

STANDARD TORQUE VALUES

FASTENER TYPE	TORQUE N-m (kgf-m, lbf-ft)	FASTENER TYPE	TORQUE N-m (kgf-m, lbf-ft)
5 mm bolt and nut	5.2 (0.5, 3.8)	5 mm screw	4.2 (0.4, 3.1)
6 mm bolt and nut	10 (1.0, 7)	6 mm screw	9 (0.9, 6.6)
8 mm bolt and nut	22 (2.2, 16)	6 mm flange bolt (8 mm head, small flange)	9 (0.9, 6.6)
10 mm bolt and nut	34 (3.5, 25)	6 mm flange bolt (8 mm head, large flange)	12 (1.2, 9)
12 mm bolt and nut	55 (5.6, 41)	6 mm flange bolt (10 mm head) and nut	12 (1.2, 9)
		8 mm flange bolt and nut	27 (2.8, 20)
		10 mm flange bolt and nut	39 (4.0, 29)

ENGINE & FRAME TORQUE VALUES

- Torque specifications listed below are for important fasteners.
- Others should be tightened to standard torque values listed above.

ENGINE**FRAME/BODY PANELS/EXHAUST SYSTEM**

ITEM	Q'TY	THREAD DIA. (mm)	TORQUE N-m (kgf-m, lbf-ft)	REMARKS
Left crankcase rear cover socket bolt	1	6	10 (1.0, 7)	See page 3-11
Exhaust pipe joint stud bolt	4	8	-	

MAINTENANCE

ITEM	Q'TY	THREAD DIA. (mm)	TORQUE N-m (kgf-m, lbf-ft)	REMARKS
Spark plug	4	12	18 (1.8, 13)	Apply grease to the threads
Timing hole cap	1	14	10 (1.0, 7)	
Crankshaft hole cap	1	30	15 (1.5, 11)	
Valve adjusting screw lock nut	6	7	23 (2.3, 17)	Apply engine oil to the threads and seating surface
Engine oil filter cartridge	1	20	26 (2.7, 19)	Apply engine oil to the threads
Oil filter boss (crankcase side)	1	20	18 (1.8, 13)	Apply locking agent to the threads
Engine oil drain bolt	1	14	29 (3.0, 21)	
Alternator cover socket bolt	3	6	10 (1.0, 7)	

LUBRICATION SYSTEM

ITEM	Q'TY	THREAD DIA. (mm)	TORQUE N-m (kgf-m, lbf-ft)	REMARKS
EOP switch	1	PT 1/8	12 (1.2, 9)	Apply sealant to the threads
EOP switch terminal screw	1	4	1.9 (0.2, 1.4)	
Oil pump assembly bolt	3	6	13 (1.3, 10)	

GENERAL INFORMATION

FUEL SYSTEM

ITEM	Q'TY	THREAD DIA. (mm)	TORQUE N·m (kgf·m, lbf·ft)	REMARKS
PAIR check valve cover bolt	4	5	7 (0.7, 5.2)	
Vacuum chamber cover screw	4	4	2.1 (0.2, 1.5)	
TP sensor torx screw	1	5	3.4 (0.3, 2.5)	
Carburetor heater set plate screw	2	5	3.4 (0.3, 2.5)	
Float chamber screw	4	4	2.1 (0.2, 1.5)	
Accelerator pump cover screw	3	4	2.1 (0.2, 1.5)	
Air cut-off valve cover screw	2	4	2.1 (0.2, 1.5)	
Accelerator pump link mounting bolt	1	5	3.4 (0.3, 2.5)	
Throttle cable stay mounting screw	2	5	3.4 (0.3, 2.5)	
SE valve nut	1	12	2.3 (0.2, 1.7)	
Carburetor drain screw	1	6	1.5 (0.2, 1.1)	
Slow jet	1	6	1.8 (0.2, 1.3)	
Needle jet holder	1	7	2.3 (0.2, 1.7)	
Main jet	1	5	2.1 (0.2, 1.5)	

COOLING SYSTEM

ITEM	Q'TY	THREAD DIA. (mm)	TORQUE N·m (kgf·m, lbf·ft)	REMARKS
Water pump cover bolt	5	6	13 (1.3, 10)	

