

# TORQUE VALUES

FASTENER TYPE	TORQUE N·m (kgf·m, lbf·ft)	FASTENER TYPE	TORQUE N·m (kgf·m, lbf·ft)
5 mm hex bolt and nut	5 (0.5, 3.6)	5 mm screw	4 (0.4, 2.9)
6 mm hex bolt and nut	10 (1.0, 7)	6 mm screw	9 (0.9, 6.5)
8 mm hex bolt and nut	22 (2.2, 16)	6 mm flange bolt (8 mm head, small flange)	10 (1.0, 7)
10 mm hex bolt and nut	34 (3.5, 25)	6 mm flange bolt (8 mm head, large flange)	12 (1.2, 9)
12 mm hex 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)

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

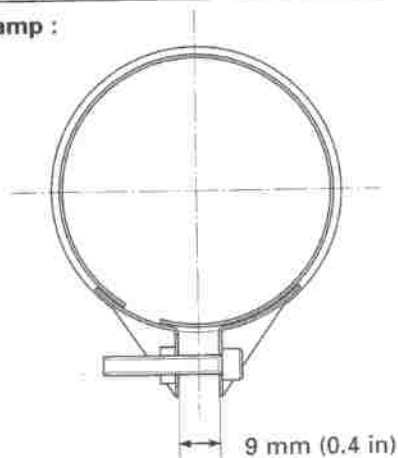
- NOTES:
1. Apply sealant to the threads.
  2. Apply a locking agent to the threads.
  3. Stake.
  4. Apply oil to the threads and flange surface.
  5. U-nut.
  6. ALOC bolt/screw: replace with a new one.
  7. Apply grease to the threads.
  8. Apply molybdenum disulfide oil to the threads and seating surface
  9. CT bolt

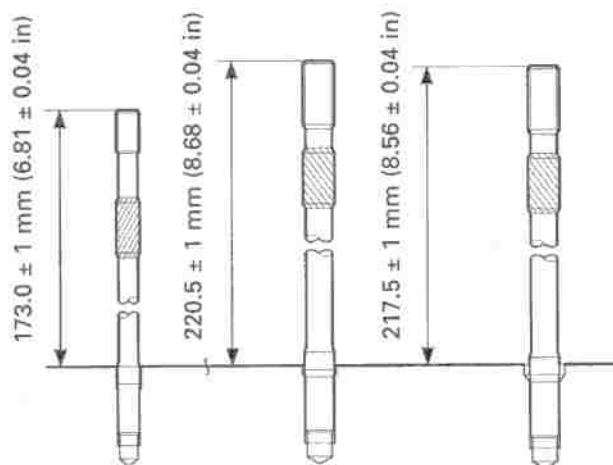
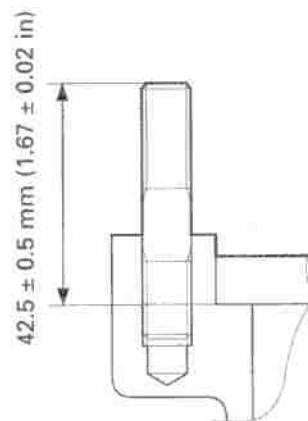
## ENGINE

