



Your Sachs dealer

Sachs Fahrzeug- und Motorentechnik GmbH

Ernst-Sachs-Straße 6 • D-90441 Nürnberg  
Phone: +49 (0)911 4231 400 • Fax +49 (0)911 4231 332  
e-Mail: [info@sachs-bikes.de](mailto:info@sachs-bikes.de) • [www.sachs-bikes.de](http://www.sachs-bikes.de)

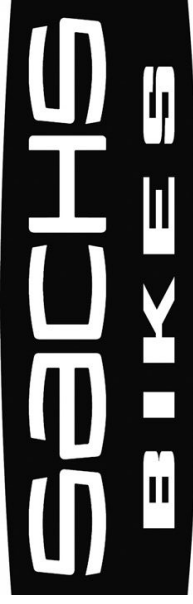
SACHS  
uses  
and recommends



Printed in Germany

Nr. P00 649 008 00 02 000

2005 05 02



owners manual



MadAss 50

## PREFACE

**You have purchased a Sachs MadAss, congratulations and thank you for putting your trust in us.**

The MadAss is a sturdy light motorcycle in modern design.

Its sound construction, the meticulous selection of materials, the advanced manufacturing techniques and conscientious work of dedicated employees provides the motorcycle with all the characteristics that are typical of Sachs, such as economical operation, quality, reliability and its lasting value.

Sachs GmbH is continuously involved in the further development of all types and models. We therefore ask you for your kind understanding that we reserve the right to change the scope of delivery with respect to appearance, equipment and technology. No claims can thus be derived from the data and descriptions contained in this instruction manual.

Reprinting, reproduction and translation, even of excerpts, without our express consent is not permitted. All rights stipulated in the copyright law remain expressly reserved.

Technical changes to the standard motorcycle cycles can cause the EC type approval to become invalid. Therefore before implementing a change, ask a specialized dealer whether this is allowed.

We cannot be held liable for any consequential damage caused by accessories not approved by the factory.

The scope of delivery and version of the motorcycle is solely determined by the purchase agreement concluded with the dealer.

This operating manual includes important instructions for handling your light motorcycle. Read it carefully, because professional handling combined with regular care and maintenance helps to maintain the motorcycle's value and is one of the requirements for warranty claims.

We wish you at all times a safe journey.

Your

**SACHS Fahrzeug- und Motorentechnik GmbH**

## OVERVIEW AND OPERATION

Safety symbols .....	3
View of vehicle .....	4-5
Engine .....	6-7
Handbar instrument .....	8
Ignition lock .....	9
Cockpit .....	10
Speedometer set-up, setting the time .....	10-11

## SAFETY TEST

Checklist .....	12
Clutch, 4-gear model .....	13
Fuel, fuel tank lid .....	14
Fuel cock .....	15
Engine oil .....	16
Checking the oil level .....	17-18
Front wheel brake .....	19
Rear wheel brake .....	20
Drive chain .....	21
Tyre tread, tyre pressure and tyre size .....	22
Load / lights .....	23

## RIDING INSTRUCTIONS

Ride safely .....	24
Ride economically and environmentally .....	25-26
Running-in instructions .....	27
Side stand .....	28
Starting .....	29
Starting with kick starter .....	30
Starting with electric starter .....	31
Shifting, 4-gear model .....	32
Start-up, automatic model .....	32
Brakes .....	33-34
Shut-down .....	35
Steering lock .....	36

## SERVICE INSTRUCTIONS

Servicing the motorbike / cleaning agents .....	37-38
Winter operation and corrosion protection .....	39
Repairing paint damage / servicing the tyres .....	39
Shut-down / start-up .....	40
Technical modifications, accessories and spare parts .....	41

## CONTENTS

### NOTES ON MAINTENANCE

Checking steering bearing, telescopic fork, spring strut.....	42
Adjusting the spring strut.....	43
Removing the front wheel.....	44
Installing the front wheel.....	45
Removing the rear wheel.....	46
Installing the rear wheel.....	47
Checking, adjusting the drive chain.....	48
Front wheel brake .....	49
Rear wheel brake .....	50-51
Adjusting the clutch lever, 4-gear model.....	52
Cleaning the air filter, fuel filter.....	53
Adjusting the play of the twist grip throttle control .....	54
Checking the spark plug .....	55
Battery .....	56-57
Fuse.....	57
Changing the light bulbs .....	58-60
Adjusting the headlight .....	61

### TECHNICAL DATA

Engine .....	62
Power transmission .....	63
Chassis.....	64
Lubricants and operating fluids .....	65
Electrical equipment.....	66
Dimensions and weights.....	67

### WARRANTY AND SERVICE DATA

Warranty conditions .....	68
List of wear items.....	69-70
Inspection plan .....	71-73
Proof of maintenance .....	74-78
Vehicle data / rating plate .....	79

### Safety symbols and notes

#### Please observe the following:



#### **WARNING**

Precautionary measures against the risk of accidents, injury and/or death.



#### **FIRE HAZARD**

The vehicle is equipped with a catalyst, this results in extremely high temperatures on the exhaust system (risk of burning).



#### **CAUTION**

Important instructions and precautionary rules to avoid damage to the vehicle. Non-observance can lead to the warranty becoming void.

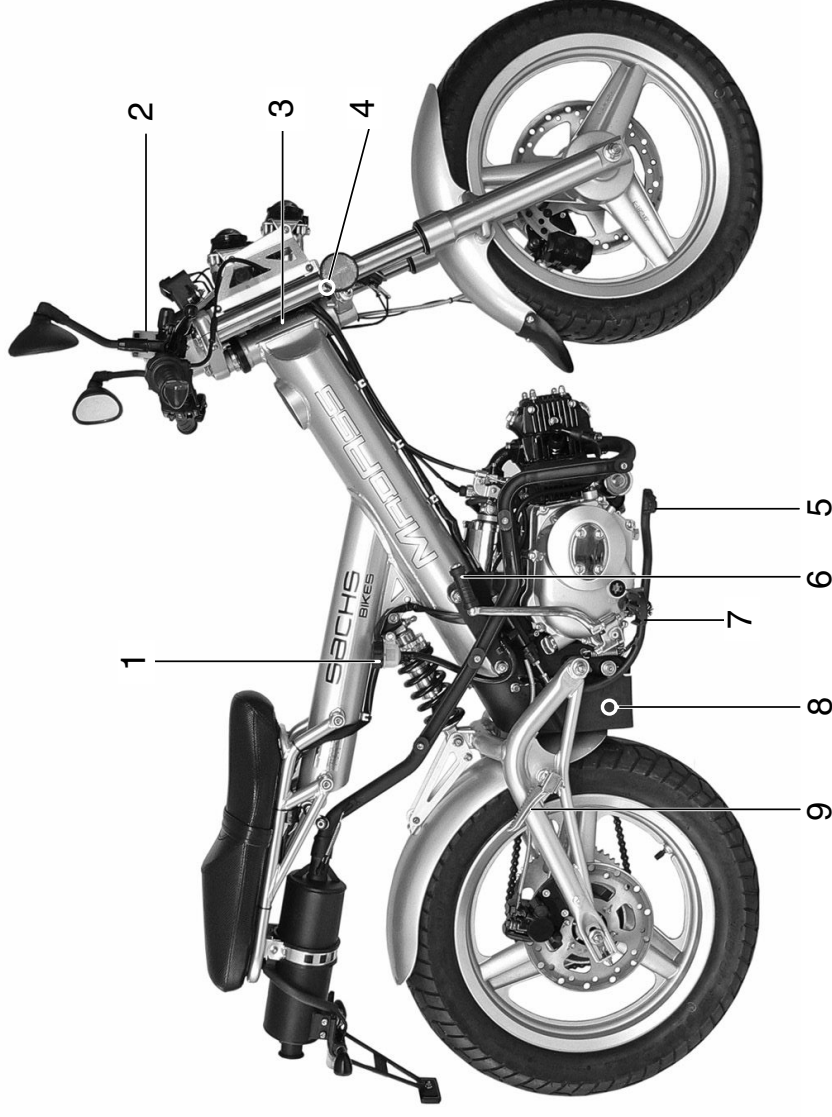


#### **NOTE**

Special instructions for better handling during operation-, inspection-, adjustments and service activities.