CYLINDER HEAD/VALVE

ITEM	Q'TY	THREAD DIA. (mm)	TORQUE N·m (kgf·m, lbf·ft)	REMARKS
Cylinder head cover bolt	4	6	10 (1.0, 7)	
Cylinder head bolt	4	8	23 (2.3, 17)	Apply engine oil to the threads and seating surface
Cylinder head nut	8	10	47 (4.8, 35)	Apply engine oil to the threads and seating surface
Cam sprocket bolt	4	7	23 (2.3, 17)	Apply locking agent to the threads
Cam chain tensioner bolt	4	6	10 (1.0, 7)	See page 9-25
Camshaft holder bolt	6	8	23 (2.3, 17)	
Camshaft holder nut	4	8	23 (2.3, 17)	
Over head cover socket bolt	8	6	10 (1.0, 7)	

CYLINDER/PISTON

ITEM	Q'TY	THREAD DIA. (mm)	TORQUE N·m (kgf·m, lbf·ft)	REMARKS
Cylinder stud bolt	2	8	-	See page 10-8
Cylinder stud bolt	6	10	-	See page 10-8
Cylinder stud bolt	2	12	-	See page 10-8

CLUTCH/GEARSHIFT LINKAGE

ITEM	Q'TY	THREAD DIA. (mm)	TORQUE N·m (kgf·m, lbf·ft)	REMARKS
Clutch lifter plate bolt	4	6	12 (1.2, 9)	
Clutch center lock nut	1	18	128 (13.1, 94)	Lock nut; replace with a new one and stake
Oil pump driven sprocket bolt	1	6	15 (1.5, 11)	Apply engine oil to the threads and seating surface
Clutch cover socket bolt	5	6	10 (1.0, 7)	Apply locking agent to the threads
Primary drive gear bolt	1	12	88 (9.0, 65)	Apply engine oil to the threads and seating surface
Gearshift spindle return spring pin	1	8	23 (2.3, 17)	
Gearshift spindle oil seal stopper plate bolt	1	6	13 (1.3, 10)	

ALTERNATOR/STARTER CLUTCH

ITEM	Q'TY	THREAD DIA. (mm)	TORQUE N-m (kgf-m, lbf-ft)	REMARKS
Flywheel bolt	1	12	128 (13.1, 94)	Left hand threads Apply engine oil to the threads and seating surface
Stator socket bolt	3	6	12 (1.2, 9)	Apply locking agent to the threads
Starter one-way clutch outer socket bolt	6	8	30 (3.1, 22)	Apply locking agent to the threads
Stator wire holder socket bolt	1	6	12 (1.2, 9)	Apply locking agent to the threads

CRANKSHAFT/TRANSMISSION

ITEM	Q'TY	THREAD DIA. (mm)	TORQUE N-m (kgf-m, lbf-ft)	REMARKS
Crankcase bolt	15	8	23 (2.3, 17)	
Gearshift cam plate bolt	1	6	12 (1.2, 9)	Apply locking agent to the threads
Crankpin bearing cap nut	4	8	33 (3.4, 24)	Apply engine oil to the threads and seating surface
Output gear case mounting bolt	3	8	31 (3.2, 23)	Apply sealant to the threads
Output drive gear assembly mounting bolt	2	8	31 (3.2, 23)	Apply engine oil to the threads and seating surface
Output driven gear assembly mounting socket bolt	4	8	31 (3.2, 23)	Apply engine oil to the threads and seating surface
Output drive gear bearing lock nut (inner)	1	30	73 (7.4, 54)	Lock nut; replace with a new one and stake Apply engine oil to the threads and seating surface
Output drive gear bearing lock nut (outer)	1	64	98 (10.0, 72)	Lock nut; replace with a new one and stake Apply engine oil to the threads and seating surface
Output driven gear bearing lock nut (inner)	1	30	73 (7.4, 54)	Lock nut; replace with a new one and stake Apply engine oil to the threads and seating surface
Output driven gear bearing lock nut (outer)	1	64	98 (10.0, 72)	Lock nut; replace with a new one and stake Apply engine oil to the threads and seating surface
Output drive gear shaft bolt	1	10	49 (5.0, 36)	

ELECTRIC STARTER

ITEM	Q'TY	THREAD DIA. (mm)	TORQUE N-m (kgf-m, lbf-ft)	REMARKS
Starter motor cable terminal nut	1	6	10 (1.0, 7)	
Starter motor assembly bolt	2	5	4.9 (0.5, 3.6)	
Negative brush screw	1	5	3.7 (0.4, 2.7)	

LIGHTS/METERS/SWITCHES

ITEM	Q'TY	THREAD DIA. (mm)	TORQUE N-m (kgf-m, lbf-ft)	REMARKS
Neutral switch	1	10	12 (1.2, 9)	
VS sensor mounting bolt	1	6	9.8 (1.0, 7.2)	

