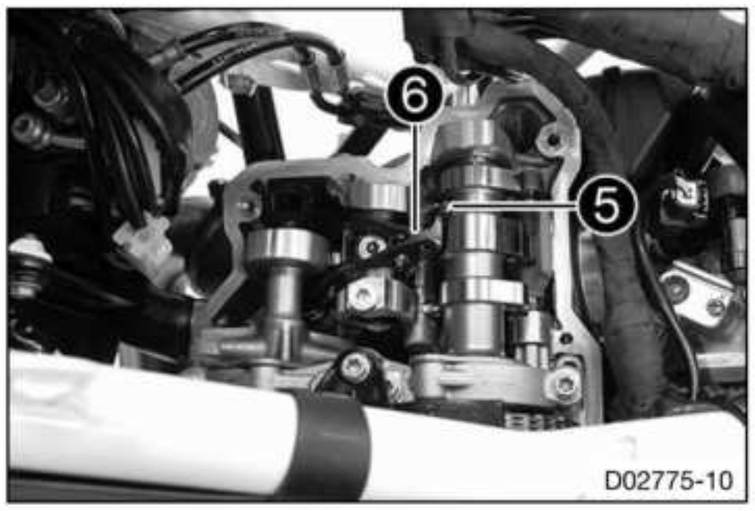
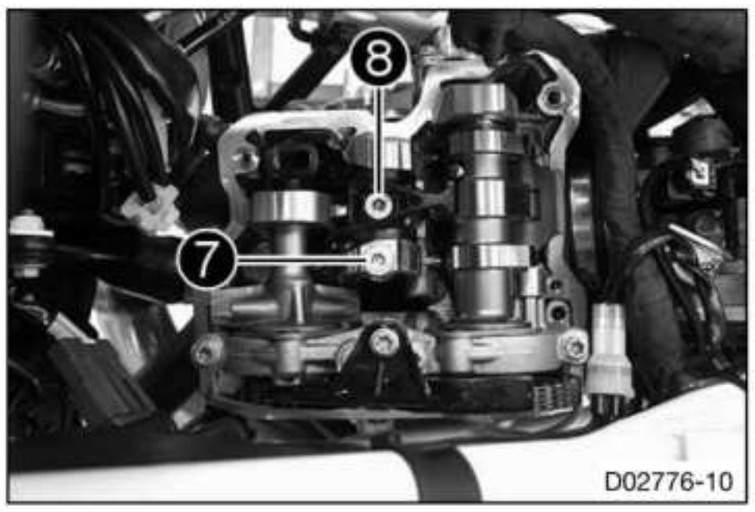


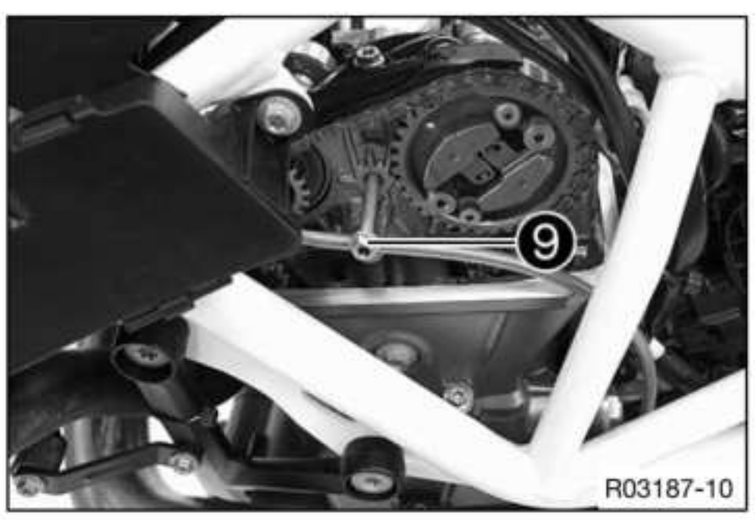
Exhaust valves

– Keep turning the crankshaft counterclockwise until autodecompressor cam ❺ is visible next to rocker arm ❻ as shown.