ITEM	Q'TY	THREAD DIA. (mm)	TORQUE N·m (kgf·m, lbf·ft)	REMARKS
<b>LUBRICATION SYSTEM:</b>				
Front oil drain bolt	1	12	29 (3.0, 22)	
Rear oil drain bolt	1	12	29 (3.0, 22)	
Oil pump assembly bolt	1	6	13 (1.3, 9)	
Oil pump driven sprocket bolt	1	6	18 (1.8, 13)	NOTE 2
Oil strainer bolt	1	6	13 (1.3, 9)	
Oil filter boss	1	20	18 (1.8, 13)	NOTE 2
Oil filter cartridge	1	20	26 (2.7, 20)	NOTE 4
Oil pressure switch	1	PT 1/8	12 (1.2, 9)	NOTE 1
Oil pressure switch wire terminal screw	1	4	2 (0.2, 1.4)	
<b>COOLING SYSTEM:</b>				
Water pump assembly bolt	2	6	13 (1.3, 9)	
<b>CYLINDER HEAD/VALVES:</b>				
Spark plug	4	14	18 (1.8, 13)	
Spark plug sleeve	2	30	18 (1.8, 13)	NOTE 4
Reed valve cover bolt	4	5	5.1 (0.52, 3.8)	
Cylinder head cover bolt (8 mm)	4	8	26 (2.7, 20)	
(6 mm)	16	6	12 (1.2, 9)	
Cylinder head nut (10 mm)	8	10	49 (5.0, 39)	NOTE 4
(8 mm)	4	8	26 (2.7, 20)	NOTE 4
Camshaft holder bolt	12	8	26 (2.7, 20)	NOTE 4
Cam sprocket bolt	4	7	23 (2.3, 17)	
Valve adjusting screw lock nut	6	—	22 (2.2, 16)	
Cam chain tensioner bolt	4	6	12 (1.2, 9)	

**ENGINE (Cont'd)**

ITEM	Q'TY	THREAD DIA. (mm)	TORQUE N·m (kgf·m, lbf·ft)	REMARKS
<b>CLUTCH/GEARSHIFT LINKAGE:</b>				
Clutch lifter plate bolt	5	6	12 (1.2, 9)	
Clutch center lock nut	1	25	186 (19.0, 137)	NOTE 3, 4
Primary drive gear bolt	1	12	137 (14.0, 101)	NOTE 4
Primary driven gear nut	1	25	186 (19.0, 137)	NOTE 3, 4
Shift drum stopper arm bolt	1	6	12 (1.2, 9)	
Shift drum center socket bolt	1	8	23 (2.3, 17)	NOTE 2
Shift return spring pin	1	8	23 (2.3, 17)	
Change pedal pinch bolt	1	6	12 (1.2, 9)	
Slave cylinder bleed valve	1	8	6 (0.6, 4.3)	
<b>ALTERNATOR/STARTER CLUTCH:</b>				
Crankshaft hole cap	1	45	18 (1.8, 13)	NOTE 7
Flywheel bolt	1	12	137 (14.0, 101)	NOTE 4
Starter clutch outer bolt	6	8	29 (3.0, 22)	NOTE 2
Balancer weight bolt	1	12	98 (10.0, 72)	
<b>CRANKCASE/TRANSMISSION:</b>				
Right crankcase bolt	14	8	26 (2.7, 20)	
Left crankcase bolt	1	8	26 (2.7, 20)	
Left crankcase oil orifice bolt	1	8	14 (1.4, 10)	
Connecting rod bearing cap bolt	4	10	49 (5.0, 36)	NOTE 4
Output gear case mounting bolt	4	8	31 (3.2, 23)	
Output drive gear bearing holder bolt	2	8	31 (3.2, 23)	
Output drive gear bearing holder socket bolt	4	8	31 (3.2, 23)	
<b>ELECTRIC STARTER:</b>				
Starter motor cable terminal nut	1	6	7 (0.7, 5.1)	
Starter motor case bolt	2	5	5 (0.5, 3.6)	
<b>LIGHTS/METERS/SWITCHES:</b>				
Neutral switch	1	10	12 (1.2, 9)	