GENERAL INFORMATION

FRAME

FRAME/BODY PANELS/EXHAUST SYSTEM

ITEM	Q'TY	THREAD DIA. (mm)	TORQUE N·m (kgf·m, lbf·ft)	REMARKS
Seat mounting socket bolt	2	8	26 (2.7, 19)	ALOC screw; replace with a new one
Grab rail mounting bolt	6	10	64 (6.5, 47)	
Fuel tank mounting bolt	1	8	27 (2.8, 20)	
Fuel valve nut	1	22	34 (3.5, 25)	
Fuel valve lever screw	1	5	0.6 (0.1, 0.4)	
Exhaust pipe joint nut	4	8	25 (2.5, 18)	
Muffler stay mounting bolt	4	8	27 (2.8, 20)	
Muffler mounting nut	2	10	44 (4.5, 32)	
Muffler bracket bolt	2	8	34 (3.5, 25)	

MAINTENANCE

ITEM	Q'TY	THREAD DIA. (mm)	TORQUE N·m (kgf·m, lbf·ft)	REMARKS
Air cleaner cover socket bolt	5	5	1.5 (0.2, 1.1)	
Final drive oil filler cap	1	30	12 (1.2, 9)	
Final drive oil drain bolt	1	8	12 (1.2, 9)	

FUEL SYSTEM

ITEM	Q'TY	THREAD DIA. (mm)	TORQUE N·m (kgf·m, lbf·ft)	REMARKS
Air cleaner chamber stay mounting screw	1	5	1.1 (0.1, 0.8)	
Air cleaner chamber connecting tube band screw	1	4	0.7 (0.1, 0.5)	

COOLING SYSTEM

ITEM	Q'TY	THREAD DIA. (mm)	TORQUE N·m (kgf·m, lbf·ft)	REMARKS
Fan motor mounting bolt	3	5	5.1 (0.5, 3.8)	Apply locking agent to the threads
Cooling fan mounting nut	1	5	2.7 (0.3, 2.0)	
Radiator filler mounting bolt	2	6	10 (1.0, 7)	See page 7-10
Thermostat housing cover bolt	2	6	10 (1.0, 7)	
Water hose band screw	6	-	-	
Fan motor assembly mounting bolt	3	6	8.4 (0.9, 6.2)	

ENGINE REMOVAL/INSTALLATION

ITEM	Q'TY	THREAD DIA. (mm)	TORQUE N·m (kgf·m, lbf·ft)	REMARKS
Engine mounting nut	4	10	54 (5.5, 40)	
Engine hanger plate bolt	8	8	26 (2.7, 19)	
Main footpeg bracket mounting bolt	3	10	39 (4.0, 29)	
Main footpeg bracket mounting nut	1	10	39 (4.0, 29)	
Gearshift arm pinch bolt	1	6	12 (1.2, 9)	

CLUTCH/GEARSHIFT LINKAGE

ITEM	Q'TY	THREAD DIA. (mm)	TORQUE N·m (kgf·m, lbf·ft)	REMARKS
Gearshift pedal pivot bolt	1	10	39 (4.0, 29)	

FINAL DRIVE

ITEM	Q'TY	THREAD DIA. (mm)	TORQUE N-m (kgf-m, lbf-ft)	REMARKS
Pinion retainer	1	64	108 (11.0, 80)	
Pinion retainer lock tab bolt	1	6	10 (1.0, 7)	
Pinion joint nut	1	16	108 (11.0, 80)	Apply locking agent to the threads
Dust guard plate bolt	1	6	10 (1.0, 7)	
Final gear case cover bolt	2	10	47 (4.8, 35)	Apply locking agent to the threads
Final gear case cover bolt	6	8	25 (2.5, 18)	
Final gear case assembly mounting nut	4	10	64 (6.5, 47)	
Final gear case stud bolt	4	10	-	See page 14-22
Rear shock absorber lower mounting bolt (left side)	1	8	22 (2.2, 16)	

FRONT WHEEL/SUSPENSION/STEERING

ITEM	Q'TY	THREAD DIA. (mm)	TORQUE N-m (kgf-m, lbf-ft)	REMARKS
Clutch lever pivot bolt	1	6	1 (0.1, 0.7)	
Clutch lever pivot nut	1	6	6 (0.6, 4.4)	
Handlebar upper holder bolt	4	8	23 (2.3, 17)	
Handlebar lower holder nut	2	8	23 (2.3, 17)	
Front brake disc bolt	6	8	42 (4.3, 31)	ALOC bolt; replace with a new one
Spoke	52	BC4	4.2 (0.4, 3.1)	
Front axle bolt	1	14	59 (6.0, 44)	
Front axle pinch bolt	2	8	22 (2.2, 16)	
Fork center socket bolt	2	10	29.5 (3.0, 22)	Apply locking agent to the threads
Fork cap	2	38	22.1 (2.3, 16)	
Tire valve nut	1	8V1	4 (0.4, 3.0)	
Fork top bridge pinch bolt	2	8	22 (2.2, 16)	
Fork bottom bridge pinch bolt	2	10	49 (5.0, 36)	
Steering top thread	1	26	-	See page 15-32
Steering top thread lock nut	1	26	-	See page 15-32
Steering stem nut	1	24	103 (10.5, 76)	

