

## GENERAL INFORMATION

## 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	4.9 (0.5, 3.6)	5 mm screw	3.9 (0.4, 2.9)
6 mm bolt and nut	9.8 (1.0, 7)	6 mm screw	8.8 (0.9, 6.5)
8 mm bolt and nut	22 (2.2, 16)	6 mm flange bolt (8 mm head, small flange)	9.8 (1.0, 7)
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	54 (5.5, 40)	6 mm flange bolt (10 mm head) and nut	12 (1.2, 9)
		8 mm flange bolt and nut	26 (2.7, 20)
		10 mm flange bolt and nut	39 (4.0, 29)

## ENGINE &amp; FRAME TORQUE VALUES

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

## NOTE:

1. Apply oil to the threads and seating surface.
2. Apply grease to the threads.
3. Apply locking agent to the threads.
4. Apply sealant to the threads.
5. Lock nut: replace with a new one and stake it.
6. ALOC bolt or screw: replace with a new one.
7. U-nut.
8. Left hand threads

## 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	9.8 (1.0, 7)	
Exhaust pipe joint stud bolt	4	8	-	page 1-16

## MAINTENANCE

ITEM	Q'TY	THREAD DIA. (mm)	TORQUE N-m (kgf-m, lbf-ft)	REMARKS
Spark plug	4	12	16 (1.6, 12)	
Timing hole cap	1	14	9.8 (1.0, 7)	NOTE 2
Crankshaft hole cap	1	30	15 (1.5, 11)	NOTE 2
Valve adjusting screw lock nut	6	7	23 (2.3, 17)	NOTE 1
Engine oil filter cartridge	1	20	26 (2.7, 20)	
Oil filter boss (stud side)	1	20	18 (1.8, 13)	NOTE 3
Engine oil drain bolt	1	14	29 (3.0, 22)	

## LUBRICATION SYSTEM

ITEM	Q'TY	THREAD DIA. (mm)	TORQUE N-m (kgf-m, lbf-ft)	REMARKS
Oil pressure switch	1	PT 1/8	12 (1.2, 9)	NOTE 4
Oil pressure switch terminal screw	1	4	2.0 (0.2, 1.4)	
Oil pump assembly bolt	3	6	13 (1.3, 9)	

**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	6.9 (0.7, 5.1)	
Carburetor insulator band screw	2	5	-	page 1-16

**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, 9)	

**CYLINDER HEAD/VALVE**

ITEM	Q'TY	THREAD DIA. (mm)	TORQUE N-m (kgf-m, lbf-ft)	REMARKS
Cylinder head cover bolt	4	6	9.8 (1.0, 7)	
Cylinder head bolt	2	6	12 (1.2, 9)	NOTE 1
Cylinder head bolt	4	8	23 (2.3, 17)	NOTE 1
Cylinder head nut	8	10	47 (4.8, 35)	NOTE 1
Cam sprocket bolt	4	7	23 (2.3, 17)	NOTE 3
Cam chain tensioner bolt	4	6	9.8 (1.0, 7)	
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	9.8 (1.0, 7)	
Alternator cover socket bolt	3	6	9.8 (1.0, 7)	

**CYLINDER/PISTON**

ITEM	Q'TY	THREAD DIA. (mm)	TORQUE N-m (kgf-m, lbf-ft)	REMARKS
Cylinder stud bolt	2	8	-	page 1-16
Cylinder stud bolt	8	10	-	page 1-16

**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	127 (13.0, 94)	NOTE 1, 5
Oil pump driven sprocket bolt	1	6	15 (1.5, 11)	NOTE 3
Clutch cover socket bolt	5	6	9.8 (1.0, 7)	
Primary drive gear bolt	1	12	88 (9.0, 65)	NOTE 1
Gearshift spindle return spring pin	1	8	23 (2.3, 17)	

**ALTERNATOR/STARTER CLUTCH**

ITEM	Q'TY	THREAD DIA. (mm)	TORQUE N-m (kgf-m, lbf-ft)	REMARKS
Flywheel bolt	1	12	127 (13.0, 94)	NOTE 8
Stator socket bolt	3	6	12 (1.2, 9)	NOTE 3
Starter one-way clutch outer socket bolt	6	8	29 (3.0, 22)	NOTE 3
Stator wire holder socket bolt	1	6	12 (1.2, 9)	NOTE 3

