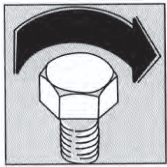


TORQUE WRENCH SETTINGS



Section



Tighten all nuts and bolts with a torque wrench at the correct setting. Insufficient tightening of nuts or bolts can cause them to become damaged or loose leading to vehicle damage or injury to the rider. Overtightening a nut or bolt can strip its thread or cause breakage. The table shows the torque settings for the main nuts and bolts in relation to thread diameter, pitch and use. The above torque settings refer to threads which have been cleaned with solvent.





TORQUE WRENCH SETTINGS

TIGHTENING TORQUES (+/- 5%)

ENGINE

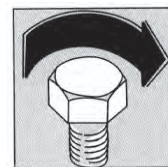
Application

Camshaft cap fastening screw	M6x1	12 Nm	1,2 Kgm	8.7 ft/lb
Rocker arm axle plug.....	M14x1,5 (+LOCTITE 243)	25 Nm	2,55 Kgm	18.4 ft/lb
Cylinder head cover fastening screw.....	M6x1	8Nm	0,8 Kgm	5.8ft/lb
Cylinder head fastening nut.....	M8x1,25	15 Nm	1,5 Kgm	10.8 ft/lb
Cylinder head and cylinder fastening nut	M10x1,5 (+MOLIKOTE HSC)	37 Nm+90°	3.8 Kgm+90°	27.5 ft/lb+90°
Oil hose fastening screw (cylinder head-transmission cover)	M10x1	15 Nm	1,5 Kgm	10.8 ft/lb
Cooling pipe connection on cylinder.....	M14x1,5 (+LOCTITE 542)	25 Nm	2,55 Kgm	18.4 ft/lb
Water temperature sensor (TE-SMR).....	M10x1,25	5 Nm	0,5 Kgm	3.6 ft/lb
Plug for water temperature sensor hole (TC-TXC).....	M8x1,25	8 Nm	0,8 Kgm	5.8 ft/lb
Rear screw, left cylinder side (USA excluded).....	M5x0,8 (+LOCTITE 243)	5 Nm	0,5 Kgm	3.6 ft/lb
Gear selector stopping pin.....	M10x1,25 (+LOCTITE 601)	15 Nm	1,5 Kgm	10.8 ft/lb
Oil hole plug on conrod pin.....	M14x1 (+LOCTITE 243)	20 Nm	2 Kgm	14.5 ft/lb
Primary drive driving gear fastening nut.....	M18x1,25 (+LOCTITE 243)	180 Nm	18 Kgm	130 ft/lb
Centrifugal disc on INTAKE CAMSHAFT fastening screw	M6x1 (+LOCTITE 243)	8 Nm	0,8 Kgm	5.8 ft/lb
Timing chain slider fastening screw.....	M8x1,25	12 Nm	1,23 Kgm	8.9 ft/lb
Crankcase bearings plates fastening screw	M6x1 (+LOCTITE 272)	11 Nm	1,1 Kgm	7.9 ft/lb
Engine oil drain plug.....	M16x1,5	25Nm	2,55 Kgm	18.4 ft/lb
Engine oil filter plug	M14x1,5	25Nm	2,55 Kgm	18.4 ft/lb
Engine oil filter cartridge cover fastening screw	M5x0,8 (+LOCTITE 243)	6 Nm	0,6 Kgm	4.3 ft/lb
Oil filling cap	M18x1,5	3 Nm	0,3 Kgm	2.1 ft/lb
Carburetor union fastening screw (TC-TXC).....	M4x0,7 (+LOCTITE 272)	3 Nm	0,3 Kgm	2.2 ft/lb
Alternator fastening nut	M12x1	75Nm	7,65 Kgm	55.3 ft/lb
Stator plate fastening screw (TC-TXC).....	M6x1 (+LOCTITE 272)	8 Nm	0,8 Kgm	5.8 ft/lb
Stator plate fastening screw (TE-SMR).....	M5x0,8 (+LOCTITE 272)	6 Nm	0,6 Kgm	4.3 ft/lb
Starter lever fastening screw	M6x1 (+LOCTITE 272)	8 Nm	0,8 Kgm	5.8 ft/lb
Spark plug	M10x1	(*)		
Pick-up fastening screw.....	M5x0,8 (+LOCTITE 272)	6 Nm	0,6 Kgm	4.3 ft/lb
Clutch hub and disc housing fastening nut.....	M18x1	75Nm	7,6 Kgm	55 ft/lb
Starting gears stop plate fastening screw.....	M6x1 (+LOCTITE 243)	8 Nm	0,8 Kgm	5.8 ft/lb
Gearbox forks driving shaft fastening screw.....	M8x1,25 (+LOCTITE 243)	20 Nm	2 Kgm	14.5 ft/lb
Gear control click and plate fastening screw	M6x1 (+LOCTITE 243)	8 Nm	0,8 Kgm	5.8 ft/lb
Gear shift position sensor fastening screw.....	M5x0,8 (+LOCTITE 243)	6Nm	0,6 Kgm	4.3 ft/lb
Water pump rotor fastening nut	M5x0,8 (+LOCTITE 243)	3,9 Nm	0,4 Kgm	2.9 ft/lb
Water pump body fastening screw	M6x1(+LOCTITE 542)	8 Nm	0,8 Kgm	5.8 ft/l
Drive sprocket seal ring plate fastening screw	M5x0,8 (+LOCTITE 243)	6Nm	0,6 Kgm	4.3 ft/lb
Timing chain slider pin fastening screw.....	M4x0,7	3 Nm	0,3 Kgm	2.2 ft/lb

