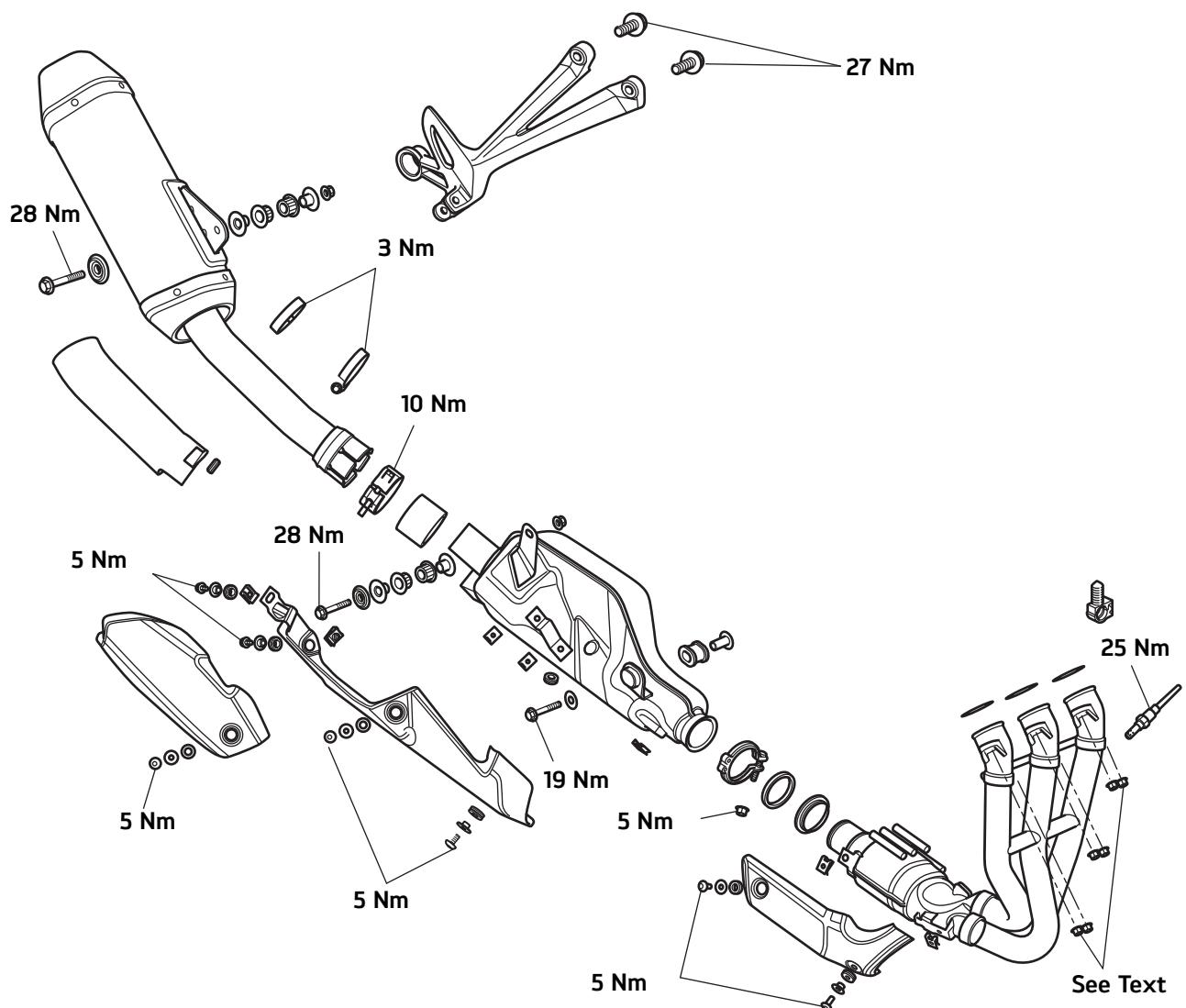


Fuel System/Engine Management

Exploded View - Exhaust System - Street Triple, Street Triple 660 cc, Street Triple R and Street Triple Rx - All Markets Except Japan

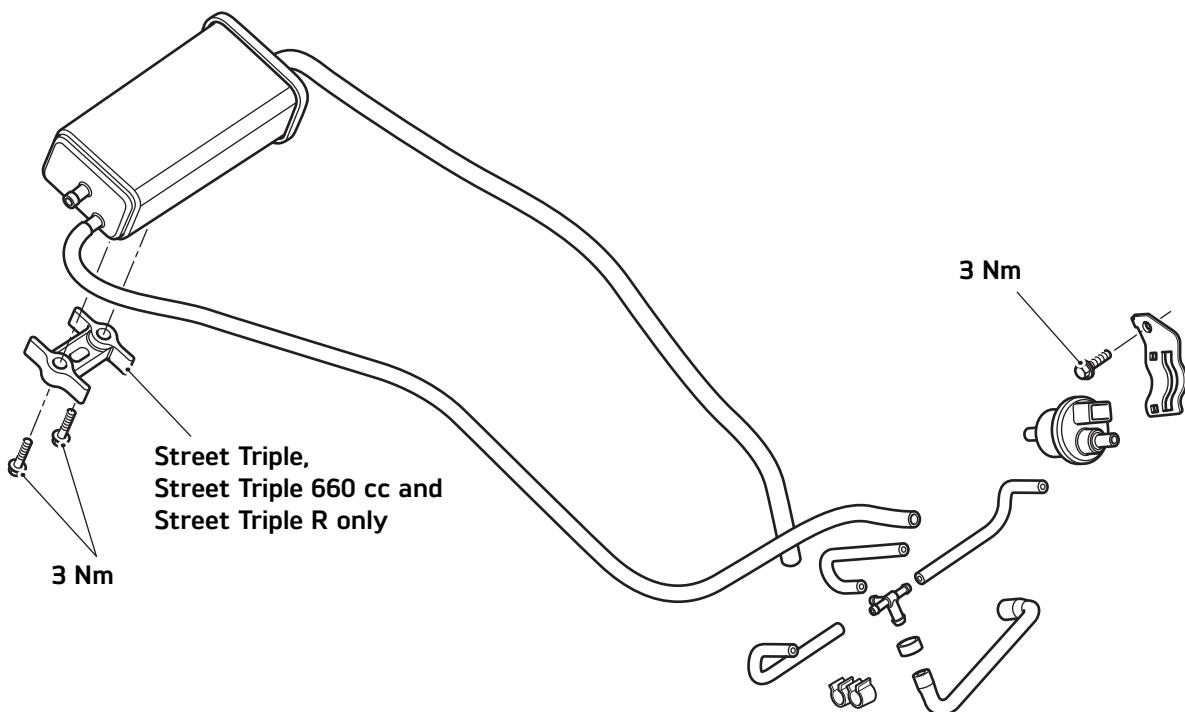


Exploded View - Exhaust System - Street Triple R and Street Triple Rx - Japanese Market Only

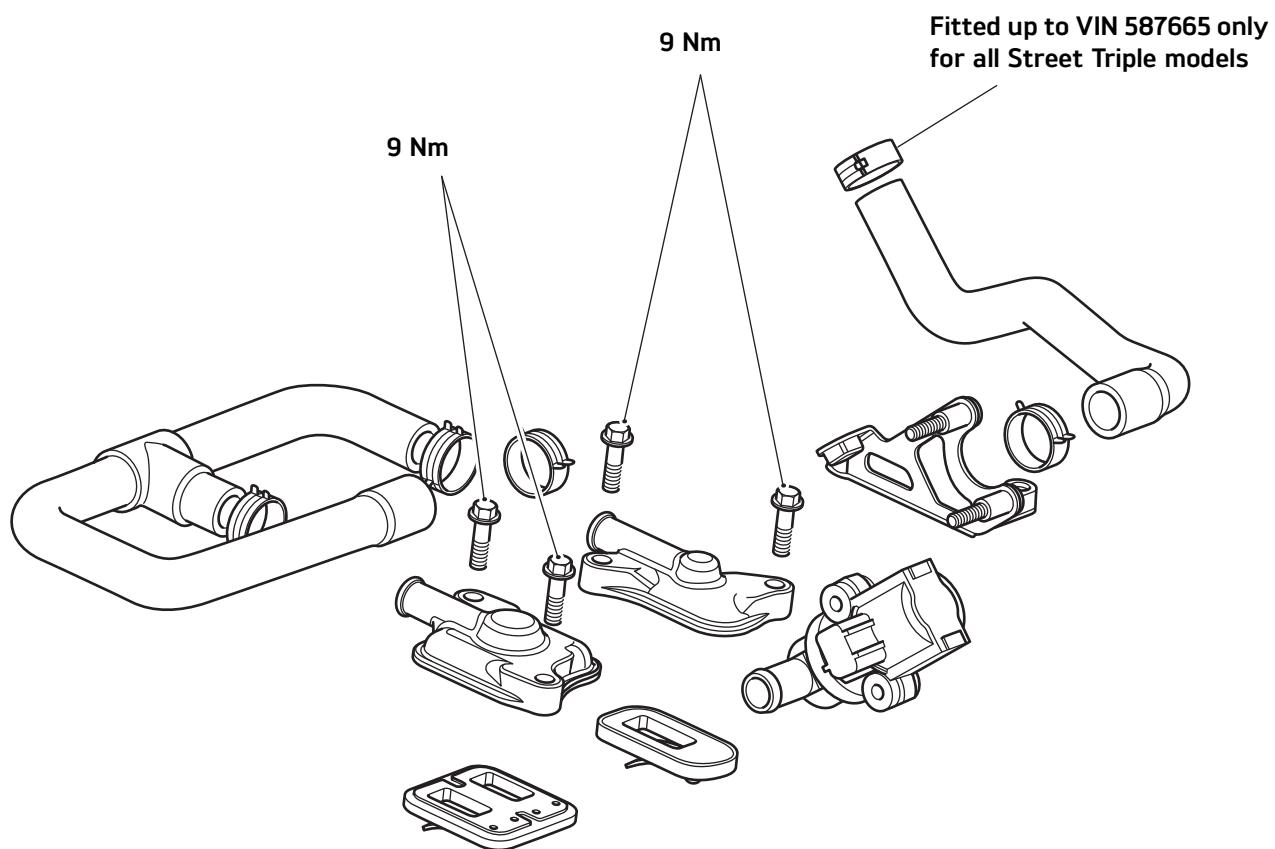


Fuel System/Engine Management

Exploded View - Evaporative System



Exploded View - Secondary Air Injection



Fuel Requirements

Fuel Requirements - all countries except USA

Outside of America, Daytona 675 and Daytona 675 R must be run on 95 RON (or higher) unleaded fuel, and Street Triple, Street Triple 660 cc, Street Triple R and Street Triple Rx must be run on 91 RON (or higher) unleaded fuel.

For the Brazilian markets only: All models must be run on 91 RON (or higher) unleaded fuel.

Fuel Requirements - USA

In the United States of America where the octane rating of fuel is measured in a different way, the following information may be applied:

Daytona 675 and Daytona 675 R are designed to run on unleaded gasoline with a CLC or AKI octane rating (R+M)/2 of 89 or higher.

Street Triple, Street Triple 660 cc, Street Triple R and Street Triple Rx are designed to run on unleaded gasoline with a CLC or AKI octane rating (R+M)/2 of 87 or higher.

Note:

- If knocking or pinking occurs at a steady engine speed under normal load, use a different brand of gasoline or a higher octane rating.



Caution

The use of leaded gasoline is illegal in some countries, states or territories and will invalidate the vehicle and emissions control warranties. Additionally, leaded gasoline will cause damage to emissions control components.

Oxygenated Gasoline

To help in meeting clean air standards, some areas of the U.S. use oxygenated gasoline to help reduce harmful emissions. This model will give best performance when using unleaded gasoline. However, the following should be used as a guide to the use of oxygenated fuels.



Caution

Because of the generally higher volatility of oxygenated fuels, starting, engine response and fuel consumption may be adversely affected by their use. Should any of these difficulties be experienced, run the motorcycle on normal unleaded gasoline.

Ethanol

Ethanol fuel is a mixture of 10% ethanol and 90% gasoline and is often described under the names 'gasohol', 'ethanol enhanced', or 'contains ethanol'. This fuel may be used in Triumph motorcycles.

Methanol



Caution

Fuels containing methanol should not be used in Triumph motorcycles as damage to components in the fuel system can be caused by contact with methanol.

MTBE (Methyl Tertiary Butyl Ether)

The use of gasolines containing up to 15% MTBE (Methyl Tertiary Butyl Ether) is permitted in Triumph motorcycles.

Fuel System/Engine Management

Glossary of Terms

The following terms and abbreviations will be found in this section. Below is given a brief explanation of what some of the more common terms and abbreviations mean.

Air temperature

The air temperature in the air box and intake system.

Air temperature sensor

Sensor located in the airbox to detect the temperature of the incoming air.

ATDC

After Top Dead Centre (TDC).

Ambient air pressure

Pressure of the ambient air.

Battery Voltage

The Voltage at the input to the Electronic Control Module (ECM).

BTDC

Before Top Dead Centre (TDC).

Catalyst

Device placed in the exhaust system which reduces exhaust emissions by stimulating secondary combustion of the exhaust gases.

Closed throttle position

Throttle position at idle (i.e. against end stop), measured as a Voltage and expressed as percentage.

Coolant temperature

The coolant temperature in the cylinder head.

Coolant temperature sensor

Sensor which detects coolant temperature.

Cooling fan status

The on or off condition of the cooling fan.

DTC

Diagnostic Trouble Code.

ECM

Engine Control Module.

Engine speed

The crankshaft revolutions per minute.

EXBV

Exhaust Butterfly Valve.

Fall detection

The fall detection switch will detect if the motorcycle is on its side and will cut power to the ECM immediately.

Freeze frame

A data set captured at the time a Diagnostic Trouble Code (DTC) is set.

Gear position sensor

Gearbox mounted sensor which delivers information to the ECM. This is converted to the gear position value that is displayed on the instrument's gear position indicator and/or neutral lamp.

Idle fuel trim

The percentage above or below the nominal fuel requirement for the volume of air entering at idle.

Idle fueling

Adjustment of fueling at idle to suit the actual air inducted.

Idle reference speed

The target idle speed as determined by the ECM. (It should be the same as the actual idle speed if the motorcycle is operating correctly.)

Ignition advance

The timing of the ignition at the spark plug relative to Top Dead Centre (TDC).

Ignition switch position

The ON or OFF position of either or both the ignition switch and the engine stop switch.

Ignition timing

Same as ignition advance.

Injector pulse time

The time during which an injector remains open (i.e. delivering fuel).

Long term fuel trim

Fueling after adapting to the engine's long term fueling requirements (closed loop only). See also short term fuel trim.

MAP sensor

Manifold Absolute Pressure (the air pressure in the intake system). Measured after the throttle valves. This reading is compared to the ambient pressure reading to allow the ECM to calculate engine load.

MIL

Malfunction Indicator Lamp.

Illuminates when most Diagnostic Trouble Codes (DTCs) are set.

Open circuit

A break in an electrical circuit - current cannot flow.

Over temp

High temperature within the ECM caused by an internal or external failure.

Oxygen Sensor

The oxygen sensor measures the oxygen levels in the exhaust gases and feeds this information to the ECM. Based on this information, adjustments to air/fuel ratio are made.

Primary throttle position sensor

Sensor for the primary (lower) throttle position.

Primary throttle stepper motor

Stepper motor used to vary throttle opening at idle and when the engine is cold.

Purge valve duty cycle

The time the purge valve is open in an open/close cycle, expressed as a percentage of the cycle time.

Road speed sensor

Gearbox mounted sensor which delivers information to the ECM. This is converted to the road speed value that is then displayed on the speedometer.

Secondary air injection

The secondary air injection system helps reduce levels of pollutants in the exhaust gases. It does this by introducing a small amount of air into each exhaust port which promotes further combustion of the fuel mixture in the exhaust system after it has left the combustion chamber.

Sensor supply Voltage

Supply Voltage to the system sensors (nominally 5 Volts).

Short circuit

A short cut in an electrical circuit - current bypasses the intended circuit (usually to ground).

Short term fuel trim

A correction applied to the fuel mixture during closed loop catalyst operation. This, in turn has an effect on the long term fuel trim in that, if an engine constantly requires mixture correction, the long term fuel trim will adapt to this requirement thus reducing the need for constant short term adjustment.

Side stand status

The up or down position of the side stand.

Target dwell time

The actual time from coil on to coil off.

Throttle position

The position of the throttle butterfly given as a percentage of the movement range. When the data is displayed on the diagnostic software, fully open need not be 100% nor fully closed 0%.

Throttle Voltage

Voltage at the throttle potentiometer.

TDC

Top Dead Centre.

Vbatt

Battery Voltage.

Fuel System/Engine Management

Engine Management System

System Description

The Daytona 675, Daytona 675 R, Street Triple, Street Triple 660 cc, Street Triple R and Street Triple Rx models are fitted with an electronic engine management system which encompasses control of both ignition and fuel delivery. The electronic control module (ECM) draws information from sensors positioned around the engine, cooling and air intake systems and precisely calculates ignition advance and fueling requirements for all engine speeds and loads.

In addition, the system has an on-board diagnostic function. For additional information, see page 10-32.

System Sensors

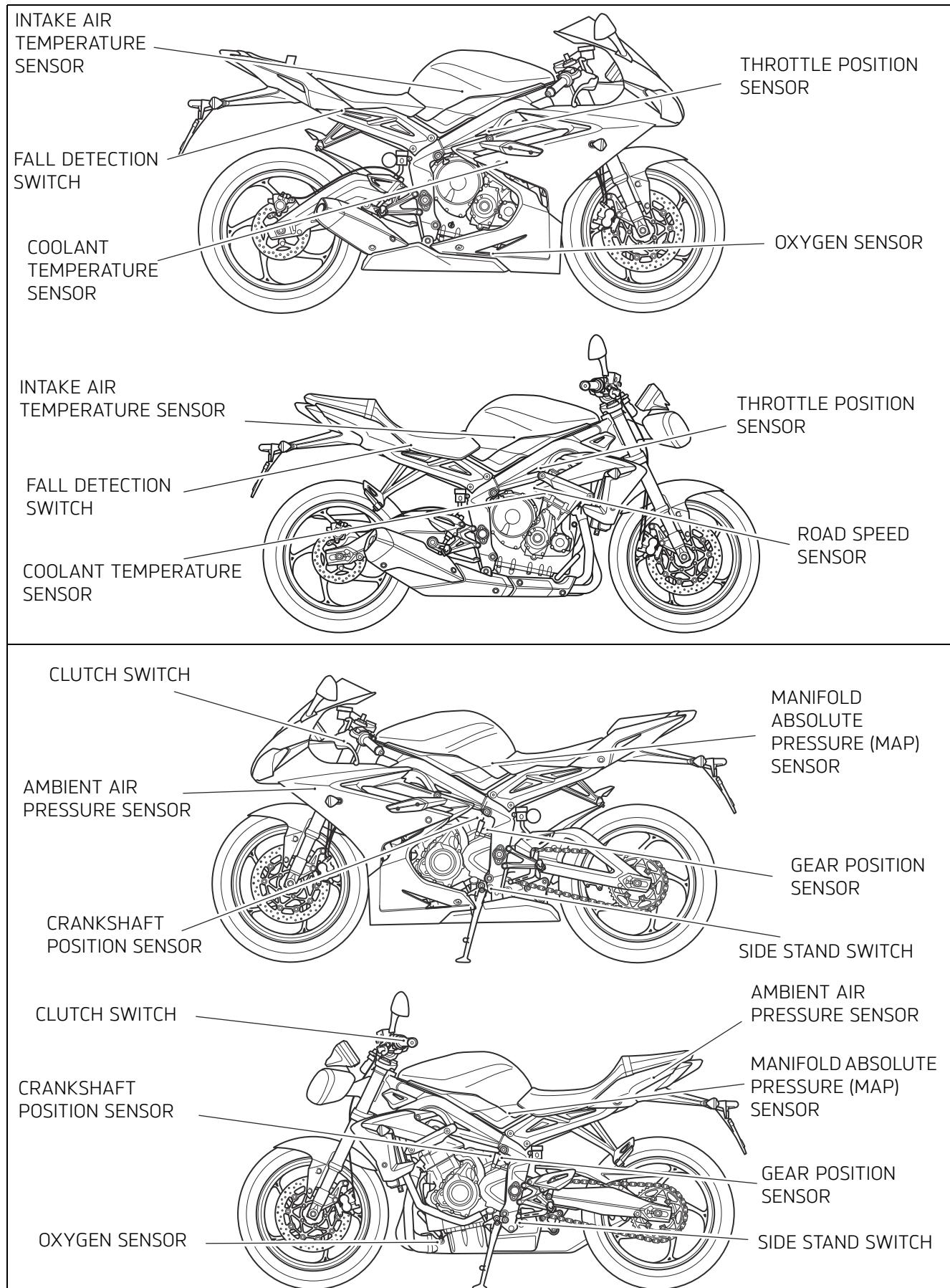
- **Intake air temperature sensor** - situated in the top of the airbox. As the density of the air (and therefore the amount of oxygen available to ignite the fuel) changes with temperature, an intake air temperature sensor is fitted. Changes in air temperature (and therefore air density) are compensated for by adjusting the amount of fuel injected to a level consistent with clean combustion and low emissions.
- **Ambient air pressure sensor - Daytona 675 and Daytona 675 R** - situated behind the cockpit and below the instrument pack. **Street Triple, Street Triple 660 cc, Street Triple R and Street Triple Rx** - situated on the rear subframe, forward of the rear light unit. The ambient air pressure sensor measures atmospheric air pressure. With this information, the amount of fuel injected is adjusted to suit the prevailing conditions.
- **Manifold Absolute Pressure (MAP) sensor** - situated to the left side of the airbox, connected to each of the three throttle bodies by equal length tubes. The MAP sensor provides information to the ECM which is used at shallow throttle angles (very small throttle openings) to provide accurate engine load indications to the ECM. This degree of engine load accuracy allows the ECM to make very small adjustments to fuel and ignition which would otherwise not be possible from throttle angle data alone.
- **Clutch switch** - situated on the clutch lever. The clutch must be pulled in for the starter motor to operate.
- **Crankshaft position sensor** - situated in the alternator cover. The crankshaft position sensor detects movement of teeth attached to the alternator rotor. The toothed rotor gives a reference point from which the actual crankshaft position is calculated. The crankshaft position sensor information is used by the ECM to determine engine speed and

crankshaft position in relation to the point where fuel is injected and ignition of the fuel occurs.

- **Engine coolant temperature sensor** - situated at the rear of the cylinder head. Coolant temperature information, received by the ECM, is used to optimise fueling at all engine temperatures and to calculate hot and cold start fueling requirements.
- **Throttle position sensor** - situated at the right end of the throttle body. Used to relay throttle position information to the ECM. Throttle opening angle is used by the ECM to determine fueling and ignition requirements for all throttle positions.
- **Road speed sensor (non ABS models only)** - situated in the upper crankcase, in front of the engine breather. The road speed sensor provides the ECM with data from which road speed is calculated and displayed on the speedometer.
- **Oxygen sensor** - situated in the exhaust header system upstream of the catalyst. The oxygen sensor constantly feeds information to the ECM on the content of the exhaust gases. Based on this information, adjustments to the air/fuel ratio are made.
- **Side stand switch** - situated at the top of the side stand leg. If the side stand is in the down position, the engine will not run unless the transmission is in neutral.
- **Gear position sensor** - situated in the upper crankcase, behind the gearbox output sprocket cover, on the left hand side of the engine. The gear position sensor provides the ECM with selected gear information. This is used to prevent the engine from starting if the transmission is in gear. The sensor also provides information to the gear position indicator and the neutral lamp in the instruments.
- **Fall detection switch** - situated under the rider's seat, next to the fuse box. The fall detection switch will detect if the motorcycle is on its side and will cut power to the ECM immediately. This prevents the engine from running and the fuel pump from delivering fuel. In the event of a fall, the switch is reset by returning the bike to an upright position and switching the ignition off then back on again.
- **Quickshifter (if fitted)** - situated on the gear change linkage. The quickshifter is a momentary action switch which is activated when pressure is applied to the gear change pedal. When activated, the quickshifter will trigger a momentary engine cut to allow gears to engage without closure of the throttle or operation of the clutch. The quickshifter will only operate for up-changes and only then if the engine speed is greater than 2,500 rpm.

Fuel System/Engine Management

Sensor Locations



Fuel System/Engine Management

System Actuators

In response to signals received from the sensors, the ECM controls and directs messages to a series of electronic and electromechanical actuators. The function and location of the actuators is given below.

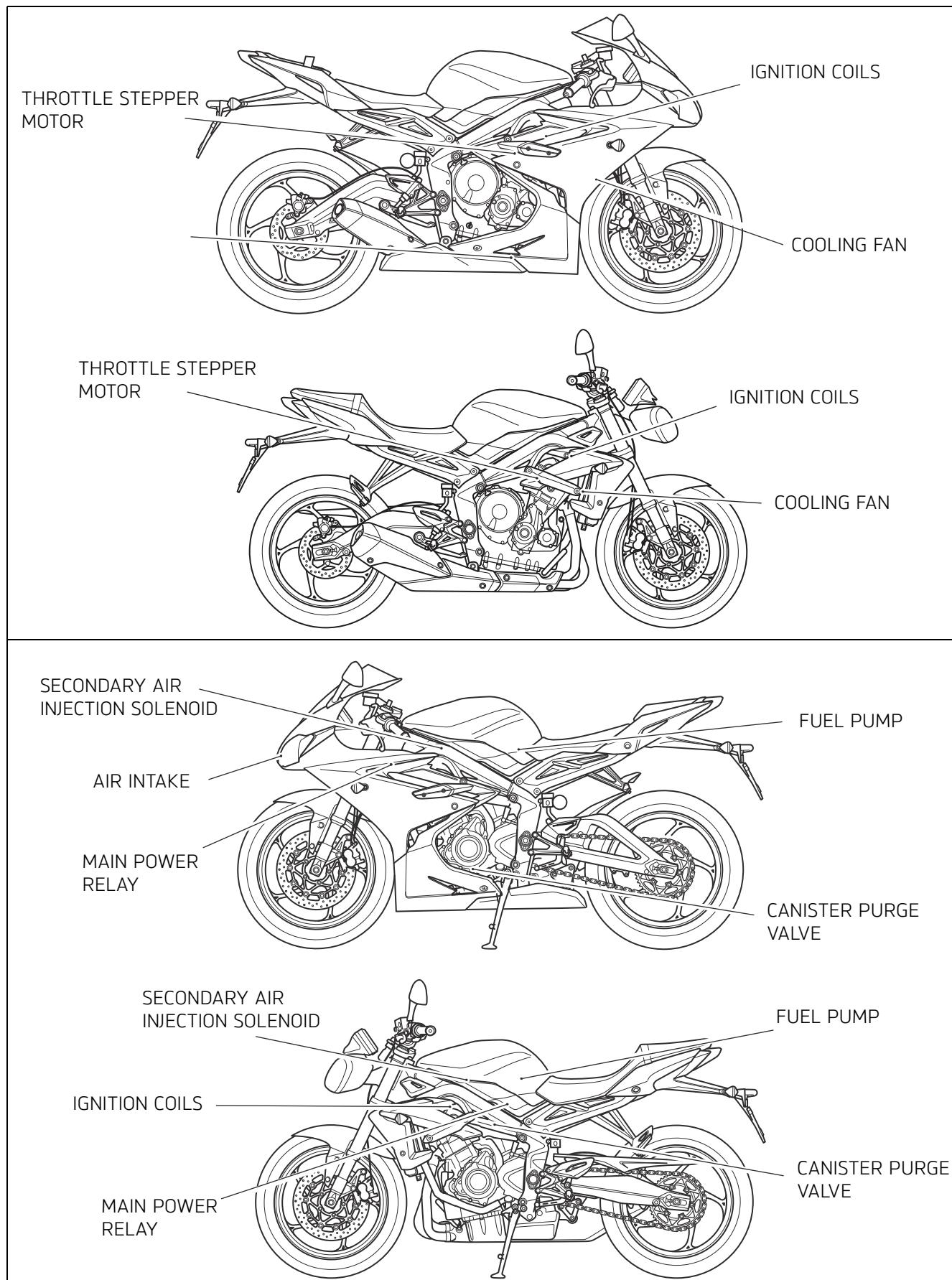
- **Throttle stepper motor** - situated between the throttle bodies of cylinders two and three. The throttle stepper actuates a cam/lever which causes variations in the closed throttle position. Although used primarily to ensure target idle speed is maintained, it also increases throttle opening when the engine is cold.
- **Canister purge valve (certain models only)** - situated in the vapour return line between the carbon canister and the throttle bodies. The purge valve controls the return of vapour which has been stored in the carbon canister during the period when the engine is switched off. The valve is 'pulsed' by the ECM to give control over the rate at which the canister is purged.
- **Injectors - Daytona 675 and Daytona 675 R** - The engine is fitted with six injectors, three are located on the throttle body and three are located in the airbox upper section. The spray pattern of the injectors is fixed but the length of time each injector can remain open is variable according to operating conditions. The duration of each injection is calculated by the ECM using data received from the various sensors in the system.
- **Injectors - Street Triple, Street Triple 660 cc, Street Triple R and Street Triple Rx** - located on the throttle body. The engine is fitted with three injectors. The spray pattern of the injectors is fixed but the length of time each injector can remain open is variable according to operating conditions. The duration of each injection is calculated by the ECM using data received from the various sensors in the system.
- **Ignition coils** - plug-top coils are located in the cam cover. There are three coils fitted, one for each spark plug. The ECM controls the point at which the coils are switched on and off. In calculating the switch-on time, the ECM allows sufficient time for the coils to charge to a level where a spark can be produced. The coils are switched off at the point of ignition, the timing of which is optimised for good engine performance.
- **EMS main relay** - situated under the rider's seat and in front of the battery. When the ignition is switched on, the EMS main relay is powered up to provide a stable Voltage supply for the ECM. When the ignition is turned off, the ECM carries out a power down sequence during which the EMS main relay remains powered by the ECM for 1 minute. The ECM power down sequence includes: writing the adaption data to ECM memory and referencing the position of the throttle stepper motor.
- **Fuel pump** - located inside the fuel tank. The electric pump delivers fuel into the fuel system, via a pressure regulator, at a constant 3.5 bar pressure. The pump is run continuously when the engine is operating and is also run briefly when the ignition is first switched on to ensure that 3.5 bar is available to the system as soon as the engine is cranked. Fuel pressure is controlled by a regulator also situated inside the fuel tank.
- **Cooling fan** - located behind the radiator. The ECM controls switching on and off of the cooling fan in response to a signal received from the coolant temperature sensor. When the coolant temperature rises to a level where the cooling effect of natural airflow is insufficient, the cooling fan is turned on by the ECM. When the coolant temperature falls sufficiently, the ECM turns the cooling fan off. The fan only becomes operational when the engine is running. It will not operate at any other time.
- **Secondary air injection solenoid** - located above the camshaft cover. The secondary air injection solenoid controls airflow through the secondary air injection system.
- **Exhaust butterfly valve - Daytona 675 and Daytona 675 R only** - is an integral part of the exhaust silencer. The purpose of the exhaust valve is to improve low down power delivery. At idle, the exhaust valve is 30% open, rising to approximately 50% open at 4,500 rpm, and fully open at 7,000 rpm and above. The profile that the exhaust valve follows has been designed to give no reduction of torque at full throttle.

Note:

- **In this system, the starter lockout system (clutch switch, gear position sensor, side stand switch) all operate through the engine management ECM.**

Fuel System/Engine Management

Actuator Locations



Fuel System/Engine Management

Circuit Diagram - Engine Management System - Daytona 675 and Daytona 675 R

Key To Wiring Circuit Diagram

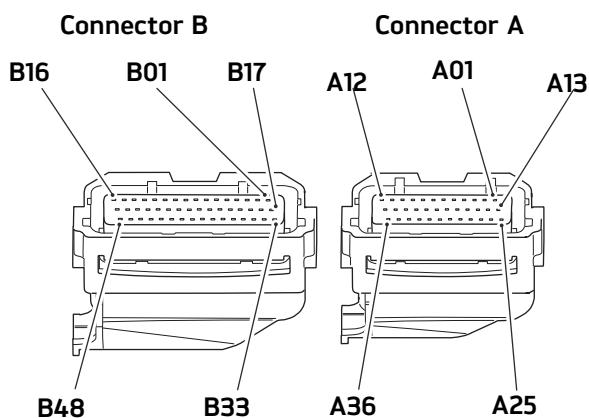
Key	Item Description
1	Engine control module
2	Crankshaft position sensor
3	Instrument assembly
4	Diagnostic connector
5	ABS modulator
6	Ignition switch
7	Immobiliser/TPMS control module
8	Left hand switch housing/clutch switch
9	Side stand switch
10	Fuel level sender
11	Fall detection switch
12	Ambient air pressure sensor
13	MAP sensor
14	Throttle position sensor
15	Oxygen sensor
16	Intake air temperature sensor
17	Coolant temperature sensor
18	Quickshifter
19	Gear position sensor
20	Exhaust valve actuator
21	Idle speed control stepper motor
22	Fuel pump relay
23	Fuel pump
24	Cooling fan relay
25	Cooling fan
26	Fuel injector - cylinder 3
27	Second fuel injector - cylinder 3
28	Fuel injector - cylinder 2
29	Second fuel injector - cylinder 2
30	Fuel injector - cylinder 1
31	Second fuel injector - cylinder 1
32	Ignition coil - cylinder 3
33	Ignition coil - cylinder 2
34	Ignition coil - cylinder 1
35	Secondary air injection solenoid valve
36	Oxygen sensor heater

Key	Item Description
37	Purge valve
38	Engine Management System (EMS) main relay

Key To Wiring Colour Codes

Key	Wiring Colour
B	Black
U	Blue
N	Brown
G	Green
S	Slate/Grey
O	Orange
K	Pink
R	Red
P	Purple
W	White
Y	Yellow
LG	Light Green
LU	Light Blue

ECM Connector Pin Numbering

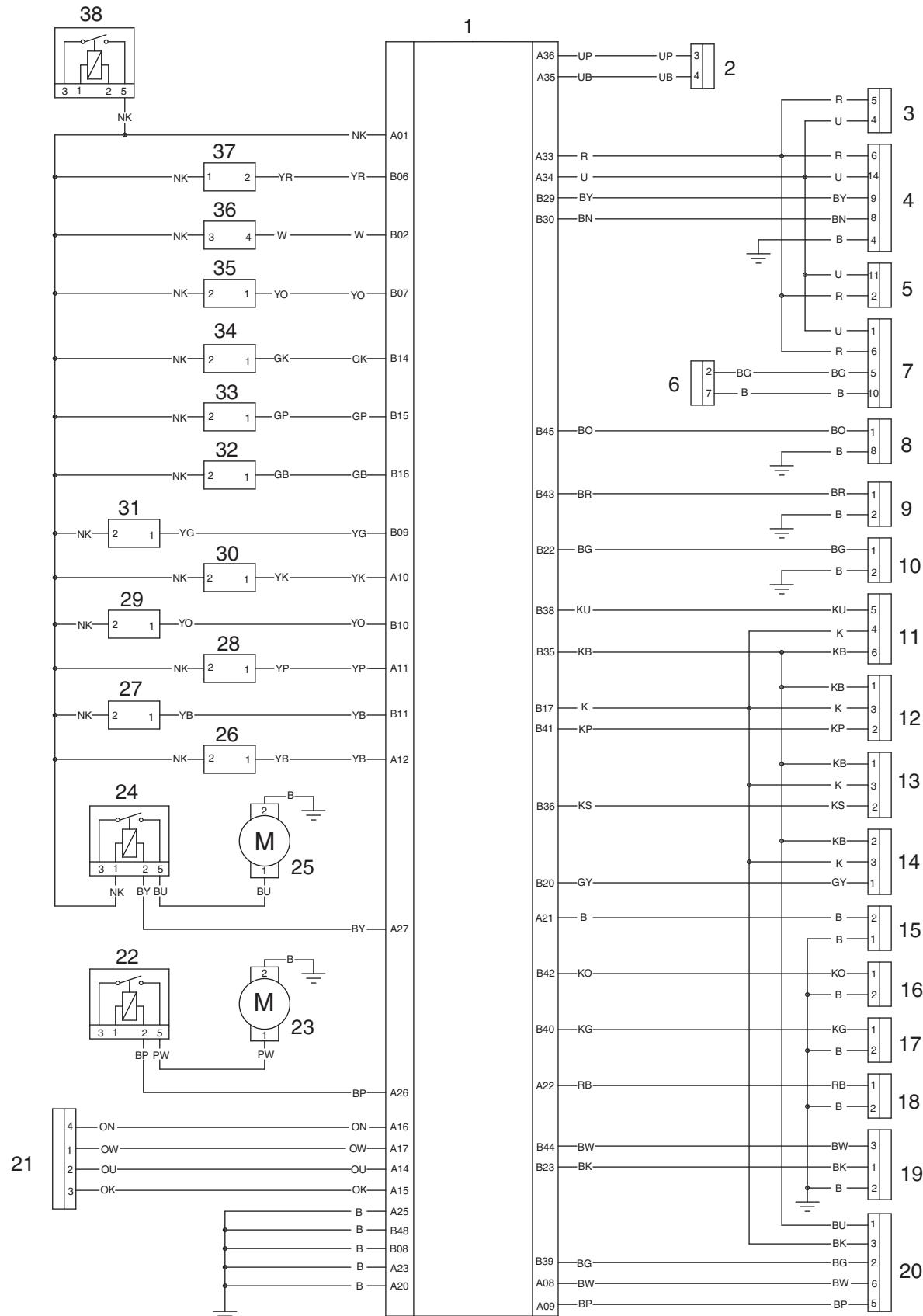


The above illustration shows the pin numbering system used in the engine management circuit diagram.

The smaller connector's pins are prefixed A and the larger connector's pins B. As viewed on the mating face with the ECM (as per the illustration), pins are numbered from right to left with number one in the top right corner.

Fuel System/Engine Management

Circuit Diagram - Engine Management System - Daytona 675 and Daytona 675 R



Fuel System/Engine Management

Circuit Diagram - Engine Management System - Daytona 675 and Daytona 675 R - With Four Pin Gear Position Sensor

Key To Wiring Circuit Diagram

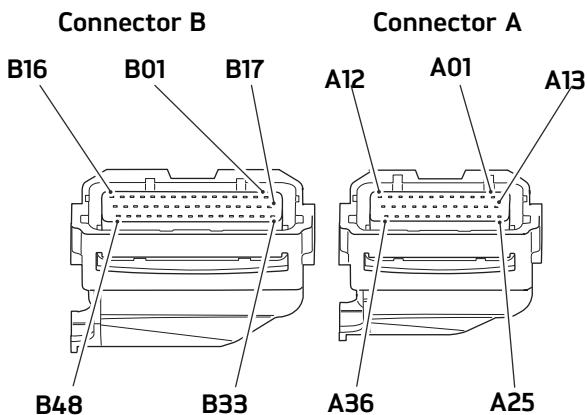
Key	Item Description
1	Engine control module
2	Crankshaft position sensor
3	Instrument assembly
4	Diagnostic connector
5	ABS modulator
6	Ignition switch
7	Immobiliser/TPMS control module
8	Left hand switch housing/clutch switch
9	Side stand switch
10	Fuel level sender
11	Fall detection switch
12	Ambient air pressure sensor
13	MAP sensor
14	Throttle position sensor
15	Oxygen sensor
16	Intake air temperature sensor
17	Coolant temperature sensor
18	Quickshifter
19	Gear position sensor
20	Exhaust valve actuator
21	Idle speed control stepper motor
22	Fuel pump relay
23	Fuel pump
24	Cooling fan relay
25	Cooling fan
26	Fuel injector - cylinder 3
27	Second fuel injector - cylinder 3
28	Fuel injector - cylinder 2
29	Second fuel injector - cylinder 2
30	Fuel injector - cylinder 1
31	Second fuel injector - cylinder 1
32	Ignition coil - cylinder 3
33	Ignition coil - cylinder 2
34	Ignition coil - cylinder 1
35	Secondary air injection solenoid valve
36	Oxygen sensor heater

Key	Item Description
37	Purge valve
38	Engine Management System (EMS) main relay

Key To Wiring Colour Codes

Key	Wiring Colour
B	Black
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R	Red
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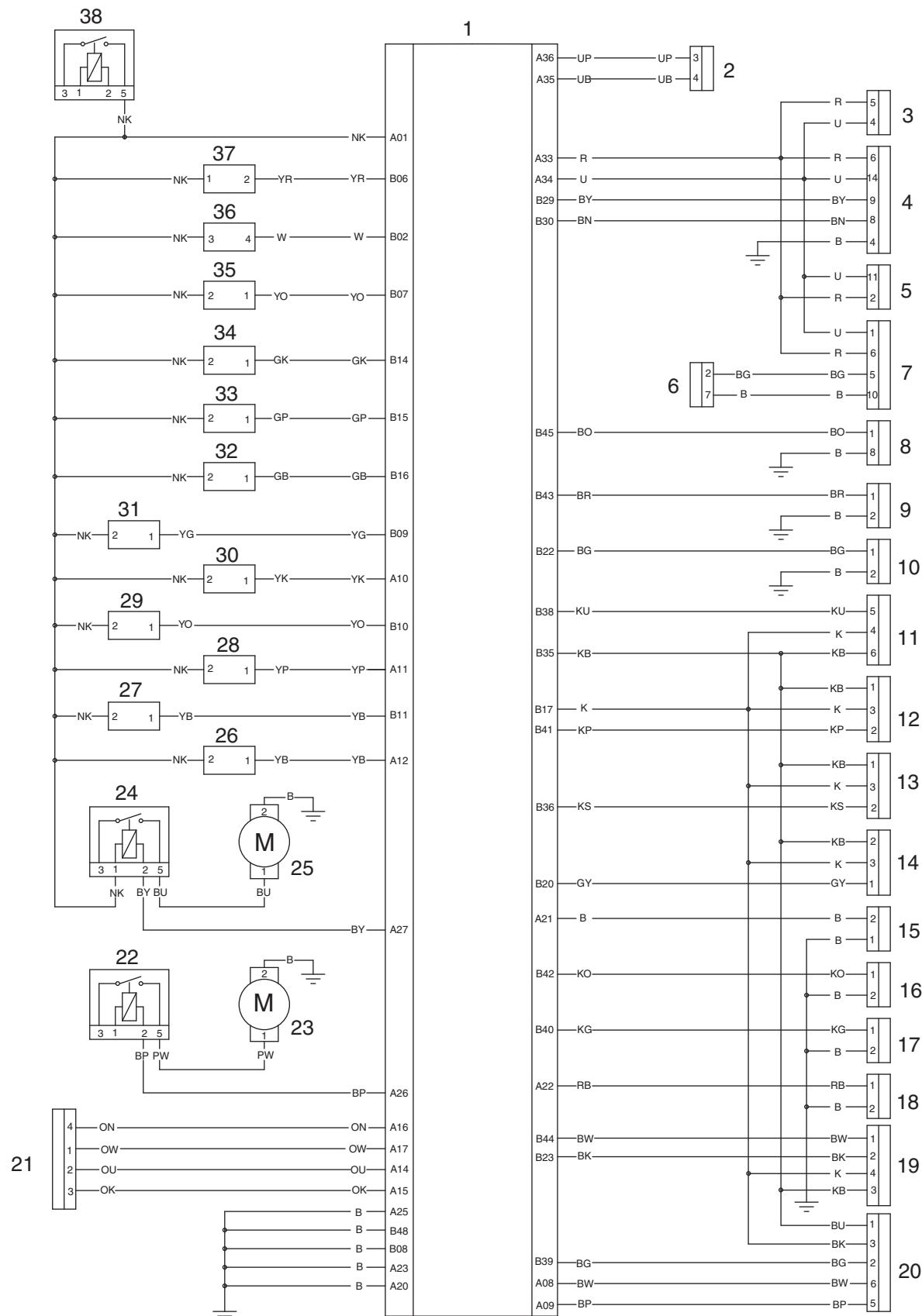
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Circuit Diagram - Engine Management System - Daytona 675 and Daytona 675 R - With Four Pin Gear Position Sensor



Fuel System/Engine Management

Circuit Diagram - Engine Management System - Street Triple, Street Triple 660 cc, Street Triple R and Street Triple Rx

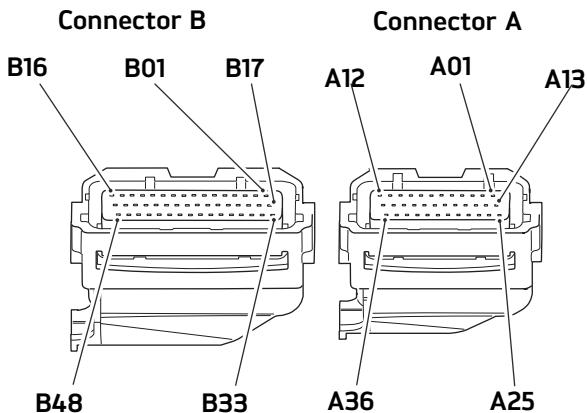
Key To Wiring Circuit Diagram

Key	Item Description
1	Engine control module
2	Instrument assembly
3	Diagnostic connector
4	ABS modulator
5	Ignition switch
6	Immobiliser/TPMS control module
7	Left hand switch housing/clutch switch
8	Side stand switch
9	Fuel level sender
10	Fall detection switch
11	Ambient air pressure sensor
12	MAP sensor
13	Throttle position sensor
14	Oxygen sensor
15	Intake air temperature sensor
16	Coolant temperature sensor
17	Quickshifter
18	Gear position sensor
19	Idle speed control stepper motor
20	Fuel pump relay
21	Fuel pump
22	Cooling fan relay
23	Cooling fan
24	Fuel injector - cylinder 3
25	Fuel injector - cylinder 2
26	Fuel injector - cylinder 1
27	Ignition coil - cylinder 3
28	Ignition coil - cylinder 2
29	Ignition coil - cylinder 1
30	Secondary air injection solenoid valve
31	Oxygen sensor heater
32	Purge valve
33	Engine Management System (EMS) main relay
34	Crankshaft position sensor

Key To Wiring Colour Codes

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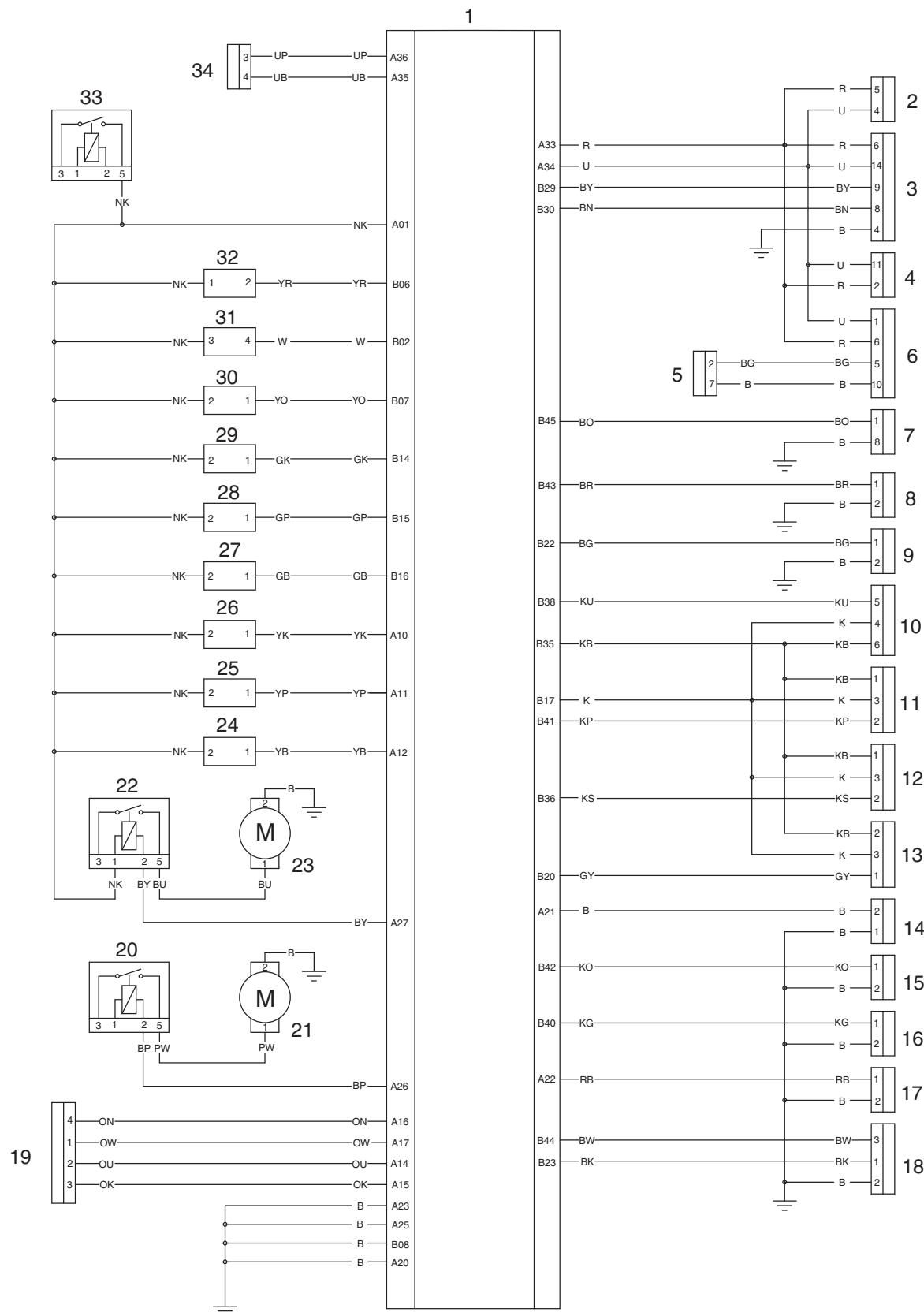
ECM Connector Pin Numbering



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Circuit Diagram - Engine Management System - Street Triple, Street Triple 660 cc, Street Triple R and Street Triple Rx



Fuel System/Engine Management

Circuit Diagram - Engine Management System - Street Triple, Street Triple 660 cc, Street Triple R and Street Triple Rx - With Four Pin Gear Position Sensor

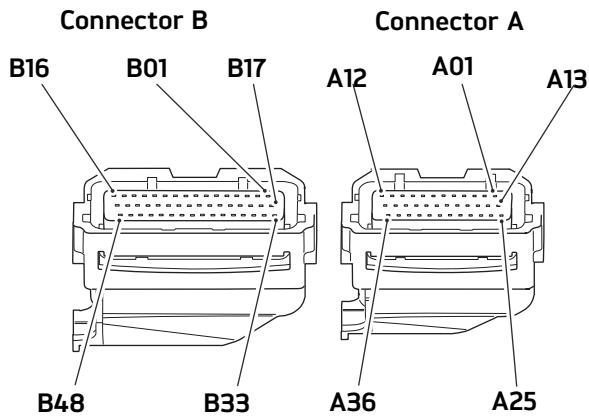
Key To Wiring Circuit Diagram

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3	Diagnostic connector
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14	Oxygen sensor
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16	Coolant temperature sensor
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18	Gear position sensor
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21	Fuel pump
22	Cooling fan relay
23	Cooling fan
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29	Ignition coil - cylinder 1
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32	Purge valve
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34	Crankshaft position sensor

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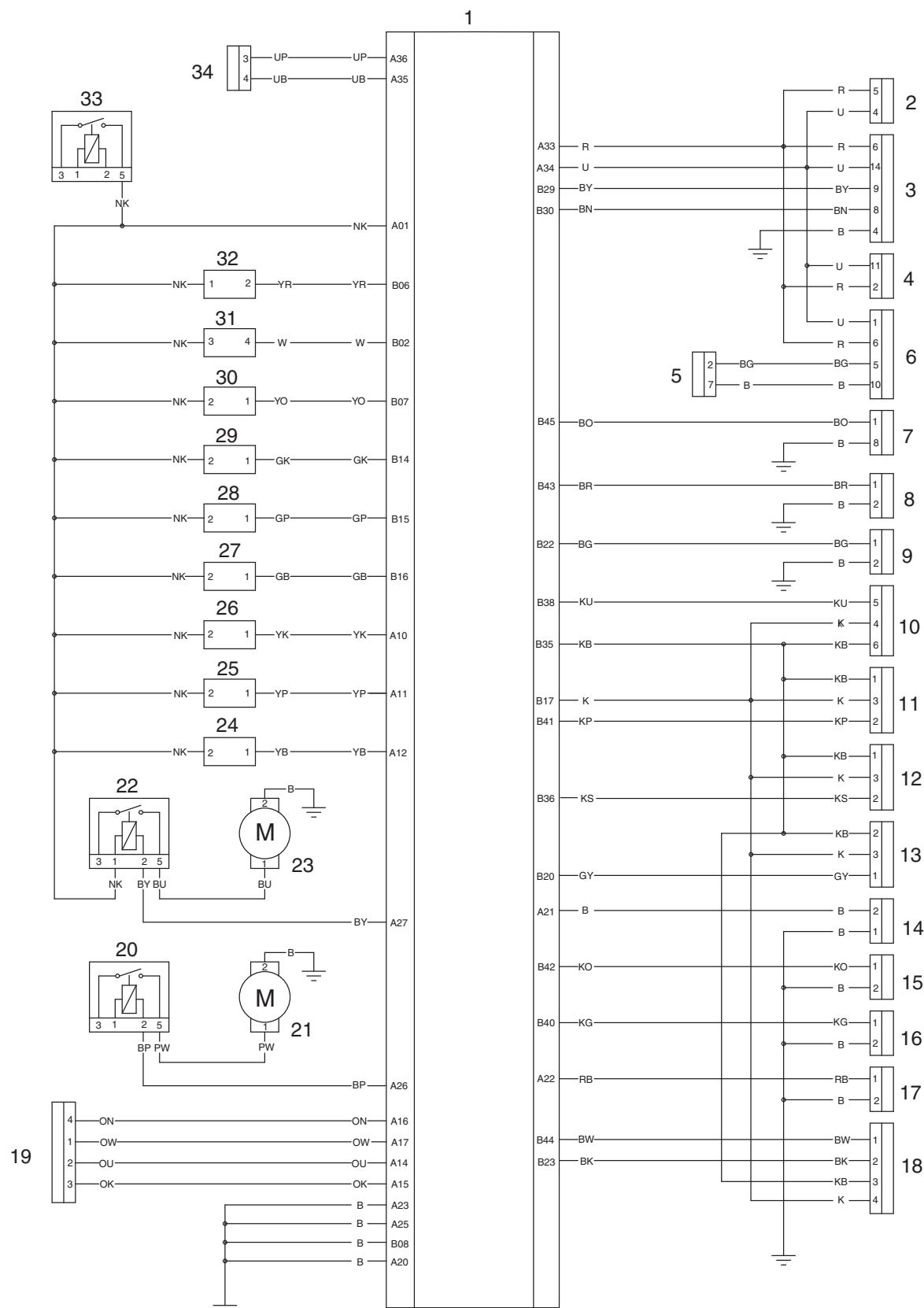
ECM Connector Pin Numbering



The above illustration shows the pin numbering system used in the engine management circuit diagram.

The smaller connector's pins are prefixed A and the larger connector's pins B. As viewed on the mating face with the ECM (as per the illustration), pins are numbered from right to left with number one in the top right corner.

Circuit Diagram - Engine Management System - Street Triple, Street Triple 660 cc, Street Triple R and Street Triple Rx - With Four Pin Gear Position Sensor



Fuel System/Engine Management

System Diagnostics

The engine management system has an on-board diagnostics feature which allows service technicians to retrieve stored data from the ECM using the Triumph diagnostic software. **Full details of the Triumph diagnostic software operation and how to interpret the results are given in the Triumph Diagnostic Tool User Guide.**

The software is connected, via an interface cable, to the motorcycle using a dedicated diagnostic plug situated beneath the seat. By using a dedicated plug, no electrical connectors associated with the system are disturbed, reducing potential connector damage.

The software allows the user to retrieve data associated with the system sensors and actuators, test various component functions, read build data and make minor adjustments to the set-up of the system. The data and tests available are described on the following pages.

On-board Fault Detection System

The on-board diagnostic system has two stages to fault detection. When a fault is detected, the DSM (Diagnostic Status Manager) raises a flag to indicate that a fault is present and increments a counter. The counter checks the number of instances that the fault is noted. For example, if there is a fault in the crankshaft position sensor, the counter will increment its count each time the crankshaft turns through 360°, provided the fault is still present.

When the count begins, the fault is detected but not confirmed. If the fault continues to be detected and the count reaches a pre-determined threshold, the fault becomes confirmed. If the fault is an emissions related fault or a serious malfunction affecting engine performance, a DTC (Diagnostic Trouble Code) and freeze frame data will be logged in the ECM's memory and the MIL (Malfunction Indicator Lamp) on the motorcycle instrument panel is illuminated. Once a fault is confirmed, the number of warm-up cycles made by the engine is counted. If the fault clears, the warm-up cycle counter will extinguish the MIL (Malfunction Indicator Lamp) at a pre determined count, and erase the DTC and freeze frame data from the ECM memory at another (higher) count.

A single warm-up cycle is deemed to have taken place when the following criteria have been met:

- The coolant temperature must be raised to 72°C or more.
- The coolant temperature must have risen by 23°C or more from its start temperature, when 72°C is reached.
- A controlled power-down sequence must take place.

Note:

- When a fault has been rectified, the MIL will remain illuminated until sufficient non-fault warm-up cycles have taken place to turn it off. The MIL will be immediately extinguished if, after first rectifying the fault, the DTC (Diagnostic Trouble Code) that caused the MIL illumination is erased from the ECM memory using the Triumph diagnostic software.

Note:

- In most cases, when a fault is detected, the engine management system will revert to a limp-home mode. In this mode, the engine will still function though the performance and fuel economy may be marginally affected. In some cases, the rider may not notice any appreciable difference from normal operation.

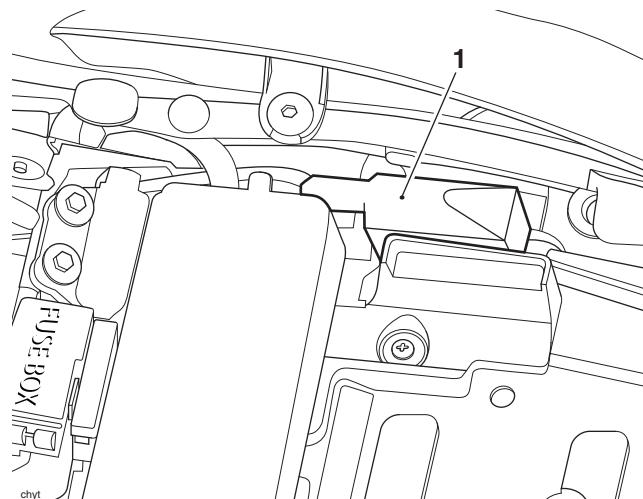
Diagnostic Tool Connection

Note:

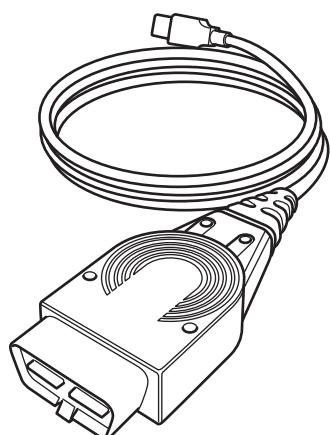
- For Daytona 675 and Daytona 675 R: If the evaporative canister is fitted, it may be necessary to detach it from the frame for easier access to the diagnostic connector.

To connect the T3880057 - Triumph Diagnostic Interface to the motorcycle:

1. Remove the seat (see page 16-22 for Daytona 675, Daytona 675 R and Street Triple Rx, see page 16-23 for Street Triple, Street Triple 660 cc and Street Triple R).
2. Release the diagnostic connector from its locating tang.



1. Diagnostic connector (Street Triple shown)
3. Plug the diagnostic interface directly in to the diagnostic connector.



Diagnostic Interface

4. When the diagnostic session is completed, disconnect the T3880057 - Triumph Diagnostic Interface.
5. Refit the diagnostic connector to its locating tang.
6. Refit the seat (see page 16-22 for Daytona 675, Daytona 675 R and Street Triple Rx, see page 16-24 for Street Triple, Street Triple 660 cc and Street Triple R).

Fuel System/Engine Management

Triumph Diagnostic Software

Described on the following pages is the range of information which can be retrieved from the ECM's memory and the adjustments which can be performed using the Triumph diagnostic software.

The tables indicate which tests are performed by the on-board system and what information can be retrieved by the Triumph diagnostic software.

Note:

- Full details of how to operate the software and how to interpret the data can be found in the Triumph Diagnostic Tool User Guide, which can be downloaded by authorised Triumph dealers from www.triumphonline.net.

Build Data

The **Build Data** screen will display the following information:

- Motorcycle model
- Vehicle Identification Number (VIN)
- ECM type
- ECM ID
- ECM serial number
- Tune number
- Date of last tune download
- Total tune downloads since manufacture
- The lock status of the ECM (ECM Locked, Unlocked or Not Applicable).

Current Data

The data available under Current Data is:

Function Examined	Result Reported (Scale)
Fuel system status 1	open or closed loop operation
Calculated load value	%
Engine coolant temperature	°C
Short term fuel trim - bank 1	%
Intake manifold absolute pressure	mmHg
Engine speed	RPM
Vehicle speed	km/h
Ignition timing advance - cylinder 1	degrees
Intake air temperature	°C
Absolute throttle position	%
Bank 1 - oxygen sensor 1	Volts
Bank 1 - oxygen sensor 1 - short term fuel trim	%

Sensor Data

When using this function it is possible to check the status of various sensors and actuators.

The data sets are divided into eight groups - Sensor Voltages; Sensor Readings; Injector Data; Ignition Data; Idle Speed and Throttle Data; Inputs; Outputs and Adaption Status. Each of these screens is described on the following pages.

Sensor Voltages

The data available under Sensor Voltages is:

Item Checked	Result Unit
Battery Voltage	Volts
Voltage from ignition switch to ECM	Volts
Air temperature sensor Voltage	Volts
Coolant temperature sensor Voltage	Volts
Atmospheric pressure sensor Voltage	Volts
Manifold absolute pressure sensor 1 Voltage	Volts
Manifold absolute pressure sensor 2 Voltage	Volts
Throttle position sensor Voltage	Volts
Fuel level sensor Voltage	Volts
Oxygen sensor 1 output Voltage	Volts
Exhaust butterfly valve sensor Voltage†	Volts

† Applies to models fitted with an exhaust butterfly valve only. All other models will show **Not Applicable** in this field.

Sensor Readings

The data available under Sensor Readings is:

Item Checked	Result Unit
Air temperature	°C
Coolant temperature	°C
Atmospheric (ambient air) pressure	mmHg
Short term fuel trim†	%
Manifold absolute pressure (one reading per cylinder)	mmHg
Low fuel light	on/off
Oxygen sensor 1 short term fuel trim	%
Oxygen sensor 1 heater status	on/off
Exhaust butterfly valve sensor Voltage†	%

† Applies to models fitted with an exhaust butterfly valve only. All other models will show **Not Applicable** in this field.

Fuel System/Engine Management

Injector Data

The data available under Injector Data is:

Item Checked	Result Unit
Injector 1 pulse time	milliseconds
Injector 2 pulse time	milliseconds
Injector 3 pulse time	milliseconds
Second injector 1 pulse time, Daytona 675 and Daytona 675 R only	milliseconds
Second injector 2 pulse time, Daytona 675 and Daytona 675 R only	milliseconds
Second injector 3 pulse time, Daytona 675 and Daytona 675 R only	milliseconds

Ignition Data

The data available under Ignition Data is:

Item Checked	Result Unit
Ignition timing cyl 1	degrees BTDC
Ignition timing cyl 2	degrees BTDC
Ignition timing cyl 3	degrees BTDC
Coil dwell time	milliseconds

Idle Speed and Throttle Data

The data available under Idle Speed and Throttle Data is:

Item Checked	Result Unit
Engine speed	RPM
Idle reference speed	RPM
Idle speed control current steps	numeric
Idle speed control target steps	numeric
Throttle position	% open
Secondary air injection status	SAI on/off

Inputs

The data available under Inputs is:

Item Checked	Result Unit
Starter switch status	switch on/off
Side stand status	up/down
Fall detection switch status	normal/over
Clutch switch status	release/grip
Neutral switch status	gear/neutral
Gear position status	numeric value or neutral
Vehicle speed	km/h
Calculated load	%

Fuel System/Engine Management

Outputs

The data available under Outputs is:

Function Examined	Result Unit
EMS main relay status	relay on/off
Fuel pump relay status	on/off
Starter relay status	starter on/off
Malfunction indicator light status	MIL on/off
Cooling fan status	fan on/off
Purge valve duty cycle	%
Throttle actuator motor internal relay	on/off
Accessory control relay status	relay on/off
Headlight relay status	headlight on/off

Adaption Status

Because the fuel system is adaptive, the engine management system is able to automatically adjust to new working conditions, such as changes in altitude, component wear, air leaks etc. This screen displays information on the adaption status of the vehicle which will show if it has adapted or not.

Function Examined	Report Method
Closed throttle position adapted	adapted/not adapted
Idle speed control adaption status	%
Oxygen sensor 1 adaption range (off idle)	%
Oxygen sensor 1 adaption range (idle)	%
Oxygen sensor 1 adaption status (off idle)	%
Oxygen sensor 1 adaption status (idle)	%

Fuel System/Engine Management

Function Tests

The system allows the diagnostic software to perform a series of function tests on various actuators in the engine management system. In some cases it is necessary to make a visual observation of a component and in others, if faults are present, DTCs will be logged.

The function tests available are:

Function Examined	Report Method
Instrument panel	Observe instrument panel, refer to Service Manual
Idle air control stepper motor†	Observe throttle position/Stored fault code*
Purge valve†	Listen for valve operation/Stored fault code*
Fuel pump - priming	Listen for fuel pump operation/Stored fault code*
Fuel pump - continuous operation	Fuel pressure test/Listen for fuel pump operation/Stored fault code*
Cooling fan control†	Observe the cooling fan/Stored fault code*
Secondary air injection†	Listen for valve operation/Stored fault code*
Exhaust butterfly valve actuator†	Listen or observe for exhaust butterfly valve actuator operation/Stored fault code*

* If a fault is detected.

† Test will only be displayed if the component is fitted.

Instrument Panel Function Test

On the diagnostic software navigate to and select the FUNCTION TESTS option.

Click the start button and observe the instruments for the following:

- tachometer needle move to 7,500 rpm
- the neutral indicator and fuel warning with the malfunction indicator light (MIL) lights alternate on and off
- coolant temperature increments up to maximum temperature
- coolant warning light illuminates when coolant temperature gauge is at maximum
- end of test. Instruments return to normal operation.

Adjust Tune

Using the Triumph diagnostic software, it is possible to:

- reset the adaptions
- balance the throttle bodies.

Further functions are provided to allow correct replacement and adjustment of the:

- throttle position sensor
- idle speed control stepper motor.

These functions are needed as, after replacement of the parts concerned, adjustments have to be made to specific Voltage settings, with the throttles set in a specific position.

To reset adaptions, see page 10-148.

To replace and adjust the throttle position sensor, see page 10-140.

To replace and adjust the ISC (Idle Speed Control) stepper motor, see page 10-145.

To balance the throttles, see page 10-138.

To adjust the exhaust butterfly valve cables, see page 10-175.

Fuel System/Engine Management

Freeze frame Data

Freeze frame data is stored at the time a DTC is recorded (confirmed) by the ECM. If multiple DTCs are recorded, the freeze frame data which is stored will relate to the first recorded DTC only.

By calling up freeze frame data associated with the first recorded DTC, the technician can check the engine condition at the time the fault occurred. The data available is:

Function Examined	Result Reported (Scale)
DTC	Diagnostic Trouble Code (DTC) number
Fuel system status 1	open or closed loop operation
Calculated load	%
Coolant temperature	°C
Short term fuel trim - bank 1	%
Intake manifold absolute pressure	mmHg
Engine speed	RPM
Vehicle speed	km/h
Ignition advance	degrees
Intake air temperature	°C
Throttle position	%
Oxygen sensor 1 output Voltage	Volts
Oxygen sensor 1 short term fuel trim	%

Fuel System/Engine Management

Diagnostic Trouble Codes

Diagnostic trouble codes (DTCs) are logged in the ECM memory when there is a confirmed fault in the system. The codes are reported to the Triumph diagnostic software as a four digit code.

As mentioned earlier, when the system detects a fault, it begins to count the number of times the fault occurs before illuminating the MIL and storing a fault code.

Similarly, if a fault clears, the ECM also records this fact and will turn off the MIL when sufficient no-fault warm-up cycles have taken place. Any fault codes will remain in the ECM memory until the required number of no-fault warm-up cycles have taken place. The number of warm-up cycles required to extinguish the MIL will always be less than the number required to remove a DTC from the ECM memory. DTCs can be removed at any time using the Triumph diagnostic software.

The system will log the Diagnostic Trouble Codes listed below/over:

Diagnostic Trouble Code (DTC)	Fault Description	Number of no-fault cycles before turning off MIL	Number of no-fault cycles before DTC is erased	MIL illuminated when fault is logged	Pinpoint test page number
P0031	Oxygen sensor heater open circuit or short to ground	3	40	Yes	10-71
P0032	Oxygen sensor heater short circuit to Vbatt	3	40	Yes	10-71
P0078	Exhaust motor circuit malfunction (Daytona 675 models only)	3	40	Yes	10-96
P0107	Manifold absolute pressure sensor 1 short circuit to ground	3	40	Yes	10-78
P0108	Manifold absolute pressure sensor 1 open circuit or short circuit to 5 Volt sensor supply	3	40	Yes	10-78
P0112	Intake air temperature sensor short circuit to ground	3	40	Yes	10-64
P0113	Intake air temperature sensor open circuit or short circuit to 5 Volt sensor supply	3	40	Yes	10-64
P0117	Engine coolant temperature sensor short circuit to ground	3	40	Yes	10-62
P0118	Engine coolant temperature sensor open circuit or short circuit to 5 Volt sensor supply	3	40	Yes	10-62
P0122	Throttle position sensor 1 short circuit to ground or open circuit	3	40	Yes	10-54
P0123	Throttle position sensor 1 short circuit to Vbatt	3	40	Yes	10-54
P0130	Oxygen sensor 1 circuit malfunction	3	40	Yes	10-70
P0201	Injector 1 circuit malfunction	3	40	Yes	10-48
P0202	Injector 2 circuit malfunction	3	40	Yes	10-48
P0203	Injector 3 circuit malfunction	3	40	Yes	10-48
P0205	Second injector number 1 circuit malfunction (Daytona 675 models only)	3	40	Yes	10-50

Fuel System/Engine Management

Diagnostic Trouble Code (DTC)	Fault Description	Number of no-fault cycles before turning off MIL	Number of no-fault cycles before DTC is erased	MIL illuminated when fault is logged	Pinpoint test page number
P0206	Second injector number 2 circuit malfunction (Daytona 675 models only)	3	40	Yes	10-50
P0207	Second injector number 3 circuit malfunction (Daytona 675 models only)	3	40	Yes	10-50
P0335	Crankshaft sensor circuit malfunction	3	40	Yes	10-46
P0351	Ignition coil 1 malfunction	3	40	Yes	10-60
P0352	Ignition coil 2 malfunction	3	40	Yes	10-60
P0353	Ignition coil 3 malfunction	3	40	Yes	10-60
P0413	Secondary air injection system short circuit to ground or open circuit	3	40	Yes	10-80
P0414	Secondary air injection system short circuit to Vbatt	3	40	Yes	10-80
P0460	Fuel level sensor circuit malfunction	0	40	No	10-76
P0500	Vehicle speed sensor malfunction	3	40	Yes	10-73
P0505	Idle Air Control Valve system malfunction	3	40	Yes	10-52
P0560	System Voltage - battery circuit malfunction	3	40	Yes	10-67
P0603	EEPROM error	0	40	No	10-84
P0705	Gear position sensor circuit malfunction	0	40	No	10-58
P1078	Exhaust position sensor - short circuit to ground or open circuit (Daytona 675 models only)	3	40	Yes	10-95
P1079	Exhaust position sensor - short circuit to 5 Volt sensor supply (Daytona 675 models only)	3	40	Yes	10-95
P1080	Exhaust actuator control mechanism fault (Daytona 675 models only)	3	40	Yes	10-96
P1105	Manifold absolute pressure sensor 1 pipe malfunction	3	40	Yes	10-78
P1107	Ambient air pressure sensor circuit short circuit to ground	3	40	Yes	10-77
P1108	Ambient air pressure sensor circuit open circuit or short circuit to 5 Volt sensor supply	3	40	Yes	10-77
P1231	Fuel pump relay short circuit to ground or open circuit	3	40	Yes	10-66
P1232	Fuel pump relay short circuit to Vbatt	3	40	Yes	10-66
P1508	Unmatched immobiliser/TPMS control module	3	40	Flashing	10-94

Fuel System/Engine Management

Diagnostic Trouble Code (DTC)	Fault Description	Number of no-fault cycles before turning off MIL	Number of no-fault cycles before DTC is erased	MIL illuminated when fault is logged	Pinpoint test page number
P1520	Unmatched ABS	3	40	Flashing	10-98
P1521	Lost communication with ABS	3	40	Yes	10-99
P1552	Cooling fan relay short circuit or open circuit	3	40	Yes	10-69
P1553	Cooling fan relay short to battery Vbatt or over temperature	3	40	Yes	10-69
P1604	ECM tamper detected - return to Triumph	0	0	Yes	10-100
P1605	ECM locked by the tune lock function	Only if tune lock is unlocked		Flashing	10-90
P1614	Instrument ID incompatible	Only if Instrument ID Matching		Flashing	10-91
P1619	Headlamp relay short circuit to ground or open circuit	0	40	No	10-101
P1620	Headlamp relay short circuit to Vbatt	0	40	No	10-101
P1631	Fall detection circuit short circuit to ground	3	40	Yes	10-72
P1632	Fall detection circuit short circuit to Vbatt	3	40	Yes	10-72
P1650	Lost communication with immobiliser/TPMS control module	3	40	Yes	10-92
P1659	Ignition power supply malfunction	0	40	Yes	10-86
P1680	Exhaust actuator control internal error (Daytona 675 models only)	3	40	Yes	10-85
P1685	Main relay circuit malfunction	3	40	Yes	10-82
P1690	CAN Fault	3	40	Yes	10-74
P1695	Lost communication with instrument panel	0	40	No	10-75
P1698	5 V sensor supply malfunction	3	40	Yes	10-88

Fuel System/Engine Management

Immobiliser/TPMS Control Module Diagnostic Trouble Codes

Diagnostic trouble codes (DTCs) are logged in the immobiliser/TPMS control module memory when there is a confirmed fault in the system.

The codes are reported to the Triumph diagnostic tool as a four digit code.

The system will log the Diagnostic Trouble Codes listed below:

Diagnostic Trouble Code (DTC)	Fault Description	Warning Light/Information
L0001	Front wheel sensor unit battery alert	
L0002	Rear wheel sensor unit battery alert	For low battery Voltage - LO bAt visible in the instrument display screen. the TPMS symbol in the display screen will indicate which sensor has low battery Voltage. For zero battery Voltage - Only dashes will be visible in the instrument display screen, TPMS warning light ON and the TPMS symbol in the display screen will flash ON and OFF
L0003	Front wheel sensor unit fault alert	
L0004	Rear wheel sensor unit fault alert	
L0005	Front wheel sensor unit loss of communication error	
L0006	Rear wheel sensor unit loss of communication error	
L0007	Immobiliser/TPMS control module fault	
L0008	Invalid key: Key authentication unsuccessful	Alarm/Immobiliser light ON

Fuel System/Engine Management

Electrical Connectors

Before beginning any diagnosis, the following connector related information should be noted:

Note:

- A major cause of hidden electrical faults can be traced to faulty electrical connectors. For example:
 - Dirty/corroded terminals.
 - Damp terminals.
 - Broken or bent cable pins within multi-plugs.

For example, the electronic control module (ECM) relies on the supply of accurate information to enable it to plan the correct fueling and ignition timing. One dirty terminal will cause an excessive Voltage drop resulting in an incorrect signal to the ECM.

If, when carrying out fault diagnosis, a fault appears to clear by simply disconnecting and reconnecting an electrical plug, examine each disconnected plug for the following.

Before Disconnection:

- If testing with a Voltmeter, the Voltage across a connector should be virtually battery Volts (unless a resistor is fitted in the circuit). If there is a noticeable change, suspect faulty/dirty connections.

When Disconnecting a Connector:

- Check for a security device that must be released before the connector can be separated, e.g. barb, hook and eye etc.

When Inspecting a Connector:

- Check that the individual pins have not been bent.
- Check for dampness/dirt/corrosion.
- Check cables for security.
- Check cable pin joints for damage.

When Connecting a Connector:

- Ensure there is no dirt around the connector/seal.
- Push together squarely to ensure terminals are not bent or incorrectly located.
- Push the two halves together positively.

Disconnection of ECM connectors

Note:

- Two different sized connectors are used in the ECM, which ensures correct connection is always made. The connectors on the ECM are coloured black and correspond with identical connectors on the main harness.

Caution

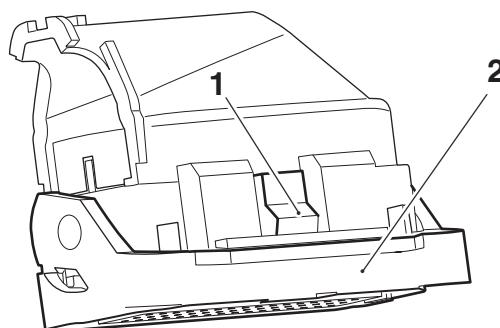
When disconnecting a connector, never pull directly on the wires as this may result in cable and connector damage.

Caution

Never disconnect the ECM when the ignition switch is in the ON position as this may cause multiple fault codes to be logged in the ECM memory.

Always disconnect an ECM after disconnecting the battery negative (black) lead first.

1. Turn the ignition to the OFF position and wait at least 1 minute for the ECM to complete its power down sequence.
2. Detach the ECM and its bracket from the airbox (see page 10-120).
3. Press down on the locking device and gently pull back on the connector to release it from the ECM.



1. Locking device
2. Locking lever

Note:

- The ECM is located beneath the fuel tank, on the rear section of the airbox.

Reconnection of ECM connectors



Caution

Damage to the connector pins may result if an attempt to fit the connectors incorrectly is made.

1. Fit the connector into its socket. When the locking lever starts to move, stop pushing the connector and use the locking lever to fully insert the connector home and lock it.
2. Refit the ECM and its bracket to the airbox (see page 10-122).

Further Diagnosis

The tables that follow will, if used correctly, help to pinpoint a fault in the system once a Diagnostic Trouble Code has been stored.

Fuel System/Engine Management

Crankshaft Sensor

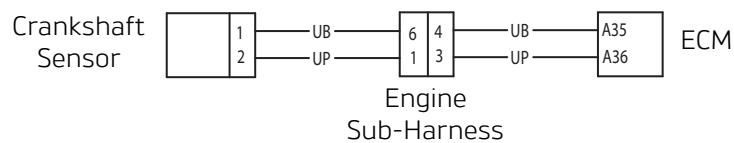
Fault Code	Possible cause	Action
P0335	Crankshaft sensor circuit malfunction	View and note diagnostic software freeze frame data if available Ensure sensor is fitted correctly and connector is secure Disconnect ECM and proceed to pinpoint test 1

Pinpoint Tests

Test	Result	Action
1 Check terminal and cable integrity: - ECM pin A35 - ECM pin A36	OK	Disconnect sensor and proceed to test 2
	Faulty	Rectify fault, proceed to test 6
2 Check cable for short circuit: - ECM pin A35 to ground - ECM pin A36 to ground	OK	Proceed to test 3
	Short circuit	Locate and rectify wiring fault, proceed to test 6
3 Check cable continuity: - ECM pin A35 to sensor pin 2 - ECM pin A36 to sensor pin 1	OK	Proceed to test 4
	Open circuit	Locate and rectify wiring fault, proceed to test 6
4 Check cable for short circuit: - ECM pin A35 to ECM pin A36	OK	Renew crankshaft sensor, proceed to test 6
	Short circuit	Locate and rectify wiring fault, proceed to test 6
5 Check crank toothed wheel: - Damage to teeth - magnetic debris contamination	OK	Proceed to test 6
	Faulty	Clean/renew toothed wheel, proceed to test 6
6 Reconnect harness, clear fault code and run engine to verify fault cleared	OK	Action complete - quit test
	Fault still present	Contact Triumph service

Fuel System/Engine Management

Circuit Diagram



Fuel System/Engine Management

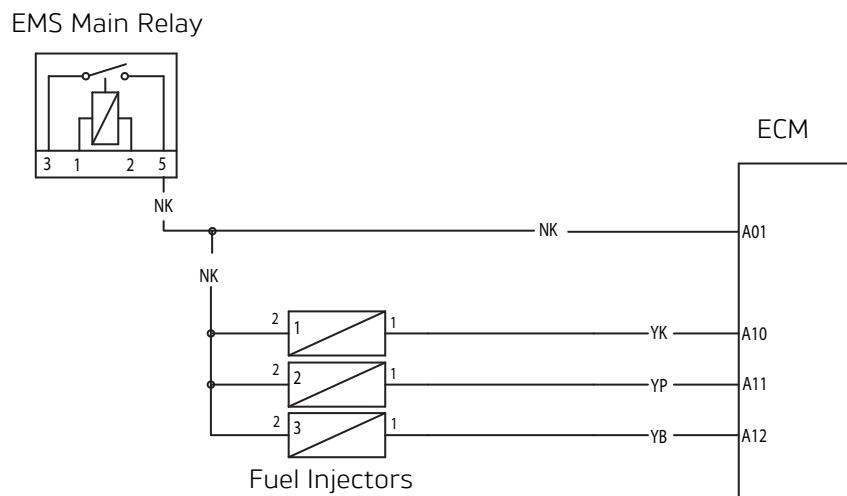
Fuel Injectors

Fault Code	Possible cause	Action
P0201	Injector 1 circuit malfunction	View and note diagnostic software freeze frame data if available Ensure relevant injector connector is secure Disconnect ECM and proceed to pinpoint test 1
P0202	Injector 2 circuit malfunction	
P0203	Injector 3 circuit malfunction	

Pinpoint Tests

Test	Result	Action
1 Check cable and terminal integrity: - ECM pin A10 - ECM pin A11 - ECM pin A12	OK	Proceed to test 2
	Faulty	Rectify fault, proceed to test 7
2 Check resistance value: - ECM pin A01 to ECM pin A10 (injector 1) - ECM pin A01 to ECM pin A11 (injector 2) - ECM pin A01 to ECM pin A12 (injector 3)	11.0Ω to 12.5Ω	Proceed to test 3
	Open circuit	Disconnect relevant injector and proceed to test 4
	Short circuit	Disconnect relevant injector and proceed to test 5
3 Check cable for short circuit to ground: - ECM pin A10 to ground - ECM pin A11 to ground - ECM pin A12 to ground	OK	Proceed to test 7
	Short circuit	Locate and rectify wiring fault, proceed to test 7
4 Check cable continuity: - ECS relay pin 5 to relevant injector pin 2 - ECM pin A10 to injector 1 pin 1 - ECM pin A11 to injector 2 pin 1 - ECM pin A12 to injector 3 pin 1	OK	Proceed to test 6
	Open circuit	Locate and rectify wiring fault, proceed to test 7
5 Check cable for short circuit to supply box: - ECM pin A01 to ECM pin A10 (injector 1) - ECM pin A01 to ECM pin A11 (injector 2) - ECM pin A01 to ECM pin A12 (injector 3)	OK	Proceed to test 6
	Short circuit	Locate and rectify wiring fault, proceed to test 7
6 Check relevant injector resistance: - Injector pin 1 to injector pin 2	9.0Ω to 12.0Ω	Proceed to test 7
	Faulty	Renew relevant injector, proceed to test 7
7 Reconnect harness, clear fault code and run engine to verify fault cleared	OK	Action complete - quit test
	Fault still present	Contact Triumph service

Circuit Diagram



Fuel System/Engine Management

Second Fuel Injectors - Daytona 675 and Daytona 675 R Only

Note:

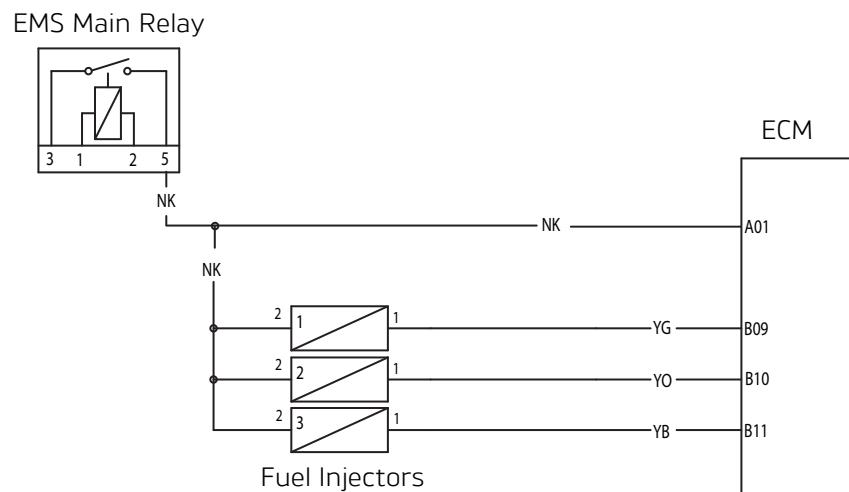
- These fuel injectors are located in the upper section of the airbox.

Fault Code	Possible cause	Action
P0205	Second injector number 1 circuit malfunction	View and note diagnostic software freeze frame data if available
P0206	Second injector number 2 circuit malfunction	Ensure relevant injector connector is secure
P0207	Second injector number 3 circuit malfunction	Disconnect ECM and proceed to pinpoint test 1

Pinpoint Tests

Test	Result	Action
1 Check cable and terminal integrity: - ECM pin B09 - ECM pin B10 - ECM pin B11	OK	Proceed to test 2
	Faulty	Rectify fault, proceed to test 7
2 Check resistance value: - ECM pin A01 to ECM pin B09 (injector 1) - ECM pin A01 to ECM pin B10 (injector 2) - ECM pin A01 to ECM pin B11 (injector 3)	11.0Ω to 12.5Ω	Proceed to test 3
	Open circuit	Disconnect relevant injector and proceed to test 4
	Short circuit	Disconnect relevant injector and proceed to test 5
3 Check cable for short circuit to ground: - ECM pin B09 to ground - ECM pin B10 to ground - ECM pin B11 to ground	OK	Proceed to test 7
	Short circuit	Locate and rectify wiring fault, proceed to test 7
4 Check cable continuity: - ECM relay pin 5 to relevant injector pin 2 - ECM pin B09 to injector 1 pin 1 - ECM pin B10 to injector 2 pin 1 - ECM pin B11 to injector 3 pin 1	OK	Proceed to test 6
	Open circuit	Locate and rectify wiring fault, proceed to test 7
5 Check cable for short circuit to supply box: - ECM pin A01 to ECM pin B09 (injector 1) - ECM pin A01 to ECM pin B10 (injector 2) - ECM pin A01 to ECM pin B11 (injector 3)	OK	Proceed to test 6
	Short circuit	Locate and rectify wiring fault, proceed to test 7
6 Check relevant injector resistance: - Injector pin 1 to injector pin 2	9.0Ω to 12.0Ω	Proceed to test 7
	Faulty	Renew relevant injector, proceed to test 7
7 Reconnect harness, clear fault code and run engine to verify fault cleared	OK	Action complete - quit test
	Fault still present	Contact Triumph service

Circuit Diagram



Fuel System/Engine Management

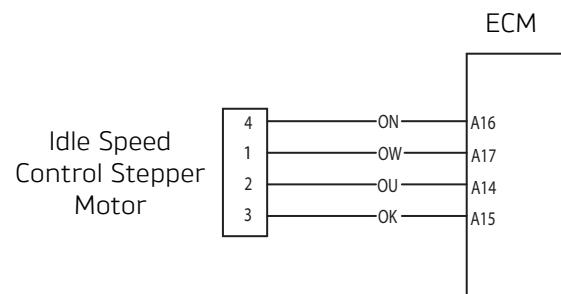
Idle Speed Control

Fault Code	Possible cause	Action
P0505	ISC (Idle Speed Control) stepper motor/wiring fault	<p>View and note diagnostic software freeze frame data if available</p> <p>View and note diagnostic software sensor data</p> <p>Ensure sensor connector is secure</p> <p>Disconnect ECM and proceed to pinpoint test 1</p>

Pinpoint Tests

Test	Result	Action
1 Check cable and terminal integrity: - ECM pin A14 - ECM pin A15 - ECM pin A16 - ECM pin A17	OK	Proceed to test 2
	Faulty	Rectify fault, proceed to test 7
2 Check resistance value: - ECM pin A14 to ECM pin A15 - ECM pin A16 to ECM pin A17	4Ω to 12Ω	Disconnect stepper motor and proceed to test 3
	Open circuit	Disconnect stepper motor and proceed to test 4
	Short circuit	Disconnect stepper motor and proceed to test 5
3 Check cable for short circuit: - ECM pin A14 to ground - ECM pin A15 to ground - ECM pin A16 to ground - ECM pin A17 to ground	OK	Proceed to test 7
	Short circuit	Locate and rectify wiring fault, proceed to test 7
4 Check cable continuity: - ECM pin A16 to stepper motor pin 4 - ECM pin A17 to stepper motor pin 1 - ECM pin A14 to stepper motor pin 2 - ECM pin A15 to stepper motor pin 3	OK	Proceed to test 6
	Open circuit	Locate and rectify wiring fault, proceed to test 7
5 Check cable for short circuit: - ECM pin A16 to ECM pin A17 - ECM pin A14 to ECM pin A15	OK	Proceed to test 6
	Short circuit	Locate and rectify wiring fault, proceed to test 7
6 Check stepper motor resistance: - Motor pin 4 to motor pin 1 - Motor pin 2 to motor pin 3	4Ω to 12Ω	Proceed to test 7
	Faulty	Renew stepper motor, proceed to test 7
7 Reconnect harness, clear fault code and run diagnostic software function test to visually verify operation of stepper motor	OK	Action complete - quit test
	Fault still present	Contact Triumph service

Circuit Diagram



Fuel System/Engine Management

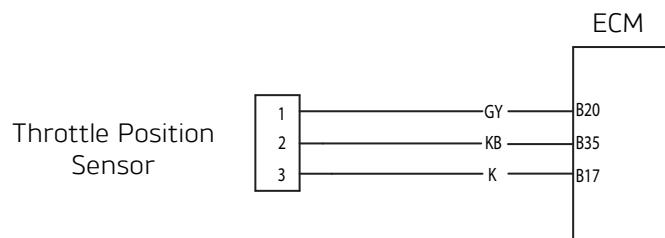
Throttle Position Sensor

Fault Code	Possible cause	Action
P0122	Throttle position sensor 1 short circuit to ground or open circuit	View and note diagnostic software freeze frame data if available
P0123	Throttle position sensor 1 short circuit to Vbatt	View and note diagnostic software sensor data Ensure sensor connector is secure Disconnect ECM and proceed to pinpoint test 1

Pinpoint Tests

Test	Result	Action
1 Check cable and terminal integrity: - ECM pin B20 - ECM pin B35 - ECM pin B17	OK	Disconnect sensor and proceed to test 2
	Faulty	Rectify fault, proceed to test 5
2 Check cable for short circuit: - ECM pin B20 to ground	OK	Proceed to test 3
	Short circuit	Locate and rectify wiring fault, proceed to test 5
3 Check cable continuity: - ECM pin B20 to sensor pin 1 - ECM pin B35 to sensor pin 2 - ECM pin B17 to sensor pin 3	OK	Proceed to test 4
	Open circuit	Locate and rectify wiring fault, proceed to test 5
4 Check cable for short circuit: - ECM pin B35 to ECM pin B20 - ECM pin B35 to ECM pin B17	OK	Renew throttle position sensor, proceed to test 5
	Short circuit	Locate and rectify wiring fault, proceed to test 5
5 Reconnect harness, clear fault code and run engine to verify fault cleared	OK	Action complete - quit test
	Fault still present	Contact Triumph service

Circuit Diagram



Fuel System/Engine Management

Purge Valve

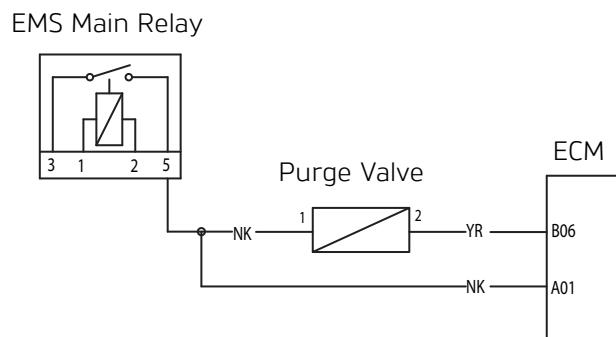
Fault Code	Possible cause	Action
P0444	Purge valve system short circuit to ground or open circuit	View and note diagnostic software sensor data Ensure purge valve connector is secure Disconnect ECM and proceed to pinpoint test 1
P0445	Purge valve short circuit to Vbatt or over temp	Disconnect purge valve and proceed to pinpoint test 5

Pinpoint Tests

Test	Result	Action
1 Check cable and terminal integrity: - ECM pin B06 - EMS relay pin 5	OK	Proceed to test 2
	Faulty	Rectify fault, proceed to test 7
2 Check resistance value: - ECM pin A01 to ECM pin B06	24Ω to 28Ω	Disconnect purge valve and proceed to test 3
	Open circuit	Proceed to test 4
	Short circuit	Disconnect purge valve and proceed to test 5
3 Check cable for short circuit: - ECM pin B06 to ground	OK	Disconnect purge valve and proceed to test 7
	Short circuit	Locate and rectify wiring fault, proceed to test 7
4 Check cable continuity: - EMS pin 5 to valve pin 1 - ECM pin B06 to valve pin 2	OK	Proceed to test 6
	Open circuit	Locate and rectify wiring fault, proceed to test 7
5 Check cable for short circuit: - ECM pin A01 to ECM pin B06	OK	Proceed to test 6
	Short circuit	Locate and rectify wiring fault, proceed to test 7
6 Check purge valve resistance: - Valve pin 1 to valve pin 2	24Ω to 28Ω	Proceed to test 7
	Faulty	Renew purge valve, proceed to test 7
7 Reconnect harness, clear fault code and run diagnostic software function test to visually verify operation of purge valve	OK	Action complete - quit test
	Fault still present	Contact Triumph service

Fuel System/Engine Management

Circuit Diagram



Fuel System/Engine Management

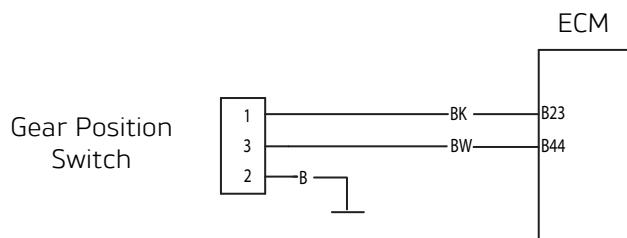
Gear Position Sensor - Models with a Three Pin Gear Position Sensor

Fault Code	Possible cause	Action
P0705	Gear position sensor circuit malfunction	<p>View and note freeze frame data if available</p> <p>View and note sensor data</p> <p>Ensure sensor connector is secure</p> <p>Disconnect ECM and proceed to pinpoint test 1</p>

Pinpoint Tests

Test	Result	Action
1 Check cable and terminal integrity: - ECM pin B23 - ECM pin B44	OK	Disconnect sensor and proceed to test 2
	Faulty	Rectify fault, proceed to test 5
2 Check cable for short circuit: - ECM pin B23 to ground - ECM pin B44 to ground	OK	Proceed to test 3
	Short circuit	Locate and rectify wiring fault, proceed to test 5
3 Check cable for continuity: - ECM pin B23 to sensor pin 1 - Ground to sensor pin 2 - ECM pin B44 to sensor pin 3	OK	Proceed to test 4
	Open circuit	Locate and rectify wiring fault, proceed to test 5
4 Check cable for short circuit: - ECM pin B23 to ECM pin B44	OK	Renew gear position sensor and contact pin and proceed to test 5
	Short circuit	Locate and rectify wiring fault, proceed to test 5
5 Reconnect harness, clear fault code and run engine	OK	Action complete - quit test
	Fault still present	Contact Triumph service

Circuit Diagram



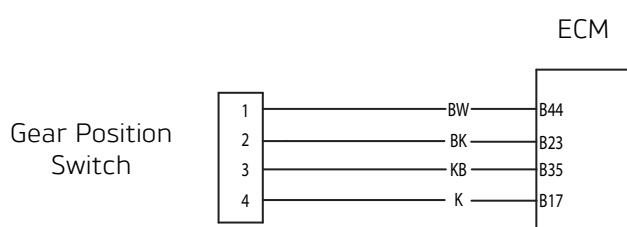
Gear Position Sensor - Models with a Four Pin Gear Position Sensor

Fault Code	Possible cause	Action
P0705	Gear position sensor circuit malfunction	View and note freeze frame data if available View and note sensor data Ensure sensor connector is secure Disconnect ECM and proceed to pinpoint test 1

Pinpoint Tests

Test	Result	Action
1 Check cable and terminal integrity: - ECM pin B23 - ECM pin B44	OK	Disconnect sensor and proceed to test 2
	Faulty	Rectify fault, proceed to test 5
2 Check cable for short circuit: - ECM pin B23 to ground - ECM pin B17 to ground - ECM pin B44 to ground	OK	Proceed to test 3
	Short circuit	Locate and rectify wiring fault, proceed to test 5
3 Check cable for continuity: - ECM pin B23 to sensor pin 2 - Ground to sensor pin 2 - ECM pin B35 to sensor pin 3 - ECM pin B17 to sensor pin 4 - ECM pin B44 to sensor pin 1	OK	Proceed to test 4
	Open circuit	Locate and rectify wiring fault, proceed to test 5
4 Check cable for short circuit: - ECM pin B23 to ECM pin B44	OK	Renew gear position sensor and contact pin and proceed to test 5
	Short circuit	Locate and rectify wiring fault, proceed to test 5
5 Reconnect harness, clear fault code and run engine	OK	Action complete - quit test
	Fault still present	Contact Triumph service

Circuit Diagram



Fuel System/Engine Management

Ignition Coils

Fault Code	Possible cause	Action
P0351	Ignition coil fault - coil 1	View and note diagnostic software freeze frame data if available Ensure relevant ignition coil connector is secure Disconnect ECM and proceed to pinpoint test 1
P0352	Ignition coil fault - coil 2	
P0353	Ignition coil fault - coil 3	

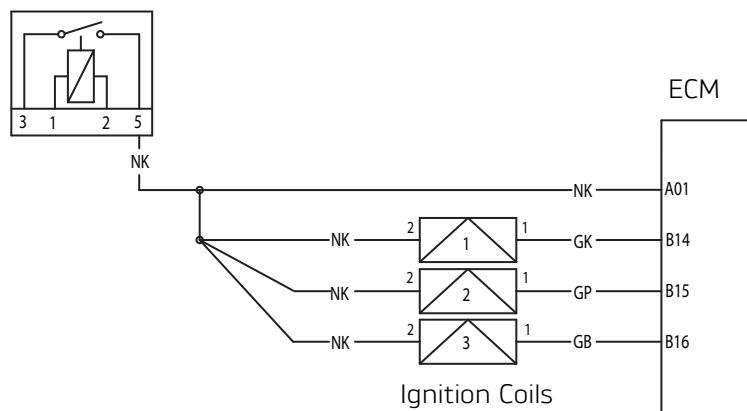
Pinpoint Tests

Test	Result	Action
1 Check cable and terminal integrity: - ECM pin B14 - ECM pin B15 - ECM pin B16 - EMS relay pin 5	OK	Proceed to test 2
	Faulty	Rectify fault, proceed to test 7
2 Check resistance value: ECM pin A01 to - ECM pin B14 (ignition coil 1) - ECM pin B15 (ignition coil 2) - ECM pin B16 (ignition coil 3)	0.8Ω to 1.2Ω	Proceed to test 3
	Open circuit	Disconnect relevant ignition coil and proceed to test 4
	Short circuit	Disconnect relevant ignition coil and proceed to test 5
3 Check cable for short circuit: - ECM pin B14 to ground - ECM pin B15 to ground - ECM pin B16 to ground	OK	Proceed to test 7
	Short circuit	Locate and rectify wiring fault, proceed to test 7
4 Check cable continuity: - EMS main relay pin 5 to any ignition coil pin 1 - ECM pin B14 to ignition coil 1 pin 1 - ECM pin B15 to ignition coil 2 pin 1 - ECM pin B16 to ignition coil 3 pin 1	OK	Proceed to test 6
	Open circuit	Locate and rectify wiring fault, proceed to test 7
5 Check cable for short circuit: ECM pin A01 to - ECM pin B14 (ignition coil 1) - ECM pin B15 (ignition coil 2) - ECM pin B16 (ignition coil 3)	OK	Proceed to test 6
	Short circuit	Locate and rectify wiring fault, proceed to test 7
6 Check relevant ignition coil resistance: - Ignition coil pin 1 to ignition coil pin 2	1.2Ω to 1.6Ω	Proceed to test 7
	Faulty	Renew relevant ignition coil, proceed to test 7
7 Reconnect harness, clear fault code and run engine to verify fault cleared	OK	Action complete - quit test
	Fault still present	Contact Triumph service

Fuel System/Engine Management

Circuit Diagram

EMS Main Relay



Fuel System/Engine Management

Coolant Temperature Sensor

Fault Code	Possible cause	Action
P0118	Engine coolant temperature sensor open circuit or short circuit to 5 Volt sensor supply	View and note diagnostic software freeze frame data if available View and note diagnostic software sensor data Ensure sensor connector is secure Disconnect ECM and proceed to pinpoint test 1
P0117	Engine coolant temperature sensor short circuit to ground	Disconnect sensor and proceed to test 4

Pinpoint Tests

Test	Result	Action
1 Check cable and terminal integrity: - ECM pin B40	OK	Proceed to test 2
	Faulty	Rectify fault, proceed to test 7
2 Check resistance value: - ECM pin B40 to ground (Temperature dependent - see opposite page)	OK	Disconnect temp sensor and proceed to test 6
	Open circuit	Disconnect sensor and proceed to test 3
	Short circuit	Disconnect temp sensor and proceed to test 4
3 Check cable continuity: - ECM pin B40 to sensor pin 1 - Ground to sensor pin 2	OK	Proceed to test 5
	Open circuit	Locate and rectify wiring fault, proceed to test 7
4 Check cable for short circuit: - ECM pin B40 to ground	OK	Proceed to test 5
	Short circuit	Locate and rectify wiring fault, proceed to test 7
5 Check sensor resistance: - Sensor pin 1 to sensor pin 2 (Temperature dependent - see opposite page)	OK	Proceed to test 7
	Faulty	Renew temp sensor, proceed to test 7
6 Reconnect harness, clear fault code and run engine to verify fault cleared	OK	Action complete - quit test
	Fault still present	Contact Triumph service

Circuit Diagram

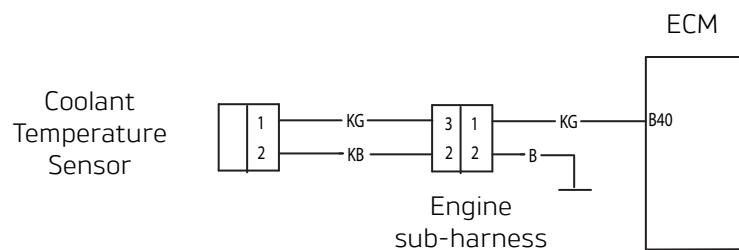
Resistance data under typical conditions:

Warm engine: 200 to 400Ω

Cold engine:

20°C ambient 2.35 to 2.60 KΩ

-10°C ambient 8.50 to 10.20 KΩ



Fuel System/Engine Management

Intake Air Temperature Sensor

Fault Code	Possible cause	Action
P0113	Intake air temperature sensor open circuit or short circuit to 5 Volt sensor supply	View and note diagnostic software freeze frame data if available View and note diagnostic software sensor data Ensure sensor connector is secure Disconnect ECM and proceed to pinpoint test 1
P0112	Intake air temperature sensor short circuit to ground	Disconnect sensor and proceed to pinpoint test 4

Pinpoint Tests

Test	Result	Action
1 Check cable and terminal integrity: - ECM pin B42	OK	Proceed to test 2
	Faulty	Rectify fault, proceed to test 7
2 Check resistance value: - ECM pin B42 to ground (Temperature dependent - see opposite page)	OK	Disconnect temp sensor and proceed to test 6
	Open circuit	Disconnect temp sensor and proceed to test 3
	Short circuit	Disconnect temp sensor and proceed to test 4
3 Check cable continuity: - ECM pin B42 to sensor pin 1 - Ground to sensor pin 2	OK	Proceed to test 5
	Open circuit	Locate and rectify wiring fault, proceed to test 7
4 Check cable for short circuit: - ECM pin B42 to ground	OK	Proceed to test 5
	Short circuit	Locate and rectify wiring fault, proceed to test 7
5 Check sensor resistance: - Sensor pin 1 to sensor pin 2 (Temperature dependent - see opposite page)	OK	Proceed to test 7
	Faulty	Renew temp sensor, proceed to test 7
6 Reconnect harness, clear fault code and run engine to verify fault cleared	OK	Action complete - quit test
	Fault still present	Contact Triumph service

Circuit Diagram

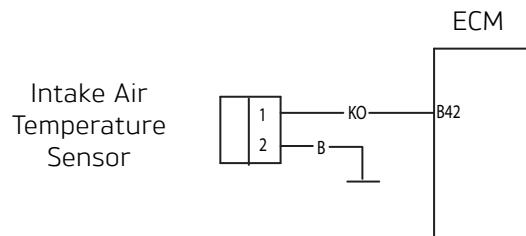
If engine is warm, remove sensor and allow time to cool to ambient prior to test.

Resistance data:

Ambient temp Resistance value

80°C 0.29 to 0.34 KΩ

0°C 5.4 to 6.6 KΩ



Fuel System/Engine Management

Fuel Pump Relay

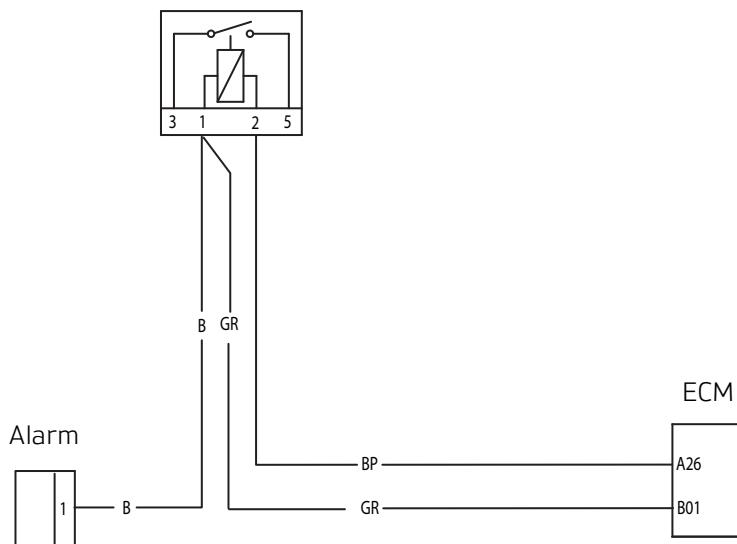
Fault Code	Possible cause	Action
P1231	Fuel pump relay short circuit to ground or open circuit	Check if pump runs briefly when ignition is switched on Ensure fuel pump relay connector is secure Disconnect ECM and proceed to pinpoint test 1
P1232	Fuel pump relay short circuit to Vbatt	Disconnect fuel pump relay and proceed to pinpoint test 4

Pinpoint Tests

Test	Result	Action
1 Check cable and terminal integrity: - ECM pin A26 - Alarm pin 1	OK	Disconnect fuel pump relay and proceed to test 2
	Faulty	Rectify fault, proceed to test 5
2 Check cable for short circuit to ground: - ECM pin A26 to ground	OK	Proceed to test 3
	Short circuit	Locate and rectify wiring fault, proceed to test 5
3 Check cable continuity: - ECM pin A26 to fuel pump relay pin 2 - Alarm pin 1 to fuel pump relay pin 1	OK	Proceed to test 4
	Open circuit	Locate and rectify wiring fault, proceed to test 5
4 Check cable for short circuit: - ECM pin A26 to Alarm pin 1	OK	Proceed to test 5
	Short circuit	Locate and rectify wiring fault, proceed to test 5
5 Reconnect harness, clear fault code and run diagnostic software function test to verify operation of fuel pump	OK	Action complete - quit test
	Fault still present	Contact Triumph service

Circuit Diagram

Fuel Pump Main Relay



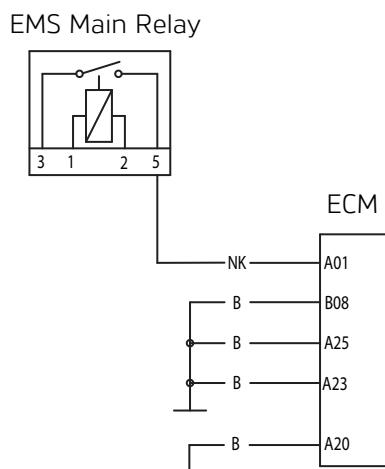
System Voltage - Street Triple, Street Triple 660 cc, Street Triple R and Street Triple Rx

Fault Code	Possible cause	Action
P0560	System Voltage - battery circuit malfunction	View and note diagnostic software sensor data Ensure Voltage across battery is acceptable, note Voltage Disconnect ECM and proceed to pinpoint test 1

Pinpoint Tests

Test	Result	Action
1 Check cable and terminal integrity: - ECM pin A01 - EMS relay pin 5	OK	Proceed to test 2
	Faulty	Rectify fault, proceed to test 3
2 With ignition ON, check Voltage at: - ECM pin A01	Same as across battery Voltage	Proceed to test 3
	Less than across battery Voltage	Locate and rectify wiring fault, proceed to test 3
3 Reconnect harness, clear fault code and run engine to verify fault cleared	OK	Action complete - quit test
	Fault still present	Contact Triumph service

Circuit Diagram



Fuel System/Engine Management

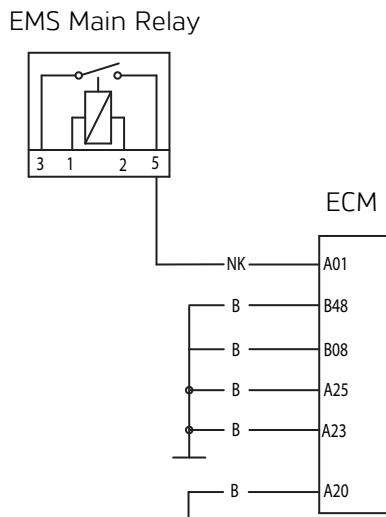
System Voltage - Daytona 675 and Daytona 675 R

Fault Code	Possible cause	Action
P0560	System Voltage - battery circuit malfunction	<p>View and note diagnostic software sensor data</p> <p>Ensure Voltage across battery is acceptable, note Voltage</p> <p>Disconnect ECM and proceed to pinpoint test 1</p>

Pinpoint Tests

Test	Result	Action
1 Check cable and terminal integrity: - ECM pin A01 - EMS relay pin 5	OK	Proceed to test 2
	Faulty	Rectify fault, proceed to test 3
2 With ignition ON, check Voltage at: - ECM pin A01	Same as across battery Voltage	Proceed to test 3
	Less than across battery Voltage	Locate and rectify wiring fault, proceed to test 3
3 Reconnect harness, clear fault code and run engine to verify fault cleared	OK	Action complete - quit test
	Fault still present	Contact Triumph service

Circuit Diagram



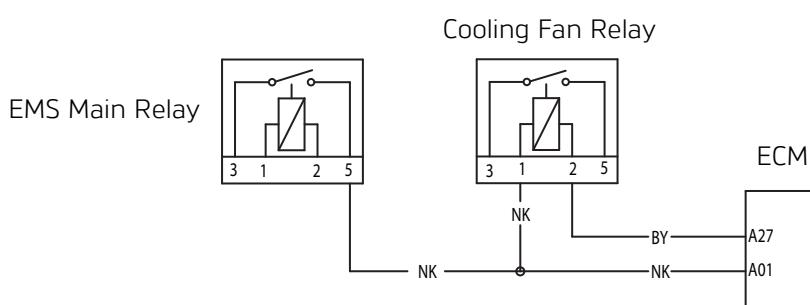
Cooling Fan Relay

Fault Code	Possible cause	Action
P1552	Cooling fan relay short circuit or open circuit	View and note diagnostic software sensor data Ensure fan relay connector is secure Disconnect ECM and proceed to pinpoint test 1
P1553	Cooling fan relay short to battery Vbatt or over temperature	Disconnect fan relay and proceed to pinpoint test 4

Pinpoint Tests

Test	Result	Action
1 Check cable and terminal integrity: - ECM pin A25 - EMS relay pin 5	OK	Disconnect fan relay and proceed to test 2
	Faulty	Rectify fault, proceed to test 5
2 Check cable for short circuit: - ECM pin A27 to ground	OK	Proceed to test 3
	Short circuit	Locate and rectify wiring fault, proceed to test 5
3 Check cable continuity: - ECM pin A27 to cooling fan relay pin 2 - EMS main relay pin 5 to cooling fan relay pin 1	OK	Proceed to test 4
	Open circuit	Locate and rectify wiring fault, proceed to test 5
4 Check cable for short circuit: - ECM pin A27 to EMS relay pin 5	OK	Proceed to test 5
	Short circuit	Locate and rectify wiring fault, proceed to test 5
5 Reconnect harness, clear fault code and run diagnostic software function test to visually verify operation of cooling fan	OK	Action complete - quit test
	Fault still present	Contact Triumph service

Circuit Diagram



Fuel System/Engine Management

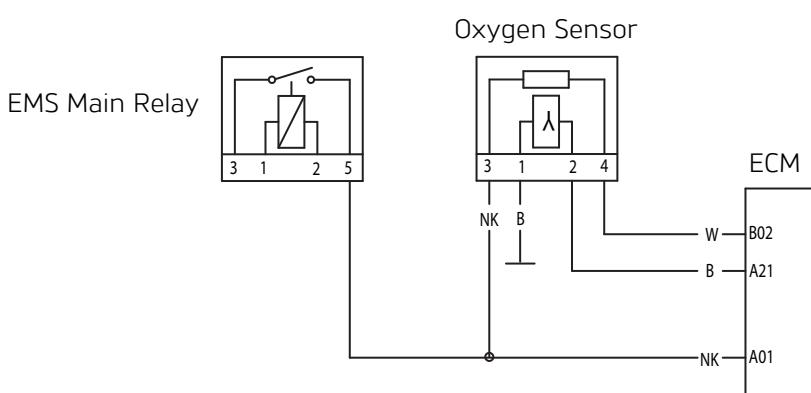
Oxygen Sensor

Fault Code	Possible cause	Action
P0130	Oxygen sensor circuit malfunction	<p>View and note freeze frame data if available</p> <p>View and note sensor data</p> <p>Ensure sensor connector is secure</p> <p>Disconnect ECM and proceed to pinpoint test 1</p>

Pinpoint Tests

Test	Result	Action
1 Check cable and terminal integrity: - ECM pin A21	OK	Disconnect oxygen sensor and proceed to test 2
	Faulty	Rectify fault, proceed to test 4
2 Check cable for short circuit: - ECM pin A21 to ground	OK	Proceed to test 3
	Short circuit	Locate and rectify wiring fault, proceed to test 4
3 Check cable continuity: - ECM pin A21 to sensor pin 2 - Ground to sensor pin 1	OK	Proceed to test 4
	Open circuit	Locate and rectify wiring fault, proceed to test 4
4 Reconnect harness, clear fault code and run engine. Check adaptation status	OK	Action complete - quit test
	Fault still present	Contact Triumph service

Circuit Diagram



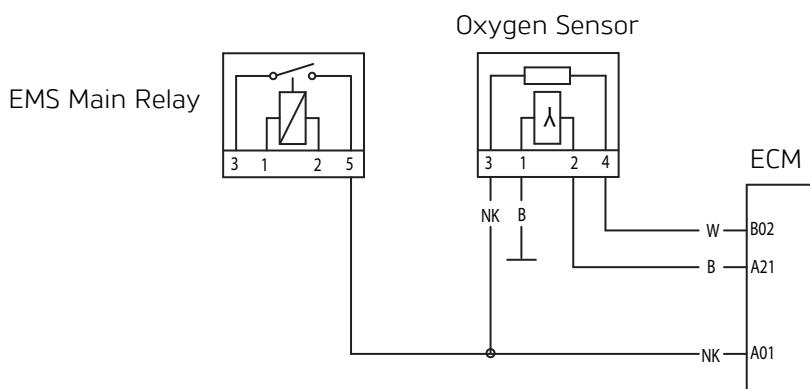
Oxygen Sensor Heater

Fault Code	Possible cause	Action
P0031	Oxygen sensor heater open circuit or short to ground	View and note freeze frame data if available View and note sensor data Ensure sensor connector is secure Disconnect ECM and proceed to pinpoint test 1
P0032	Oxygen sensor heater short circuit to battery Voltage	Disconnect oxygen sensor and proceed to pinpoint test 4

Pinpoint Tests

Test	Result	Action
1 Check cable and terminal integrity: - ECM pin B02 - EMS relay pin 5	OK	Disconnect oxygen sensor and proceed to test 2
	Faulty	Rectify fault, proceed to test 5
2 Check cable for short circuit: - ECM pin B02 to ground	OK	Proceed to test 3
	Short circuit	Locate and rectify wiring fault, proceed to test 5
3 Check cable continuity: - ECM pin B02 to sensor pin 4 - EMS relay pin 5 to sensor pin 3	OK	Proceed to test 5
	Open circuit	Locate and rectify wiring fault, proceed to test 5
4 Check cable for short circuit: - ECM pin A01 to ECM pin B02	OK	Renew oxygen sensor and proceed to test 5
	Short circuit	Locate and rectify wiring fault, proceed to test 5
5 Reconnect harness, clear fault code and run engine. Check adaption status	OK	Action complete - quit test
	Fault still present	Contact Triumph service

Circuit Diagram



Fuel System/Engine Management

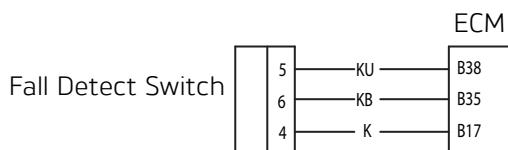
Fall Detection Switch

Fault Code	Possible cause	Action
P1631	Fall detection circuit short circuit to ground	View and note freeze frame data if available
P1632	Fall detection circuit short circuit to battery Voltage	View and note sensor data Ensure switch connector is secure Disconnect ECM and proceed to pinpoint test 1

Pinpoint Tests

Test	Result	Action
1 Check cable and terminal integrity: - ECM pin B35 - ECM pin B17 - ECM pin B38	OK	Disconnect sensor and proceed to test 2
	Faulty	Rectify fault, proceed to test 5
2 Check cable for short circuit: - ECM pin B38 to ground	OK	Proceed to test 3
	Short circuit	Locate and rectify wiring fault, proceed to test 5
3 Check cable continuity: - ECM pin B35 to sensor pin 6 - ECM pin B17 to sensor pin 4 - ECM pin B38 to sensor pin 5	OK	Proceed to test 4
	Open circuit	Locate and rectify wiring fault, proceed to test 5
4 Check cable for short circuit: - ECM pin B38 to ECM pin B17 - ECM pin B38 to ECM pin B35	OK	Connect ECM and proceed to test 5
	Short circuit	Locate and rectify wiring fault, proceed to test 5
5 Reconnect harness, clear fault code	OK	Action complete - quit test
	Fault still present	Contact Triumph service

Circuit Diagram



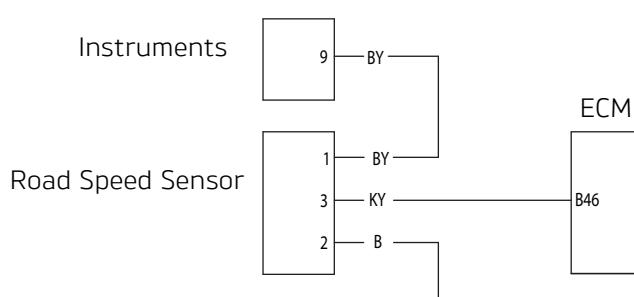
Vehicle Speed Sensor

Fault Code	Possible cause	Action
P0500	Vehicle speed sensor malfunction - Motorcycles without ABS	View and note freeze frame data if available View and note sensor data Ensure sensor connector is secure Disconnect ECM and proceed to pinpoint test 1
	Rear wheel speed sensor - Motorcycles with ABS	Refer to C1613 (see page 14-96)

Pinpoint Tests

Test	Result	Action
1 Check cable and terminal integrity: - ECM pin B46 - Instruments pin 9	OK	Disconnect sensor and proceed to test 2
	Faulty	Rectify fault, proceed to test 4
2 Check cable for short circuit: - ECM pin B46 to ground - ECM pin B46 to Instruments pin 9	OK	Proceed to test 3
	Faulty	Locate and rectify wiring fault, proceed to test 4
3 Check cable for continuity: - ECM pin B46 to sensor pin 3 - Sensor pin 2 to ground - Instruments pin 9 to sensor pin 1	OK	Renew vehicle speed sensor and proceed to test 4
	Open circuit	Locate and rectify wiring fault, proceed to test 4
4 Reconnect harness, clear fault code and run engine	OK	Action complete - quit test
	Fault still present	Contact Triumph service

Circuit Diagram



Fuel System/Engine Management

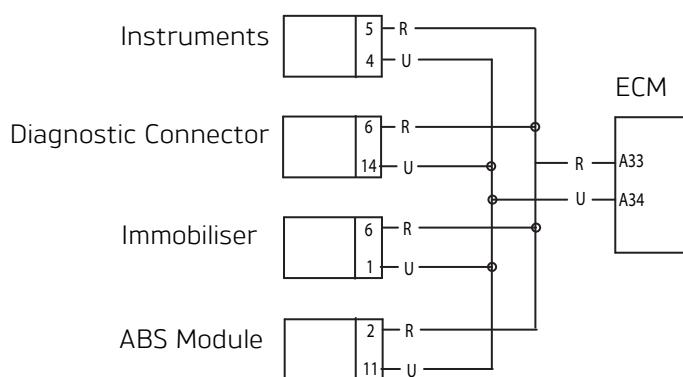
CAN Communication

Fault Code	Possible cause	Action
P1690	CAN fault - communication between ECM and other CAN nodes (immobiliser/TPMS control module, instruments and ABS module)	View and note freeze frame data if available View and note sensor data Ensure instrument connector is secure Disconnect ECM and proceed to pinpoint test 1

Pinpoint Tests

Test	Result	Action
1 Check cable and terminal integrity: - ECM pin A33 - ECM pin A34 - Instruments pin 4 - Instruments pin 5	OK	Disconnect instruments and proceed to test 2
	Faulty	Rectify fault, proceed to test 4
2 Check cable for short circuit: - ECM pin A33 to A24 - ECM pin A33 to ground - ECM pin A34 to ground	OK	Proceed to test 3
	Faulty	Locate and rectify wiring fault, proceed to test 4
3 Check cable continuity: - ECM pin A34 to Instruments pin 4 - ECM pin A33 to Instruments pin 5	OK	Contact Triumph service
	Open circuit	Locate and rectify wiring fault, proceed to test 4
4 Reconnect harness, clear fault code and run engine	OK	Action complete - quit test
	Fault still present	Contact Triumph service

Circuit Diagram



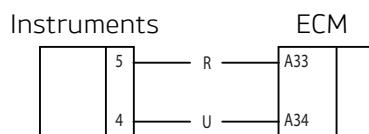
Instrument Communication (CAN)

Fault Code	Possible cause	Action
P1695	Lost communication with instrument panel	View and note freeze frame data if available Disconnect ECM and proceed to pinpoint test 1

Pinpoint Tests

Test	Result	Action
1 Check cable and terminal integrity: - Instruments pin 5 - Instruments pin 4	OK	Disconnect instruments and proceed to test 2
	Faulty	Rectify fault, proceed to test 5
2 Check cable for short circuit: - ECM pin A33 to ground - ECM pin A34 to ground	OK	Proceed to test 3
	Faulty	Locate and rectify wiring fault, proceed to test 5
3 Check cable continuity: - ECM pin A33 to instruments pin 5 - ECM pin A34 to instruments pin 4	OK	Proceed to test 4
	Open circuit	Locate and rectify wiring fault, proceed to test 5
4 Check cable for short circuit: - ECM pin A33 to ECM pin A34	OK	Proceed to test 5
	Short circuit	Locate and rectify wiring fault, proceed to test 5
5 Reconnect harness, clear fault code and run engine	OK	Action complete - quit test
	Fault still present	Contact Triumph service

Circuit Diagram



Fuel System/Engine Management

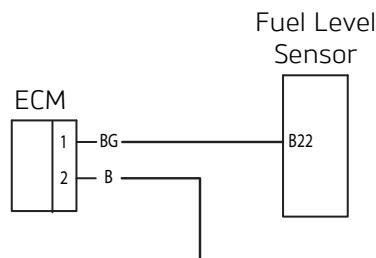
Fuel Level Sensor

Fault Code	Possible cause	Action
P0460	Fuel level sensor circuit malfunction	<p>View and note freeze frame data if available</p> <p>View and note sensor data</p> <p>Ensure sensor connector is secure</p> <p>Disconnect ECM and proceed to pinpoint test 1</p>

Pinpoint Tests

Test	Result	Action
1 Check cable and terminal integrity: - ECM pin B22	OK	Disconnect sensor and proceed to test 2
	Faulty	Rectify fault, proceed to test 4
2 Check cable for short circuit: - ECM pin B22 to ground	OK	Proceed to test 3
	Short circuit	Locate and rectify wiring fault, proceed to test 4
3 Check cable continuity: - ECM pin B22 to sensor pin 1 - Sensor pin 2 to ground	OK	Proceed to test 4
	Open circuit	Locate and rectify wiring fault, proceed to test 4
4 Reconnect harness, clear fault code	OK	Action complete - quit test
	Fault still present	Contact Triumph service

Circuit Diagram



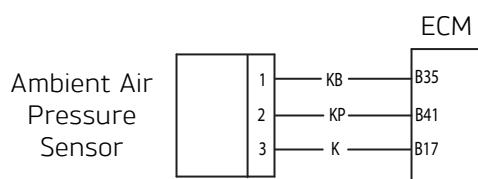
Ambient Air Pressure Sensor

Fault Code	Possible cause	Action
P1107	Ambient air pressure sensor circuit short circuit to ground	View and note freeze frame data if available View and note sensor data Ensure sensor connector is secure Disconnect ECM and proceed to pinpoint test 1
P1108	Ambient air pressure sensor circuit open circuit or short circuit to 5 Volt sensor supply	Disconnect ambient air pressure sensor and proceed to pinpoint test 4

Pinpoint Tests

Test	Result	Action
1 Check cable and terminal integrity: - ECM pin B35 - ECM pin B17 - ECM pin B41	OK	Disconnect ambient air pressure sensor and proceed to test 2
	Faulty	Rectify fault, proceed to test 5
2 Check cable for short circuit: - ECM pin B41 to ground - ECM pin B41 to ECM pin B35	OK	Proceed to test 3
	Short circuit	Locate and rectify wiring fault, proceed to test 5
3 Check cable for continuity: - ECM pin B41 to ECM pin B17	OK	Renew ambient air pressure sensor and proceed to test 5
	Open circuit	Locate and rectify wiring fault, proceed to test 5
4 Check cable for short circuit: - ECM pin B41 to sensor pin 2 - ECM pin B35 to sensor pin 1	OK	Renew ambient air pressure sensor and proceed to test 5
	Short circuit	Locate and rectify wiring fault, proceed to test 5
5 Reconnect harness, clear fault code and run engine	OK	Action complete - quit test
	Fault still present	Contact Triumph service

Circuit Diagram



Fuel System/Engine Management

Manifold Absolute Pressure (MAP) Sensor

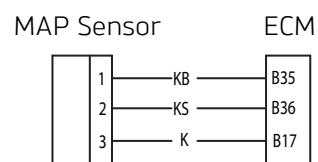
Fault Code	Possible cause	Action
P0107	Manifold absolute pressure sensor 1 short circuit to ground	<p>View and note freeze frame data if available</p> <p>View and note sensor data</p> <p>Ensure sensor connector is secure</p> <p>Disconnect ECM and proceed to pinpoint test 1</p>
P0108	Manifold absolute pressure sensor 1 open circuit or short circuit to 5 Volt sensor supply	Disconnect MAP sensor and proceed to test 4
P1105	Manifold absolute pressure sensor 1 pipe malfunction	Check connection/condition of pipe from MAP sensor to throttle body

Pinpoint Tests

Test	Result	Action
1 Check cable and terminal integrity: - ECM pin B35 - ECM pin B17 - ECM pin B36	OK	Disconnect MAP sensor and proceed to test 2
	Faulty	Rectify fault, proceed to test 6
2 Check cable for short circuit: - ECM pin B36 to ground - ECM pin B36 to ECM pin B35	OK	Proceed to test 3
	Short circuit	Locate and rectify wiring fault, proceed to test 6
3 Check cable for continuity: - ECM pin B17 to sensor pin 3	OK	Renew MAP sensor and proceed to test 6
	Open circuit	Locate and rectify wiring fault, proceed to test 6
4 Check cable for short circuit: - ECM pin B36 to ECM pin B17	OK	Renew MAP sensor and proceed to test 5
	Short circuit	Locate and rectify wiring fault, proceed to test 6
5 Check cable for continuity: - ECM pin B36 to sensor pin 2 - ECM pin B35 to sensor pin 1	OK	Renew MAP sensor and proceed to test 6
	Open circuit	Locate and rectify wiring fault, proceed to test 6
6 Reconnect harness, clear fault code and run engine	OK	Action complete - quit test
	Fault still present	Contact Triumph service

Fuel System/Engine Management

Circuit Diagram



Fuel System/Engine Management

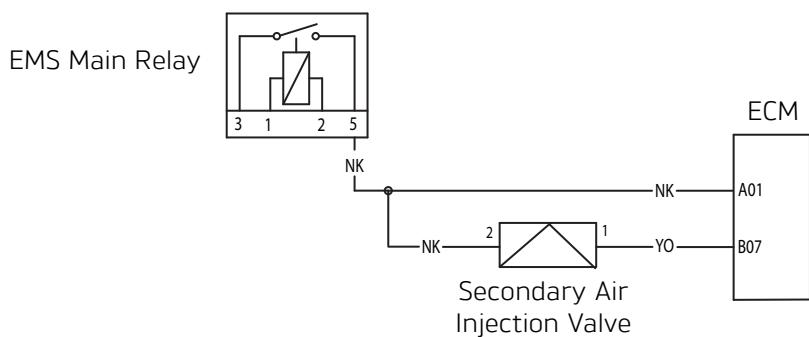
Secondary Air Injection Valve

Fault Code	Possible cause	Action
P0413	Secondary air injection system short circuit to ground or open circuit	View and note diagnostic software sensor data Ensure SAI valve connector is secure Disconnect ECM and proceed to pinpoint test 1
P0414	Secondary air injection system short circuit to Vbatt	Disconnect SAI valve and proceed to pinpoint test 5

Pinpoint Tests

Test	Result	Action
1 Check cable and terminal integrity: - ECM pin B07 - EMS relay pin 5	OK	Proceed to test 2
	Faulty	Rectify fault, proceed to test 7
2 Check resistance value: - ECM pin A01 to ECM pin B07	20Ω to 25Ω	Disconnect SAI valve and proceed to test 3
	Open circuit	Proceed to test 4
	Short circuit	Disconnect SAI valve and proceed to test 5
3 Check cable for short circuit: - ECM pin B07 to ground	OK	Proceed to test 6
	Short circuit	Locate and rectify wiring fault, proceed to test 7
4 Check cable continuity: - EMS relay pin 5 to valve pin 1 - ECM pin A01 to valve pin 2 - ECM pin B07 to valve pin 1	OK	Proceed to test 6
	Open circuit	Locate and rectify wiring fault, proceed to test 7
5 Check cable for short circuit: - ECM pin B07 to ECM pin A01	OK	Proceed to test 6
	Short circuit	Locate and rectify wiring fault, proceed to test 7
6 Check SAI valve resistance: - Valve pin 1 to valve pin 2	20Ω to 25Ω	Proceed to test 7
	Faulty	Renew SAI valve, proceed to test 7
7 Reconnect harness, clear fault code and run diagnostic software function test to visually verify operation of SAI valve	OK	Action complete - quit test
	Fault still present	Contact Triumph service

Circuit Diagram



Fuel System/Engine Management

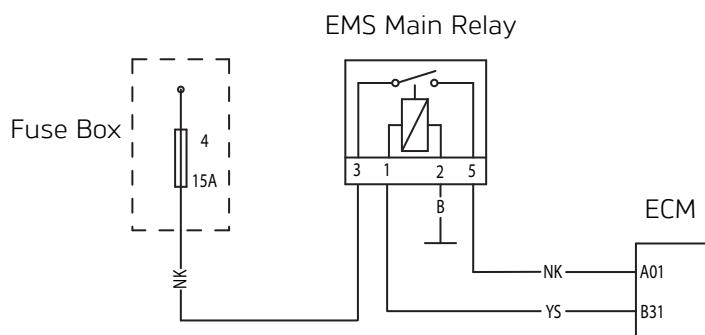
EMS Main Relay Circuit

Fault Code	Possible cause	Action
P1685	Main relay circuit malfunction	Note that the starter motor cannot be powered if a main relay fault exists Ensure the EMS main relay connector is secure Proceed to pinpoint test 1

Pinpoint Tests

Test	Result	Action
1 Ensure ignition has been switched off for greater than one minute. Identify EMS Main Relay on the harness. Check that relay operates when the ignition is switched ON.	OK	Proceed to test 2
	Faulty	Disconnect ECM and proceed to test 4
2 Check fuse box fuse 4 integrity	OK	Disconnect ECM and proceed to test 4
	Faulty	Disconnect ECM and proceed to test 3
3 Check cable for short circuit: - ECM pin A01 to ground - EMS main relay pin 3 to ground	OK	Replace Fuse 4 and proceed to test 4
	Short circuit	Locate and rectify wiring fault, replace Fuse 4 and proceed to test 7
4 Check cable and terminal integrity: - ECM pin A01 - ECM pin B31 - EMS main relay pin 1 - EMS main relay pin 2 - EMS main relay pin 3 - EMS Main relay pin 5	OK	Disconnect Main Relay and proceed to test 5
	Faulty	Rectify fault, proceed to test 7
5 Check cable for short circuit: - ECM pin B31 to ground	OK	Proceed to test 6
	Short circuit	Locate and rectify wiring fault, proceed to test 7
6 Check cable continuity: - ECM pin A01 to EMS Relay pin 5 - ECM pin B31 to EMS main relay pin 1 - EMS main relay pin 2 to ground - EMS main relay pin 3 to fuse box fuse 4	OK	Replace EMS Main Relay and proceed to test 7
	Open circuit	Locate and rectify wiring fault, proceed to test 7
7 Reconnect harness, clear fault code. Switch ignition off for longer than one minute. Switch ignition on and check that the EMS main relay operates. Start engine as final check	OK	Action complete - quit test
	Fault still present	Contact Triumph service

Circuit Diagram



Fuel System/Engine Management

EEPROM Error

Fault Code	Possible cause	Action
P0603	EEPROM error	<p>View and note freeze frame data if available</p> <p>No tests available - contact Triumph service</p>

Exhaust Actuator Control Internal Error

Fault Code	Possible cause	Action
P1680	Exhaust actuator control internal error (Daytona 675 models only)	<p>View and note freeze frame data if available</p> <p>No tests available - contact Triumph service</p>

Fuel System/Engine Management

EMS Ignition Voltage Input Circuit

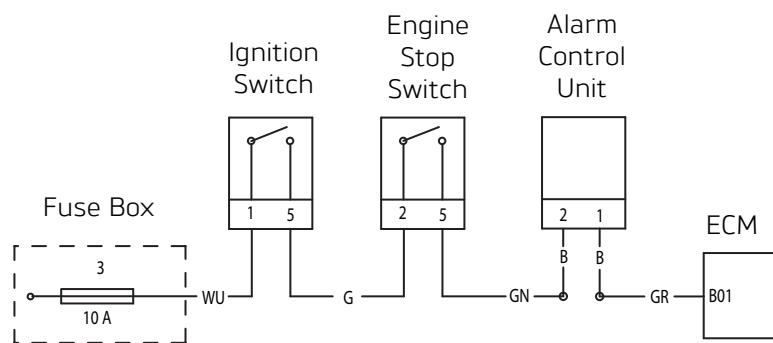
Fault Code	Possible cause	Action
P1659	Ignition power supply malfunction	Disconnect ECM and proceed to pinpoint test 1

Pinpoint Tests

Test	Result	Action
1 Check fuse box fuse 3 integrity	OK	Proceed to test 3
	Faulty	Proceed to test 2
2 Check cable for short circuit: - ECM pin B01 to ground	OK	Replace fuse 3 and proceed to test 3
	Short circuit	Locate and rectify wiring fault, replace fuse 3 and proceed to test 5
3 Check cable and terminal integrity: - ECM pin B01 - Alarm Connector pin 1 - Alarm Connector pin 2 - Right hand switch housing pin 2 - Right hand switch housing pin 5 - Ignition switch pin 1 - Ignition switch pin 5	OK	Proceed to test 4
	Faulty	Rectify fault, proceed to test 5
4 Check cable continuity: - ECM pin B01 to fuse box fuse 3 Note that the engine stop switch must be in the RUN position and any alarm fitted must be disarmed	OK	Proceed to test 5
	Open circuit	Locate and rectify wiring, immobiliser/TPMS control module or engine stop switch fault, proceed to test 5
5 Reconnect harness, clear fault code and run engine to verify fault cleared	OK	Action complete - quit test
	Fault still present	Contact Triumph service

Fuel System/Engine Management

Circuit Diagram



Fuel System/Engine Management

5 Volt Sensor Supply Circuit

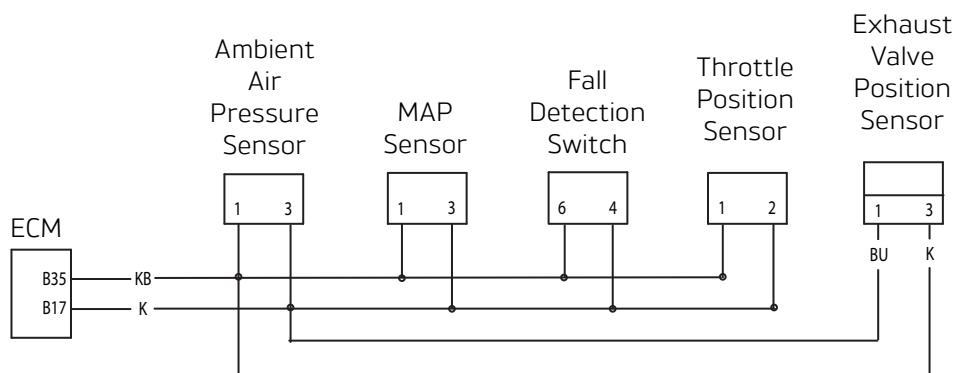
Fault Code	Possible cause	Action
P1698	5 V sensor supply malfunction Note: ECM sensors requiring a power supply will not be active	View and note diagnostic software sensor data Disconnect ECM and proceed to pinpoint test 1

Pinpoint Tests

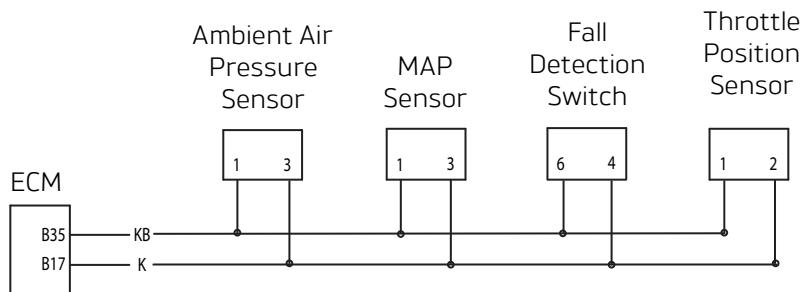
Test	Result	Action
1 Check cable and terminal integrity: - ECM pin B35 - ECM pin B17	OK	Proceed to test 2
	Faulty	Rectify fault, proceed to test 5
2 Check cable for short circuit - ECM pin B35 to ECM pin B17	OK	Proceed to test 4
	Faulty	Proceed to test 3
3 Disconnect the following sensors in turn: - MAP sensor - Ambient air pressure sensor - Fall detection sensor And retest for short circuit - ECM pin B35 to ECM pin B17	OK	Replace sensor last removed and proceed to test 5
	Faulty	Proceed to test 4
4 Check cable for short circuit: - ECM pin B35 to ground - ECM pin B17 to ground - ECM pin B35 to A01 - ECM pin B17 to A01 - ECM pin B35 to battery positive - ECM pin B17 to battery positive	OK	Proceed to test 5
	Short circuit	Locate and rectify wiring fault, proceed to test 5
5 Reconnect harness, clear fault code and use service software to check for correct sensor outputs and 5 V sensor supply Voltage level	OK	Action complete - quit test
	Fault still present	Contact Triumph service

Fuel System/Engine Management

Circuit Diagram - Daytona 675 and Daytona 675 R



Circuit Diagram - Street Triple, Street Triple 660 cc, Street Triple R and Street Triple Rx



Fuel System/Engine Management

Tune Lock

Fault Code	Possible cause	Action
P1605	ECM locked by the tune lock function	This is also identified by a fast flashing MIL indication, and a disabled engine management system. Unlock the ECM using the diagnostic software and supplied unlock code from Triumph service

Instrument ID Incorrect

Fault Code	Possible cause	Action
P1614	Instrument ID incompatible	This is also identified by a fast flashing MIL indication, and a disabled engine management system

Pinpoint Tests

Test	Result	Action
1 Check ECM part number is correct for the motorcycle	OK	Proceed to test 2
	Incorrect	Replace ECM with correct part and proceed to test 3
2 Check that the tune is correct for the motorcycle, using the diagnostic software	OK	Proceed to test 3
	Incorrect	Update tune using the diagnostic software, proceed to test 3
3 Clear fault code, check for normal operation	OK	Action complete - quit test
	Fault still present	Contact Triumph service

Fuel System/Engine Management

Immobiliser/TPMS Control Module Communication

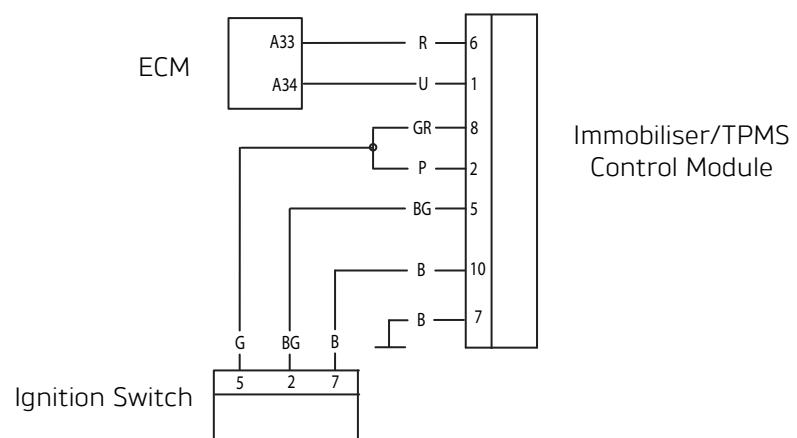
Fault Code	Possible cause	Action
P1650	Lost communication with immobiliser/TPMS control module	<p>View and note freeze frame data if available</p> <p>Ensure immobiliser/TPMS control module connector is secure</p> <p>Ensure the ignition switch is turned to the OFF position</p> <p>Proceed to pinpoint test 1</p>

Pinpoint Tests

Test	Result	Action
1 Check cable and terminal integrity: - ECM pin A33 - ECM pin A34 - Immobiliser/TPMS control module pin 1 - Immobiliser/TPMS control module pin 6	OK	Disconnect ECM and proceed to test 2
	Faulty	Rectify fault, proceed to test 4
2 Check cable for short circuit: - ECM pin A33 to ground - ECM pin A34 to ground	OK	Disconnect immobiliser/TPMS control module, ignition switch and proceed to test 3
	Faulty	Locate and rectify wiring fault, proceed to test 4
3 Check cable continuity: - ECM pin A33 to immobiliser/TPMS control module pin 6 - ECM pin A34 to immobiliser/TPMS control module pin 1 - Immobiliser/TPMS control module pin 7 to ground - Ignition switch pin 5 to immobiliser/TPMS control module pin 2 - Ignition switch pin 5 to immobiliser/TPMS control module pin 8	OK	Contact Triumph service
	Fault still present	Locate and rectify wiring fault, proceed to test 4
4 Reconnect harness, clear fault code and run engine	OK	Action complete - quit test
	Fault still present	Contact Triumph service

Fuel System/Engine Management

Circuit Diagram



Fuel System/Engine Management

Immobiliser/TPMS Control Module ID Incompatible

Fault Code	Possible cause	Action
P1508	Unmatched immobiliser/TPMS control module	This is also identified by a MIL indication and a disabled engine management system

Pinpoint Tests

Test	Result	Action
1 Follow the Pair ECM and immobiliser/TPMS control module procedure as described in the Triumph Diagnostic Tool User Guide	OK	Action complete - quit test
	Fault still present	Contact Triumph service

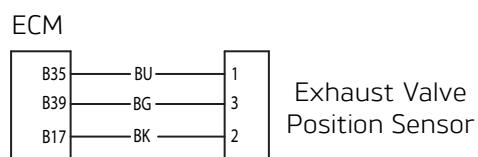
Exhaust Butterfly Valve (EXBV) Position Sensor - Daytona 675 and Daytona 675 R only

Fault Code	Possible cause	Action
P1078	Exhaust position sensor - short circuit to ground or open circuit (Daytona 675 models only)	View and note diagnostic software freeze frame data if available View and note diagnostic software sensor data
P1079	Exhaust position sensor - short circuit to 5 Volt sensor supply (Daytona 675 models only)	Ensure actuator connector is secure Disconnect ECM and proceed to pinpoint test 1

Pinpoint Tests

Test	Result	Action
1 Check cable and terminal integrity: - ECM pin B39 - ECM pin B17 - ECM pin B35	OK	Disconnect actuator and proceed to test 2
	Faulty	Rectify fault, proceed to test 5
2 Check cable for short circuit: - ECM pin B39 to ground	OK	Proceed to test 3
	Short circuit	Locate and rectify wiring fault, proceed to test 5
3 Check cable continuity: - ECM pin B39 to actuator pin 2 - ECM pin B17 to actuator pin 3 - ECM pin B35 to actuator pin 1	OK	Proceed to test 4
	Open circuit	Locate and rectify wiring fault, proceed to test 5
4 Check cable for short circuit: - ECM pin B39 to ECM pin B17 - ECM pin B39 to ECM pin B35	OK	Renew exhaust control valve actuator, proceed to test 5
	Short circuit	Locate and rectify wiring fault, proceed to test 5
5 Reconnect harness, clear fault code and run diagnostic software function test to visually verify operation of the exhaust control valve actuator	OK	Action complete - quit test
	Fault still present	Contact Triumph service

Circuit Diagram



Fuel System/Engine Management

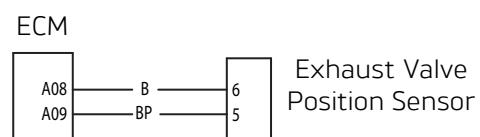
Exhaust Butterfly Valve (EXBV) Motor - Daytona 675 and Daytona 675 R

Fault Code	Possible cause	Action
P0078	Exhaust position sensor - short circuit to 5 Volt sensor supply (Daytona 675 models only)	<p>View and note diagnostic software freeze frame data if available</p> <p>View and note diagnostic software sensor data</p> <p>Ensure actuator connector is secure</p> <p>Disconnect ECM and proceed to pinpoint test 1</p>
P1080	Exhaust actuator control mechanism fault (Daytona 675 models only)	Proceed to pinpoint test 5

Pinpoint Tests

Test	Result	Action
1 Check cable and terminal integrity: - ECM pin A08 - ECM pin A09	OK	Disconnect actuator and proceed to test 2
	Faulty	Rectify fault, proceed to test 6
2 Check cable for short circuit: - ECM pin A08 to ground - ECM pin A09 to ground	OK	Proceed to test 3
	Short circuit	Locate and rectify wiring fault, proceed to test 6
3 Check cable continuity: - ECM pin A08 to Actuator pin 6 - ECM pin A09 to Actuator pin 5	OK	Proceed to test 4
	Open circuit	Locate and rectify wiring fault, proceed to test 6
4 Check cable for short circuit: - ECM pin A08 to ECM pin A09	OK	Renew exhaust control valve actuator, proceed to test 6
	Short circuit	Locate and rectify wiring fault, proceed to test 6
5 Check adjustment of cables is within specification. Disconnect cables and check that the cables are free to slide through the cable outers (see page 10-175) Using a suitable tool check that the exhaust control valve can be rotated manually	OK	Renew Exhaust control valve actuator, proceed to test 6
	Faulty	Renew relevant part and proceed to test 6
6 Reconnect harness, clear fault code and run diagnostic software function test to visually verify operation of the exhaust control valve actuator	OK	Action complete - quit test
	Fault still present	Contact Triumph service

Circuit Diagram



Fuel System/Engine Management

ABS Modulator ID Incompatible

Fault Code	Possible cause	Action
P1520	Unmatched ABS	This is also identified by ABS warning light indication Proceed to pinpoint test 1

Pinpoint Tests

Test	Result	Action
1 Check ABS modulator part number is correct for the motorcycle	OK	Proceed to test 2
	Incorrect	Replace ABS modulator with correct part and proceed to test 3
2 Check that the tune is correct for the motorcycle, using the diagnostic tool	OK	Proceed to test 3
	Incorrect	Update tune using service tool, proceed to test 3
3 Clear fault code, check for normal operation	OK	Action complete - quit test
	Fault still present	Contact Triumph service

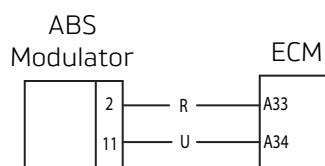
ABS Modulator Communication

Fault Code	Possible cause	Action
P1521	Lost communication with ABS	View and note freeze frame data if available Ensure ABS modulator connector is secure Proceed to pinpoint test 1

Pinpoint Tests

Test	Result	Action
1 Check cable and terminal integrity: - ECM pin A33 - ECM pin A34 - ABS modulator pin 2 - ABS modulator pin 11	OK	Disconnect ECM and proceed to test 2
	Faulty	Rectify fault, proceed to test 4
2 Check cable for short circuit: - ECM pin A33 to ground - ECM pin A34 to ground	OK	Disconnect ABS modulator and proceed to test 3
	Faulty	Locate and rectify wiring fault, proceed to test 4
3 Check cable continuity: - ECM pin A33 to ABS modulator pin 2 - ECM pin A34 to ABS modulator pin 11	OK	Contact Triumph service
	Fault still present	Locate and rectify wiring fault, proceed to test 4
4 Reconnect harness, clear fault code and run engine	OK	Action complete - quit test
	Fault still present	Contact Triumph service

Circuit Diagram



Fuel System/Engine Management

ECM Tamper Detected

Fault Code	Possible cause	Action
P1604	ECM tamper detected - return to Triumph	Contact Triumph service

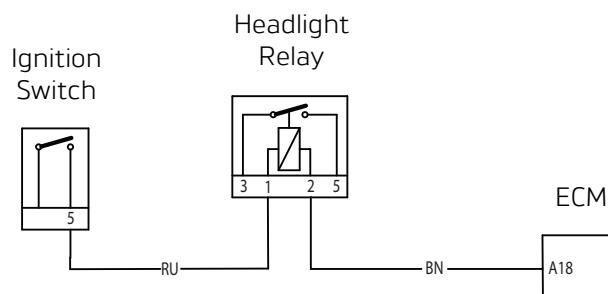
Headlight Relay

Fault Code	Possible cause	Action
P1619	Headlamp relay short circuit to ground or open circuit	View and note freeze frame data if available Ensure ABS modulator connector is secure Disconnect ECM and proceed to pinpoint test 1
P1620	Headlamp relay short circuit to Vbatt	Disconnect ECM and headlight relay and proceed to pinpoint test 4

Pinpoint Tests

Test	Result	Action
1 Check cable and terminal integrity: - ECM pin A18 - Ignition switch pin 5	OK	Disconnect headlight relay and proceed to test 2
	Faulty	Rectify fault, proceed to test 5
2 Check cable for short circuit: - ECM pin A18 to ground	OK	Proceed to test 3
	Faulty	Locate and rectify wiring fault, proceed to test 5
3 Check cable continuity: - ECM pin A18 to headlight relay pin 2 - Ignition switch pin 5 to headlight relay pin 1	OK	Renew headlight relay, proceed to test 5
	Open circuit	Locate and rectify wiring fault, proceed to test 5
4 Check cable for short circuit: - ECM pin A18 to ignition switch pin 5	OK	Renew headlight relay, proceed to test 5
	Short circuit	Renew headlight relay, proceed to test 5
5 Reconnect harness, clear fault code and run engine	OK	Action complete - quit test
	Fault still present	Contact Triumph service

Circuit Diagram



Fuel System/Engine Management

Fault Finding - Non Electrical

Symptom	Possible cause(s)
Poor throttle response at low RPM	Low fuel pressure caused by filter blockage/leaks
Cutting out at idle	Throttle bodies out of balance
	ISC (Idle Speed Control) actuator inoperative
	Low fuel pressure
	Weak mixture caused by air leak at the throttle body/transition piece to cylinder head face
Idle speed too low/high	ISC (Idle Speed Control) actuator sticking
	Incorrect closed throttle position setting
	Mechanical fault with the throttle linkage
Diagnostic software malfunctions during tune download procedure	Low battery Voltage
Throttle hang-up	Incorrect closed throttle position setting
Engine will start but cuts out immediately	ISC (Idle Speed Control) motor stuck
	Low fuel pressure caused by filter blockage/leaks
Abnormally high fuel pressure	Fuel pressure regulator inoperative
Temperature gauge reads cooler than normal	Cooling system air-locked resulting in coolant temperature sensor operating in air instead of coolant
Motorcycle will not start	Check the immobiliser system for faults
	Ensure that the keys, ECM and immobiliser/TPMS control module are all correctly paired

Front Wheel Unit Sensor Battery Alert

Note:

- All the fault codes for the Tyre Pressure Monitoring System and the Immobiliser System can only be viewed in the Safety/Security section of the Triumph diagnostic software.

Fault Code	Possible cause	Action
L0001 or The TPMS tyre symbol in the instrument pack will be on for 8 seconds with the F symbol with lo bAtt shown in the display screen	Front wheel sensor unit battery alert	Replace the front wheel pressure sensor following the procedure described in the Triumph Diagnostic Tool User Guide Record the new sensor's ID number into the Owner's Handbook before fitting

Fuel System/Engine Management

Rear Wheel Unit Sensor Battery Alert

Fault Code	Possible cause	Action
L0002 or The TPMS tyre symbol in the instrument pack will be on for 8 seconds with the R symbol with lo bAtt shown in the display screen	Rear wheel sensor unit battery alert	Replace the rear wheel pressure sensor following the procedure described in the Triumph Diagnostic Tool User Guide Record the new sensor's ID number into the Owner's Handbook before fitting

Front Wheel Unit Sensor Fault Alert

Fault Code	Possible cause	Action
L0003	Front wheel sensor unit fault alert Note: This DTC will automatically be generated if DTC L0007 occurs	If the problem persists: Replace the front wheel pressure sensor following the procedure described in the Triumph Diagnostic Tool User Guide Record the new sensor's ID number into the Owner's Handbook before fitting

Fuel System/Engine Management

Rear Wheel Unit Sensor Fault Alert

Fault Code	Possible cause	Action
L0004	<p>Rear wheel sensor unit fault alert</p> <p>Note: This DTC will automatically be generated if DTC L0007 occurs</p>	<p>If the problem persists: Replace the rear wheel pressure sensor following the procedure described in the Triumph Diagnostic Tool User Guide Record the new sensor's ID number into the Owner's Handbook before fitting</p>

Front Wheel Unit Sensor Loss of Communication

Note:

- Refer to the Owner's Handbook for the wheel pressure sensors' ID numbers.

Fault Code	Possible cause	Action
L0005	Front wheel sensor unit loss of communication error Low battery Voltage Wrong sensor ID number has been registered in the immobiliser/TPMS control module	If the problem persists: Using the Triumph diagnostic tool, check that the correct ID number for the front wheel pressure sensor is registered to the Immobiliser/TPMS control module Replace the front wheel pressure sensor following the procedure described in the Triumph Diagnostic Tool User Guide Record the new sensor's ID number into the Owner's Handbook before fitting

Fuel System/Engine Management

Rear Wheel Unit Sensor Loss of Communication

Note:

- Refer to the Owner's Handbook for the wheel pressure sensors' ID numbers.

Fault Code	Possible cause	Action
L0006	Rear wheel sensor unit loss of communication error Low battery Voltage Wrong sensor ID number has been registered in the immobiliser/TPMS control module	If the problem persists: Using the Triumph diagnostic tool, check that the correct ID number for the rear wheel pressure sensor is registered to the Immobiliser/TPMS control module Replace the rear wheel pressure sensor following the procedure described in the Triumph Diagnostic Tool User Guide Record the new sensor's ID number into the Owner's Handbook before fitting

Immobiliser/TPMS Control Module Fault

Note:

- Refer to the Owner's Handbook for the wheel pressure sensors' ID numbers.

Fault Code	Possible cause	Action
L0007	Immobiliser/TPMS control module fault Low battery Voltage Wrong sensor ID numbers have been registered in the immobiliser/TPMS control module	Using the Triumph diagnostic tool, check that the correct ID numbers for the wheel pressure sensors are registered to the Immobiliser/TPMS control module If the correct IDs are registered, replace the front and rear wheel pressure sensor following the procedure described in the Triumph Diagnostic Tool User Guide Record the new sensor's ID number into the Owner's Handbook before fitting

Fuel System/Engine Management

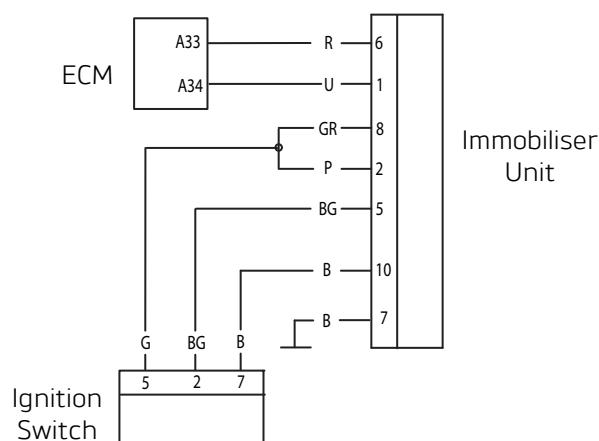
Invalid Key: Key Authentication Unsuccessful

Fault Code	Possible cause	Action
L0008 or Alarm/immobiliser warning indicator light is on when the ignition switch is at the ON position (only visible on motorcycles without the accessory alarm fitted)	Invalid key: Key authentication unsuccessful	Check that the key has been registered with the immobiliser/TPMS control module, if it is a new key or an additional key Check that there are no additional keys with a transponder chip fitted close to the ignition key and proceed to pinpoint test 1

Pinpoint Tests

Test	Result	Action
1 If available, try to start the motorcycle with the second registered key:	OK	Transponder chip in the key not functioning correctly. Register a new key using the Triumph diagnostic tool then proceed to test 5
	Faulty	Proceed to test 2
2 Check the condition of cable, connector housing and terminals for the following: - Ignition switch - Immobiliser/TPMS control module	OK	Disconnect the ignition switch, proceed to test 3
	Faulty	Rectify fault, proceed to test 5
3 Check antenna coil resistance: - Ignition switch pin 2 to ignition switch pin 7	7Ω to 13Ω	Proceed to test 4
	Faulty	Replace the ignition switch, register new keys and proceed to test 5
4 Check cable continuity: - Ignition switch pin 7 to immobiliser/TPMS control module pin 10 - Ignition switch pin 2 to immobiliser/TPMS control module pin 5	OK	Contact Triumph service
	Faulty	Rectify fault, proceed to test 5
5 Reconnect harness, clear fault code and run engine	OK	Action complete - quit test
	Fault still present	Contact Triumph service

Circuit Diagram



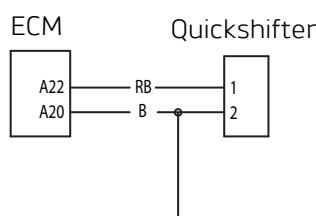
Quickshifter Fault

Fault Code	Possible cause	Action
Not applicable	Quickshifter supply Voltage less than 4.5 V	Disconnect ECM and proceed to pinpoint test 1
Quickshifter not working	Quickshifter open circuit	
Quickshifter working intermittently	Quickshifter switch fault	

Pinpoint Tests

Test	Result	Action
1 Check cable and terminal integrity: - ECM pin A20 - ECM pin A22 - Quickshifter pin 1 - Quickshifter pin 2	OK	Proceed to test 2
	Faulty	Rectify fault, proceed to test 7
2 Disconnect quickshifter and check Voltage at: - Quickshifter connector pin 1 (motorcycle harness side)	Voltage greater than 4.5 V	Proceed to test 3
	Voltage less than or equal to 4.5 V	Contact Triumph service
3 Check cable continuity: - Quickshifter connector pin 2 to ground (motorcycle harness side)	Ok	Proceed to test 4
	Open circuit	Locate and rectify wiring fault, repeat test 3
4 Check cable continuity: - ECM pin A20 to ground	OK	Proceed to test 5
	Open circuit	Locate and rectify wiring fault, repeat test 4
5 Check quickshifter continuity in non activated state across quickshifter terminals:	No continuity	Proceed to test 6
	Continuity	Replace quickshifter
6 Check quickshifter continuity in activated state across quickshifter terminals:	Continuity	Proceed to test 7
	No continuity	Replace quickshifter
7 Reconnect quickshifter and ECM connectors and test for correct operation	OK	Action complete - quit test
	Fault still present	Contact Triumph service

Circuit Diagram



Fuel System/Engine Management

Fuel Tank

Removal

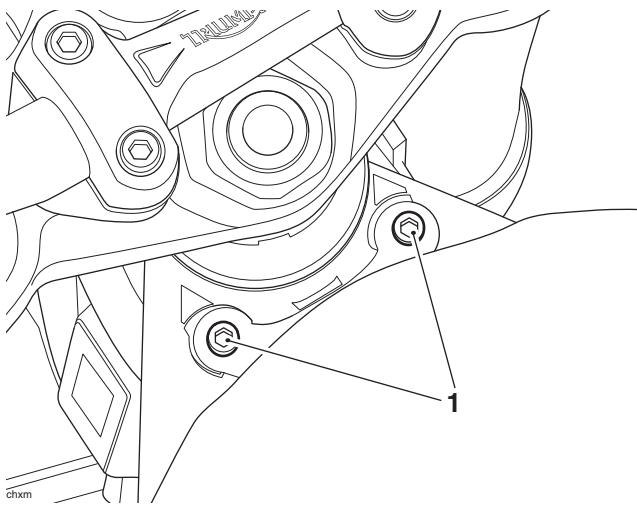


Warning

Observe the warning advice given in the General Information section on the safe handling of fuel and fuel containers.

A fire, causing personal injury and damage to property, could result from spilled fuel or fuel not handled or stored correctly.

1. Remove the seat (see page 16-22 for Daytona 675, Daytona 675 R and Street Triple Rx, see page 16-23 for Street Triple, Street Triple 660 cc and Street Triple R).
2. Disconnect the battery, negative (black) lead first.
3. Release the fixings securing the front of the fuel tank to the frame.

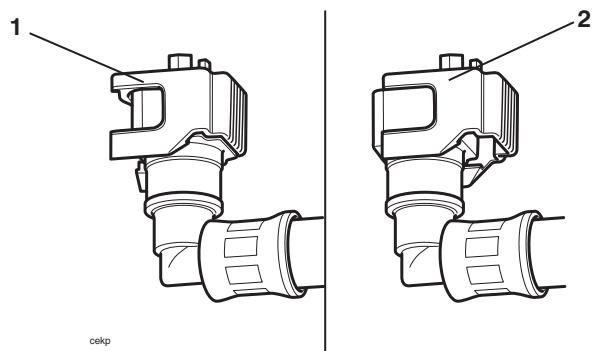


1. Fixings

4. Raise the fuel tank and disconnect the electrical connections to the fuel pump and the fuel level sensor.

Note:

- Because fuel stored in the fuel rail will be at 3.5 bar pressure, it is essential that the fuel pressure is reduced before any dismantling of the fuel rail takes place. To reduce pressure, briefly crank the engine with the fuel pump disconnected.
 - When disconnected, the fuel tank is self-sealing but a small amount of fuel may dribble from the hose.
5. Ease the latch away from the connector until the release buttons are exposed.



1. Locked position

2. Unlocked position

6. Disconnect the fuel hose by squeezing the sides of the connector and pulling the hose free from its spigot on the fuel pump plate.

Note:

- Before disconnection, note the position of the two breather hoses so that they can be returned to the same locations when refitting the tank.



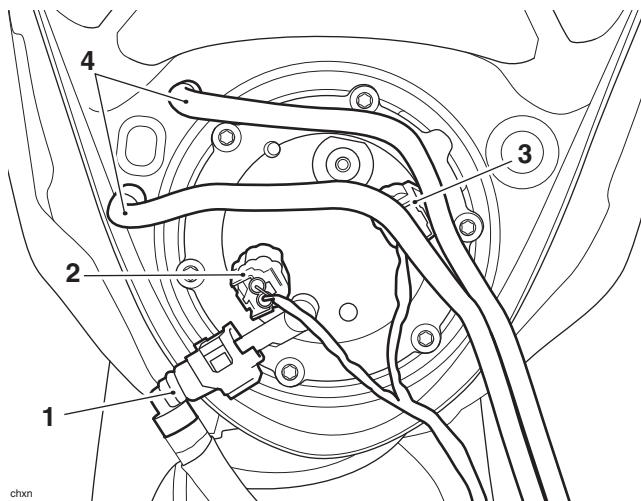
Warning

If the fuel rail is dismantled without first reducing pressure, fuel may escape causing clothing and components to be coated with fuel.

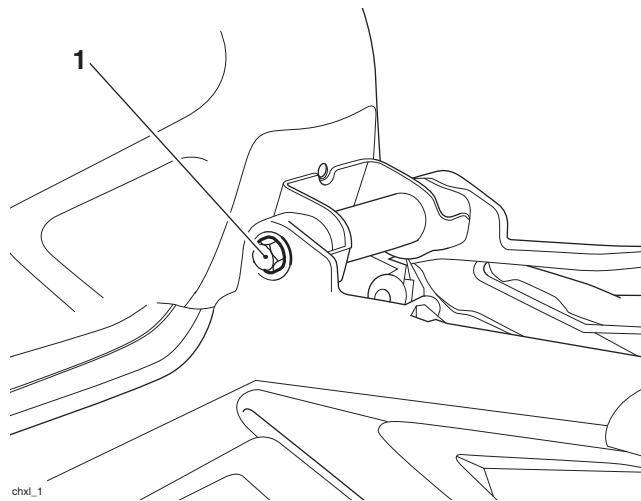
This would represent a serious fire hazard which could lead to burn injuries and damage to property.

Fuel System/Engine Management

7. Disconnect the two breather hoses.

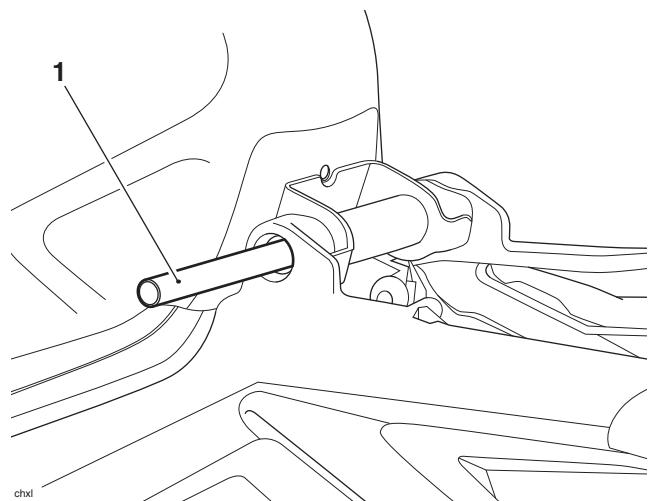


8. Lower the fuel tank and release the fixing securing the rear of fuel tank to the frame.



1. Fixing

9. Withdraw the spacer sleeve from the frame.



1. Spacer sleeve

10. Remove the fuel tank from the frame.

Note:

- If fitting a new fuel tank, the barrel lock must be removed from the original fuel cap and fitted to the new one (see page 16-41).

Installation

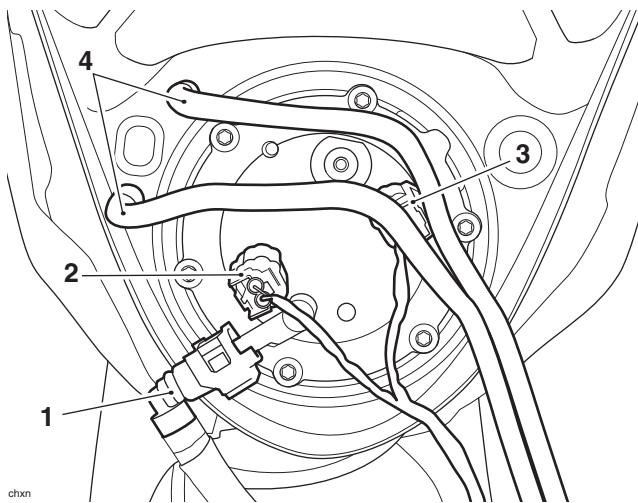
1. Align the fuel tank rear mounting to the frame.
2. Refit the rear spacer sleeve. Fit and tighten the rear bolt to **8 Nm**.
3. With the fuel tank raised, connect the two breather hoses as noted for removal.

Note:

- The fuel hose has different coloured connectors on each end, to aid orientation. The orange end must be fitted to the fuel tank, the grey end must be fitted to the fuel rails.
4. Reconnect the fuel feed hose by gently pushing inwards until the hose engages with a click.
 5. Slide the double check latch down (i.e. towards the spigot) until the release buttons are covered. If the latch will not slide into position, then the fuel hose is not fully home on its spigot and must therefore be refitted correctly.
 6. Reconnect the fuel pump electrical connection.

Fuel System/Engine Management

- Reconnect the fuel level sensor.



1. Fuel hose
2. Fuel pump electrical connection
3. Fuel level sensor connection
4. Breather hoses

- Lower the fuel tank and align the fuel tank front mounting to the frame. Refit the two bolts and tighten to **9 Nm**.
- Reconnect the battery, positive (red) lead first. Tighten the battery terminals to **4.5 Nm**.
- Start the engine and check carefully for fuel leaks. Rectify as necessary.
- Refit the seat (see page 16-22 for Daytona 675, Daytona 675 R and Street Triple Rx, see page 16-24 for Street Triple, Street Triple 660 cc and Street Triple R).

Fuel Pump

Removal

Note:

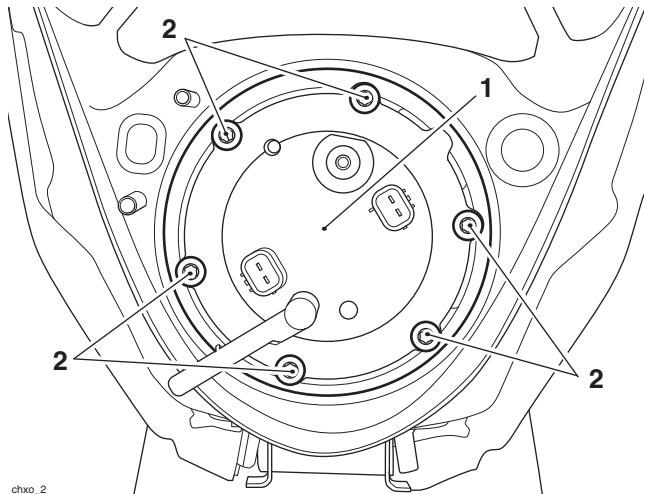
- The fuel pump and fuel filter is a sealed for life unit and must be replaced as a complete assembly.
- Remove the seat (see page 16-22 for Daytona 675, Daytona 675 R and Street Triple Rx, see page 16-23 for Street Triple, Street Triple 660 cc and Street Triple R).
 - Disconnect the battery, negative (black) lead first.
 - Remove the fuel tank (see page 10-112).
 - Using proprietary professional automotive workshop equipment approved for fuel handling, drain the fuel from the fuel tank.



Warning

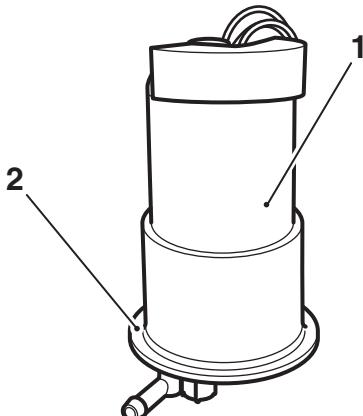
Observe the warning advice given in the General Information section on the safe handling of fuel and fuel containers. A fire, causing personal injury and damage to property, could result from spilled fuel or fuel not handled or stored correctly.

- Invert the fuel tank and place on a protective surface to prevent paint damage.
- Remove the fixings securing the fuel pump mounting plate to the fuel tank.



1. Mounting plate
2. Fixings

7. Lift the fuel pump assembly and manoeuvre it from the fuel tank aperture.
8. Noting its orientation, remove and discard the sealing ring from the fuel pump assembly.

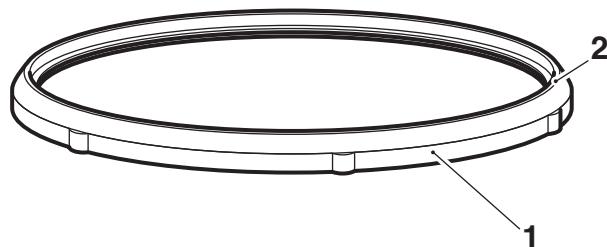


ccxh

1. Fuel pump assembly
2. Sealing ring location

Installation

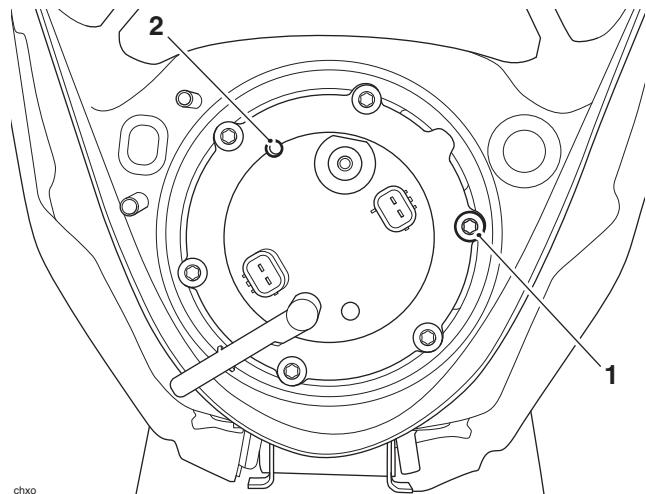
1. Install a new sealing ring in the fuel pump assembly, with the seal lip facing uppermost, and ensure that it is correctly seated.



cdva

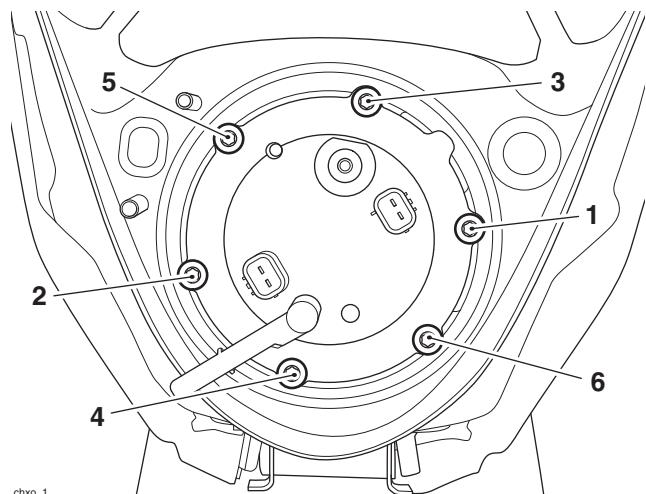
1. Sealing ring
2. Seal lip
2. Taking care to ensure the sealing ring is not damaged or dislodged, manoeuvre the fuel pump assembly into the fuel tank aperture.

3. Ensure the locating peg on the fuel pump assembly is located in the cut out on the mounting plate and the offset hole is positioned as shown below.



1. Offset hole position
2. Locating peg

4. In the sequence shown below, tighten the mounting plate fixings to **9 Nm**.



Fuel Pump Mounting Plate Torque Sequence

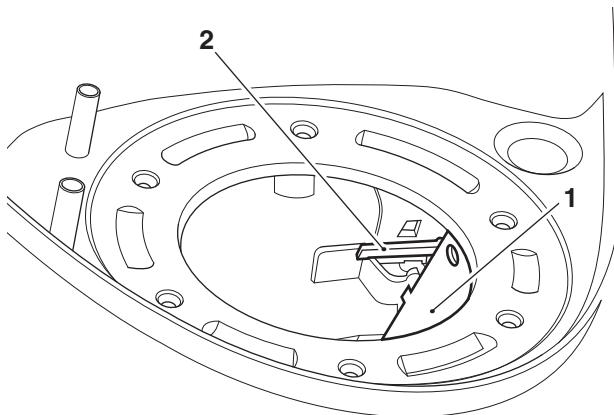
5. Refit the fuel tank (see page 10-113).
6. Using proprietary professional automotive workshop equipment approved for fuel handling, refill the fuel tank with the fuel drained earlier.
7. Reconnect the battery, positive (red) lead first. Tighten the battery terminals to **4.5 Nm**.
8. Refit the seat (see page 16-22 for Daytona 675, Daytona 675 R and Street Triple Rx, see page 16-24 for Street Triple, Street Triple 660 cc and Street Triple R).

Fuel System/Engine Management

Fuel Level Sender Assembly/Float Replacement

Removal

1. Remove the seat (see page 16-22 for Daytona 675, Daytona 675 R and Street Triple Rx, see page 16-23 for Street Triple, Street Triple 660 cc and Street Triple R).
2. Disconnect the battery, negative (black) lead first.
3. Remove the fuel pump and filter assembly (see page 10-114).
4. Release the locking device and slide the bottom of the level sender to the fuel tank opening. Withdraw from the tank and allow any remaining fuel to drain into a suitable container.