**GENERAL INFORMATION****CRANKSHAFT/TRANSMISSION**

ITEM	Q'TY	THREAD DIA. (mm)	TORQUE N-m (kgf-m, lbf-ft)	REMARKS
Crankcase bolt	15	8	23 (2.3, 17)	
Shift drum cam plate bolt	1	6	12 (1.2, 9)	NOTE 3
Crank pin bearing cap nut	4	4	33 (3.4, 25)	NOTE 1
Output gear case mounting bolt	3	8	31 (3.2, 23)	NOTE 4
Output drive gear bearing holder bolt	2	8	31 (3.2, 23)	NOTE 1
Output driven gear bearing holder socket bolt	4	8	31 (3.2, 23)	NOTE 1
Output drive gear bearing lock nut (inner)	1	30	74 (7.5, 54)	NOTE 1, 5
(outer)	1	64	98 (10.0, 72)	NOTE 1, 5
Output driven gear bearing lock nut (inner)	1	30	74 (7.5, 54)	NOTE 1, 5
(outer)	1	64	98 (10.0, 72)	NOTE 1, 5
Output drive gear shaft bolt	1	10	49 (5.0, 36)	NOTE 1

**ELECTRIC STARTER/STARTER CLUTCH**

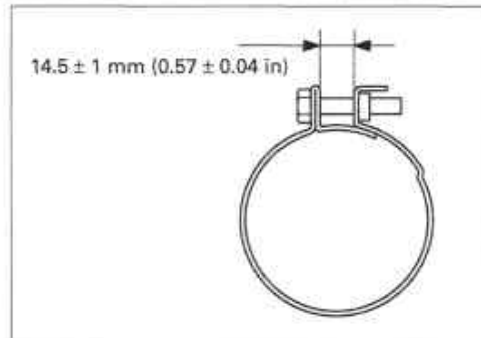
ITEM	Q'TY	THREAD DIA. (mm)	TORQUE N-m (kgf-m, lbf-ft)	REMARKS
Starter motor cable terminal nut	1	6	9.8 (1.0, 7)	

**LIGHTS/METERS/SWITCHES**

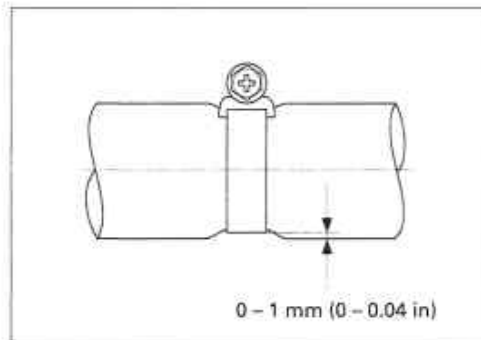
ITEM	Q'TY	THREAD DIA. (mm)	TORQUE N-m (kgf-m, lbf-ft)	REMARKS
Neutral switch	1	10	12 (1.2, 9)	