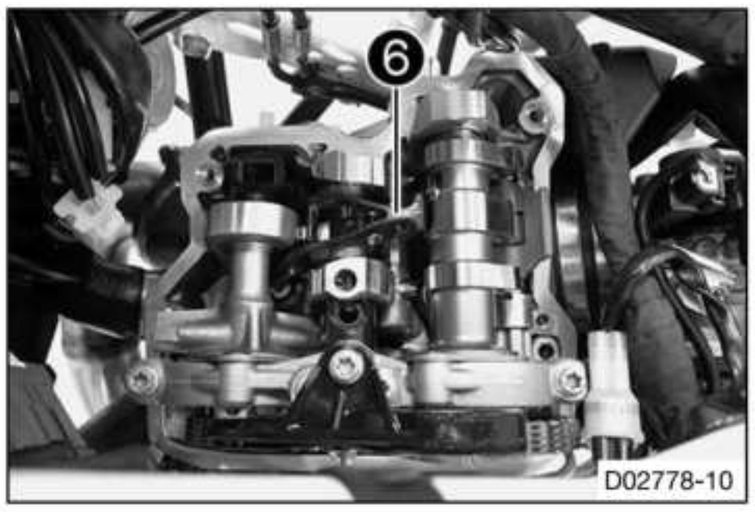
Info
The autodecompressor cam must be pushed slightly to the side.



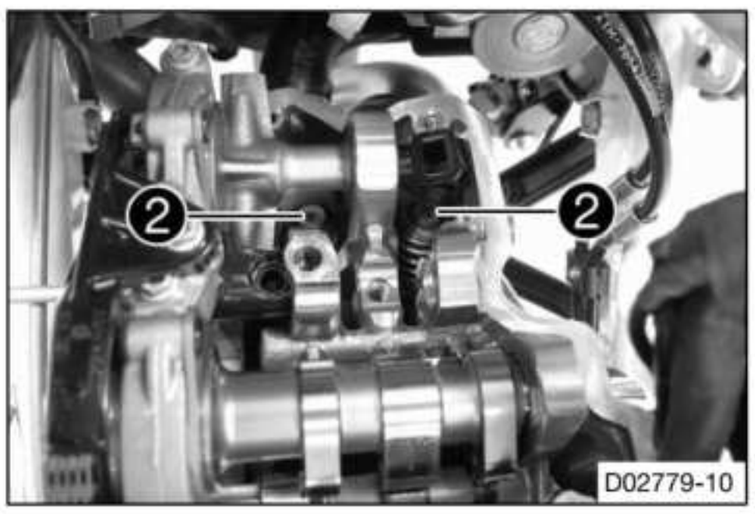
– Remove screws ❼ and ❽.



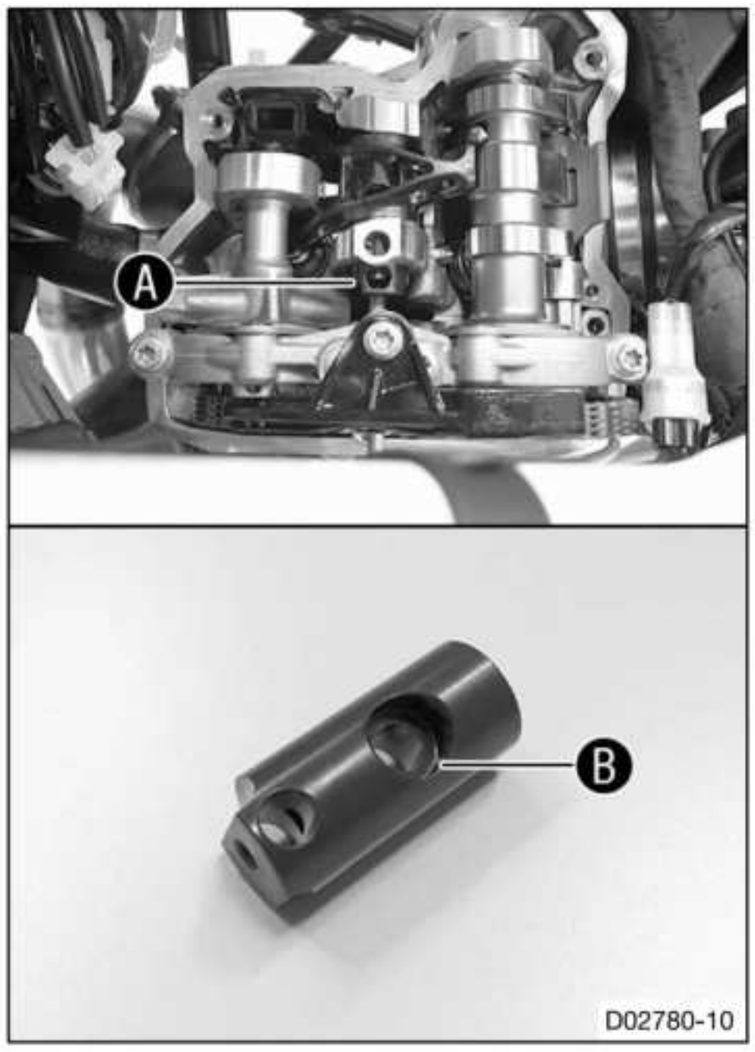
– Screw a suitable M6 screw ❾ into the rocker arm shaft.
– Pull back rocker arm shaft.