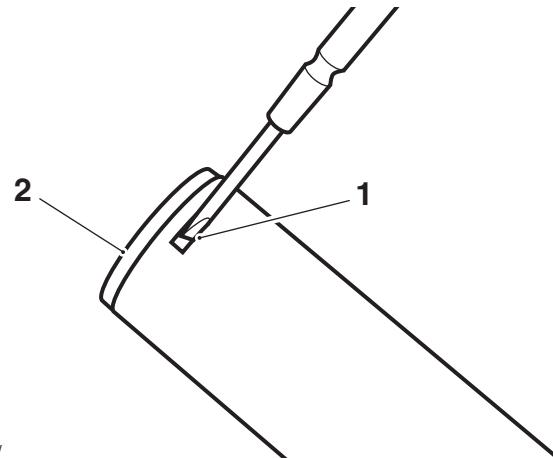


chxh

1. Fuel level sensor
2. Locking device

Float Replacement

1. Insert a small screwdriver into one of the tabs at the top of the float assembly and gently prise the lid free.



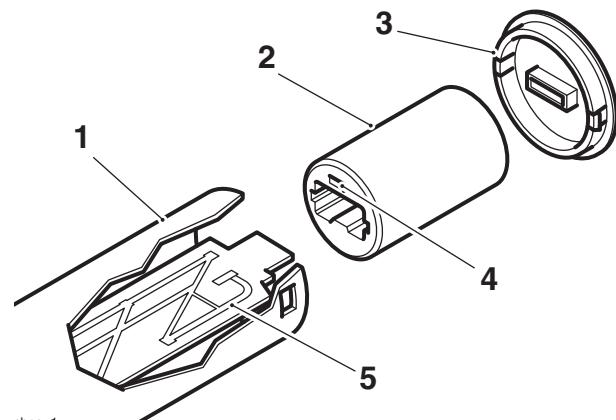
1. Tab

2. Lid

2. Invert the assembly and allow the float unit to slide free.
3. Discard the old float unit.
4. Insert the new float unit in the orientation shown below ensuring the magnet cover on the face of the unit faces towards the bottom of the support tube.

Note:

- It is possible to fit the float unit upside down. An incorrect fuel level reading will be indicated during motorcycle operation if the float unit is fitted upside down.



1. Support tube

2. Float unit

3. Lid

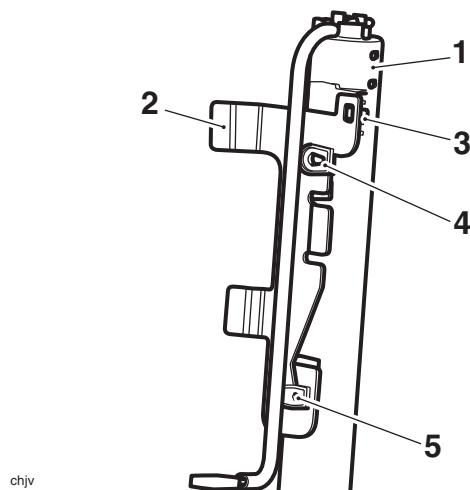
4. Magnet cover

5. Slider

- Refit the lid ensuring the tabs on the lid locate correctly with the cut-outs in the top of the support tube.

Installation

- Align the lower lug first to the bracket then the upper lug. Ensure that the locking device is fully engaged to the bracket and is secure.



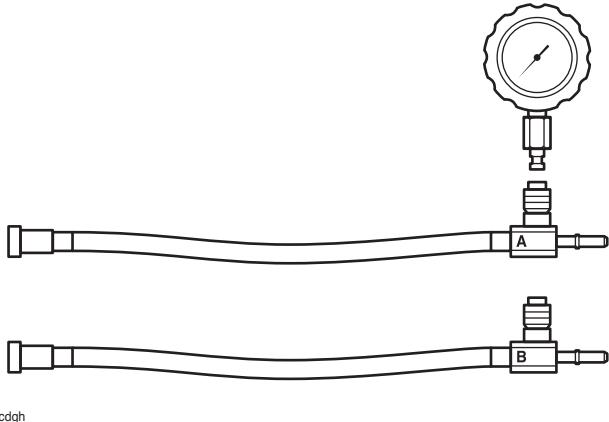
- Level sender**
- Bracket, inside fuel tank**
- Locking device**
- Upper lug**
- Lower lugs**
- Refit the fuel pump and filter assembly (see page 10-115).
- Refit the fuel tank (see page 10-113).
- Reconnect the battery, positive (red) lead first. Tighten the battery terminals to **4.5 Nm**.
- Start the engine and check carefully for fuel leaks. Rectify as necessary.
- Refit the seat (see page 16-22 for Daytona 675, Daytona 675 R and Street Triple Rx, see page 16-24 for Street Triple, Street Triple 660 cc and Street Triple R).

Fuel Pressure Checking

Warning

Observe the fuel handling precautions given in the General Information section.

Fuel pressure is checked using T3880001 - Fuel Pressure Gauge.



T3880001 - Fuel Pressure Gauge

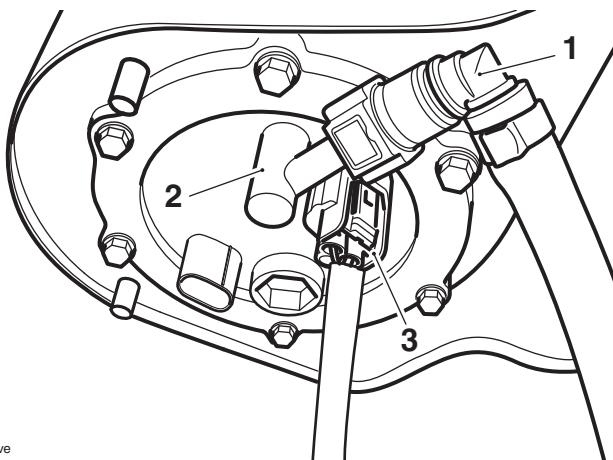
- Remove the seat (see page 16-22 for Daytona 675, Daytona 675 R and Street Triple Rx, see page 16-23 for Street Triple, Street Triple 660 cc and Street Triple R).
- Remove the fuel tank (see page 10-112) and place on a suitable support, close to the motorcycle.
- Using the T3880123 - Extension Cable, carefully connect the fuel pump connection on the main harness to the fuel tank. Connect the other end of the extension cable to the motorcycle main harness.
- Select the fuel pressure gauge adapter marked B from T3880123 - Extension Cable.

Warning

Always use the correct fuel pressure gauge adapter (**adapter B for Daytona 675 and Daytona 675 R, Street Triple, Street Triple 660 cc, Street Triple R and Street Triple Rx**). Use of an incorrect adapter will result in a fuel leak. A fuel leak can result in a fire causing damage to property and injury to persons.

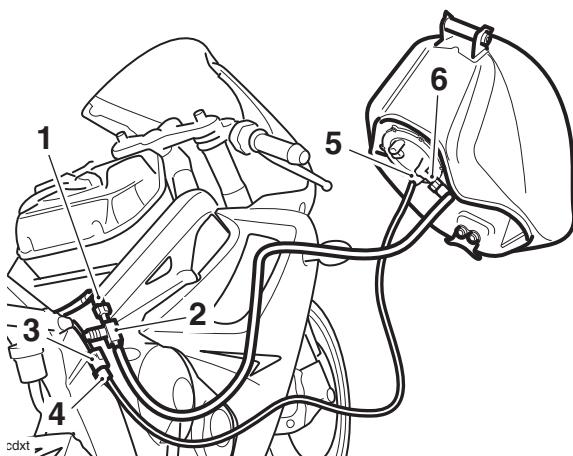
Fuel System/Engine Management

5. Connect the adapter hose to the fuel pump plate outlet as shown in the illustration below.



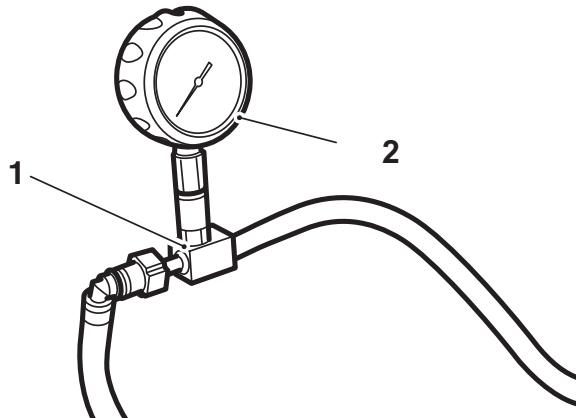
1. Adaptor hose B
2. Fuel pump plate outlet
3. T3880123 - Extension Cable

6. Connect the fuel hose to the adaptor hose as shown in the illustration below.



1. Motorcycle fuel hose
2. Adaptor hose B
3. Fuel pump connection
4. T3880123 - Extension Cable
5. Fuel pump connection
6. Fuel pump plate outlet

7. Connect the fuel pressure gauge to the adaptor hose as shown below by pushing the gauge spigot into the adapter until a click can be heard.



1. Adaptor hose
2. Fuel pressure gauge

Note:

- To release the fuel pressure gauge from the adapter, slide the outer ferrule downwards. This will allow the gauge to spring upwards from the adapter.
- 8. Ensure the gauge is visible to the side of the motorcycle.
- 9. Start the engine and observe the fuel pressure reading on the gauge.

Note:

- The fuel pressure should be 3.5 bar nominally.
- 10. When fuel pressure checking is complete, disconnect the fuel pressure gauge adapter and wiring extension.
- 11. Refit the fuel tank (see page 10-113).
- 12. Refit the seat (see page 16-22 for Daytona 675, Daytona 675 R and Street Triple Rx, see page 16-24 for Street Triple, Street Triple 660 cc and Street Triple R).

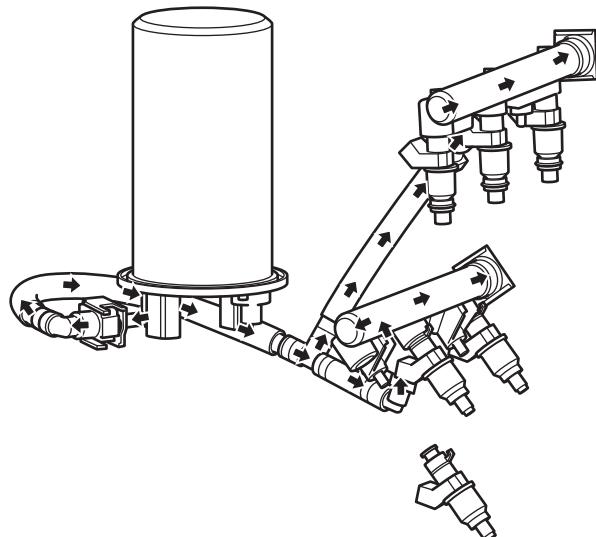
Fuel Delivery System

Fuel is delivered to the injectors by a pump located inside the fuel tank. Fuel flows in the direction of the arrows shown in the diagram below.

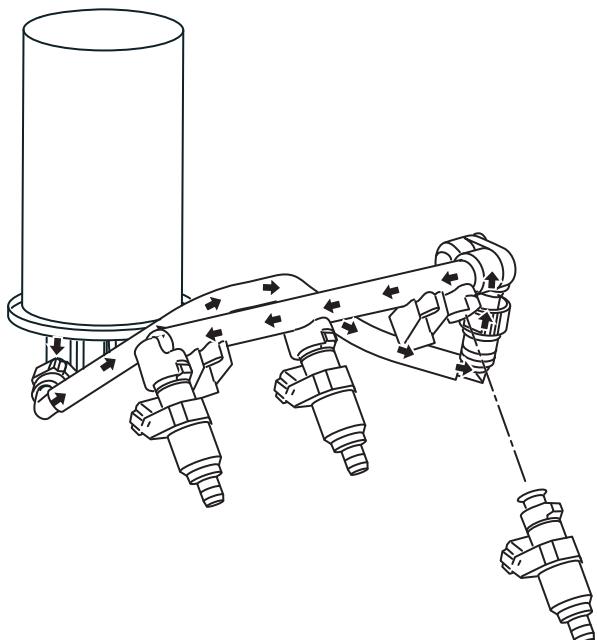
The Daytona 675 and Daytona 675 R have a second set of fuel injectors which are located on the upper section of the airbox.

Incorporated in the fuel pump assembly is a filter, a pressure regulator and a pick-up strainer.

Direction of fuel flow - Daytona 675 and Daytona 675 R



Direction of fuel flow - Street Triple, Street Triple 660 cc, Street Triple R and Street Triple Rx

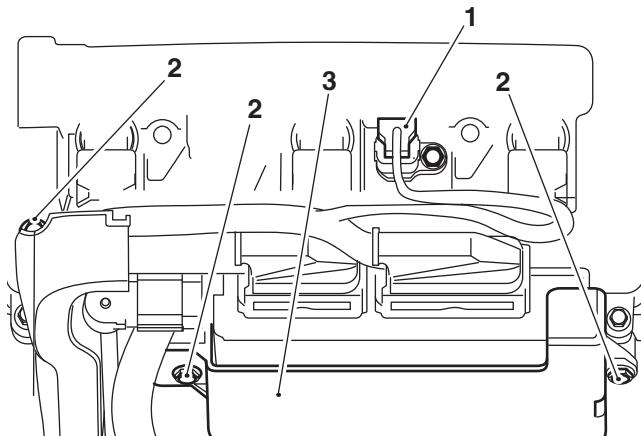


Fuel System/Engine Management

Airbox

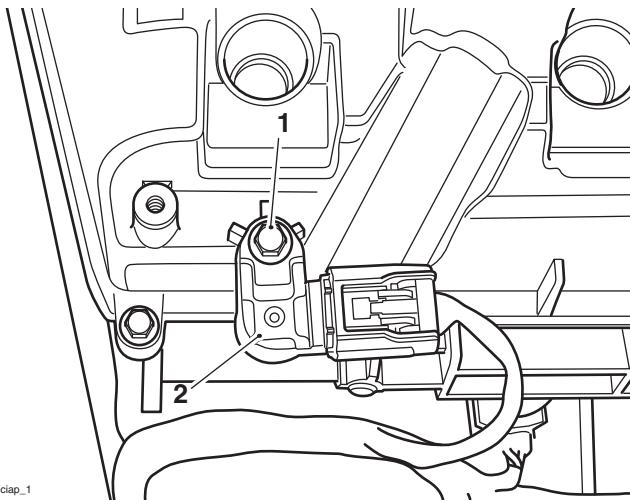
Removal

1. Remove the seat (see page 16-22 for Daytona 675, Daytona 675 R and Street Triple Rx, see page 16-23 for Street Triple, Street Triple 660 cc and Street Triple R).
2. Disconnect the battery, negative (black) lead first.
3. Remove the fuel tank (see page 10-112).
4. **For Daytona 675 and Daytona 675 R:** Disconnect the multi-plugs from the second set of fuel injectors.
5. Release the locking device then lift the multiplug up to disconnect it from the air temperature sensor.
6. Release the three fixings and detach the ECM and its bracket from the airbox.



1. Multiplug, air temperature sensor
2. Fixings
3. ECM bracket

7. Disconnect the map sensor multiplug.
8. Release the fixing and detach the map sensor from the airbox.



1. Fixing
2. Map sensor

Daytona 675 and Daytona 675 R



Warning

If the fuel rail is dismantled without first reducing pressure, fuel may escape causing clothing and components to be coated with fuel.

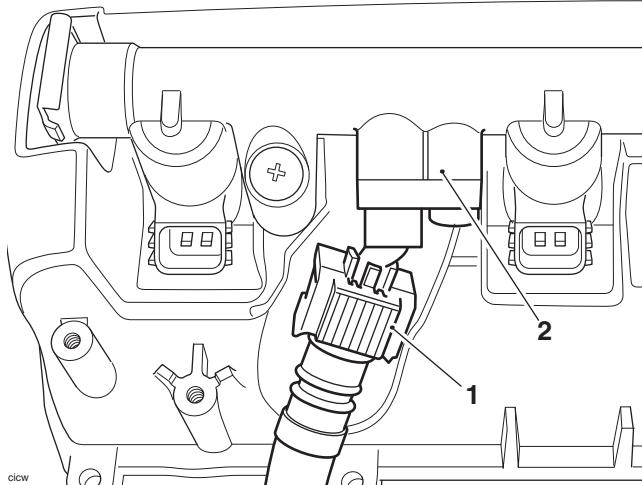
This would represent a serious fire hazard which could lead to burn injuries and damage to property.

Note:

- Because fuel stored in the fuel rail will be at 3.5 bar pressure, it is essential that the fuel pressure is reduced before any dismantling of the fuel rail takes place. To reduce pressure, briefly crank the engine with the fuel pump disconnected.
- 9. To disconnect the fuel line from the fuel rail, ease the latch away from the connector until the release buttons are exposed.

Fuel System/Engine Management

10. Disconnect the fuel hose by squeezing the sides of the connector and pulling the hose free from its spigot on the fuel rail.

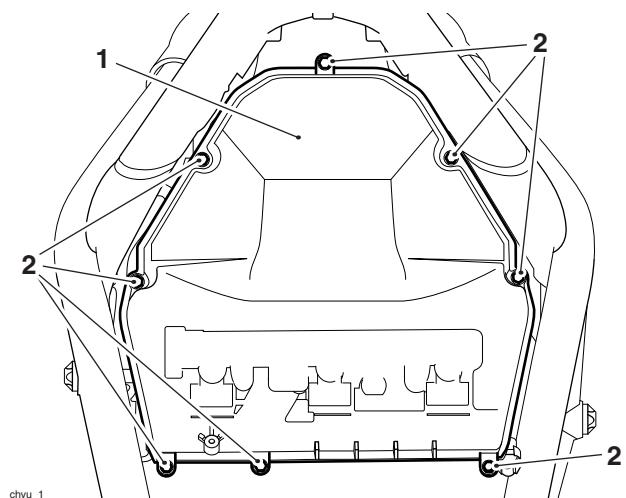


1. Fuel connector
2. Fuel rail, second set of injectors

All Models

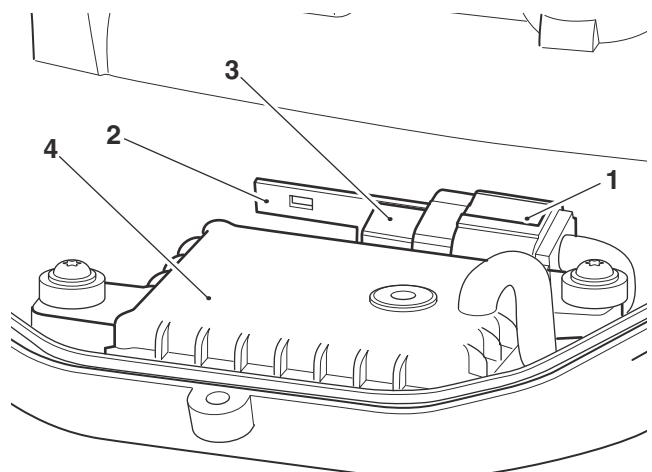
Note:

- The immobiliser/TPMS control module is attached to the inside surface of the airbox upper section. Note the routing of its harness for installation.
 - When detaching the air box upper section from the lower section, the air filter element will be attached to the upper section.
11. Release the eight fixings and detach the airbox upper section from the lower section.

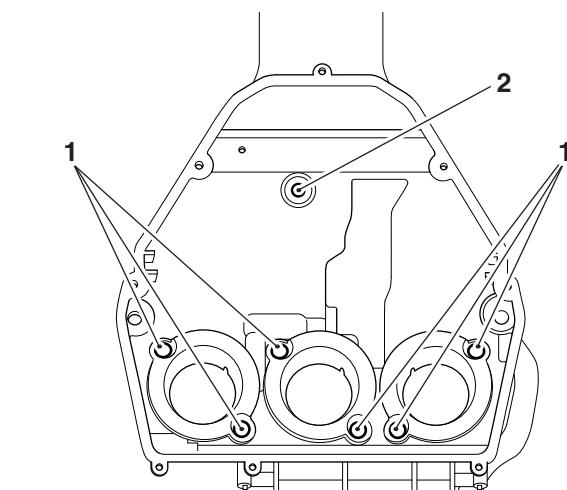


1. Airbox upper section
2. Fixings

12. Remove the air filter element (see page 10-123).
13. Disconnect the multiplug for the immobiliser/TPMS control module, detach the main harness connector from its bracket and remove the airbox upper section.



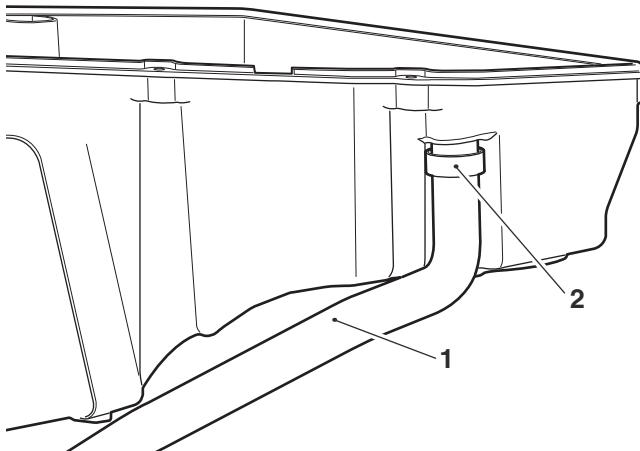
1. Immobiliser/TPMS control module multiplug
2. Bracket
3. Main harness connector
4. Immobiliser/TPMS control module
14. Release the six fixings and remove the airbox intake trumpets.
 15. Release the front fixing securing the airbox to the frame.



1. Airbox intake trumpet fixings
2. Airbox front fixing

Fuel System/Engine Management

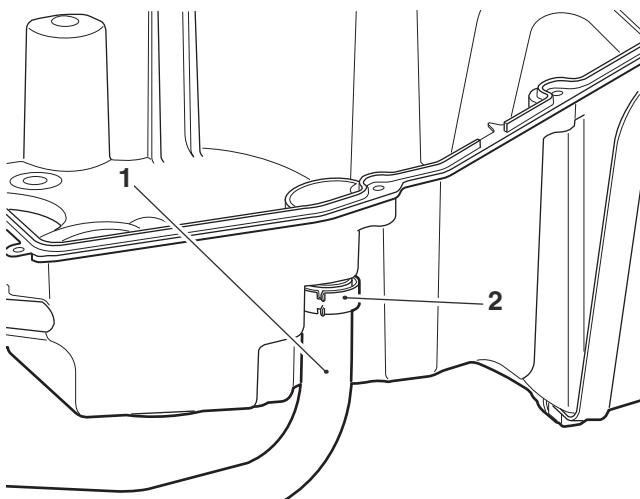
16. Release the spring hose clip and disconnect the secondary air injection hose at the airbox.



1. Secondary air injection hose

2. Spring hose clip

17. Release the spring hose clip and disconnect the engine breather hose at the airbox.



1. Engine breather hose

2. Spring hose clip

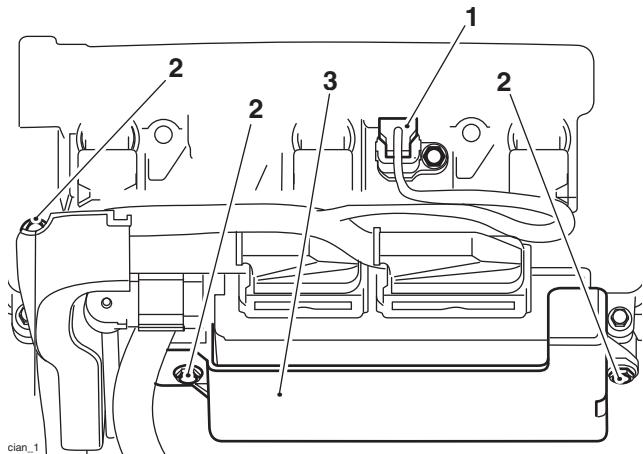
18. Remove the airbox from the motorcycle.

Inspection

1. Thoroughly clean the inside and outside of the airbox.
2. Check the airbox and intake trumpets for damage.
3. Check the air intake seal at the front of the airbox for damage.

Installation

1. Position the airbox to the frame.
2. Connect the engine breather hose and refit the spring hose clip.
3. Connect the secondary air injection hose and refit the spring hose clip.
4. Align the front of the air box to the frame and loosely install the front fixing. Do not tighten the fixing at this stage.
5. Align the rear of the airbox to the throttle bodies and fit the airbox intake trumpets. Tighten the fixings to **6 Nm**.
6. Tighten the airbox front fixing to **8 Nm**.
7. Attach the main harness connector to its bracket in the airbox upper section. Connect the multiplug for the immobiliser to the main harness.
8. Fit the air filter element (see page 10-124).
9. Refit the airbox upper section. Ensure that the routing of the immobiliser/TPMS control module harness is as noted for removal. Tighten the fixings to **1.5 Nm**.
10. Reconnect the map sensor multiplug.
11. Refit the ECM and its bracket to the airbox and tighten the fixings to **1.5 Nm**.
12. Reconnect the intake air temperature sensor multiplug. Ensure the multiplug is fully engaged and the locking device is holding it secure.



1. Connector, air temperature sensor

2. Fixings

3. ECM bracket

Daytona 675 and Daytona 675 R

13. Connect multiplugs to the second set of fuel injectors.
14. Reconnect the fuel feed hose by gently pushing inwards until the hose engages with a click.
15. Slide the double check latch down (i.e. towards the spigot) until the release buttons are covered. If the latch will not slide into position, then the fuel hose is not fully home on its spigot and must therefore be refitted correctly.

All Models

16. Refit the fuel tank (see page 10-113).
17. Reconnect the battery, positive (red) lead first. Tighten the battery terminals to **4.5 Nm**.
18. Refit the seat (see page 16-22 for Daytona 675, Daytona 675 R and Street Triple Rx, see page 16-24 for Street Triple, Street Triple 660 cc and Street Triple R).

Air Filter Element

Removal

Note:

- When detaching the air box upper section from the lower section, the air filter will be attached to the upper section.

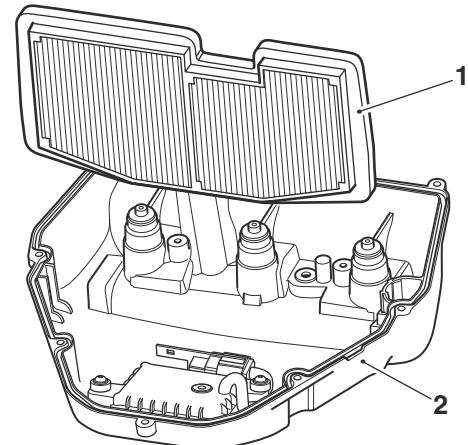
1. Remove the seat (see page 16-22 for Daytona 675, Daytona 675 R and Street Triple Rx, see page 16-23 for Street Triple, Street Triple 660 cc and Street Triple R).
2. Disconnect the battery negative (black) lead first.
3. Remove the fuel tank (see page 10-112).

Note:

- The immobiliser/TPMS control module is attached to the inside surface of the airbox upper section. Note the routing of its harness for installation.
 - It is not necessary to disconnect the immobiliser/TPMS control module when changing the air filter.
4. Detach the airbox upper section from the lower section (see page 10-120).

Note:

- Note the orientation of the air filter for installation.
5. Remove the air filter from the airbox upper section.



1. Air filter

2. Airbox, upper section

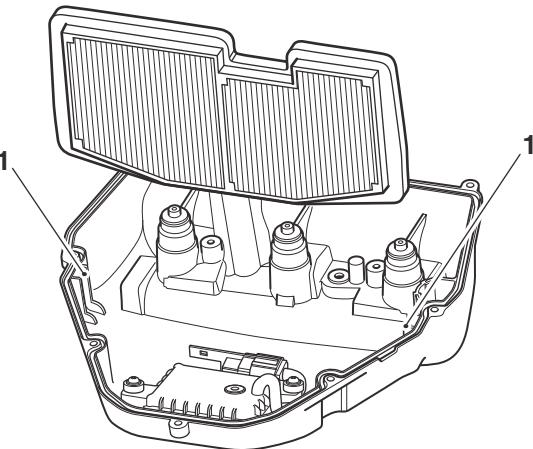
Fuel System/Engine Management

Installation

1. Thoroughly clean the inside and outside of the airbox.

Note:

- **The air filter will only fit one way, do not force fit the air filter.**
2. Align the air filter to its locating guides in the air box upper section in the orientation noted for removal. Push the filter fully down until it clicks into place.



chxd_1

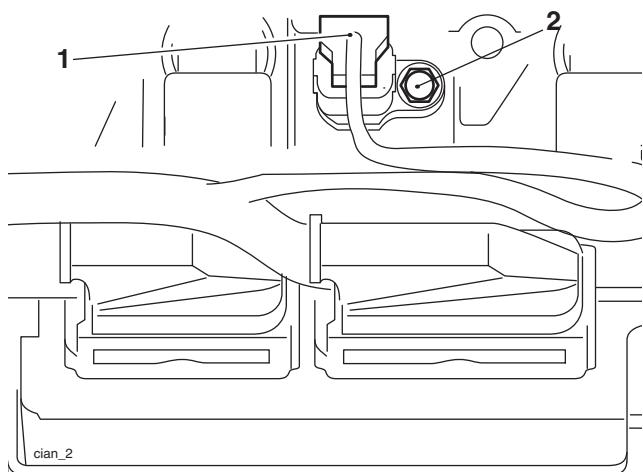
1. Locating guides

3. Refit the airbox upper section. Ensure that the routing of the immobiliser/TPMS control module harness is as noted for removal. Tighten the fixings to **1.5 Nm**.
4. Refit the fuel tank (see page 10-113).
5. Reconnect the battery, positive (red) lead first. Tighten the battery terminals to **4.5 Nm**.
6. Refit the seat (see page 16-22 for Daytona 675, Daytona 675 R and Street Triple Rx, see page 16-24 for Street Triple, Street Triple 660 cc and Street Triple R).

Intake Air Temperature Sensor

Removal

1. Remove the seat (see page 16-22 for Daytona 675, Daytona 675 R and Street Triple Rx, see page 16-23 for Street Triple, Street Triple 660 cc and Street Triple R).
2. Disconnect the battery, negative (black) lead first.
3. Remove the fuel tank (see page 10-112).
4. Disconnect the multiplug from the air temperature sensor.
5. Release the fixing and remove the air temperature sensor.



1. Multiplug

2. Fixing

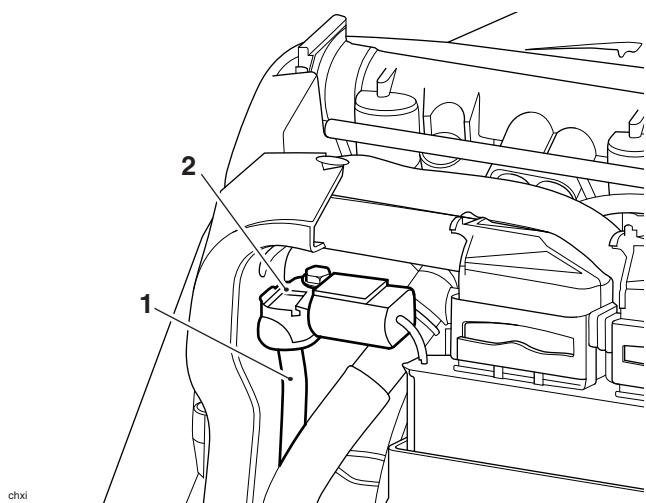
Installation

1. Fit the air temperature sensor to the airbox. Tighten its fixing to **1.5 Nm**.
2. Reconnect the intake air temperature sensor multiplug. Ensure the multiplug is fully engaged and the locking device is holding it secure.
3. Refit the fuel tank (see page 10-113).
4. Reconnect the battery, positive (red) lead first. Tighten the battery terminals to **4.5 Nm**.
5. Refit the seat (see page 16-22 for Daytona 675, Daytona 675 R and Street Triple Rx, see page 16-24 for Street Triple, Street Triple 660 cc and Street Triple R).

Map Sensor

Removal

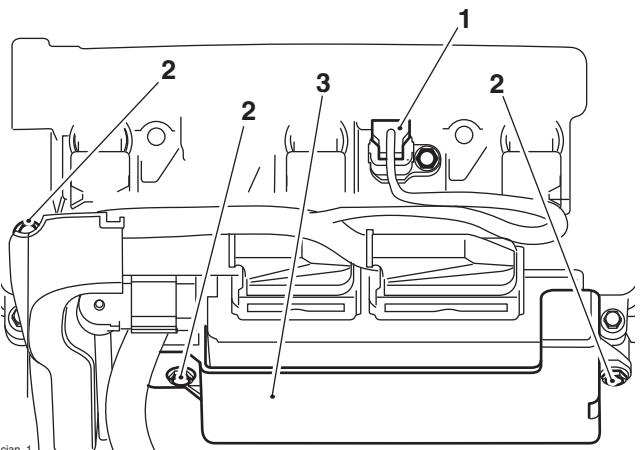
1. Remove the seat (see page 16-22 for Daytona 675, Daytona 675 R and Street Triple Rx, see page 16-23 for Street Triple, Street Triple 660 cc and Street Triple R).
2. Disconnect the battery, negative (black) lead first.
3. Remove the fuel tank (see page 10-112).
4. Disconnect the vacuum hose from the map sensor.



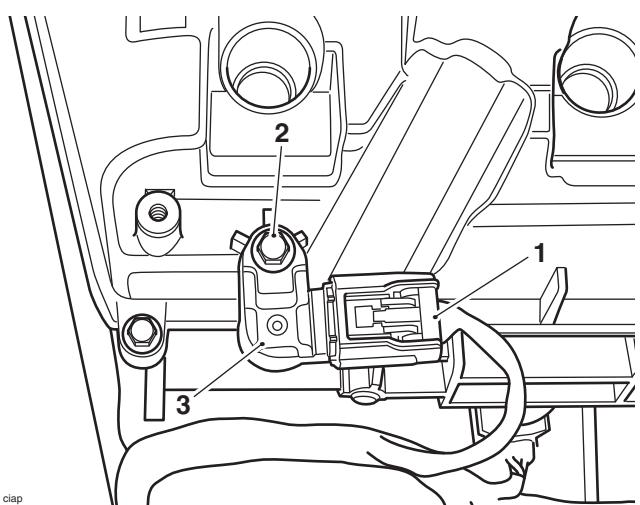
chxi
1. Vacuum hose
2. Map sensor

5. **For Daytona 675 and Daytona 675 R:** Disconnect the multiplugs from the second set of fuel injectors.
6. Disconnect the multiplug from the air temperature sensor.

7. Release the three fixings and detach the ECM and its bracket from the airbox.



- cian_1
1. Multiplug, air temperature sensor
 2. Fixings
 3. ECM bracket
 8. Disconnect the map sensor multiplug.
 9. Release the fixing and remove the map sensor.



ciap

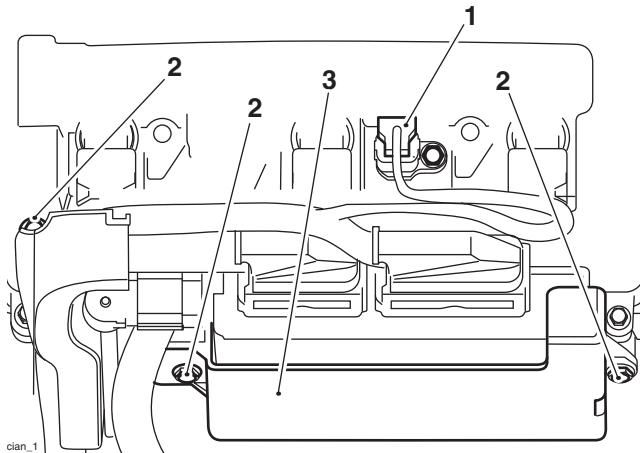
1. Multiplug
2. Fixing
3. Map sensor

Installation

1. Fit the sensor to the airbox, tightening the fixing to **2.5 Nm**.
2. Reconnect the map sensor multiplug.
3. Refit the ECM and its bracket to the airbox and tighten the fixings to **1.5 Nm**.

Fuel System/Engine Management

- Reconnect the air temperature sensor multiplug.



1. Connector, air temperature sensor

2. Fixings

3. ECM bracket

- For Daytona 675 and Daytona 675 R: Connect multiplugs to the second set of fuel injectors.
- Refit the vacuum hose.
- Refit the fuel tank (see page 10-113).
- Reconnect the battery, positive (red) lead first. Tighten the battery terminals to **4.5 Nm**.
- Refit the seat (see page 16-22 for Daytona 675, Daytona 675 R and Street Triple Rx, see page 16-24 for Street Triple, Street Triple 660 cc and Street Triple R).

Ambient Air Pressure Sensor - Daytona 675 and Daytona 675 R only

Removal

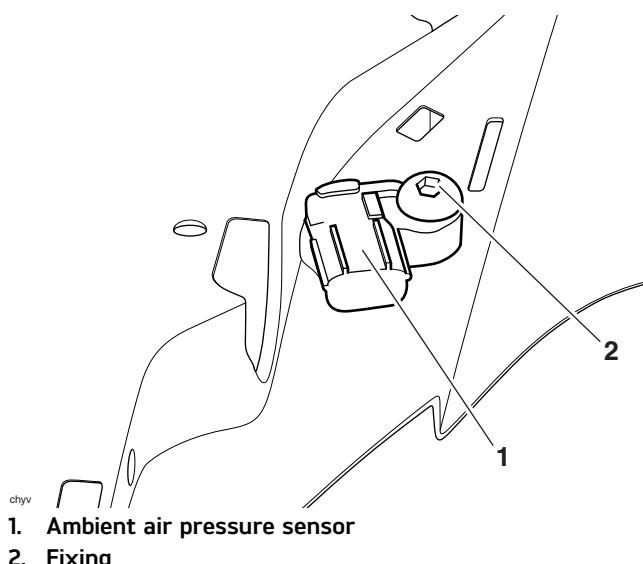
Note:

- The ambient air pressure sensor is located on the lower panel of the cockpit, on the left hand side.

- Remove the seat (see page 16-22).
- Disconnect the battery, negative (black) lead first.
- Remove the cockpit (see page 16-36).

Note:

- Note the orientation of the sensor for installation.
- Release the fixing securing the sensor to the cockpit and remove the sensor.



Installation

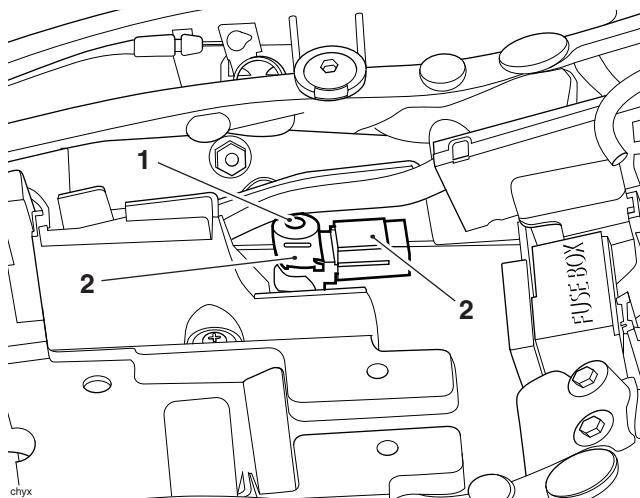
- Fit the sensor to the cockpit in the orientation noted from removal and tighten its fixing to **3 Nm**.
- Refit the cockpit (see page 16-37).
- Reconnect the battery, positive (red) lead first. Tighten the battery terminals to **4.5 Nm**.
- Refit the seat (see page 16-22).

Ambient Air Pressure Sensor - Street Triple, Street Triple 660 cc and Street Triple R

Removal

Note:

- The ambient air pressure sensor is located under the seat, on the left hand side of the rear mudguard moulding.
- Remove the seat (see page 16-23).
 - Disconnect the battery, negative (black) lead first.
 - If fitted, remove the evaporative canister (see page 10-186).
 - Release the fixing securing the sensor to the rear mudguard moulding.
 - Disconnect the multiplug and remove the sensor.



1. Ambient air pressure sensor
2. Fixing
3. Multiplug

Installation

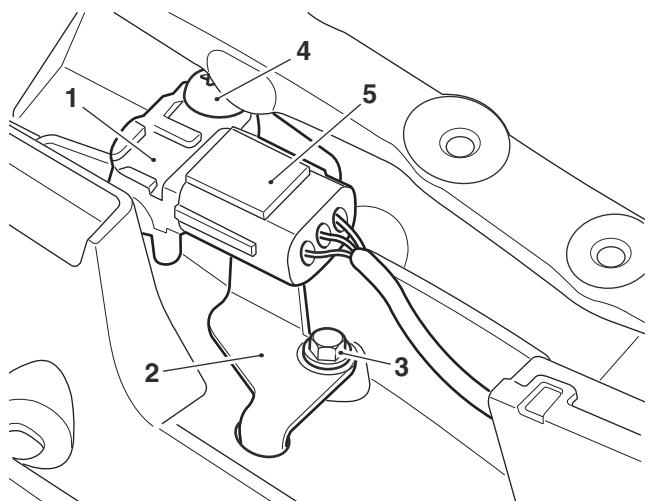
- Reconnect the multiplug.
- Fit the sensor to the rear mudguard moulding, tightening the fixing to **1.5 Nm**.
- If removed, refit the evaporative canister (see page 10-186).
- Reconnect the battery, positive (red) lead first. Tighten the battery terminals to **4.5 Nm**.
- Refit the seat (see page 16-23).

Ambient Air Pressure Sensor - Street Triple Rx

Removal

Note:

- The ambient air pressure sensor is located under the seat, on a bracket attached to the left hand side of the rear mudguard moulding.
- Remove the seat (see page 16-23).
 - Disconnect the battery, negative (black) lead first.
 - If fitted, remove the evaporative canister (see page 10-186).
 - Release the fixing securing the ambient air pressure sensor bracket to the rear mudguard moulding.
 - Release the fixing securing the sensor to the bracket.
 - Disconnect the multiplug and remove the sensor.



1. Ambient air pressure sensor
2. Bracket
3. Bracket fixing
4. Sensor fixing
5. Multiplug

Installation

- Reconnect the multiplug.
- Fit the sensor to the bracket, tightening the fixing to **3 Nm**.
- Fit the sensor and bracket assembly to the rear mudguard moulding, tightening the fixing to **1.5 Nm**.

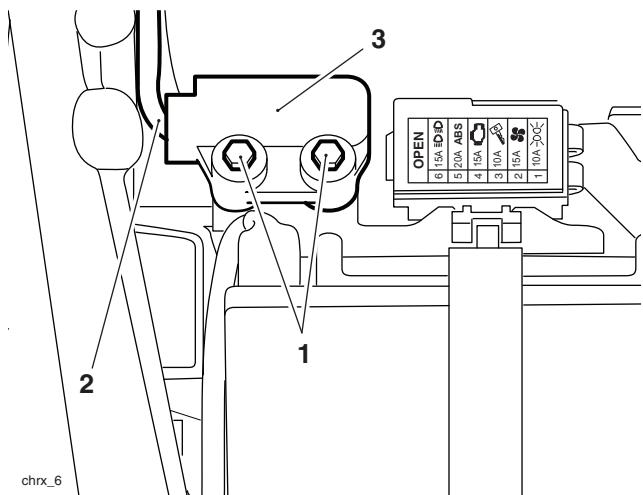
Fuel System/Engine Management

4. If removed, refit the evaporative canister (see page 10-186).
5. Reconnect the battery, positive (red) lead first. Tighten the battery terminals to **4.5 Nm**.
6. Refit the seat (see page 16-23).

Fall Detection Switch

Removal

1. Remove the seat (see page 16-22 for Daytona 675, Daytona 675 R and Street Triple Rx, see page 16-23 for Street Triple, Street Triple 660 cc and Street Triple R).
2. Disconnect the battery, negative (black) lead first.
3. Detach the switch from the frame. Discard the fixings.



1. **Fixings**
2. **Multiplug**
3. **Fall detection switch**
4. Disconnect the multiplug and remove the switch.

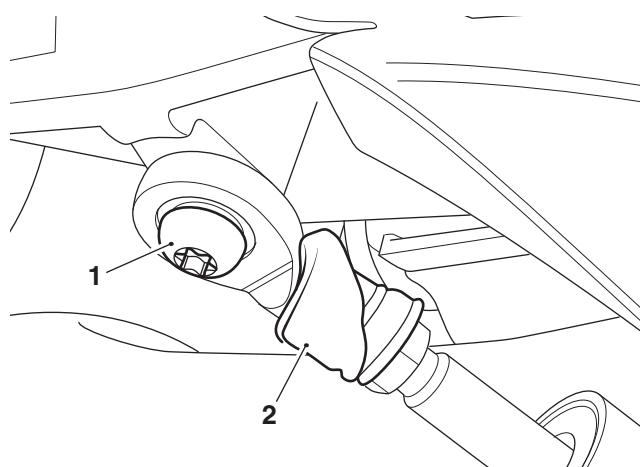
Installation

1. Connect the multiplug to the fall detection switch.
2. Fit the switch and tighten the two new fixings to **3 Nm**.
3. Reconnect the battery, positive (red) lead first. Tighten the battery terminals to **4.5 Nm**.
4. Refit the seat (see page 16-22 for Daytona 675, Daytona 675 R and Street Triple Rx, see page 16-24 for Street Triple, Street Triple 660 cc and Street Triple R).

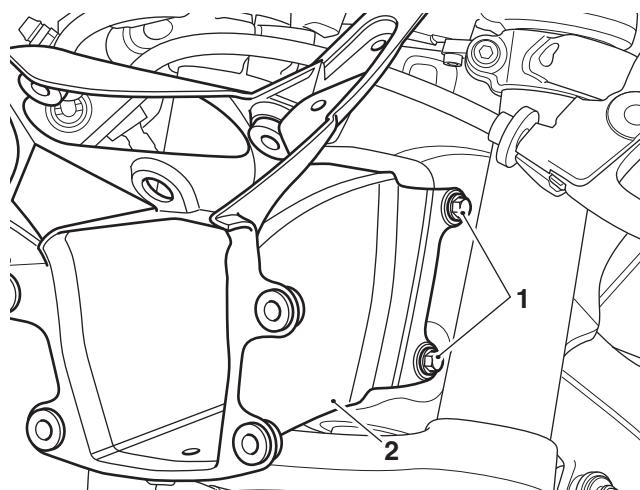
Intake Air Duct - Daytona 675 and Daytona 675 R only

Removal

1. Remove the seat (see page 16-22).
2. Disconnect the battery, negative (black) lead first.
3. Remove the cockpit (see page 16-36).
4. Remove the instruments (see page 17-18).
5. Reposition the damper rod boot and detach the steering damper from the intake air duct. Noting its position, collect the steel washer located between the damper and the frame bracket.



1. Steering damper lower fixing
2. Damper rod boot
6. Release the four fixings securing the intake air duct to the frame headstock and remove the duct.



1. Fixings (left hand shown)
2. Intake air duct

Installation

1. Position the duct to the frame headstock and refit the four fixings. Tighten the fixings to **7 Nm**.
2. Attach the steering damper to the intake air duct with the steel washer fitted as noted for removal. Tighten the fixing to **18 Nm**.
3. Refit the instruments (see page 17-18).
4. Refit the cockpit (see page 16-37).
5. Reconnect the battery, positive (red) lead first. Tighten the battery terminals to **4.5 Nm**.
6. Refit the seat (see page 16-22).

Fuel System/Engine Management

Crankshaft Position Sensor

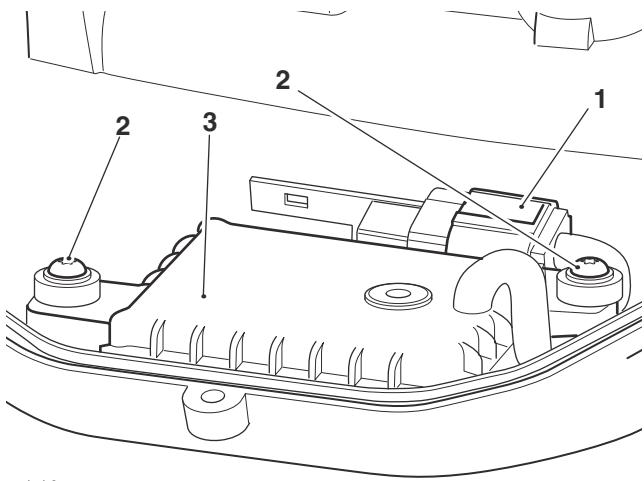
Note:

- The alternator stator and crankshaft position sensor are supplied as an assembly and cannot be separated.
- For additional information, refer to alternator (see page 17-33 for removal and page 17-36 for installation).

Immobiliser/TPMS Control Module

Removal

1. Remove the seat (see page 16-22 for Daytona 675, Daytona 675 R and Street Triple Rx, see page 16-23 for Street Triple, Street Triple 660 cc and Street Triple R).
2. Disconnect the battery, negative (black) lead first.
3. Remove the fuel tank (see page 10-112).
4. Detach the airbox upper section from the lower section and remove the air filter element (see page 10-123).
5. Disconnect the multiplug for the immobiliser/TPMS control module from the main harness.
6. Release the two fixings and remove the immobiliser/TPMS control module.



- chxd_3
1. Immobiliser/TPMS control module multiplug
 2. Fixings
 3. Immobiliser/TPMS control module

Installation

1. Fit the immobiliser/TPMS control module to the airbox upper section, tighten its fixings to **3 Nm**.
2. Connect the multiplug for the immobiliser/TPMS control module to the main harness.
3. Refit the air filter element and fit the airbox upper section to the airbox lower section (see page 10-124).

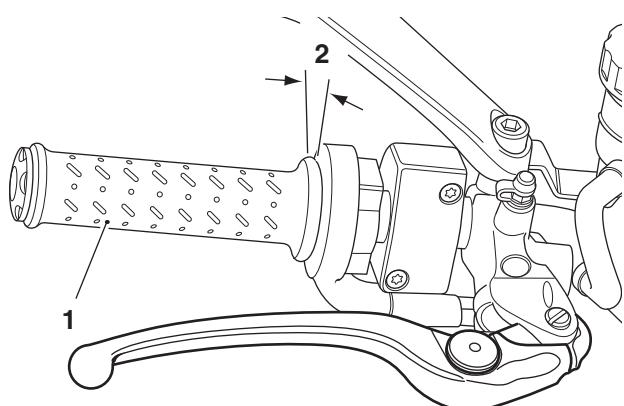
4. Fit the fuel tank (see page 10-113).
5. Connect the battery, positive (red) lead first. Tighten the battery terminals to **4.5 Nm**.
6. If a new immobiliser/TPMS control module is fitted, it must be paired with following items as described in the Safety/Security section of the Triumph diagnostic software:
 - ECM.
 - Ignition keys for the motorcycle.
 - If fitted, the front and rear tyre pressure sensors.
7. Refit the seat (see page 16-22 for Daytona 675, Daytona 675 R and Street Triple Rx, see page 16-24 for Street Triple, Street Triple 660 cc and Street Triple R).

Throttle Cable

Adjustment

Note:

- Minor adjustments to the opening cable can be made using the adjuster near the throttle grip end of the throttle. Where a correct setting cannot be achieved this way, the adjusters at the throttle end of both cables must be used. The opening cable must be set first followed by the closing cable.



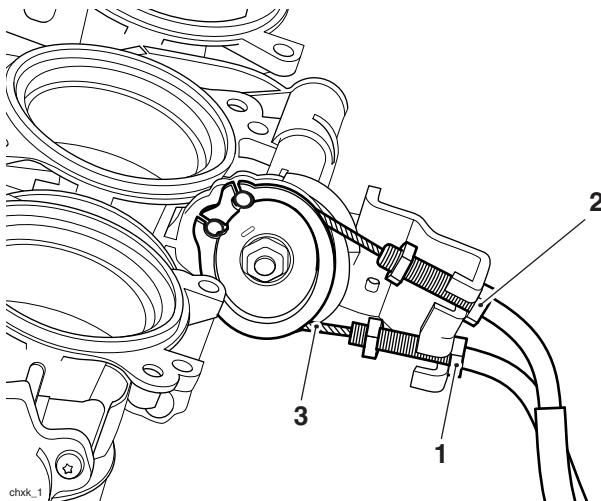
chrn_1

- 1. Throttle grip**
2. Correct setting, 2 - 3 mm

1. Remove the seat (see page 16-22 for Daytona 675, Daytona 675 R and Street Triple Rx, see page 16-23 for Street Triple, Street Triple 660 cc and Street Triple R).
2. Disconnect the battery, negative (black) lead first.
3. Set the opening cable adjuster at the throttle grip end such that it has an equal amount of adjustment in each direction. Tighten the lock nut.
4. Remove the fuel tank (see page 10-112).
5. Remove the airbox (see page 10-120).

Fuel System/Engine Management

6. Set the opening cable adjuster at the throttle body end to give 2 - 3 mm of play at the throttle grip. Tighten the lock nut to **2.5 Nm**.



1. 'Opening' cable adjuster (throttle end)
 2. 'Closing' cable adjuster (throttle end)
 3. Closing cable - free play measurement point
7. With the throttle fully closed, ensure that there is 2 - 3 mm of free play in the closing cable. Adjust if necessary ensuring that the lock nut is tightened to **2.5 Nm** afterwards.



Warning

Operation of the motorcycle with incorrectly adjusted, incorrectly routed or damaged throttle cables could interfere with the operation of the brakes, clutch or the throttle itself. Any of these conditions could result in loss of motorcycle control and an accident.



Warning

Move the handlebars to left and right full lock while checking that cables and harnesses do not bind. Cables or harnesses that bind will restrict the steering and may cause loss of motorcycle control and an accident.



Warning

Ensure that the adjuster lock nuts are tightened. A loose throttle cable adjuster could cause the throttle to stick leading to loss of motorcycle control and an accident.

8. Refit the airbox (see page 10-122).
9. Refit the fuel tank (see page 10-113).
10. Reconnect the battery, positive (red) lead first. Tighten the battery terminals to **4.5 Nm**.

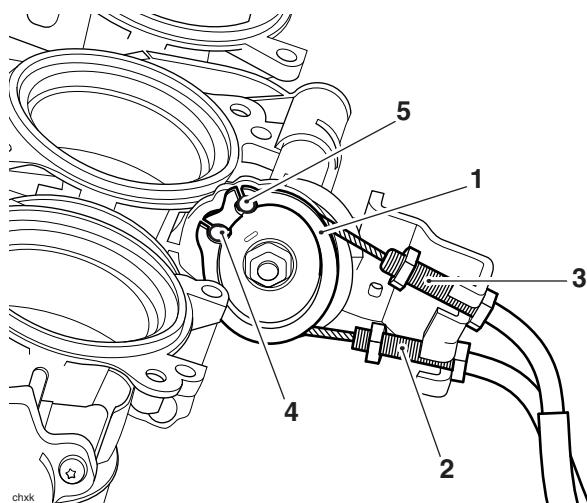
11. Refit the seat (see page 16-22 for Daytona 675, Daytona 675 R and Street Triple Rx, see page 16-24 for Street Triple, Street Triple 660 cc and Street Triple R).

Removal

Note:

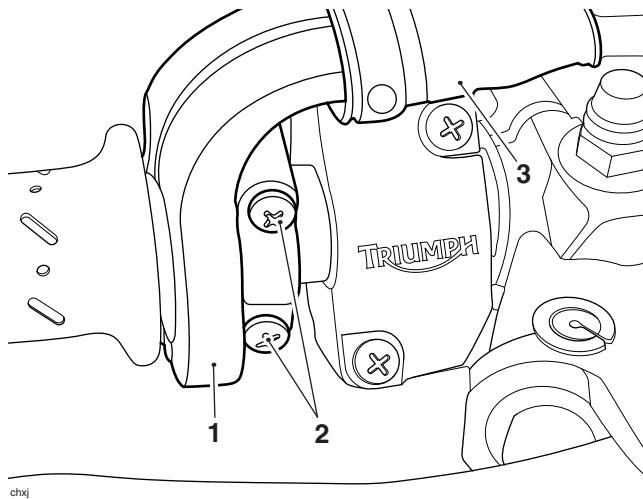
- Before beginning to remove the throttle cables, note the exact routing and location of both cables, their retaining clips and cable guides to help ensure that they are returned to the same locations and routing on assembly.

1. Remove the seat (see page 16-22 for Daytona 675, Daytona 675 R and Street Triple Rx, see page 16-23 for Street Triple, Street Triple 660 cc and Street Triple R).
2. Disconnect the battery, negative (black) lead first.
3. Remove the fuel tank (see page 10-112).
4. Remove the airbox (see page 10-120).
5. Loosen the adjuster lock nuts at the throttle body end of the cables such that they will allow the outer cables to be detached from the cable bracket.
6. Detach the inner cable nipples from the throttle cam.



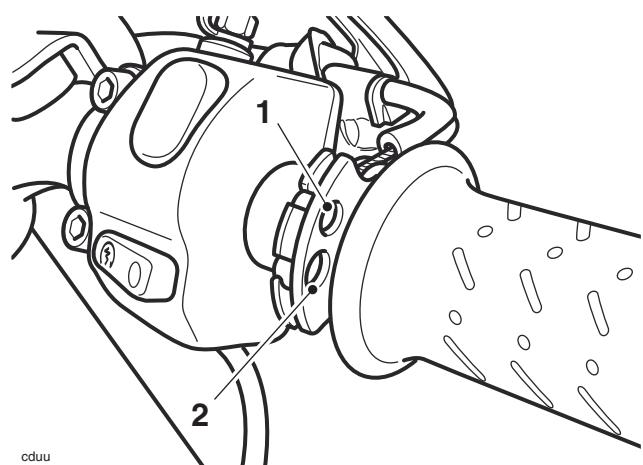
1. Throttle cam
2. Opening cable
3. Closing cable
4. Opening cable nipple
5. Closing cable nipple

7. At the throttle grip end, slide off the rubber boot and release the screws which secure the two halves of the throttle grip guide to each other.



1. Throttle grip guide
2. Screws
3. Rubber boot

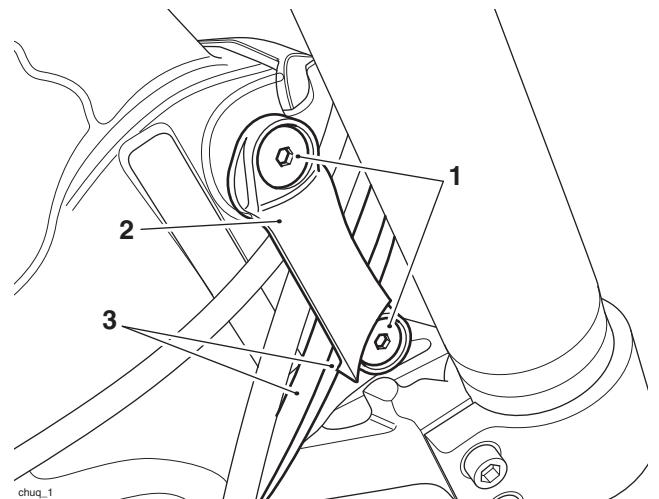
8. Separate the two halves of the guide then release the inner cables from the throttle grip.



1. Opening cable
2. Closing cable

9. **Non-ABS models only:** Release the fixing and remove the wire cable guide from the underside of the frame headstock. Discard the fixing.
 10. **ABS models only:** Release the fixing securing the ABS line, anti-rotation bracket and wire cable guide to the underside of the frame headstock and remove the wire cable guide. Support the ABS line and anti-rotation bracket by temporarily refitting them to the underside of the frame headstock using the original fixing. Do not fully tighten at this stage.

11. Remove one of the fixings for the cable guide located on the right hand side of the headstock and remove the throttle cables from the motorcycle.



1. Fixings
2. Cable guide
3. Throttle cables

Inspection

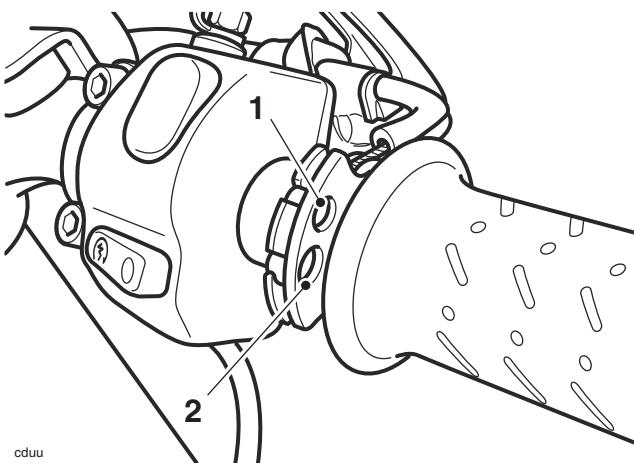
1. Check that both the throttle cables operate smoothly, without sticking or binding. Replace the cables if there is any doubt as to their correct operation.

Installation

1. Locate the cables to the frame following the routing noted during removal.
2. Route the throttle cables behind the cable guide on the right hand side of the headstock. Secure the cable guide and tighten its fixing to **7 Nm**.
3. **For non-ABS models only:** Refit the wire cable guide to the underside of the headstock as noted during removal and secure with a new fixing. Tighten the fixing to **5 Nm**.
4. **For ABS models only:** Release and discard the fixing used to temporarily secure the ABS line and anti-rotation bracket to the underside of the headstock. Refit the ABS line, anti-rotation bracket and wire cable guide to the underside of the headstock as noted during removal and secure using a new fixing. Tighten the fixing to:
 - **15 Nm** - For Daytona 675 and Daytona 675 R
 - **9 Nm** - For Street Triple, Street Triple 660 cc, Street Triple R and Street Triple Rx.

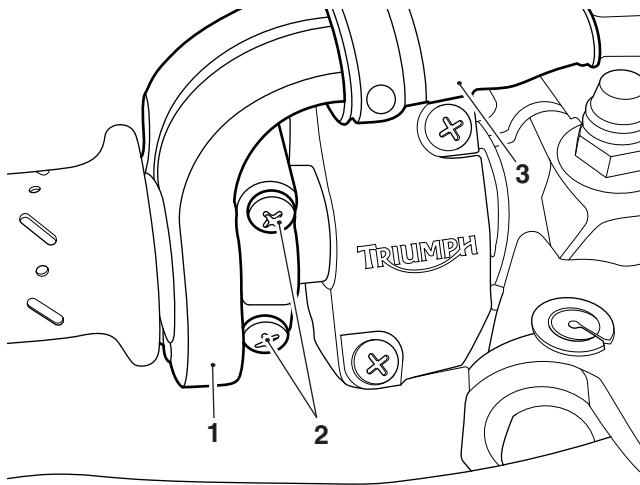
Fuel System/Engine Management

- Engage the inner cable nipples to the throttle grip, ensuring the opening cable is located in the upper slot in the throttle grip, and the closing cable is located to the lower slot.



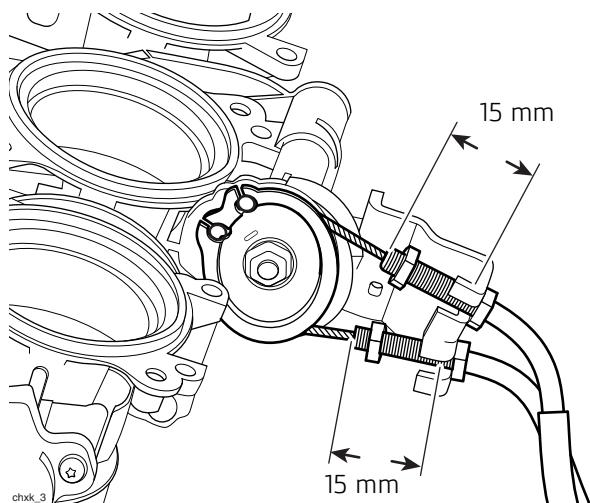
- Opening cable**
- Closing cable**

- Assemble the two halves of the cable guide ensuring that the outer cables are correctly located in the guide and the guide is positioned on the handlebars as noted prior to removal. Fit and tighten the two screws to:
 - 3 Nm** - Street Triple, Street Triple 660 cc, Street Triple R and Street Triple Rx
 - 2.5 Nm** - Daytona 675 and Daytona 675 R.



- Throttle grip guide**
- Screws**
- Rubber boot**

- Refit the boot.
- Attach the other end of the inner cables to the throttle cam ensuring the closing cable is fitted to the top of the cam and the opening cable to the bottom.
- Locate the outer cables to the bracket and adjust until the start of the thread is 15 mm away from the back of the throttle cable bracket. Tighten the adjuster and lock nuts to **2.5 Nm**.



Outer Cable Adjustment

- Set the throttle cable adjustment (see page 10-131).
- Refit the airbox (see page 10-122).
- Refit the fuel tank (see page 10-113).
- Reconnect the battery, positive (red) lead first. Tighten the battery terminals to **4.5 Nm**.
- Refit the seat (see page 16-22 for Daytona 675, Daytona 675 R and Street Triple Rx, see page 16-24 for Street Triple, Street Triple 660 cc and Street Triple R).

Throttle Bodies/Injectors

Removal



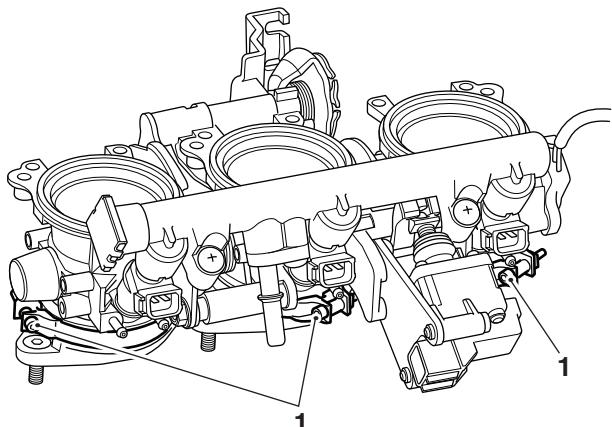
Warning

If the fuel rail is dismantled without first reducing pressure, fuel may escape causing clothing and components to be coated with fuel.

This would represent a serious fire hazard which could lead to burn injuries and damage to property.

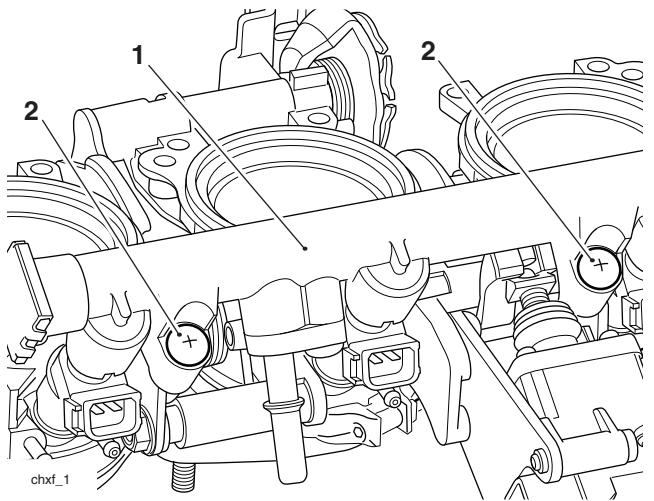
Note:

- **Because fuel stored in the fuel rail will be at 3.5 bar pressure, it is essential that the fuel pressure is reduced before any dismantling of the fuel rail takes place. To reduce pressure, briefly crank the engine with the fuel pump disconnected.**
1. Remove the seat (see page 16-22 for Daytona 675, Daytona 675 R and Street Triple Rx, see page 16-23 for Street Triple, Street Triple 660 cc and Street Triple R).
 2. Disconnect the battery, negative (black) lead first.
 3. Remove the fuel tank (see page 10-112).
 4. Remove the airbox (see page 10-120).
 5. Disconnect the throttle position sensor multiplug.
 6. Disconnect the fuel injector multiplugs.
 7. Disconnect the idle speed control stepper motor multiplug.
 8. Detach the fuel line from the fuel rail.
 9. Release the clips securing the throttle bodies to the transition pieces.



1. Clip location (engine removed for clarity)

10. Detach both throttle cables from the throttle cam (see page 10-132).
11. Remove the throttle bodies.
12. If required, release the screws securing the fuel rail to the throttle bodies.

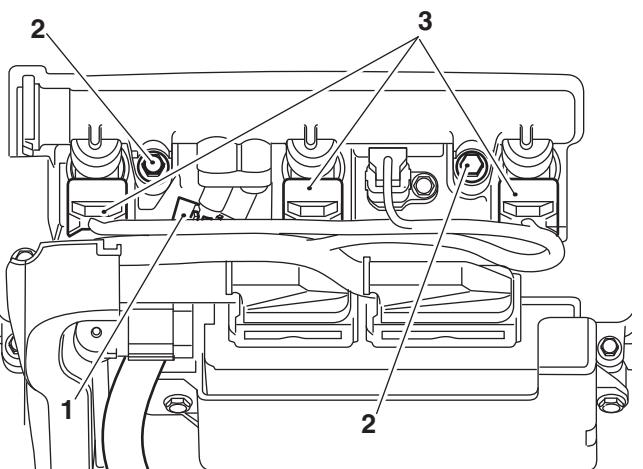


1. Fuel rail
2. Fuel rail screws

13. Ease the fuel rail and injectors from the throttle bodies.

Daytona 675 and Daytona 675 R

14. If required, detach the fuel line from the fuel rail on the upper section of the airbox.
15. Disconnect the multiplugs from the injectors.
16. Release the fixings securing the fuel rail and ease the fuel rail and injectors from the upper section of the airbox.

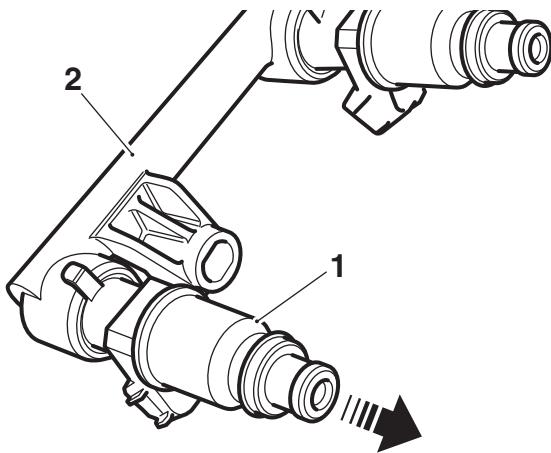


1. Fuel line
2. Injector multiplugs
3. Fixings

Fuel System/Engine Management

All Models

- To detach the injectors from the fuel rail, gently ease the injector from the rail.



cdvp

- Injector**
- Fuel rail**

- Release the fixings and remove the transition pieces from the head. Discard the fixings.



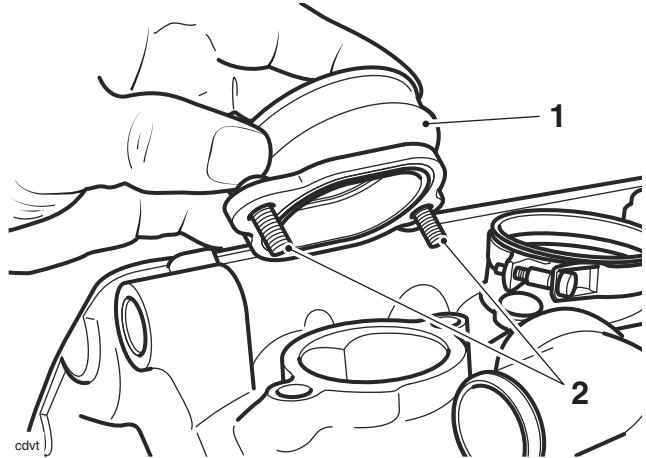
- Transition piece**
- Fixings**

Inspection

- Check all joints and seals for splits, cuts and damage.
- Check the throttles for sticking, loose or damaged throttle plates.
- Check the transition piece rubber bead for damage, replace the transition piece if necessary.

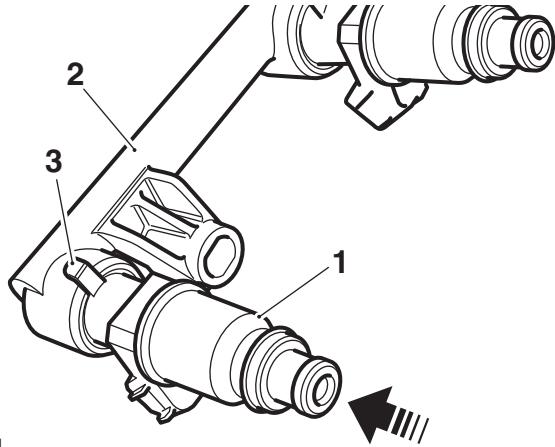
Installation

- Thoroughly clean the transition piece to cylinder head mating faces.
- Refit the transition pieces to the head and tighten the new fixings to **8 Nm**.



- Transition piece**
- Fixings**

- If the injectors have been removed from the fuel rail, refit them to the rail, ensuring the injector locating peg is fully engaged in the slot in the rail.



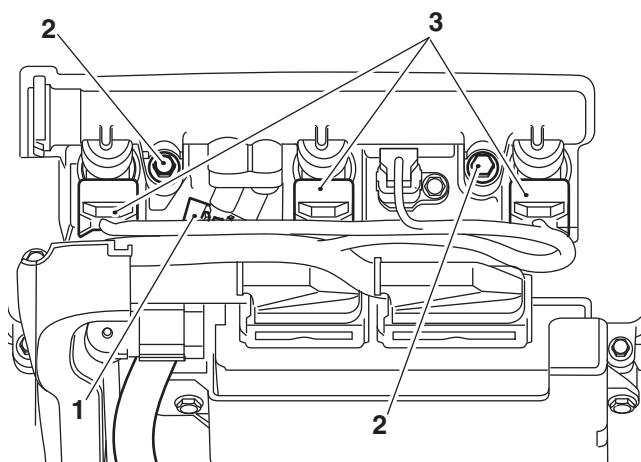
- Injector**
- Fuel rail**
- Locating peg**

- Check the injector O-rings for splits and other damage. Replace as necessary.

Daytona 675 and Daytona 675 R

- If removed, fit the injectors and fuel rail to the upper section of the airbox. Tighten the fuel rail fixings to **4 Nm**.
- Connect the fuel injector multiplugs.

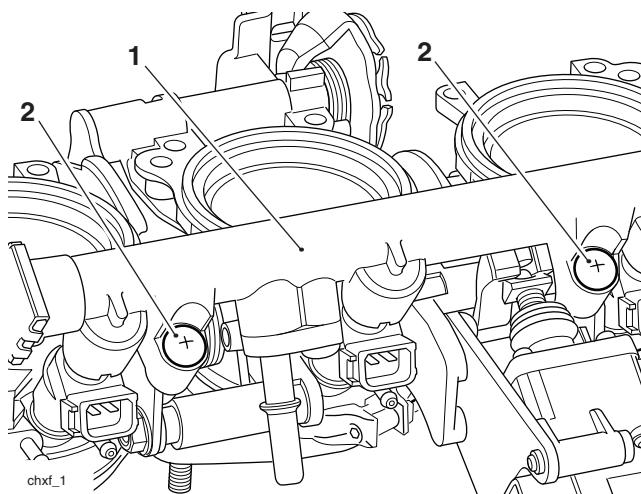
7. Connect the fuel line to the fuel rail.



1. Fuel line
2. Fixings
3. Injector multiplugs

All Models

8. Refit the injectors and fuel rail to the throttle bodies. Tighten the fuel rail screws to **3.5 Nm**.



1. Fuel rail
2. Fuel rail screws

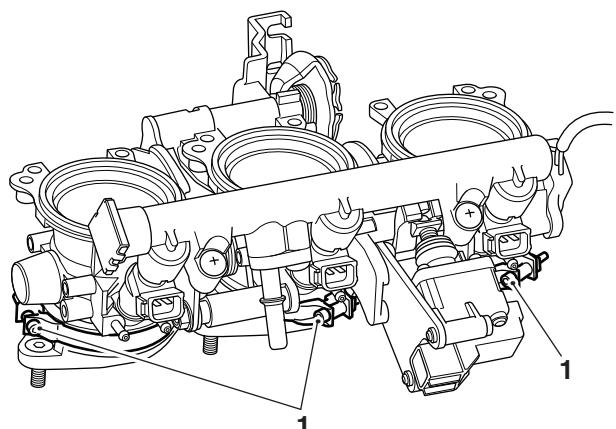
9. Re-attach the throttle cables (see page 10-133).



Warning

The throttle body clips must be positioned as shown below. If the clips are not positioned as shown this could cause the throttle to stick, leading to loss of motorcycle control and an accident.

10. Refit the throttle bodies to the transition pieces and secure with the clips.



1. Clip location (engine removed for clarity)
11. Adjust the throttle cables (see page 10-131).
12. Reconnect the idle speed control stepper motor multiplug.
13. Reconnect the fuel injector multiplugs.
14. Reconnect the throttle position sensor multiplug.
15. Refit the airbox (see page 10-122).
16. Refit the fuel tank (see page 10-113).
17. Reconnect the battery, positive (red) lead first. Tighten the battery terminals to **4.5 Nm**.
18. Refit the seat (see page 16-22 for Daytona 675, Daytona 675 R and Street Triple Rx, see page 16-24 for Street Triple, Street Triple 660 cc and Street Triple R).

Fuel System/Engine Management

Throttle Body Balancing

Note:

- The throttles cannot be balanced using equipment to measure vacuum in each throttle. Instead, the Triumph diagnostic software must be used.
- Remove the seat (see page 16-22 for Daytona 675, Daytona 675 R and Street Triple Rx, see page 16-23 for Street Triple, Street Triple 660 cc and Street Triple R).
 - Turn the ignition to the OFF position.
 - Remove the fuel tank (see page 10-112) and place on a suitable support, close to the motorcycle.



Warning

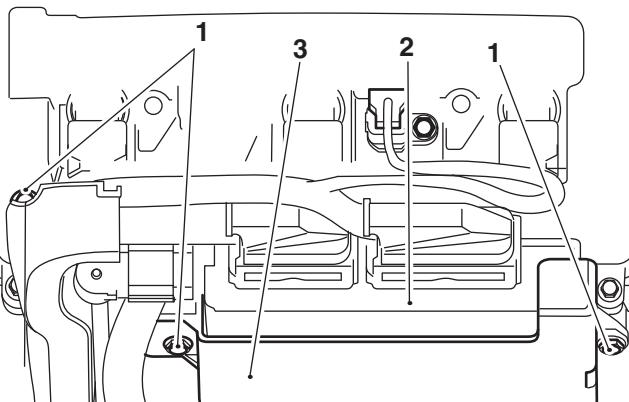
If the engine has recently been running, the components beneath the fuel tank may be hot to the touch.



Warning

For Daytona 675 and Daytona 675 R only: Do not disconnect the fuel line from the injectors in the airbox upper section. If this fuel line is disconnected during the throttle balance procedure, fuel will be pumped from the fuel tank via the fuel pump which may lead to a fire hazard which could cause damage to property and injury to persons.

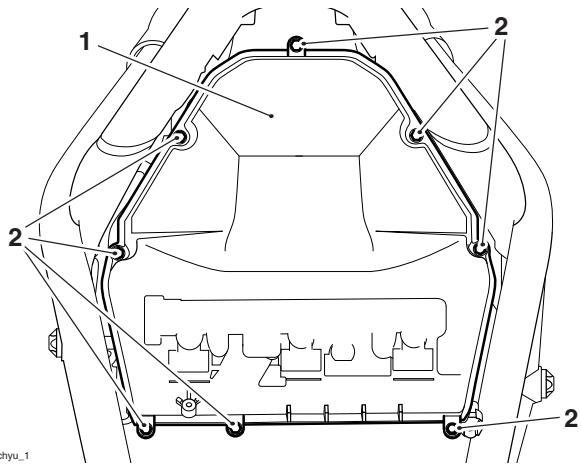
- Release the three fixings and detach the engine control module (ECM) and its bracket from the airbox.



1. Fixings
2. ECM
3. ECM bracket

Note:

- The immobiliser/TPMS control module is attached to the inside surface of the airbox upper section. Note the routing of its harness for installation.
 - When detaching the airbox upper section from the lower section, the immobiliser/TPMS control module, air temperature sensor and MAP sensor must remain connected to the main harness throughout the throttle body balancing procedure.
 - For Daytona 675 and Daytona 675 R only:** When detaching the airbox upper section from the lower section, do not disconnect the multiplugs from any of the injectors in the airbox upper section. If these injectors are disconnected, the relevant injector in the throttle bodies will also be inoperative.
 - When detaching the airbox upper section from the lower section, the air filter element will be attached to the upper section.
- Release the eight fixings and detach the upper section of the airbox from the lower section.



1. Airbox upper section

2. Fixings

Note:

- Note the position of the air filter element for installation.**
- Remove the air filter element from the airbox upper section and position the upper section to one side. Ensure that the immobiliser/TPMS control module, Air temperature sensor, MAP sensor and injectors (Daytona 675 and Daytona 675 R only) remain connected to the main harness.
 - Remove the airbox lower section as described from step 14 onwards of the airbox removal procedure (see page 10-120).

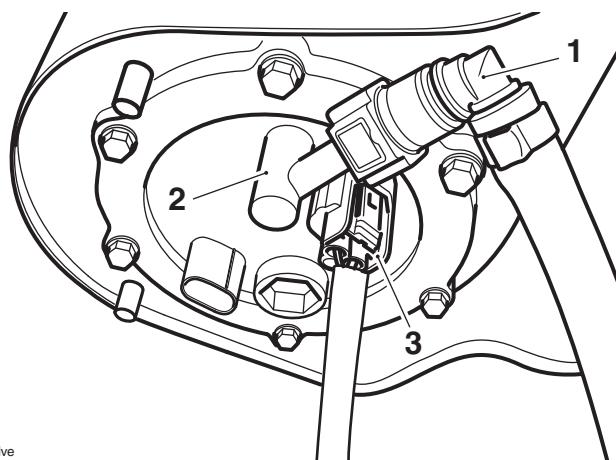
8. Using the T3880123 - Extension Cable, carefully connect the fuel pump connection on the main harness to the fuel tank. Connect the other end of the harness extension to the motorcycle main harness.
9. Select the fuel pressure gauge adapter marked B from T3880001 - Fuel Pressure Gauge.



Warning

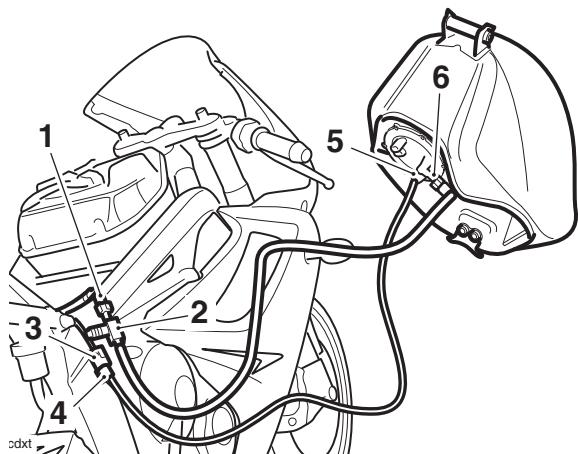
Always use the correct fuel pressure gauge adapter (**adapter B for Daytona 675 and Daytona 675 R, Street Triple, Street Triple 660 cc, Street Triple R and Street Triple Rx**). Use of an incorrect adapter will result in a fuel leak. A fuel leak can result in a fire causing damage to property and injury to persons.

10. Connect the adapter hose to the fuel pump plate outlet as shown in the illustration below.



1. Adaptor hose B
2. Fuel pump plate outlet
3. T3880123 - Extension Cable

11. Connect the fuel hose to the adaptor hose as shown in the illustration below.



1. Motorcycle fuel hose
2. Adaptor hose B
3. Fuel pump connection
4. T3880123 - Extension Cable
5. Fuel pump connection
6. Fuel pump plate outlet

12. Attach exhaust extraction hoses to the silencer.



Warning

Daytona 675 and Daytona 675 R only: When carrying out the throttle balance procedure, DO NOT raise the engine speed above 3,500 rpm. If the engine speed exceeds 3,500 rpm the injectors in the upper airbox cover may start to inject fuel which may lead to a fire hazard which could cause damage to property and injury to persons.

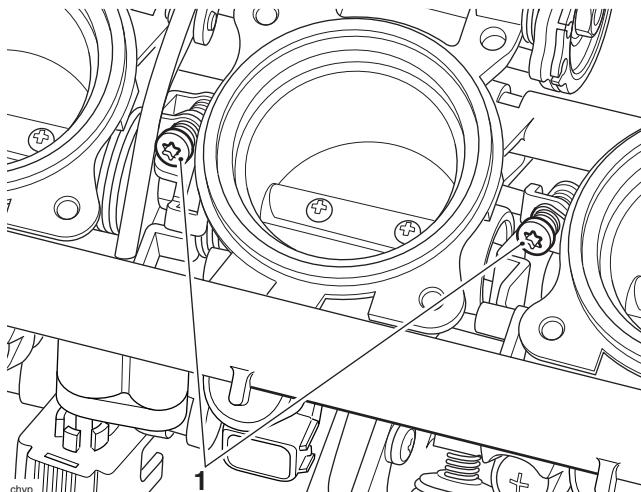
13. Attach the Triumph diagnostic tool to the dedicated plug. Refer to the Triumph Diagnostic Tool User Guide. Start the engine and allow to idle.
14. On the diagnostic software navigate to ADJUST TUNE.
15. Select BALANCE THROTTLES.
16. Click the Adjust button.

Note:

- The balance throttle screen will show the vacuum value of each throttle in mmHg. In addition, when the throttles are balanced to within an acceptable range of each other, the word THROTTLES BALANCED in green text will appear on the right of the screen. At this point, no further adjustment is necessary or productive.

Fuel System/Engine Management

- If the throttles are not balanced to each other the word THROTTLES UNBALANCED in red text will appear on the right of the screen. At this point adjustment will be necessary.
- The adjusters operate on the outer cylinders only (cylinders 1 and 3). The centre throttle (cylinder 2) adjustment is fixed, this being controlled by the idle speed control stepper motor. Note that the centre reading will alter slightly as the two outer cylinders are adjusted.
- DO NOT attempt to adjust the centre throttle stop screw, located below the idle stepper motor. The stop screw is set at the factory during manufacture, and must not be adjusted.
- Using the throttle adjusters, make adjustments to the two outer cylinders until the word THROTTLES BALANCED in green text appears.



1. Adjusters

- When balanced, stop the engine and disconnect the diagnostic tool.

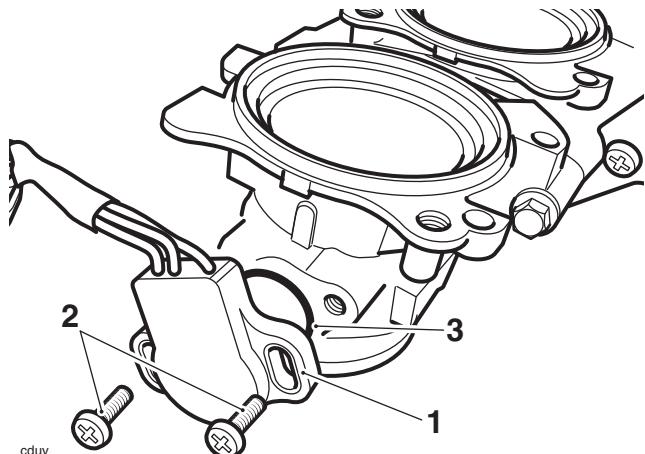
Note:

- Because fuel stored in the fuel line will be at 3.5 bar pressure, it is essential that the fuel pressure is reduced before any dismantling of the fuel pressure gauge adapter takes place. To reduce pressure, briefly crank the engine with the fuel pump disconnected from the main harness.
- Disconnect the fuel pressure gauge adapter and wiring extension.
 - Refit the airbox (see page 10-122).
 - Refit the fuel tank (see page 10-113).
 - Remove the exhaust extraction hoses from the silencer.
 - Refit the seat (see page 16-22 for Daytona 675, Daytona 675 R and Street Triple Rx, see page 16-24 for Street Triple, Street Triple 660 cc and Street Triple R).

Throttle Position Sensor

Removal

- Remove the seat (see page 16-22 for Daytona 675, Daytona 675 R and Street Triple Rx, see page 16-23 for Street Triple, Street Triple 660 cc and Street Triple R).
- Disconnect the battery, negative (black) lead first.
- Remove the fuel tank (see page 10-112).
- Remove the airbox (see page 10-120).
- Remove the throttle body assembly (see page 10-135).
- Release the two screws and rotate the throttle position sensor clockwise through 45° to remove it from the left hand end of the throttle body. Collect the O-ring on disassembly.



1. Throttle position sensor
2. Screws
3. O-ring

Installation

- Fit the replacement throttle position sensor ensuring the O-ring is positioned correctly between the sensor and throttle body. Rotate the sensor through 45° anticlockwise until the screw holes align.
- Engage the new screws and washers supplied and part tighten such that the sensor can still be rotated.
- Position the throttle body assembly near to its fitted position and reconnect the sensor and all other throttle body electrical connectors.
- Reconnect the battery, positive (red) lead first. Tighten the battery terminals to **4.5 Nm**.

5. Attach the Triumph diagnostic tool to the dedicated plug, refer to the Triumph Diagnostic Tool User Guide.
6. If disconnected, temporarily reconnect the immobiliser/TPMS control module multiplug.
7. Turn the ignition to the ON position.
8. On the diagnostic software navigate to and select the ADJUST TUNE option.
9. At the next screen, select Throttle Position Sensor Adjust then click the Adjust button.
10. On pressing the adjust button, the diagnostic tool will send a command, which drives the primary throttle to the fully closed position. The tool will also display the Voltage reading coming from the throttle position sensor.
11. Gently rotate the new throttle position sensor until the Voltage reading on the software shows 0.6 Volts +/- 0.02 Volts. The reading on the screen will turn green, indicating that the reading is correct.

Note:

- **This is a setting Voltage only. Because of the adaptive nature of the engine management system, the in-service Voltage may vary from this setting figure.**
12. Tighten the sensor retaining screws to **2 Nm** and recheck the Voltage reading shown on the tool. Repeat the adjustment if the reading is outside the specified range.
 13. Click on the OK button to return the throttle to normal control and return the diagnostic tool to the ADJUST TUNE menu.
 14. Disconnect the diagnostic tool.
 15. Check that the throttle opens and closes without obstruction/sticking and has a smooth action throughout the full range of its movement. Rectify as necessary.

! Warning

Operation of the motorcycle with an incorrectly adjusted, incorrectly routed or damaged throttle cable could interfere with the operation of the brakes, clutch or the throttle itself. Any of these conditions could result in loss of control of the motorcycle and an accident.

16. Disconnect the battery, negative (black) lead first.
17. Refit the throttle body assembly (see page 10-136).
18. Refit the airbox (see page 10-122).
19. Refit the fuel tank (see page 10-113).
20. Reconnect the battery, positive (red) lead first. Tighten the battery terminals to **4.5 Nm**.
21. Check and clear any stored faults using the diagnostic tool. Refer to the Triumph Diagnostic Tool User Guide.
22. Refit the seat (see page 16-22 for Daytona 675, Daytona 675 R and Street Triple Rx, see page 16-24 for Street Triple, Street Triple 660 cc and Street Triple R).



! Warning

Operation of the motorcycle with an incorrectly adjusted throttle position sensor, or a throttle position sensor that causes the throttle to stick could result in loss of throttle control. Loss of throttle control could result in loss of control of the motorcycle and an accident.

Fuel System/Engine Management

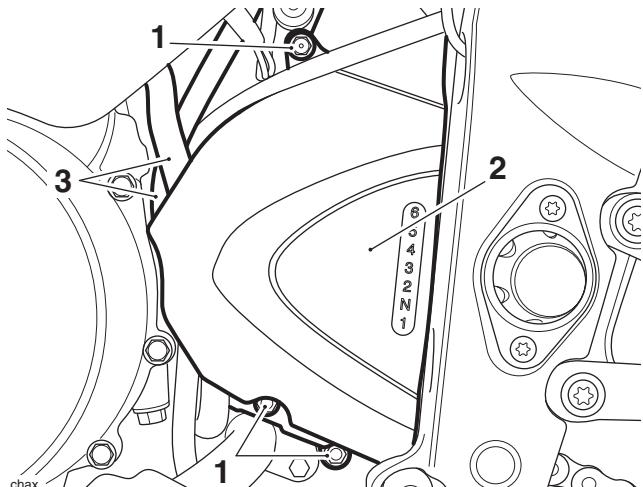
Gear Position Sensor

Removal

1. Remove the seat (see page 16-22 for Daytona 675, Daytona 675 R and Street Triple Rx, see page 16-23 for Street Triple, Street Triple 660 cc and Street Triple R).
2. Disconnect the battery, negative (black) lead first.
3. Remove the gear change linkage (see page 7-10).

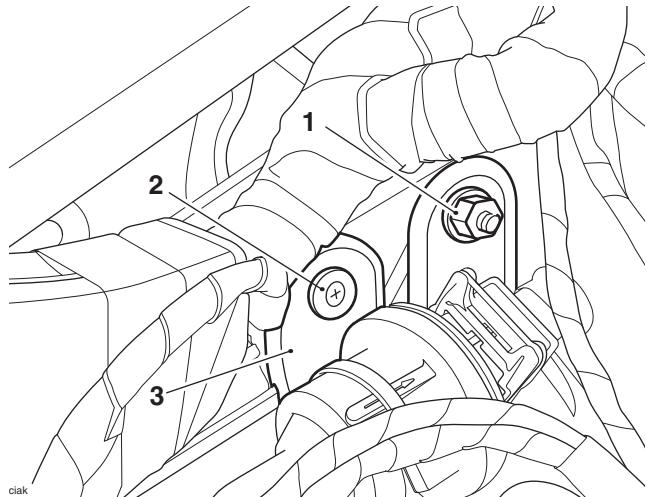
Note:

- Note the routing of the breather hoses and harnesses in front of the sprocket cover for installation.
- 4. Release the fixings and remove the engine's sprocket cover.



1. Fixings
2. Sprocket cover (Street Triple shown)
3. Breather hoses

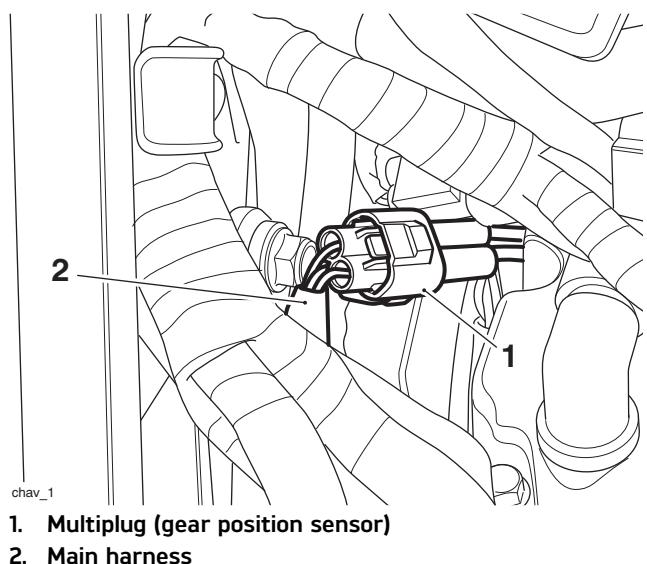
5. Remove the cable tie and detach the purge valve from the frame's left hand finisher.
6. Release the lock nut, fir-tree clip and remove the frame's left hand finisher.



1. Lock nut
2. Fir-tree clip
3. Finisher

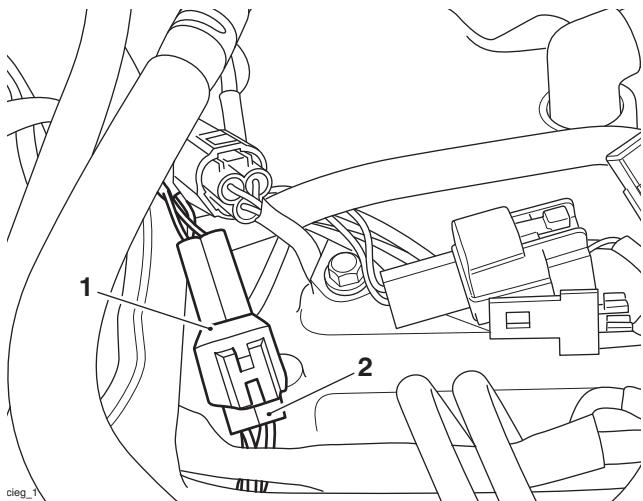
Note:

- Note the routing of the harness for the gear position sensor for installation.
- From engine number 596481 a new gear position sensor was introduced with a fly lead which may be fitted to earlier engines (see Technical News 143 issued April 2013).
- 7. **Gear position sensor without a fly lead:** Follow the route of the harness for the gear position sensor, disconnect its multiplug from the main harness.



1. Multiplug (gear position sensor)
2. Main harness

8. **Gear position sensor with a fly lead:** Follow the route of the harness for the gear position sensor, disconnect its multiplug from the fly lead.

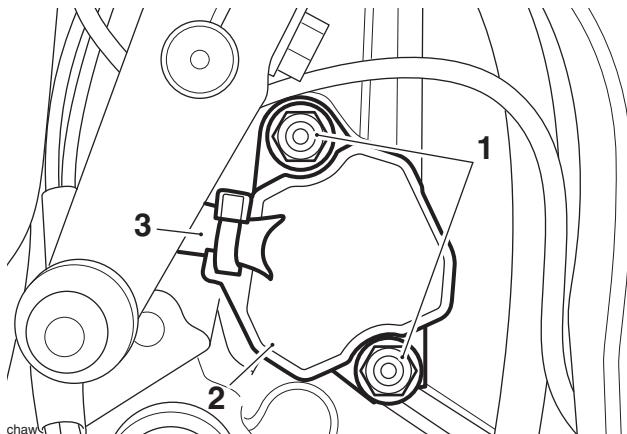


1. Multiplug (gear position sensor)

2. Fly lead

Note:

- **Note the position of the wire guide (if fitted) secured by the upper fixing of the gear position sensor for installation.**
9. Release the fixings and detach the gear position sensor from the engine.



1. Fixings

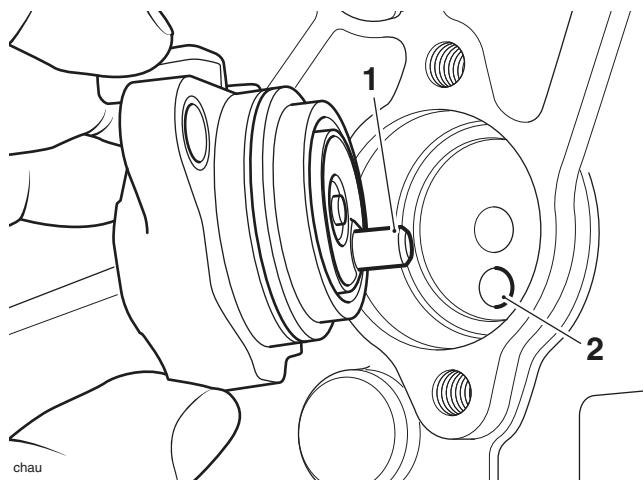
2. Gear position sensor (Street Triple shown)

3. Harness

10. Remove and discard the O-ring from the gear position sensor.

Installation

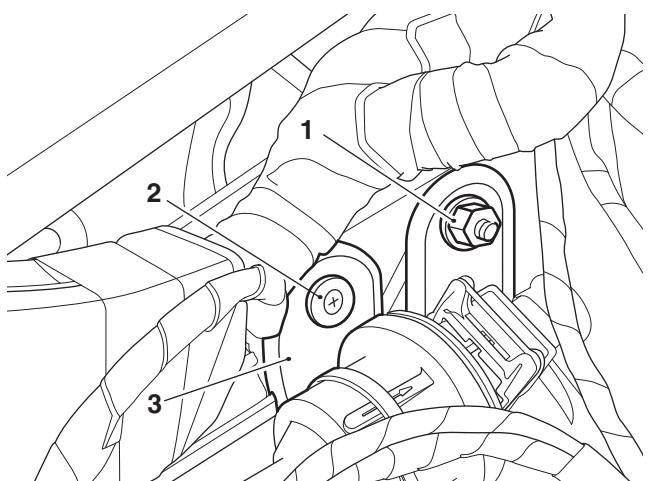
1. Fit two new O-rings to the gear position sensor. Lubricate the O-rings with a smear of petroleum jelly.
2. Fit the gear position sensor to the engine. Ensure that the locating pin on the sensor fits into the hole in the end of the gear selector drum.



1. Locating pin

2. Hole

3. Fit the gear position sensor fixings and wire guide as noted for removal and tighten to **5 Nm**.
4. Connect the multiplug for the gear position sensor to the main harness or the fly lead, if fitted.
5. Refit the frame's left hand finisher, secure with the fir-tree clip and lock nut. Tighten the lock nut to **3 Nm**.



1. Lock nut

2. Fir-tree clip

3. Finisher

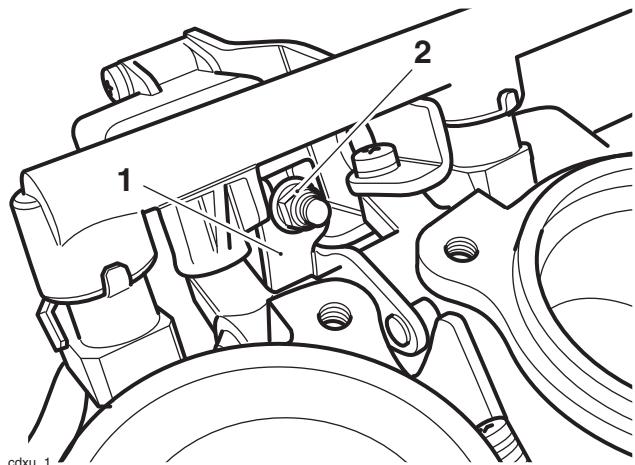
Fuel System/Engine Management

6. Secure the purge valve onto the frame's left hand finisher with a new cable tie.
7. Refit the sprocket cover with the breather hoses routed as noted for removal. Tighten the fixings to **9 Nm**.
8. Refit the gear change lever (see page 7-10).
9. Reconnect the battery, positive (red) lead first. Tighten the battery terminals to **4.5 Nm**.
10. Refit the seat (see page 16-22 for Daytona 675, Daytona 675 R and Street Triple Rx, see page 16-24 for Street Triple, Street Triple 660 cc and Street Triple R).

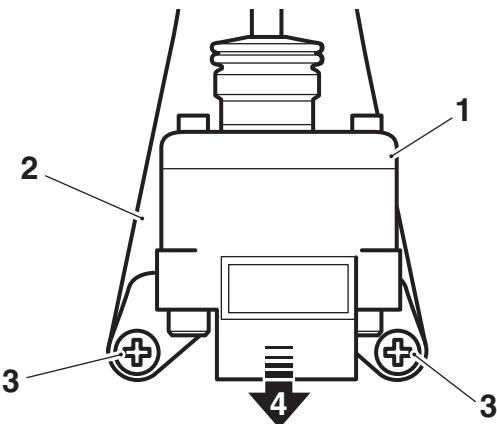
Idle Speed Control Stepper Motor

Removal

1. Remove the seat (see page 16-22 for Daytona 675, Daytona 675 R and Street Triple Rx, see page 16-23 for Street Triple, Street Triple 660 cc and Street Triple R).
2. Disconnect the battery, negative (black) lead first.
3. Remove the fuel tank (see page 10-112).
4. Remove the airbox (see page 10-120).
5. Remove the throttle bodies (see page 10-135).
6. Remove the nut, metal washer and plastic washer attaching the idle control stepper arm to the idle speed control lever.



7. Remove the two screws securing the idle speed control stepper motor to its bracket, then remove the stepper motor in the direction shown.



cdaw

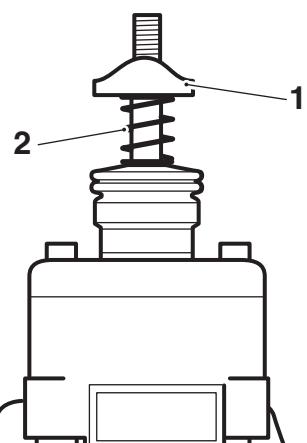
1. Idle speed control stepper motor

2. Bracket

3. Fixings

4. Direction of removal

8. Leave the plastic collar and spring on the stepper motor arm.



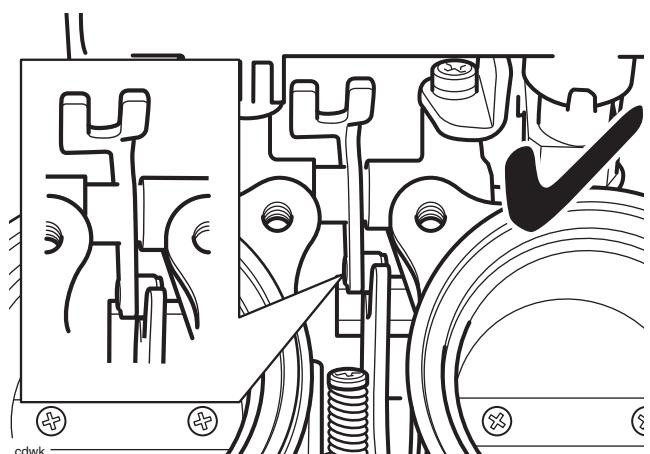
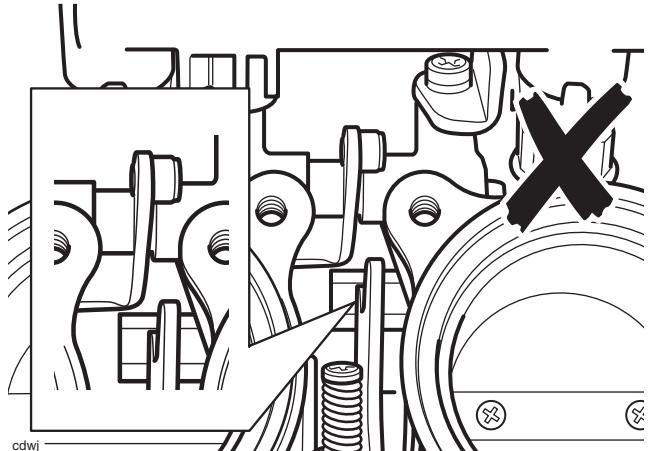
cdax

1. Collar

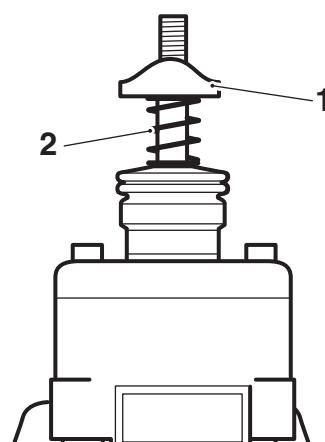
2. Spring

Installation

1. Ensure the Idle speed control lever is correctly positioned in relation to the throttle cam as shown below.



2. If removed, loosely fit the spring and collar on the stepper motor arm.

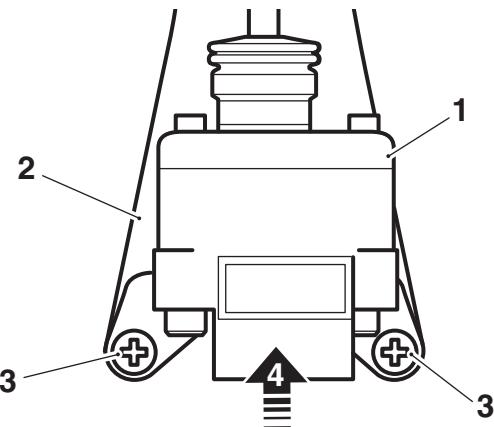


1. Collar

2. Spring

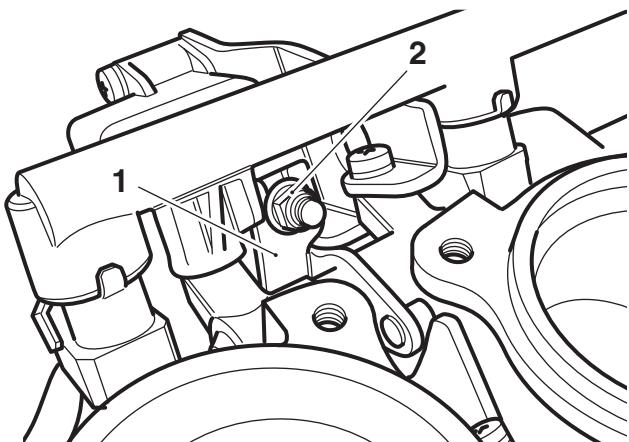
Fuel System/Engine Management

3. Locate the stepper motor to its bracket and tighten the fixings to **3.5 Nm**.



- 1. Idle speed control stepper motor**
2. Bracket
3. Fixings
4. Direction of fitting

4. Fit the plastic washer to the lever then fit the metal washer and nut.

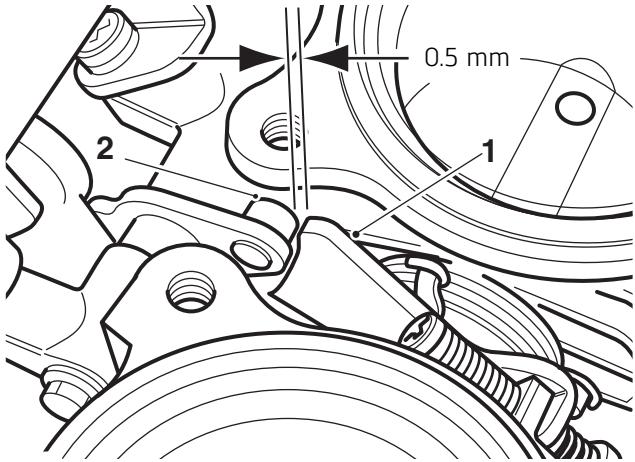


- 1. Idle speed control lever**
2. Nut etc.

5. Mount the throttle body onto the engine.
6. If disconnected, temporarily reconnect the immobiliser/TPMS control module multiplug.
7. Temporarily reconnect the battery, positive (red) lead first.
8. Attach the Triumph diagnostic tool to the dedicated plug. Refer to the Triumph Diagnostic Tool User Guide.
9. Turn the ignition to the ON position.
10. On the diagnostic software navigate to and select the ADJUST TUNE option.
11. Select Idle Speed Control Stepper Motor Adjust then click the Adjust button.

12. On pressing the adjust key, the diagnostic tool will send a command that drives the throttle to the fully closed position. The tool will also display the Voltage reading coming from the throttle position sensor which should be between the target Voltage range of 0.58 V and 0.62 V.

13. Tighten the stepper arm nut on the idle speed stepper motor until a clearance of 0.5 mm can be measured between the idle speed control cam and the throttle roller.



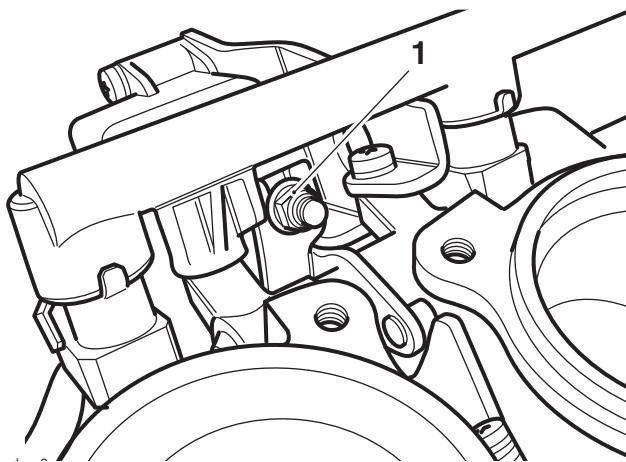
- 1. Idle speed control lever**
2. Throttle roller

14. Check the Voltage reading shown on the software. If the reading is between the target Voltage range, then proceed to step 17. If the reading is not within this range, adjustment must be made as described in steps 14 to 16.
15. Loosen the screws on the throttle position sensor.
16. Gently turn the throttle position sensor until the Voltage reading shown on the software is between the target Voltage range.
17. Tighten the sensor retaining screws to **2 Nm** and recheck the Voltage reading shown on the software. Repeat the adjustment if the reading is outside the specified range.
18. Click the OK button to progress to the next adjustment.

Note:

- The diagnostic software will calculate the target Voltage range for when the throttle is in the fully open position.

19. On pressing the OK button, the diagnostic tool will send a command that drives the throttle to the fully open position. The tool will also display the Voltage reading coming from the throttle position sensor which should be within the target Voltage range calculated by the software and shown on the screen.
20. With the stepper fully opened, check the Voltage shown on the software and, if necessary, adjust the nut on the top of the stepper arm until the software shows a Voltage within the target Voltage range shown on the screen. The reading on the screen will change from red to green, indicating that the reading is correct.



1. Adjustment nut

21. Click the OK button to fully close the idle speed control stepper motor. After a minimum of 15 seconds (the tool will show Adapting and not allow further actions to take place during this period), click the OK button again to return the ECM to normal control.



Caution

Do not operate the throttle while the stepper motor is being adjusted, otherwise the incorrect value will be adapted and the engine will not start.

22. Turn the ignition to the OFF position.
23. Disconnect the diagnostic tool.
24. Disconnect the battery, negative (black) lead first.
25. Check and adjust the throttle cable settings (see page 10-131).



Warning

Move the handlebars to left and right full lock while checking that the cables and harnesses do not bind. A cable or harness which binds will restrict the steering and may cause loss of control and an accident.

26. Refit the airbox (see page 10-122).
27. Refit the fuel tank (see page 10-113).
28. Reconnect the battery, positive (red) lead first. Tighten the battery terminals to **4.5 Nm**.
29. Refit the seat (see page 16-22 for Daytona 675, Daytona 675 R and Street Triple Rx, see page 16-24 for Street Triple, Street Triple 660 cc and Street Triple R).

Fuel System/Engine Management

Engine Management Adaption

General Information

The engine management system is adaptive. This means that the system is able to learn about new or changing operating conditions and continuously adapt itself without needing to constantly make major adjustments from a fixed baseline setting.

Adaptive changes can become necessary because of changing rider behaviour, changes in the region in which the bike is operated (i.e. operation at high altitude where it was previously used at sea level) or because a new part may have been fitted which has slightly different characteristics to the old part. All adaptive changes are automatic and require no intervention by rider or dealer.

Adaption Status

To see if a motorcycle has fully adapted, a facility named ADAPTION STATUS is provided on the diagnostic software. The following adaption details can be examined:

Function Examined	Report Method
Closed throttle position reference status	adapted/not adapted
Idle speed control adaption status	%
Oxygen sensor adaption status (off idle)	%
Oxygen sensor adaption range (off idle)	%
Oxygen sensor adaption status (idle)	%
Oxygen sensor adaption range (idle)	%

Terminology

Where the term 'status' is used, this indicates how far the present operating parameter is from the stored (baseline) value. The nearer these figures are to zero the better as it indicates the motorcycle has adapted to its current operating conditions.

The term 'range' indicates how much (in percentage terms) of the adjustment range has been used to reach the current operating status.

Typical Values

In a correctly adapted motorcycle, the following will be typical:

Function Examined	Read Out
Closed throttle position reference status	Yes (Adapted)
Idle speed control adaption status	Between +100 and -100%
Oxygen sensor adaption status (off idle)	0% +/- 10%
Oxygen sensor adaption range (off idle)	Between +100 and -100%
Oxygen sensor adaption status (idle)	0% +/- 10%
Oxygen sensor adaption range (idle)	Between +100 and -100%

Forcing adaption to take place

If the read out indicates that the motorcycle is not adapted, the following will force the system to make adaptions:

1. Ensure the engine is cold.
2. WITHOUT TOUCHING THE THROTTLE, start the engine and allow it to warm up until the cooling fan comes on.
3. Leave the engine to idle for a further 12 minutes.

Note:

- As an alternative to the above process, connect the diagnostic tool, select ADJUST TUNE (see the Triumph Diagnostic Tool User Guide) and select RESET ADAPTIONS. This will force a fast adaption routine to take place in around 5 seconds. For this to happen, the engine MUST be running, it must be at normal operating temperature and in closed loop control mode. Under any other conditions fast adaption will not take place and may cause default values to be loaded, which may then require a normal 12 minute adaption routine to be run.

Fault Indications

If 'range' figures at 100% are seen, then the adjustment has reached maximum indicating a mechanical fault exists on the motorcycle. This can be due to a number of faults but the most likely causes will be low/high fuel pressure, faulty injectors or air leaks at the throttle bodies or airbox.

In these circumstances, locate and rectify the fault, and reset the adaptions as described above.

Exhaust System - Daytona 675 and Daytona 675 R (All Markets Except Japan)

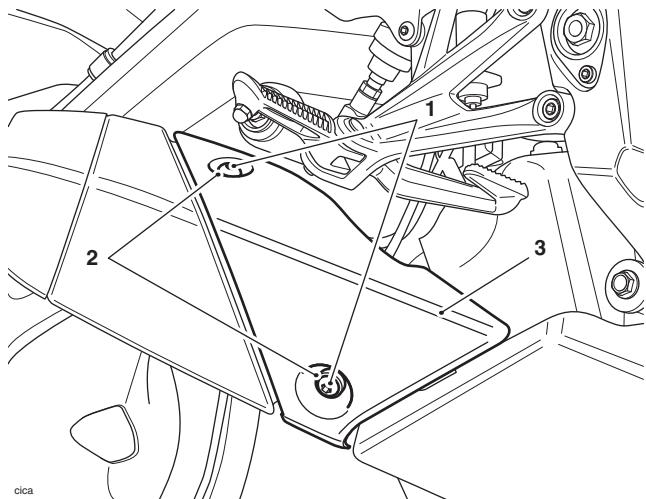
Removal



Warning

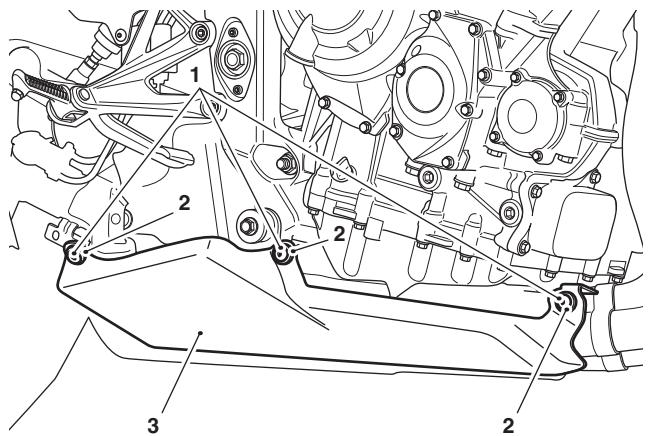
If the engine has recently been running, the exhaust system will be hot. Before working on or near the exhaust system, allow sufficient time for the exhaust system to cool as touching any part of a hot exhaust system could cause burn injuries.

1. Place the motorcycle on a paddock stand.
2. Remove the seat (see page 16-22).
3. Disconnect the battery, negative (black) lead first.
4. Remove the cockpit infill panels (see page 16-31).
5. Remove the radiator infill panels (see page 16-32).
6. Remove the fairings (see page 16-33).
7. Release the fixings, shouldered washers and remove the silencer's rear heat shield.



- cica
1. Fixings
2. Shouldered washers
3. Heat shield

8. Release the fixings, shouldered washers and remove the silencer's front heat shield.

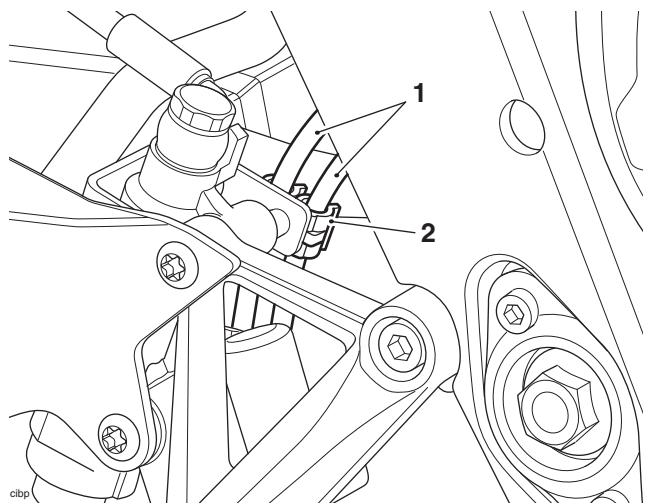


cicb

- 1. Fixings**
- 2. Shouldered washers**
- 3. Heat shield**

Note:

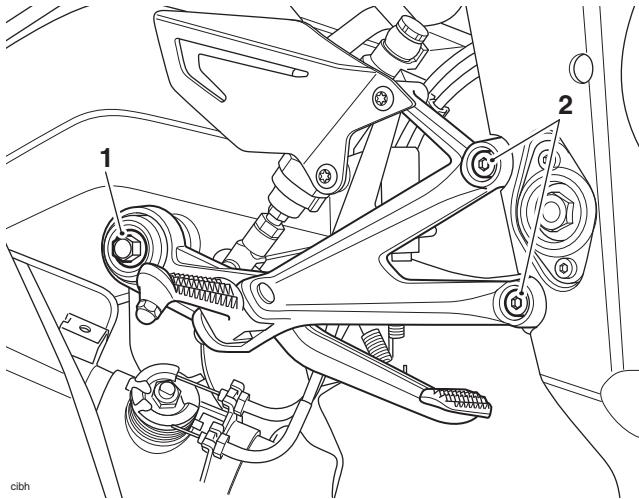
- For easier access to the adjusters on the exhaust butterfly valve cables, detach the right hand control plate from the frame and exhaust silencer.
- 9. Detach the cables for the exhaust butterfly valve from their clip on the bracket near the rear brake master cylinder.



- cibp
1. Cables
2. Clip

Fuel System/Engine Management

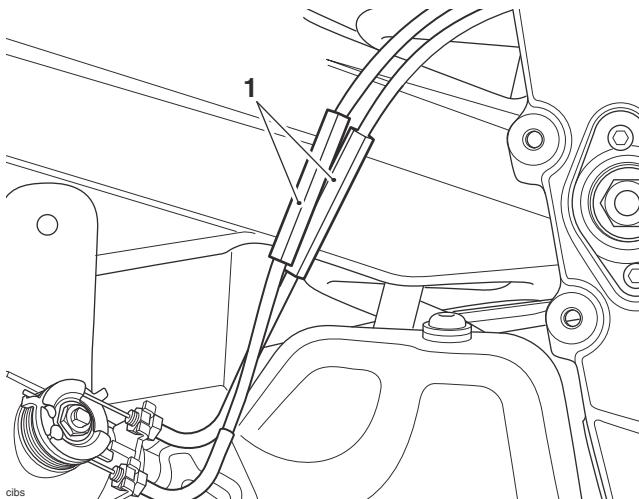
10. Remove the nut and bolt securing the silencer to the right hand control plate.
11. Remove the two fixings securing the right hand control plate to the frame.



1. Nut and bolt, silencer mounting

2. Fixings

12. Taking care not to scratch the frame with the control plate, loosen the adjuster on each exhaust butterfly valve cable to allow the outer cables to be detached from their bracket.

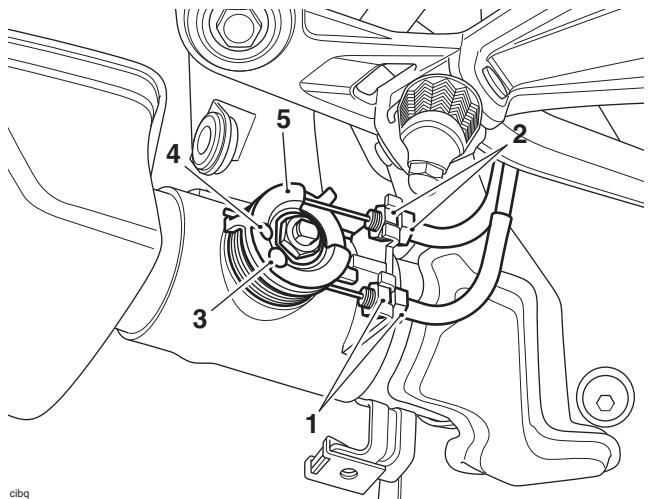


1. Adjusters, control plate removed for clarity.

Note:

- The opening cable's lower end is coloured black.
- The closing cable's lower end is coloured silver.
- Note the cables positions for installation.

13. Loosen the fixings and detach the outer cables from their bracket.
14. Noting the orientation of the cables, detach the inner cables from the exhaust butterfly valve pulley wheel.



1. Opening cable (black) fixings

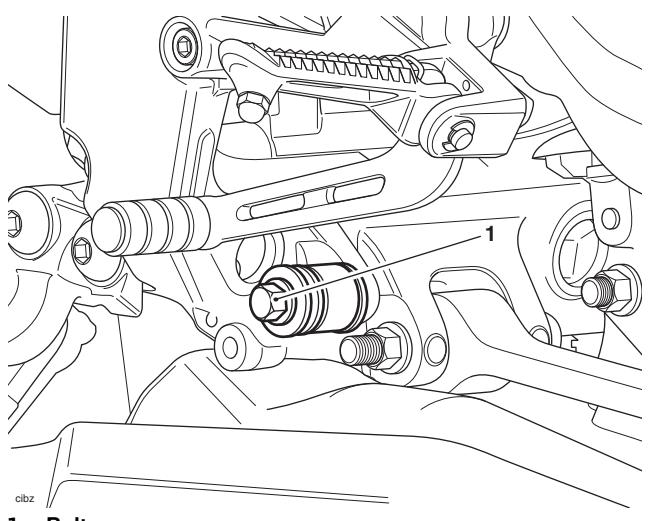
2. Closing cable (silver) fixings

3. Opening inner cable

4. Closing inner cable

5. Exhaust butterfly valve pulley wheel

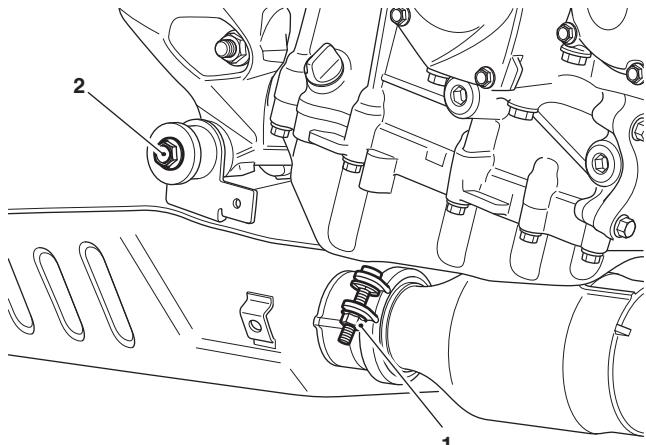
15. Remove the silencer's left hand mounting bolt.



1. Bolt

Fuel System/Engine Management

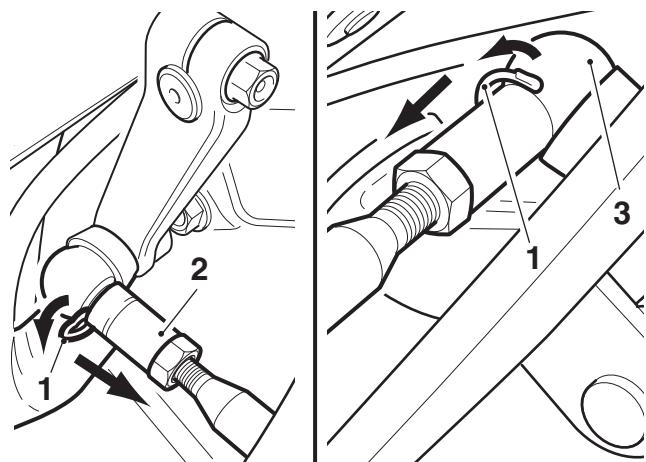
16. Release the clamp securing the silencer to the catalytic converter.
17. While supporting the silencer, remove the bolt securing the silencer to the frame.



clbx

1. Clamp
2. Bolt

18. Move the silencer rearwards to disengage it from the catalytic converter and remove.
19. Remove the wire clips securing the gear selector rod front and rear ball joints and remove the selector rod.

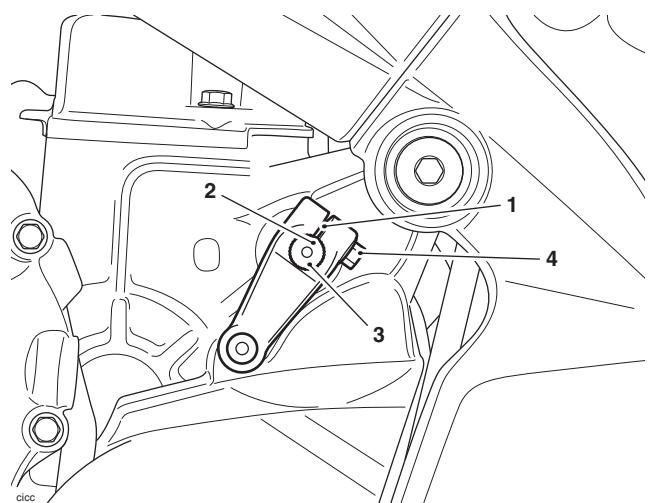


1. Wire clip
2. Ball joint, front
3. Ball joint, rear

Note:

- Note the position of the split line in the transmission linkage to the dot mark on the gear selector mechanism for installation.

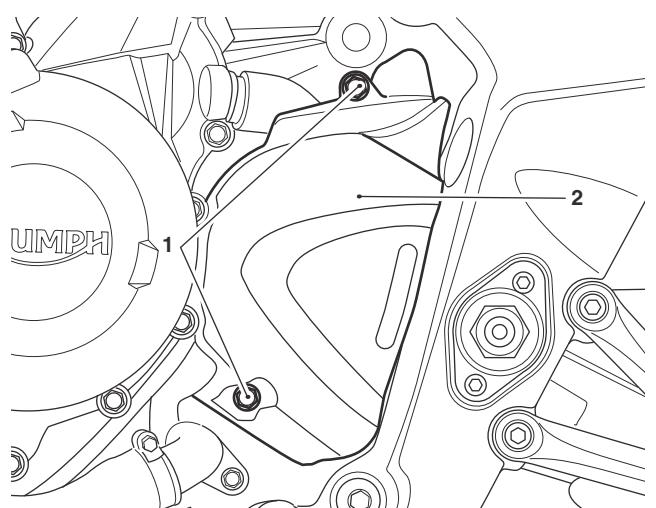
20. Release the fixing and remove the transmission linkage.



1. Split line
2. Dot mark
3. Gear selector mechanism
4. Fixing

Note:

- Note the routing of the breather hoses and harnesses in front of the sprocket cover for installation.
- 21. Release the fixings and remove the engine's sprocket cover.



1. Fixings
2. Cover

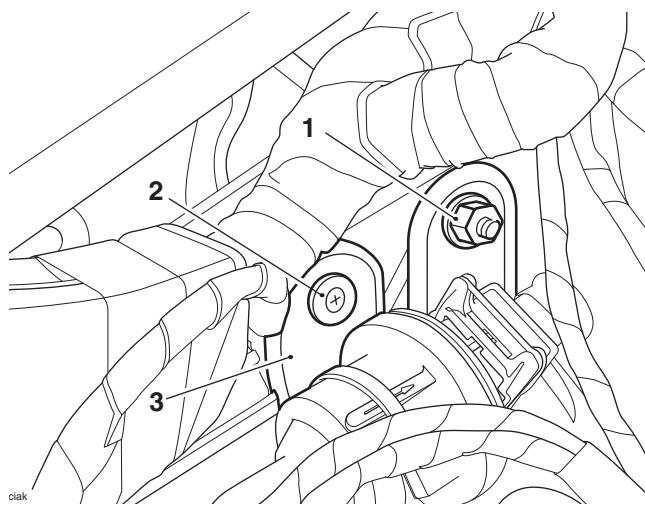
22. Remove the cable tie and detach the purge valve from the frame's left hand finisher.

Note:

- The connector for the oxygen sensor is located behind the frame's left hand finisher.

Fuel System/Engine Management

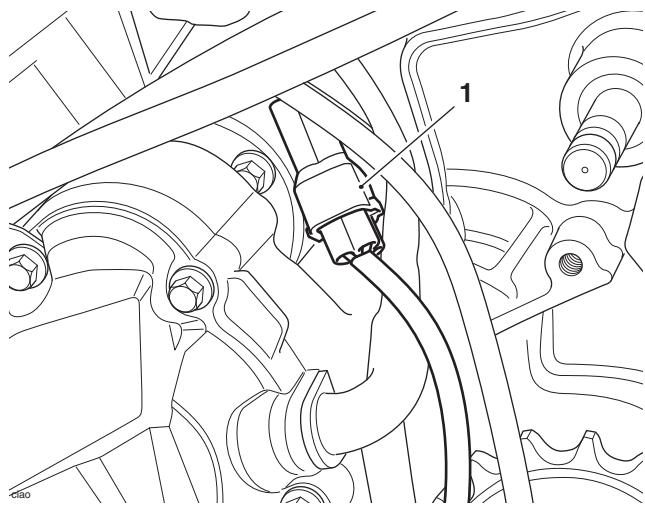
23. Release the lock nut, fir-tree clip and remove the frame's left hand finisher.



1. Lock nut
2. Fir-tree clip
3. Finisher

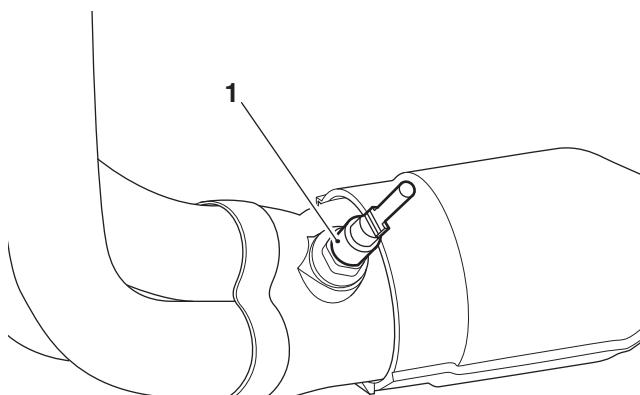
Note:

- Note the routing of the oxygen sensor's harness for installation.**
- 24. Disconnect the oxygen sensor's multiplug from the main harness.

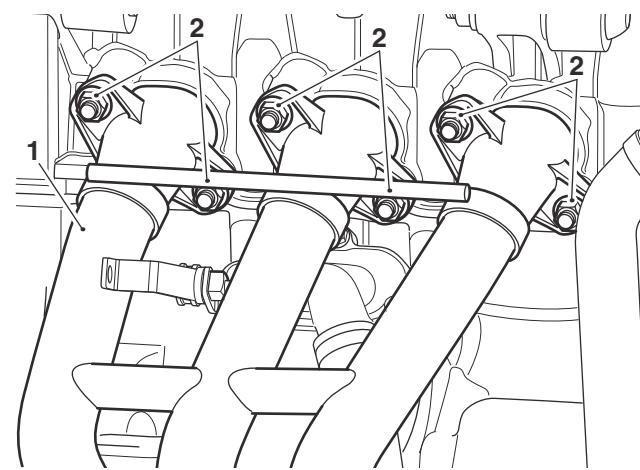


1. Multiplug, oxygen sensor

25. Remove the radiator (see page 11-16).
26. If necessary, remove the oxygen sensor.



1. Oxygen sensor
27. Release the fixings securing the header pipe joints to the cylinder head. Discard the fixings.



1. Header pipes
2. Fixings
28. Remove the header pipe assembly and collect the seals from the cylinder head ports.

Inspection

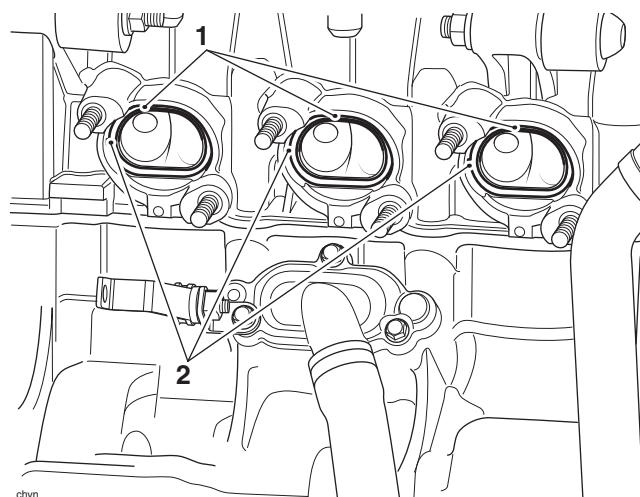
- Using an open ended spanner on the flats of the spindle, check that the exhaust valve in the silencer is free to rotate and operates smoothly. If the exhaust valve is seized or does not operate smoothly, proceed as follows:
 - Spray penetrating fluid into the spindle bushes of the butterfly valve, and again using an open-ended spanner on the flats of the spindle, turn the spindle end until it rotates freely.
 - Once free, check the spindle end-float. The standard end-float is 0.3 to 1.9 mm but, if end float is less than 0.3 mm, the silencer must be renewed.
 - Once satisfied that the valve is in a serviceable condition, refit the exhaust system to the motorcycle and adjust the butterfly valve cables (see page 10-175).

Installation

- Fit new seals to the cylinder head. Ensure that the face of the seal with the tab is facing the cylinder head.

Note:

- A smear of grease may be used to retain the seals in the cylinder head during assembly.**



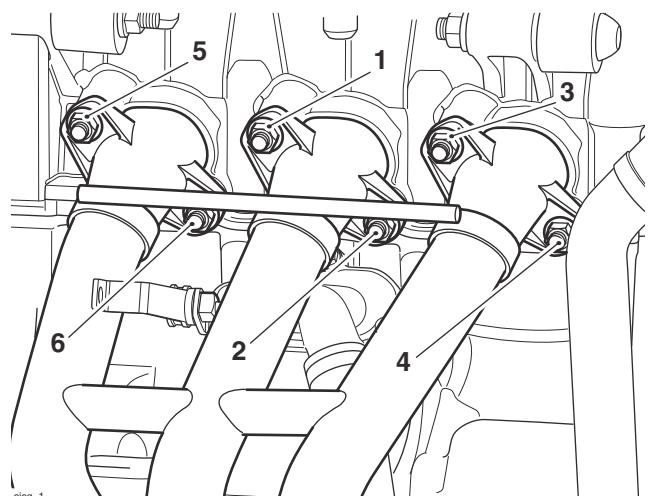
1. Seals

2. Seal tab

- Locate the header pipes and align the header pipe flanges to the fixing points. Fit new nuts, do not fully tighten at this stage.
- Fit the silencer onto the catalytic converter. Fit the bolts that secure the silencer to the frame. Do not fully tighten them at this stage.

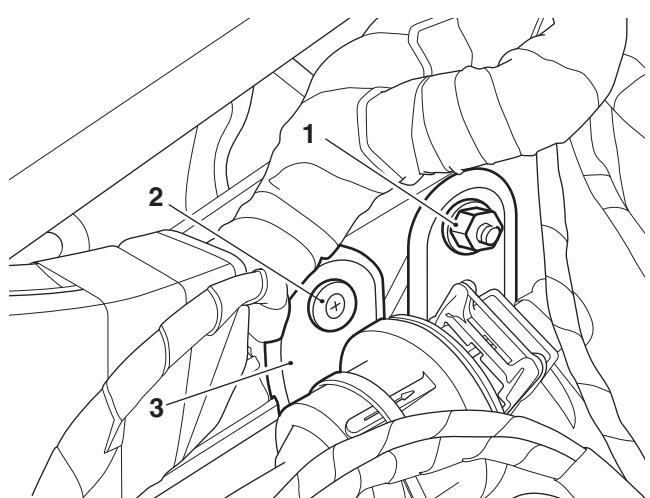
- Tighten the header pipe to cylinder head nuts in the sequence shown below:

- Stage 1:** Tighten the header pipe nuts in sequence to **2 Nm**.
- Stage 2:** Tighten the header pipe nuts in sequence to **15 Nm**.



Header Pipe Tightening Sequence

- If removed, apply a thin smear of anti-seize compound to the threads of the oxygen sensor, install the oxygen sensor and tighten to **25 Nm**.
- Refit the radiator and refill the cooling system (see page 11-8).
- Reconnect the oxygen sensor to the main harness, as noted on removal.
- Refit the frame's left hand finisher, secure with the fir-tree clip and lock nut. Tighten the lock nut to **3 Nm**.



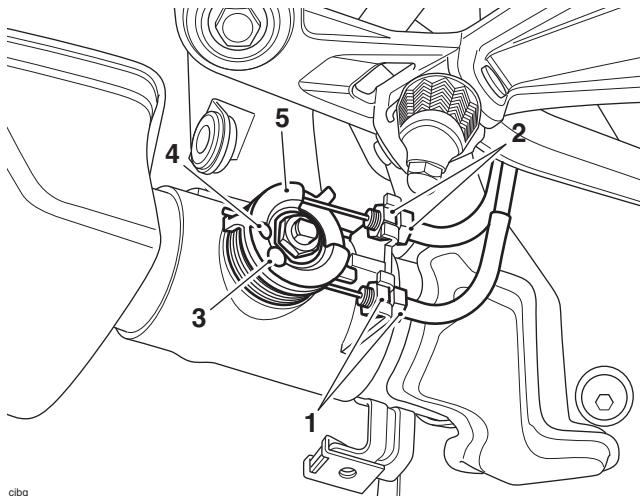
1. Lock nut

2. Fir-tree clip

3. Finisher

Fuel System/Engine Management

9. Secure the purge valve onto the frame's left hand finisher with a new cable tie.
10. Fit the engine's sprocket cover and tighten its fixings to **9 Nm**. Ensure that the hose and harnesses are routed as noted for removal.
11. Fit the transmission linkage and tighten its fixing to **8 Nm**.
12. Fit the gear selector rod to the transmission linkage and gear change pedal.
13. Refit the wire clips to the ball joints. Ensure the clips locate correctly before rotating the clip to the lock position.
14. Fit the silencer onto the catalytic converter. Fit the bolts that secure the silencer to the frame and tighten to **19 Nm**.
15. Fit the silencer clamp and tighten to **5 Nm**.
16. Attach the inner cables to the exhaust butterfly valve pulley wheel as noted for removal.



1. Opening cable (black) fixings
2. Closing cable (silver) fixings
3. Opening inner cable
4. Closing inner cable
5. Exhaust butterfly valve pulley wheel

17. Attach the outer cables to their bracket. Tighten the fixings to **5 Nm**.
18. Adjust the exhaust butterfly valve control cables (see page 10-175).
19. Fit the right hand control plate to the frame and tighten its fixings to **24 Nm**.
20. Secure the silencer to the right hand control plate with its bolt and new lock nut. Tighten to **19 Nm**.
21. Refit the heat shields and secure with the shouldered washers and fixings. Tighten the fixings to **5 Nm**.
22. Reconnect the battery, positive (red) lead first. Tighten the battery terminals to **4.5 Nm**.

Caution

Do not install the exhaust system or run the engine without the exhaust heat shields fitted. Components protected by the exhaust heat shields may suffer severe damage or a fire if the motorcycle is operated without the heat shields being fitted.

23. Start the engine and check for exhaust gas leaks. Rectify if necessary.
24. Refit the fairings (see page 16-34).
25. Refit the radiator infill panels (see page 16-32).
26. Refit the cockpit infill panels (see page 16-32).
27. Refit the seat (see page 16-22).

Exhaust System - Daytona 675 and Daytona 675 R (Japanese Market Only)

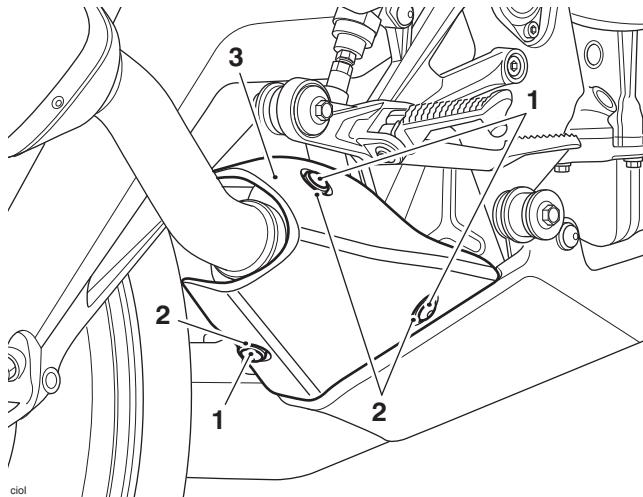
Removal



Warning

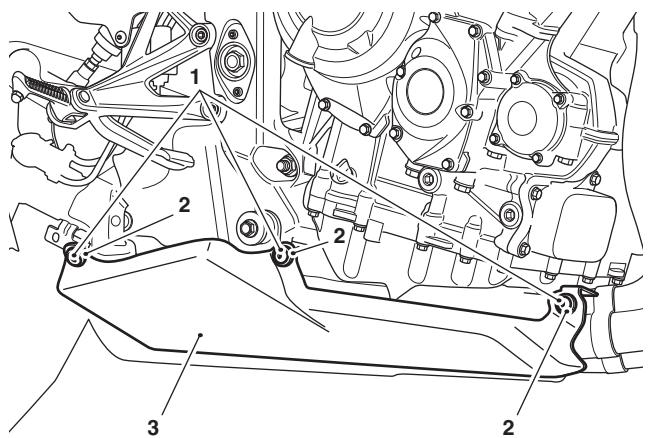
If the engine has recently been running, the exhaust system will be hot. Before working on or near the exhaust system, allow sufficient time for the exhaust system to cool as touching any part of a hot exhaust system could cause burn injuries.

1. Place the motorcycle on a paddock stand.
2. Remove the seat (see page 16-22).
3. Disconnect the battery, negative (black) lead first.
4. Remove the cockpit infill panels (see page 16-31).
5. Remove the radiator infill panels (see page 16-32).
6. Remove the fairings (see page 16-33).
7. Release the fixings, shouldered washers and remove the front silencer's rear heat shield.



- 1. Fixings
- 2. Shouldered washers
- 3. Heat shield

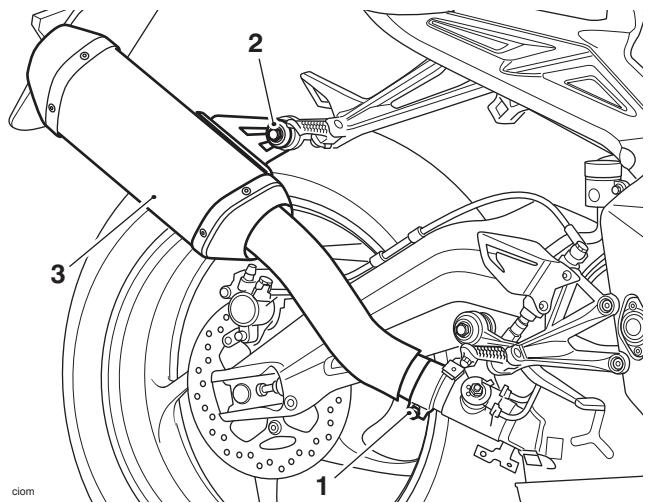
8. Release the fixings, shouldered washers and remove the front silencer's front heat shield.



cicb

- 1. Fixings
- 2. Shouldered washers
- 3. Heat shield

9. Release the clamp securing the rear silencer to the front silencer.
10. While supporting the rear silencer, remove the bolt and nut securing it to the footrest hanger.



- 1. Clamp
- 2. Bolt
- 3. Rear silencer

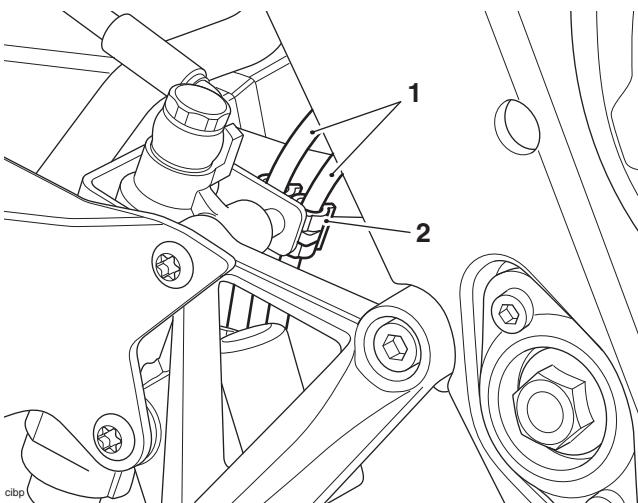
11. Move the rear silencer rearwards to disengage it from the front silencer and remove.

Note:

- For easier access to the adjusters on the exhaust butterfly valve cables, detach the right hand control plate from the frame and exhaust silencer.

Fuel System/Engine Management

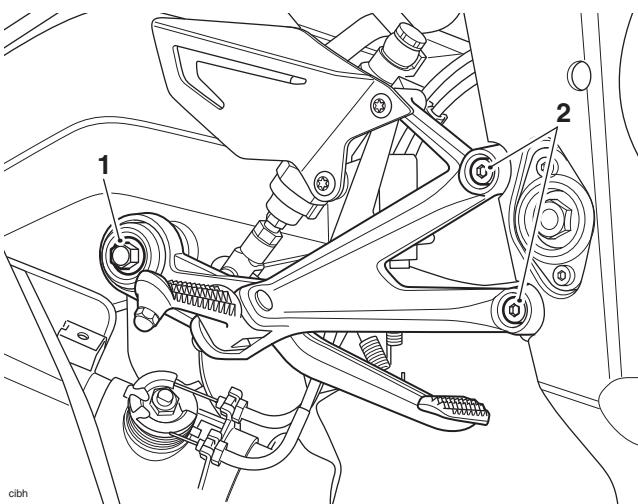
12. Detach the cables for the exhaust butterfly valve from their clip on the bracket near the rear brake master cylinder.



1. Cables

2. Clip

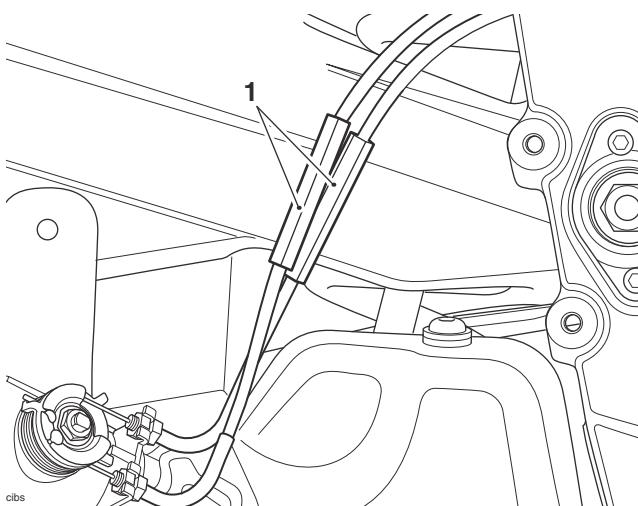
13. Remove the nut and bolt securing the front silencer to the right hand control plate.
14. Remove the two fixings securing the right hand control plate to the frame.



1. Nut and bolt, silencer mounting

2. Fixings

15. Taking care not to scratch the frame with the control plate, loosen the adjuster on each exhaust butterfly valve cable to allow the outer cables to be detached from their bracket.

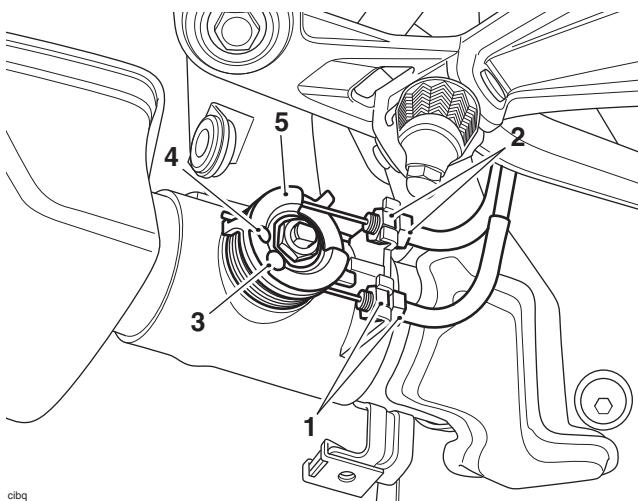


1. Adjusters, control plate removed for clarity.

Note:

- The opening cable's lower end is coloured black.
- The closing cable's lower end is coloured silver.
- Note the cables positions for installation.

16. Loosen the fixings and detach the outer cables from their bracket.
17. Noting the orientation of the cables, detach the inner cables from the exhaust butterfly valve pulley wheel.



1. Opening cable (black) fixings

2. Closing cable (silver) fixings

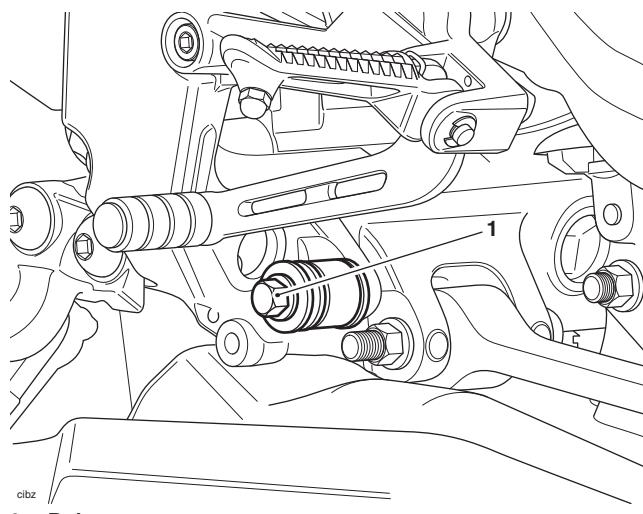
3. Opening inner cable

4. Closing inner cable

5. Exhaust butterfly valve pulley wheel

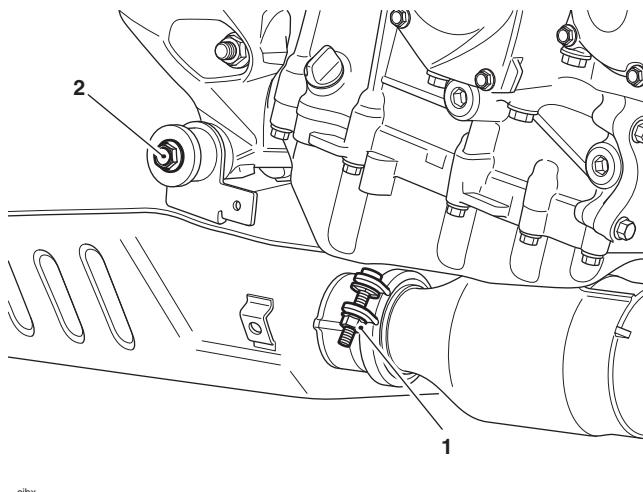
Fuel System/Engine Management

18. Remove the silencer's left hand mounting bolt.



1. Bolt

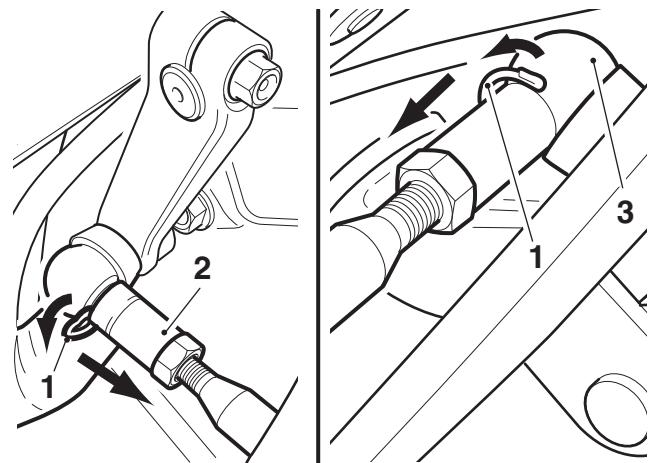
19. Release the clamp securing the silencer to the catalytic converter.
20. While supporting the silencer, remove the bolt securing the silencer to the frame.



1. Clamp
2. Bolt

21. Move the silencer rearwards to disengage it from the catalytic converter and remove.

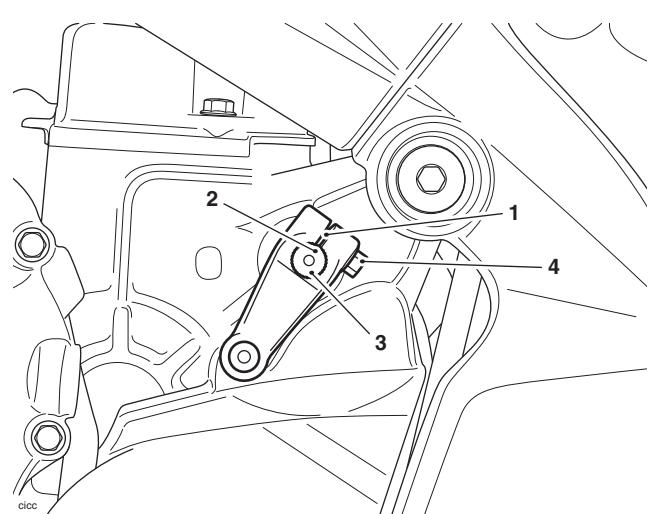
22. Remove the wire clips securing the gear selector rod front and rear ball joints and remove the selector rod.



1. Wire clip
2. Ball joint, front
3. Ball joint, rear

Note:

- Note the position of the split line in the transmission linkage to the dot mark on the gear selector mechanism for installation.
23. Release the fixing and remove the transmission linkage.



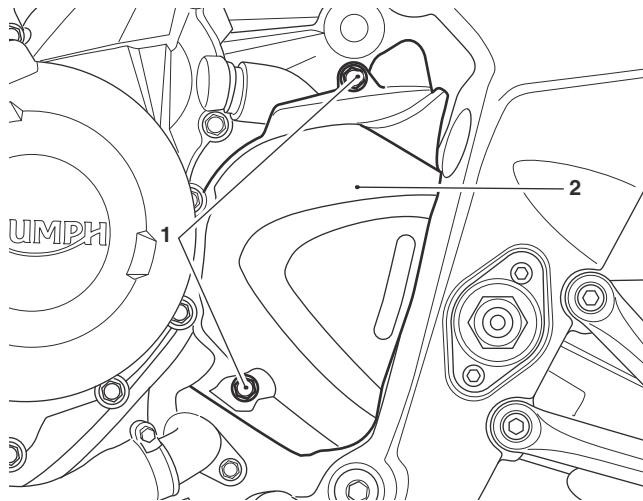
1. Split line
2. Dot mark
3. Gear selector mechanism
4. Fixing

Note:

- Note the routing of the breather hoses and harnesses in front of the sprocket cover for installation.

Fuel System/Engine Management

24. Release the fixings and remove the engine's sprocket cover.

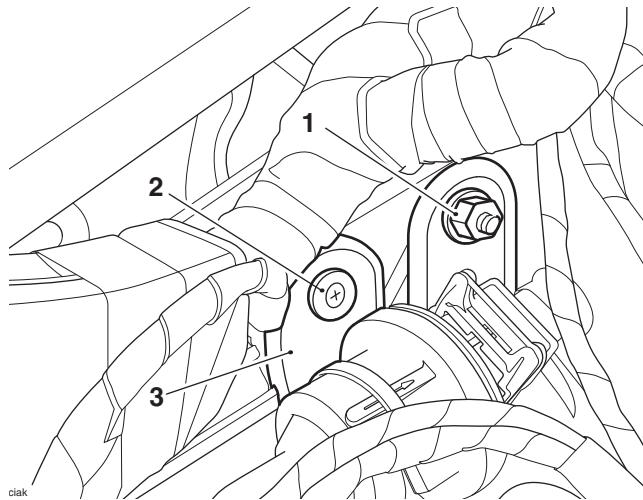


- 1. Fixings**
2. Cover

25. Remove the cable tie and detach the purge valve from the frame's left hand finisher.

Note:

- **The connector for the oxygen sensor is located behind the frame's left hand finisher.**
26. Release the lock nut, fir-tree clip and remove the frame's left hand finisher.

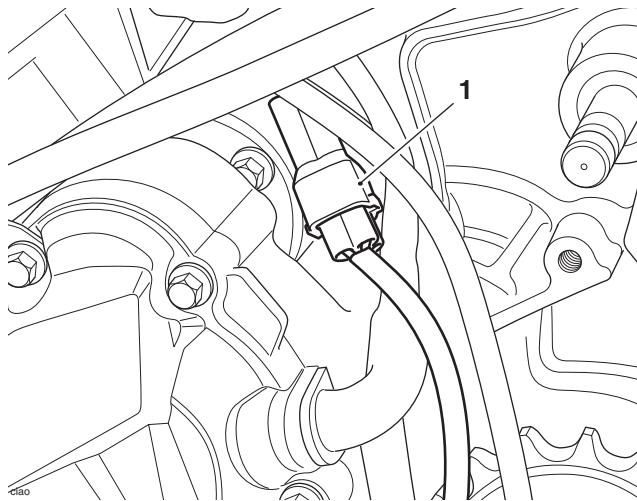


- 1. Lock nut**
2. Fir-tree clip
3. Finisher

Note:

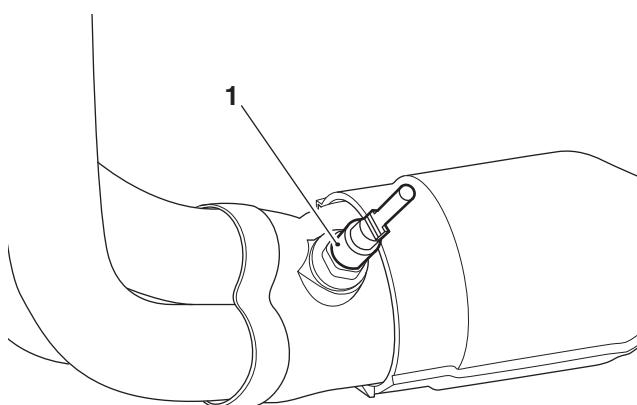
- **Note the routing of the oxygen sensor's harness for installation.**

27. Disconnect the oxygen sensor's multiplug from the main harness.



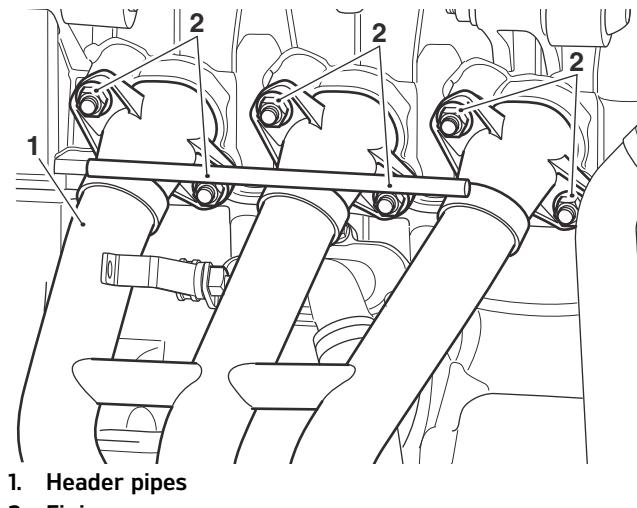
- 1. Multiplug, oxygen sensor**

28. Remove the radiator (see page 11-16).
29. If necessary, remove the oxygen sensor.



- 1. Oxygen sensor**

30. Release the fixings securing the header pipe joints to the cylinder head. Discard the fixings.



- 1. Header pipes**
2. Fixings

31. Remove the header pipe assembly and collect the seals from the cylinder head ports.

Inspection

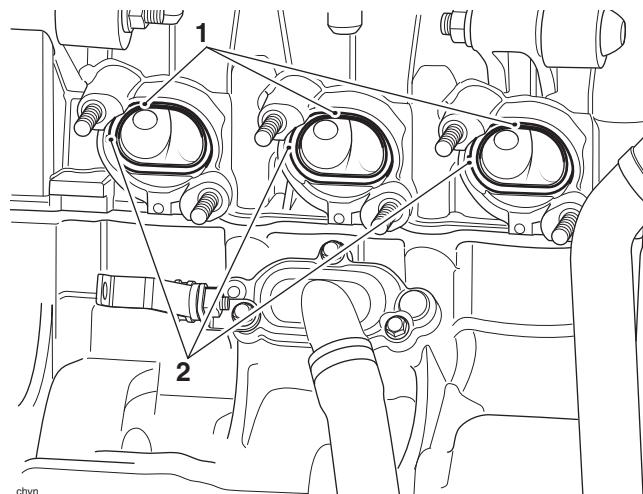
- Using an open ended spanner on the flats of the spindle, check that the exhaust valve in the silencer is free to rotate and operates smoothly. If the exhaust valve is seized or does not operate smoothly, proceed as follows:
 - Spray penetrating fluid into the spindle bushes of the butterfly valve, and again using an open-ended spanner on the flats of the spindle, turn the spindle end until it rotates freely.
 - Once free, check the spindle end-float. The standard end-float is 0.3 to 1.9 mm but, if end float is less than 0.3 mm, the silencer must be renewed.
 - Once satisfied that the valve is in a serviceable condition, refit the exhaust system to the motorcycle and adjust the butterfly valve cables (see page 10-175).

Installation

- Fit new seals to the cylinder head. Ensure that the face of the seal with the tab is facing the cylinder head.

Note:

- A smear of grease may be used to retain the seals in the cylinder head during assembly.**

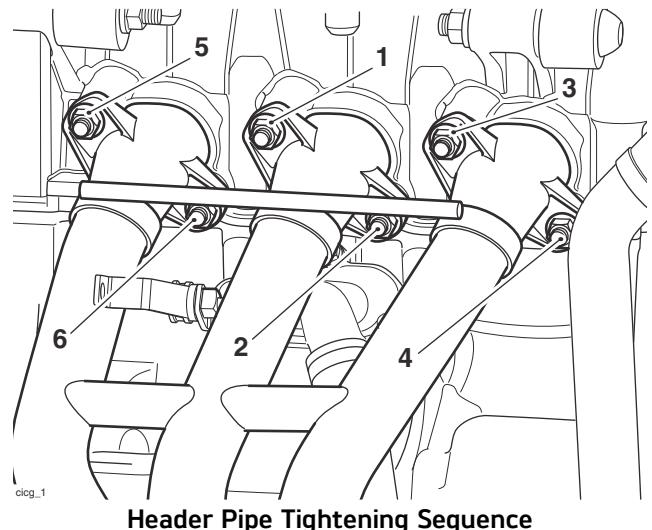


1. Seals

2. Seal tab

- Locate the header pipes and align the header pipe flanges to the fixing points. Fit new nuts, do not fully tighten at this stage.

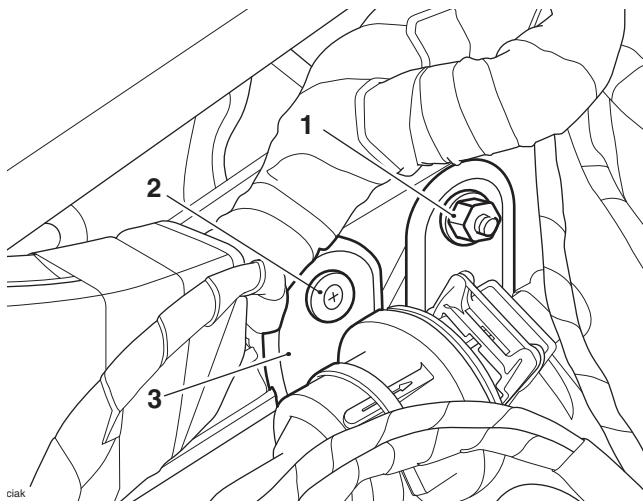
- Fit the silencer onto the catalytic converter. Fit the bolts that secure the silencer to the frame. Do not fully tighten them at this stage.
- Tighten the header pipe to cylinder head nuts in the sequence shown below:
 - Stage 1:** Tighten the header pipe nuts in sequence to **2 Nm**.
 - Stage 2:** Tighten the header pipe nuts in sequence to **15 Nm**.



- If removed, apply a thin smear of anti-seize compound to the threads of the oxygen sensor, install the oxygen sensor and tighten to **25 Nm**.
- Refit the radiator and refill the cooling system (see page 11-8).
- Reconnect the oxygen sensor to the main harness, as noted on removal.

Fuel System/Engine Management

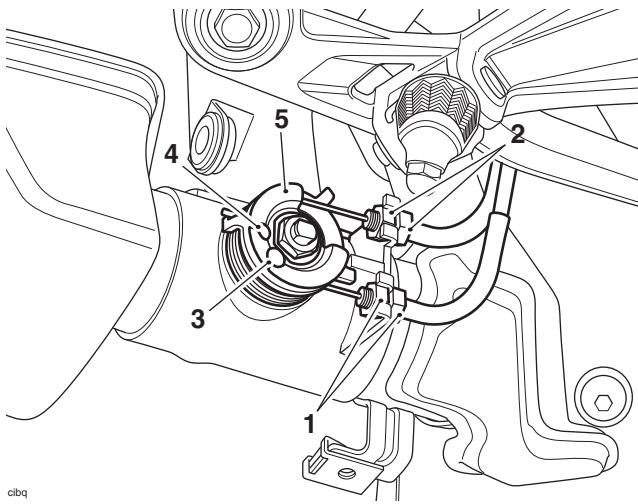
8. Refit the frame's left hand finisher, secure with the fir-tree clip and lock nut. Tighten the lock nut to **3 Nm**.



1. Lock nut
2. Fir-tree clip
3. Finisher

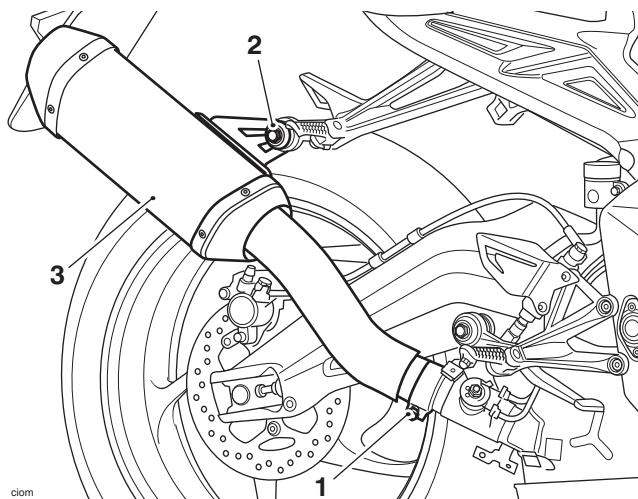
9. Secure the purge valve onto the frame's left hand finisher with a new cable tie.
10. Fit the engine's sprocket cover and tighten its fixings to **9 Nm**. Ensure that the hose and harnesses are routed as noted for removal.
11. Fit the transmission linkage and tighten its fixing to **8 Nm**.
12. Fit the gear selector rod to the transmission linkage and gear change pedal.
13. Refit the wire clips to the ball joints. Ensure the clips locate correctly before rotating the clip to the lock position.
14. Fit the front silencer onto the catalytic converter. Fit the bolts that secure the silencer to the frame and tighten to **19 Nm**.
15. Fit the silencer clamp and tighten to **5 Nm**.

16. Attach the inner cables to the exhaust butterfly valve pulley wheel as noted for removal.



1. Opening cable (black) fixings
2. Closing cable (silver) fixings
3. Opening inner cable
4. Closing inner cable
5. Exhaust butterfly valve pulley wheel

17. Attach the outer cables to their bracket. Tighten the fixings to **5 Nm**.
18. Adjust the exhaust butterfly valve control cables (see page 10-175).
19. Fit the right hand control plate to the frame and tighten its fixings to **24 Nm**.
20. Secure the front silencer to the right hand control plate with its bolt and new lock nut. Tighten to **19 Nm**.
21. Fit the rear silencer onto the front silencer. Fit the bolt and a new lock nut and tighten to **27 Nm**.
22. Fit the silencer clamp and tighten to **10 Nm**.



1. Clamp
2. Bolt
3. Rear silencer

23. Refit the front silencer's front heat shield and secure with the shouldered washers and fixings. Tighten the fixings to **5 Nm**.
24. Refit the front silencer's rear heat shield and secure with the shouldered washers and fixings. Tighten the fixings to **5 Nm**.
25. Reconnect the battery, positive (red) lead first. Tighten the battery terminals to **4.5 Nm**.



Caution

Do not install the exhaust system or run the engine without the exhaust heat shields fitted. Components protected by the exhaust heat shields may suffer severe damage or a fire if the motorcycle is operated without the heat shields being fitted.

26. Start the engine and check for exhaust gas leaks. Rectify if necessary.
27. Refit the fairings (see page 16-34).
28. Refit the radiator infill panels (see page 16-32).
29. Refit the cockpit infill panels (see page 16-32).
30. Refit the seat (see page 16-22).

Exhaust System - Street Triple (All Markets), Street Triple R and Street Triple Rx (All Markets Except Japan)

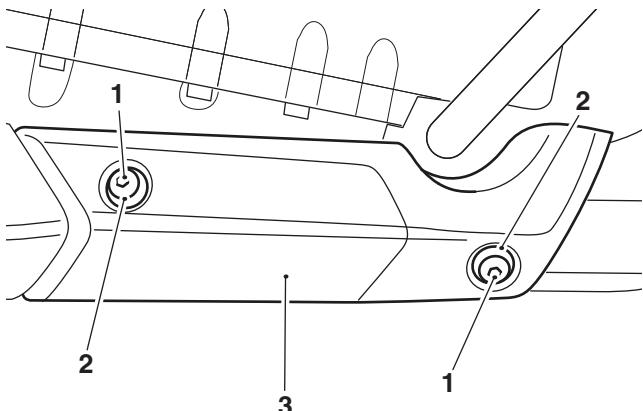
Removal



Warning

If the engine has recently been running, the exhaust system will be hot. Before working on or near the exhaust system, allow sufficient time for the exhaust system to cool as touching any part of a hot exhaust system could cause burn injuries.

1. Remove the seat (see page 16-23 for Street Triple, Street Triple 660 cc and Street Triple R, see page 16-22 for Street Triple Rx).
2. Disconnect the battery, negative (black) lead first.
3. If fitted, remove the belly pan (see page 16-40).
4. Release the fixings, shouldered washers and remove the front heat shield.

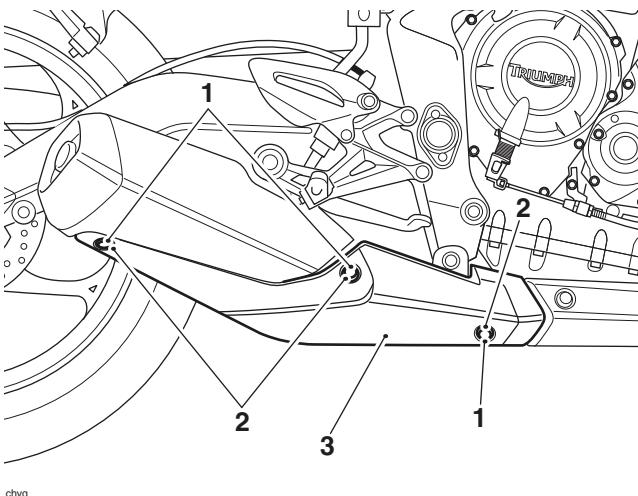


chys

1. Fixings
2. Shouldered washers
3. Heat shield

Fuel System/Engine Management

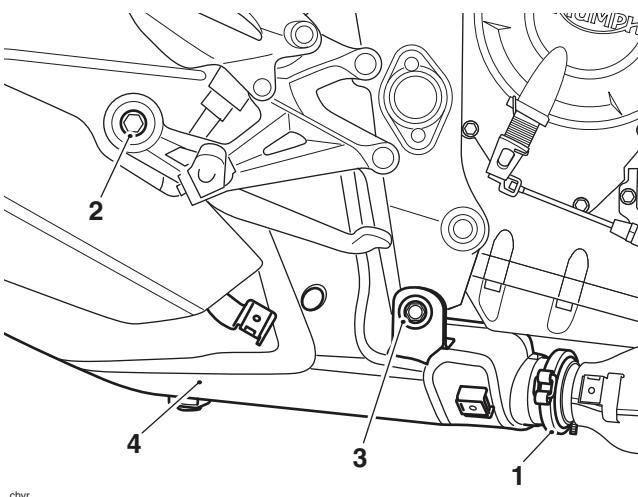
5. Release the fixing, shouldered washer and remove the heat shield.



1. Fixings

- 2. Shouldered washer**
3. Heat shield

6. Release the clamp securing the silencer to the catalytic converter.
7. Remove the nut and bolt securing the silencer to the right hand control plate.
8. While supporting the silencer, remove the bolt securing the silencer to the frame.



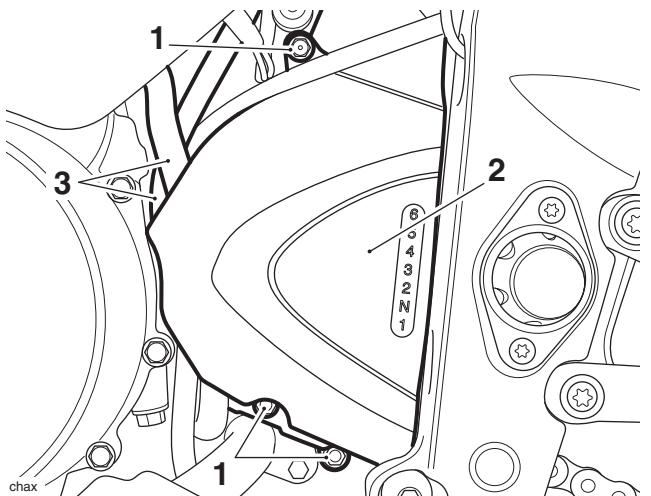
- 1. Clamp**
2. Nut and bolt
3. Bolt
4. Silencer

9. Move the silencer rearwards to disengage it from the catalytic converter and remove.
10. Remove the gear change linkage (see page 7-10).

Note:

- Note the routing of the breather hoses and harnesses in front of the sprocket cover for installation.**

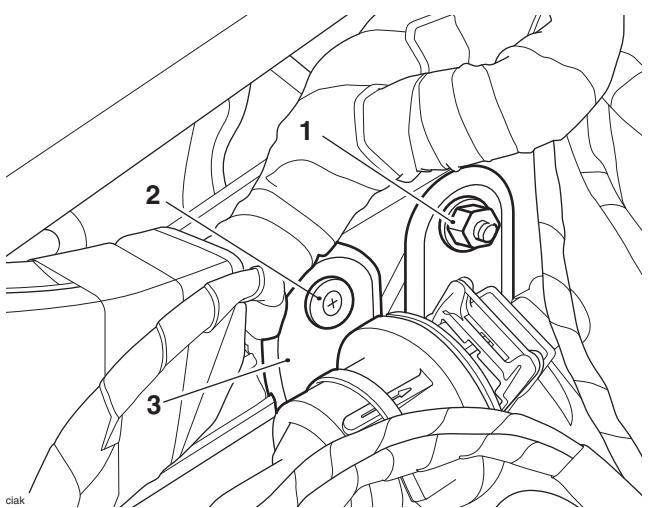
11. Release the fixings and remove the engine's sprocket cover.



1. Fixings

- 2. Sprocket cover**
3. Breather hoses

12. Remove the cable tie and detach the purge valve from the frame's left hand finisher.
13. Release the lock nut, fir-tree clip and remove the frame's left hand finisher.

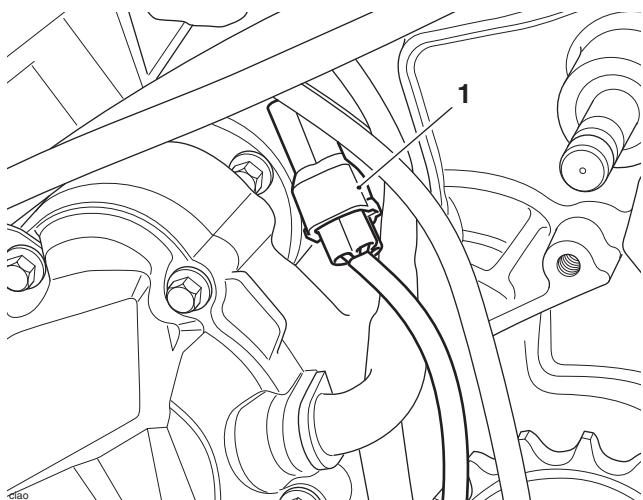


- 1. Lock nut**
2. Fir-tree clip
3. Finisher

Note:

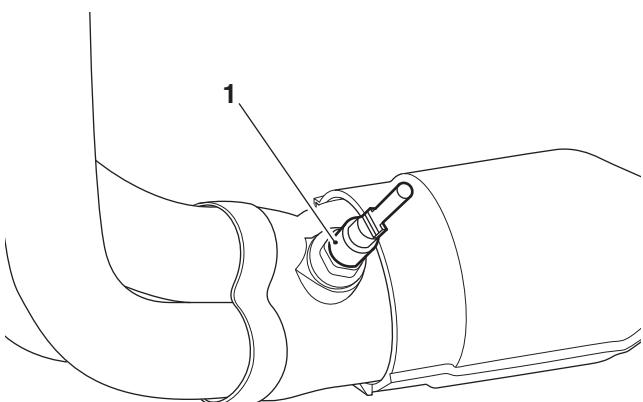
- Note the routing of the oxygen sensor's harness for installation.**

14. Disconnect the oxygen sensor's multiplug from the main harness.



1. Multiplug, oxygen sensor

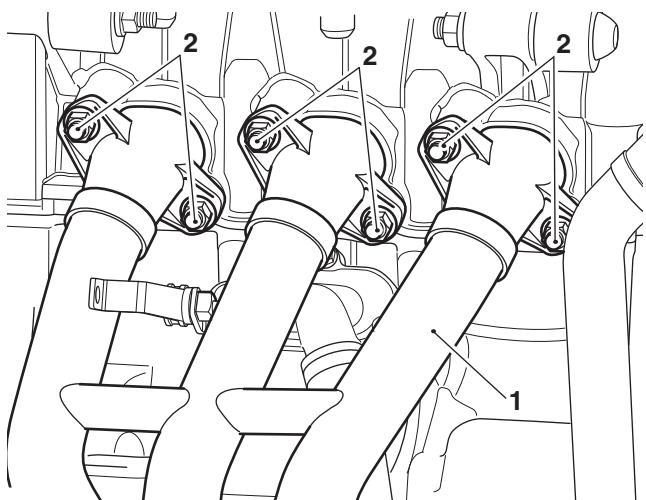
15. If necessary, loosen the oxygen sensor.