## OVERVIEW AND OPERATION

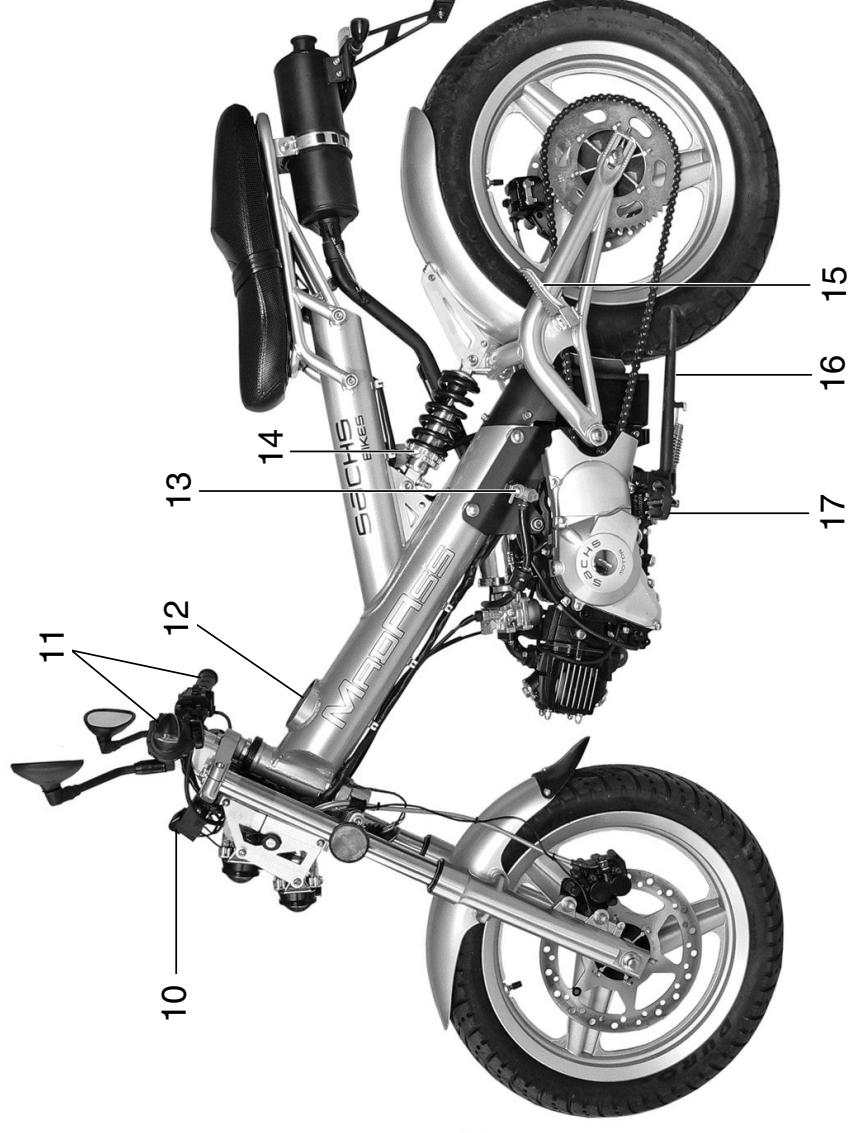
- 1 Brake fluid container for rear wheel brake
- 2 Brake fluid container for front wheel brake
- 3 Chassis no. and rating plate
- 4 Steering lock
- 5 Foot brake, rear wheel
- 6 Kick starter
- 7 Foot rest
- 8 Battery and fuse
- 9 Pillion rider foot rest, foldable



**Illustration, automatic model**

### Left-hand side view

- 10 Cockpit
- 11 Handlebar instruments
- 12 Tank lid
- 13 Fuel cock
- 14 Spring strut, adjustment
- 15 Pillion rider foot rest, foldable
- 16 Side stand
- 17 Foot rest

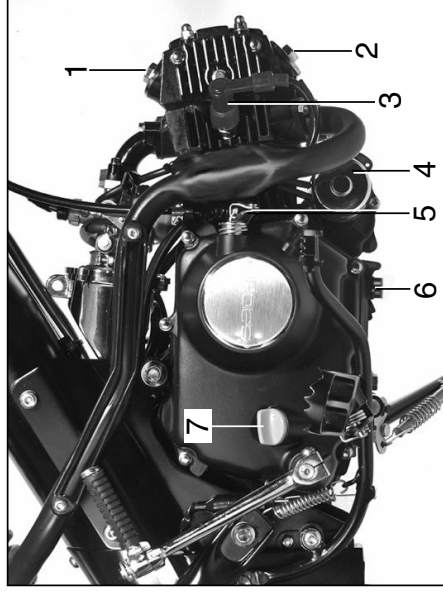


Illustration, automatic model



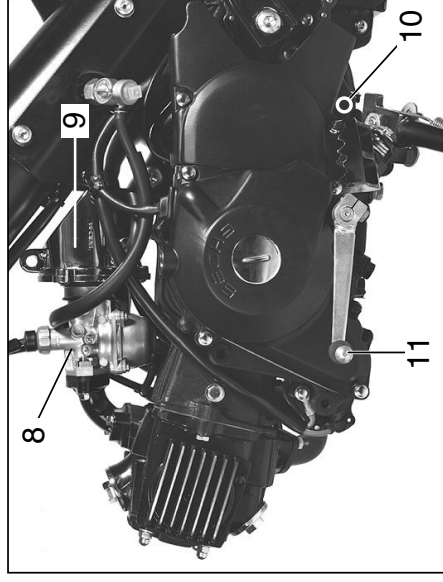
## OVERVIEW AND OPERATION

Right hand view of engine, 4-gear model



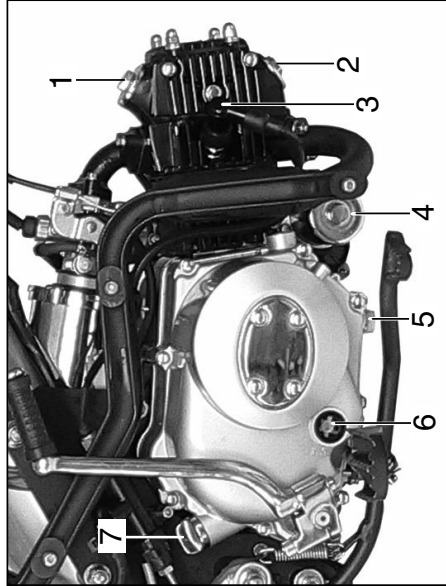
- 1 Service cover, intake valve
- 2 Service cover, exhaust valve
- 3 Spark plug socket
- 4 Starter
- 5 Clutch lever
- 6 Oil drain plug
- 7 Oil level control plug

Left hand view of engine, 4-gear model

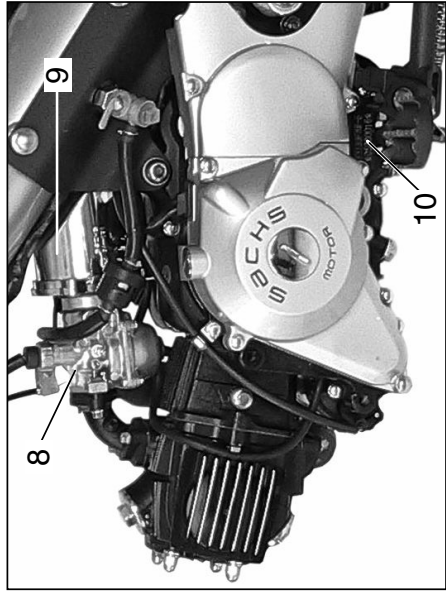


- 8 Carburettor
- 9 Air filter housing
- 10 Engine number
- 11 Gear shift pedal

Right-hand view of engine, automatic model      Left-hand view of engine, automatic model



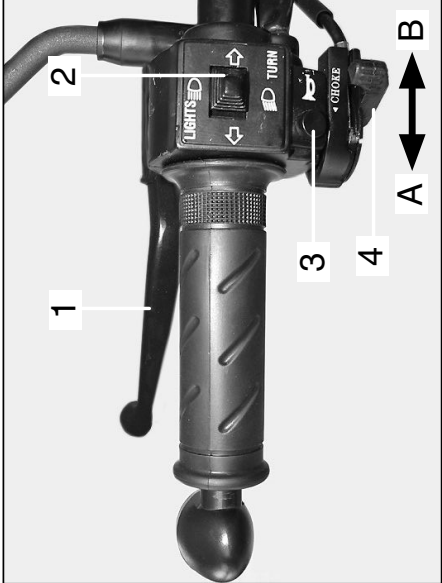
- 1 Service cover, intake valve
- 2 Service cover, exhaust valve
- 3 Spark plug socket
- 4 Starter
- 5 Oil drain plug
- 6 Oil level inspection glass
- 7 Oil filler plug



- 8 Carburettor
- 9 Air filter housing
- 10 Engine number

## OVERVIEW AND OPERATION

### Handlebar instrument, left



1 Clutch lever, 4-gear model

2 Dimmer switch

☰ Press dimmer switch up  
the top headlight lights

☷ Press dimmer switch down  
the bottom headlight lights


2 Indicator switch

⇐ Push to the left:

Indicating to the left

⇒ Push to the right:

Indicating to the right

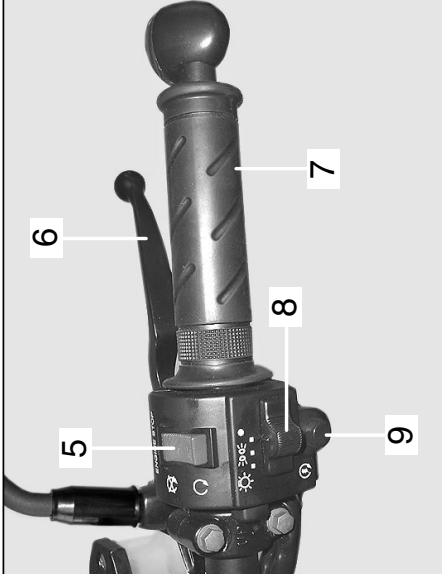
3  Warning horn button

4 Cold start lever (CHOKE)

Operating position: **A Cold start**

**B Warm start**

### Handlebar instrument, right



6 Hand brake lever for front wheel brake


7 Twist grip throttle control

8 Light switch

● Off

☼ Position light

☼ Driving light

9  Start button



### CAUTION

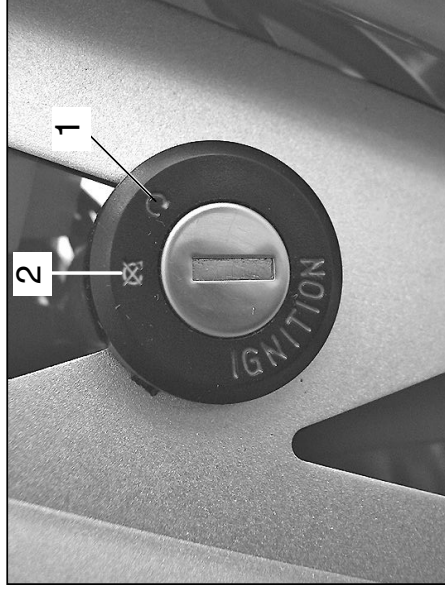
The **EMERGENCY OFF switch (5)** first of all is a safety device and should normally be in  position .