(*): Apply a little graphite grease to the spark plug thread; fit and screw the spark plug by hand then tighten to the torque of 10÷12 Nm- 7.4÷8.9 ft/lb. Loosen the spark plug then tighten it again to the torque of 10÷12 Nm- 7.4÷8.9 ft/lb.



TORQUE WRENCH SETTINGS



TIGHTENING TORQUES (+/- 5%)

CHASSIS

Application

Rear frame lower fastening screw	M8x1,25	25,5 Nm	2,6 Kgm	18.8 ft/lb
Engine guard fastening screw	M6x1	14,7 Nm	1,5 Kgm	10.8 ft/lb
Rear chain roller fastening screw	M8x1,25	26,95 Nm	2,75 Kgm	19.9 ft/lb
Side stand fastening screw.....	M8x1,25 (+LOCTITE 243)	11,75 Nm	1,2 Kgm	8.7 ft/lb
Rear frame upper fastening screw	M8x1,25	25,5 Nm	2,6 Kgm	18.8 ft/lb
Frame to engine plate fastening screw.....	M8x1,25 (+LOCTITE 270)	35,3 Nm	3,6 Kgm	26 ft/lb
Engine lower fastening screw	M8x1,25	35,3 Nm	3,6 Kgm	26 ft/lb
Clutch and front brake controls clamp fastening screw	M6x1	4,9 Nm	0,5 Kgm	3.6 ft/lb
Throttle control holders fastening screw.....	M6x1	4,9 Nm	0,5 Kgm	3.6 ft/lb
Front brake hose upper fastening screw (TE, SMR).....	M10x1	19 Nm	1,95 Kgm	14 ft/lb
Front brake hose upper fastening screw (TC, TXC).....	M10x1	24,7 Nm	2,5 Kgm	18.2 ft/lb
Rear brake control pedal fastening screw	M10x1,25 (+LOCTITE 243)	41,65 Nm	4,25 Kgm	30.7 ft/lb
Rear brake pump fastening screw.....	M6x1	10,4 Nm	1,05 Kgm	7.7 ft/lb
Front brake pump plate fastening screw (SMR).....	M6x1	10,4 Nm	1,05 Kgm	7.7 ft/lb
Rear brake fluid tank fastening screw	M6x1	2,45 Nm	0,25 Kgm	1.8 ft/lb
Rear stop control switch (TE, SMR).....	M10x1	19 Nm	1,95 Kgm	14 ft/lb
Front control switch connector fastening screw (SMR).....	M2x0,4	0,8 Nm	0,1 Kgm	0,6 ft/lb
Rear brake pedal adjusting cam fastening screw.....	M6x1	14,7 Nm	1,4 Kgm	10.8 ft/lb
Front brake hose guide plate fastening screw.....	M6x1	6 Nm	0,6 Kgm	4.4 ft/lb
Front brake tank cap fastening screw (SMR).....	M6x1	4,9 Nm	0,5 Kgm	3.6 ft/lb
Front fork legs fastening screw	M8x1,25	25 Nm	2,5 Kgm	18.4 ft/lb
Front wheel axle fastening screw	M6x1	10,4 Nm	1,05 Kgm	7.7 ft/lb
Steering bearings adjusting ring nut.....	M25x1	3,45 Nm	0,35 Kgm	2.5 ft/lb
Steering pivot fastening nut.....	M24x1	83,3 Nm	8,5 Kgm	61.4 ft/lb
Handlebar upper clamp	M8x1,25	28,4 Nm	2,9 Kgm	20.9 ft/lb
Handlebar holder fastening screw.....	M10x1,5	21,1 Nm	2,15 Kgm	15.6 ft/lb
Front fork legs guard fastening screw	M5x0,8	7,85 Nm	0,8 Kgm	5.8 ft/lb
Front fork legs ring guard fastening screw	M5x0,8	2,45 Nm	0,25 Kgm	1.8 ft/lb
Rear swing arm axle fastening nut.....	M16x1,5 (+LOCTITE 243)	122,5 Nm	12,5 Kgm	90.3 ft/lb
Rear swing arm to rocker arm fastening nut.....	M12x1,25	80 Nm	8,2 Kgm	59 ft/lb
Tie rod to rocker arm fastening nut.....	M12x1,25	80 Nm	8,2 Kgm	59 ft/lb