– Remove rocker arm ❻.



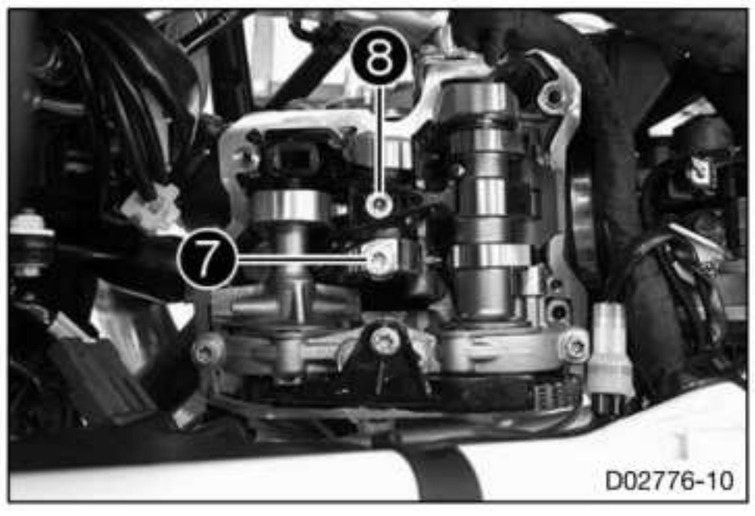
– Remove shims ❷ and set them down according to the installation position.
– Correct the shims based on the results of the valve clearance check.
– Insert suitable shims.



– Position the rocker arm and mount the rocker arm shaft.
  ✓ The large recess Ⓐ must face the exhaust side.
  ✓ Dip Ⓑ in the rocker arm shaft faces upward.

Info
The autodecompressor cam must be pushed slightly to the side.

– Remove screw ⑨.



– Mount and tighten screw ⑦.

Guideline

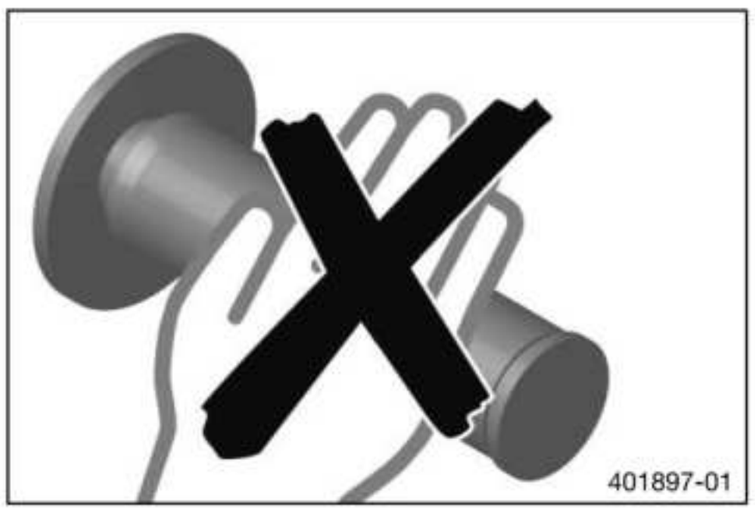
Screw, rocker arm shaft	M8x55	15 Nm (11.1 lbf ft)

– Mount and tighten screw ⑧.