5 Emergency stop switch



✗ The engine does not start

↻ The engine starts

## Ignition lock



### Key positions

- 1  Operating position: Light, ignition and all other functions are switched on.
- 2  Ignition off.




### WARNING

Do not switch the ignition off  while riding the motorbike!



### NOTE

Activate the parking light only for a limited period. Leaving the parking light on for a longer time will discharge the battery. In position  the key can be pulled out.

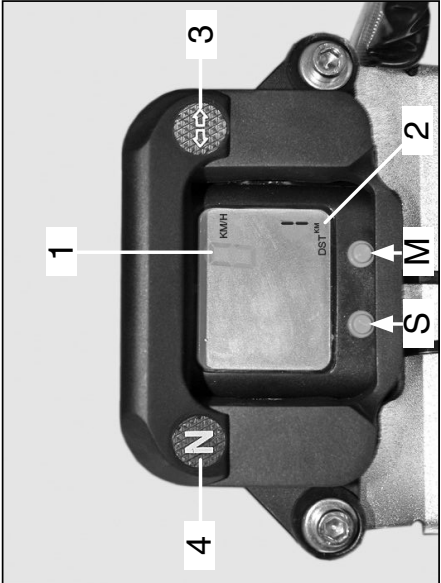


### NOTE

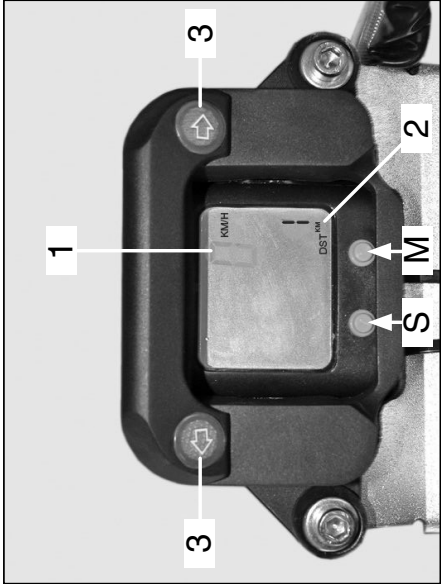
The same key is used for ignition, steering lock and tank cap.

OVERVIEW AND OPERATION

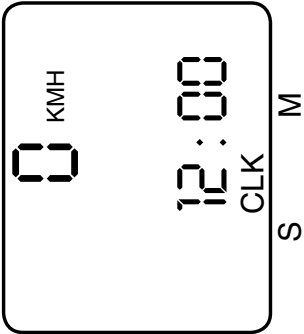
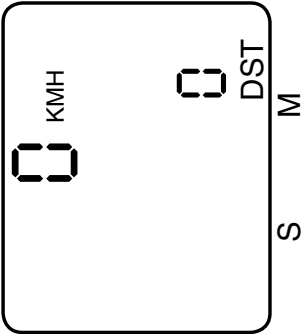
Cockpit, 4-gear model



Cockpit, automatic model



Setting the speedometer



Speedometer

- 1 KMH speed display
- 2 DST - odometer (total number of km)  
TRIP - trip meter

Control lights

- 3 Indicator control light
  - ↔ green left + right
  - ↔ green left
  - ↔ green right

- 4 Shift gear control light
  - neutral N green
  - M Mode
  - S Set

NOTE

Cockpit and vehicle clock are supplied from the vehicle battery. The display is only visible when the ignition is on.

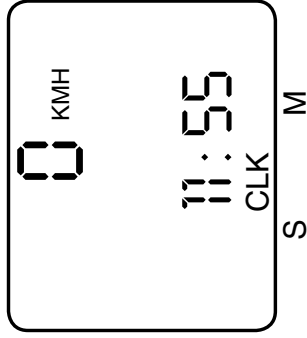
After disconnecting and reconnecting the battery the clock time needs to be reset.

Button M press once  
Changing from odometer (DST) to clock (CLK)

or

Button M press once  
Changing from time (CLK) to odometer (DST)

## Setting odometer / time



Button S press once the clock (CLK) is displayed, the time can be set.

Button S press once, the hour value flashes

The hour value can be set by pressing button M.

Button S press once the minute value flashes

The minute value can be set by pressing button M.

Button S press once, the time is set and ( : ) flashes.

## SAFETY TEST

### Checklist

#### Run through the safety checklist before taking a ride.

Perform the safety checks exactly as specified. Carry out service work before setting off (→ **SERVICE**) or have this work performed by your SACHS dealer. This will give you the certainty that your motorcycle corresponds to traffic regulations. A technically faultless motorcycle is a basic requirement for the safety of both yourself and other road users.

Before starting your ride, check the following:

- Steering (light moving and free of play)
- Clutch lever play (**4-gear model**)
- Fuel level
- Engine oil level
- Front wheel brake
- Rear wheel brake
- Tyres (tread and pressure)
- Front fork

- Load / lights
- Total weight
- Clutch function (**4-gear model**)
- Brake fluid level
- Function of brakes

In case of problems or difficulties, contact your Sachs dealer. He will do all he can to assist you.



#### WARNING

**While the engine is running or the ignition is on, do not touch live parts in the ignition system.**



#### FIRE HAZARD

**The exhaust system becomes very hot. While riding, idling or parking, make sure that no inflammable materials (e.g. hay, leaves, grass, clothes or luggage, etc.) can come into contact with the hot exhaust system!**

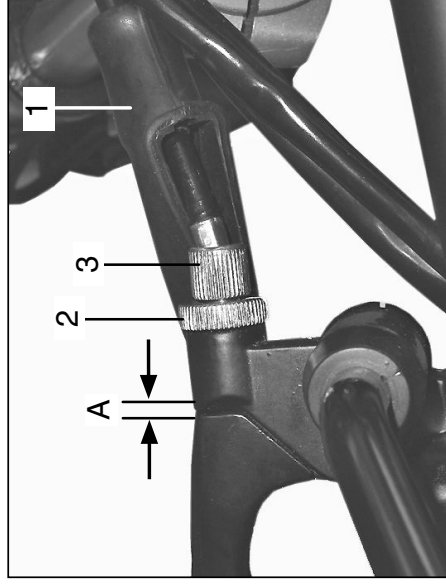
- Fire hazard!

#### Important notes for the operation with a catalyst.

The catalyst is designed for a optimal performance and lifetime. Strictly observe the following notes:

- Run a motorbike with catalyst only with unleaded fuel.
- The ignition should not be switched off while the bike is still rolling.
- Don't continue your ride in case of misfiring, power drop and poor running of the engine. Have the problem rectified by your nearest Sachs dealer.
- Longer starting attempts by pushing the bike in cold or warm operating state should be refrained from.

At the mentioned operating states unburned fuel can reach the catalyst, burn at operating temperature of the system and cause overheating of the exhaust system.

**Clutch, 4-gear model****Adjust:**

- Pull back the rubber cap (1).
- Slacken the lock nut (2).
- Turn setscrew (3) accordingly.
- Tighten lock nut (2).
- Check the play.

**Clutch lever play****CAUTION**

Riding without clutch lever play will damage the clutch.

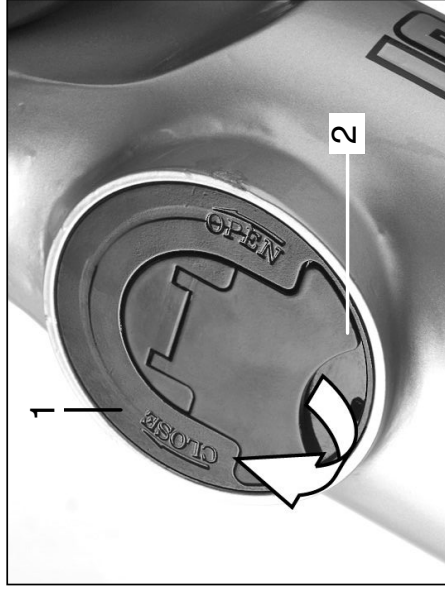
**Check:**

- Pull the lever until resistance can be felt.
- Measure the play.  
Nominal value: A = min. 3-4 mm



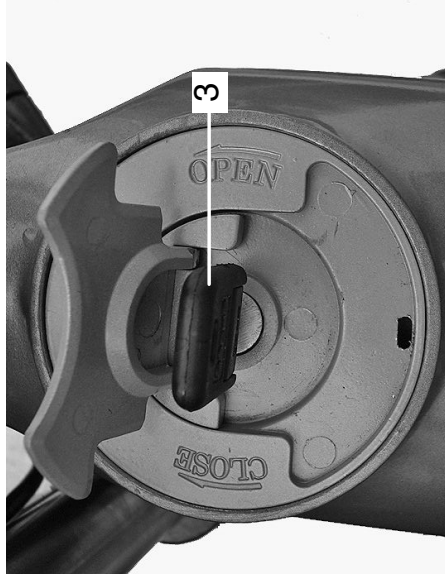
## SAFETY TEST

### Fuel



#### Unlock:

- Tilt cover (2) up in direction of the arrow.
- Insert ignition key (3), turn cover (2) to the left to open the tank cap (1).