**GENERAL INFORMATION**

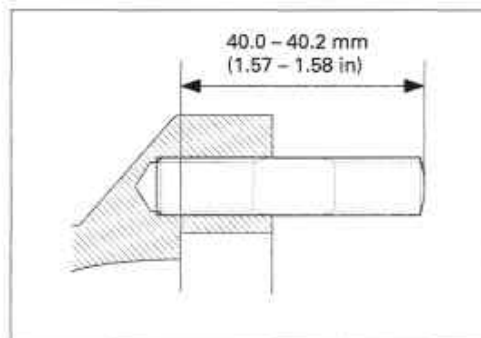
**Insulator clamp:**



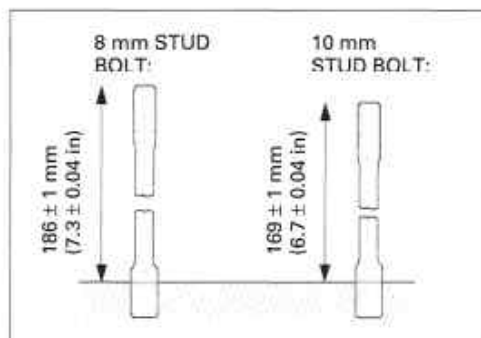
**Water hose clamp:**

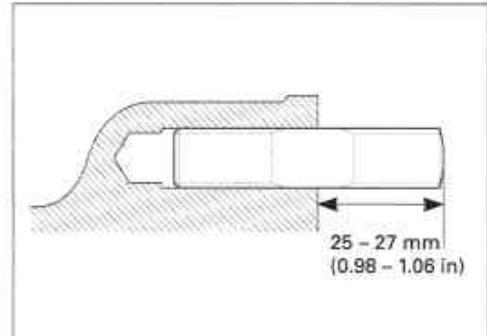


**Exhaust pipe joint stud bolt:**



**Cylinder stud bolt:**



**GENERAL INFORMATION****Final gear case stud bolt:**

**GENERAL INFORMATION****FRAME****FRAME/BODY PANELS/EXHAUST SYSTEM**

ITEM	Q'TY	THREAD DIA. (mm)	TORQUE N·m (kgf·m, lbf·ft)	REMARKS
Main seat mounting socket bolt	2	8	26 (2.7, 20)	NOTE 6
Rear seat mounting socket bolt	1	6	12 (1.2, 9)	
Grab rail mounting bolt	6	10	64 (6.5, 47)	NOTE 6
Fuel tank mounting bolt	1	8	26 (2.7, 20)	
Fuel valve nut	1	22	34 (3.5, 25)	
Fuel valve lever screw	1	5	0.6 (0.06, 0.4)	
Exhaust pipe joint nut	4	8	25 (2.5, 18)	
Muffler mounting bolt	2	8	26 (2.7, 20)	
Muffler bracket bolt	2	10	44 (4.5, 33)	

**MAINTENANCE**

ITEM	Q'TY	THREAD DIA. (mm)	TORQUE N·m (kgf·m, lbf·ft)	REMARKS
Air cleaner cover socket bolt	5	5	2.0 (0.2, 1.4)	
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	1.0 (0.1, 0.7)	
Air cleaner housing connecting tube band screw	1	4	1.0 (0.1, 0.7)	
Air cleaner chamber connecting tube band screw	1	4	1.0 (0.1, 0.7)	

**COOLING SYSTEM**

ITEM	Q'TY	THREAD DIA. (mm)	TORQUE N·m (kgf·m, lbf·ft)	REMARKS
Fan motor mounting bolt	1	5	4.9 (0.5, 3.6)	NOTE 3
Cooling fan mounting nut	1	5	2.9 (0.3, 2.2)	
Radiator filler mounting bolt	2	6	9.8 (1.0, 7)	page 1-16
Thermostat housing cover bolt	2	6	9.8 (1.0, 7)	
Water hose band screw	6	-	-	
Fan motor shroud mounting bolt	3	6	8.8 (0.9, 6.5)	

**ENGINE MOUNTING**

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, 20)	
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)	

**GENERAL INFORMATION****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	9.8 (1.0, 7)	
Pinion joint nut	1	16	108 (11.0, 80)	NOTE 3
Dust guard plate bolt	1	6	9.8 (1.0, 7)	
Gear case cover bolt	2	10	47 (4.8, 35)	NOTE 3
Gear case cover bolt	6	8	25 (2.6, 19)	
Final gear case assembly mounting nut	4	10	64 (6.5, 47)	
Final gear case stud bolt	4	10	-	page 1-17
Rear shock absorber lower mounting bolt (left side)	1	8	23 (2.3, 17)	