Guideline

Screw, rocker arm shaft	M8x40	15 Nm (11.1 lbf ft)

25.1 Performing the initialization run


401897-01

Condition
The diagnostics tool is connected and running.

– Execute **"Engine electronics"** > **"Functions"** > **"Clear adaptation values"**.
  ✓ The adaptation values are deleted.
– Program the gear position sensor. (📖 p. 281)
– Switch off ignition.
– Disconnect the diagnostics tool.

Danger
Danger of poisoning Exhaust gases are toxic and inhaling them may result in unconsciousness and death.
– Always make sure there is sufficient ventilation when running the engine.
– Use effective exhaust extraction when starting or running the engine in an enclosed space.

– Start the engine without operating the throttle grip.
Guideline

Coolant temperature	< 25 °C (< 77 °F)

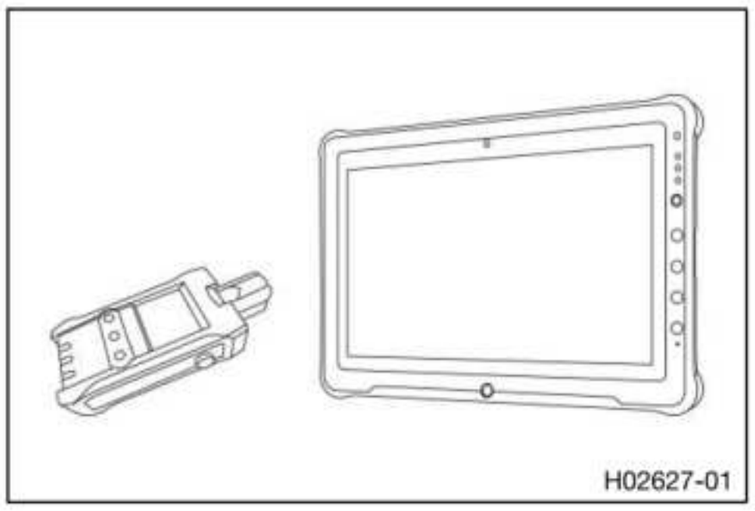
– Let the engine run at idle speed for at least 10 minutes (600 seconds).

Info
Do not operate the throttle grip during the initialization process.

– Switch off the ignition after 10 minutes (600 seconds).

Info
If initialization is not completed or if the initialization process was interrupted, the entire process must be restarted.

25.2 Resetting the engine electronics control unit


H02627-01

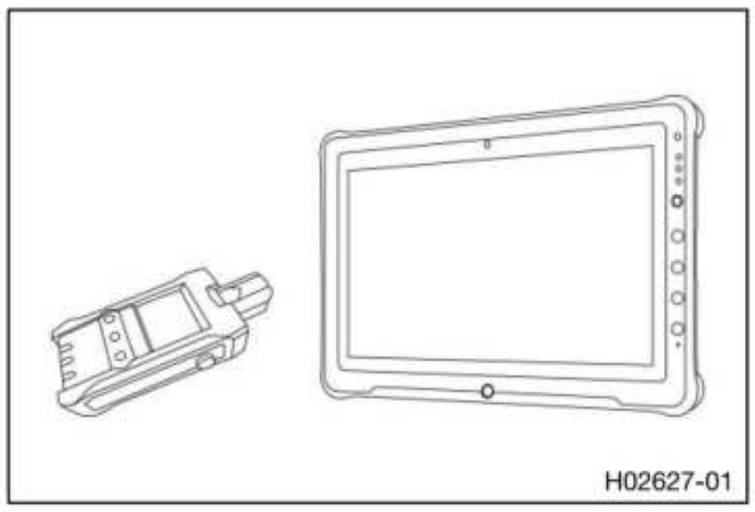
Condition
The diagnostics tool is connected and running.