NOTE: If not otherwise specified, standard tightening torques for the following thread

M5x0,8
M6x1
M8x1,25

5,6÷6,2 Nm
7,6÷8,4 Nm
24÷26 Nm

0,57÷0,63 Kgm
0,80÷0,85 Kgm
2,4÷2,6 Kgm

4.1÷4.5 ft/lb
5.8÷6.1 ft/lb
17.3÷18.8 ft/lb





TORQUE WRENCH SETTINGS

TIGHTENING TORQUES (+/- 5%)

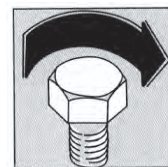
CHASSIS

Application

Frame to tie rod fastening nut.....	M12x1,25	80 Nm	8,2 Kgm	59 ft/lb
Rocker arm to tie rod lubricator	M6x1	2,95 Nm	0,3 Kgm	2,2 ft/lb
Rear shock absorber to frame fastening pivot.....	M10x1,25	52,4 Nm	5,35 Kgm	38,6 ft/lb
Rocker arm to frame fastening pivot.....	M10x1,25	52,4 Nm	5,35 Kgm	38,6 ft/lb
Chain guide to rear swing arm fastening screw (TE-SMR)	M8x1,25	25 Nm	2,5 Kgm	18.4 ft/lb
Chain guide to rear swing arm front fastening screw (TC).....	M8x1,25 (+LOCTITE 243)	10,4 Nm	1,05 Kgm	7.7 ft/lb
Chain guide to rear swing arm rear fastening screw (TC).....	M6x1 (+LOCTITE 243)	10,4 Nm	1,05 Kgm	7.7 ft/lb
Bracket to chain guide fastening screw (TE-SMR).....	M6x1 (+LOCTITE 243)	2 Nm	0,2 Kgm	1.5 ft/lb
Chain slider and rear brake hose clamp lower fastening screw	M5x0,8	4,4 Nm	0,45 Kgm	3.2 ft/lb
Chain slider and rear brake hose clamp rear fastening screw (TC-TXC)	M5x0,8	4,4 Nm	0,45 Kgm	3.2 ft/lb
Chain guard fastening screw (TE-SMR).....	M5x0,8	4,4 Nm	0,45 Kgm	3.2 ft/lb
Chain adjuster fastening nut.....	M8x1,25	4,4 Nm	0,45 Kgm	3.2 ft/lb
Spoiler to fuel tank fastening screw.....	M6x1	6 Nm	0,6 Kgm	4.4 ft/lb
Front number holder upper fastening screw (TC-TXC)	M6x1	6 Nm	0,6 Kgm	4.4 ft/lb
Front number holder lower fastening screw (TC-TXC).....	M6x1	10,4 Nm	1,05 Kgm	7.7 ft/lb
Rear shock absorber guard fastening screw	M6x1	6 Nm	0,6 Kgm	4.4 ft/lb
Rear fender front fastening screw	M6x1	10,4 Nm	1,05 Kgm	7.7 ft/lb
Rear fender rear fastening screw	M6x1	6 Nm	0,6 Kgm	4.4 ft/lb
Front fender fastening screw	M6x1	10,4 Nm	1,05 Kgm	7.7 ft/lb
Radiator guard fastening screw.....	M6x1	6 Nm	0,6 Kgm	4.4 ft/lb
Side panel fastening screw	M6x1	6 Nm	0,6 Kgm	4.4 ft/lb
License plate fastening screw	M6x1	6 Nm	0,6 Kgm	4.4 ft/lb
Rear reflector fastening nut	M4x0,7	1,9 Nm	0,2 Kgm	1.4 ft/lb
Brake hose ring to front fairing fastening screw	ø 3,5	1,9 Nm	0,2 Kgm	1.4 ft/lb
Turn signals fastening screw	M6x1	6 Nm	0,6 Kgm	4.4 ft/lb
Front headlamp fastening screw	ø 3,9	1,45 Nm	0,15 Kgm	1 ft/lb
Electric start remote control switch cables fastening screw	M6x1	10,4 Nm	1,05 Kgm	7.7 ft/lb
Fuel tank front rubber pad fastening screw	M6x1	10,4 Nm	1,05 Kgm	7.7 ft/lb
Fuel cock fastening screw	ø5,5	2,45 Nm	0,25 Kgm	1.8 ft/lb
Fuel tank rear fastening screw	M6x1	10,4 Nm	1,05 Kgm	7.7 ft/lb
Air filter box front fastening screw	M6x1	10,4 Nm	1,05 Kgm	7.7 ft/lb