1. Oxygen sensor

16. Remove the radiator (see page 11-18).

17. Release the fixings securing the header pipe joints to the cylinder head. Discard the fixings.



1. Header pipes

2. Fixings

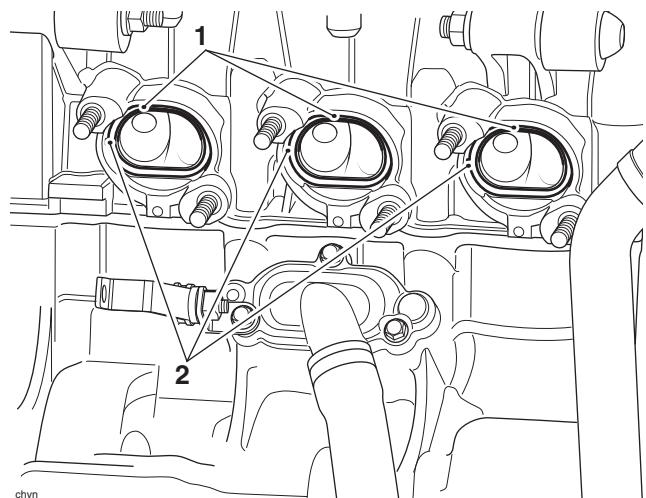
18. Remove the header pipe assembly and collect the seals from the cylinder head ports.
19. If necessary, remove the oxygen sensor.

Installation

1. Fit new seals to the cylinder head. Ensure that the face of the seal with the tab is facing the cylinder head.

Note:

- A smear of grease may be used to retain the seals in the cylinder head during assembly.**



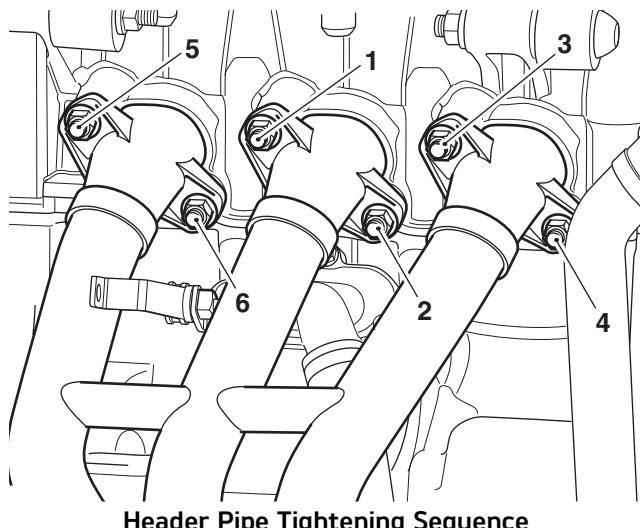
1. Seals

2. Seal tab

2. Locate the header pipes and align the header pipe flanges to the fixing points. Fit new nuts, do not tighten at this stage.

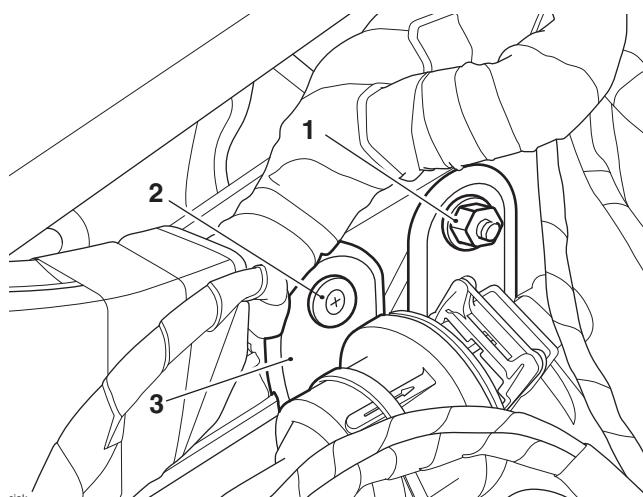
Fuel System/Engine Management

3. Tighten the header pipe to cylinder head nuts in the sequence shown below:
 - **Stage 1:** Tighten the header pipe nuts in sequence to **2 Nm**.
 - **Stage 2:** Tighten the header pipe nuts in sequence to **15 Nm**.
8. Secure the purge valve onto the frame's left hand finisher with a new cable tie.
9. Refit the sprocket cover with the breather hoses routed as noted for removal. Tighten the fixings to **9 Nm**.
10. Refit the gear change lever (see page 7-10).
11. Fit the silencer onto the catalytic converter. Fit the bolt that secures the silencer to the frame. Do not fully tighten at this stage.
12. Fit the bolt and new lock nut that secures the silencer to the right hand control plate. Do not fully tighten at this stage.
13. Fit the silencer clamp and tighten to **5 Nm**.

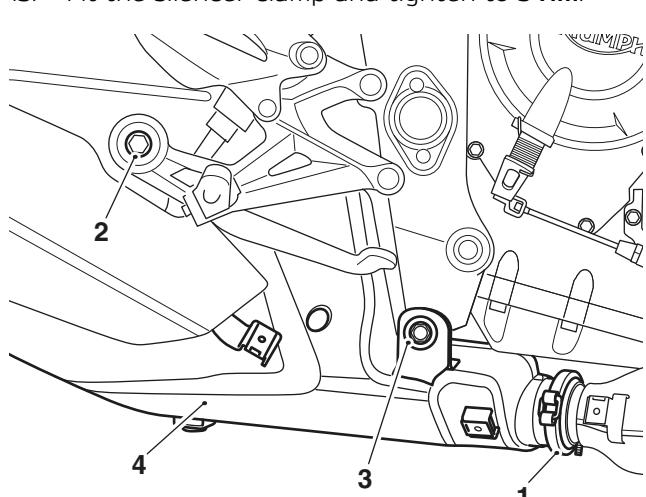


Header Pipe Tightening Sequence

4. If removed, apply a thin smear of anti-seize compound to the threads of the oxygen sensor, install the oxygen sensor and tighten to **25 Nm**.
5. Refit the radiator and refill the cooling system (see page 11-20).
6. Reconnect the oxygen sensor to the main harness, as noted on removal.
7. Refit the frame's left hand finisher, secure with the fir-tree clip and lock nut. Tighten the lock nut to **3 Nm**.

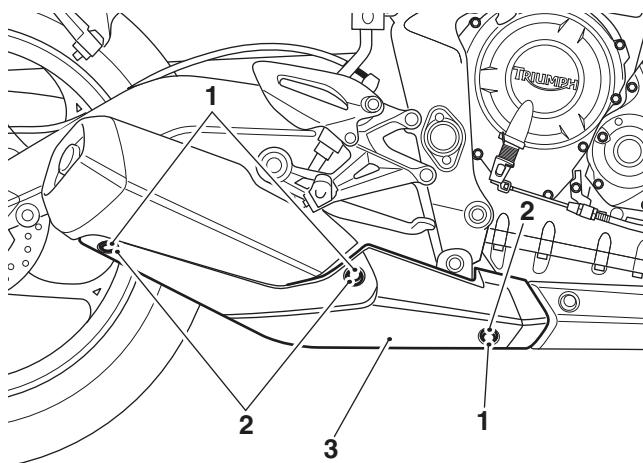


1. Lock nut
2. Fir-tree clip
3. Finisher



1. Clamp
2. Nut and bolt
3. Bolt
4. Silencer
14. Tighten the bolt securing the silencer to the frame to **19 Nm**.
15. Tighten the lock nut and bolt securing the silencer to the right hand control plate to **28 Nm**.

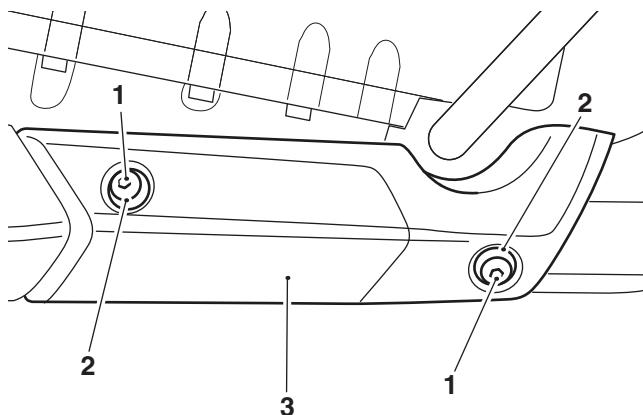
16. Fit the rear heat shield onto the exhaust. Secure with the shouldered washers and fixings. Tighten the fixings to **5 Nm**.



chyq

1. Fixings
2. Shouldered washer
3. Heat shield

17. Slide the front heat shield onto the exhaust. Secure with the shouldered washers and fixings. Tighten the fixing to **5 Nm**.



chys

1. Fixings
2. Shouldered washers
3. Heat shield

18. Reconnect the battery, positive (red) lead first. Tighten the battery terminals to **4.5 Nm**.



Caution

Do not install the exhaust system or run the engine without the exhaust heat shields fitted. Components protected by the exhaust heat shields may suffer severe damage or a fire if the motorcycle is operated without the heat shields being fitted.

19. Start the engine and check for exhaust gas leaks. Rectify if necessary.
20. Refit the seat (see page 16-23 for Street Triple, Street Triple 660 cc and Street Triple R, see page 16-22 for Street Triple Rx).

Fuel System/Engine Management

Exhaust System - Street Triple R and Street Triple Rx (Japanese market only)

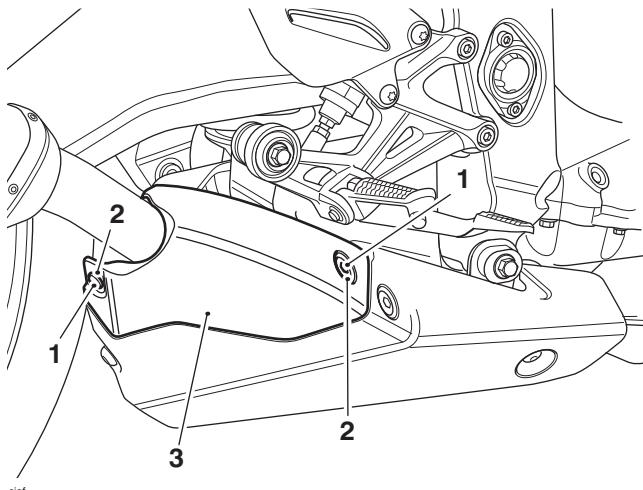
Removal



Warning

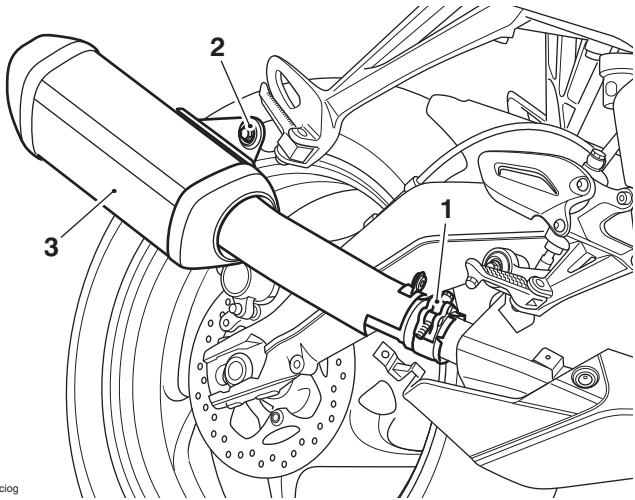
If the engine has recently been running, the exhaust system will be hot. Before working on or near the exhaust system, allow sufficient time for the exhaust system to cool as touching any part of a hot exhaust system could cause burn injuries.

1. Remove the seat (see page 16-23 for Street Triple, Street Triple 660 cc and Street Triple R, see page 16-22 for Street Triple Rx).
2. Disconnect the battery, negative (black) lead first.
3. If fitted, remove the belly pan (see page 16-40).
4. Release the two fixings and the shouldered washers. Move the rear heat shield rearwards to release its front locating lug from its mounting and remove from the motorcycle.



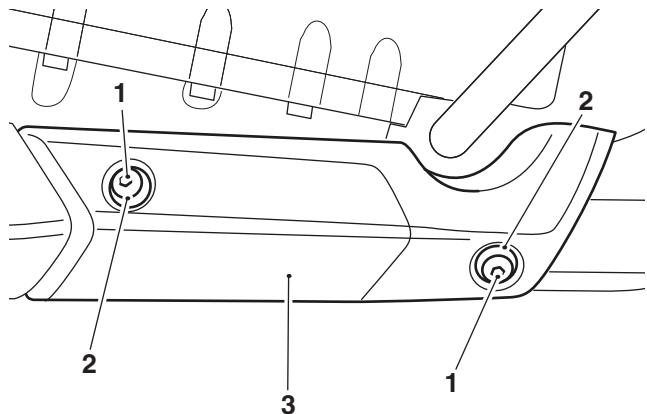
1. Fixings
2. Shouldered washers
3. Heat shield

5. Release the clamp securing the rear silencer to the front silencer.
6. While supporting the rear silencer, remove the bolt and nut securing it to the rear footrest hanger.



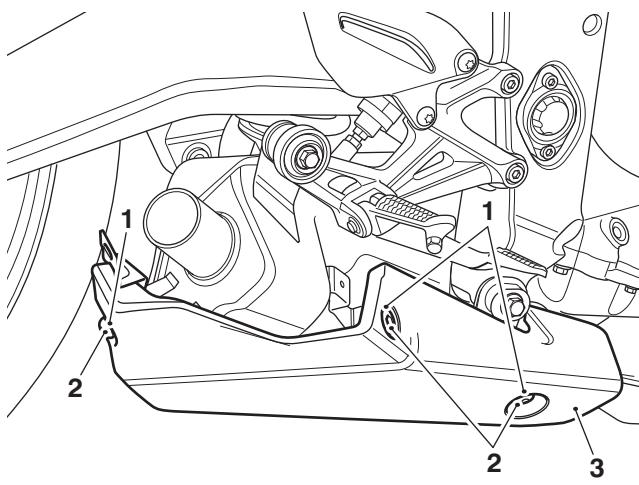
1. Clamp
2. Bolt
3. Rear silencer

7. Move the rear silencer rearwards to disengage it from the front silencer and remove.
8. Release the fixings, shouldered washers and remove the front heat shield.



1. Fixings
2. Shouldered washers
3. Heat shield

9. Release the fixings, shouldered washers and remove the centre heat shield.

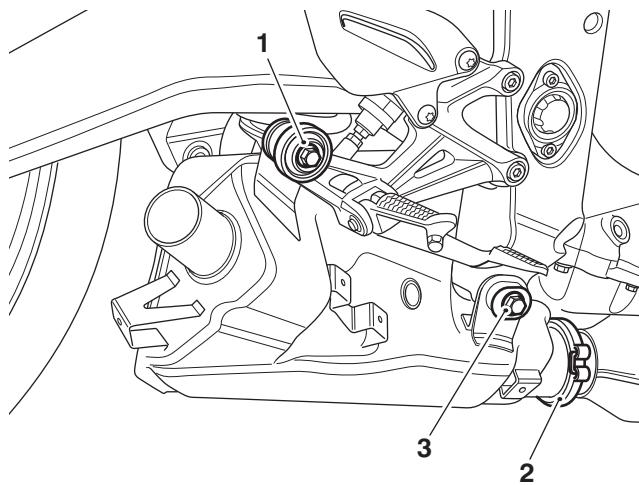


1. Fixings

2. Shouldered washer

3. Heat shield

10. Remove the nut and bolt securing the front silencer to the right hand control plate.
 11. Release the clamp securing the front silencer to the catalytic converter.
 12. While supporting the front silencer, remove the bolt securing the front silencer to the frame.



1. Nut and bolt

2. Clamp

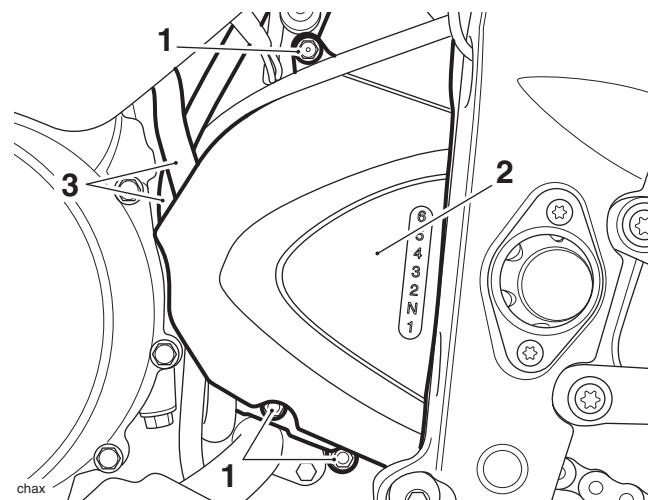
3. Bolt

13. Move the silencer rearwards to disengage it from the catalytic converter and remove.
 14. Remove the gear change linkage (see page 7-10).

Note:

- Note the routing of the breather hoses and harnesses in front of the sprocket cover for installation.**

15. Release the fixings and remove the engine's sprocket cover.

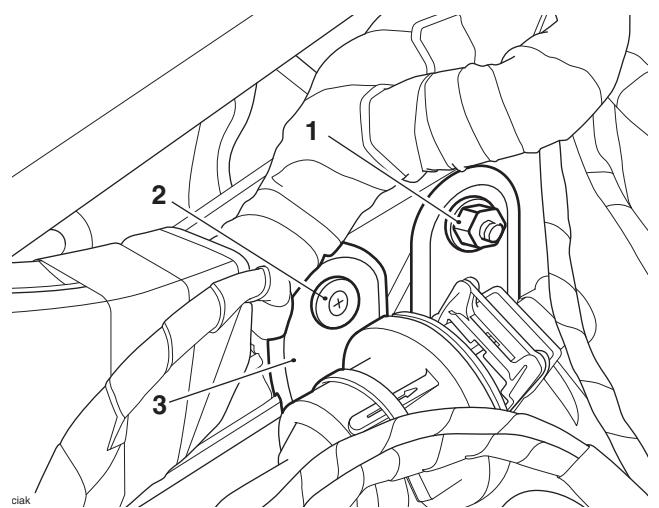


1. Fixings

2. Sprocket cover

3. Breather hoses

16. Remove the cable tie and detach the purge valve from the frame's left hand finisher.
 17. Release the lock nut, fir-tree clip and remove the frame's left hand finisher.



1. Lock nut

2. Fir-tree clip

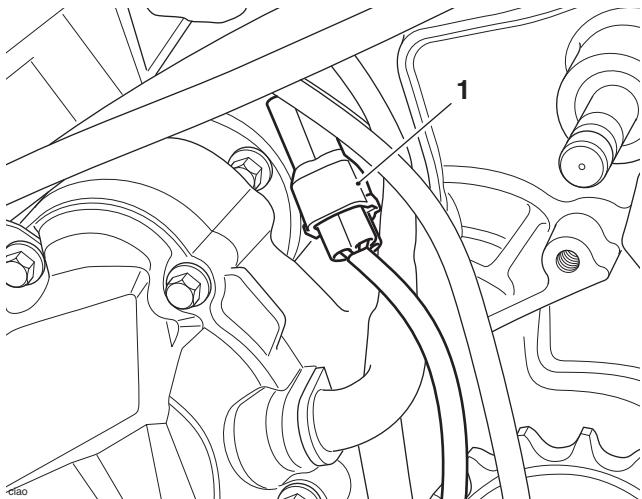
3. Finisher

Note:

- Note the routing of the oxygen sensor's harness for installation.**

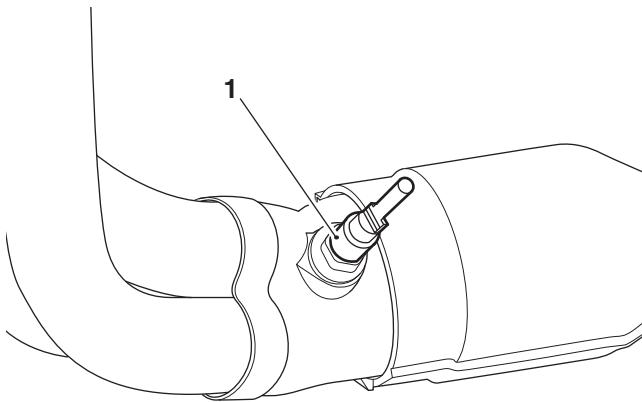
Fuel System/Engine Management

18. Disconnect the oxygen sensor's multiplug from the main harness.



1. Multiplug, oxygen sensor

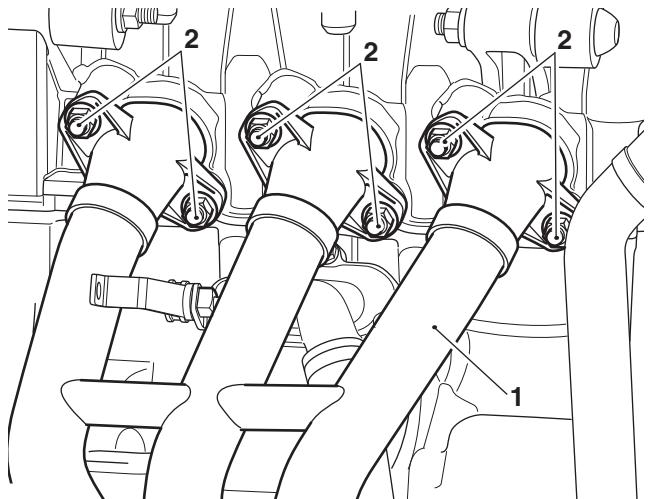
19. If necessary, loosen the oxygen sensor.



1. Oxygen sensor

20. Remove the radiator (see page 11-18).

21. Release the fixings securing the header pipe joints to the cylinder head. Discard the fixings.



1. Header pipes

2. Fixings

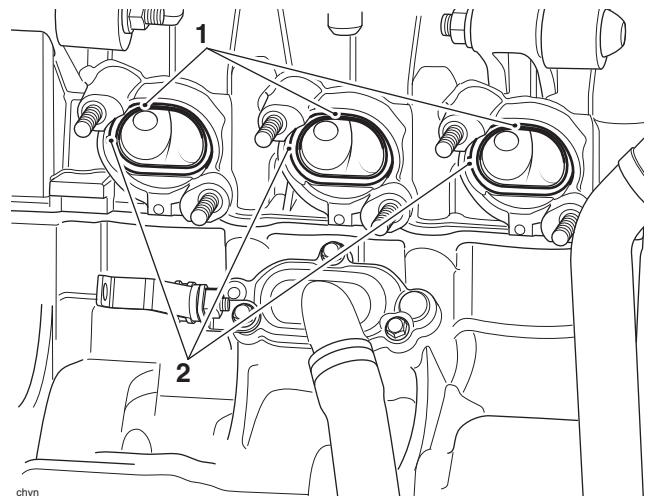
22. Remove the header pipe assembly and collect the seals from the cylinder head ports.
23. If necessary, remove the oxygen sensor.

Installation

1. Fit new seals to the cylinder head. Ensure that the face of the seal with the tab is facing the cylinder head.

Note:

- A smear of grease may be used to retain the seals in the cylinder head during assembly.

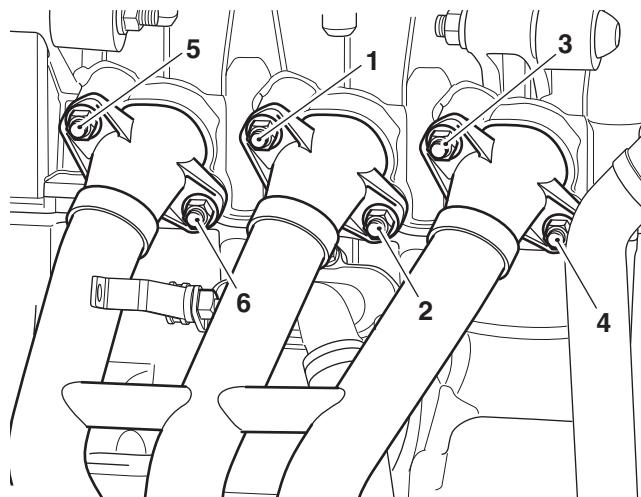


1. Seals

2. Seal tab

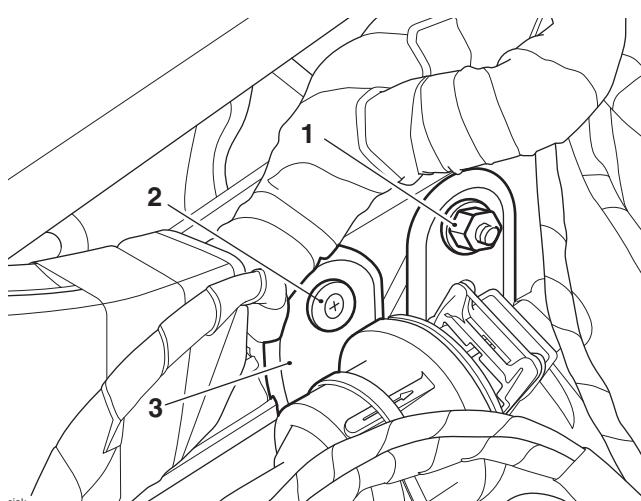
2. Locate the header pipes and align the header pipe flanges to the fixing points. Fit new nuts, do not tighten at this stage.

3. Tighten the header pipe to cylinder head nuts in the sequence shown below:
 - **Stage 1:** Tighten the header pipe nuts in sequence to **2 Nm**.
 - **Stage 2:** Tighten the header pipe nuts in sequence to **15 Nm**.



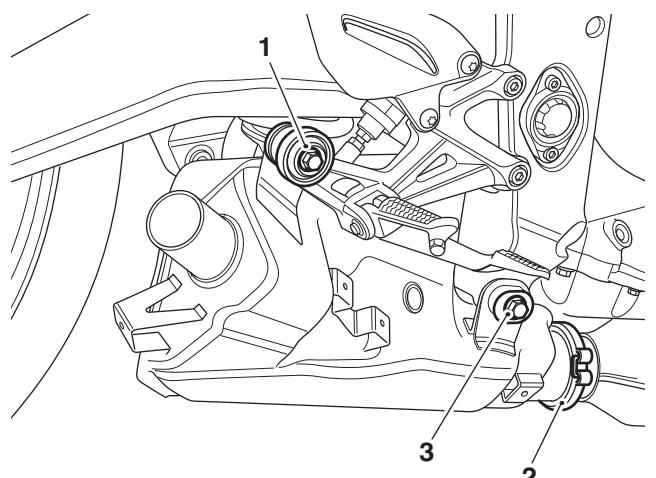
Header Pipe Tightening Sequence

4. If removed, apply a thin smear of anti-seize compound to the threads of the oxygen sensor, install the oxygen sensor and tighten to **25 Nm**.
5. Refit the radiator and refill the cooling system (see page 11-20).
6. Reconnect the oxygen sensor to the main harness, as noted on removal.
7. Refit the frame's left hand finisher, secure with the fir-tree clip and lock nut. Tighten the lock nut to **3 Nm**.



- 1. Lock nut
- 2. Fir-tree clip
- 3. Finisher

8. Secure the purge valve onto the frame's left hand finisher with a new cable tie.
9. Refit the sprocket cover with the breather hoses routed as noted for removal. Tighten the fixings to **9 Nm**.
10. Refit the gear change lever (see page 7-10).
11. Fit the front silencer onto the catalytic converter. Fit the bolt that secures the front silencer to the frame. Do not fully tighten at this stage.
12. Fit the bolt and new lock nut that secures the front silencer to the right hand control plate. Tighten to **28 Nm**.
13. Tighten the bolt securing the front silencer to the frame to **19 Nm**.
14. Fit the silencer clamp and tighten to **5 Nm**.

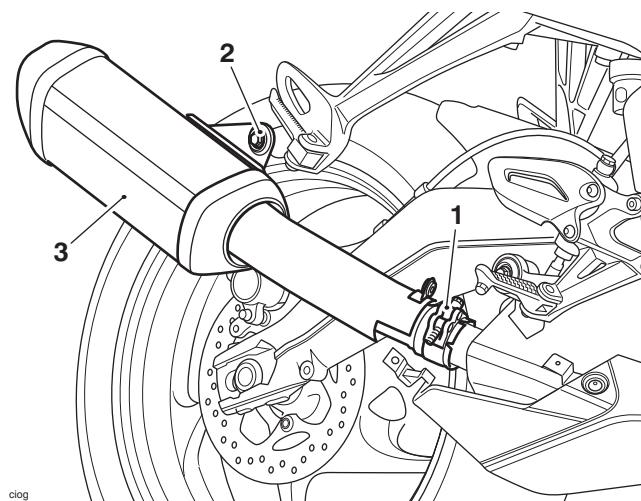


- 1. Nut and bolt
- 2. Clamp
- 3. Bolt

15. Fit the rear silencer onto the front silencer. Fit the bolt and a new lock nut that secure the rear silencer to the rear footrest hanger and tighten to **28 Nm**.

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- Fit the silencer clamp and tighten to **10 Nm**.



1. Clamp

2. Bolt

3. Rear silencer

- Refit the centre, front and rear heat shields with their shouldered washers and fixings. Tighten the fixings to **5 Nm**.
- Reconnect the battery, positive (red) lead first. Tighten the battery terminals to **4.5 Nm**.



Caution

Do not install the exhaust system or run the engine without the exhaust heat shields fitted. Components protected by the exhaust heat shields may suffer severe damage or a fire if the motorcycle is operated without the heat shields being fitted.

- Start the engine and check for exhaust gas leaks. Rectify if necessary.
- Refit the seat (see page 16-23 for Street Triple, Street Triple 660 cc and Street Triple R, see page 16-22 for Street Triple Rx).

Exhaust Butterfly Valve Actuator - Daytona 675 and Daytona 675 R only

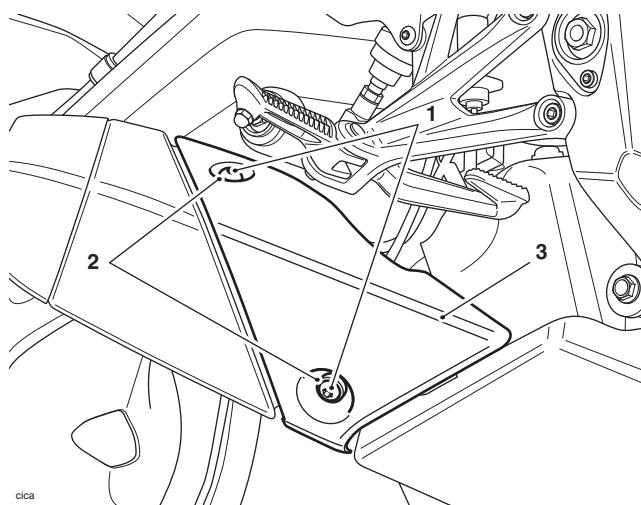
Removal



Warning

If the engine has recently been running, the exhaust system will be hot. Before working on or near the exhaust system, allow sufficient time for the exhaust system to cool as touching any part of a hot exhaust system could cause burn injuries.

- Remove the seat (see page 16-22).
- Disconnect the battery, negative (black) lead first.
- Release the fixings, shouldered washers and remove the silencer's heat shield.



1. Fixings

2. Shouldered washers

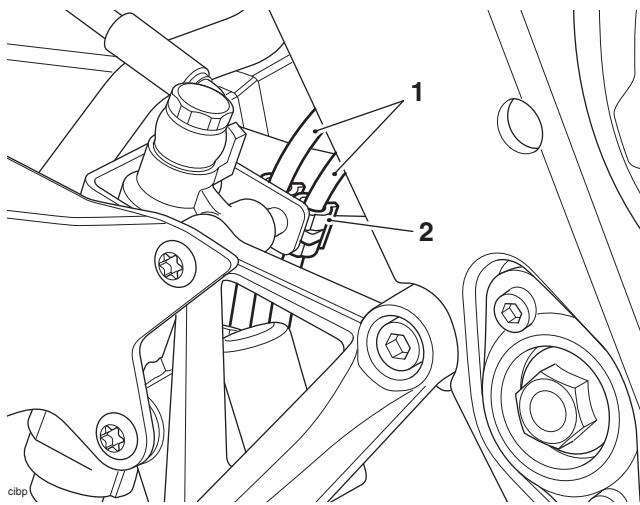
3. Heat shield

Note:

- For easier access to the adjusters on the exhaust butterfly valve cables, detach the right hand control plate from the frame and exhaust silencer.

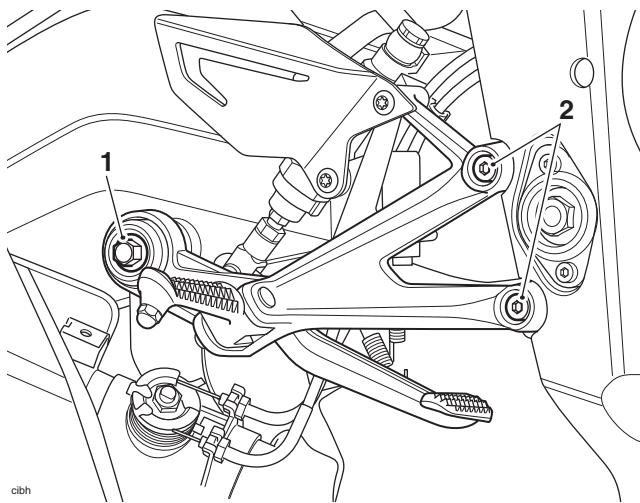
Fuel System/Engine Management

4. Detach the cables for the exhaust butterfly valve from their clip.



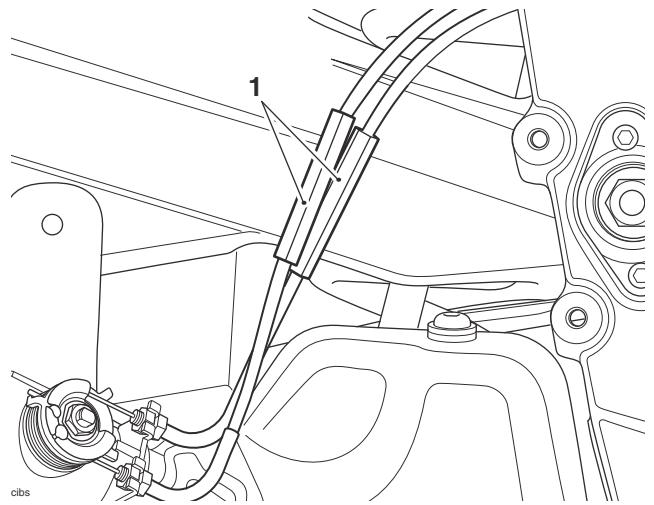
- 1. Cables**
2. Clip

5. Remove the nut and bolt securing the silencer to the right hand control plate.
6. Remove the two fixings securing the right hand control plate to the frame.



- 1. Nut and bolt, silencer mounting**
2. Fixings

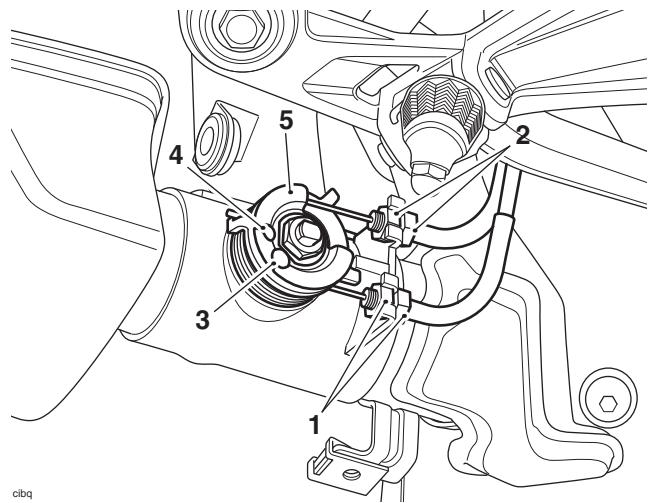
7. Taking care not to scratch the frame with the control plate, loosen the adjuster on each exhaust butterfly valve cable to allow the outer cables to be detached from their bracket.



- 1. Adjusters, control plate removed for clarity.**

Note:

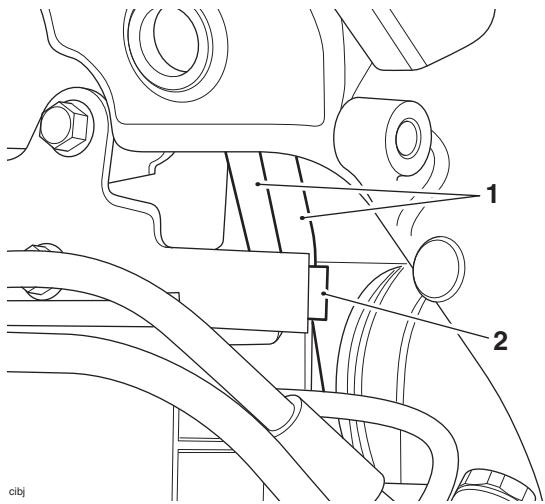
- The opening cable's lower end is coloured black.
- The closing cable's lower end is coloured silver.
- Note the cables' positions for installation.
- 8. Loosen the fixings and detach the outer cables from their bracket.
- 9. Noting the orientation of the cables, detach the inner cables from the exhaust butterfly valve pulley wheel.



- 1. Opening cable (black) fixings**
2. Closing cable (silver) fixings
3. Opening inner cable
4. Closing inner cable
5. Exhaust butterfly valve pulley wheel

Fuel System/Engine Management

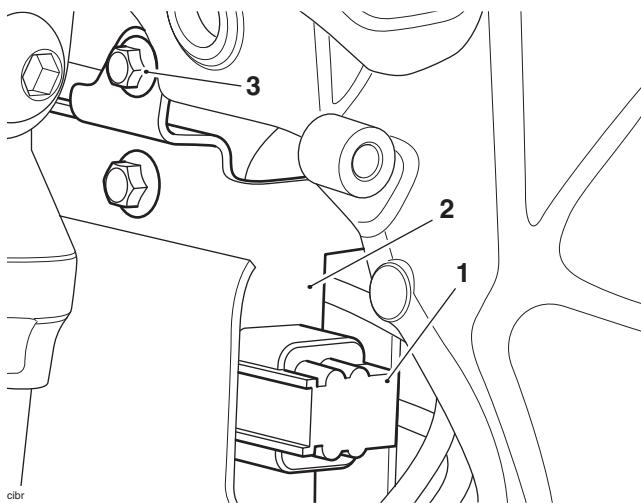
10. **For models with ABS only:** Detach the two brake lines from their clip on the bracket for the exhaust butterfly valve actuator.



1. Brake lines

2. Clip

11. Disconnect the electrical connector from the exhaust butterfly valve actuator.
12. Release the two fixings and remove the exhaust butterfly actuator and bracket assembly.



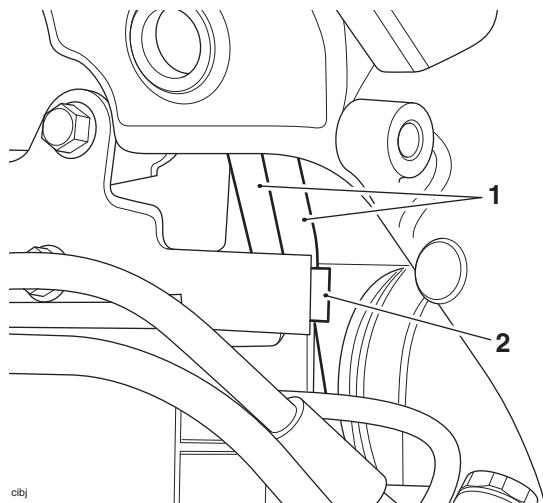
1. Connector

2. Actuator

3. Fixing (right hand shown)

Installation

1. Check that the exhaust valve in the silencer is free to rotate and operates smoothly (see page 10-153).
2. Refit the actuator to the frame and tighten the two fixings to **12 Nm**.
3. Connect the exhaust butterfly valve actuator electrical connector.
4. **For models with ABS only:** Attach the two brake lines to their clip on the bracket for the exhaust butterfly valve actuator.



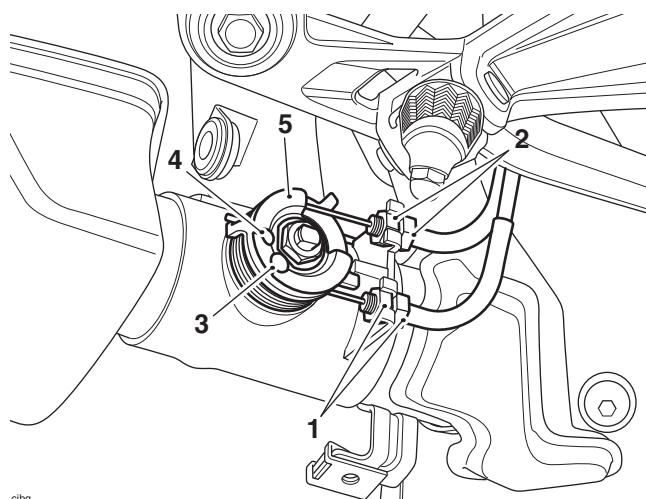
1. Brake lines

2. Clip

Note:

- The opening cable's lower end is coloured black.
 - The closing cable's lower end is coloured silver.
5. Position the cables to the exhaust butterfly valve pulley wheel as noted for removal.
 6. Attach the inner cables to the exhaust butterfly valve pulley wheel.

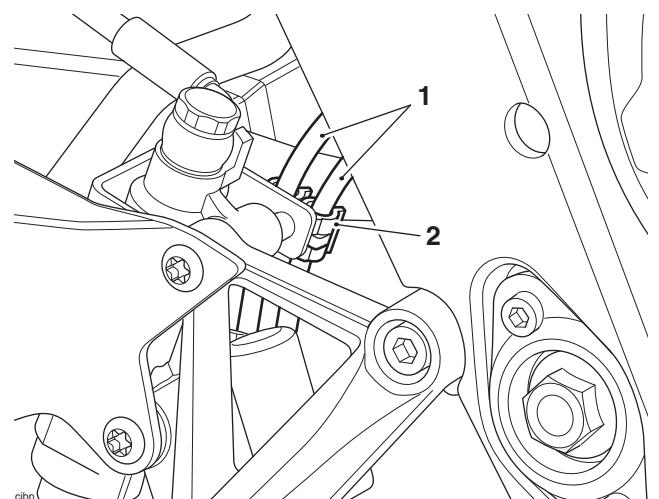
7. Attach the outer cables to their bracket and tighten their fixings to **5 Nm**.



1. Opening cable (black) fixings
2. Closing cable (silver) fixings
3. Opening inner cable
4. Closing inner cable
5. Exhaust butterfly valve pulley wheel

8. Adjust the butterfly valve control cables (see page 10-175).
9. Fit the right hand control plate to the frame and tighten its fixings to **24 Nm**.
10. Secure the silencer to the right hand control plate with its bolt and new lock nut. Tighten to **19 Nm**.

11. Attach the cables for the exhaust butterfly valve to its clip.



1. Cables
 2. Clip
12. Refit the heat shield and secure with the shouldered washers and fixings. Tighten the fixings to **5 Nm**.
13. Reconnect the battery, red (positive) lead first. Tighten the battery terminals to **4.5 Nm**.
14. Refit the seat (see page 16-22).

Fuel System/Engine Management

Exhaust Butterfly Valve Cables - Daytona 675 and Daytona 675 R only

Removal



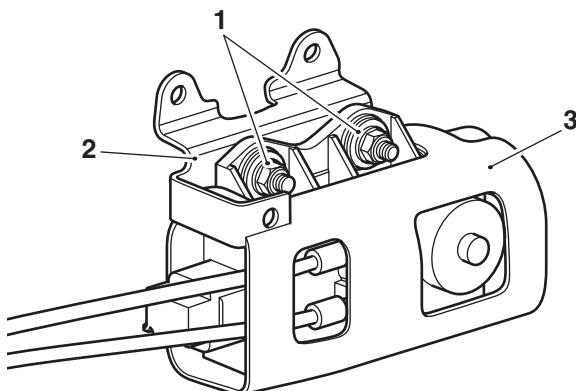
Warning

If the engine has recently been running, the exhaust system will be hot. Before working on or near the exhaust system, allow sufficient time for the exhaust system to cool as touching any part of a hot exhaust system could cause burn injuries.

1. Remove the seat (see page 16-22).
2. Disconnect the battery, negative (black) lead first.
3. Remove the exhaust butterfly valve actuator (see page 10-170).

Note:

- Note how the rubber cover is fitted to the actuator for installation.
4. Release the lock nuts and bolts then remove the mounting bracket and the rubber cover.



cibo

1. Lock nuts
2. Bracket
3. Rubber cover



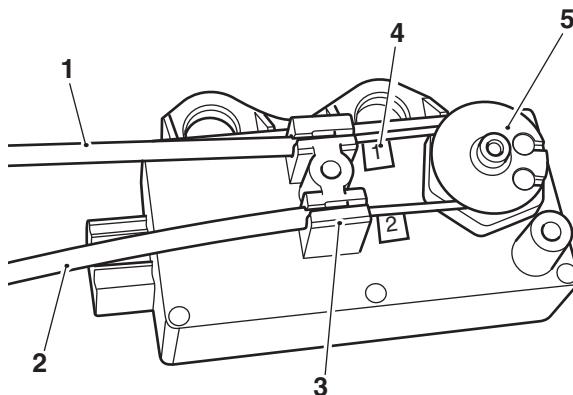
Caution

Do not rotate the pulley on the exhaust butterfly valve actuator. Rotating the pulley will damage the internal components of the actuator.

Note:

- The cable with the yellow writing is fitted to the upper mounting (labelled 1) on the actuator.
- Note the position of the cables on the actuator for installation.

5. Slide the outer cables out of their mounting on the actuator and detach the inner cables from the actuator pulley wheel.



cblk

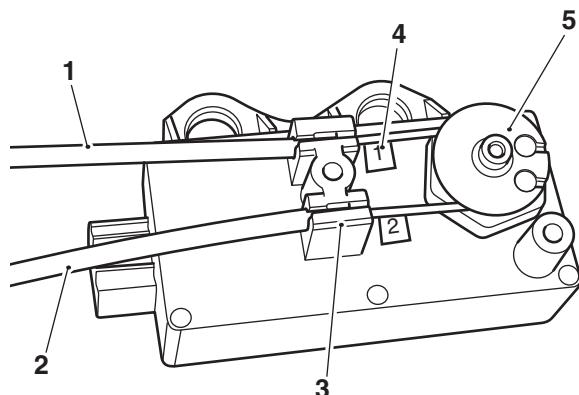
1. Cable with yellow writing
2. Cable with white writing
3. Mounting
4. Upper mounting (labelled 1)
5. Pulley wheel

Inspection

1. Check that both the exhaust valve cables operate smoothly, without sticking or binding. Replace the cables if there is any doubt as to their correct operation.
2. Using an open ended spanner on the flats of the spindle, check that the exhaust valve in the silencer is free to rotate and operates smoothly. If the exhaust valve is seized or does not operate smoothly, proceed as follows:
3. Spray penetrating fluid into the spindle bushes of the butterfly valve, and again using an open-ended spanner on the flats of the spindle, turn the spindle end until it rotates freely.
4. Once free, check the spindle end-float. The standard end-float is 0.3 to 1.9 mm but, if end float is less than 0.3 mm, the silencer must be renewed.

Installation

1. Insert the outer cables into their mountings on the actuator. Ensure the cable with the yellow writing is fitted to the upper mounting (labelled 1) as noted on removal.
2. Attach the inner cables to the actuator pulley wheel.



cblk

1. **Cable with yellow writing**
2. **Cable with white writing**
3. **Mounting**
4. **Upper mounting (labelled 1)**
5. **Pulley wheel**
3. Fit the rubber cover and mounting bracket to the actuator as noted for removal. Tighten the new lock nuts to **12 Nm**.
4. Fit the exhaust butterfly valve actuator to the motorcycle (see page 10-172).
5. Connect the battery, positive (red) lead first. Tighten the battery terminals to **4.5 Nm**.
6. Adjust the exhaust butterfly cables (see page 10-175).
7. Refit the seat (see page 16-22).

Exhaust Butterfly Valve Cable Adjustment - Daytona 675 and Daytona 675 R only

Warning

If the engine has recently been running, the exhaust system will be hot. Before working on or near the exhaust system, allow sufficient time for the exhaust system to cool as touching any part of a hot exhaust system could cause burn injuries.

To help accurately check and set the adjustment of the control cables for the exhaust butterfly valve, use the Triumph diagnostic tool as described below.

Check the Control Cables

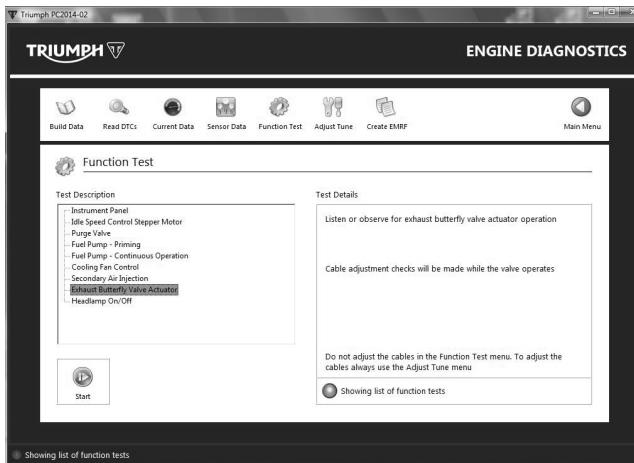
1. Remove the seat (see page 16-22).
2. Attach the Triumph diagnostic tool to the dedicated plug, refer to the Triumph Diagnostic Tool User Guide.
3. Open the engine diagnostics menu.



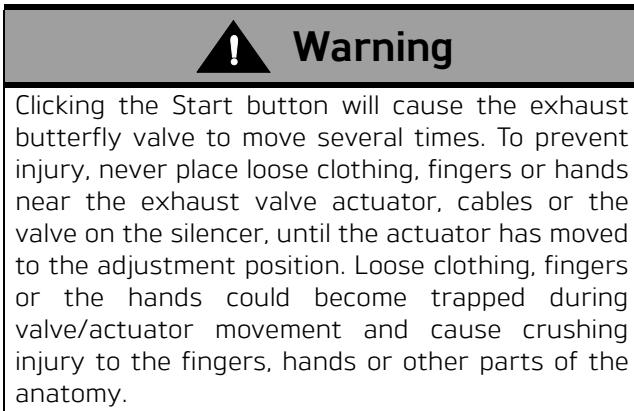
Engine Diagnostics Menu

Fuel System/Engine Management

4. Select the Function Test menu.



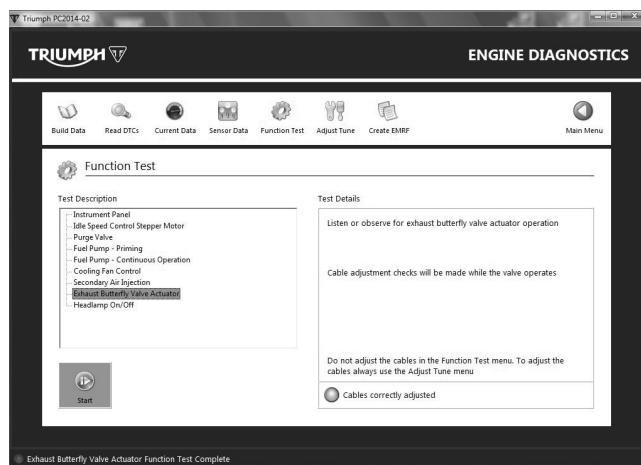
Function Test Menu



5. Select Exhaust Butterfly Valve Actuator then click the Start button. The software will also show the message 'Cable adjustment checks will be made while the valve operates'.

6. Typically, the software will operate the valve several times and will then report its cable adjustment findings near the bottom of the PC screen. In some circumstances, particularly if the cables are not correctly adjusted, the test result will be shown immediately without running a test. This is because the software recovers data from the ECM on initiation and does not need to run the function test to determine a result. The software will display four possible results as follows:

- **Cables too tight.**
- **Cables too loose.**
- **Cables not evenly adjusted.**
- **Cables correctly adjusted.**



Exhaust Butterfly Valve Function Test Results

Note:

- **With the diagnostic software in the Function Test screen, one cable will be under tension and the other will be slack. This will prevent the cables from being evenly adjusted.**
7. If the test fails, do not adjust the cables while the diagnostic software is in the Function Test screen. Select the Adjust Tune option then adjust the cables as described in Adjustment of the Control Cables.

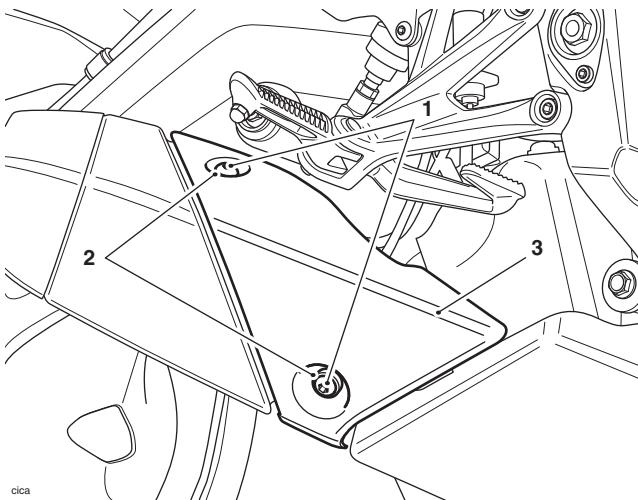
Adjustment of the Control Cables



Caution

Do not rotate the pulley on the exhaust butterfly valve actuator. Rotating the pulley will damage the internal components of the actuator.

8. Release the fixings, shouldered washers and remove the silencer's rear heat shield.



1. Fixings
 2. Shouldered washers
 3. Heat shield
9. Turn the ignition to the ON position.
 10. On the diagnostic software navigate to and select the Adjust Tune option.



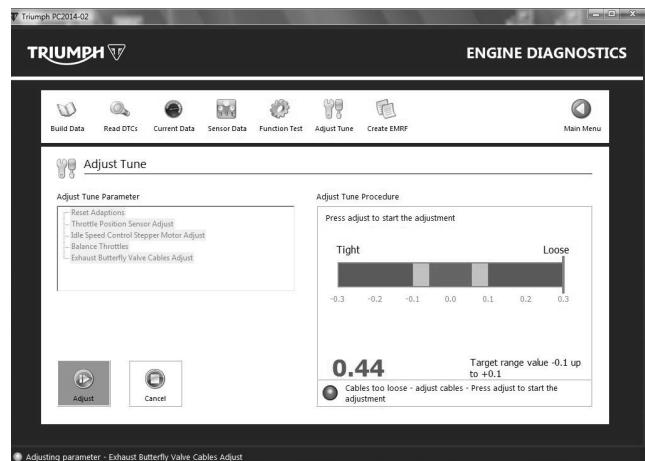
Warning

Clicking the Adjust button will cause the exhaust valve actuator to move several times. To prevent injury, never place loose clothing, fingers or hands near the exhaust valve actuator, cables or the valve on the silencer, until the actuator has moved to the adjustment position. Loose clothing, fingers or the hands could become trapped during valve/actuator movement and cause crushing injury to the fingers, hands or other parts of the anatomy.

11. Select Exhaust Butterfly Valve Cable Adjust then click the Adjust button.

Note:

- The target range value for correct cable adjustment is -0.10 up to 0.10 however, the cables should be set as close to zero as possible (gauge reading in the green zone).
- The software will recommend cable readjustment for range values falling between +/- 0.07 to 0.10 (gauge reading in either of the amber zones).
- 12. On clicking Adjust, the software will operate the exhaust butterfly valve several times then display a gauge and range value indicating one of the following:
 - **Cables too loose** - range value greater than 0.10, gauge reading in the red (Loose) zone
 - **Cables too tight** - range value greater than -0.10, gauge reading in the red (Tight) zone
 - **Cable readjustment recommended** - range value between + or - 0.07 to 0.10, gauge reading in either of the amber zones
 - **Cables correctly adjusted** - range value between -0.06 and 0.06, gauge reading in the green zone).



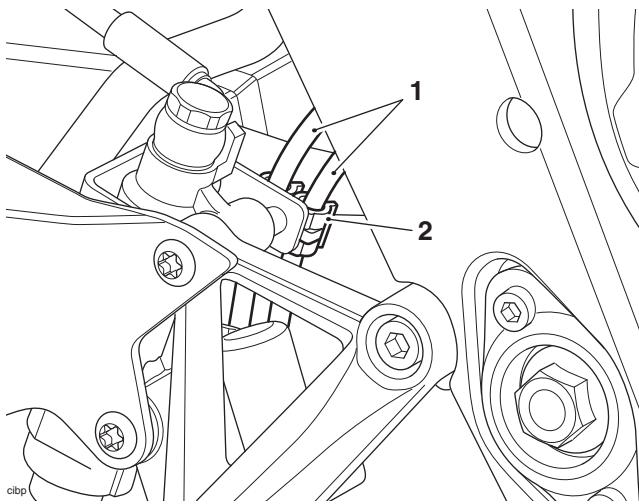
Exhaust Butterfly Valve Cable Adjust - Gauge and Range Value Shown For Cables Too Loose

Note:

- If the cables are correctly adjusted, omit steps 14 to 28 and continue from step 29.
- If the cables are too loose, too tight or readjustment is recommended, continue from step 13.

Fuel System/Engine Management

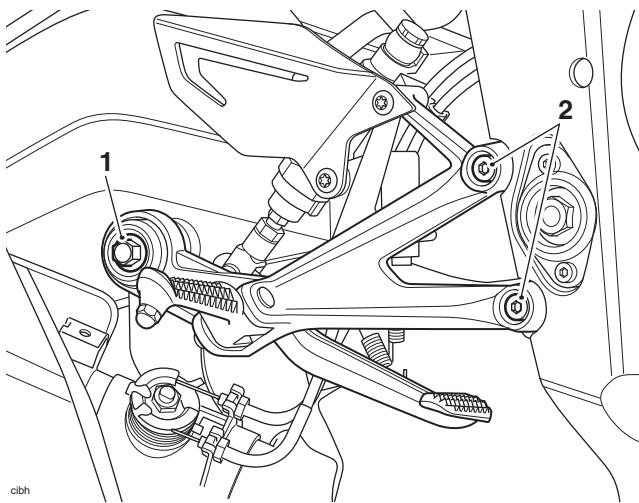
13. Detach the cables for the exhaust butterfly valve from their clip near the rear brake master cylinder.



1. Cables

2. Clip

14. Remove the nut and bolt securing the silencer to the right hand control plate.
15. Remove the two fixings securing the right hand control plate to the frame.



1. Nut and bolt, silencer mounting

2. Fixings

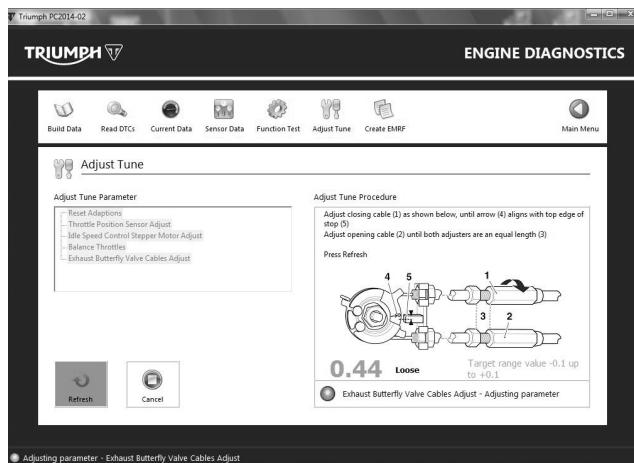
Note:

- The cable adjustment must only be made when the exhaust butterfly valve is in its middle position.

Warning

Clicking the Adjust button will cause the exhaust valve actuator to move to the middle position. To prevent injury, never place loose clothing, fingers or hands near the exhaust valve actuator, cables or the valve on the silencer, until the actuator has moved to the adjustment position. Loose clothing, fingers or the hands could become trapped during valve/actuator movement and cause crushing injury to the fingers, hands or other parts of the anatomy.

16. Click the Adjust button. The software will drive the exhaust butterfly valve into the adjust position and display on screen instructions for initial cable adjustment.



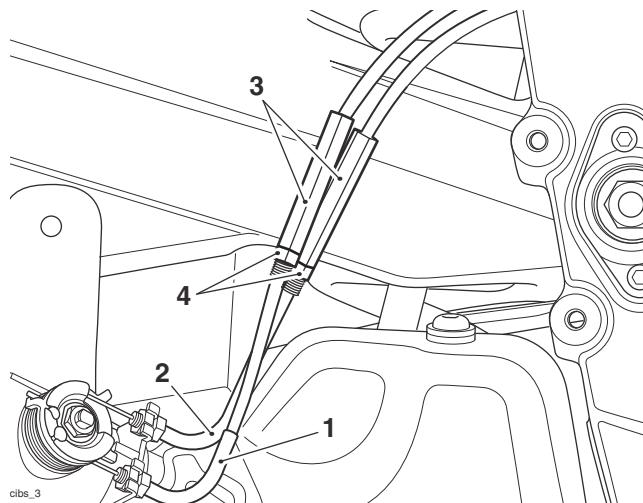
Cable Adjustment Screen - Initial Cable Adjustment Instructions Shown

Fuel System/Engine Management

Initial Cable Adjustment

Note:

- An initial adjustment is required to give a preliminary cable setting.
- Do not click the Refresh button until the cable adjustment is completed.



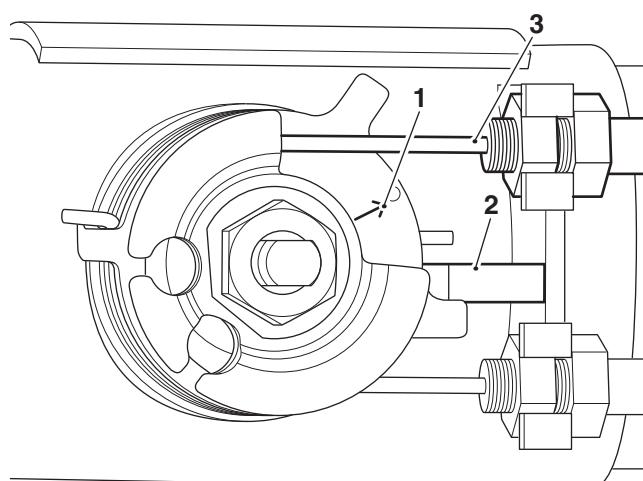
1. Opening (black) cable (control plate removed for clarity)

2. Closing (silver) cable

3. Adjusters

4. Adjuster lock nuts

17. Taking care not to scratch the frame with the control plate, loosen the adjuster lock nuts.
18. Adjust the closing cable adjuster until the arrow on the butterfly valve pulley is aligned with the upper edge of the butterfly valve stop.

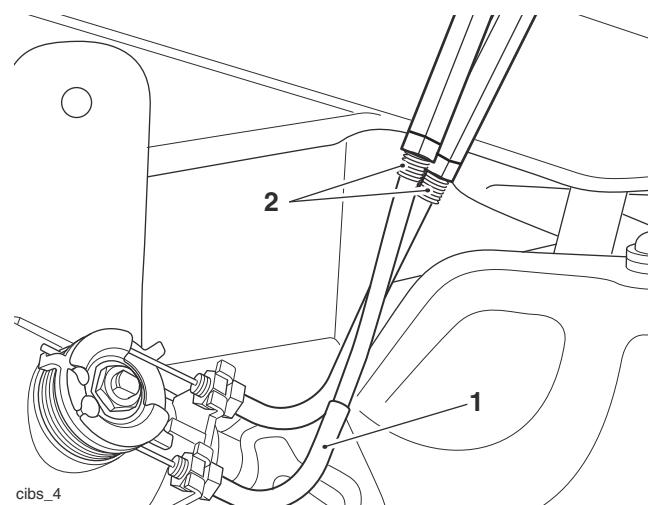


1. Arrow

2. Butterfly valve stop

3. Closing cable

19. Adjust the opening cable adjuster until it has the same amount of threads showing as the closing cable.



1. Opening (black) cable (control plate removed for clarity)

2. Threaded area

20. Tighten the adjuster lock nuts to 5 Nm.



Warning

Clicking the Refresh button will cause the exhaust valve actuator to move several times. To prevent injury, never place loose clothing, fingers or hands near the exhaust valve actuator, cables or the valve on the silencer, until the actuator has moved to the adjustment position. Loose clothing, fingers or the hands could become trapped during valve/actuator movement and cause crushing injury to the fingers, hands or other parts of the anatomy.

21. Click the Refresh button.

22. The software will operate the exhaust butterfly valve several times then display an updated gauge and range value indicating one of the following:

- **Cables too loose** - range value greater than 0.10, gauge reading in the red (Loose) zone
- **Cables too tight** - range value greater than -0.10, gauge reading in the red (Tight) zone
- **Cable readjustment recommended** - range value between + or - 0.07 to 0.10, gauge reading in either of the amber zones
- **Cables correctly adjusted** - range value between -0.06 and 0.06, gauge reading in the green zone).

Fuel System/Engine Management

Note:

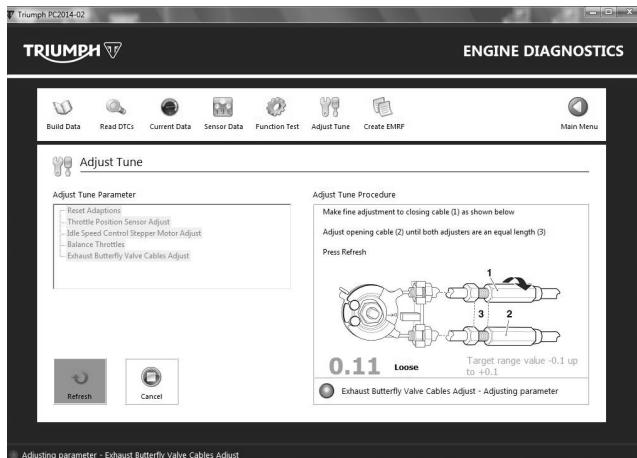
- If, after initial adjustment, the cables are correctly adjusted, omit steps 23 to 28 and continue from step 29.
- If the cables are too loose, too tight or readjustment is recommended, continue from step 23.



Warning

Clicking the Adjust button will cause the exhaust valve actuator to move to the middle position. To prevent injury, never place loose clothing, fingers or hands near the exhaust valve actuator, cables or the valve on the silencer, until the actuator has moved to the adjustment position. Loose clothing, fingers or the hands could become trapped during valve/actuator movement and cause crushing injury to the fingers, hands or other parts of the anatomy.

23. Click the Adjust button. The software will drive the exhaust butterfly valve into the adjust position and display on screen instructions for fine cable adjustment.



Cable Adjustment Screen - Fine Cable Adjustment Instructions Shown

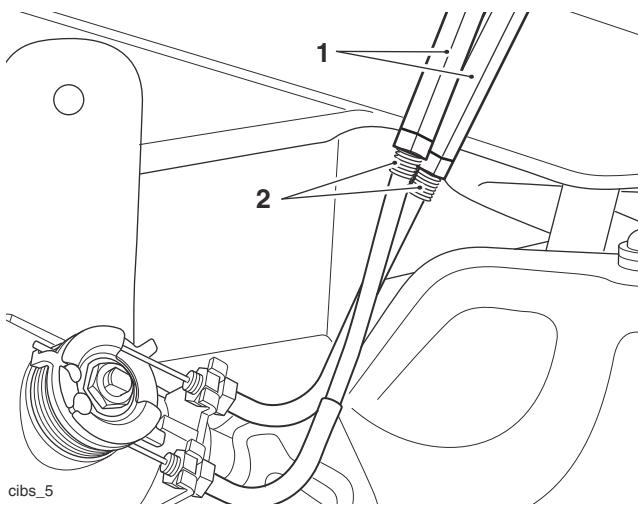
Fine Cable Adjustment

Note:

- Do not click the Refresh button until the cable adjustment is completed.
- 24. Taking care not to scratch the frame with the control plate, loosen the adjuster lock nuts.

Note:

- During fine cable adjustment, ensure that both cables are adjusted equally and that both adjusters have the same amount of threads showing after adjustment.
- 25. Make fine adjustments to the cables as follows:
 - If the cables are loose: Tighten the cables by turning both opening and closing cable adjusters anticlockwise by an equal amount.
 - If the cables are tight: Loosen the cables by turning both opening and closing cable adjusters clockwise by an equal amount.



1. Adjusters (control plate removed for clarity)
2. Threaded area

26. Tighten the adjuster lock nuts to **5 Nm**.



Warning

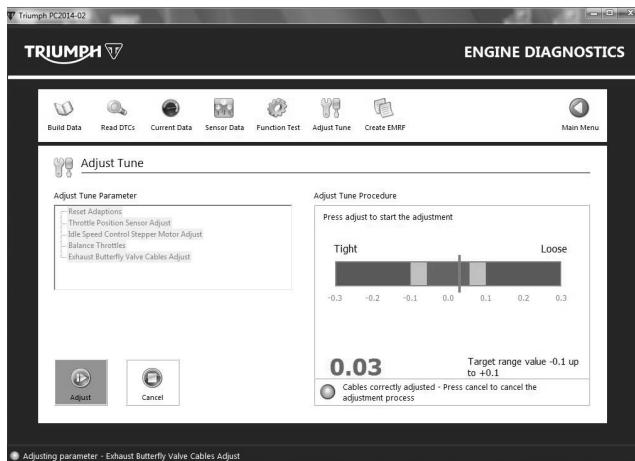
Clicking the Refresh button will cause the exhaust valve actuator to move several times. To prevent injury, never place loose clothing, fingers or hands near the exhaust valve actuator, cables or the valve on the silencer, until the actuator has moved to the adjustment position. Loose clothing, fingers or the hands could become trapped during valve/actuator movement and cause crushing injury to the fingers, hands or other parts of the anatomy.

Fuel System/Engine Management

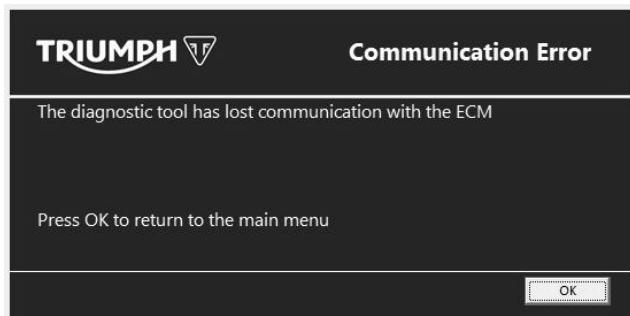
27. Click the Refresh button.
28. The software will operate the exhaust butterfly valve several times then display an updated gauge and range value indicating one of the following:
 - **Cables too loose** - range value greater than 0.10, gauge reading in the red (Loose) zone
 - **Cables too tight** - range value greater than -0.10, gauge reading in the red (Tight) zone
 - **Cable readjustment recommended** - range value between + or - 0.07 to 0.10, gauge reading in either of the amber zones
 - **Cables correctly adjusted** - range value between -0.06 and 0.06, gauge reading in the green zone).

Note:

- If, after fine adjustment, the cables are correctly adjusted, continue from step 29.
 - If the cables are too loose, too tight or readjustment is recommended, repeat steps 23 to 28.
29. Once correct adjustment has been achieved, click Cancel.



30. Read and erase any stored DTCs.
31. Switch the ignition OFF and allow the motorcycle's ECM to power down. This should take approximately one minute. The software will display the following message when the ECM power down has completed.



32. Switch the ignition ON.

Note:

- If new exhaust butterfly valve cables have been installed, the cables must be bedded in by repeating the exhaust butterfly valve function test three times.
33. Open the engine diagnostic menu and Select the function test menu. Run the Exhaust Butterfly Valve function test as follows:
 - When adjusting existing exhaust butterfly valve cables, run the Exhaust Butterfly Valve function test once only as described on page 10-175.
 - If new exhaust butterfly valve cables have been installed, bed in the new cables by repeating the Exhaust Butterfly Valve function test three times as described on page 10-175.

Fuel System/Engine Management

Confirmation of Correct Adjustment

34. To confirm correct adjustment of the cables, navigate to the Adjust Tune menu and select Exhaust Butterfly Valve Cable Adjust.



Warning

Clicking the Adjust button will cause the exhaust valve actuator to move several times. To prevent injury, never place loose clothing, fingers or hands near the exhaust valve actuator, cables or the valve on the silencer, until the actuator has moved to the adjustment position. Loose clothing, fingers or the hands could become trapped during valve/actuator movement and cause crushing injury to the fingers, hands or other parts of the anatomy.

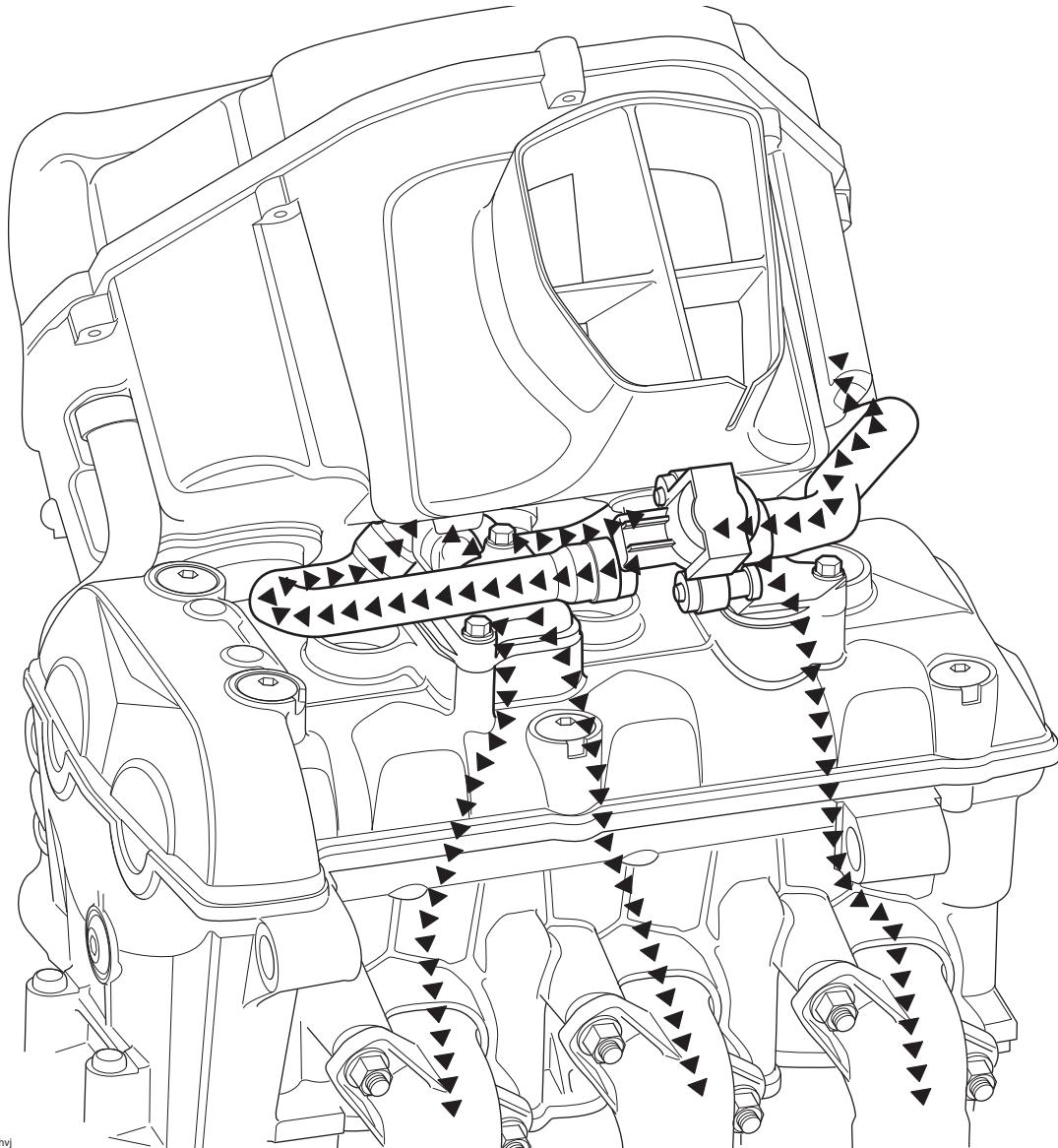
35. Click the Adjust button.
36. The software will operate the exhaust butterfly valve several times then display an updated gauge and range value indicating one of the following:
- **Cables too loose** - range value greater than 0.10, gauge reading in the red (Loose) zone
 - **Cables too tight** - range value greater than -0.10, gauge reading in the red (Tight) zone
 - **Cable readjustment recommended** - range value between + or - 0.07 to 0.10, gauge reading in either of the amber zones
 - **Cables correctly adjusted** - range value between -0.06 and 0.06, gauge reading in the green zone).

Note:

- If the cables are correctly adjusted, continue from step 37.
 - If the cables are too loose, too tight or readjustment is recommended, repeat the adjustment process from step 23 onwards.
37. Close the software and disconnect the Triumph diagnostic tool.
38. If removed, refit the following:
- Refit the right hand control plate to the frame and tighten its fixings to **24 Nm**.
 - Secure the silencer to the right hand control plate with its bolt and new lock nut. Tighten to **19 Nm**.
 - Refit the exhaust butterfly valve cables into their clip near the rear brake master cylinder.
 - Refit the silencer's rear heat shield and secure with the shouldered washers and fixings. Tighten the fixings to **5 Nm**.
39. Refit the seat (see page 16-22).

Secondary Air Injection

System Purpose and Operation



The secondary air injection system is an aid to reducing levels of pollutants in the exhaust gases. It does this by introducing a small amount of air into each exhaust port as the exhaust valve opens. The introduced air helps promote further combustion of the fuel mixture in the exhaust system after it has left the combustion chamber.

At certain specific engine speeds (determined by the factory programming of the engine management system), the secondary air injection control valve is opened by the ECM and allows an air feed into the secondary air system where, each time a pair of exhaust valves open, the exhaust gases in the exhaust port create a depression which causes reed valves in the secondary air injection system to open. When open, the depression in the exhaust port draws air from the control valve, through the open reed valves, into the exhaust port. This air promotes secondary combustion of the exhaust gases in the ports and the header system.

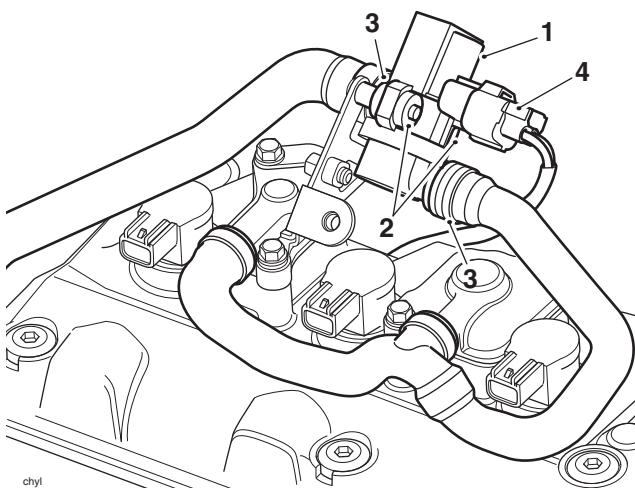
At other engine speeds, the system is disabled by closing the control valve in the system. This allows an oxygen sensor to control air to fuel ratios. If air was fed to the exhaust system when the oxygen sensor was operational, the incoming air would cause inaccuracies in the readings sensed by the oxygen sensor (which requires access to raw combustion gases) which would lead to rough running.

Fuel System/Engine Management

Secondary Air Injection Solenoid Valve

Removal

1. Remove the seat (see page 16-22 for Daytona 675, Daytona 675 R and Street Triple Rx, see page 16-23 for Street Triple, Street Triple 660 cc and Street Triple R).
2. Disconnect the battery, negative (black) lead first.
3. Remove the fuel tank (see page 10-112).
4. Remove the airbox (see page 10-120).
5. Release the hoses attached to the valve.
6. Disconnect the multiplug.



1. Solenoid valve
 2. Retainer
 3. Spring hose clips
 4. Multiplug
7. Gently pull the valve to detach it from its retainer.

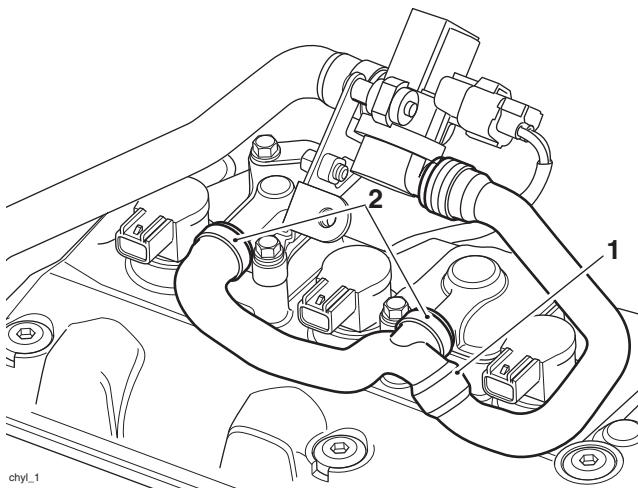
Installation

1. Locate the valve to the retainer.
2. Reconnect the multiplug.
3. Refit the hoses to the valve.
4. Refit the airbox (see page 10-122).
5. Refit the fuel tank (see page 10-113).
6. Reconnect the battery, positive (red) lead first. Tighten the battery terminals to **4.5 Nm**.
7. Refit the seat (see page 16-22 for Daytona 675, Daytona 675 R and Street Triple Rx, see page 16-24 for Street Triple, Street Triple 660 cc and Street Triple R).

Secondary Air Injection Reed Valves

Removal

1. Remove the seat (see page 16-22 for Daytona 675, Daytona 675 R and Street Triple Rx, see page 16-23 for Street Triple, Street Triple 660 cc and Street Triple R).
2. Disconnect the battery, negative (black) lead first.
3. Remove the fuel tank (see page 10-112).
4. Remove the airbox (see page 10-120).
5. Release the spring clips and detach the secondary air injection feed hoses from the reed valves on the camshaft cover.

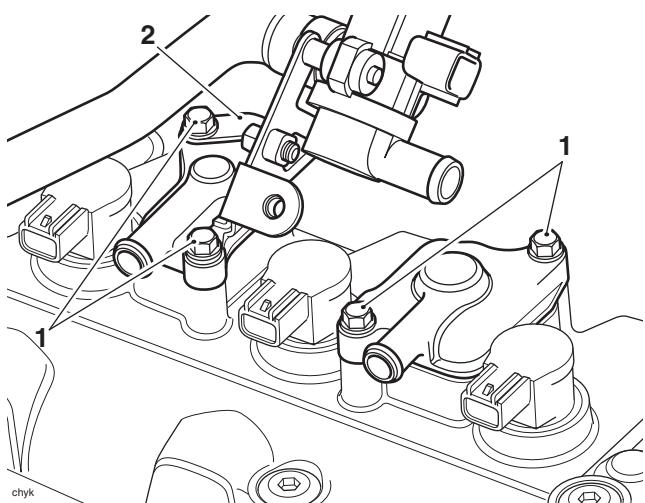


1. Secondary air injection hose
2. Spring-close clip

Note:

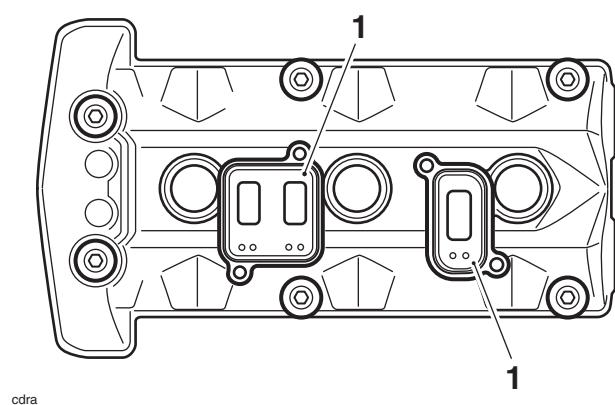
- Note that the mounting bracket for the secondary air injection solenoid valve is secured by the fixings for the left hand reed valve cover.

- Release the bolts securing the valve covers to the camshaft cover.



**1. Fixings
2. Bracket**

- Ease the valve covers from the valves.
- Detach the valves from the camshaft cover.



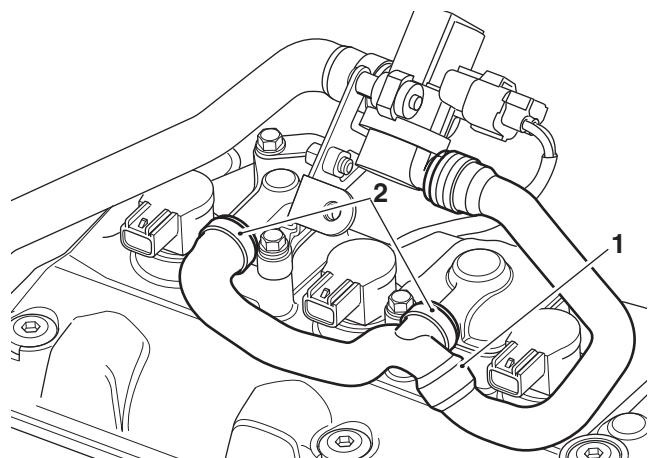
1. Reed valves

Inspection

- Check for cracks, bending or other damage to the valve flaps. Replace as necessary.
- Check for damage to the seal areas. Replace as necessary.
- Check the valve body to cylinder head seal for damage.

Installation

- Fit the reed valves to the camshaft cover.
- Refit the valve covers and the bracket for the secondary air injection solenoid, as noted for removal. Tighten the fixings to **9 Nm**.
- Refit the secondary air injection feed hoses to the reed valves.



**1. Secondary air injection hose
2. Spring-close hose clip**

- Refit the airbox (see page 10-122).
- Refit the fuel tank (see page 10-113).
- Reconnect the battery, positive (red) lead first. Tighten the battery terminals to **4.5 Nm**.
- Refit the seat (see page 16-22 for Daytona 675, Daytona 675 R and Street Triple Rx, see page 16-24 for Street Triple, Street Triple 660 cc and Street Triple R).

Fuel System/Engine Management

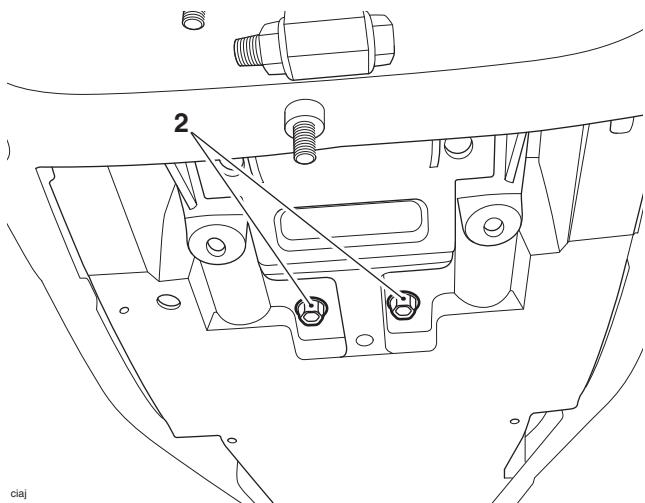
Evaporative Canister (where fitted)

Removal

1. Remove the seat (see page 16-22 for Daytona 675, Daytona 675 R and Street Triple Rx, see page 16-23 for Street Triple, Street Triple 660 cc and Street Triple R).
2. Disconnect the battery, negative (black) lead first.
3. Remove the rear panels (see page 16-25 for Daytona 675, Daytona 675 R and Street Triple Rx, see page 16-29 for Street Triple, Street Triple 660 cc and Street Triple R).

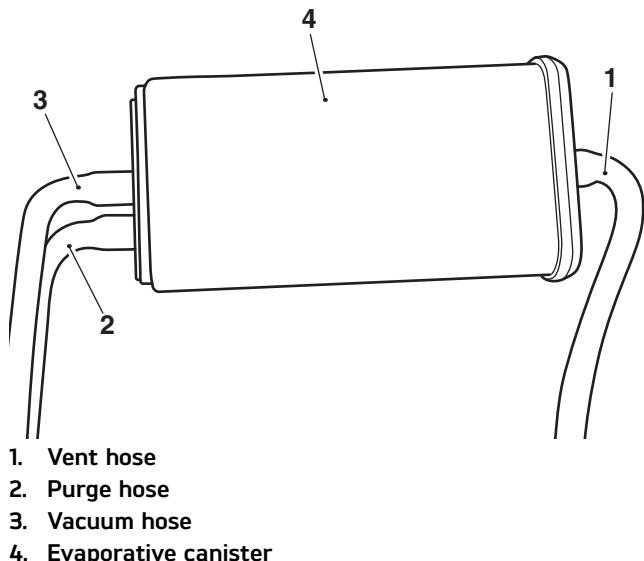
Note:

- Note the position of the evaporative canister hoses for installation.
- Note the orientation of the evaporative canister for installation.
- For Street Triple, Street Triple 660 cc and Street Triple R only, there is a spacer fitted between the evaporative canister and the under seat tray.
- 4. Release the two fixings and remove the evaporative canister. For Street Triple, Street Triple 660 cc and Street Triple R collect the spacer.



1. Fixings, for evaporative canister

5. Disconnect the vacuum, purge and vent hoses, and remove the canister.



Installation

1. Refit the hoses to the canister as noted for removal.
2. For Street Triple, Street Triple 660 cc and Street Triple R only: Position the spacer for the evaporative canister between it and the under seat tray.
3. Fit the evaporative canister to the under seat tray and tighten its fixings to **3 Nm**.
4. Refit the rear panels (see page 16-27 for Daytona 675, Daytona 675 R and Street Triple Rx, see page 16-30 for Street Triple, Street Triple 660 cc and Street Triple R).
5. Connect the battery, positive (red) lead first. Tighten the battery terminals to **4.5 Nm**.
6. Refit the seat (see page 16-22 for Daytona 675, Daytona 675 R and Street Triple Rx, see page 16-24 for Street Triple, Street Triple 660 cc and Street Triple R).

Evaporative Emissions Control System

Certain Markets Only

Some models in certain markets are fitted with a system to control the evaporation of fuel vapour to the atmosphere.

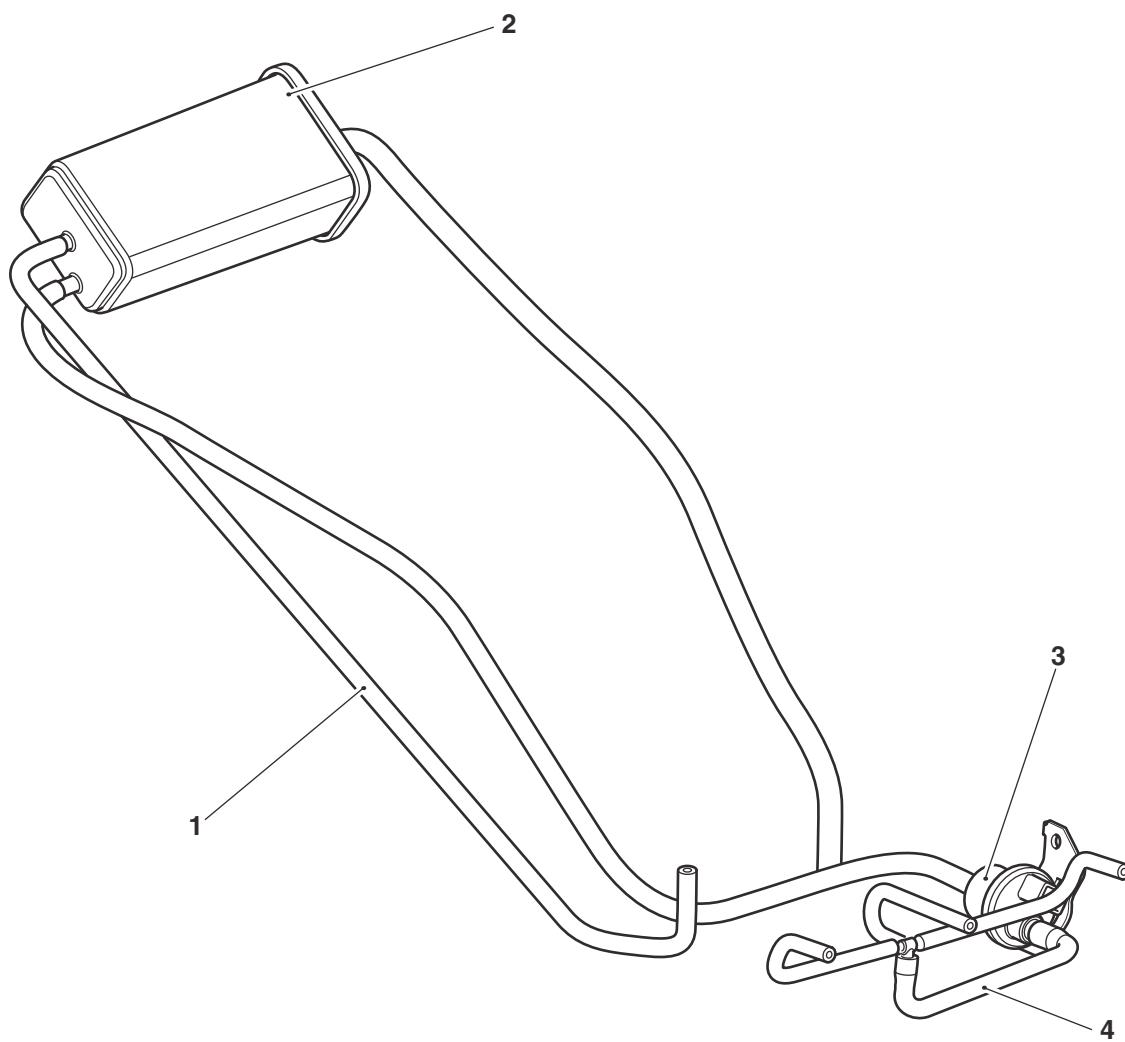
A carbon filled canister absorbs vapour while the engine is not running. When the engine is started, the vapour is returned to the engine and burnt.

There are two distinct phases to the system's operation: engine off and engine running. These two conditions are explained overleaf.

Component Locations

Carbon Filled Canister - under the seat.

Purge Control Valve - attached to the left hand side of the frame behind the throttle bodies (electronically controlled by the ECM).



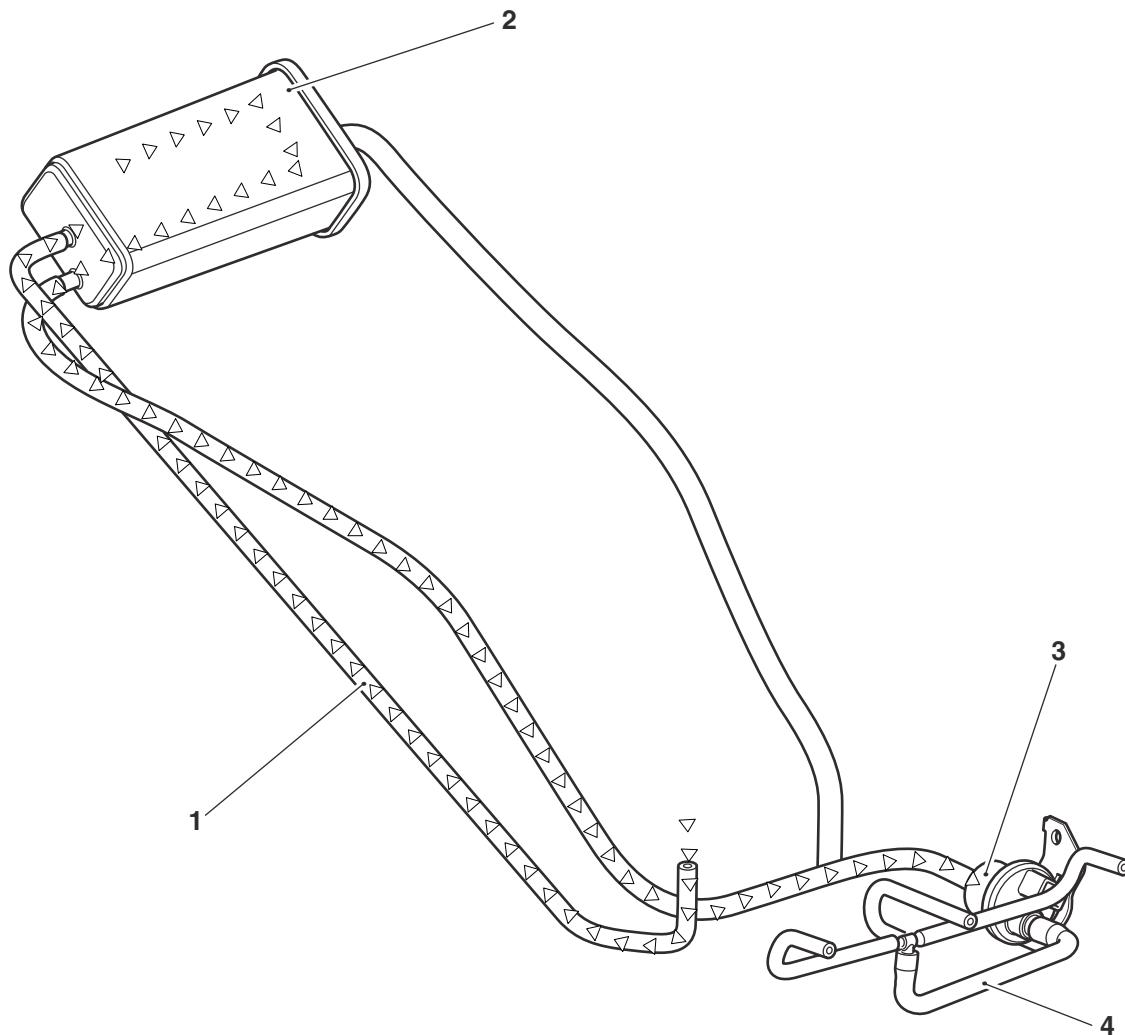
1. Breather hoses
2. Carbon filled canister
3. Purge valve
4. Purge hose to throttle bodies

Fuel System/Engine Management

Evaporative Control System - Engine Off

When the engine is stationary, any pressure increase in the fuel tank due to a rise in ambient temperature will cause the fuel vapour to pass down the breather hose (1) to a carbon filled canister (2) which stores the vapour.

Once in the canister, vapour cannot enter the engine because the purge valve is closed.



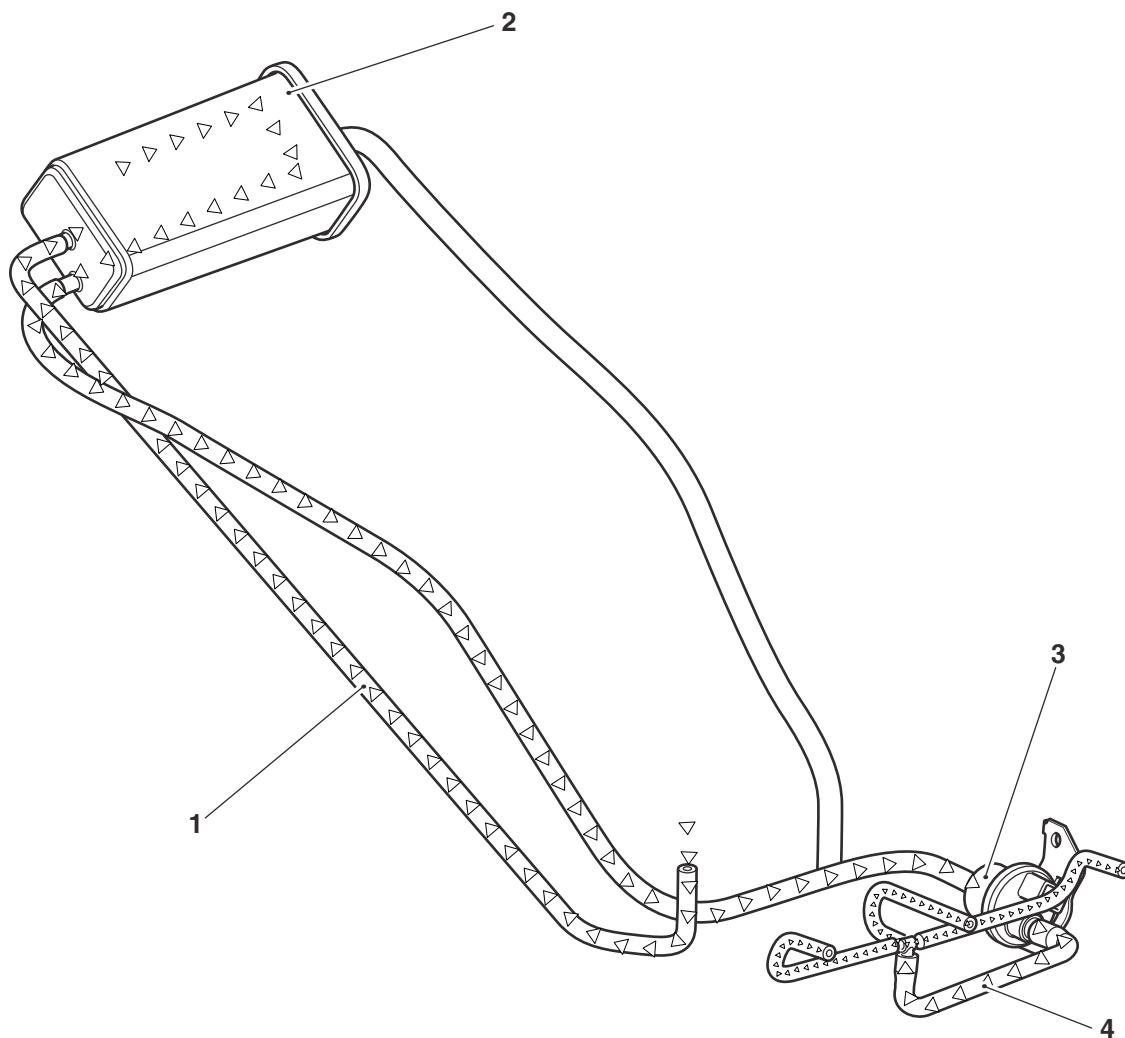
1. Breather hoses
2. Carbon filled canister
3. Purge valve (closed)
4. Purge hose to throttle bodies

Evaporative Control System - Engine Running

When the engine is running, a vacuum is applied to the purge hose (4) from the throttle bodies.

At certain times, the ECM opens the purge valve. The vacuum applied to the purge hose (4) now begins to draw stored vapour from the carbon filled area of the canister and returns it to the throttle bodies for burning in the engine.

In order to control the speed at which the vapour is purged from the canister, the engine management system shuttles the purge control valve between the open and closed positions.



1. Breather hoses
2. Carbon filled canister
3. Purge valve (open under ECM control)
4. Purge hose to throttle bodies

Fuel System/Engine Management

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11 Cooling

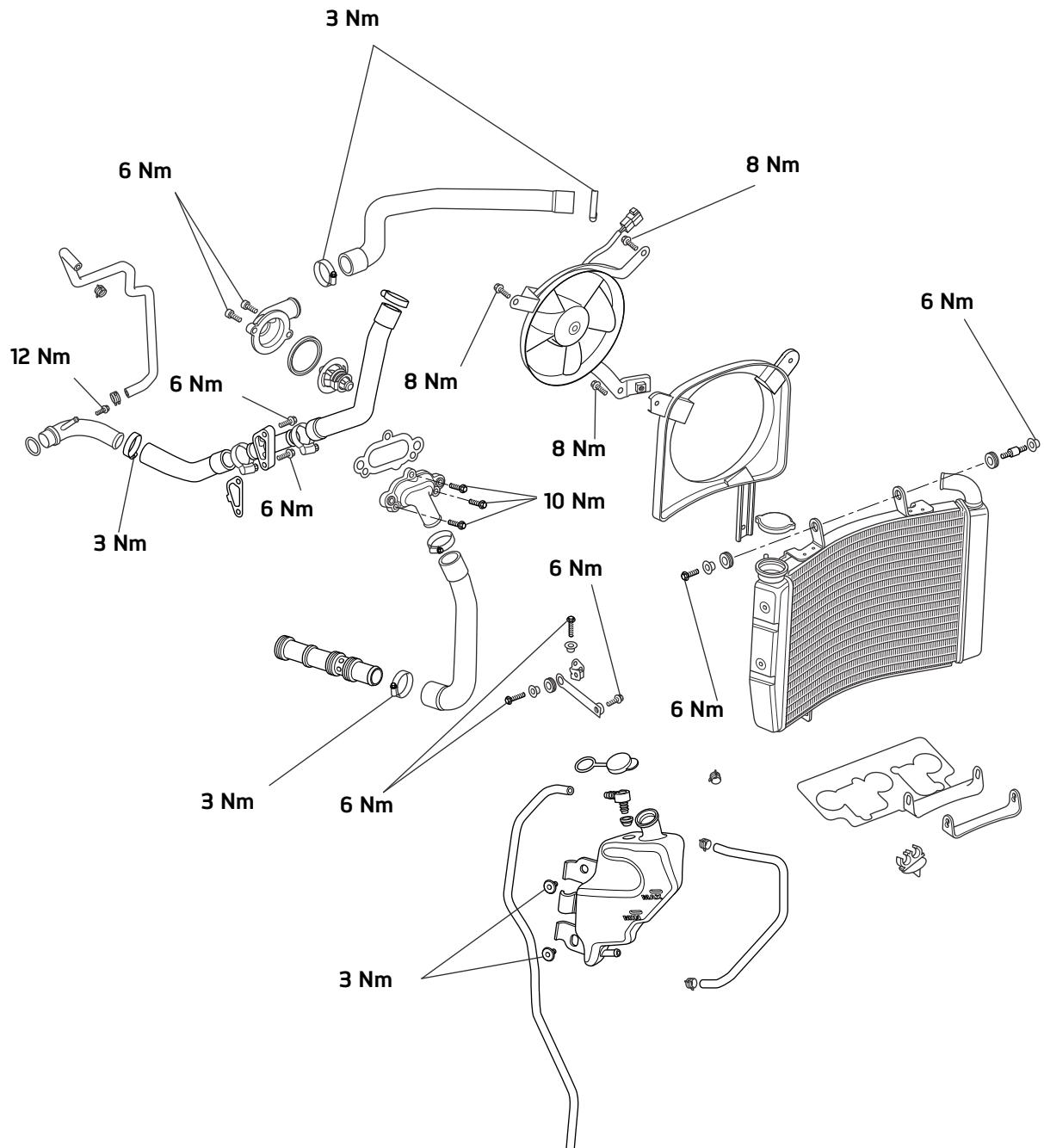
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Cooling

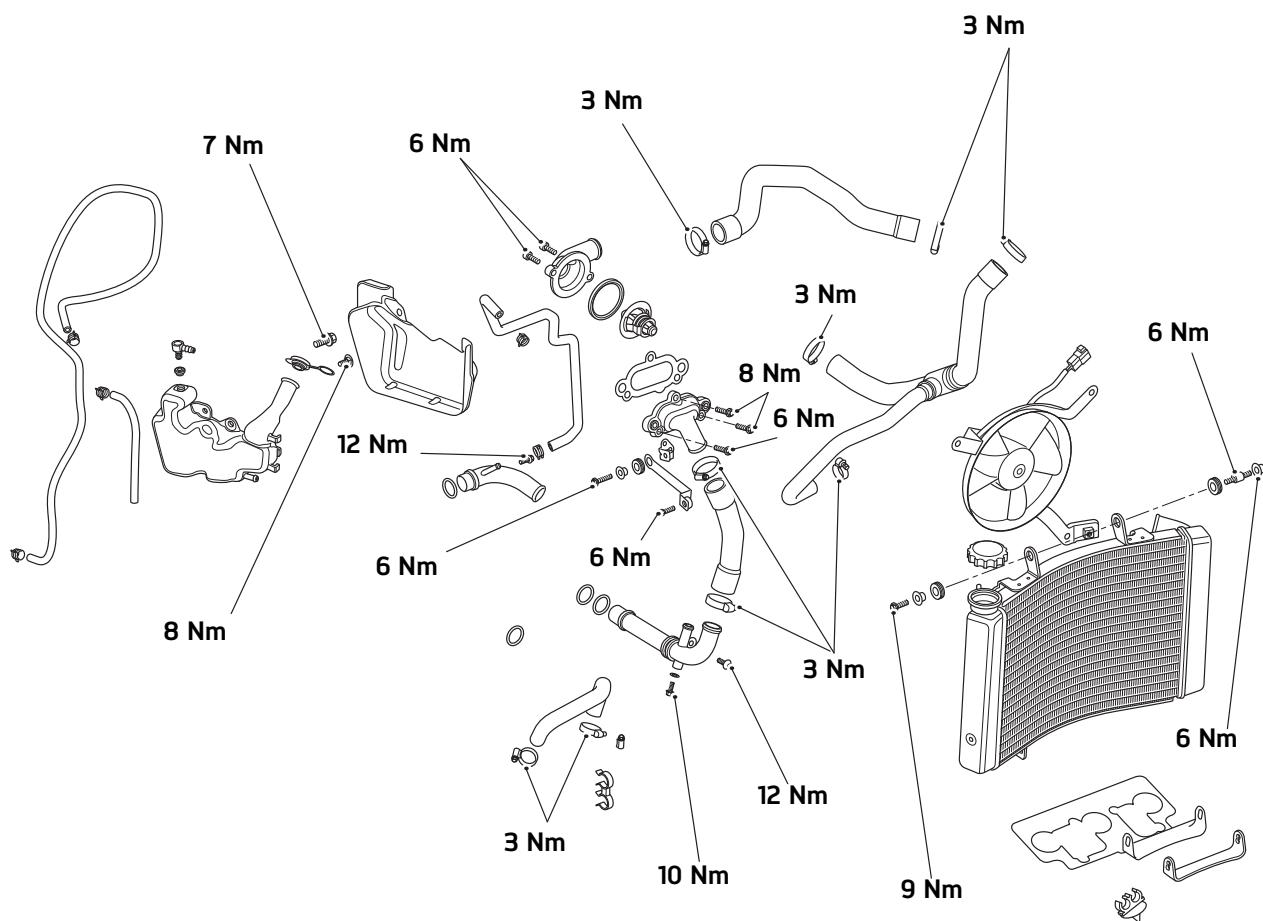
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Exploded View - Cooling System - Daytona 675 and Daytona 675 R



Cooling

Exploded View - Cooling System - Street Triple, Street Triple 660 cc, Street Triple R and Street Triple Rx



Coolant

A permanent type of antifreeze is installed in the cooling system when the motorcycle leaves the factory.

A year-round, Hybrid Organic Acid Technology (known as Hybrid OAT or HOAT) coolant is installed in the cooling system. It is coloured green, contains a 50% solution of ethylene glycol based antifreeze, and has a freezing point of -35°C (-31°F).

Note:

- **HD4X Hybrid OAT coolant, as supplied by Triumph, is premixed and does not need to be diluted prior to filling or topping up the cooling system.**

All models

Always change the coolant at the intervals specified in the scheduled maintenance chart.



Warning

The coolant mixture contains antifreeze and corrosion inhibitors, which both contain toxic chemicals which are harmful to the human body. Never swallow antifreeze or any of the motorcycle coolant.



Caution

The coolant mixture contains a corrosion inhibitor which helps prevent damage to the metal surfaces inside the cooling system. Without this inhibitor, the coolant would attack the metals and the resulting corrosion would cause blockages in the cooling system leading to engine overheating and damage. Always use the correct antifreeze as specified in the Owner's Handbook. Never use a methanol based antifreeze as this does not contain the required corrosion inhibition properties.



Caution

Distilled water must be used with the antifreeze (see specification for antifreeze) in the cooling system.

If hard water is used in the system, it causes scale accumulation in the water passages, and considerably reduces the efficiency of the cooling system. Reduced cooling system efficiency may cause the engine to overheat and suffer severe damage.

Radiator Hoses

Regularly check all radiator hoses and hose clips for cracks, leaks or deterioration in accordance with the scheduled maintenance chart.

Cooling

Radiator and Cooling Fan

Check the radiator fins for obstruction by insects, mud, leaves and general debris. Clean off any obstructions by hand or with a stream of low pressure water.



Warning

The cooling fan operates automatically. To prevent injury, keep hands and clothing away from the fan blades at all times.



Caution

Using high pressure water sprays can damage the radiator fins and impair the radiator's efficiency.

Do not obstruct or deflect airflow through the radiator by installing unauthorized accessories in front of the radiator or behind the cooling fan. Interference with the radiator airflow can lead to overheating and consequent engine damage.

Coolant Level Inspection - Daytona 675 and Daytona 675 R

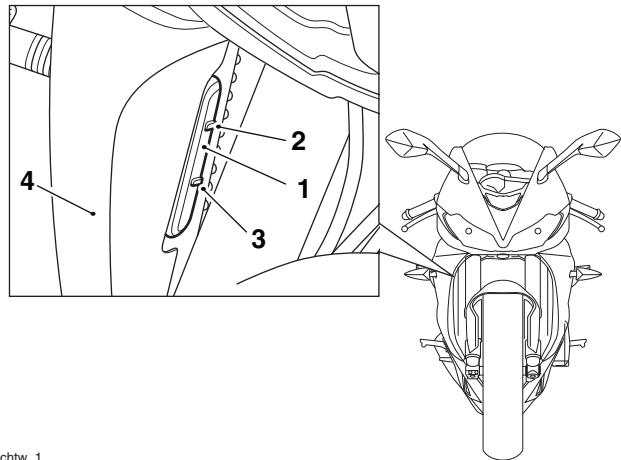


Warning

Do not remove the coolant pressure cap when the engine is hot. When the engine is hot, the coolant inside the radiator is hot and also under pressure. Contact with the pressurised coolant will cause scalds and skin damage.

The coolant expansion tank is mounted to the right hand side of the radiator and is covered by the right hand fairing.

1. Position the motorcycle on level ground and in an upright position.
2. The expansion tank can be viewed by looking between the front forks from the front of the motorcycle. The coolant level should be between the MAX and MIN marks.

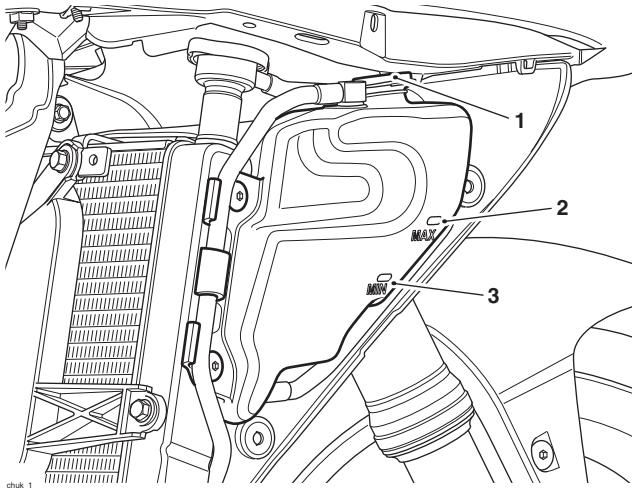


chtw_1

1. Expansion tank
2. MAX mark
3. MIN mark
4. Right hand fairing

If the level of coolant is low, the coolant level must be adjusted as follows:

- a) Remove the right hand fairing (see page 16-33).
- b) Remove the cap from the expansion tank and add coolant mixture as necessary to bring the level up to the MAX mark. Refit the cap.



1. Expansion tank filler cap
2. MAX mark
3. MIN mark



Caution

If the coolant level is found to be low, or if coolant has to be added regularly, inspect the cooling system for coolant leaks. If necessary, pressure test the system to locate the source of the leak and rectify as necessary. Loss of coolant may cause the engine to overheat and suffer severe damage.

- c) Refit the right hand fairing (see page 16-34).

Coolant Level Inspection - Street Triple, Street Triple 660 cc, Street Triple R and Street Triple Rx

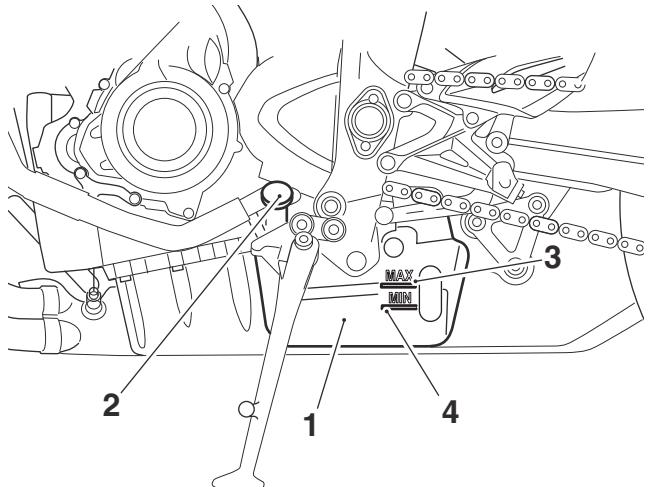


Warning

Do not remove the coolant pressure cap when the engine is hot. When the engine is hot, the coolant inside the radiator is hot and also under pressure. Contact with the pressurised coolant will cause scalds and skin damage.

The expansion tank is located on the left hand side of the motorcycle next to the side stand.

1. Position the motorcycle on level ground and in an upright position.



1. Expansion tank
2. Expansion tank filler cap
3. MAX mark
4. MIN mark

2. Check the coolant level in the expansion tank. The coolant level must be between the MAX and MIN marks. If the coolant is below the minimum level, the coolant level must be adjusted.
3. If the level of coolant is low, remove the cap from the expansion tank and add coolant mixture as necessary to bring the level up to the MAX mark. Refit the cap.



Caution

If the coolant level is found to be low, or if coolant has to be added regularly, inspect the cooling system for coolant leaks. If necessary, pressure test the system to locate the source of the leak and rectify as necessary. Loss of coolant may cause the engine to overheat and suffer severe damage.

Cooling

Coolant Replacement - Daytona 675 and Daytona 675 R

Drainage

Note:

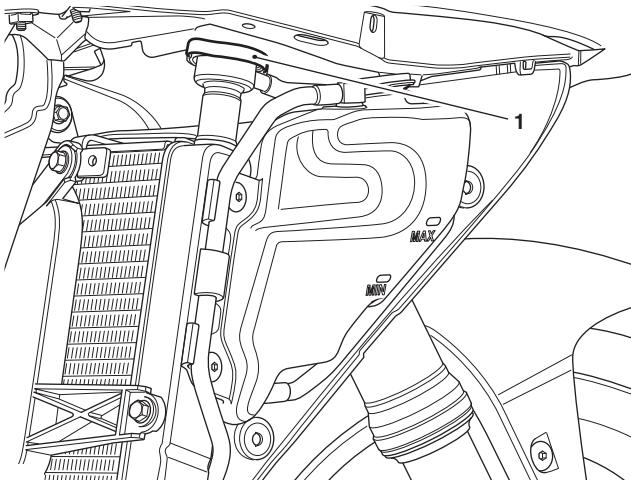
- Prior to disassembly of the coolant hoses, note the orientation and position of the hose clips to help ensure that they are returned to the same positions and orientation on assembly.
 - For models fitted with the constant tension hose clips, use the T3880207 - Hose Clip Pliers for their removal and installation.
- Position the motorcycle on level ground on the side stand.
 - Remove the rider's seat (see page 16-22).
 - Disconnect the battery, negative (black) lead first.



Warning

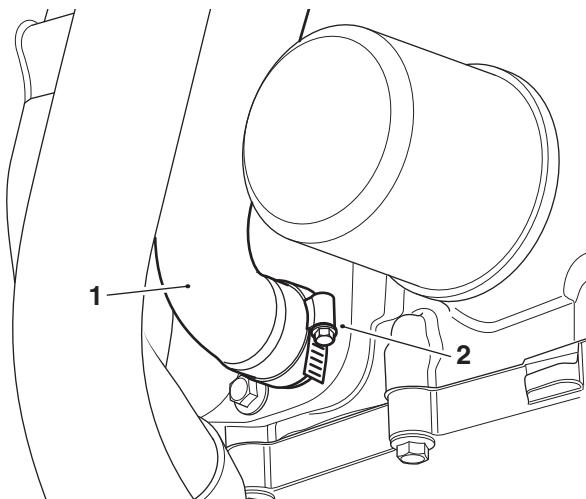
Do not remove the coolant pressure cap when the engine is hot. When the engine is hot, the coolant inside the radiator is hot and also under pressure. Contact with the pressurised coolant will cause scalds and skin damage.

- Remove the fairings (see page 16-33).
- Remove the coolant pressure cap on the radiator.



1. Radiator cap

- Position a container to collect the displaced coolant.
- Loosen the hose clip then release the coolant hose from the front of the crankcase and allow the coolant to drain.



1. Coolant hose
2. Hose clip

Filling

- Reconnect the coolant hose to the front of the crankcase. Ensure the hose clip is positioned as noted for removal.
For models that are not fitted with constant tension hose clips, tighten the hose clip to **3 Nm**.
- Slowly add coolant mixture to the system, through the filler opening in the radiator, until the system is full.

Note:

- A hand operated vacuum pump or similar should be used to syphon the coolant through the system.
- If necessary, top up the system through the filler and refit the pressure cap.
 - With the aid of an assistant, lean the motorcycle fully over to the right hand side, and then the left hand side, to release air trapped in the cooling system. Repeat as necessary.
 - Reconnect the battery, positive (red) lead first. Tighten the battery terminals to **4.5 Nm**.
 - Start the motorcycle and allow to run for approximately 20 to 30 seconds. Briefly raise the engine speed several times to allow any air to be expelled from the system.
 - Stop the engine. Check and top up the coolant level as necessary.

8. With the aid of an assistant, lean the motorcycle fully over to the right hand side, and then the left hand side, to release air trapped in the cooling system.
9. Start the motorcycle. Briefly raise the engine speed several times to allow any air to be expelled from the system.
10. Allow the engine to run until the cooling fan operates.
11. Stop the motorcycle and allow the engine to cool.



Warning

Do not remove the coolant pressure cap when the engine is hot. When the engine is hot, the coolant inside the cooling system is hot and also under pressure. Contact with the pressurised coolant will cause scalds and skin damage.

12. Check and top up the coolant level as necessary (see page 11-6).
13. Check the expansion tank level and top up if necessary.
14. Refit the rider's seat (see page 16-22).
15. Refit the fairings (see page 16-34).

Coolant Replacement - Street Triple, Street Triple 660 cc, Street Triple R and Street Triple Rx

Drainage

Note:

- Prior to disassembly of the coolant hoses, note the orientation and position of the hose clips to help ensure that they are returned to the same positions and orientation on assembly.
 - For models fitted with the constant tension hose clips, use the T3880207 - Hose Clip Pliers for their removal and installation.
1. Position the motorcycle on level ground on the side stand.
 2. Remove the rider's seat (see page 16-23 for Street Triple, Street Triple 660 cc and Street Triple R, see page 16-22 for Street Triple Rx).
 3. Disconnect the battery, negative (black) lead first.



Warning

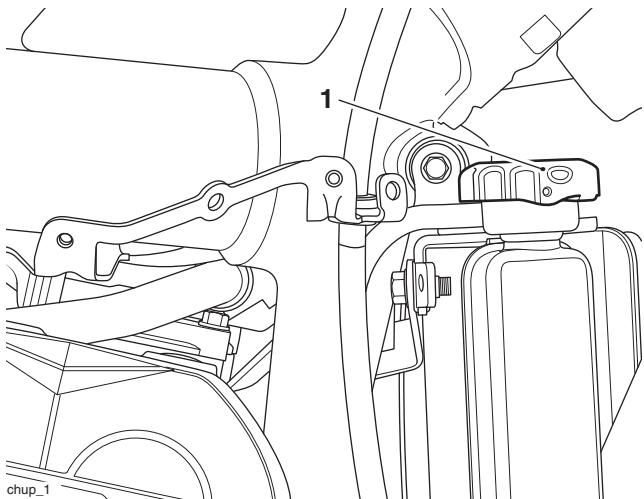
Do not remove the coolant pressure cap when the engine is hot. When the engine is hot, the coolant inside the radiator is hot and also under pressure. Contact with the pressurised coolant will cause scalds and skin damage.

Note:

- It is not necessary to disconnect the direction indicator connections when detaching the radiator cowl from the radiator.
 - When detached, secure the cowl to one side ensuring that it does not hang on the direction indicator harness.
4. Detach the right hand radiator cowl and its inner cowl from the radiator (see page 16-38).

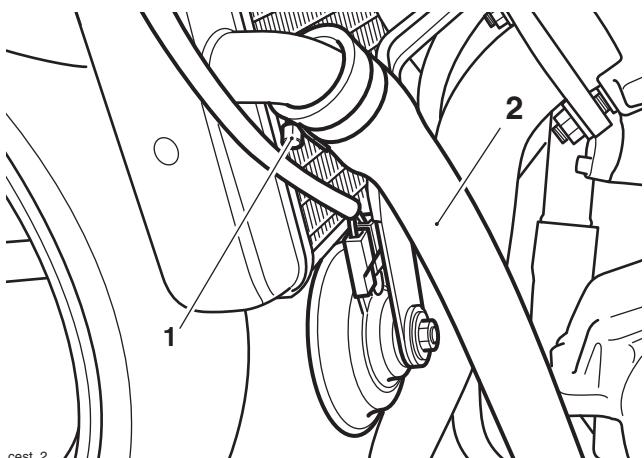
Cooling

- Remove the coolant pressure cap on the radiator.



1. Radiator cap

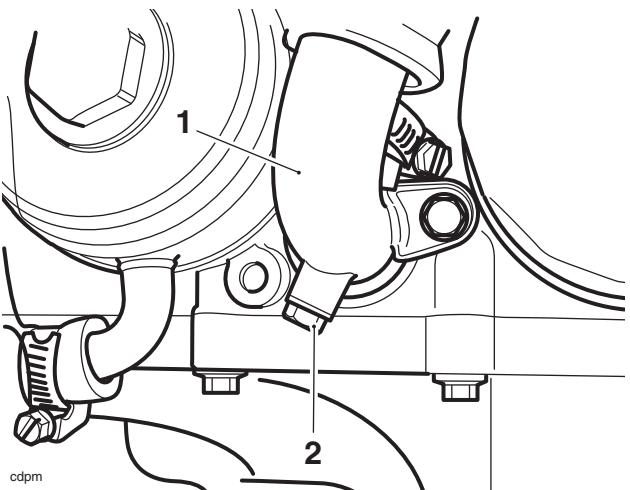
- Position a container to collect the displaced coolant.
- loosen the clip then release the bottom hose from the radiator and allow the coolant to drain.



1. Clip

2. Bottom hose

- Remove the drain bolt from the coolant outlet tube, located next to the heat exchanger and allow the coolant to drain. Discard the sealing washer.



1. Coolant outlet tube

2. Drain bolt

Filling

- Incorporating a new sealing washer, refit the drain bolt to the coolant outlet tube and tighten to **10 Nm**.
- Reconnect the bottom hose. Ensure the hose clip is positioned as noted for removal. For models that are not fitted with the constant tension hose clips, tighten the hose clip to **3 Nm**.
- Slowly add coolant mixture to the system, through the filler opening in the radiator, until the system is full.

Note:

- A hand operated vacuum pump or similar should be used to syphon the coolant through the system.
- If necessary, top up the system through the filler and refit the pressure cap.
 - With the aid of an assistant, lean the motorcycle fully over to the right hand side, and then the left hand side, to release air trapped in the cooling system. Repeat as necessary.
 - Reconnect the battery, positive (red) lead first. Tighten the battery terminals to **4.5 Nm**.
 - Start the motorcycle and allow to run for approximately 20 to 30 seconds. Briefly raise the engine speed several times to allow any air to be expelled from the system.

8. Stop the engine. Check and top up the coolant level as necessary.
9. With the aid of an assistant, lean the motorcycle fully over to the right hand side, and then the left hand side, to release air trapped in the cooling system.
10. Start the motorcycle. Briefly raise the engine speed several times to allow any air to be expelled from the system.
11. Allow the engine to run until the cooling fan operates.
12. Stop the motorcycle and allow the engine to cool.



Warning

Do not remove the coolant pressure cap when the engine is hot. When the engine is hot, the coolant inside the cooling system is hot and also under pressure. Contact with the pressurised coolant will cause scalds and skin damage.

13. Check and top up the coolant level as necessary.
14. Refit the right hand radiator cowl and its inner cowl (see page 16-39).
15. Check the expansion tank level and top up if necessary (see page 11-7).
16. Refit the rider's seat (see page 16-23 for Street Triple, Street Triple 660 cc and Street Triple R, see page 16-22 for Street Triple Rx).

Water Pump

Note:

- The oil pump and water pump are supplied as an assembly and cannot be separated. For additional information, refer to Oil Pump (see page 8-14 for removal and page 8-21 for installation).

Cooling

Coolant Pressure Cap and Coolant System Testing

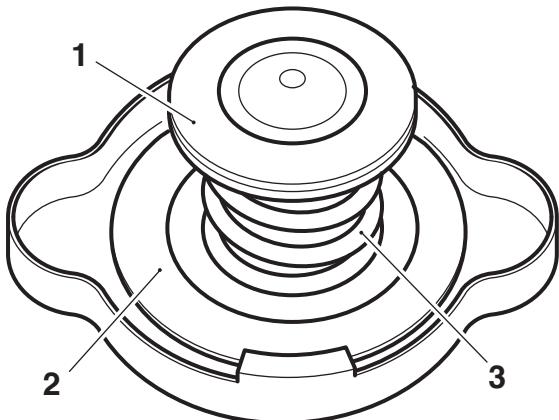
Inspection



Warning

Do not remove the coolant pressure cap when the engine is hot. When the engine is hot, the coolant inside the radiator is hot and also under pressure. Contact with the pressurised coolant will cause scalds and skin damage.

1. Allow the engine temperature to cool for at least 30 minutes.
2. Remove the coolant pressure cap.
3. Check the condition of the upper and lower seals of the coolant pressure cap.



cawr

1. Lower seal
2. Upper seal
3. Spring

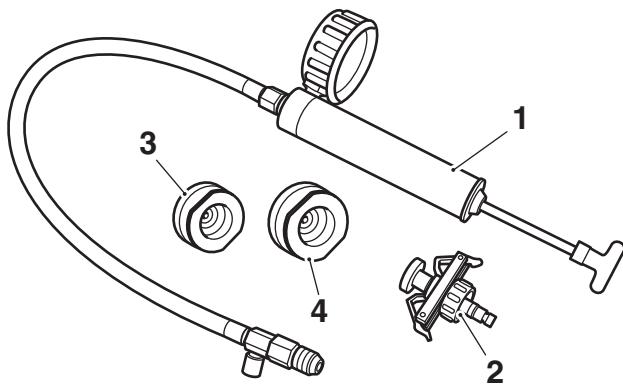
Note:

- If there is any sign of damage or deterioration replace the cap.
- 4. Pressure test the cap and cooling system to the blow off pressure of 1.1 bar as described below using T3880147 - Radiator and Cap Tester.

Note:

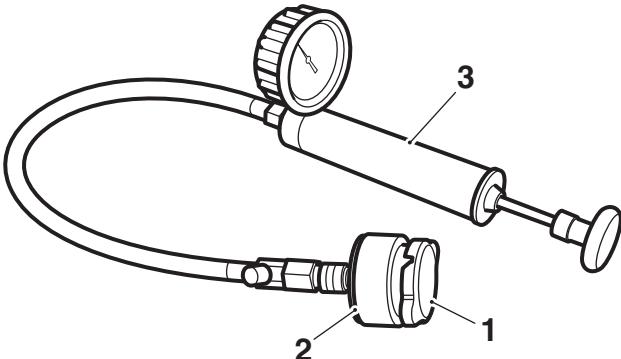
- It is recommended to carry out coolant pressure cap and cooling system pressure tests consecutively.

Coolant Pressure Cap Test



1. Hand held pump
2. Bayonet type connector
3. Pressure cap test adaptor 44 mm
4. Pressure cap test adaptor 46 mm

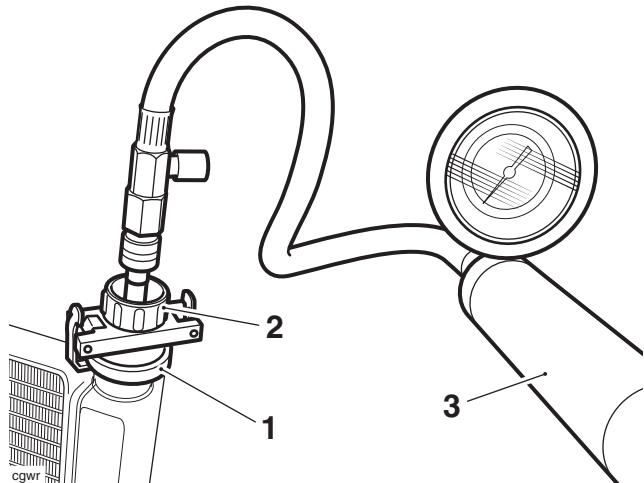
1. Select the correct test adaptor and securely fasten to the pressure cap.
2. Carefully connect the hand pump to the adaptor ensuring an air tight seal is maintained.



1. Pressure cap
 2. Test adaptor
 3. Hand held pump
3. Pressure test the coolant cap to its 1.1 bar blow off pressure. If the coolant cap opens at a lower pressure, fails to open at the correct pressure or the seal leaks, replace the cap.

Coolant System Pressure Test

1. Select the bayonet type adaptor and securely fasten to the radiator.
2. Carefully connect the hand pump to the bayonet connector ensuring an air tight seal is maintained.



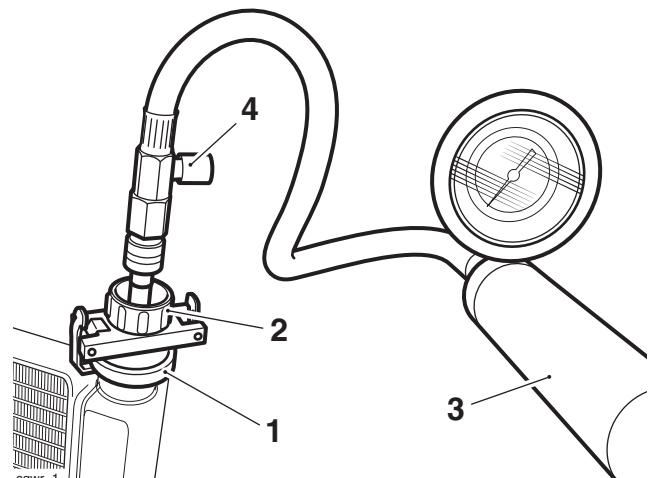
1. Radiator filler
2. Bayonet type connector
3. Hand held pump

3. Pressurise the cooling system to its 1.1 bar operating pressure, using the hand pump taking care not to exceed the maximum cap pressure.
4. Hold the pressure for a minimum of 10 minutes, whilst visually inspecting the external components of the coolant system for leaks.
5. Remove the engine oil filler cap/dipstick and check for contamination of the engine oil caused by coolant escaping into the engine sump.

Note:

- If the engine oil is contaminated further exploratory investigation will be required.
- If the engine oil is contaminated, rectify the cause of the problem and then renew the oil and filter.

6. Depressurise the coolant test kit using the pressure release valve.



1. Radiator filler
2. Bayonet type connector
3. Hand held pump
4. Pressure release valve

7. Refit the coolant cap.
8. Fill the coolant to the maximum mark (see page 11-6 for Daytona 675 and Daytona 675 R, see page 11-7 for Street Triple, Street Triple 660 cc, Street Triple R and Street Triple Rx).

Cooling

Thermostat

Removal

Note:

- Prior to disassembly of the coolant hoses, note the orientation and position of the hose clips to help ensure that they are returned to the same positions and orientation on assembly.
- For models fitted with the constant tension hose clips, use the T3880207 - Hose Clip Pliers for their removal and installation.

- Remove the seat (see page 16-22 for Daytona 675, Daytona 675 R and Street Triple Rx, see page 16-23 for Street Triple, Street Triple 660 cc and Street Triple R).
- Disconnect the battery, negative (black) lead first.
- Drain the coolant (see page 11-8 for Daytona 675 and Daytona 675 R or page 11-9 for Street Triple, Street Triple 660 cc, Street Triple R and Street Triple Rx).
- Remove the fuel tank (see page 10-112).
- Remove the airbox (see page 10-120).
- Remove the throttle bodies (see page 10-135).

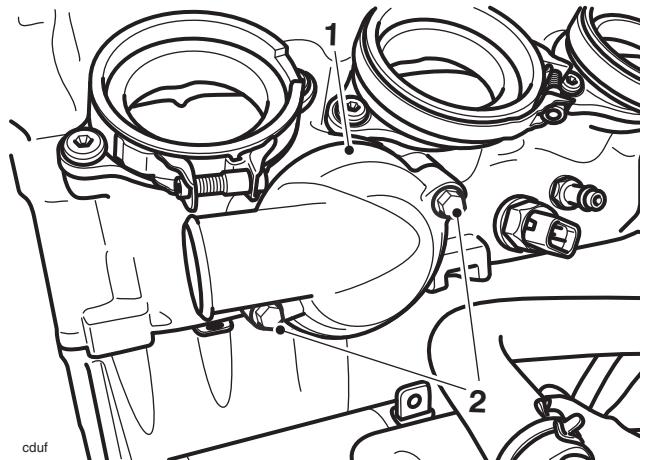


Warning

Do not remove the coolant pressure cap when the engine is hot. When the engine is hot, the coolant inside the radiator is hot and also under pressure. Contact with the pressurised coolant will cause scalds and skin damage.

- Detach the top hose from the thermostat elbow.
- Release the fixings securing the thermostat elbow to the cylinder head.

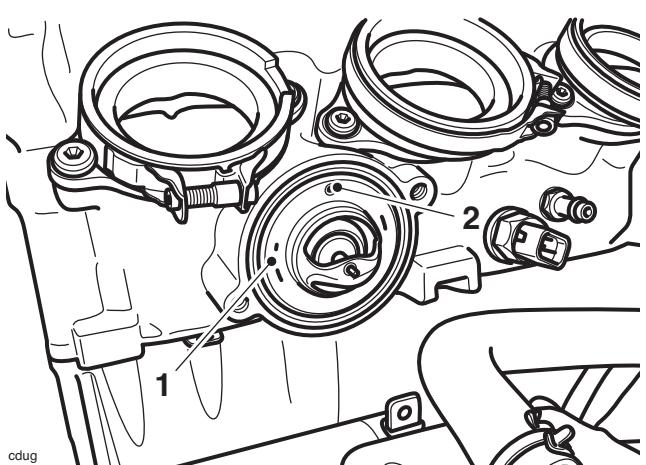
- Remove the thermostat housing. Discard the O-ring.



1. Thermostat housing

2. Fixings

- Remove the thermostat from the cylinder head.



1. Thermostat

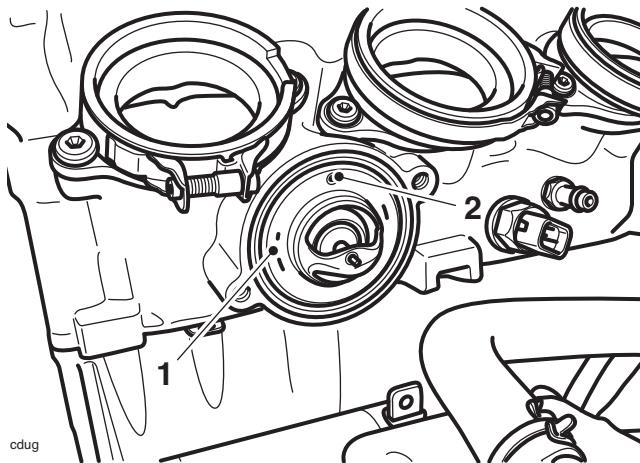
2. Bleed valve

Inspection

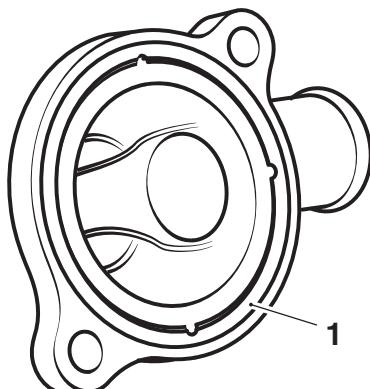
- Inspect the thermostat at room temperature. If the valve is open, the thermostat must be replaced.
- To check the valve opening temperature, suspend the thermostat in a container of water and raise the temperature of the water until the thermostat opens. The thermostat should start to open at $71^{\circ}\text{C} \pm 5^{\circ}\text{C}$.
- If the temperature at which thermostat opening takes place is incorrect, replace the thermostat.

Installation

- Locate the thermostat into the cylinder head. Ensure the bleed valve is uppermost as shown below.



- Thermostat**
- Bleed valve**
- Fit a new O-ring to the thermostat elbow groove.



- O-ring groove**
- Tighten the fixings to **6 Nm**.
- Reconnect the top hose. Ensure the hose clip is positioned as noted for removal.
For models that are not fitted with the constant tension hose clips, tighten the hose clip to **3 Nm**.
- Refit the throttle bodies (see page 10-136).
- Refit the airbox (see page 10-122).
- Refit the fuel tank (see page 10-113).
- Reconnect the battery positive (red) lead first.
Tighten the battery terminals to **4.5 Nm**.

- Refit the seat (see page 16-22 for Daytona 675, Daytona 675 R and Street Triple Rx, see page 16-24 for Street Triple, Street Triple 660 cc and Street Triple R).
- Refill the cooling system (see page 11-8 for Daytona 675 and Daytona 675 R, or page 11-10 for Street Triple, Street Triple 660 cc, Street Triple R and Street Triple Rx).

Cooling

Radiator - Daytona 675 and Daytona 675 R

Removal

Note:

- Prior to disassembly of the coolant hoses, note the orientation and position of the hose clips to help ensure that they are returned to the same positions and orientation on assembly.
- For models fitted with the constant tension hose clips, use the T3880207 - Hose Clip Pliers for their removal and installation.

- Remove the rider's seat (see page 16-22).
- Disconnect the battery, negative (black) lead first.
- Remove the fuel tank (see page 10-112).
- Remove the airbox (see page 10-120).
- Remove the fairings (see page 16-33).



Warning

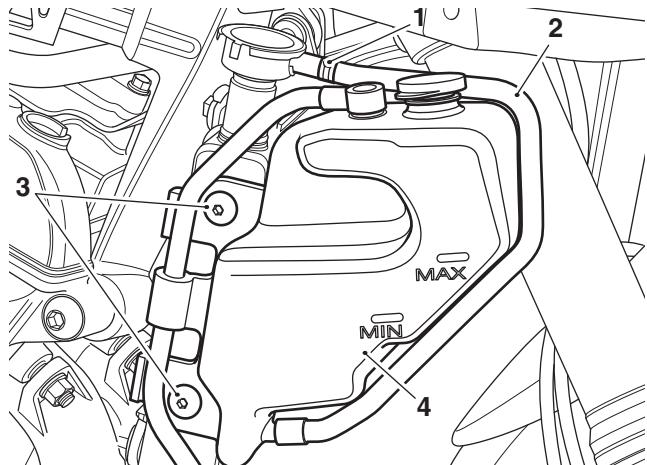
Do not remove the coolant pressure cap when the engine is hot. When the engine is hot, the coolant inside the radiator is hot and also under pressure. Contact with the pressurised coolant will cause scalds and skin damage.

- Disconnect the horn's two electrical connectors.
- Drain the coolant (see page 11-8).

Note:

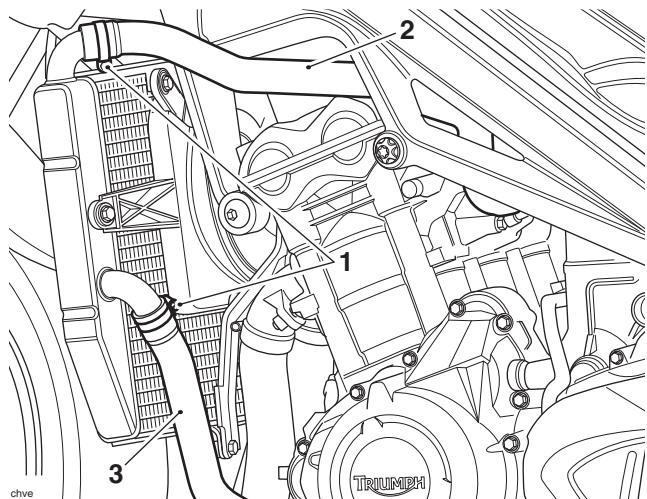
- Note the routing of the harness for the cooling fan for installation.
- Follow the routing of the harness for the cooling fan and disconnect it from the main harness.
- Release the spring clip and disconnect the bypass hose at the radiator.

- Release the two fixings and remove the coolant expansion tank.



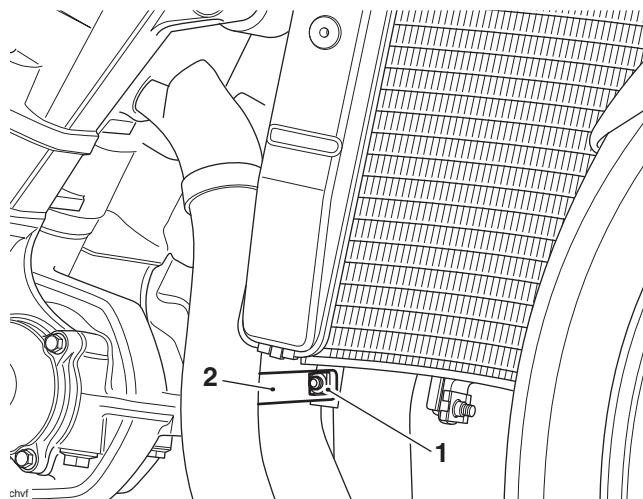
- Spring clip
- Bypass hose
- Fixings
- Coolant expansion tank

- Loosen the hose clips then detach the top and bottom hoses from the radiator.



- Hose clips
- Top hose
- Bottom hose

12. Release the radiator lower mounting.

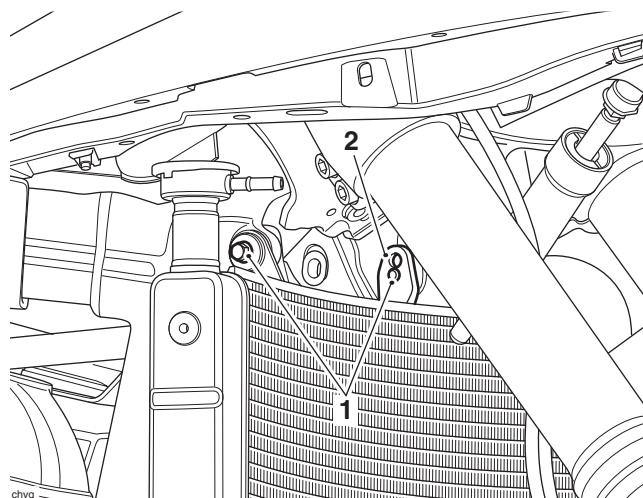


1. Fixing

2. Radiator lower mounting

Note:

- Note the position of the rubber air deflector and its retaining plate in relation to the radiator's upper mounting bolts for installation.
13. Release the fixings securing the radiator to the frame. Collect the retaining plate for the air deflector.



1. Fixings

2. Retaining plate

14. Remove the radiator.

Inspection

1. Check the radiator for stone damage.
2. Check the radiator core for damage to the fins or obstructions to air flow.
3. Repair any damage and clear all obstructions.



Caution

To avoid overheating and consequent engine damage, replace the radiator if the cores are blocked or if the fins are badly deformed or broken.

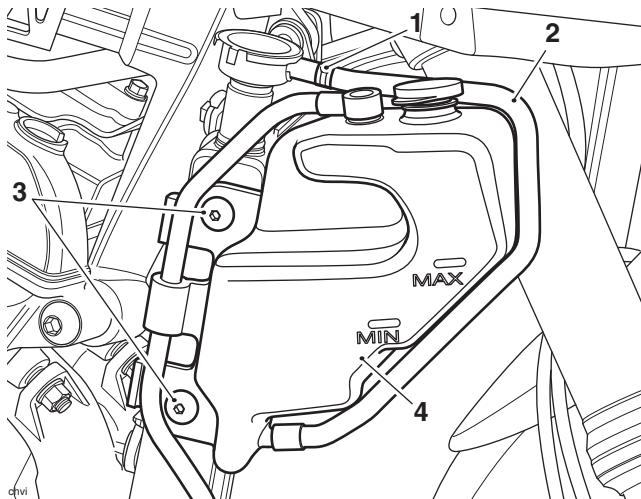
4. Check that the fan spins freely and without tight spots.
5. Check the fan blades for signs of heat distortion.

Installation

1. Align the radiator to the frame and lower mounting.
2. Position the rubber air deflector and its retaining plate to the upper mountings as noted for removal.
3. Fit the upper mounting fixings. Tighten the left hand fixing to **6 Nm**, and the right hand fixing to **6 Nm**.
4. Fit and tighten the lower mounting fixing to **6 Nm**.
5. Route the harness for the cooling fan as noted for removal and connect to the main harness.
6. Reconnect the top and bottom hoses. Ensure the hose clips are positioned as noted for removal.
For models that are not fitted with the constant tension hose clips, tighten the hose clips to **3 Nm**.
7. Connect the horn's two electrical connectors.
8. Refit the coolant expansion tank to the radiator and tighten its fixings to **3 Nm**.

Cooling

9. Connect the bypass hose to the radiator and secure with its spring clip.



1. Spring clip
2. Bypass hose
3. Fixings
4. Coolant expansion tank

10. Refit the airbox (see page 10-122).
11. Refit the fuel tank (see page 10-113).
12. Reconnect the battery, positive (red) lead first. Tighten the battery terminals to **4.5 Nm**.
13. Refill the cooling system (see page 11-8).
14. Refit the rider's seat (see page 16-22).
15. Refit the fairings (see page 16-34).

Radiator - Street Triple, Street Triple 660 cc, Street Triple R and Street Triple Rx

Removal

Note:

- Prior to disassembly of the coolant hoses, note the orientation and position of the hose clips to help ensure that they are returned to the same positions and orientation on assembly.
- For models fitted with the constant tension hose clips, use the T3880207 - Hose Clip Pliers for their removal and installation.

1. Remove the rider's seat (see page 16-23 for Street Triple, Street Triple 660 cc and Street Triple R, see page 16-22 for Street Triple Rx).
2. Disconnect the battery, negative (black) lead first.
3. Remove the fuel tank (see page 10-112).
4. Remove the airbox (see page 10-120).



Warning

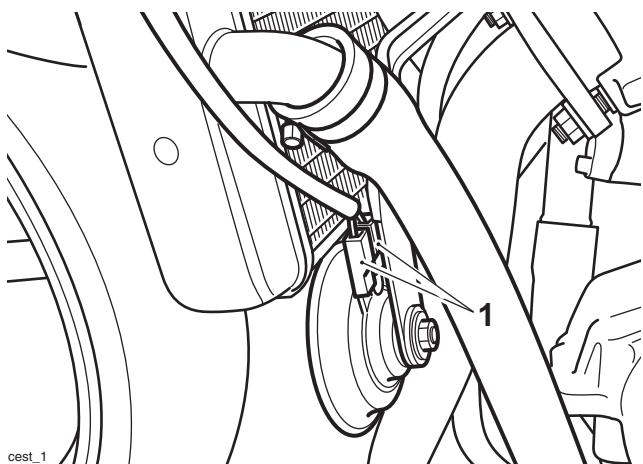
Do not remove the coolant pressure cap when the engine is hot. When the engine is hot, the coolant inside the radiator is hot and also under pressure. Contact with the pressurised coolant will cause scalds and skin damage.

5. Remove the radiator's inner and outer cowls (see page 16-38).

Note:

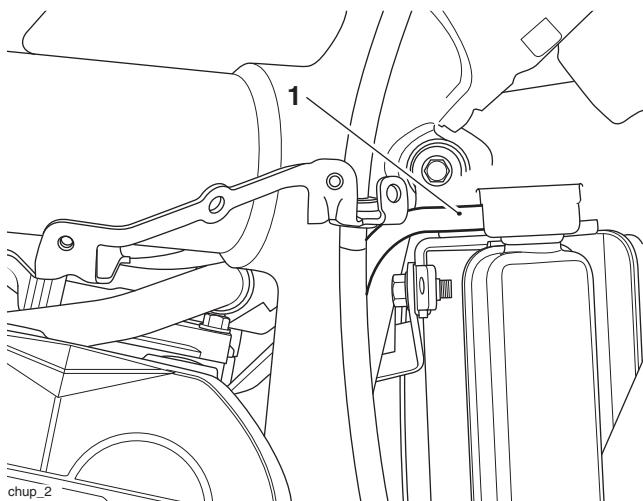
- Note the routing of the harness for the cooling fan for installation.
- 6. Follow the routing of the harness for the cooling fan and disconnect it from the main harness.
- 7. Drain the coolant (see page 11-9).

8. Disconnect the horn's two electrical connectors.



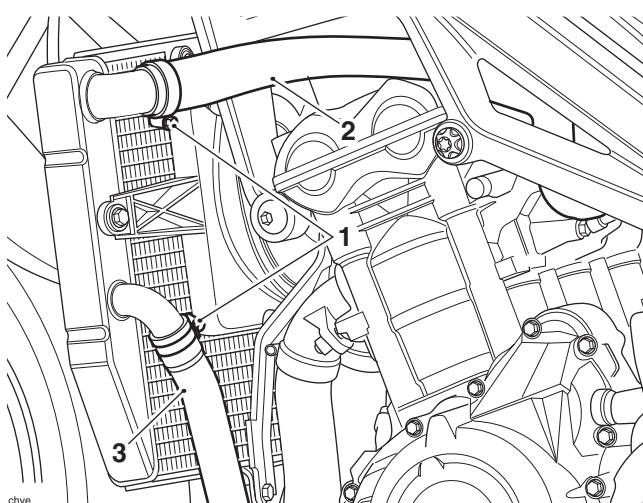
1. Horn connectors

9. Disconnect the bypass hose at the radiator.



1. Bypass hose

10. Disconnect the top and bottom hoses from the radiator.

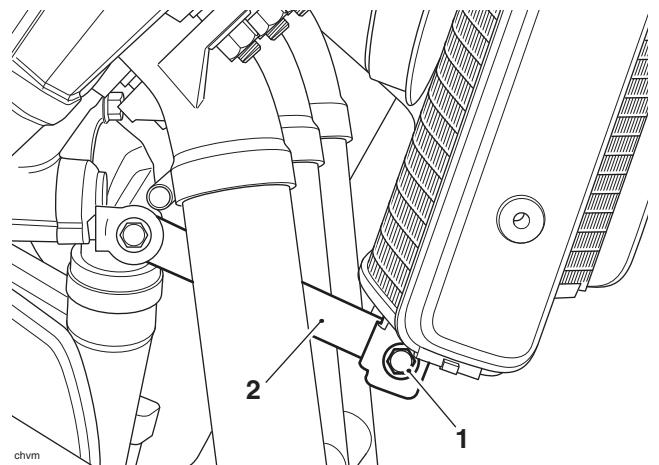


1. Hose clips

2. Top hose

3. Bottom hose

11. Release the radiator lower mounting.



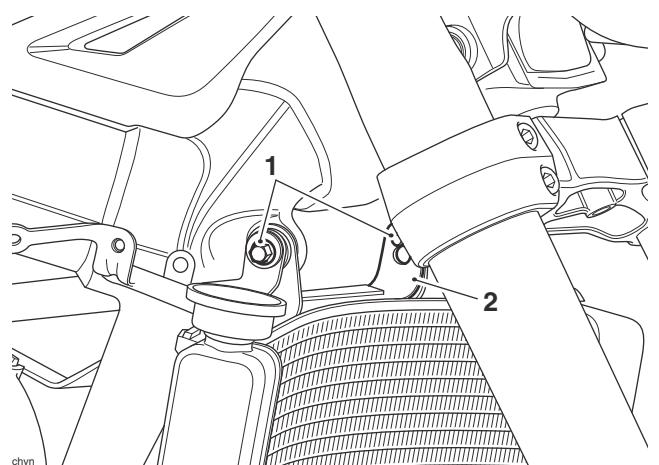
1. Fixing

2. Radiator lower mounting

Note:

- Note the position of the rubber air deflector and its retaining plate in relation to the radiator's upper mounting bolts for installation.

12. Release the fixings securing the radiator to the frame. Collect the retaining plate for the air deflector.



1. Fixings

2. Retaining plate

13. Remove the radiator.

Cooling

Inspection

1. Check the radiator for stone damage.
2. Check the radiator core for damage to the fins or obstructions to air flow.
3. Repair any damage and clear all obstructions.



Caution

To avoid overheating and consequent engine damage, replace the radiator if the cores are blocked or if the fins are badly deformed or broken.

4. Check that the fan spins freely and without tight spots.
5. Check the fan blades for signs of heat distortion.

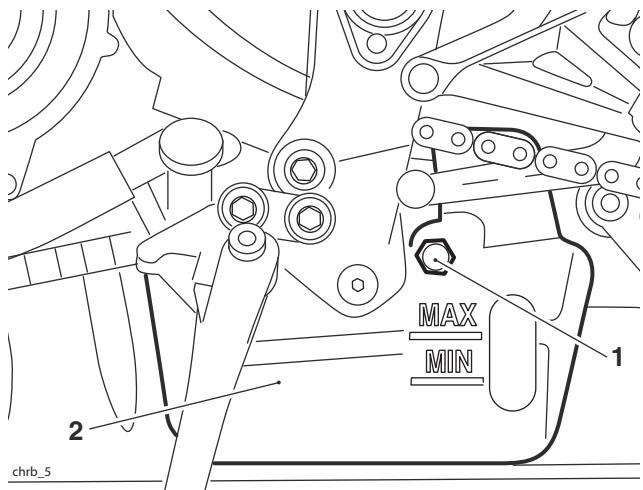
Installation

1. Align the radiator to the frame and lower mounting.
2. Position the rubber air deflector and its retaining plate to the upper mountings as noted for removal.
3. Fit the upper mounting fixings. Tighten the left hand fixing to **6 Nm**, and the right hand fixing to **9 Nm**.
4. Fit and tighten the lower mounting fixing to **6 Nm**.
5. Route the harness for the cooling fan as noted for removal and connect to the main harness.
6. Reconnect the top and bottom hoses. Ensure the hose clips are positioned as noted for removal.
For models that are not fitted with the constant tension hose clips, tighten the hose clips to **3 Nm**.
7. Connect the horn's two electrical connectors.
8. Connect the bypass hose to the radiator and secure with its spring clip.
9. Refit the airbox (see page 10-122).
10. Refit the fuel tank (see page 10-113).
11. Reconnect the battery, positive (red) lead first. Tighten the battery terminals to **4.5 Nm**.
12. Refit the rider's seat (see page 16-23 for Street Triple, Street Triple 660 cc and Street Triple R, see page 16-22 for Street Triple Rx).
13. Refill the cooling system (see page 11-10).
14. Refit the radiator's inner and outer cowls (see page 16-39).

Coolant Expansion Tank - Street Triple, Street Triple 660 cc, Street Triple R and Street Triple Rx

Removal

1. Place the motorcycle onto a paddock stand.
2. Remove and discard the fixing then remove the coolant expansion tank cover.

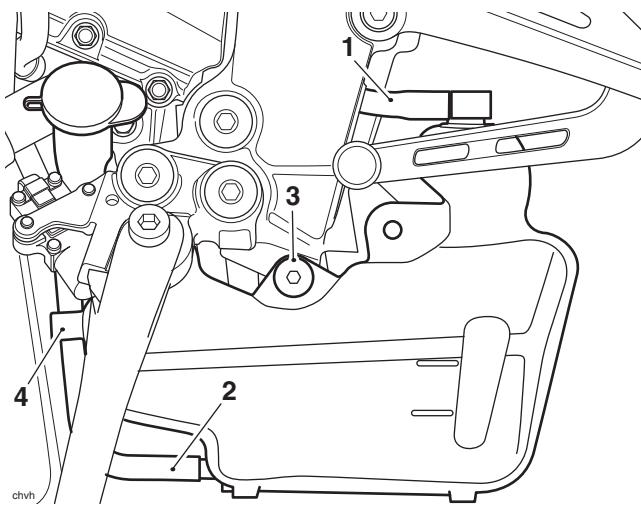


1. Fixing
2. Coolant expansion tank cover

Note:

- Note the position of the coolant expansion tank and its two hoses for installation.
- 3. Position a container to collect the displaced coolant.
- 4. Detach the upper and lower hoses from the expansion tank.

5. Release the fixing and detach the expansion tank from the frame.



1. Upper hose
2. Lower hose
3. Fixing
4. Retaining clip, one of three shown

6. Detach the lower hose from its retaining clips and remove the coolant expansion tank.

Installation

1. Position the coolant expansion tank to the frame as noted for removal.
2. Secure the lower hose to its three retaining clips on the expansion tank.
3. Secure the coolant expansion tank to the frame and tighten its fixing to **8 Nm**.
4. Attach the upper and lower hoses to the coolant expansion tank.
5. Fit the coolant expansion tank cover and tighten its new fixing to **7 Nm**.
6. Top up the coolant level in the expansion tank (see page 11-10).

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12 Front Suspension

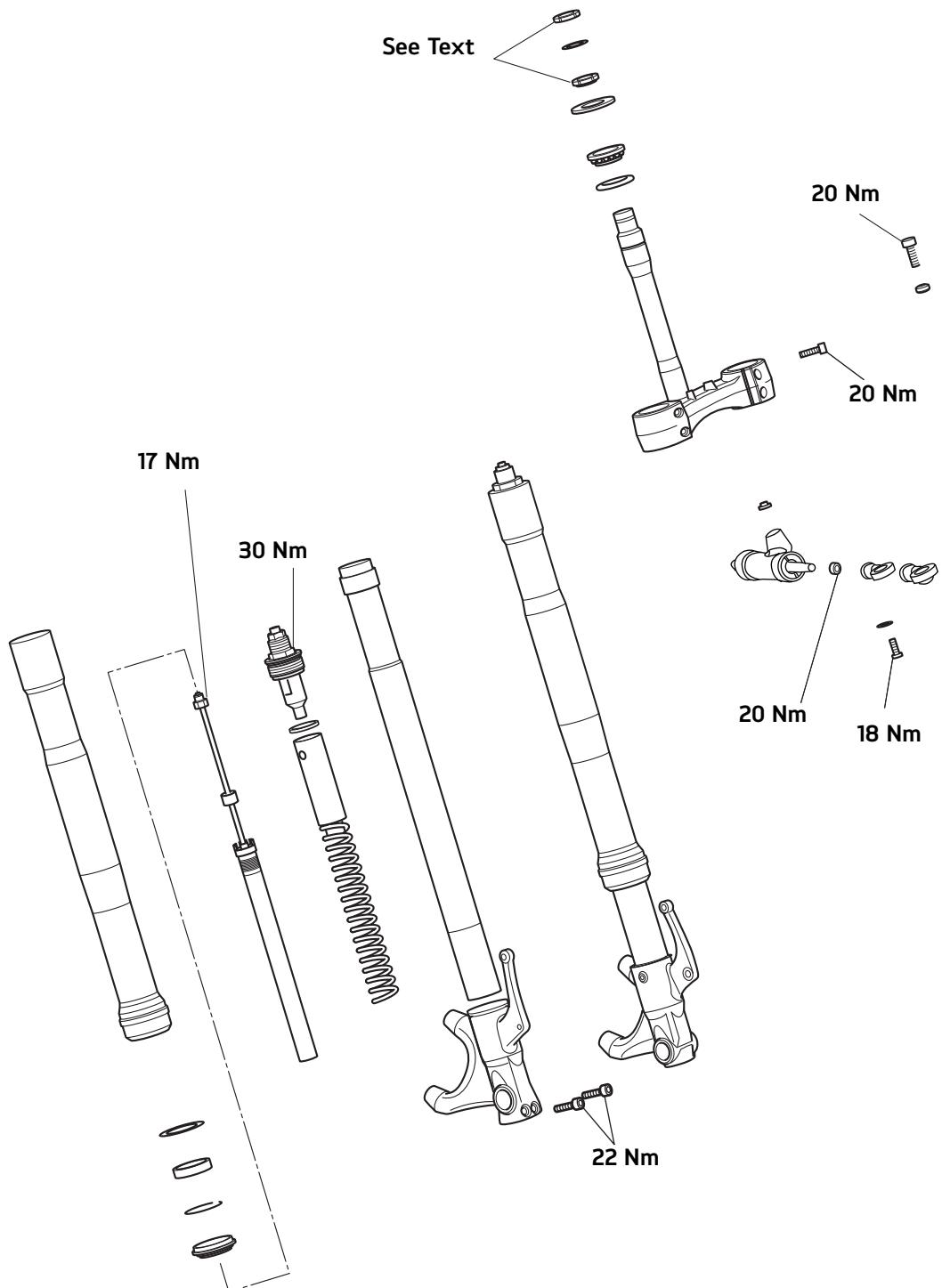
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Front Suspension

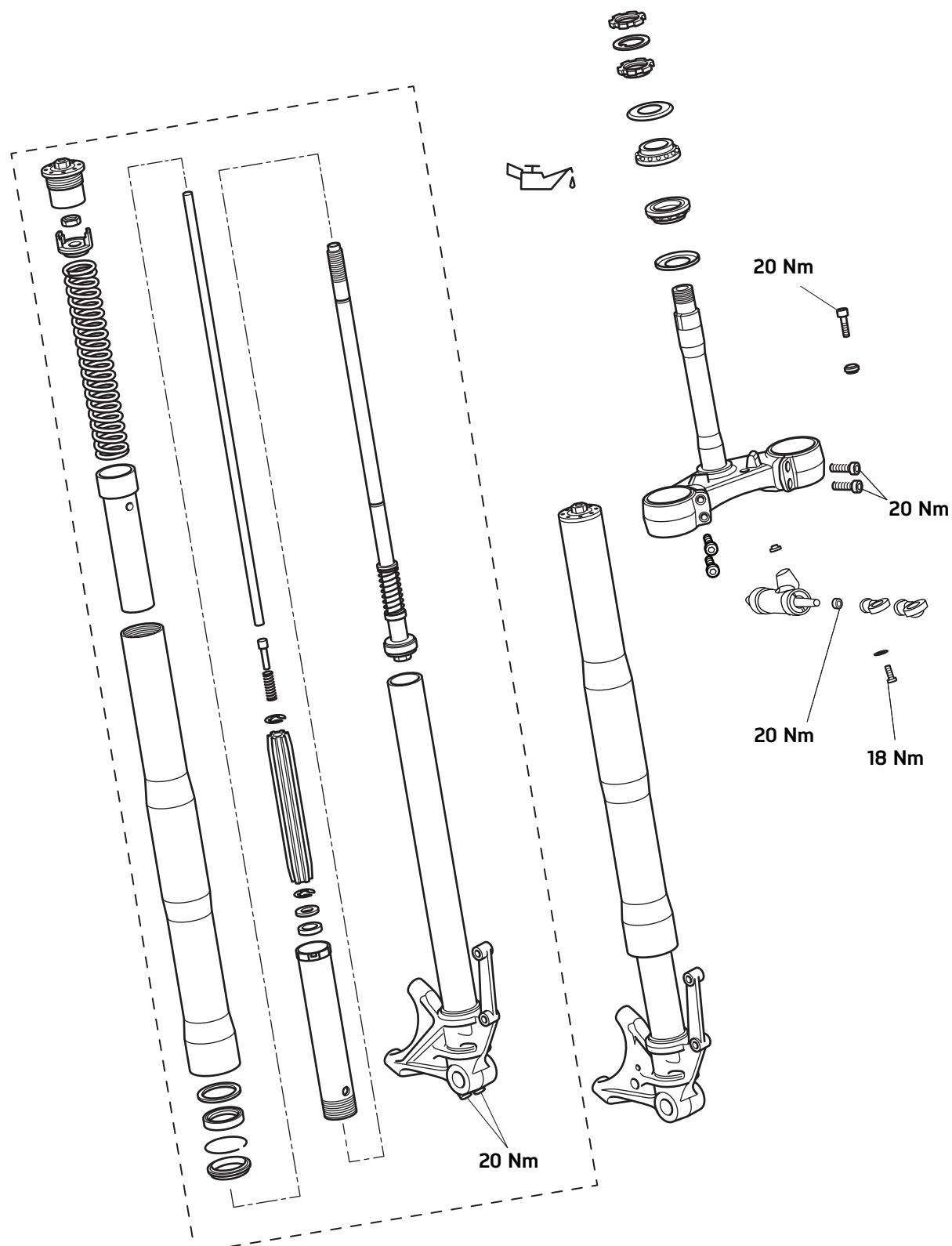
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Exploded View - Front Fork - Daytona 675

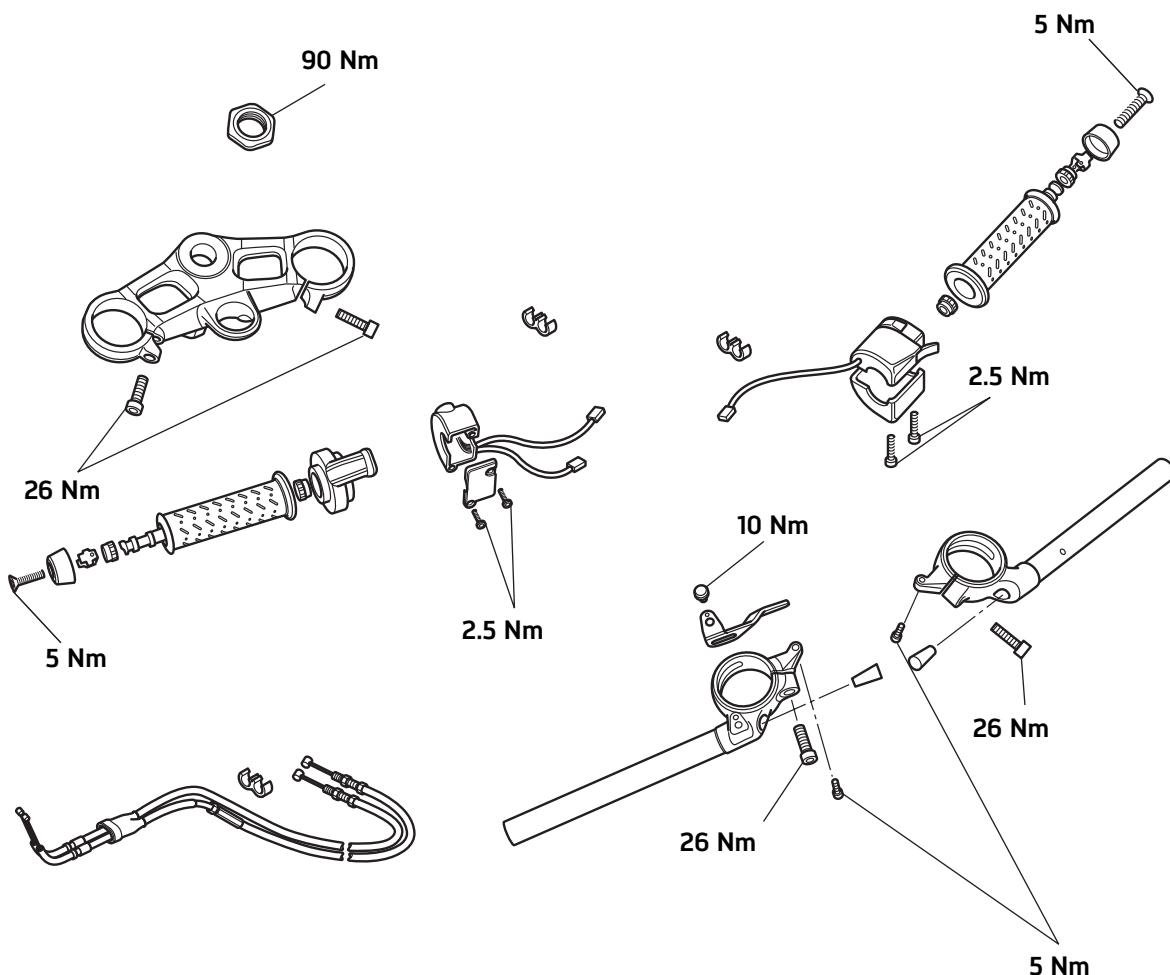


Front Suspension

Exploded View - Front Fork - Daytona 675 R

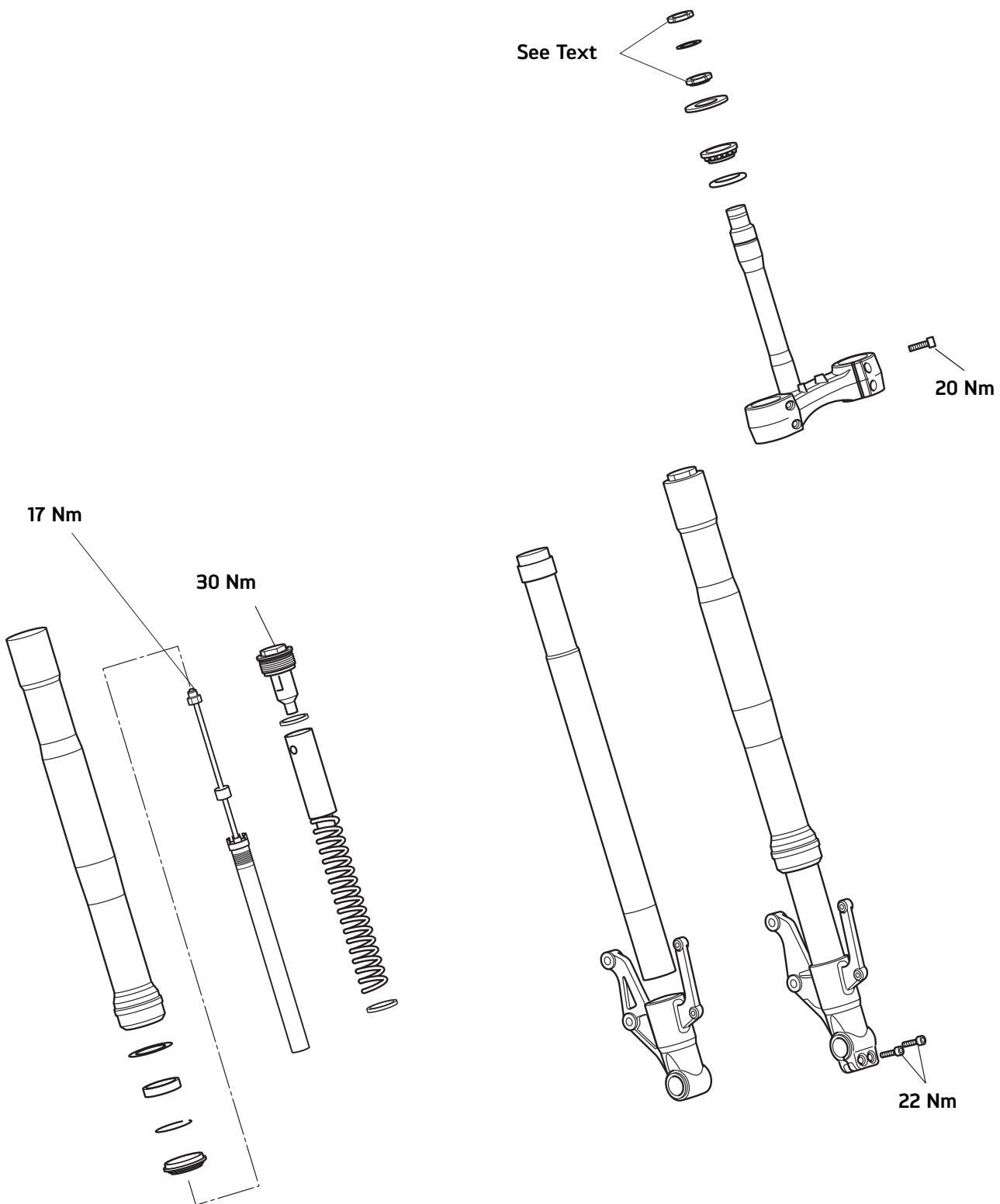


Exploded View - Handlebars - Daytona 675 and Daytona 675 R

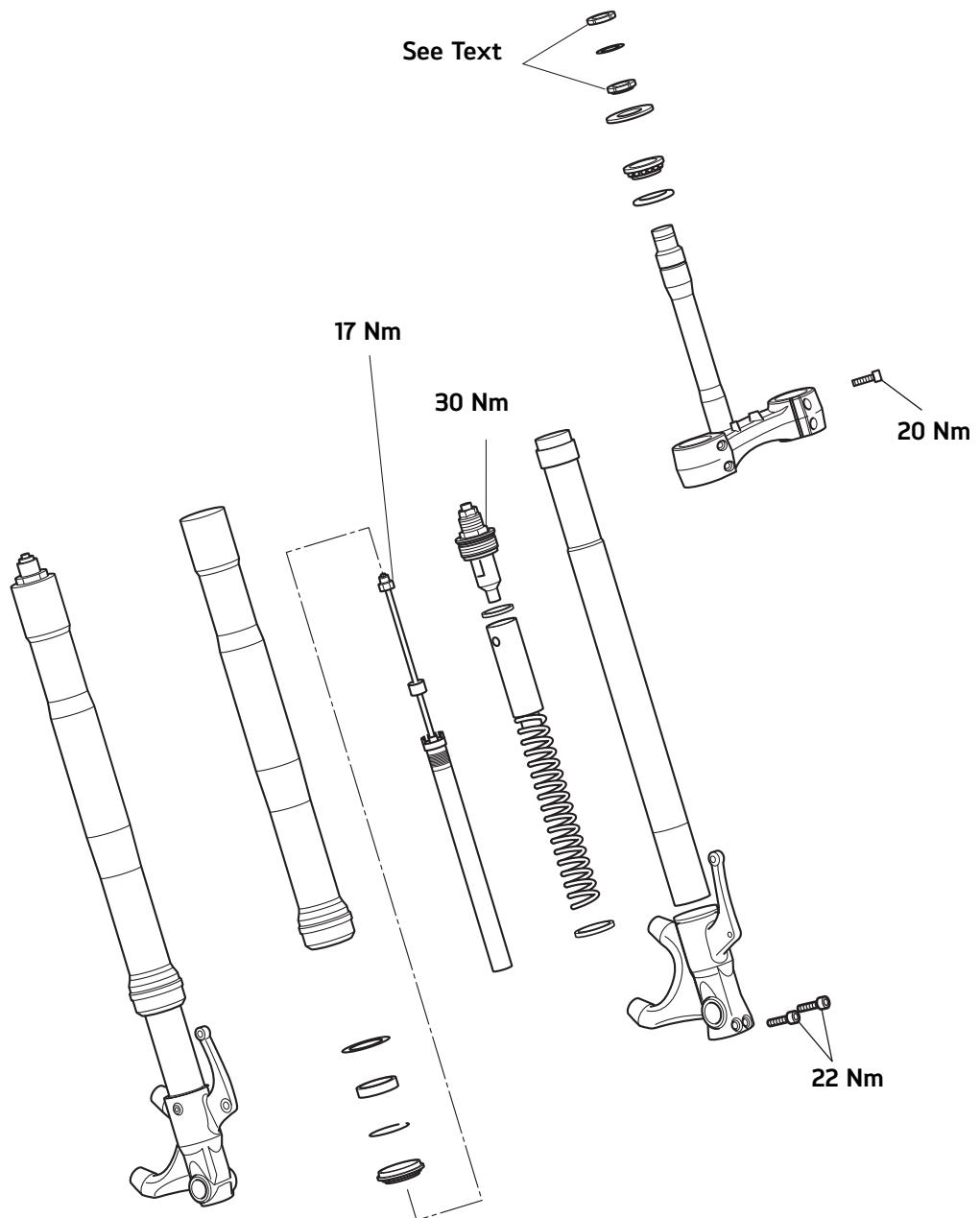


Front Suspension

Exploded View - Front Fork - Street Triple and Street Triple 660 cc

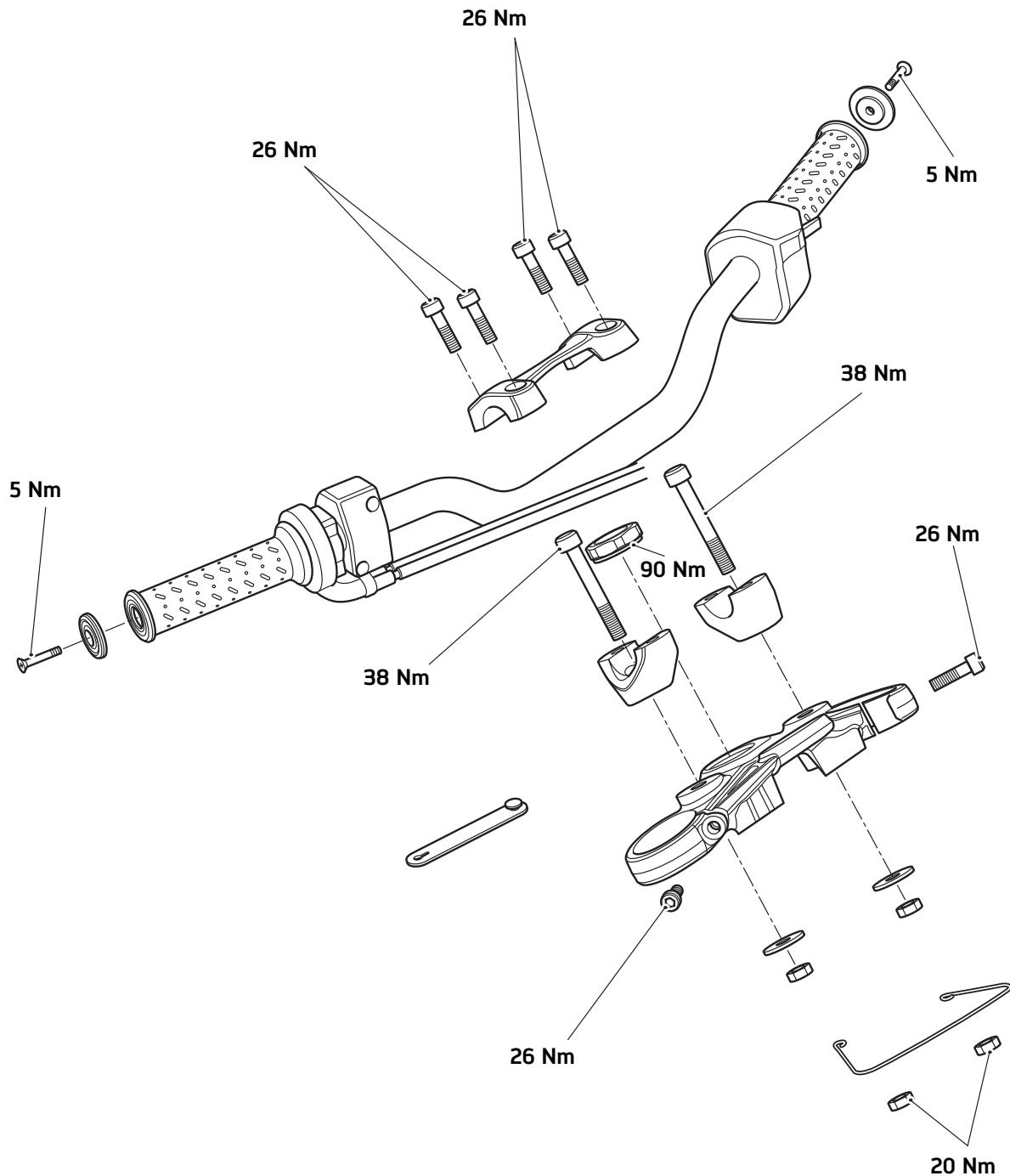


Exploded View - Front Fork - Street Triple R and Street Triple Rx



Front Suspension

Exploded View - Handlebars - Street Triple, Street Triple 660 cc, Street Triple R and Street Triple Rx



Front Suspension

The Daytona 675, Street Triple R and Street Triple Rx are equipped with hydraulic, adjustable, telescopic front forks. Both forks are adjustable for spring pre-load, compression damping and rebound damping. The Daytona 675 front forks have low stroke speed and high stroke speed compression damping adjusters.