Main work
– Execute **"Engine electronics"** > **"Functions"** > **"Clear adaptation values"**.
  ✓ The adaptation values are deleted.

Final steps

– Program the gear position sensor. (📖 p. 281)

25.3 Checking the CO adjustment using the Husqvarna Motorcycles diagnostics tool



Condition

The diagnostics tool is connected and running.

– Select **"Engine electronics"** > **"Functions"** > **"CO adjustment when idling"**.
– Confirm the warning using **"Next"**.
– Check the position of the bar in the measurement range.
  » The bar is positioned in the middle of the green area of the measurement range.
    – Quit the function using **"Cancel"**.
  » The bar is not positioned in the middle of the green area of the measurement range.
    – Using the + button or – button, position the bar in the middle of the measurement range.
    – Quit the function using **"Save"**.
– Quit the process using **"Execute"**.

26.1 Engine

Design	1-cylinder 4-stroke engine, water-cooled
Displacement	692.7 cm³ (42.271 cu in)
Stroke	80 mm (3.15 in)
Bore	105 mm (4.13 in)
Compression ratio	12.7:1
Control	OHC, intake with cam levers, exhaust controlled by rocker arm, chain drive
Valve diameter, intake	42 mm (1.65 in)
Valve diameter, exhaust	34 mm (1.34 in)
Valve play, cold	
Intake at: 20 °C (68 °F)	0.10 … 0.15 mm (0.0039 … 0.0059 in)
Exhaust at: 20 °C (68 °F)	0.22 … 0.27 mm (0.0087 … 0.0106 in)
Crankshaft bearing	2 roller bearings
Conrod bearing	Slide bearing
Piston pin bearing	Piston pin with **DLC** coating
Pistons	Forged light alloy
Piston rings	1 compression ring, 1 lower compression ring, 1 oil ring with spring expander
Engine lubrication	Semi-dry sump lubrication system with two rotor pumps
Primary transmission	36:79
Clutch	**APTC™** antihopping clutch in oil bath/hydraulically operated
Transmission	6-gear transmission, claw shifted
Transmission ratio	
1st gear	14:35
2nd gear	16:28
3rd gear	21:28
4th gear	21:23
5th gear	23:22
6th gear	23:20
Mixture preparation	Electronic fuel injection
Ignition	Contactless controlled fully electronic ignition with digital ignition adjustment
Alternator	12 V, 300 W
Spark plug	
Inside spark plug	NGK LKAR9BI-10
Outside spark plug	NGK LMAR7DI-10
Spark plug electrode gap	1.0 mm (0.039 in)
Cooling	Water cooling, permanent circulation of coolant by water pump
Idle speed	
Coolant temperature: ≥ 70 °C (≥ 158 °F)	1,600 … 1,700 rpm
Starting aid	Starter motor, automatic decompression