REAR WHEEL/BRAKE/SUSPENSION

ITEM	Q'TY	THREAD DIA. (mm)	TORQUE N-m (kgf-m, lbf-ft)	REMARKS
Spoke	52	BC4	4.2 (0.4, 3.1)	
Tire valve nut	1	8V1	4 (0.4, 3.0)	
Rear axle nut	1	18	88 (9.0, 65)	U-nut
Rear axle pinch bolt	1	8	27 (2.8, 20)	
Rear brake stopper arm nut	1	8	22 (2.2, 16)	
Rear brake arm pinch bolt	1	8	26 (2.7, 19)	
Rear shock absorber upper mounting bolt	2	8	26 (2.7, 19)	
Rear shock absorber lower mounting bolt (right side)	1	10	34 (3.5, 25)	
Stopper plate bolt	5	6	20 (2.0, 15)	ALOC bolt; replace with a new one
Swingarm left pivot bolt	1	30	103 (10.5, 76)	
Swingarm right pivot bolt	1	30	-	See page 16-26
Swingarm right pivot bolt lock nut	1	30	103 (10.5, 76)	

GENERAL INFORMATION

HYDRAULIC BRAKE

ITEM	Q'TY	THREAD DIA. (mm)	TORQUE N-m (kgf-m, lbf-ft)	REMARKS
Brake caliper bleed valve	1	8	5.5 (0.6, 4.1)	
Front master cylinder reservoir cap screw	2	4	1.5 (0.2, 1.1)	
Brake pad pin	1	10	18 (1.8, 13)	
Brake pad pin plug	1	10	2.5 (0.3, 1.8)	
Brake hose oil bolt	2	10	34 (3.5, 25)	
Brake lever pivot bolt	1	6	1 (0.1, 0.7)	
Brake lever pivot nut	1	6	6 (0.6, 4.4)	
Front brake light switch screw	1	4	1.2 (0.1, 0.9)	
Front master cylinder holder bolt	2	6	12 (1.2, 9)	
Front brake caliper bracket pin	1	8	12 (1.2, 9)	Apply locking agent to the threads
Front brake caliper pin	1	8	27 (2.8, 20)	Apply locking agent to the threads
Front brake caliper mounting bolt	2	8	30 (3.1, 22)	ALOC bolt; replace with a new one

BATTERY/CHARGING SYSTEM

ITEM	Q'TY	THREAD DIA. (mm)	TORQUE N-m (kgf-m, lbf-ft)	REMARKS
Battery case cover screw	1	6	1 (0.1, 0.7)	

LIGHTS/METERS/SWITCHES

ITEM	Q'TY	THREAD DIA. (mm)	TORQUE N-m (kgf-m, lbf-ft)	REMARKS
Headlight unit mounting bolt	2	5	4.1 (0.4, 3.0)	
Brake/tail light mounting nut	3	6	6.3 (0.6, 4.6)	
Speedometer mounting socket bolt	2	6	10 (1.0, 7)	
Ignition switch mounting bolt	2	6	12 (1.2, 9)	
Ignition switch cover screw	1	4	1 (0.1, 0.7)	
Fan motor switch	1	16	18 (1.8, 13)	
Sidestand switch bolt	1	6	10 (1.0, 7)	ALOC bolt; replace with a new one
ECT sensor switch	1	PT 1/8	7 (0.7, 5.2)	Apply sealant to the threads
Horn mounting bolt	1	8	21 (2.1, 15)	

OTHERS

ITEM	Q'TY	THREAD DIA. (mm)	TORQUE N-m (kgf-m, lbf-ft)	REMARKS
Sidestand pivot bolt	1	10	9 (0.9, 6.6)	Apply grease to the sliding surface
Sidestand pivot lock nut	1	10	30 (3.1, 22)	
Sidestand bracket bolt	2	10	49 (5.0, 36)	
Tool box screw	2	4	2 (0.2, 1.5)	