The Daytona 675 R is equipped with hydraulic, adjustable, telescopic front forks. The spring pre-load adjusters are located at the top of each fork. The rebound damping adjuster is located at the top of the right hand fork and the compression damping adjuster is located at the top of the left hand fork.

The Street Triple and Street Triple 660 cc are equipped with hydraulic, telescopic front forks. The Street Triple and Street Triple 660 cc front suspension has no adjustments.

Periodic inspection for damage and fluid leaks is essential for safe riding. Always follow the inspection instructions at the intervals stated in the scheduled maintenance chart.

On Daytona 675 and Daytona 675 R, a hydraulic, non-adjustable, steering damper is fitted beneath the lower yoke. The damper rod is attached to the frame via a bracket above the radiator.

Fork Inspection

Examine each fork for any sign of damage or scratching of the slider surface or for oil leaks.

If any damage or oil leakage is found, strip and repair as described in this section or consult an authorised Triumph dealer.

Check for smooth operation of the forks as follows:

- Place the motorcycle on level ground.
- While holding the handlebars and applying the front brake, pump the forks up and down several times.

If roughness or excessive stiffness is detected, repair as described in this section or consult an authorised Triumph dealer.



Warning

Riding the motorcycle with defective or damaged suspension can cause loss of motorcycle control and an accident. Never ride with damaged or defective suspension.

Front Fork

Removal



Warning

Before starting work, ensure the motorcycle is stabilised and adequately supported. This will help prevent it from falling and causing injury to the operator or damage to the motorcycle.

1. **For Daytona 675 and Daytona 675 R:** Remove the fairings (see page 16-33) and the radiator infill panels (see page 16-32).
2. Raise and support the front of the motorcycle.
3. Detach and support the front brake calipers:
 - see page 14-41 for Street Triple R and Street Triple Rx
 - see page 14-33 for Daytona 675
 - see page 14-41 for Daytona 675 R
 - see page 14-38 for Street Triple and Street Triple 660 cc.



Warning

Never allow the brake calipers to hang on the brake hoses as this may damage the hoses. A damaged brake hose can cause a reduction in braking efficiency leading to loss of motorcycle control and an accident.

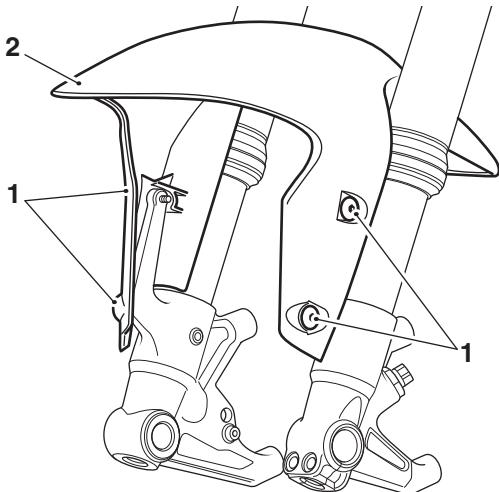
4. Remove the front wheel (see page 15-7 for all models except Daytona 675 R, see page 15-8 for Daytona 675 R).

Note:

- **Note the routing of the brake hoses for installation.**
- 5. Detach the brake hoses from the front mudguard.

Front Suspension

6. Release the four fixings and remove the front mudguard.



1. Fixings (Street Triple R shown)

2. Mudguard

Note:

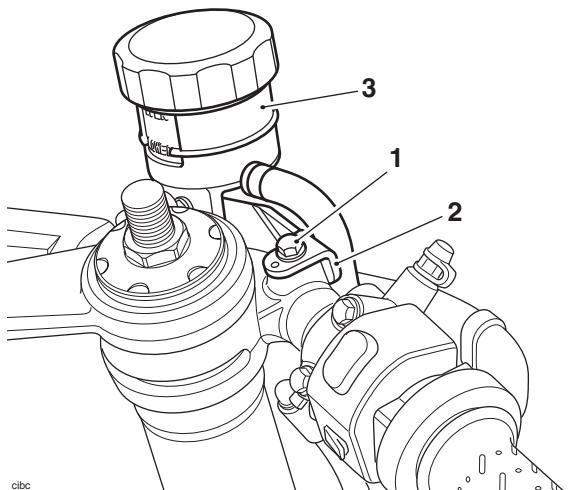
- For Daytona 675 and Daytona 675 R, it will be necessary to detach the front brake reservoir from the handlebar to access the handlebar and top yoke clamp bolts.



Caution

To prevent paint damage, do not spill brake fluid onto any area of the bodywork. Spilled brake fluid will damage paintwork.

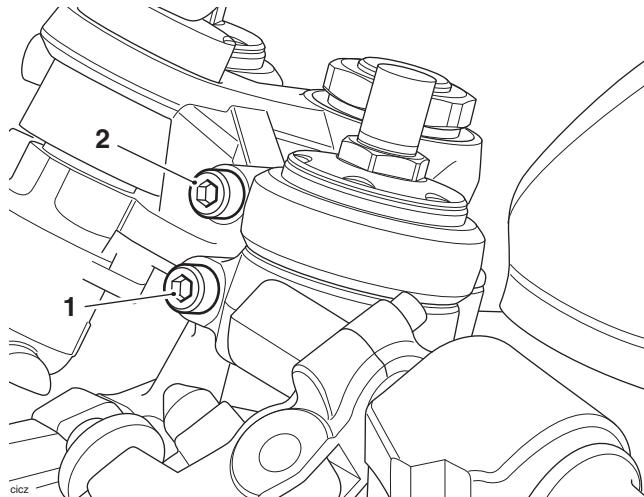
7. For Daytona 675 and Daytona 675 R: Detach the mounting bracket for the front brake fluid reservoir from the handlebar. Position the reservoir aside in an upright position.



1. Fixing
2. Bracket
3. Front brake fluid reservoir, Daytona 675 shown

Note:

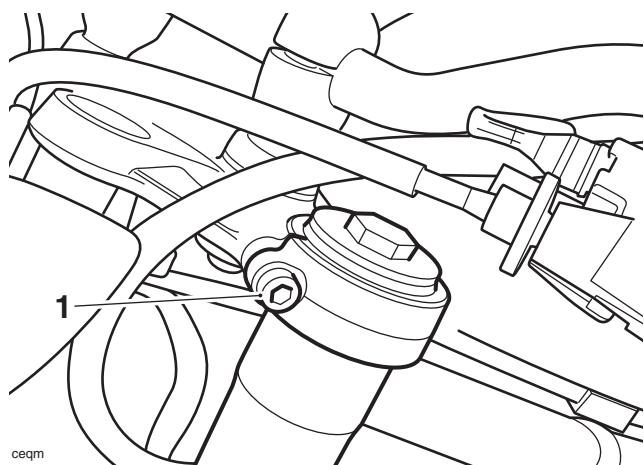
- If the forks are to be dismantled, loosen the fork top caps.
- For Daytona 675 and Daytona 675 R: Loosen the handlebar and top yoke clamp bolts.



1. Handlebar clamp bolt, Daytona 675 shown

2. Top yoke clamp bolt

9. For Street Triple, Street Triple 660 cc, Street Triple R and Street Triple Rx: Loosen the top yoke clamp bolts.



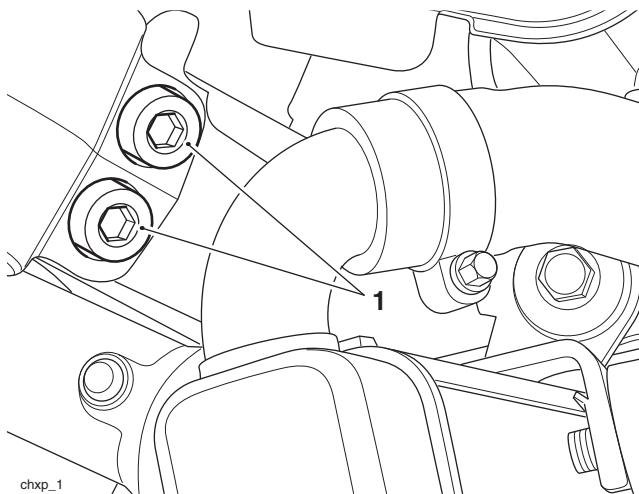
1. Top yoke clamp bolt



Caution

Care must be taken when removing the forks, to ensure that the outer surfaces do not become scratched.

- Loosen the lower yoke clamp bolts.

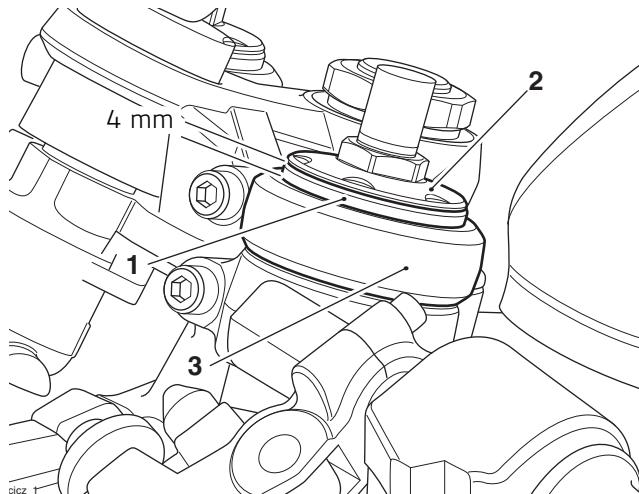


1. Lower yoke clamp bolts

- Using a downward, twisting action, withdraw the forks from between the yokes.

Installation

- Position the forks within the yokes so that the lip of the outer tube, not the top cap, is positioned as follows for:
 - Daytona 675:** 4 mm above the upper surface of the top yoke, as shown below.
 - Daytona 675 R:** 12 mm above the upper surface of the top yoke.
 - Street Triple, Street Triple 660 cc, Street Triple R and Street Triple Rx:** 28 mm above the lower face of the top yoke.



1. Outer tube, Daytona 675 shown

- 2. Top cap**
- 3. Top yoke**

- Tighten the lower yoke clamp bolts to **20 Nm**.
- Tighten the top yoke clamp bolts to **26 Nm**.
- For Daytona 675 and Daytona 675 R:** Tighten the handlebar clamp bolts to **26 Nm**.

Note:

- For Daytona 675, Street Triple, Street Triple 660 cc, Street Triple R and Street Triple Rx:** If the forks have been dismantled, tighten the fork top caps to **30 Nm**.
- For Daytona 675 R:** If the forks have been dismantled, tighten the fork top caps to **20 Nm**.
- For Daytona 675 and Daytona 675 R:** Attach the mounting bracket for the front brake fluid reservoir to the handlebar and tighten the fixing to **10 Nm**.
- Refit the front mudguard. Tighten the fixings to **6 Nm**.
- Attach the front brake hoses to the front mudguard as noted for removal.
- Install the front wheel (see page 15-8 for all models except Daytona 675 R, see page 15-9 for Daytona 675 R).
- Refit the front brake calipers;
 - see page 14-42 for Street Triple R and Street Triple Rx
 - see page 14-35 for Daytona 675
 - see page 14-37 for Daytona 675 R
 - see page 14-40 for Street Triple and Street Triple 660 cc.
- Lower the motorcycle to the ground and park it on the side stand.

Front Suspension

Fork Oil Change

Draining



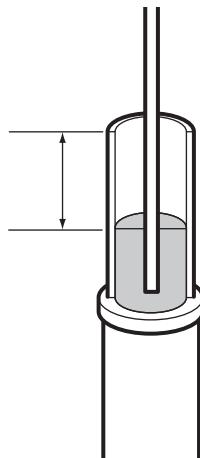
Warning

Before starting work, ensure the motorcycle is stabilised and adequately supported. This will help prevent it from falling and causing injury to the operator or damage to the motorcycle.

1. Remove the fork (see page 12-9).
2. Remove the top cap assembly (see page 12-13 for all models except Daytona 675 R, see page 12-19 for Daytona 675 R).
3. Remove the fork spring and spring spacer (see page 12-13 for all models except Daytona 675 R, see page 12-19 for Daytona 675 R).
4. Holding the inner and outer tubes together, invert the fork and pour out the fork oil into a suitable container. Pump the damper rod to remove all the oil.

Oil Refilling

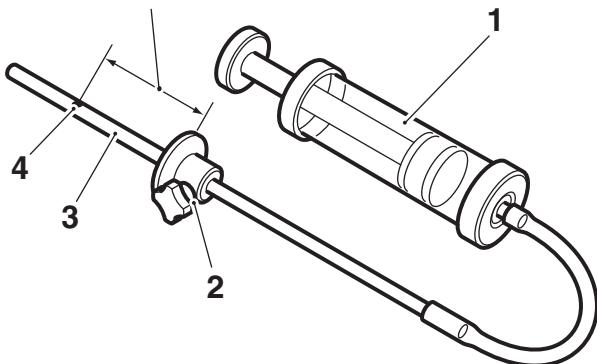
The oil level is measured from the upper surface of the fork outer tube, with the fork fully compressed and the spring removed.



For the measurement, refer to the table below

1. Fill the fork with the grade of oil specified in the fork oil table, to a level above that which will finally be required.
2. Pump the fork assembly and damper several times to expel any trapped air then fully compress the fork and support it in an upright position. Leave the fork for a few minutes to allow the oil to stabilise.
3. Refer to the fork oil level chart and set the scale on the 3880160-T0301 - Fork Filler/Evacuator to the relevant distance, as shown below.

Refer to fork oil level chart



byg

1. **3880160-T0301 - Fork Filler/Evacuator**
2. **Adjustment plate**
3. **Scale area**
4. **Hole (zero position)**

Note:

- Zero level on the tool is set at the small exit hole in the side of the scale tube, NOT AT THE END TIP. Do not attempt to block this side hole as this will cause the final fluid level to be incorrect.
- 4. Insert the scale end of the tool into the fork inner tube.
- 5. Hold the tool adjuster plate level with the upper surface of the fork inner tube and draw fluid into the syringe until fluid flow ceases (empty the syringe if the body becomes full before fluid flow stops).
- 6. The fluid level in the fork is now set to the height set on the tool scale. Check the tool scale setting and repeat the process if incorrectly set.



Warning

Incorrect fork oil levels could result in an unsafe riding condition leading to loss of control and an accident.

7. Assemble the fork (see page 12-17 for all models except Daytona 675 R, see page 12-23 for Daytona 675 R).
8. Refit the fork (see page 12-11).

Fork Oil Level Chart

Daytona 675			
Oil Level*	Oil Volume	Oil Grade	Fork Pull Through
95 mm	503 cc	Kayaba KHL15-10	Top of the outer tube 4 mm above the upper face of the top yoke
Daytona 675 R			
Oil Level*	Oil Volume	Oil Grade	Fork Pull Through
150 mm	Not specified by Öhlins	Öhlins fork oil	Top of the outer tube 12 mm above the upper face of the top yoke
Street Triple and Street Triple 660 cc			
Oil Level*	Oil Volume	Oil Grade	Fork Pull Through
86 mm	505 cc	Kayaba KHL15-10	Top of the outer tube 28 mm above the lower face of the top yoke
Street Triple R and Street Triple Rx			
Oil Level*	Oil Volume	Oil Grade	Fork Pull Through
89 mm	483 cc	Kayaba KHL15-10	Top of the outer tube 28 mm above the lower face of the top yoke

*Spring and Spring Spacer Removed and Fork Fully Compressed

Front Fork - Daytona 675, Street Triple, Street Triple 660 cc, Street Triple R and Street Triple Rx

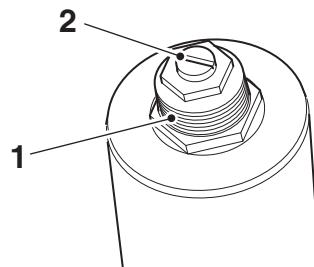
Disassembly

! Warning

Before starting work, ensure the motorcycle is stabilised and adequately supported. This will help prevent it from falling and causing injury to the operator or damage to the motorcycle.

Note:

- Before removing the forks, loosen the top cap a little to allow easier removal during strip-down.
 - The procedure for the disassembly of Daytona 675, Street Triple, Street Triple 660 cc, Street Triple R and Street Triple Rx front forks is identical unless otherwise stated.
 - The fork seals can be renewed without removal of the damper assembly. Unless removal of the damper assembly is necessary, omit items 16 and 17 of this procedure.
1. Remove the forks (see page 12-9).
 2. For Daytona 675, Street Triple R and Street Triple Rx: Turn the spring preload adjuster fully anticlockwise to the softest setting. Make a note of the number of turns to ensure the setting is retained on assembly.



cdli

1. Preload adjuster marks
2. Compression/rebound adjuster

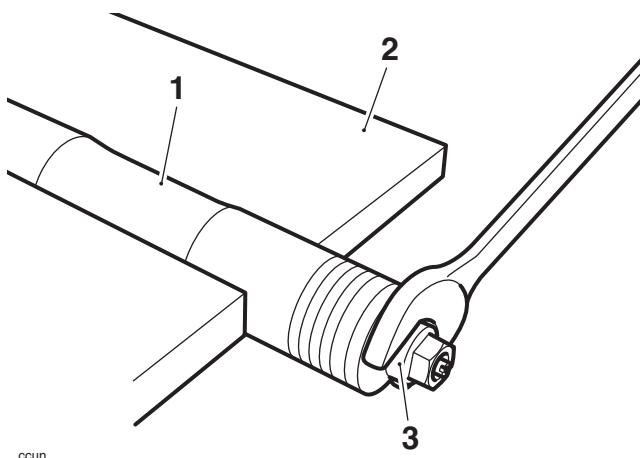
Front Suspension



Warning

Do not change the fork adjustment settings. If they are changed, this will change the handling of the motorcycle from those which the rider is used to. Riding with unfamiliar fork settings may cause unexpected handling characteristics leading to loss of motorcycle control and an accident.

- Very gently clamp the fork in the soft jawed vice to prevent it from turning, hold the outer tube, then unscrew the top cap from the outer tube.



- Fork
- Soft jaws
- Top cap



Caution

Never tightly clamp the outer tube as this will cause the tube to permanently distort. A distorted tube is not serviceable and must be replaced.

Note:

- The top cap is not under spring tension and will not spring upwards when the threads disengage.
- Holding the inner and outer tubes together, invert the fork and pour out the fork oil into a suitable container. Pump the damper rod to remove all the oil.
 - Return the fork to the soft jawed vice.



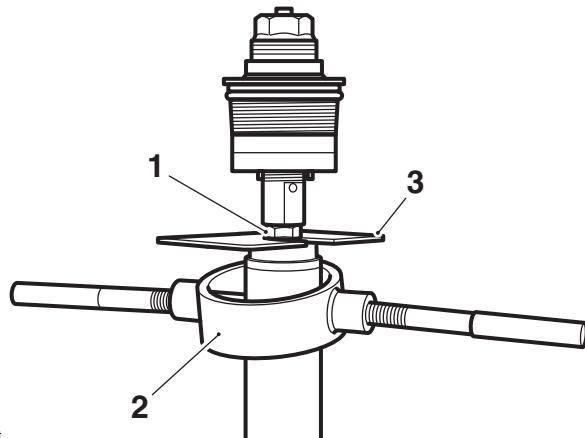
Warning

While compressing the fork spring and while the spring holder is in place always wear protective equipment for the face and eyes and never stand directly above or look directly down on the fork. If the spring compressor or holder should dislodge or detach, the resulting release of spring tension could cause parts to fly off resulting in injury to the user.

- Fit the T3880067 - Fork Spring Compressor over the top cap. Position the two adjustable arms to the holes in the spring spacer. Screw in the arms until they positively engage in the spring spacer holes.

Note:

- An assistant may be required to insert the spring holder below the damper lock nut.
- Using T3880067 - Fork Spring Compressor, manually compress the fork spring and insert the spring holder as shown, below the damper lock nut.



- Damper lock nut
 - T3880067 - Fork Spring Compressor
 - Spring holder (part of T3880067)
- Loosen the lock nut, unscrew and remove the top cap and damper rod. If necessary, remove the O-ring seal from the top cap assembly. The top cap assembly cannot be dismantled.
 - Recompress the fork spring to remove the holder.

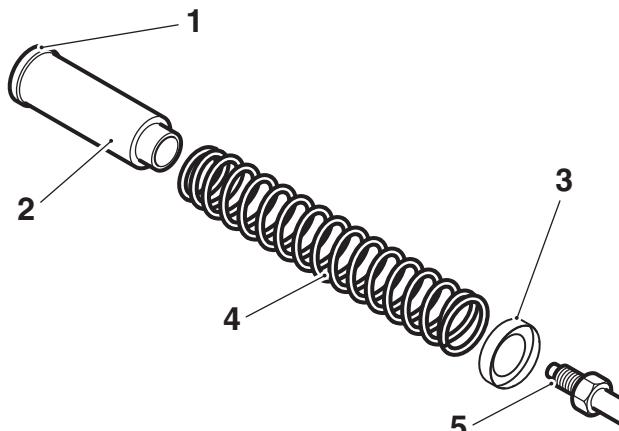


Warning

While compressing the fork spring and while the spring holder is in place always wear protective equipment for the face and eyes and never stand directly above or look directly down on the fork. If the spring compressor or holder should dislodge or detach, the resulting release of spring tension could cause parts to fly off resulting in injury to the user.

Note:

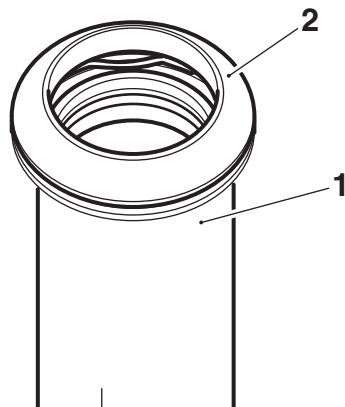
- The spring has a smaller coil diameter at its upper end. Note the orientation of the spring before removal.
- 10. Remove the upper washer, spring spacer, lower washer and spring.



cdno_1

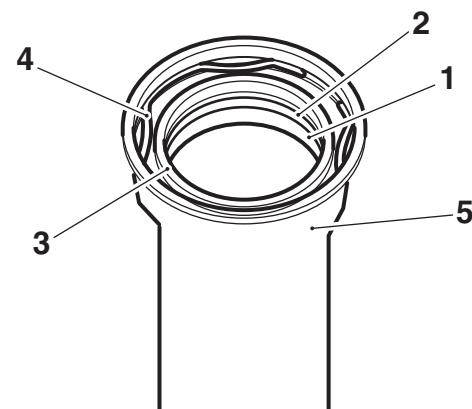
1. Upper washer
2. Spring spacer
3. Lower washer
4. Spring
5. Damper rod

11. Separate the inner and outer tubes leaving the seals and bushes in place on the outer tube.
12. Remove the dust cover from the outer tube.



1. Fork outer tube
2. Dust cover

13. Carefully remove the circlip.



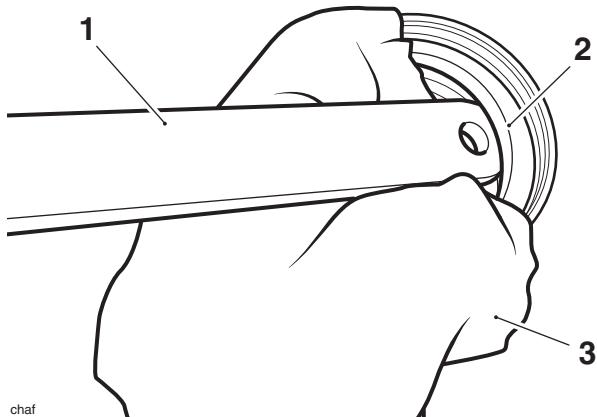
1. Bush
2. Washer
3. Oil seal
4. Circlip
5. Outer tube

Note:

- Note the orientation of the oil seal for installation.

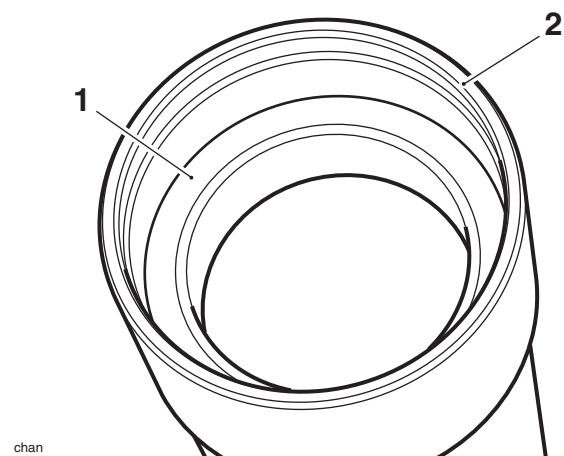
Front Suspension

14. Using the handle of the T3880162 - 17 mm U-Spanner remove the oil seal. Use a piece of cloth under the tool to prevent it from damaging the outer tube. Discard the oil seal.



chaf
1. T3880162 - 17 mm U-Spanner
2. Oil seal
3. Cloth

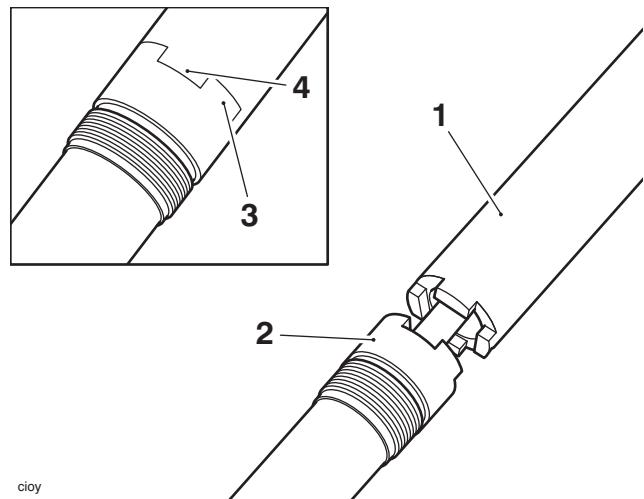
15. Remove the washer.



chan
1. Washer
2. Outer tube

16. If removal of the damper assembly is required, clamp the lower end of the front fork inner tube in a soft-jawed vice.

17. Engage the four lugs on T3880807 - Damper Assembly Tool into the four slots of the damper assembly, ensuring the lugs on the service tool fully engage into the damper lugs, and remove the damper assembly.



cioy
1. T3880807 - Damper Assembly Tool
2. Damper assembly (shown removed from front fork for clarity)
3. Lugs (on damper assembly)
4. Lugs (on T3880807)

Inspection

1. Inspect the inner tube for stone chips, scoring, scratches, excessive wear and any other damage. Renew as necessary.

Note:

- Small inclusions in the inner tube may be removed using a fine grade stone or similar.
- 2. Inspect the spring for damage, cracks and deformation. Renew the spring if necessary.
- 3. Inspect the dust seal for damage. Renew if necessary.

Assembly**Warning**

The front forks comprise of many precision machined parts. Total cleanliness must be observed at all times and assembly must take place in a dirt/dust-free environment.

Dirt ingress may cause damage to the fork parts, leading to incorrect operation, instability, loss of motorcycle control and an accident.

1. If the damper assembly has been removed, reinstall as follows:
Apply two drops of ThreeBond 1344 to the threads of the damper assembly.

**Caution**

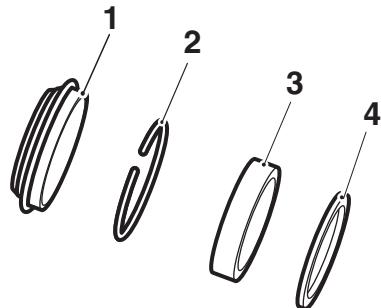
Do not allow the ThreeBond to cure during the tightening sequence of the damper assembly described below.

The tightening sequence must take place immediately after applying ThreeBond to the threads of the damper assembly.

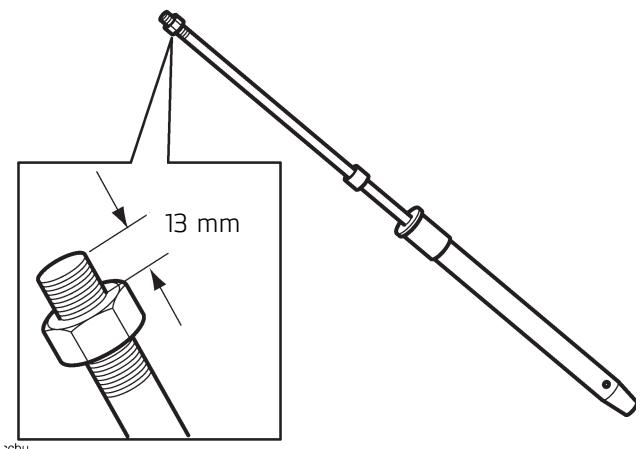
Note:

- **The tightening of the damper assembly must be carried out in the following sequence. This will ensure that the damper assembly is in the centre of the fork inner tube.**
2. Using T3880807 - Damper Assembly Tool fit the damper assembly to the retaining ring and tighten it in the following sequence:
 - Tighten to **60 Nm**.
 - Loosen the damper assembly.
 - Tighten to **60 Nm**.
 - Loosen the damper assembly.
 - Tighten to **60 Nm**.
 3. Apply a smear of fork oil to the seals.
 4. Fit the washer into the outer tube.
 5. Press the new oil seal into the outer tube using finger pressure only in the orientation noted for removal. Secure in position with a new circlip.

6. Press the dust seal back into the outer tube using finger pressure only.



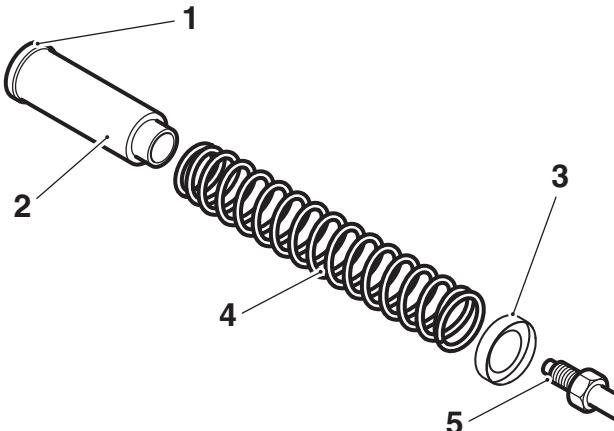
1. Dust seal
2. Circlip
3. Oil seal
4. Washer
7. Position the inner tube assembly to the outer, ensuring that the oil and dust seal lips do not become damaged.
8. Fill the fork with oil (see page 12-12).
9. Position the fork assembly as for compression of the fork spring during strip down.
10. **Daytona 675, Street Triple R and Street Triple Rx only:** Adjust the damper rod lock nut leaving **13 mm** of the damper rod exposed above the nut.



11. **Street Triple and Street Triple 660 cc only:** Screw the damper rod lock nut to the bottom of the damper rod threads.

Front Suspension

12. Refit the fork spring, close wound end uppermost, lower washer, spring spacer and upper washer.
14. Refit the T3880067 - Fork Spring Compressor as previously described, compress the fork spring and refit the spring holder.



cdno_1

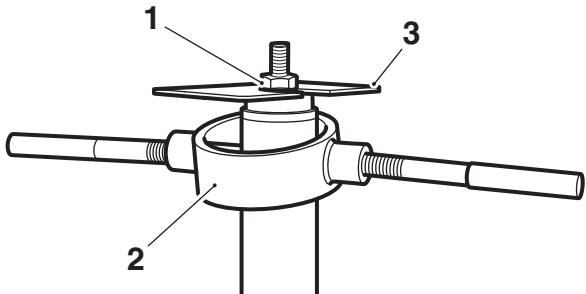
1. Upper washer
2. Spring spacer
3. Lower washer
4. Spring
5. Damper rod

13. Attach the 3880085-T0301 - Fork Piston Holder to the threads of the damper rod and pull the damper upwards.



Warning

While re-compressing the fork spring and while the spring holder is in place always wear protective equipment for the face and eyes and never stand directly above or look directly down on the fork. If the spring compressor or holder should dislodge or detach, the resulting release of spring tension could cause parts to fly off resulting in injury to the user.



1. Damper lock nut
2. T3880067 - Fork Spring Compressor
3. Spring holder (part of T3880067)

15. Remove the T3880067 - Fork Spring Compressor from the damper rod.



Caution

If removed, the damping rod lock nut must be fitted with the flat face facing to the top of the fork. The slightly tapered face must face the fork spring. Incorrect orientation may lead to a loosening of the lock nut.

16. Fit a new O-ring to the top cap.
17. **Daytona 675, Street Triple R and Street Triple Rx only:** Ensure the damping adjuster rod is installed into the damper rod.
18. **All models:** Refit the top cap to the damper rod.
19. **Daytona 675, Street Triple R and Street Triple Rx only:** Ensure the damper rod thread is screwed into the top cap to a depth of **13 mm**, as set by the lock nut at step 10.
20. **Street Triple and Street Triple 660 cc only:** Screw the top cap fully on the damper rod.
21. **All models:** Hold the top cap while tightening the damper rod lock nut to **17 Nm**.



Warning

While compressing the fork spring and while the spring holder is in place always wear protective equipment for the face and eyes and never stand directly above or look directly down on the fork. If the spring compressor or holder should dislodge or detach, the resulting release of spring tension could cause parts to fly off resulting in injury to the user.

22. Recompress the spring to remove the spring holder.
23. Lubricate the O-ring on the top cap with a smear of fork oil then screw the top cap fully into the outer tube.
24. Tighten the top cap to **30 Nm**.

Note:

- **It is much easier to tighten the top cap when the fork has been refitted.**
25. Refit the fork (see page 12-11).

Front Fork - Daytona 675 R

Disassembly



Warning

If the damping cylinder is to be removed, we recommend that one fork is disassembled and assembled prior to starting work on the other.

The damping cylinder in the left hand fork is for compression damping while the damping cylinder in the right hand fork is for rebound damping. Should these damping components get fitted to the wrong fork, the front suspension will not function correctly and may lead to loss of motorcycle control and an accident.



Warning

Before starting work, ensure the motorcycle is stabilised and adequately supported. This will help prevent it from falling and causing injury to the operator or damage to the motorcycle.



Warning

The front forks comprise many precision machined parts. Total cleanliness must be observed at all times and disassembly/assembly must take place in a dirt/dust-free environment.

Dirt ingress may cause damage to the fork parts, leading to incorrect operation, instability, loss of control or an accident.

Note:

- **Before removing the forks, loosen the top cap a little (using T3880161 - Top Nut Socket) to allow easier removal during the strip down.**
- **The fork seals can be renewed without the removal of the damping cylinder. Unless the removal of the damping cylinder is necessary, omit steps 15 to 20 of this procedure.**

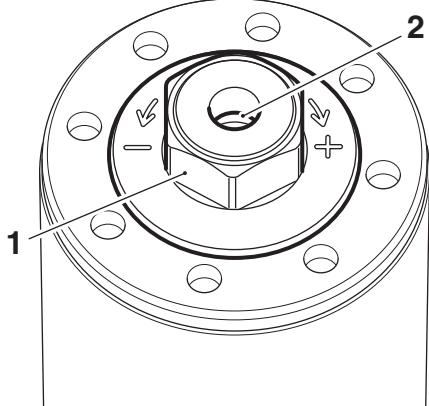


Caution

Care must be taken when turning the spring pre-load adjuster to ensure that it does not become scratched. Protect its surfaces with a suitable cloth or tape to prevent scratching.

Front Suspension

- Turn the spring pre-load adjuster fully anticlockwise to the softest setting. Make a note of the number of turns to ensure the setting is retained on re-assembly.
- Very gently clamp the fork bottom end in a soft jawed vice. Hold the outer tube and using the T3880161 - Top Nut Socket, unscrew the top cap from the outer tube.



- cgzz
1. Spring preload adjuster
2. Compression/rebound adjuster
- Remove the forks (see page 12-9).

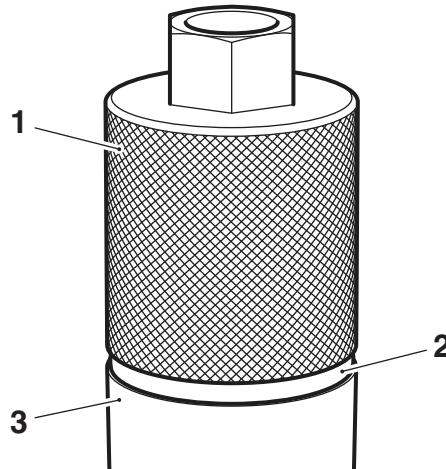


Warning

Do not change the fork adjustment settings. If they are changed, this will change the handling of the motorcycle from those which the rider is used to. Riding with unfamiliar fork settings may cause unexpected handling characteristics leading to loss of motorcycle control and an accident.

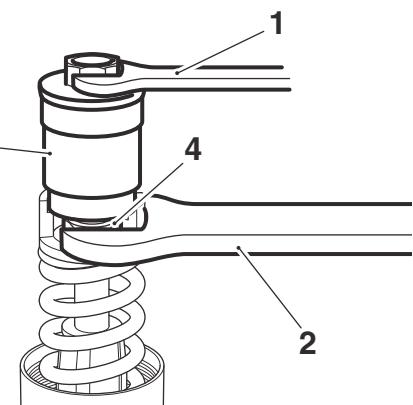
Note:

- The top cap is not under spring tension and will not spring upwards when the threads disengage.



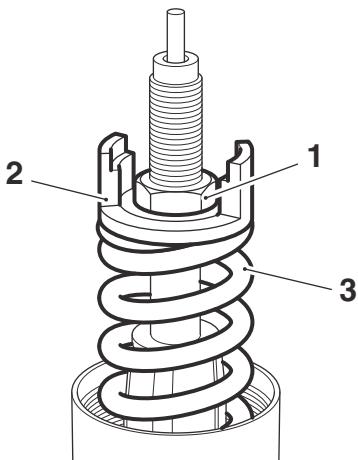
- chaa
1. T3880161 - Top Nut Socket
2. Top cap
3. Outer tube

- Use a 17 mm open ended spanner to hold the top cap, and use the T3880162 - 17 mm U-Spanner to loosen the lock nut then remove the top cap.



- chac_1
1. 17 mm spanner
2. T3880162 - 17 mm U-Spanner
3. Top cap
4. Lock nut

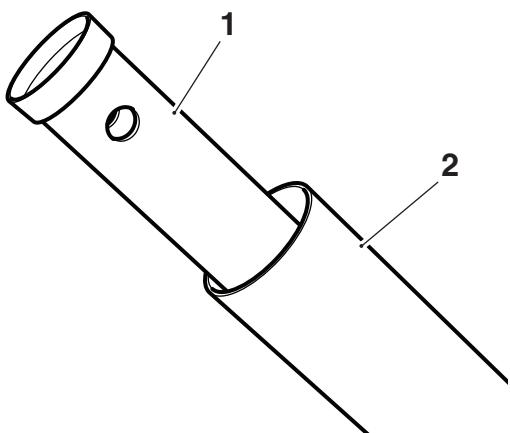
5. Remove the lock nut, upper seat and the spring.



chab

1. Lock nut
2. Upper seat
3. Spring

6. Using a length of steel wire with a hook in one end, remove the spring spacer.



chap

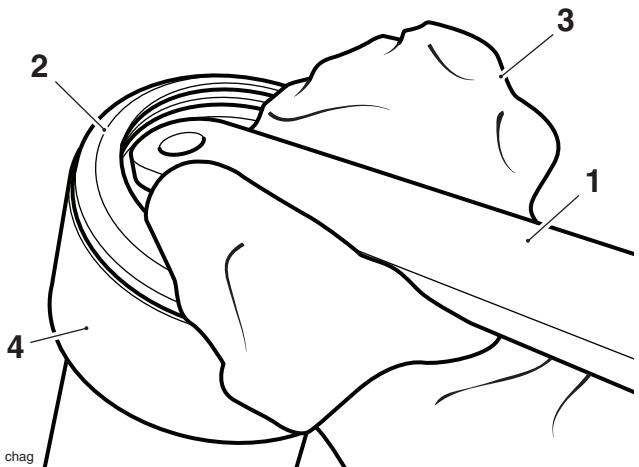
1. Spring spacer
2. Outer tube

7. Remove the fork from the vice.

Note:

- While pouring out the fork oil, be aware that the adjustment rod, its needle and spring may also come out.
8. Holding the inner and outer tubes together, invert the fork and pour out the fork oil into a suitable container. Pump the damper rod to remove all the oil.
9. Return the fork bottom end to the soft jawed vice.
10. Carefully separate the inner and outer tube leaving the seals and bushes in place on the outer tube.

11. Using the handle of the T3880162 - 17 mm U-Spanner remove the dust seal from the outer tube as shown below. Use a piece of cloth under the tool to prevent it from damaging the outer tube.



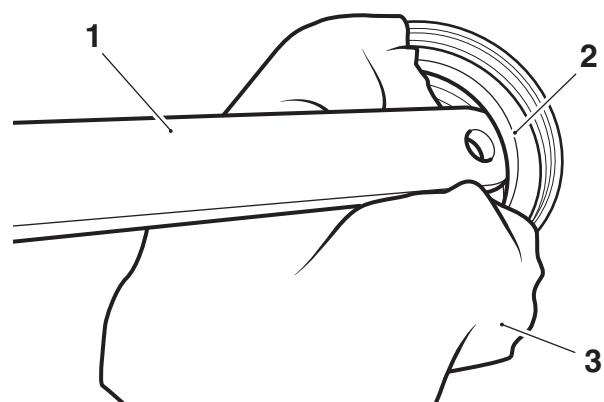
chag

1. T3880162 - 17 mm U-Spanner
2. Dust seal
3. Cloth
4. Outer tube

12. Using a suitable small screwdriver, remove the circlip.

Note:

- Note the orientation of the oil seal for installation.
13. Using the handle of the T3880162 - 17 mm U-Spanner remove the oil seal. Use a piece of cloth under the tool to prevent it from damaging the outer tube.

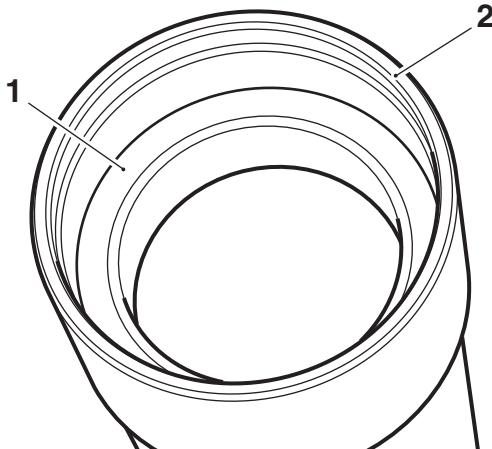


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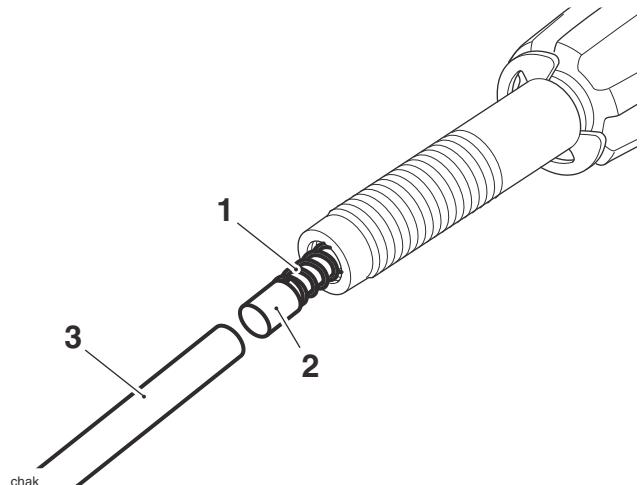
1. T3880162 - 17 mm U-Spanner
2. Oil seal
3. Cloth

Front Suspension

14. Remove the washer.
16. Remove the adjustment rod, valve and spring from the damping rod.



chan
1. Washer
2. Outer tube



chak
1. Adjustment rod
2. Valve
3. Spring

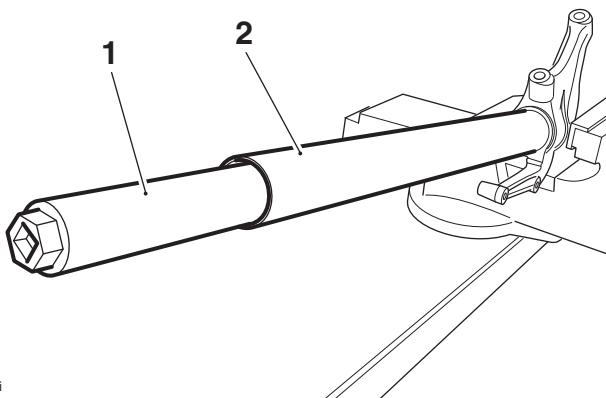


Warning

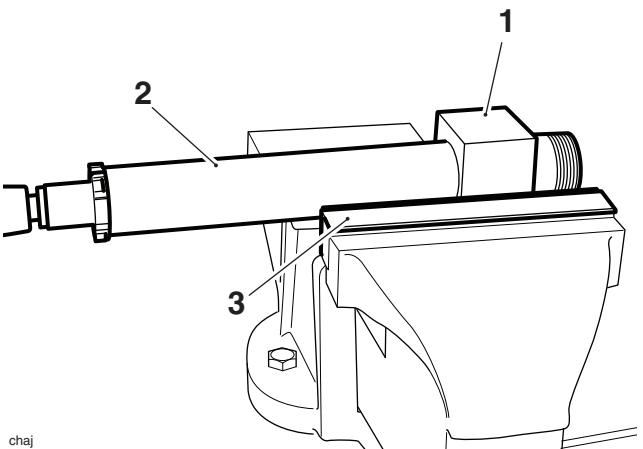
If the damping cylinder is to be removed, we recommend that one fork is disassembled and assembled prior to starting work on the other.

The damping cylinder in the left hand fork is for compression damping while the damping cylinder in the right hand fork is for rebound damping. Should these damping components get fitted to the wrong fork, the front suspension will not function correctly and may lead to loss of motorcycle control and an accident.

15. Insert the T3881005 - Öhlins Cap/Cartridge Tool over the damping cylinder, engage the lugs on the tool into the slots in the damping cartridge inside the fork. Unscrew the cartridge and remove it from the fork.

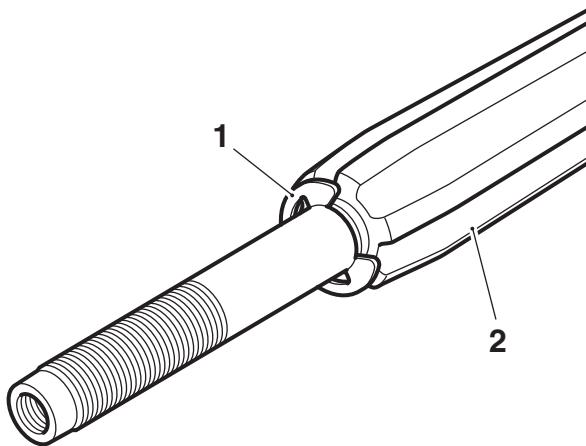


chai
1. T3881005 - Öhlins Cap/Cartridge Tool
2. Inner tube



chaj
1. T3881003 - Öhlins Piston Shaft Clamp
2. Damping cylinder
3. Soft jawed vice

18. Remove the E-clip and then the spring guide. Discard the E-clip.

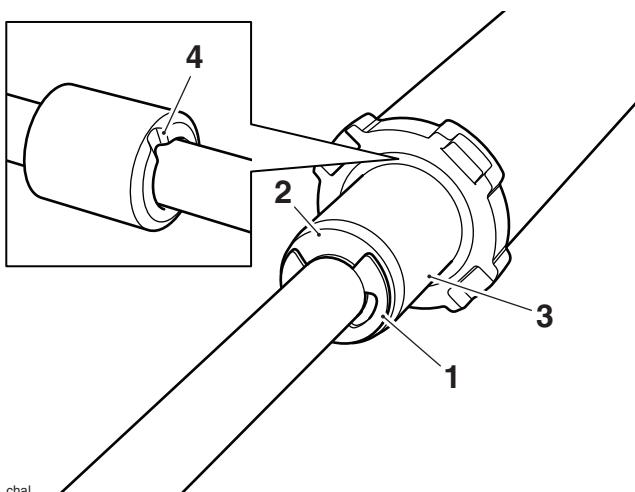


chak

1. E-clip
2. Spring guide

Note:

- Note one end of the rubber stop has a cut away in it. Note orientation of the rubber stop and washer for installation.**
19. Remove the E-clip, washer and rubber stop. Discard the E-clip.

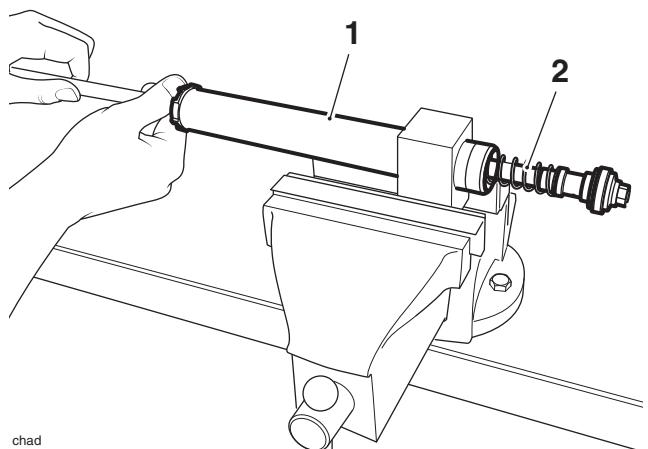


- chal
1. E-clip
2. Washer
3. Rubber stop
4. Cut away

Note:

- Note the orientation of the damping rod for installation.**

20. Push the damping rod into the cylinder and remove it from the other end.



chad

1. Damping cylinder
2. Damping rod

Inspection

- Inspect the inner tube for stone chips, scoring, scratches, excessive wear and any other damage. Renew as necessary.

Note:

- Small inclusions in the inner tube may be removed using a fine grade stone or similar.**
- Inspect the spring for damage, cracks and deformation. Renew the spring if necessary.
- Inspect the seals for damage. Renew any damaged seals as necessary.

Assembly

Warning

The front forks comprise many precision machined parts. Total cleanliness must be observed at all times and disassembly/assembly must take place in a dirt/dust-free environment.

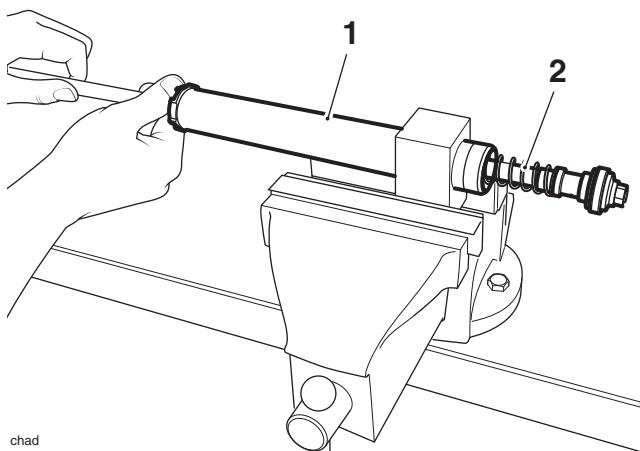
Dirt ingress may cause damage to the fork parts, leading to incorrect operation, instability, loss of control or an accident.

Note:

- If the damping cylinder has not been removed omit steps 1 to 6.**

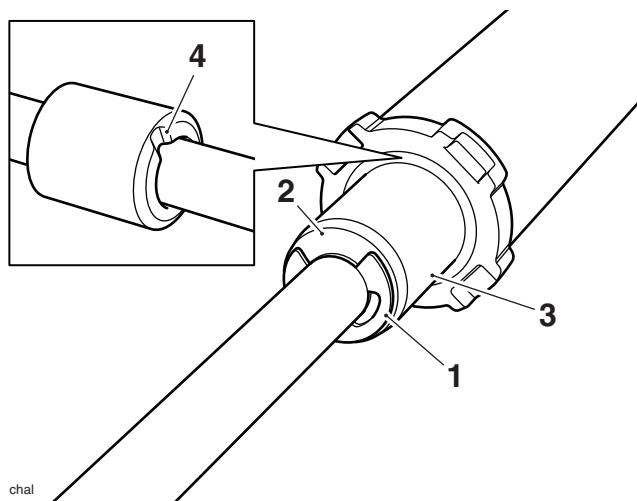
Front Suspension

- Carefully fit the damping rod into the damping cylinder as noted for removal.
- Fit the spring guide and secure into position with a new E-clip.

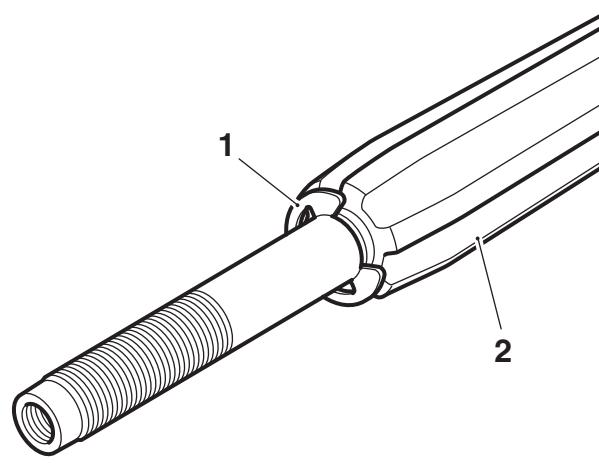


1. Damping cylinder
2. Damping rod

- Fit the rubber stop and washer to the damping rod as noted for removal. Secure in position with a new E-clip.

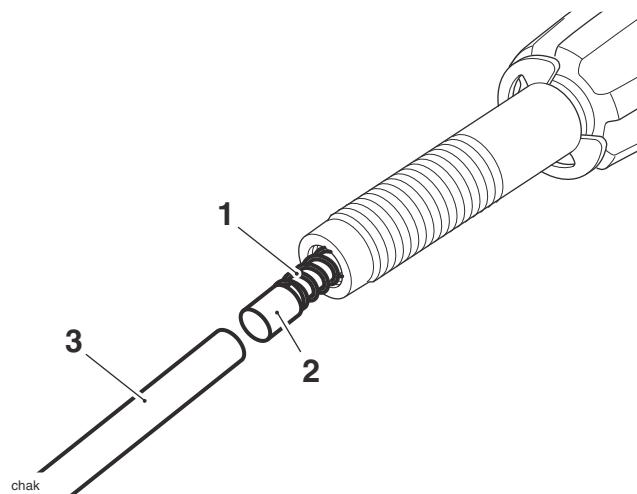


1. E-clip
2. Washer
3. Rubber stop
4. Cut away



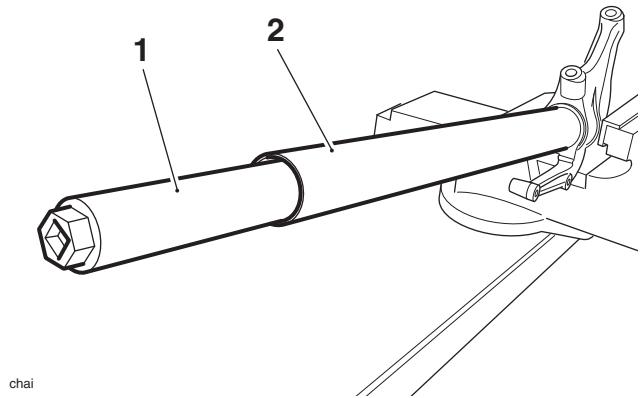
1. E-clip
2. Spring guide

- Fit the spring, valve and adjustment rod into the damping rod as noted for removal.



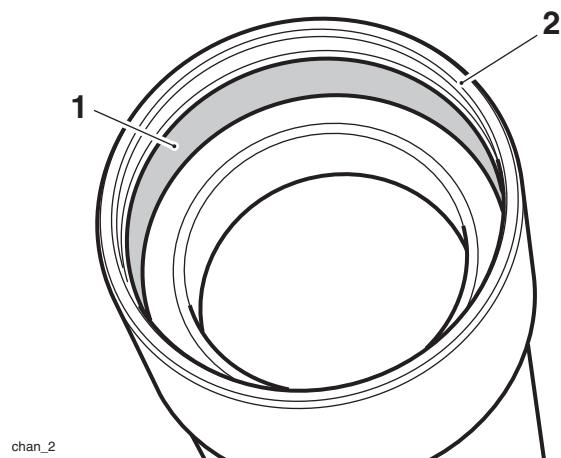
1. Spring
2. Valve
3. Adjustment rod

5. Remove the T3881003 - Öhlins Piston Shaft Clamp and damping cylinder from the vice and remove the tool from the cylinder.
6. Fit the damping cylinder into the inner tube and tighten to **40 Nm** using the T3881005 - Öhlins Cap/Cartridge Tool and a torque wrench.



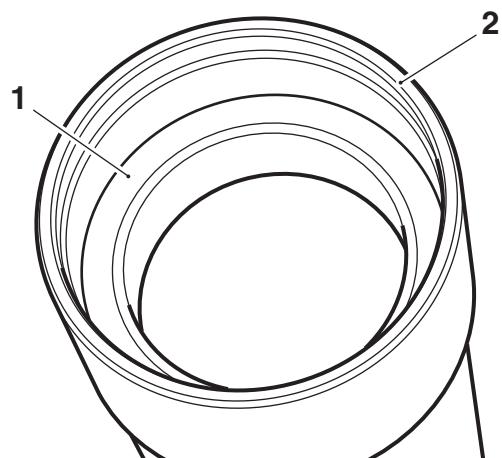
chai
1. T3881005 - Öhlins Cap/Cartridge Tool
2. Inner tube

7. Apply a thin coating of Öhlins grease (part number T2041077) to the inner surface of the outer tube in the area where the seal is to be fitted.



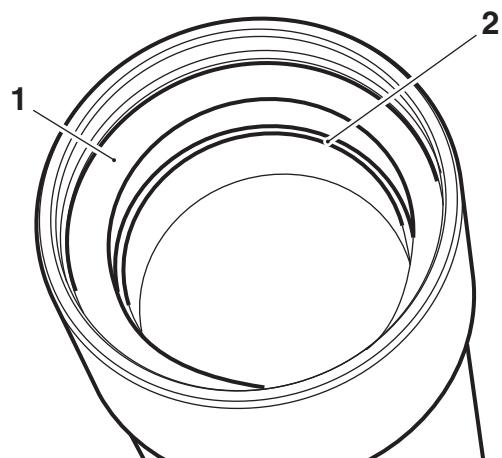
chan_2
1. Area to be greased
2. Outer tube

8. Fit the washer into the outer tube.



chan
1. Washer
2. Outer tube

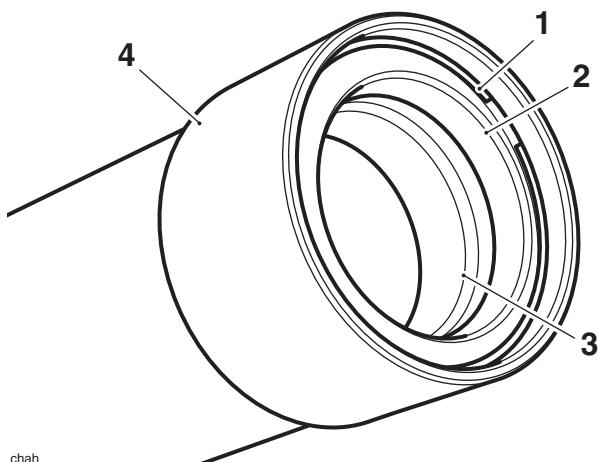
9. Press the oil seal into the outer tube using finger pressure only in the orientation noted for removal.



chan_1
1. Oil seal
2. Washer

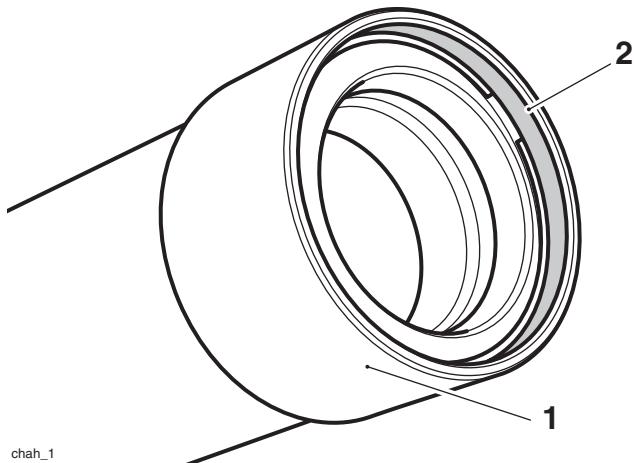
Front Suspension

10. Fit the circlip to the outer tube.



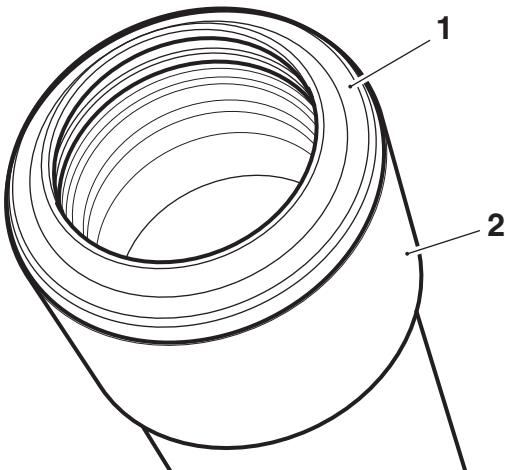
chah
1. Circlip
2. Oil seal
3. Washer
4. Outer tube

11. Apply a thin coating of Öhlins grease (part number T2041077) to the inner surface of the outer tube in the area where the dust seal is to be fitted.



chah_1
1. Area to be greased
2. Outer tube

12. Press the dust seal back into the outer tube using finger pressure only.



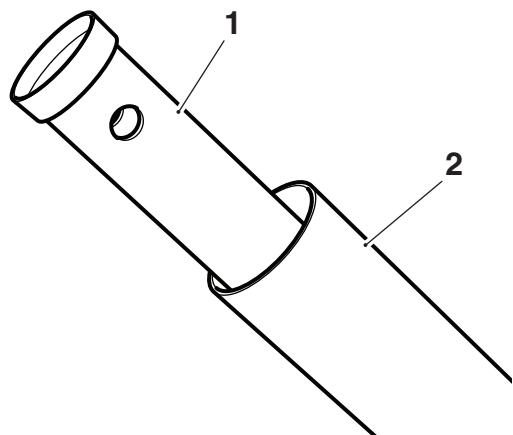
chao
1. Dust seal
2. Outer tube

13. Apply a light coating of fork oil to the outer surface of the inner tube, then carefully fit the outer tube over the inner tube.

14. Pour 500 ml of Öhlins fork oil into the inner tube. Push the damping rod up and down until the fork is filled with oil.

15. Compress the fork leg and damper rod completely and adjust the fork oil level to 150 mm below the upper edge of the outer tube (see page 12-12).

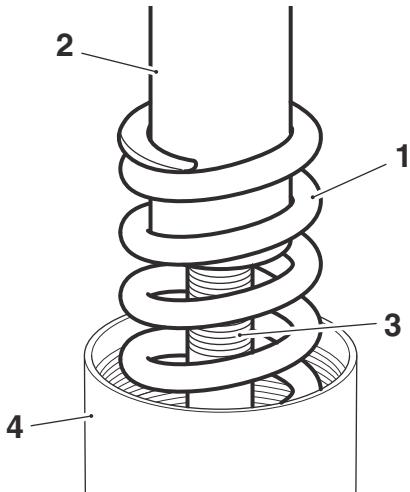
16. Fit the spring spacer into the outer tube.



chap
1. Spring spacer
2. Outer tube

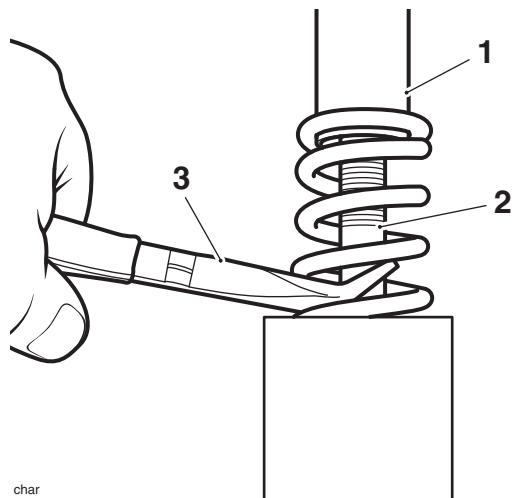
Front Suspension

17. Very gently clamp the fork bottom end in a soft jawed vice.
18. Fit the spring into the inner tube.
19. Attach the T3880163 - Rod, Pull Up to the threads of the damping rod and pull it fully upwards.



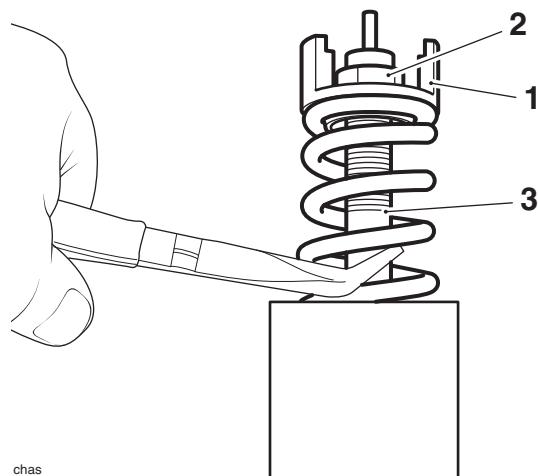
- chaq
1. Spring
 2. T3880163 - Rod, Pull Up
 3. Damping rod
 4. Outer tube

20. Using a suitable pair of pliers, carefully hold the damping rod in position without touching the outer tube. Remove tool T3880163.



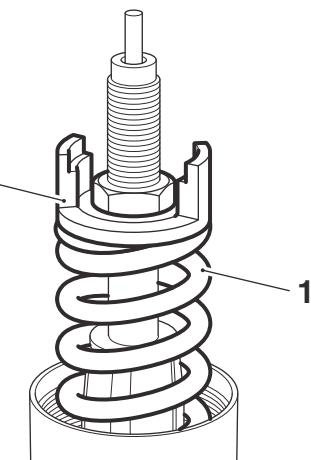
- char
1. T3880163 - Rod, Pull Up
 2. Damping rod
 3. Pliers

21. While holding the damping rod, fit the upper seat and its lock nut to the damping rod, as shown below.



- chas
1. Upper seat
 2. Lock nut
 3. Damping rod

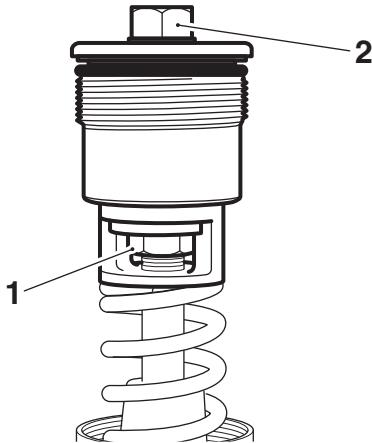
22. Turn the lock nut fully onto the damping rod. Ensure that the spring remains seated to its upper seat as shown below.



- chat
1. Spring
 2. Upper seat

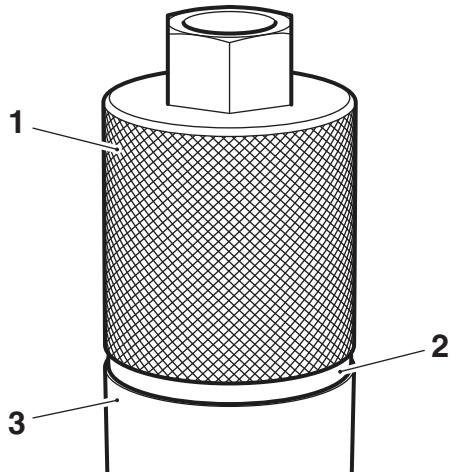
Front Suspension

23. Fit the top cap fully onto the damping rod, ensure that the damping rod is screwed fully into the cap. Then tighten the lock nut to **20 Nm**.



1. Lock nut
2. Top cap

24. Push the top cap into the outer tube. Use the T3880161 - Top Nut Socket to tighten hand tight.



1. T3880161 - Top Nut Socket
2. Top cap
3. Outer tube

Note:

- **It is much easier to finally tighten the top cap when the fork has been fitted.**
25. Refit the fork (see page 12-11).
26. Tighten the top cap to **20 Nm**.
27. Adjust the spring preload as noted for removal.
28. Adjust the compression and damping rebound as described in the Owner's Handbook.

Headstock Bearing Check/Adjustment

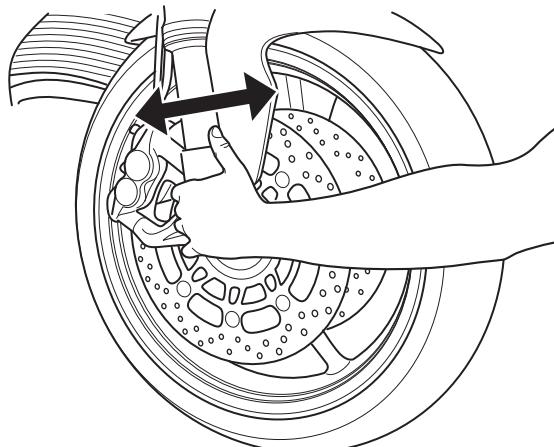
Check

1. Raise and support the front of the motorcycle.



Warning

Before starting work, ensure the motorcycle is stabilised and adequately supported. This will help prevent it from falling and causing injury to the operator or damage to the motorcycle.



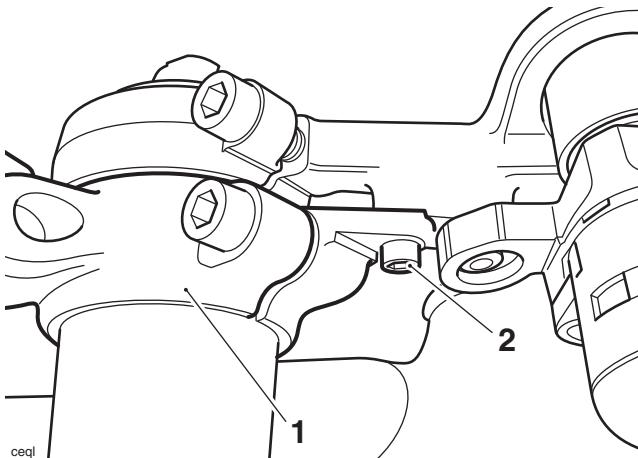
cdlh_1

Checking Headstock Bearing Adjustment

2. Hold the bottom end of the front forks as illustrated and rock with a front-to-rear motion. If free play can be detected, the headstock bearings require adjustment.

Adjustment - Daytona 675 and Daytona 675 R

1. Raise and support the front of the motorcycle.
2. Release the fixing securing each handlebar to the top yoke.



1. Handlebar (right hand shown)
2. Fixing



Caution

To prevent paint damage, do not spill brake fluid onto any area of the bodywork. Spilled brake fluid will damage paintwork.

3. Detach the bracket for the front brake fluid reservoir from the handlebar. Taking care not to invert the brake fluid reservoir, move it to one side.
4. Loosen the top yoke clamp bolts.



Warning

If the lower yoke fixings are also loosened, the forks will no longer support the weight of the motorcycle.

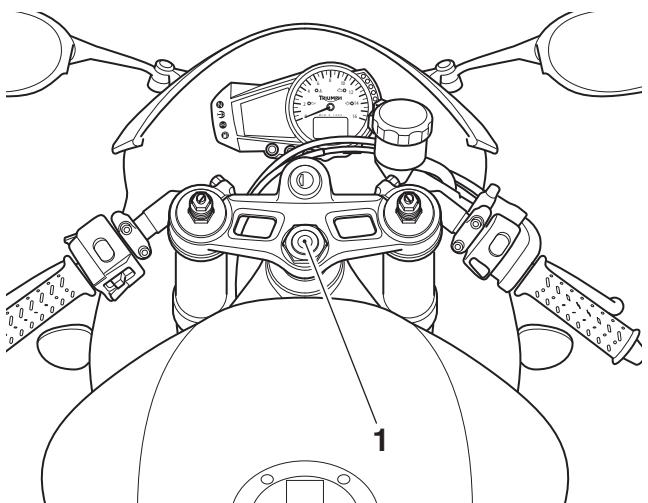
Do not loosen the lower yoke fixings as, in this condition, the motorcycle could topple over causing damage and/or risk of injury.



Caution

Care must be taken when removing the headstock top nut, to ensure that the top nut and top yoke do not become scratched. Protect the surfaces with a suitable cloth or tape to prevent scratching.

5. Remove the headstock top nut.



1. Headstock top nut (Daytona 675 shown)

6. Ease the top yoke from the forks and support while detached.

Note:

- When adjusting the bearing free play, ensure that the threaded part of the stem is free from grease.
- 7. Adjust the bearing free play as follows, all using the T3880023 - Adjuster Socket 50 mm:
 - Remove the lock nut and tab washer. Discard the washer.
 - Thoroughly clean the threads on the steering stem.
 - Loosen the adjuster nut then tighten to **40 Nm**.
 - Loosen the adjuster nut, then retighten to **15 Nm**.
 - Fit a new tab washer and the lock nut.

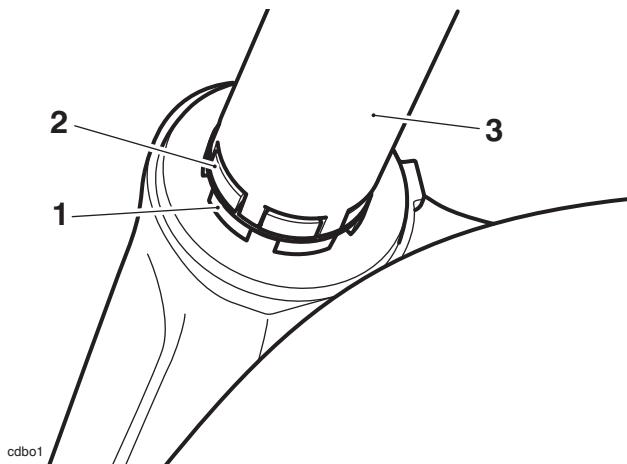


Warning

It is essential that the adjuster nut is not overtightened. If the adjuster nut is over-tightened it will cause a pre-load on the headstock bearings. This will introduce tight steering, which could cause loss of control and an accident.

Front Suspension

- Hold the adjuster nut in position while tightening the lock nut to **40 Nm**.



1. Adjuster nut
2. Lock nut
3. T3880023 - Adjuster Socket 50 mm
8. Refit the top yoke to the forks.
9. Fit the top nut and tighten to **90 Nm**.
10. Install the handlebar to top yoke fixings and tighten to **5 Nm**.
11. Tighten the top yoke clamp bolts to **26 Nm**.
12. Fit the bracket for the front brake fluid reservoir and tighten the fixing to **10 Nm**.
13. Recheck the bearing adjustment (see page 12-28).

Adjustment - Street Triple, Street Triple 660 cc, Street Triple R and Street Triple Rx

1. Raise and support the front of the motorcycle.
2. Release the fixings securing the handlebar clamps to the risers, detach the clamps and release the handlebar.
3. As an assembly, raise the handle bars until clear of the top yoke. Rest the assembly forward of the steering stem such that access to the headstock top nut and the adjustment nuts is unrestricted. Ensure the master cylinder remains in an upright position.
4. Loosen the top yoke clamp bolts.



Warning

If the lower yoke fixings are also loosened, the forks will no longer support the weight of the motorcycle.

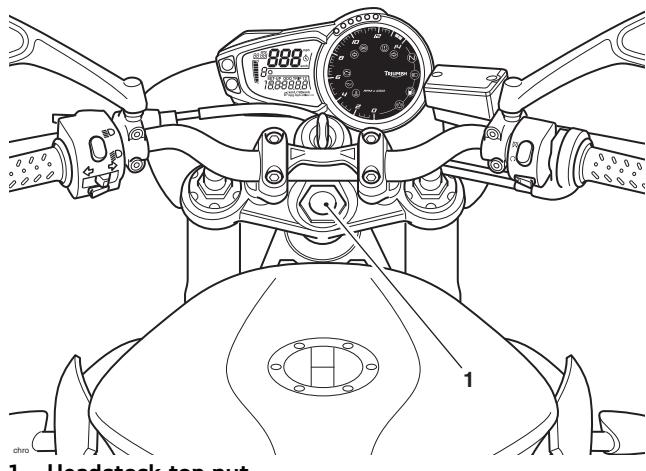
Do not loosen the lower yoke fixings as, in this condition, the motorcycle could topple over causing damage and/or risk of injury.



Caution

Care must be taken when removing the headstock top nut, to ensure that the top nut and top yoke do not become scratched. Protect the surfaces with a suitable cloth or tape to prevent scratching.

5. Remove the headstock top nut.



1. Headstock top nut

6. Ease the top yoke from the forks and support while detached.

Note:

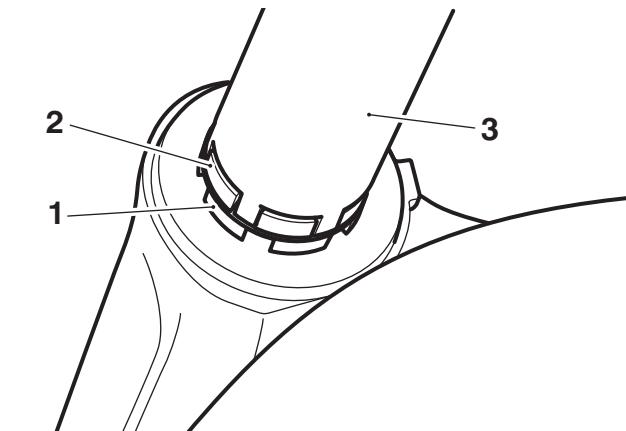
- When adjusting the bearing free play, ensure that the threaded part of the stem is free from grease.
- 7. Adjust the bearing free play as follows, all using the T3880023 - Adjuster Socket 50 mm:
 - Remove the lock nut and tab washer. Discard the washer.
 - Thoroughly clean the threads on the steering stem.
 - Loosen the adjuster nut then tighten to **40 Nm**.
 - Loosen the adjuster nut, then retighten to **10 Nm**.
 - Fit a new tab washer and the lock nut.



Warning

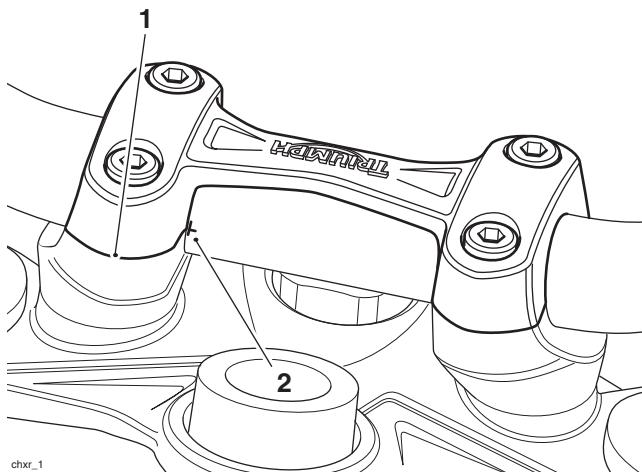
It is essential that the adjuster nut is not overtightened. If the adjuster nut is over-tightened it will cause a pre-load on the headstock bearings. This will introduce tight steering, which could cause loss of control and an accident.

- Hold the adjuster nut in position while tightening the lock nut to **40 Nm**.



- 1. Adjuster nut**
- 2. Lock nut**
- 3. T3880023 - Adjuster Socket 50 mm**

- Refit the top yoke assembly to the forks.
- Fit the top nut and tighten to **90 Nm**.
- Tighten the top yoke clamp bolts to **26 Nm**.
- Locate the handlebar assembly in the lower halves of the clamps. Fit the upper clamps and bolts.
- Align the handlebar alignment mark with the front split line of the right hand riser.
- For Street Triple, Street Triple 660 cc, Street Triple R and Street Triple Rx:** Tighten the front clamp bolts to **26 Nm**, then the rears.



- 1. Right hand split line**
- 2. Alignment mark (Street Triple shown)**

- Recheck the bearing adjustment (see page 12-28).

Headstock Bearing

Removal



Warning

Before starting work, ensure the motorcycle is stabilised and adequately supported. This will help to prevent it falling and causing injury to the operator or damage to the motorcycle.

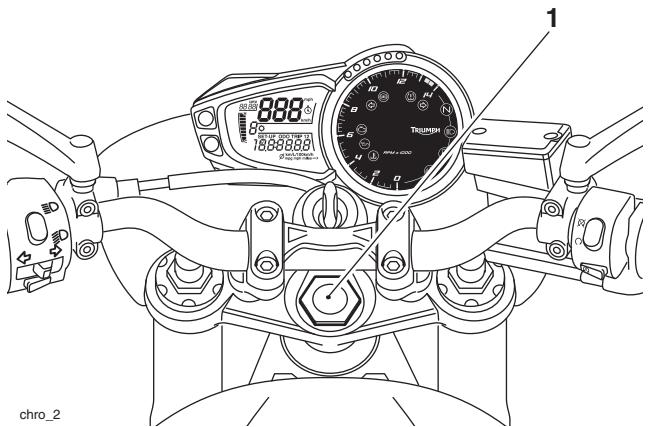
- For Daytona 675 and Daytona 675 R:** Remove the steering damper (see page 12-33).
- Remove both forks (see page 12-9).



Caution

Care must be taken when removing the headstock top nut, to ensure that the top nut and headstock do not become scratched. Protect the surfaces with a suitable cloth or tape to prevent scratching.

- Remove the headstock top nut.

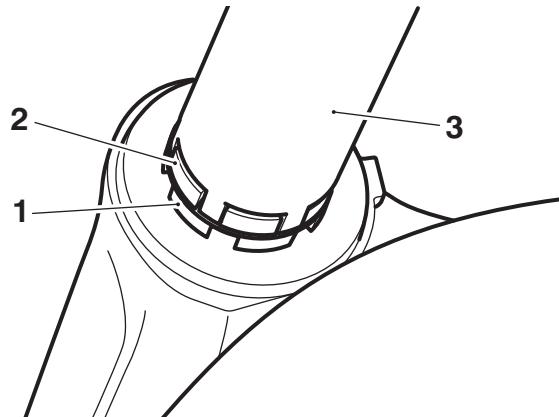


- 1. Headstock top nut (Street Triple shown)**

- As an assembly, raise the top yoke and handle bars until clear of the steering stem. Rest the assembly forward of the steering stem such that access to the adjustment nuts is unrestricted. Ensure the master cylinder remains in an upright position.

Front Suspension

- Using the T3880023 - Adjuster Socket 50 mm, remove the lock nut and tab washer. Discard the tab washer.



1. **Adjuster nut**
2. **Lock nut**
3. **T3880023 - Adjuster Socket 50 mm**
6. Using the same tool, remove the adjuster nut.
7. Remove the lower yoke from below the frame headstock.



Warning

Always wear eye, hand and face protection when using a hammer and drift. Use of a hammer and drift can cause bearings to fragment. Pieces of fragmented bearing could cause eye and soft tissue injuries if suitable protective apparel is not worn.

8. Using a suitable drift, evenly and progressively drive the bearing races from the frame headstock.
9. Remove the inner race and dust seal from the lower yoke using a press or puller.

Inspection



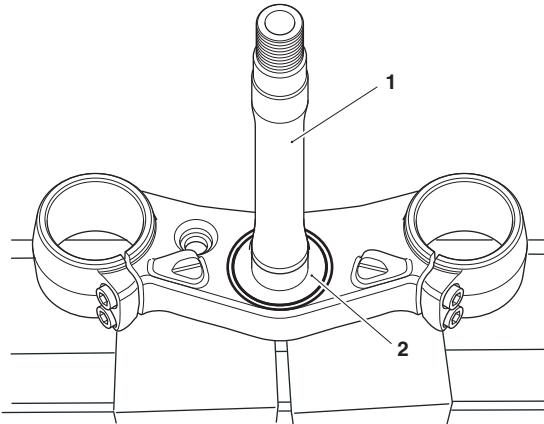
Warning

Only remove raised witness marks from within the frame. Removal of material below any raised areas will reduce the level of interference between the frame and the bearings. Loss of interference could cause the bearing to become loose in the frame leading to loss of motorcycle control and an accident.

1. Examine the frame for any raised witness marks caused by the removal process. Remove any such marks with fine emery paper or a gentle file.

Installation

1. Fit a new dust seal to the steering stem on the lower yoke.



chxt_1

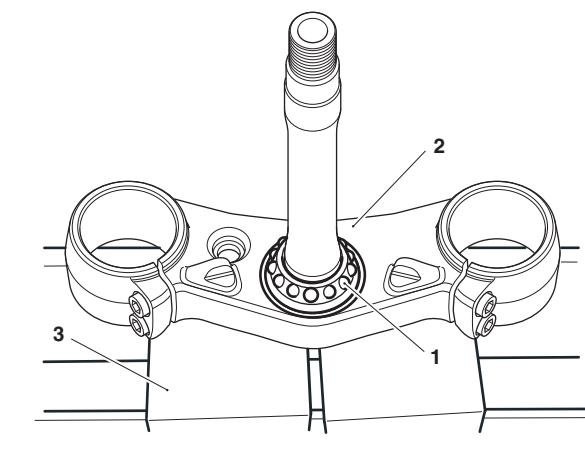
1. **Steering stem**
2. **Dust seal**



Caution

Protect the threads of the lower yoke when using a press or puller as damaged threads may mean replacing the yoke completely.

2. Press a new lower bearing inner race onto the steering stem of the lower yoke.



chxt
1. Bearing

2. Lower yoke

3. Press bed

3. Evenly and progressively drive a new complete upper bearing into the frame headstock.
4. Lubricate the lower bearing using grease to NLGI 2 specification.
5. Drive a new lower outer bearing into the frame headstock.
6. Lubricate the upper bearing using grease to NLGI 2 specification.
7. Insert the lower yoke to the frame, fit the upper bearing and race, and retain with the adjuster nut.
8. Ensure that the threads on the steering stem are free from grease and adjust the headstock bearings (see page 12-28).
9. Locate the upper yoke to the steering stem. Install but do not fully tighten the headstock top nut at this stage.
10. Fit the forks (see page 12-11).
11. Tighten the headstock top nut to **90 Nm**.
12. **For Daytona 675 and Daytona 675 R:** Refit the steering damper (see page 12-34).
13. If removed, refit the wire guide and tighten its fixing to **6 Nm**.
14. Check that no freeplay exists in the headstock bearings. Adjust as necessary (see page 12-28).

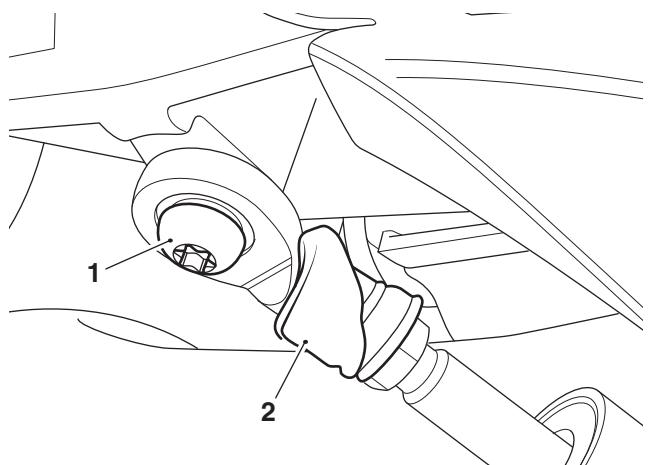
Steering Damper - Daytona 675 and Daytona 675 R only

Removal

! Warning

Before starting work, ensure the motorcycle is stabilised and adequately supported. This will help to prevent it falling and causing injury to the operator or damage to the motorcycle.

1. Remove the cockpit (see page 16-36).
2. Reposition the damper rod boot and remove the steering damper lower fixing. Noting its position, collect the steel washer located between the damper and the air intake duct.

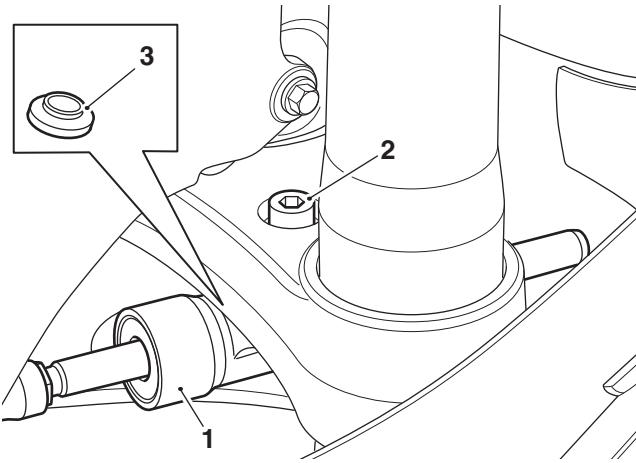


1. Steering damper lower fixing

2. Damper rod boot

Front Suspension

- Release the steering damper upper fixing and remove the steering damper. Noting its position and orientation, collect the flanged sleeve located between the damper body and the lower yoke.



1. Steering damper
2. Upper fixing
3. Flanged sleeve

Installation

1. Installation is the reverse of removal noting the following:

Note:

- Refit the steel washer as noted during removal.
- Refit the flanged sleeve as noted during removal.
- Tighten the lower (air intake duct) fixing to 18 Nm.
- Tighten the upper (lower yoke) fixing to 20 Nm.
- Refit the boot over the lower damper rod fixing.

Handlebars - Daytona 675 and Daytona 675 R

Warning

Before starting work, ensure the motorcycle is stabilised and adequately supported. This will help prevent it from falling and causing injury to the operator or damage to the motorcycle.

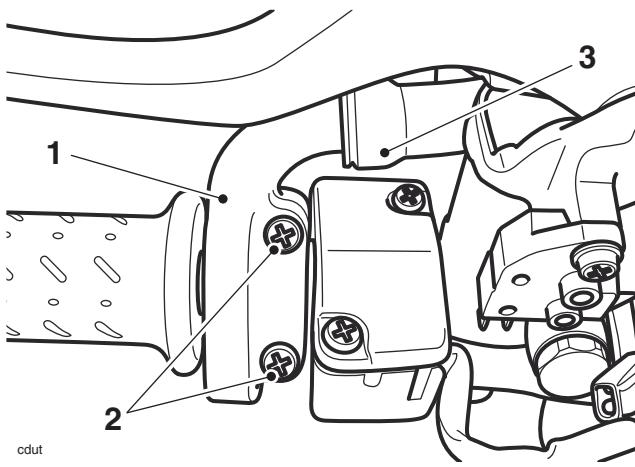
Removal

Note:

- This procedure describes the removal of both handlebars.
1. Remove the seat and disconnect the battery, negative (black) lead first.
 2. Remove and discard the fixings and remove the end weights from the handlebars.
 3. Undo the screws and free the left switch gear assembly from the handlebar. Without disconnecting any wiring, lay the switch aside.
 4. Unscrew the bolts and remove the clamp from the clutch lever assembly. Without disconnecting the clutch cable, lay the lever aside.

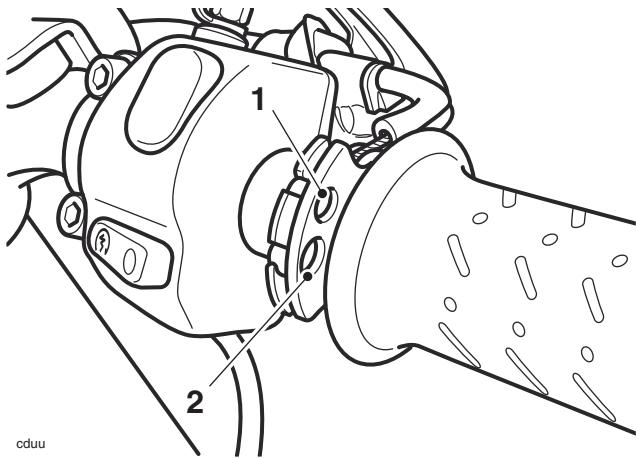
Note:

- The orientation of the twist grip guide differs between the Daytona 675 and the Daytona 675 R. Note the orientation of the guide for installation.
5. Slide off the rubber boot and release the fixings which secure the two halves of the twist grip guide to each other.



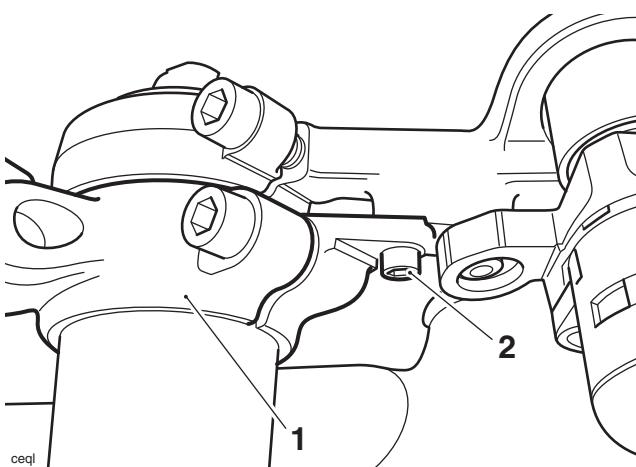
1. Twist grip guide, Daytona 675 shown
2. Screws
3. Rubber boot

6. Note and mark the position of each cable relative to the twist grip in order to correctly identify their location during assembly.
7. Release the inner cables from the twist grip.



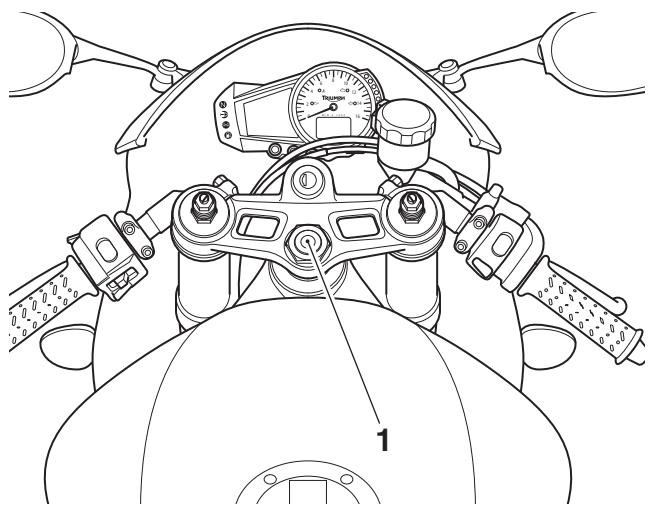
- 1. Opening cable**
- 2. Closing cable**

8. Slide the twist grip off the handlebar.
9. Undo the screws and free the right hand switch gear assembly from the handlebar. Without disconnecting any wiring, lay the switch aside.
10. Unscrew the bolts and remove the clamp from the front brake master cylinder. Taking care to not invert the brake fluid reservoir, lay the assembly aside.
11. Release the fixing securing each handlebar to the top yoke.

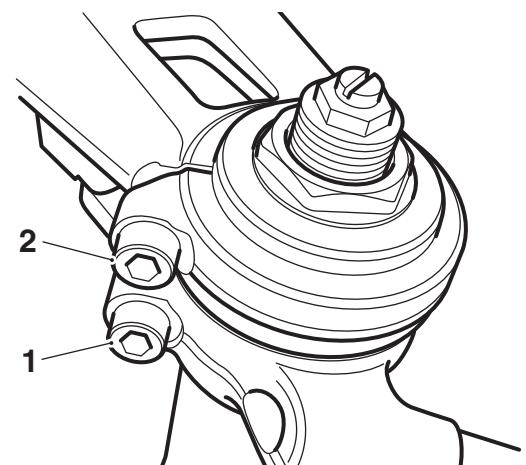


- 1. Handlebar (right hand shown)**
- 2. Fixing**

12. Remove the headstock top nut.



- 1. Headstock top nut**
13. Loosen the handlebar and top yoke clamp bolts.



- 1. Handlebar clamp bolt**
- 2. Top yoke clamp bolt**



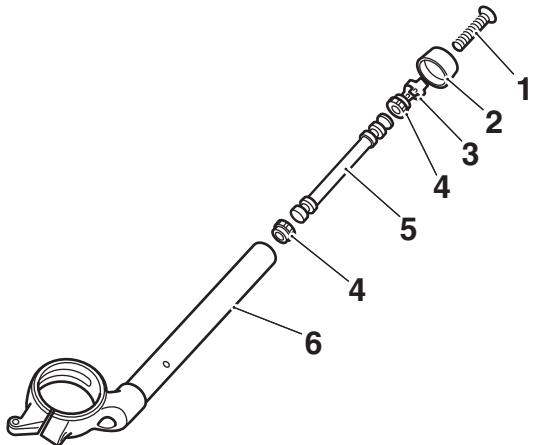
Caution

Care must be taken when removing the top yoke or handlebars to ensure that the outer surfaces of the front forks do not become scratched.

14. Slide the top yoke off the front forks and lay aside.
15. Slide the handlebars off the front forks.
16. If required, remove the left hand handlebar grip.

Front Suspension

17. If the handlebar end weight assembly is to be removed, gently squeeze the clip with suitable pliers and withdraw the assembly from the handlebar.

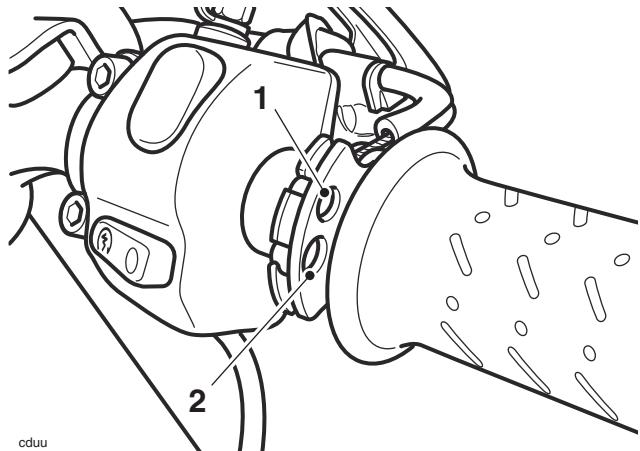


- 1. Fixing
- 2. End weight
- 3. Clip
- 4. Damper
- 5. Internal weight
- 6. Handlebar

Installation

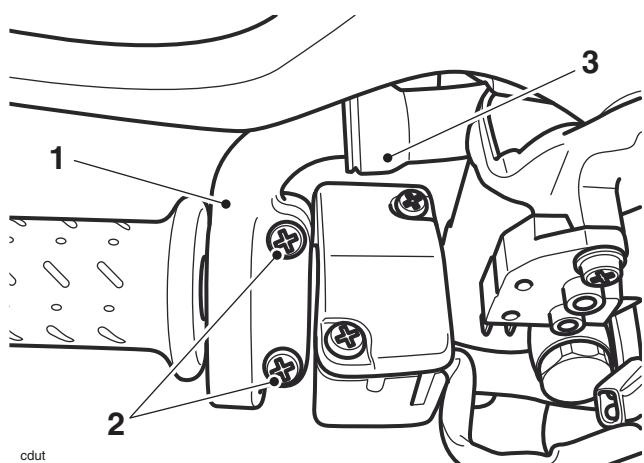
1. If the bar end weight assembly has been removed from the handlebar, fit a new clip and install the weight into the handlebar. Ensure the two locking tangs on the clip engage fully into the holes in the handlebar.
2. Refit the handlebars to the front forks. Do not tighten the clamp bolts at this stage.
3. Refit the top yoke. Do not tighten the clamp bolts at this stage.
4. Refit the headstock top nut and tighten to **90 Nm**.
5. Install the handlebar to top yoke fixings and tighten to **5 Nm**.
6. Tighten the top yoke clamp bolts to **26 Nm**.
7. Tighten the handlebar clamp bolts to **26 Nm**.
8. If removed, fit the left hand handlebar grip.
9. Position the clutch lever to the handlebar. Fit the clamp (UP arrow pointing upwards) and clamp bolts.
10. Align the split line of the clutch lever with the punch mark on the upper surface of the handlebar, then tighten the clamp bolts, upper first, to **12 Nm**.
11. Align the left hand switch housing to the handlebar and secure with the screws. Tighten the screws to **2.5 Nm**.

12. Slide the twist grip onto the right hand side of the handlebar.
13. Reconnect the inner throttle cables as noted during removal. Ensure that the positions of the opening and closing cables are not transposed.



- 1. Opening cable
- 2. Closing cable

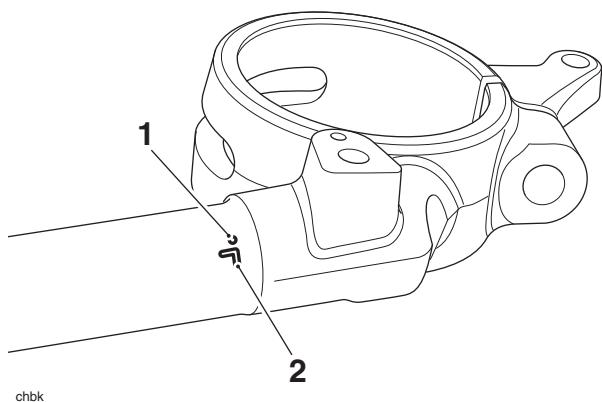
14. Assemble the two halves of the cable guide ensuring that the outer cables are correctly located in the guide and the guide is positioned on the handlebars as noted for removal.



- 1. Twist grip guide
- 2. Rubber boot
- 3. Screws

15. Tighten the cable guide fixings to **2.5 Nm**.
16. Position the right hand switch housing to the handlebar and tighten the fixings to **2.5 Nm**.
17. Position the front brake master cylinder assembly to the handlebar. Fit the clamp (UP arrow pointing upwards) and clamp fixings.

18. Align the split line of the master cylinder clamp to the alignment mark on the upper surface of the handlebar and tighten the clamp fixings to **8 Nm**.



- 1. Alignment mark (Daytona 675)**
2. Alignment mark (Daytona 675 R)

19. Fit the handlebar end weights, fit new fixings and tighten to **5 Nm**.
 20. Check the throttle cable free play setting. Adjust as necessary. See page 10-131.
 21. Reconnect the battery, positive (red) lead first. Tighten the battery terminals to **4.5 Nm**.
 22. Refit the seat (see page 16-22).
 23. Check for correct operation of the front brake and clutch. Check that the throttle opens and closes without sticking and that the cables do not bind or restrict the steering when the handlebars are turned from lock-to-lock. Rectify as necessary.



Warning

Operation of the motorcycle with incorrectly adjusted, incorrectly routed or damaged throttle cables could interfere with the operation of the brakes, clutch or the throttle itself. Any of these conditions could result in loss of control of the motorcycle and an accident.



Warning

Move the handlebars to left and right full lock while checking that cables and harnesses do not bind or that the steering feels tight or difficult to turn. A cable or harness that binds, or steering that is tight/difficult to turn will restrict the steering and may cause loss of control and an accident.

Handlebars - Street Triple, Street Triple 660 cc, Street Triple R and Street Triple Rx



Warning

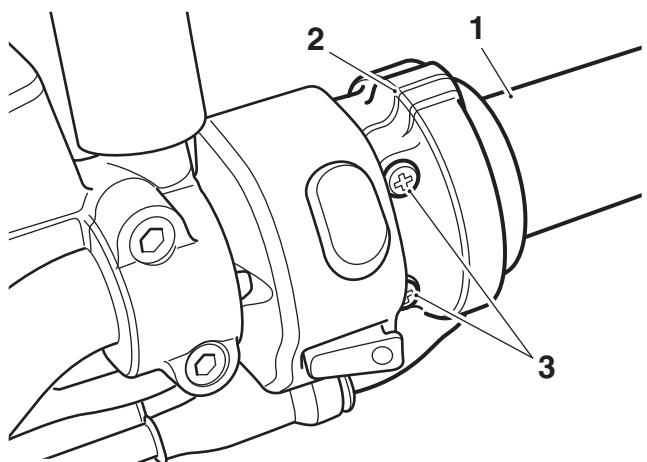
Before starting work, ensure the motorcycle is stabilised and adequately supported. This will help prevent it from falling and causing injury to the operator or damage to the motorcycle.

Removal

1. Remove the seat and disconnect the battery negative (black) lead first.
2. Undo the fixing screws and remove the end weights from the handlebars.
3. Undo the screws and free the left switch gear assembly from the handlebar. Without disconnecting any wiring, lay the switch aside.
4. Unscrew the bolts and remove the clamp from the clutch lever assembly. Without disconnecting the clutch cable, lay the lever aside.

Note:

- The orientation of the twist grip guide differs between the Street Triple and Street Triple 660 cc models and the Street Triple R and Street Triple Rx models. Note the orientation of the guide for installation.
- 5. Slide off the rubber boot and release the fixings which secure the two halves of the twist grip guide to each other.



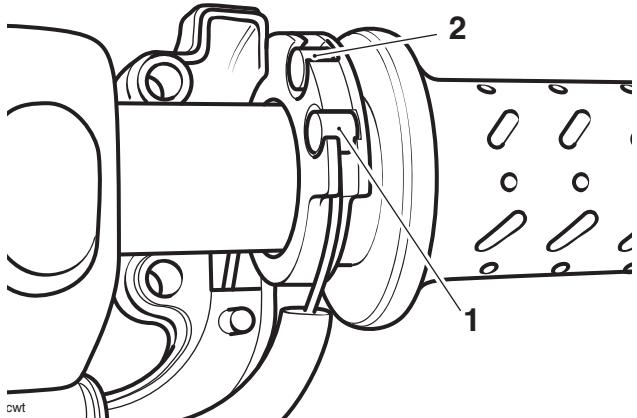
1. Twist grip

2. Twist grip guide (Street Triple shown)

3. Fixings

Front Suspension

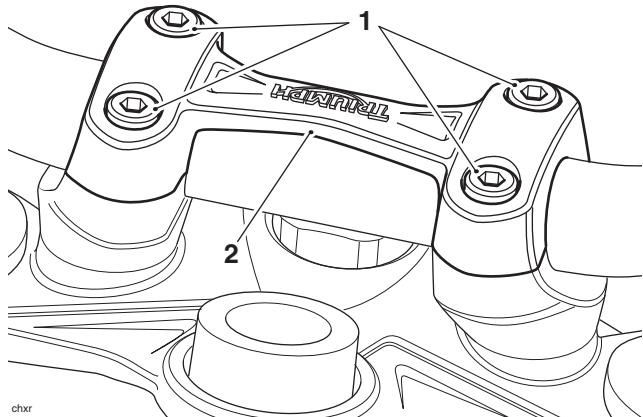
6. Note the position of the guide relative to the handlebar then separate the two halves of the twist grip guide.
7. Note and mark the position of each cable relative to the twist grip in order to correctly identify their location during reassembly.
8. Release the inner cables from the twist grip.



1. Closing inner cable
2. Opening inner cable

9. Slide the twist grip off the handlebar.
10. Undo the screws and free the right hand switch gear assembly from the handlebar. Without disconnecting any wiring, lay the switch aside.
11. **Street Triple R and Street Triple Rx only:** Remove the fixing and detach the front brake fluid reservoir from the mounting bracket. Ensure the reservoir is supported in an upright position.
12. Unscrew the bolts and remove the clamp from the front brake master cylinder. Taking care to not invert the brake fluid reservoir, lay the assembly aside.

13. Release the fixings securing the handlebar clamp to the risers, detach the clamp and collect the handlebar.

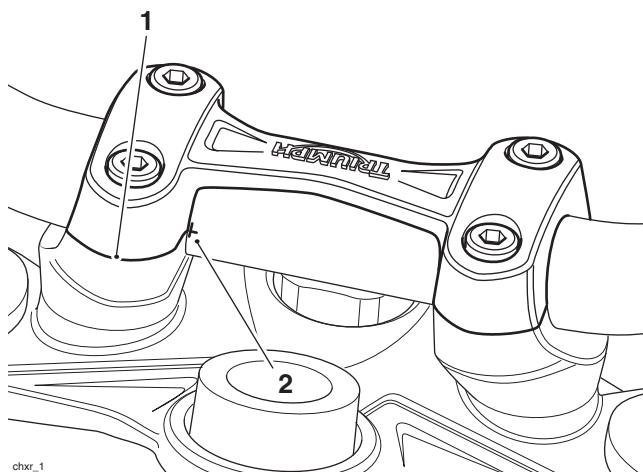


1. Fixings
2. Upper Clamp

14. Remove the left hand handlebar grip.

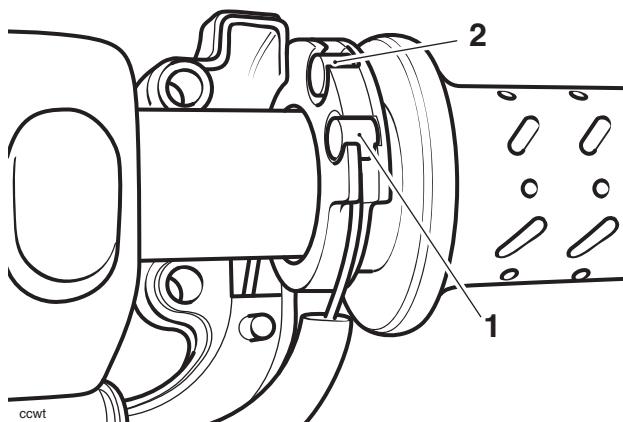
Installation

1. Locate the handlebar in the lower halves of the clamps. Fit the upper clamps and bolts.
2. Align the handlebar alignment mark with the front split line of the right hand riser.
3. **For Street Triple, Street Triple 660 cc, Street Triple R and Street Triple Rx:** Tighten the front clamp bolts to **26 Nm**, then the rears.



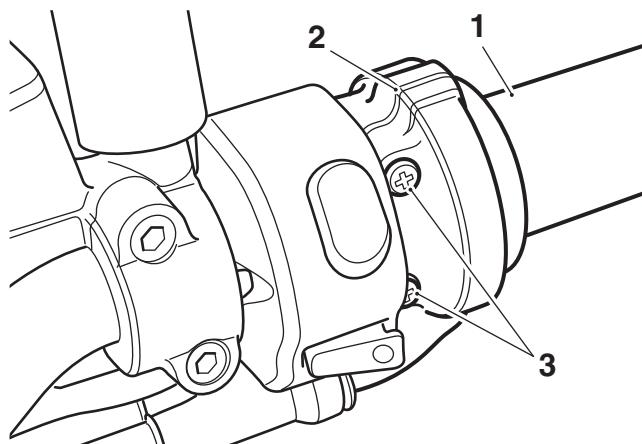
1. Right hand split line
2. Alignment mark (Street Triple shown)

4. Fit the left hand handlebar grip.
5. Position the clutch lever to the handlebar. Fit the clamp (UP arrow pointing upwards) and clamp bolts.
6. Align the split line of the clutch lever with the punch mark on the upper surface of the handlebar, then tighten the clamp bolts, upper first, to **12 Nm**.
7. Align the left hand switch housing to the handlebar and secure with the screws. Tighten the screws to **2.5 Nm**.
8. Slide the twist grip onto the right hand side of the handlebar.
9. Reconnect the inner throttle cables as noted during removal. Ensure that the positions of the opening and closing cables are not transposed.



- 1. Closing inner cable**
- 2. Opening inner cable**

10. Assemble the two halves of the cable guide ensuring that the outer cables are correctly located in the guide and the guide is positioned on the handlebars as noted for removal.



- 1. Twist grip**
- 2. Twist grip guide (Street Triple shown)**
- 3. Screws**

11. Tighten the cable guide fixings to **3 Nm**.
12. Position the right hand switch housing to the handlebar and tighten the fixings to **2.5 Nm**.
13. Position the front brake master cylinder assembly to the handlebar. Fit the clamp (Up arrow pointing upwards) and clamp fixings.
14. Align the split line of the master cylinder clamp to the mark on the upper surface of the handlebar and tighten the clamp fixings to **12 Nm**.
15. **Street Triple R and Street Triple Rx only:** Attach the front brake reservoir to its mounting bracket. Tighten the fixing to **7 Nm**.
16. Fit the handlebar end weights, tightening the fixings to **5 Nm**.
17. Check the throttle cable free play setting. Adjust as necessary. See page 10-131.
18. Reconnect the battery, positive (red) lead first. Tighten the battery terminals to **4.5 Nm**.
19. Refit the seat (see page 16-24 for Street Triple, Street Triple 660 cc and Street Triple R, see page 16-22 for Street Triple Rx).
20. Check for correct operation of the front brake and clutch. Check that the throttle opens and closes without sticking and that the cables do not bind or restrict the steering when the handlebars are turned from lock-to-lock. Rectify as necessary.

! Warning

Operation of the motorcycle with incorrectly adjusted, incorrectly routed or damaged throttle cables could interfere with the operation of the brakes, clutch or the throttle itself. Any of these conditions could result in loss of control of the motorcycle and an accident.

! Warning

Move the handlebars to left and right full lock while checking that cables and harnesses do not bind or that the steering feels tight or difficult to turn. A cable or harness that binds, or steering that is tight/difficult to turn will restrict the steering and may cause loss of control and an accident.

Front Suspension

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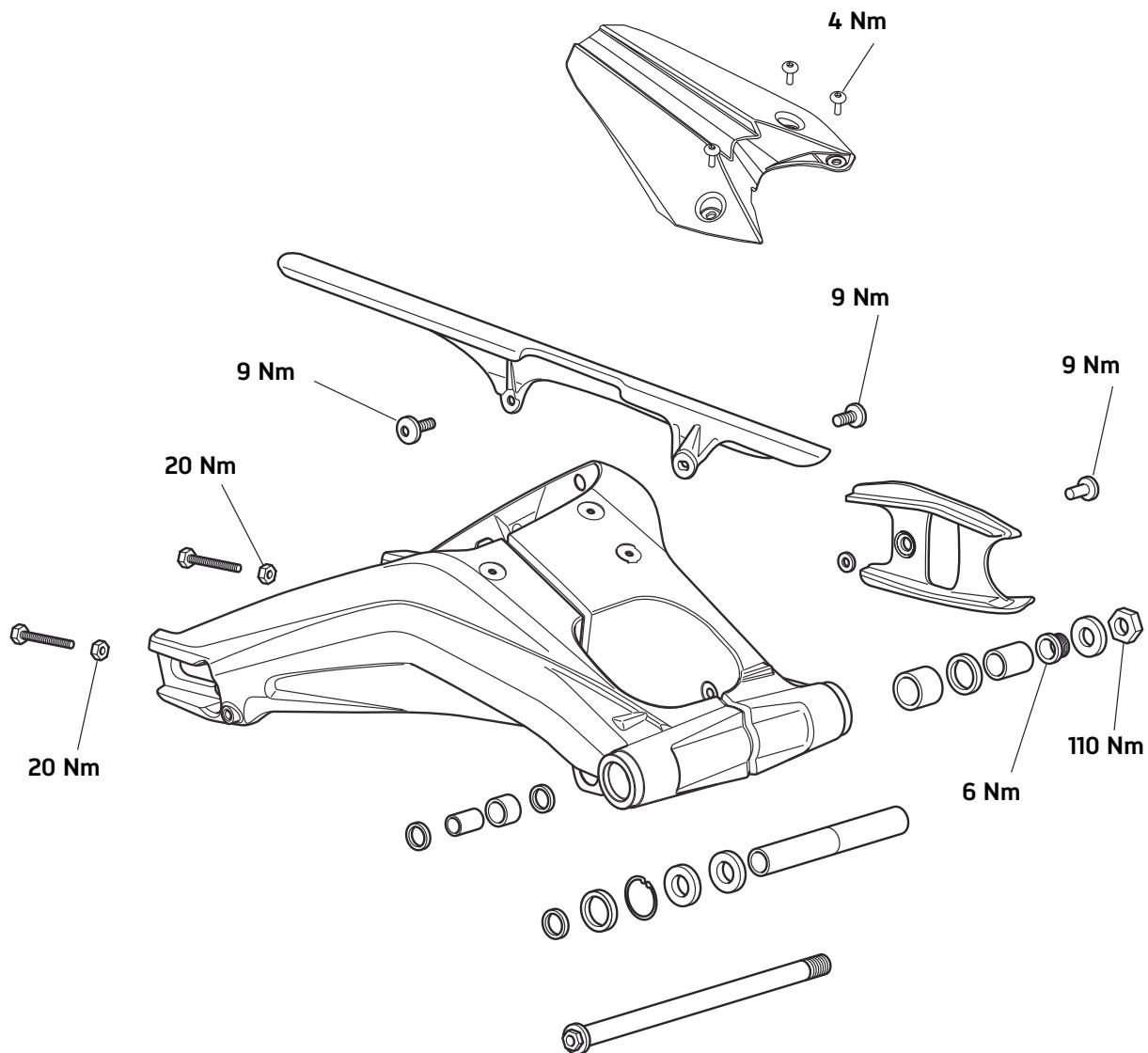
13 Rear Suspension

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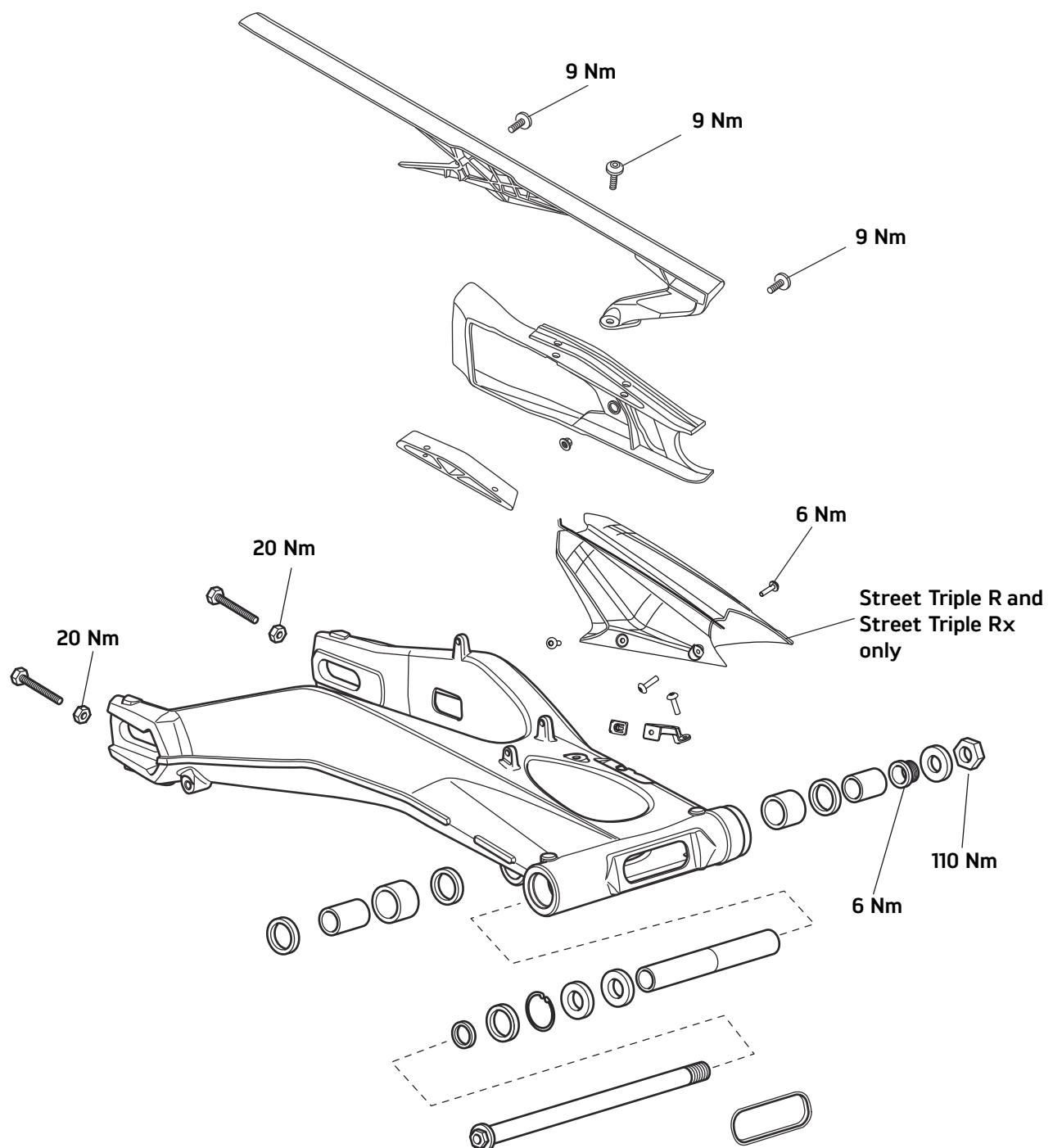
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Rear Suspension

Exploded View - Swinging Arm - Daytona 675 and Daytona 675 R

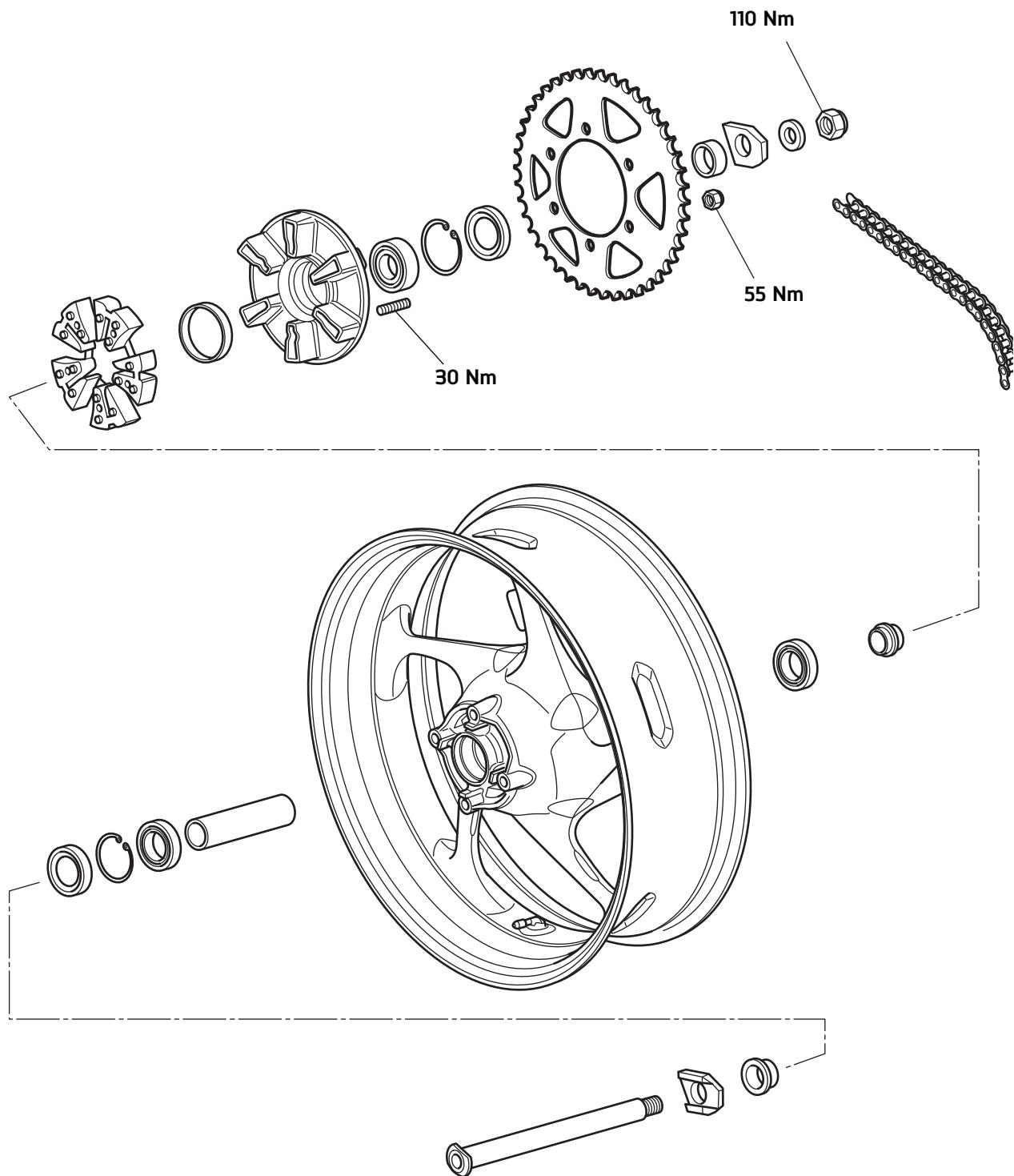


Exploded View - Swinging Arm - Street Triple, Street Triple 660 cc, Street Triple R and Street Triple Rx

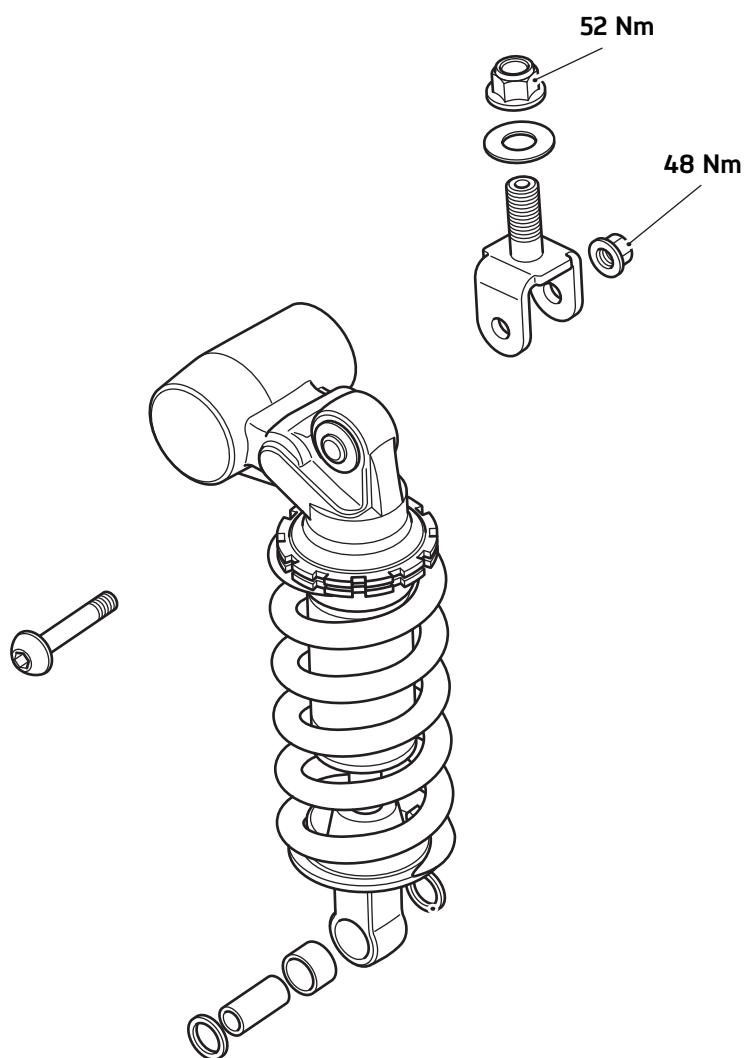


Rear Suspension

Exploded View - Rear Hub and Wheel

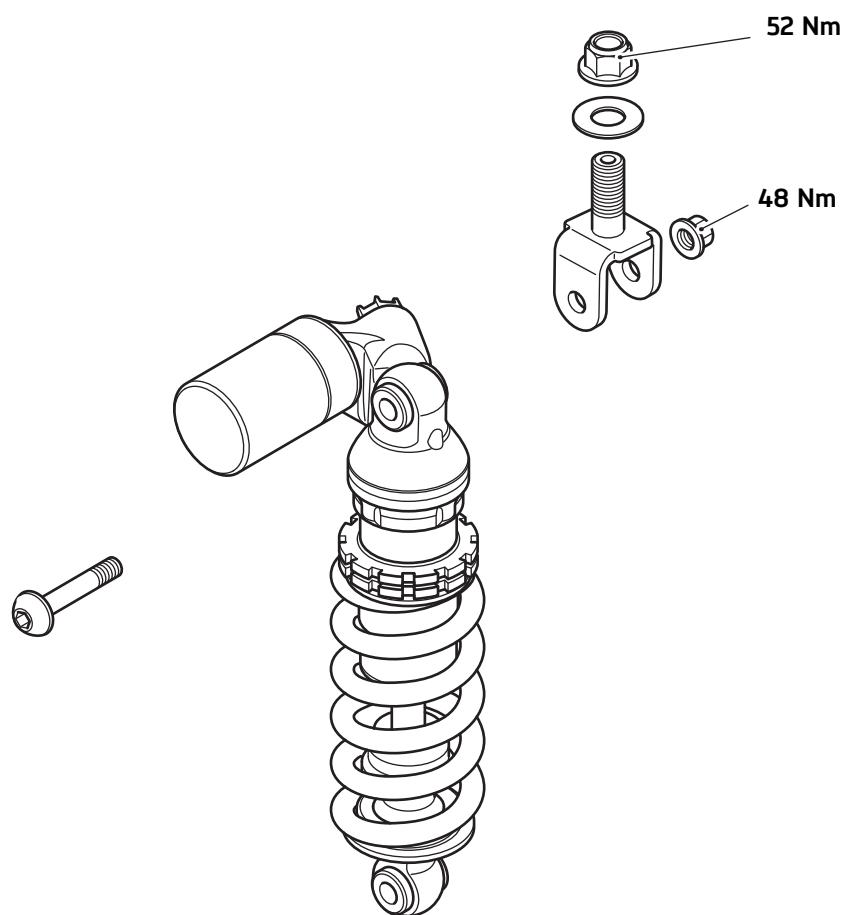


Exploded View - Rear Suspension Unit - Daytona 675, Street Triple R and Street Triple Rx

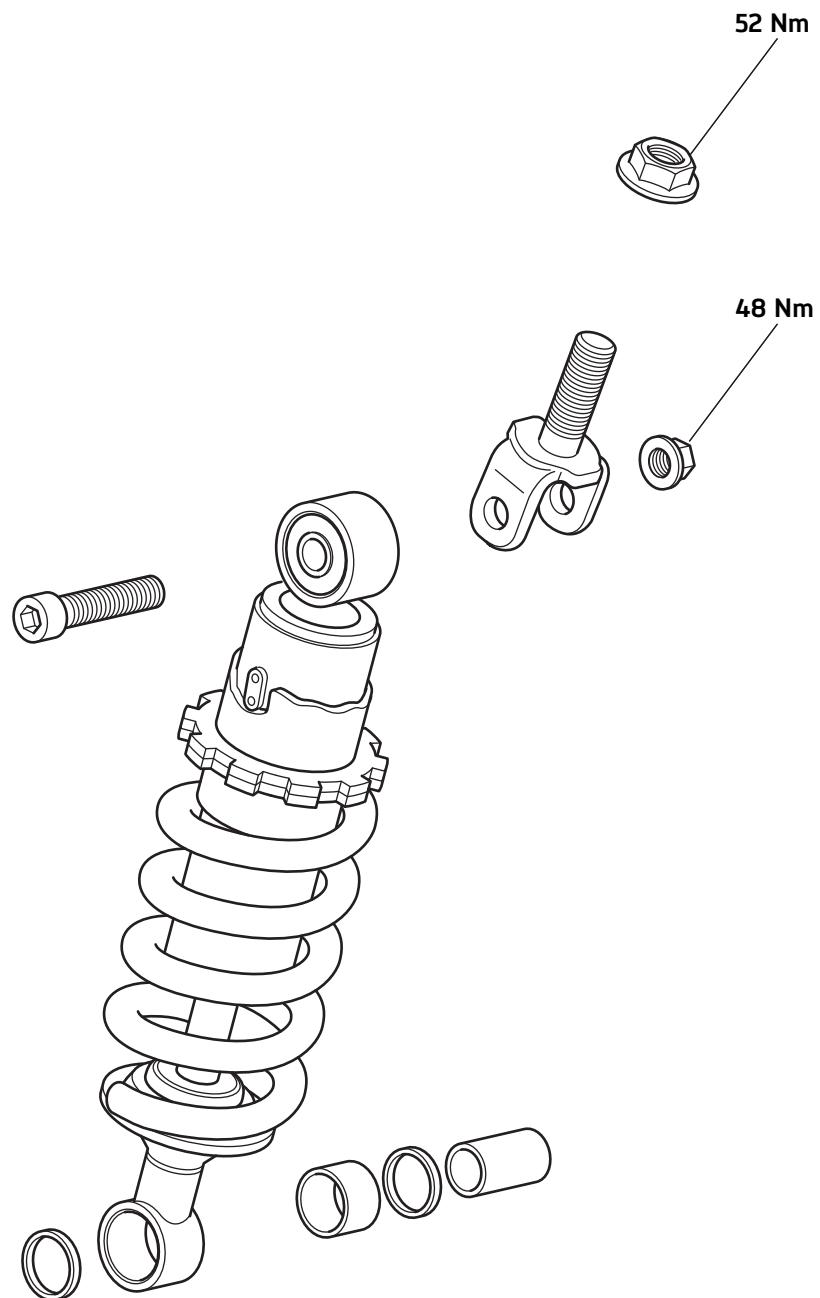


Rear Suspension

Exploded View - Rear Suspension Unit - Daytona 675 R

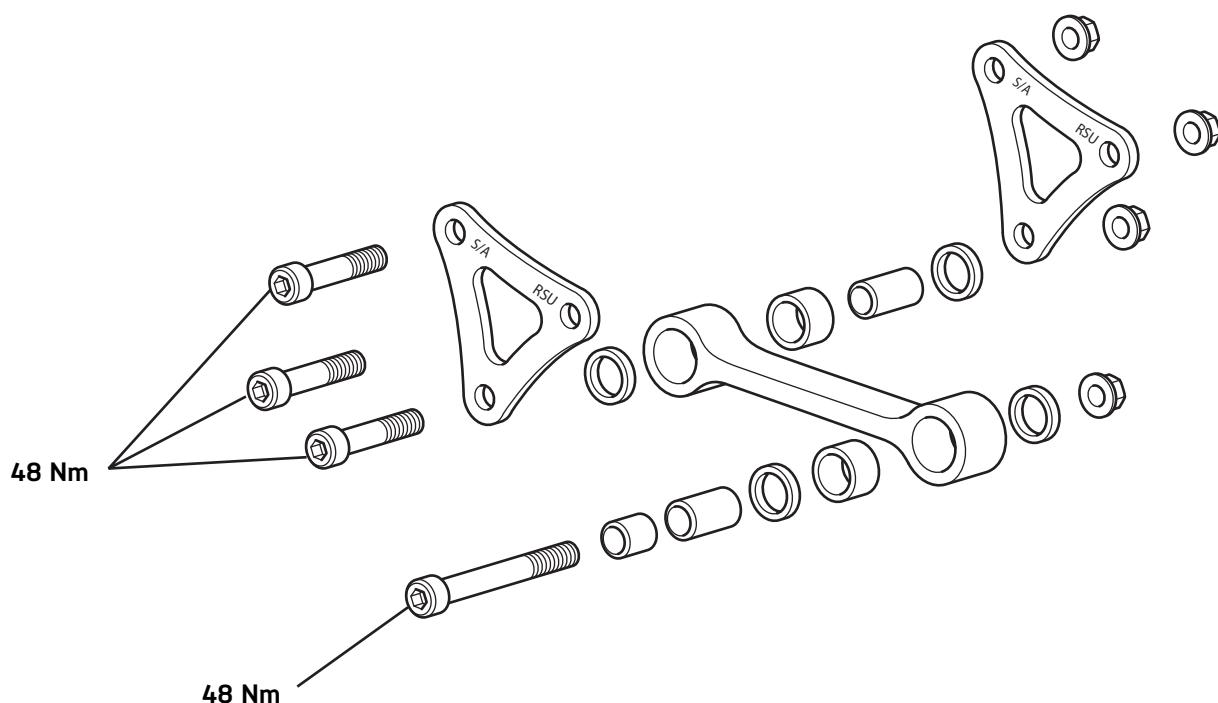


Exploded View - Rear Suspension Unit - Street Triple and Street Triple 660 cc



Rear Suspension

Exploded View - Drop/Drag Link



Drive Chain

For safety and to prevent excessive wear, the drive chain must be checked, adjusted and lubricated in accordance with scheduled maintenance requirements. Checking, adjustment and lubrication must be carried out more frequently for extreme conditions such as salty or heavily gritted roads.

If the chain is badly worn or incorrectly adjusted (either too loose or too tight) the chain could jump off the sprockets or break.



Warning

A chain that breaks or jumps off the sprockets could snag on the engine sprocket or lock the rear wheel, severely damaging the motorcycle and causing an accident. Never neglect chain maintenance.

Note:

- Lubrication of the drive chain should ideally be carried out with the motorcycle set up so that the rear suspension hangs free.**
- The chain must be adjusted with the motorcycle in an upright position, resting on its wheels, and with no additional weight on it.**

Chain Lubrication

Lubrication is necessary every 200 miles (300 km) and also after riding in wet weather, on wet roads, or any time that the chain appears dry.

Use the special chain lubricant as recommended in the specification section.

Correct application is critical for chain lubrication. Apply the lubricant for one full chain revolution only, then leave for eight hours before riding. This allows the lubricant's solvent (used to thin the oil) to evaporate and the oil to 'soak' into all parts of the chain. If the lubricant is applied and the motorcycle is ridden shortly afterwards, the lubricant is unlikely to reach all parts and the majority will be flung off and wasted. Applying excessive amounts is not helpful under any circumstances.

It should be noted that the lubricant is applied to the chain to lubricate its action across the sprockets. In an O-ring chain, external lubrication does not penetrate to the bushes and rollers as the O-ring seals prevents this from happening.

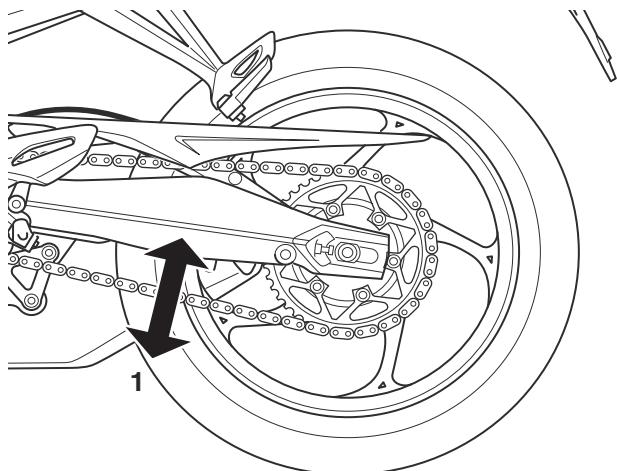


Caution

Do not use a power jet washer to clean the chain as this may cause damage to the chain components.

Chain Adjustment

Chain Free-movement Inspection



1. Maximum movement position



Warning

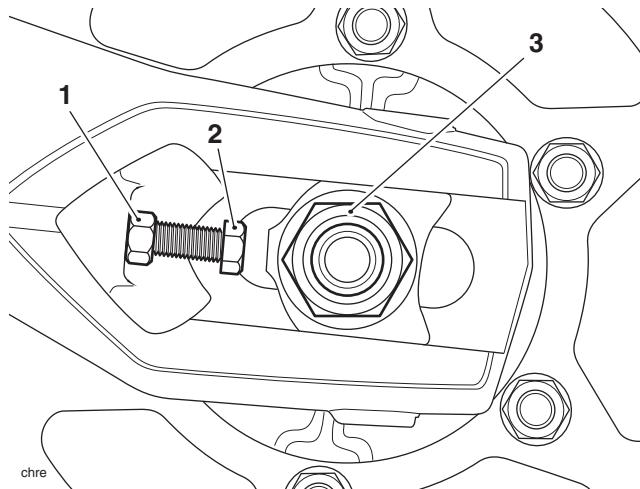
Before starting work, ensure the motorcycle is stabilised and adequately supported. This will help prevent it from falling and causing injury to the operator or damage to the motorcycle.

1. Place the motorcycle on a level surface and hold it in an upright position with no weight on it.
2. Rotate the rear wheel by pushing the motorcycle to find the position where the chain has least slack. Measure the chain's vertical movement, mid-way between sprockets.
3. If correct, the vertical movement of the drive chain midway between the sprockets should be:
 - 28 - 38 mm for the Daytona 675 and Daytona 675 R
 - 13 - 32 mm for the Street Triple, Street Triple 660 cc, Street Triple R and Street Triple Rx.

Rear Suspension

Chain Free-movement Adjustment

1. Loosen the wheel spindle nut.
2. Release the lock nuts on both the left hand and right hand chain adjuster bolts.



1. Adjuster bolt lock nut

2. Adjuster bolt

3. Rear wheel spindle nut

3. Moving both adjusters by an equal amount, turn the adjuster bolts clockwise to increase chain free-movement and counter clockwise to reduce chain free-movement.
4. When the correct amount of chain free movement has been set, push the wheel into firm contact with the adjusters.

Note:

- Check for equal adjustment on both sides using the graduation marks on the swinging arm.
- 5. Tighten both adjuster lock nuts to **20 Nm** and the rear wheel spindle nut to **110 Nm**.
- 6. Repeat the chain adjustment check. Re-adjust if necessary.



Warning

Operation of the motorcycle with insecure adjuster lock nuts or a loose wheel spindle may result in impaired stability and handling of the motorcycle. This impaired stability and handling may lead to loss of motorcycle control and an accident.

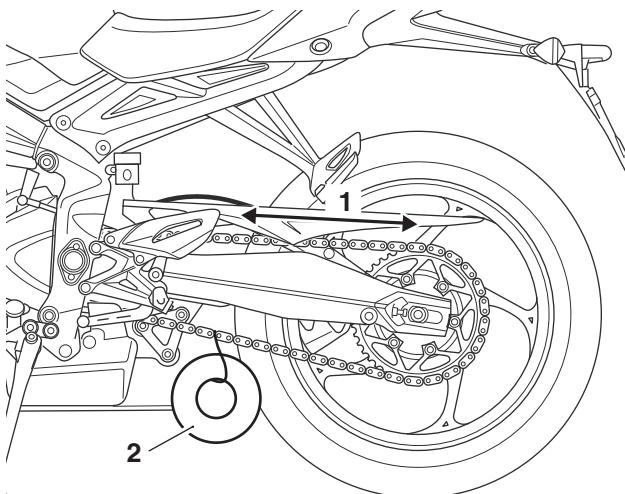
7. Check the rear brake effectiveness. Rectify if necessary.



Warning

It is dangerous to operate the motorcycle with defective brakes; you must have your authorised Triumph dealer take remedial action before you attempt to ride the motorcycle again. Failure to take remedial action may reduce braking efficiency leading to loss of motorcycle control and an accident.

Chain Wear Inspection



1. Measurement across 20 links

2. 10 - 20 kg Weight



Warning

Before starting work, ensure the motorcycle is stabilised and adequately supported. This will help prevent it from falling and causing injury to the operator or damage to the motorcycle.

1. Remove the chain guard from the swinging arm.
2. Stretch the chain taut by hanging a 10 - 20 kg (20 - 40 lb) weight on the chain.
3. Measure a length of 20 links on the straight part of the chain from pin centre of the 1st pin to pin centre of the 21st pin. Repeat the test at various sections of the chain to establish an average reading. This is because the chain may wear unevenly.
4. If the length exceeds the service limit of 319 mm (12.56 in), the chain must be replaced.

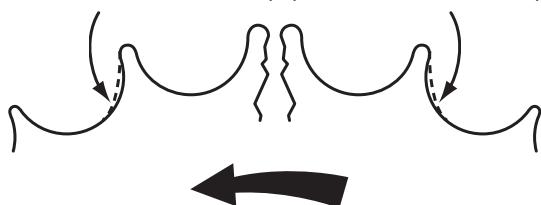


Warning

A chain that breaks or jumps off the sprockets could snag on the engine sprocket or lock the rear wheel, severely damaging the motorcycle and causing loss of control and an accident.

5. Examine the whole length of the chain. If there are any excessively tight or loose sections, loose pins or damaged rollers, the chain should be replaced.
6. Inspect sprockets for unevenly or excessively worn teeth. Also examine the sprockets for damaged teeth.

WORN TOOTH
(ENGINE SPROCKET) WORN TOOTH
(REAR SPROCKET)



ccol

Note:

- **Sprocket wear is exaggerated for illustration purposes.**



Warning

The use of non-approved chains may result in a broken chain or may cause the chain to jump off the sprockets.

Use a genuine Triumph supplied chain as specified in the Triumph Parts Catalogue.

Never neglect chain maintenance and always have chains installed by an authorised Triumph dealer.

7. If there is any irregularity found in any of the components, replace the drive chain and/or any other damaged components.
8. Refit the chain guard, tightening the fixings to **9 Nm**.

Rear Suspension Unit

Removal



Warning

If the engine has recently been running, the exhaust system will be hot. Before working on or near the exhaust system, allow sufficient time for the exhaust system to cool as touching any part of a hot exhaust system could cause burn injuries.



Warning

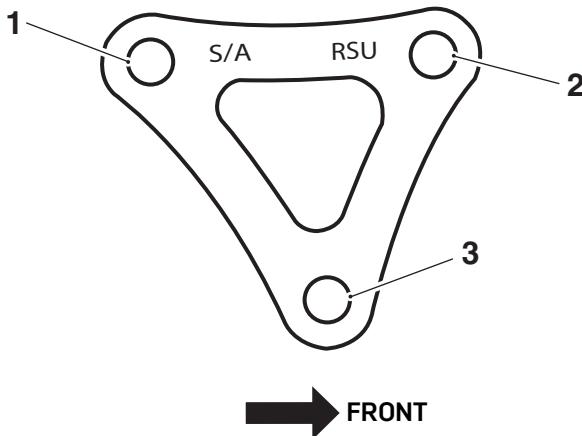
Before starting work, ensure the motorcycle is stabilised and adequately supported. This will help prevent it from falling and causing injury to the operator or damage to the motorcycle.

1. Raise and support the rear of the motorcycle under the frame or engine. Position a block to support the rear wheel.
2. Remove the seat (see page 16-22 for Daytona 675, Daytona 675 R and Street Triple Rx, see page 16-23 for Street Triple, Street Triple 660 cc and Street Triple R).
3. Disconnect the battery, negative (black) lead first.
4. Remove the exhaust silencer (see page 10-149 for Daytona 675 and Daytona 675 R, see page 10-161 for Street Triple, Street Triple 660 cc, Street Triple R and Street Triple Rx).
5. Remove the three drop link plate fixings. Discard the lock nuts.

Rear Suspension

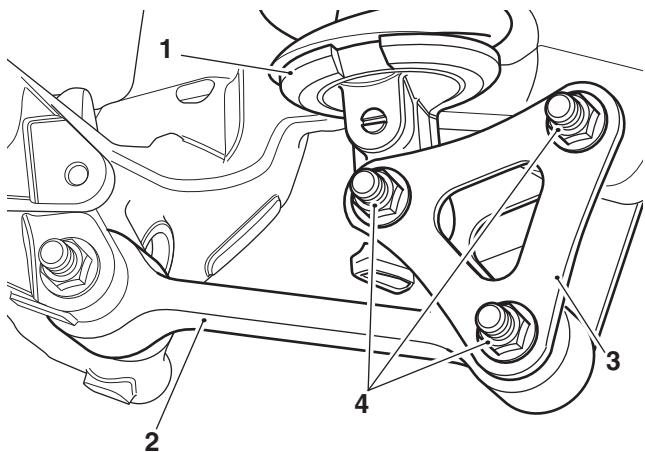
Note:

- Both drop link plates are marked as shown below. Both plates are identical, and must be fitted with the bolt hole markings facing the right hand side of the motorcycle.



1. Swinging arm bolt position
2. Rear suspension bolt position
3. Drag link bolt position

6. Noting the orientation of the drop link plates, remove the plates and position the drag link clear.



chvb

1. Rear suspension unit
2. Drag link
3. Drop link
4. Fixings



Warning

Never attempt to disassemble the rear suspension unit or reservoir. It contains fluid under pressure and serious injury could result if any part of the system is disturbed.

7. Remove the rear suspension unit upper mounting nut and bolt, and manoeuvre the unit upwards through the swinging arm and clear of the motorcycle.

Inspection

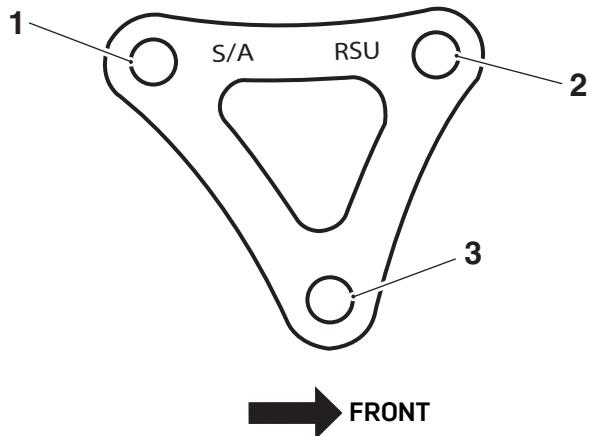
1. Clean all components and inspect for damage/wear to:
 - drag link, its bearings, sleeve and seals
 - rear suspension unit lower mounting sleeve and bearing
 - drop link plates.
2. Renew as necessary.
3. Inspect the unit for damage and fluid leaks. If there is any damage, or fluid leaks are evident, the unit must be replaced.

Installation

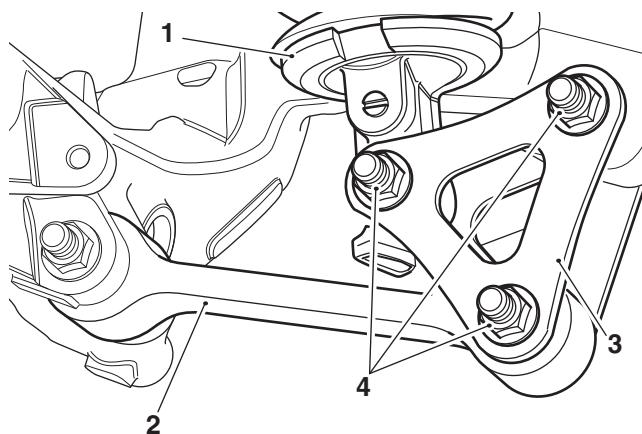
1. Remove the drag link sleeve and pack the bearing with fresh grease. Refit the sleeve.
2. Remove the rear suspension lower sleeve and pack the bearing with fresh grease. Refit the sleeve.
3. Remove the swinging arm drop link sleeve and pack the bearing with fresh grease. Refit the sleeve.
4. Refit the rear suspension unit to the motorcycle by lowering the unit downwards through the hole in the swinging arm.
5. Locate the rear suspension unit and loosely fit the upper mounting bolt and a new nut.

Note:

- The drop link plates are marked as shown below. Both plates are identical, and must be fitted with the bolt hole markings facing the right hand side of the motorcycle.



1. Swinging arm bolt position
2. Rear suspension bolt position
3. Drag link bolt position
6. Locate the drop link plates and, from the right hand side, loosely fit the bolts and new nuts.



1. Rear suspension unit
2. Drag link
3. Drop link plate
4. Fixings

7. With the weight of the motorcycle on its wheels, tighten the rear suspension unit upper mounting to **48 Nm**.
8. Tighten the three drop link fixings to **48 Nm**.
9. Refit the exhaust silencer (see page 10-153 for Daytona 675 and Daytona 675 R, see page 10-161 for Street Triple, Street Triple 660 cc, Street Triple R and Street Triple Rx).
10. Connect the battery, red (positive) lead first. Tighten the battery terminals to **4.5 Nm**.
11. Refit the seat (see page 16-22 for Daytona 675, Daytona 675 R and Street Triple Rx, see page 16-24 for Street Triple, Street Triple 660 cc and Street Triple R).

Rear Suspension

Drag Link

Removal



Warning

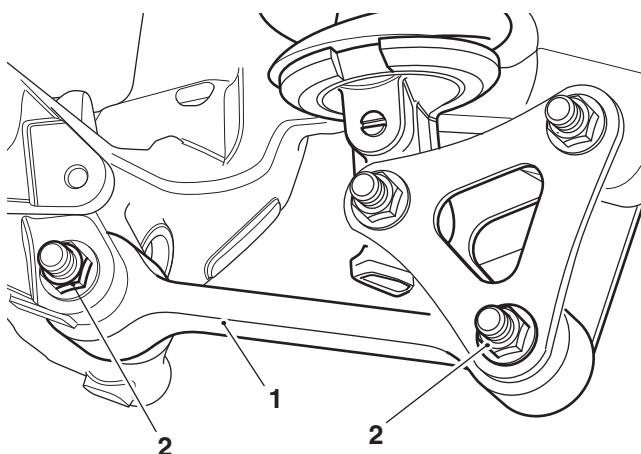
If the engine has recently been running, the exhaust system will be hot. Before working on or near the exhaust system, allow sufficient time for the exhaust system to cool as touching any part of a hot exhaust system could cause burn injuries.



Warning

Before starting work, ensure the motorcycle is stabilised and adequately supported. This will help prevent it from falling and causing injury to the operator or damage to the motorcycle.

1. Raise and support the rear of the motorcycle beneath the frame or engine. Position a block to support the rear wheel.
2. Remove the seat (see page 16-22 for Daytona 675, Daytona 675 R and Street Triple Rx, see page 16-23 for Street Triple, Street Triple 660 cc and Street Triple R).
3. Disconnect the battery, negative (black) lead first.
4. Remove the exhaust silencer (see page 10-149 for Daytona 675 and Daytona 675 R, see page 10-161 for Street Triple, Street Triple 660 cc, Street Triple R and Street Triple Rx).
5. Remove the two fixings securing the drag link.
6. Remove the drag link.



chvb_1

1. Drag link
2. Fixings

Inspection

1. Clean all components and inspect for damage/wear to:
 - drag link, its bearings, sleeve and seals
 - rear suspension unit lower mounting sleeve and bearing
 - drop link plates.

Installation

1. Remove the drag link sleeves and pack the bearings with fresh grease. Refit the sleeves.
2. Refit the drag link, fit the bolts and new nuts. Do not fully tighten at this stage.
3. With the weight of the motorcycle on its wheels, tighten the drag link and drop link nuts and bolts to **48 Nm**.
4. Refit the exhaust silencer (see page 10-153 for Daytona 675 and Daytona 675 R, see page 10-163 for Street Triple, Street Triple 660 cc, Street Triple R and Street Triple Rx).
5. Connect the battery, red (positive) lead first. Tighten the battery terminals to **4.5 Nm**.
6. Refit the seat (see page 16-22 for Daytona 675, Daytona 675 R and Street Triple Rx, see page 16-24 for Street Triple, Street Triple 660 cc and Street Triple R).

Swinging Arm

Removal



Warning

If the engine has recently been running, the exhaust system will be hot. Before working on or near the exhaust system, allow sufficient time for the exhaust system to cool as touching any part of a hot exhaust system could cause burn injuries.



Warning

Before starting work, ensure the motorcycle is stabilised and adequately supported. This will help prevent it from falling and causing injury to the operator or damage to the motorcycle.

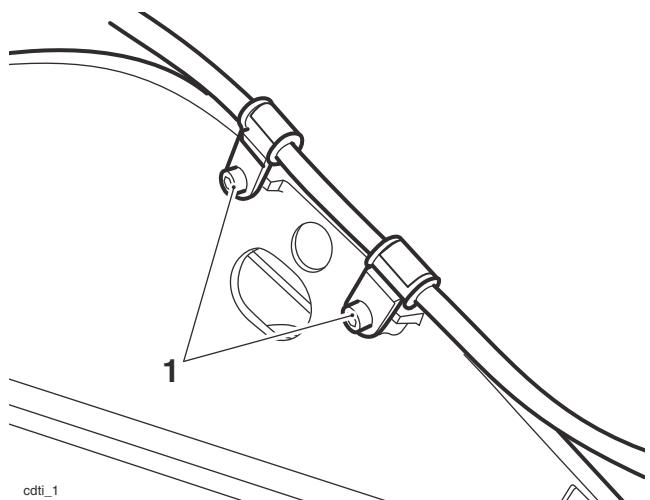
1. Remove the seat (see page 16-22 for Daytona 675, Daytona 675 R and Street Triple Rx, see page 16-23 for Street Triple, Street Triple 660 cc and Street Triple R).
2. Disconnect the battery, negative (black) lead first.
3. Remove the exhaust silencer (see page 10-149 for Daytona 675 and Daytona 675 R, see page 10-161 for Street Triple, Street Triple 660 cc, Street Triple R and Street Triple Rx).
4. Remove the rear wheel (see page 15-10).
5. Support the swinging arm and remove the rear suspension unit (see page 13-11).
6. Remove the output sprocket cover.
7. **For Street Triple, Street Triple 660 cc, Street Triple R and Street Triple Rx:** Detach the drive chain from the output sprocket.
8. **For Daytona 675 and Daytona 675 R:** Remove the drive chain (see page 13-18).



Warning

Do not allow the caliper to hang on the brake hose as this may damage the hose and could lead to an accident.

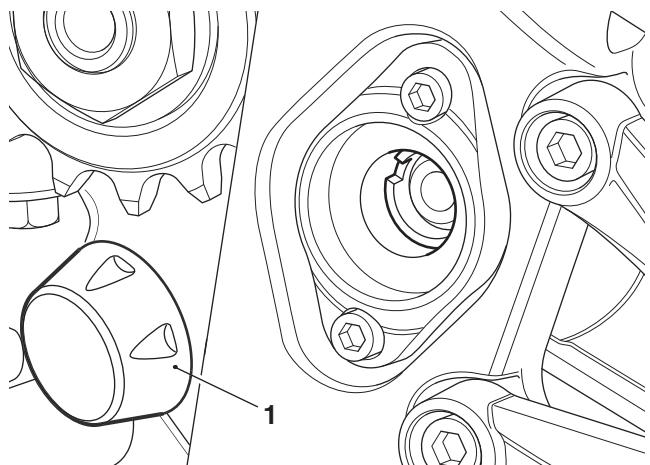
9. Release the brake hose clips from the swinging arm and tie the rear brake caliper to one side.



1. Rear brake hose clips

Note:

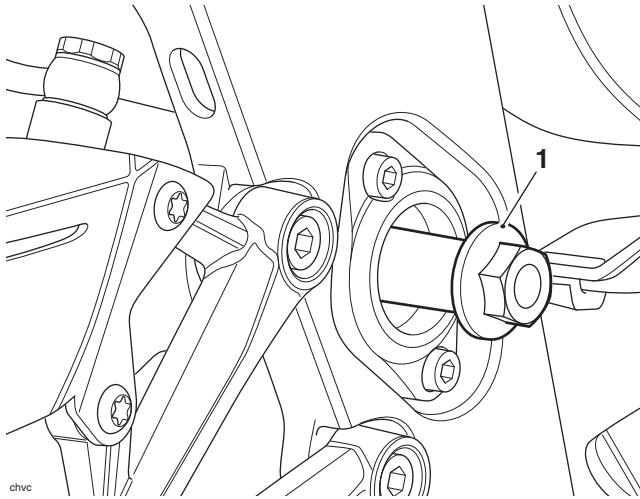
- The left hand finisher for the swinging arm spindle is larger than the finisher for the right hand side.
- 10. Without using any tools, carefully remove the rubber finishers from the left and right hand side of the swinging arm spindle.



1. Rubber finisher, left hand side

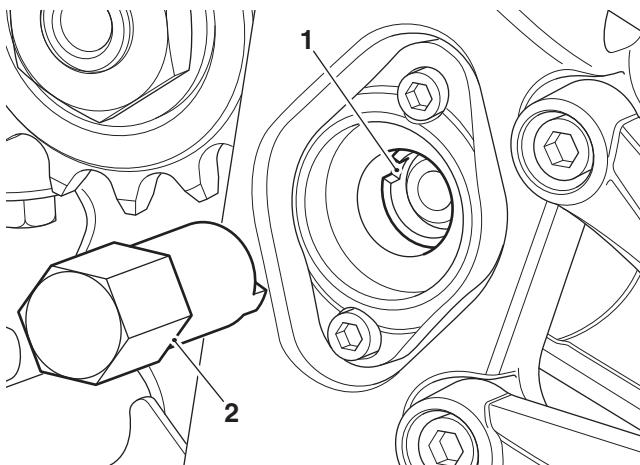
Rear Suspension

11. Remove the swinging arm spindle lock nut and washer. Discard the lock nut.
12. Partially withdraw the swinging arm spindle from the right hand side, to allow access to the frame adjuster sleeve located on the left hand side of the frame.



1. Swinging arm spindle

13. Engage the T3880104 - Swinging Arm Adjuster Wrench in the slots of the frame adjuster sleeve and rotate anticlockwise to loosen the sleeve fully.

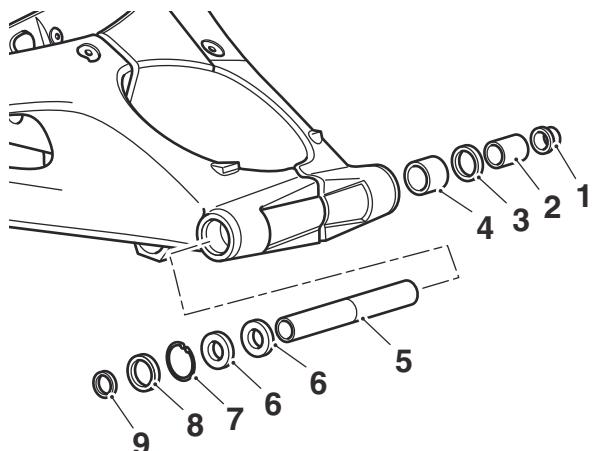


1. Frame adjuster sleeve

2. T3880104 - Swinging Arm Adjuster Wrench

14. Withdraw the swinging arm spindle from the right hand side and remove the swinging arm.
15. Remove the bearing sleeves from both sides.
16. Remove the right hand bearing by drifting through from the left.

17. Collect the spacer tube.



1. Frame adjuster sleeve

2. Sleeve

3. Seal

4. Needle roller bearing

5. Spacer tube

6. Ball Bearing

7. Circlip

8. Seal

9. Spacer

Note:

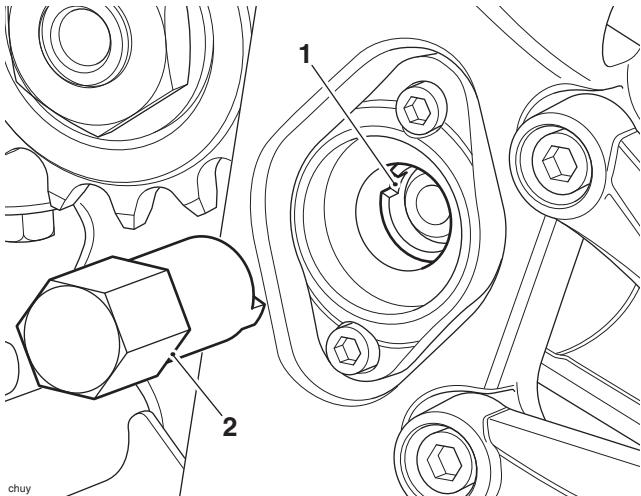
- The needle roller bearing in the left hand side of the arm cannot be removed undamaged.
18. Remove the drive chain rubbing strip.

Inspection

1. Check all swinging arm bearings for damage, pitting, and cracks. Replace as necessary.
2. Check the swinging arm for damage. Replace as necessary.
3. Check the wheel bearings for damage, pitting, and cracks. Replace as necessary.
4. Check all bearing seals for damage, splits etc. Replace as necessary.
5. Check the chain for wear, damage etc. Replace as necessary.
6. Check both sprockets for wear, damage etc. Replace as necessary.
7. Check the drive chain rubbing strip for wear and damage. Replace as necessary.

Assembly

1. Install the bearings (marked faces outwards), sleeves etc. into the swinging arm in the order shown on the previous page. Use new seals throughout.
2. Fit the drive chain rubbing strip and tighten the fixing to **9 Nm**.
3. **For Street Triple, Street Triple 660 cc, Street Triple R and Street Triple Rx only:**
Position the drive chain to the swinging arm.
4. Position the swinging arm to the frame ensuring the drive chain is in position on the rubbing strip.
5. Refit the swinging arm spindle from the right hand side such that it will support the swinging arm, but not pass all the way through the frame adjuster sleeve. This will allow tool T3880104 to engage in the slot in the frame adjuster sleeve.
6. Using the T3880104 - Swinging Arm Adjuster Wrench, tighten the frame adjuster sleeve to **6 Nm**.

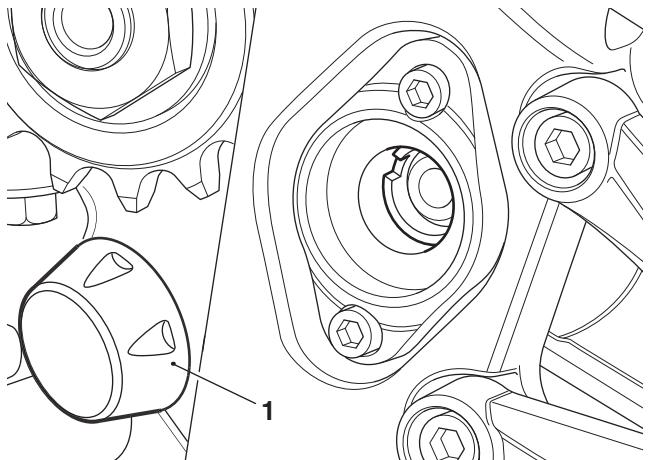


1. Frame adjuster

2. T3880104 - Swinging Arm Adjuster Wrench

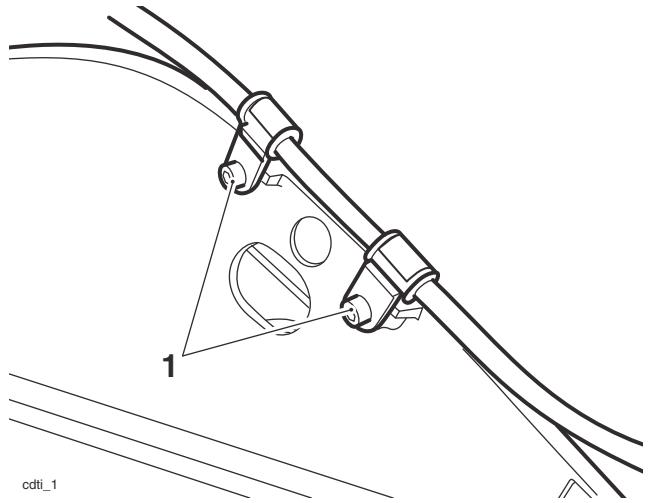
7. Fully insert the swinging arm spindle.
8. Fit a new swinging arm spindle nut and tighten to **110 Nm**.

9. Fit the rubber finishers to the swinging arm spindle. Ensure they are fitted as shown below.



1. Rubber finisher, left hand side

10. **For Daytona 675 and Daytona 675 R only:** Fit the drive chain (see page 13-18).
11. Fit the drive chain to the output sprocket.
12. Refit the sprocket cover and tighten the bolts to **9 Nm**.
13. Release the caliper and refit the rear brake hose clips to the swinging arm. Tighten the fixings to **6 Nm**.



1. Rear brake hose clips

14. Refit the rear suspension unit (see page 13-12).
15. Refit the rear wheel (see page 15-10).
16. Refit the exhaust silencer (see page 10-153 for Daytona 675 and Daytona 675 R, see page 10-163 for Street Triple, Street Triple 660 cc, Street Triple R and Street Triple Rx).
17. Connect the battery, red (positive) lead first. Tighten the battery terminals to **4.5 Nm**.

Rear Suspension

18. Refit the seat (see page 16-22 for Daytona 675, Daytona 675 R and Street Triple Rx, see page 16-24 for Street Triple, Street Triple 660 cc and Street Triple R).
19. Pump the rear brake pedal several times to position the brake pads in the caliper. Rectify as necessary.



Warning

It is dangerous to operate the motorcycle with defective brakes; you must have your authorised Triumph dealer take remedial action before you ride the motorcycle again. Failure to take remedial action may result in reduced braking efficiency leading to loss of motorcycle control and an accident.

Drive Chain Replacement

Rivet link type

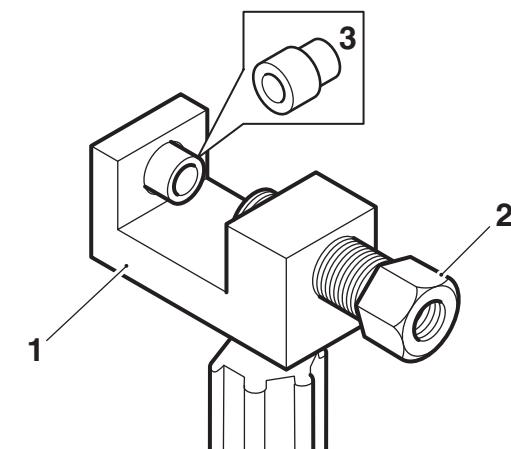
Removal of the swinging arm is not required for drive chain replacement. The following instructions for the replacement of rivet link type drive chains requires the use of T3880027 - Chain Link Tool Kit.



Warning

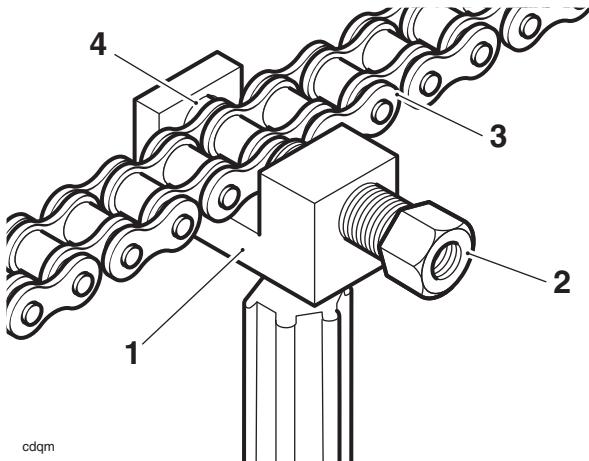
Before starting work, ensure the motorcycle is stabilised and adequately supported. This will help prevent it from falling and causing injury to the operator or damage to the motorcycle.

1. Support the motorcycle on a stand so the rear wheel is clear of the ground.
2. Insert the hollow chain cutting tail piece into the tool body so its larger diameter end is facing towards the large pressure screw as shown.



1. **T3880027 - Chain Link Tool Kit**
2. Large pressure screw
3. Chain cutting tail piece

3. Position the chain to the tool ensuring that the chain link pin which is to be removed is aligned with the holes in the chain cutting tail piece and the large pressure screw. Tighten the large pressure screw by hand to grip the chain.



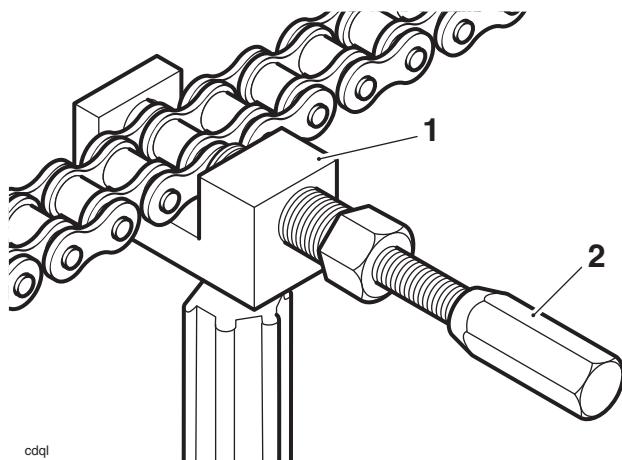
1. T3880027 - Chain Link Tool Kit

2. Large pressure screw

3. Chain

4. Chain cutting tail piece

4. Insert the small pressure screw into the larger pressure screw as shown below, until the cutting pin on the small pressure screw contacts the link pin. Ensure that the cutting pin is centralised on the link pin to be removed.



1. T3880027 - Chain Link Tool Kit

2. Small pressure screw

5. Hold the tool body then tighten the small pressure screw until the link pin is pressed out from the chain.
6. Repeat steps 3 to 5 on the remaining chain link pin.
7. Remove the tool and separate the two ends of the chain.

8. Remove the chain cutting tail piece from the body.

Note:

- The replacement chain is supplied in a split condition, complete with a link kit to join the two ends.



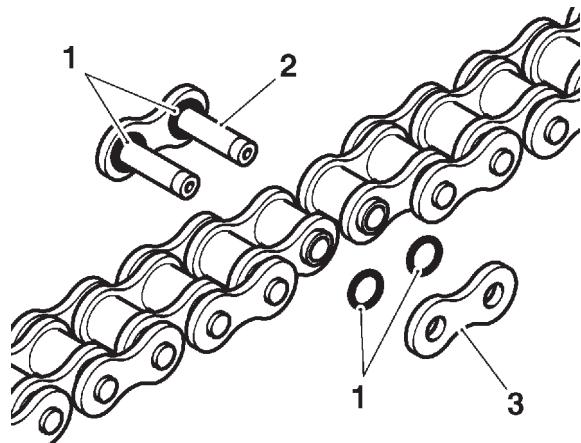
Caution

The component parts of the new link kit are coated with a special grease which must not be removed. Removal of this special grease will severely reduce the service life of the chain.

9. Use the old drive chain to pull the new chain into position as follows: Temporarily attach the end of the new chain to a free end of the old chain using the old connector link. Carefully pull the other end of the old chain to pull the new chain around the sprockets.

Note:

- Do not use the new connector link as the special grease on it may be removed.
- 10. Using the new link supplied with the chain kit, join the two ends of the chain. Ensure that the O-rings are positioned as shown below and the link plate is fitted with its markings facing outwards.



1. O-rings

2. Link

3. Link plate

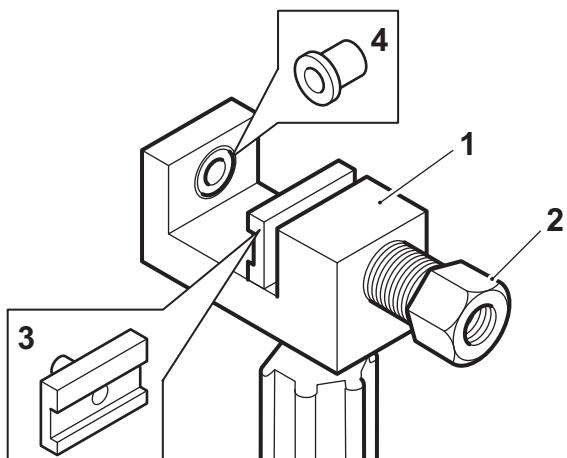
Rear Suspension

11. Insert the riveting tail piece into the tool body so its larger diameter end is facing towards the large pressure screw as shown.