26.2 Engine tolerance, wear limits

Camshafts - diameter, bearing pin	
Next to exhaust cam	≥ 39.95 mm (≥ 1.5728 in)
Next to inlet cam	≥ 17.96 mm (≥ 0.7071 in)
Valve spring	
Minimum length (without valve spring seat)	40.5 mm (1.594 in)
Valve spring cap - thickness	2.4 … 2.5 mm (0.094 … 0.098 in)
Valve - valve stem diameter	
Exhaust	≥ 5.93 mm (≥ 0.2335 in)
Intake	≥ 5.93 mm (≥ 0.2335 in)
Valve guide - diameter	
New condition	6.004 … 6.016 mm (0.23638 … 0.23685 in)
Wear limit	6.050 mm (0.23819 in)
Valve - sealing seat width	
Intake	1.60 mm (0.063 in)
Exhaust	2.00 mm (0.0787 in)
Valve - run-out	
On the valve plate	≤ 0.05 mm (≤ 0.002 in)
On the valve stem	≤ 0.05 mm (≤ 0.002 in)
Cylinder/cylinder head - sealing area distortion	≤ 0.10 mm (≤ 0.0039 in)
Cylinder - bore diameter	
Size I	105.000 … 105.012 mm (4.13385 … 4.13432 in)
Size II	105.013 … 105.025 mm (4.13436 … 4.13483 in)
Piston - diameter	
Size I	104.955 … 104.965 mm (4.13208 … 4.13247 in)
Size II	104.965 … 104.975 mm (4.13247 … 4.13287 in)
Piston/cylinder - mounting clearance	
New condition	0.035 … 0.060 mm (0.00138 … 0.00236 in)
Wear limit	0.10 mm (0.0039 in)
Piston ring - groove clearance	≤ 0.08 mm (≤ 0.0031 in)
Piston ring end gap	
Compression rings	≤ 0.80 mm (≤ 0.0315 in)
Oil scraper ring	≤ 1.00 mm (≤ 0.0394 in)
Piston - piston pin hole diameter	20.010 … 20.020 mm (0.78779 … 0.78819 in)
Piston pin - diameter	19.995 … 20.004 mm (0.7872 … 0.78756 in)
Connecting rod - axial clearance of lower conrod bearing	0.30 … 0.60 mm (0.0118 … 0.0236 in)
Connecting rod - radial clearance of lower conrod bearing	0.05 mm (0.002 in)
Crankshaft - axial clearance	0.15 … 0.25 mm (0.0059 … 0.0098 in)
Crankshaft run-out at bearing pin	≤ 0.10 mm (≤ 0.0039 in)
Balancer shaft axial clearance	0.15 … 0.25 mm (0.0059 … 0.0098 in)
Clutch facing disc - thickness	≥ 2.5 mm (≥ 0.098 in)
Intermediate disk - thickness	≥ 1.35 mm (≥ 0.0531 in)
Clutch spring - length	31.5 … 33.5 mm (1.24 … 1.319 in)

Oil pressure regulator valve - minimum length spring	25.4 mm (1 in)
Oil pump	
Clearance between external rotor and engine case	≤ 0.20 mm (≤ 0.0079 in)
Clearance between external rotor and internal rotor	≤ 0.20 mm (≤ 0.0079 in)
Axial clearance	0.04 … 0.08 mm (0.0016 … 0.0031 in)
Oil pressure	
Coolant temperature: ≥ 70 °C (≥ 158 °F) Engine speed: Idle speed	≥ 0.8 bar (≥ 12 psi)
Coolant temperature: ≥ 70 °C (≥ 158 °F) Engine speed: 5,000 rpm	≥ 2.0 bar (≥ 29 psi)
Main shaft axial clearance	0.10 … 0.40 mm (0.0039 … 0.0157 in)
Transmission shaft run-out	≤ 0.025 mm (≤ 0.00098 in)
Shift shaft - play in sliding plate/shift quadrant	0.40 … 0.80 mm (0.0157 … 0.0315 in)
Fuel pressure	
Under every load condition	3.3 … 3.7 bar (48 … 54 psi)

26.3 Engine tightening torques

Screw, membrane fixation	M3	2 Nm (1.5 lbf ft) **Loctite®243™**
Hose clamp, intake flange	M4	2.5 Nm (1.84 lbf ft)
Oil nozzle for clutch lubrication	M4x8	2 Nm (1.5 lbf ft)
Oil nozzle for conrod bearing lubrication	M4	2 Nm (1.5 lbf ft) **Loctite®243™**
Locking screw for bearing	M5	6 Nm (4.4 lbf ft) **Loctite®243™**
Oil nozzle in cylinder head	M5	2 Nm (1.5 lbf ft) **Loctite®243™**
Remaining screws, engine	M5	6 Nm (4.4 lbf ft)
Screw, axial lock of camshaft	M5	6 Nm (4.4 lbf ft) **Loctite®243™**
Screw, clutch spring	M5	8 Nm (5.9 lbf ft)
Screw, cover plate for oil return line	M5	6 Nm (4.4 lbf ft)
Screw, gear sensor	M5	5 Nm (3.7 lbf ft) **Loctite®243™**
Screw, oil filter cover	M5	6 Nm (4.4 lbf ft)
Screw, oil pump cover	M5	6 Nm (4.4 lbf ft) **Loctite®243™**
Screw, oil pump cover, top	M5	6 Nm (4.4 lbf ft) **Loctite®243™**
Remaining screws, engine	M6	10 Nm (7.4 lbf ft)
Screw in alternator cover	M6	10 Nm (7.4 lbf ft)
Screw, alternator cover	M6x30	10 Nm (7.4 lbf ft)
Screw, alternator cover (timing chain shaft through-hole)	M6	10 Nm (7.4 lbf ft) **Loctite®243™**