#### Lock:

- Close the tank cap (1) by turning the cover (2) to the right and pull out the ignition key.



#### WARNING

Fuel is inflammable and explosive! Do not smoke! Do not use open fire when working on the fuel tank.

#### Tank cap (1)

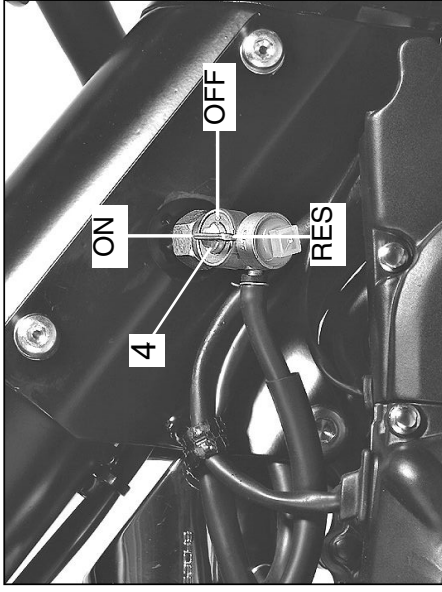


#### NOTE

To open the tank cap (1) only insert the ignition key (3), but do not turn. Open with cover (2).

The tank cap is designed with ventilation. Do not make any changes to the cap.

## Fuel cock



### Fuel cock (4)

#### Fuel cock positions:

**ON = OPEN**

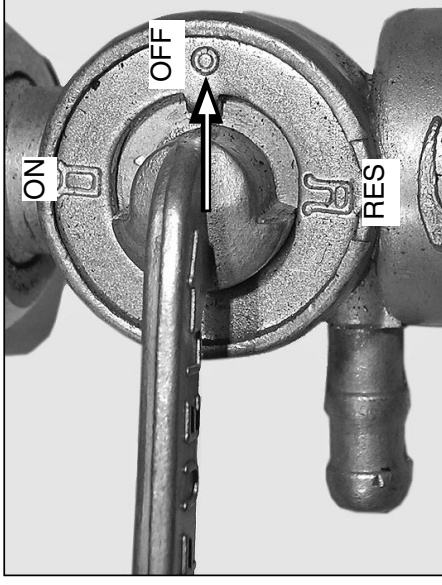
Fuel tank will empty down to a reserve quantity of approx. 0,35 litres

**RES = RESERVE**

Fuel tank runs empty. A residual quantity that cannot be used will remain in the tank.

**OFF = CLOSED**

Fuel supply closed.



### CAUTION

Always close the fuel cock (OFF) after a ride. Otherwise, fuel could flow into the engine. This could cause starting difficulties or lead to serious engine damage.

Damage caused by not observing this instruction will not be covered under warranty.



### WARNING

Fuel expands under the influence of heat and sun radiation. You should therefore never fill the tank to the brim.

Do not refuel with the engine running. Never come close to the open tank with a lit cigarette or a naked flame, since fuel vapours could suddenly ignite.

### Checking the fuel level

- Open the tank cap (1) on the fuel tank.
- Check the fuel level visually.
- Close the tank cap (1) on the fuel tank again.

### Filling in fuel

- Use only standard grade unleaded fuel (min. 91 octane)

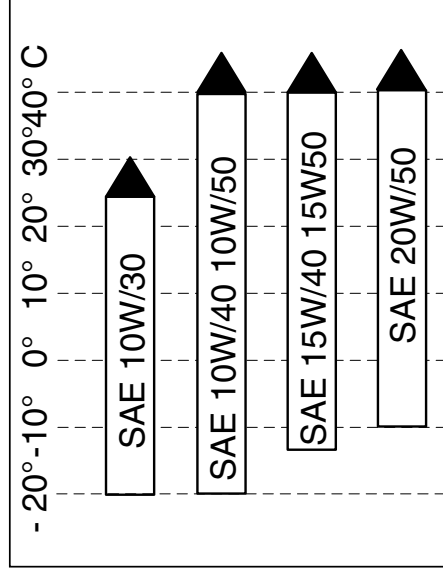
## SAFETY TEST

### Engine oil



#### CAUTION

Do not mix in any additives. Since the engine oil also serves the purpose of lubricating the clutch, do not use automobile engine oils with so-called friction modifiers. These „Energy Conserving“-oils can cause slipping of the clutch. Use a suitable smooth running -engine oil for vehicles, such as e.g.:  
**Motorex SAE 15W/40 mineral oil API (SG or higher)**



#### Recommended grades:

Acc. to API: SG or higher or also with additional release status: ACEA A3/96 (CCMC G5)

#### Recommended viscosity:

Viscosity depends on the ambient temperature. Short-term exceeding of the temperature limits for the corresponding SAE-grades is permitted.

The recommended viscosity class SAE 15W/40 covers the ambient temperature range from -15 °C to +40 °C and therefore represents the optimum for our latitudes.

- If necessary, fill up the engine oil (classification and viscosity, see the table) through the oil-filler opening up to the maximum level mark.

## SAFETY TEST

### Checking the oil level, 4-gear model

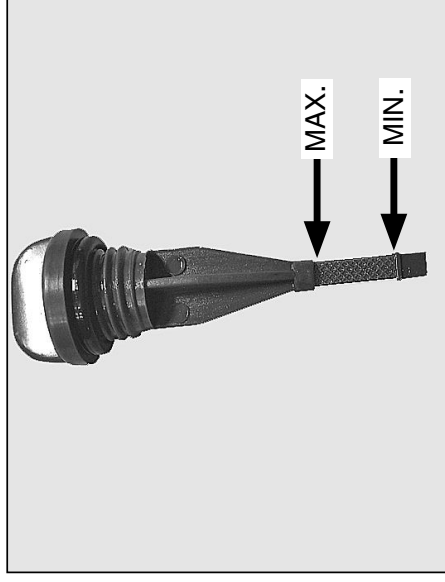


- Stop the engine and unscrew the oil filler plug (1) on the lower right of the crankcase.
- Clean the bottom end of the oil filler plug with a clean cloth.



#### CAUTION

- Reinsert the oil level inspection plug to check the oil level, do not screw in! Otherwise the measurement may be incorrect, which could lead to engine failure.
  - The oil level should be between the minimum and maximum marks.
- If required, replenish with engine oil SAE 15W/40 through the oil filler opening of the oil level inspection plug.
- Tighten the oil level inspection plug by hand.



- Shut the engine down at operating temperature, wait approx. 5 minutes and hold the vehicle in level position.



#### NOTE

Keep the motorbike in level position throughout the oil level check. Even the slightest inclination towards the side will lead to measuring faults.

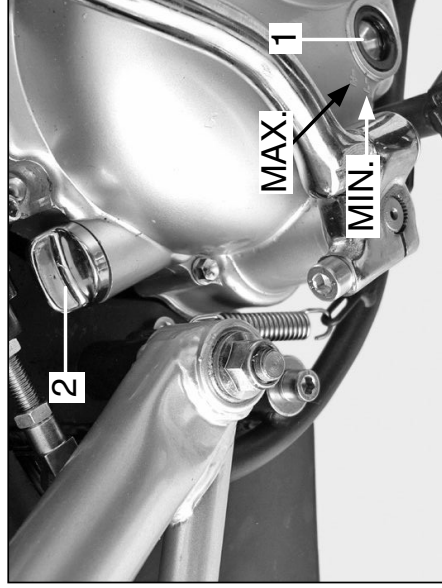


#### CAUTION

Checking the oil on a cold engine will lead to misinterpretation and thus to an incorrect oil level!  
In order to avoid engine damage: Do not exceed the maximum level! Do not allow to drop below the minimum level!

## SAFETY TEST

### Checking the oil level, automatic model



- Shut the engine down at operating temperature, wait approx. 5 minutes and hold the vehicle in level position.



#### NOTE

Keep the motorbike in level position throughout the oil level check. Even the slightest inclination towards the side will lead to measuring faults.

- Read the oil level in the inspection glass (1) at the bottom right hand side of the crankcase with the engine stopped.
- The oil level should be between the MIN and MAX-marks.

If necessary, replenish with engine oil SAE 15W/40 through the oil filler opening of the oil level inspection plug (2).

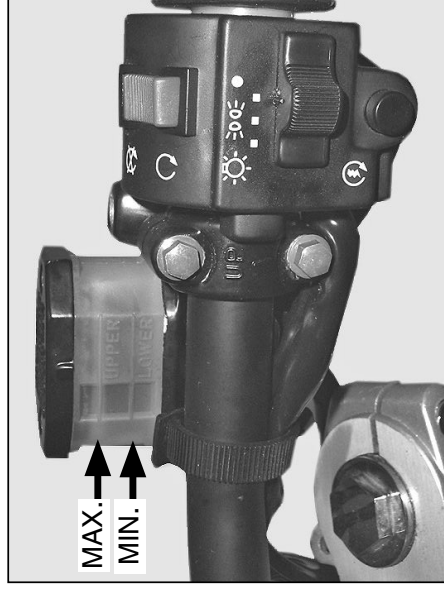


#### CAUTION

Checking the oil on a cold engine will lead to misinterpretation and thus to an incorrect oil level!