**Insulator clamp :**


**Crankcase stud bolts:****Exhaust pipe stud bolt:****FRAME**

ITEM	Q'TY	THREAD DIA. (mm)	TORQUE N·m (kgf·m, lbf·ft)	REMARKS
<b>FRAME BODY PANELS/EXHAUST SYSTEM:</b>				
Exhaust pipe joint nut	4	8	23 (2.3, 17)	
Muffler band bolt	3	8	17 (1.7, 12)	
Muffler stay nut	2	8	34 (3.5, 25)	
<b>FUEL SYSTEM (Programmed Fuel Injection):</b>				
Air cleaner housing cover bolt	5	5	3.4 (0.35, 2.5)	
Fuel tank rear mounting bolt	1	6	12 (1.2, 9)	
Fuel hose banjo bolt (fuel tank side)	1	12	22 (2.2, 16)	
Fuel hose sealing nut (throttle body side)	1	12	22 (2.2, 16)	
ECT sensor	1	16	18 (1.8, 13)	
Starter valve screw	2	5	3.4 (0.35, 2.5)	
MAP sensor screw	2	4	2.1 (0.21, 1.5)	
Throttle cable guide screw	2	5	3.4 (0.35, 2.5)	
Fuel pump mounting nut	8	6	12 (1.2, 9)	
O <sub>2</sub> sensor	1	12	25 (2.6, 19)	
<b>COOLING SYSTEM:</b>				
Radiator cover bolt	3	6	10 (1.0, 7)	
Radiator cover side bolt	4	6	3.4 (0.35, 2.5)	

**FRAME (Cont'd)**

ITEM	Q'TY	THREAD DIA. (mm)	TORQUE N·m (kgf·m, lbf·ft)	REMARKS
<b>ENGINE MOUNTING:</b>				
Front upper engine mounting nut	1	12	54 (5.5, 40)	
Front lower engine mounting nut	1	12	54 (5.5, 40)	
Rear upper engine mounting nut	1	12	54 (5.5, 40)	
Rear lower engine mounting nut	1	12	54 (5.5, 40)	
Right front upper engine hanger plate bolt	2	8	26 (2.7, 20)	
Left front upper engine hanger plate bolt	2	8	26 (2.7, 20)	
Right front lower engine hanger plate bolt	2	10	39 (4.0, 29)	
Rear upper engine hanger plate bolt	4	8	26 (2.7, 20)	
Rear lower engine hanger plate bolt	4	8	26 (2.7, 20)	
<b>CLUTCH/GEARSHIFT LINKAGE:</b>				
Clutch master cylinder holder bolt	2	6	12 (1.2, 9)	
Clutch master cylinder reservoir cap screw	2	4	1.5 (0.15, 1.1)	
Clutch lever pivot bolt	1	6	1 (0.1, 0.7)	
nut	1	6	6 (0.6, 4.3)	
Clutch switch screw	1	4	1.2 (0.12, 0.9)	
Clutch hose oil bolt	2	10	34 (3.5, 25)	
<b>FINAL DRIVE:</b>				
Final gear case mounting nut	4	10	64 (6.5, 47)	
Final drive oil filler cap	1	30	12 (1.2, 9)	
Final drive oil drain bolt	1	14	20 (2.0, 14)	
Gear case cover bolt (10 mm)	2	10	62 (6.3, 46)	NOTE 2
(8 mm)	6	8	25 (2.6, 19)	
Pinion retainer	1	70	147 (15.0, 108)	
Pinion joint nut	1	16	108 (11.0, 80)	NOTE 2
Pinion retainer lock tab bolt	1	6	10 (1.0, 7)	
Dust guard plate bolt	1	6	10 (1.0, 7)	
<b>FRONT WHEEL/SUSPENSION/STEERING:</b>				
Handlebar upper holder bolt	4	8	26 (2.7, 20)	
Handlebar lower holder nut	2	12	64 (6.5, 47)	NOTE 5
Front axle bolt	1	14	90 (9.2, 67)	
Front axle holder bolt	4	8	22 (2.2, 16)	
Front brake disc bolt	12	6	20 (2.0, 14)	NOTE 6
Steering stem nut	1	24	100 (10.2, 74)	
Top adjusting nut A	1	26	17 (1.7, 12)	
Top adjusting nut B	1	26	—	
Fork top bridge pinch bolt	2	10	55 (5.6, 41)	
Fork bottom bridge pinch bolt	4	8	24 (2.4, 17)	
Fork cap	2	50	34 (3.5, 25)	
Fork cap lock nut	2	10	20 (2.0, 14)	
Fork socket bolt	1	8	20 (2.0, 14)	NOTE 2
Inner fork bolt	1	43	98 (10.0, 72)	
<b>REAR WHEEL/SUSPENSION:</b>				
Rear axle nut	1	18	110 (11.2, 81)	
Rear brake disc bolt	6	8	42 (4.3, 31)	NOTE 6
Driven flange nut	5	12	88 (9.0, 65)	
Left swingarm pivot bolt	1	30	103 (10.5, 76)	
Right swingarm pivot bolt	1	30	14 (1.4, 10)	
Right swingarm pivot lock nut	1	30	113 (11.5, 83)	
Rear shock absorber mounting bolt	4	8	26 (2.7, 20)	
Rear shock absorber lower mounting bolt (final gear case side)	1	12	54 (5.5, 40)	NOTE 2