Note:

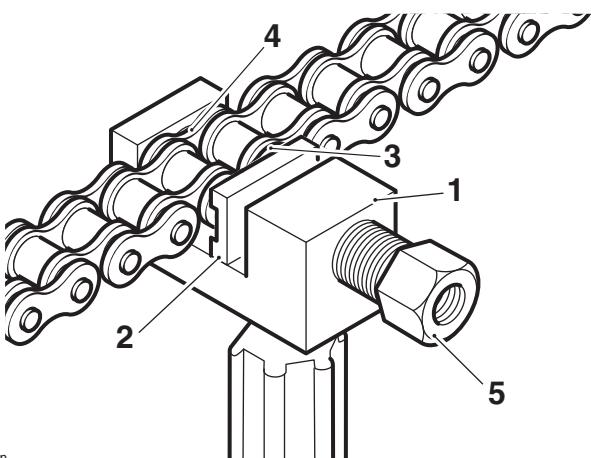
- Tool T3880027 includes two link plate holders, one is for riveted link plates (marked PH5060R), the other is for link plates retained by a spring clip (marked PH4060C). The holder for riveted link plates has a shallow groove to allow for chain link clearance, the holder for clipped link plates has a deep groove to allow for chain link clearance.

12. Insert the link plate holder (marked PH5060R) into the large pressure screw.



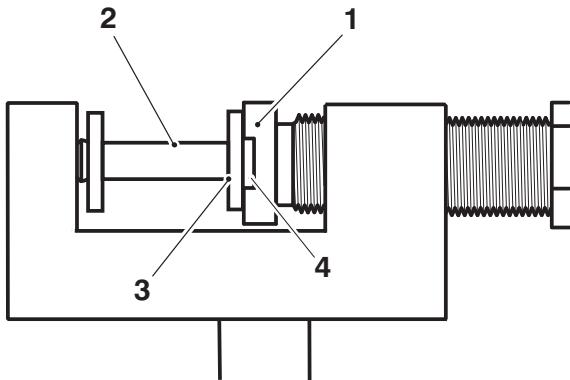
1. Tool body
2. Large pressure screw
3. Link plate holder (marked PH5060R)
4. Riveting tail piece

13. Position the tool to the chain. Ensure the link plate holder is correctly located in the large pressure screw.



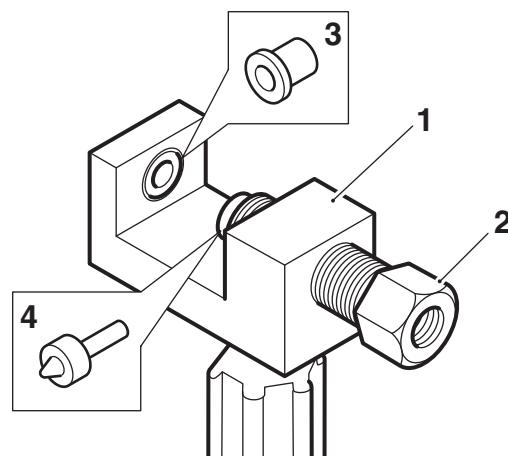
- cdqn
1. Tool body
 2. Link plate holder (marked PH5060R)
 3. Link plate
 4. Link
 5. Large pressure screw

14. Locate the split link pins such that the pins will enter the groove in the link plate holder when the link plate is pressed onto the link.



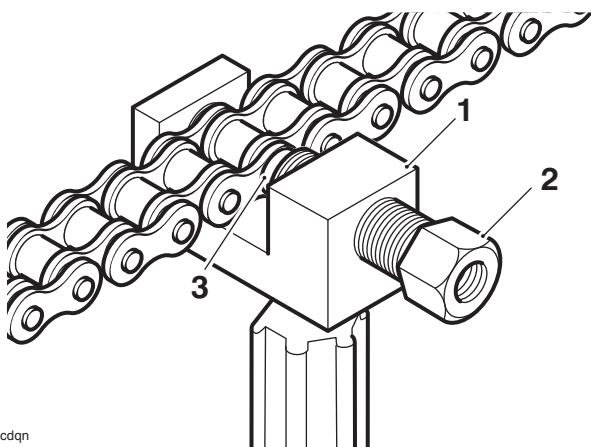
1. Link plate holder
2. Link
3. Link plate
4. Link plate holder groove

15. Hold the tool body and tighten the large pressure screw until the link plate is pressed fully onto the link.
16. Back off the pressure screw, slide the tool assembly to one side and check that the split link is correctly assembled.
17. Remove the link plate holder from the tool. Do not remove the riveting tail piece from the tool
18. Insert the flare pin into the large pressure screw.



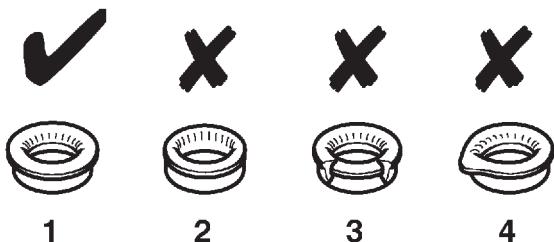
1. Tool body
2. Large pressure screw
3. Riveting tail piece
4. Flare pin

19. Locate one of the split link pins into the riveting tail piece and screw the large pressure screw in until the flare pin contacts the split link end. Ensure the split link pin is centrally located on the flare pin.
20. Hold the tool body and tighten the large pressure screw until the split link end is riveted-over.
22. Remove the tool from the chain and check that both the split link pins are correctly riveted as shown below.



1. Tool body
2. Large pressure screw
3. Flare pin

21. Back off the large pressure screw and rivet the remaining split link pin as described above.



1. Correct riveting
2. Insufficient riveting
3. Excessive riveting
4. Riveting off-centre

⚠ Warning

If either split link pin is not correctly riveted, the split link must be removed and replaced with a new link. Never operate the motorcycle with an incorrectly riveted split link as the link could fail resulting in an unsafe riding condition leading to loss of control and an accident.

Rear Suspension

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14 Brakes

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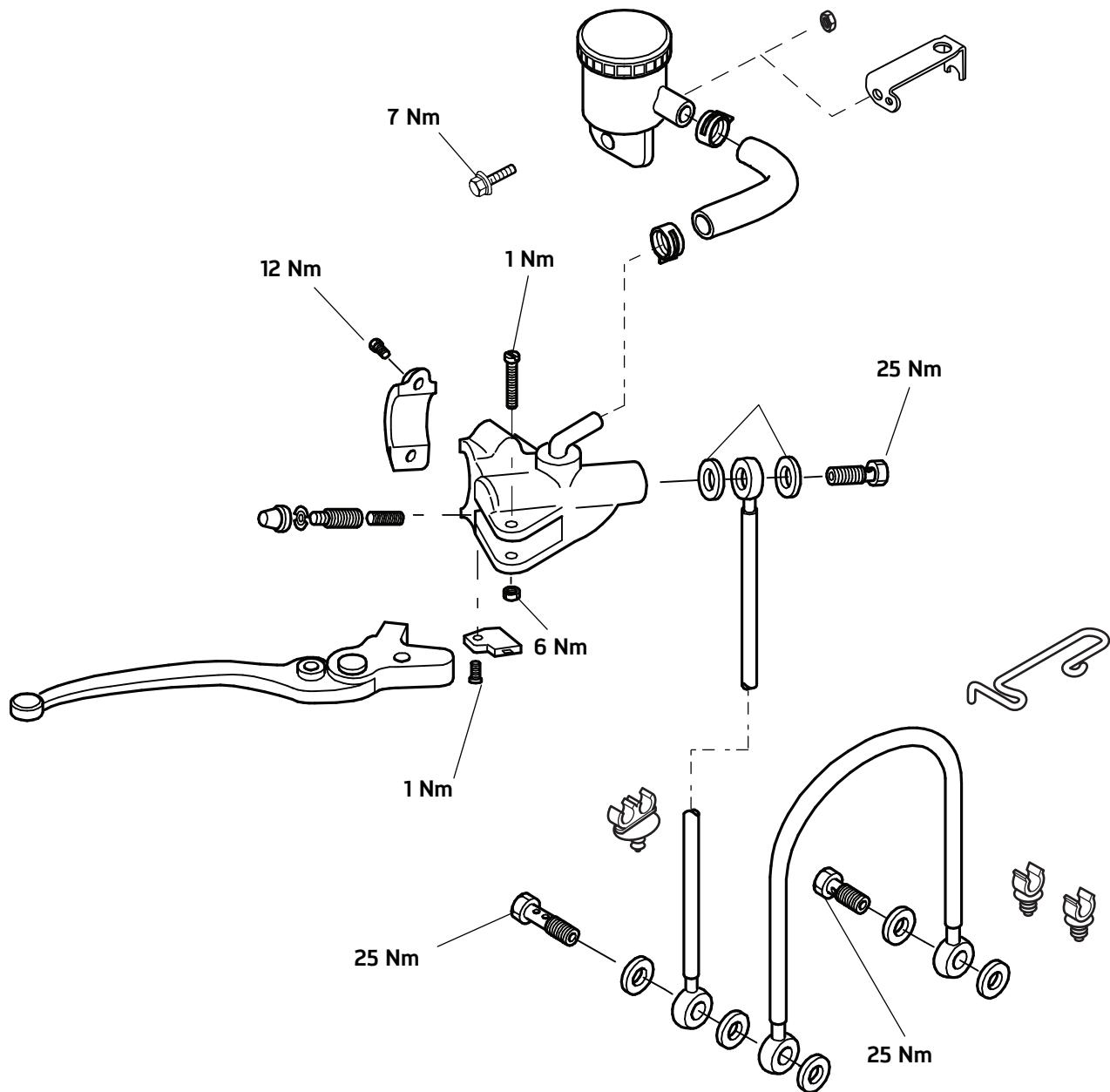
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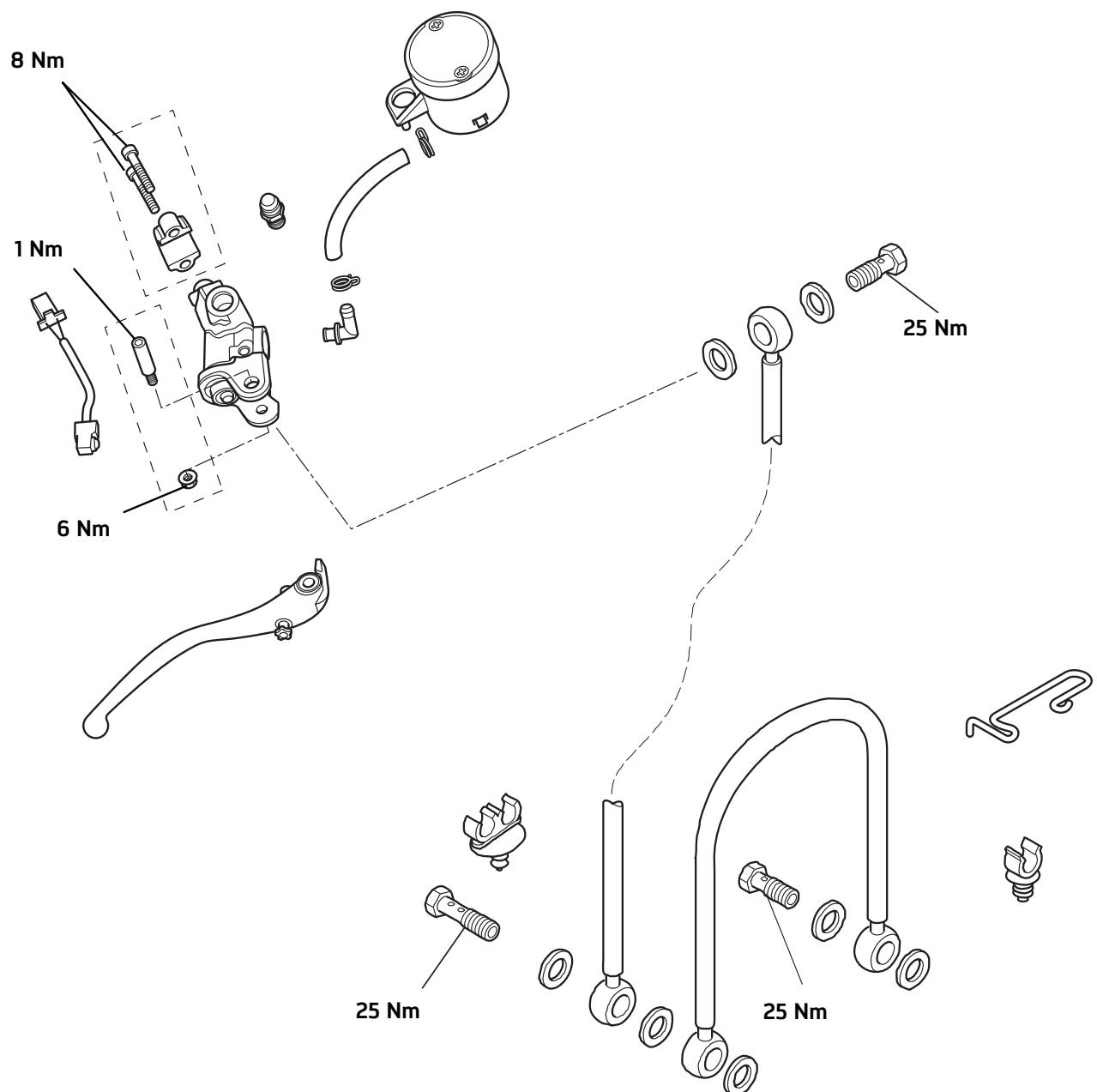
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Brakes

Exploded View - Front Brake Master Cylinder - Daytona 675, Street Triple R and Street Triple Rx

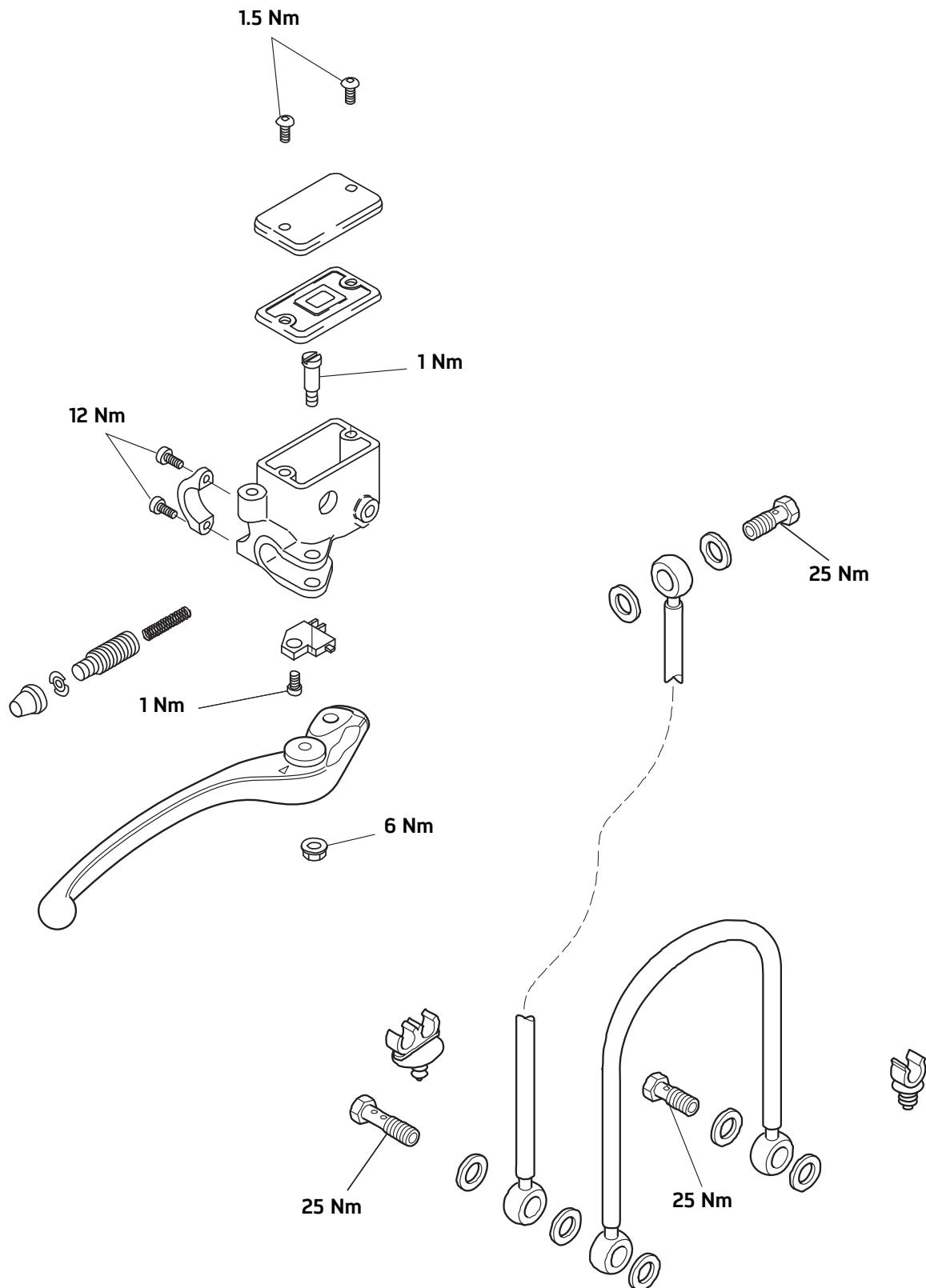


Exploded View - Front Brake Master Cylinder - Daytona 675 R

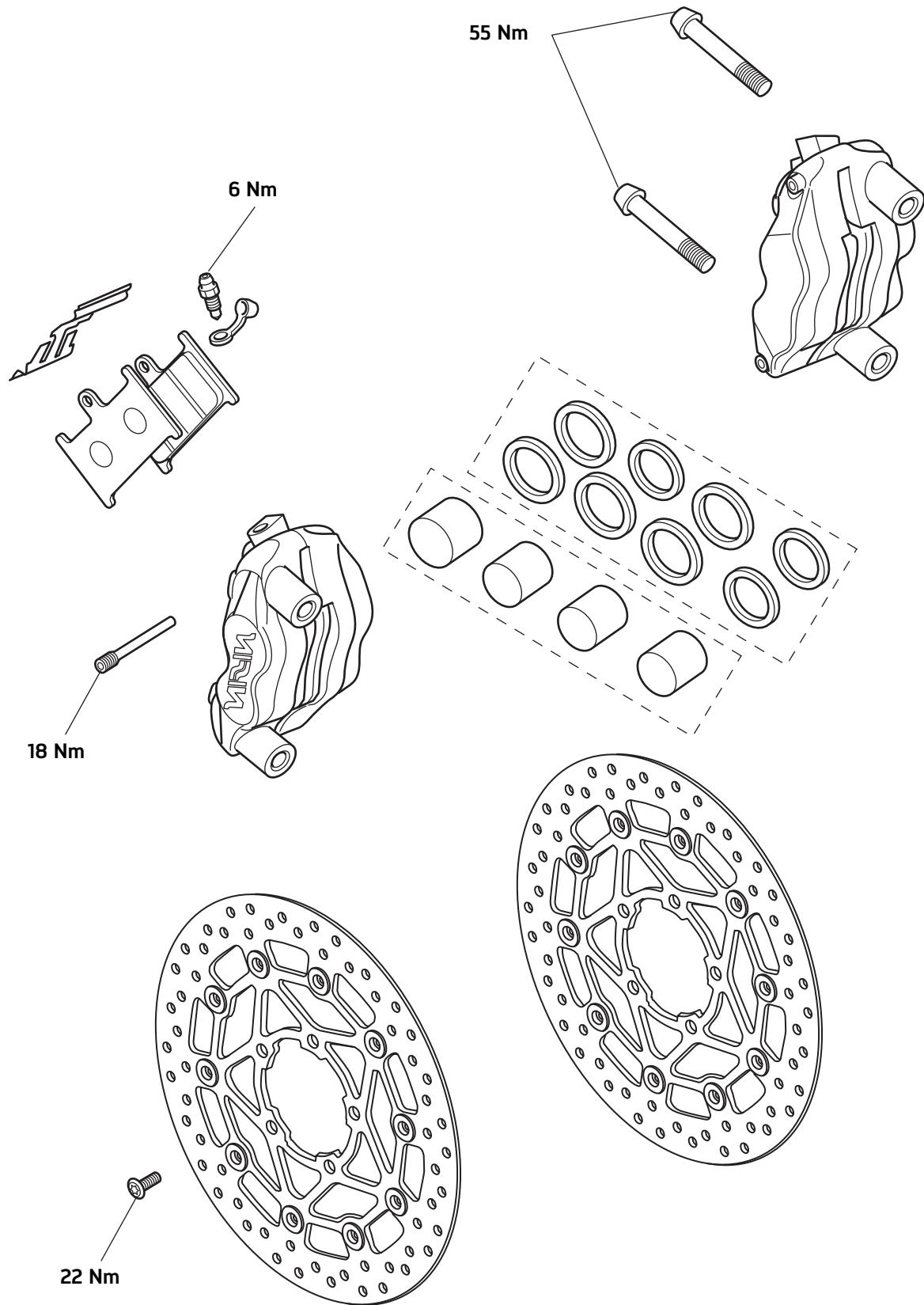


Brakes

Exploded View - Front Brake Master Cylinder - Street Triple and Street Triple 660 cc

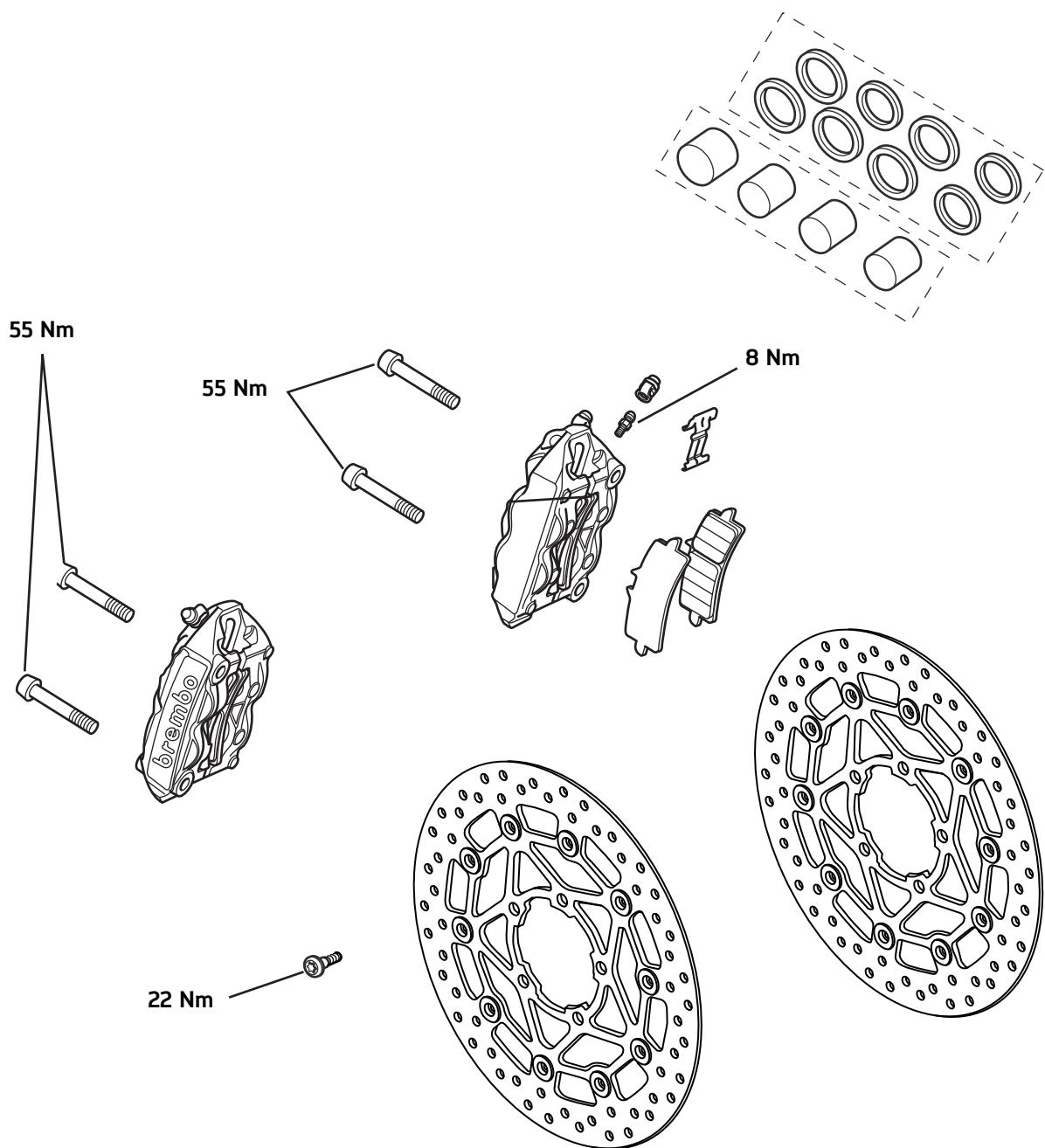


Exploded View - Front Brake Caliper - Daytona 675

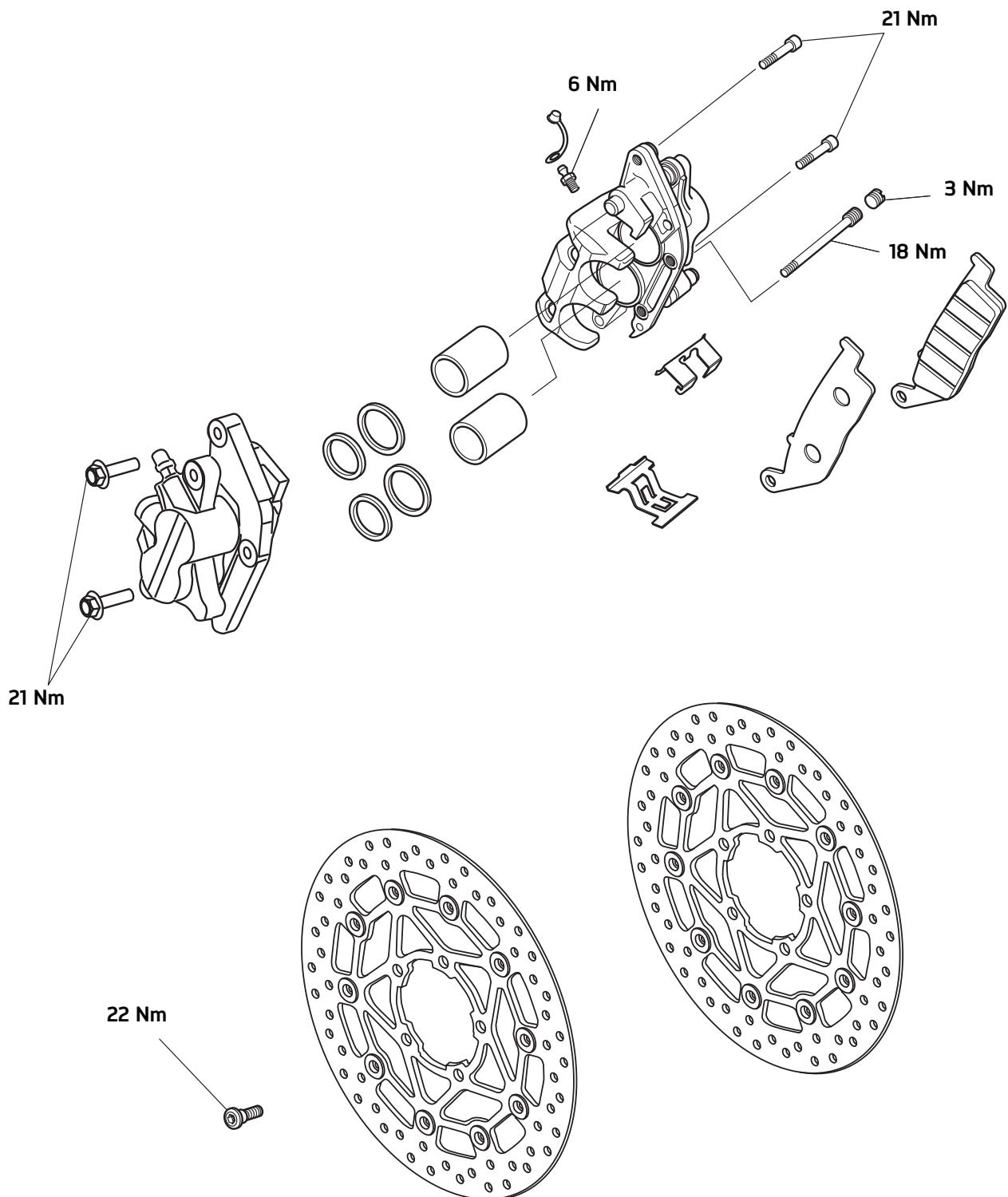


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Exploded View - Front Brake Caliper - Daytona 675 R

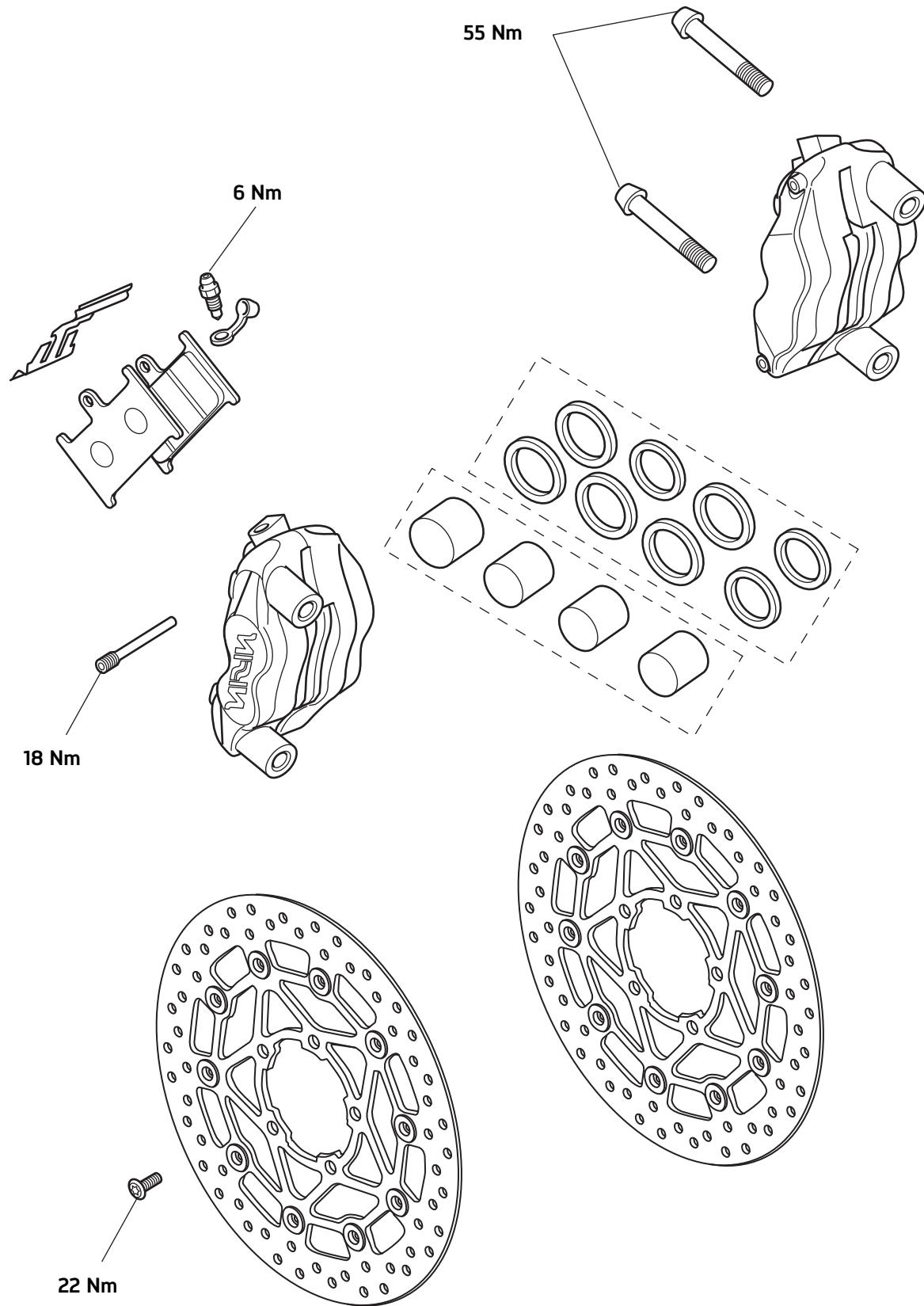


Exploded View - Front Brake Caliper - Street Triple and Street Triple 660 cc

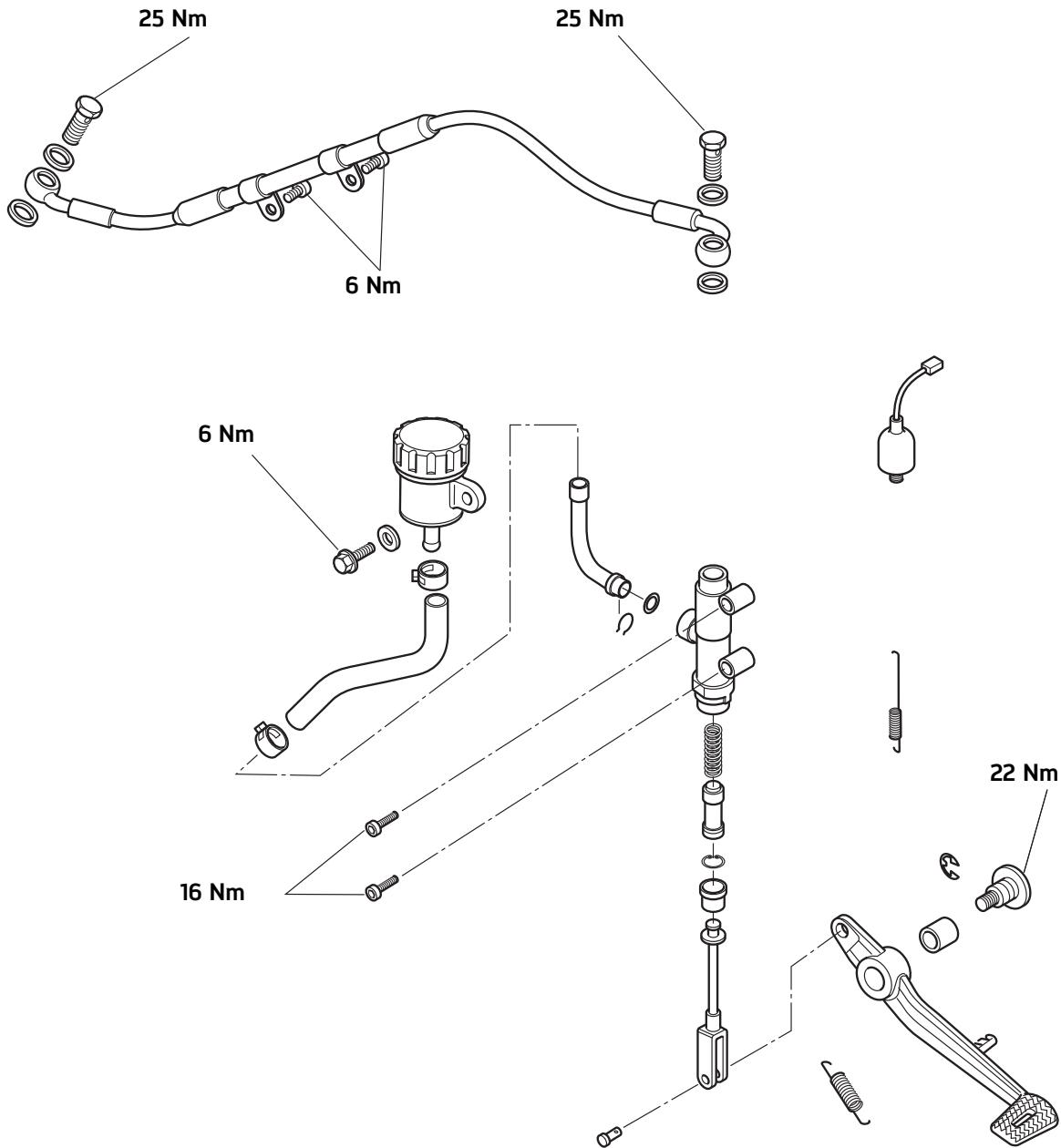


Brakes

Exploded View - Front Brake Caliper - Street Triple R and Street Triple Rx

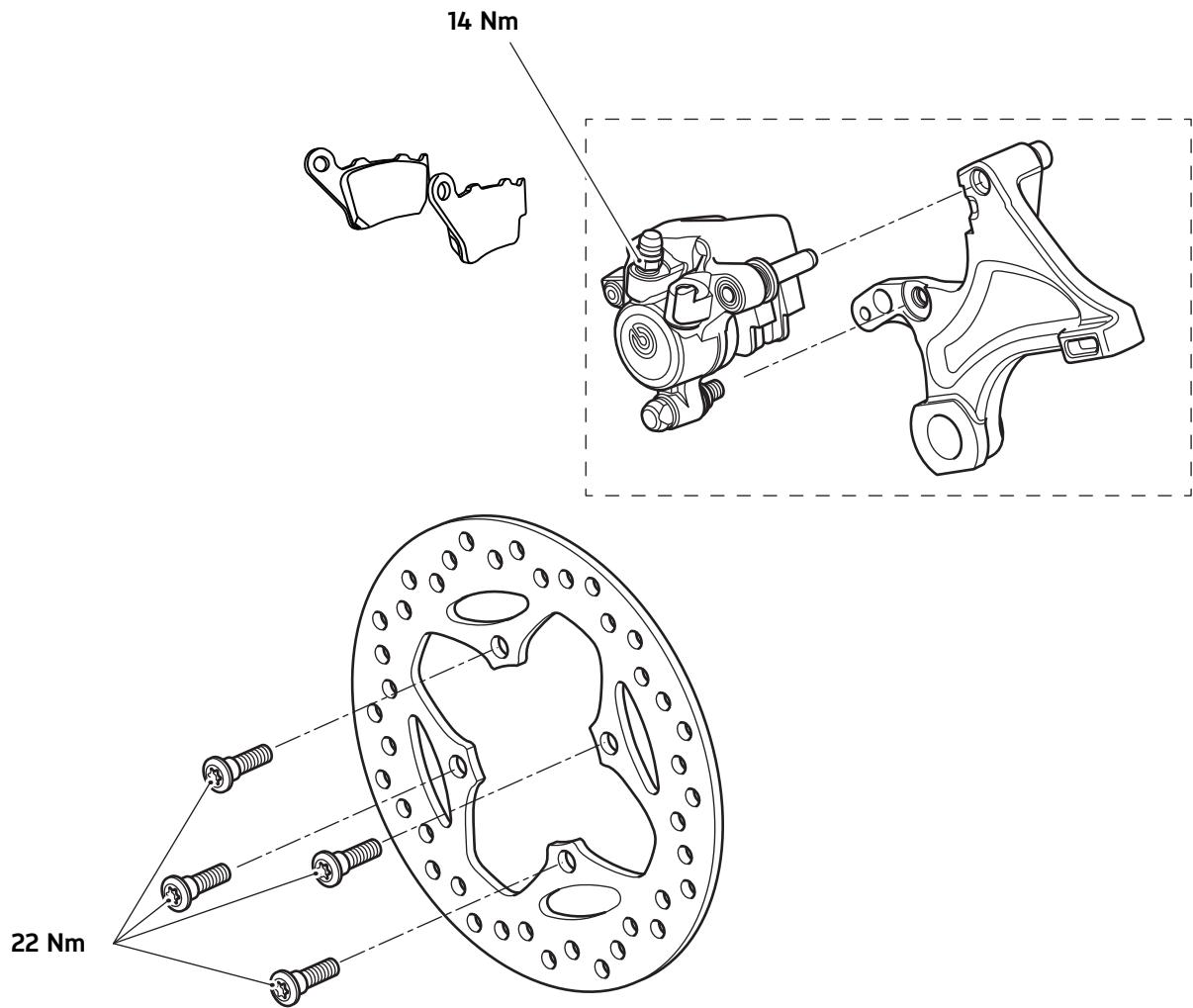


Exploded View - Rear Brake Master Cylinder - All Models

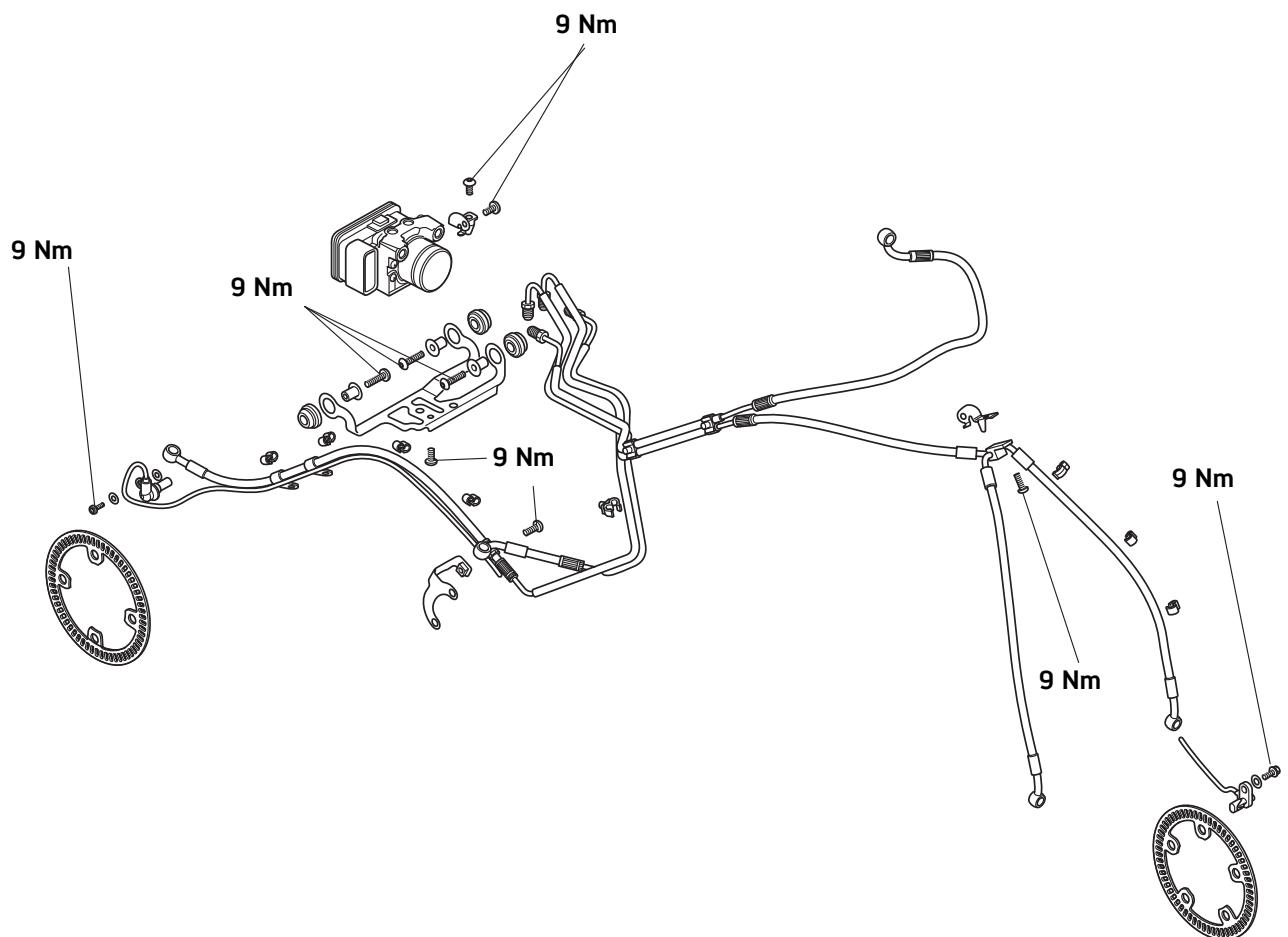


Brakes

Exploded View - Rear Brake Caliper - All Models

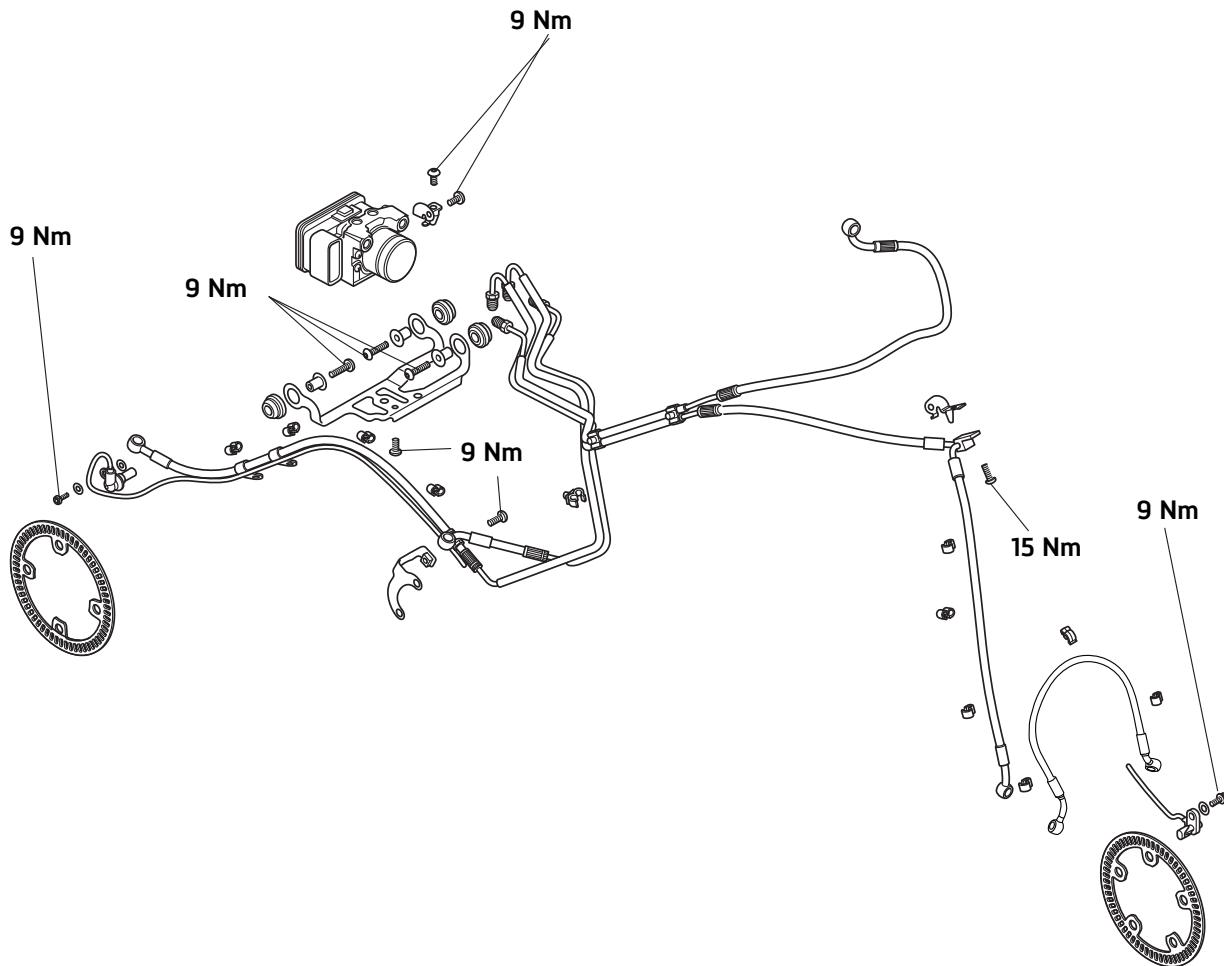


**Exploded View - ABS System - Street Triple, Street Triple 660 cc,
Street Triple R and Street Triple Rx**

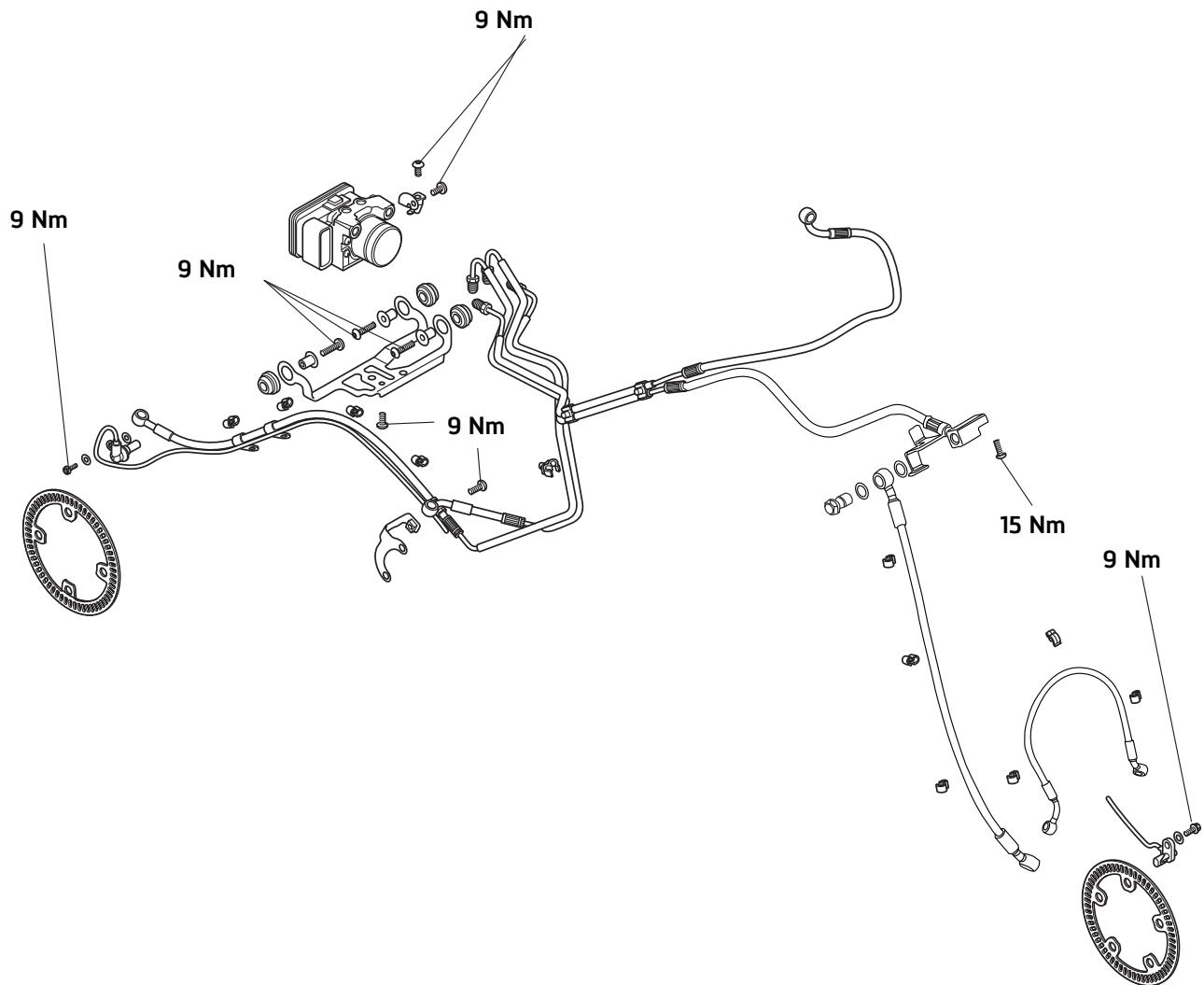


Brakes

Exploded View - ABS System - Daytona 675



Exploded View - ABS System - Daytona 675 R



Brakes

Braking System Maintenance Safety Precautions



Warning

Brake fluid is hygroscopic which means it will absorb moisture from the air. The absorbed moisture will greatly reduce the boiling point of the brake fluid causing a reduction in braking efficiency.

Replace brake fluid in line with the scheduled maintenance chart. A dangerous riding condition could result if this important maintenance item is neglected.

Do not spill brake fluid onto any area of the bodywork as this will damage any painted or plastic surface.

Always use new brake fluid from a sealed container and never use fluid from an unsealed container or from one which has been previously opened.

Do not mix different brands of fluid. Check for fluid leakage around brake fittings, seals and joints.

Check regularly for brake hose damage.

FAILURE TO OBSERVE ANY OF THE ABOVE WARNINGS MAY REDUCE BRAKING EFFICIENCY LEADING TO AN ACCIDENT.



Warning

If there has been an appreciable drop in the level of the fluid in either brake fluid reservoir, consult your authorised Triumph dealer for advice before riding.

If the brake lever or pedal feels soft when it is applied, or if the lever/pedal travel becomes excessive, there may be air in the brake lines or the brake may be defective.

It is dangerous to operate the motorcycle under such conditions and remedial action must be taken by your authorised Triumph dealer before riding the motorcycle. Failure to take remedial action may reduce braking efficiency leading to an accident.



Warning

Use only DOT 4 specification brake fluid as listed in the General Information section of this manual. The use of brake fluids other than those DOT 4 fluids listed in the General Information section may reduce the efficiency of the braking system leading to an accident.

Failure to change the brake fluid at the interval specified in the scheduled maintenance chart may reduce braking efficiency resulting in an accident.



Warning

Never use mineral based grease (such as lithium or copper based grease) in any area where contact with the braking system hydraulic seals and dust seals is possible. Mineral based grease will damage the hydraulic seals and dust seals in the calipers and master cylinders. Damage caused by contact with mineral based grease may reduce braking efficiency resulting in an accident.



Warning

A magnetised brake disc and/or a magnetised ABS pulser ring may cause problems with the ABS sensor which will illuminate the ABS warning light and disable the ABS.

To prevent these parts becoming magnetised, we strongly recommend that magnets, and items that contain magnets, must not be stored near or placed on brake discs or ABS pulser rings.

This includes parts fitted to motorcycles, parts removed during motorcycle service and new parts in dealer stores.

Examples of items that may contain magnets, are listed below:

- Alternator rotor
- Magnetic fuel tank bags
- Audio speakers
- Magnetic dial test indicator stand
- Magnetic parts tray.

If the ABS is not functioning, the brake system will continue to function as a non-ABS braking system. Do not continue to ride for longer than is necessary with the indicator light illuminated. Ride with extreme caution when performing diagnostic troubleshooting on a non-functioning ABS system. In this situation braking too hard will cause the wheels to lock resulting in loss of motorcycle control and an accident.

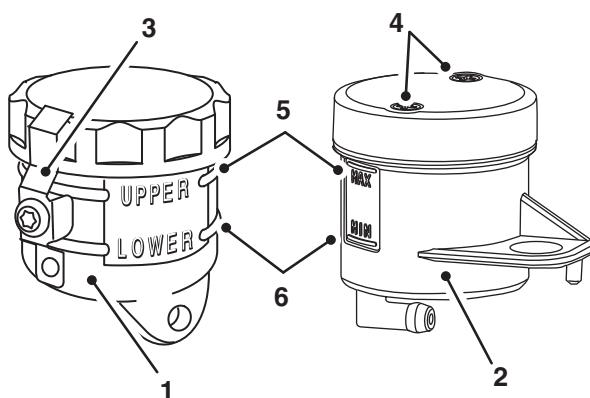
Front Brake Fluid Level Inspection - Daytona 675, Daytona 675 R, Street Triple R and Street Triple Rx

! Warning

Before starting work, ensure the motorcycle is stabilised and adequately supported. This will help prevent it from falling and causing injury to the operator or damage to the motorcycle.

In accordance with the scheduled maintenance chart, inspect the brake fluid level in the front and rear master cylinder reservoirs.

1. Ensure that the brake fluid level in the front brake fluid reservoir is between the upper and lower level lines (reservoir held horizontal).



jajc_1

1. Front brake reservoir Daytona 675, Street Triple R and Street Triple Rx
2. Front brake reservoir Daytona 675 R
3. Safety clip
4. Fixings
5. Upper level
6. Lower level

2. To adjust the fluid level:
 - Remove the safety clip for Daytona 675, Street Triple R and Street Triple Rx.
 - Remove the fixings for Daytona 675 R.
 - Remove the reservoir cover.
 - Fill the reservoir to the upper level line using new DOT 4 fluid from a sealed container.
 - Refit the reservoir cover ensuring that the diaphragm seal is correctly fitted.
 - Refit the safety clip for Daytona 675, Street Triple R and Street Triple Rx.
 - Refit the fixings for Daytona 675 R.

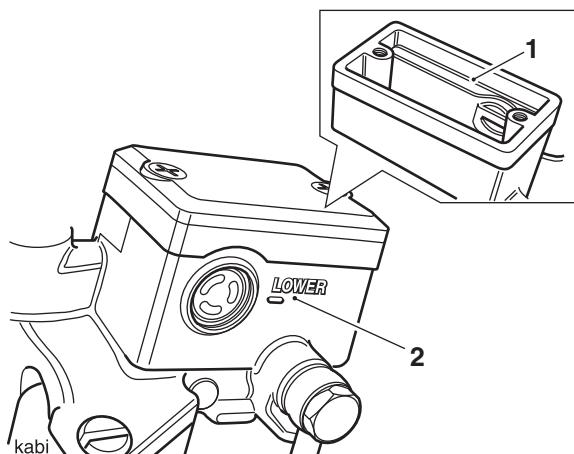
Front Brake Fluid Level Inspection - Street Triple and Street Triple 660 cc

! Warning

Before starting work, ensure the motorcycle is stabilised and adequately supported. This will help prevent it from falling and causing injury to the operator or damage to the motorcycle.

In accordance with the scheduled maintenance chart, inspect the brake fluid level in the front and rear master cylinder reservoirs.

1. Ensure that the brake fluid level in the front brake fluid reservoir is between the upper and lower level lines (reservoir held horizontal).



1. Front reservoir upper level
2. Front reservoir lower level
2. To inspect the fluid level, check the level of fluid visible in the window at the front of the reservoir body.
3. To adjust the fluid level:
 - Release the cap screws and detach the cover noting the position of the sealing diaphragm.
 - Fill the reservoir to the upper level line using new DOT 4 fluid from a sealed container.
 - Refit the cover, ensuring that the diaphragm seal is correctly positioned between the cap and reservoir body. Tighten the cap retaining screws.

Brakes

Rear Brake Fluid Level Inspection - All Models

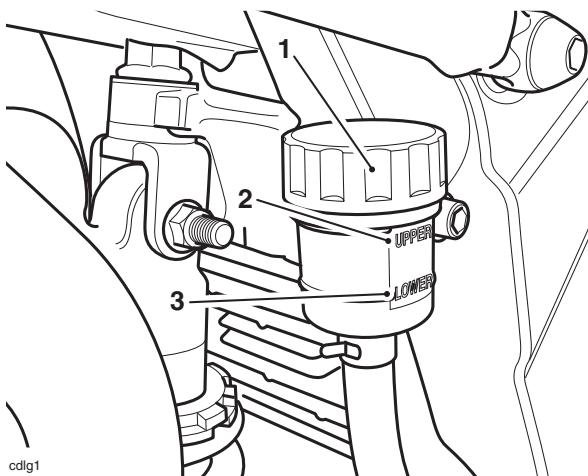


Warning

Before starting work, ensure the motorcycle is stabilised and adequately supported. This will help prevent it from falling and causing injury to the operator or damage to the motorcycle.

In accordance with the scheduled maintenance chart, inspect the brake fluid level in the front and rear master cylinder reservoirs.

1. Ensure that the brake fluid level in the rear brake fluid reservoir is between the upper and lower level lines (reservoir held horizontal).



1. Rear reservoir
2. Rear reservoir upper level
3. Rear reservoir lower level

Changing Brake Fluid

Brake fluid should be changed at the interval specified in the scheduled maintenance chart.

Brake Pads

Front and rear pad wear is automatically compensated for and has no effect on brake lever or pedal action.

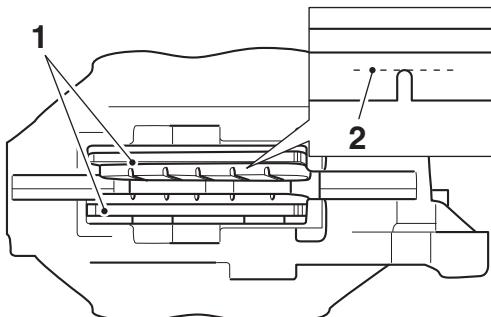
Brake Wear Inspection

In accordance with the scheduled maintenance chart, inspect the brake pads for wear. The minimum thickness of lining material for any front or rear brake pad is:

Front Brake Pads

- For all models except Daytona 675 R: 1.5 mm (0.06 in)
- For Daytona 675 R: 1.0 mm (0.04 in).

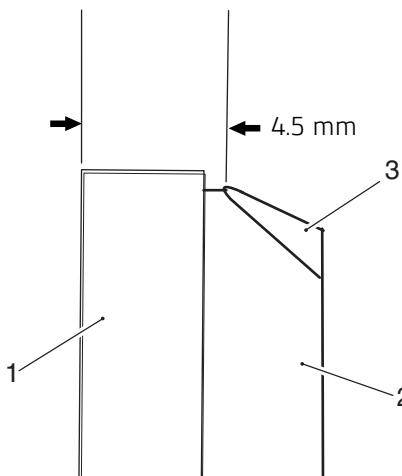
If any pad has worn to the bottom of the groove in the pad centre, replace all the brake pads on that wheel.



1. Lining material thickness
2. Centre groove

Rear Brake Pads

- All models:** If the lining thickness of any rear brake pad including the carrier plate is less than 4.5 mm (0.18 in), or if the pad has worn beyond the chamfer, replace all the pads on the wheel.



1. Carrier plate
2. Friction material
3. Chamfer

Breaking-in New Brake Pads and Discs

After replacement brake discs and/or pads have been fitted to the motorcycle, we recommend a period of careful breaking-in that will optimise the performance and longevity of the discs and pads. The recommended distance for breaking-in new pads and discs is 200 miles (300 km).

After fitting new brake discs and/or pads avoid extreme braking, ride with caution and allow for greater braking distances during the breaking-in period.

**Warning**

Do not replace individual brake pads, replace both pads in the brake caliper. On the front where two calipers are mounted on the same wheel, all the pads in both calipers must be replaced together. Replacing individual pads will reduce braking efficiency and may cause an accident.

Brakes

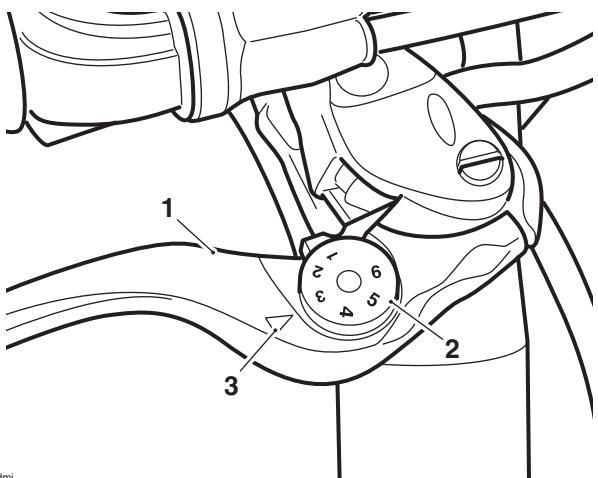
Bleeding the Front Brakes, Renewing Brake Fluid



Warning

Before starting work, ensure the motorcycle is stabilised and adequately supported. This will help prevent it from falling and causing injury to the operator or damage to the motorcycle.

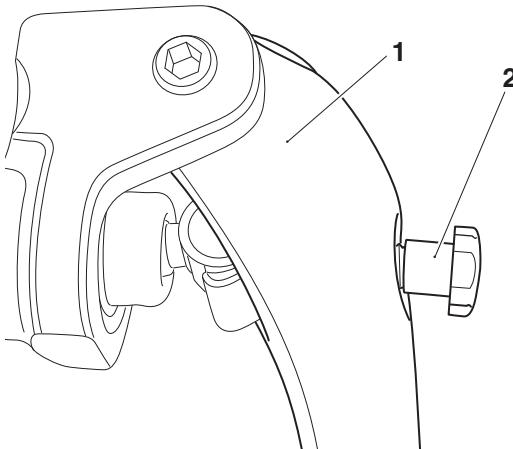
1. **For all Models except Daytona 675 R:** Note the original setting of the brake lever adjuster in order that it can be returned to the same position when the bleeding operation is complete. Set the brake lever adjuster to position No. 1.



cdmj

1. Lever
2. Adjuster wheel
3. Triangular mark

2. **For Daytona 675 R only:** Note the original setting of the brake lever adjuster in order that it can be returned to the same position when the bleeding operation is complete. Turn the brake lever adjuster fully in.



1. Brake lever
2. Adjusting screw

3. Turn the handlebars to bring the fluid reservoir to a level position.



Warning

Ensure absolute cleanliness when adding brake fluid to the brake fluid reservoir. Do not allow moisture or debris to enter the cylinder, as this will adversely affect the fluid properties. Always use fluid from a sealed container and do not use fluid from a container that has been opened for any period of time. Always check for fluid leakage around hydraulic fittings and for damage to hoses. A dangerous riding condition leading to loss of motorcycle control and an accident could result if this warning is ignored.



Warning

Use only DOT 4 specification brake fluid as listed in the General Information section of this manual. The use of brake fluids other than those DOT 4 fluids listed in the General Information section may reduce the efficiency of the braking system leading to loss of motorcycle control and an accident.

Observe the brake fluid handling warnings given earlier in this section of the manual.



Caution

To prevent paint damage, do not spill brake fluid onto any area of the bodywork. Spilled brake fluid will damage paintwork.

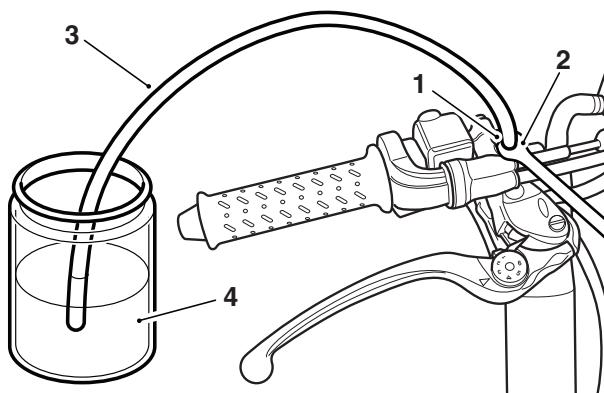
4. **Daytona 675, Street Triple R and Street Triple Rx only:** Remove the screw from the reservoir cover and collect the safety clip. Carefully remove the reservoir cover taking care not to spill any fluid.
5. **Daytona 675 R only:** Release the screws and carefully remove the reservoir cover taking care not to spill any fluid.
6. **Street Triple and Street Triple 660 cc only:** Release the cap screws and detach the cover noting the position of the sealing diaphragm.
7. **All models:** Check the condition of the sealing diaphragm for the reservoir. Replace if necessary.

Note:

- For all models except Street Triple and Street Triple 660 cc: The master cylinder should always be bled first. Continue from step 8.
- For Street Triple and Street Triple 660 cc only: omit steps 8 to 17 and continue from step 18.

Bleeding the Master Cylinder - All models except Street Triple and Street Triple 660 cc:

8. Remove the rubber cap from the bleed nipple on the master cylinder.
9. Attach a transparent tube to the bleed nipple and place the other end of the tube in a suitable receptacle containing new brake fluid. Keep the tube end below the level of fluid.



1. Bleed nipple
2. Spanner
3. Bleed Tube
4. Container

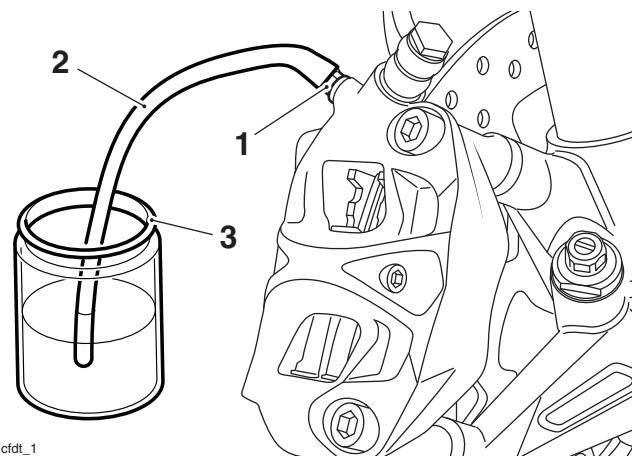
10. Release the bleed nipple.

Note:

- During bleeding, do not allow the fluid level to fall below the lower level mark in the reservoir. If the fluid level is allowed to fall below this mark, air may enter the system and the sequence of bleeding must be repeated.
- 11. Get an assistant to slowly pull the brake lever to the handlebar.
- 12. With the lever held fully against the handlebar, close the bleed nipple. Once the bleed nipple is closed, release the brake lever.
- 13. Repeat steps 11 and 12 until no more air appears in the bleed tube. Ensure that the brake fluid level is maintained between the upper and lower reservoir levels whilst bleeding is being carried out.
- 14. When all air has been expelled from the system, hold the lever fully against the handlebar and close the bleed nipple.
- 15. Tighten the bleed nipple to:
 - 6 Nm - all models except Daytona 675 R
 - 8 Nm - Daytona 675 R only.
- 16. Remove the bleed tube and replace the bleed nipple cap.
- 17. Fill the reservoir to the upper level with new DOT 4 fluid.

Bleeding The Calipers - All Models:

18. Remove the rubber cap from the bleed nipple on the right hand caliper.
19. Attach a transparent tube to the bleed nipple and place the other end of the tube in a suitable receptacle containing new brake fluid. Keep the tube end below the level of fluid.



1. Bleed nipple
2. Bleed tube
3. Container

Brakes

20. Release the bleed nipple.

Note:

- During bleeding, do not allow the fluid level to fall below the lower level mark in the reservoir. If the fluid level is allowed to fall below this mark, air may enter the system and the sequence of bleeding must be repeated.
21. Get an assistant to slowly pull the brake lever to the handlebar.
22. With the lever held fully against the handlebar, close the bleed nipple. Once the bleed nipple is closed, release the brake lever.
23. Repeat steps 21 and 22 until no more air appears in the bleed tube. Ensure that the brake fluid level is maintained between the upper and lower reservoir levels whilst bleeding is being carried out.
24. When all air has been expelled from the system, hold the lever fully against the handlebar and close the bleed nipple.
25. Tighten the bleed nipple to:
- **6 Nm** - all models except Daytona 675 R
 - **8 Nm** - Daytona 675 R only.

26. Remove the bleed tube and replace the bleed nipple cap.
27. Fill the reservoir to the upper level with new DOT 4 fluid.
28. Repeat steps 18 to 27 for the left hand caliper.
29. When both calipers (and the master cylinder on Daytona 675, Daytona 675 R, Street Triple R and Street Triple Rx) have been bled, ensure the brake lever operation has a firm resistive feel to it, does not feel spongy and that the lever cannot be pulled directly back to the handlebar. Take remedial action as necessary.
30. **Daytona 675, Street Triple R and Street Triple Rx only:** Refit the diaphragm and reservoir cover. Refit the safety clip and tighten the screw to **1 Nm**.
31. **Daytona 675 R only:** Refit the reservoir diaphragm and cover. Secure the cap with its screws.

32. **Street Triple only:** Refit the diaphragm and reservoir cover. Refit the screws and tighten to **1.5 Nm**.



Warning

Always return the lever adjuster to the original setting as noted in paragraph 1. Operating the motorcycle with lever settings that are unfamiliar may lead to loss of control or an accident.

33. **All models:** Reset the brake lever adjuster to the original setting.
34. Check the operation of the front brake. Rectify as necessary.



Warning

It is dangerous to operate the motorcycle with defective brakes; you must have your authorised Triumph dealer take remedial action before you attempt to ride the motorcycle again. Failure to take remedial action may reduce braking efficiency leading to loss of motorcycle control and an accident.

Front Brake Pads - Daytona 675

Removal



Warning

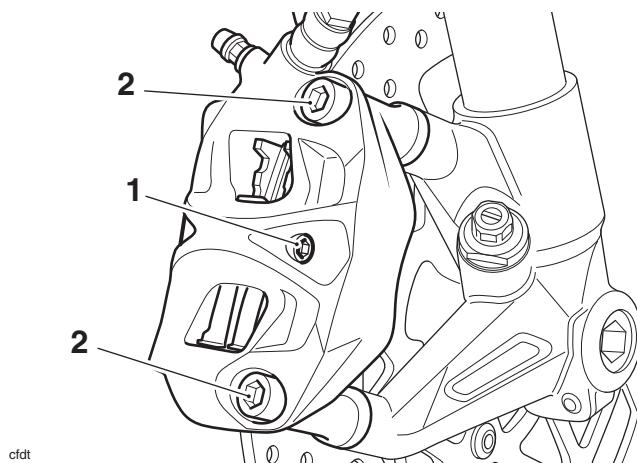
Before starting work, ensure the motorcycle is stabilised and adequately supported. This will help prevent it from falling and causing injury to the operator or damage to the motorcycle.



Warning

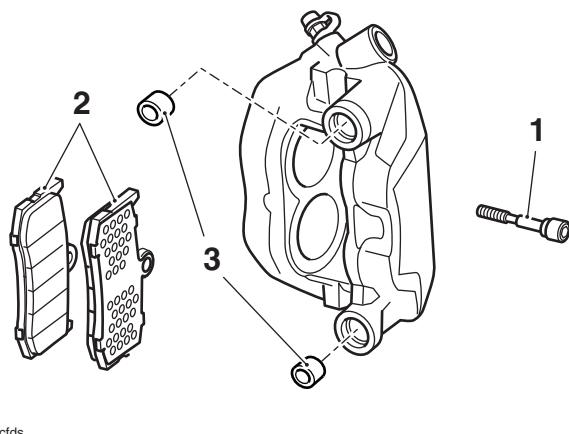
Do not allow the calipers to hang on the brake hoses as this may damage the hoses and could lead to loss of motorcycle control and an accident.

1. Loosen the pad retaining pin, remove the caliper mounting bolts and slide the caliper off the disc. Recover the two dowels.



1. Pad retaining pin
2. Caliper mounting bolts

2. Remove the pad retaining pin and remove the pads from the caliper. Take care not to lose the anti-rattle spring from the caliper body.



1. Pad retaining pin
2. Brake pads
3. Dowels

Inspection

1. Check the anti-rattle spring and retaining pin. Renew any component which shows signs of damage or corrosion.
2. Check there is no sign of leakage from the piston seals. Rectify any problems before installing the pads.

Note:

- Complete the assembly of the brake pads to one caliper (see assembly for details) before removing the pads from the other caliper.

Installation



Warning

Never use mineral based grease (such as lithium or copper based grease) in any area where contact with the braking system hydraulic seals and dust seals is possible. Mineral based grease will damage the hydraulic seals and dust seals in the calipers and master cylinders. Damage caused by contact with mineral based grease may reduce braking efficiency resulting in an accident.



Caution

Never lever directly against the disc, caliper or the pad lining material as this will damage these components. Always use a levering tool made from a soft material which will not cause damage to the load bearing surfaces.

Brake fluid will be displaced as the caliper pistons are compressed. To prevent body damage, ensure that the displaced fluid does not come into contact with any part of the bodywork.

1. If new pads are being installed, push the pistons fully back into the caliper body. Keep an eye on the fluid level in the reservoir whilst retracting the pistons to prevent fluid spillage.
2. Ensure the anti-rattle spring is securely clipped onto the caliper body.

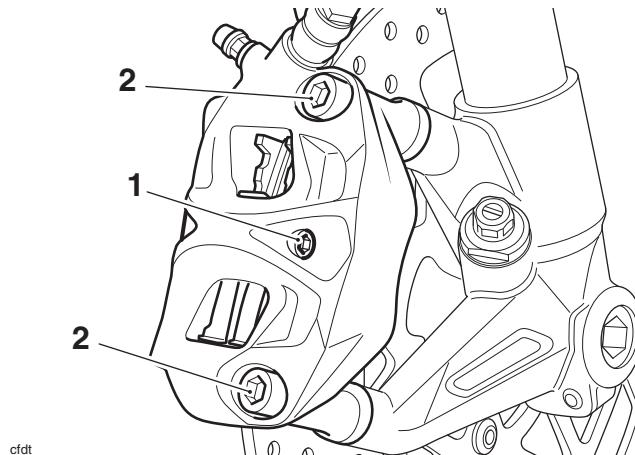


Warning

Do not apply more than a minimum coating of grease to the pad retaining pins. Excess grease may contaminate the brake pads, hydraulic seals and discs causing reduced braking efficiency and an accident.

3. Lubricate the pad retaining pin with a thin smear of proprietary high temperature copper-based grease.
4. Ensure the heat isolation pads are fitted to the back of each brake pad. Fit the pads to the caliper with their friction material surfaces facing each other. Locate the pad upper ends in the mounting bracket retainer then align them with the caliper body and insert the retaining pin.
5. Thoroughly clean the threaded bolt holes for the front fork brake caliper fixings.
6. Position the caliper over the disc.
7. Thoroughly clean the threaded part of the bolt and smear the first four threads with a proprietary copper based grease.
8. Secure the brake caliper with the bolts and tighten to **55 Nm**.

9. Tighten the pad retaining pin to **18 Nm**.



1. Pad retaining pin
2. Caliper mounting bolts

10. Pump the brake lever to correctly position the caliper pistons.
11. Repeat the removal, inspection and installation process for the other caliper.



Warning

Use only DOT 4 specification brake fluid as listed in the General Information section of this manual. The use of brake fluids other than those DOT 4 fluids listed in the General Information section may reduce the efficiency of the braking system leading to loss of motorcycle control and an accident.

Observe the brake fluid handling warnings given earlier in this section of the manual.

12. Check the front brake fluid level and top up as required with new DOT 4 fluid.
13. Check for correct brake operation. Rectify as necessary.



Warning

It is dangerous to operate the motorcycle with defective brakes; you must have your authorised Triumph dealer take remedial action before you ride the motorcycle again. Failure to take remedial action may result in reduced braking efficiency leading to loss of motorcycle control and an accident.

Front Brake Pads - Daytona 675 R

Removal



Warning

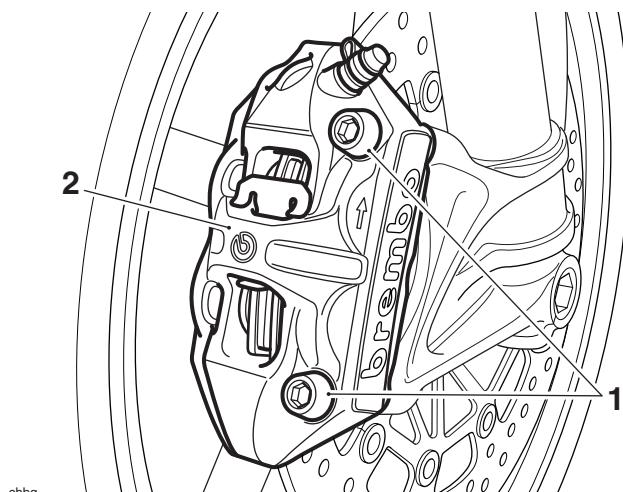
Before starting work, ensure the motorcycle is stabilised and adequately supported. This will help prevent it from falling and causing injury to the operator or damage to the motorcycle.



Warning

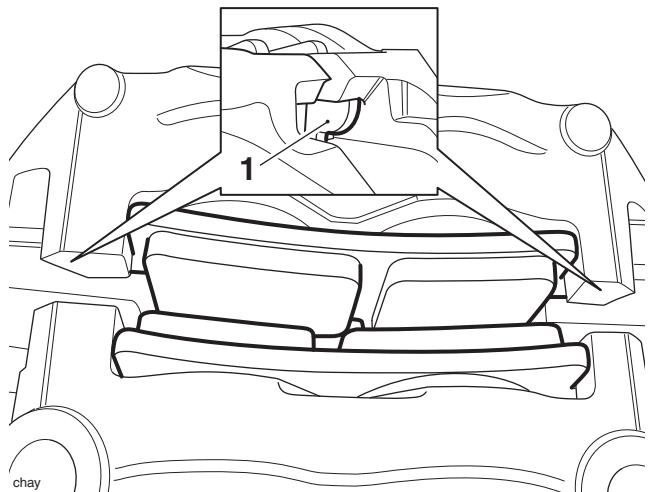
Do not allow the calipers to hang on the brake hoses as this may damage the hoses and could lead to loss of motorcycle control and an accident.

1. Remove the caliper mounting bolts and slide the caliper off the disc.



1. Caliper mounting bolts
2. Caliper

2. Release the brake pad retaining lug from its mounting in the caliper and remove the brake pad.

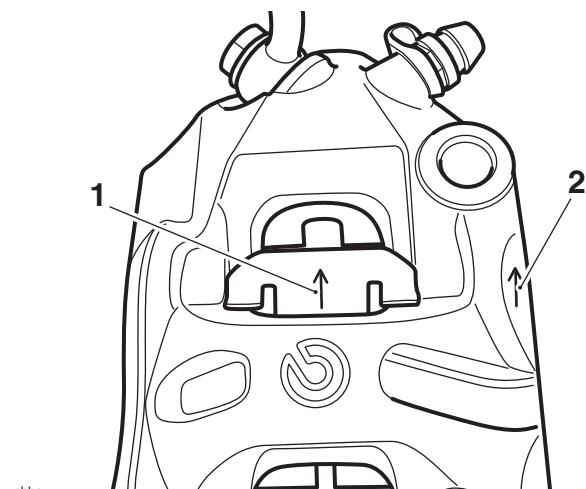


1. Brake pad retaining lug

3. Repeat for the other brake pad.

Note:

- Note the position and orientation of the anti-rattle spring for installation.
- Note that the arrow on the anti-rattle spring is pointing in the same direction as the arrow on the caliper.



1. Arrow, anti-rattle spring
2. Arrow, front caliper

Inspection

1. Check the anti-rattle spring. Renew any component which shows signs of damage or corrosion.
2. Check there is no sign of leakage from the piston seals. Rectify any problems before installing the pads.

Brakes

Note:

- Complete the assembly of the brake pads to one caliper (see assembly for details) before removing the pads from the other caliper.

Installation



Warning

Never use mineral based grease (such as lithium or copper based grease) in any area where contact with the braking system hydraulic seals and dust seals is possible. Mineral based grease will damage the hydraulic seals and dust seals in the calipers and master cylinders. Damage caused by contact with mineral based grease may reduce braking efficiency resulting in an accident.

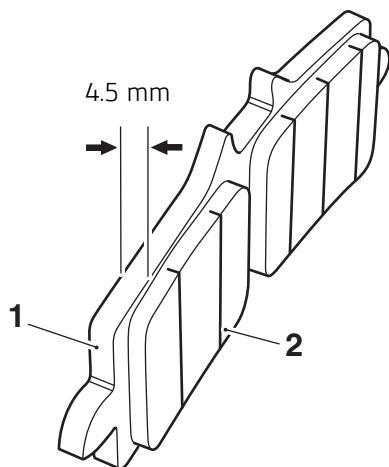


Warning

If fitting new proprietary brake pads, check that the carrier plate of the brake pad is at least 4.5 mm thick.

Fitting brake pads with the carrier plate less than 4.5 mm thick may result in brake failure due to the possible loss of the brake pad as it wears.

Brake pads for this model supplied by Triumph will have the carrier plate at least 4.5 mm thick. Always have replacement brake pads supplied and fitted by your Triumph dealer.



chbe
1. Carrier plate
2. Brake pad

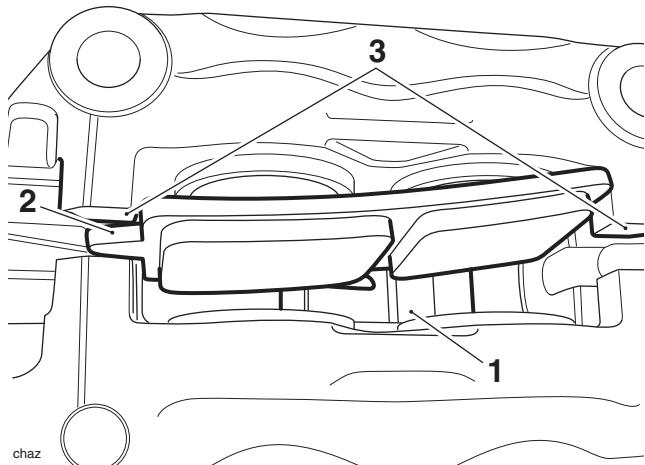


Caution

Never lever directly against the disc, caliper or the pad lining material as this will damage these components. Always use a levering tool made from a soft material which will not cause damage to the load bearing surfaces.

Brake fluid will be displaced as the caliper pistons are compressed. To prevent body damage, ensure that the displaced fluid does not come into contact with any part of the bodywork.

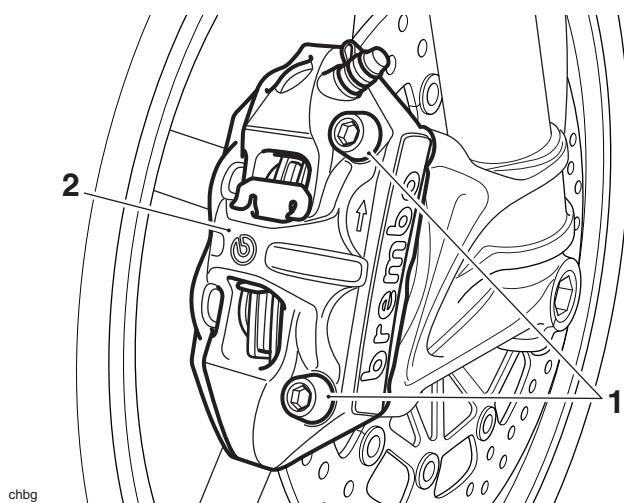
1. If new pads are being installed, push the pistons fully back into the caliper body. Keep an eye on the fluid level in the reservoir whilst retracting the pistons to prevent fluid spillage.
2. Ensure that the anti-rattle plate position and orientation is as noted for removal.
3. Fit one of the brake pad's retaining lugs into its mounting in the caliper with its friction material surfaces facing the other side of the caliper.



1. Anti-rattle spring
2. Retaining lug
3. Retaining lug mounting

4. Using finger pressure only, fit the pad's other retaining lug into its mounting of the caliper. Ensure that both retaining lugs are fully fitted into their mountings.
5. Repeat steps 2 to 4 for the other brake pad.
6. Thoroughly clean the threaded bolt holes for the front fork brake caliper fixings.
7. Position the caliper over the disc.
8. Thoroughly clean the threaded part of the bolt and smear the first four threads with a proprietary copper based grease.

- Secure the brake caliper with the bolts and tighten to **55 Nm**.



1. Caliper mounting bolts

2. Caliper

- Pump the brake lever to correctly position the caliper pistons.
- Repeat the removal, inspection and installation process for the other caliper.



Warning

Use only DOT 4 specification brake fluid as listed in the General Information section of this manual. The use of brake fluids other than those DOT 4 fluids listed in the General Information section may reduce the efficiency of the braking system leading to loss of motorcycle control and an accident.

Observe the brake fluid handling warnings given earlier in this section of the manual.

- Check the front brake fluid level and top up as required with new DOT 4 fluid.
- Check for correct brake operation. Rectify as necessary.



Warning

It is dangerous to operate the motorcycle with defective brakes; you must have your authorised Triumph dealer take remedial action before you ride the motorcycle again. Failure to take remedial action may result in reduced braking efficiency leading to loss of motorcycle control and an accident.

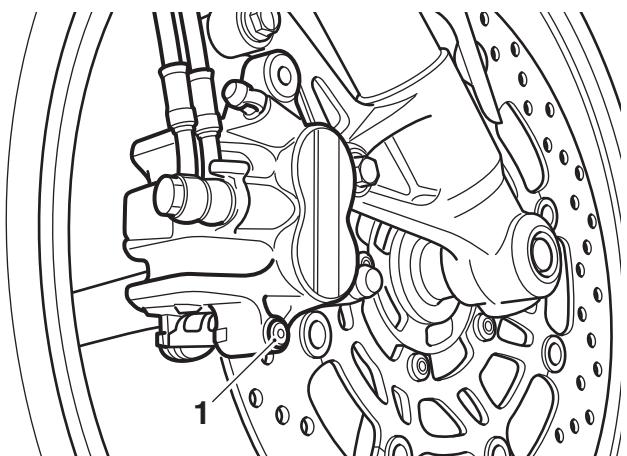
Front Brake Pads - Street Triple and Street Triple 660 cc

Removal

! Warning

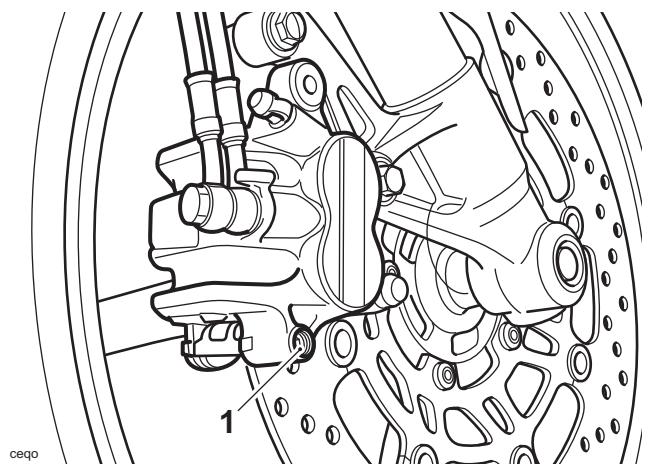
Before starting work, ensure the motorcycle is stabilised and adequately supported. This will help prevent it from falling and causing injury to the operator or damage to the motorcycle.

- Unscrew the pad retaining pin plug from the caliper.



1. Pad retaining pin plug

- Loosen the pad retaining pin.



1. Pad retaining pin

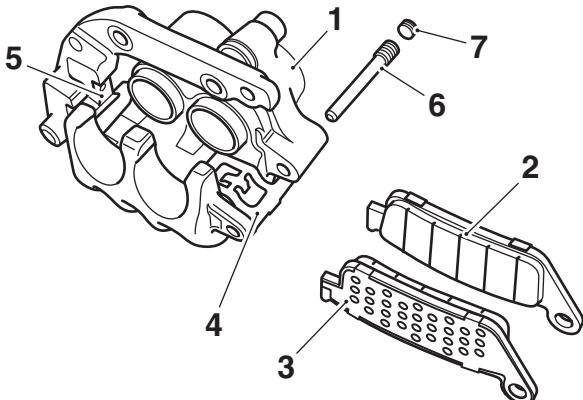


Warning

Do not allow the calipers to hang on the brake hoses as this may damage the hoses and could lead to loss of motorcycle control and an accident.

Brakes

3. Loosen and remove the caliper mounting bolts and slide the caliper off the disc.
4. Remove the pad retaining pin and remove the pads from the caliper. Take care not to lose the pad retainer from the mounting bracket or the anti-rattle spring from the caliper body.



ceqv

1. Caliper
2. Brake pad
3. Heat isolation pad
4. Anti-rattle spring
5. Pad retainer
6. Pad retaining pin
7. Pad retaining pin plug

Inspection

1. Check the pad retainer, anti-rattle spring and retaining pin. Renew any component which shows signs of damage or corrosion.
2. Check the caliper body slides easily on the mounting bracket pins and check there is no sign of leakage from the piston seals. Rectify any problems before installing the pads.

Note:

- **Complete the assembly of the brake pads to one caliper (see assembly for details) before removing the pads from the other caliper.**

Installation

Warning

Never use mineral based grease (such as lithium or copper based grease) in any area where contact with the braking system hydraulic seals and dust seals is possible. Mineral based grease will damage the hydraulic seals and dust seals in the calipers and master cylinders. Damage caused by contact with mineral based grease may reduce braking efficiency resulting in an accident.

Caution

Never lever directly against the disc, caliper or the pad lining material as this will damage these components. Always use a levering tool made from a soft material which will not cause damage to the load bearing surfaces.

Brake fluid will be displaced as the caliper pistons are compressed. To prevent body damage, ensure that the displaced fluid does not come into contact with any part of the bodywork.

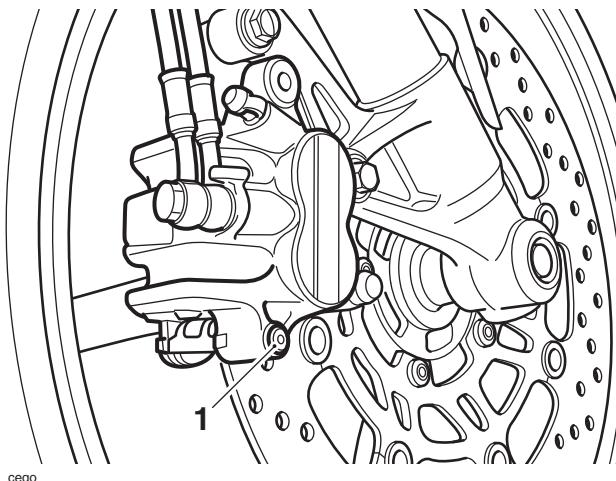
1. If new pads are being installed, push the pistons fully back into the caliper body. Keep an eye on the fluid level in the reservoir whilst retracting the pistons to prevent fluid spillage.
2. Ensure the pad retainer is correctly fitted to the mounting bracket and the anti-rattle spring is securely clipped onto the caliper body.

Warning

Do not apply more than a minimum coating of grease to the pad retaining pins. Excess grease may contaminate the brake pads, hydraulic seals and discs causing reduced braking efficiency and an accident.

3. Lubricate the pad retaining pin with a thin smear of proprietary high temperature copper-based grease.
4. Ensure the heat isolation pads are fitted to the back of each brake pad. Fit the pads to the caliper with their friction material surfaces facing each other. Locate the pad upper ends in the mounting bracket retainer then align them with the caliper body and insert the retaining pin.
5. Slide the caliper onto the disc, ensuring the pads pass either side, and fit the mounting bolts. Tighten the mounting bolts to **21 Nm**.

6. Tighten the pad retaining pin to **18 Nm**.
7. Fit the pad retaining pin plug to the caliper and tighten to **3 Nm**.



1. Pad retaining pin plug

8. Pump the brake lever to correctly position the caliper pistons.
9. Repeat the removal, inspection and installation process for the other caliper.



Warning

Use only DOT 4 specification brake fluid as listed in the General Information section of this manual. The use of brake fluids other than those DOT 4 fluids listed in the General Information section may reduce the efficiency of the braking system leading to loss of motorcycle control and an accident.

Observe the brake fluid handling warnings given earlier in this section of the manual.

10. Check the front brake fluid level and top up as required with new DOT 4 fluid.
11. Check for correct brake operation. Rectify as necessary.



Warning

It is dangerous to operate the motorcycle with defective brakes; you must have your authorised Triumph dealer take remedial action before you ride the motorcycle again. Failure to take remedial action may result in reduced braking efficiency leading to loss of motorcycle control and an accident.

Front Brake Pads - Street Triple R and Street Triple Rx

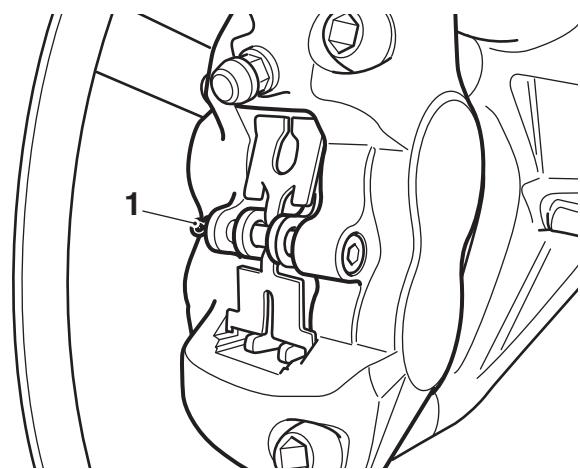
Removal



Warning

Before starting work, ensure the motorcycle is stabilised and adequately supported. This will help prevent it from falling and causing injury to the operator or damage to the motorcycle.

1. Remove the brake pad retaining pin after removing the R-clip from its inner end. Inspect the pad retaining pin for damage.



1. R-clip

2. Remove the anti-rattle spring and inspect the spring for damage.



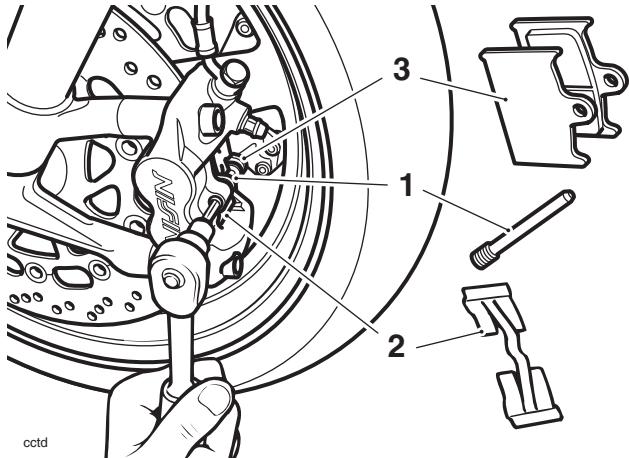
Caution

Never lever directly against the disc, caliper or the pad lining material as this will damage these components. Always use a levering tool made from a soft material which will not cause damage to the load bearing surfaces.

Brake fluid will be displaced as the caliper pistons are compressed. To prevent body damage, ensure that the displaced fluid does not come into contact with any part of the bodywork.

Brakes

3. Ease the brake pads apart to force the caliper pistons back to allow withdrawal of the pads.
4. Remove both brake pads and inspect for damage and wear beyond the service limit.



1. Retaining pin
2. Anti-rattle spring
3. Brake pads

Note:

- Complete the assembly of the brake pads to one caliper (see assembly for details) before removing the pads from the other caliper.

Inspection

1. Check the R-clip, anti-rattle spring and retaining pin. Renew any component which shows signs of damage or corrosion.
2. Check there is no sign of leakage from the piston seals. Rectify any problems before installing the pads.

Note:

- Complete the assembly of the brake pads to one caliper (see assembly for details) before removing the pads from the other caliper.

Installation

Warning

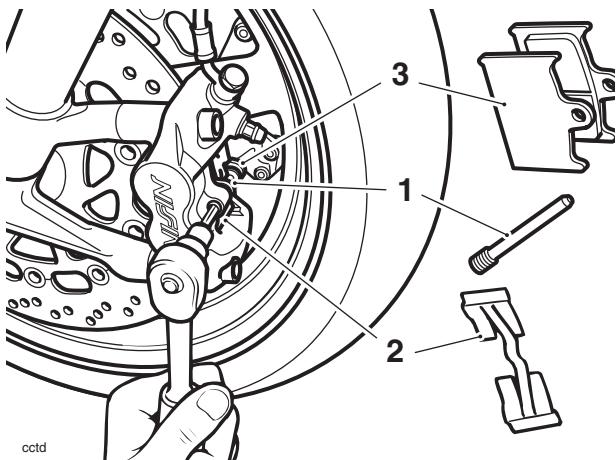
Never use mineral based grease (such as lithium or copper based grease) in any area where contact with the braking system hydraulic seals and dust seals is possible. Mineral based grease will damage the hydraulic seals and dust seals in the calipers and master cylinders. Damage caused by contact with mineral based grease may reduce braking efficiency resulting in an accident.

1. Fit new brake pads as an axle set or, if all the pads are in a serviceable condition, clean the pad grooves before refitting all pads in their original positions.

Warning

Do not apply more than a minimum coating of grease to the pad retaining pins. Excess grease may contaminate the brake pads, hydraulic seals and discs causing reduced braking efficiency and an accident.

2. Lubricate the pad retaining pin using a minimum amount of proprietary high temperature copper-based grease.
3. Fit the anti-rattle spring over the pads and push down in the centre to allow the pad retaining pin to slide across the top of the spring.
4. Tighten the pad retaining pin to **18 Nm**, and secure with the R-clip.



1. Retaining pin
2. Anti-rattle spring
3. Brake pads

5. Pump the brake lever to correctly position the caliper pistons.
6. Repeat the removal, inspection and installation process for the other caliper.



Warning

Use only DOT 4 specification brake fluid as listed in the General Information section of this manual. The use of brake fluids other than those DOT 4 fluids listed in the General Information section may reduce the efficiency of the braking system leading to loss of motorcycle control and an accident.

Observe the brake fluid handling warnings given earlier in this section of the manual.

7. Check the front brake fluid level and top up as required with new DOT 4 fluid.
8. Check for correct brake operation. Rectify as necessary.



Warning

It is dangerous to operate the motorcycle with defective brakes; you must have your authorised Triumph dealer take remedial action before you ride the motorcycle again. Failure to take remedial action may result in reduced braking efficiency leading to loss of motorcycle control and an accident.

Front Brake Caliper - Daytona 675

Removal



Warning

Before starting work, ensure the motorcycle is stabilised and adequately supported. This will help prevent it from falling and causing injury to the operator or damage to the motorcycle.



Caution

To prevent paint damage, do not spill brake fluid onto any area of the bodywork. Spilled brake fluid will damage paintwork.

1. Disconnect the brake hose at the caliper (two hoses on right hand caliper), and place the free end of the hose(s) in a suitable container to collect the brake fluid.
2. Remove the brake pads (see page 14-25).

Disassembly



Warning

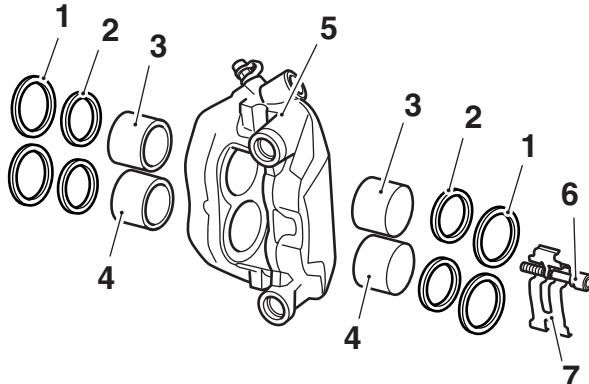
To prevent injury, never place fingers or hands inside the caliper opening when removing the pistons. Always wear eye, hand and face protection when using compressed air. Eye, face and skin damage will result from direct contact with compressed air.

Note:

- Only the top two pistons (near the brake hose) are Nymfron coated.
- The Nymfron coated pistons appear to have a matt finish compared to the Nickel plated pistons.
- Note the position of the Nymfron coated pistons.

Brakes

- Cover the caliper opening with a clean heavy cloth and using either compressed air or by reconnecting the master cylinder and pumping the brake lever, remove the pistons one at a time.



cfdr2

- Piston seal
- Dust seal
- Pistons with Nymfron coating
- Pistons with Nickel coating
- Caliper
- Pad retaining pin
- Anti-rattle spring



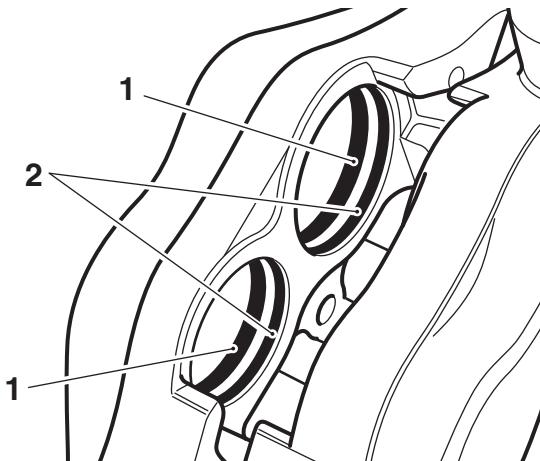
Warning

Ensure the seal grooves in the caliper bores are not damaged during the removal of the seals. Damage to the seal grooves may allow brake fluid to leak past the seals resulting in a dangerous riding condition leading to loss of motorcycle control and an accident.

- Extract the dust seals and piston seals, taking care not to damage the caliper bores. Discard the old seals, these must not be reused.

Note:

- The piston seals are slightly thicker than the dust seals.



- Piston seals
- Dust seals
- Check the pistons, caliper and mounting bracket for signs of damage, paying particular attention to the caliper bores and pistons. If damage is present, renew the worn component or the complete caliper assembly.

Inspection

- Check the pistons and caliper bores for corrosion, scoring and damage. Renew as necessary.



Warning

Always renew caliper seals and pistons after removal from the caliper. An effective hydraulic seal can only be made if new components are used.

A dangerous riding condition leading to an accident could result if this warning is ignored.

- Inspect the brake pads for damage and wear beyond the service limit. Renew as necessary.

Assembly

- If all components are serviceable, obtain a piston seal kit and reassemble the caliper as follows:



Warning

Never use mineral based grease (such as lithium or copper based grease) in any area where contact with the braking system hydraulic seals and dust seals is possible. Mineral based grease will damage the hydraulic seals and dust seals in the calipers and master cylinders. Damage caused by contact with mineral based grease may reduce braking efficiency resulting in an accident.



Warning

Before installation, all internal brake components should be cleaned and lubricated with clean new DOT 4 brake fluid.

Never use solvents, petrol (gasoline), engine oil, or any other petroleum distillate on internal brake components as this will cause deterioration of the hydraulic seals in the calipers and master cylinders.

A dangerous riding condition leading to loss of motorcycle control and an accident could result if this warning is ignored.

- Ensure all components are clean, then fit the new seals to their grooves in the caliper bores.
- Lubricate the fluid seals, caliper bore and the outside of the pistons with clean DOT 4 brake fluid.
- Ease the pistons squarely back into the bores as noted for removal, taking care not to displace the seals.

Installation

- Fit the brake pads (see page 14-25).
- Connect the brake hose(s) to the caliper incorporating new sealing washers on each side of all hose connections.
- Tighten the banjo bolt to **25 Nm**.



Warning

Use only DOT 4 specification brake fluid as listed in the General Information section of this manual. The use of brake fluids other than those DOT 4 fluids listed in the General Information section may reduce the efficiency of the braking system leading to loss of motorcycle control and an accident.

Observe the brake fluid handling warnings given earlier in this section of the manual.

- Fill the master cylinder with new, DOT 4 brake fluid from a sealed container.
- Fill and bleed the front brakes (see page 14-22 for motorcycles without ABS, see page 14-62 for motorcycles with ABS).
- Check for correct brake operation.



Warning

It is dangerous to operate the motorcycle with defective brakes; you must have your authorised Triumph dealer take remedial action before you ride the motorcycle again. Failure to take remedial action may result in reduced braking efficiency leading to loss of motorcycle control and an accident.

Brakes

Front Brake Caliper - Daytona 675 R

Removal



Warning

Before starting work, ensure the motorcycle is stabilised and adequately supported. This will help prevent it from falling and causing injury to the operator or damage to the motorcycle.



Caution

To prevent paint damage, do not spill brake fluid onto any area of the bodywork. Spilled brake fluid will damage paintwork.

Note:

- Note the orientation of the brake hose on the caliper for installation.
1. Disconnect the brake hose at the caliper and place the free end of the hose in a suitable container to collect the brake fluid.
 2. Remove the brake pads (see page 14-27).

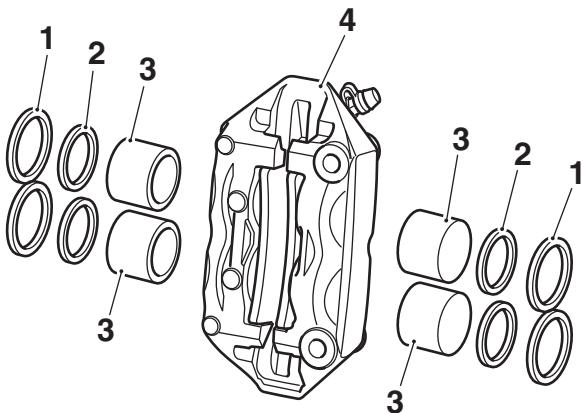
Disassembly



Warning

To prevent injury, never place fingers or hands inside the caliper opening when removing the pistons. Always wear eye, hand and face protection when using compressed air. Eye, face and skin damage will result from direct contact with compressed air.

1. Cover the caliper opening with a clean heavy cloth and using either compressed air or by reconnecting the master cylinder and pumping the brake lever, remove the pistons one at a time.



chbd

1. Piston seal
2. Dust seal
3. Pistons
4. Caliper



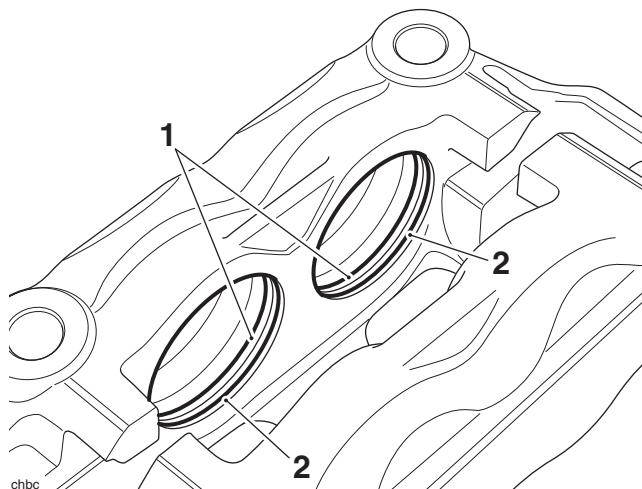
Warning

Ensure the seal grooves in the caliper bores are not damaged during the removal of the seals. Damage to the seal grooves may allow brake fluid to leak past the seals resulting in a dangerous riding condition leading to loss of motorcycle control and an accident.

- Extract the dust seals and piston seals, taking care not to damage the caliper bores. Discard the old seals, these must not be reused.

Note:

- The piston seals are slightly thicker than the dust seals.**



1. Piston seals
2. Dust seals

- Check the pistons, caliper and mounting bracket for signs of damage, paying particular attention to the caliper bores and pistons. If damage is present, renew the worn component or the complete caliper assembly.

Inspection

- Check the pistons and caliper bores for corrosion, scoring and damage.

**Warning**

Always renew caliper seals and pistons after removal from the caliper. An effective hydraulic seal can only be made if new components are used.

A dangerous riding condition leading to an accident could result if this warning is ignored.

- Inspect the brake pads for damage and wear beyond the service limit. Renew as necessary.

Assembly

- If all components are serviceable, obtain a piston seal kit and reassemble the caliper as follows:

**Warning**

Never use mineral based grease (such as lithium or copper based grease) in any area where contact with the braking system hydraulic seals and dust seals is possible. Mineral based grease will damage the hydraulic seals and dust seals in the calipers and master cylinders. Damage caused by contact with mineral based grease may reduce braking efficiency resulting in an accident.

**Warning**

Before installation, all internal brake components should be cleaned and lubricated with clean new DOT 4 brake fluid.

Never use solvents, petrol (gasoline), engine oil, or any other petroleum distillate on internal brake components as this will cause deterioration of the hydraulic seals in the calipers and master cylinders.

A dangerous riding condition leading to loss of motorcycle control and an accident could result if this warning is ignored.

- Ensure all components are clean, then fit the new seals to their grooves in the caliper bores.
- Lubricate the fluid seals, caliper bore and the outside of the pistons with clean DOT 4 brake fluid.
- Ease the pistons squarely back into the bores, taking care not to displace the seals.

Installation

- Remove the front wheel (see page 15-8).
- Temporarily fit the calipers to the forks.
- Connect the brake hoses to the calipers incorporating new sealing washers on each side of the hose connections.
- Ensure the orientation of the brake hose is as noted for removal and tighten the banjo bolt to **25 Nm**.

**Warning**

Do not allow the calipers to hang on the brake hoses as this may damage the hoses and could lead to loss of motorcycle control and an accident.

Brakes

5. Detach the calipers from the front forks and refit the wheel (see page 15-9).
6. Fit the brake pads (see page 14-28).



Warning

Use only DOT 4 specification brake fluid as listed in the General Information section of this manual. The use of brake fluids other than those DOT 4 fluids listed in the General Information section may reduce the efficiency of the braking system leading to loss of motorcycle control and an accident.

Observe the brake fluid handling warnings given earlier in this section of the manual.

7. Fill the master cylinder with new, DOT 4 brake fluid from a sealed container.
8. Fill and bleed the front brakes (see page 14-22 for motorcycles without ABS, see page 14-62 for motorcycles with ABS).
9. Check for correct brake operation.



Warning

It is dangerous to operate the motorcycle with defective brakes; you must have your authorised Triumph dealer take remedial action before you ride the motorcycle again. Failure to take remedial action may result in reduced braking efficiency leading to loss of motorcycle control and an accident.

Front Brake Caliper - Street Triple and Street Triple 660 cc

Removal



Warning

Before starting work, ensure the motorcycle is stabilised and adequately supported. This will help prevent it from falling and causing injury to the operator or damage to the motorcycle.



Caution

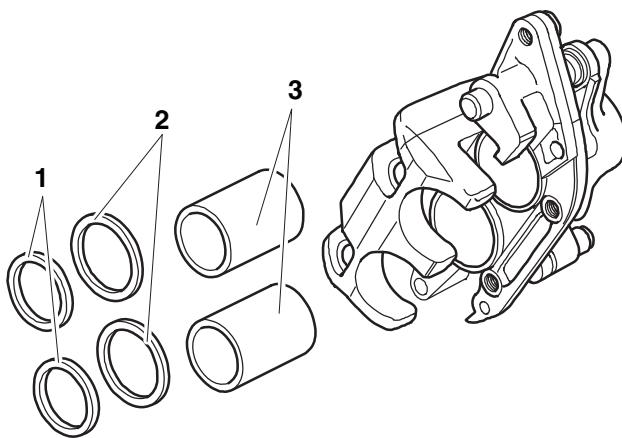
To prevent paint damage, do not spill brake fluid onto any area of the bodywork. Spilled brake fluid will damage paintwork.

1. Disconnect the brake hose at the caliper (two hoses on right hand caliper), and place the free end of the hose(s) in a suitable container to collect the brake fluid.
2. Remove the brake pads (see page 14-29).

Disassembly**Warning**

To prevent injury, never place fingers or hands inside the caliper opening when removing the pistons. Always wear eye, hand and face protection when using compressed air. Eye, face and skin damage will result from direct contact with compressed air.

1. Separate the caliper and mounting bracket.
2. Cover the caliper opening with a clean, heavy cloth and, using either compressed air or by reconnecting the master cylinder and pumping the brake lever, eject both pistons from the caliper at the same time.



1. Dust seals
2. Piston seals
3. Pistons

**Warning**

Ensure the seal grooves in the caliper bores are not damaged during the removal of the seals. Damage to the seal grooves may allow brake fluid to leak past the seals resulting in a dangerous riding condition leading to loss of motorcycle control and an accident.

3. Extract the dust seals and piston seals, taking care not to damage the caliper bores.
4. Check the pistons, caliper and mounting bracket for signs of damage, paying particular attention to the caliper bores and pistons. If damage is present, renew the worn component or the complete caliper assembly.
5. If all components are serviceable, obtain a piston seal kit and reassemble the caliper as follows:

**Warning**

Always renew caliper seals after removal of the pistons. An effective hydraulic seal can only be made if new seals are fitted.

A dangerous riding condition leading to an accident could result if this warning is ignored.

**Warning**

Before installation, all internal brake components should be cleaned and lubricated with clean new DOT 4 brake fluid.

Never use solvents, petrol (gasoline), engine oil, or any other petroleum distillate on internal brake components as this will cause deterioration of the hydraulic seals in the calipers and master cylinders.

A dangerous riding condition leading to loss of motorcycle control and an accident could result if this warning is ignored.

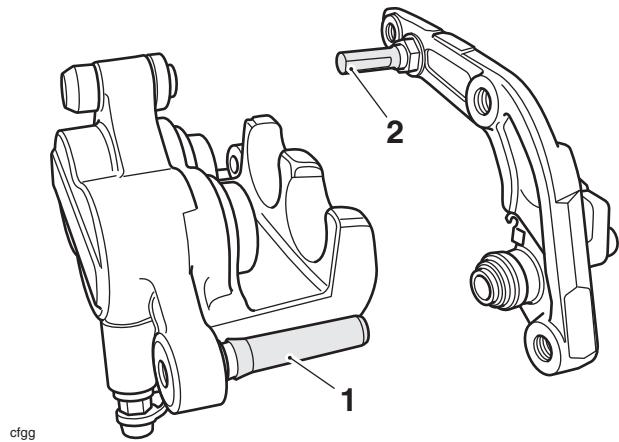
6. Ensure all components are clean, then fit the new seals to their grooves in the caliper bores.
7. Lubricate the fluid seals, caliper bore and the outside of the pistons with clean DOT 4 brake fluid.
8. Ease the pistons squarely back into the bores, taking care not to displace the seals.

**Warning**

Never use mineral based grease (such as lithium or copper based grease) in any area where contact with the braking system hydraulic seals and dust seals is possible. Mineral based grease will damage the hydraulic seals and dust seals in the calipers and master cylinders. Damage caused by contact with mineral based grease may reduce braking efficiency resulting in an accident.

Brakes

9. Lubricate the sliding pins with a suitable silicone based brake grease then reassemble the bracket and caliper. Ensure the pin gaiters are correctly located on both the bracket and caliper.



1. Caliper sliding pin
2. Caliper bracket sliding pin

cfgg

Installation

- Fit the brake pads (see page 14-30).
- Connect the brake hose(s) to the caliper incorporating new sealing washers on each side of all hose connections.
- Tighten the banjo bolt to **25 Nm**.



Warning

Use only DOT 4 specification brake fluid as listed in the General Information section of this manual. The use of brake fluids other than those DOT 4 fluids listed in the General Information section may reduce the efficiency of the braking system leading to loss of motorcycle control and an accident.

Observe the brake fluid handling warnings given earlier in this section of the manual.

- Fill the master cylinder with new, DOT 4 brake fluid from a sealed container.
- Fill and bleed the front brakes (see page 14-22 for motorcycles without ABS, see page 14-62 for motorcycles with ABS).
- Check for correct brake operation.



Warning

It is dangerous to operate the motorcycle with defective brakes; you must have your authorised Triumph dealer take remedial action before you ride the motorcycle again. Failure to take remedial action may result in reduced braking efficiency leading to loss of motorcycle control and an accident.

Front Brake Caliper - Street Triple R and Street Triple Rx

Removal



Warning

Before starting work, ensure the motorcycle is stabilised and adequately supported. This will help prevent it from falling and causing injury to the operator or damage to the motorcycle.



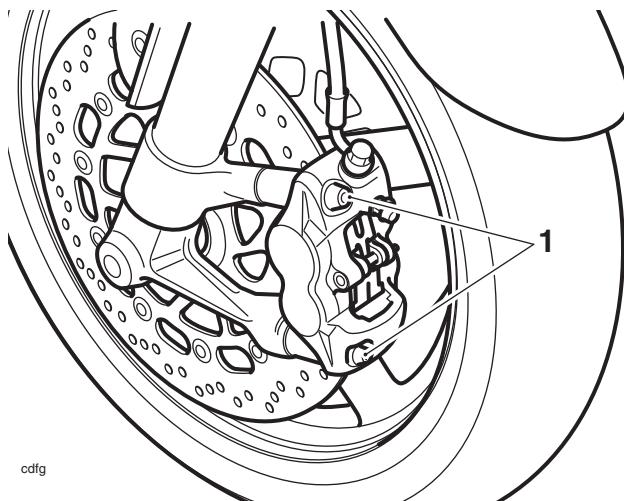
Caution

To prevent paint damage, do not spill brake fluid onto any area of the bodywork. Spilled brake fluid will damage paintwork.

1. Disconnect the brake hose at the caliper (two hoses on right hand caliper), and place the free end of the hose(s) in a suitable container to collect the brake fluid.

Note:

- If the calipers are to be removed for access only, do not remove the brake pads.
2. Remove the brake pads (see page 14-31).
 3. Remove the two caliper bolts.



1. Caliper bolts

4. Manoeuvre the caliper clear of the disc, taking care not to damage the wheel.

Disassembly



Warning

To prevent injury, never place fingers or hands inside the caliper opening when removing the pistons. Always wear eye, hand and face protection when using compressed air. Eye, face and skin damage will result from direct contact with compressed air.

1. Undo and remove the four bolts which secure the two halves of the brake caliper together. Discard the bolts.
2. Carefully split the two halves of the caliper then remove and discard the joint seal.
3. Cover a caliper half with a clean, heavy cloth and, using compressed air, remove the pistons one at a time.



Warning

Ensure the seal grooves in the caliper bores are not damaged during the removal of the seals. Damage to the seal grooves may allow brake fluid to leak past the seals resulting in a dangerous riding condition leading to loss of motorcycle control and an accident.

4. Remove the old piston seals and dust seals then thoroughly clean and dry the caliper bores and pistons. Discard the old seals, these must not be reused.

Inspection

1. Check the pistons and caliper bores for corrosion, scoring and damage. Renew as necessary.



Warning

Always renew caliper seals and pistons after removal from the caliper. An effective hydraulic seal can only be made if new components are used.

A dangerous riding condition leading to an accident could result if this warning is ignored.

2. Inspect the brake pads for damage and wear beyond the service limit. Renew as necessary.

Brakes

Assembly



Warning

Never use mineral based grease (such as lithium or copper based grease) in any area where contact with the braking system hydraulic seals and dust seals is possible. Mineral based grease will damage the hydraulic seals and dust seals in the calipers and master cylinders. Damage caused by contact with mineral based grease may reduce braking efficiency resulting in an accident.



Warning

Before installation, all internal brake components should be cleaned and lubricated with clean new DOT 4 brake fluid.

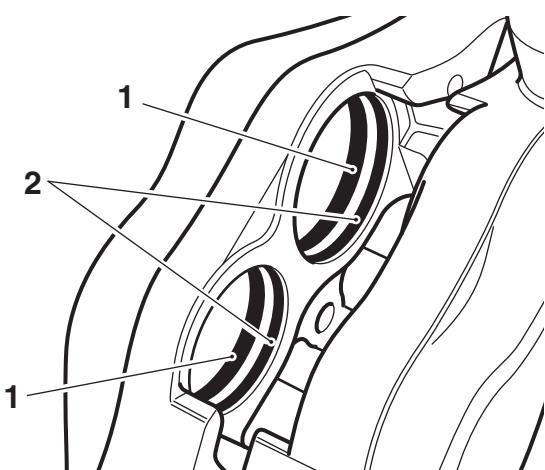
Never use solvents, petrol (gasoline), engine oil, or any other petroleum distillate on internal brake components as this will cause deterioration of the hydraulic seals in the calipers and master cylinders.

A dangerous riding condition leading to loss of motorcycle control and an accident could result if this warning is ignored.

1. Lubricate the piston seals with clean DOT 4 brake fluid. Fit the piston seals and the dust seals to the caliper bores in the positions shown below.

Note:

- **The piston seals are slightly thicker than the dust seals.**



1. Piston seals
2. Dust seals



Warning

Ensure that the caliper bores do not become scratched during piston removal and assembly. Ensure that the pistons remain square to their bores during fitment otherwise damage to the caliper could result.

A dangerous riding condition leading to an accident could result if this warning is ignored.

2. Carefully refit the pistons fully into the caliper bores by hand.
3. Once all seals and pistons have been fitted, carefully clean the mating faces of both calipers, then fit a new joint seal to the recess in one half of the caliper.



Warning

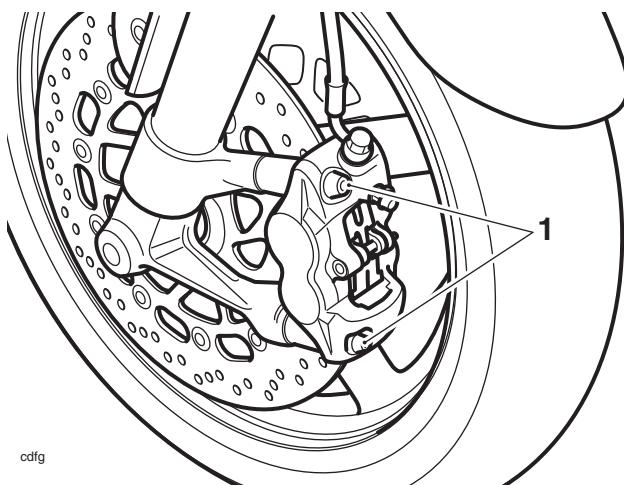
Ensure the mating faces of the caliper halves are clean and free from dust prior to assembly. Failure to ensure that the mating faces are clean and free from dust will result in a dangerous riding condition leading to loss of motorcycle control and an accident.

4. Apply a small drop of Loctite Hydraulic Sealant 569 to the threads of new caliper bolts and secure the two halves of the caliper together. Tighten the caliper bolts to **22 Nm**.

Installation

1. Thoroughly clean the threaded bolt holes for the front fork brake caliper fixings.
2. Position the caliper over the disc.
3. Thoroughly clean the threaded part of the bolt and smear the first four threads with a proprietary copper based grease.

4. Secure the brake caliper with the bolts and tighten to **55 Nm**.



1. Caliper bolts

5. Fit the brake pads (see page 14-32).
6. Connect the brake hose(s) to the caliper incorporating new sealing washers on each side of all hose connections.
7. Tighten the banjo bolt to **25 Nm**.



Warning

Use only DOT 4 specification brake fluid as listed in the General Information section of this manual. The use of brake fluids other than those DOT 4 fluids listed in the General Information section may reduce the efficiency of the braking system leading to loss of motorcycle control and an accident.

Observe the brake fluid handling warnings given earlier in this section of the manual.

8. Fill the master cylinder with new, DOT 4 brake fluid from a sealed container.
9. Fill and bleed the front brakes (see page 14-22 for motorcycles without ABS, see page 14-62 for motorcycles with ABS).
10. Check for correct brake operation.



Warning

It is dangerous to operate the motorcycle with defective brakes; you must have your authorised Triumph dealer take remedial action before you ride the motorcycle again. Failure to take remedial action may result in reduced braking efficiency leading to loss of motorcycle control and an accident.

Front Discs - All Models



Warning

Before starting work, ensure the motorcycle is stabilised and adequately supported. This will help prevent it from falling and causing injury to the operator or damage to the motorcycle.

Wear

1. Replace any brake disc if worn beyond the service limit or that exceeds the disc run-out limit.

Front Disc Thickness

Daytona 675 and Daytona 675 R

Standard	4.5 mm
Service Limit	4.0 mm

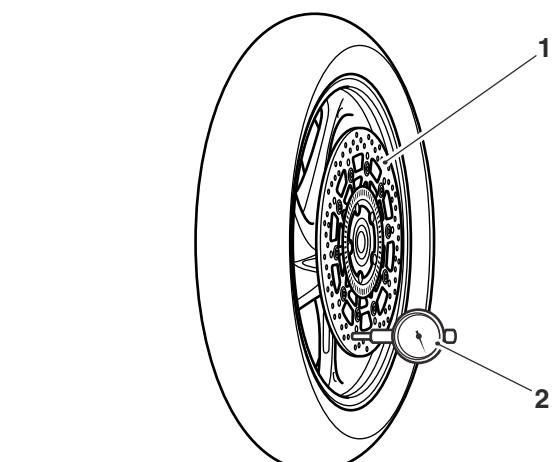
Street Triple, Street Triple 660 cc, Street Triple R and Street Triple Rx

Standard	4.0 mm
Service Limit	3.6 mm

Disc Run-out - All Models

Service Limit	0.3 mm
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Measure disc run-out using an accurate dial gauge mounted on a surface plate.



chzm

1. Disc

2. Dial gauge

Brakes

Removal

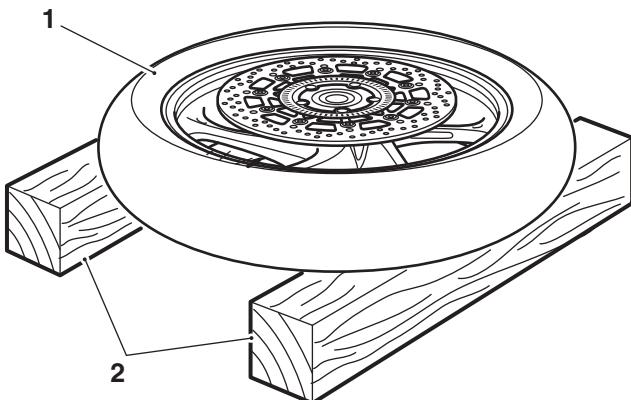


Warning

Do not renew front brake discs individually. Discs must always be renewed in pairs even if one of a pair is serviceable.

A dangerous riding condition leading to an accident could result if this warning is ignored.

1. Remove the front wheel (see page 15-7 for all models except Daytona 675 R, see page 15-8 for Daytona 675 R).
2. Support the wheel on blocks as illustrated to avoid damage to the wheel centre.



ceil_2

1. **Wheel**
2. **Support blocks**

3. Remove and discard the five fixings and remove the brake disc.
4. Repeat for the other disc.

Installation

1. Locate the first disc to the wheel.
2. Fit new fixings and tighten to **22 Nm**.
3. Fit the other disc in the same way.
4. Refit the front wheel (see page 15-8 for all models except Daytona 675 R, see page 15-9 for Daytona 675 R).
5. Check for correct brake operation. Rectify as necessary.



Warning

It is dangerous to operate the motorcycle with defective brakes; you must have your authorised Triumph dealer take remedial action before you ride the motorcycle again. Failure to take remedial action may result in reduced braking efficiency leading to loss of motorcycle control and an accident.

Front Brake Master Cylinder - Daytona 675, Street Triple R and Street Triple Rx

Removal



Warning

Before starting work, ensure the motorcycle is stabilised and adequately supported. This will help prevent it from falling and causing injury to the operator or damage to the motorcycle.

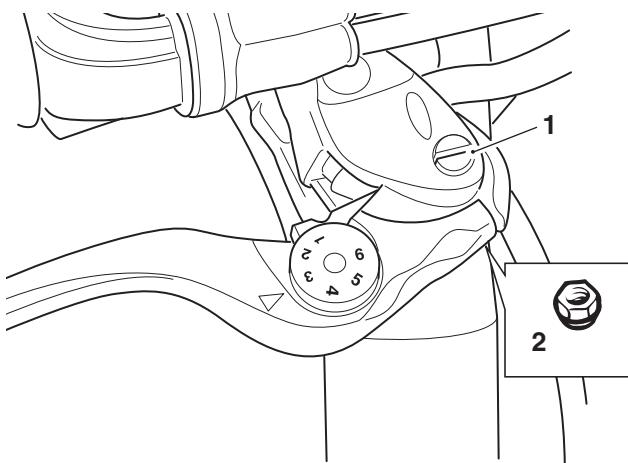
1. Remove the rider's seat (see page 16-22 for Daytona 675 and Street Triple Rx, see page 16-23 for Street Triple R).
2. Disconnect the battery, negative (black) lead first.



Caution

To prevent paint damage, do not spill brake fluid onto any area of the bodywork. Spilled brake fluid will damage paintwork.

3. To drain the fluid from the master cylinder, attach a tube to the right hand caliper bleed nipple, loosen the nipple and allow the fluid to drain into a suitable container. Operate the brake lever until all fluid has been expelled.
4. Note the setting of the brake lever adjuster to ensure it is returned to the same position when the overhaul operation is complete.
5. Remove the pivot lock nut and bolt securing the brake lever to the master cylinder, and remove the lever.

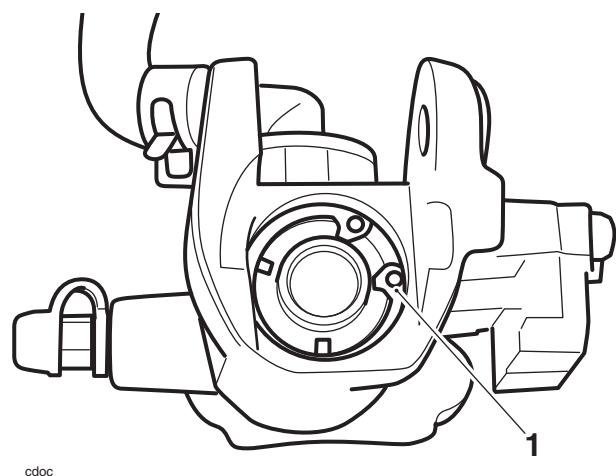


- cdm_1
1. Pivot bolt
 2. Nut

6. Disconnect from the master cylinder the:
 - brake hoses
 - brake light switch connections.
7. Release the clamp screws from the handlebar to remove the master cylinder.

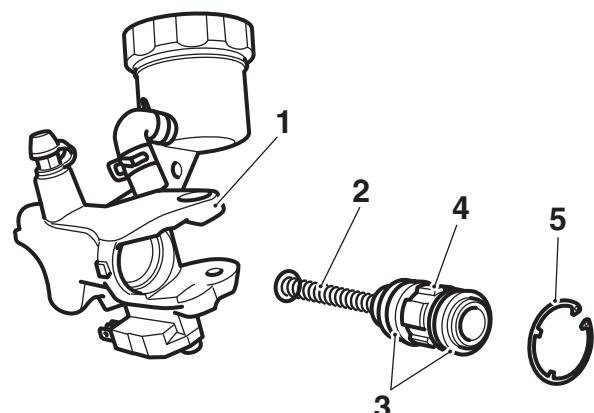
Disassembly

1. Support or remove the reservoir.
2. Detach the boot and push-rod from the lever end of the cylinder.
3. Remove the circlip from beneath the boot.



1. Circlip

4. Remove the piston set from the master cylinder bore noting the relative position of the seals and piston components.

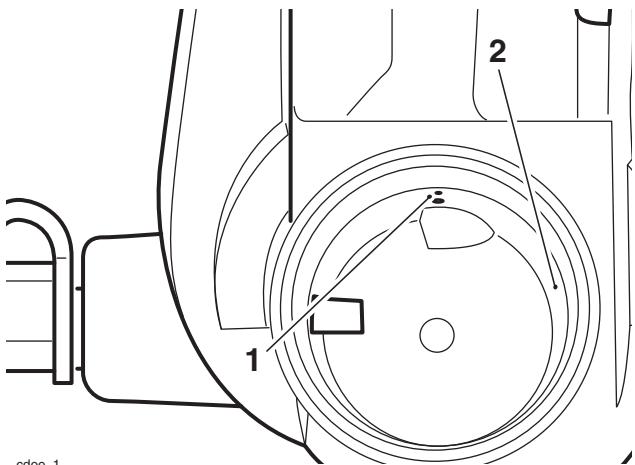


1. Master cylinder
2. Spring
3. Piston seals
4. Piston
5. Circlip

Brakes

Inspection

1. Check the following for wear, damage, cracks or deterioration:
 - Cylinder bore
 - Dust cover
 - Spring
 - Piston
 - Pivot bolt.
2. Always renew the piston and seal set if the cylinder is dismantled.
3. Check that the two ports in the master cylinder bore are not blocked.



cdoe_1

1. Ports
2. Master cylinder bore

Assembly

Warning

Never use mineral based grease (such as lithium or copper based grease) in any area where contact with the braking system hydraulic seals and dust seals is possible. Mineral based grease will damage the hydraulic seals and dust seals in the calipers and master cylinders. Damage caused by contact with mineral based grease may reduce braking efficiency resulting in an accident.

Warning

Before installation, all internal brake components should be cleaned and lubricated with clean new DOT 4 brake fluid.

Never use solvents, petrol (gasoline), engine oil, or any other petroleum distillate on internal brake components as this will cause deterioration of the hydraulic seals in the calipers and master cylinders.

A dangerous riding condition leading to loss of motorcycle control and an accident could result if this warning is ignored.

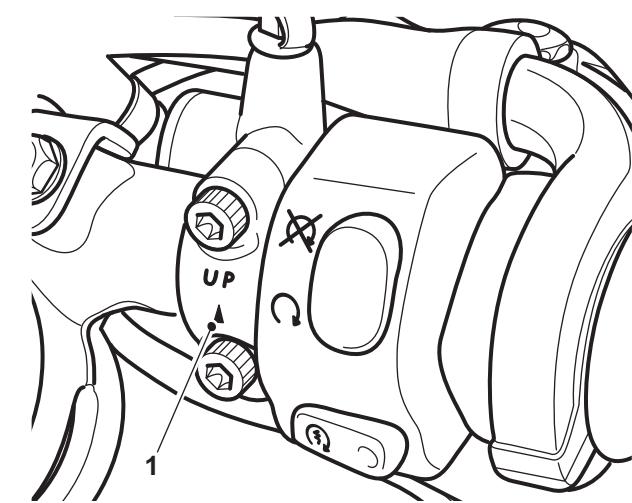
1. Lubricate the piston and cylinder with new, clean brake fluid.

Warning

Ensure that the piston and piston seal are fitted facing the same way as noted during removal. A dangerous riding condition leading to an accident could result from incorrect assembly of the master cylinder.

2. Fit the new piston set into the master cylinder and retain with a new circlip.
3. Refit the master cylinder boot.

Installation



1. Arrow mark

1. Locate the master cylinder to the handlebars and position the clamp with the UP arrow pointing upwards. Do not tighten the clamp bolts at this stage.
2. Connect the brake hose to the master cylinder incorporating new sealing washers. Tighten the banjo bolt to **25 Nm**.
3. **Daytona 675 only:** Align the split line of the master cylinder clamp to the alignment mark on the upper surface of the handlebar and tighten the clamp fixings to **8 Nm**.
4. **For Street Triple R and Street Triple Rx only:** Align the split line of the master cylinder clamp to the alignment mark on the upper surface of the handlebar and tighten the clamp fixings to **12 Nm**.
5. Connect the brake light switch.
6. Position the brake lever ensuring that the pivot boss is correctly aligned to the pushrod. Fit and tighten the pivot bolt to **1 Nm**, and the lock nut to **6 Nm**.

7. Fill and bleed the front brakes (see page 14-22 for motorcycles without ABS, see page 14-62 for motorcycles with ABS).



Warning

Always return the lever adjuster to the original setting noted during removal. Operating the motorcycle with lever settings which are unfamiliar may lead to loss of control or an accident.

8. Reset the brake lever adjuster to the original setting.
9. Examine the system for correct operation and fluid leaks. Rectify as necessary.
10. Connect the battery, positive (red) lead first. Tighten the battery terminals to **4.5 Nm**.
11. Refit the seat (see page 16-22 for Daytona 675 and Street Triple Rx, see page 16-24 for Street Triple R).
12. Check for correct brake operation. Rectify as necessary.



Warning

It is dangerous to operate the motorcycle with defective brakes; you must have your authorised Triumph dealer take remedial action before you ride the motorcycle again. Failure to take remedial action may result in reduced braking efficiency leading to loss of motorcycle control and an accident.



Warning

Use only DOT 4 specification brake fluid as listed in the General Information section of this manual. The use of brake fluids other than those DOT 4 fluids listed in the General Information section may reduce the efficiency of the braking system leading to loss of motorcycle control and an accident.

Observe the brake fluid handling warnings given earlier in this section of the manual.

Brakes

Front Brake Master Cylinder - Daytona 675 R

Note:

- The piston set inside the front brake master cylinder is not serviceable. The master cylinder must be replaced in the event of a failure.

Removal



Warning

Before starting work, ensure the motorcycle is stabilised and adequately supported. This will help prevent it from falling and causing injury to the operator or damage to the motorcycle.

- Remove the seat (see page 16-22).
- Disconnect the battery, negative (black) lead first.



Caution

To prevent paint damage, do not spill brake fluid onto any area of the bodywork. Spilled brake fluid will damage paintwork.

- To drain the fluid from the master cylinder, attach a tube to the right hand caliper bleed nipple, loosen the nipple and allow the fluid to drain into a suitable container. Operate the brake lever until all fluid has been expelled.
- Note the setting of the brake lever adjuster to ensure it is returned to the same position when the overhaul operation is complete.
- Disconnect from the master cylinder:
 - brake hoses
 - brake light switch connections.
- Release the clamp screws from the handlebar to remove the master cylinder.

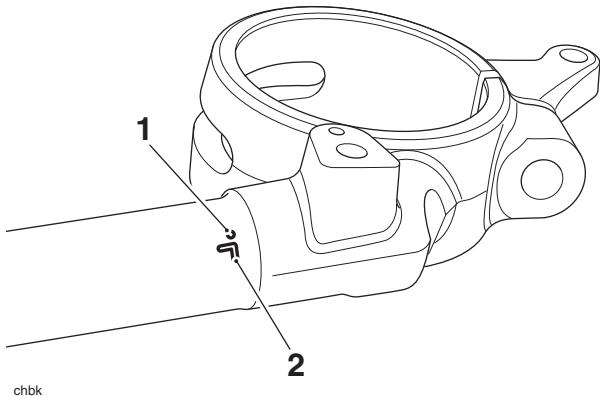
Disassembly

The following items can be replaced on the front brake master cylinder:

- Brake lever
- Bleed screw
- Brake light switch.

Installation

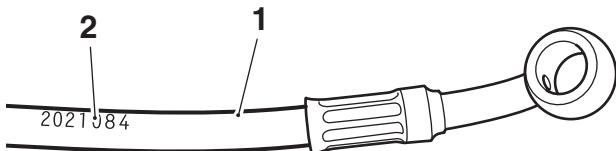
- Position the front brake master cylinder assembly to the handlebar. Fit the clamp (UP arrow pointing upwards) and clamp fixings.
- Align the split line of the master cylinder clamp to the alignment mark on the upper surface of the handlebar and tighten the clamp bolts, upper first then lower to **8 Nm**.



- Punch mark
- Alignment mark

Note:

- If the front brake hoses have been completely removed from the motorcycle, ensure that the end with the part number is fitted to the brake master cylinder.



- Front brake hose
- Part number
- Connect the brake hoses to the master cylinder incorporating new sealing washers. Tighten the banjo bolt to **25 Nm**.
- Connect the brake light switch.



Warning

Use only DOT 4 specification brake fluid as listed in the General Information section of this manual. The use of brake fluids other than those DOT 4 fluids listed in the General Information section may reduce the efficiency of the braking system leading to loss of motorcycle control and an accident.

5. Fill and bleed the front brakes (see page 14-22 for motorcycles without ABS, see page 14-62 for motorcycles with ABS).



Warning

Always return the lever adjuster to the original setting noted for removal. Operating the motorcycle with lever settings which are unfamiliar may lead to loss of control or an accident.

6. Reset the brake lever adjuster to the original setting.
7. Examine the system for correct operation and fluid leaks. Rectify as necessary.
8. Reconnect the battery, positive (red) lead first. Tighten the battery terminals to **4.5 Nm**.
9. Refit the rider's seat (see page 16-23).
10. Check for correct brake operation. Rectify as necessary.



Warning

It is dangerous to operate the motorcycle with defective brakes; you must have your authorised Triumph dealer take remedial action before you ride the motorcycle again. Failure to take remedial action may result in reduced braking efficiency leading to loss of motorcycle control and an accident.

Front Brake Master Cylinder - Street Triple and Street Triple 660 cc

Removal



Warning

Before starting work, ensure the motorcycle is stabilised and adequately supported. This will help prevent it from falling and causing injury to the operator or damage to the motorcycle.

1. Remove the seat (see page 16-23).
2. Disconnect the battery, negative (black) lead first.



Caution

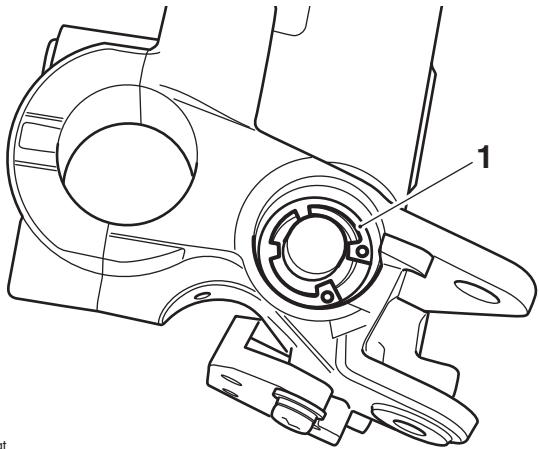
To prevent paint damage, do not spill brake fluid onto any area of the bodywork. Spilled brake fluid will damage paintwork.

3. To drain the fluid from the master cylinder, attach a tube to the right hand caliper bleed nipple, loosen the nipple and allow the fluid to drain into a suitable container. Operate the brake lever until all fluid has been expelled.
4. Note the setting of the brake lever adjuster to ensure it is returned to the same position when the overhaul operation is complete.
5. Remove the pivot lock nut and bolt securing the brake lever to the master cylinder, and remove the lever.
6. Disconnect from the master cylinder the:
 - brake hose
 - brake light switch connections.
7. Release the clamp screws from the handlebar to remove the master cylinder.

Brakes

Disassembly

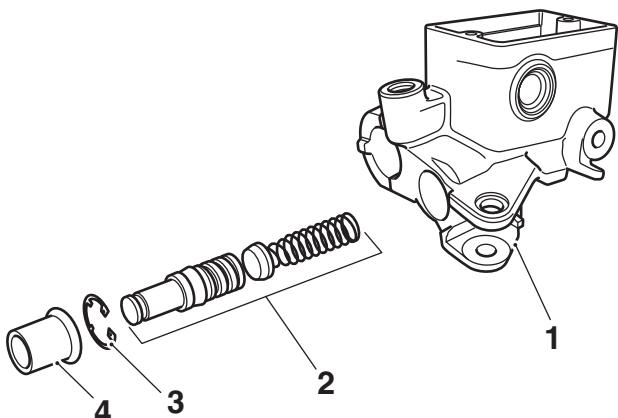
1. Detach the rubber boot from the lever end of the cylinder.
2. Remove the circlip from beneath the boot.



ceqt

1. Circlip

3. Remove the piston set from the master cylinder bore noting the relative position of the seals and piston components.



cequ

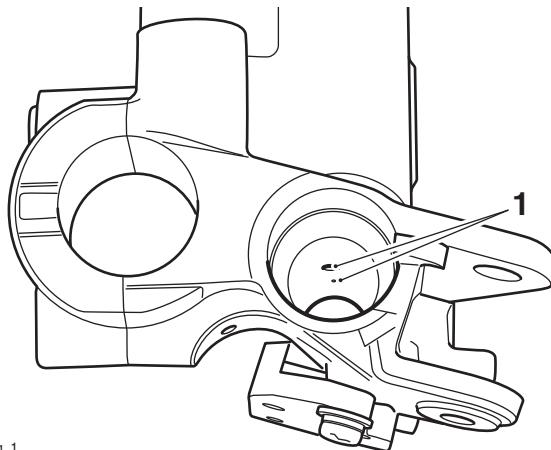
1. Master cylinder

2. Spring and piston assembly
3. Circlip
4. Rubber boot

Inspection

1. Check the following for wear, damage, cracks or deterioration:
 - Cylinder bore
 - Rubber boot
 - Spring
 - Piston
 - Pivot Bolt.

2. Always renew the piston and seal set if the cylinder is dismantled.
3. Check that the two ports in the master cylinder bore are not blocked.



ceqq_1

1. Ports

Assembly



Warning

Never use mineral based grease (such as lithium or copper based grease) in any area where contact with the braking system hydraulic seals and dust seals is possible. Mineral based grease will damage the hydraulic seals and dust seals in the calipers and master cylinders. Damage caused by contact with mineral based grease may reduce braking efficiency resulting in an accident.



Warning

Before installation, all internal brake components should be cleaned and lubricated with clean new DOT 4 brake fluid.

Never use solvents, petrol (gasoline), engine oil, or any other petroleum distillate on internal brake components as this will cause deterioration of the hydraulic seals in the calipers and master cylinders.

A dangerous riding condition leading to loss of motorcycle control and an accident could result if this warning is ignored.

1. Lubricate the piston and cylinder with new, clean brake fluid.

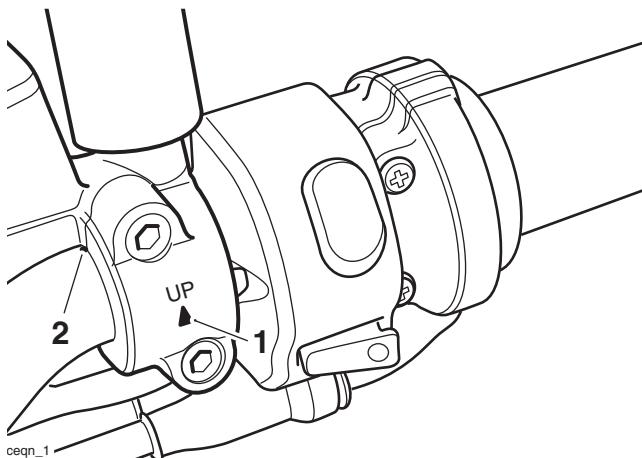


Warning

Ensure that the piston and piston seal are fitted facing the same way as noted during removal. A dangerous riding condition leading to an accident could result from incorrect assembly of the master cylinder.

2. Fit the new piston set into the master cylinder and retain with a new circlip.
3. Refit the master cylinder boot.

Installation



1. UP arrow
2. Dot mark

1. Locate the master cylinder to the handlebars and position the clamp with the UP arrow pointing upwards.
2. Align the master cylinder/clamp split line with the alignment mark on the handlebar.
3. Tighten the clamp bolts, upper first and then the lower to **12 Nm**.
4. Connect the brake hose to the master cylinder incorporating new sealing washers. Tighten the banjo bolt to **25 Nm**.
5. Connect the brake light switch connections.
6. Position the brake lever ensuring that the pivot boss is correctly aligned to the pushrod. Fit and tighten the pivot bolt to **1 Nm**, and the lock nut to **6 Nm**.



Warning

Use only DOT 4 specification brake fluid as listed in the General Information section of this manual. The use of brake fluids other than those DOT 4 fluids listed in the General Information section may reduce the efficiency of the braking system leading to loss of motorcycle control and an accident.

Observe the brake fluid handling warnings given earlier in this section of the manual.

7. Fill and bleed the front brakes (see page 14-22 for motorcycles without ABS, see page 14-62 for motorcycles with ABS).



Warning

Always return the lever adjuster to the original setting noted during removal. Operating the motorcycle with lever settings which are unfamiliar may lead to loss of control or an accident.

8. Reset the brake lever adjuster to the original setting.
9. Examine the system for correct operation and fluid leaks. Rectify as necessary.
10. Connect the battery, positive (red) lead first. Tighten the battery terminals to **4.5 Nm**.
11. Refit the seat (see page 16-24).
12. Check for correct brake operation. Rectify as necessary.



Warning

It is dangerous to operate the motorcycle with defective brakes; you must have your authorised Triumph dealer take remedial action before you ride the motorcycle again. Failure to take remedial action may result in reduced braking efficiency leading to loss of motorcycle control and an accident.

Brakes

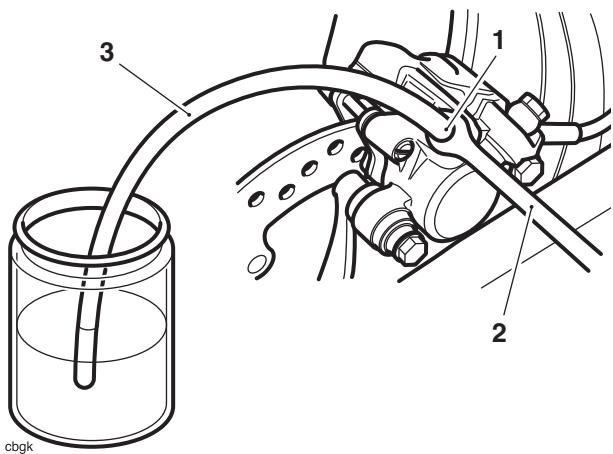
Bleeding the Rear Brakes, Renewing Brake Fluid



Warning

Before starting work, ensure the motorcycle is stabilised and adequately supported. This will help prevent it from falling and causing injury to the operator or damage to the motorcycle.

1. Remove the cap from the rear bleed nipple.
2. Attach a transparent tube to the bleed nipple.



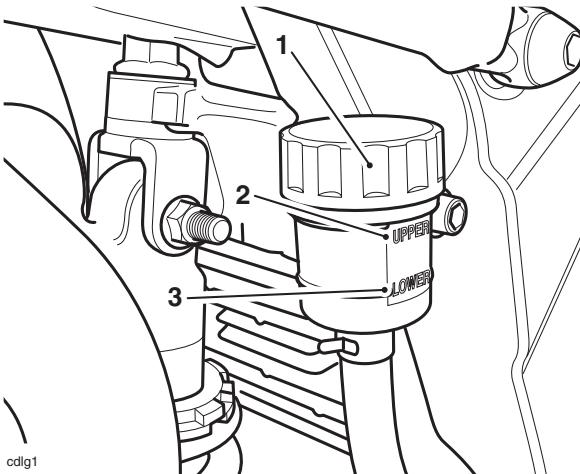
1. Bleed nipple
 2. Spanner
 3. Bleed tube
3. Place the other end of the tube in a suitable receptacle containing new brake fluid.



Caution

To prevent paint damage, do not spill brake fluid onto any area of the bodywork. Spilled brake fluid will damage paintwork.

4. Unscrew and remove the rear brake reservoir cover taking care not to spill any fluid.



1. Rear reservoir
2. Rear reservoir upper level
3. Rear reservoir lower level



Warning

Ensure absolute cleanliness when adding brake fluid to the brake fluid reservoir. Do not allow moisture or debris to enter the cylinder as this will adversely affect the fluid properties. Always use fluid from a sealed container and do not use fluid from a container which has been opened for any period of time. Always check for fluid leakage around hydraulic fittings and for damage to hoses.

A dangerous riding condition leading to an accident could result if this warning is ignored.

5. Check the condition of the sealing diaphragm. Replace the diaphragm as necessary.
6. Release the bleed nipple.

Note:

- During bleeding, do not allow the fluid level to fall below the lower level mark in the reservoir. If the level is allowed to fall below this mark, air may enter the system and the sequence of bleeding must be repeated.
7. Slowly depress the brake pedal and, holding the pedal fully down, close the bleed nipple.
 8. Repeat steps 6 and 7 until no more air appears in the bleed tube.
 9. Maintain the brake fluid level between the upper and lower reservoir levels whilst bleeding is being carried out.
 10. When all air has been expelled from the system, hold down the brake pedal and close the bleed nipple. Tighten the nipple to **14 Nm**.

11. Fill the reservoir to the maximum level with new DOT 4 fluid.



Warning

Use only DOT 4 specification brake fluid as listed in the General Information section of this manual. The use of brake fluids other than those DOT 4 fluids listed in the General Information section may reduce the efficiency of the braking system leading to loss of motorcycle control and an accident.

Observe the brake fluid handling warnings given earlier in this section of the manual.

12. Fit the reservoir cover and diaphragm. Check for correct diaphragm fitment before final tightening of the cover.
13. Remove the bleed tube from the nipple.
14. Replace the bleed nipple cap.
15. Check for correct brake operation. Rectify as necessary.



Warning

It is dangerous to operate the motorcycle with defective brakes; you must have your authorised Triumph dealer take remedial action before you ride the motorcycle again. Failure to take remedial action may result in reduced braking efficiency leading to loss of motorcycle control and an accident.

Rear Brake Pads

Removal

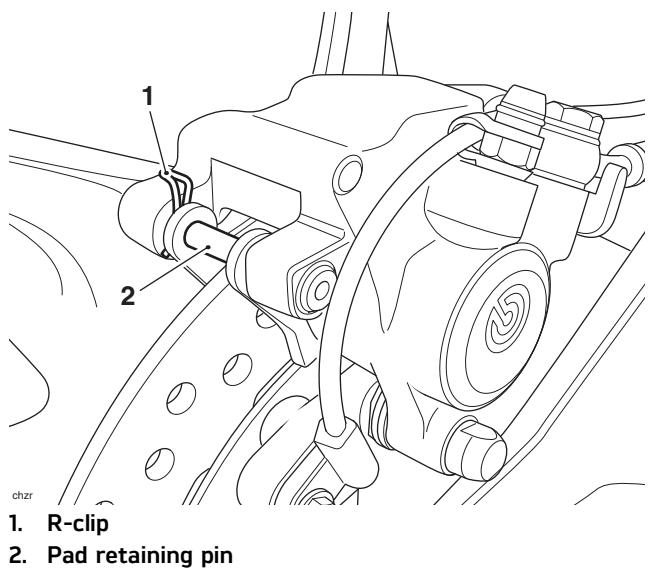


Warning

Before starting work, ensure the motorcycle is stabilised and adequately supported. This will help prevent it from falling and causing injury to the operator or damage to the motorcycle.

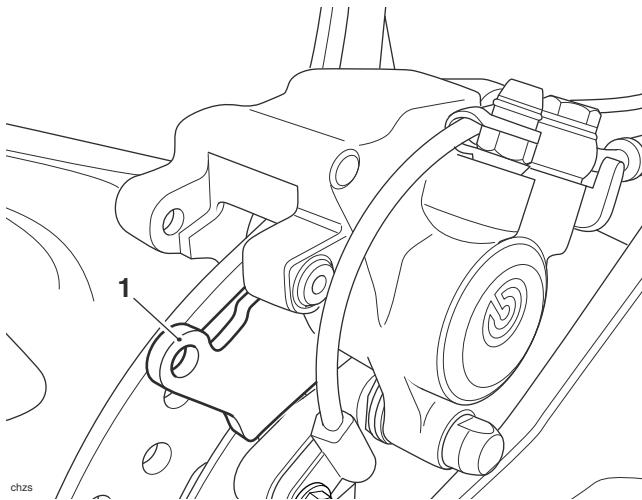
Note:

- Before removing the brake pads, note the relationship of the pads to the caliper and ensure that, on assembly, they are fitted in the same way.
1. Push the brake caliper inwards towards the wheel in order to displace the caliper piston.
- Note:**
- Note the orientation of the R-clip for installation.
 - 2. Remove the R-clip from the pad retaining pin.
 - 3. Using a suitable pin punch, tap the pad retaining pin out in the direction towards the wheel.



Brakes

- Remove the brake pads.



- 1. Brake pad**
- For inspection and replacing the anti-rattle spring, remove the caliper (see page 14-55).

Installation



Warning

Never use mineral based grease (such as lithium or copper based grease) in any area where contact with the braking system hydraulic seals and dust seals is possible. Mineral based grease will damage the hydraulic seals and dust seals in the calipers and master cylinders. Damage caused by contact with mineral based grease may reduce braking efficiency resulting in an accident.



Caution

To prevent paint damage, do not spill brake fluid onto any area of the bodywork. Spilled brake fluid will damage paintwork.

- If fitting new pads, use hand pressure to compress the caliper piston fully into its bore. Keep an eye on the fluid level in the reservoir whilst retracting the pistons to prevent fluid spillage.
- Fit the brake pads to the caliper in the positions noted during removal.



Warning

Do not apply more than a minimum coating of grease to the pad retaining pins. Excess grease may contaminate the brake pads, hydraulic seals and discs causing reduced braking efficiency and an accident.

- Lubricate the pad retaining pin using a minimum amount of proprietary high temperature brake grease.
- Install the brake pad retaining pin.
- Install the R-clip to the brake pad retaining pin, as noted for removal.
- Pump the brake pedal to correctly position the caliper pistons.
- Check the brake fluid level in the rear reservoir and top-up as required with new DOT 4 fluid.



Warning

Use only DOT 4 specification brake fluid as listed in the General Information section of this manual. The use of brake fluids other than those DOT 4 fluids listed in the General Information section may reduce the efficiency of the braking system leading to loss of motorcycle control and an accident.

Observe the brake fluid handling warnings given earlier in this section of the manual.

- Check for correct brake operation. Rectify as necessary.



Warning

It is dangerous to operate the motorcycle with defective brakes; you must have your authorised Triumph dealer take remedial action before you ride the motorcycle again. Failure to take remedial action may result in reduced braking efficiency leading to loss of motorcycle control and an accident.

Rear Brake Caliper

Removal



Warning

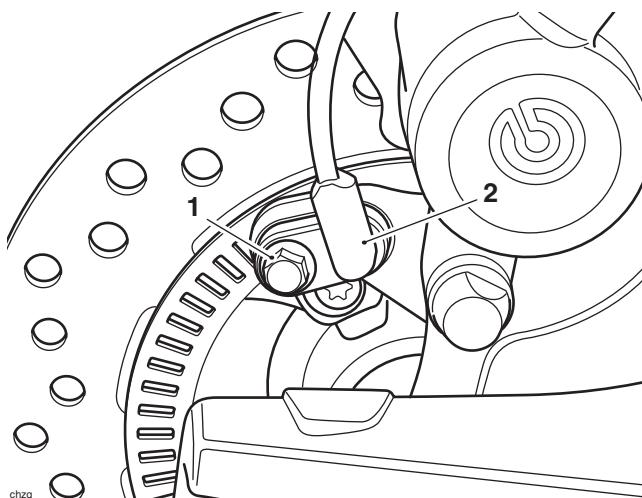
Before starting work, ensure the motorcycle is stabilised and adequately supported. This will help prevent it from falling and causing injury to the operator or damage to the motorcycle.



Caution

To prevent paint damage, do not spill brake fluid onto any area of the bodywork. Spilled brake fluid will damage paintwork.

1. Remove the brake pads (see page 14-53).
2. **Motorcycles with ABS only:** Release the fixing and remove the sensor. Collect the shim from between the sensor and fork leg and discard the fixing.



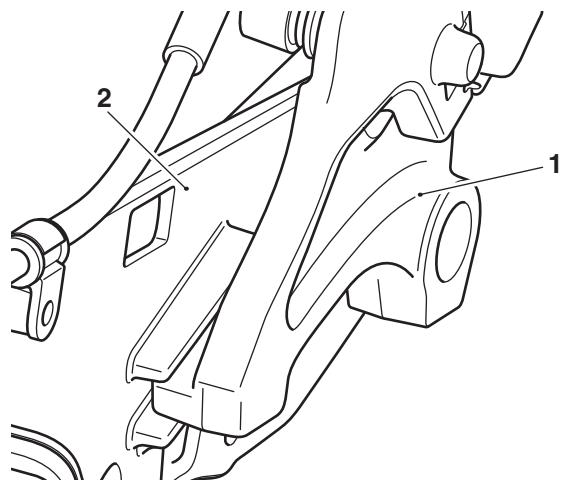
1. Fixing
2. Rear ABS wheel sensor, Street Triple R shown

3. Disconnect the rear brake hose at the caliper and place the free end of the hose in a suitable container to collect the brake fluid.

Note:

- Note the position of the rear brake caliper for installation.

4. Remove the rear wheel (see page 15-10).
5. Remove the brake caliper and carrier assembly.



1. Caliper carrier
2. Swinging arm

Disassembly

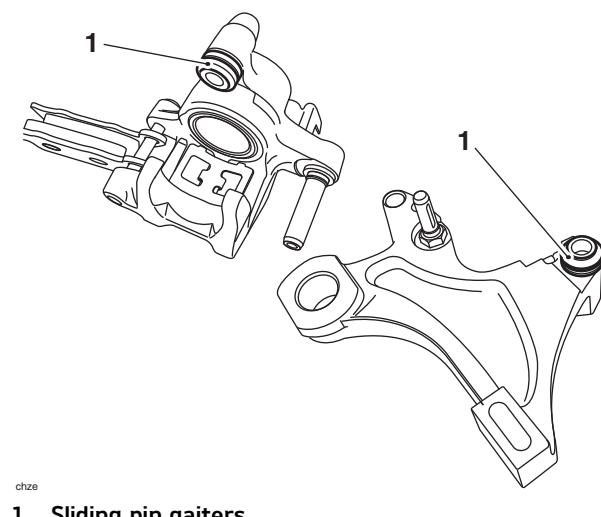
The following items can only be replaced on the rear brake caliper:

- Anti-rattle spring
- Sliding pin gaiters
- Bleed screw
- Bleed screw boot.

1. Slide the caliper off the carrier.
2. Remove the anti-rattle spring.

Inspection

1. Inspect the sliding pin gaiters for damage, replace if necessary.



1. Sliding pin gaiters

Brakes

Assembly



Warning

Never use mineral based grease (such as lithium or copper based grease) in any area where contact with the braking system hydraulic seals and dust seals is possible. Mineral based grease will damage the hydraulic seals and dust seals in the calipers and master cylinders. Damage caused by contact with mineral based grease may reduce braking efficiency resulting in an accident.

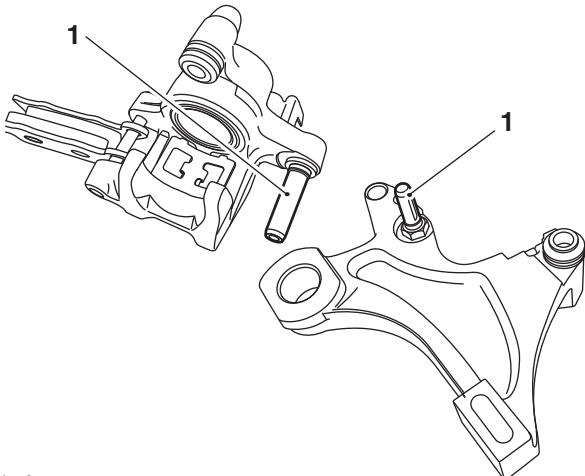
1. Install the anti-rattle spring into the caliper.



Warning

Do not apply more than a minimum coating of grease to the pad retaining pins. Excess grease may contaminate the brake pads, hydraulic seals and discs causing reduced braking efficiency and an accident.

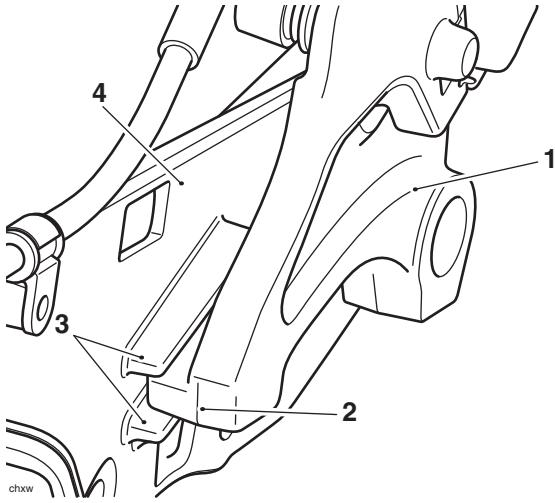
2. Lubricate the sliding pins with silicone based grease (such as T2022021 supplied by Triumph) then reassemble the carrier to the caliper. Ensure the pin gaiters are correctly located on both the carrier and caliper.



chze_2
1. Sliding pins

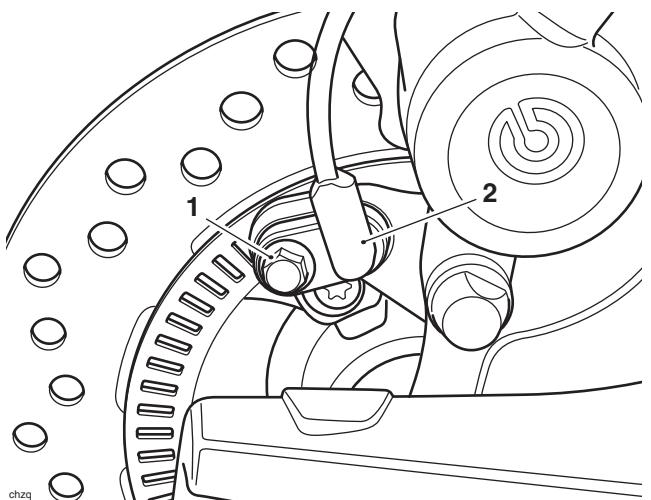
Installation

1. Position the caliper and carrier assembly to the swinging arm as noted for removal. Align the boss on the carrier with the raised slot on the swinging arm.



1. Carrier
2. Caliper carrier boss
3. Swinging arm slot
4. Swinging arm

2. Fit the rear wheel (see page 15-10).
3. Connect the brake hose to the caliper incorporating new washers on each side of the banjo bolt.
4. Tighten the banjo bolt to **25 Nm**.
5. **Motorcycles with ABS only:** Position the wheel speed sensor to the fork leg with its shim between the sensor and fork leg. Fit a new bolt and tighten to **9 Nm**.



1. Fixing
2. Rear ABS wheel sensor (Street Triple R shown)

6. Fit the brake pads (see page 14-54).



Warning

Use only DOT 4 specification brake fluid as listed in the General Information section of this manual. The use of brake fluids other than those DOT 4 fluids listed in the General Information section may reduce the efficiency of the braking system leading to loss of motorcycle control and an accident.

Observe the brake fluid handling warnings given earlier in this section of the manual.

7. Fill the master cylinder with new, DOT 4 brake fluid from a sealed container.
8. Bleed the rear brake (see page 14-52).
9. **Motorcycles with ABS only:** The air gap between the wheel speed sensor and the pulser ring must be between 0.4 mm and 1.2 mm. Check, and if necessary, adjust the air gap (see page 14-68).
10. Check for correct brake operation. Rectify as necessary.



Warning

It is dangerous to operate the motorcycle with defective brakes; you must have your authorised Triumph dealer take remedial action before you ride the motorcycle again. Failure to take remedial action may result in reduced braking efficiency leading to loss of motorcycle control and an accident.

Rear Brake Disc

Wear



Warning

Before starting work, ensure the motorcycle is stabilised and adequately supported. This will help prevent it from falling and causing injury to the operator or damage to the motorcycle.

1. Replace any brake disc worn beyond the service limit or that exceeds the disc run-out limit.

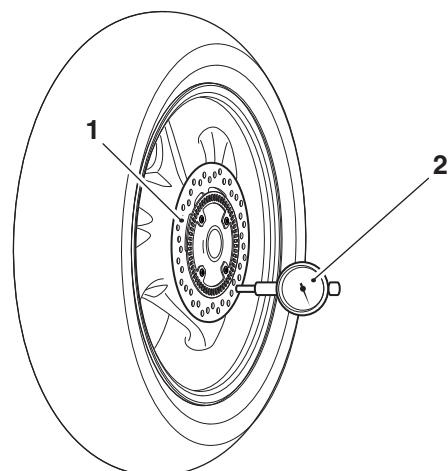
Rear Disc Thickness

Standard	5.0 mm
Service Limit	4.5 mm

Disc Run-out

Service Limit	0.30 mm
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Measure disc run-out using an accurate dial gauge mounted on a surface plate.



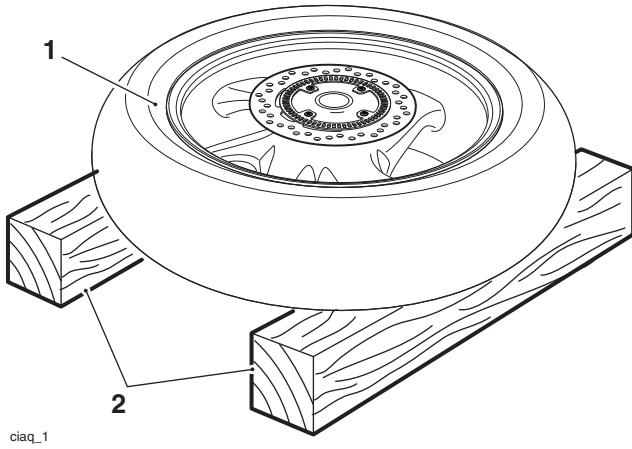
ciaq

1. Disc
2. Dial gauge

Brakes

Removal

1. Remove the rear wheel (see page 15-10).
2. Support the wheel on blocks as illustrated to avoid damage to the wheel centre.



1. Wheel

2. Support blocks

3. Remove and discard the four fixings and remove the brake disc.

Installation

1. Locate the disc to the wheel.
2. Fit new fixings and tighten to **22 Nm**.
3. Refit the rear wheel (see page 15-10).
4. Check for correct brake operation. Rectify as necessary.



Warning

It is dangerous to operate the motorcycle with defective brakes; you must have your authorised Triumph dealer take remedial action before you ride the motorcycle again. Failure to take remedial action may result in reduced braking efficiency leading to loss of motorcycle control and an accident.

Rear Master Cylinder

Removal



Warning

Before starting work, ensure the motorcycle is stabilised and adequately supported. This will help prevent it from falling and causing injury to the operator or damage to the motorcycle.

1. Remove the seat (see page 16-22 for Daytona 675, Daytona 675 R and Street Triple Rx, see page 16-23 for Street Triple, Street Triple 660 cc and Street Triple R).
2. Disconnect the battery, negative (black) lead first.



Caution

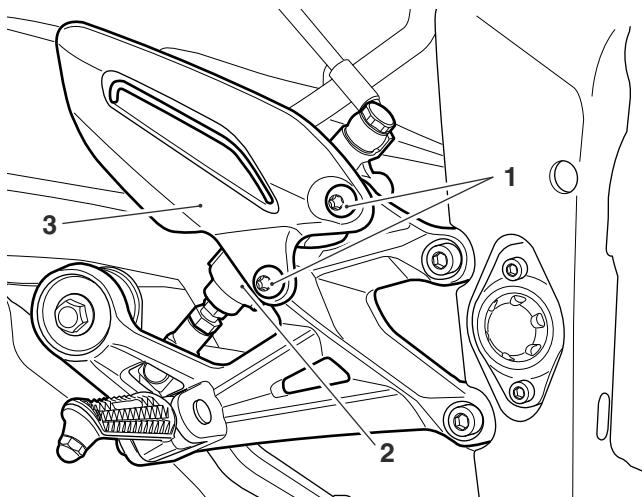
To prevent paint damage, do not spill brake fluid onto any area of the bodywork. Spilled brake fluid will damage paintwork.

3. Drain the fluid from the master cylinder by bleeding the system at the rear caliper until all fluid has been expelled.
4. Disconnect from the master cylinder the:
 - rear brake hose (noting orientation)
 - reservoir hose.

Note:

- **For motorcycles with ABS, note the position of the bracket for the ABS brake lines for installation.**

5. Remove the screws securing the master cylinder and heel guard to the frame to detach the master cylinder from the control plate.



1. Master cylinder fixings

2. Master cylinder

3. Heel guard

Note:

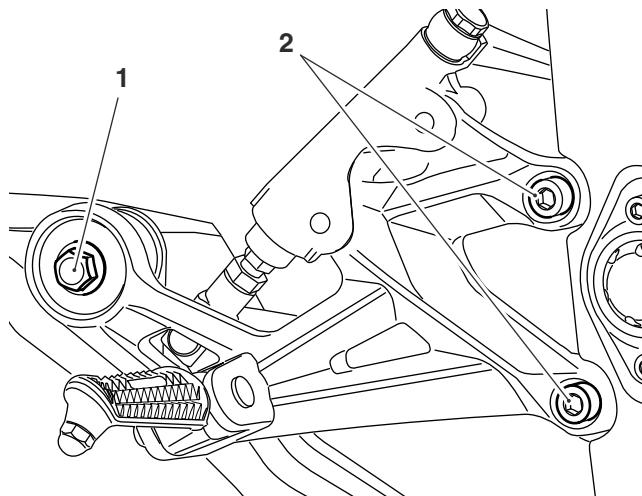
- For all Daytona 675 models omit steps 7 to 10.
- For all Street Triple models omit step 6.

Daytona 675 and Daytona 675 R

6. Remove the clip and clevis pin at the lower end of the brake pushrod and remove the master cylinder.

Street Triple, Street Triple 660 cc, Street Triple R and Street Triple Rx

7. Remove the nut and bolt securing the silencer to the right hand control plate.
8. Remove the two fixings securing the right hand control plate to the frame.

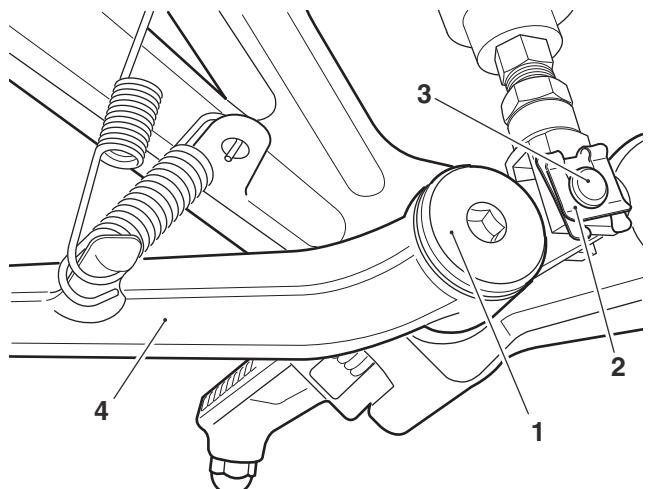


1. Nut and bolt, silencer mounting

2. Fixings

Note:

- Note the position of the springs on the rear brake pedal for installation.
- 9. Taking care not to scratch the frame with the control plate, remove and discard the rear brake pedal pivot bolt.
- 10. Remove the clip and clevis pin at the lower end of the brake pushrod and remove the master cylinder.



1. Pivot bolt

2. Clip

3. Clevis pin

4. Rear brake pedal

Disassembly

1. Remove the boot from the cylinder and pushrod.
2. Remove the circlip retaining the pushrod to the cylinder.
3. Remove the pushrod and piston set from the master cylinder bore, noting the relative position of the seals and piston components.

Inspection

1. Visually inspect the master cylinder bore for wear, scratches or corrosion. Replace as necessary.
2. Check the piston and cylinder bore for damage, wear or deterioration. Replace as necessary.
3. Always renew the piston and seal set if the cylinder is dismantled.
4. Examine the pushrod for bends and damage. Replace as necessary.

Brakes

Assembly



Warning

Never use mineral based grease (such as lithium or copper based grease) in any area where contact with the braking system hydraulic seals and dust seals is possible. Mineral based grease will damage the hydraulic seals and dust seals in the calipers and master cylinders. Damage caused by contact with mineral based grease may reduce braking efficiency resulting in an accident.



Warning

Before installation, all internal brake components should be cleaned and lubricated with clean new DOT 4 brake fluid.

Never use solvents, petrol (gasoline), engine oil, or any other petroleum distillate on internal brake components as this will cause deterioration of the hydraulic seals in the calipers and master cylinders.

A dangerous riding condition leading to loss of motorcycle control and an accident could result if this warning is ignored.

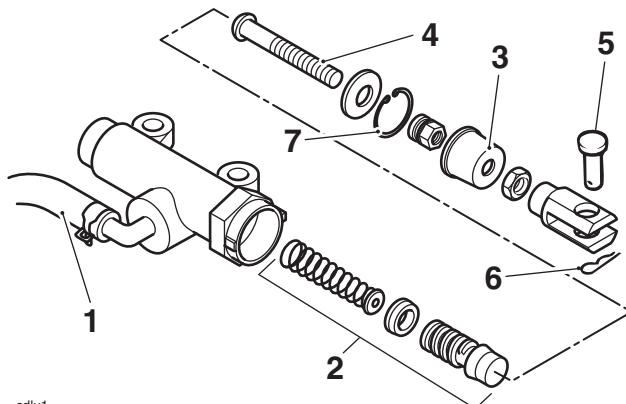
1. Clean the master cylinder bore, piston and seals with new brake fluid.
2. Ensure all ports are clear of obstruction.



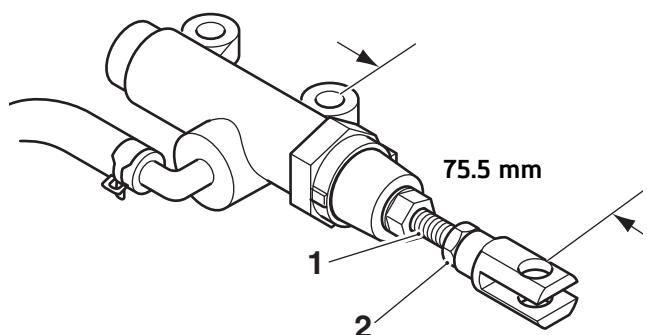
Warning

Ensure that the piston and piston seal are fitted facing the same way as noted during removal. A dangerous riding condition leading to an accident could result from incorrect assembly of the master cylinder.

3. Install the spring and piston set together.
4. Apply a small amount of brake grease to the pushrod.
5. Install the pushrod in the master cylinder and retain with a new circlip.
6. Refit the boot.



1. Reservoir hose
 2. Piston set
 3. Dust boot
 4. Pushrod
 5. Clevis pin
 6. Clip
 7. Circlip
7. If the pushrod has been disassembled, adjust the length of the pushrod as shown below:



1. Pushrod
 2. Lock nut
8. Set the pushrod free length to 75.5 mm.
9. Tighten the lock nut to **18 Nm**.

Installation

1. Connect the pushrod to the brake pedal using a new clevis pin and clip.

Note:

- For Daytona 675 and Daytona 675 R, omit steps 2 to 4.