Screw, auto decompression	M6	3.5 Nm (2.58 lbf ft) **Loctite®243™**
Screw, camshaft bearing support	M6x80	10 Nm (7.4 lbf ft)
Screw, camshaft bearing support	M6x90	10 Nm (7.4 lbf ft)
Screw, clutch cover	M6	10 Nm (7.4 lbf ft)
Screw, clutch slave cylinder	M6x20	10 Nm (7.4 lbf ft) **Loctite®243™**
Screw, clutch slave cylinder	M6x20	10 Nm (7.4 lbf ft)
Screw, crankshaft speed sensor	M6	10 Nm (7.4 lbf ft) **Loctite®243™**
Screw, cylinder	M6	10 Nm (7.4 lbf ft) **Loctite®243™**
Screw, cylinder head	M6	10 Nm (7.4 lbf ft) **Loctite®243™**
Screw, engine case	M6	10 Nm (7.4 lbf ft)
Screw, guide rail	M6x20	10 Nm (7.4 lbf ft) **Loctite®243™**
Screw, ignition coil	M6	10 Nm (7.4 lbf ft)
Screw, locking lever	M6	10 Nm (7.4 lbf ft) **Loctite®243™**
Screw, oil pump cover, bottom	M6	10 Nm (7.4 lbf ft) **Loctite®243™**
Screw, resonator	M6	10 Nm (7.4 lbf ft) **Loctite®243™**
Screw, shift drum locating	M6	10 Nm (7.4 lbf ft) **Loctite®243™**
Screw, shift lever	M6	14 Nm (10.3 lbf ft) **Loctite®243™**
Screw, starter motor	M6	10 Nm (7.4 lbf ft) **Loctite®243™**
Screw, stator	M6	10 Nm (7.4 lbf ft) **Loctite®243™**
Screw, thermostat housing	M6	10 Nm (7.4 lbf ft) **Loctite®243™**
Screw, timing chain guide rail	M6x30	10 Nm (7.4 lbf ft) **Loctite®2701™**
Screw, timing chain shaft	M6	10 Nm (7.4 lbf ft) **Loctite®243™**
Screw, timing chain tensioning rail	M6x30	10 Nm (7.4 lbf ft) **Loctite®2701™**
Screw, valve cover	M6	10 Nm (7.4 lbf ft)
Screw, water pump cover	M6	10 Nm (7.4 lbf ft)
Screw, water pump wheel	M6	10 Nm (7.4 lbf ft) **Loctite®243™**
Screws, secondary air system cover	M6x12	10 Nm (7.4 lbf ft) **Loctite®243™**
Intake channel vacuum connection	M6x0.75	2.5 Nm (1.84 lbf ft) **Loctite®243™**
Oil jet, piston cooling	M6x0.75	4 Nm (3 lbf ft) **Loctite®243™**