**In order to avoid engine damage: Do not exceed the maximum level! Do not allow to drop below the minimum level!**

## Front wheel brake



## Checking the brake fluid level

**WARNING**

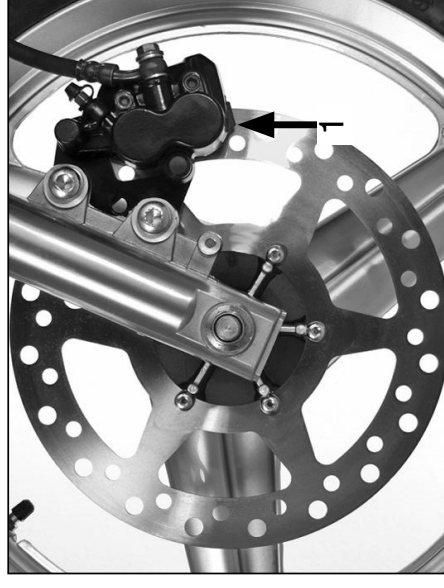
The brake fluid should be changed by an authorized Sachs-dealer at two year intervals. The level should not drop below the MIN-mark. Use only brake fluid of the DOT 4 classification.

**CAUTION**

Brake fluid will cause severe damage painted and plastic parts.

**WARNING**

Sudden changes in play or a spongy feel of the brake lever can be caused by faults in the hydraulic system. Do not continue your ride when in doubt about the operability of the brake system. Immediately consult a Sachs-dealer.



## Checking the brake linings

**WARNING**

**Brake disks and brake linings must be free of oil and grease.**

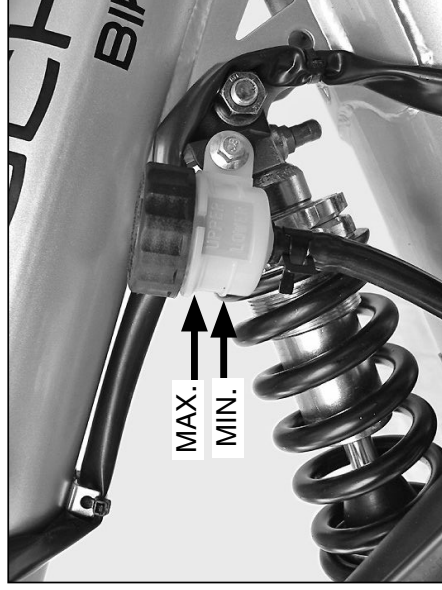
Brake linings (1) are subject to normal wear. In order to guarantee the operability of the brake system, brake linings should never be worn down to their limit.

Checking the brake linings:

➡➡➡ **MAINTENANCE**

## SAFETY TEST

### Hydraulic rear wheel brake



#### WARNING

Sudden changes in play or a spongy feel of the brake lever can be caused by faults in the hydraulic system. Do not continue your ride when in doubt about the operability of the brake system. Immediately consult a Sachs-dealer.

### Checking the brake fluid level



#### WARNING

The brake fluid should be changed by an authorized Sachs-dealer at two year intervals. The level should not drop below the MIN-mark. Use only brake fluid of the DOT 4 classification.



#### CAUTION

Brake fluid will cause severe damage painted and plastic parts.

- Park the motorbike horizontally.
- The brake fluid level must be between the MIN and MAX-marks.
- If air bubbles are visible: Check the brake linings for wear, if necessary replenish the brake fluid.



### Checking the brake linings



#### WARNING

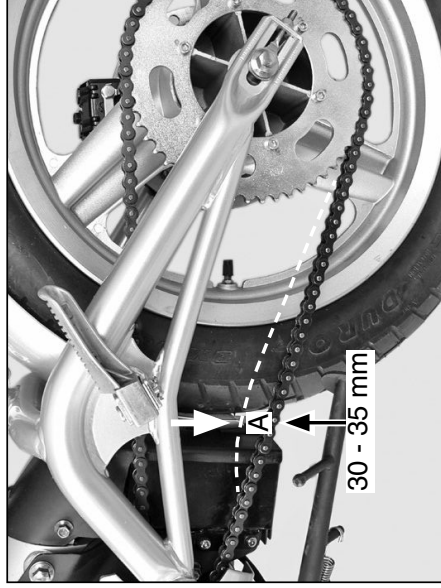
Brake disks and brake linings must be free of oil and grease.

Brake linings (1) are subject to normal wear. In order to guarantee the operability of the brake system, brake linings should never be worn down to their limit.

Checking the brake linings:

➡ MAINTENANCE

## Drive chain



### Checking the chain tension

- Shift to neutral gear.
- Prop the motorbike up on the side stand.
- Let the rear end of the motorbike drop to the suspension limit.
- Push in the drive chain up half way between sprocket and pinion. Measure the travel.

### CAUTION

The adjustment of the chain affects the wear of drive chain and sprocket as well as the spring travel of the rear wheel.

Clean and lubricate the drive chain at regular intervals. Check chain adjustment and drive chain for damage before each ride.

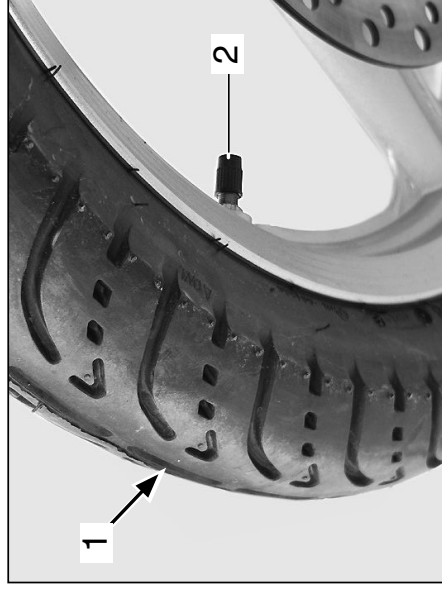
**Nominal value: A = 30-35 mm**

- If necessary adjust the drive chain.  
 **MAINTENANCE**



## SAFETY TEST

### Tyre treads, tyre pressure and tyre size



#### WARNING

Do not ride with valve caps (2) missing. Firmly tightened valve caps prevent the tyre from suddenly losing pressure.

- **With cold tyres:**
- Unscrew the valve caps.
- Check/adjust the tyre pressure.
- Screw the valve caps back on.

#### Tyre pressure

front	2.0 bar	Pillion rider 2.2 bar
rear	2.5 bar	Pillion rider 2.7 bar

#### Tyre size

The standard motorbike is equipped with the following tyre sizes:

front	90/90-16 48J
rear	120/80-16 60J

#### Checking the tyre treads



#### WARNING

Observe the legally stipulated minimum tread depth.

- Measure the tread depth in the middle (1) of the tyre.

The specified minimum tread depth must never be fallen short of:

front	2.0 mm
rear	2.5 mm

#### Checking the tyre pressure



#### WARNING

Regulate the tyre pressure with respect to the total weight. The total weight should never exceed the load bearing capacity of the tyres.

Incorrect tyre pressure has a considerable effect on the riding characteristics of the motorbike and the lifetime of the tyres!



#### WARNING

Use only tyres approved by the manufacturer. When using tyre brands, types or sizes not approved by the Sachs the type approval for the motorbike will become invalid. Use only pairs of tyres from the same manufacturer.

➡ TECHNICAL DATA

## SAFETY TEST

### Load / lights



#### **WARNING**

**For your own safety you should only use original Sachs accessories or products, which have been approved Sachs.**

Sachs cannot judge for each third-party product whether it can be safely used in combination with your Sachs motorcycle. Nor can an TÜV acceptance test or an official approval give such a guarantee in all cases, since the scope of testing is not always extensive enough.



#### **NOTE**

Sachs accessories and products approved by Sachs, as well as qualified advice are available from all specialized Sachs dealers.

#### **Distribute loads correctly**

- Ensure correct weight distribution left/right.
- Check for correct fastenings and tightness.
- Do not transport bulky loads.
- Do not cover the lights.



#### **WARNING**

**The permissible total weight of 280 kg may not be exceeded.**  
**Match telescopic forks and tyre pressures to the total weight.**

#### **Checking the lights**



#### **WARNING**

**Before setting off check the function of all lighting components.**

- Check headlights and lenses for cleanliness.

#### **Adjusting the headlight**

**→ MAINTENANCE**

## RIDING INSTRUCTIONS

---

### Ride safely



#### CAUTION

**Riding safety mainly depends on the driving style.**

Therefore:

- Wear a tested/approved protective helmet and close the buckle correctly.
- Wear suitable protective clothes.
- Rest your feet on the footrests.
- Do not ride if your riding ability is affected.

Your reactions can be adversely affected not only by alcohol, but also by drugs and medicines.

- Strictly observe all traffic regulations.
- Always adapt your riding speed to the traffic and road conditions.

Especially on smooth, slippery roads you should always remember that your riding stability and braking powers are limited by the grip of the tyres on the road surface.

### Ride economically and environmentally

Fuel consumption, pollution and wear of engine, brakes and tyres depend on various factors.

Your personal riding style is decisive for fuel economy and exhaust gas and noise generation.

#### **Do not run the engine warm in idling speed.**

In idling speed the engine takes a long time to warm up to operating temperature. During the warm-up phase both the wear level and pollutant emissions are very high. You should therefore start your ride immediately after starting.

#### **Avoid excessive acceleration**

Sensitive throttle control not only reduces the fuel consumption, but also the pollution and wear levels.