**FRONT WHEEL/SUSPENSION/STEERING**

ITEM	Q'TY	THREAD DIA. (mm)	TORQUE N-m (kgf-m, lbf-ft)	REMARKS
Clutch lever bracket holder bolt	2	8	12 (1.2, 9)	page 14-10
Clutch lever pivot bolt	1	6	1.0 (0.1, 0.7)	
Clutch lever pivot nut	1	6	5.9 (0.6, 4.3)	
Handlebar mounting nut	2	12	54 (5.5, 40)	
Front brake disc bolt	6	8	42 (4.3, 31)	NOTE 6
Spoke	52	BC4	3.9 (0.4, 2.9)	
Front axle	1	18	74 (7.5, 54)	
Front axle pinch bolt	2	8	22 (2.2, 16)	
Fork center socket bolt	2	10	29 (3.0, 22)	NOTE 3
Fork cap	2	38	22 (2.2, 16)	
Fork cover bolt	2	6	12 (1.2, 9)	
Fork cover bolt	2	8	26 (2.7, 20)	
Fork top bridge pinch bolt	2	8	26 (2.7, 20)	
Fork bottom bridge pinch bolt	2	10	49 (5.0, 36)	
Steering top thread	1	26	-	page 14-28
Steering top thread lock nut	1	26	-	page 14-28
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	3.9 (0.4, 2.9)	
Rear axle nut	1	18	88 (9.0, 65)	NOTE 7
Rear axle pinch bolt	1	8	26 (2.7, 20)	
Rear brake stopper arm nut	1	8	22 (2.2, 16)	
Rear brake arm pinch bolt	1	8	28 (2.9, 21)	
Rear shock absorber upper mounting bolt	2	8	26 (2.7, 20)	
Rear shock absorber lower mounting bolt (right side)	1	10	34 (3.5, 25)	
Stopper plate bolt	5	6	20 (2.0, 14)	NOTE 6
Swingarm left pivot bolt	1	30	103 (10.5, 76)	
Swingarm right pivot bolt	1	30	-	page 15-26
Swingarm right pivot bolt lock nut	1	30	103 (10.5, 76)	

**GENERAL INFORMATION****HYDRAULIC BRAKE**

ITEM	QTY	THREAD DIA. (mm)	TORQUE N-m (kgf-m, lbf-ft)	REMARKS
Brake caliper bleed valve	1	8	5.9 (0.6, 4.3)	
Front master cylinder reservoir cap screw	2	4	2.0 (0.2, 1.4)	
Brake pad pin	1	10	18 (1.8, 13)	
Brake pad pin plug	1	10	2.9 (0.3, 2.2)	
Brake hose oil bolt	2	10	34 (3.5, 25)	
Brake lever pivot bolt	1	6	1.0 (0.1, 0.7)	
Brake lever pivot nut	1	6	5.9 (0.6, 4.3)	
Front brake light switch screw	1	4	1.0 (0.1, 0.7)	
Front master cylinder holder bolt	2	6	12 (1.2, 9)	page 16-13
Front brake caliper bracket pin	1	8	13 (1.3, 9)	NOTE 3
Front brake caliper pin	1	8	23 (2.3, 17)	NOTE 3
Front brake caliper mounting bolt	2	8	30 (3.1, 22)	NOTE 6

**BATTERY/CHARGING SYSTEM**

ITEM	QTY	THREAD DIA. (mm)	TORQUE N-m (kgf-m, lbf-ft)	REMARKS
Battery box cover screw	1	6	1.0 (0.1, 0.7)	

**LIGHTS/METERS/SWITCHES**

ITEM	QTY	THREAD DIA. (mm)	TORQUE N-m (kgf-m, lbf-ft)	REMARKS
Headlight unit mounting bolt	2	5	3.9 (0.4, 2.9)	
Brake/tail light mounting nut	3	6	5.9 (0.6, 4.3)	
Speedometer mounting socket bolt	2	6	9.8 (1.0, 7)	
Vehicle speed sensor mounting bolt	1	6	9.8 (1.0, 7)	
Ignition switch mounting bolt	2	6	12 (1.2, 9)	
Ignition switch cover screw	1	4	2.0 (0.2, 1.4)	
Fan motor switch	1	16	18 (1.8, 13)	
Side stand switch bolt	1	6	9.8 (1.0, 7)	
Thermostatic switch	1	PT 1/8	7.8 (0.8, 5.8)	
Horn mounting bolt	1	8	21 (2.1, 15)	

**OTHERS**

ITEM	QTY	THREAD DIA. (mm)	TORQUE N-m (kgf-m, lbf-ft)	REMARKS
Side stand pivot bolt	1	10	9.8 (1.0, 7)	
Side stand pivot lock nut	1	10	29 (3.0, 22)	
Side stand bracket bolt	2	10	49 (5.0, 36)	
Tool box screw	2	6	2.0 (0.2, 1.4)	