Street Triple, Street Triple 660 cc, Street Triple R and Street Triple Rx

2. Fit the brake pedal to the control plate and tighten the new pivot bolt to **22 Nm**.
3. Fit the right hand control plate to the frame and tighten its fixings to **24 Nm**.
4. Secure the silencer to the right hand control plate with its bolt and new lock nut and tighten to **28 Nm**.

All Models

Note:

- For motorcycles with ABS, ensure the bracket for the ABS brake lines is fitted as noted for removal.
- 5. Secure the master cylinder and heel guard to the frame. Tighten the securing screws to **16 Nm**.
- 6. Fit the reservoir hose to the master cylinder.
- 7. Incorporating new washers, fit the brake hose to the master cylinder. Ensuring correct orientation of the brake hose, tighten the banjo bolt to **25 Nm**.

8. Fill and bleed the rear brake system (see page 14-52 for motorcycles without ABS, see page 14-66 for motorcycles with ABS).
9. Reconnect the battery, positive (red) lead first. Tighten the battery terminals to **4.5 Nm**.
10. Refit the seat (see page 16-22 for Daytona 675, Daytona 675 R and Street Triple Rx, see page 16-24 for Street Triple, Street Triple 660 cc and Street Triple R).
11. Check for correct brake operation. Rectify as necessary.



Warning

It is dangerous to operate the motorcycle with defective brakes; you must have your authorised Triumph dealer take remedial action before you ride the motorcycle again. Failure to take remedial action may result in reduced braking efficiency leading to loss of motorcycle control and an accident.



Warning

Use only DOT 4 specification brake fluid as listed in the General Information section of this manual. The use of brake fluids other than those DOT 4 fluids listed in the General Information section may reduce the efficiency of the braking system leading to loss of motorcycle control and an accident.

Observe the brake fluid handling warnings given earlier in this section of the manual.

Bleeding the Front Brakes, Renewing Brake Fluid - Motorcycles with ABS



Warning

Before starting work, ensure the motorcycle is stabilised and adequately supported. This will help prevent it from falling and causing injury to the operator or damage to the motorcycle.

1. Complete the brake bleed procedure as for models without ABS brakes (see page 14-22).
2. Connect the Triumph diagnostic tool (see page 14-80).
3. Follow the on screen menu to ABS Diagnostics. From the menu, select BLEED SYSTEM (see the Triumph Diagnostic Tool User Guide).

Note:

- On pressing the Start button, the diagnostic software will send a command to the ABS control module to open the 2nd circuit solenoid.
 - The front brake lever travel will increase as ABS modulator solenoids are opened and will then decrease as the solenoids are automatically closed.
 - Pressure must be applied to the front brake lever before operating the bleed sequence on the diagnostic tool. An assistant will be required to open the bleed nipple while pressure is applied to the brake lever.
4. Apply pressure to the front brake lever, press the **Start** button to activate the bleed sequence on the diagnostic tool, and with assistance, release one of the bleed nipples.
 5. Get an assistant to slowly pull the brake lever to the handlebar.
 6. With the lever held fully against the handlebar, close the bleed nipple. Once the bleed nipple is closed, release the brake lever.
 7. Repeat steps 5 and 6 until no more air appears in the bleed tube, maintaining the brake fluid level between the upper and lower reservoir levels whilst bleeding is being carried out.
 8. The bleed sequence will run for a maximum of 90 seconds. Press the **Stop** button to end the bleed sequence at any time. Once the bleed sequence has completed, the diagnostic tool will display a message '**ABS system bleed complete**'.



Caution

The ABS modulator must be allowed to cool between bleeding operations. Always allow the ABS modulator to cool for 5 minutes before starting the bleed procedure again. Failure to follow this instruction may result in damage to the ABS modulator.

9. Repeat the above procedure as necessary until all air is expelled from the system.
10. When all air has been expelled from the system, apply pressure to the brake lever and close the bleed nipple. Tighten the nipple to:
 - **6 Nm** - All models except Daytona 675 R
 - **8 Nm** - Daytona 675 R only.
11. Repeat the brake bleed procedure as for models without ABS brakes (see page 14-22).

Front ABS Wheel Sensor

Removal



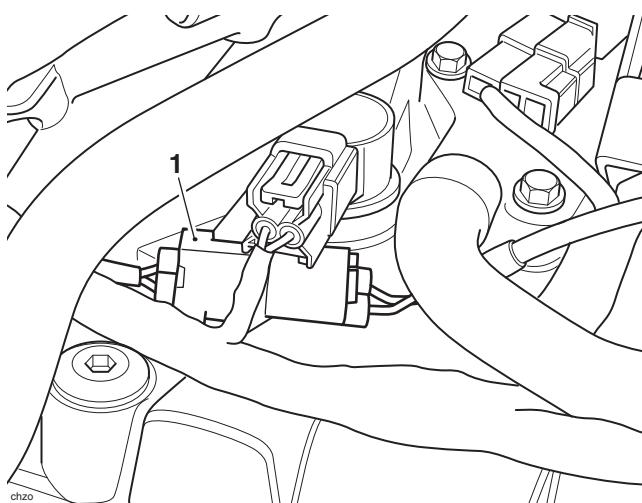
Warning

Before starting work, ensure the motorcycle is stabilised and adequately supported. This will help prevent it from falling and causing injury to the operator or damage to the motorcycle

1. Remove the seat (see page 16-22 for Daytona 675, Daytona 675 R and Street Triple Rx, see page 16-23 for Street Triple, Street Triple 660 cc and Street Triple R).
2. Disconnect the battery, negative (black) lead first.
3. Remove the fuel tank (see page 10-112).
4. Remove the airbox (see page 10-120).

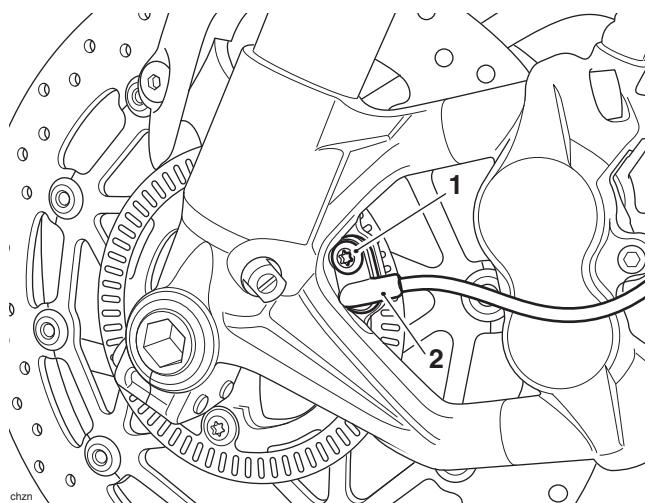
Note:

- Note the routing of the harness and its retaining clips for installation.
- 5. Disconnect the ABS wheel sensor multiplug, identified as the white connector.



1. Front ABS wheel sensor multiplug

6. Release the ABS wheel sensor harness from its retaining clips.
7. Release the fixing and remove the sensor. Collect the shim from between the sensor and fork leg and discard the fixing.



1. Fixing
2. Front ABS wheel sensor, Street Triple R shown

Installation

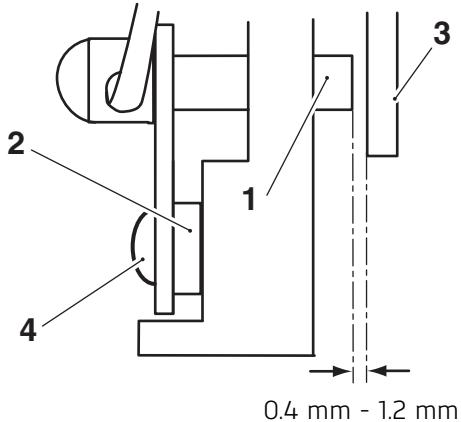
Note:

- Check the condition of the shim before use. Do not use a shim which is bent or damaged.
1. Position the wheel speed sensor to the fork leg with its shim between the sensor and fork leg. Fit a new bolt and tighten to **9 Nm**.
 2. Route the harness and secure to the brake hose clips as noted for removal.
 3. Connect the wheel speed sensor multi-plug.
 4. Refit the airbox (see page 10-122).
 5. Refit the fuel tank (see page 10-113).
 6. The air gap between the wheel speed sensor and the pulser ring must be between 0.4 mm and 1.2 mm. Check, and if necessary, adjust the air gap (see page 14-64).
 7. Connect the battery, positive (red) lead first. Tighten the battery terminals to **4.5 Nm**.
 8. Refit the seat (see page 16-22 for Daytona 675, Daytona 675 R and Street Triple Rx, see page 16-24 for Street Triple, Street Triple 660 cc and Street Triple R).

Brakes

Air Gap Measurement

9. Using feeler gauges, measure the air gap between the wheel speed sensor and the pulser ring.



cdhj_1

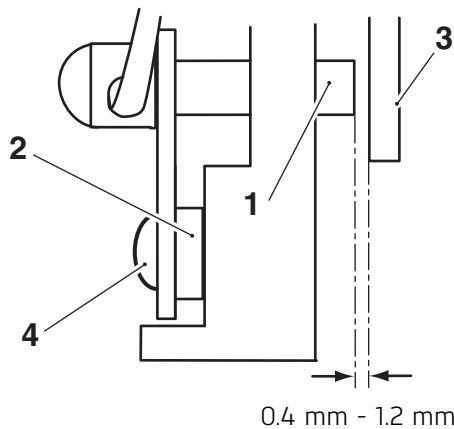
1. ABS sensor
2. Shim
3. Pulser ring
4. Fixing

10. Rotate the wheel and repeat the measurement in several places to ensure the pulser ring is not distorted or bent. Renew a damaged pulser ring.
11. Adjust the air gap using the correct shim to achieve an air gap between 0.4 mm to 1.2 mm.

Note:

- Shims are available in the following sizes, 0.5 mm, 1.0 mm, 1.5 mm and 2.0 mm.

12. If necessary, remove the wheel speed sensor, fit the correct thickness shim and refit the wheel speed sensor and tighten the new fixing to **9 Nm**.



cdhj_1

1. ABS sensor
2. Shim
3. Pulser ring
4. Fixing

13. Repeat the air gap measurement. Re-adjust as necessary.

Front ABS Pulser Ring

Removal



Warning

Before starting work, ensure the motorcycle is stabilised and adequately supported. This will help prevent it from falling and causing injury to the operator or damage to the motorcycle

1. Remove the front wheel (see page 15-7 for all models except Daytona 675 R, see page 15-8 for Daytona 675 R).

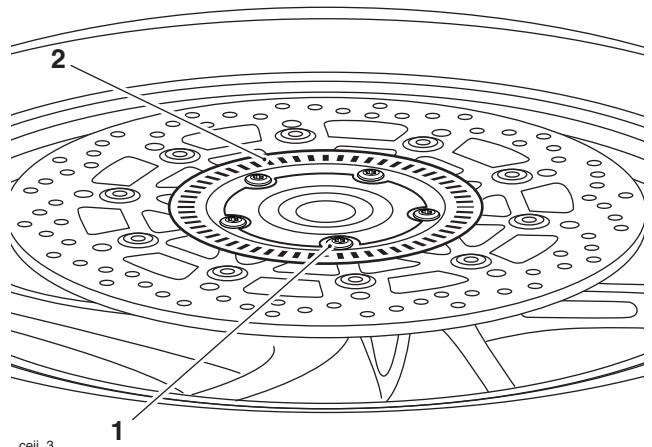


Warning

Damage to the wheel centre could cause misalignment of the wheel when refitted. A dangerous riding condition leading to an accident could result if this warning is ignored.

2. Support the wheel on blocks as illustrated to avoid damage to the wheel centre.

3. Remove and discard the five fixings and remove the pulser ring.



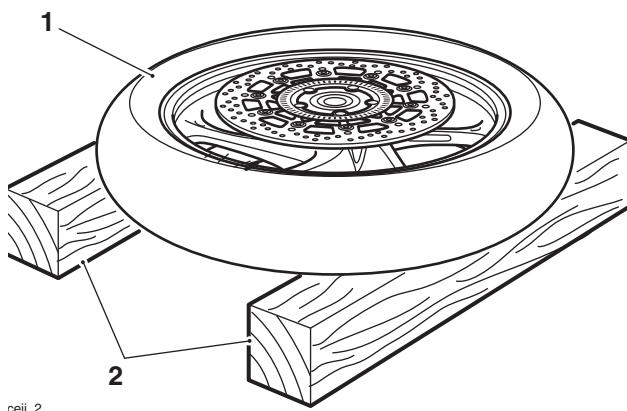
1. Fixings
2. Pulser ring

Inspection

1. Check the pulser ring for damage, missing or cracked teeth or distortion. Renew the pulser ring as necessary.

Installation

1. Locate the pulser ring onto the wheel, fit new bolts and tighten to **22 Nm**.
2. Refit the front wheel (see page 15-8 for all models except Daytona 675 R, see page 15-9 for Daytona 675 R).
3. The air gap between the wheel speed sensor and the pulser ring must be between 0.4 mm and 1.2 mm. Check, and if necessary, adjust the air gap (see page 14-64).
4. Check that the brakes operate correctly.



1. Wheel
2. Support block

Brakes

Bleeding the Rear Brake Fluid - Motorcycles with ABS



Warning

Before starting work, ensure the motorcycle is stabilised and adequately supported. This will help prevent it from falling and causing injury to the operator or damage to the motorcycle.

1. Complete the brake bleed procedure as for models without ABS brakes (see page 14-52).
2. Connect the Triumph diagnostic tool (see page 14-80).
3. Follow the on screen menu to ABS Diagnostics. From the menu, select BLEED SYSTEM (see the Triumph Diagnostic Tool User Guide).

Note:

- On pressing the Start button, the diagnostic software will send a command to the ABS control module to open the 2nd circuit solenoid.
 - The rear brake pedal travel will increase as ABS modulator solenoids are opened and will then decrease as the solenoids are automatically closed.
 - Pressure must be applied to the rear brake pedal before operating the bleed sequence on the diagnostic tool. An assistant will be required to open the bleed nipple while pressure is applied to the brake pedal.
4. Apply pressure to the rear brake pedal, press the Start button to activate the bleed sequence on the diagnostic tool, and with assistance, release the bleed nipple.
 5. Slowly depress the brake pedal and, holding the pedal fully down, close the bleed nipple. Repeat until no more air appears in the bleed tube, maintaining the brake fluid level between the upper and lower reservoir levels whilst bleeding is being carried out.
 6. The bleed sequence will run for a maximum of 90 seconds. Press the Stop button to end the bleed sequence at any time. Once the bleed sequence has completed the diagnostic tool will display a message '**ABS system bleed complete**'.



Caution

The ABS modulator must be allowed to cool between bleeding operations. Always allow the ABS modulator to cool for 5 minutes before starting the bleed procedure again. Failure to follow this instruction may result in damage to the ABS modulator.

Rear ABS Wheel Speed Sensor

Removal



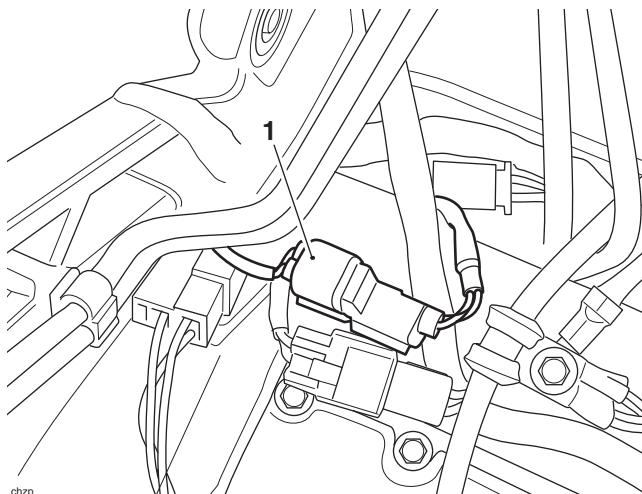
Warning

Before starting work, ensure the motorcycle is stabilised and adequately supported. This will help prevent it from falling and causing injury to the operator or damage to the motorcycle.

1. Remove the seat (see page 16-22 for Daytona 675, Daytona 675 R and Street Triple Rx, see page 16-23 for Street Triple, Street Triple 660 cc and Street Triple R).
2. Disconnect the battery, negative (black) lead first.
3. Remove the fuel tank (see page 10-112).
4. Remove the airbox (see page 10-120).

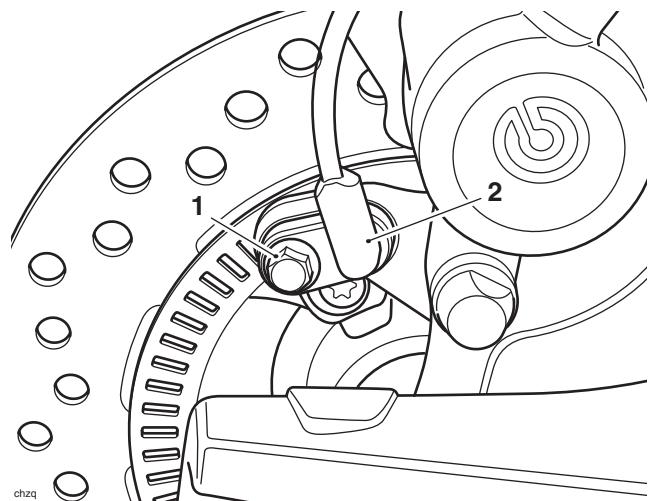
Note:

- Note the routing of the harness and its retaining clips for installation.
5. Disconnect the ABS wheel sensor multiplug, identified as the white connector.



1. Rear ABS wheel sensor multiplug

6. Release the ABS wheel sensor harness from its retaining clips.
7. Release the fixing and remove the sensor. Collect the shim from between the sensor and fork leg and discard the fixing.



1. Fixing
2. Rear ABS wheel sensor, Street Triple R shown

Installation

Note:

- Check the condition of the shim before use. Do not use a shim which is bent or damaged.
1. Position the wheel speed sensor to the fork leg with its shim between the sensor and fork leg. Fit a new bolt and tighten to **9 Nm**.
 2. Route the harness and secure to the brake hose clips as noted for removal.
 3. Connect the wheel speed sensor multiplug.
 4. Refit the airbox (see page 10-122).
 5. Refit the fuel tank (see page 10-113).
 6. The air gap between the wheel speed sensor and the pulser ring must be between 0.4 mm and 1.2 mm. Check, and if necessary, adjust the air gap (see page 14-68).
 7. Connect the battery, positive (red) lead first. Tighten the battery terminals to **4.5 Nm**.

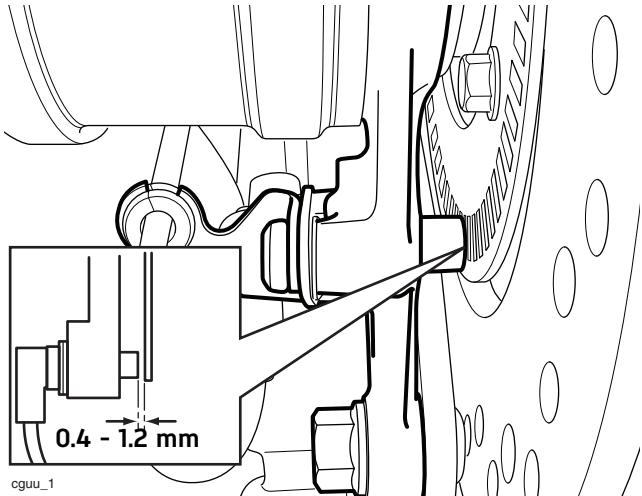
Brakes

Air Gap Measurement

Caution

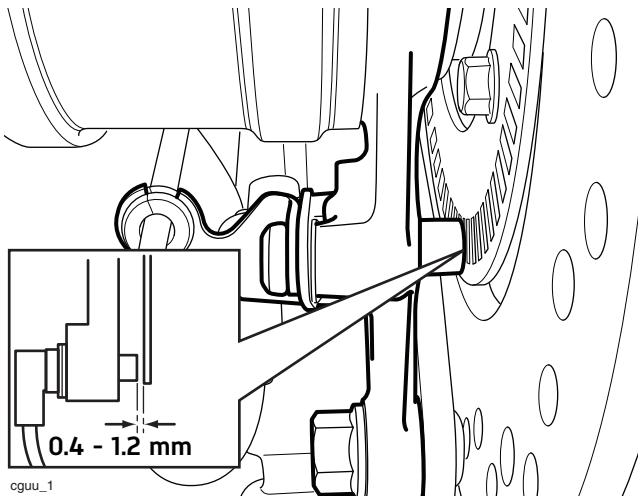
Never lever directly against the disc, caliper or the pad lining material. Always use a levering tool made from a soft material which will not cause damage to the load bearing surfaces.

1. Carefully slide the caliper carrier towards the brake disc to eliminate any play in the caliper carrier.
2. Using feeler gauges, measure the air gap between the wheel speed sensor and the pulser ring.



ABS Wheel Speed Sensor Air Gap Measurement

3. Carefully slide the caliper carrier away from the brake disc to eliminate any play in the caliper carrier.
4. Repeat the air gap measurement.



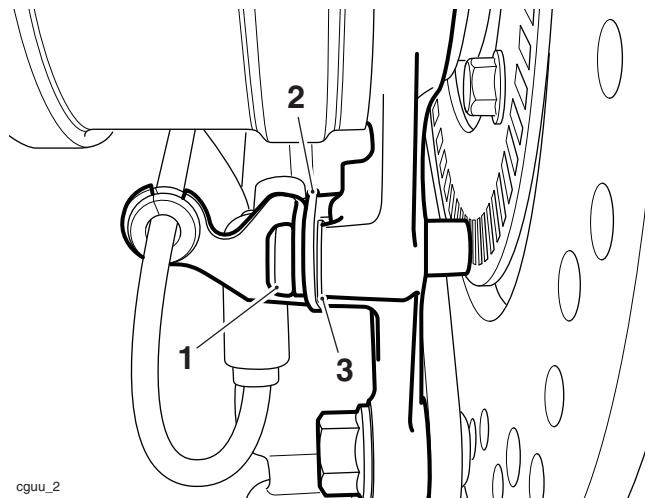
ABS Wheel Speed Sensor Air Gap Measurement

5. Rotate the wheel and repeat the measurement in several places to ensure the pulser ring is not distorted or bent. Renew a damaged pulser ring.

6. Adjust the air gap using the correct shim to achieve an air gap between 0.4 mm to 1.2 mm.

Note:

- Shims are available in the following sizes, **0.5 mm, 1.0 mm, 1.5 mm and 2.0 mm**.
- 7. If necessary, remove the wheel speed sensor, fit the correct thickness shim and refit the wheel speed sensor and tighten the new fixing to **9 Nm**.



cguu_2

1. Fixing
2. ABS sensor
3. Shim

8. Repeat the air gap measurement. Readjust as necessary.

Rear ABS Pulser Ring

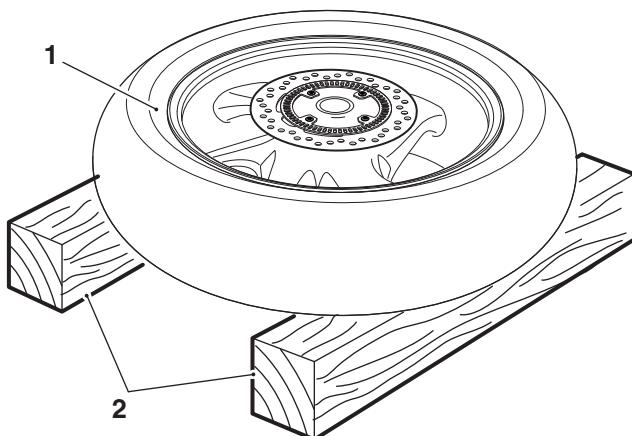
Removal



Warning

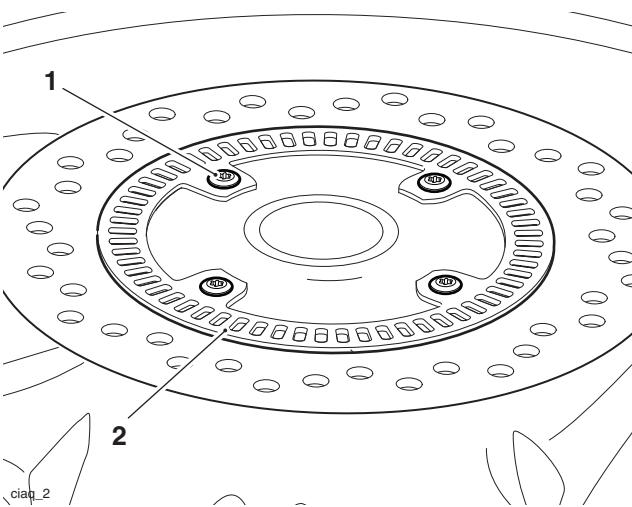
Before starting work, ensure the motorcycle is stabilised and adequately supported. This will help prevent it from falling and causing injury to the operator or damage to the motorcycle.

1. Remove the rear wheel (see page 15-10).
2. Support the wheel on blocks as illustrated below.



ciaq_1

1. Rear wheel
2. Support blocks
3. Remove and discard the four fixings and remove the pulser ring.



1. Fixings
2. Pulser ring

Inspection

1. Check the pulser ring for damaged, missing or cracked teeth or distortion. Renew the pulser ring as necessary.

Installation

1. Locate the pulser ring onto the rear brake disc.
2. Install new fixings and tighten to **22 Nm**.
3. Fit the rear wheel (see page 15-10).
4. The air gap between the wheel speed sensor and the pulser ring must be between 0.4 mm and 1.2 mm. Check, and if necessary, adjust the air gap (see page 14-68).
5. Check that the brakes operate correctly.

Brakes

ABS Hydraulic Modulator/ECM

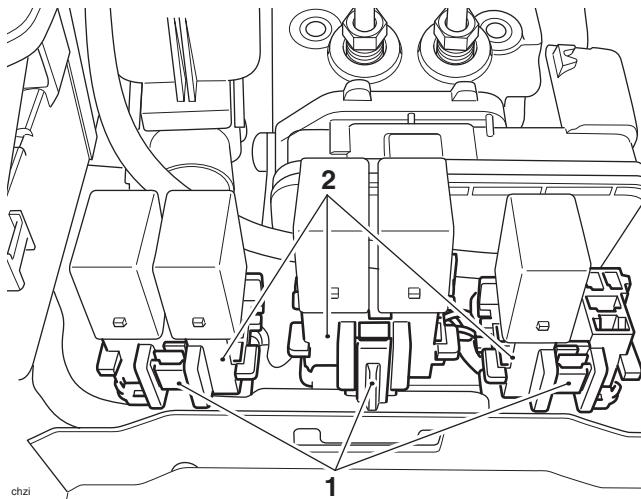
Removal



Warning

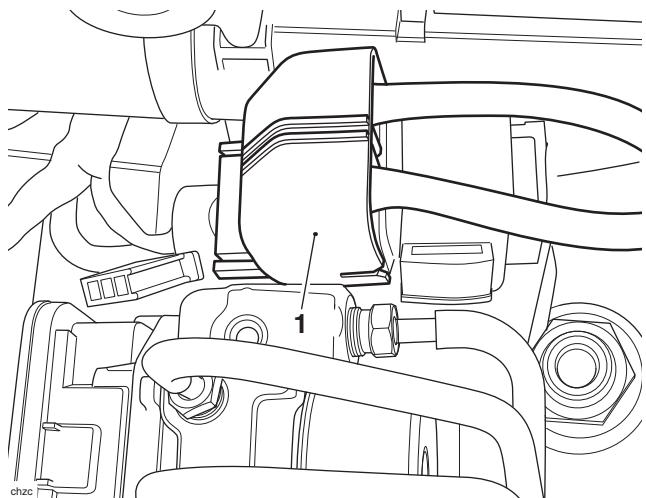
Before starting work, ensure the motorcycle is stabilised and adequately supported. This will help prevent it from falling and causing injury to the operator or damage to the motorcycle.

1. Remove the seat (see page 16-22 for Daytona 675, Daytona 675 R and Street Triple Rx, see page 16-23 for Street Triple, Street Triple 660 cc and Street Triple R).
2. Disconnect and remove the battery (see page 17-13).
3. Remove the fuel tank (see page 10-112).
4. Remove the airbox (see page 10-120).
5. Release their locking devices and detach the relay blocks from their mounting brackets.



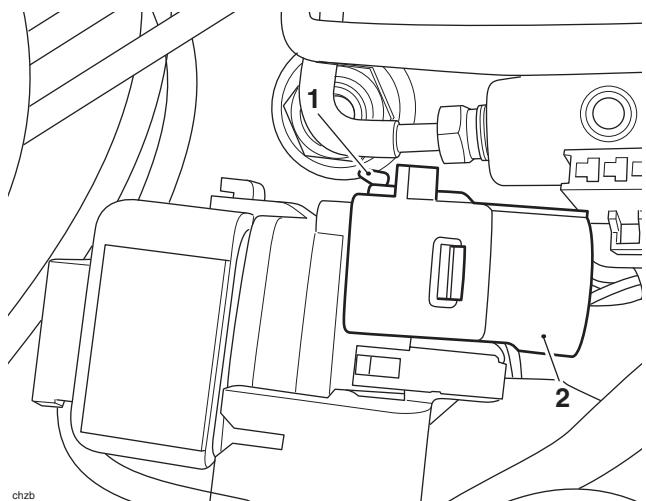
1. Locking devices
2. Relay blocks

6. Detach the starter motor solenoid from its mounting.



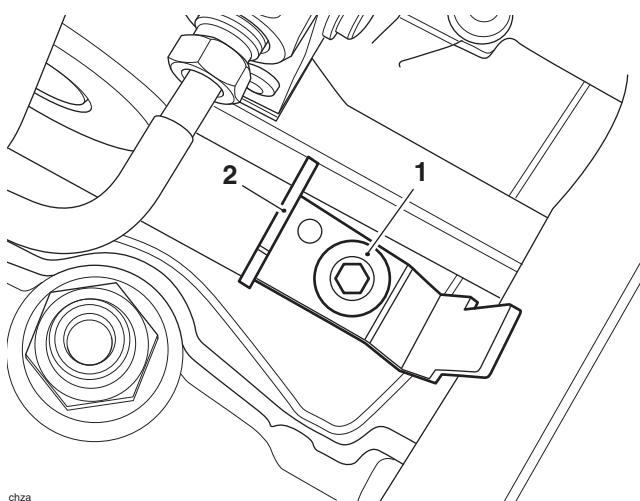
1. Starter motor solenoid

7. Release the locking device and disconnect the multiplug from the starter motor solenoid.



1. Locking device
2. Multiplug

8. Release the fixing and remove the bracket for the starter motor solenoid.



1. Fixing
2. Bracket

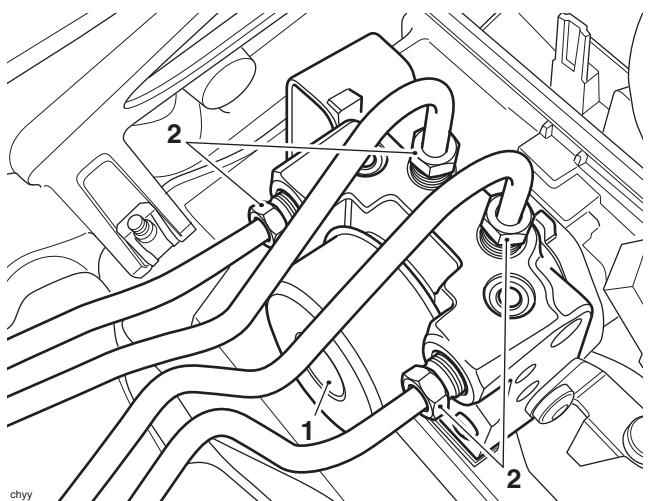


Caution

To prevent body damage, do not spill brake fluid onto any area of the bodywork or wheels.

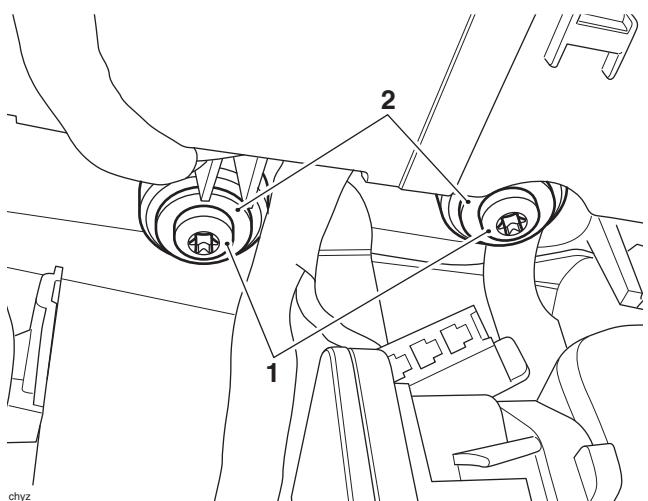
9. Drain the fluid from the front and rear master cylinders (for front brake master cylinder see page 14-22; for rear brake master cylinder see page 14-52).
10. Disconnect the ABS modulator multiplug (see page 14-85).

11. Remove the 4 brake line unions and, taking care not to bend the brake lines, detach the lines from the ABS modulator.



1. ABS modulator
2. Brake line unions

12. Release the two fixings and shouldered washers for the left hand side of the ABS modulator mounting bracket. Discard the fixings.



1. Fixings
2. Shouldered washer



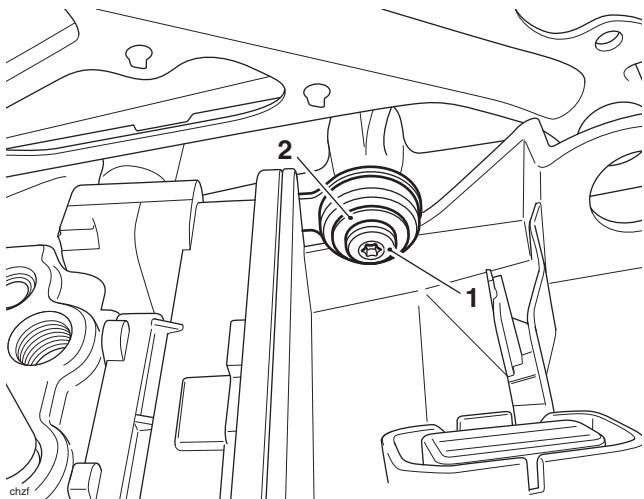
Warning

Before the disassembly of any brake lines in the ABS hydraulic circuit, always mark their position so that they can be returned to the same position when assembled.

If the brake lines are incorrectly assembled the performance of the ABS system will be seriously compromised, leading to loss of motorcycle control and an accident.

Brakes

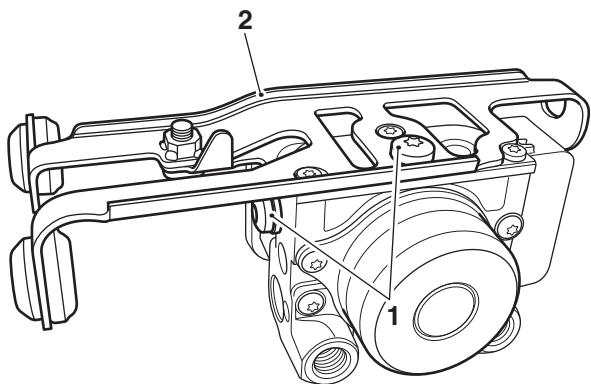
13. Release the fixing and shouldered washer for the right hand side of the ABS modulator mounting bracket. Discard the fixing.



1. Fixing

2. Shouldered washer

14. Carefully manoeuvre the ABS modulator and bracket assembly from the motorcycle.
15. If necessary, release the fixings and remove the mounting bracket. Discard the fixings.

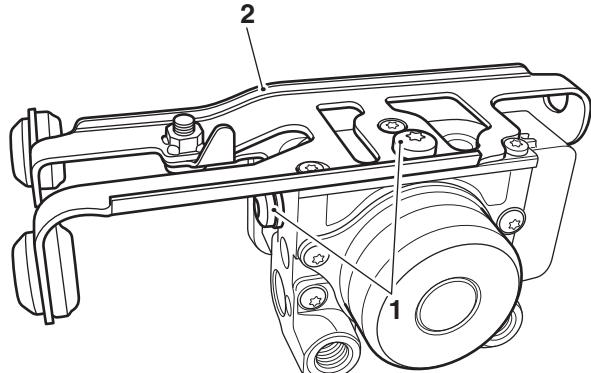


1. Fixings

2. Mounting bracket

Installation

1. Align the ABS modulator to its bracket, fit new fixings and tighten to **9 Nm**.

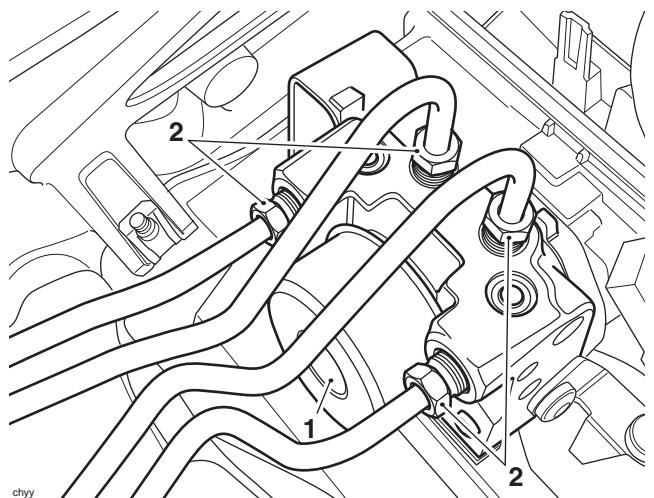


chzj

1. Fixings

2. Mounting bracket

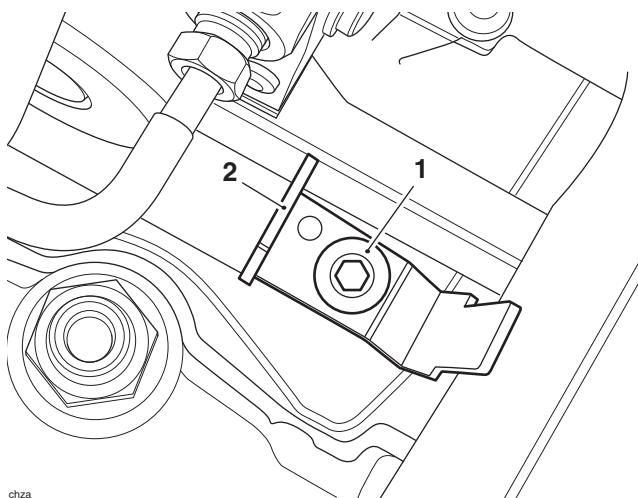
2. Carefully manoeuvre the ABS modulator and bracket assembly to the frame. Fit the right hand fixing and shouldered washer. Do not fully tighten at this stage.
3. Fit the two left hand fixings and shouldered washers to the frame.
4. Tighten all three fixings to **9 Nm**.
5. Taking care not to bend the brake lines, connect the brake lines to the ABS modulator as noted for removal. Tighten the brake lines to **15 Nm**.



1. ABS modulator

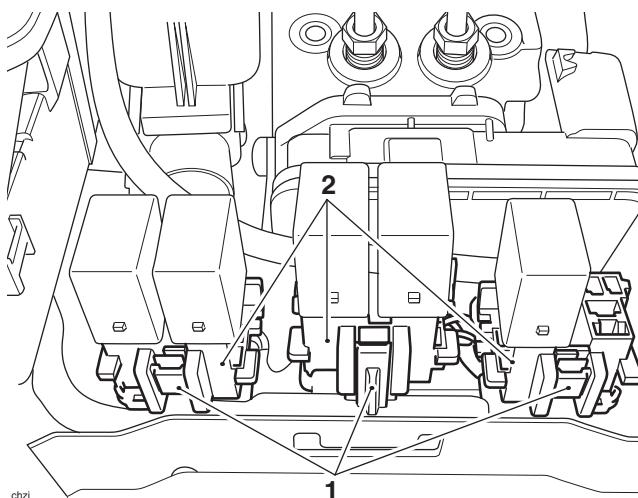
2. Brake line unions

6. Reconnect the ABS modulator multiplug, ensure the locking device is fully engaged.
7. Reconnect the multiplug to the starter motor solenoid, ensure the locking device is fully engaged.
8. Fit the bracket for the starter motor solenoid, ensure the locating hole in its base aligns with the locating pin on the under seat tray. Tighten its fixing to **4 Nm**.



chza
1. Fixing
2. Bracket

9. Attach the starter motor solenoid to its mounting.
10. Attach the relay blocks to their mounting brackets, ensure their locking devices are fully engaged.



chzi
1. Locking devices
2. Relay blocks

11. Refit the airbox (see page 10-122).
12. Refit the fuel tank (see page 10-113).
13. Install the battery and connect (see page 17-13).

! Warning

Use only DOT 4 specification brake fluid as listed in the General Information section of this manual. The use of brake fluids other than those DOT 4 fluids listed in the General Information section may reduce the efficiency of the braking system leading to an accident.

Observe the brake fluid handling warnings given earlier in this section of the manual.

14. Bleed the front brakes (see page 14-62).
15. Bleed the rear brakes (see page 14-66).

! Warning

It is dangerous to operate the motorcycle with defective brakes; you must have your authorised Triumph Dealer take remedial action. Failure to take remedial action may reduce braking efficiency leading to loss of motorcycle control and an accident.

16. Refit the rider's seat.
17. Check that the brakes operate correctly.

Brakes

ABS

System Description

The ABS versions of the Street Triple, Street Triple 660 cc, Street Triple R, Street Triple Rx, Daytona 675 and Daytona 675 R are fitted with an electronic anti-lock brake system (ABS) which is designed to prevent the wheels from locking or skidding by reducing braking effort to the front or rear brake caliper when wheel-lock is detected.

The system consists of a hydraulic modulator and ECM assembly mounted to a bracket beneath the seat, a front wheel speed sensor mounted to the front fork, and a rear wheel speed sensor mounted to the rear brake caliper carrier.

Both front and rear wheels have a pulser ring mounted onto the wheel, the front being mounted to the front brake disc, the rear being mounted to the rear brake disc.

The front and rear master cylinders are connected via lines to the modulator and from the modulator the pipes connect to the brake calipers. The calipers and master cylinders are identical to the non-ABS equipped motorcycle.

The front and rear brake circuits operate as separate systems. The front and rear brakes are not connected in any way inside the modulator.

The modulator ECM continuously calculates the front and rear wheel speeds, and from these inputs the ECM calculates the estimated motorcycle speed, wheel deceleration/acceleration, the wheel speed difference and the wheel slip (skid) rate. This is calculated by comparing the calculated wheel speeds with the calculated vehicle speed, so that if one wheel speed deviates significantly from the other two readings, this wheel is determined to be skidding.

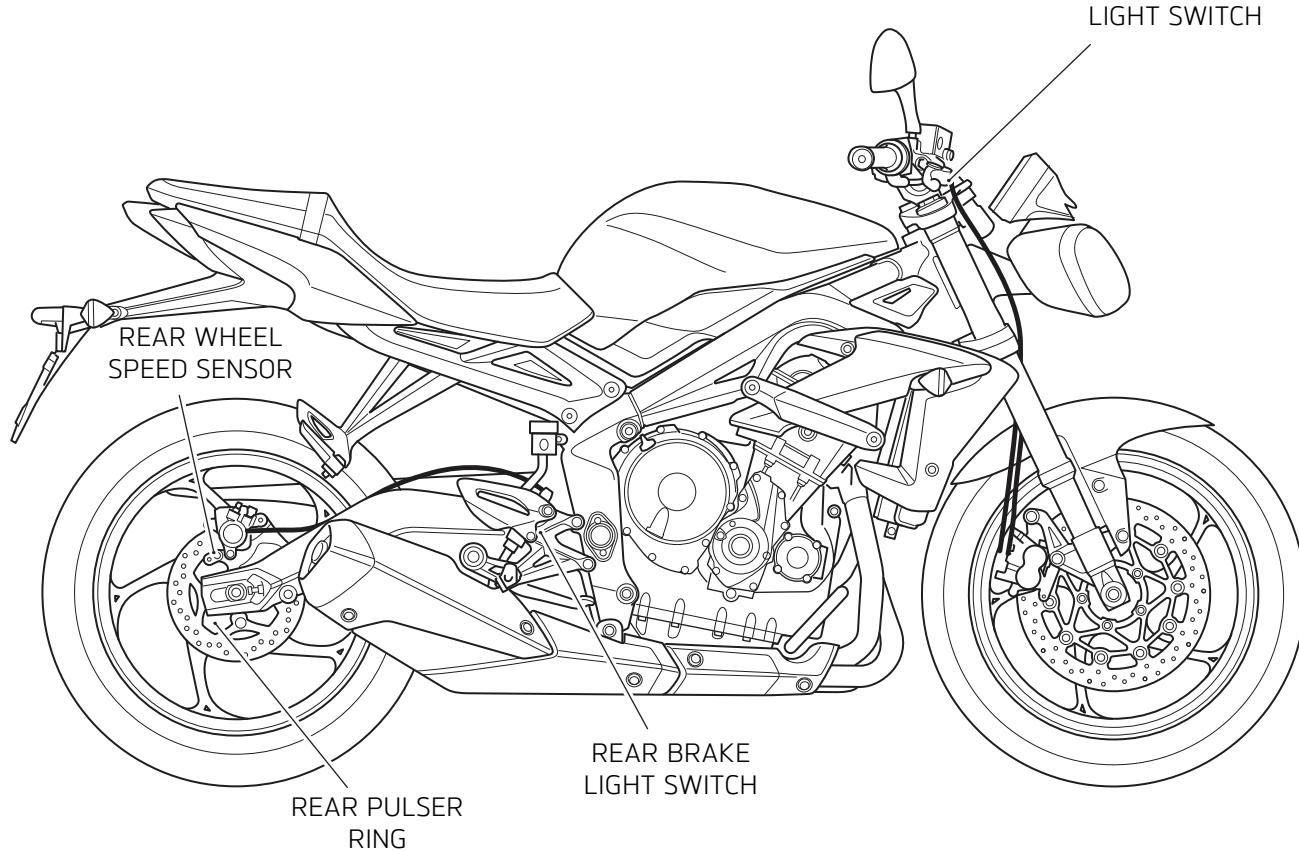
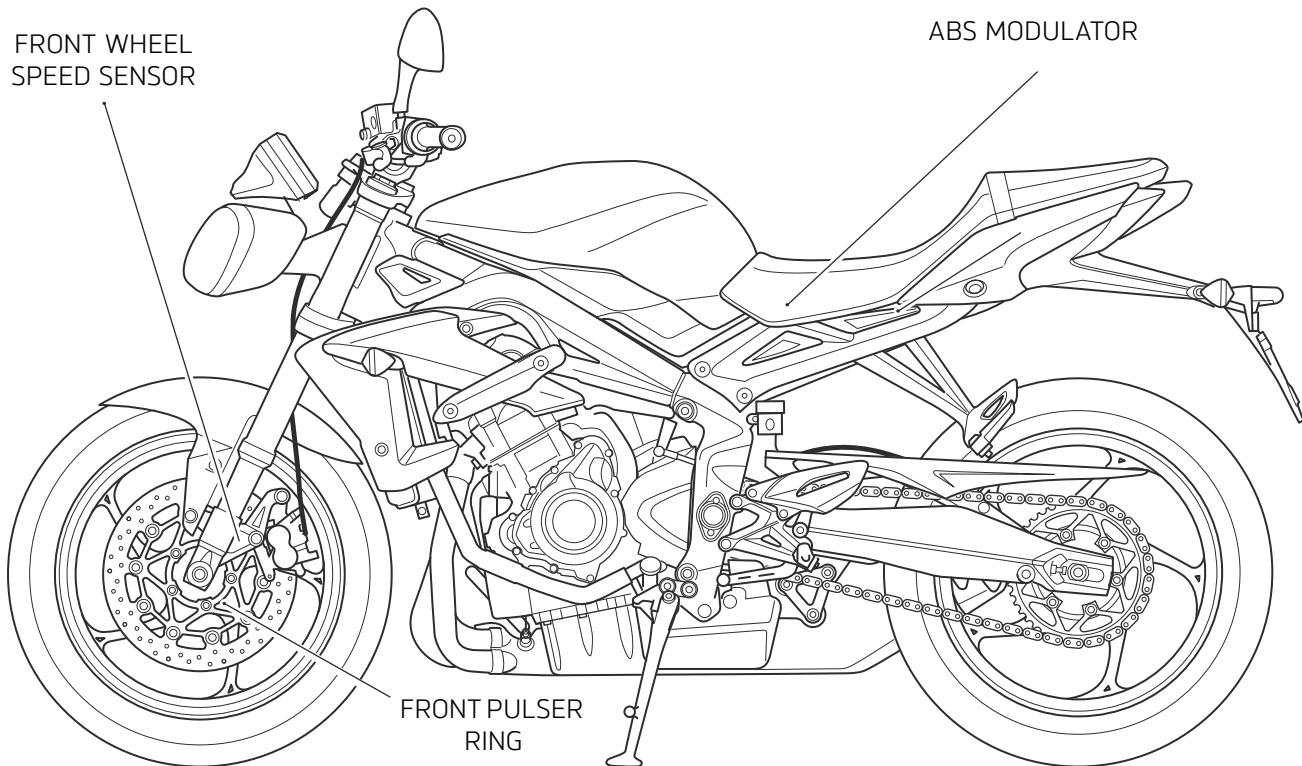
Under braking, if the modulator detects that either wheel is about to slip, due to the brake force exceeding the available traction between the tyre and road surface (the wheel will begin to slip or 'skid'), the ECM very rapidly releases and re-applies the brake pressure to prevent the wheel from skidding.

This is felt through the brake pedal or lever as a rapid 'pulsing'.

If the rider reduces braking effort, or traction increases (so that traction exceeds braking force, the wheel will rotate once more) the wheel will no longer lock up. The ABS system will detect this and stop controlling brake pressure, and return to its monitoring state.

The system has a self diagnostic function built-in which monitors the fail safe relay, solenoid valves, motor relay, wheel speed sensors, power supply and ground, as well as internal ECM functions. In the event of a malfunction being detected, the ECM will illuminate the ABS warning light, and store a Diagnostic Trouble Code in the system memory. This stored data can then be recovered using a special service tool which is mandatory for all Triumph dealers. In this way, precise diagnosis of a fault can be made and the fault quickly rectified.

Under normal operation, the ABS warning light will flash on and off after ignition on until the vehicle speed exceeds 6 mph (10 km/h). If a trouble code is stored the ABS warning light will stay illuminated and the ABS will not function, however the brakes will operate normally. If the ABS warning light does not extinguish, or illuminates whilst the motorcycle is being ridden, refer to the ABS system diagnostics (see page 14-80).

Component Location - Street Triple shown

Brakes

ABS System Circuit Diagram - Daytona 675 and Daytona 675 R

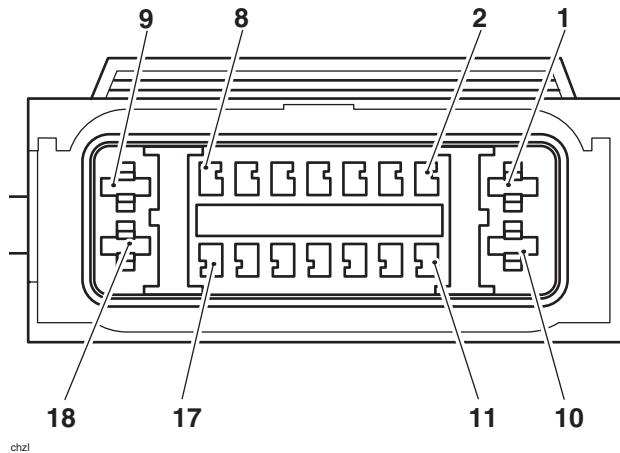
Key to Wiring Diagram

Key	Item Description
1	Main Fuse Box (Fuse 5)
2	ABS Modulator
3	Ignition Switch
4	Rear brake switch
5	Right hand switch housing/brake switch
6	Brake light
7	Front Wheel Speed Sensor
8	Rear Wheel Speed Sensor
9	Diagnostic Connector
10	Instruments

Key to Wiring Colour Codes

Key	Wiring Colour
B	Black
U	Blue
N	Brown
G	Green
S	Slate/Grey
O	Orange
K	Pink
R	Red
P	Purple
W	White
Y	Yellow
LG	Light Green
LU	Light Blue

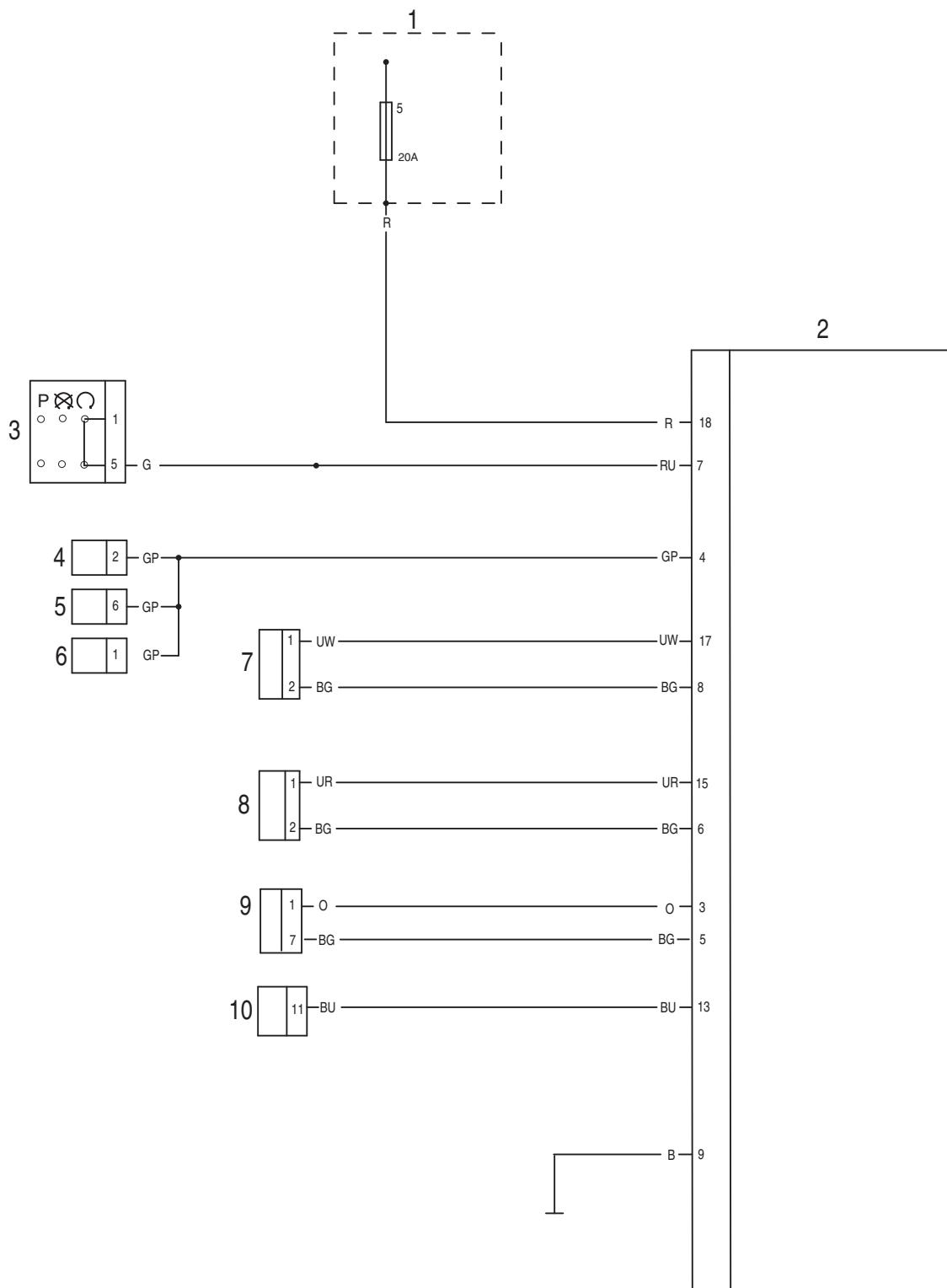
ABS control module Connector Pin Numbering



The above illustration shows the pin numbering system used in the ABS circuit diagram.

As viewed on the mating face with the ABS control module (as per the illustration), pins are numbered from right to left with number one in the top right hand corner.

ABS System Circuit Diagram - Daytona 675 and Daytona 675 R



Brakes

ABS System Circuit Diagram - Street Triple, Street Triple 660 cc, Street Triple R and Street Triple Rx

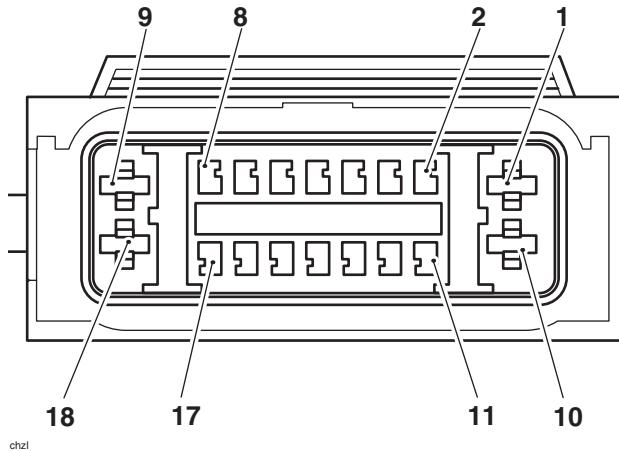
Key to Wiring Diagram

Key	Item Description
1	ABS Fuse Box (Fuse 1)
2	ABS Modulator
3	Ignition Switch
4	Rear brake switch
5	Right hand switch housing/brake switch
6	Brake light
7	Front Wheel Speed Sensor
8	Rear Wheel Speed Sensor
9	Diagnostic Connector
10	Instruments

Key to Wiring Colour Codes

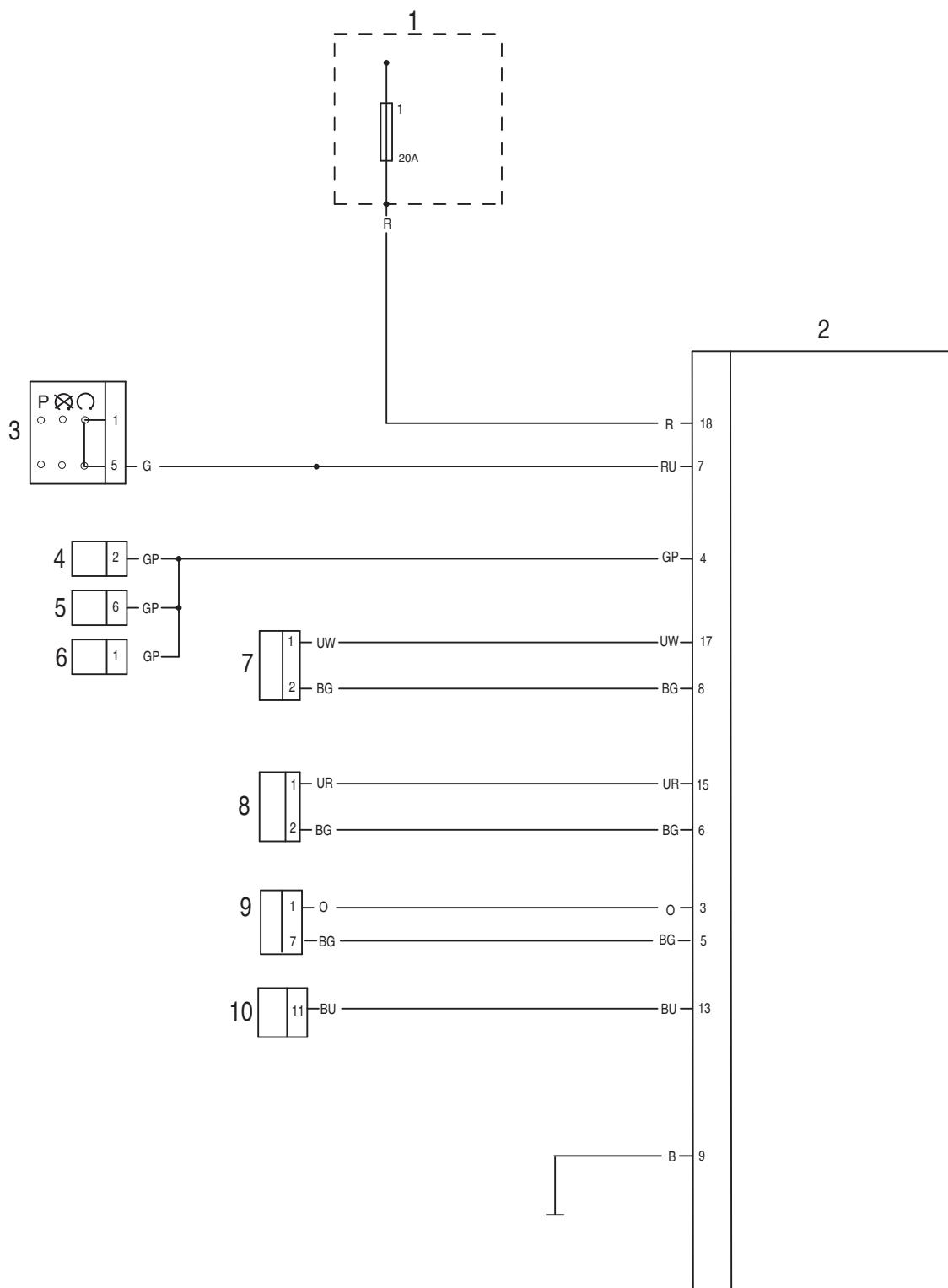
Key	Wiring Colour
B	Black
U	Blue
N	Brown
G	Green
S	Slate/Grey
O	Orange
K	Pink
R	Red
P	Purple
W	White
Y	Yellow
LG	Light Green
LU	Light Blue

ABS control module Connector Pin Numbering



The above illustration shows the pin numbering system used in the ABS circuit diagram.

As viewed on the mating face with the ABS control module (as per the illustration), pins are numbered from right to left with number one in the top right hand corner.

**ABS System Circuit Diagram - Street Triple, Street Triple 660 cc,
Street Triple R and Street Triple Rx**

Brakes

System Diagnostics

The ABS system has an on-board diagnostics feature which allows service technicians to retrieve stored data from the ECM using Triumph diagnostic software. **Full details of the Triumph diagnostic software operation and how to interpret the results are given in the Triumph Diagnostic Tool User Guide.**

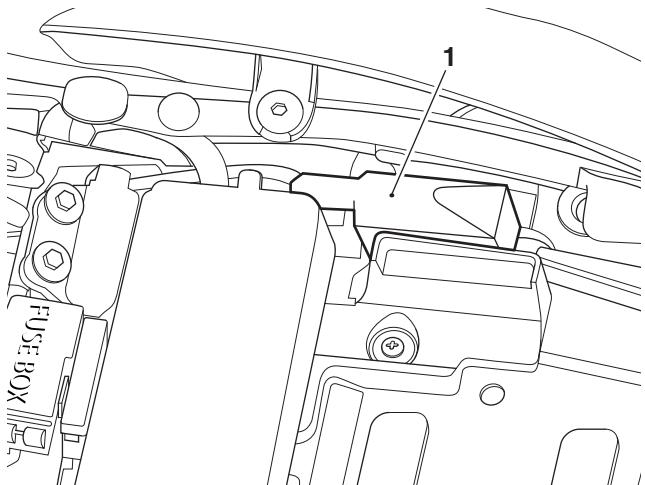
The software is connected, via an interface cable, to the motorcycle using a dedicated diagnostic plug situated under the seat. By using a dedicated plug, no electrical connectors associated with the system are disturbed, reducing potential connector damage.

The software allows the user to retrieve data associated with the system sensors and actuators, test various component functions, read build data and make minor adjustments to the set-up of the system. The data and tests available are described on the following pages.

Diagnostic Tool Connection

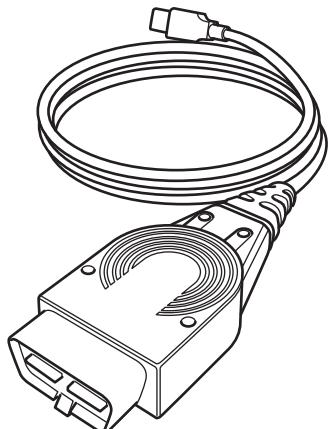
To connect the T3880057 - Triumph Diagnostic Interface to the motorcycle:

1. Remove the seat (see page 16-22 for Daytona 675, Daytona 675 R and Street Triple Rx, see page 16-23 for Street Triple, Street Triple 660 cc and Street Triple R).
2. Release the diagnostic connector from its locating tang.



1. Diagnostic connector (Street Triple shown)

3. Plug the diagnostic interface directly into the diagnostic connector.



Diagnostic Interface

4. When the diagnostic session is completed, disconnect the T3880057 - Triumph Diagnostic Interface.
5. Refit the diagnostic connector to its locating tang.
6. Refit the seat (see page 16-22 for Daytona 675, Daytona 675 R and Street Triple Rx, see page 16-24 for Street Triple, Street Triple 660 cc and Street Triple R).

Triumph Diagnostic Tool

Described on the following pages is the range of information which can be retrieved from the ECM's memory and the adjustments which can be performed using the Triumph diagnostic software.

The tables indicate which tests are performed by the on-board system and what information can be retrieved by the Triumph diagnostic software.

Note:

- Full details of how to operate the software can be found in the Triumph Diagnostic Tool User Guide, which can be downloaded by authorised Triumph dealers from www.triumphonline.net.

Build Data

The **Build Data** screen will display the following information:

Function Examined
ECM type
ECM ID number
Software version number

Current Data

The **Current Data** screen will display the following information:

Function Examined	Result Reported (Scale)
Front wheel speed	km/h
Rear wheel speed	km/h
Brake switch status	On/Off
ABS warning light status	On/Off

Bleed System

Using the Triumph diagnostic tool, it is possible to bleed the ABS modulator of trapped air. This is necessary when the hydraulic brake system has been dismantled, or the ABS modulator renewed.

Full details of this procedure are provided on page 14-62 for front brakes or page 14-66 for rear brakes.

Brakes

Diagnostic Trouble Codes

Diagnostic trouble codes (DTCs) are logged in the ABS control module memory when there is a confirmed fault in the system.

The codes are reported to the Triumph diagnostic tool as a four digit code.

DTCs can be removed at any time using the Triumph diagnostic tool.

The system will log the Diagnostic Trouble Codes listed below:

Diagnostic Trouble Code (DTC)	Fault Description	Pinpoint test page number
C1611	Front wheel sensor short circuit to ground or open circuit	14-94
C1612	Front Wheel Sensor Abnormal Input/Losing Contact	14-98
C1613	Rear Wheel Sensor Open Circuit/Short Circuit	14-96
C1614	Rear Wheel Sensor Abnormal Input/Losing Contact	14-99
C1621	Front Wheel Pulser Gear Missing Teeth	14-100
C1623	Rear Wheel Pulser Gear Missing Teeth	14-101
C1631	Front wheel input solenoid short circuit to ground or open circuit	14-102
C1632	Front wheel output solenoid short circuit to ground or open circuit	14-102
C1633	Rear wheel input solenoid short circuit to ground or open circuit	14-102
C1634	Rear wheel output solenoid short circuit to ground or open circuit	14-102
C1641	Front Wheel Actuator (Hydraulic Control) Wheel Lock	14-106
C1643	Rear Wheel Actuator (Hydraulic Control) Wheel Lock	14-106
C1651	Motor - Lock	14-107
C1654	Solenoid and Motor Relay - Stuck OFF/ON	14-104
C1661	Power Source Voltage Drop	14-108
C1662	Power Source Voltage Rise	14-108
C1671	Different Tyre Diameter	14-110
C1681	Abnormal ECM	14-111

Diagnostic Trouble Codes

Dependant on the DTC stored, the ABS control module will act in one of two ways:

- a) Inhibit ABS operation immediately, irrespective of the ABS operating mode
- or

- b) Allow the ABS operation to complete before inhibiting the ABS.

Once the ABS control module has inhibited ABS function, the ECM will act in one of three ways:

- a) Allow the ABS to resume operation if the fault clears
- or
- b) Allow ABS operation after an ignition cycle if the fault clears
- or
- c) Inhibit the ABS function until the fault is rectified and the DTC erased.

The ABS system will act on the DTC stored according to the tables on the following pages:

Fault Description	ABS warning light illuminated when fault is logged	ABS operation is inhibited when fault is logged	ABS continues to operate when fault is logged (Only when ABS is Active. When ABS is no longer active, operation is inhibited)	ABS will resume operation if fault clears
Front Wheel Sensor Open Circuit/Short Circuit	Yes	Yes		No
Front Wheel Sensor Abnormal Input/Losing Contact	Yes	Yes	Yes	Yes, if after ignition cycle, no fault is detected. DTC remains stored
Rear Wheel Sensor Open Circuit/Short Circuit	Yes	Yes		No
Rear Wheel Sensor Abnormal Input/Losing Contact	Yes	Yes	Yes	Yes, if after ignition cycle, no fault is detected. DTC remains stored
Front Wheel Pulser Gear Missing Teeth	Yes		Yes	Yes, if after ignition cycle, no fault is detected for 1 second and speed exceeds 30 km/h. DTC remains stored
Rear Wheel Pulser Gear Missing Teeth	Yes		Yes	Yes, if after ignition cycle, no fault is detected for 1 second and speed exceeds 30 km/h. DTC remains stored
Front Wheel Input Solenoid Open/Short Circuit	Yes	Yes		No
Front Wheel Output Solenoid Open/Short Circuit	Yes		Yes	No
Rear Wheel Input Solenoid Open/Short Circuit	Yes	Yes		No

Brakes

Fault Description	ABS warning light illuminated when fault is logged	ABS operation is inhibited when fault is logged	ABS continues to operate when fault is logged (Only when ABS is Active. When ABS is no longer active, operation is inhibited)	ABS will resume operation if fault clears
Rear Wheel Output Solenoid Open/Short Circuit	Yes		Yes	No
Front Wheel Actuator (Hydraulic Control) Wheel Lock	Yes		Yes	Yes, if after ignition cycle, no fault is detected. DTC remains stored
Rear Wheel Actuator (Hydraulic Control) Wheel Lock	Yes		Yes	Yes, if after ignition cycle, no fault is detected. DTC remains stored
Motor - Lock	Yes		Yes	No
Solenoid and motor Relay - Stuck OFF/ON	Yes	Yes		No
Power Source Voltage Drop	Yes, Light will extinguish if fault clears	Yes		Yes, if Voltage rises above a preset threshold for more than 10 seconds
Power Source Voltage Rise	Yes, Light will extinguish if fault clears	Yes		Yes, if Voltage drops below a preset threshold for more than 10 seconds
Different Tyre Diameter	Yes	Yes		No
Abnormal ABS control module	Yes	Yes		No

Electrical Connectors

Before beginning any diagnosis, the following connector related information should be noted:

Note:

- A major cause of hidden electrical faults can be traced to faulty electrical connectors.

For example:

- Dirty/corroded terminals
- Damp terminals
- Broken or bent cable pins within multiplugs.

For example, the ABS electronic control modulator (ABS control module) relies on the supply of accurate information to enable it to monitor and control the brake system. One dirty terminal will cause an excessive Voltage drop resulting in an incorrect signal to the ECM.

If, when carrying out fault diagnosis, a fault appears to clear by simply disconnecting and reconnecting an electrical plug, examine each disconnected plug for the following.

Before Disconnection:

- If testing with a Voltmeter, the Voltage across a connector should be virtually battery Volts (unless a resistor is fitted in the circuit). If there is a noticeable change, suspect faulty/dirty connections.

When Disconnecting a Connector:

- Check for a security device that must be released before the connector can be separated, e.g. barb, hook and eye etc.

When Inspecting a Connector:

- Check that the individual pins have not been bent.
- Check for dampness/dirt/corrosion.
- Check cables for security.
- Check cable pin joints for damage.

When Connecting a Connector:

- Ensure there is no dirt around the connector/seal.
- Push together squarely to ensure terminals are not bent or incorrectly located.
- Push the two halves together positively.

Disconnection of ABS control module Connector

Caution

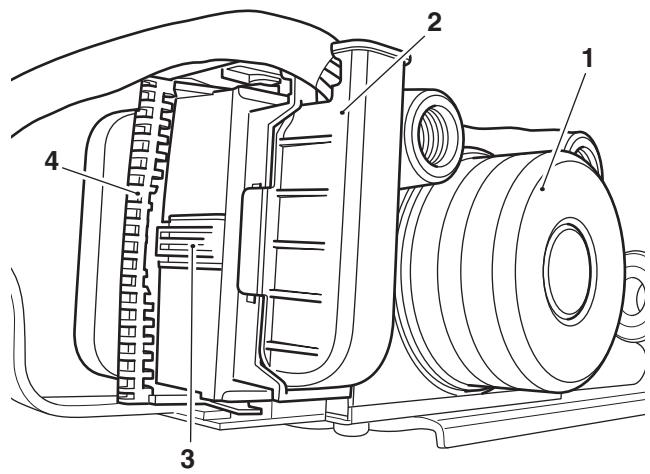
When disconnecting a connector, never pull directly on the wires as this may result in cable and connector damage.

Caution

Never disconnect the ABS control module when the ignition switch is in the ON position as this may cause multiple fault codes to be logged in the ECM memory.

Always disconnect an ECM after disconnecting the battery negative (black) lead first.

1. Press the locking device and move the lever to the rear of the connector while disconnecting it from the ABS control module.
2. When disconnected, ensure the lever is fully to the rear of the connector. An audible click can be heard when it is locked in position.



1. ABS modulator, shown removed for clarity

2. Connector

3. Locking device

4. Lever

Note:

- The ABS control module is an integral part of the ABS modulator. Under no circumstances should the ECM be removed from the ABS modulator. If a new ECM is required, repair is by replacement of the ABS modulator and ECM as an assembly only.

Brakes

Reconnection of ABS control module Connector



Caution

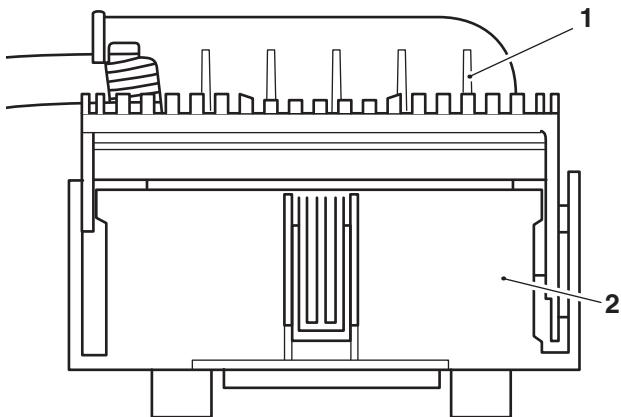
Damage to the connector pins may result if an attempt to fit the connectors incorrectly is made.



Caution

If the lever is not fully over to the rear position, it is possible that the connector may not fully engage into its socket.

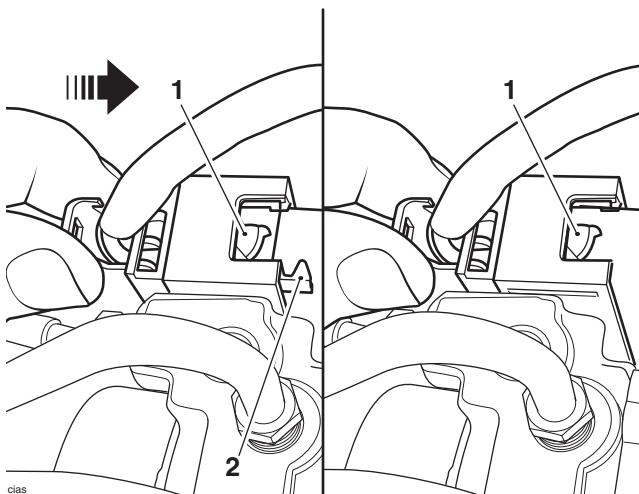
1. Ensure the lever on the connector is fully over to the unlocked position, as shown below.



ciar

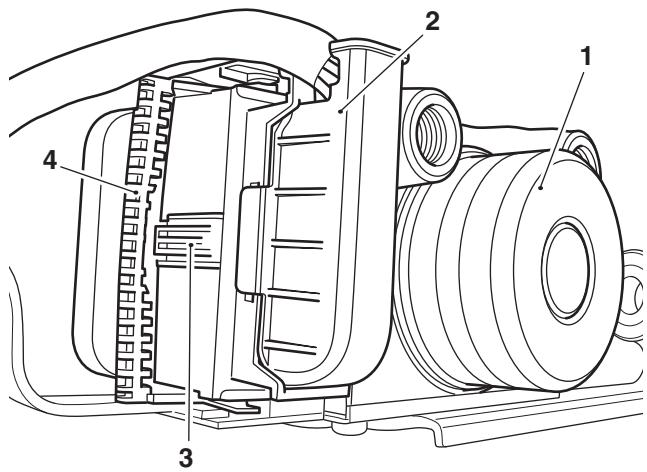
1. Lever
2. Connector

2. Align the connector to its socket on the ABS modulator such that the end of the lever aligns with lug on the socket.



1. Lever end
2. Lug

3. Release the lever by pushing it towards the front of the connector. At the same time, push the connector into its socket until the lever is fully forward and locked in position. An audible click can be heard when locked.



1. ABS modulator, shown removed for clarity
2. Connector
3. Locking device
4. Lever

Further Diagnosis

The tables that follow will, if used correctly, help to pinpoint a fault in the system once a Diagnostic Trouble Code has been stored.

Pinpoint Tests

Before Starting Pinpoint Tests

1. Delete the stored DTCs.
2. Switch the ignition OFF and ON.



Warning

If the ABS is not functioning, the brake system will continue to function as a non-ABS braking system. Do not continue to ride for longer than is necessary with the indicator light illuminated. Ride with extreme caution when performing diagnostic troubleshooting on a non-functioning ABS system. In this situation braking too hard will cause the wheels to lock resulting in loss of motorcycle control and an accident.

After Completion of the Pinpoint Tests

1. Delete the stored DTCs.
2. Switch the ignition OFF and ON.
3. Ride the motorcycle at a road speed in excess of 30 km/h. If the DTC is repeated proceed to the relevant pinpoint test.
4. If a DTC is stored there is a further fault. Read the stored DTC and refer to the relevant pinpoint test.

3. Ride the motorcycle at a road speed in excess of 30 km/h. If the DTC is repeated proceed to the relevant pinpoint test.
4. If the DTC is not repeated this indicates the DTC may have been stored due to external influences such as bad road surfaces or electrical interference.

Brakes

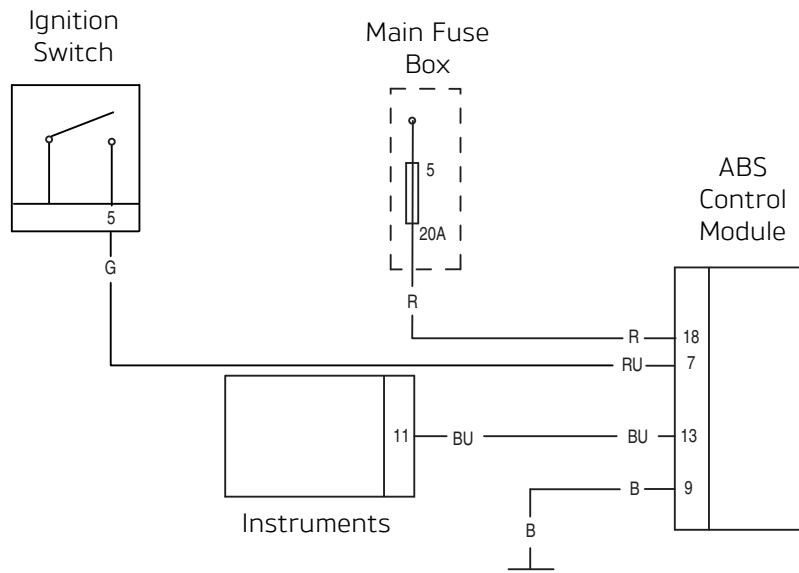
ABS Warning Light ON (No DTCs Stored)

Fault Code	Possible cause	Action
ABS Warning Light ON (No DTC's Stored)	ABS Ignition supply fuse/circuit fault ABS Warning light circuit fault	Ensure ABS control module connector is secure. Disconnect ABS control module connector and proceed to pinpoint test 1:

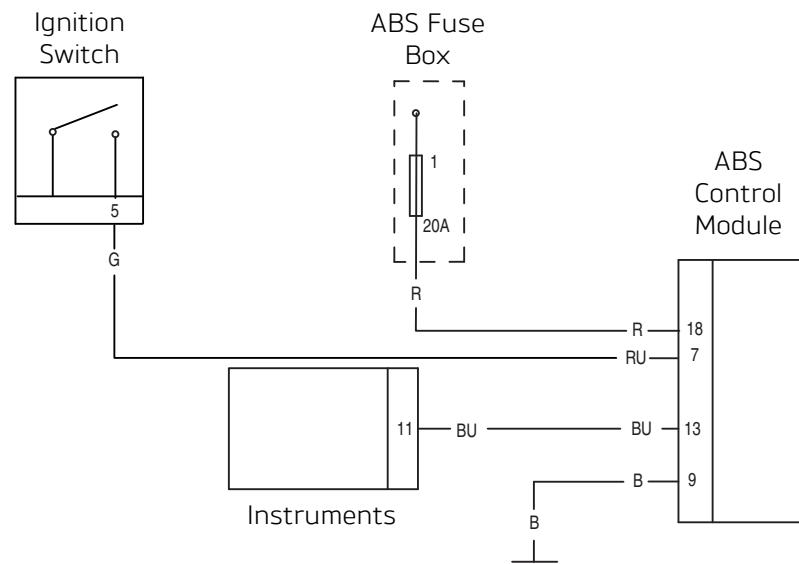
Pinpoint Tests

Test	Result	Action
1 Check cable and terminal integrity: - ABS control module connector pin 7 and ground pin 9	OK	Proceed to test 2
	Faulty	Rectify fault, proceed to test 5
2 Check cable continuity of the ABS ignition supply circuit: With Ignition ON, check Voltage between: - ABS control module connector pin 7 and ground	Same as 'across battery' Voltage	Proceed to test 3
	Less than 'across battery' Voltage	Locate and rectify wiring fault, proceed to test 5
3 Check cable continuity of the ABS warning light circuit Check Voltage between: - ABS control module connector pin 13 and ground	Voltage greater than 1.5 V	Proceed to test 4
	Voltage less than 1.5 V	Locate and rectify fault, proceed to test 5
4 Check cable continuity of the ABS warning light circuit Short ABS control module connector pin 13 and ground pin 9 together: Turn Ignition ON	ABS warning light OFF	Proceed to test 5
	ABS warning light ON	Locate and rectify fault, proceed to test 5
5 Reconnect ABS control module harness, clear fault code and test ABS to verify fault cleared	OK	Action complete - quit test
	Fault still present	Contact Triumph service

Circuit Diagram - Daytona 675 and Daytona 675 R



Circuit Diagram - Street Triple, Street Triple 660 cc, Street Triple R and Street Triple Rx



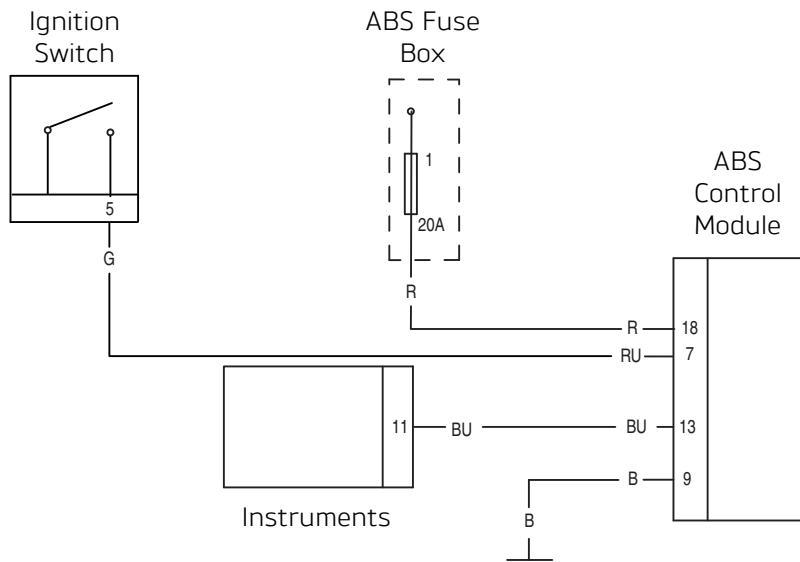
Brakes

ABS Warning Light Does Not Illuminate (No DTCs Stored) - Street Triple, Street Triple 660 cc, Street Triple R and Street Triple Rx

Fault Code	Possible cause	Action
ABS Warning Light OFF (No DTC's Stored)	Warning light circuit fault ABS control module ground circuit fault	Ensure ABS control module connector is secure. Ensure ABS control module ground connection is secure. Disconnect ABS control module connector and proceed to pinpoint test 1:

Pinpoint Tests

Test	Result	Action
1 Check cable and terminal integrity: - ABS control module connector pin 7 and ground	OK	Proceed to test 2
	Faulty	Rectify fault, proceed to test 6
2 Check the ABS warning light circuit fuse (ABS fuse box, fuse 1)	OK	Proceed to test 3
	Faulty	Replace fuse, proceed to test 6
3 Check cable for short to Voltage: With Ignition OFF, check Voltage between: - ABS control module connector pin 7 and ground	0 V	Proceed to test 4
	Above 3 V	Locate and rectify wiring fault, proceed to test 6
4 Check cable for short to ground: With ignition ON, check the ABS warning light circuit Voltage between: - ABS control module connector pin 13 and ground	Voltage greater than 1.5 V	Proceed to test 5
	Voltage less than 1.5 V	Locate and rectify fault, proceed to test 6
5 Check cable for continuity: ABS control module connector pin 9 and Ground Turn Ignition ON	OK	Proceed to test 6
	Faulty	Locate and rectify fault, proceed to test 6
6 Reconnect ABS control module harness, clear fault code and test ABS to verify fault cleared	OK	Action complete - quit test
	Fault still present	Contact Triumph service

Circuit Diagram

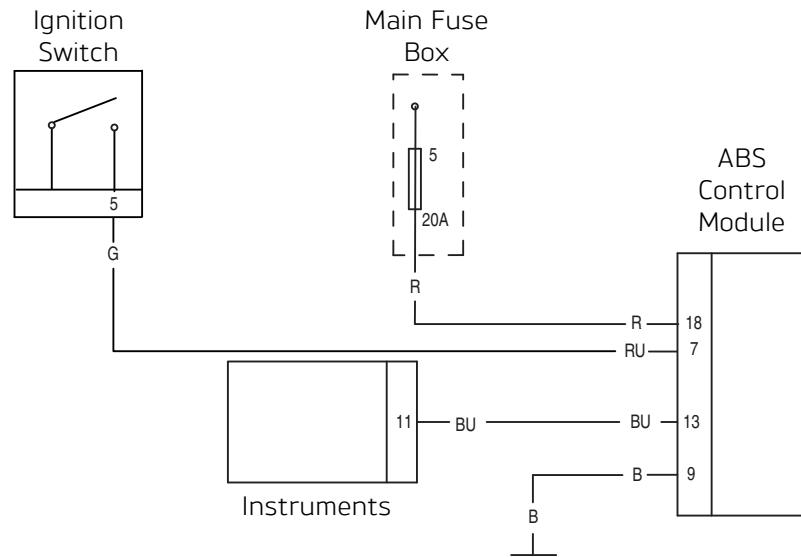
Brakes

ABS Warning Light Does Not Illuminate (No DTCs Stored) - Daytona 675 and Daytona 675 R

Fault Code	Possible cause	Action
ABS Warning Light OFF (No DTC's Stored)	Warning light circuit fault ABS control module ground circuit fault	Ensure ABS control module connector is secure. Ensure ABS control module ground connection is secure. Disconnect ABS control module connector and proceed to pinpoint test 1:

Pinpoint Tests

Test	Result	Action
1 Check cable and terminal integrity: - ABS control module connector pin 7 and ground	OK	Proceed to test 2
	Faulty	Rectify fault, proceed to test 6
2 Check the ABS warning light circuit fuse (main fuse box, fuse 5)	OK	Proceed to test 3
	Faulty	Replace fuse, proceed to test 6
3 Check cable for short to Voltage: With Ignition OFF, check Voltage between: - ABS control module connector pin 7 and ground	0 V	Proceed to test 4
	Above 3 V	Locate and rectify wiring fault, proceed to test 6
4 Check cable for short to ground: With ignition ON, check the ABS warning light circuit Voltage between: - ABS control module connector pin 13 and ground	Voltage greater than 1.5 V	Proceed to test 5
	Voltage less than 1.5 V	Locate and rectify fault, proceed to test 6
5 Check cable for continuity: ABS control module connector pin 9 and Ground: Turn Ignition ON	OK	Proceed to test 6
	Faulty	Locate and rectify fault, proceed to test 6
6 Reconnect ABS control module harness, clear fault code and test ABS to verify fault cleared	OK	Action complete - quit test
	Fault still present	Contact Triumph service

Circuit Diagram

Brakes

Front Wheel Sensor Open Circuit/Short Circuit

Fault Code	Possible cause	Action
C1611	Front wheel sensor short circuit to ground or open circuit	Ensure ABS control module connector is secure. Ensure wheel speed sensor connector is secure. Disconnect ABS control module connector and proceed to pinpoint test 1:

Pinpoint Tests

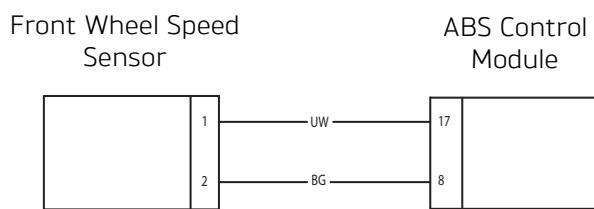
Test	Result	Action
1 Check cable and terminal integrity: - ABS control module connector pin 17 and ABS control module connector pin 8	OK	Proceed to test 2
	Faulty	Rectify fault, proceed to test 9
2 Check cable for short circuit: - ABS control module connector pin 8 and ground	OK	Proceed to test 4
	Short circuit	Proceed to test 3
3 Disconnect the front wheel speed sensor connector. Check cable for short circuit: - Wheel speed sensor connector pin 2 (motorcycle harness side) and ground	OK	Replace the wheel speed sensor, proceed to test 9
	Short circuit	Locate and rectify wiring harness fault, proceed to test 9
4 Check cable for short circuit: - ABS control module connector pin 17 and ground	OK	Proceed to test 6
	Short circuit	Proceed to test 5
5 Check cable for short circuit: - Wheel speed sensor connector pin 1 (motorcycle harness side) and ground	OK	Replace the wheel speed sensor, proceed to test 9
	Short circuit	Locate and rectify wiring harness fault, proceed to test 9
6 Check cable continuity: - ABS control module connector pin 8 and Wheel speed sensor connector pin 2 (motorcycle harness side)	OK	Proceed to test 7
	Open circuit	Locate and rectify wiring harness fault, proceed to test 9
7 Check cable continuity: - ABS control module connector pin 17 and Wheel speed sensor connector pin 1 (motorcycle harness side)	OK	Proceed to test 8
	Open circuit	Locate and rectify wiring harness fault, proceed to test 9
8 Reconnect the front wheel speed sensor connector. Check the wheel speed sensor operation: - Connect a suitable Voltage supply between 4.5 V and 16 V between ABS control module connector pin 8 (positive) and pin 17 (negative), and measure the current consumption of the wheel speed sensor	3 mA to 14 mA	Proceed to test 9
	Faulty	Replace the wheel speed sensor, proceed to test 9

Test	Result	Action
9 Reconnect ABS control module harness, clear fault code and test ABS to verify fault cleared	OK	Action complete - quit test
	Fault still present	Contact Triumph service

Circuit Diagram

Wheel speed sensor current consumption data under typical conditions:

Voltage	Min	Typical	Max
Low (4.5 V)	1.8 mA	2.4 mA	3.0 mA
High (16 V)	5.4 mA	7.2 mA	14.2 mA



Brakes

Rear Wheel Sensor Open Circuit/Short Circuit

Fault Code	Possible cause	Action
C1613	Rear wheel sensor short circuit to ground or open circuit	Ensure ABS control module connector is secure. Ensure wheel speed sensor connector is secure. Disconnect ABS control module connector and proceed to pinpoint test 1:

Pinpoint Tests

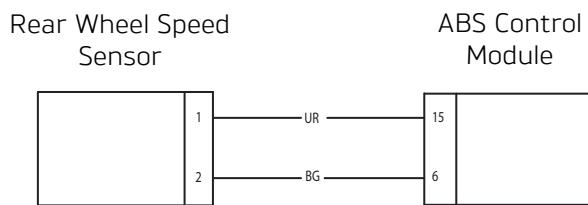
Test	Result	Action
1 Check cable and terminal integrity: - ABS control module connector pin 6 and ABS control module connector pin 15	OK	Proceed to test 2
	Faulty	Rectify fault, proceed to test 9
2 Check cable for short circuit: - ABS control module connector pin 6 and ground	OK	Proceed to test 4
	Short circuit	Proceed to test 3
3 Disconnect the rear wheel speed sensor connector. Check cable for short circuit: - Wheel speed sensor connector pin 6 (motorcycle harness side) and ground	OK	Replace the wheel speed sensor, proceed to test 9
	Short circuit	Locate and rectify wiring harness fault, proceed to test 9
4 Check cable for short circuit: - ABS control module connector pin 15 and ground	OK	Proceed to test 6
	Short circuit	Proceed to test 5
5 Check cable for short circuit: - Wheel speed sensor connector pin 1 (motorcycle harness side) and ground	OK	Replace the wheel speed sensor, proceed to test 9
	Short circuit	Locate and rectify wiring harness fault, proceed to test 9
6 Check cable continuity: - ABS control module connector pin 6 and Wheel speed sensor connector pin 2 (motorcycle harness side)	OK	Proceed to test 7
	Open circuit	Locate and rectify wiring harness fault, proceed to test 9
7 Check cable continuity: - ABS control module connector pin 15 and Wheel speed sensor connector pin 1 (motorcycle harness side)	OK	Proceed to test 8
	Open circuit	Locate and rectify wiring harness fault, proceed to test 9
8 Reconnect the rear wheel speed sensor connector. Check the wheel speed sensor operation: - Connect a suitable Voltage supply between 4.5 V and 16 V between ABS control module connector pin 6 (positive) and pin 15 (negative), and measure the current consumption of the wheel speed sensor	3 mA to 14 mA	Proceed to test 9
	Faulty	Replace the wheel speed sensor, proceed to test 9

Test	Result	Action
9 Reconnect ABS control module harness, clear fault code and test ABS to verify fault cleared	OK	Action complete - quit test
	Fault still present	Contact Triumph service

Circuit Diagram

Wheel speed sensor current consumption data under typical conditions:

Voltage	Min	Typical	Max
Low (4.5 V)	1.8 mA	2.4 mA	3.0 mA
High (16 V)	5.4 mA	7.2 mA	14.2 mA



Brakes

Front Wheel Sensor Abnormal Input/losing Contact

Fault Code	Possible cause	Action
C1612	Front wheel speed sensor poor signal Incorrect wheel speed sensor air gap Damaged or dirty pulser ring Loose or incorrectly installed wheel speed sensor	Ensure ABS control module connector is secure. Ensure wheel speed sensor connector is secure. Proceed to pinpoint test 1:

Pinpoint Tests

Test	Result	Action
1 Measure the air gap of the front wheel speed sensor between the sensor and the pulser ring: - Air gap between 0.4 mm to 1.2 mm	OK	Proceed to test 2
	Faulty	Rectify the fault and proceed to test 5
2 Check the pulser ring for damage or contamination by road grime or ferrous metal filings	OK	Proceed to test 3
	Faulty	Clean or replace the ABS pulser ring, proceed to test 5
3 Check the wheel speed sensors for correct installation, and the fixings for correct torque	OK	Proceed to test 4
	Faulty	Rectify the fault and proceed to test 5
4 Check the wheel speed sensor circuit (see page 14-94)	OK	Contact Triumph service
	Faulty	Rectify the fault and proceed to test 5
5 Clear fault code and test ABS to verify fault cleared	OK	Action complete - quit test
	Fault still present	Contact Triumph service

Rear Wheel Sensor Abnormal Input/Losing Contact

Fault Code	Possible cause	Action
C1614	Rear wheel speed sensor poor signal Incorrect wheel speed sensor air gap Damaged or dirty pulser ring Loose or incorrectly installed wheel speed sensor	Ensure ABS control module connector is secure. Proceed to pinpoint test 1:

Pinpoint Tests

Test	Result	Action
1 Measure the air gap of the rear wheel speed sensor between the sensor and the pulser ring: - Air gap between 0.4 mm to 1.2 mm	OK	Proceed to test 2
	Faulty	Rectify the fault and proceed to test 5
2 Check the pulser ring for damage or contamination by road grime or ferrous metal filings	OK	Proceed to test 3
	Faulty	Clean or replace the ABS pulser ring, proceed to test 5
3 Check the wheel speed sensors for correct installation, and the fixings for correct torque:	OK	Proceed to test 4
	Faulty	Rectify the fault and proceed to test 5
4 Check the wheel speed sensor circuit (see page 14-96)	OK	Contact Triumph service
	Faulty	Rectify the fault and proceed to test 5
5 Clear fault code and test ABS to verify fault cleared	OK	Action complete - quit test
	Fault still present	Contact Triumph service

Brakes

Front Wheel Pulser Gear Missing Teeth

Fault Code	Possible cause	Action
C1621	Incorrect wheel speed sensor air gap Damaged or dirty pulser ring Loose or incorrectly installed wheel speed sensor Damaged/incorrect wheels	Ensure ABS control module connector is secure. Proceed to pinpoint test 1:

Pinpoint Tests

Test	Result	Action
1 Measure the air gap of the front wheel speed sensor between the sensor and the pulser ring: - Air gap between 0.4 mm to 1.2 mm	OK	Proceed to test 2
	Faulty	Rectify the fault and proceed to test 5
2 Check the pulser ring for damage or contamination by road grime or ferrous metal filings	OK	Proceed to test 3
	Faulty	Clean or replace the ABS pulser ring, proceed to test 5
3 Check the wheel speed sensors for correct installation, and the fixings for correct torque:	OK	Proceed to test 4
	Faulty	Rectify the fault and proceed to test 5
4 Check the motorcycle wheel for damage/incorrect size	OK	Proceed to test 4
	Faulty	Rectify the fault and proceed to test 5
5 Clear fault code and test ABS to verify fault cleared	OK	Action complete - quit test
	Fault still present	Contact Triumph service

Rear Wheel Pulser Gear Missing Teeth

Fault Code	Possible cause	Action
C1623	Incorrect wheel speed sensor air gap Damaged or dirty pulser ring Loose or incorrectly installed wheel speed sensor Damaged/incorrect wheels	Ensure ABS control module connector is secure. Proceed to pinpoint test 1:

Pinpoint Tests

Test	Result	Action
1 Measure the air gap of the rear wheel speed sensor between the sensor and the pulser ring: - Air gap between 0.4 mm to 1.2 mm	OK	Proceed to test 2
	Faulty	Rectify the fault and proceed to test 5
2 Check the pulser ring for damage or contamination by road grime or ferrous metal filings	OK	Proceed to test 3
	Faulty	Clean or replace the ABS pulser ring, proceed to test 5
3 Check the wheel speed sensors for correct installation, and the fixings for correct torque:	OK	Proceed to test 4
	Faulty	Rectify the fault and proceed to test 5
4 Check the motorcycle wheel for damage/incorrect size	OK	Proceed to test 4
	Faulty	Rectify the fault and proceed to test 5
5 Clear fault code and test ABS to verify fault cleared.	OK	Action complete - quit test
	Fault still present	Contact Triumph service

Brakes

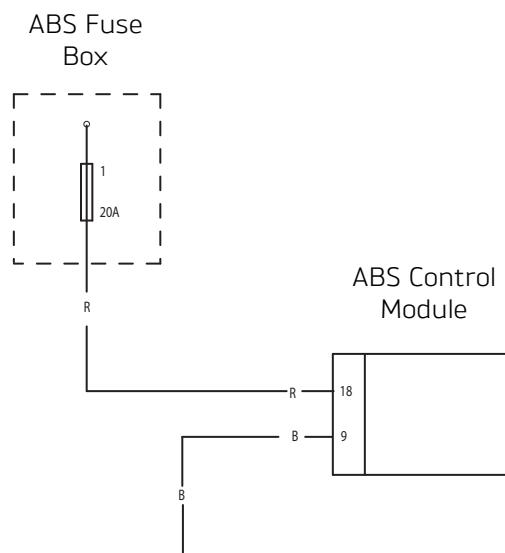
Front or Rear Input/Output Solenoid Open/Short Circuit - Street Triple, Street Triple 660 cc, Street Triple R and Street Triple Rx

Fault Code	Possible cause	Action
Front: C1631; C1632 Rear: C1633; C1634	ABS solenoid circuit fault	Ensure ABS control module connector is secure. Disconnect ABS control module connector and proceed to pinpoint test 1:

Pinpoint Tests

Test	Result	Action
1 Check cable and terminal integrity: - ABS control module connector pin 18 and ground	OK	Proceed to test 2
	Faulty	Rectify fault, proceed to test 5
2 Check the ABS solenoid fuse (ABS fuse box, fuse 1)	OK	Proceed to test 3
	Faulty	Replace fuse, proceed to test 5
3 Check cable continuity: With Ignition ON, check Voltage between: - ABS control module connector pin 18 and ground	Same as across battery Voltage	Proceed to test 4
	Less than across battery Voltage	Locate and rectify wiring fault, proceed to test 5
4 Check cable for continuity: - ABS control module connector pin 9 and ground	OK	Proceed to test 5
	Faulty	Locate and rectify fault, proceed to test 5
5 Clear fault code and test ABS to verify fault cleared	OK	Action complete - quit test
	Fault still present	Contact Triumph service

Circuit Diagram



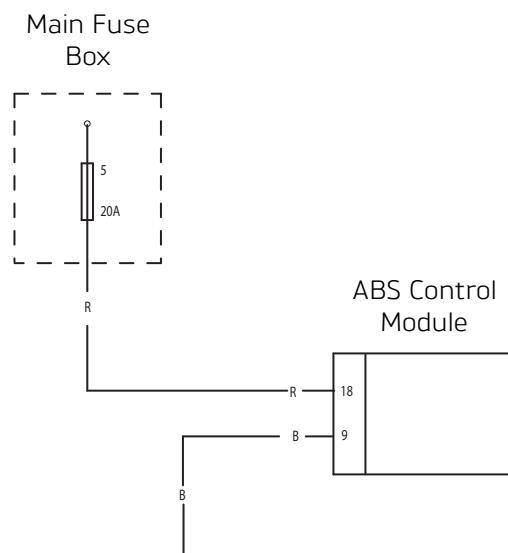
Front or Rear Input/Output Solenoid Open/Short Circuit - Daytona 675 and Daytona 675 R

Fault Code	Possible cause	Action
Front: C1631; C1632 Rear: C1633; C1634	ABS solenoid circuit fault	Ensure ABS control module connector is secure. Disconnect ABS control module connector and proceed to pinpoint test 1:

Pinpoint Tests

Test	Result	Action
1 Check cable and terminal integrity: - ABS control module connector pin 18 and ground	OK	Proceed to test 2
	Faulty	Rectify fault, proceed to test 5
2 Check the ABS solenoid fuse (main fuse box, fuse 5)	OK	Proceed to test 3
	Faulty	Replace fuse, proceed to test 5
3 Check cable continuity: With Ignition ON, check Voltage between: - ABS control module connector pin 18 and ground	Same as across battery Voltage	Proceed to test 4
	Less than across battery Voltage	Locate and rectify wiring fault, proceed to test 5
4 Check cable for continuity: - ABS control module connector pin 9 and ground	OK	Proceed to test 5
	Faulty	Locate and rectify fault, proceed to test 5
5 Clear fault code and test ABS to verify fault cleared	OK	Action complete - quit test
	Fault still present	Contact Triumph service

Circuit Diagram



Brakes

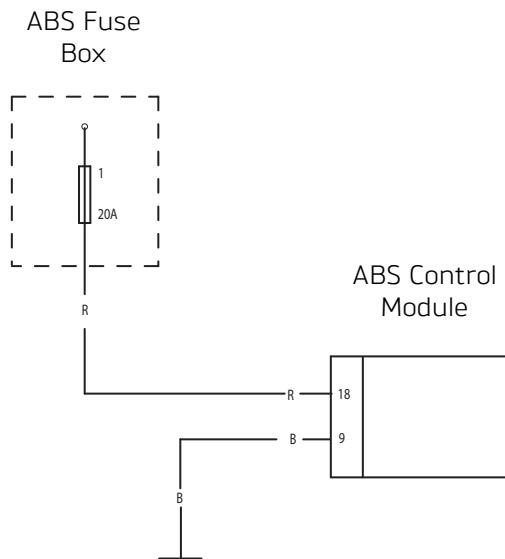
Solenoid and Motor Relay - Stuck ON/OFF Circuit - Street Triple, Street Triple 660 cc, Street Triple R and Street Triple Rx

Fault Code	Possible cause	Action
C1654	Motor runs continually	Contact Triumph Service
	Motor does not run at all	Disconnect ABS control module connector and proceed to pinpoint test 1:

Pinpoint Tests

Test	Result	Action
1 Check cable and terminal integrity: - ABS control module connector pin 18 and ground	OK	Proceed to test 2
	Faulty	Rectify fault, proceed to test 5
2 Check the ABS solenoid fuse (ABS fuse box fuse 1)	OK	Proceed to test 3
	Faulty	Replace fuse, proceed to test 5
3 Check cable continuity: With Ignition ON, check Voltage between: - ABS control module connector pin 18 and ground	Same as across battery Voltage	Proceed to test 4
	Less than across battery Voltage	Locate and rectify wiring fault, proceed to test 5
4 Check cable for continuity: - ABS control module connector pin 9 and ground	OK	Proceed to test 5
	Faulty	Locate and rectify fault, proceed to test 5
5 Clear fault code and test ABS to verify fault cleared	OK	Action complete - quit test
	Fault still present	Contact Triumph service

Circuit Diagram



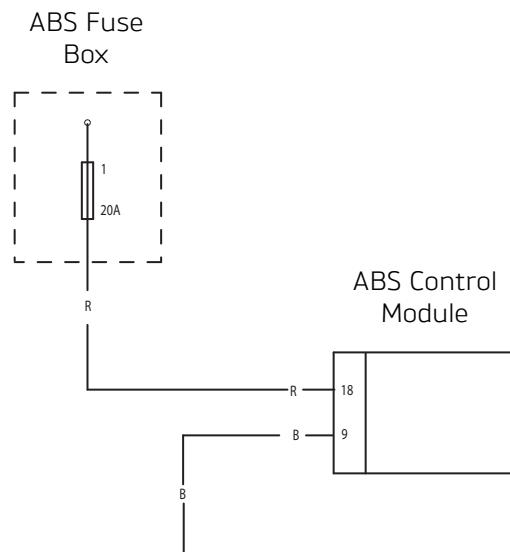
Solenoid and Motor Relay - Stuck ON/OFF Circuit - Daytona 675 and Daytona 675 R

Fault Code	Possible cause	Action
C1654	Motor runs continually	Contact Triumph Service
	Motor does not run at all	Disconnect ABS control module connector and proceed to pinpoint test 1:

Pinpoint Tests

Test	Result	Action
1 Check cable and terminal integrity: - ABS control module connector pin 18 and ground	OK	Proceed to test 2
	Faulty	Rectify fault, proceed to test 5
2 Check the ABS solenoid fuse (ABS fuse box fuse 1)	OK	Proceed to test 3
	Faulty	Replace fuse, proceed to test 5
3 Check cable continuity: With Ignition ON, check Voltage between: - ABS control module connector pin 18 and ground	Same as across battery Voltage	Proceed to test 4
	Less than across battery Voltage	Locate and rectify wiring fault, proceed to test 5
4 Check cable for continuity: - ABS control module connector pin 9 and ground	OK	Proceed to test 5
	Faulty	Locate and rectify fault, proceed to test 5
5 Clear fault code and test ABS to verify fault cleared	OK	Action complete - quit test
	Fault still present	Contact Triumph service

Circuit Diagram



Brakes

Front or Rear Wheel Actuator (Hydraulic Control) Wheel Lock

Fault Code	Possible cause	Action
C1641; C1643	Binding brake Incorrect Wheel speed sensor air gap Loose or incorrectly installed wheel speed sensor	Ensure ABS control module connector is secure. Proceed to pinpoint test 1:

Pinpoint Tests

Test	Result	Action
1 Check the relevant wheel for brake bind caused by caliper or master cylinder faults, or other mechanical causes	OK	Proceed to test 2
	Faulty	Rectify the fault and proceed to test 4
2 Measure the air gap of the wheel speed sensor between the sensor and the pulser ring: - Air gap between 0.4 mm to 1.2 mm	OK	Proceed to test 3
	Faulty	Rectify the fault and proceed to test 4
3 Check the wheel speed sensors for correct installation, and the fixings for correct torque	OK	Proceed to test 4
	Faulty	Rectify the fault and proceed to test 4
4 Clear fault code and test ABS to verify fault cleared	OK	Action complete - quit test
	Fault still present	Contact Triumph service

Motor - Lock; Motor Stuck OFF; Motor Stuck ON - All Models

Fault Code	Possible cause	Action
C1651	Motor circuit fault	Ensure ABS control module connector is secure. Proceed to pinpoint test 1:

Pinpoint Tests

Test	Result	Action
1 Clear fault code and test ABS to verify fault cleared	OK	Action complete - quit test
	Fault still present	Contact Triumph service

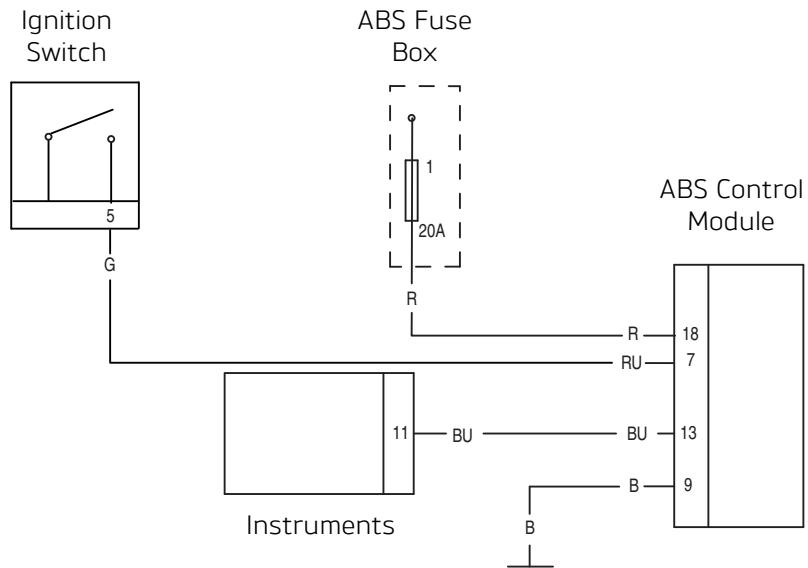
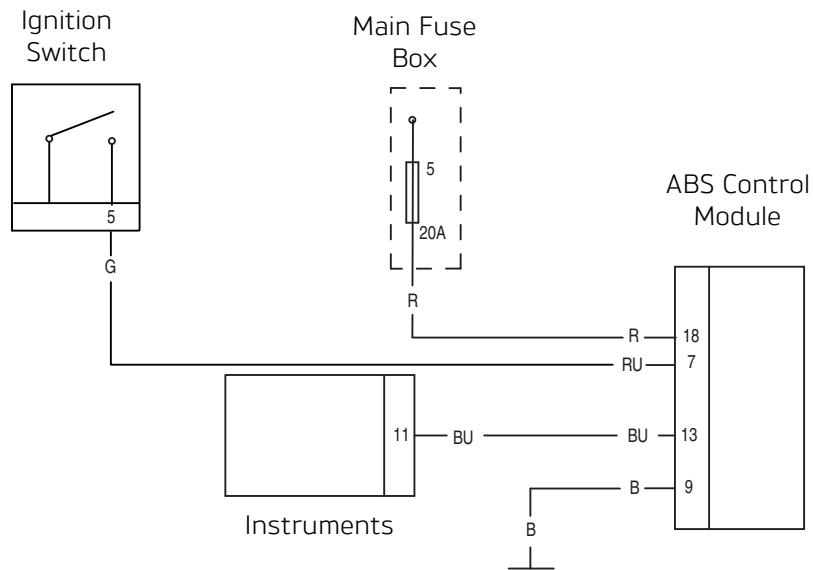
Brakes

Power Source Voltage Drop/Voltage Rise

Fault Code	Possible cause	Action
C1661; C1662	Power supply circuit fault Battery charging circuit fault	Ensure ABS control module connector is secure. Disconnect ABS control module connector and proceed to pinpoint test 1:

Pinpoint Tests

Test	Result	Action
1 Check battery Voltage: - Battery positive (red) terminal and negative (black) terminal	OK (Voltage between 10 V and 16 V)	Proceed to test 2
	Faulty	Check the battery charging circuit, locate and rectify the fault, proceed to test 6.
2 Check cable and terminal integrity: - ABS control module connector pin 7 and ground pin 9 - ABS control module connector pin 18 and ground pin 9	OK	Proceed to test 3
	Faulty	Rectify fault, proceed to test 6
3 Check the cable for continuity: - ABS control module connector pin 9 and ground	OK	Proceed to test 4
	Faulty	Rectify wiring harness fault, proceed to test 6
4 Check battery Voltage: With ignition ON, check the Voltage between: - ABS control module connector pin 7 and ground pin 9	OK (Voltage between 10 V and 16 V)	Proceed to test 5
	Faulty	Locate and rectify fault, proceed to test 6
5 Check battery Voltage: Check the Voltage between: - ABS control module connector pin 18 and ground pin 9	OK (Voltage between 10 V and 16 V)	Proceed to test 6
	Faulty	Check the battery charging circuit. Locate and rectify fault, proceed to test 6
6 Reconnect the ABS control module harness, clear fault code and test ABS to verify fault cleared	OK	Action complete - quit test
	Fault still present	Contact Triumph service

Circuit Diagram - Street Triple, Street Triple 660 cc, Street Triple R and Street Triple Rx**Circuit Diagram - Daytona 675 and Daytona 675 R**

Brakes

Different Tyre Diameter

Fault Code	Possible cause	Action
C1671	Incorrect diameter wheels installed Incorrect tyre pressures Incorrect wheel speed sensor air gap Damaged or dirty pulser ring	Ensure ABS control module connector is secure. Proceed to pinpoint test 1:

Pinpoint Tests

Test	Result	Action
1 Check for installation of wheels and tyres of the correct size	OK	Proceed to test 2
	Faulty	Rectify fault, proceed to test 5
2 Check the tyre pressures	OK	Proceed to test 3
	Faulty	Rectify fault, proceed to test 5
3 Check the pulser ring for damage or contamination by road grime or ferrous metal filings	OK	Proceed to test 4
	Faulty	Clean or replace the ABS pulser ring, proceed to test 5
4 Measure the air gap of the wheel speed sensor between the sensor and the pulser ring: - Air gap between 0.4 mm to 1.2 mm	OK	Proceed to test 5
	Faulty	Rectify the fault and proceed to test 5
5 Clear fault code and test ABS to verify fault cleared	OK	Action complete - quit test
	Fault still present	Contact Triumph service

Abnormal ABS Control Module

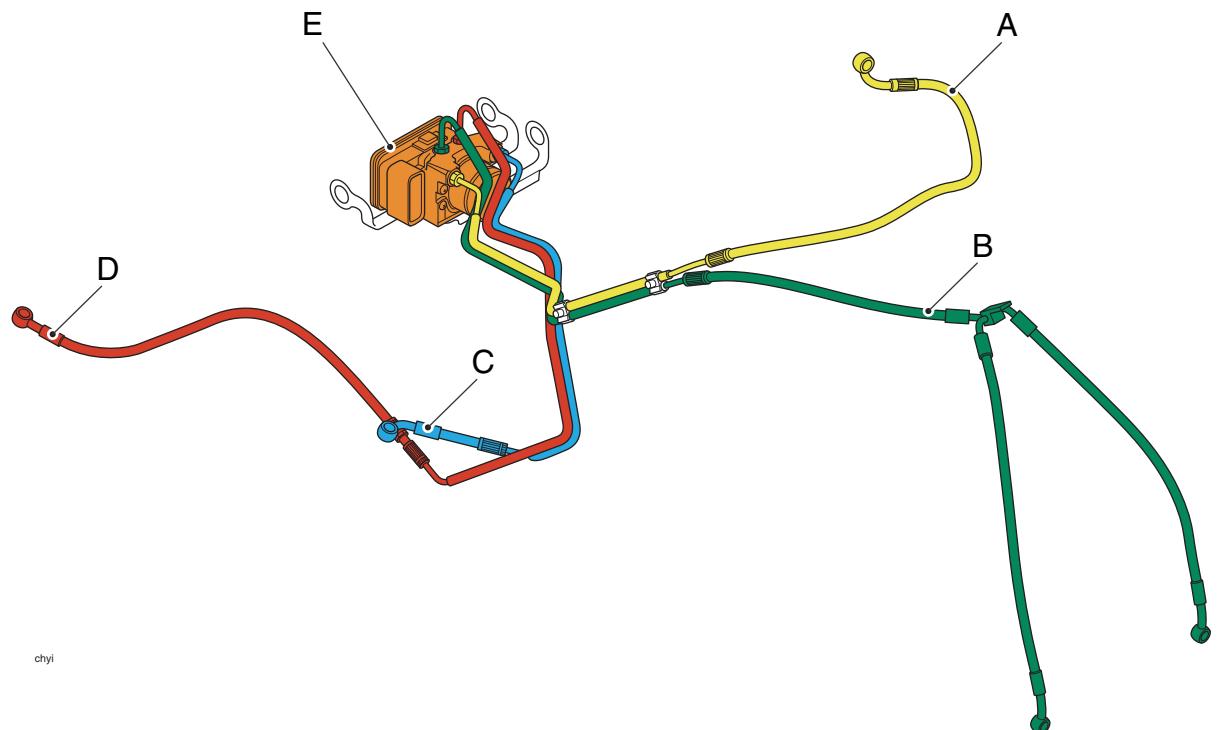
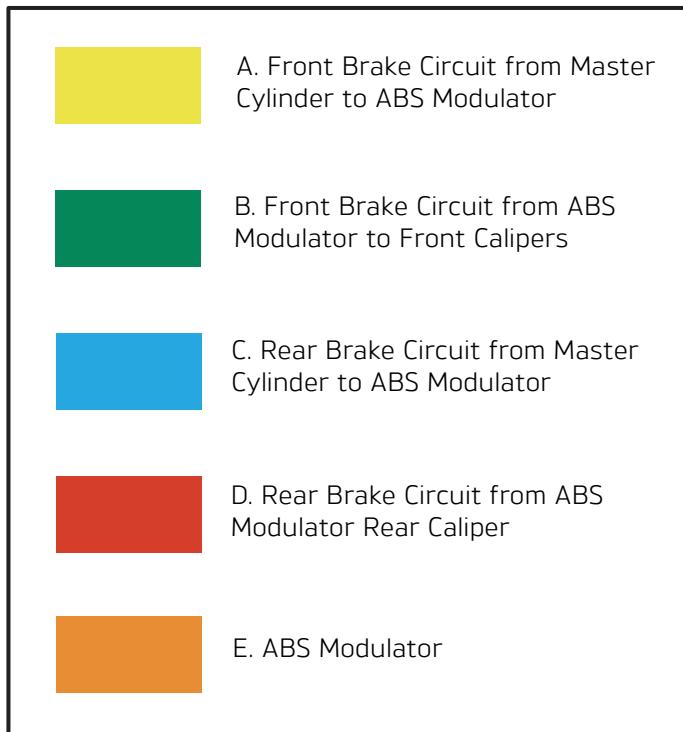
Fault Code	Possible cause	Action
C1681	Abnormal ABS control module Incorrect Wheel speed sensor air gap Damaged or dirty pulser ring Loose or incorrectly installed wheel speed sensor	Ensure ABS control module connector is secure. Proceed to pinpoint test 1:

Pinpoint Tests

Test	Result	Action
1 Measure the air gap of the wheel speed sensors between the sensor and the pulser ring: - Air gap between 0.4 mm to 1.2 mm	OK	Proceed to test 2
	Faulty	Rectify the fault and proceed to test 4
2 Check the pulser rings for damage or contamination by road grime or ferrous metal filings	OK	Proceed to test 3
	Faulty	Clean or replace the ABS pulser ring, proceed to test 4
3 Check the wheel speed sensors for correct installation, and the fixings for correct torque	OK	Proceed to test 4
	Faulty	Rectify the fault and proceed to test 4
4 Clear fault code and test ABS to verify fault cleared	OK	Action complete - quit test
	Fault still present	Contact Triumph service

Brakes

ABS Hydraulic Circuit Layout



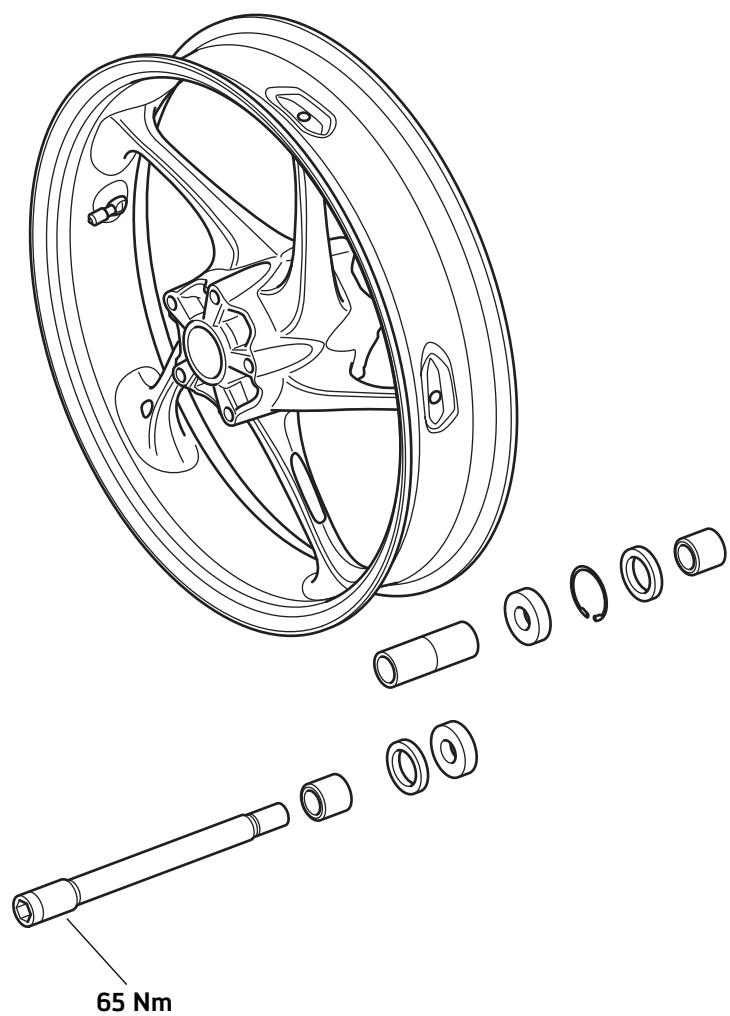
15 Wheels/Tyres

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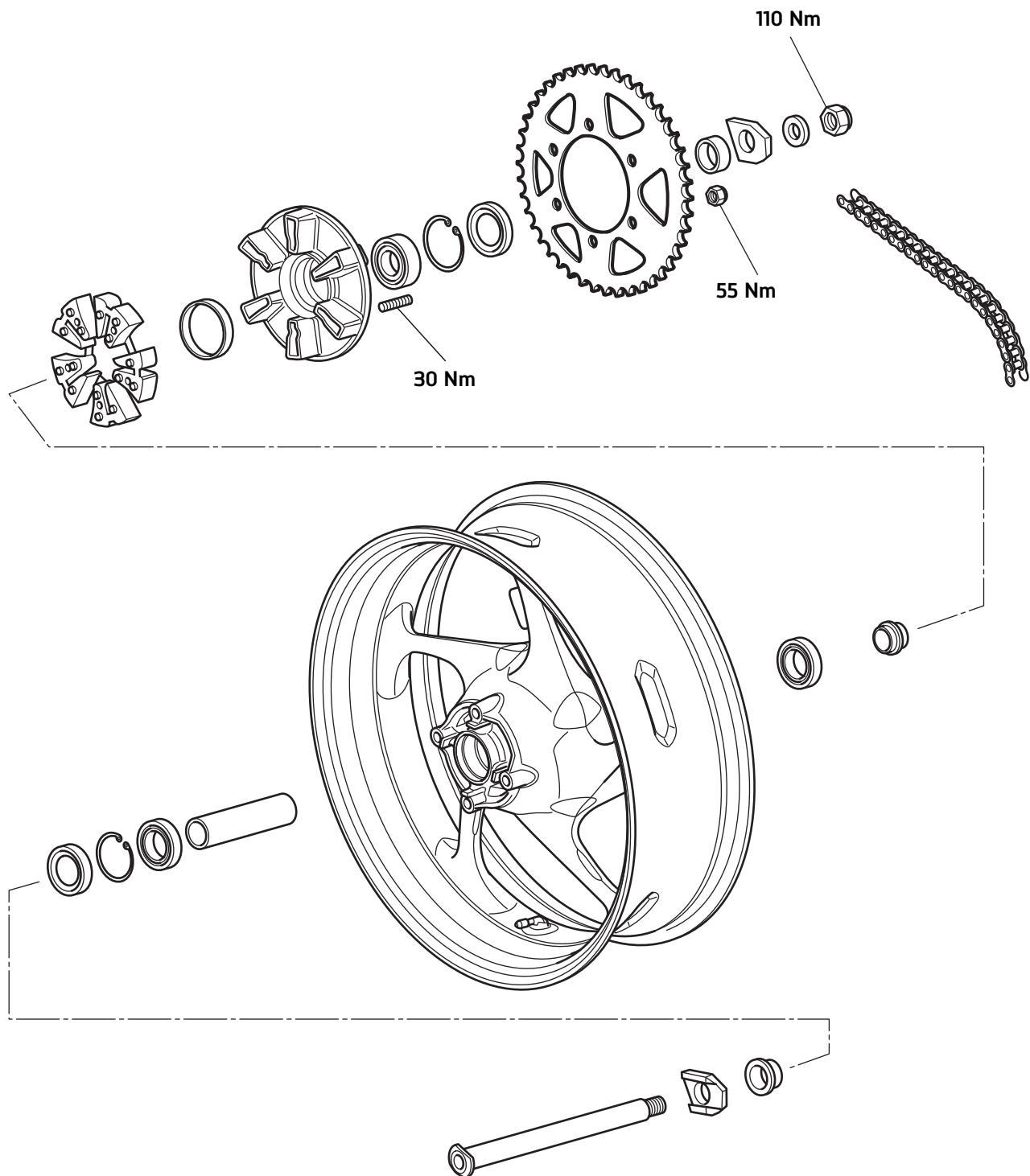
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Wheels/Tyres

Exploded view - Front Wheel



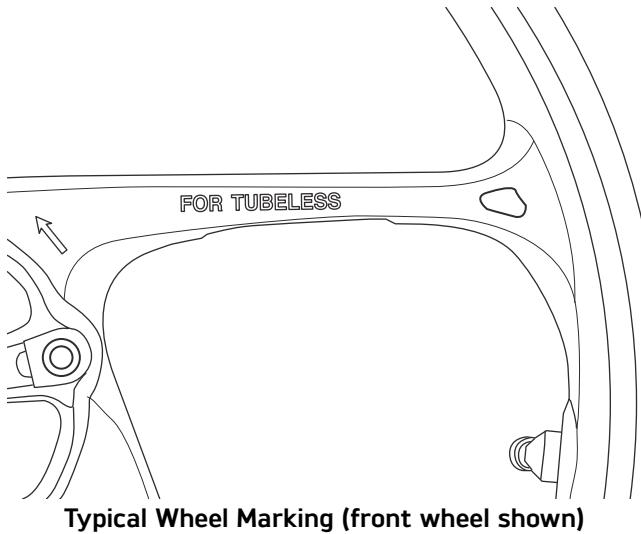
Exploded View - Rear Wheel and Final Drive



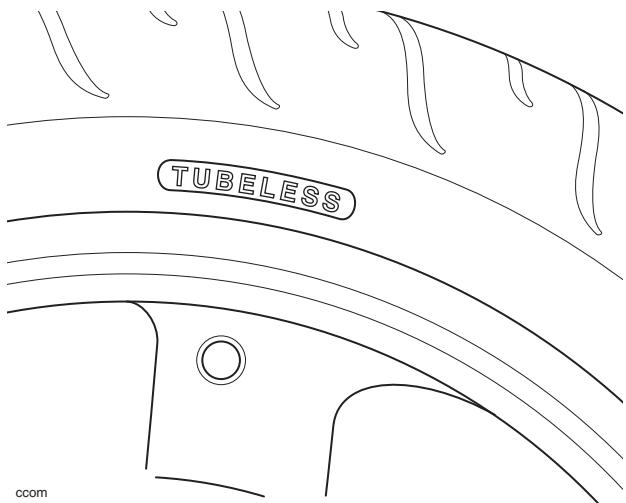
Wheels/Tyres

Tyres

This model is equipped with tubeless tyres, valves, and wheel rims. Only tyres marked TUBELESS and tubeless type tyre valves mounted on rims marked SUITABLE FOR TUBELESS TYRES can be used.



Typical Wheel Marking (front wheel shown)



Typical Tyre Marking

Warning	
Tyres that have been used on a rolling road dynamometer may become damaged. In some cases, the damage may not be visible on the external surface of the tyre. Tyres must be replaced after such use as continued use of a damaged tyre may lead to instability, loss of control and an accident.	

Tyre Pressures

Correct inflation pressure will provide maximum stability, rider comfort and tyre life.

Tyre pressures should be checked frequently and adjusted as necessary. Correct tyre pressures are:

Daytona 675 and Daytona 675 R

Tyre Pressure - Front	2.35 bar (34 psi)
Tyre Pressure - Rear	2.48 bar (36 psi)

Street Triple, Street Triple 660 cc, Street Triple R and Street Triple Rx

Tyre Pressure - Front	2.35 bar (34 psi)
Tyre Pressure - Rear	2.90 bar (42 psi)



Warning

Incorrect tyre inflation will cause abnormal tread wear and instability problems which may lead to loss of control and an accident.

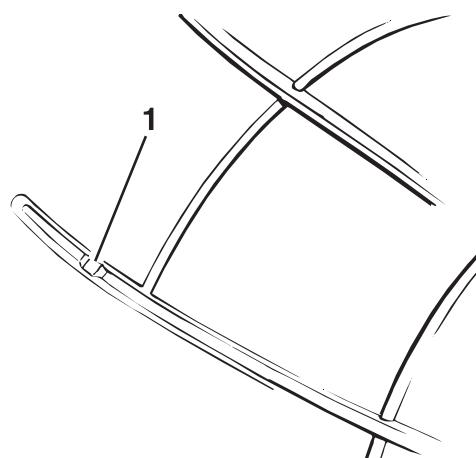
Under-inflation may result in the tyre slipping on, or coming off the rim. Over-inflation will cause instability and accelerated tread wear.

Both conditions are dangerous as they may cause loss of control leading to an accident.

Tyre Wear/Wheel Inspection

As the tyre tread wears down, the tyre becomes more susceptible to puncture and failure. It is estimated that 90% of all tyre failures occur during the last 10% of tread life (90% worn). It is false economy and unsafe to use tyres until they are worn to their minimum.

All tyres are fitted with tread wear indicators. When the tyre becomes worn down as far as the top of a tread wear indicator, the tyre is worn beyond its service life and must be replaced.



gafj

1. Tread wear indicator

In accordance with the scheduled maintenance chart, measure the depth of the tread with a depth gauge, and replace any tyre that has worn to, or beyond the minimum allowable tread depth.

Inspect wheels for cracks, splits and kerb damage. Always replace wheels that are suspected of having become damaged.



Warning

Operation with excessively worn tyres is hazardous and will adversely affect traction, stability and handling which may lead to loss of control or an accident.

When tubeless tyres become punctured, leakage is often very slow. Always inspect tyres very closely for punctures.

Check the tyres for cuts, embedded nails or other sharp objects.

Check the rims for dents or deformation. Operation with damaged or defective wheels or tyres is dangerous and loss of control or an accident could result.

Always consult your Triumph dealer for tyre replacement, or for a safety inspection of the tyres.

Minimum Recommended Tread Depth

The following chart can be used as a guide to the minimum safe tread depth.

Under 130 km/h (80 mph)	2 mm (0.08 in)
Over 130 km/h (80 mph)	Rear 3 mm (0.12 in) Front 2 mm (0.08 in)



Warning

Triumph motorcycles must not be operated above the legal road speed limit except in authorised closed-course conditions.

Important Tyre Information

All Triumph motorcycles are carefully and extensively tested in a range of riding conditions to ensure that the most effective tyre combinations are approved for use on each model. It is essential that approved tyre combinations are used when purchasing replacement tyres as the use of non approved tyres or approved tyres in non approved combinations may lead to motorcycle instability.

Note:

- A list of approved tyres is available from your authorised Triumph dealer, or on the Internet at www.triumph.co.uk.



Warning

If a tyre sustains a puncture, the tyre must be replaced. Failure to replace a punctured tyre, or operation with a repaired tyre can lead to instability, loss of control or an accident.

Never use an inner tube to repair a punctured tyre. The rough surface inside the tyre can chafe the tube leading to instability, rapid deflation, loss of control and an accident.



Warning

The use of tyres other than those listed in the Tyre Selector Guide provided on the internet at www.triumph.co.uk, may adversely affect handling leading to loss of control or an accident.

Use the recommended tyre options only in the combinations given in the Tyre Selector Guide provided on the internet at www.triumph.co.uk.

Do not mix tyres from different manufacturers or tyres from the same manufacturer but from another option.



Warning

Always check tyre pressures before riding when the tyres are cold. Operation with incorrectly inflated tyres may affect handling leading to loss of control and an accident.



Warning

Operation with excessively worn or damaged tyres will adversely affect handling and control leading to loss of control or an accident.



Warning

Do not install tube-type tyres on tubeless rims. The bead will not seat and the tyres could slip on the rims, causing tyre deflation that may result in a loss of vehicle control and an accident.

Do not install an inner tube inside a tubeless tyre. This may cause instability and excessive heat build-up may cause the tube to burst resulting in rapid tyre deflation, loss of vehicle control and an accident.



Warning

When replacement tyres are required, consult your authorised Triumph dealer who will arrange for the tyres to be fitted according to the tyre manufacturers instructions.

When tyres are replaced, allow time for the tyre to seat itself to the rim (approximately 24 hours). During this seating period, ride cautiously as an incorrectly seated tyre could cause loss of control or an accident. Initially, the new tyre will not produce the same handling characteristics as the worn tyre and the rider must allow adequate riding distance (approximately 100 miles (160 km) to become accustomed to the new handling characteristics.

After both 24 hours and 100 miles (160 km), the tyre pressures should be checked and adjusted and the tyre examined for correct seating and rectified as necessary.

Use of a motorcycle when not accustomed to its handling characteristics may lead to loss of control and an accident.



Warning

Accurate wheel balance is necessary for safe, stable handling of the motorcycle. Do not remove or change any wheel balance weights. Incorrect wheel balance may cause instability leading to loss of control and an accident.

When wheel balancing is required, such as after tyre replacement, see your authorised Triumph dealer.

Only use self-adhesive weights. Clip-on weights will damage the wheel and tyre resulting in tyre deflation, loss of control and an accident.

Front Wheel - All Models except Daytona 675 R

Removal



Warning

Before starting work, ensure the motorcycle is stabilised and adequately supported. This will help prevent it from falling and causing injury to the operator or damage to the motorcycle.

1. Position the motorcycle on a paddock stand.
2. Detach and support the front brake calipers;
 - see page 14-33 for Daytona 675
 - see page 14-38 for Street Triple and Street Triple 660 cc
 - see page 14-41 for Street Triple R and Street Triple Rx.

Note:

- It is not necessary to disconnect the brake hoses.



Warning

Do not allow the calipers to hang on the brake hoses as this may damage the hoses.

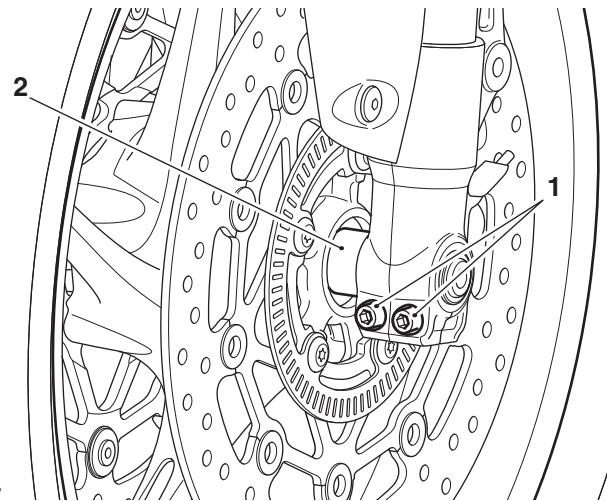
Damaged hoses could cause brake failure leading to loss of control and an accident.

3. Raise and support the front of the motorcycle.

Note:

- For Street Triple, Street Triple 660 cc, Street Triple R and Street Triple Rx, the pinch bolts for the wheel spindle are at the lower end of the left hand fork.
- For the Daytona 675, the pinch bolts for the wheel spindle are at the lower end of the right hand fork.

4. Loosen both pinch bolts at the lower end of the left or right hand fork.
5. Release and remove the wheel spindle, which is threaded into the left or right hand fork.
6. Remove the wheel and the wheel spacers.



1. Fork pinch bolts

2. Wheel spacers (left hand shown)

7. Place the wheel on wooden blocks.



Warning

Do not allow the wheel to rest on either brake disc as this may damage the disc and could lead to an accident.



Caution

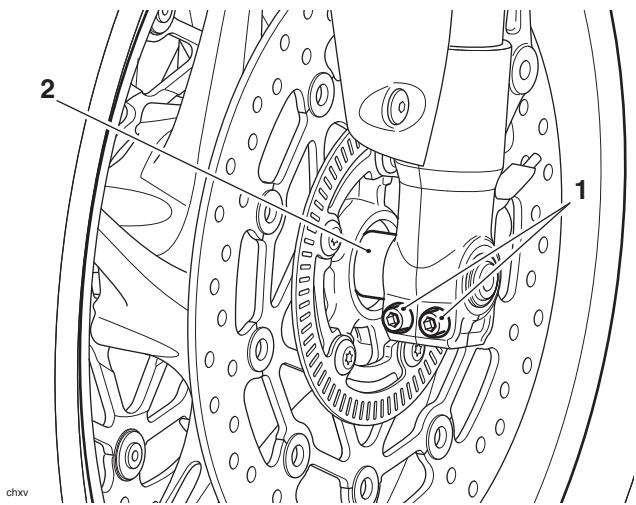
To prevent wheel and bearing damage, observe absolute cleanliness and ensure there is no dirt ingress to the wheel bearings while the wheel is removed.

8. Thoroughly clean all components and inspect for wear or damage.

Wheels/Tyres

Installation

1. Lightly smear the wheel spacers with grease and locate in the hubs.
2. Position the wheel between the forks ensuring the spacers remain in position on both sides.
3. Refit the wheel spindle from the left hand side and tighten to **65 Nm**.
4. Lower the motorcycle to the ground and pump the front suspension to allow the left hand fork to float to its natural position on the wheel spindle.
5. Tighten the fork pinch bolts to **22 Nm**.



1. **Wheel spacers**
2. **Fork pinch bolts**
6. Thoroughly clean and degrease the brake discs.
7. Refit the front brake calipers:
 - see page 14-35 for Daytona 675
 - see page 14-40 for Street Triple and Street Triple 660 cc
 - see page 14-42 for Street Triple R and Street Triple Rx.

Front Wheel - Daytona 675 R

Removal

Warning

Before starting work, ensure the motorcycle is stabilised and adequately supported. This will help prevent it from falling and causing injury to the operator or damage to the motorcycle.

1. Position the motorcycle on a paddock stand.
2. Detach and support the front brake calipers (see page 14-41).

Note:

- It is not necessary to disconnect the brake hoses.

Warning

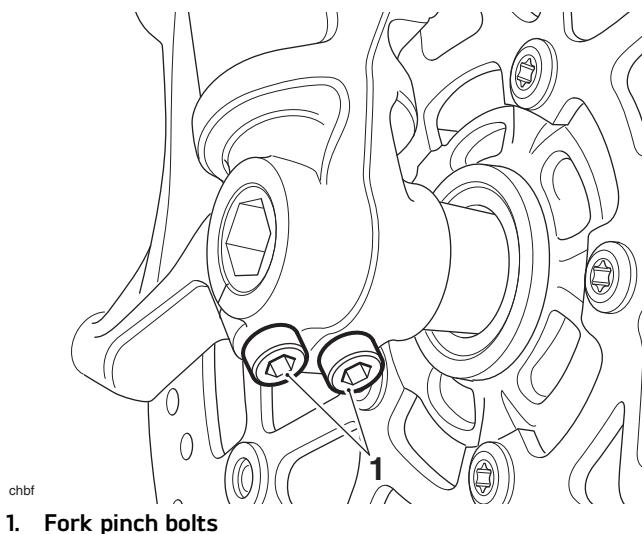
Do not allow the calipers to hang on the brake hoses as this may damage the hoses.

Damaged hoses could cause brake failure leading to loss of control and an accident.

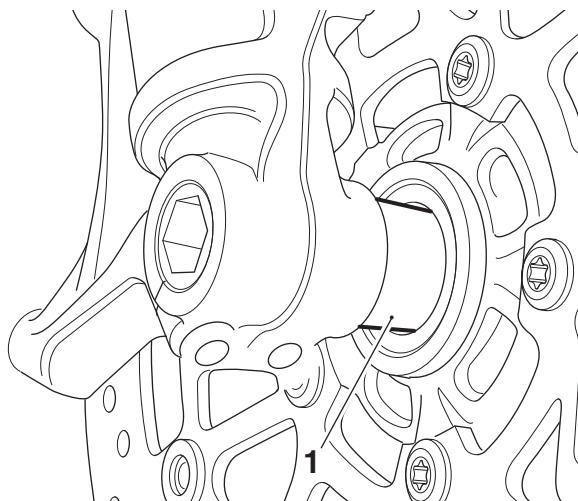
3. Raise and support the front of the motorcycle.

Note:

- The pinch bolts for the wheel spindle are at the lower end of the right hand fork.
- 4. Loosen both pinch bolts at the lower end of the right hand fork.



5. Release and remove the wheel spindle, which is threaded into the right hand fork.
6. Remove the wheel and the wheel spacers.



1. Wheel spacers (right hand shown)

7. Place the wheel on wooden blocks.



Warning

Do not allow the wheel to rest on either brake disc as this may damage the disc and could lead to an accident.



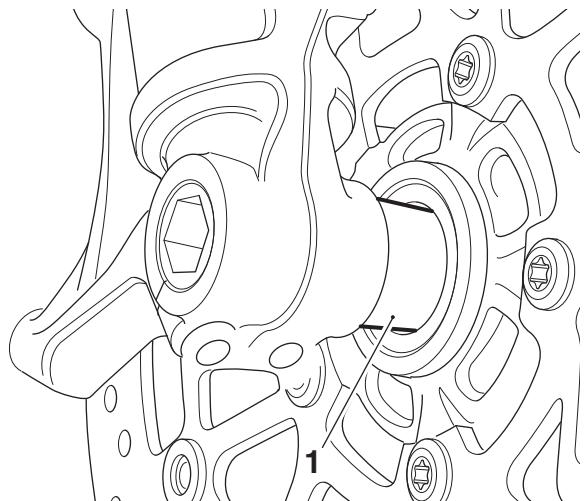
Caution

To prevent wheel and bearing damage, observe absolute cleanliness and ensure there is no dirt ingress to the wheel bearings while the wheel is removed.

8. Thoroughly clean all components and inspect for wear or damage.

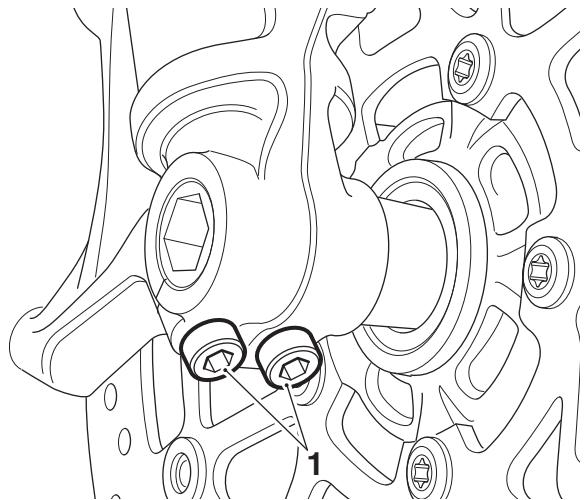
Installation

1. Lightly smear the wheel spacers with grease and locate in the hubs.
2. Position the wheel between the forks ensuring the spacers remain in position on both sides.



1. Wheel spacers

3. Refit the wheel spindle from the left hand side and tighten to **65 Nm**.
4. Lower the motorcycle to the ground and pump the front suspension to allow the left hand fork to float to its natural position on the wheel spindle.
5. Tighten the fork pinch bolts to **20 Nm**.



1. Fork pinch bolts

6. Thoroughly clean and degrease the brake discs.
7. Refit the front brake calipers (see page 14-37).

Wheels/Tyres

Rear Wheel

Removal



Warning

Before starting work, ensure the motorcycle is stabilised and adequately supported. This will help prevent it from falling and causing injury to the operator or damage to the motorcycle.

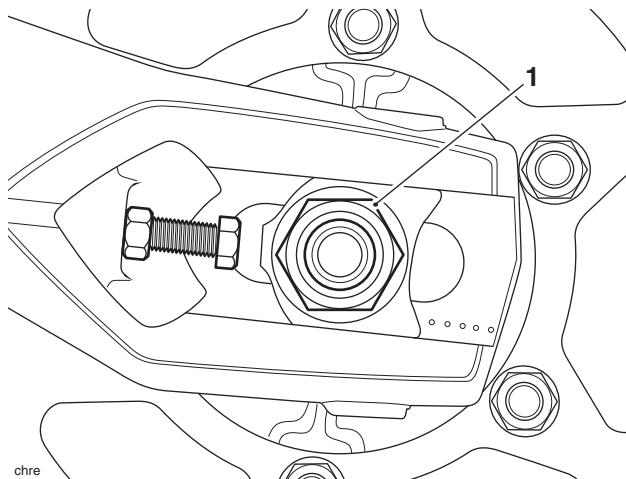
1. Raise and support the rear of the motorcycle to allow removal of the rear wheel.



Warning

If the engine has recently been running, the exhaust system will be hot. Before working on or near the exhaust system, allow sufficient time for the exhaust system to cool as touching any part of a hot exhaust system could cause burn injuries.

2. Remove the nut from the rear wheel spindle.



1. Rear wheel spindle nut

3. Support the wheel and withdraw the wheel spindle.
4. Noting its position, release the brake caliper and carrier from the slot on the swinging arm and roll the wheel forward until the chain can be detached from the rear sprocket.



Warning

Do not allow the caliper to hang on the brake hose as this may damage the hose.

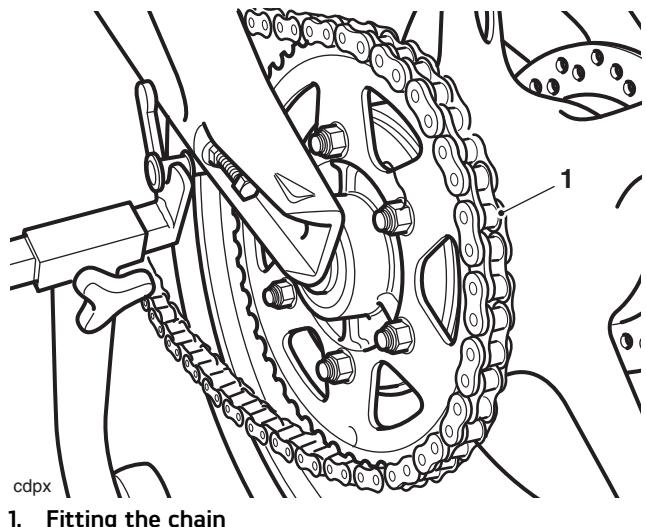
Damaged hoses could cause brake failure leading to loss of control and an accident.

5. Tie the rear brake caliper aside.

6. Withdraw the wheel and collect the flanged spacer from the right hand side and the plain spacer from the left hand side.
7. Place the wheel on wooden blocks with the drive sprocket uppermost.
8. Remove the final drive (see page 15-15).
9. Reposition the wheel on wooden blocks with the rear brake disc uppermost.
10. If required, remove the rear brake disc and discard the disc bolts.

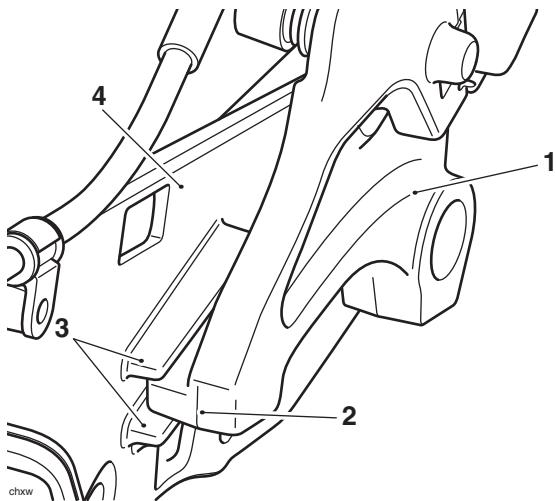
Installation

1. Thoroughly clean and degrease the brake disc.
2. Fit the brake disc and tighten new disc bolts to **22 Nm**.
3. Refit the final drive assembly (see page 15-15).
4. Position the wheel within the swinging arm and refit the chain to the final drive sprocket.



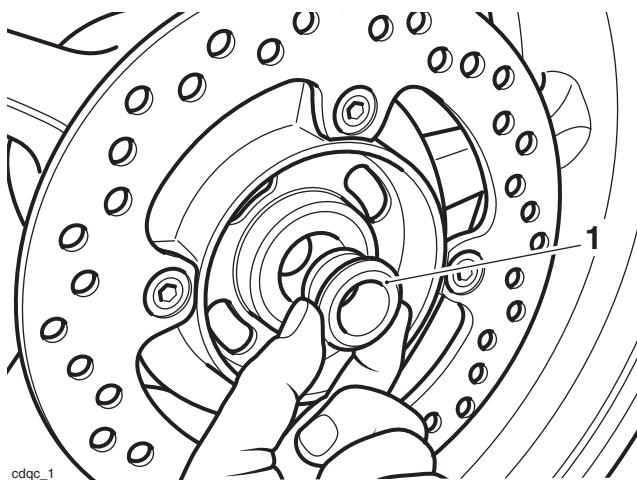
1. Fitting the chain

- Position the rear brake caliper and carrier to the swinging arm as noted prior to removal. Align the boss on the carrier with the raised slot on the swinging arm.



- Caliper carrier, wheel shown removed for clarity
- Caliper carrier boss
- Swinging arm slot
- Swinging arm

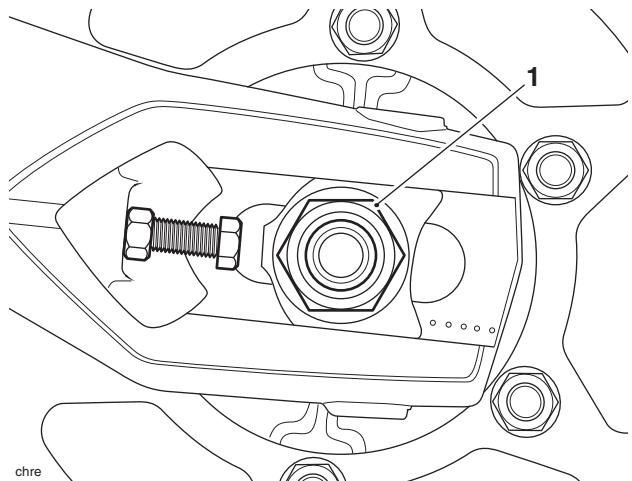
- Refit the wheel spacers, flanged spacer to the right hand side (flange facing outwards) and plain spacer to the left.



- Wheel spacer (right hand shown)

- Lift the rear wheel into position, aligning the wheel, caliper carrier and swinging arm.

- Fit the wheel spindle with the threaded end facing to the left.
- Keeping the chain adjuster blocks in contact with the adjuster bolts, tighten the wheel spindle nut to **110 Nm**.



- Rear wheel spindle nut

- Lower the motorcycle to the ground.



Warning

It is dangerous to operate the motorcycle with defective brakes and you must have your authorised Triumph dealer take remedial action before you attempt to ride the motorcycle again. Failure to take remedial action may reduce braking efficiency leading to loss of motorcycle control and an accident.

- Check the operation of the rear brake.
- Check and, if necessary, adjust the chain (see page 13-10).



Warning

Check that the spacers are still correctly positioned. Incorrectly fitted wheel spacers will cause a dangerous riding condition leading to loss of motorcycle control and an accident.

Wheels/Tyres

Front Wheel Bearings

Removal

1. Remove the front wheel (see page 15-7 for all models except Daytona 675 R, see page 15-8 for Daytona 675 R).



Caution

Do not allow the wheel to rest on the brake discs, as this may damage the discs. Support the wheel on wooden blocks, equally spaced around the rim, such that the brake discs are raised above the ground.

2. Place the wheel on wooden blocks to prevent damage to the brake discs.
3. Remove and discard the seals and the bearing circlip.



Warning

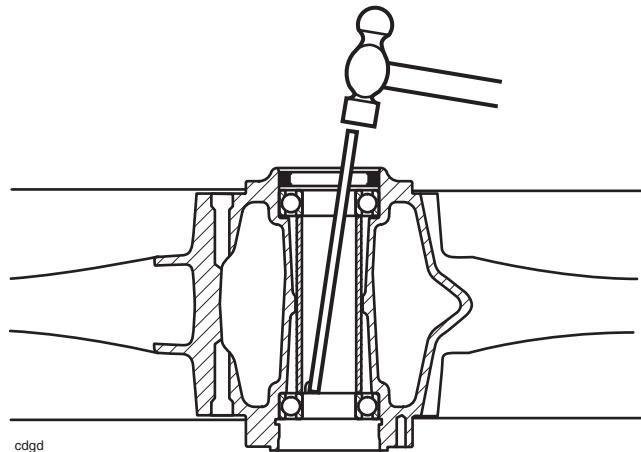
Always wear eye, hand and face protection when using a hammer and drift. Use of a hammer and drift can cause bearings to fragment. Pieces of fragmented bearing could cause eye and soft tissue injuries if suitable protective apparel is not worn.



Caution

To prevent wheel damage and to aid bearing removal, always apply force evenly on both sides of the bearing to prevent it from tipping and becoming stuck. Application of uneven force will lead to difficulty in removing the bearing and to a damaged wheel.

4. Using a suitable pin punch, through the centre of the wheel, drift out the wheel bearings. Collect the centre sleeve.



Wheel Bearing Removal

Inspection



Warning

Only remove raised witness marks from within the wheel. Removal of material below any raised areas will reduce the level of interference between the wheel and the bearings. Loss of interference could cause the bearing to become loose in the wheel leading to loss of motorcycle control and an accident.

1. Examine the wheel for any raised witness marks caused by the removal process. Remove any such marks with fine emery paper or a gentle file.

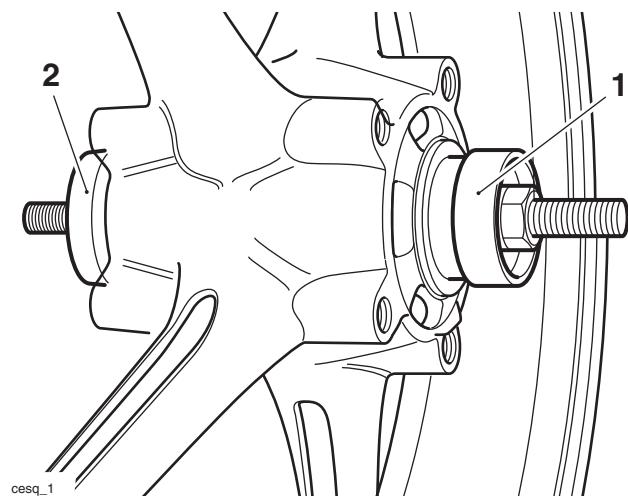
Installation

Note:

- Refer to the chart below for the correct tool and tool face when inserting bearings. Bearings are inserted by means of a draw-bolt acting on the insertion tool. A support tool is located on the opposite side of the wheel to the insertion tool and as the bolt is tightened, the bearing is drawn into the wheel.
- Insert bearings with the marked or shielded side facing outwards and always fit a new bearing circlip and seals.

	Bearing insertion tool	Support tool
Left bearing	T3880053 Small face to bearing	3880065-T0301 Large face to wheel
Right bearing	T3880053 Small face to bearing	3880065-T0301 Large face to wheel

- Fit the wheel bearings and centre sleeve using the method described on the previous page.



- T3880053 - Wheel Bearing Extraction Kit**
- 3880065-T0301 - Bearing Installer**
- Fit a new circlip.
- Lubricate and fit new seals to the front wheel. Lubricate the seal's knife-edge with grease to NLGI 2 specification.
- Fit the front wheel (see page 15-8 for all models except Daytona 675 R, see page 15-9 for Daytona 675 R).

Rear Wheel Bearings

Removal

- Remove the rear wheel (see page 15-10).

Caution

Do not allow the wheel to rest on the brake disc, as this may damage the disc. Support the wheel on wooden blocks, equally spaced around the rim, such that the brake disc is raised above the ground.

- Place the wheel on wooden blocks to prevent damage to the brake disc.
- Remove and discard the seals and the bearing circlip.

Warning

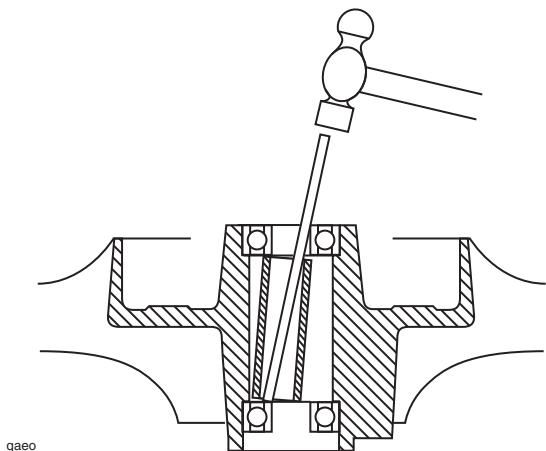
Always wear eye, hand and face protection when using a hammer and drift. Use of a hammer and drift can cause bearings to fragment. Pieces of fragmented bearing could cause eye and soft tissue injuries if suitable protective apparel is not worn.

Caution

To prevent wheel damage and to aid bearing removal, always apply force evenly on both sides of the bearing to prevent it from tipping and becoming stuck. Application of uneven force will lead to difficulty in removing the bearing and to a damaged wheel.

Wheels/Tyres

- Using a suitable pin punch, through the centre of the wheel, drift out the wheel bearings. Collect the centre sleeve.



Rear Wheel Bearing Removal

Inspection



Warning

Only remove raised witness marks from within the wheel. Removal of material below any raised areas will reduce the level of interference between the wheel and the bearings. Loss of interference could cause the bearing to become loose in the wheel leading to loss of motorcycle control and an accident.

- Examine the wheel for any raised witness marks caused by the removal process. Remove any such marks with fine emery paper or a gentle file.

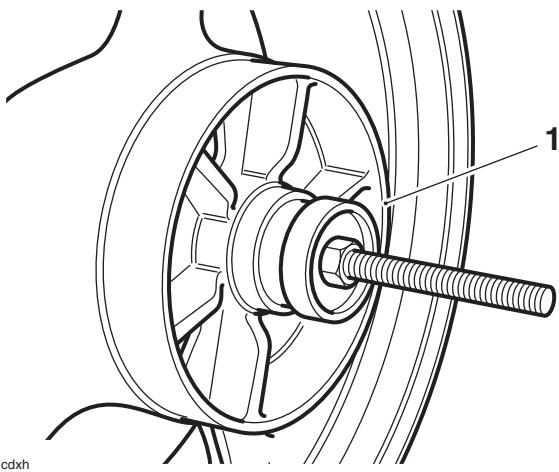
Installation

Note:

- Refer to the chart below for the correct tool and tool face when inserting bearings. Bearings are inserted by means of a draw-bolt acting on the insertion tool. A support tool is located on the opposite side of the wheel to the insertion tool and as the bolt is tightened, the bearing is drawn into the wheel.
- Insert bearings with the marked or shielded side facing outwards and always fit a new bearing circlip and seals.

	Bearing insertion tool	Support tool
Left bearing	3880070-T0301 Small face to bearing	3880065-T0301 Large face to wheel
Right bearing	3880070-T0301 Small face to bearing	3880065-T0301 Large face to wheel

- Fit the wheel bearings and centre sleeve using the method described on the previous page.



- 3880070-T0301 - Bearing Installer**

- Fit a new circlip.
- Lubricate and fit new seals to the rear wheel. Lubricate the seal's knife-edge with grease to NLGI 2 specification.
- Fit the rear wheel (see page 15-10).

Final Drive

Removal



Warning

Before starting work, ensure the motorcycle is stabilised and adequately supported. This will help prevent it from falling and causing injury to the operator or damage to the motorcycle.

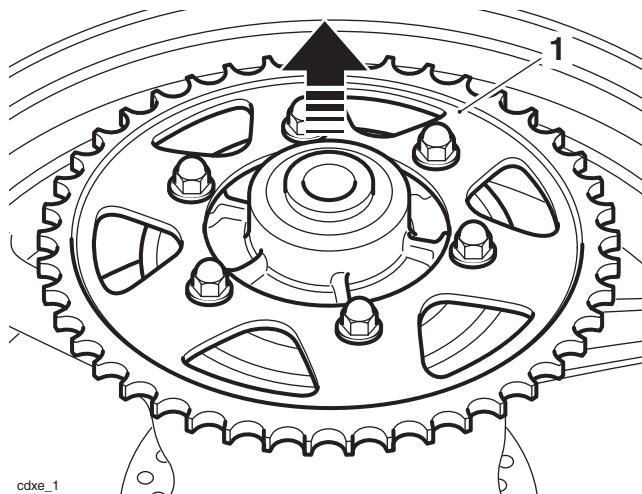
1. Remove the rear wheel (see page 15-10).



Caution

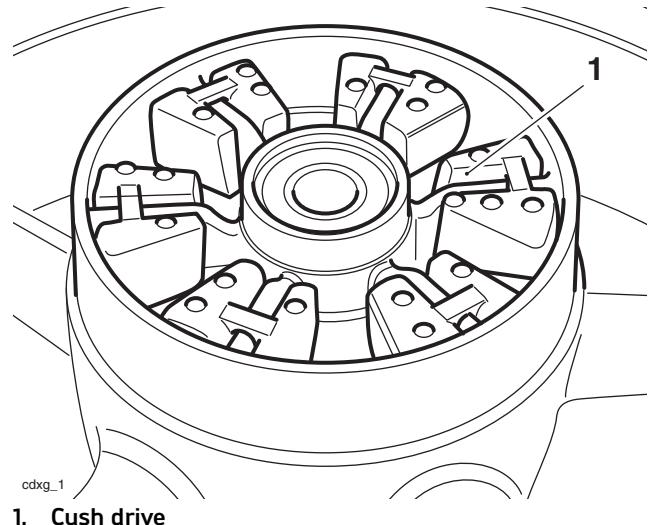
Do not allow the wheel to rest on the brake disc, as this may damage the disc. Support the wheel on wooden blocks, equally spaced around the rim, such that the brake disc is raised above the ground.

2. Place the wheel on wooden blocks with the drive sprocket uppermost.
3. Gently lever the drive flange from the wheel hub.



1. Drive flange

4. Remove the cushion drive rubbers.



Inspection

1. Check the cushion drive rubbers for deterioration, cracks etc.
2. Inspect the sprocket teeth for wear, damage and chips.
3. Check the wheel and drive flange for wear, cracks and damage.

Installation

1. Install the cushion drive rubbers to the wheel.
2. Refit the drive flange to the wheel.
3. Refit the rear wheel (see page 15-10).