Do not use excessive engine speeds - shift gear as soon as possible and do not shift down until it is necessary to do so.

#### **Ride as evenly as possible and look ahead as far as possible.**

Unnecessary acceleration and braking operations must be paid for with a high fuel consumption and a higher emissions.

#### **Turn the engine off when waiting in traffic.**

Different riding conditions also affect fuel consumption.

The following conditions are unfavourable for fuel consumption:

- High traffic loads, especially in big cities with many stops at traffic lights.
- Frequent short rides with repeated starts and warm-ups of the engine.
- Riding in strings of motorbikes at low speed, i.e. with relatively low engine speed.

Plan rides ahead of time in order to avoid heavy traffic, avoid short-distance traffic etc.

## RIDING INSTRUCTIONS

### Ride economically and environmentally

Fuel consumption is also affected by conditions that are out of your control, for instance, poor road condition, inclinations, riding in winter.

- Observe the following points to enhance the fuel economy:
- The scheduled inspection intervals must be strictly observed.
  - Regular service by a specialized Sachs dealer not only guarantees continued operability, but also good fuel economy, low pollutant emissions and a long lifetime.
  - Check the tyre pressure every two weeks.

Low tyre pressure increases the rolling resistance. This not only affects fuel economy and tyre wear, but also the riding behaviour.

- Keep an eye on the fuel consumption.
- Frequently check the engine-oil level.

## Running-in instructions

running-in instructions for engine and gearbox



### CAUTION

Exceeding the running-in speeds increases the wear of the engine!

In case of engine problems during the running-in period you should immediately consult your specialized Sachs-dealer.



### NOTE

During the running-in period, ride in frequently changing load -and engine speed ranges. Drive on winding and slightly hilly routes. Avoid constantly low engine speeds and full throttle under load.

Maximum top speed in the individual gears during the running-in period:

4-gear model		km/h in the individual gears			
Kilometre		1.	2.	3.	4.
0-500		18	28	35	40
500-1000		25	35	40	45

Automatic model	
0-500 km	Open the throttle control half.
500-1000 km	Do not open the throttle more than three-quarter.

Slowly increase the engine speeds. Up to 1000 km avoid longer rides with full load



### CAUTION

Have the first inspection carried out after the first 1000 km.

Ask your Sachs dealer in due time to avoid unnecessary waiting.

Running-in new tyres



### WARNING

New tyres have a smooth surface. They must therefore be roughened by carefully running them in at various slanted positions.

Only then will the surface obtain its full grip!

Running-in new brake linings



### WARNING

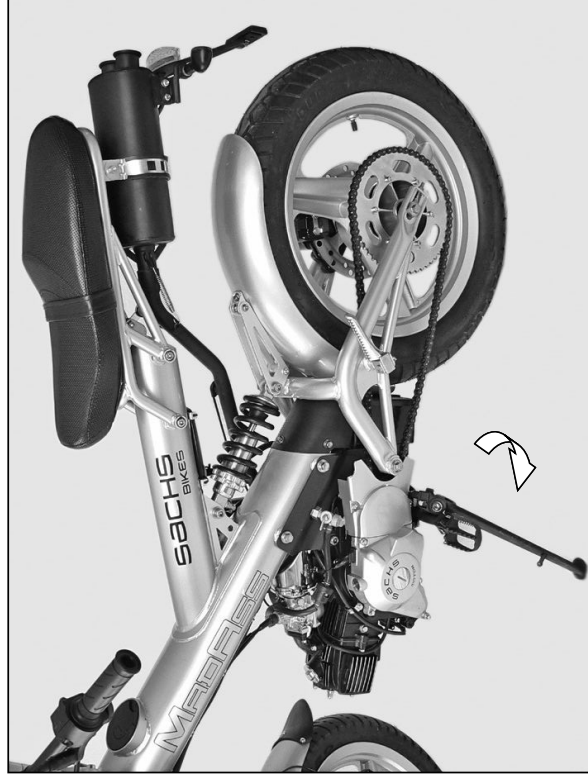
New brake linings must be run-in and will only reach their full friction power after the initial 500 km.

The slightly reduced braking effect can be compensated for by increasing the pressure on the brake lever.

During this period, avoid unnecessary hard braking actions!

## RIDING INSTRUCTIONS

### Side stand



- Shut down the engine.
- Left hand on the left handlebar grip.
- Right hand on the seat.
- Fold out the arm of the side stand against the front stop and hold it with your foot.
- Slowly tilt the motorbike to the left until its weight is supported.

### Propping The Motorbike Up On The Side Stand

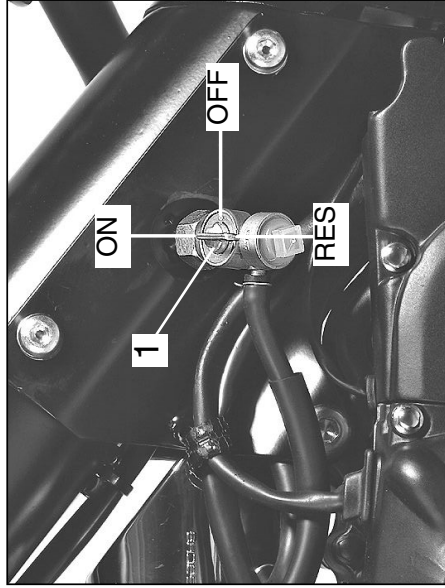


#### WARNING

Always make sure that the stand is resting on firm ground. On sloping roads park the motorbike facing „uphill“. Do not stand in the pivoting area of the side stand when taking the motorbike off the stand.

The side stand must in any case be fully folded up before setting off!  
– Danger of accident!

## Starting



### Before starting



#### NOTE

#### Automatic model:

On the automatic model the side stand must be folded up before starting the engine.

- Stand the motorbike upright and fold the side stand up.
- Turn the fuel cock (1) to ON or RES.
- Mount the motorbike.

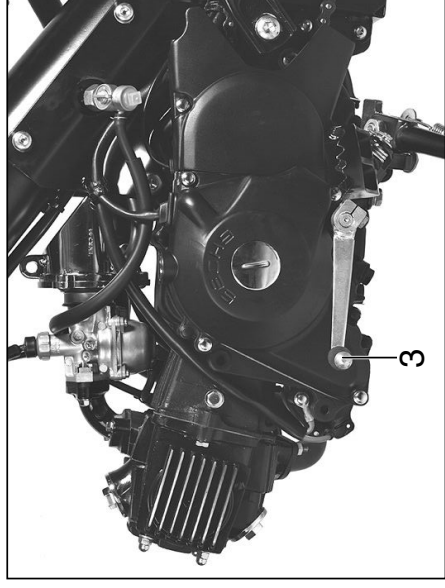


- Turn the ignition key (2) to operating position ↻.



#### WARNING

Before starting your ride, the side stand must be fully folded up! – Danger of accident!



### 4-gear model:

- Shift the gear pedal (3) to neutral.



#### NOTE

#### 4-gear model:

After shifting to neutral, the green control light „N“ for the manual gearbox must light up.



## RIDING INSTRUCTIONS

### Starting with kick starter



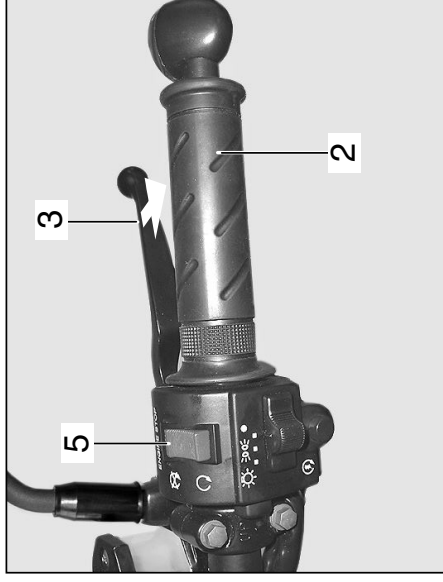
#### CAUTION

Avoid high engine speeds after a cold start.

- Shift the cold start lever (CHOKE 1) in direction „A“.
- Do not open the twist grip throttle control (2).

#### Automatic model:

- Pull the hand brake lever (3) and hold it. Then operate the kick starter (4).
- Only release the hand brake just before setting off.



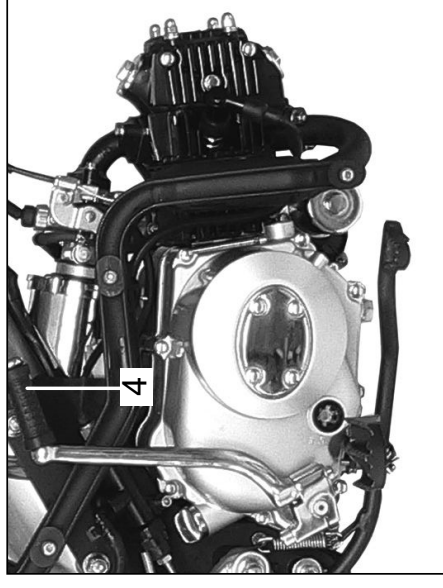
- Swing the the kick starter pedal (4) out and kick it down quickly.



#### CAUTION

Do not let the kick starter hit back against the stop. Fold the kick starter pedal back in after use.

- When the engine is running push the cold start lever (CHOKE 1) back in direction „B“.
- With increasing operating temperature push the cold start lever fully back against the direction of arrow „B“.