<b>FRAME (Cont'd)</b>				
<b>ITEM</b>	<b>Q'TY</b>	<b>THREAD DIA. (mm)</b>	<b>TORQUE N·m (kgf·m, lbf·ft)</b>	<b>REMARKS</b>
<b>HYDRAULIC BRAKE:</b>				
Brake pad pin	3	10	18 (1.8, 13)	
Brake caliper bleed valve	5	8	6 (0.6, 4.3)	
Brake hose oil bolt	7	10	34 (3.5, 25)	
Brake pipe joint bolt	12	10	17 (1.7, 12)	NOTE 4
Brake pipe 2/3 way joint	6	6	12 (1.2, 9)	
Brake hose clamp/stay bolt	7	6	12 (1.2, 9)	
Brake hose guide bolt	1	8	22 (2.2, 16)	NOTE 6
PCV (Proportional Control Valve) mounting bolt	2	6	12 (1.2, 9)	
Front master cylinder holder bolt	2	6	12 (1.2, 9)	
Front master cylinder reservoir cap screw	2	4	1.5 (0.15, 1.1)	
Front brake lever pivot bolt	1	6	1 (0.1, 0.7)	
nut	1	6	6 (0.6, 4.3)	
Front brake light switch screw	1	4	1.2 (0.12, 0.9)	
Rear master cylinder reservoir cover bolt	1	6	12 (1.2, 9)	
Rear master cylinder mounting bolt	2	6	12 (1.2, 9)	
Rear master cylinder push rod lock nut	1	8	18 (1.8, 13)	
Front caliper mounting bolt	4	8	30 (3.1, 22)	NOTE 6
Front caliper body B bolt	6	8	32 (3.3, 24)	NOTE 6
Front caliper pin bolt A	2	8	23 (2.3, 17)	NOTE 2
Front caliper pin bolt	2	8	13 (1.3, 9)	NOTE 2
Rear caliper pin bolt	1	12	27 (2.8, 20)	
Rear caliper bracket pin bolt	1	8	23 (2.3, 17)	NOTE 2
Rear caliper stopper pin bolt	1	18	69 (7.0, 51)	NOTE 6
Brake pedal pivot bolt	1	8	21 (2.1, 15)	
<b>LIGHTS/METERS/SWITCHES:</b>				
Ignition switch mounting bolt	2	6	10 (1.0, 7)	
Ignition switch rear cover screw	4	4	2 (0.2, 1.4)	
Horn mounting bolt	1	8	21 (2.1, 15)	
Fan motor switch	1	16	17 (1.7, 12)	
Side stand switch bolt	1	6	10 (1.0, 7)	NOTE 6
<b>OTHERS:</b>				
Side stand pivot bolt	1	10	10 (1.0, 7)	
Side stand lock nut	1	10	29 (3.0, 22)	NOTE 5
Side stand bracket bolt	3	10	39 (4.0, 29)	
Step holder bolt	4	10	39 (4.0, 29)	
Pillion step holder bolt	2	8	26 (2.7, 20)	
Change pivot shaft	1	8	32 (3.3, 24)	