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16 Frame and Bodywork

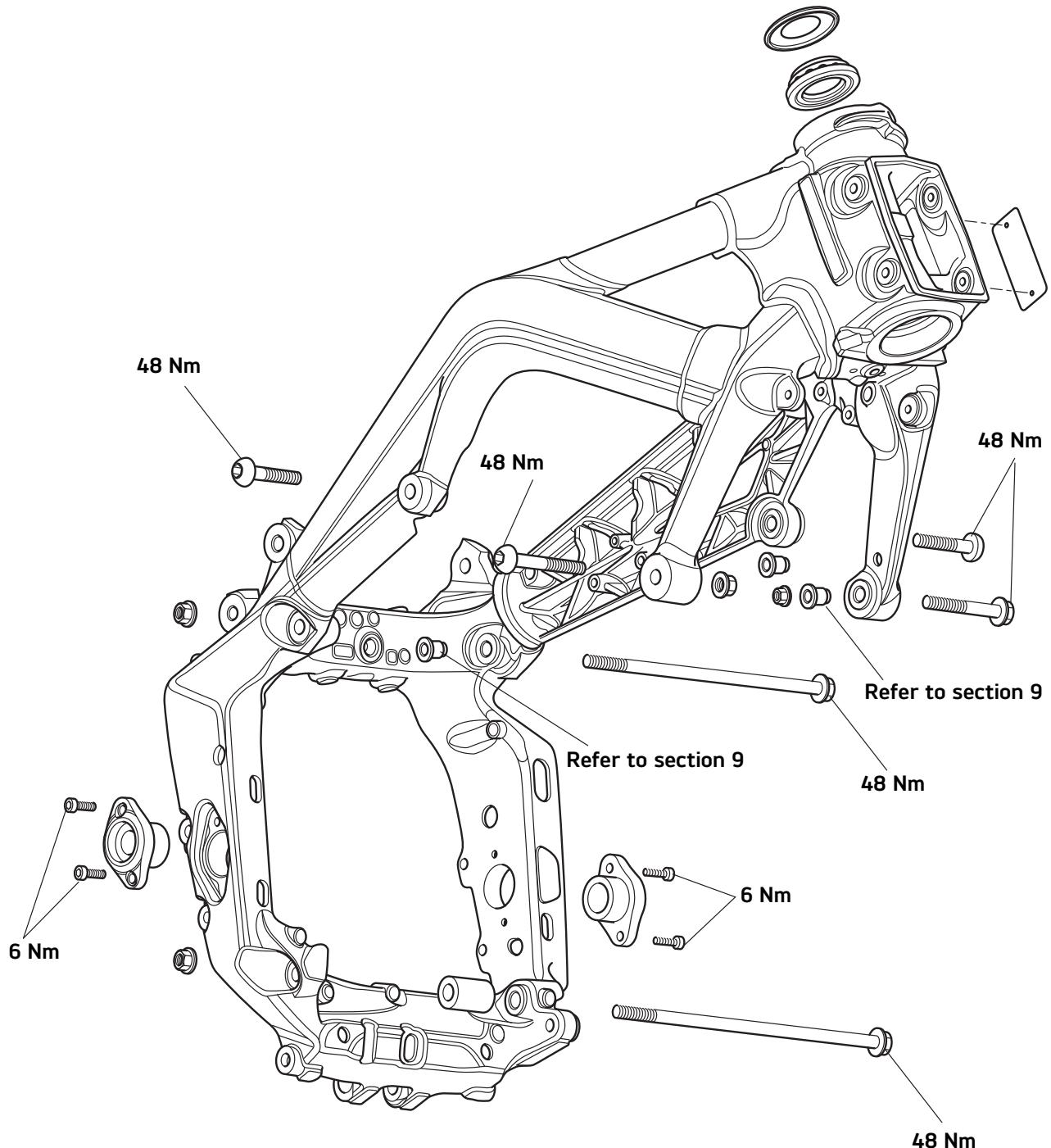
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Frame and Bodywork

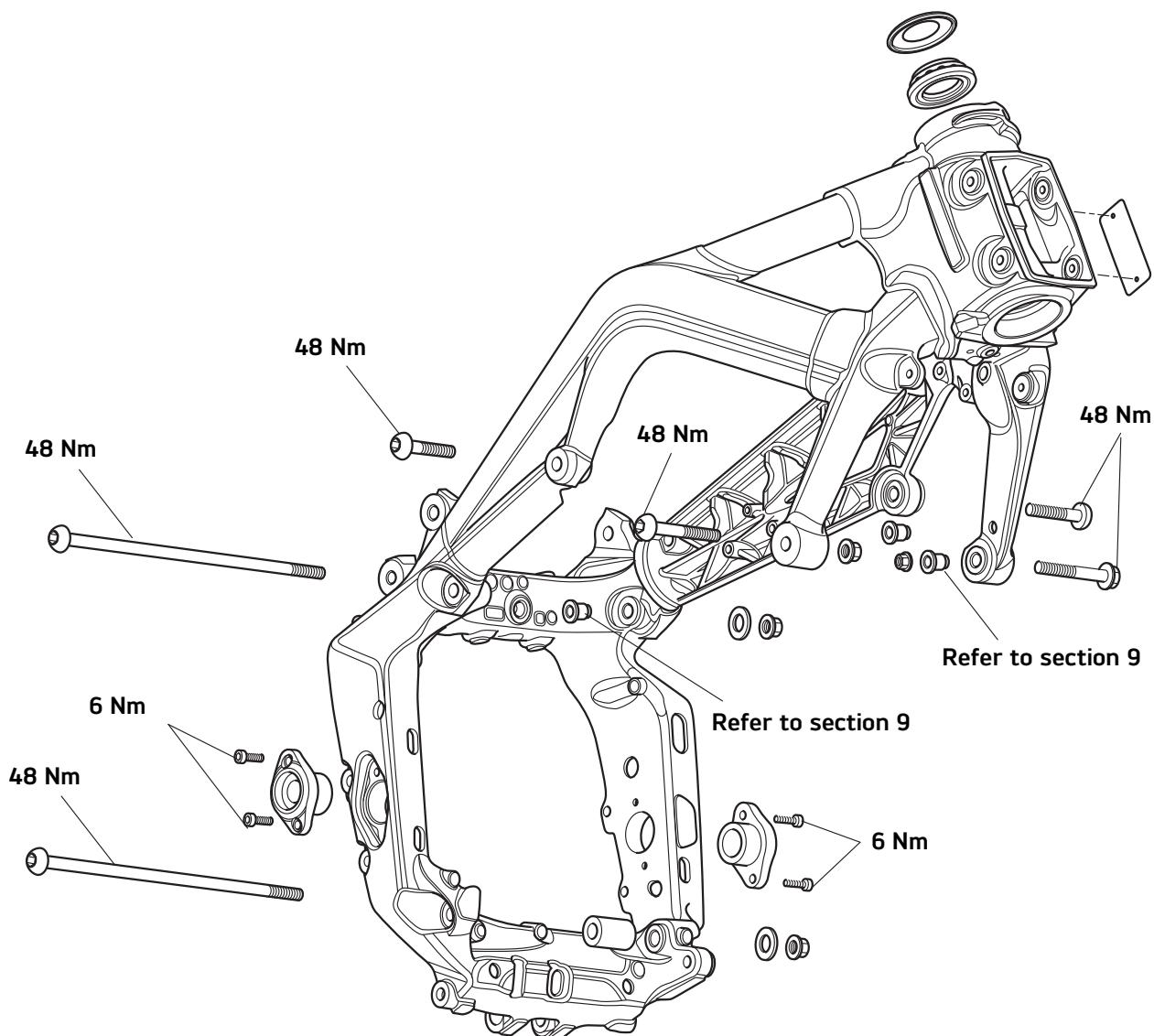
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Exploded View - Frame - Daytona 675 and Daytona 675 R up to VIN 617993 and Street Triple, Street Triple 660 cc, Street Triple R and Street Triple Rx up to VIN 629221

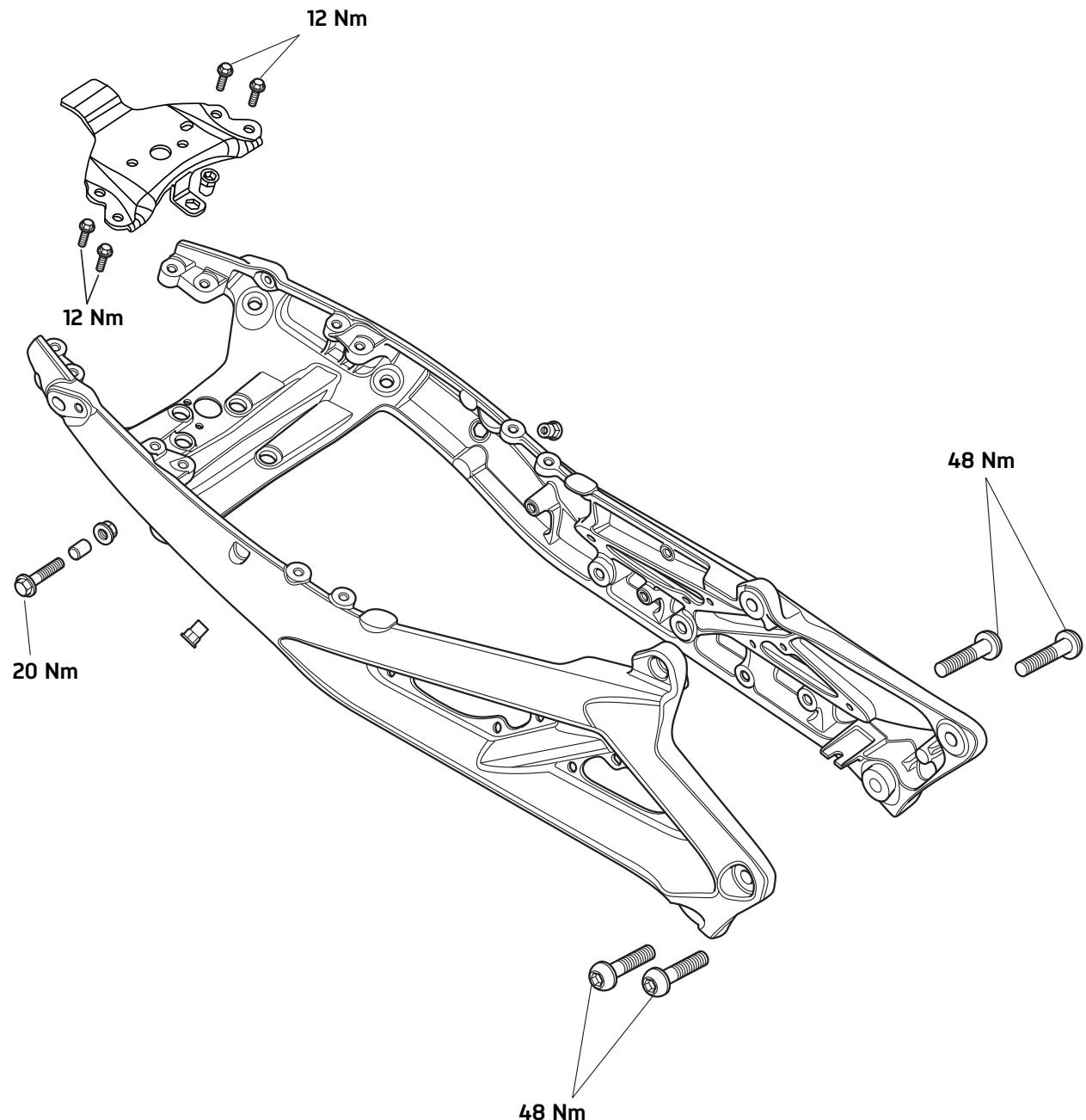


Frame and Bodywork

Exploded View - Frame - Daytona 675 and Daytona 675 R from VIN 617994 and Street Triple, Street Triple 660 cc, Street Triple R and Street Triple Rx from VIN 629222

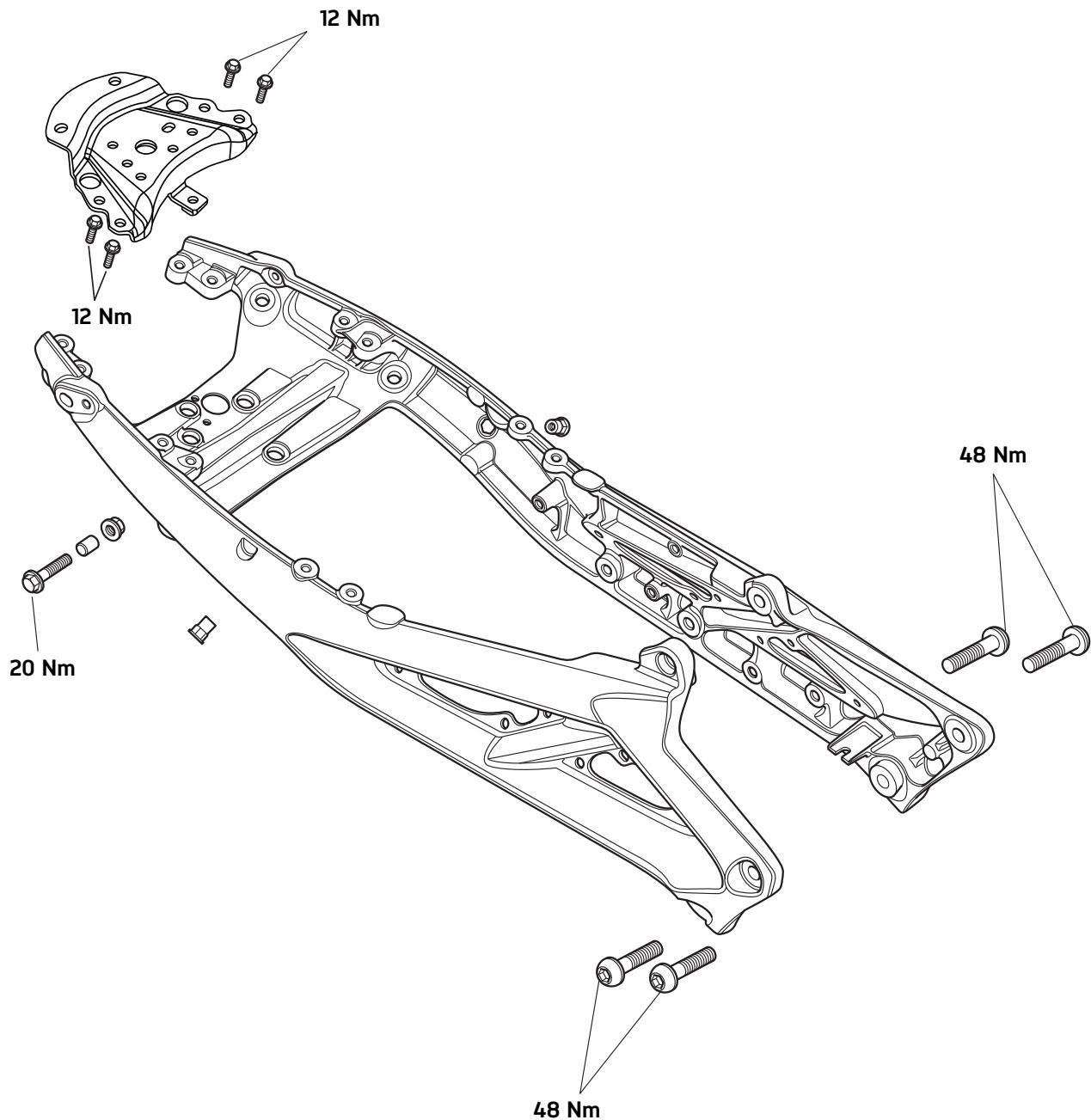


Exploded View - Rear Subframe - Daytona 675, Daytona 675 R and Street Triple Rx

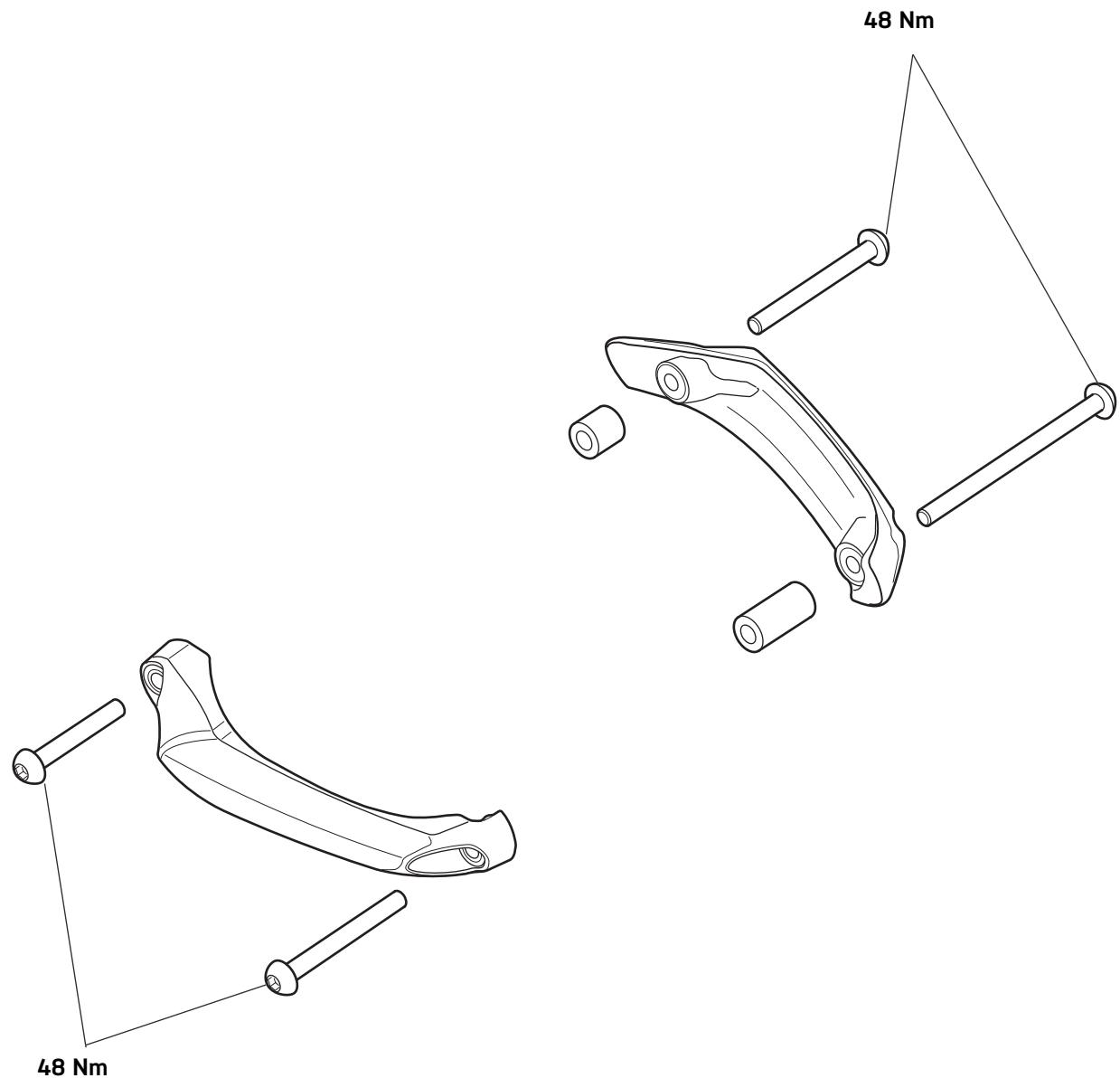


Frame and Bodywork

Exploded View - Rear Subframe - Street Triple, Street Triple 660 cc and Street Triple R

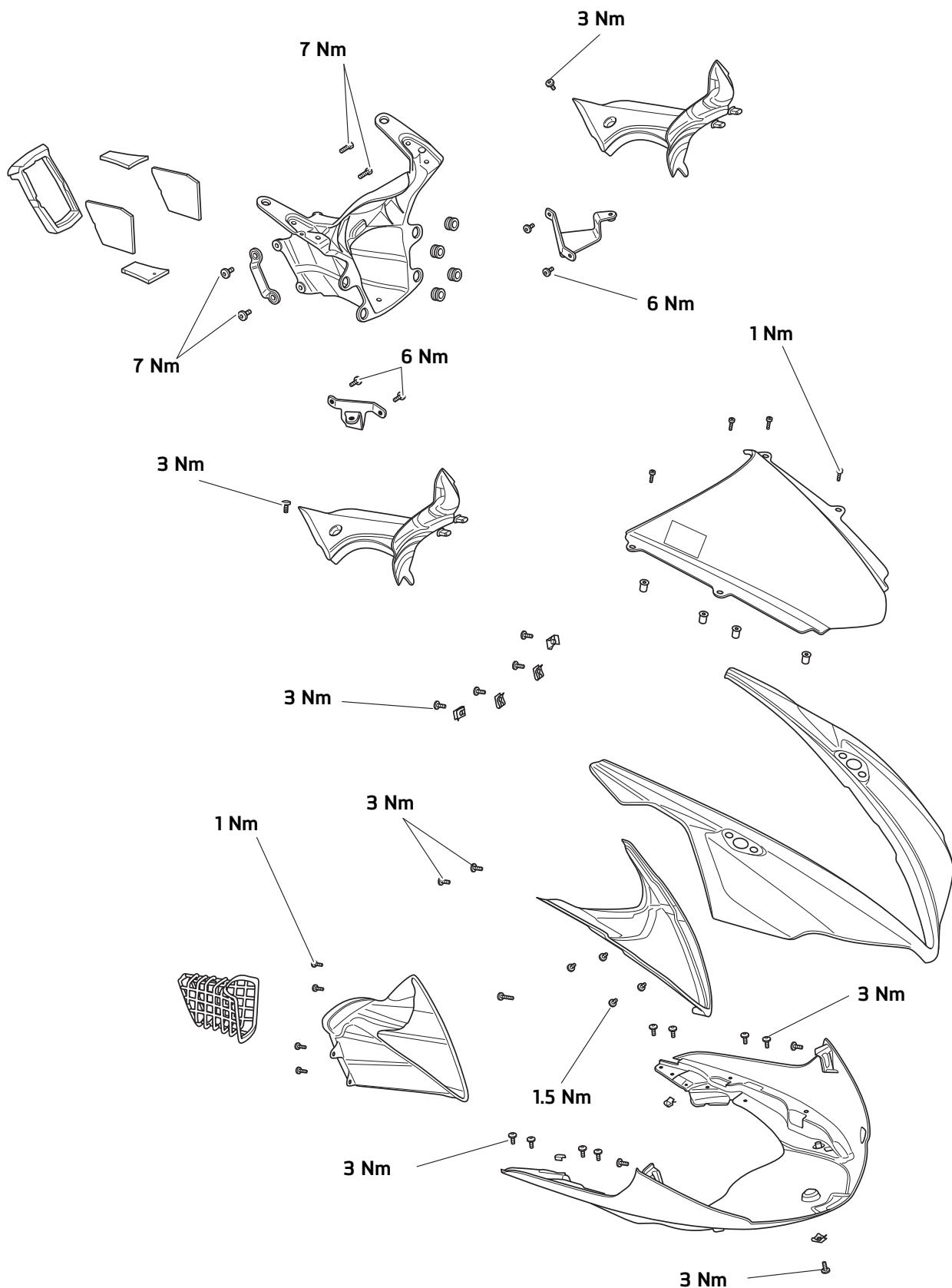


Exploded View - Frame Protectors - Street Triple, Street Triple 660 cc, Street Triple R and Street Triple Rx (if fitted)

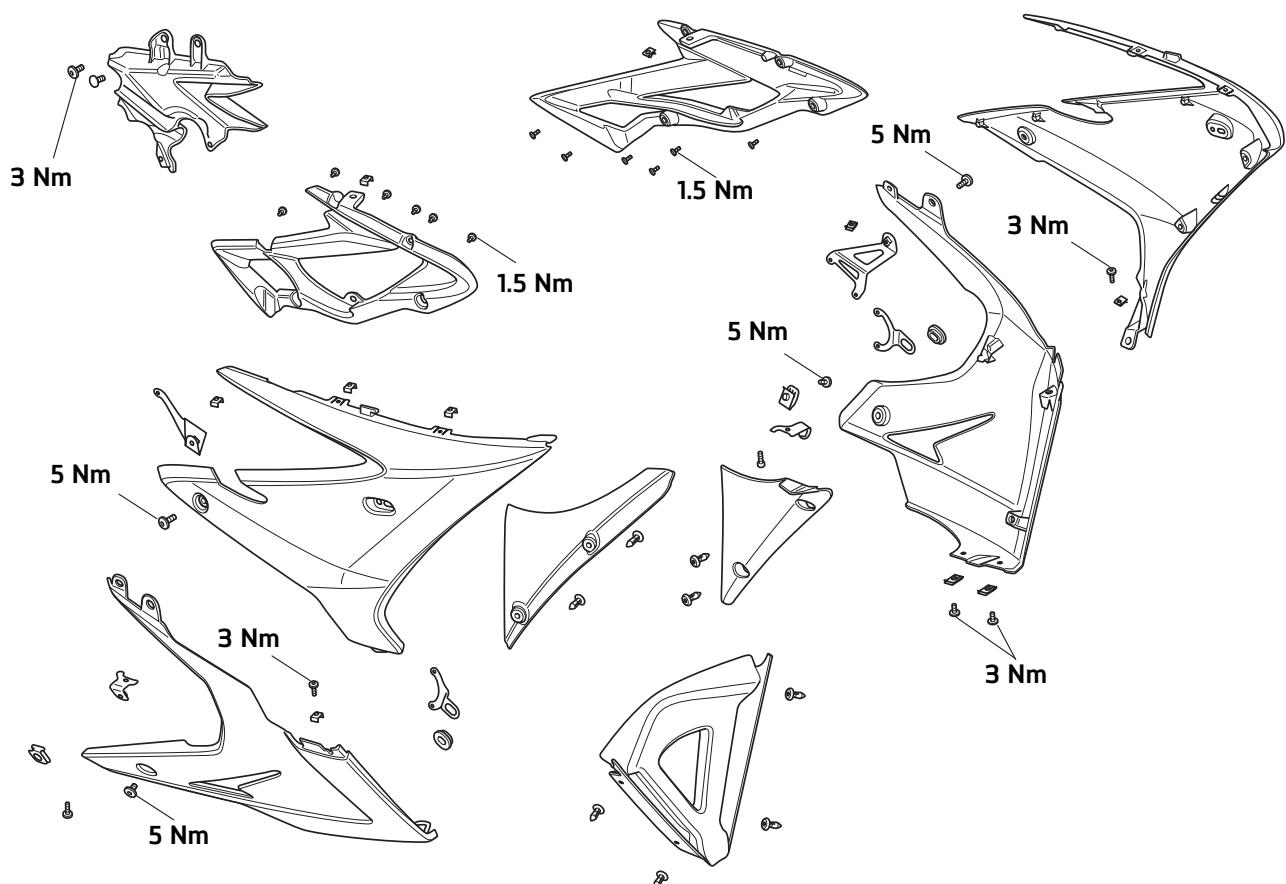


Frame and Bodywork

Exploded View - Cockpit and mountings - Daytona 675 and Daytona 675 R

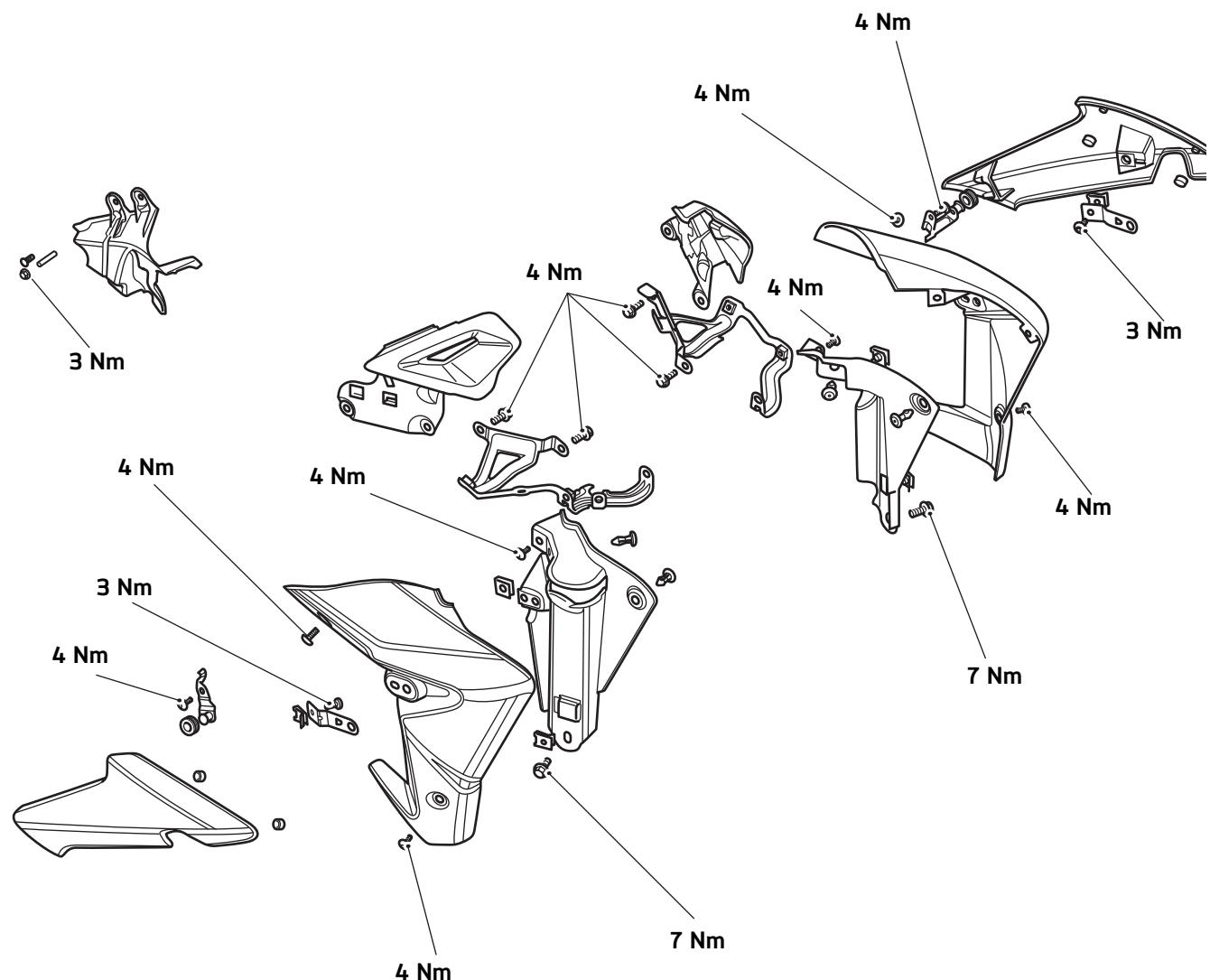


Exploded View - Fairings - Daytona 675 and Daytona 675 R

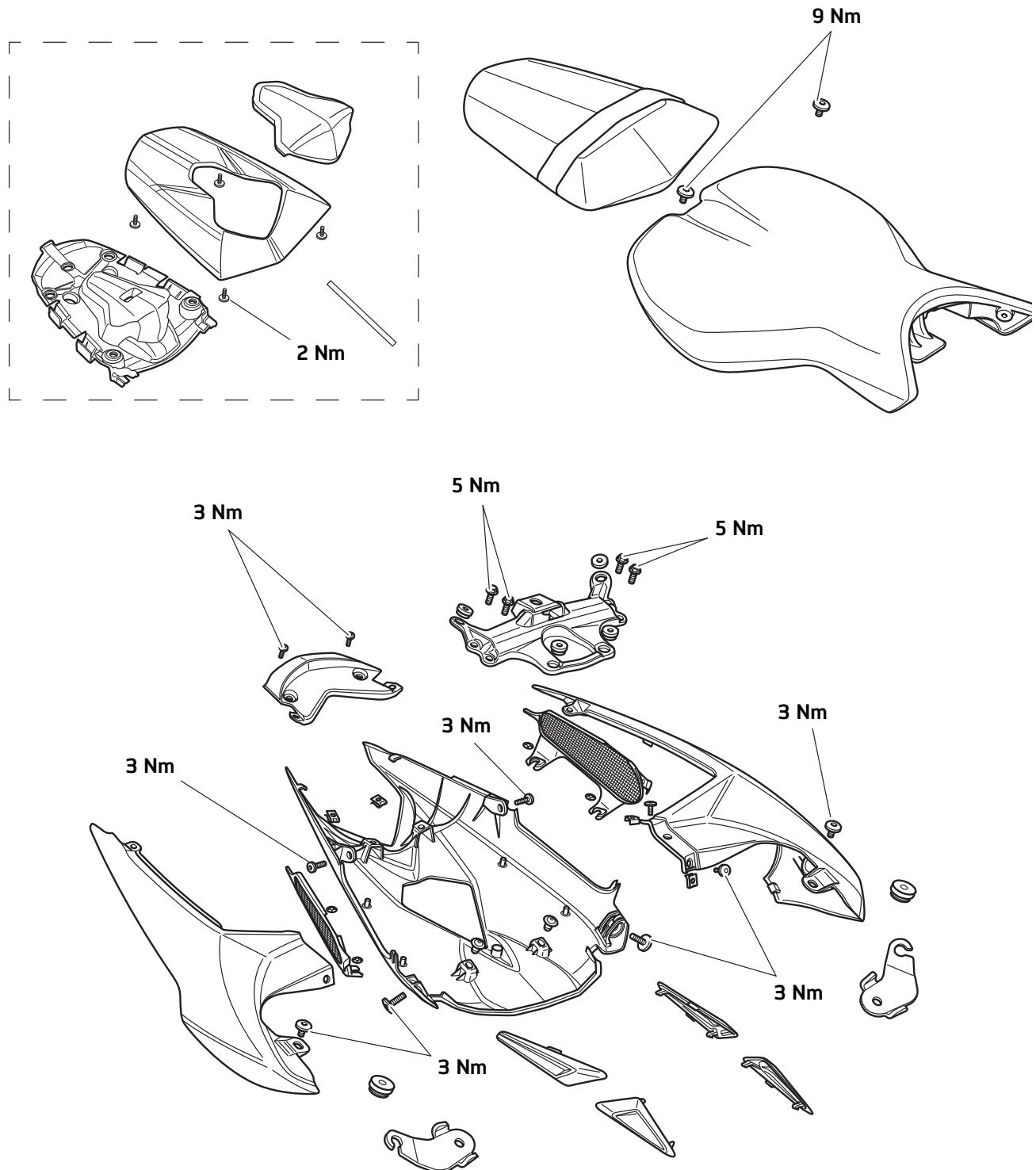


Frame and Bodywork

**Exploded View - Side Panels - Street Triple, Street Triple 660 cc,
Street Triple R and Street Triple Rx**

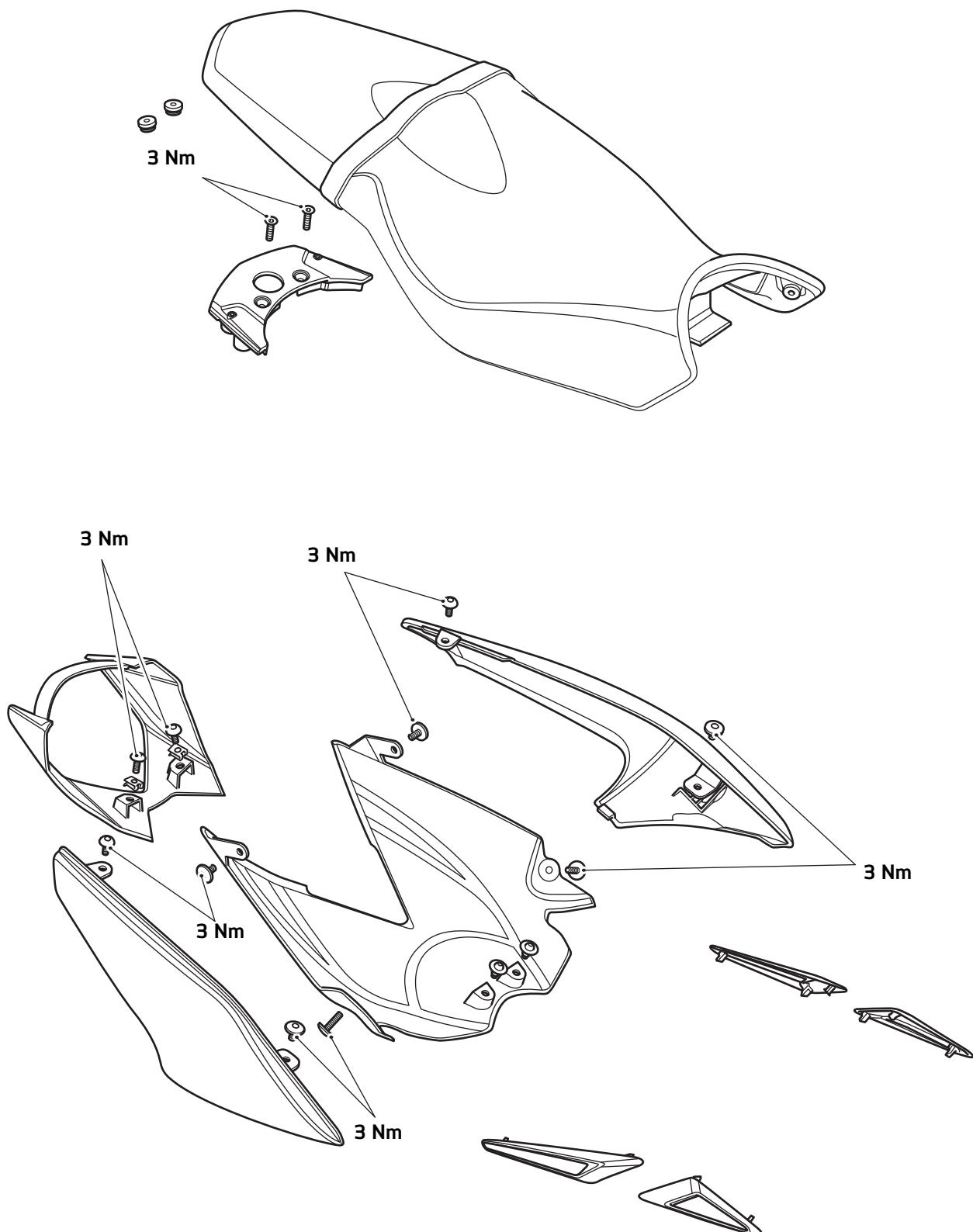


Exploded View - Rear Panels - Daytona 675, Daytona 675 R and Street Triple Rx

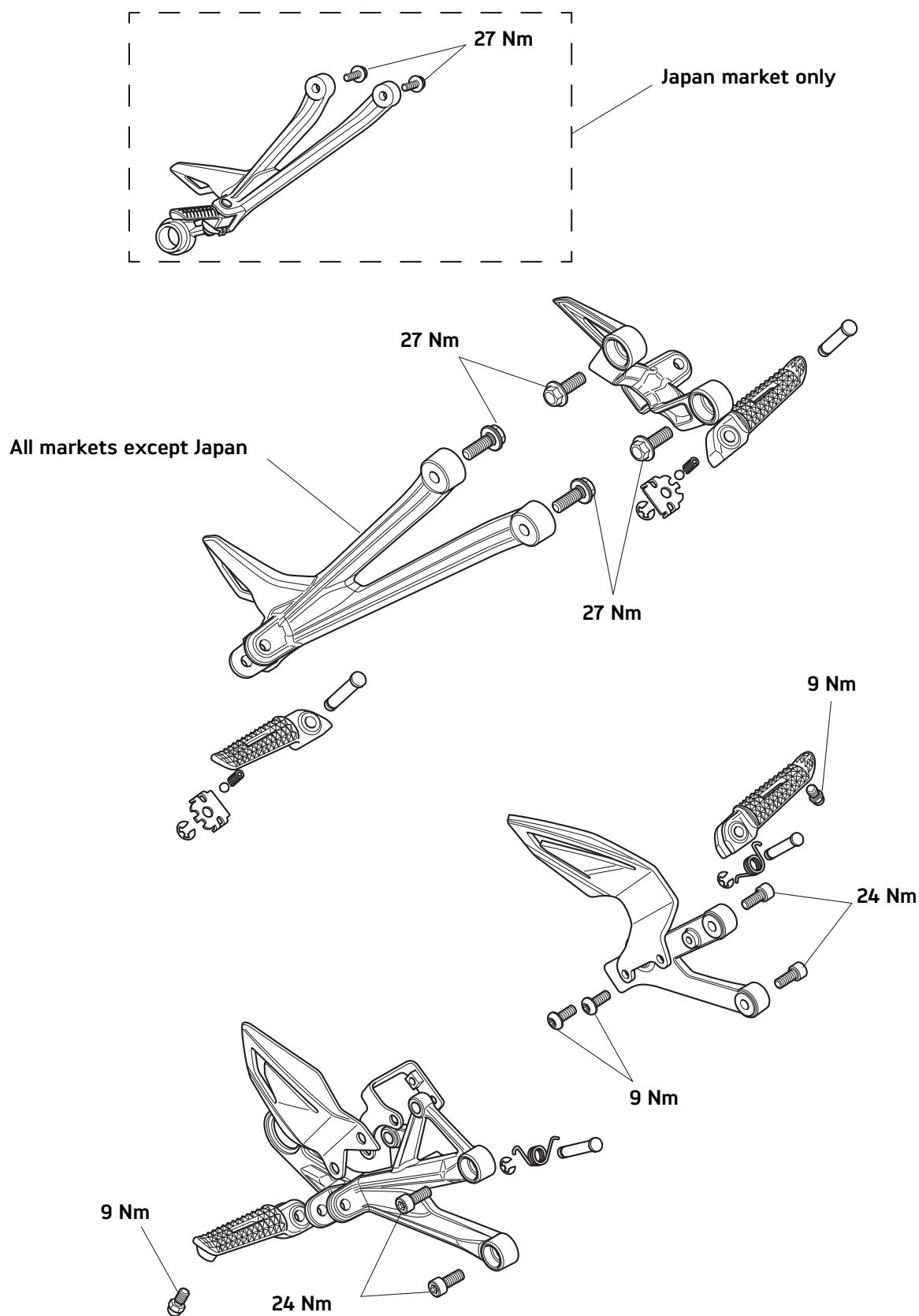


Frame and Bodywork

Exploded View - Rear Panels - Street Triple, Street Triple 660 cc and Street Triple R

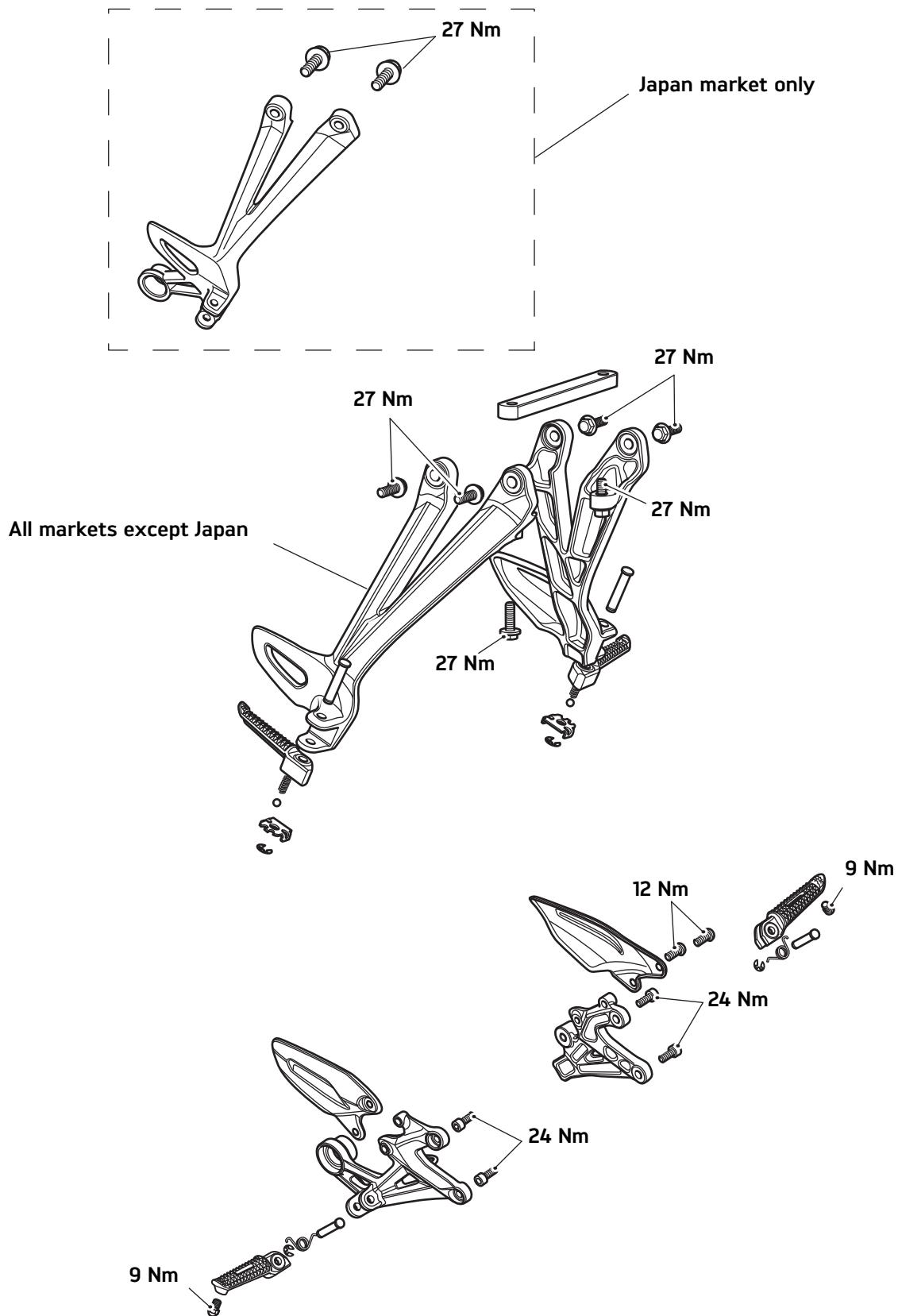


Exploded View - Footrests and Mountings - Daytona 675 and Daytona 675 R

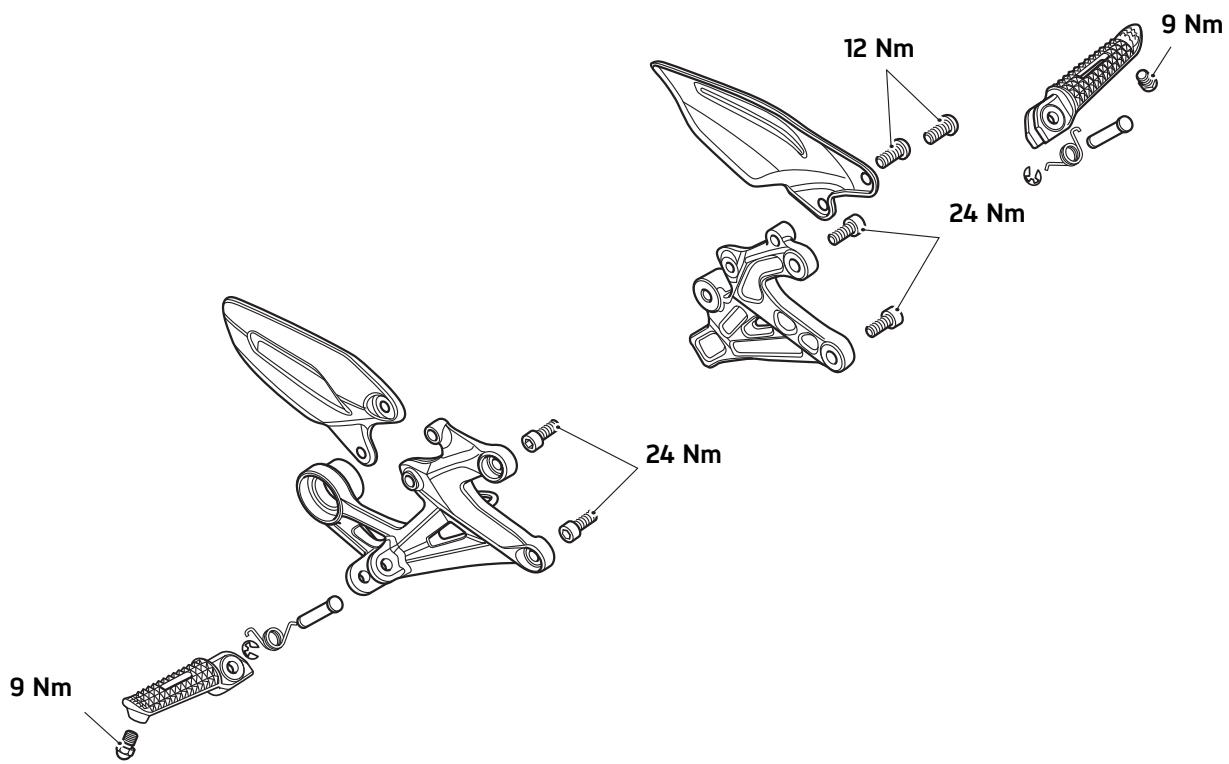
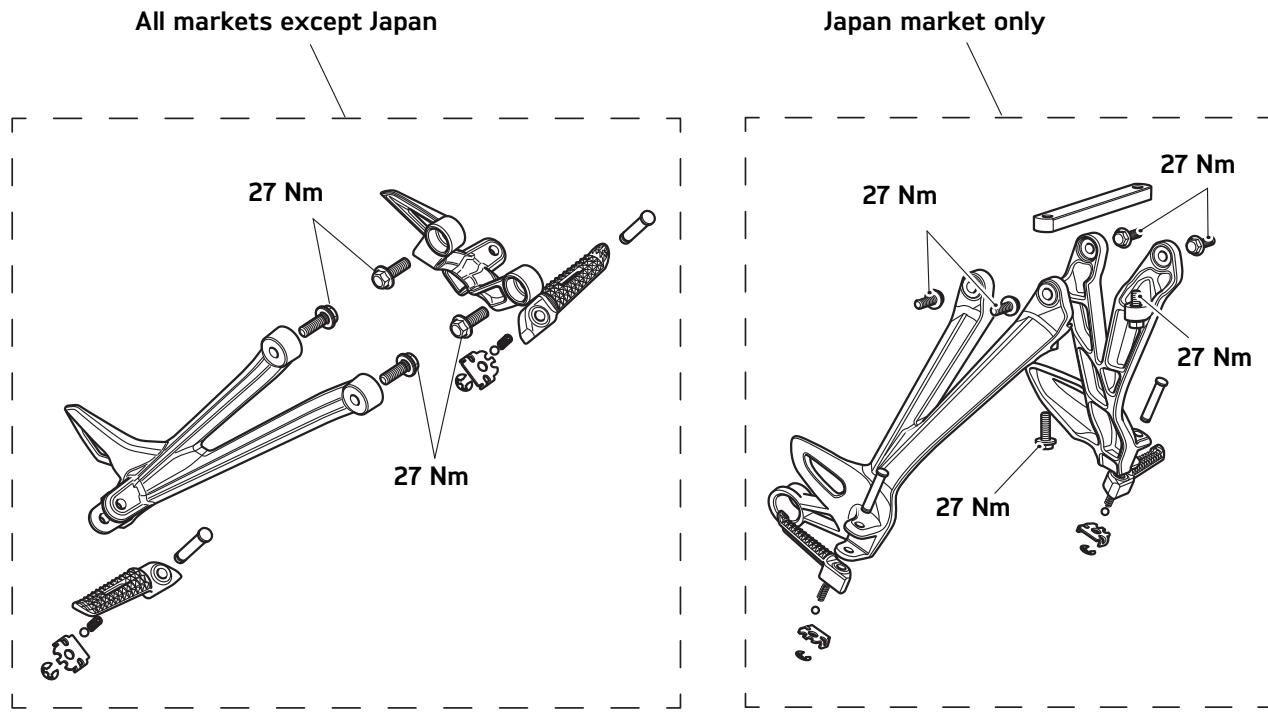


Frame and Bodywork

Exploded View - Footrests and Mountings - Street Triple, Street Triple 660 cc and Street Triple R

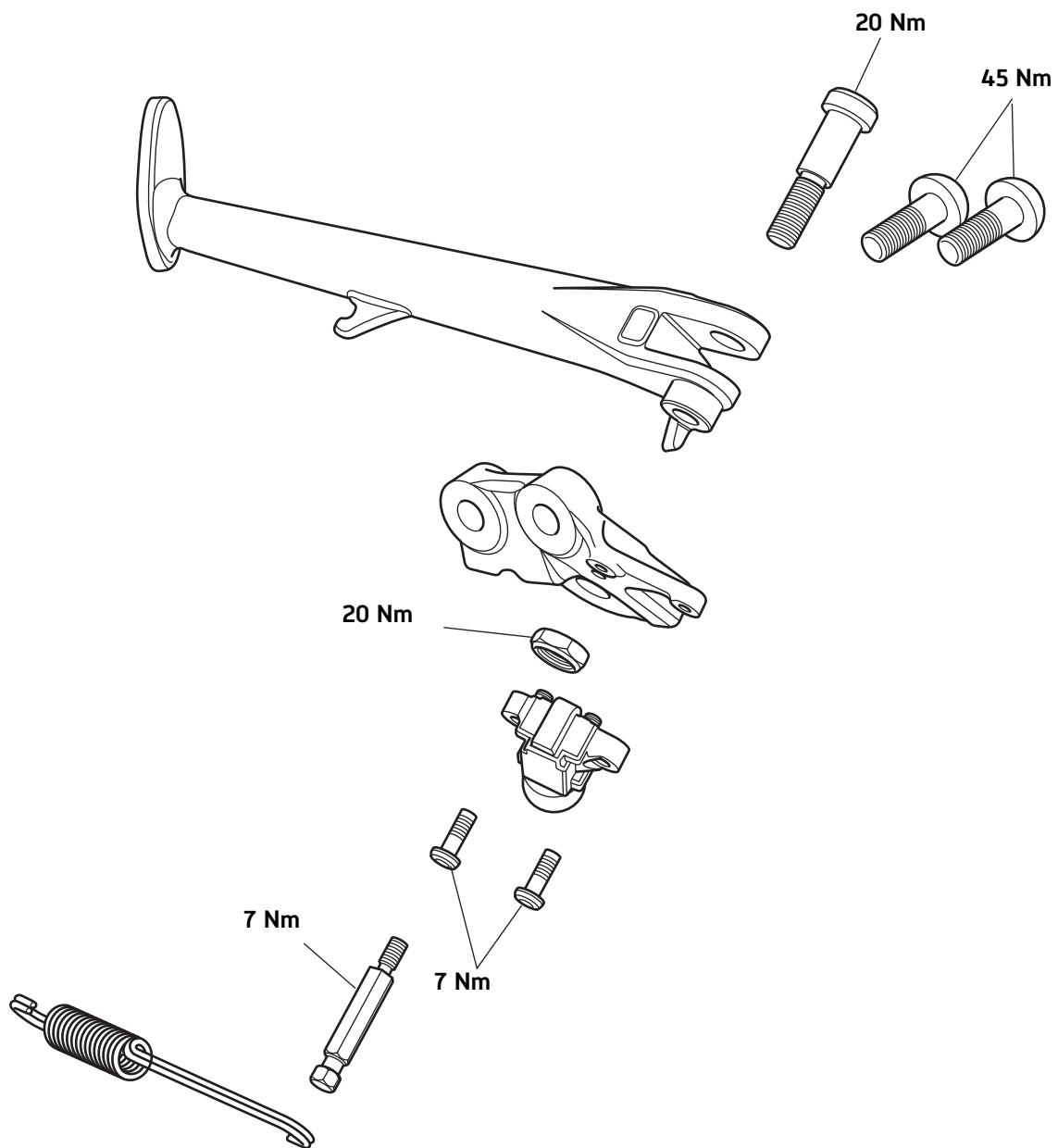


Exploded View - Footrests and Mountings - Street Triple Rx

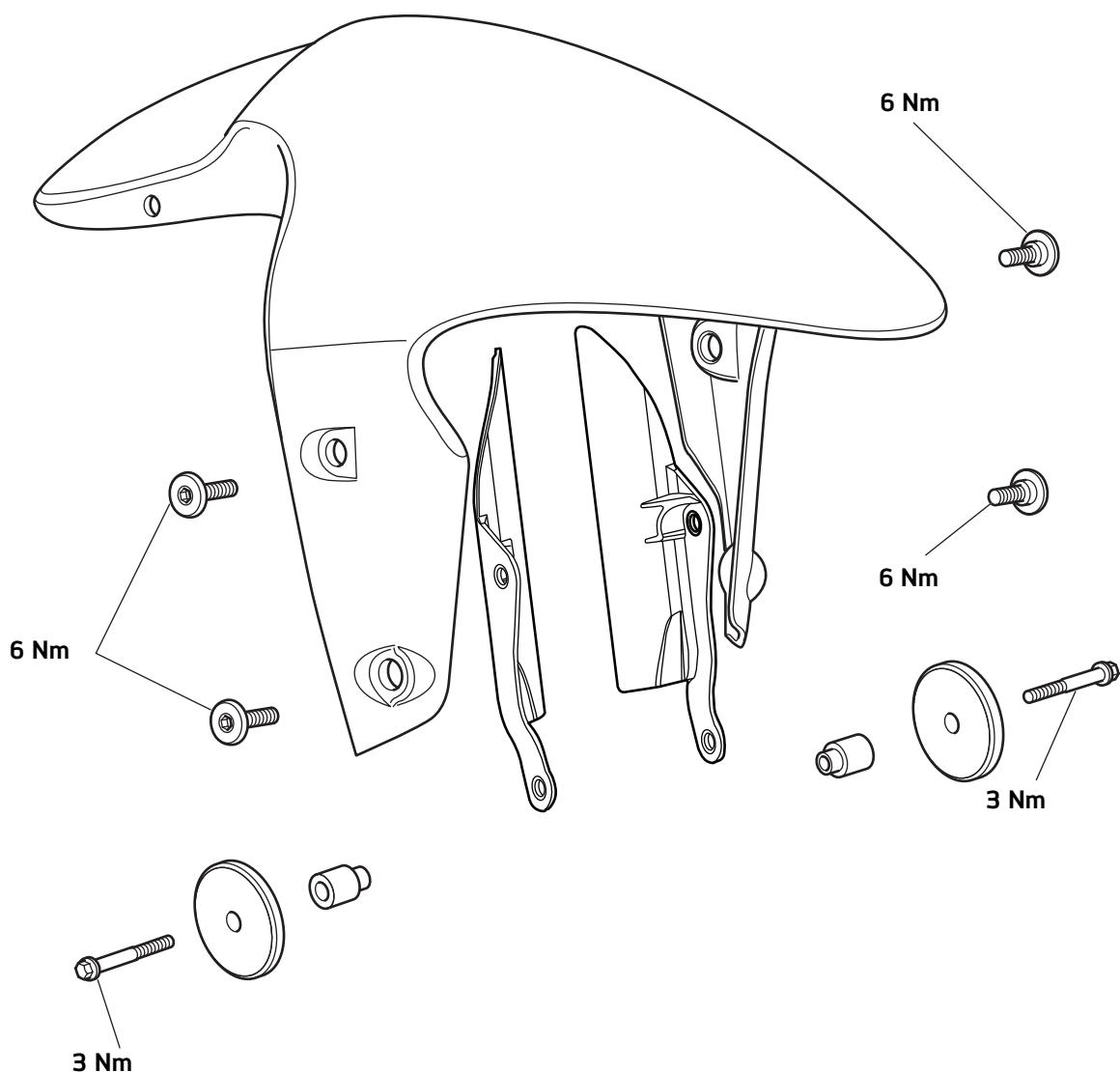


Frame and Bodywork

Exploded View - Side Stand

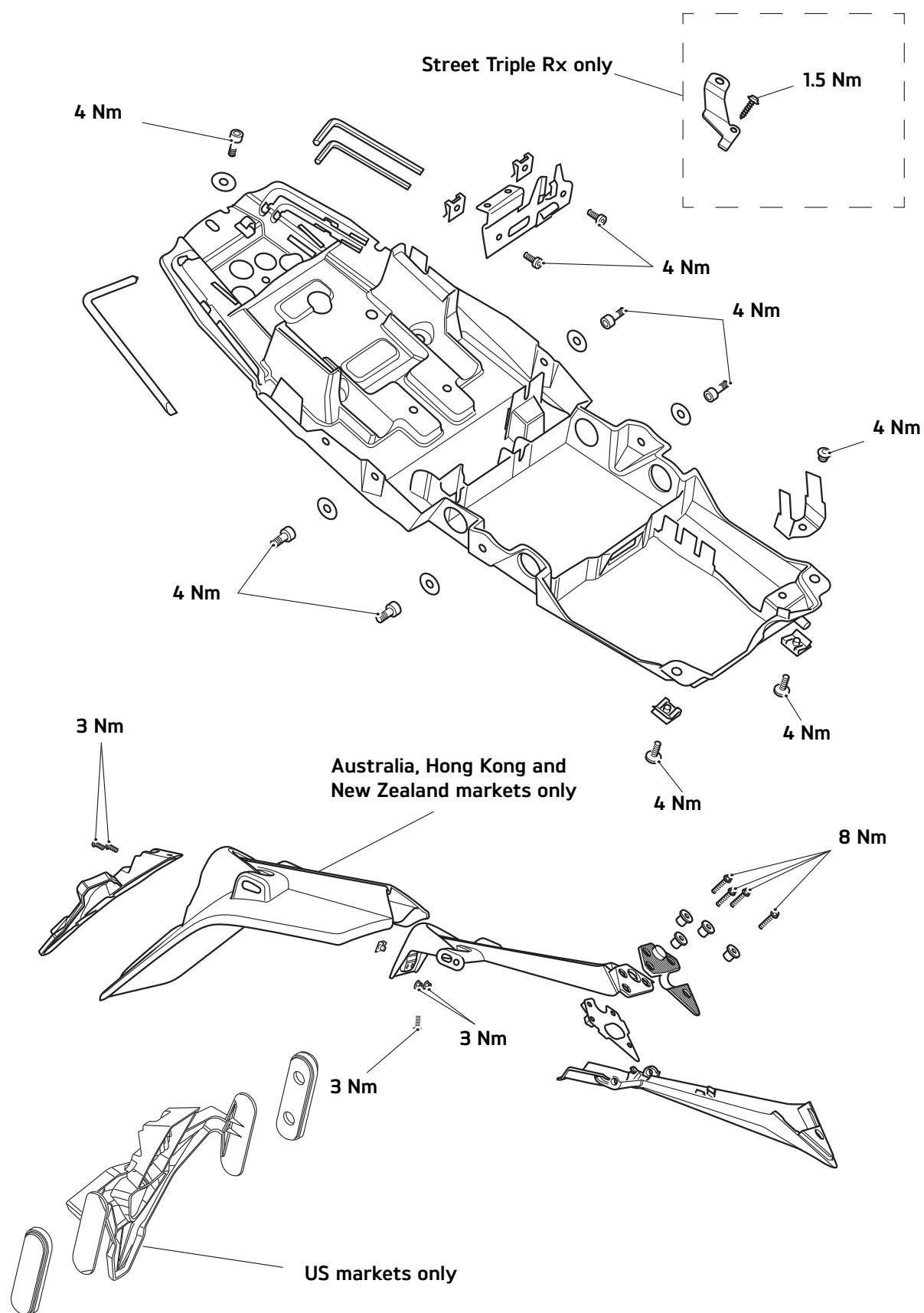


Exploded View - Front Mudguard

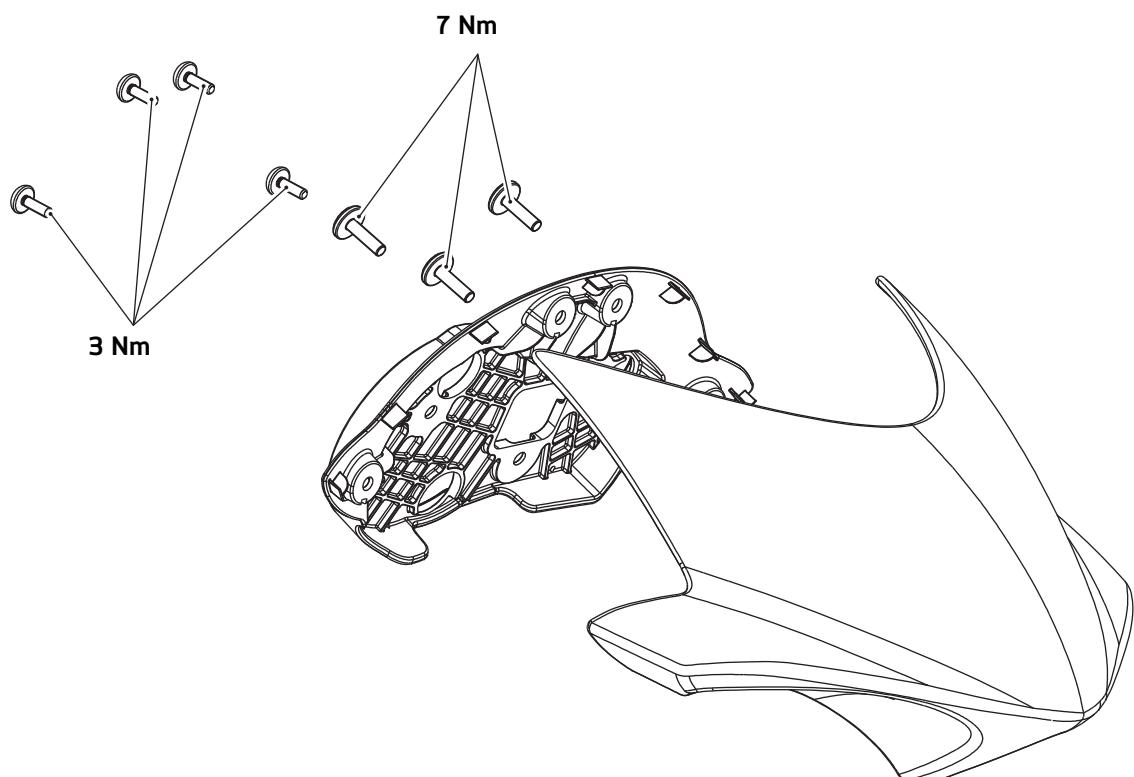


Frame and Bodywork

Exploded View - Rear Mudguard

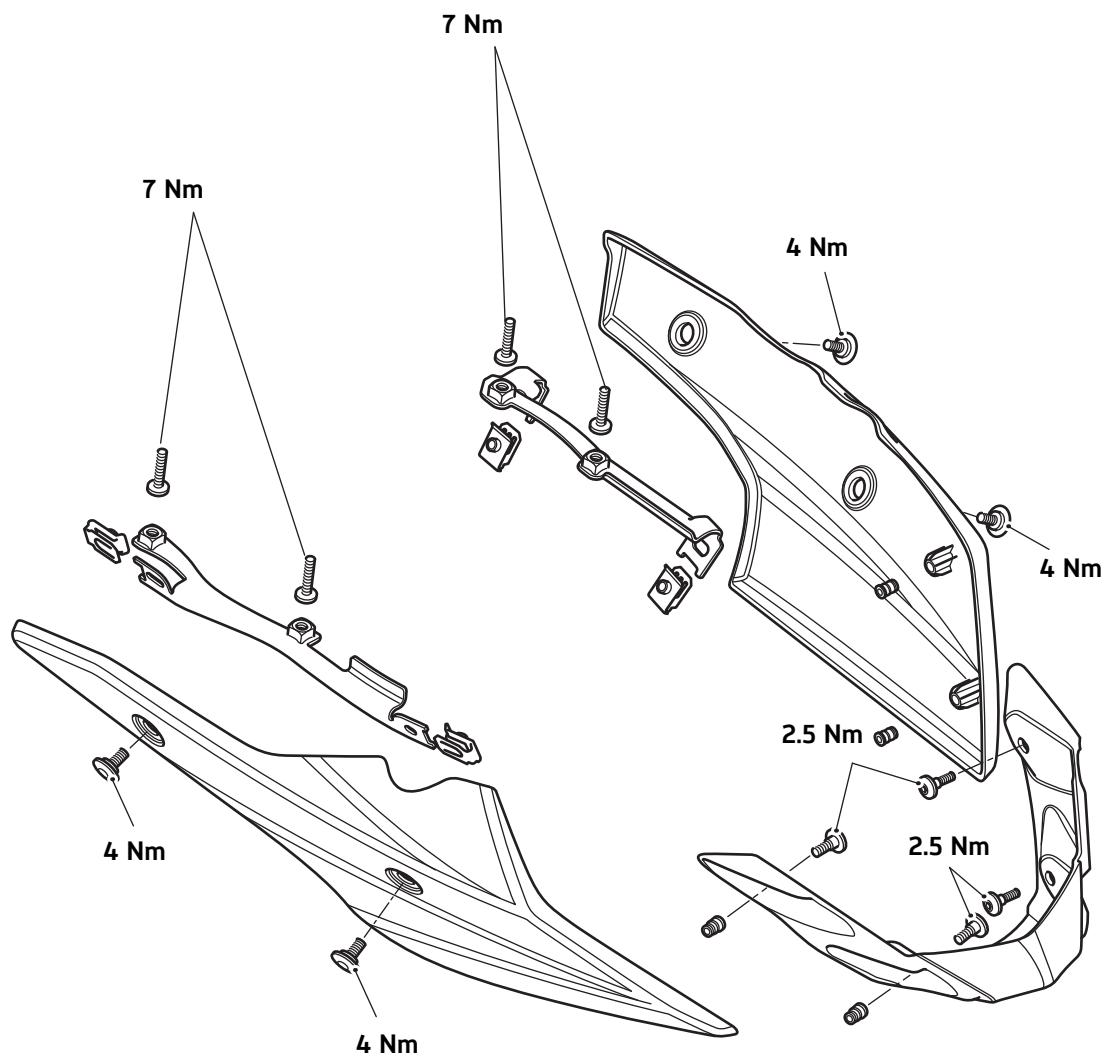


Exploded View - Flyscreen - Street Triple, Street Triple 660 cc and Street Triple R (if fitted) and Street Triple Rx

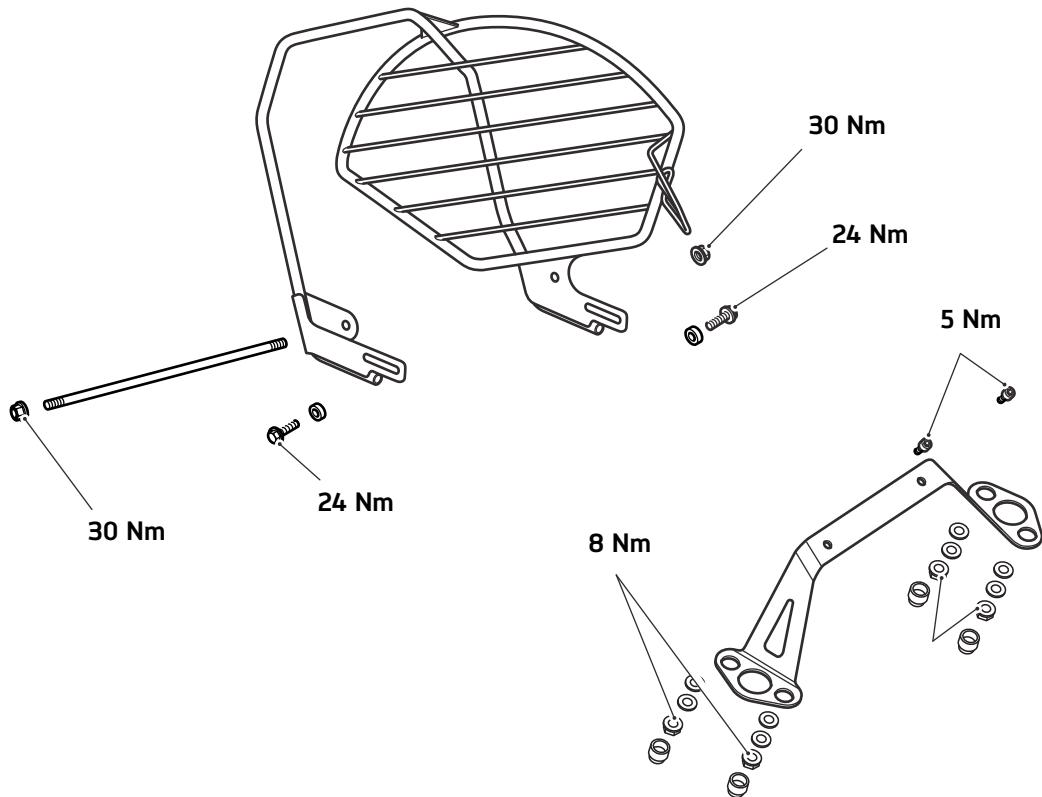


Frame and Bodywork

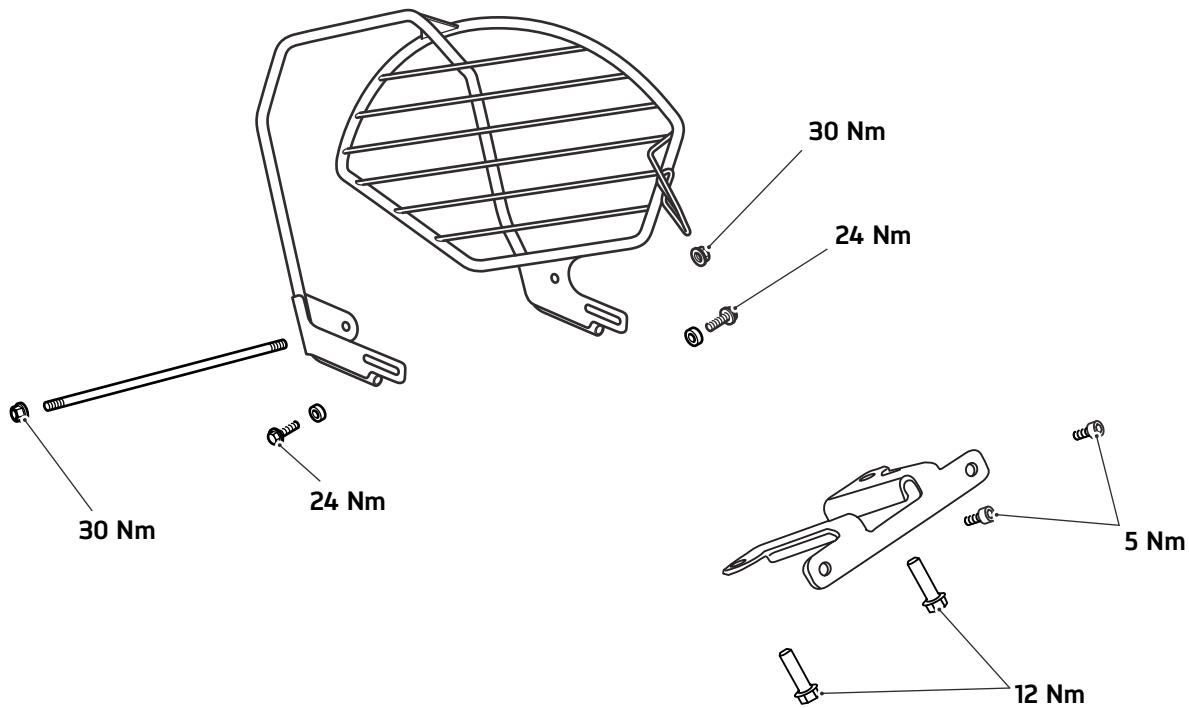
Exploded View - Belly Pan - Street Triple, Street Triple 660 cc and Street Triple R (if fitted) and Street Triple Rx



Exploded View - Sari Guard and Front Licence Plate Bracket - Daytona 675 and Daytona 675 R - Indian Market Only



Exploded View - Sari Guard and Front Licence Plate Bracket - Street Triple - Indian Market Only



Frame and Bodywork

Rider's Seat - Daytona 675, Daytona 675 R and Street Triple Rx

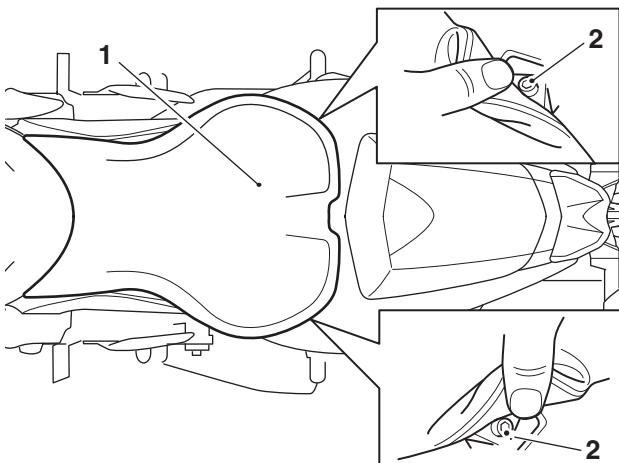
Removal



Caution

To prevent damage to the seat and its cover, care must be taken not to drop the seat. Do not lean the seat against the motorcycle or a wall as it may fall. Instead, place the seat, with the seat cover facing up, on a flat surface which is covered with a soft cloth.

To remove the seat, remove the fixings located beneath the seat's padding, as shown in the illustration below. Slide the seat rearwards for complete removal from the motorcycle.



1. Rider's seat
2. Fixings

Installation

To refit the seat, engage the seat's tongue under the fuel tank, fit and tighten the fixings to **9 Nm**.



Warning

To prevent detachment of the seat during riding, after fitting always grasp the seat and pull firmly upwards. If the seat is not correctly secured it will detach from the lock. A loose or detached seat could cause loss of motorcycle control and an accident.

Pillion Seat - Daytona 675, Daytona 675 R and Street Triple Rx only

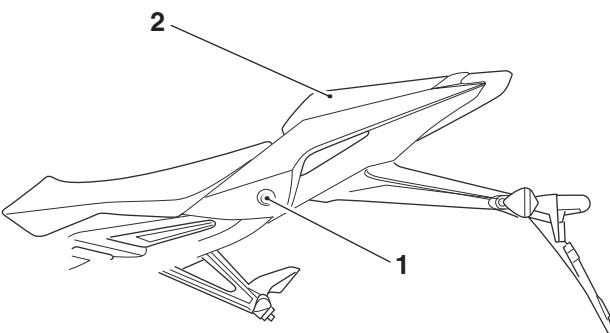
Removal



Caution

To prevent damage to the seat and its cover, care must be taken not to drop the seat. Do not lean the seat against the motorcycle or a wall as it may fall. Instead, place the seat, with the seat cover facing up, on a flat surface which is covered with a soft cloth.

The seat lock is located on the left hand side of the rear bodywork. To remove the pillion seat, insert the ignition key into the seat lock and turn it anticlockwise while pressing down on the rear of the seat. This will release the seat from its lock and allow it to be slid forwards for complete removal from the motorcycle.



- chtr_3
1. Seat lock
 2. Pillion seat

Installation

To refit the seat, engage the seat's tongue under its mounting on the subframe's front bridge. Press down at the rear of the seat to engage it in the seat lock. An audible click can be heard when the seat is fully engaged in its lock.



Warning

To prevent detachment of the seat during riding, after fitting always grasp the seat and pull firmly upwards. If the seat is not correctly secured it will detach from the lock. A loose or detached seat could cause loss of motorcycle control and an accident.

Seat - Street Triple, Street Triple 660 cc and Street Triple R

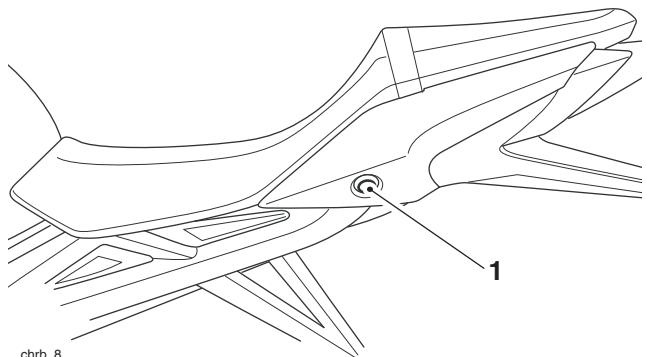
Removal



Caution

To prevent damage to the seat and its cover, care must be taken not to drop the seat. Do not lean the seat against the motorcycle or a wall as it may fall. Instead, place the seat, with the seat cover facing up, on a flat surface which is covered with a soft cloth.

The seat lock is located on the left hand side of the rear bodywork. To remove the seat, insert the ignition key into the seat lock and turn it anticlockwise while pressing down on the rear of the seat. This will release the seat from its lock and allow it to be slid rearwards for complete removal from the motorcycle.



1. Seat lock

Frame and Bodywork

Installation

To refit the seat, engage the seat's tongue under the fuel tank and press down at the rear to engage in the seat lock.

An audible click can be heard when the seat is fully engaged in its lock.



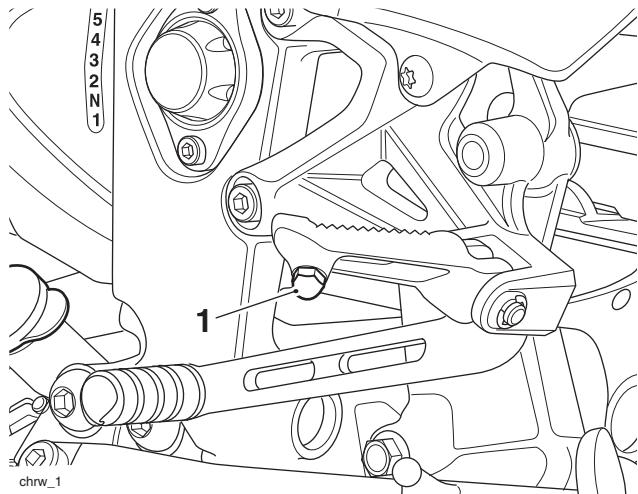
Warning

To prevent detachment of the seat during riding, after fitting always grasp the seat and pull firmly upwards. If the seat is not correctly secured it will detach from the lock. A loose or detached seat could cause loss of motorcycle control and an accident.

Frame, Footrests and Fixings

Inspection

1. Inspect the frame, footrests and fairings for damage, cracks, chafing and other dangerous conditions. Check fairing and frame fixings for security.
2. Inspect the bank angle indicators on the rider's footrests for wear. The bank angle indicators are worn out when:
 - **5 mm** of the bank indicator remains for all models except Street Triple and Street Triple 660 cc.
 - **15 mm** of the bank angle indicator remains for the Street Triple and Street Triple 660 cc.



1. Bank angle indicator (Street Triple R shown)



Warning

Use of a motorcycle with bank angle indicators worn beyond the maximum limit will allow the motorcycle to be banked to an unsafe angle.

Banking to an unsafe angle may cause instability, loss of control and an accident causing injury or death.



Warning

If the motorcycle is involved in an accident or collision it must be taken to an authorised Triumph dealer for repair or inspection.

Any accident can cause damage to the motorcycle which, if not correctly repaired, may cause another accident which may result in injury or death.



Warning

The frame must not be modified as any modification to the frame such as welding or drilling may weaken the frame resulting in an accident.

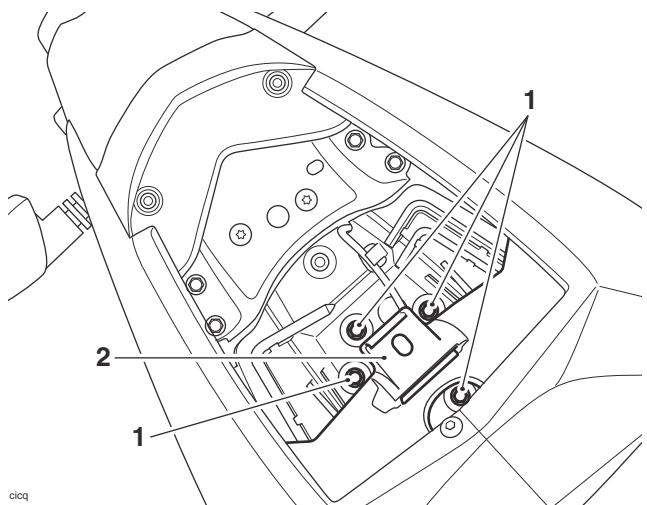
Rear Panel - Daytona 675, Daytona 675 R and Street Triple Rx

Removal

1. Remove the seats (see page 16-22).
2. Disconnect the battery, negative (black) lead first.
3. Disconnect the multiplug for the rear indicators.

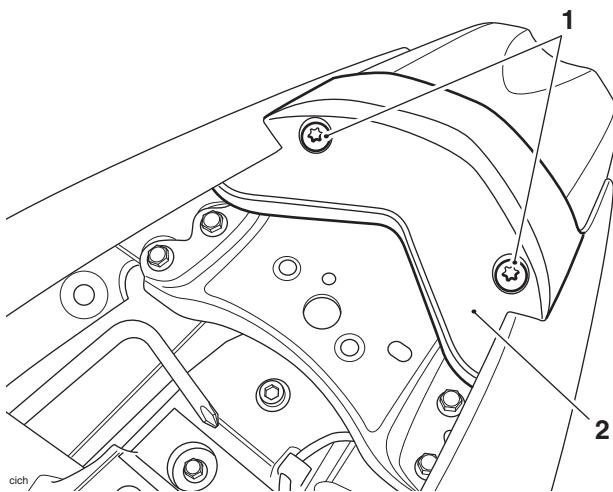
Note:

- Note the position and orientation of the mounting plate and the seal of the rear indicator hanger for installation.
 - Note the routing of the rear indicator harness for installation.
4. Release the four fixings and remove the rear indicator hanger.



Frame and Bodywork

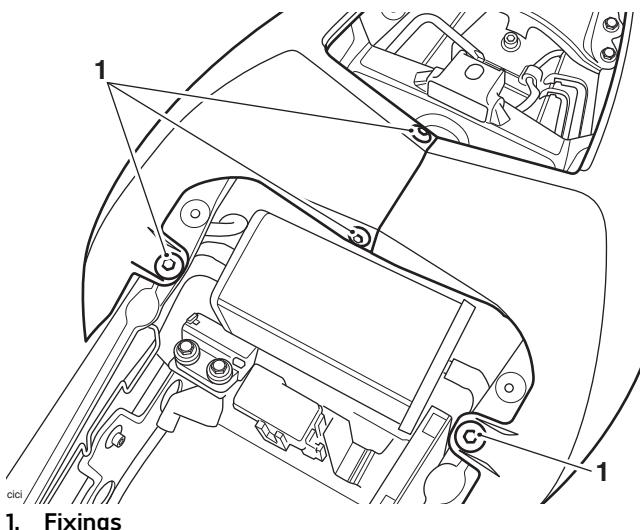
5. Release the two fixings and manoeuvre the upper panel off the motorcycle.



1. Fixings
2. Upper panel

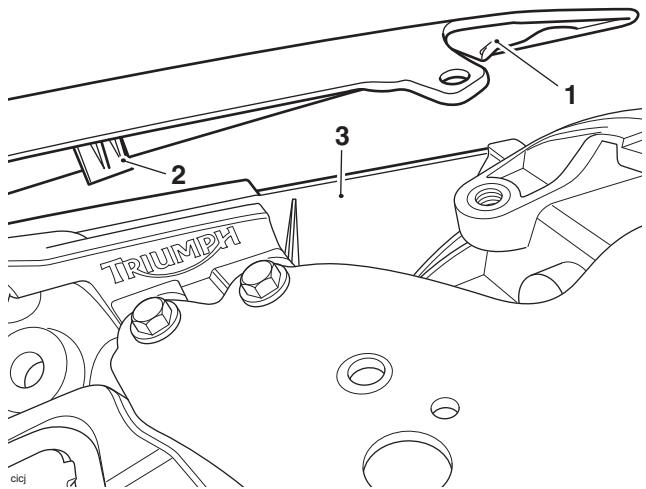
Note:

- Note the position and orientation of the support brackets located on the rear panel front fixings for installation.
6. Remove the four fixings securing the rear panels to the frame. Collect the support brackets located under the front fixings.



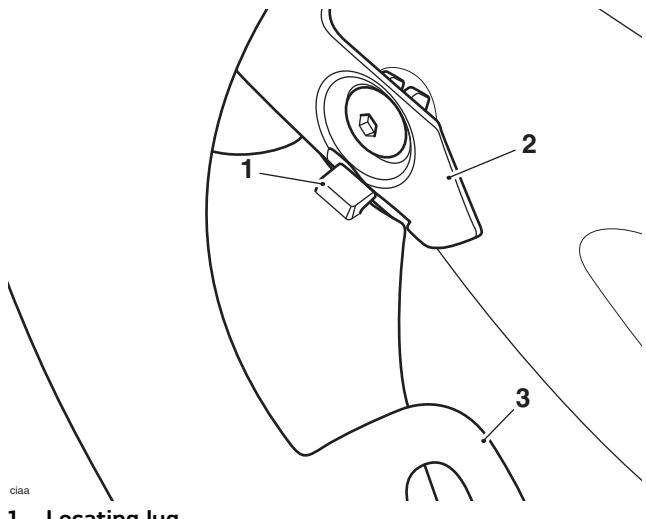
1. Fixings

7. Gently slide the right hand panel rearwards to release the rear locating lug from the rear light.
8. Gently raise the rear of the panel until the middle locating lug is released from the lower panel.



1. Rear locating lug
2. Middle locating lug
3. Lower panel

9. Rotate the panel away from the motorcycle to release the front locating lug from the lower panel.



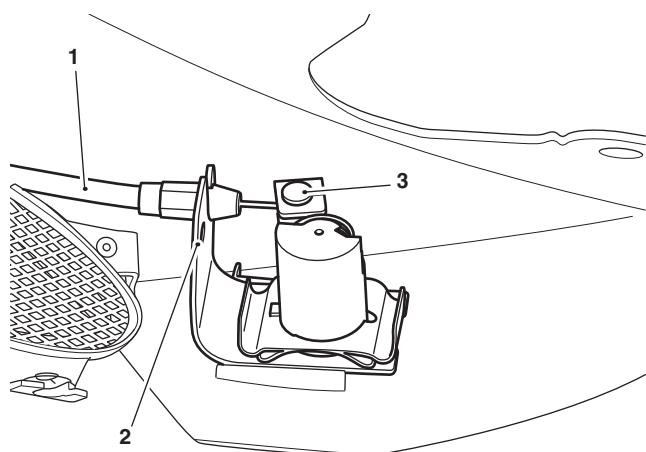
1. Locating lug
2. Lower panel
3. Rear panel

10. Repeat steps 7 to 9 for the other rear panel.

Note:

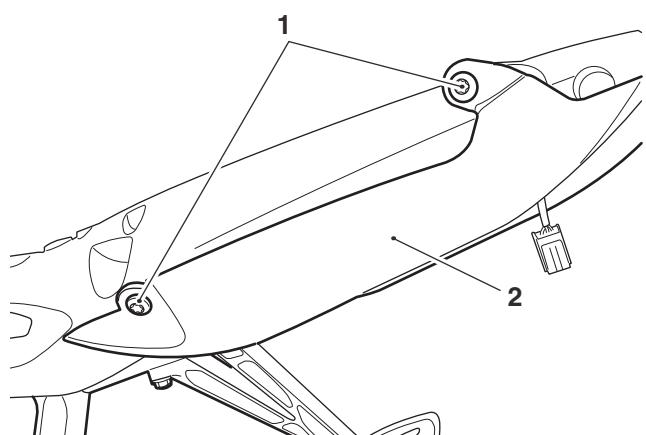
- When removing the left hand rear panel, the cable for the seat lock must be detached from the lock.

11. **For the left hand rear panel only:** Detach the seat lock's outer cable from its bracket. Turn the inner cable to align with the slot in the lock lever and detach the cable.



- ciby
1. Outer cable
 2. Bracket
 3. Inner cable

12. Release the four fixings and detach the lower panel from the frame.

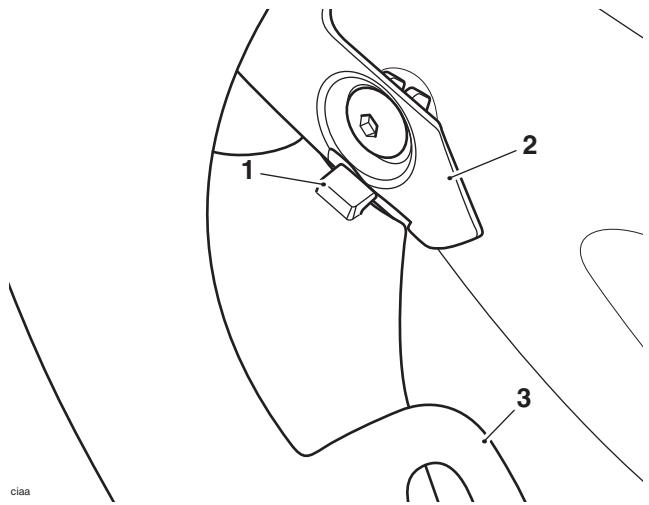


- ciaa
1. Fixings (left hand shown)
 2. Lower panel

13. Disconnect the multiplug for the rear light and remove the lower panel.

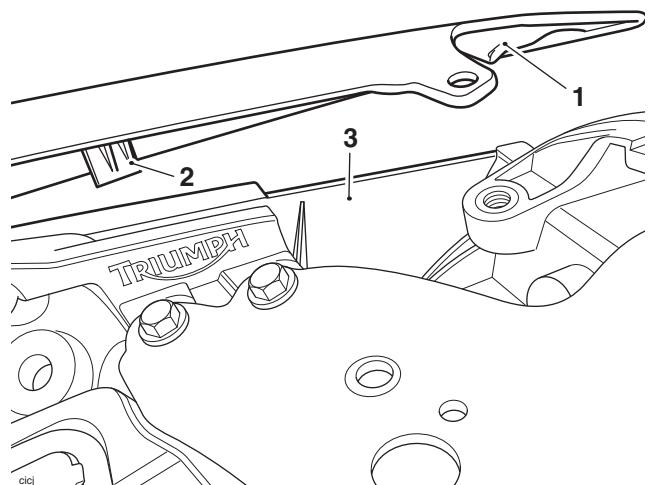
Installation

1. Connect the multiplug for the rear light to the main harness.
2. Fit the lower panel to the frame and tighten its fixings to **3 Nm**.
3. Align the front locating lug to its slot in the lower panel.



- cicj
1. Front locating lug
 2. Lower panel
 3. Rear panel

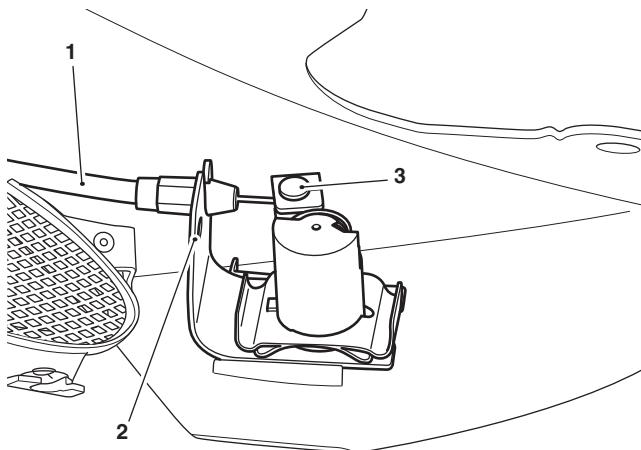
4. Position the middle locating lug over the lower panel then slide the rear panel forwards. Ensure that the rear locating lug engages into the rear light.



- cicj
1. Rear locating lug
 2. Middle locating lug
 3. Lower panel

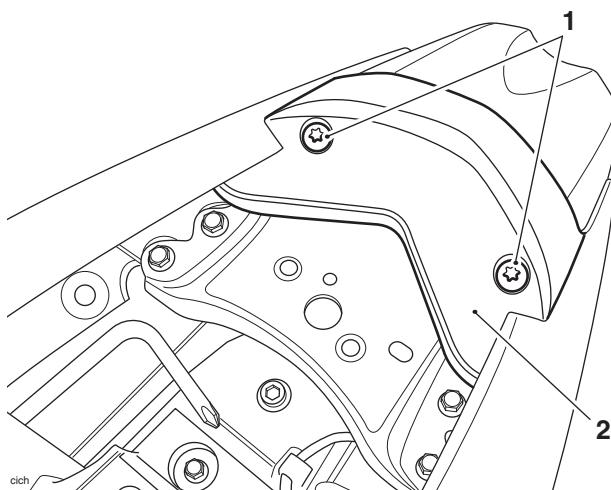
Frame and Bodywork

5. **For the left hand rear panel only:** Fit the inner cable to the lock lever and the outer cable to its bracket.



- 1. Outer cable
2. Bracket
3. Inner cable**

6. Repeat steps 3 and 4 for the left hand rear panel.
7. Position the support brackets as noted for removal and secure both of the rear panels with their fixings. Tighten to **3 Nm**.
8. Manoeuvre the upper panel between the rear panels, secure with its fixings and tighten to **3 Nm** as shown below.



- 1. Fixings
2. Upper panel**

Note:

- Route the rear indicator harness as noted for removal.

9. With the mounting plate and the seal positioned as noted for removal, fit the rear indicator hanger and tighten its fixings to **8 Nm**.
10. Connect the multiplug for the rear indicators.
11. Connect the battery, positive (red) lead first. Tighten the battery terminals to **4.5 Nm**.
12. Check the operation of all the rear lights and, if necessary, rectify any faults.
13. Refit the seat (see page 16-22).

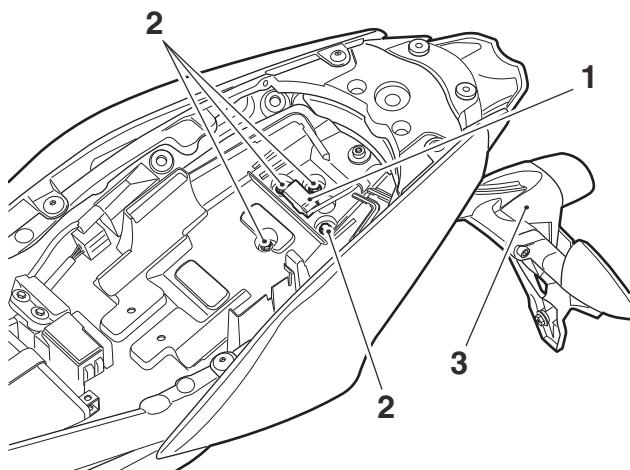
Rear Panel - Street Triple, Street Triple 660 cc and Street Triple R

Removal

1. Remove the seat (see page 16-23).
2. Disconnect the battery, negative (black) lead first.
3. Disconnect the multiplug for the rear indicators.

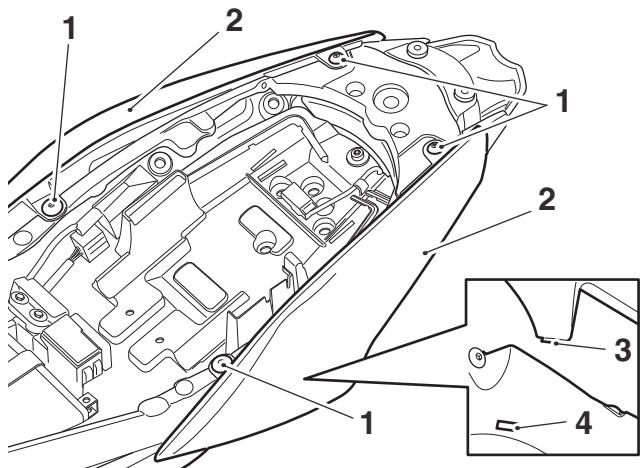
Note:

- Note the position and orientation of the mounting plate and the seal of the rear indicator hanger for installation.
 - Note the routing of the rear indicator harness for installation.
4. Release the four fixings and remove the rear indicator hanger.



1. Multiplug, rear indicators
2. Fixings
3. Rear indicator hanger

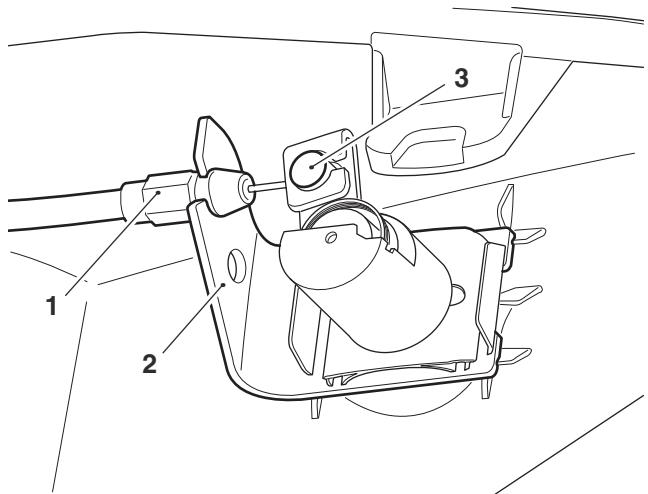
5. Release the fixings and gently pull the rear panel outwards to release its locating lug from the lower panel.



1. Fixings
2. Rear panels
3. Locating lug
4. Slot, for locating lug

Note:

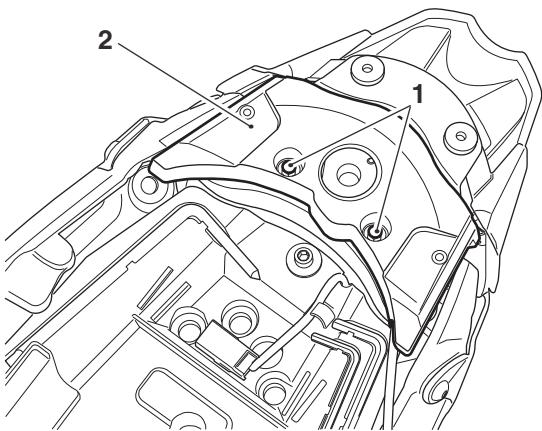
- When removing the left hand rear panel, the cable for the seat lock must be detached from the lock.
6. For the left hand rear panel only: Detach the lock cable from its bracket. Turn the inner cable to align with the slot in the lock lever and detach the cable.



1. Outer cable
2. Bracket
3. Inner cable

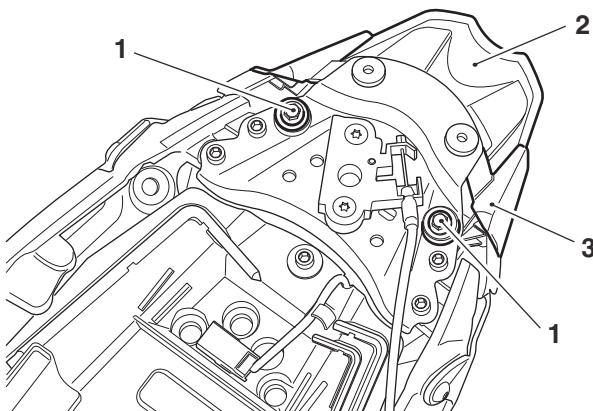
Frame and Bodywork

7. Release the fixings and remove the seat's rear support.
10. Release the four fixings and remove the lower panel from the frame.

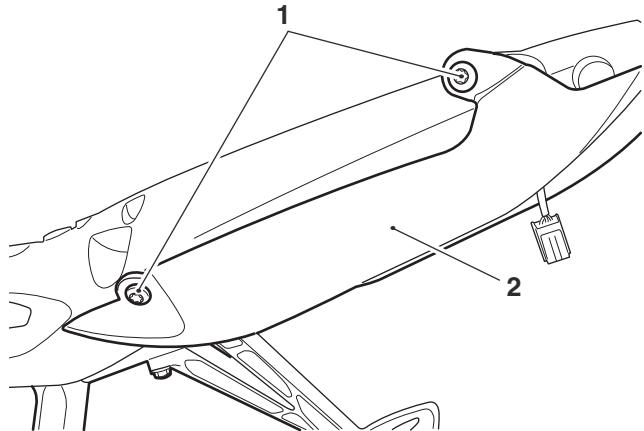


- 1. Fixings**
2. Seat support

8. Release the fixings and detach the rear light, with its moulding, from the frame.



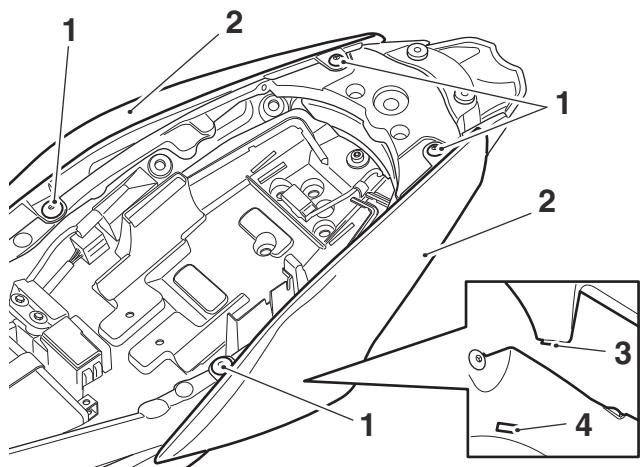
- 1. Fixings**
2. Rear light
3. Moulding
9. Disconnect the multiplug for the rear light and remove the light.



- 1. Fixings (left hand shown)**
2. Lower panel

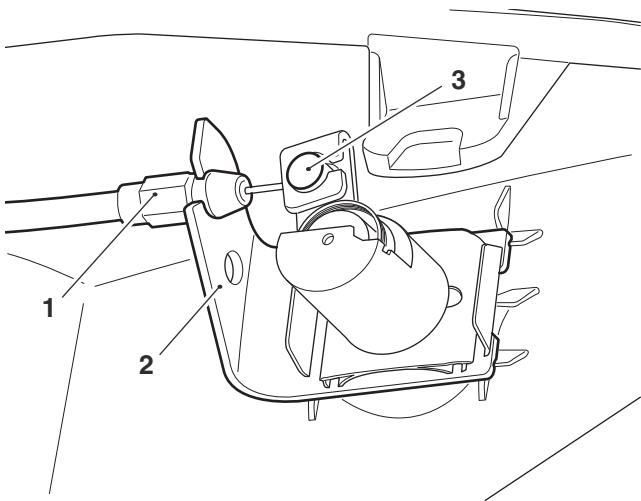
Installation

1. Fit the lower panel to the frame and tighten its fixings to **3 Nm**.
2. Connect the multiplug for the rear light to the main harness.
3. Fit the rear light to the frame and tighten its fixings to **4 Nm**.
4. Fit the seat support and tighten its fixings to **3 Nm**.
5. Fit the right hand rear panel to the frame. Ensure that the locating lug aligns with its slot in the lower panel. Secure with the fixings and tighten its fixings to **3 Nm**.



- 1. Fixings**
2. Rear panels
3. Locating lug
4. Slot, for locating lug

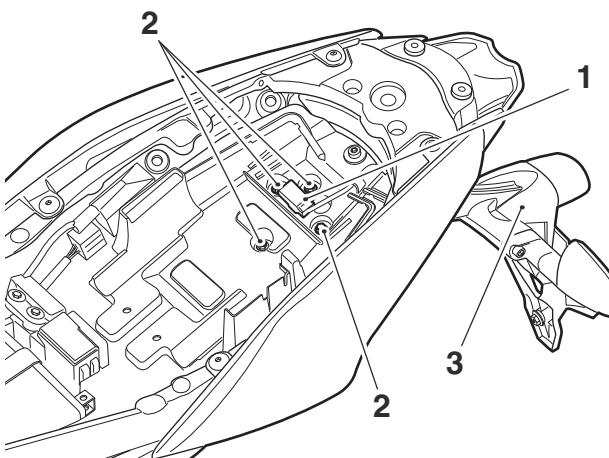
6. **For the left hand rear panel only:** Fit the inner cable to the lock lever and the outer cable to its bracket.



1. Outer cable
2. Bracket
3. Inner cable
7. Repeat step 5 to fit the left hand rear panel.

Note:

- **Route the rear indicator harness as noted for removal.**
8. With the mounting plate and the seal positioned as noted for removal, fit the rear indicator hanger and tighten its fixings to **8 Nm**.
9. Connect the multiplug for the rear indicators.



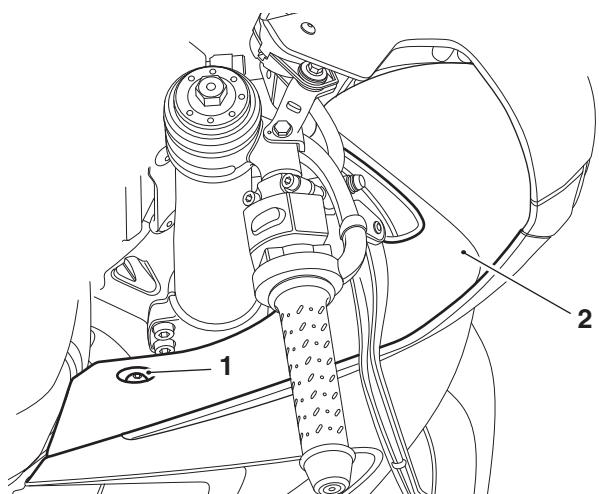
1. Multiplug, rear indicators
2. Fixings
3. Rear indicator hanger
10. Connect the battery, positive (red) lead first. Tighten the battery terminals to **4.5 Nm**.
11. Check the operation of all the rear lights and, if necessary, rectify any faults.
12. Refit the seat (see page 16-24).

Cockpit Infill Panels - Daytona 675 and Daytona 675 R

Removal

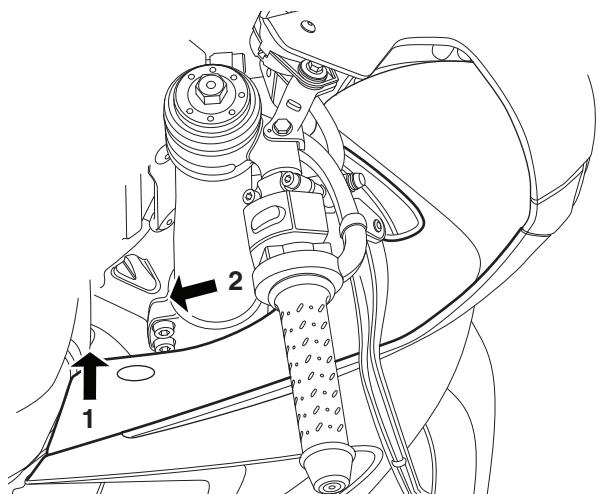
Note:

- **Follow the same procedure for both left and right hand sides.**
1. Remove the rider's seat (see page 16-22).
 2. Disconnect the battery, negative (black) lead first.
 3. Remove the fixing securing the cockpit infill panel.



1. Fixing
2. Cockpit infill panel

4. Lift the rear of the panel up and pull rearwards to release its tangs from the grommets in the rear of the headlight.



1. Lift rear of panel
2. Move rearwards

Frame and Bodywork

Installation

1. Installation is the reverse of removal noting the following:

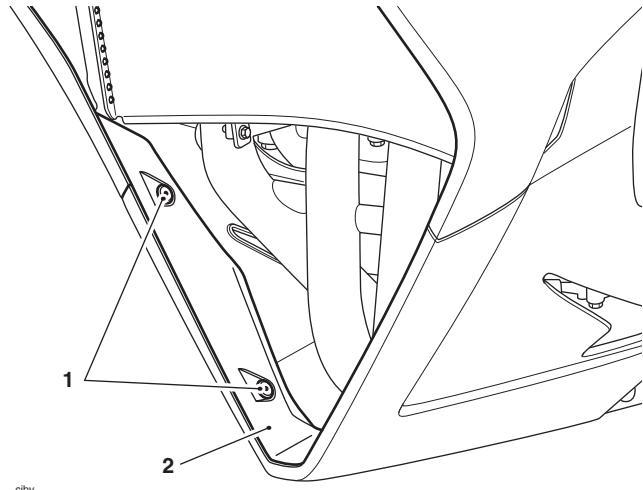
Note:

- Ensure the front locating lugs fully engage into their grommets in the rear of the headlight.
- Tighten the fixing to 3 Nm.
- Reconnect the battery, positive (red) lead first. Tighten the battery terminals to 4.5 Nm.

Radiator Infill Panels - Daytona 675 and Daytona 675 R

Removal

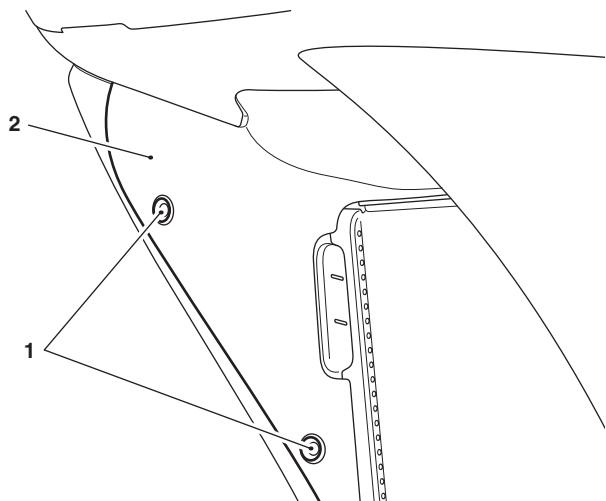
1. Remove the cockpit infill panels (see page 16-31).
2. Remove the four scrivets and remove the lower infill panel.



1. Scrivets (right hand two shown)

2. Lower infill panel

3. Remove the two scrivets and remove the upper infill panel.



1. Scrivets

2. Radiator infill panel (right hand shown)

Installation

1. Installation is the reverse of removal.

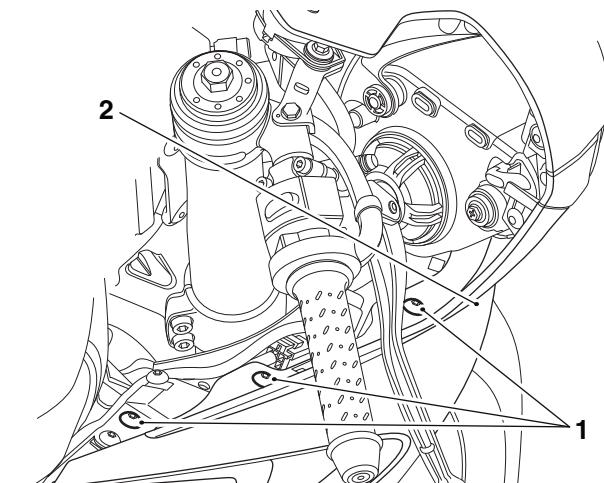
Fairing - Daytona 675 and Daytona 675 R

Removal

Note:

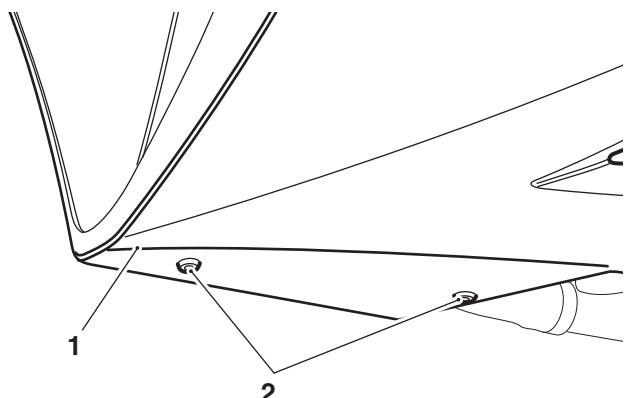
- Follow the same procedure for both left and right hand sides.
- The cockpit does NOT need to be removed in order to remove the fairings.

1. Remove the rider's seat (see page 16-22).
2. Disconnect the battery, negative (black) lead first.
3. Remove the cockpit infill panels (see page 16-31).
4. Remove radiator's upper and lower infill panels (see page 16-32).
5. Remove the three fixings securing the fairing to the cockpit.



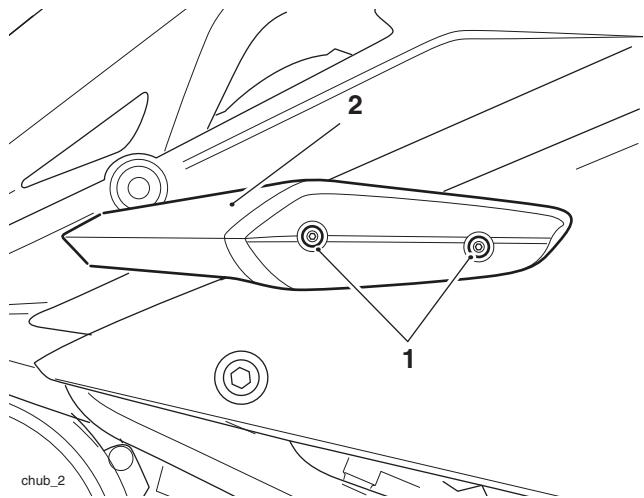
1. Fixings
2. Fairing

6. Remove the two fixings securing the fairing lower halves to each other.



1. Fairing
2. Fixings

7. If fitted, release the fixings and remove the frame protectors, one each side.

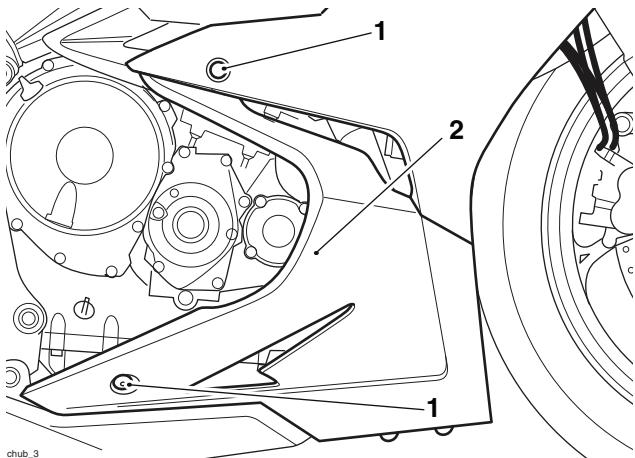


1. Fixings
2. Frame protector

8. Remove the two fixings securing the fairing to the frame.

Frame and Bodywork

9. Detach the fairing stud from the frame grommet.



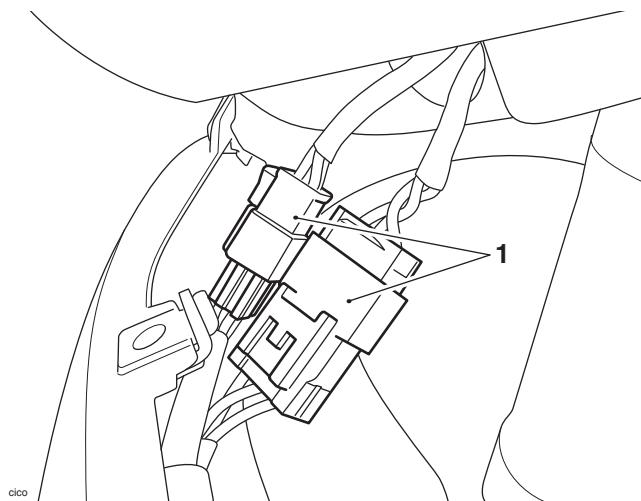
1. Fixings

2. Fairing stud/grommet location (one on each fairing)

10. Ease the fairing rearwards and detach it from the cockpit.

Note:

- The alternator rectifier/regulator is mounted to the inside of the left hand fairing.**
11. **Left hand fairing only:** If the left hand fairing is to be removed, disconnect the two multiplugs for the rectifier/regulator from the main harness.



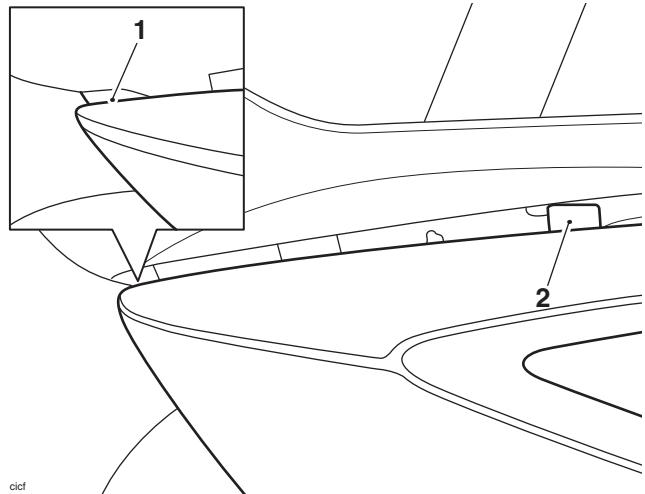
1. Multiplugs

Note:

- Note the routing of the direction indicator harness for installation.**
12. Disconnect the direction indicator connectors and remove the fairing.

Installation

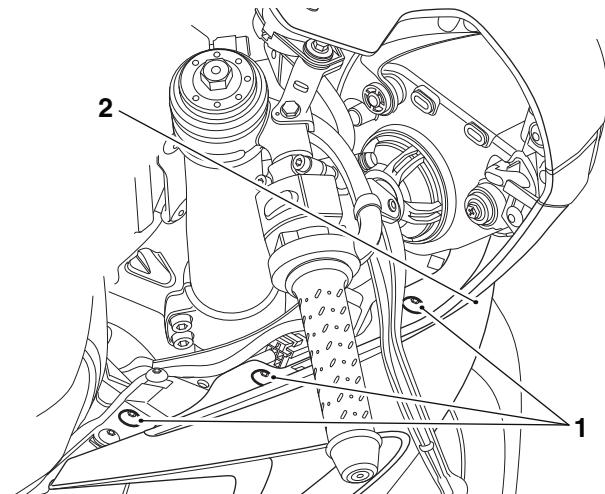
- Route the direction indicator harness as noted for removal and connect to the main harness.
- Left hand fairing only:** Connect the two multiplugs for the regulator/rectifier to the main harness.
- Align the two locating lugs on the fairing to their slots in the cockpit.



1. Front locating lug

2. Rear locating lug

- Slide the fairing forward and align the fairing stud to the frame grommet and refit.
- Refit the fairing to cockpit fixings and tighten to **3 Nm**.



1. Fixings

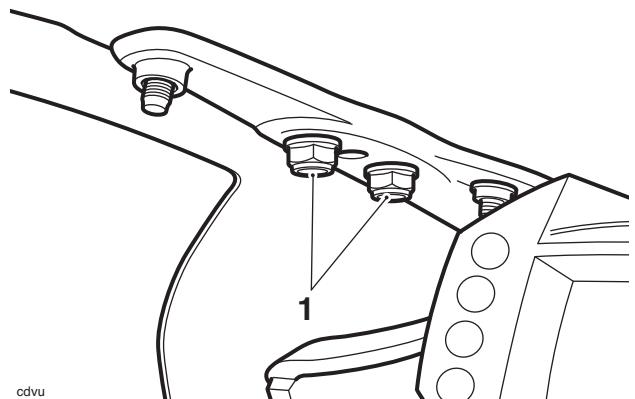
2. Fairing

6. Refit the fairing to frame fixings and tighten to **5 Nm**.
7. Refit the radiator infill panel fixings. (see page 16-32).
8. Refit the cockpit infill panels (see page 16-32).
9. Reconnect the battery, positive (red) lead first. Tighten the battery terminals to **4.5 Nm**.
10. Refit the rider's seat (see page 16-32).

Windscreen - Daytona 675 and Daytona 675 R

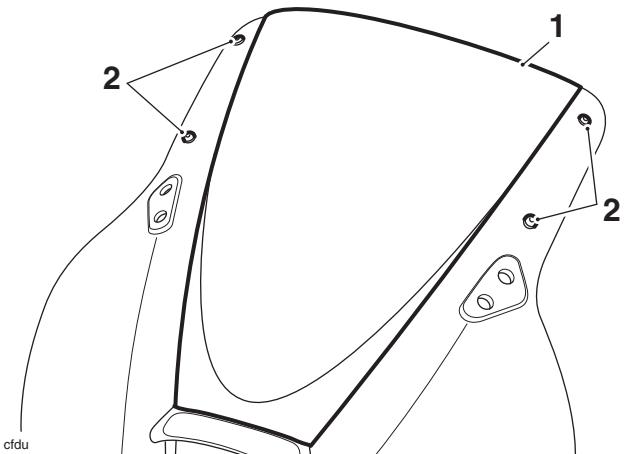
Removal

1. Remove the caps on the mirror securing nuts, release the two nuts and remove the mirror, on both sides.



1. **Mirror fixings**

2. Release the four windscreen fixings.



1. **Windscreen**

2. **Windscreen fixings**

3. Slide the windscreen upwards and to the rear.

Installation

1. Installation is the reverse of removal noting the following:

Note:

- **Tighten the windscreen fixings to 1 Nm.**
- **Tighten the mirror fixings to 8 Nm.** Refit the nut covers.

Frame and Bodywork

Cockpit - Daytona 675 and Daytona 675 R

Removal

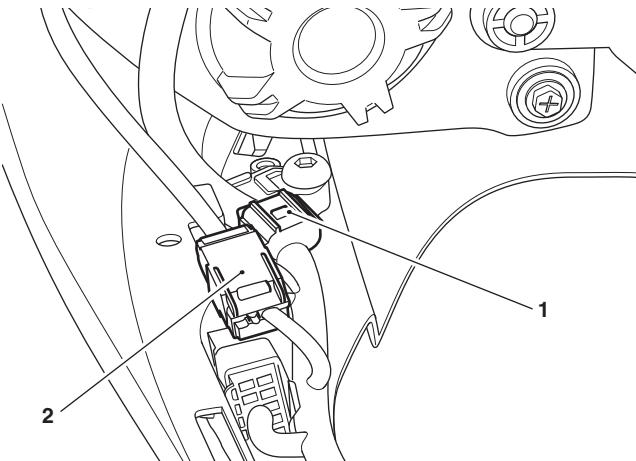
Note:

- The headlight will remain in the cockpit upon removal of the cockpit.

1. Remove the rider's seat (see page 16-22).
2. Disconnect the battery, negative (black) lead first.
3. Remove the cockpit infill panels (see page 16-32).
4. Remove the radiator infill panels (see page 16-32).
5. Remove the fairings (see page 16-33).
6. Remove the windscreens (see page 16-35).

Note:

- Note the routing of the harnesses in the left and right hand sides of the cockpit for installation.
7. Disconnect the multiplugs for the ambient air pressure sensor and the headlight.

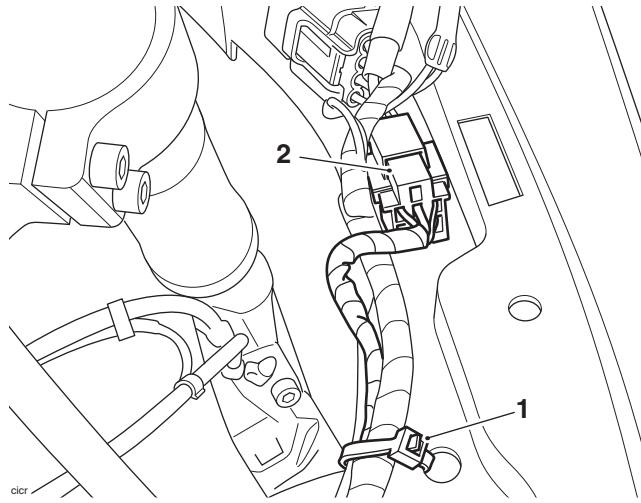


1. Ambient air pressure sensor multiplug
2. Headlight multiplug

Note:

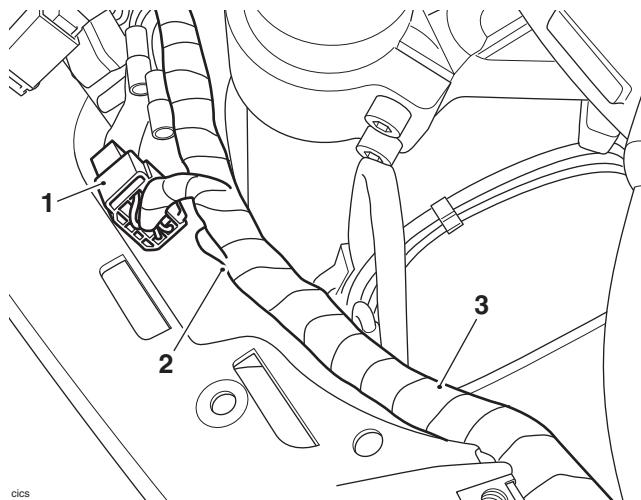
- Note the position of the two cable ties securing the harnesses to the cockpit for installation.

8. Remove the cable ties securing the harnesses to the rear of the left and right hand sides of the cockpit.
9. Detach the harness multiplug from the right hand side of the cockpit.



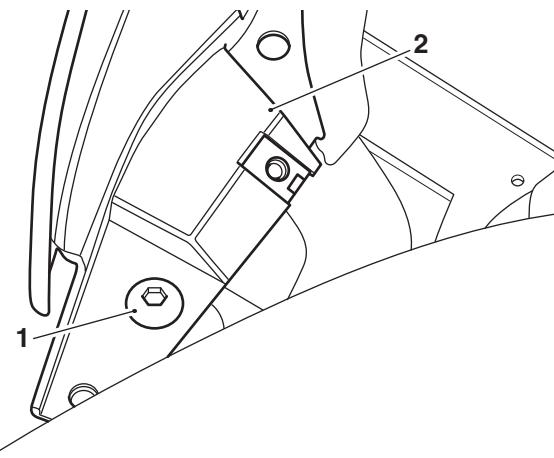
1. Cable tie, right hand side
2. Multiplug

10. Detach the harness multiplug from the left hand side of the cockpit.
11. Detach the harness for the horn from the cockpit.



1. Multiplug
2. Harness for horn
3. Cable tie

12. Remove the fixings securing the rear of the cockpit to the frame, one either side.



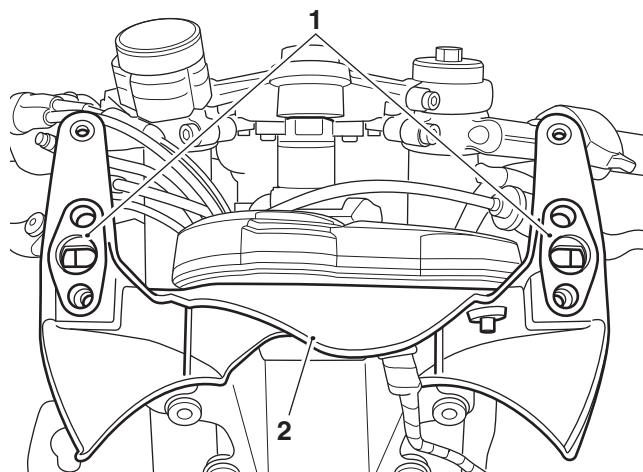
- 1. Fixing**
2. Rear of cockpit (left hand shown)

13. With the aid of an assistant, move the cockpit in a forward direction to disengage the headlight four locating lugs from their holes in the cockpit's subframe.

2. With the aid of an assistant, position the cockpit to the motorcycle.
3. Route the harnesses into the cockpit as noted for removal.
4. Secure the rear of the cockpit with its fixings and tighten to **3 Nm**.
5. Secure the harness for the horn and the two multiplugs to the cockpit.
6. Secure the harnesses to the cockpit with new cable ties as noted for removal.
7. Reconnect the multiplugs for the ambient air pressure sensor and headlight.
8. Refit the windscreen (see page 16-35).
9. Refit the fairings (see page 16-34).
10. Refit the radiator infill panels (see page 16-32).
11. Refit the cockpit infill panels (see page 16-32).
12. Connect the battery, positive (red) lead first. Tighten the battery terminals to **4.5 Nm**.
13. Refit the rider's seat (see page 16-22).

Installation

1. Prior to fitting the cockpit, ensure that the rubber mountings for the mirrors are on the cockpit's subframe.



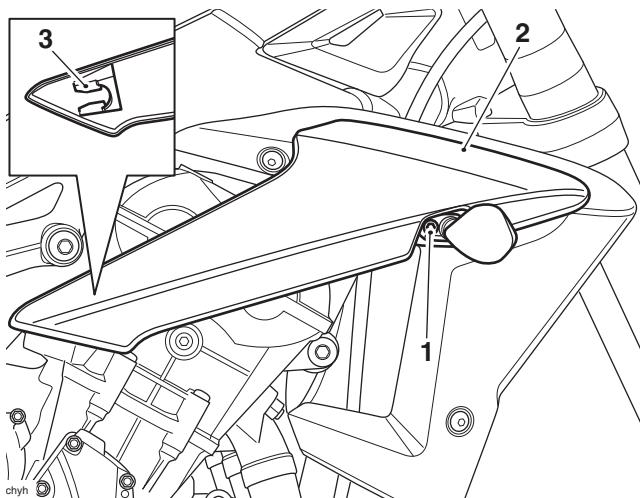
- 1. Rubber mountings**
2. Subframe

Frame and Bodywork

Radiator Cowl - Street Triple, Street Triple 660 cc, Street Triple R and Street Triple Rx

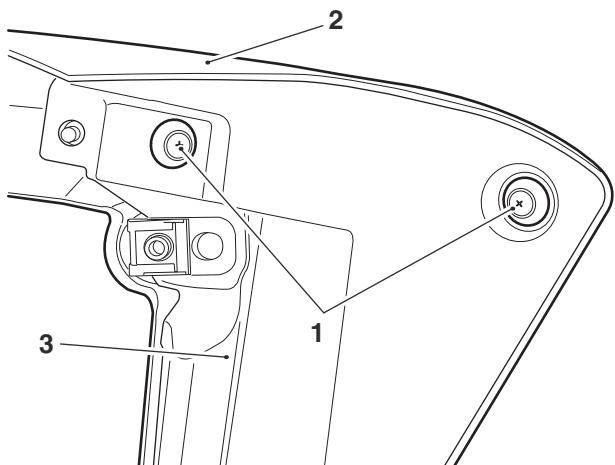
Removal

1. Remove the rider's seat (see page 16-23).
2. Disconnect the battery, negative (black) lead first.
3. Release the fixing securing the direction indicator to the radiator cowl.
4. Slide the outer cowl forward to release its rear mounting and remove the cowl.



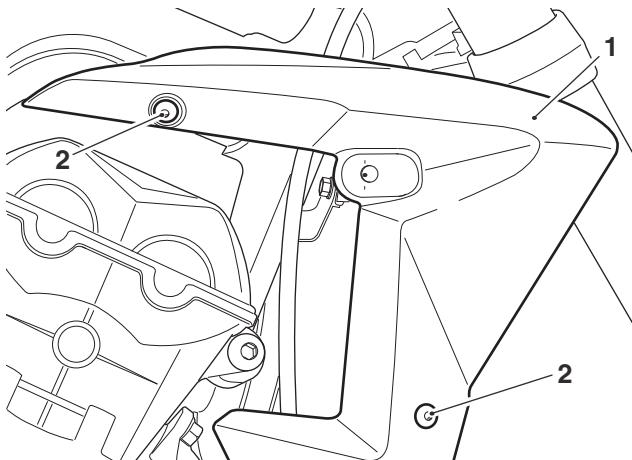
1. Fixing
2. Outer cowl
3. Rear mounting

5. Remove the two scrivets securing the radiator cowl to the inner cowl.



1. Scrivets
2. Radiator cowl
3. Inner cowl

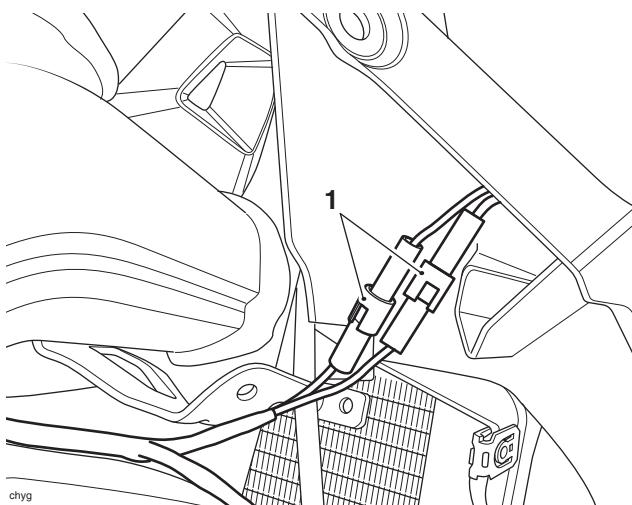
6. Release the two fixings and detach the radiator cowl. Discard the fixings.



1. Radiator cowl
2. Fixings

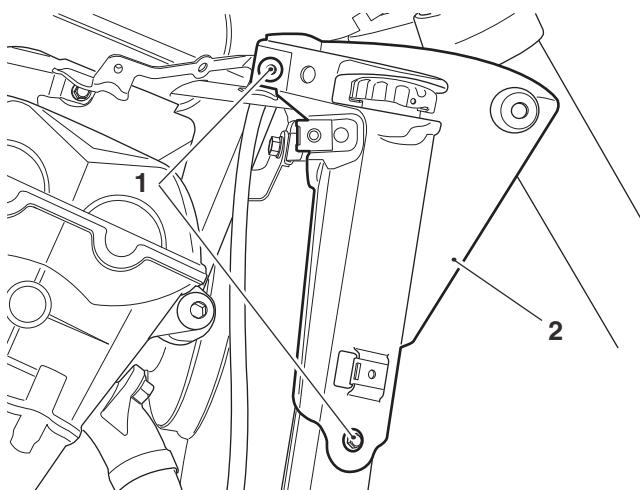
Note:

- Note the routing of the direction indicator harnesses for installation.
- 7. Disconnect the direction indicator from the harness and remove the radiator cowl.



1. Connectors, direction indicator

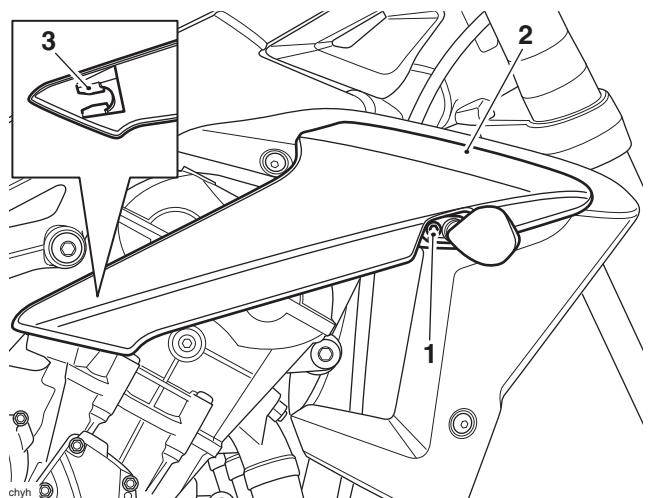
- If necessary, release the two fixings and remove the inner cowl. Discard the upper fixing.



- Fixings**
- Mounting bracket**

Installation

- If removed, fit the inner cowl to the radiator. Tighten the new upper fixing to **4 Nm** and the lower fixing to **7 Nm**.
- Ensure the main harness for the direction indicator is routed as noted for removal and connect it to the direction indicator.
- Fit two new fixings for the radiator cowl and tighten to **4 Nm**.
- Fit the outer cowl's rear mounting onto its mounting bracket.
- Secure the outer cowl and the front indicator to the radiator cowl.



- Fixing**
- Outer cowl**
- Rear mounting**

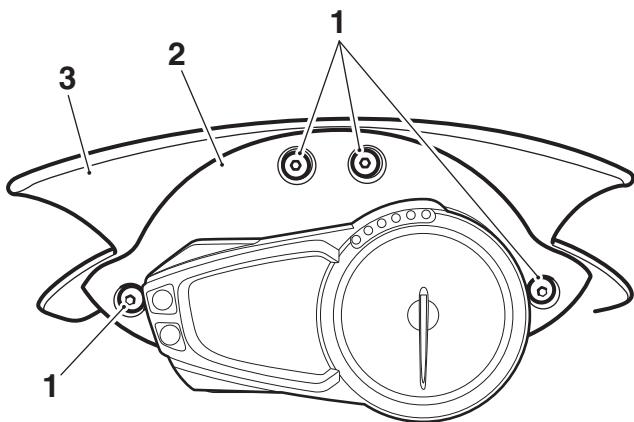
- Reconnect the battery, positive (red) lead first. Tighten the battery terminals to **4.5 Nm**.
- Refit the rider's seat (see page 16-24).

Frame and Bodywork

Flyscreen - Street Triple, Street Triple 660 cc and Street Triple R (if fitted) and Street Triple Rx

Removal

1. Release the four fixings securing the flyscreen to its infill panel.



cgpc_1

1. Fixings
 2. Infill panel
 3. Flyscreen
2. Slide the flyscreen forward to remove from the motorcycle.

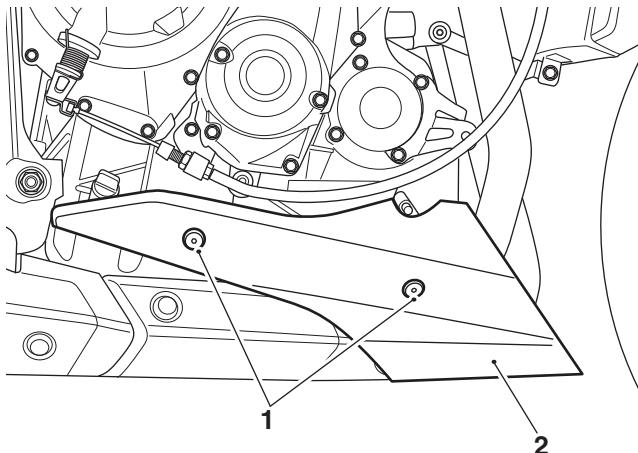
Installation

1. Position the flyscreen to its infill panel and tighten the fixings to **3 Nm**.

Belly Pan - Street Triple, Street Triple 660 cc and Street Triple R (if fitted) and Street Triple Rx

Removal

1. Release the fixings that secure the belly pan to its mountings.



chxu

1. Fixings (right hand shown)
 2. Belly pan
2. Carefully slide the belly pan forward and down to remove from the motorcycle.

Installation

1. Position the belly pan onto its mountings and tighten the fixings to **4 Nm**.

Fuel Cap Lock

Removal



Warning

Petrol (gasoline) is highly flammable and can be explosive under certain conditions. When opening the fuel tank cap always observe all the following items:

Turn the motorcycle ignition switch OFF.

Do not smoke.

Always have a fire extinguisher containing FOAM, CO₂, HALON or POWDER close at hand when handling or draining fuel or fuel systems. Fire extinguishers must also be present in areas where fuel is stored.

Always disconnect the vehicle battery, negative (black) lead first, before carrying out dismantling or draining work on a fuel system.

Whenever petrol (gasoline) is being handled, drained, stored or when fuel systems are being dismantled, make sure the area is well ventilated. All potential forms of ignition must be extinguished or removed (this includes any appliance with a pilot light). Any lead-lamps must be flame-proof and kept clear of any fuel spillage.

Warning notices must be posted at a safe distance from the site of the work to warn others that petrol is being openly handled. The notice must instruct the reader of the precautions which must be taken.

Failure to observe any of the above warnings may lead to a fire hazard which could result in personal injury.



Warning

No one should be permitted to repair components associated with petrol/gasoline without first having specialist training on the fire hazards which may be created by incorrect installation and repair of items associated with petrol/gasoline.

Repairs carried out by untrained personnel could bring about a safety hazard leading to a risk of personal injury.

A new filler cap is supplied without the barrel lock. Therefore, the barrel in the original filler cap will need to be removed and fitted to the filler cap.



Warning

Draining or extraction of petrol/gasoline from a vehicle fuel tank must be carried out in a well ventilated area.

The receptacle used to contain the petrol/gasoline must be more than adequate for the full amount of fuel to be extracted or drained. The receptacle should be clearly marked with its contents, and placed in a safe storage area which meets the requirements of local authority regulations.

When petrol/gasoline has been extracted or drained from a fuel tank, the precautions governing naked lights and ignition sources should be maintained.

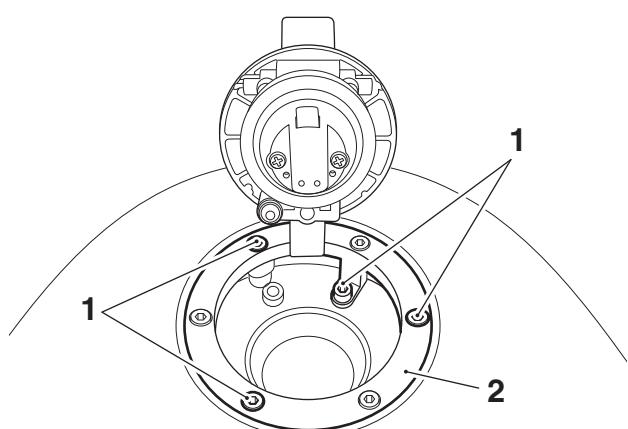
Failure to observe any of the above warnings could bring about a safety hazard leading to a risk of personal injury.



Warning

Never drain fuel from the tank using non-approved, non-professional standard fuel handling equipment. A fire causing destruction of property and injury to persons may result from use of non-approved fuel handling equipment.

1. Remove the fuel tank (see page 10-112).
2. Drain the fuel tank into a suitable fuel proof container.
3. Open the fuel cap on the original fuel tank.
4. Remove the screws shown in the illustration below, then remove the fuel filler cap.



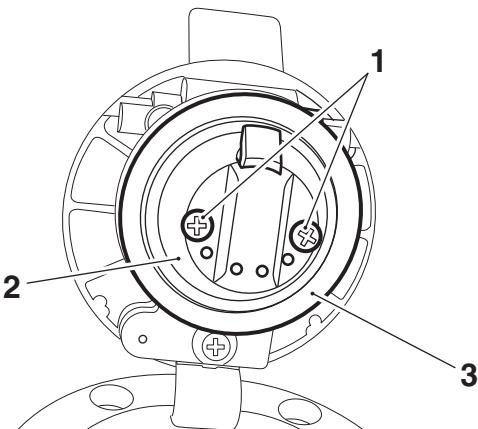
cfls_1

1. Screws
2. Filler cap

Frame and Bodywork

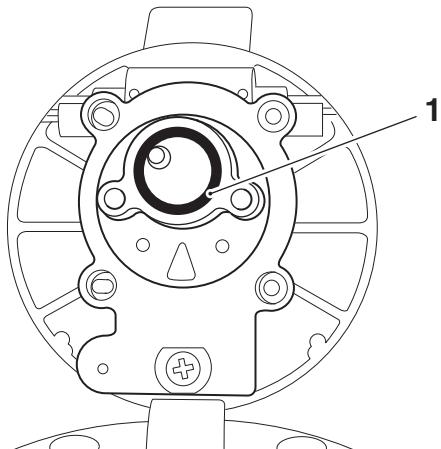
Note:

- When removing the lock housing and sealing ring, the four sealing ring springs will become loose.
 - Note the position and orientation of the lock housing, sealing ring and springs for installation.
5. Remove the screws, then carefully remove the lock housing and sealing ring from the fuel cap and collect the four springs.



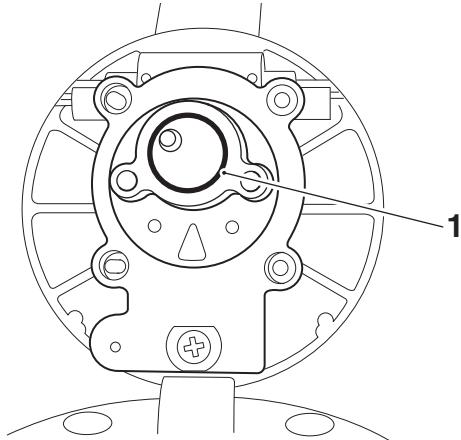
- Screws
- Lock housing
- Sealing ring

6. Remove the O-ring from the fuel cap.



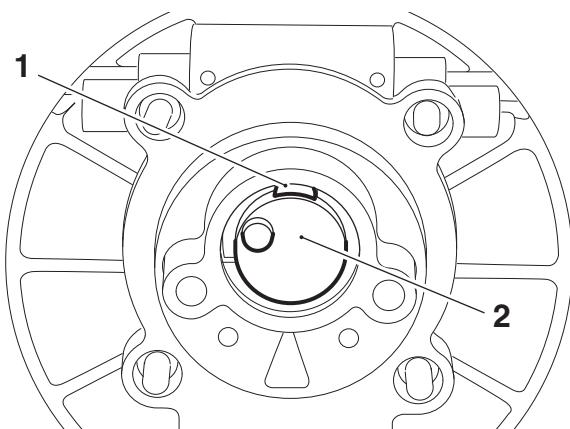
- O-ring

7. Remove the two washers (one washer is behind the other).



1. Washers

8. Using a suitable flat blade screwdriver, release the locking device for the barrel lock and push the barrel out of the fuel cap.

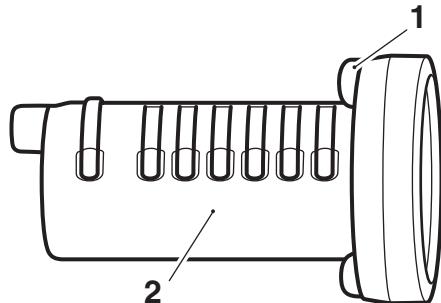


- Locking device
- Barrel lock

9. If still attached, remove the barrel lock seal.

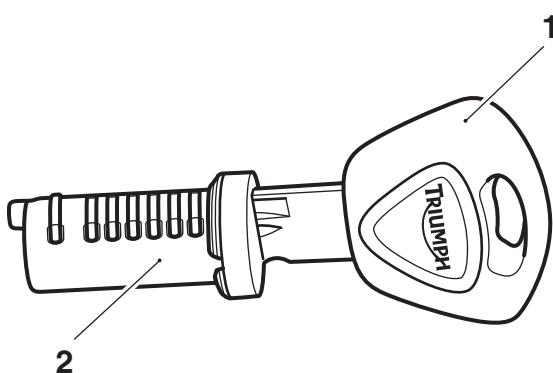
Installation

1. Insert the key into the barrel lock.



cflo

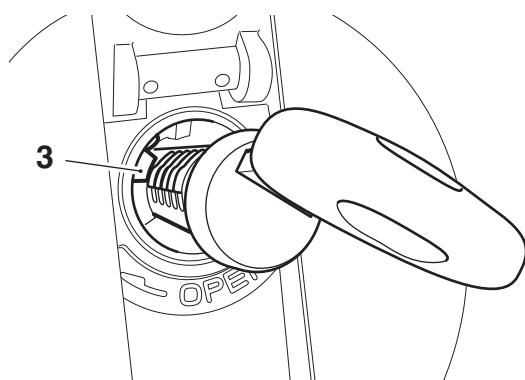
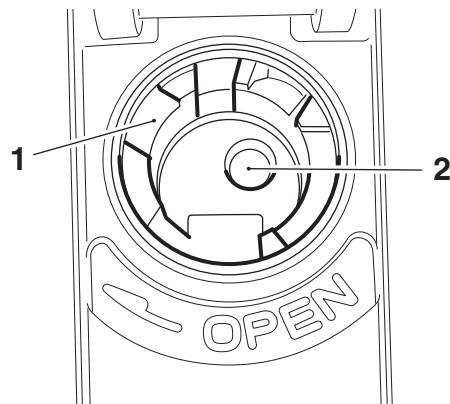
1. Seal
2. Barrel lock



cflp

1. Key
2. Barrel lock

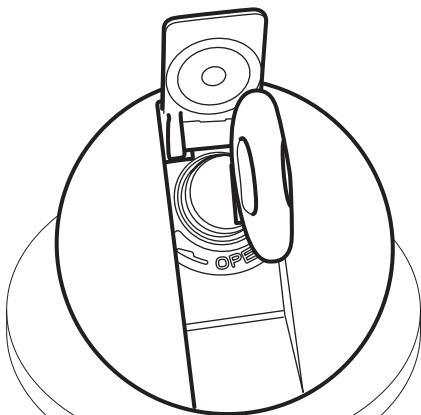
2. Align the locking device on the barrel to the small slot in the upper left hand side of the housing, as indicated in the illustration below.



1. Slot
2. Housing
3. Locking device

Frame and Bodywork

3. Push the barrel lock half way into the fuel cap.
4. Turn the lock clockwise until the key is vertical in the fuel cap.



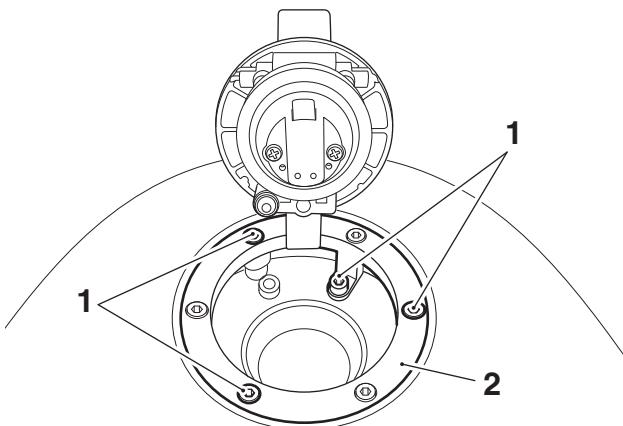
cflr

Barrel Lock and Key Shown in the Vertical Position

Note:

- An audible click can be heard when the lock is pushed fully into the fuel cap.
5. Push the barrel fully into the fuel cap.
 6. Fit the two washers to the fuel cap.
 7. Fit the O-ring to the fuel cap.

8. Fit the lock housing, sealing ring and springs as noted during removal and secure with the screws.
9. Test the lock for normal operation.
10. Fit the filler cap to the fuel tank and secure with the screws shown in the illustration below. Tighten the screws to **4 Nm**.



cfls_1

1. Screws
 2. Filler cap
11. Fit the fuel tank (see page 10-113).
 12. Refill the fuel tank with the fuel drained earlier.

17 Electrical

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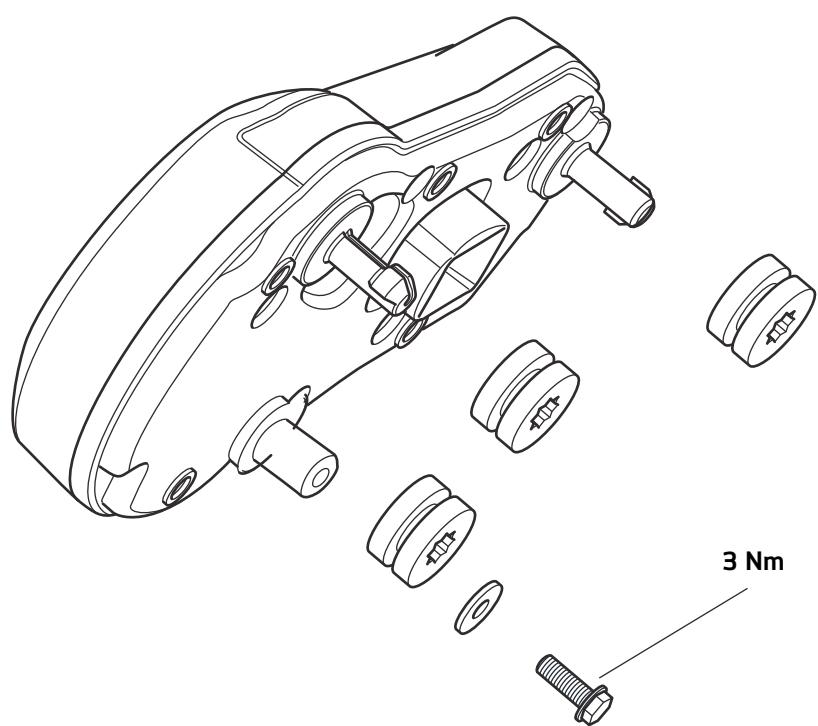
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Electrical

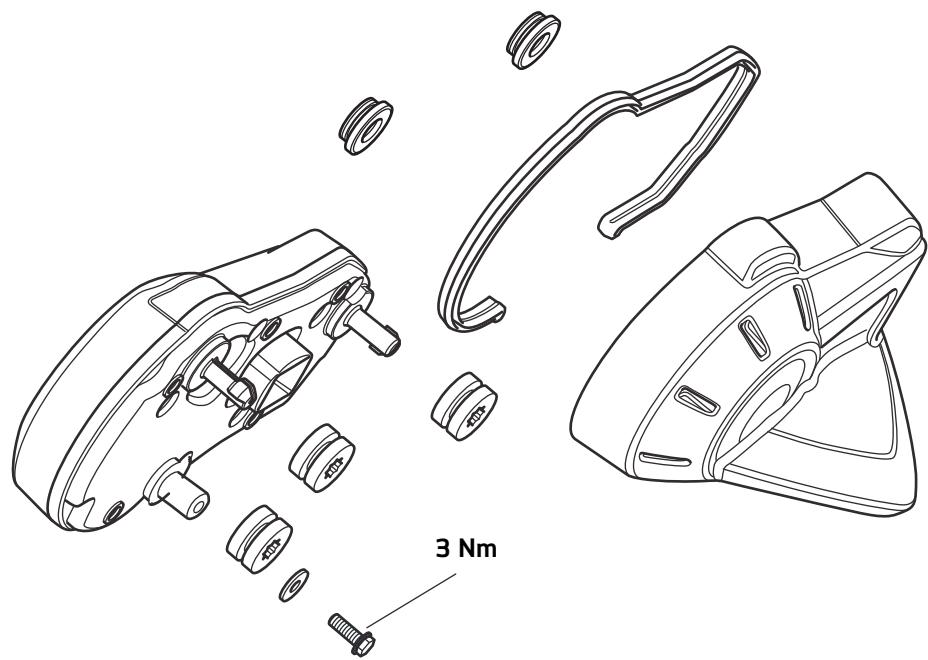
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Exploded View - Instruments - Daytona 675 and Daytona 675 R

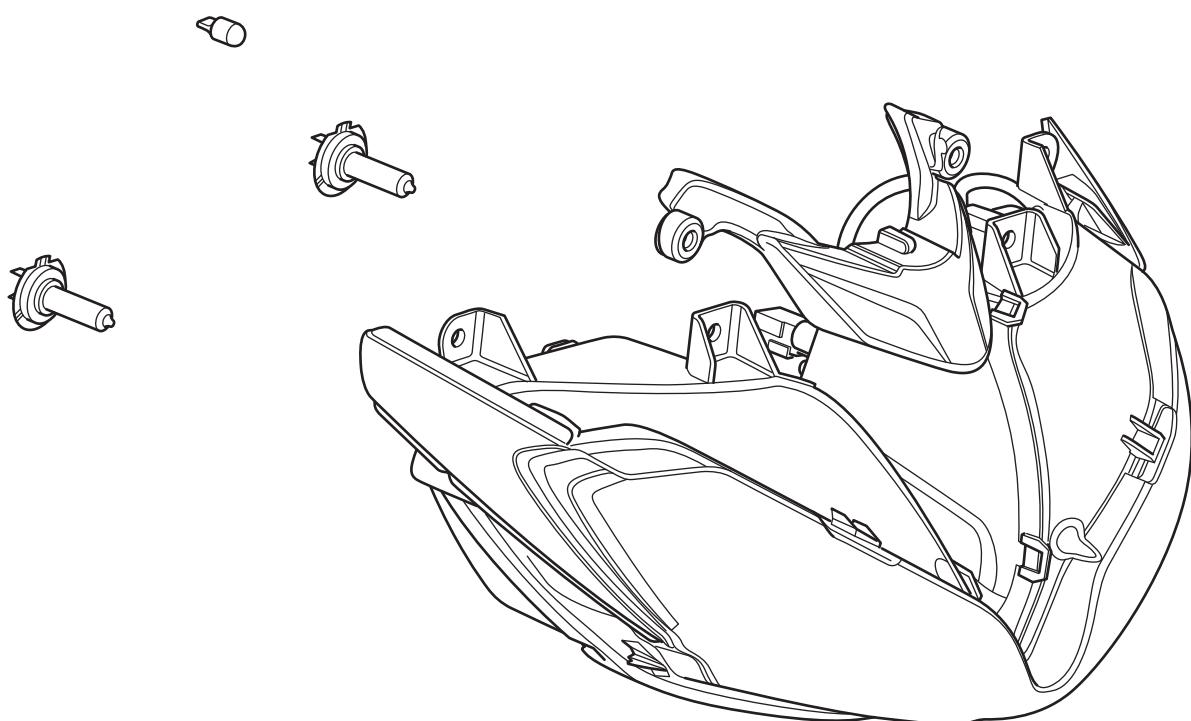


Electrical

Exploded View - Instruments - Street Triple, Street Triple 660 cc, Street Triple R and Street Triple Rx

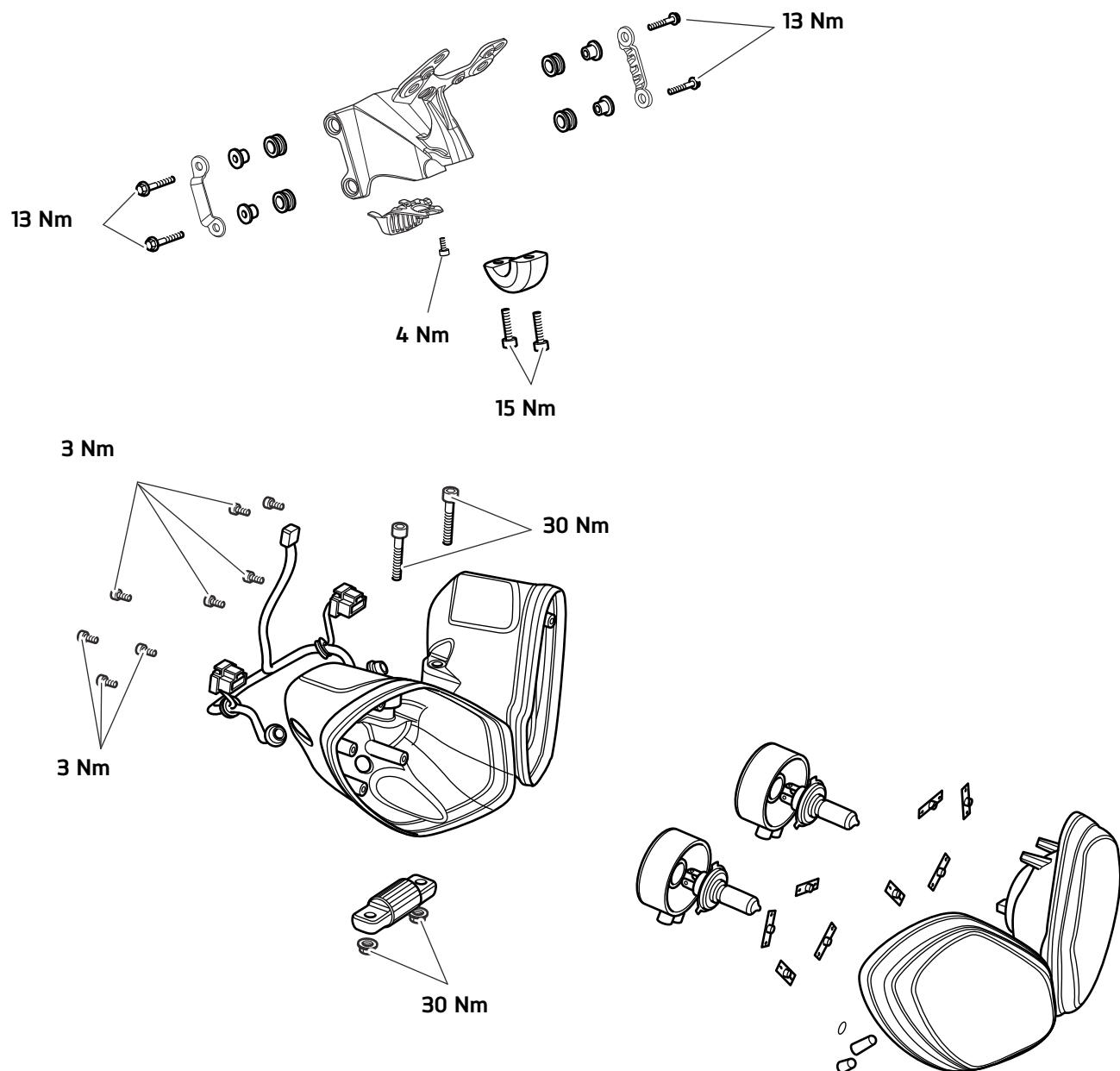


Exploded View - Headlight - Daytona 675 and Daytona 675 R

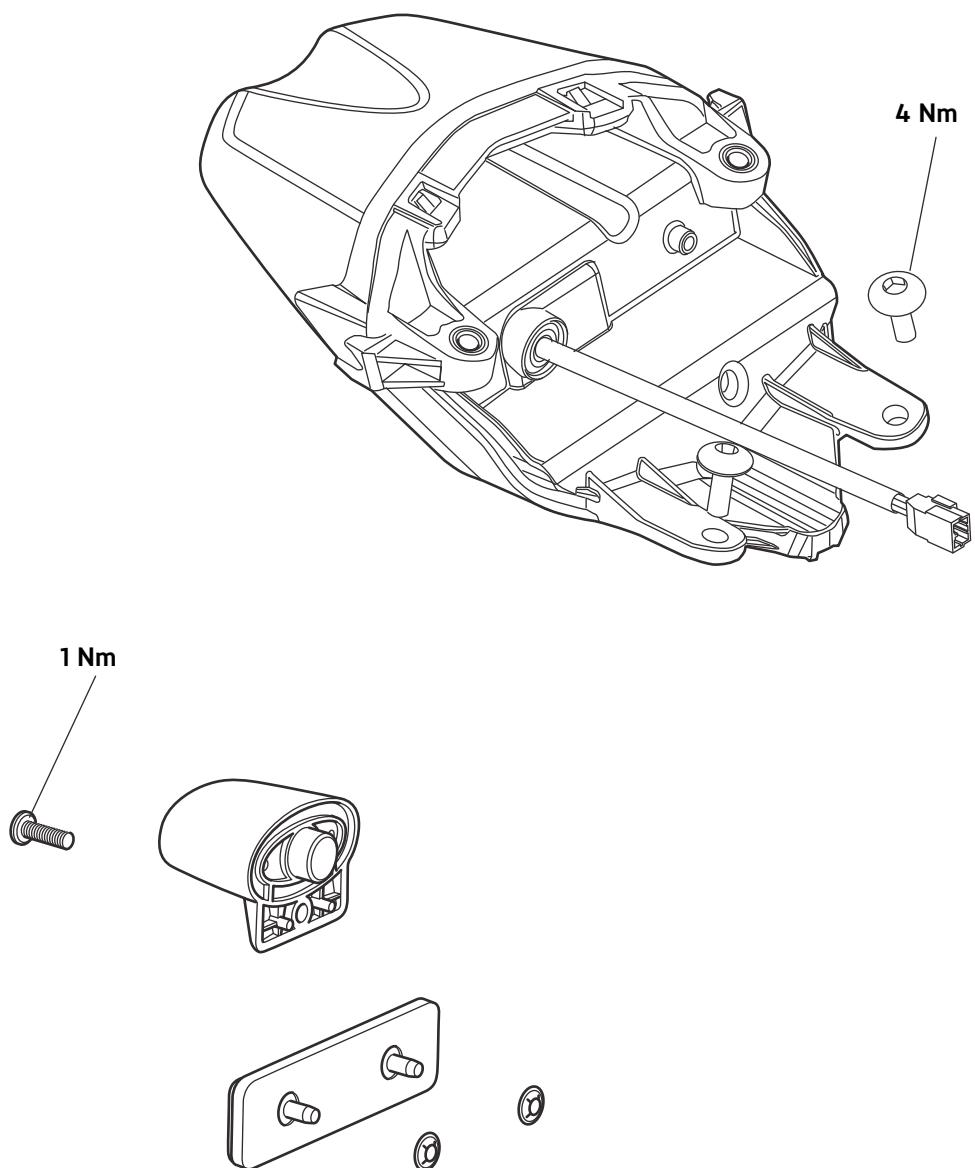


Electrical

Exploded View - Headlights - Street Triple, Street Triple 660 cc, Street Triple R and Street Triple Rx

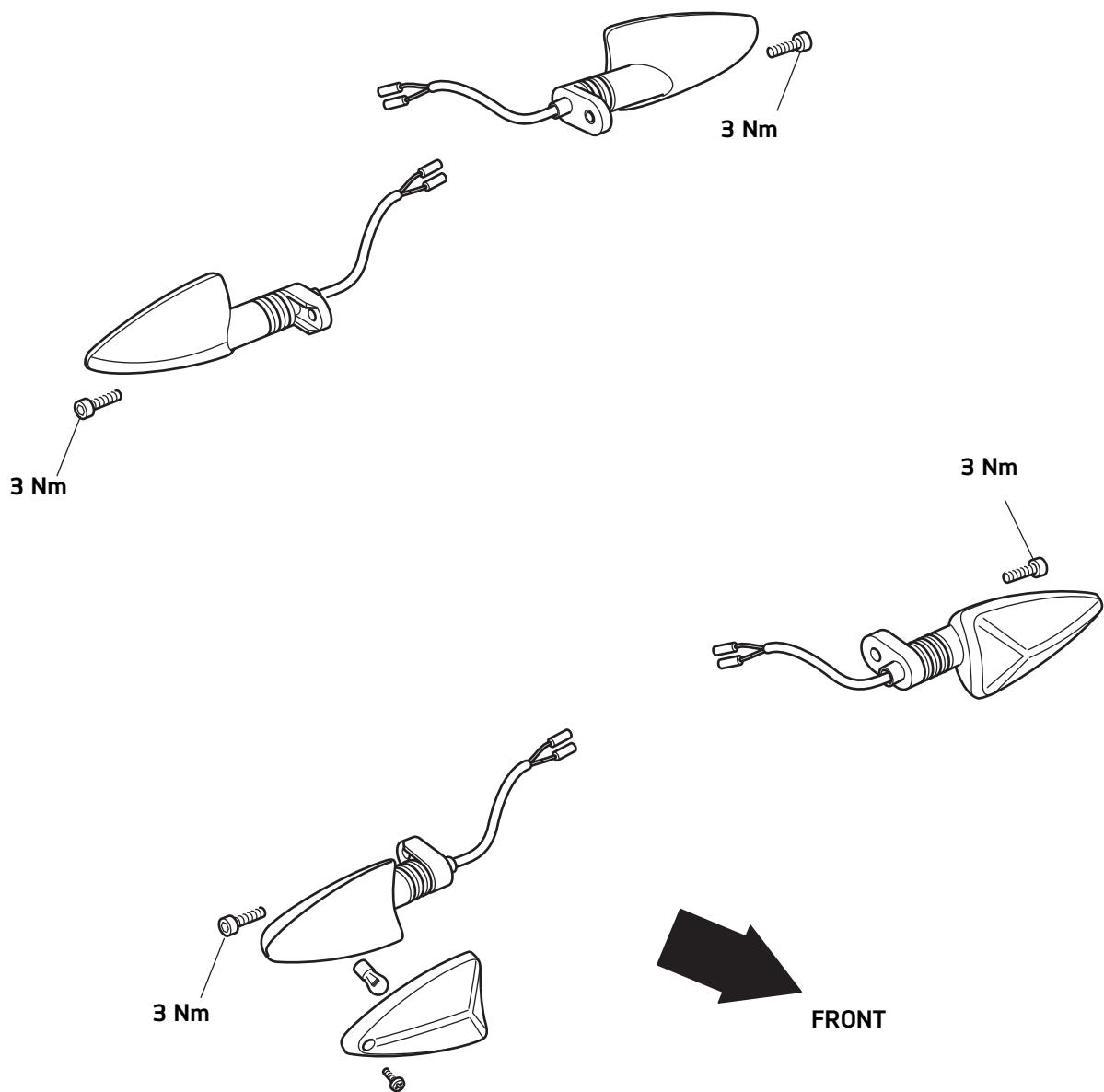


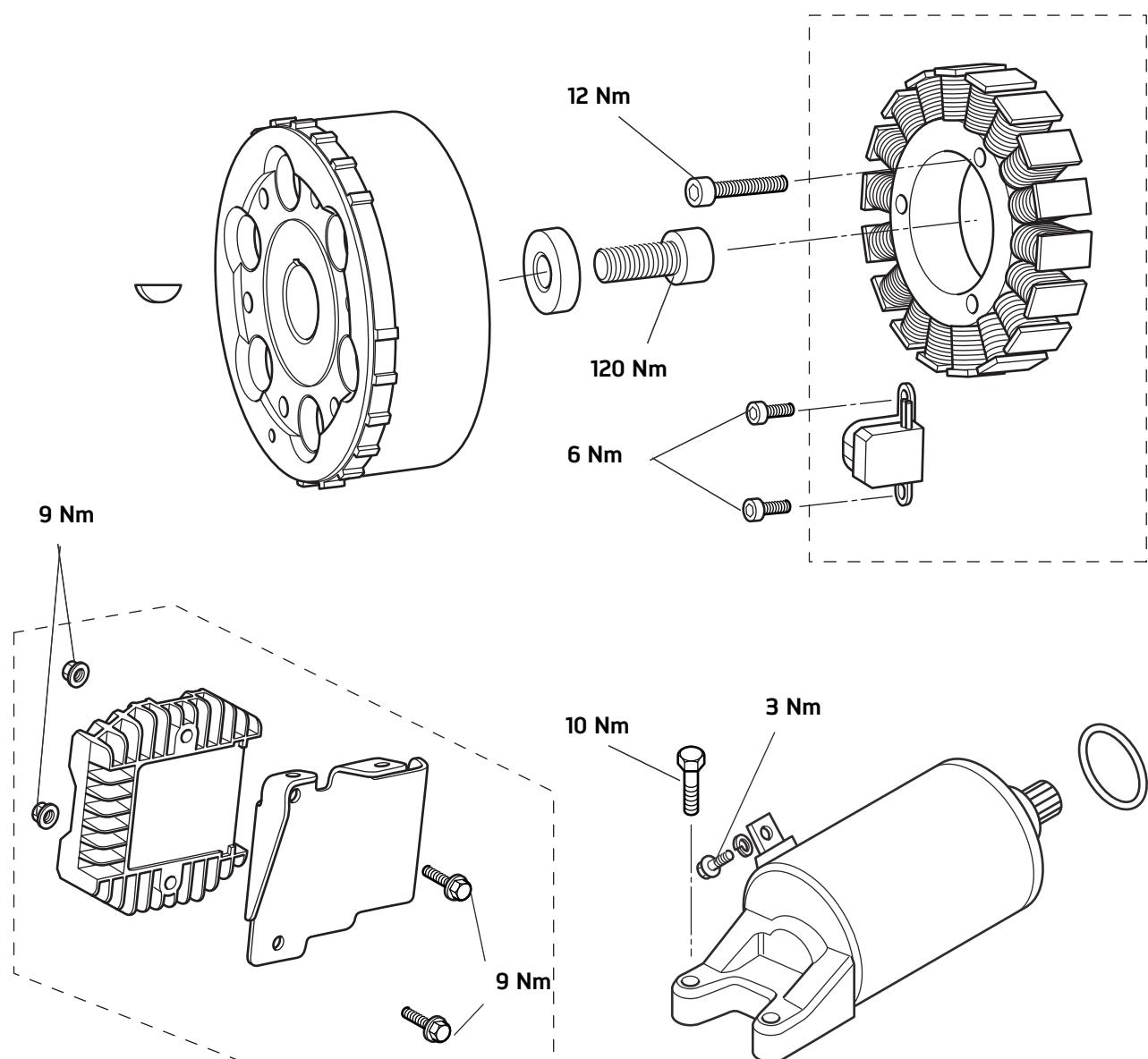
Exploded View - Rear Light and Licence Plate Light



Electrical

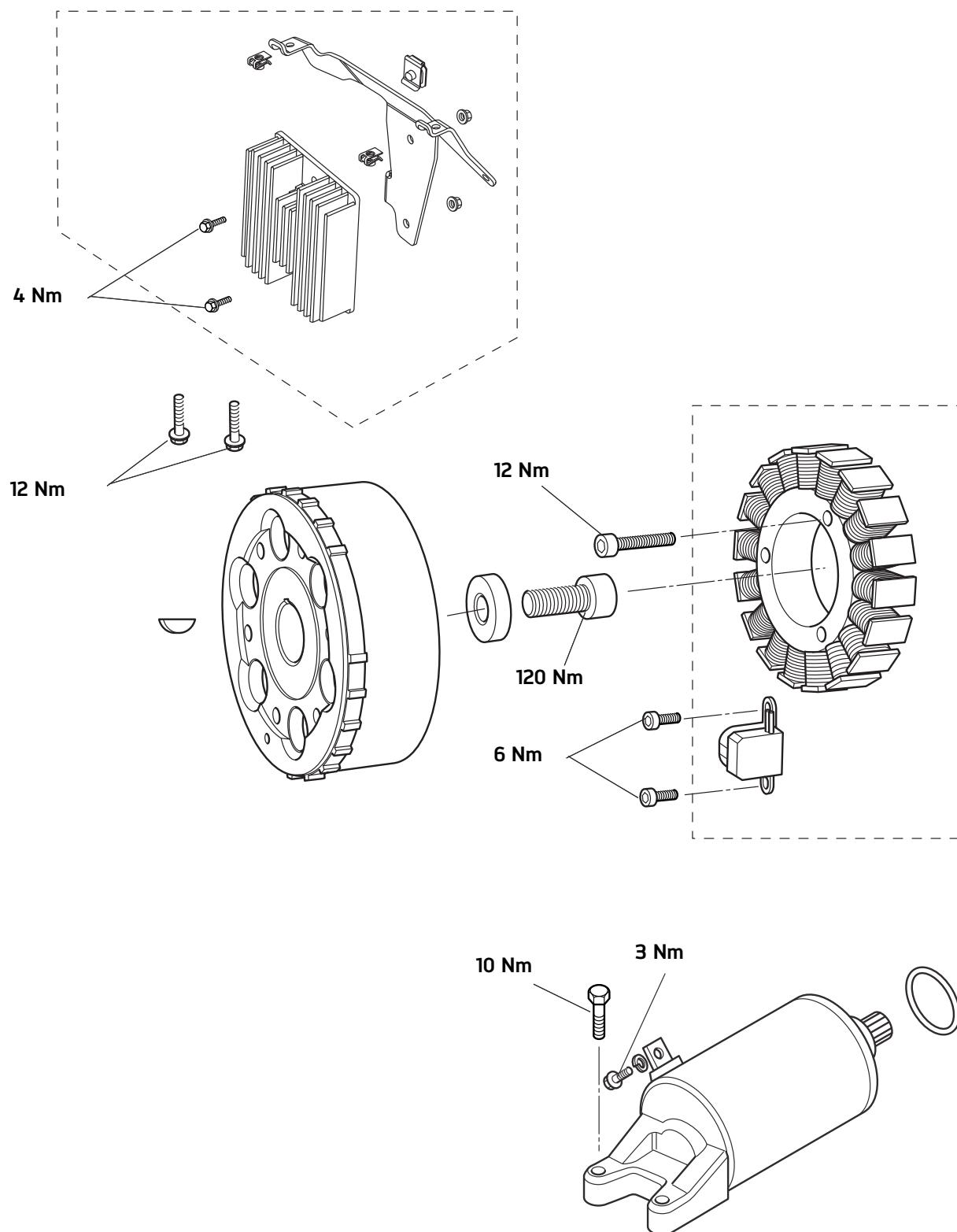
Exploded View - Direction Indicators - All Models



**Exploded View - Alternator and Starter - Street Triple, Street Triple 660 cc,
Street Triple R and Street Triple Rx**

Electrical

Exploded View - Alternator and Starter - Daytona 675 and Daytona 675 R



Battery



Warning

The battery gives off explosive gases; keep sparks, flames and cigarettes away. Provide adequate ventilation when charging or using the battery in an enclosed space.

The battery contains sulphuric acid (electrolyte). Contact with skin or eyes may cause severe burns. Wear protective clothing and a face shield.

- If electrolyte gets on your skin, flush with water immediately.
- If electrolyte gets in your eyes, flush with water for at least 15 minutes and SEEK MEDICAL ATTENTION IMMEDIATELY.
- If electrolyte is swallowed, drink large quantities of water and SEEK MEDICAL ATTENTION IMMEDIATELY.

KEEP ELECTROLYTE OUT OF THE REACH OF CHILDREN.



Warning

The battery contains harmful materials. Always keep children away from the battery whether or not it is fitted in the motorcycle.

Do not jump start the battery, touch the battery cables together or reverse the polarity of the cables as any of these actions may cause a spark which would ignite battery gasses causing a risk of personal injury.

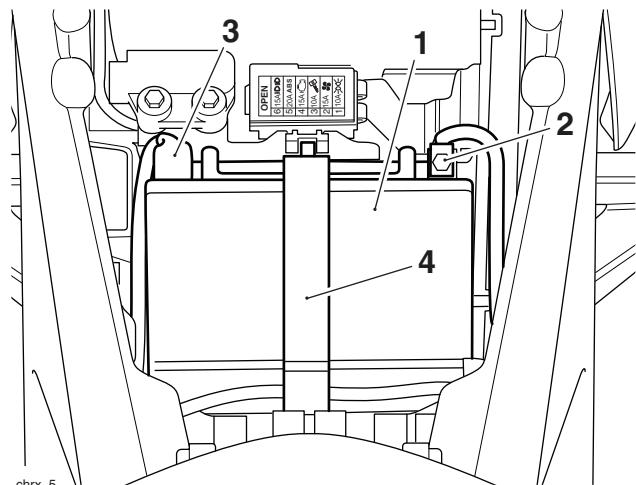


Warning

The battery electrolyte is corrosive and poisonous. Never swallow battery electrolyte or allow electrolyte to come into contact with the skin. Always wear eye and skin protection when handling battery electrolyte.

3. Remove the battery strap.

4. Take the battery out of the case.



1. Battery
2. Negative (-) terminal
3. Positive (+) terminal
4. Battery strap



Warning

Ensure that the battery terminals do not touch the motorcycle frame as this may cause a short circuit or spark which would ignite battery gases causing a risk of personal injury.

Battery Installation



Warning

Ensure that the battery terminals do not touch the motorcycle frame as this may cause a short circuit or spark which would ignite battery gases causing a risk of personal injury.

1. Place the battery in the battery case.
2. Reconnect the battery, positive (red) lead first. Tighten the battery terminals to **4.5 Nm**.
3. Apply a light coat of grease to the terminals to prevent corrosion.
4. Cover the terminals with the protective caps.
5. Refit the battery strap.
6. Refit the seat (see page 16-22 for Daytona 675, Daytona 675 R and Street Triple Rx, see page 16-23 for Street Triple, Street Triple 660 cc and Street Triple R).

Battery Removal

1. Remove the seat (see page 16-22 for Daytona 675, Daytona 675 R and Street Triple Rx, see page 16-23 for Street Triple, Street Triple 660 cc and Street Triple R).
2. Disconnect the battery, negative (black) lead first.

Electrical

Battery Commissioning and Charging

New Battery

In order to correctly and safely commission a new battery, the battery commissioning procedure listed below must be carefully followed. This is the only battery commissioning procedure that Triumph recommends. The procedure is designed to ensure that the battery is at its best when fitted to the motorcycle, and will provide the best possible performance and reliability.

Failure to comply with this procedure may lead to reduced battery performance and/or shorten the life of the battery.



Warning

The battery gives off explosive gases; keep sparks, flames and cigarettes away. Provide adequate ventilation when charging or using the battery in an enclosed space.

The battery contains sulphuric acid (electrolyte). Contact with skin or eyes may cause severe burns. Wear protective clothing and a face shield.

- If electrolyte gets on your skin, flush with water immediately.
- If electrolyte gets in your eyes, flush with water for at least 15 minutes and SEEK MEDICAL ATTENTION IMMEDIATELY.
- If electrolyte is swallowed, drink large quantities of water and SEEK MEDICAL ATTENTION IMMEDIATELY.

KEEP ELECTROLYTE OUT OF THE REACH OF CHILDREN.

1. Ensure the VIN number printed on the anti-tamper label attached to the battery matches the motorcycle VIN.
2. Read the instructions and warnings delivered with the battery.
3. Place the battery on a flat level surface and remove the sealing foil.



Caution

Ensure the electrolyte container part number matches the battery part number to be filled. Battery life will be greatly reduced if the incorrect volume (either too little or too much) of acid is added to the battery.

4. Remove the battery sealing strip from the electrolyte container (if applicable) and save for later in this procedure. Place the sealing strip on a clean surface, with the upper side facing downwards to avoid contamination of the sealing strip. Do not break the seal on the electrolyte container.
5. Place the electrolyte container and adapter (if applicable) on the battery and fill the battery according to the manufacturers instructions.
6. After starting to fill the battery with electrolyte, allow the battery to stand for 30 minutes with the filling container in place.
7. Check that all of the electrolyte has drained from the container. Do not remove the container at this point. If the container has not completely drained, tap the sides of the container to start the electrolyte flowing again.
8. After the electrolyte has drained into the battery, allow the battery to stand with the electrolyte container in place for a further 30 minutes for batteries 3 Ah - 12 Ah or 1 hour for batteries greater than 12 Ah.
9. Remove the electrolyte container and adapter carefully, and dispose of immediately.
10. Place the sealing cap strip LOOSELY over the filling holes of the battery.
11. Charge the battery using the BatteryMate 150-9. Refer to the instructions supplied with the BatteryMate 150-9.



Caution

The caps must be fitted (after charging) within two hours of filling the battery with acid. Leaving the battery open to the atmosphere for longer than is necessary will start to reverse the chemical reaction which takes place within the battery, greatly reducing the battery life.

12. After charging is complete, press down firmly with both hands to seat the caps (do not use tools or force the caps into position).
13. Disconnect the charger and allow the battery to stand for 1 hour before fitting to the motorcycle.
14. Fit the battery to the motorcycle, positive (red) lead first. Tighten the battery terminals to **4.5 Nm**.

Battery Maintenance

The battery is a sealed type and does not require any maintenance other than routine recharging such as during storage.

It is not possible to adjust the electrolyte level in the battery.

Note:

- The charge level in the battery must be maintained to maximise the battery life.**

With normal use of the motorcycle, the charging system will keep the battery charged. If the motorcycle is unused the battery will gradually discharge due to battery self discharge and the continuous current drain for the clock and the engine control module memory.

The rate of battery discharge can be greatly increased by the addition of electrical security systems or other accessories.

If the motorcycle is used for very short journeys, the alternator will not have enough time to replenish the charge used to start and run it. Therefore, the battery should be charged after each return journey following the instructions and advice given here and in the Owner's Handbook under the sections Battery Discharge and Battery Discharge During Storage and Infrequent Use of the Motorcycle.

Allowing a battery to discharge, or leaving it discharged over a period of time, causes sulphation of the lead plates within the battery. Sulphation is a

normal chemical reaction inside the battery and over a period of time sulphate will crystallise onto the lead plates making charging difficult or impossible. The result is a permanently damaged battery, which would not be covered by the motorcycle warranty.

Keeping a battery at full charge reduces the chance of it freezing in cold conditions. Allowing a battery to freeze can cause serious internal damage to the battery.

When leaving the motorcycle standing for more than a few days, regularly check the battery Voltage using a digital multi-meter. Should the battery Voltage fall below 12.8 V, charge the battery using the BatteryMate 150-9. Refer to the instructions supplied with the BatteryMate 150-9. For extended periods of storage (beyond two weeks) the battery should be removed and the battery Voltage checked regularly and charged when below 12.8 V.

Battery Already in Service

Use the guidelines in the table below for charging. Always verify the battery condition before charging, and 30 minutes after charging.

Note:

- A fully charged battery should read 12.8 Volts or higher after the battery has been off the charger for 30 minutes or more.**

Table of Battery Charging Times

State of charge	Voltage	Action	Charge time (using BatteryMate 150-9)
100%	12.8 V - 13.0 V	None. Check at 6 months from date of manufacture	None required
75% - 100%	12.5 V - 12.8 V	May need slight charge. If no charge given, check in 3 - 4 months	3 - 6 hours
50% - 75%	12.0 V - 12.5 V	Needs charge	5 - 11 hours
25% - 50%	11.5 V - 12.0 V	Needs charge	at least 13 hours
0% - 25%	11.5 V or less	Needs recovery using BatteryMate 150-9. Re-test after recovery	20 hours

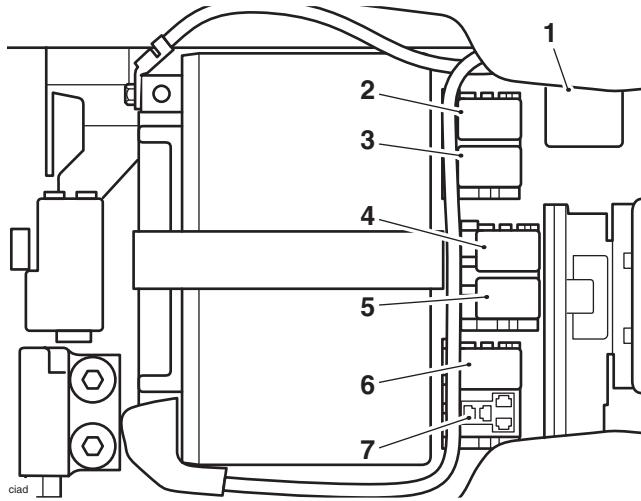
Electrical

Relays

The relay pack is located beneath the rider's seat. To gain access to the relays:

1. Remove the seat (see page 16-22 for Daytona 675, Daytona 675 R and Street Triple Rx, see page 16-23 for Street Triple, Street Triple 660 cc and Street Triple R).

Relay Identification



1. Direction indicator relay
2. Engine management system (EMS)
3. Headlight relay
4. Fuel Pump relay
5. Cooling fan relay
6. Starter relay
7. Heated grips relay (if fitted to Street Triple, Street Triple 660 cc, Street Triple R and Street Triple Rx only)

Fuses

All Models

If a fuse fails during operation, inspect the electrical system to determine the cause, and then replace it with a new fuse of the correct current rating.

A blown fuse is indicated when all of the systems protected by that fuse become inoperative. When checking for a blown fuse, refer to the relevant fuse identification table to establish which fuse has blown.

Note:

- The starter solenoid has an additional 30 Amp fuse attached directly to the solenoid, beneath the rider's seat.



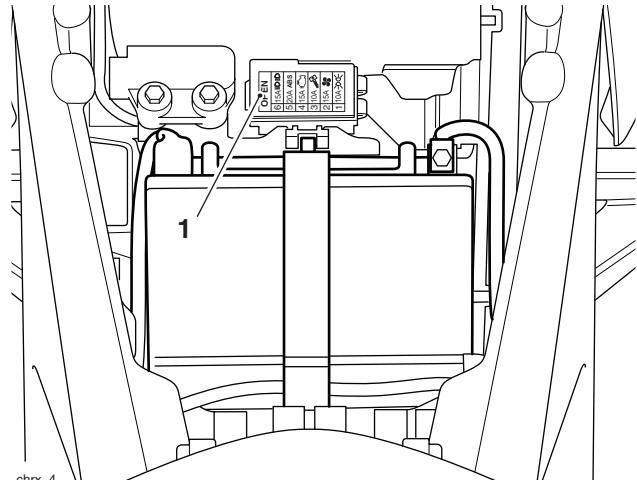
Warning

Always replace blown fuses with new ones of the correct current rating (as specified on the fuse box cover) and never use a fuse of higher rating.

Fuses are arranged in the fuse box located beneath the rider's seat.

To gain access to the fuse box:

1. Remove the seat (see page 16-22 for Daytona 675, Daytona 675 R and Street Triple Rx, see page 16-23 for Street Triple, Street Triple 660 cc and Street Triple R).



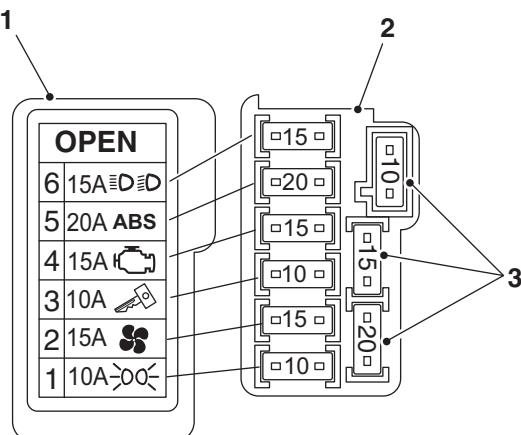
1. Fuse box

Fuse Identification - Daytona 675 and Daytona 675 R

The fuse identification numbers listed correspond with those printed on the fuse box cover.

Note:

- For motorcycles without ABS, fuse position 5 will be empty.**



1. Fuse box cover, motorcycles with ABS shown
2. Fuse box
3. Spare fuses

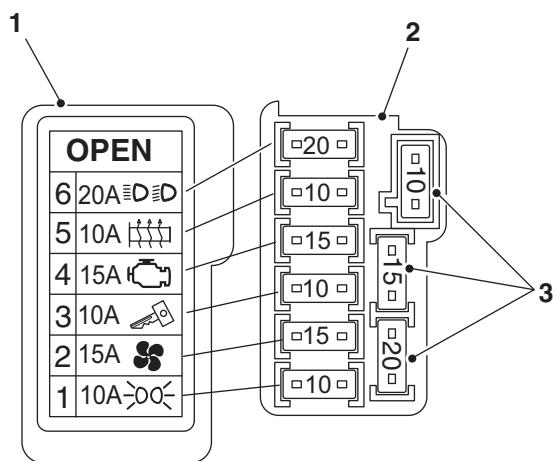
Fuse identification

Fuse No.	Circuits Protected	Fuse Rating
1	Auxiliary lights	10
2	Cooling fan	15
3	Ignition switch, starter circuit	10
4	Engine management system	20
5	ABS	20
6	Dip and main beam headlights, starter relay	15

Fuse Identification - Street Triple, Street Triple 660 cc, Street Triple R and Street Triple Rx

Main Fuse Box

The fuse identification numbers listed correspond with those printed on the fuse box cover.



1. Fuse box cover
2. Fuse box
3. Spare fuses

Fuse identification

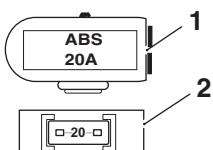
Fuse No.	Circuits Protected	Fuse Rating
1	Auxiliary lights	10
2	Cooling fan	15
3	Ignition switch, starter circuit	10
4	Engine management system	15
5	Heated grips	10
6	Dip and main beam headlights, starter relay	20

Electrical

ABS Fuse Box - If Fitted

The ABS fuse box is attached to the main fuse box. A spare 20 Amp fuse is located in the main fuse box. To allow access to the ABS fuse box the seat must be removed.

Fuse No.	Circuits Protected	Fuse Rating
1	ABS	20

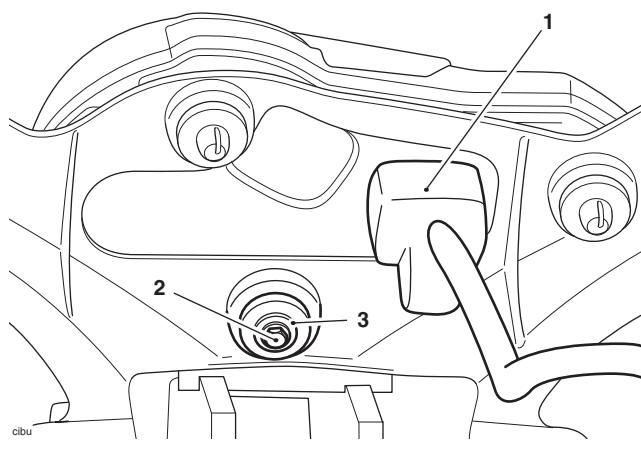


1. Fuse box cover
2. Fuse box

Instrument Pack - Daytona 675 and Daytona 675 R

Removal

1. Remove the rider's seat (see page 16-22).
2. Disconnect the battery, negative (black) lead first.
3. Remove the cockpit (see page 16-36).
4. Release the multiplug from the instrument pack.
5. Release the fixing securing the instrument pack to the bracket, collect the washer.