Screw plug, locking screw	M8	15 Nm (11.1 lbf ft)
Screw, rocker arm shaft	M8x40	15 Nm (11.1 lbf ft)
Screw, rocker arm shaft	M8x55	15 Nm (11.1 lbf ft)
Setscrew, camshaft bearing bridge	M8	6 Nm (4.4 lbf ft) **Loctite®243™**
Stud, exhaust flange	M8	10 Nm (7.4 lbf ft) **Loctite®243™**
Screw, cylinder head	M10	Tightening sequence: Tighten diagonally, beginning with the rear screw on the timing chain shaft. 1st stage 15 Nm (11.1 lbf ft) 2nd stage 30 Nm (22.1 lbf ft) 3rd stage 45 Nm (33.2 lbf ft) 4th stage 60 Nm (44.3 lbf ft) Lubricated with engine oil **Loctite® 577™**
Oil line for oil pressure sensor	M10x1	10 Nm (7.4 lbf ft)
Oil pressure sensor	M10x1	10 Nm (7.4 lbf ft)
Screw plug, oil channel	M10x1	15 Nm (11.1 lbf ft) **Loctite®243™**
Screw plug, oil channel, for oil radiator	M10x1	15 Nm (11.1 lbf ft)
Screw plug, water pump drain hole	M10x1	15 Nm (11.1 lbf ft)
Screw, unlocking of timing chain tensioner	M10x1	10 Nm (7.4 lbf ft)
Spark plug outside	M10x1	11 Nm (8.1 lbf ft)
Spark plug inside	M12x1.25	18 Nm (13.3 lbf ft)
Coolant temperature sensor on the cylinder head	M12x1.5	12 Nm (8.9 lbf ft)
Oil drain plug with magnet	M12x1.5	20 Nm (14.8 lbf ft)
Screw plug, oil pressure control valve	M12x1.5	20 Nm (14.8 lbf ft)
Screw plug, oil channel	M14x1.5	15 Nm (11.1 lbf ft) **Loctite®243™**
Engine case stud	M16x1.5	25 Nm (18.4 lbf ft) **Loctite®243™**
Rotor nut	M18x1.5	100 Nm (73.8 lbf ft)
Nut, engine sprocket	M20x1.5	80 Nm (59 lbf ft) **Loctite®243™**
Nut, inner clutch hub	M20x1.5	120 Nm (88.5 lbf ft) **Loctite®243™**
Nut, primary gear wheel	M20LHx1.5	90 Nm (66.4 lbf ft) **Loctite®243™**
Plug, oil screen	M20x1.5	15 Nm (11.1 lbf ft)
Plug, oil thermostat	M24x1.5	15 Nm (11.1 lbf ft)

Plug, timing chain tensioner	M24x1.5	25 Nm (18.4 lbf ft)
Screw in alternator cover	M24x1.5	8 Nm (5.9 lbf ft)

26.4 Capacities

26.4.1 Engine oil

Engine oil	1.70 l (1.8 qt.)	Engine oil (SAE 10W/50) (📖 p. 376)

26.4.2 Coolant

Coolant	1.20 l (1.27 qt.)	Coolant (📖 p. 376)

26.4.3 Fuel

Total fuel tank capacity, approx.	13 l (3.4 US gal)	Super unleaded (ROZ 95/RON 95/PON 91) (📖 p. 377)

Fuel reserve, approx.	2.5 l (2.6 qt.)

26.5 Chassis

Frame	Lattice frame made of chrome molybdenum steel tubing, powder-coated
Fork	**WP Suspension** 4860 ROTA SPLIT
Shock absorber	**WP Suspension** 4618 with **Pro-Lever** bell crank
Suspension travel	
front	215 mm (8.46 in)
rear	250 mm (9.84 in)
Brake system	
front	Disc brake with radially mounted four-piston brake caliper, floating brake disc
rear	Disc brake with single-piston brake caliper, floating
Brake discs - diameter	
front	320 mm (12.6 in)
rear	240 mm (9.45 in)
Brake discs - wear limit	
front	4.0 mm (0.157 in)
rear	4.5 mm (0.177 in)
Tire pressure when solo	
front	2.0 bar (29 psi)
rear	2.0 bar (29 psi)
Tire pressure with passenger / full payload	
front	2.0 bar (29 psi)
rear	2.2 bar (32 psi)
Secondary drive ratio	16:42
Chain	5/8 x 1/4” X-ring
Steering head angle	63°
Wheelbase	1,485 ± 15 mm (58.46 ± 0.59 in)