#### WARNING

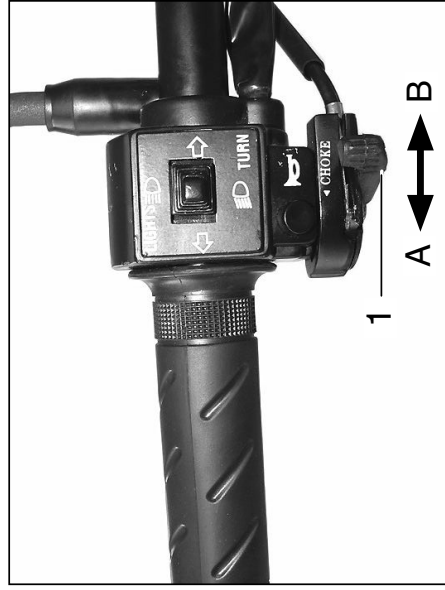
Never run the engine in closed rooms. Exhaust gases are highly toxic - danger to life!



#### CAUTION

The EMERGENCY OFF switch (5) first of all serves as a safety device and should normally remain in position .

## Starting with electric starter



- When the engine is running push the cold start lever (CHOKE 1) back in direction „B“.
- With increasing operating temperature push the cold start lever fully back against the direction of arrow „B“.



### WARNING

Never run the engine in closed rooms. Exhaust gases are highly toxic - danger to life!



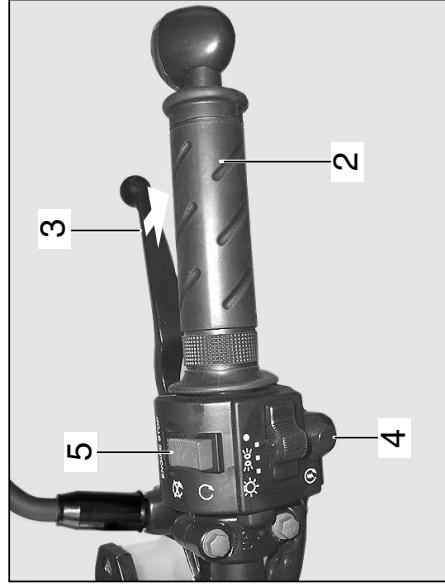
### CAUTION

Avoid high engine speeds after a cold start.

- Shift the cold start lever (CHOKE 1) in direction „A“.
- Do not open the twist grip throttle control (2).

### Automatic model:

- Pull the hand brake lever (3) and hold it. Then operate the starter button (4).
- Only release the hand brake just before setting off.



### 4-gear model:

- Operate the starter button (4).



### CAUTION

If the engine doesn't start immediately, release the starter button, wait a few seconds and push it again. Operate the starter button only for a few seconds at a time in order to save the battery. Do not operate the starter button for more than 10 seconds.

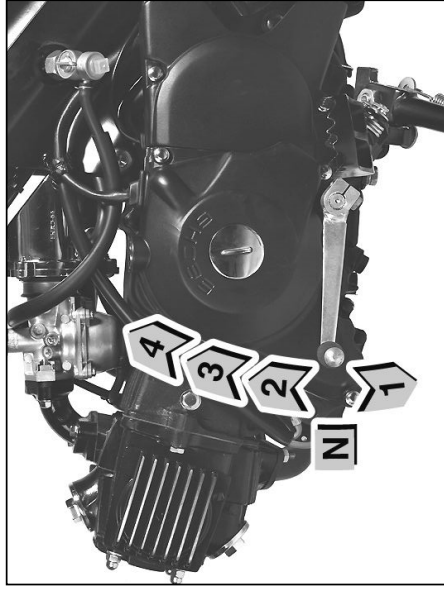


### CAUTION

The EMERGENCY OFF switch (5) first of all serves as a safety device and should normally remain in position (5).

## RIDING INSTRUCTIONS

### Shifting, 4-gear model



#### CAUTION

Avoid:

- Crashing the gears.
- Changing gear without operating the clutch.
- Changing down at high engine speeds.
- Too low and too high engine speeds (unnecessary wear and fuel consumption).

#### Setting off / shifting up

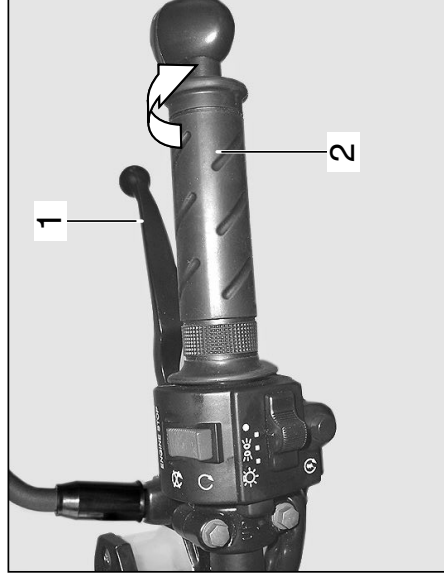
- Pull the clutch lever.
- Push the gear shift pedal down (do not open the throttle)
- Sensitively engage the clutch.
- Simultaneously open the throttle slightly.
- Accelerate after engaging the clutch.

Shifting up to gears 2, 3 and 4 is done similarly.

#### Shifting down

- Close the throttle.
- Pull the clutch lever.
- Push down gear shift pedal.
- Accelerate after engaging the clutch.
- When stopping, change to neutral gear (control light N in cockpit lights green).

### Start-up, automatic model



- Release the hand brake lever (1).
- Slightly open the twist grip throttle control (2) to accelerate the motorbike.

## Brakes

### Wet brakes

Washing the motorcycle or riding through water or rain can delay the braking effect due to wet or (in winter) ice-covered brake discs and linings.



### WARNING

**The brakes must first be run dry!**

### Salt film on the brakes

When riding on salt sprayed streets without braking for a while, the full braking effect may be delayed.

### Oil- and grease free brakes



### WARNING

**Brake discs and linings must be free of oil- and grease!**



### WARNING

**If the motorcycle is not used for a while, a rust film may form on the brakes and thus increase the braking effect. A thick rust film can cause the brakes to lock up. When setting out on a ride after a longer shut-down period, carefully operate the brakes several times until they work normally.**



### NOTE

Braking manoeuvres for emergency situations should be practiced where no other persons are endangered (e.g. traffic training areas).



### WARNING

**Operate the brakes to grind off any salt deposits that have formed on the brake discs.**

### Dirty brakes

When riding on dirty streets, the braking effect can be delayed due to dirty brake discs and linings.

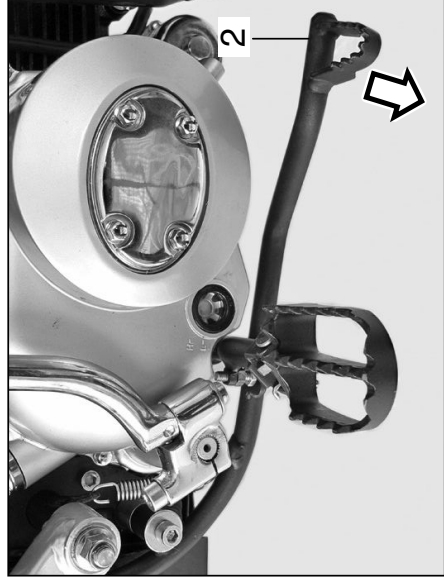
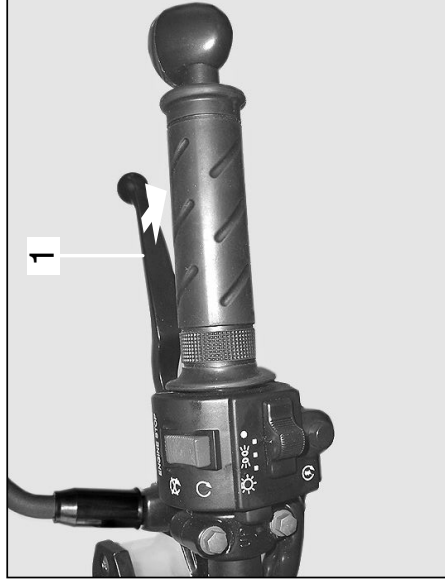


### WARNING

**Operate the brakes until they are clean. The wear of brake linings is increased by dirty brakes!**

## RIDING INSTRUCTIONS

### Brakes



Brake with care. Locked wheels do not have much braking effect and can lead to skidding / crashing. You should generally not brake in a curve, but before the curve. Braking in a curve increases the danger of sliding.

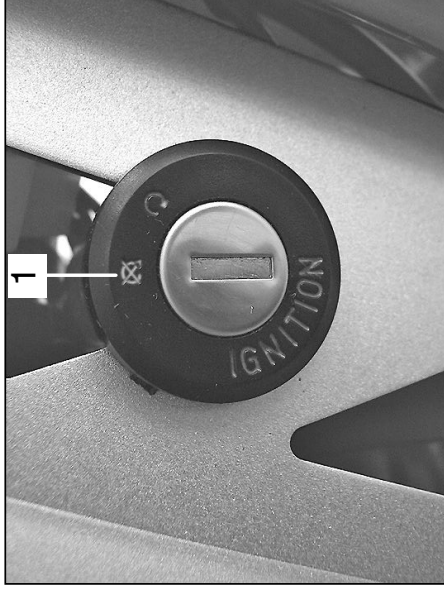
### Brakes

Front and rear brakes are operated independently from each other. The front brake is operated with the hand brake lever (1) on the handlebar, whereas the rear brake is operated by kicking down the footbrake lever (2) with the right foot.