TORQUE WRENCH SETTINGS



TIGHTENING TORQUES (+/- 5%)

CHASSIS

Application

Air filter box flange fastening nut	M5x0,8	3,45 Nm	0,35 Kgm	2.5 ft/lb
Front brake caliper fastening screw (TE- TC).....	M8x1,25	25,5 Nm	2,6 Kgm	18.8 ft/lb
Brake hoses lower fastening screw	M10x1	19 Nm	1,95 Kgm	14 ft/lb
Front wheel axle fastening screw (SMR)	M10x1,5	51,45 Nm	5,25 Kgm	38 ft/lb
Front brake caliper fastening screw (SMR)	M10x1,5	25,5 Nm	2,6 Kgm	18.8 ft/lb
Brake caliper holding plate to front fork (SMR)	M10x1,5	25,5 Nm	2,6 Kgm	18.8 ft/lb
Front wheel axle fastening screw (TE-TC-TXC)	M20x1,5	51,45 Nm	5,25 Kgm	38 ft/lb
Front brake disc fastening screw (TE-TC-TXC)	M6x1 (LOCTITE 243)	14,7 Nm	1,5 Kgm 1	0.8 ft/lb
Front brake disc fastening screw (SMR)	M8x1,25	34,7 Nm	3,54 Kgm	25.6 ft/lb
Rear brake disc fastening screw	M6x1 (LOCTITE 243)	14,7 Nm	1,5 Kgm	10.8 ft/lb
Front wheel nipple	M4,07x0,75	4,4 Nm	0,45 Kgm	3.2 ft/lb
Rear wheel nipple.....	M4,5x0,75	4,4 Nm	0,45 Kgm	3.2 ft/lb
Rear wheel sprocket fastening nut	M8x1,25 (+LOCTITE 243)	34,3 Nm	3,5 Kgm	25.3 ft/lb
Rear wheel axle fastening nut	M20x1,5	142,1 Nm	14,5 Kgm	104.8 ft/lb
Drive sprocket cover fastening screw	M6x1	10,4 Nm	1 Kgm	7.7 ft/lb
Exhaust silencer fastening screw	M6x1	10,4 Nm	1 Kgm	7.7 ft/lb
Exhaust pipes to cylinder head fastening screw	M6x1	10,4 Nm	1 Kgm	7.7 ft/lb
Instrument fastening screw	ø4,8	3,45 Nm	0,35 Kgm	2.5 ft/lb
Radiator fastening screw	M6x1	7 Nm	0,72 Kgm	5.2 ft/lb





TORQUE WRENCH SETTINGS

NOTE: If not otherwise specified, standard tightening torques for the following thread (+/- 5%)

steel screws on plastic with metal spacer	M4	2 Nm	0,2 Kgm	1.45 ft/lb
steel screws on brass, copper, aluminium	M4	2 Nm	0,2 Kgm	1.45 ft/lb
steel screws on iron, steel	M4	3 Nm	0,3 Kgm	2.2 ft/lb
steel screws on plastic with metal spacer	M5	4 Nm	0,4 Kgm	3 ft/lb
steel screws on brass, copper, aluminium	M5	4 Nm	0,4 Kgm	3 ft/lb
steel screws on iron, steel	M5	6 Nm	0,6 Kgm	4.4 ft/lb
steel screws on plastic with metal spacer	M6	6,5 Nm	0,65 Kgm	4.8 ft/lb
steel screws on brass, copper, aluminium	M6	6,5 Nm	0,65 Kgm	4.8 ft/lb
steel screws on iron, steel	M6	10,5 Nm	1 Kgm	7.7 ft/lb
steel screws on brass, copper, aluminium	M8	16 Nm	1,6 Kgm	11.8 ft/lb
steel screws on iron, steel	M8	26 Nm	2,6 Kgm	19.1 ft/lb
steel screws on iron, steel	M10	52 Nm	5,2 Kgm	38.3 ft/lb
steel screws on iron, steel	M12	100 Nm	10 Kgm	73.8 ft/lb
steel screws on iron, steel	M14	145 Nm	14,5 Kgm	107 ft/lb