6. Remove the instrument pack from the bracket.

Installation

1. Position the instrument pack to the bracket.
2. Insert the bayonet fixings into the grommets.
3. Refit the fixing with its washer and tighten to **3 Nm**.
4. Connect the multiplug to the instruments.
5. Refit the cockpit (see page 16-37).
6. Reconnect the battery, positive (red) lead first. Tighten the battery terminals to **4.5 Nm**.
7. Refit the rider's seat (see page 16-22).

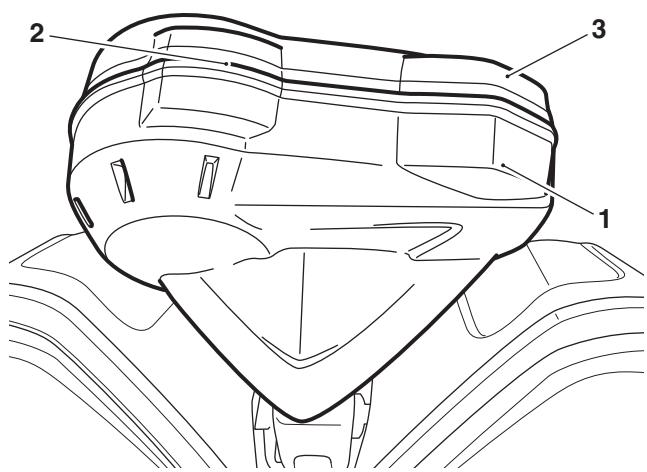
Instrument Pack - Street Triple, Street Triple 660 cc, Street Triple R and Street Triple Rx

Removal

1. Remove the seat (see page 16-23 for Street Triple, Street Triple 660 cc and Street Triple R, see page 16-22 for Street Triple Rx).
2. Disconnect the battery, negative (black) lead first.
3. If fitted, remove the flyscreen (see page 16-40).
4. Remove the cover and gasket attached to the rear of the instruments.

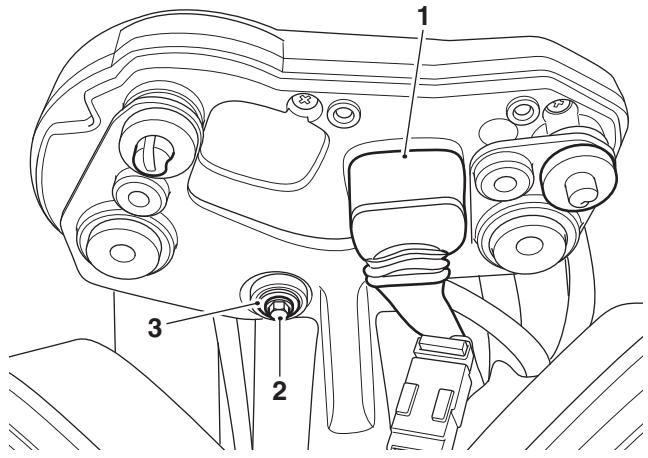
Note:

- The cover is held in place by bayonet type fixings. Gently pull on the cover to release it.



1. Cover
2. Gasket
3. Instruments

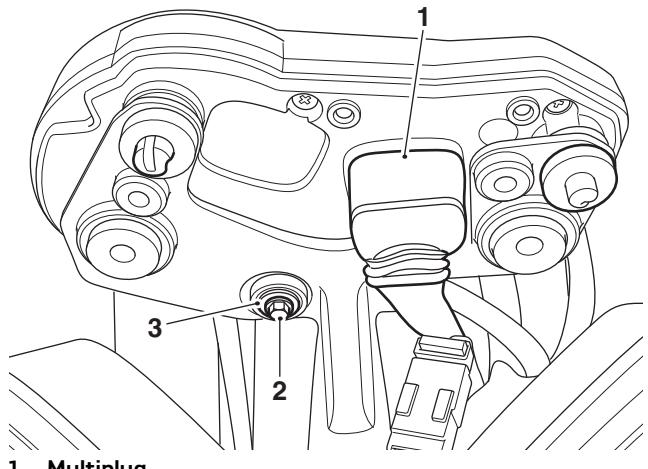
5. Disconnect the multiplug from the instruments.
6. Release the fixing securing the instrument pack to the bracket, collect the washer.



1. Multiplug
2. Fixing
3. Washer
7. Remove the instrument pack from the bracket.

Installation

1. Position the instrument pack to the bracket.
2. Insert the bayonet fixings into the grommets.
3. Refit the fixing with its washer and tighten to **3 Nm**.
4. Connect the multiplug to the instruments.



1. Multiplug
2. Fixing
3. Washer

Electrical

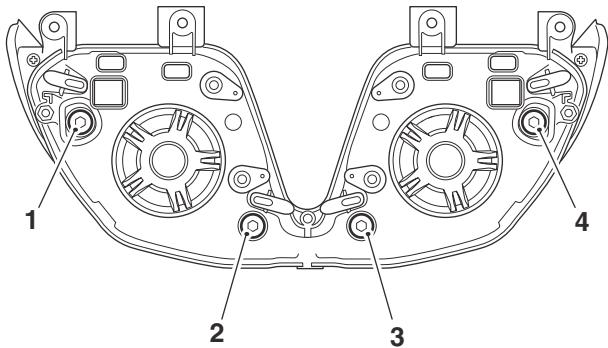
5. Install the cover and gasket to the rear of the instruments, ensuring the bayonet fixings are fully inserted in the grommets on the instrument bracket.
6. If removed, refit the flyscreen (see page 16-40).
7. Reconnect the battery, positive (red) lead first. Tighten the battery terminals to **4.5 Nm**.
8. Refit the seat (see page 16-24 for Street Triple, Street Triple 660 cc and Street Triple R, see page 16-22 for Street Triple Rx).

Headlights - Daytona 675 and Daytona 675 R

Headlight Adjustment

Note:

- **Each headlight can be adjusted by means of vertical and horizontal adjustment screws located on the rear of each headlight.**



chuc_1

1. Horizontal adjustment screw (left hand)
2. Vertical adjustment screw (left hand)
3. Vertical adjustment screw (right hand)
4. Horizontal adjustment screw (right hand)

1. Switch the headlight dipped beam on.
2. Turn the vertical adjustment screws on each headlight clockwise to lower the beam or anticlockwise to raise the beam.
3. On the right hand headlight turn the horizontal adjustment screw clockwise to move the beam to the right or anticlockwise to move the beam to the left.
4. On the left hand headlight turn the horizontal adjustment screw clockwise to move the beam to the left or anticlockwise to move the beam to the right.
5. Switch the headlights off when both beam settings are satisfactorily set.



Warning

Adjust road speed to suit the visibility and weather conditions in which the motorcycle is being operated.

Ensure that the beam is adjusted to illuminate the road surface sufficiently far ahead without dazzling oncoming traffic. An incorrectly adjusted headlight may impair visibility causing an accident.

Headlight Bulb Replacement



Caution

The use of non approved headlight bulbs may result in damage to the headlight lens.

Use a genuine Triumph supplied headlight bulb as specified in the Triumph Parts Catalogue.

Always have replacement headlight bulbs installed by an authorised Triumph dealer.

Each headlight bulb can be replaced as follows:



Warning

The bulb becomes hot during use. Always allow sufficient time for the bulb to cool before handling.

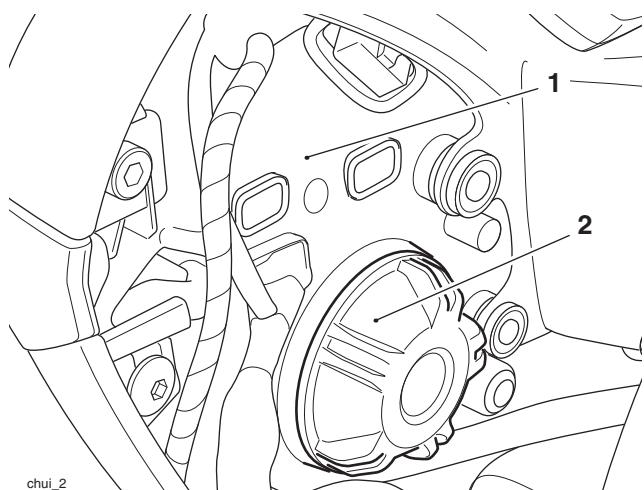
Avoid touching the glass part of the bulb. If the glass is touched or gets dirty, clean with alcohol before reuse.



Warning

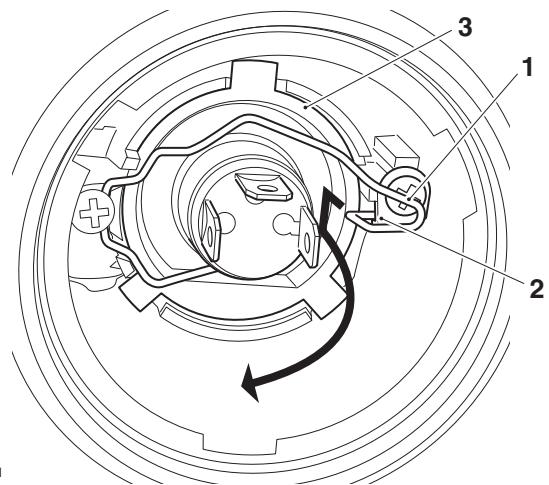
Do not reconnect the battery until the assembly process has been completed. Premature battery reconnection could result in ignition of the battery gases causing risk of injury.

1. Remove the rider's seat (see page 16-22).
2. Disconnect the battery, negative (black) lead first.
3. Remove the cockpit infill panel (see page 16-31).
4. Turn the headlamp bulb cover anticlockwise and remove it from the headlamp.



- chui_2**
1. Headlight unit (left hand shown)
 2. Bulb cover

5. Disconnect the multiplug from the bulb.
6. Detach the bulb retainer from the hook on the headlight assembly and rotate it away from the bulb as shown.



1. Bulb retainer
2. Bulb retainer hook
3. Bulb

7. Remove the bulb from the bulb retainer.

Installation

1. Installation is the reverse of removal, noting the following:

Note:

- When reconnecting the battery, connect the positive (red) lead first. Tighten the battery terminals to 4.5 Nm.

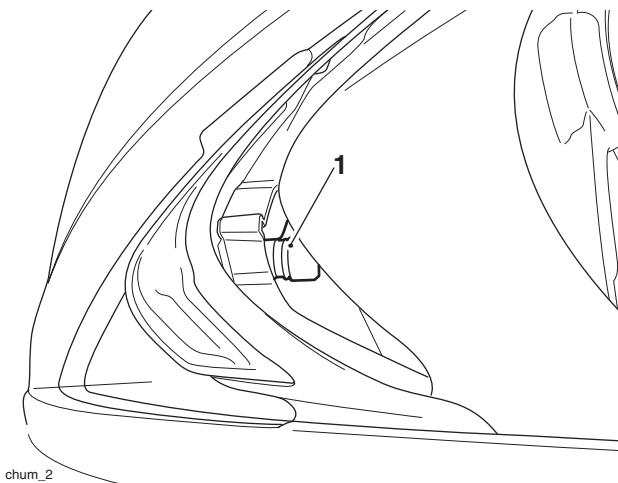
Electrical

Position Light Bulb Replacement

The position light is fitted to the front of the cockpit above the headlight.

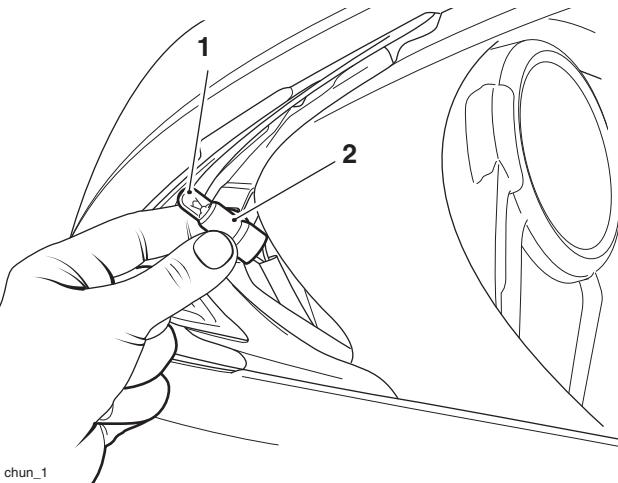
The position light bulb can be replaced as follows:

1. Remove the windsreen, to allow access to the position light (see page 16-35).
2. Detach the rubber bulb holder from the position light's housing.



1. Bulb holder

3. Pull out the bulb.



1. Bulb holder

2. Position light bulb

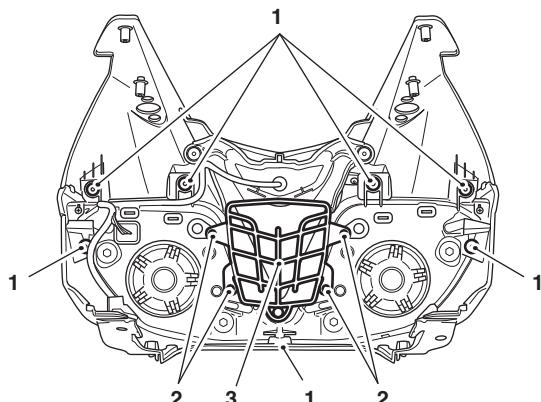
Installation

1. Installation is the reverse of the removal procedure.

Headlight Assembly - Daytona 675 and Daytona 675 R

Removal

1. Remove the seat (see page 16-22).
2. Disconnect the battery, negative (black) lead first.
3. Remove the cockpit (see page 16-36).
4. Release the four self tapping screws and remove the air intake duct.
5. Release the seven M5 fixings securing the headlight to the cockpit. Remove the headlight.



- cicd
1. M5 fixings
 2. Self tapping screws
 3. Air intake duct

Installation

1. Installation is the reverse of removal, noting the following:

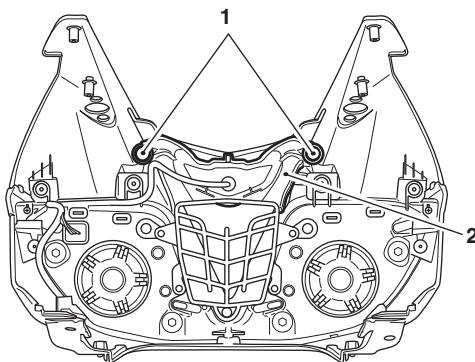
Note:

- Tighten the M5 fixings to 3 Nm.
- Tighten the self tapping screws to 1.5 Nm.
- Reconnect the battery, positive (red) lead first. Tighten the battery terminals to 4.5 Nm.

Position Light - Daytona 675 and Daytona 675 R

Removal

1. Remove the seat (see page 16-22).
2. Disconnect the battery, negative (black) lead first.
3. Remove the cockpit (see page 16-36).
4. Release the two M5 fixings securing the position light to the cockpit. Remove the position light.



cild_1

1. M5 fixings
2. Position light

Installation

1. Installation is the reverse of removal, noting the following:

Note:

- **Tighten the M5 fixings to 3 Nm.**
- **Reconnect the battery, positive (red) lead first.**
Tighten the battery terminals to 4.5 Nm.

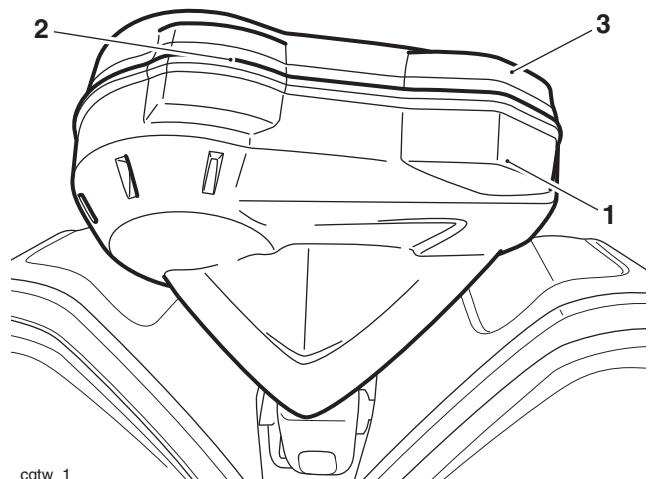
Headlights - Street Triple, Street Triple 660 cc, Street Triple R and Street Triple Rx

Removal

1. Remove the seat (see page 16-23 for Street Triple, Street Triple 660 cc and Street Triple R, see page 16-22 for Street Triple Rx).
2. Disconnect the battery, negative (black) lead first.
3. If fitted, remove the flyscreen (see page 16-40).
4. Remove the cover and gasket attached to the rear of the instruments.

Note:

- **The cover is held in place by bayonet type fixings. Gently pull on the cover to release it.**

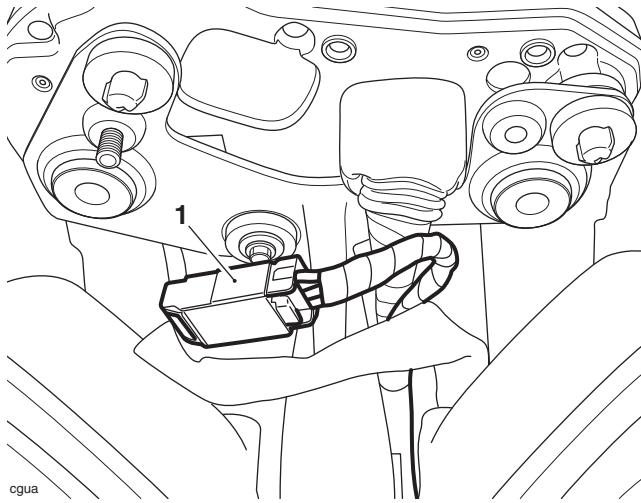


cgtw_1

1. Cover
2. Gasket
3. Instruments

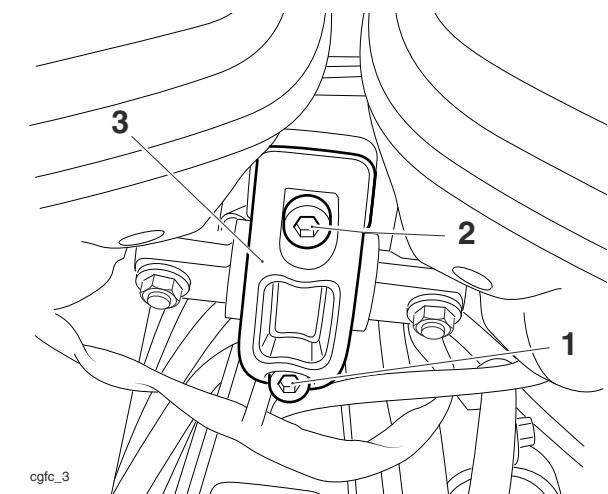
Electrical

- Disconnect the multiplug for the headlights.



1. Multiplug, headlight

- Loosen the bolt at the rear of the headlight clamp.
- While supporting the headlight assembly, remove both bolts, the clamp and the headlight assembly.



1. Rear bolt
2. Front bolt
3. Clamp

Installation

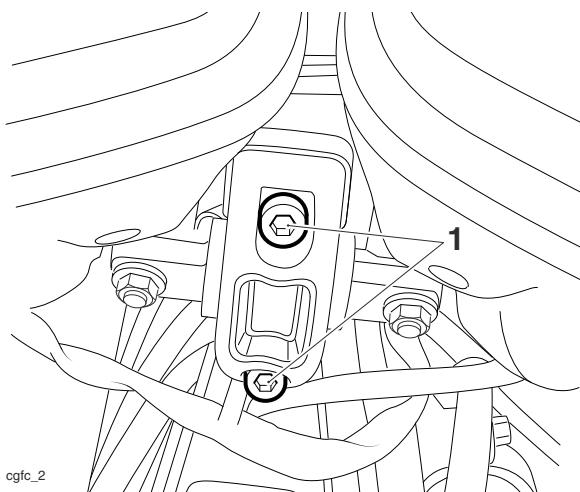
- Align the headlight assembly to its bracket.
- Fit the clamp and tighten the clamp bolts, front first, to **15 Nm**.
- Reconnect the multiplug for the headlight.
- Install the cover and gasket to the rear of the instruments. Ensure that the headlight harness is covered and the bayonet fixings are fully inserted into the grommets on the bracket.
- If removed, refit the flyscreen (see page 16-40).
- Reconnect the battery, positive (red) lead first. Tighten the battery terminals to **4.5 Nm**.
- Check and, if necessary, adjust the headlight alignment (see page 17-24).
- Refit the seat (see page 16-24 for Street Triple, Street Triple 660 cc and Street Triple R, see page 16-22 for Street Triple Rx).

Headlight Adjustment

Vertical Adjustment

Note:

- The vertical beams of the headlights can only be adjusted together. Independent adjustment is not possible.



1. Vertical adjuster fixings

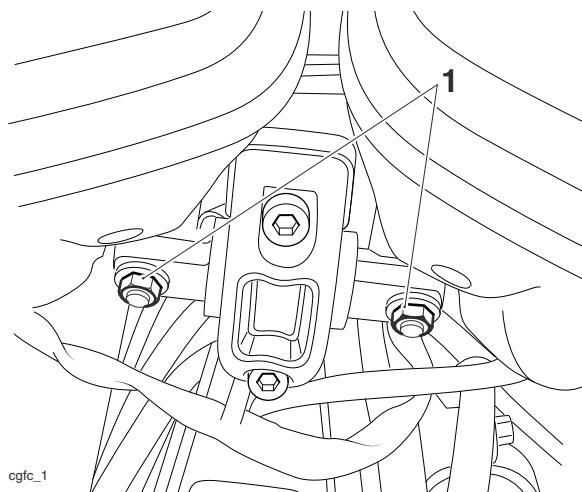
- Switch the headlight dipped beam on.
- Loosen the clamp bolts, rear first, sufficiently to allow restricted movement of the headlights.
- Adjust the position of the headlights to give the required beam setting.

4. Tighten the clamp bolts, front first, to **15 Nm**.
5. Re-check the headlight beam settings.
6. Switch the headlights off when the beam setting is satisfactorily set.

Horizontal Adjustment

Note:

- The horizontal beams of both headlights can be adjusted individually. The same procedure is used to adjust either headlight.



1. Horizontal adjuster fixings

1. Switch the headlight dipped beam on.
2. Loosen the headlight mounting nut.
3. Adjust the horizontal position of the headlight to give the required beam setting.
4. Tighten the nut to **30 Nm**.
5. Repeat for the second headlight.
6. Re-check the headlight beam settings.
7. Switch the headlights off when both beam settings are satisfactorily set.



Warning

Adjust road speed to suit the visibility and weather conditions in which the motorcycle is being operated.

Ensure that the headlight beam is adjusted to illuminate the road surface sufficiently far ahead without dazzling oncoming traffic. An incorrectly adjusted headlight may impair visibility causing an accident.

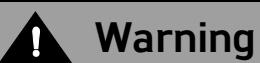
Headlight Bulb Replacement

Each headlight bulb can be replaced as follows:



Warning

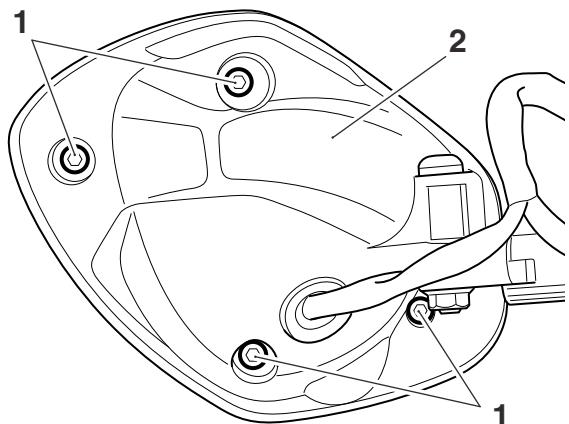
The bulb becomes hot during use. Always allow sufficient time for the bulb to cool before handling. Avoid touching the glass part of the bulb. If the glass is touched or gets dirty, clean with alcohol before reuse.



Warning

Do not reconnect the battery until the assembly process has been completed. Premature battery reconnection could result in ignition of the battery gases causing risk of injury.

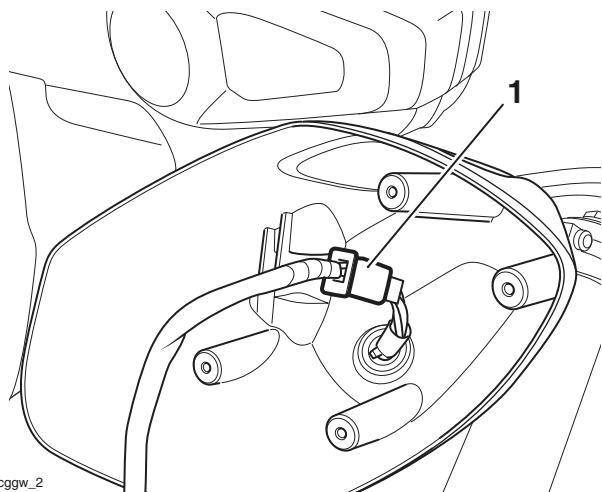
1. Remove the seat (see page 16-23 for Street Triple, Street Triple 660 cc and Street Triple R, see page 16-22 for Street Triple Rx).
2. Disconnect the battery, negative (black) lead first.
3. While supporting the headlight, remove the fixings and detach the headlight from its bowl.



- 1. Fixings
2. Headlight bowl**

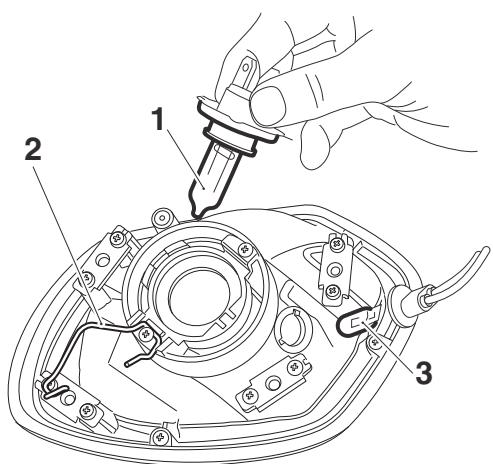
Electrical

- Disconnect the multiplug for the headlight from the main harness and remove the headlight.



1. Multi-pin connector

- Disconnect the multiplug from the bulb and remove the rubber cover.
- Detach the wire retainer from its clip (do not remove the screw) then remove the bulb from the light unit.



cgn_2

- Headlight bulb
- Bulb clip
- Position lamp bulb

Installation

- Installation is the reverse of the removal procedure.

Note:

- Tighten the fixings for the headlight bowl to 3 Nm.
- Connect the battery, positive (red) lead first. Tighten the battery terminals to 4.5 Nm.
- Refit the seat (see page 16-24 for Street Triple, Street Triple 660 cc and Street Triple R, see page 16-22 for Street Triple Rx).

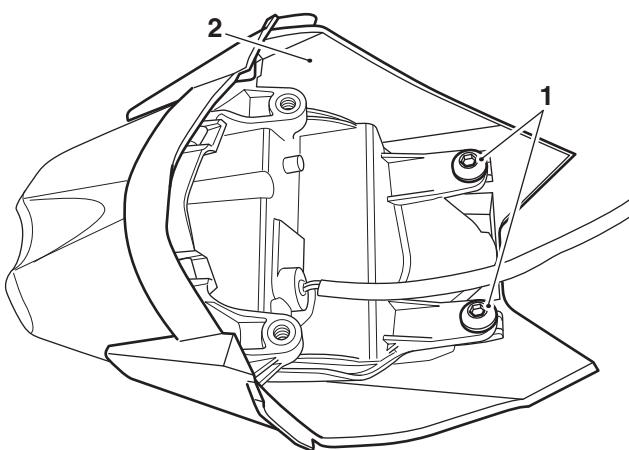
Rear Light

Removal

Note:

- The rear light is a sealed for life unit and must be replaced in the event of a failure.

- Remove the seat (see page 16-22 for Daytona 675, Daytona 675 R and Street Triple Rx, see page 16-23 for Street Triple, Street Triple 660 cc and Street Triple R).
- Disconnect the battery, negative (black) lead first.
- Remove the rear panels (see page 16-29 for Street Triple, Street Triple 660 cc and Street Triple R, see page 16-25 For Daytona 675, Daytona 675 R and Street Triple Rx).
- Release the fixings and remove the rear light finisher.



- Fixings
- Finisher (Street Triple shown)

Installation

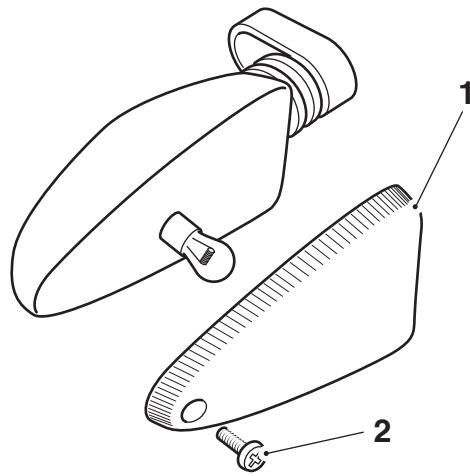
- Installation is the reverse of the removal procedure.

Note:

- Tighten the rear light finisher fixings to 3 Nm.
- Refit the rear panels (see page 16-30 For Street Triple, Street Triple 660 cc and Street Triple R, see page 16-27 for Daytona 675, Daytona 675 R and Street Triple Rx).

Direction Indicators

Bulb Replacement



celc

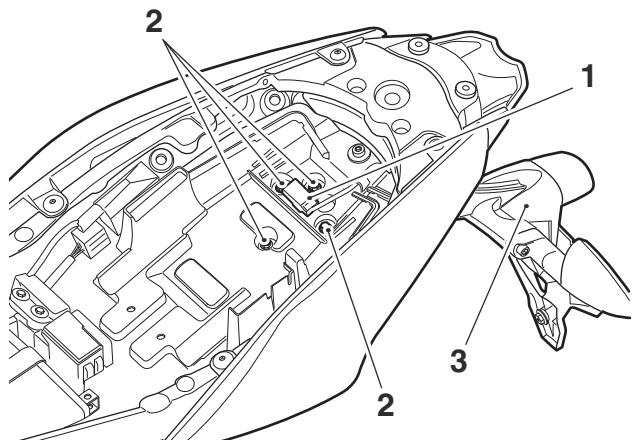
1. Direction indicator lens
2. Screw

The lens on each direction indicator is held in place by a securing screw located in the lens of the light. Release the screw and remove the lens to gain access to the bulb for replacement.

Rear Direction Indicator

Removal

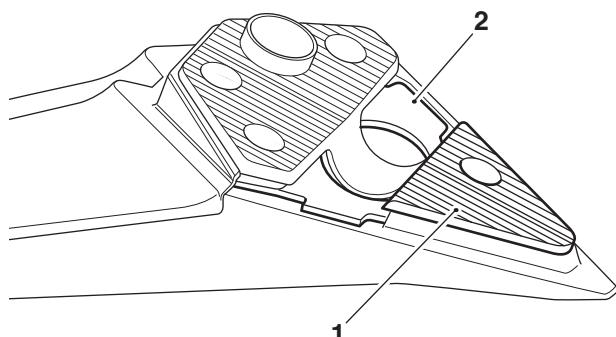
1. Remove the seat (see page 16-22 for Daytona 675, Daytona 675 R and Street Triple Rx, see page 16-23 for Street Triple, Street Triple 660 cc and Street Triple R).
2. Disconnect the battery, negative (black) lead first.
3. Disconnect the multiplug for the rear indicators.
4. Release the four fixings and remove the rear indicator hanger.



1. Multiplug
2. Fixings
3. Rear indicator hanger

Note:

- Note the position and orientation of the mounting plate and the seal of the rear indicator hanger for installation.

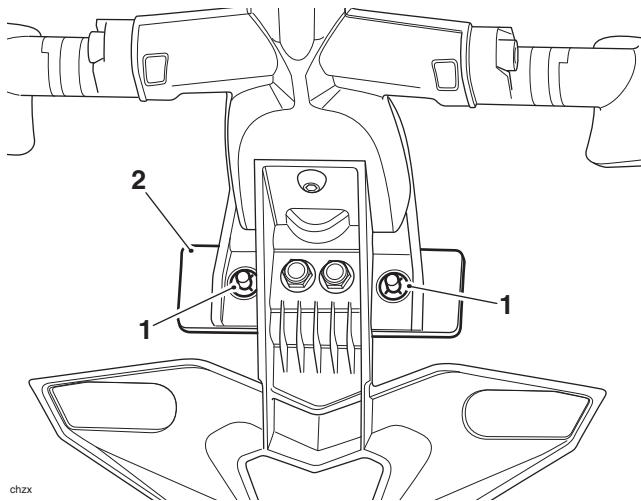


chzv

1. Gasket
2. Mounting plate

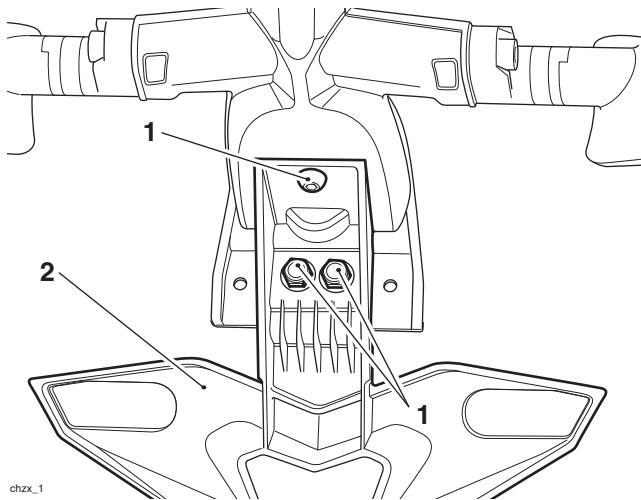
Electrical

5. Carefully release the clips and remove the reflector from the indicator hanger.



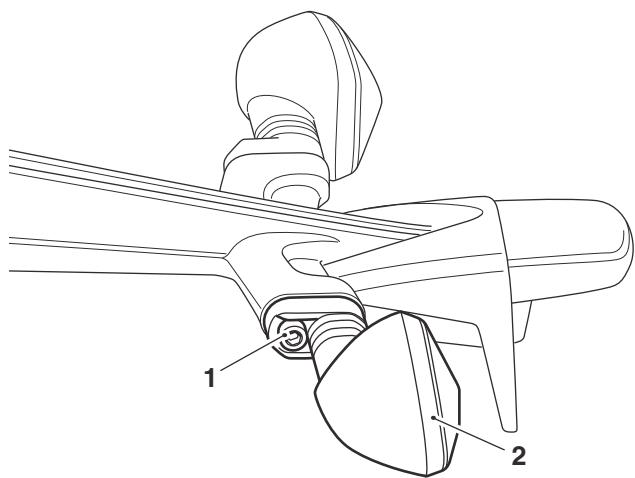
1. Clips
2. Reflector

6. Release the fixings and remove the licence plate bracket.



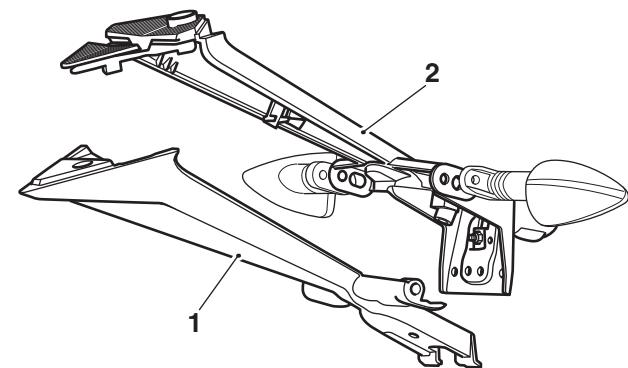
1. Fixings
2. Licence plate bracket

7. Release the fixings and detach the indicators from the hanger.



1. Fixing
2. Indicator

8. Carefully remove the lower moulding from the upper moulding of the hanger.

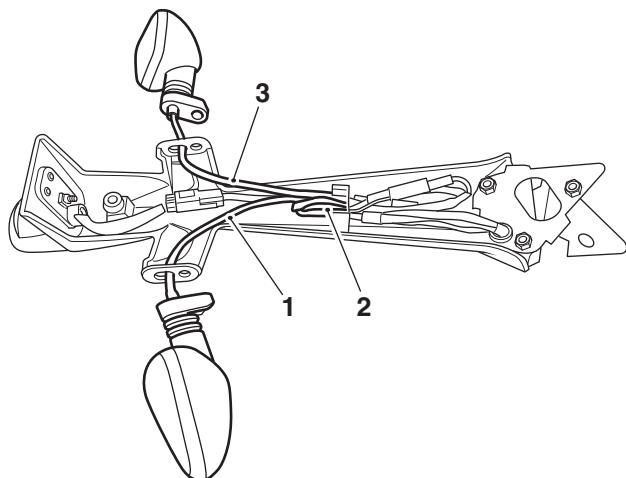


1. Lower moulding
2. Upper moulding

Note:

- Note the routing of the harnesses in the upper moulding.
- Note that the right hand indicator harness can be identified by the red tape on it.

9. Disconnect the indicator from the sub-harness and remove the indicator.



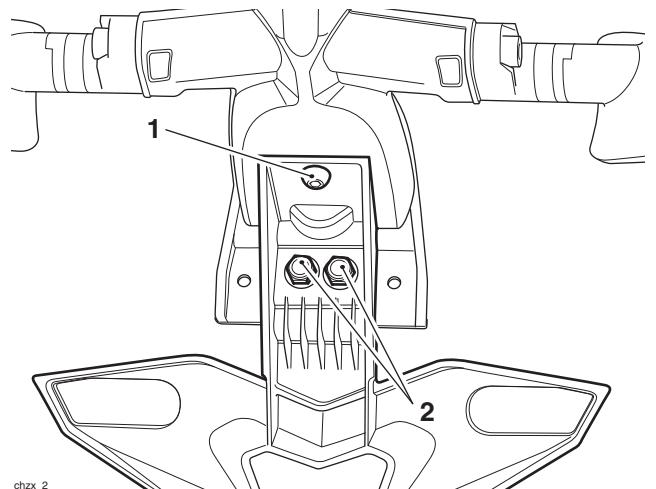
- chzz
1. Right hand indicator harness
2. Red tape
3. Left hand indicator harness

Installation

Note:

- Note that the right hand indicator harness can be identified by the red tape on it.

1. Feed the indicator harnesses into the upper moulding as noted for removal and connect them to the sub-harness.
2. Carefully attach the lower moulding to the upper moulding. Ensure that the mounting plate is positioned as noted for removal.
3. Secure the indicators onto the indicator hanger and tighten their fixings to **3 Nm**.
4. Fit the licence plate bracket to the indicator hanger and tighten the:
 - M5 screw to **3 Nm**
 - Lock nuts to **3 Nm**.



- chzx 2
1. M5 screw
2. Lock nuts
5. Fit the rear reflector and secure in position with the clips.

Note:

- Ensure that the gasket is positioned as noted for removal.
6. Fit the indicator hanger to the motorcycle and tighten the fixings to **8 Nm**.
 7. Connect the multiplug for the rear indicators.
 8. Connect the battery, positive (red) lead first. Tighten the battery terminals to **4.5 Nm**.
 9. Check the operation of the rear indicators and the licence plate light. Rectify if necessary.
 10. Refit the seat (see page 16-22 for Daytona 675, Daytona 675 R and Street Triple Rx, see page 16-24 for Street Triple, Street Triple 660 cc and Street Triple R).

Electrical

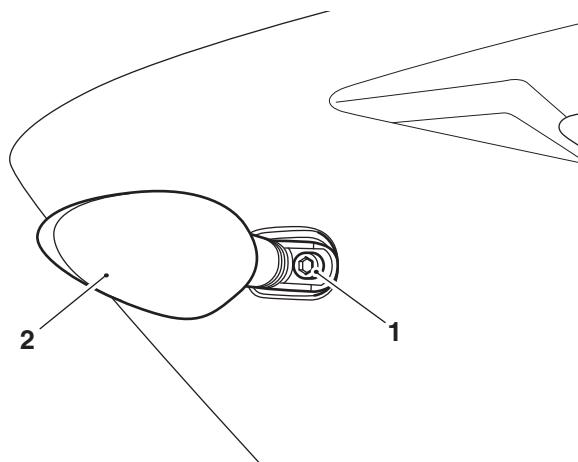
Front Direction Indicator - Daytona 675 and Daytona 675 R

Removal

1. Remove the rider's seat (see page 16-22).
2. Disconnect the battery, negative (black) lead first.
3. Remove the fairing (see page 16-33).

Note:

- **The fixing for the left hand front direction indicator also secures the regulator/rectifier mounting bracket to the fairing.**
- 4. Release the fixing securing the direction indicator to the fairing and remove the light unit.



1. Fixing
2. Direction indicator

Installation

1. Installation is the reverse of the removal procedure, noting the following.

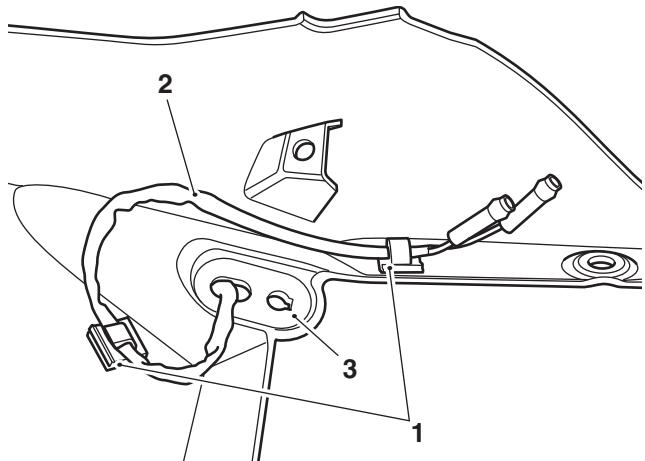
Note:

- **Tighten the direction indicator fixing to 3 Nm.**
- **Reconnect the battery, positive (red) lead first. Tighten the battery terminals to 4.5 Nm.**

Front Direction Indicator - Street Triple, Street Triple 660 cc, Street Triple R and Street Triple Rx

Removal

1. Remove the seat (see page 16-23 for Street Triple, Street Triple 660 cc and Street Triple R, see page 16-22 for Street Triple Rx).
2. Disconnect the battery, negative (black) lead first.
3. Remove the radiator cowl (see page 16-38).
4. Release the harness from its clips and remove the direction indicator, feeding the harness through the hole in the cowl.



1. Clips
2. Harness, Direction indicator
3. Hole
5. Remove the direction indicator from the radiator cowl.

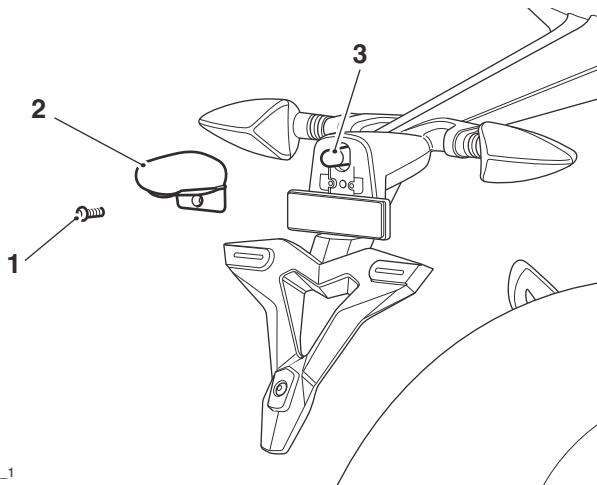
Installation

1. Pass the direction indicator harness through the hole in the radiator cowl.
2. Secure the harness to its clips on the cowl.
3. Reconnect the indicator leads and refit the radiator cowl (see page 16-39). Tighten the direction indicator fixing to **3 Nm**.
4. Reconnect the battery, positive (red) lead first. Tighten the battery terminals to **4.5 Nm**.
5. Refit the seat (see page 16-23 for Street Triple, Street Triple 660 cc and Street Triple R, see page 16-22 for Street Triple Rx).

Licence Plate Light

Bulb Replacement

- Release the screw and detach the licence plate light from the licence plate bracket.



chrs_1

- 1. Fixing
 - 2. Lens
 - 3. Bulb
- Replace the bulb, refit the lens and tighten its fixing to **1 Nm**.

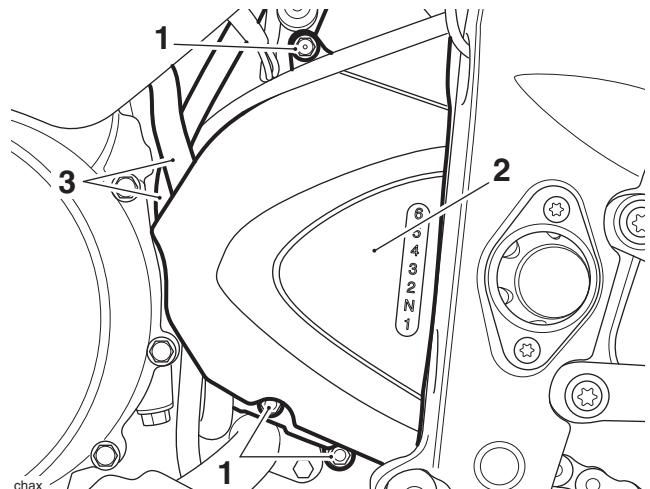
Starter Motor

Removal

- Remove the seat (see page 16-22 for Daytona 675, Daytona 675 R and Street Triple Rx, see page 16-23 for Street Triple, Street Triple 660 cc and Street Triple R).
- Disconnect the battery, negative (black) lead first.
- Remove the fuel tank (see page 10-112).
- Remove the airbox (see page 10-120).
- Remove the throttle bodies (see page 10-135).
- Remove the gear change linkage (see page 7-10).

Note:

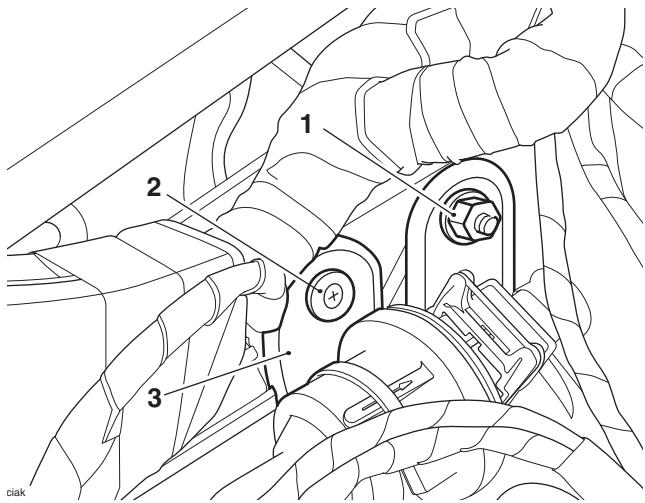
- **Note the routing of the breather hoses and harnesses in front of the sprocket cover for installation.**
- 7. Release the fixings and remove the engine's sprocket cover.



- 1. Fixings
- 2. Sprocket cover (Street Triple shown)
- 3. Breather hoses

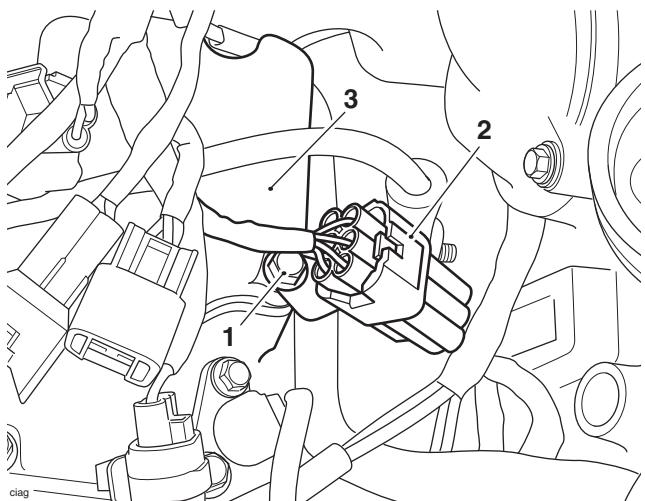
Electrical

8. Remove the cable tie and detach the purge valve from the frame's left hand finisher.
9. Release the lock nut, fir-tree clip and remove the frame's left hand finisher.



1. Lock nut
2. Fir-tree clip
3. Finisher

10. Release the fixing and detach the engine sub-harness from the engine breather cover.



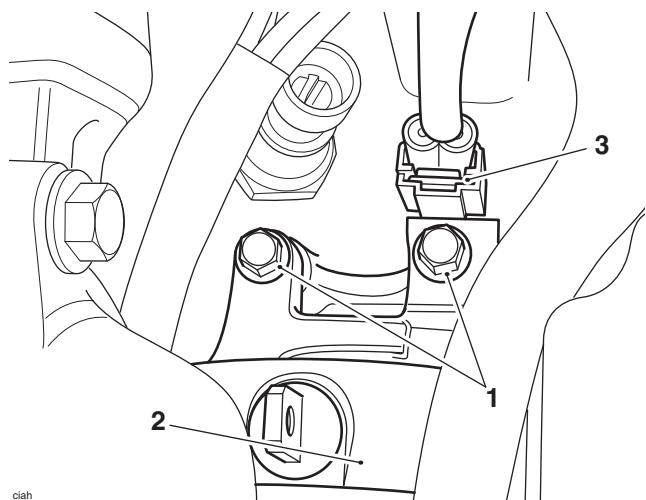
1. Fixing
2. Engine sub-harness
3. Breather cover

11. Disconnect the low oil pressure warning light switch.
12. Ease the boot from the starter cable terminal and then release the cable bolt.
13. Detach the cable.

Note:

- Note the position of the mounting bracket for the crankshaft position sensor's multiplug for installation.

14. Release the fixings securing the starter to the crankcase.



1. Fixings
2. Starter motor
3. Multiplug, crankshaft position sensor

15. Ease the starter motor from the upper crankcase.

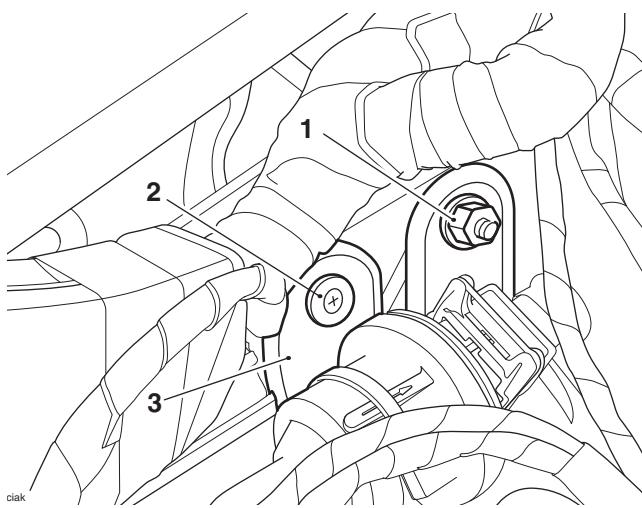
Inspection

1. Ensure the starter turns freely and without binding.
2. Check the starter O-ring for damage and deterioration. Replace as necessary.

Installation

1. Lubricate the starter motor O-ring with a small amount of petroleum jelly.
2. Fit the starter motor to the upper crankcase with the multiplug for the crankshaft position sensor as noted for removal. Ensure that the O-ring does not become damaged during installation.
3. Fit and tighten the starter bolts to **10 Nm**.
4. Refit the starter cable and secure with the bolt. Tighten to **3 Nm**.
5. Refit the starter cable boot.
6. Connect the low oil pressure warning light switch.
7. Secure the multiplug for the engine's sub-harness to the engine breather cover, tighten the fixing to **9 Nm**.

8. Refit the frame's left hand finisher, secure with the fir-tree clip and lock nut. Tighten the lock nut to **3 Nm**.



1. Lock nut
2. Fir-tree clip
3. Finisher
9. Secure the purge valve to the frame's left hand finisher with a new cable tie.
10. Refit the sprocket cover with the breather hoses routed as noted for removal. Tighten the fixings to **9 Nm**.
11. Refit the gear change lever (see page 7-10).
12. Refit the throttle bodies (see page 10-136).
13. Refit the airbox (see page 10-122).
14. Refit the fuel tank (see page 10-113).
15. Reconnect the battery, positive (red) lead first. Tighten the battery terminals to **4.5 Nm**.
16. Refit the seat (see page 16-22 for Daytona 675, Daytona 675 R and Street Triple Rx, see page 16-24 for Street Triple, Street Triple 660 cc and Street Triple R).

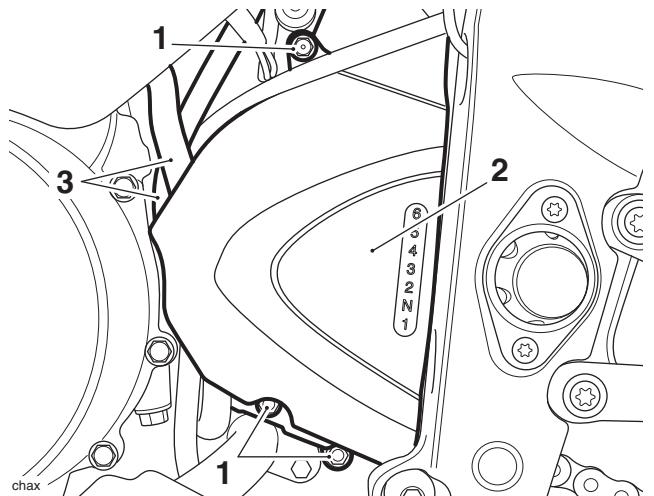
Alternator

Removal

1. Remove the seat (see page 16-22 for Daytona 675, Daytona 675 R and Street Triple Rx, see page 16-23 for Street Triple, Street Triple 660 cc and Street Triple R).
2. Disconnect the battery, negative (black) lead first.
3. **For Daytona 675 and Daytona 675 R:** Remove the left hand fairing (see page 16-33).
4. Remove the fuel tank (see page 10-112).
5. Remove the airbox (see page 10-120).
6. Remove the throttle bodies (see page 10-135).
7. Remove the gear change linkage (see page 7-10).

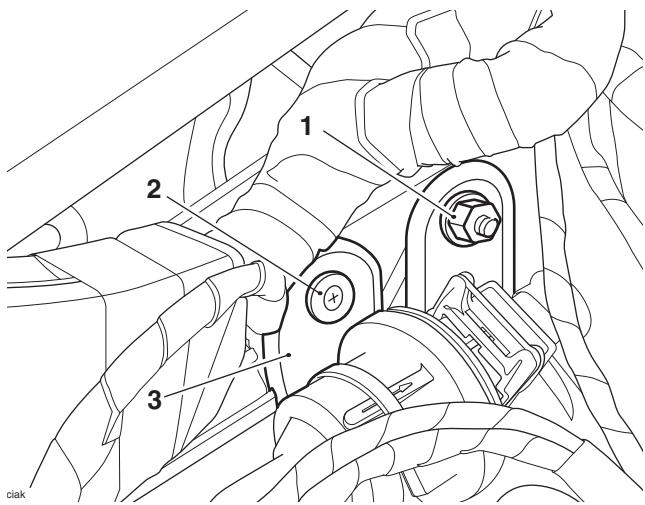
Note:

- **Note the routing of the breather hoses and harnesses in front of the sprocket cover for installation.**
- 8. Release the fixings and remove the engine's sprocket cover.



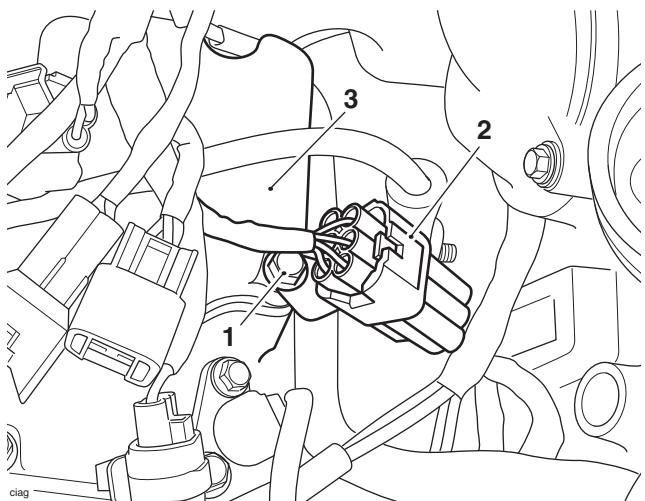
Electrical

9. Remove the cable tie and detach the purge valve from the frame's left hand finisher.
10. Release the lock nut, fir-tree clip and remove the frame's left hand finisher.



- 1. Lock nut
2. Fir-tree clip
3. Finisher**

11. Release the fixing and detach the engine sub-harness from the engine breather cover.

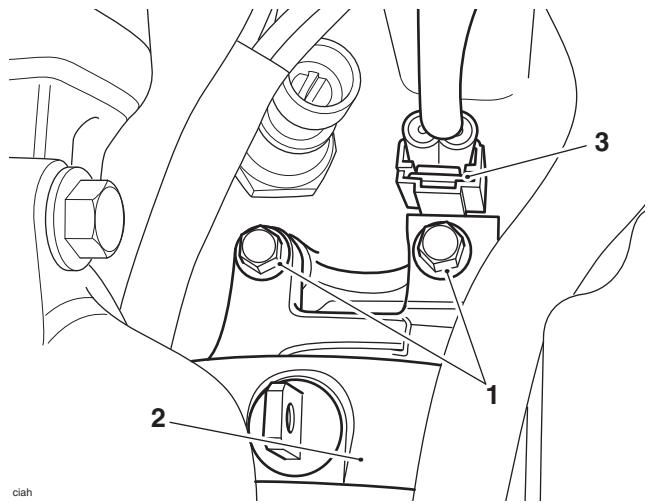


- 1. Fixing
2. Engine sub-harness
3. Breather cover**

Note:

- The multiplug for the crankshaft position sensor is secured by the starter motor's mounting bolt.

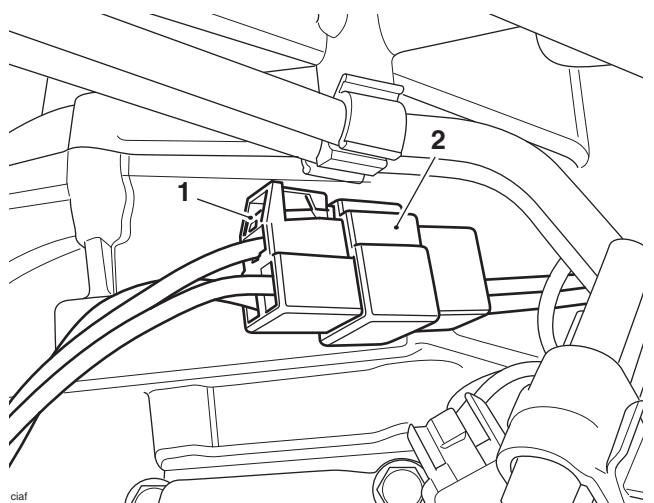
12. Release the fixing securing the multiplug for the crankshaft position sensor to the starter motor. Disconnect the crankshaft position sensor from the engine sub-harness.



- 1. Multiplug
2. Starter motor
3. Crankshaft position sensor**

For Street Triple, Street Triple 660 cc, Street Triple R and Street Triple Rx

13. Disconnect the alternator's harness from the regulator/rectifier's sub-harness.

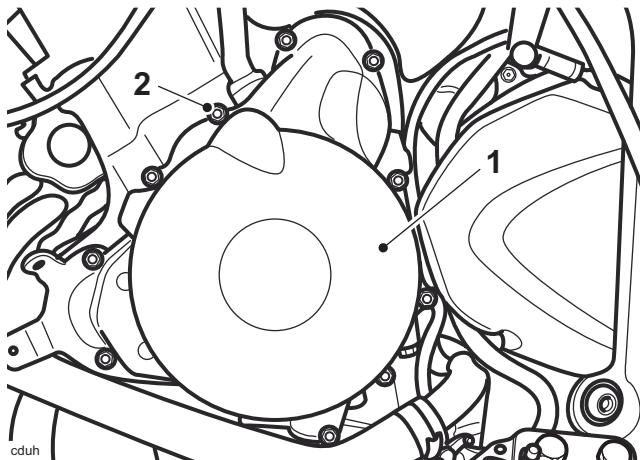


- 1. Multiplug, alternator
2. Regulator/rectifier sub-harness**

Note:

- Note the position of the copper washer under the head of one of the upper bolts.

14. Release the bolts securing the left hand engine cover.

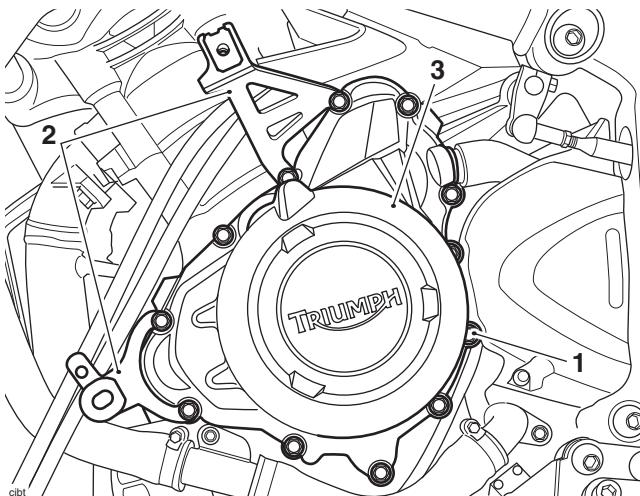


1. Left hand engine cover
2. Copper washer position

Daytona 675 and Daytona 675 R

Note:

- Note the position of the two brackets for the fairing.**
15. Release the fixings securing the left hand engine cover. Collect the fairing brackets.



1. Fixings
2. Brackets
3. Left hand engine cover

All Models

Note:

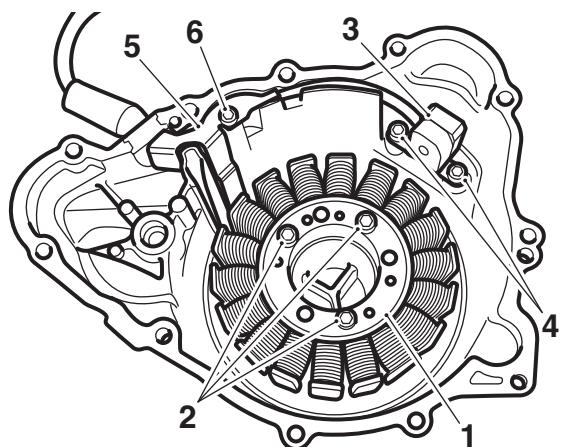
- Note the routing of the alternator harness and clips for installation.**
16. Withdraw the cover from the crankcase against the pull of the alternator magnet.

Note:

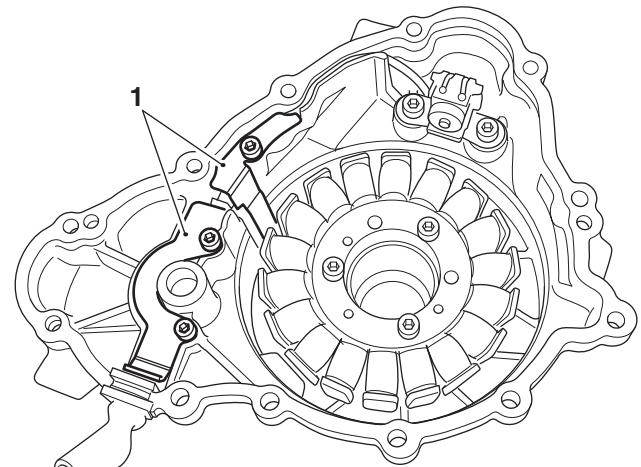
- The stator and crankshaft position sensor are supplied as an assembly and cannot be separated.**
17. To remove the stator and crankshaft position sensor from the cover, release the three bolts in the centre of the cover and release the bolt securing the cable bracket. Discard the bolts.

Note:

- For Daytona 675 and Daytona 675 R there are two cable brackets fitted to the alternator cover.**
18. Release and discard the fixings securing the cable bracket(s) and crankshaft position sensor to the cover.



1. Stator
2. Stator fixings
3. Crankshaft position sensor
4. Crankshaft position sensor fixings
5. Cable bracket, all Street Triple models
6. Cable bracket fixing



1. Cable brackets, Daytona 675 and Daytona 675 R

Electrical

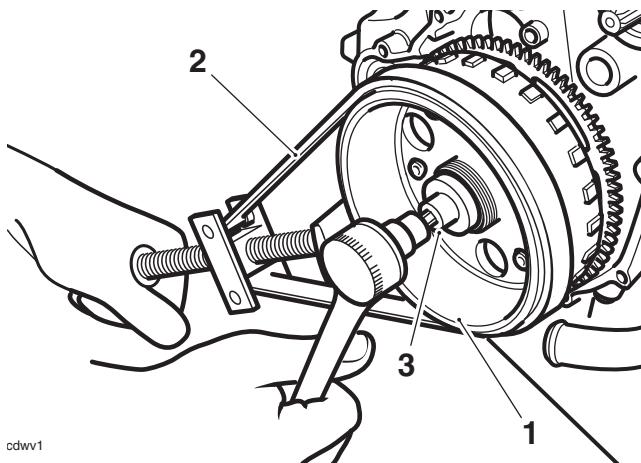
19. Withdraw the stator and crankshaft position sensor.



Caution

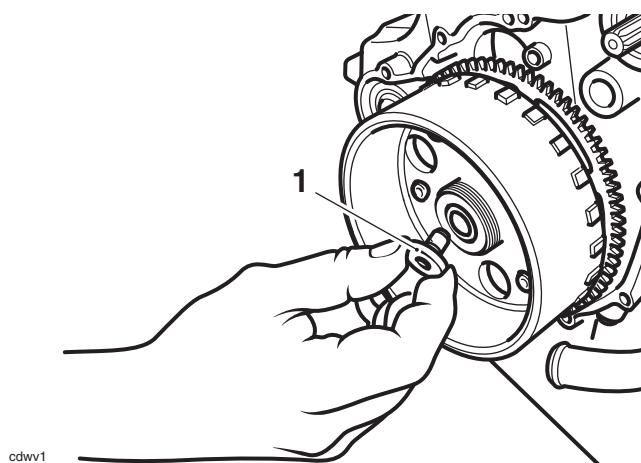
Do not use tools to tighten service tool T3880375. Tighten the tool by hand only. Over-tightening of the tool will lead to damage to the alternator rotor.

20. To remove the rotor, clean the alternator rotor to remove all traces of oil, and fit the T3880375 - Alternator Rotor Holder to the rotor as shown below. Retain the tool to prevent the crankshaft from rotating and remove the centre bolt from the crankshaft.



1. Rotor
2. T3880375 - Alternator Rotor Holder
3. Centre bolt

21. With the bolt removed, locate the spigot from the larger of the two thrust pads supplied with T3880365 - Alternator Rotor Puller to the crankshaft.

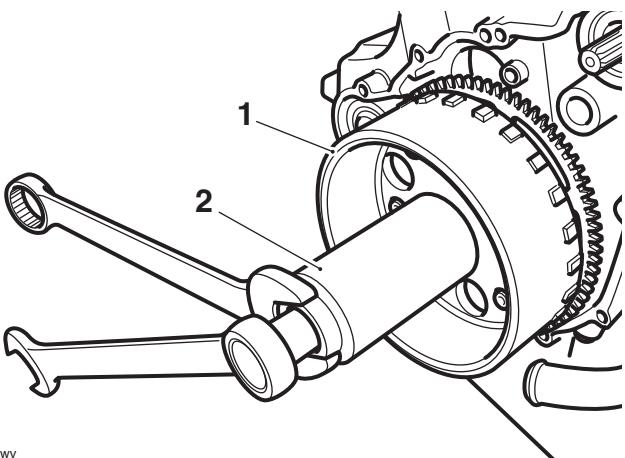


1. Thrust pad

22. Assemble the T3880365 - Alternator Rotor Puller to the threaded centre section of the rotor.

Note:

- **Ensure that the thrust pad does not fall out during assembly of the tool.**
- 23. Hold the centre of the tool to prevent rotation then tighten the draw-bolt in the centre of the tool to release the taper seating of the rotor from the crankshaft.



1. Rotor
2. T3880365 - Alternator Rotor Puller

24. Withdraw the rotor and tool as an assembly and then separate the tool from the rotor. Collect the Woodruff key and the tool thrust pad from the crankshaft.

Installation

1. Refit the Woodruff key to the crankshaft.
2. Assemble the rotor to the keyway on the crankshaft, ensuring the Woodruff key remains in position.

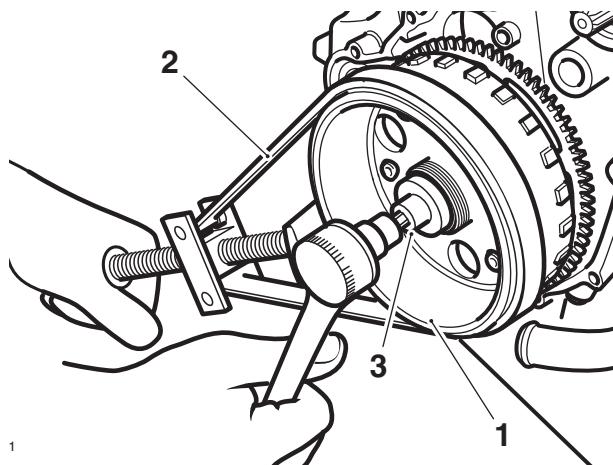


Caution

Do not use tools to tighten service tool T3880375. Tighten the tool by hand only. Over-tightening of the tool will lead to damage to the alternator rotor.

3. Refit the T3880375 - Alternator Rotor Holder to prevent the crankshaft from rotating, ensuring the rotor is free from oil and the tool is not over-tightened.

4. Tighten the rotor retaining bolt to **120 Nm**.

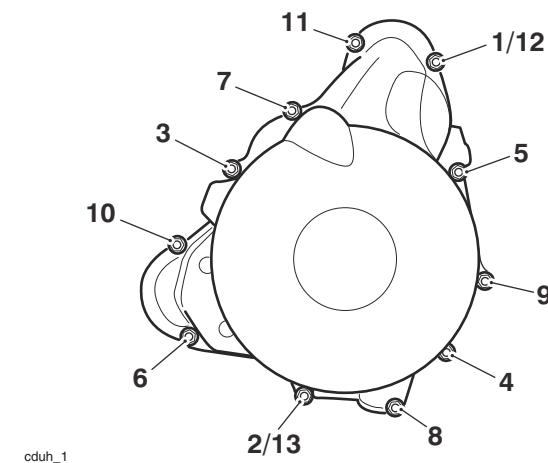


1. Rotor
2. T3880375 - Alternator Rotor Holder
3. Centre bolt

5. Remove the T3880375 - Alternator Rotor Holder.
6. Locate the stator and crankshaft position sensor to the engine cover.
7. Apply silicone sealer to the cable grommet (at the factory, ThreeBond 1215 is used) and align the cable to the exit slot.
8. Fit the cable retainer bracket(s) and tighten the new retainer bolt(s) to **6 Nm**.
9. Tighten the new stator bolts to **12 Nm**.
10. Tighten the new crankshaft position sensor bolts to **6 Nm**.
11. Position a new gasket to the crankcase dowels then refit the left hand engine cover. Route the alternator harness as noted for removal.

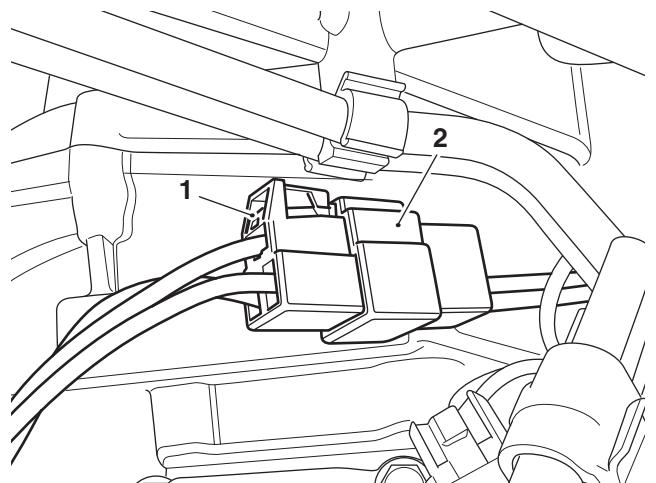
For Street Triple, Street Triple 660 cc, Street Triple R and Street Triple Rx:

12. Tighten the cover bolts to **8 Nm** in the sequence shown below. Ensure the bolt with the copper washer is located at position number seven.



Left Hand Engine Cover Tightening Sequence
- Street Triple, Street Triple 660 cc,
Street Triple R and Street Triple Rx

13. Connect the alternator's harness to the regulator/rectifier's sub-harness.

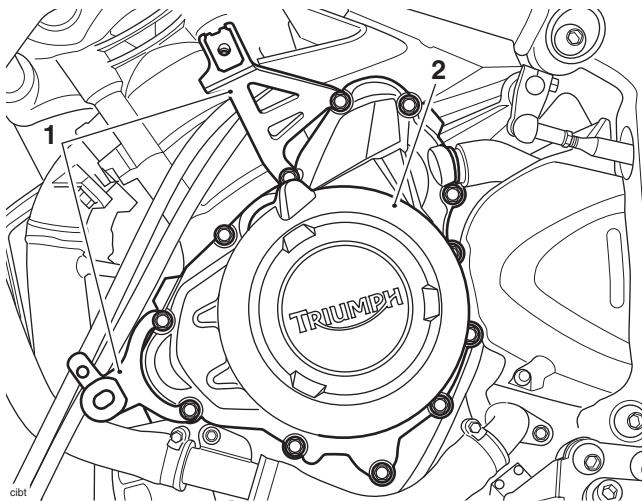


1. Multiplug, alternator
2. Regulator/rectifier sub-harness

Electrical

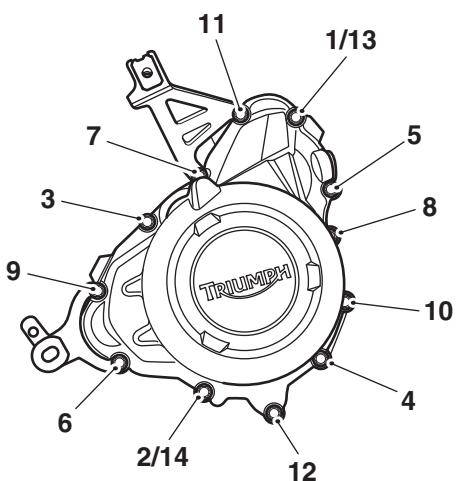
Daytona 675 and Daytona 675 R:

14. Refit the fairing brackets as noted for removal.



1. Brackets
2. Left hand engine cover

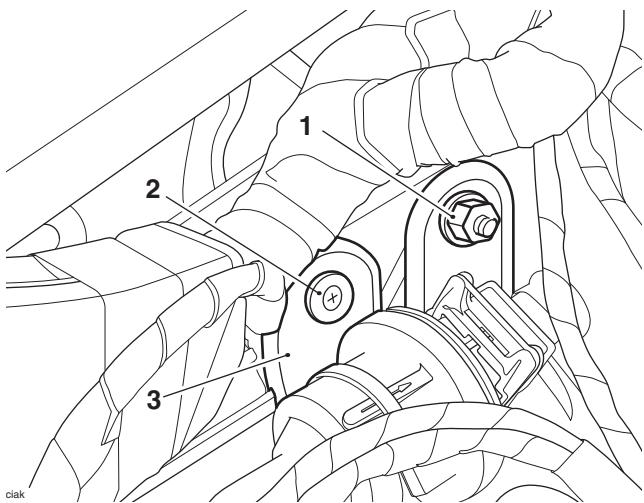
15. Tighten the cover bolts to **10 Nm** in the sequence shown below.



cibt_2
Left Hand Engine Cover Tightening Sequence
- Daytona 675 and Daytona 675 R

All Models

16. Refit the frame's left hand finisher, secure with the fir-tree clip and lock nut. Tighten the lock nut to **3 Nm**.



1. Lock nut
2. Fir-tree clip
3. Finisher

17. Secure the purge valve to the frame's left hand finisher with a new cable tie.
18. Refit the sprocket cover with the breather hoses routed as noted for removal. Tighten the fixings to **9 Nm**.
19. Refit the gear change lever (see page 7-10).
20. Refit the throttle bodies (see page 10-136).
21. Refit the airbox (see page 10-122).
22. Refit the fuel tank (see page 10-113).
23. **For Daytona 675 and Daytona 675 R:** Refit the left hand fairing (see page 16-34).
24. Reconnect the battery, positive (red) lead first. Tighten the battery terminals to **4.5 Nm**.
25. Refit the seat (see page 16-22 for Daytona 675, Daytona 675 R and Street Triple Rx, see page 16-24 for Street Triple, Street Triple 660 cc and Street Triple R).

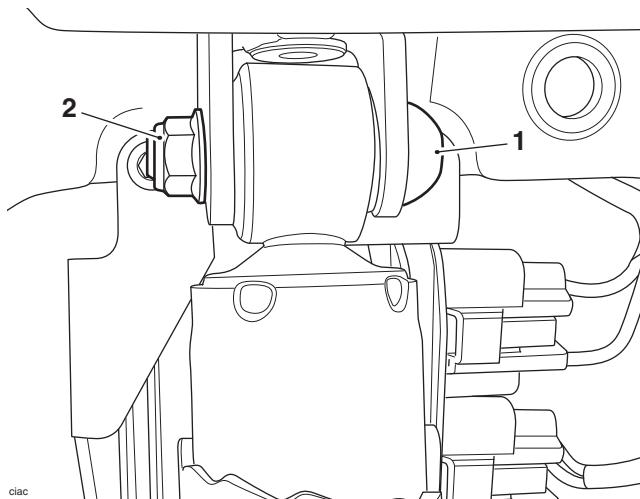
Alternator Regulator/Rectifier - Street Triple, Street Triple 660 cc, Street Triple R and Street Triple Rx

The regulator/rectifier does not contain any serviceable parts and must be replaced if faulty.

Removal

The alternator regulator/rectifier is located in between the rear suspension unit and the gearbox.

1. Raise and support the rear of the motorcycle under the frame or engine. Position a block to support the rear wheel.
2. Remove the seat (see page 16-23).
3. Disconnect the battery, negative (black) lead first.
4. Remove the rear suspension unit upper mounting bolt and lock nut. Discard the lock nut.

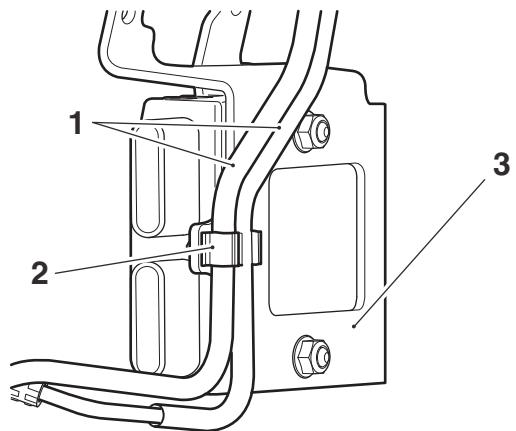


- 1. Bolt**
2. Lock nut

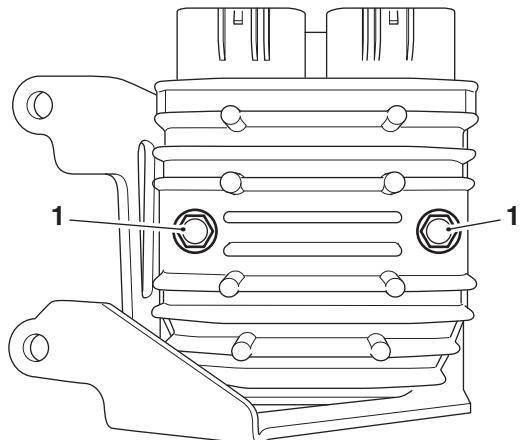
Note:

- Note the position of the two electrical connectors for installation.

5. Disconnect the two electrical connectors.
6. **Motorcycles with ABS:** Detach the two brake lines from their clip-on the back of the regulator/rectifier mounting bracket.



- 1. ABS brake lines**
- 2. Clip**
- 3. Mounting bracket, shown removed for clarity**
7. Release the two fixings and remove the regulator/rectifier.



- 1. Fixings**
8. Release the fixings and remove the regulator/rectifier from its bracket.

Electrical

Installation

1. Fit the regulator/rectifier to its bracket and tighten its fixings to **9 Nm**.
2. Fit the regulator/rectifier and bracket assembly to the frame and tighten its fixings to **12 Nm**.
3. **Motorcycles with ABS:** Attach the two brake lines to their clip on the back of the regulator/rectifier mounting bracket.
4. Reconnect the two electrical connectors as noted for removal.
5. Fit the rear suspension unit upper mounting bolt and new lock nut. Do not fully tighten at this stage.
6. Connect the battery, positive (red) lead first. Tighten the battery terminals to **4.5 Nm**.
7. Fit the seat (see page 16-24).
8. With the weight of the motorcycle on its wheels, tighten the rear suspension unit upper mounting to **48 Nm**.

Alternator Regulator/Rectifier - Daytona 675 and Daytona 675 R

The regulator/rectifier does not contain any serviceable parts and must be replaced if faulty.

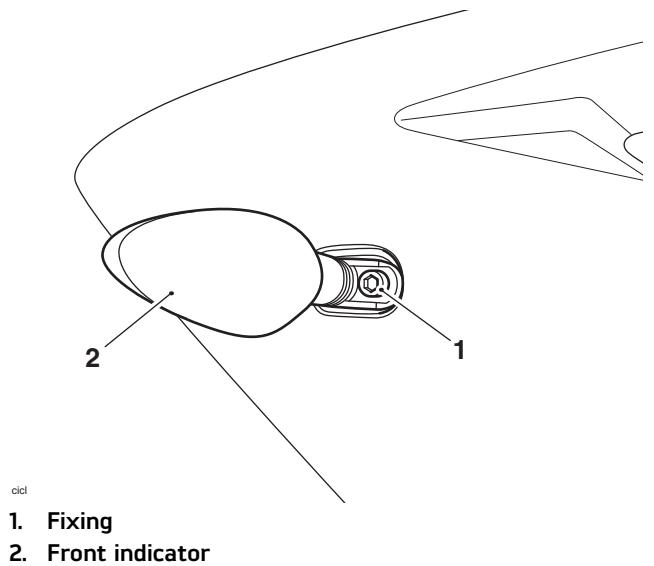
Removal

The alternator rectifier is located behind the left hand fairing.

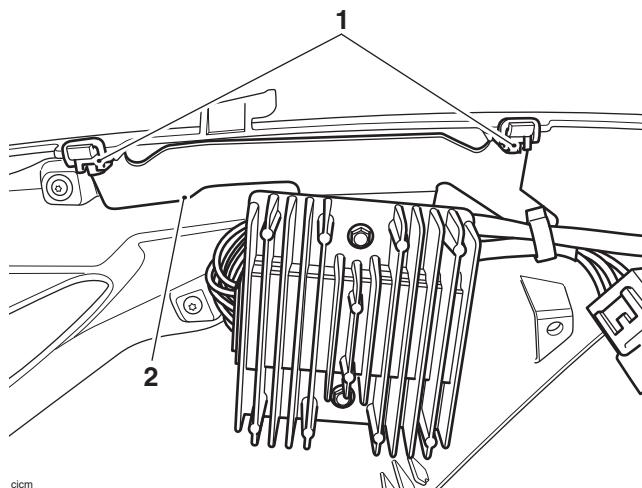
1. To access the rectifier, remove the left hand fairing (see page 16-33).

Note:

- **The fixing for the front direction indicator also secures the regulator/rectifier mounting bracket to the fairing.**
- 2. Remove the fixing for the front direction indicator.



3. Lift the regulator/rectifier and mounting bracket assembly off its mounting lugs on the fairing.



- cicm**
1. Mounting lugs
2. Bracket

Note:

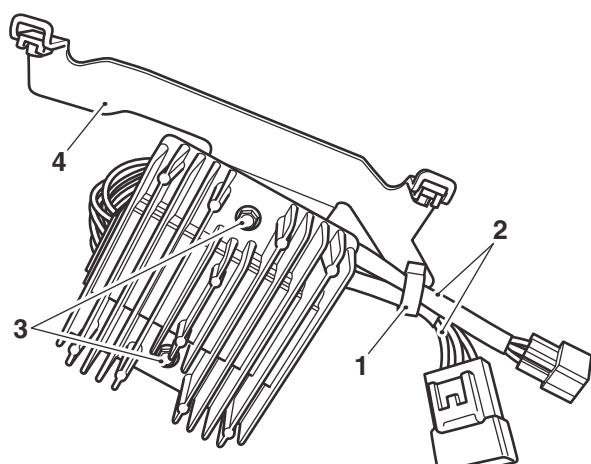
- Note the routing of the regulator/rectifier harnesses for installation.
4. Detach the harnesses from their retaining clip.
5. Release the fixings and remove the regulator/rectifier.

Installation

1. Position the regulator/rectifier to its bracket with the harnesses routed as noted for removal. Secure with the fixings and tighten to **4 Nm**.
2. Secure the harnesses to their clip.
3. Fit the regulator/rectifier and mounting bracket assembly to its mounting lugs on the fairing.

Note:

- The fixing for the front direction indicator also secures the regulator/rectifier mounting bracket to the fairing.
4. Secure the front indicator with its fixing and tighten to **3 Nm**.
 5. Fit the front left hand fairing (see page 16-34).



- cicm**
1. Clip
2. Harnesses
3. Fixings
4. Bracket

Electrical

Alternator Stator - Daytona 675 and Daytona 675 R

The stator is an assembly of 18 coils, arranged into three phases. It is possible to check for continuity, and short circuits through the coils to ground.

Note:

- Only repairs to the stator harness between the connector and the harness entry point into the crankcase are permitted.
- Do not attempt to repair the stator coils.
- If the battery is not fully charged, the charging Voltage may be lower than specified when checking at 2,000 rpm.
- Ensure all additional accessories (auxiliary lights, heated grips etc.) are switched off.

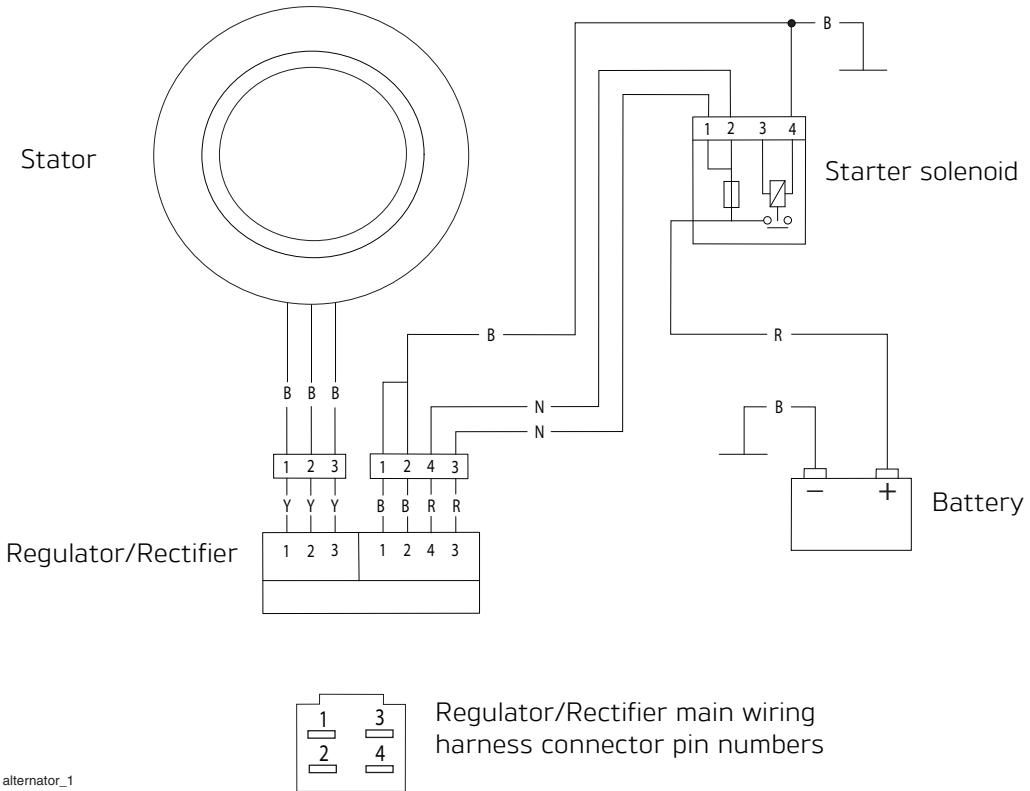
Fault Code	Possible cause	Action
Battery not charging	Fuse at the starter solenoid	Check the condition of the fuse.
	Battery	Check the condition of the battery. Test the battery using the BatteryMate 150-9. Refer to the instructions supplied with the BatteryMate 150-9. Ensure the battery is serviceable.
	Alternator	Proceed to pinpoint test 1.
	Regulator/Rectifier	Test the regulator/rectifier (see page 17-45).

Pinpoint Tests

Test	Result	Action
1 Check cable and terminal integrity: - Battery positive (+) - Battery negative (-) - Regulator/rectifier to main wiring harness connector pin 1 - Regulator/rectifier to main wiring harness connector pin 2 - Regulator/rectifier to main wiring harness connector pin 3 - Regulator/rectifier to main wiring harness connector pin 4	OK	Proceed to test 2
	Faulty	Rectify fault, proceed to test 6
2 Check cable and terminal integrity: - Regulator/rectifier to alternator harness connector pin 1 - Regulator/rectifier to alternator harness connector pin 2 - Regulator/rectifier to alternator harness connector pin 3	OK	Disconnect the battery leads, negative (black) lead first. Disconnect regulator/rectifier to main wiring harness connector (4 pin). Proceed to test 3
	Faulty	Rectify fault, proceed to test 6
3 Check cable continuity: - Regulator/rectifier main harness connector pin 1 to battery lead negative - Regulator/rectifier main harness connector pin 2 to battery lead negative - Regulator/rectifier main harness connector pin 3 to battery lead positive - Regulator/rectifier main harness connector pin 4 to battery lead positive	OK	Reconnect the battery leads, positive (red) lead first. Tighten the battery terminals to 4.5 Nm . Reconnect the regulator/rectifier to main wiring harness connector (4 pin). Disconnect the regulator/rectifier to alternator harness connector (3 pin). Proceed to test 4
	Open circuit	Locate and rectify wiring fault, proceed to test 6
4 Check resistance through the coils: - Alternator harness pin 1 to 2 - Alternator harness pin 2 to 3 - Alternator harness pin 3 to 1	0.4Ω to 0.6Ω	Proceed to test 5
	Open circuit or short circuit	If the fault is between the connector and the crankcase, repair the harness. Proceed to test 6 If the fault is after the crankcase, replace the unit. Proceed to test 6
5 Check for short to ground: - Alternator harness pin 1 to metal frame - Alternator harness pin 2 to metal frame - Alternator harness pin 3 to metal frame	Open circuit	Proceed to test 6
	Short circuit	Replace unit. Proceed to test 6

Electrical

Test	Result	Action
6 Reconnect the harness and run the engine. Check the charging Voltage at 2,000 rpm:	13.5 V to 15 V	Action complete - quit test
	Fault still present	Test regulator/rectifier (see page 17-45)
		If regulator/rectifier is serviceable, contact Triumph service



Regulator/Rectifier - Daytona 675 and Daytona 675 R

Internally the regulator/rectifier consists of:

- six diodes
- a Voltage controller and three thyristors.

The diodes are arranged with one diode connected between each yellow input wire and each pair of red and black output wires.

The diodes convert the AC Voltage to DC Voltage.

Each yellow input wire is also connected to a thyristor which is in turn connected to ground. When the DC Voltage at the battery reaches the required level, the Voltage controller sends a signal to all three thyristors. The thyristors then conduct and effectively short circuit the stator until the DC Voltage drops to an acceptable level.

It is possible for any number of these diodes to fail, reducing the power output of the unit. This may not be obvious until maximum power is required by the ignition, lighting and accessories etc.

The diodes can be checked using a multi-meter on DIODE setting.

Note:

- **This test does not check for Voltage regulation.**

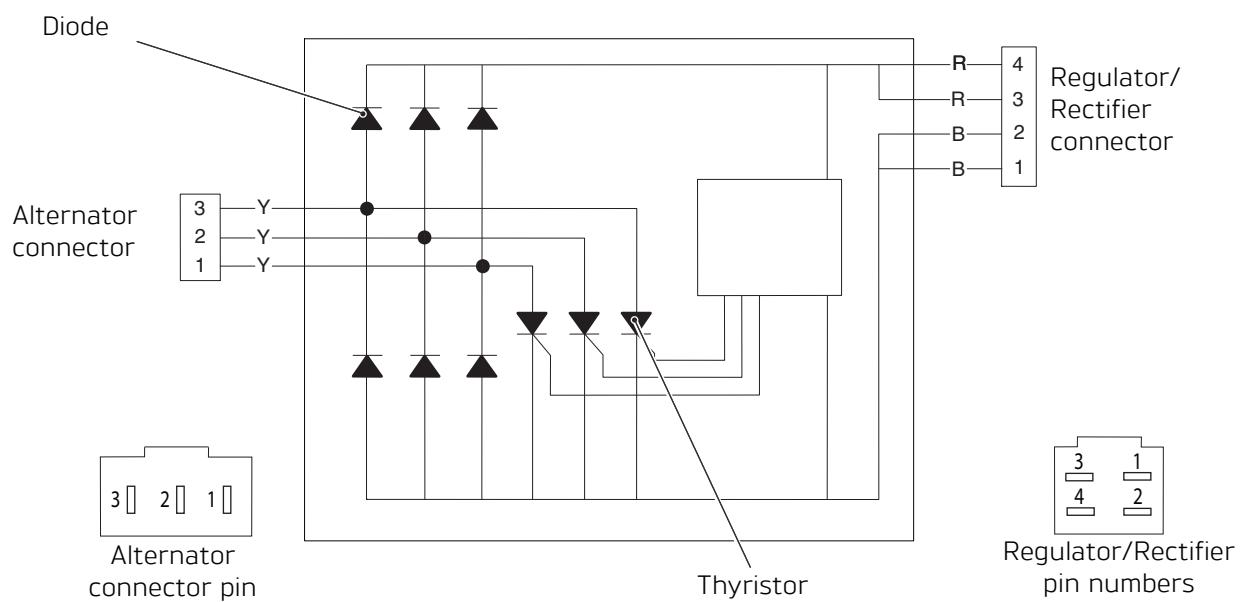
Fault Code	Possible cause	Action
Battery not charging	Fuse at the starter solenoid	Check the condition of the fuse:
	Battery	Check the condition of the battery. Test the battery using the BatteryMate 150-9. Refer to the instructions supplied with the BatteryMate 150-9. Ensure the battery is serviceable.
	Regulator/Rectifier	Disconnect the rectifier regulator connectors from the main wiring harness and the alternator harness. Proceed to pinpoint test 1.
	Alternator	Test the alternator stator (see page 17-42).

Electrical

Pinpoint Tests

Test	Result	Action
1 Check the ground and power for continuity: - Regulator/rectifier connector pin 1 to pin 2 - Regulator/rectifier connector pin 3 to pin 4	OK	Proceed to test 2
	Open circuit	Rectify wiring fault. Proceed to test 5 If no wiring fault found, replace unit. Proceed to test 5
2 Check diodes forward bias: - Positive (+) probe to Regulator/rectifier connector pin 1 to: - Negative (-) probe to alternator connector pin 1 - Negative (-) probe to alternator connector pin 2 - Negative (-) probe to alternator connector pin 3	0.4 V to 0.7 V	Proceed to test 3
	Open circuit or short circuit	Replace unit. Proceed to test 5
3 Check diodes forward bias: - Negative (-) probe to Regulator/rectifier connector pin 4 to: - Positive (+) probe to alternator connector pin 1 - Positive (+) probe to alternator connector pin 2 - Positive (+) probe to alternator connector pin 3	0.4 V to 0.7 V	Proceed to test 3
	Open or short circuit	Replace unit. Proceed to test 5
4 Check diodes reverse bias: - Positive (+) probe to Regulator/rectifier connector pin 4 to: - Negative (-) probe to alternator connector pin 1 - Negative (-) probe to alternator connector pin 2 - Negative (-) probe to alternator connector pin 3	Open circuit or OL on meter	Proceed to test 4
	A Voltage reading or short circuit	Replace unit. Proceed to test 5
5 Check diodes reverse bias: - Negative (-) probe to Regulator/rectifier connector pin 1 to: - Positive (+) probe to alternator connector pin 1 - Positive (+) probe to alternator connector pin 2 - Positive (+) probe to alternator connector pin 3	Open circuit or OL on meter	Proceed to test 5
	A Voltage reading or short circuit	Replace unit. Proceed to test 5

Test	Result	Action
6 Reconnect the harness and run the engine. Check the charging Voltage at 2,000 rpm:	13.5 V to 15 V	Action complete - quit test
	Fault still present	Test regulator/rectifier (see page 17-45)
		If regulator/rectifier is serviceable, contact Triumph service



Electrical

Alternator Stator - Street Triple, Street Triple 660 cc, Street Triple R and Street Triple Rx

The stator is an assembly of 18 coils, arranged into three phases. It is possible to check for continuity, and short circuits through the coils to ground.

Note:

- Only repairs to the stator harness between the connector and the harness entry point into the crankcase are permitted.
- Do not attempt to repair the stator coils.
- If the battery is not fully charged, the charging Voltage may be lower than specified when checking at 2,000 rpm.
- Ensure all additional accessories (auxiliary lights, heated grips etc.) are switched off.

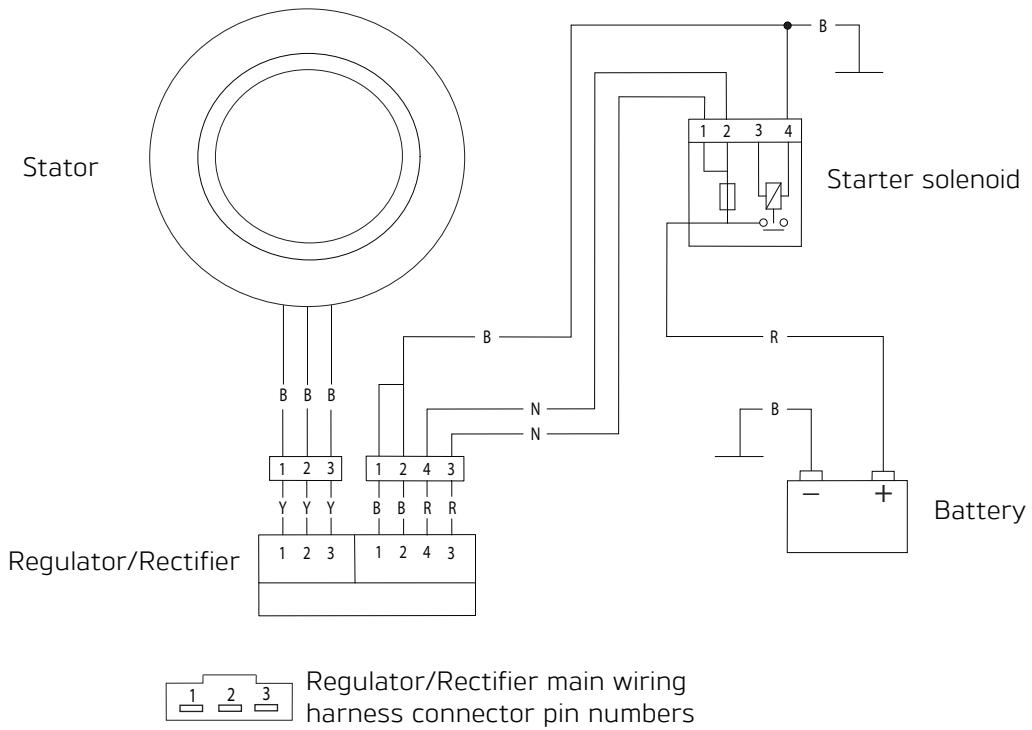
Fault Code	Possible cause	Action
Battery not charging	Fuse at the starter solenoid	Check the condition of fuse.
	Battery	Check the condition of the battery. Test the battery using the BatteryMate 150-9. Refer to the instructions supplied with the BatteryMate 150-9. Ensure the battery is serviceable.
	Alternator	Proceed to pinpoint test 1.
	Regulator/Rectifier	Test the regulator/rectifier (see page 17-51).

Pinpoint Tests

Test	Result	Action
1 Check cable and terminal integrity: - Battery positive (+) - Battery negative (-) - Regulator/rectifier to main wiring harness connector pin 1 - Regulator/rectifier to main wiring harness connector pin 3	OK	Proceed to test 2
	Faulty	Rectify fault, proceed to test 6
2 Check cable and terminal integrity: - Regulator/rectifier to alternator harness connector pin 1 - Regulator/rectifier to alternator harness connector pin 2 - Regulator/rectifier to alternator harness connector pin 3	OK	Disconnect the battery leads, negative (black) lead first. Disconnect regulator/rectifier to main wiring harness connector (3 pin). Proceed to test 3
	Faulty	Rectify fault, proceed to test 6
3 Check cable continuity: - Regulator/rectifier main harness connector pin 1 to battery lead negative - Regulator/rectifier main harness connector pin 3 to battery lead positive	OK	Reconnect the battery leads, positive (red) lead first. Tighten the battery terminals to 4.5 Nm . Reconnect the regulator/rectifier to main wiring harness connector (3 pin). Disconnect the regulator/rectifier to alternator harness connector (3 pin). Proceed to test 4
	Open circuit	Locate and rectify wiring fault, proceed to test 6
4 Check resistance through the coils: - Alternator harness pin 1 to 2 - Alternator harness pin 2 to 3 - Alternator harness pin 3 to 1	0.4Ω to 0.6Ω	Proceed to test 5
	Open circuit or short circuit	If the fault is between the connector and the crankcase, repair the harness. Proceed to test 6 If the fault is after the crankcase, replace the unit. Proceed to test 6
5 Check for short to ground: - Alternator harness pin 1 to metal frame - Alternator harness pin 2 to metal frame - Alternator harness pin 3 to metal frame	Open circuit	Proceed to test 6
	Short circuit	Replace unit. Proceed to test 6

Electrical

Test	Result	Action
6 Reconnect the harness and run the engine. Check the charging Voltage at 2,000 rpm:	13.5 V to 15 V	Action complete - quit test
	Fault still present	Test regulator/rectifier (see page 17-51)
		If regulator/rectifier is serviceable, contact Triumph service



alternator_1

Regulator/Rectifier - Street Triple, Street Triple 660 cc, Street Triple R and Street Triple Rx

Internally the regulator/rectifier consists of:

- six diodes
- a Voltage controller and three thyristors.

The diodes are arranged with one diode connected between each yellow input wire and each pair of red and black output wires.

The diodes convert the AC Voltage to DC Voltage.

Each yellow input wire is also connected to a thyristor which is in turn connected to ground. When the DC Voltage at the battery reaches the required level, the Voltage controller sends a signal to all three thyristors. The thyristors then conduct and effectively short circuit the stator until the DC Voltage drops to an acceptable level.

It is possible for any number of these diodes to fail, reducing the power output of the unit. This may not be obvious until maximum power is required by the ignition, lighting and accessories etc.

The diodes can be checked using a multi-meter on DIODE setting.

Note:

- **This test does not check for Voltage regulation.**

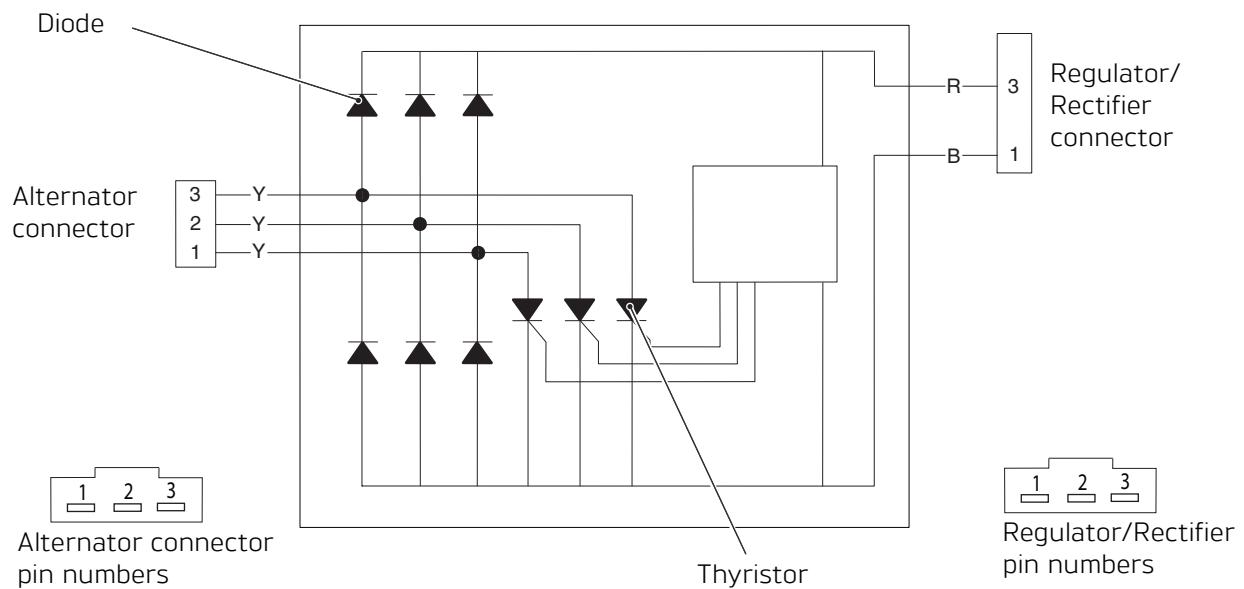
Fault Code	Possible cause	Action
Battery not charging	Fuse at the starter solenoid	Check the condition of the fuse:
	Battery	Check the condition of the battery. Test the battery using the BatteryMate 150-9. Refer to the instructions supplied with the BatteryMate 150-9. Ensure the battery is serviceable.
	Regulator/Rectifier	Disconnect the rectifier regulator connectors from the main wiring harness and the alternator harness. Proceed to pinpoint test 1.
	Alternator	Test the alternator stator (see page 17-48).

Electrical

Pinpoint Tests

Test	Result	Action
1 Check diodes forward bias: - Positive (+) probe to regulator/rectifier connector pin 1 to: - Negative (-) probe to alternator connector pin 1 - Negative (-) probe to alternator connector pin 2 - Negative (-) probe to alternator connector pin 3	0.4 V to 0.7 V	Proceed to test 2
	Open circuit or short circuit	Replace unit. Proceed to test 5
2 Check diodes forward bias: - Negative (-) probe to regulator/rectifier connector pin 3 to: - Positive (+) probe to alternator connector pin 1 - Positive (+) probe to alternator connector pin 2 - Positive (+) probe to alternator connector pin 3	0.4 V to 0.7 V	Proceed to test 3
	Open or short circuit	Replace unit. Proceed to test 5
3 Check diodes reverse bias: - Positive (+) probe to regulator/rectifier connector pin 3 to: - Negative (-) probe to alternator connector pin 1 - Negative (-) probe to alternator connector pin 2 - Negative (-) probe to alternator connector pin 3	Open circuit or OL on meter	Proceed to test 4
	A Voltage reading or short circuit	Replace unit. Proceed to test 5
4 Check diodes reverse bias: - Negative (-) probe to regulator/rectifier connector pin 1 to: - Positive (+) probe to alternator connector pin 1 - Positive (+) probe to alternator connector pin 2 - Positive (+) probe to alternator connector pin 3	Open circuit or OL on meter	Proceed to test 5
	A Voltage reading or short circuit	Replace unit. Proceed to test 5

Test	Result	Action
5 Reconnect the harness and run the engine. Check the charging Voltage at 2,000 rpm:	13.5 V to 15 V	Action complete - quit test
	Fault still present	Test regulator/rectifier (see page 17-51)
		If regulator/rectifier is serviceable, contact Triumph service



Electrical

Lighting Circuit - Daytona 675 and Daytona 675 R

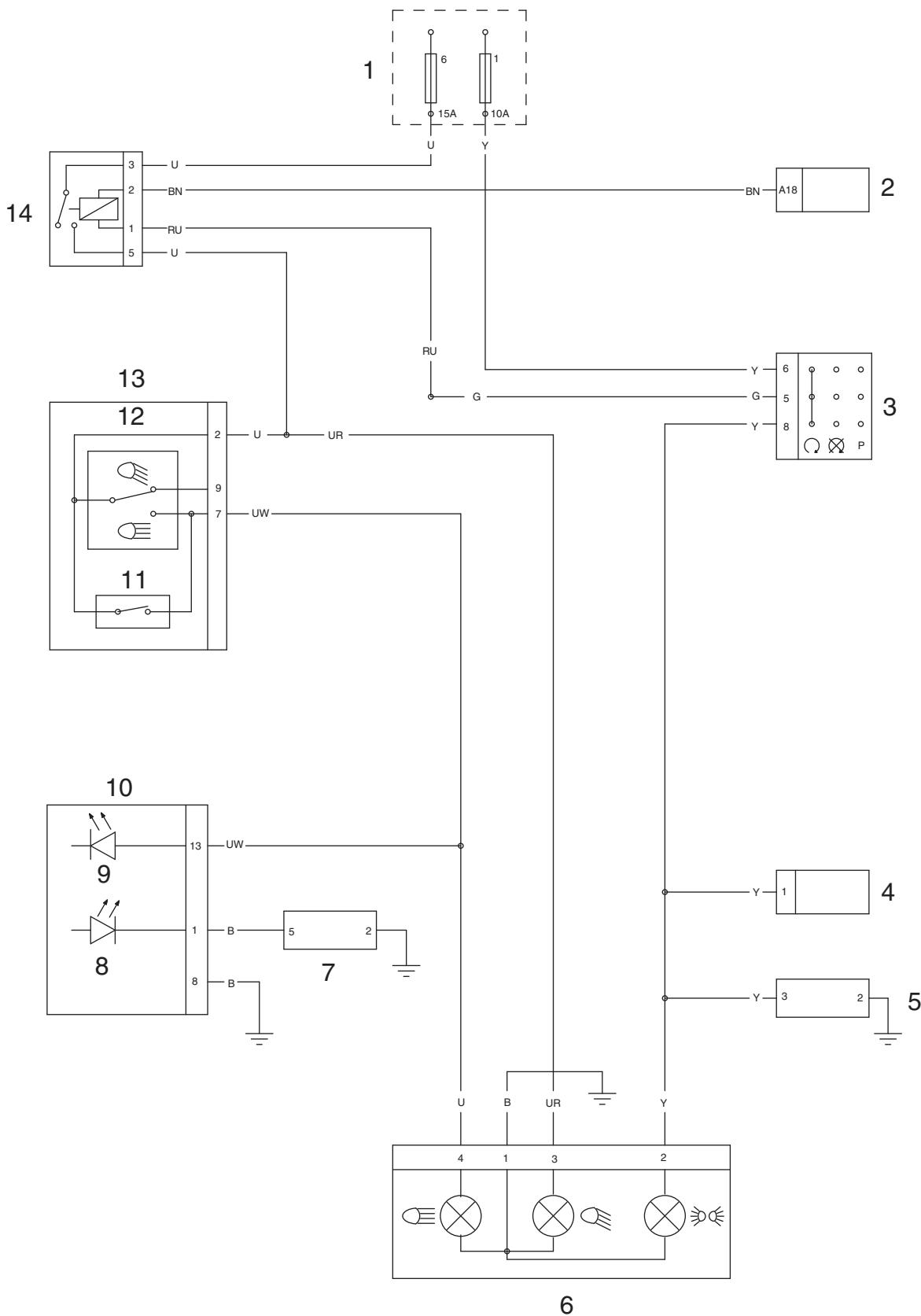
Key to circuit diagram

Key	Item Description
1	Fuse box (Fuse 1 and 6)
2	Engine control module
3	Ignition switch
4	Rear light sub-harness connector
5	Rear light
6	Headlight
7	Oil pressure switch
8	Oil pressure warning light
9	Main beam warning light
10	Instruments
11	Pass light switch
12	Dip/main beam switch
13	Left hand switch housing
14	Headlight relay

Key to wiring colours

Key	Wiring Colour
B	Black
U	Blue
N	Brown
G	Green
S	Slate/Grey
O	Orange
K	Pink
R	Red
P	Purple
W	White
Y	Yellow
LG	Light Green
LU	Light Blue

Lighting Circuit - Daytona 675 and Daytona 675 R



Electrical

Lighting Circuit - Street Triple, Street Triple 660 cc, Street Triple R and Street Triple Rx

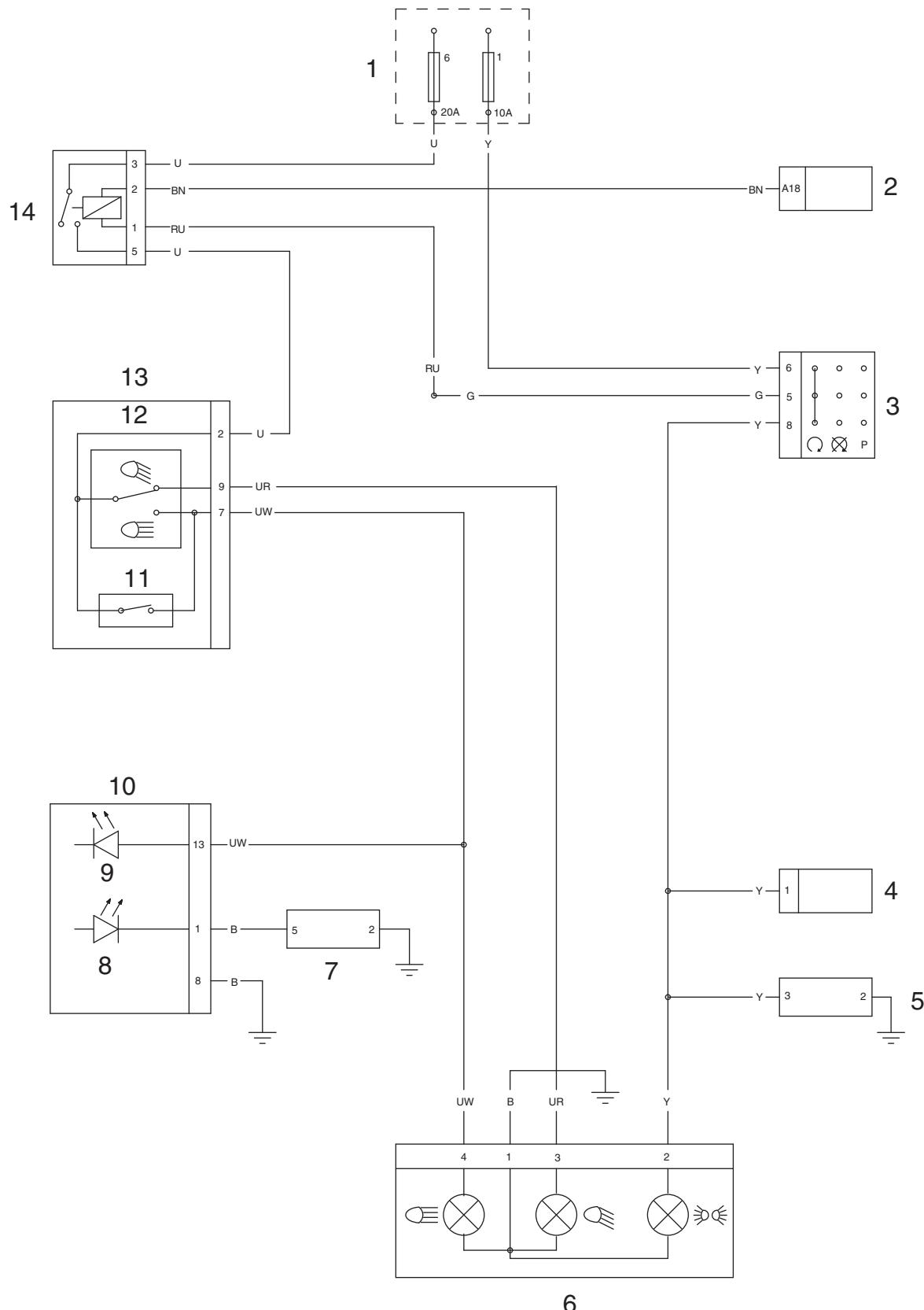
Key to circuit diagram

Key	Item Description
1	Fuse box (Fuse 1 and 6)
2	Engine control module
3	Ignition switch
4	Rear light sub-harness connector
5	Rear light
6	Headlight
7	Oil pressure switch
8	Oil pressure warning light
9	Main beam warning light
10	Instruments
11	Pass light switch
12	Dip/main beam switch
13	Left hand switch housing
14	Headlight relay

Key to wiring colours

Key	Wiring Colour
B	Black
U	Blue
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R	Red
P	Purple
W	White
Y	Yellow
LG	Light Green
LU	Light Blue

Lighting Circuit - Street Triple, Street Triple 660 cc, Street Triple R and Street Triple Rx



Electrical

Starting and Charging Circuit - Daytona 675 and Daytona 675 R

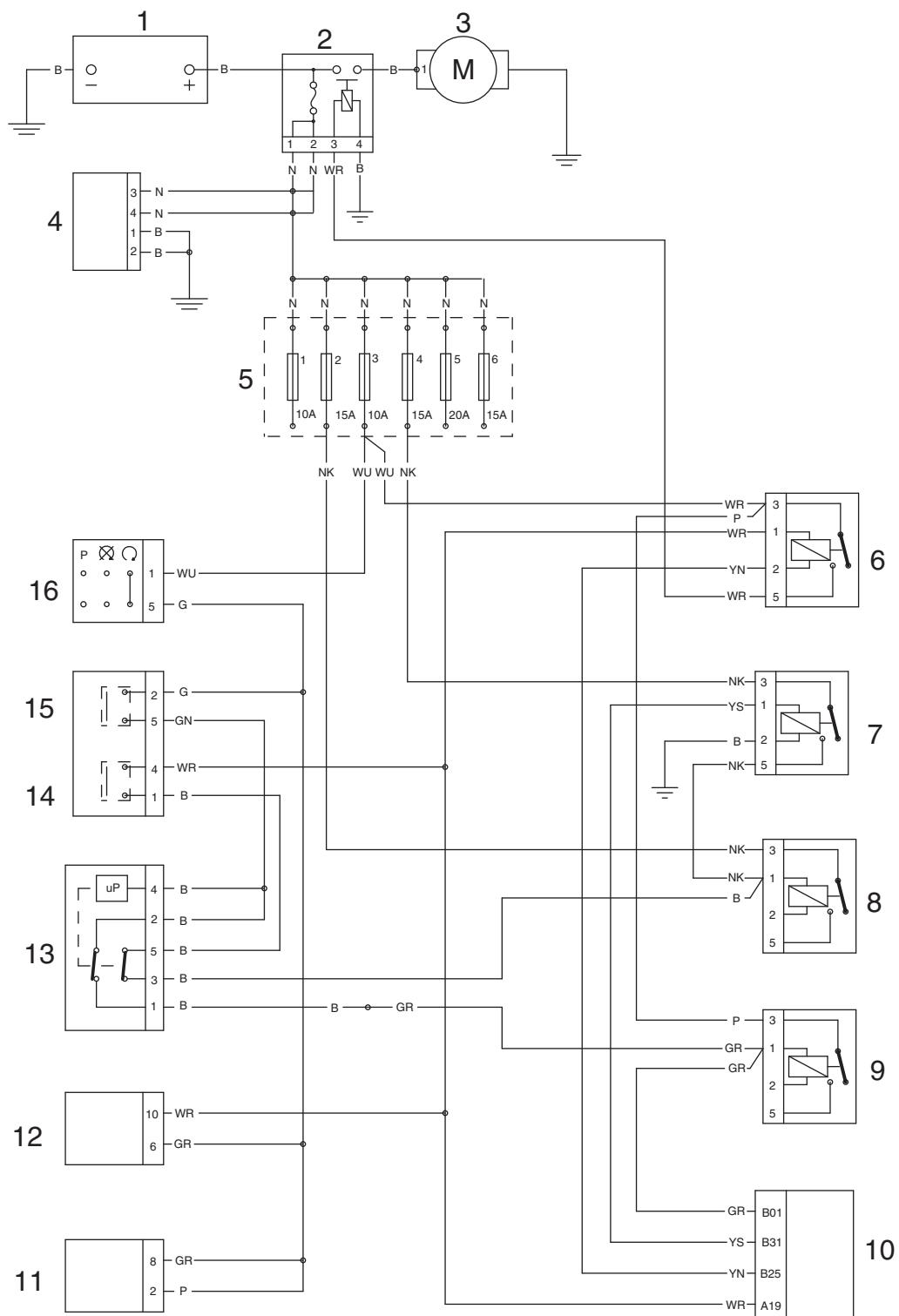
Key to circuit diagram

Key	Item Description
1	Battery
2	Starter solenoid
3	Starter motor
4	Regulator/rectifier
5	Fuse box
6	Starter relay
7	Engine control module relay
8	Cooling fan relay
9	Fuel pump relay
10	Engine control module
11	Immobiliser module
12	Instruments
13	Alarm unit
14	Starter switch
15	Engine kill switch
16	Ignition switch

Key to wiring colours

Key	Wiring Colour
B	Black
U	Blue
N	Brown
G	Green
S	Slate/Grey
O	Orange
K	Pink
R	Red
P	Purple
W	White
Y	Yellow
LG	Light Green
LU	Light Blue

Starting and Charging Circuit - Daytona 675 and Daytona 675 R



Electrical

Starting and Charging Circuit - Street Triple, Street Triple 660 cc, Street Triple R and Street Triple Rx

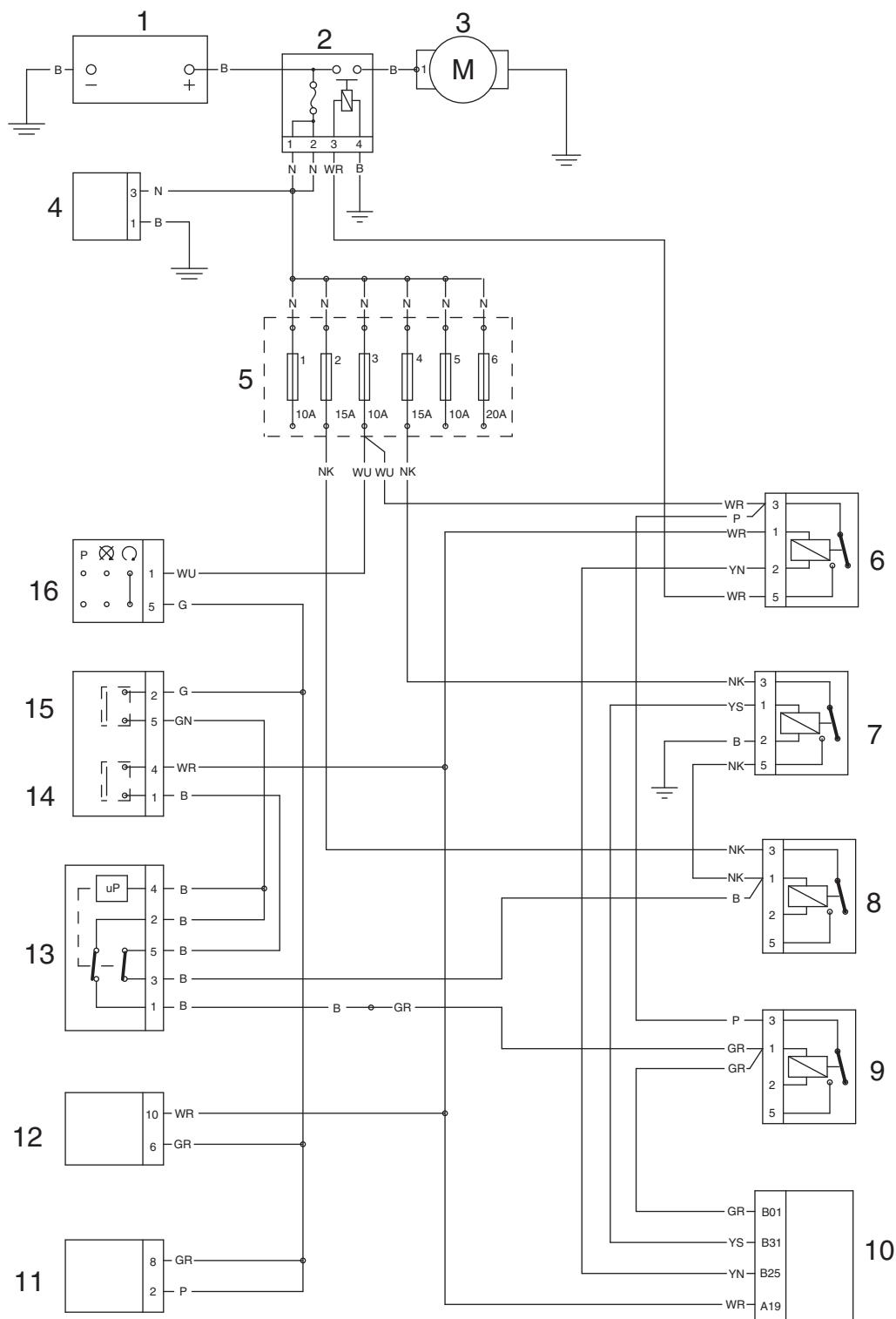
Key to circuit diagram

Key	Item Description
1	Battery
2	Starter solenoid
3	Starter motor
4	Regulator/rectifier
5	Fuse box
6	Starter relay
7	Engine control module relay
8	Cooling fan relay
9	Fuel pump relay
10	Engine control module
11	Immobiliser module
12	Instruments
13	Alarm unit
14	Starter switch
15	Engine kill switch
16	Ignition switch

Key to wiring colours

Key	Wiring Colour
B	Black
U	Blue
N	Brown
G	Green
S	Slate/Grey
O	Orange
K	Pink
R	Red
P	Purple
W	White
Y	Yellow
LG	Light Green
LU	Light Blue

Starting and Charging Circuit - Street Triple, Street Triple 660 cc, Street Triple R and Street Triple Rx



Electrical

Auxiliary and Accessory Circuit - Daytona 675 and Daytona 675 R

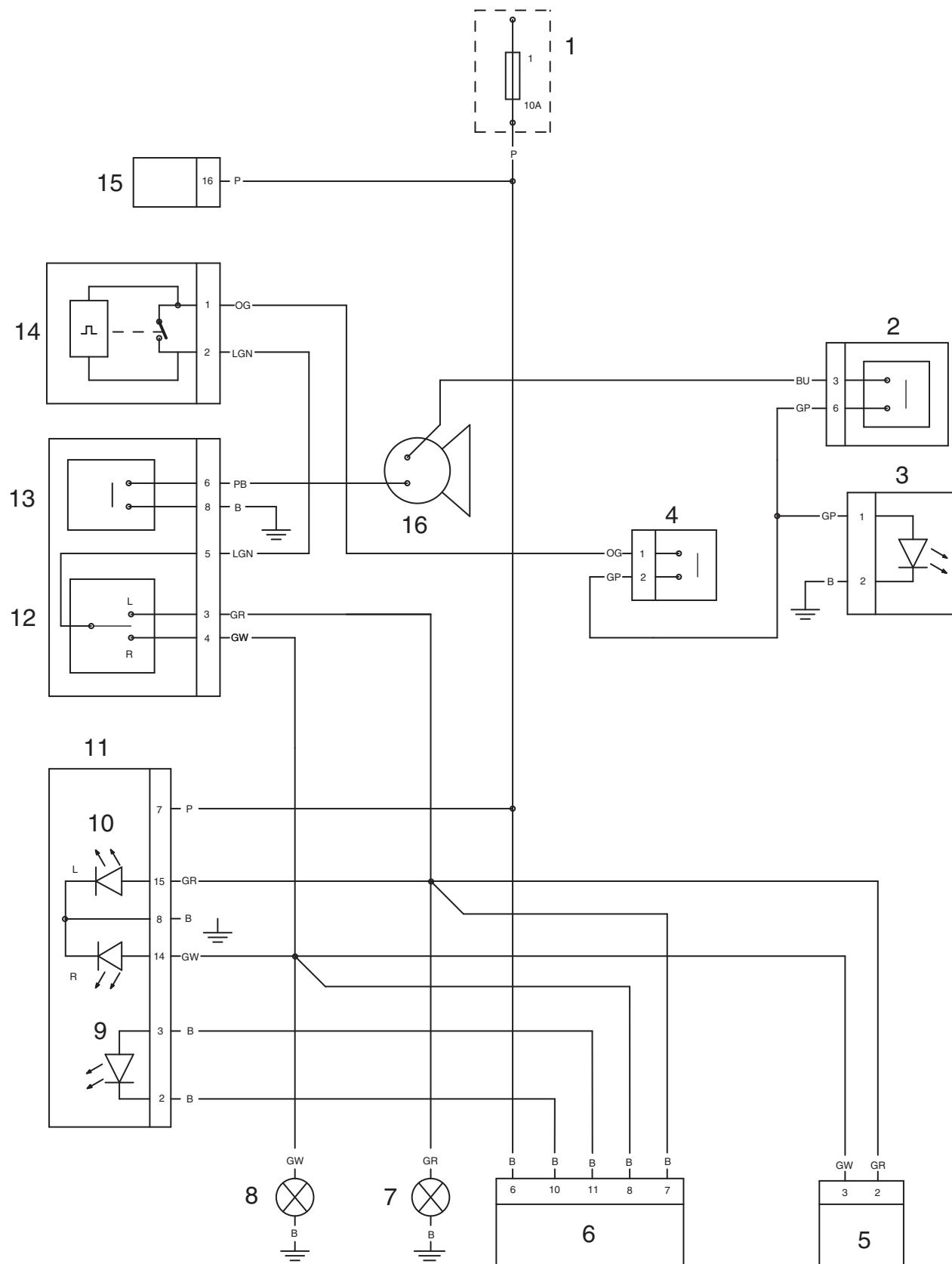
Key to circuit diagram

Key	Item Description
1	Fuse box (Fuse 1)
2	Right hand switch housing/brake switch
3	Brake light
4	Rear brake switch
5	Rear light sub-harness connector
6	Alarm unit
7	Front left direction indicator
8	Front right direction indicator
9	Alarm lamp
10	Direction indicator warning lamps
11	Instruments
12	Direction indicator switch
13	Horn switch
14	Direction indicator relay
15	Diagnostic connector
16	Horn

Key to wiring colours

Key	Wiring Colour
B	Black
U	Blue
N	Brown
G	Green
S	Slate/Grey
O	Orange
K	Pink
R	Red
P	Purple
W	White
Y	Yellow
LG	Light Green
LU	Light Blue

Auxiliary and Accessory Circuit - Daytona 675 and Daytona 675 R



Electrical

Auxiliary and Accessory Circuit - Street Triple, Street Triple 660 cc, Street Triple R and Street Triple Rx

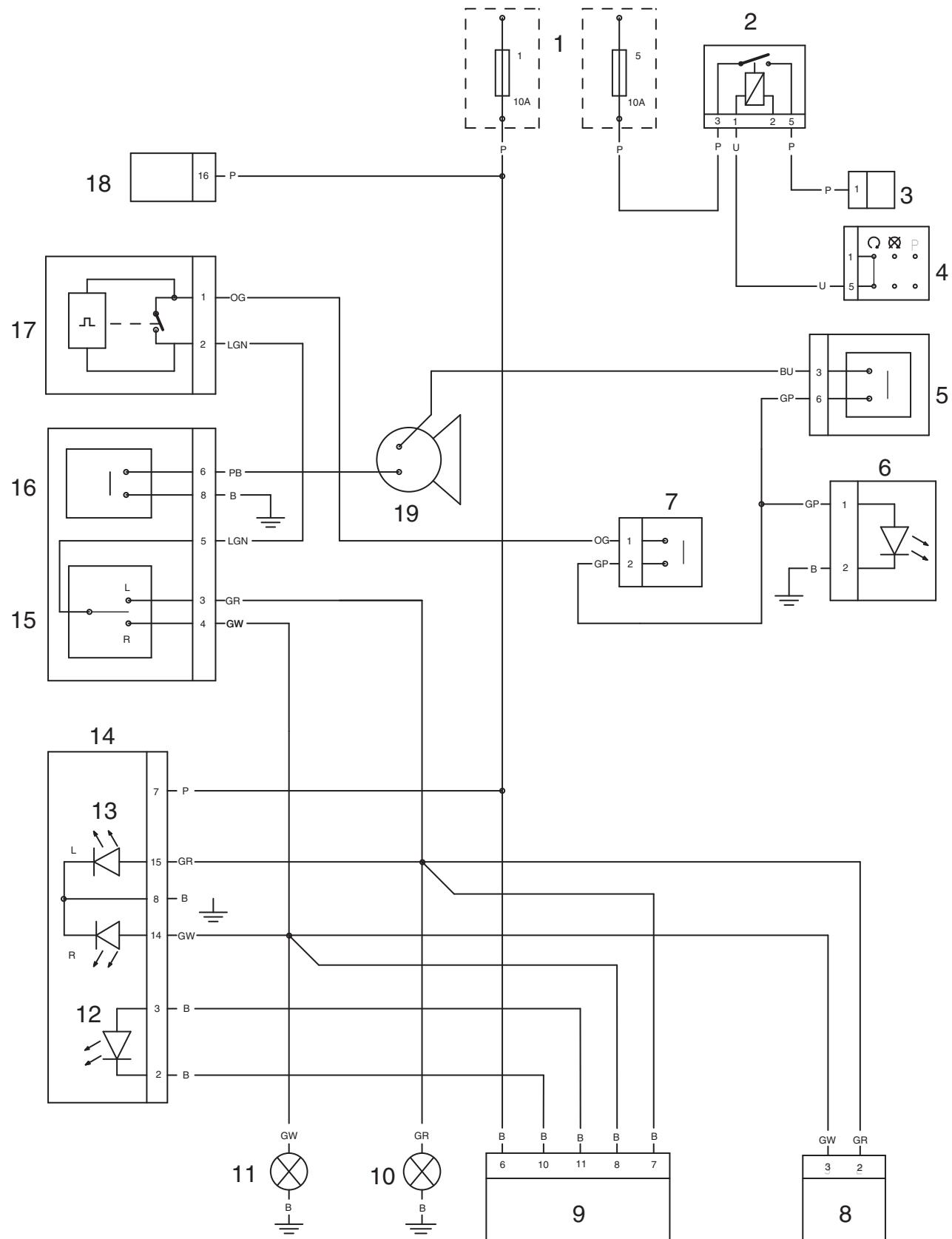
Key to circuit diagram

Key	Item Description
1	Fuse box (Fuses 1 and 5)
2	Heated grip relay
3	Heated grips
4	Ignition switch
5	Right hand switch housing/brake switch
6	Brake Light
7	Rear brake switch
8	Rear light sub-harness connector
9	Alarm unit
10	Front left direction Indicator
11	Front right direction Indicator
12	Alarm warning lamp
13	Direction indicator warning lamps
14	Instruments
15	Indicator switch
16	Horn switch
17	Indicator relay
18	Diagnostic connector
19	Horn

Key to wiring colours

Key	Wiring Colour
B	Black
U	Blue
N	Brown
G	Green
S	Slate/Grey
O	Orange
K	Pink
R	Red
P	Purple
W	White
Y	Yellow
LG	Light Green
LU	Light Blue

Auxiliary and Accessory Circuit - Street Triple, Street Triple 660 cc, Street Triple R and Street Triple Rx



Electrical

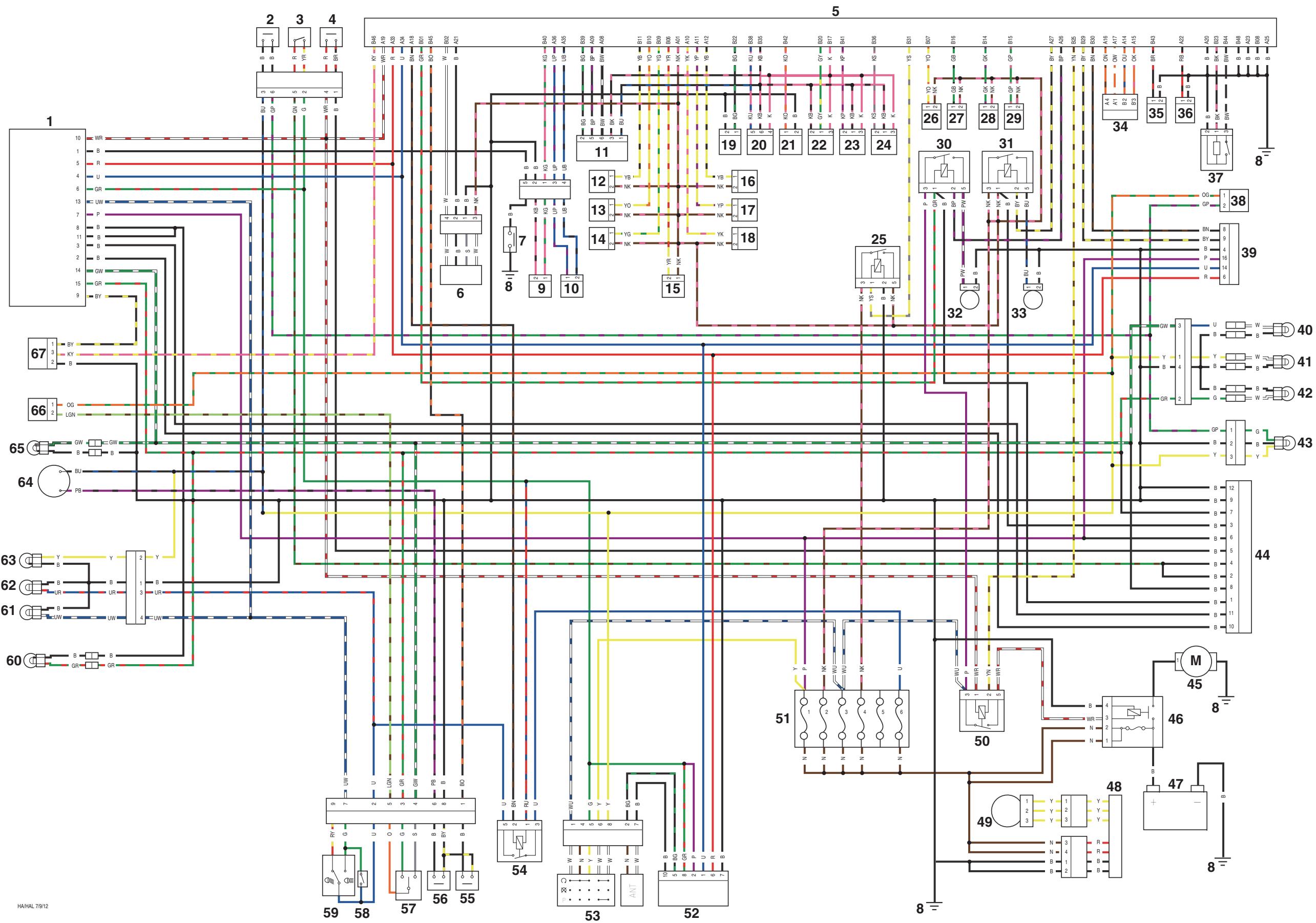
Complete System - Daytona 675 and Daytona 675 R without ABS

Key to circuit diagram

Key	Item Description
1	Instrument assembly
2	Front brake lever switch
3	Engine stop switch
4	Starter button
5	Engine control module
6	Oxygen sensor
7	Oil pressure switch
8	Engine ground
9	Coolant temperature sensor
10	Crankshaft sensor
11	Exhaust valve actuator
12	Second fuel injector 3
13	Second fuel injector 2
14	Second fuel injector 1
15	Purge valve
16	Fuel injector 3
17	Fuel injector 2
18	Fuel injector 1
19	Fuel level sensor
20	Fall detection switch
21	Inlet air temperature sensor
22	Throttle Potentiometer
23	Ambient air pressure sensor
24	MAP sensor
25	EMS main relay
26	Secondary air injection solenoid
27	Ignition coil 3
28	Ignition coil 1
29	Ignition coil 2
30	Fuel pump relay
31	Cooling fan relay
32	Fuel pump
33	Cooling fan
34	Idle speed control actuator

Key	Item Description
35	Side stand switch
36	Quickshifter
37	Gear position sensor
38	Rear brake switch
39	Diagnostic connector
40	Right hand rear indicator
41	Licence plate light
42	Left hand rear indicator
43	Rear light
44	Alarm connector
45	Starter motor
46	Starter solenoid (fused)
47	Battery
48	Regulator/Rectifier
49	Alternator
50	Starter relay
51	Fuse box
52	Immobiliser
53	Ignition switch
54	Headlight relay
55	Clutch lever switch
56	Horn button
57	Direction indicator switch
58	Pass switch
59	Headlamp dip switch
60	Left hand front indicator
61	Main light
62	Dip light
63	Position light
64	Horn
65	Right hand front indicator
66	Direction indicator unit
67	Road speed sensor

Circuit Diagram - Complete System - Daytona 675 and Daytona 675 R without ABS



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Electrical

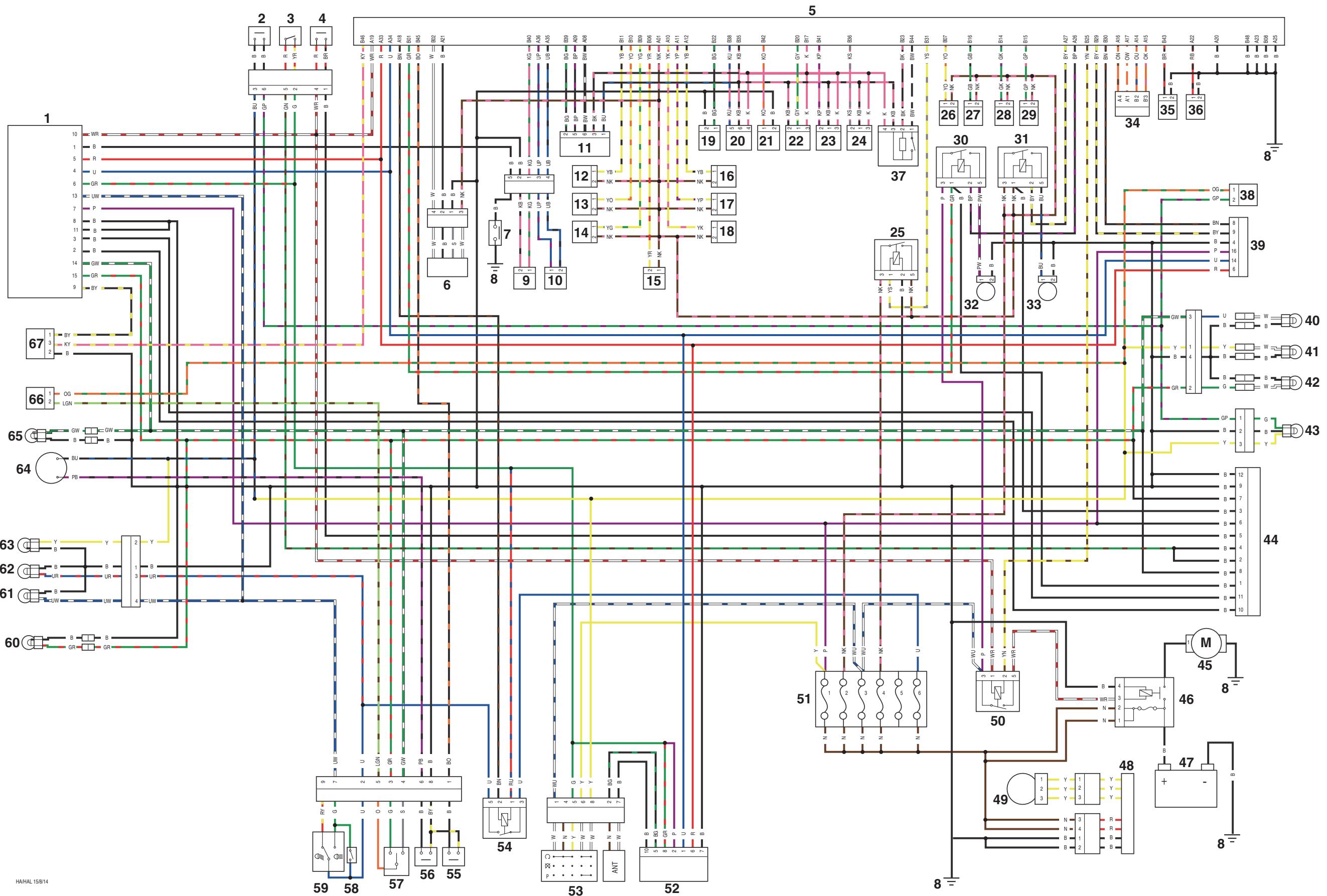
Complete System - Daytona 675 and Daytona 675 R without ABS - With Four Pin Gear Position Sensor

Key to circuit diagram

Key	Item Description
1	Instrument assembly
2	Front brake lever switch
3	Engine stop switch
4	Starter button
5	Engine control module
6	Oxygen sensor
7	Oil pressure switch
8	Engine ground
9	Coolant temperature sensor
10	Crankshaft sensor
11	Exhaust valve actuator
12	Second fuel injector 3
13	Second fuel injector 2
14	Second fuel injector 1
15	Purge valve
16	Fuel injector 3
17	Fuel injector 2
18	Fuel injector 1
19	Fuel level sensor
20	Fall detection switch
21	Inlet air temperature sensor
22	Throttle Potentiometer
23	Ambient air pressure sensor
24	MAP sensor
25	EMS main relay
26	Secondary air injection solenoid
27	Ignition coil 3
28	Ignition coil 1
29	Ignition coil 2
30	Fuel pump relay
31	Cooling fan relay
32	Fuel pump
33	Cooling fan
34	Idle speed control actuator

Key	Item Description
35	Side stand switch
36	Quickshifter
37	Gear position sensor
38	Rear brake switch
39	Diagnostic connector
40	Right hand rear indicator
41	Licence plate light
42	Left hand rear indicator
43	Rear light
44	Alarm connector
45	Starter motor
46	Starter solenoid (fused)
47	Battery
48	Regulator/Rectifier
49	Alternator
50	Starter relay
51	Fuse box
52	Immobiliser
53	Ignition switch
54	Headlight relay
55	Clutch lever switch
56	Horn button
57	Direction indicator switch
58	Pass switch
59	Headlamp dip switch
60	Left hand front indicator
61	Main light
62	Dip light
63	Position light
64	Horn
65	Right hand front indicator
66	Direction indicator unit
67	Road speed sensor

Circuit Diagram - Complete System - Daytona 675 and Daytona 675 R without ABS - With Four Pin Gear Position Sensor



Electrical

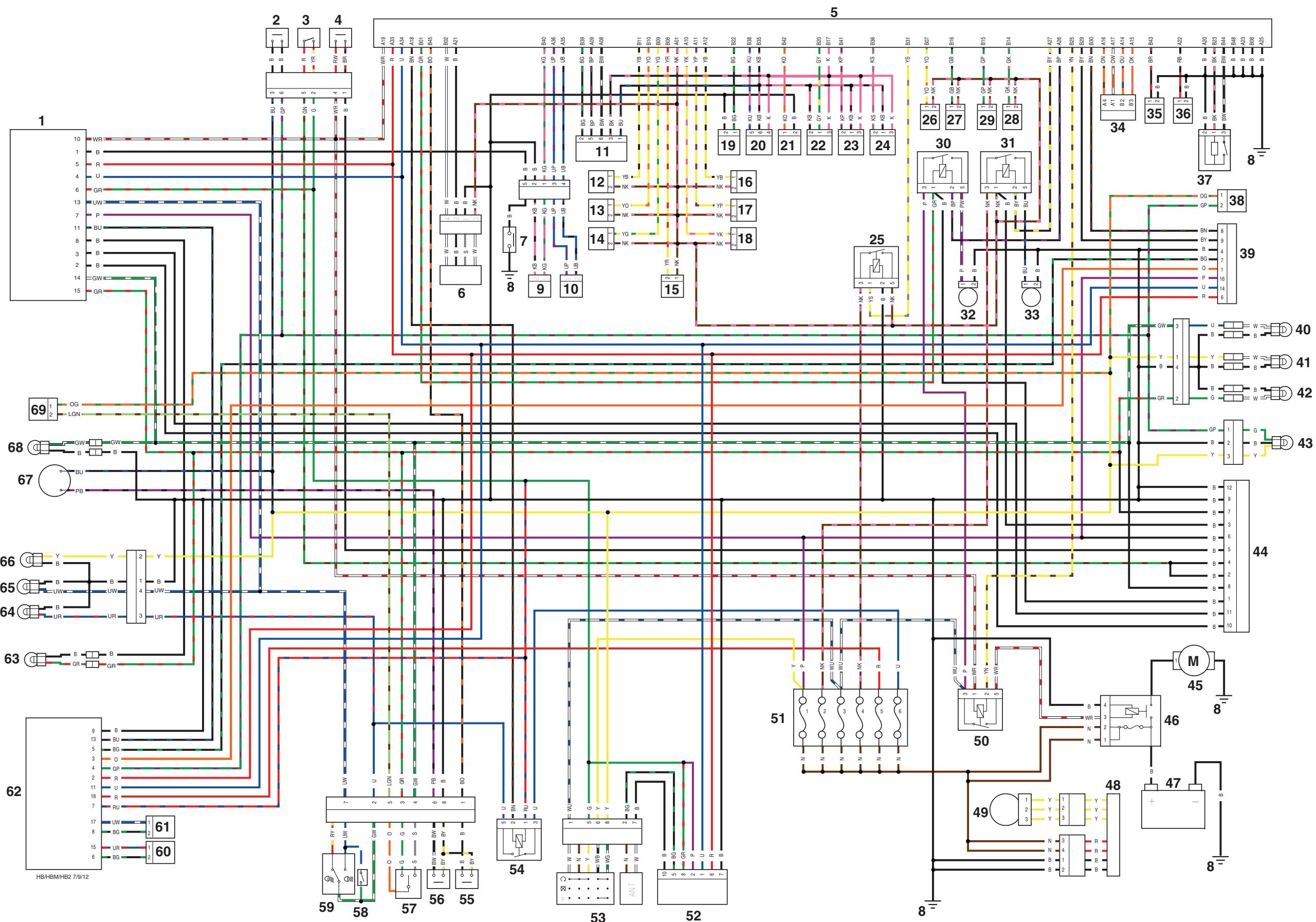
Complete System - Daytona 675 and Daytona 675 R with ABS

Key to circuit diagram

Key	Item Description
1	Instrument assembly
2	Front brake lever switch
3	Engine stop switch
4	Starter button
5	Engine control module
6	Oxygen sensor
7	Oil pressure switch
8	Engine ground
9	Coolant temperature sensor
10	Crankshaft sensor
11	Exhaust valve actuator
12	Second fuel injector 3
13	Second fuel injector 2
14	Second fuel injector 1
15	Purge valve
16	Fuel injector 3
17	Fuel injector 2
18	Fuel injector 1
19	Fuel level sensor
20	Fall detection switch
21	Inlet air temperature sensor
22	Throttle Potentiometer
23	Ambient air pressure sensor
24	MAP sensor
25	EMS main relay
26	Secondary air injection solenoid
27	Ignition coil 3
28	Ignition coil 1
29	Ignition coil 2
30	Fuel pump relay
31	Cooling fan relay
32	Fuel pump
33	Cooling fan
34	Idle speed control actuator
35	Side stand switch

Key	Item Description
36	Quickshifter
37	Gear position sensor
38	Rear brake switch
39	Diagnostic connector
40	Right hand rear indicator
41	Licence plate light
42	Left hand rear indicator
43	Rear light
44	Alarm connector
45	Starter motor
46	Starter solenoid (fused)
47	Battery
48	Regulator/Rectifier
49	Alternator
50	Starter relay
51	Fuse box
52	Immobiliser
53	Ignition switch
54	Headlight relay
55	Clutch lever switch
56	Horn button
57	Direction indicator switch
58	Pass switch
59	Headlamp dip switch
60	Rear wheel speed sensor
61	Front wheel speed sensor
62	ABS control module
63	Left hand front indicator
64	Dip light
65	Main light
66	Position light
67	Horn
68	Right hand front indicator
69	Direction indicator unit

Circuit Diagram - Complete System - Daytona 675 and Daytona 675 R with ABS



Electrical

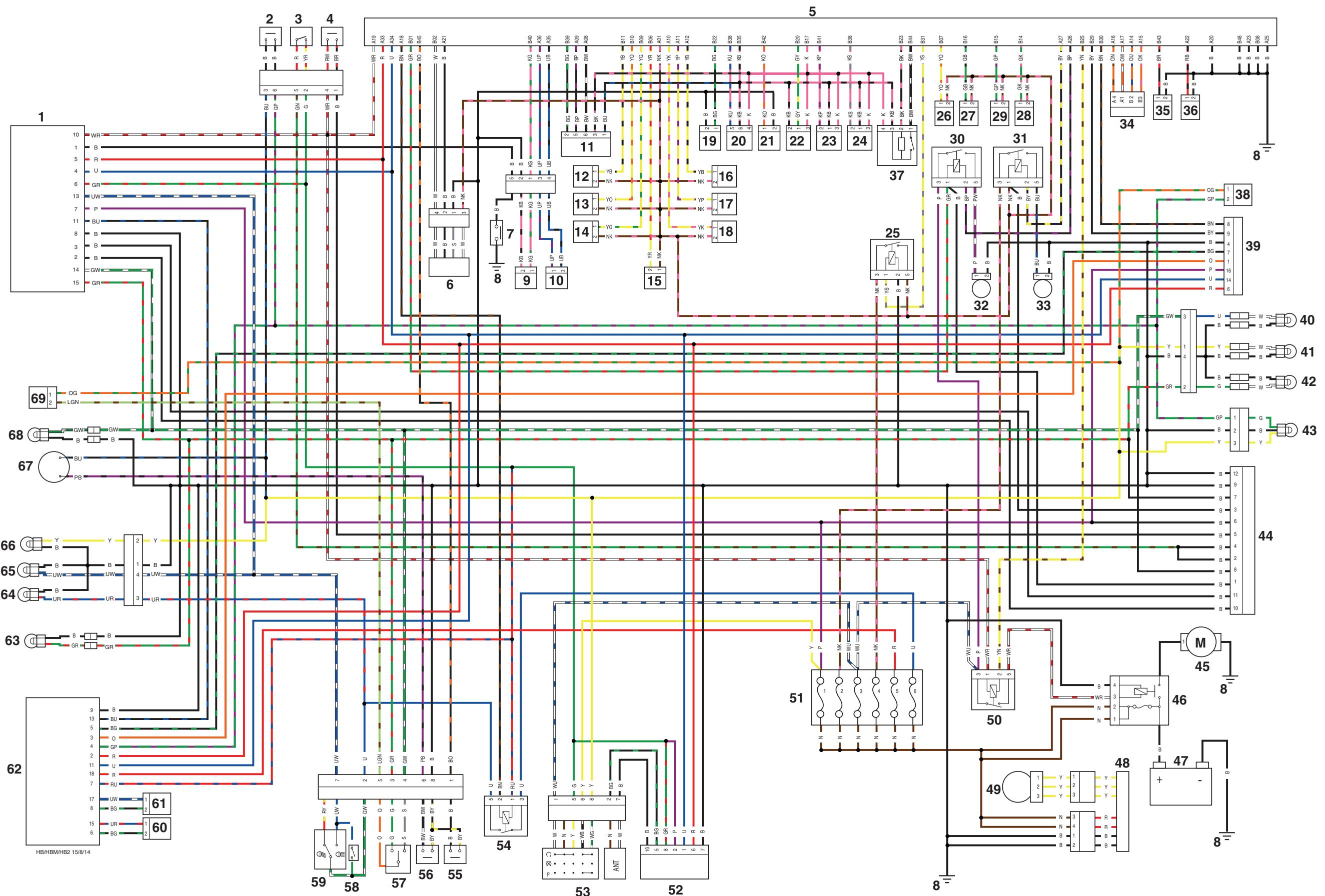
Complete System - Daytona 675 and Daytona 675 R with ABS - With Four Pin Gear Position Sensor

Key to circuit diagram

Key	Item Description
1	Instrument assembly
2	Front brake lever switch
3	Engine stop switch
4	Starter button
5	Engine control module
6	Oxygen sensor
7	Oil pressure switch
8	Engine ground
9	Coolant temperature sensor
10	Crankshaft sensor
11	Exhaust valve actuator
12	Second fuel injector 3
13	Second fuel injector 2
14	Second fuel injector 1
15	Purge valve
16	Fuel injector 3
17	Fuel injector 2
18	Fuel injector 1
19	Fuel level sensor
20	Fall detection switch
21	Inlet air temperature sensor
22	Throttle Potentiometer
23	Ambient air pressure sensor
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30	Fuel pump relay
31	Cooling fan relay
32	Fuel pump
33	Cooling fan
34	Idle speed control actuator
35	Side stand switch

Key	Item Description
36	Quickshifter
37	Gear position sensor
38	Rear brake switch
39	Diagnostic connector
40	Right hand rear indicator
41	Licence plate light
42	Left hand rear indicator
43	Rear light
44	Alarm connector
45	Starter motor
46	Starter solenoid (fused)
47	Battery
48	Regulator/Rectifier
49	Alternator
50	Starter relay
51	Fuse box
52	Immobiliser
53	Ignition switch
54	Headlight relay
55	Clutch lever switch
56	Horn button
57	Direction indicator switch
58	Pass switch
59	Headlamp dip switch
60	Rear wheel speed sensor
61	Front wheel speed sensor
62	ABS control module
63	Left hand front indicator
64	Dip light
65	Main light
66	Position light
67	Horn
68	Right hand front indicator
69	Direction indicator unit

Circuit Diagram - Complete System - Daytona 675 and Daytona 675 R with ABS - With Four Pin Gear Position Sensor



Electrical

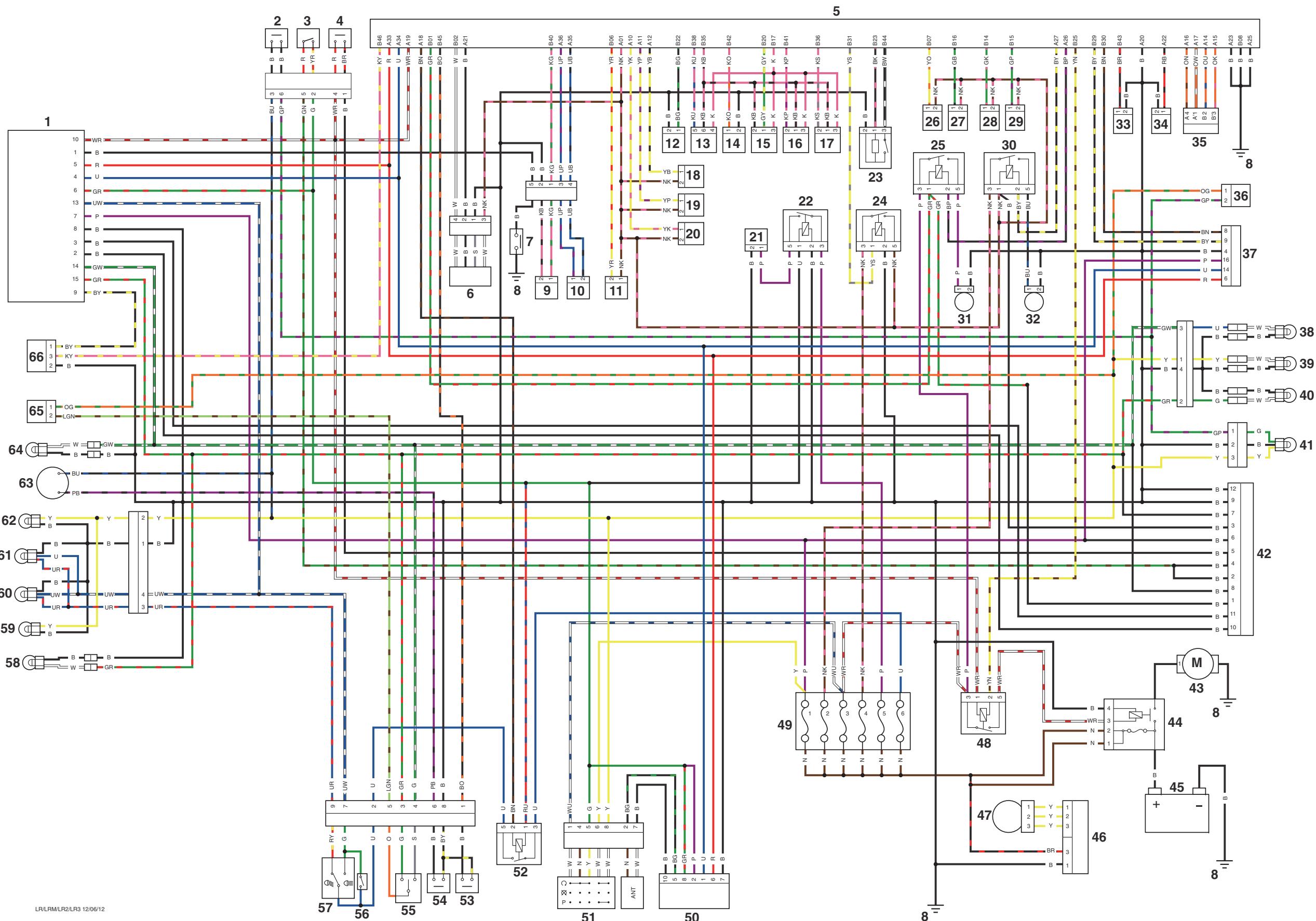
Complete System - Street Triple and Street Triple R without ABS

Key to circuit diagram

Key	Item Description
1	Instrument assembly
2	Front brake lever switch
3	Engine stop switch
4	Starter button
5	Engine control module
6	Oxygen sensor
7	Oil pressure switch
8	Engine ground
9	Coolant temperature sensor
10	Crankshaft sensor
11	Purge valve
12	Fuel level sensor
13	Fall detection switch
14	Inlet air temperature sensor
15	Throttle potentiometer
16	Ambient air pressure sensor
17	MAP sensor
18	Fuel injector 3
19	Fuel injector 2
20	Fuel injector 1
21	Heated grips
22	Heated grip relay
23	Gear position sensor
24	EMS main relay
25	Fuel pump relay
26	Secondary air injection solenoid
27	Ignition coil 3
28	Ignition coil 1
29	Ignition coil 2
30	Cooling fan relay
31	Fuel pump
32	Cooling fan
33	Side stand switch

Key	Item Description
34	Quickshifter
35	Idle speed control actuator
36	Rear brake switch
37	Diagnostic connector
38	Right hand rear indicator
39	Licence plate light
40	Left hand rear indicator
41	Rear light
42	Alarm connector (accessory)
43	Starter motor
44	Starter solenoid (fused)
45	Battery
46	Regulator/Rectifier
47	Alternator
48	Starter relay
49	Fuse box
50	Immobiliser
51	Ignition switch
52	Headlight relay
53	Clutch lever switch
54	Horn button
55	Direction indicator switch
56	Pass switch
57	Headlamp dip switch
58	Left hand front indicator
59	Left hand position light
60	Left hand headlight
61	Right hand headlight
62	Right hand position light
63	Horn
64	Right hand front indicator
65	Direction indicator unit
66	Road speed sensor

Circuit Diagram - Complete System - Street Triple and Street Triple R without ABS



Electrical

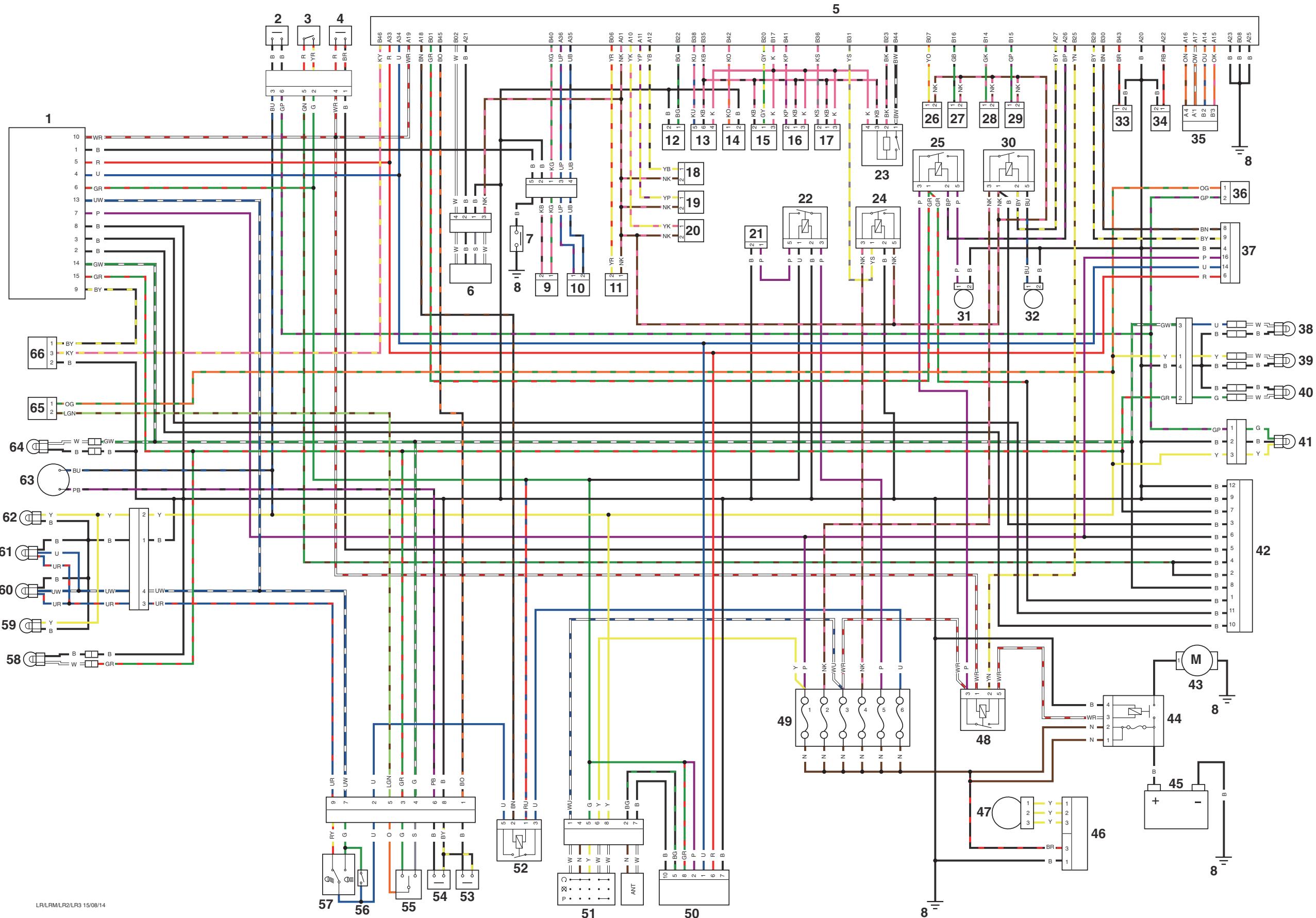
Complete System - Street Triple and Street Triple R without ABS - With Four Pin Gear Position Sensor

Key to circuit diagram

Key	Item Description
1	Instrument assembly
2	Front brake lever switch
3	Engine stop switch
4	Starter button
5	Engine control module
6	Oxygen sensor
7	Oil pressure switch
8	Engine ground
9	Coolant temperature sensor
10	Crankshaft sensor
11	Purge valve
12	Fuel level sensor
13	Fall detection switch
14	Inlet air temperature sensor
15	Throttle potentiometer
16	Ambient air pressure sensor
17	MAP sensor
18	Fuel injector 3
19	Fuel injector 2
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22	Heated grip relay
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24	EMS main relay
25	Fuel pump relay
26	Secondary air injection solenoid
27	Ignition coil 3
28	Ignition coil 1
29	Ignition coil 2
30	Cooling fan relay
31	Fuel pump
32	Cooling fan
33	Side stand switch

Key	Item Description
34	Quickshifter
35	Idle speed control actuator
36	Rear brake switch
37	Diagnostic connector
38	Right hand rear indicator
39	Licence plate light
40	Left hand rear indicator
41	Rear light
42	Alarm connector (accessory)
43	Starter motor
44	Starter solenoid (fused)
45	Battery
46	Regulator/Rectifier
47	Alternator
48	Starter relay
49	Fuse box
50	Immobiliser
51	Ignition switch
52	Headlight relay
53	Clutch lever switch
54	Horn button
55	Direction indicator switch
56	Pass switch
57	Headlamp dip switch
58	Left hand front indicator
59	Left hand position light
60	Left hand headlight
61	Right hand headlight
62	Right hand position light
63	Horn
64	Right hand front indicator
65	Direction indicator unit
66	Road speed sensor

Circuit Diagram - Complete System - Street Triple and Street Triple R without ABS - With Four Pin Gear Position Sensor



Electrical

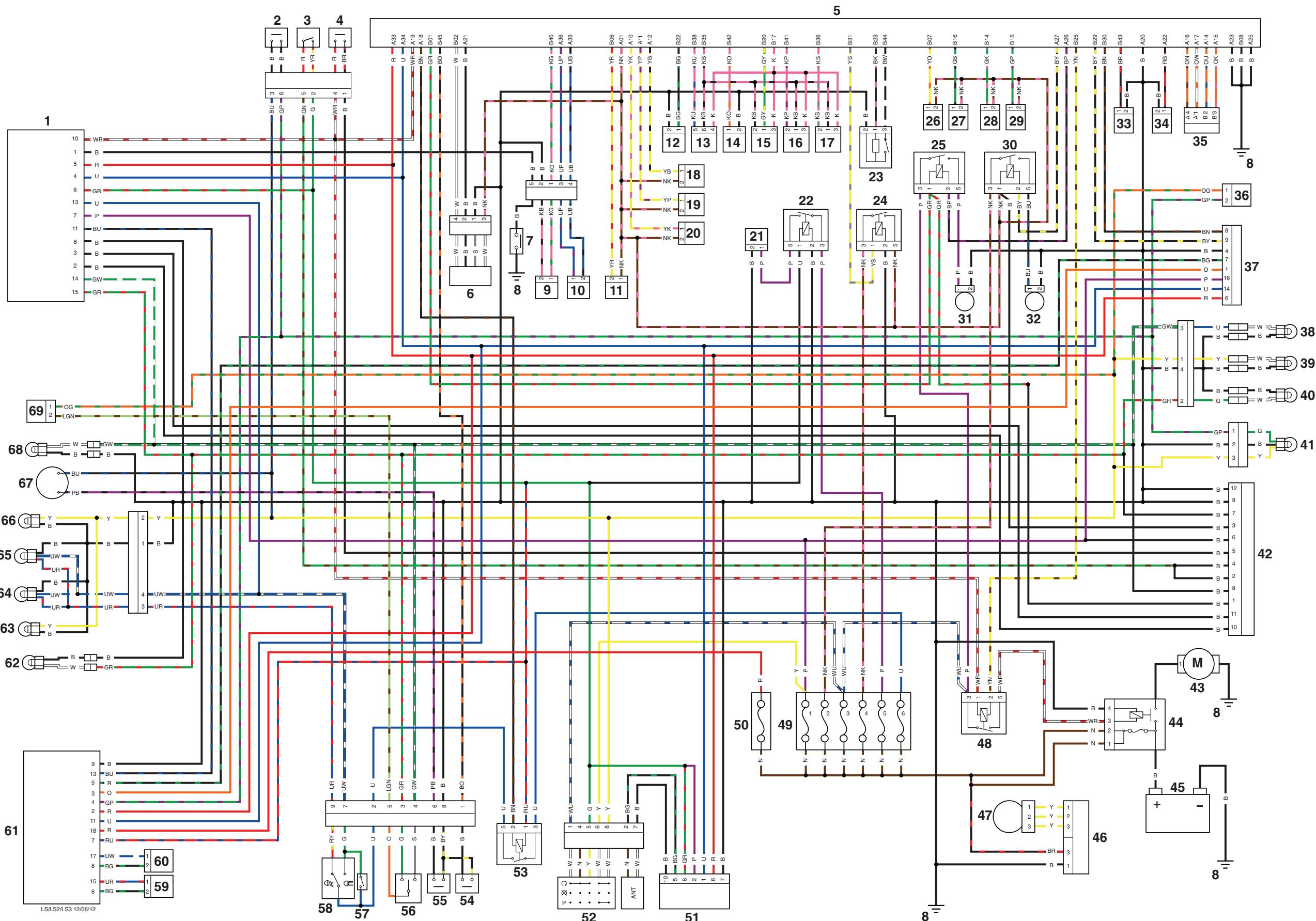
Complete System - Street Triple, Street Triple 660 cc, Street Triple R and Street Triple Rx with ABS

Key to circuit diagram

Key	Item Description
1	Instrument assembly
2	Front brake lever switch
3	Engine stop switch
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12	Fuel level sensor
13	Fall detection switch
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16	Ambient air pressure sensor
17	MAP sensor
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29	Ignition coil 2
30	Cooling fan relay
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32	Cooling fan
33	Side stand switch
34	Quickshifter
35	Idle speed control actuator

Key	Item Description
36	Rear brake switch
37	Diagnostic connector
38	Right hand rear indicator
39	Licence plate light
40	Left hand rear indicator
41	Rear light
42	Alarm connector (accessory)
43	Starter motor
44	Starter solenoid (fused)
45	Battery
46	Regulator/Rectifier
47	Alternator
48	Starter relay
49	Fuse box
50	ABS fuse box
51	Immobiliser
52	Ignition switch
53	Headlight relay
54	Clutch lever switch
55	Horn button
56	Direction indicator switch
57	Pass switch
58	Headlamp dip switch
59	Rear wheel speed sensor
60	Front wheel speed sensor
61	ABS control module
62	Left hand front indicator
63	Left hand position light
64	Left hand headlight
65	Right hand headlight
66	Right hand position light
67	Horn
68	Right hand front indicator
69	Direction indicator unit

Circuit Diagram - Complete System - Street Triple, Street Triple 660 cc, Street Triple R and Street Triple Rx with ABS



Electrical

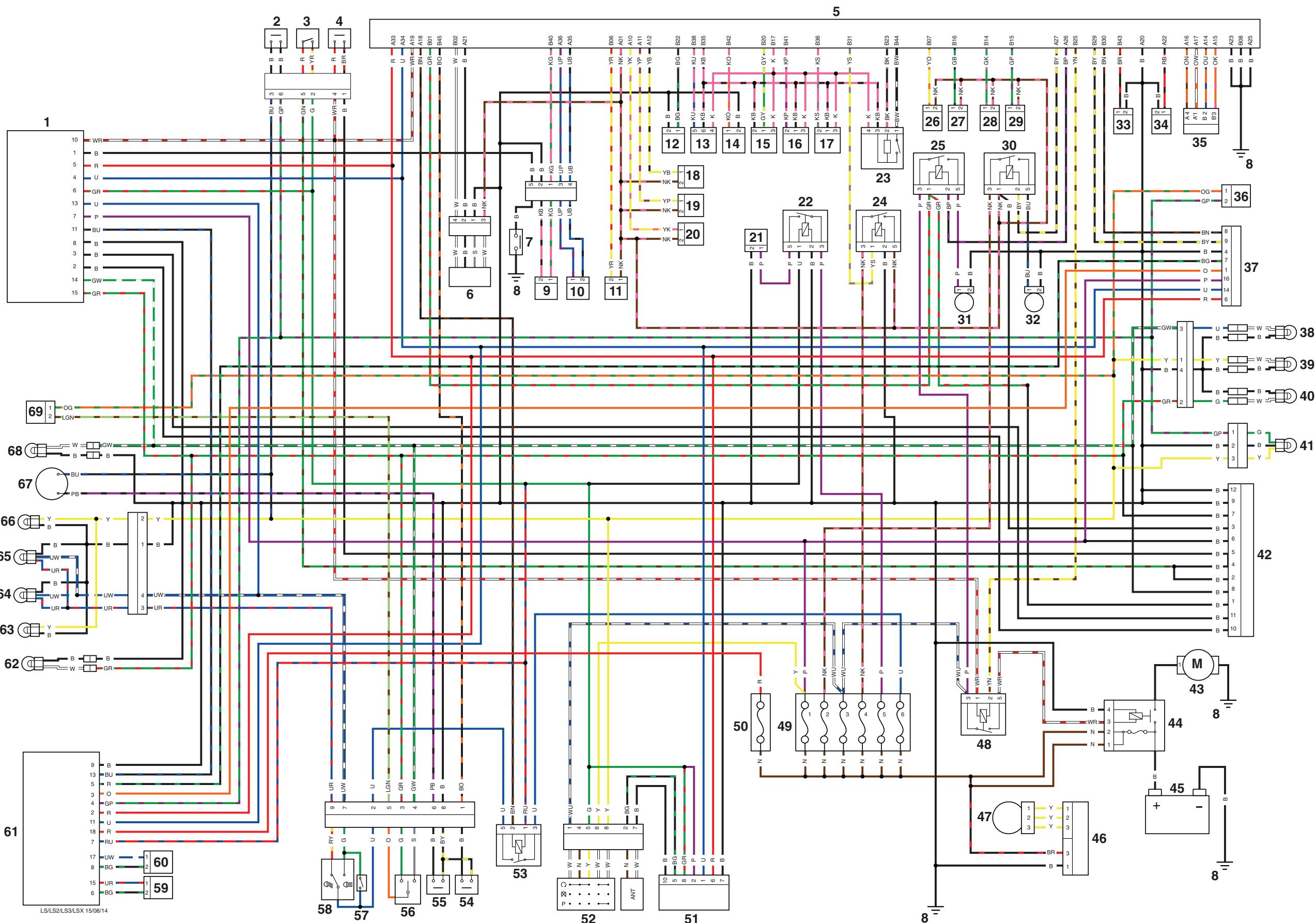
Complete System - Street Triple, Street Triple 660 cc, Street Triple R and Street Triple Rx with ABS - With Four Pin Gear Position Sensor

Key to circuit diagram

Key	Item Description
1	Instrument assembly
2	Front brake lever switch
3	Engine stop switch
4	Starter button
5	Engine control module
6	Oxygen sensor
7	Oil pressure switch
8	Engine ground
9	Coolant temperature sensor
10	Crankshaft sensor
11	Purge valve
12	Fuel level sensor
13	Fall detection switch
14	Inlet air temperature sensor
15	Throttle potentiometer
16	Ambient air pressure sensor
17	MAP sensor
18	Fuel injector 3
19	Fuel injector 2
20	Fuel injector 1
21	Heated grips
22	Heated grip relay
23	Gear position sensor
24	EMS main relay
25	Fuel pump relay
26	Secondary air injection solenoid
27	Ignition coil 3
28	Ignition coil 1
29	Ignition coil 2
30	Cooling fan relay
31	Fuel pump
32	Cooling fan
33	Side stand switch
34	Quickshifter
35	Idle speed control actuator

Key	Item Description
36	Rear brake switch
37	Diagnostic connector
38	Right hand rear indicator
39	Licence plate light
40	Left hand rear indicator
41	Rear light
42	Alarm connector (accessory)
43	Starter motor
44	Starter solenoid (fused)
45	Battery
46	Regulator/Rectifier
47	Alternator
48	Starter relay
49	Fuse box
50	ABS fuse box
51	Immobiliser
52	Ignition switch
53	Headlight relay
54	Clutch lever switch
55	Horn button
56	Direction indicator switch
57	Pass switch
58	Headlamp dip switch
59	Rear wheel speed sensor
60	Front wheel speed sensor
61	ABS control module
62	Left hand front indicator
63	Left hand position light
64	Left hand headlight
65	Right hand headlight
66	Right hand position light
67	Horn
68	Right hand front indicator
69	Direction indicator unit

Circuit Diagram - Complete System - Street Triple, Street Triple 660 cc, Street Triple R and Street Triple Rx with ABS - With Four Pin Gear Position Sensor



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