When stopping or slowing down, release the throttle and operate **both** brakes at the same time.

On tight curves, sandy and slippery roads, wet asphalt and black ice use the front brake carefully to avoid blocking and slipping of the front wheel.

## Shut-down



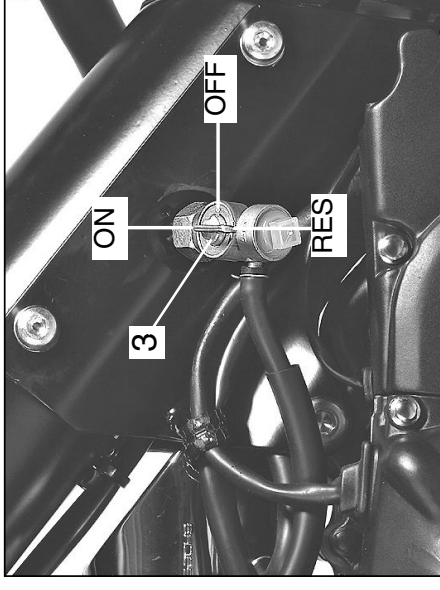
### Shut-down

- Shut down the engine by turning the ignition key to position (1).
- Pull out the ignition key.



### CAUTION

The EMERGENCY OFF switch (2) first of all serves as a safety device and should normally remain in position .



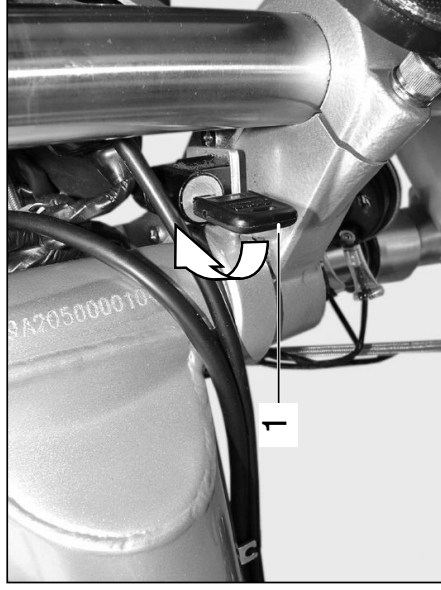
### CAUTION

Turn the fuel cock (3) to „OFF“ position. In position „ON“ or „RES“ fuel can flow into the engine. This can cause starting difficulties and severe engine damage

If this instruction is not observed any resulting damage will be excluded from warranty.

## RIDING INSTRUCTIONS

### Steering lock



**Safeguard the steering against unauthorized use.**

**Lock:**

- Turn the handlebar fully to the left.
- Insert key (1) into the lock and turn it in clockwise direction.
- Pull out the key.

**Unlock:**

- Insert key (1) into the lock and turn it in anti-clockwise direction.
- Pull out the key.



**CAUTION**

**Always remove the key before setting off.**

## Servicing the motorbike / cleaning agents



### NOTE

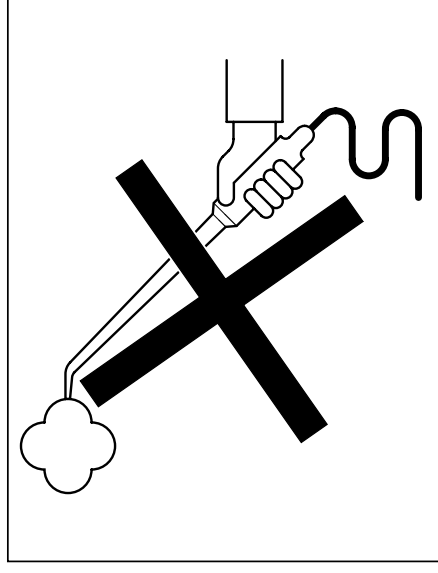
Regular and professional care and maintenance helps to maintain the value of the motorbike and is a prerequisite for the acceptance of warranty claims.

Corrosion caused by a lack of care and maintenance or winter operation is not covered under warranty.



### CAUTION

Rubber- and plastic parts will be damaged by aggressive or penetrating cleaning- agents or solvents.



### CAUTION

Do not use steam- or high pressure cleaning equipment! The high water pressure emitted by such devices can damage seals, the hydraulic braking system and the electrical system.



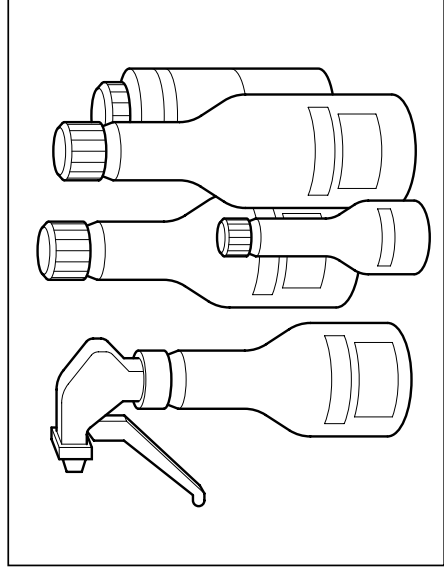
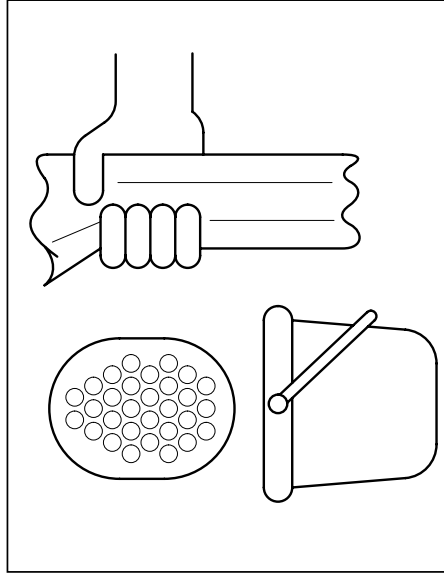
### WARNING

Always perform a brake test after cleaning and before setting off for a ride!



## SERVICE INSTRUCTIONS

### Servicing the motorbike / cleaning agents



#### CAUTION

Never use paint polishing agents on plastic parts.

- After a longer ride, thoroughly clean the chassis and all aluminium parts and preserve them with a commercially available anti-corrosion agent.

### Cleaning

- Only wash the motorcycle with a soft sponge and clean water.
- Use a soft cloth or leather to polish!
- Do not wipe off dust or dirt with a dry cloth (this will scratch paint or trims).

### Care products

When necessary, the motorcycle must be preserved with commercially available care and cleaning agents.

- As a precaution, especially in winter, corrosion endangered parts should be regularly treated with preservation agents.

## SERVICE INSTRUCTIONS

### Winter operation and corrosion protection



#### NOTE

Protect the environment by using only environmentally friendly preservation agents, and use them frugally.

If the motorbike is used during the winter, considerable damage can be caused by road salt.

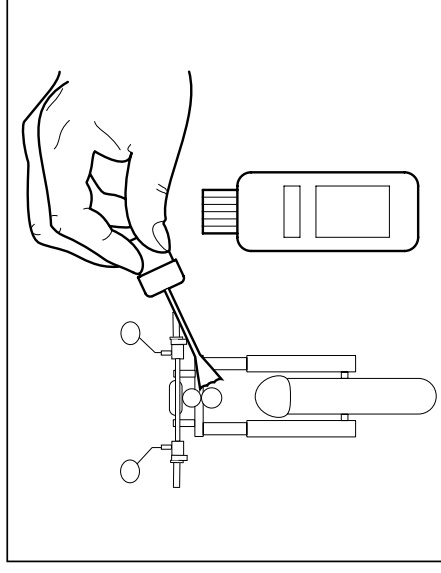


#### CAUTION

**Do not use warm water - this will boost the effect of the salt.**

- Wash the motorcycle with cold water after the ride.
- Thoroughly dry the motorcycle.
- Treat parts liable to corrosion with wax-based anti-corrosion agents.

### Repairing paint damage



Minor paint damage should be immediately repaired.

### Servicing tyres

If the motorbike is not to be used for a longer period of time, we recommend to jack up the motorbike to relieve the tyres from any weight.

Additional spraying of the tyres with a silicon-rubber care product prevents the tyres from brittling. Clean the tyres thoroughly first.

Do not store the motorbike or the tyres in warm rooms - such as a heater rooms - over longer periods of time.



#### WARNING

**A minimum tyre tread depth of 2.0 mm must be maintained at all times.**

## SERVICE INSTRUCTIONS

### Shut-down / start-up

#### Shut-down

- Clean the motorbike.
- Remove the battery.  
Observe the maintenance instructions!
- Spray brake- and clutch lever joints as well as the side stand and main stand bearings with a suitable lubricant.
- Cover bright / chromium-plated parts with acid-free grease (Vaseline).
- Store the motorbike in a dry room and jack it up so that its weight is not on the wheels.



#### NOTE

Before shutting down the motorbike, have the engine oil changed by a Sachs-dealer. Combine shut-down / start-up activities with an inspection by your Sachs-dealer.

#### Start-up

- Remove the preservation agents from the exterior of the motorbike.
- Clean the motorbike.
- Install the charged battery.
- Cover the battery terminal clamps with pole grease.
- Check / adjust the tyre pressure .
- Check the brakes.
- Carry out activities according to the inspection plan.
- Carry out the safety checks.