

## 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	5 (0.5, 3.6)	5 mm screw	4 (0.4, 2.9)
6 mm bolt and nut	10 (1.0, 7)	6 mm screw	9 (0.9, 6.5)
8 mm bolt and nut	22 (2.2, 16)	6 mm flange bolt (8 mm head, small flange)	10 (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 & 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. Apply brake fluid to the threads.
6. Lock nut: replace with a new one and stake it.
7. ALOC bolt or screw: replace with a new one.
8. One-way bolt: replace with a new one.
9. Left-hand threads.
10. U-nut.

## ENGINE MAINTENANCE

ITEM	Q'TY	THREAD DIA. (mm)	TORQUE N·m (kgf·m, lbf·ft)	REMARKS
Spark plug	6	14	18 (1.8, 13)	
Timing hole cap	1	45	18 (1.8, 13)	NOTE 2
Engine oil filter cartridge	1	20	26 (2.7, 20)	NOTE 1
Engine oil drain bolt	1	14	34 (3.5, 25)	

## 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 strainer bolt	1	6	12 (1.2, 9)	NOTE 3
Oil pump assembly bolt	3	6	13 (1.3, 9)	

## FUEL SYSTEM (Programmed Fuel Injection)

ITEM	Q'TY	THREAD DIA. (mm)	TORQUE N·m (kgf·m, lbf·ft)	REMARKS
Fuel hose joint bolt	6	6	10 (1.0, 7)	
Fuel rail mounting bolt	6	6	10 (1.0, 7)	
Pressure regulator nut	1	18	27 (2.8, 20)	
Pressure regulator stay bolt	2	6	10 (1.0, 7)	
Fuel rail banjo bolt	1	12	33 (3.4, 25)	
Sealing bolt	1	6	12 (1.2, 9)	
PAIR check valve cover bolt	12	5	5 (0.5, 3.6)	
Knock sensor	2	12	31 (3.2, 23)	
Engine coolant temperature (ECT) sensor	1	12	25 (2.5, 18)	
O <sub>2</sub> sensor	2	12	25 (2.5, 18)	

## GENERAL INFORMATION

### COOLING SYSTEM

ITEM	Q'TY	THREAD DIA. (mm)	TORQUE N·m (kgf·m, lbf·ft)	REMARKS
Water pump cover sealing plate bolt	2	6	13 (1.3, 9)	
Water pump cover bolt	3	6	13 (1.3, 9)	

### CYLINDER HEAD/VALVE

ITEM	Q'TY	THREAD DIA. (mm)	TORQUE N·m (kgf·m, lbf·ft)	REMARKS
Cylinder head bolt	16	9	44 (4.5, 33)	NOTE 1
Left cam chain guide washer bolt	1	6	12 (1.2, 9)	
Cam chain tensioner pivot bolt	3	6	12 (1.2, 9)	
Ignition pulse generator rotor bolt	1	10	59 (6.0, 43)	NOTE 1
Front crankcase cover bolt	12	6	12 (1.2, 9)	
Cam sprocket bolt	4	7	25 (2.6, 19)	NOTE 3
Camshaft holder bolt	16	6	12 (1.2, 9)	NOTE 1
Cam chain tensioner lifter mounting bolt	4	6	12 (1.2, 9)	
Cam chain tensioner lifter sealing bolt	2	6	12 (1.2, 9)	
Cylinder head cover bolt	11	6	10 (1.0, 7)	
Cylinder head side cover bolt	10	6	10 (1.0, 7)	
Sealing bolt (oil passage)	6	14	25 (2.5, 18)	NOTE 3
Sealing bolt (secondary air passage)	6	8	22 (2.2, 16)	NOTE 3

### CLUTCH

ITEM	Q'TY	THREAD DIA. (mm)	TORQUE N·m (kgf·m, lbf·ft)	REMARKS
Clutch slave cylinder bleed valve	1	8	9 (0.9, 6.5)	
Clutch outer lock nut	1	40	186 (19.0, 137)	NOTE 3, 6
Clutch center lock nut	1	22	127 (13.0, 94)	NOTE 1, 6

### GEARSHIFT LINKAGE/TRANSMISSION

ITEM	Q'TY	THREAD DIA. (mm)	TORQUE N·m (kgf·m, lbf·ft)	REMARKS
Shift drum stopper arm pivot bolt	1	6	12 (1.2, 9)	
Shift drum joint bolt	1	8	27 (2.8, 20)	NOTE 3
Mainshaft bearing lock nut	1	30	186 (19.0, 137)	NOTE 1, 6
Countershaft setting plate bolt	3	6	12 (1.2, 9)	NOTE 3
Mainshaft setting plate bolt	2	8	26 (2.7, 20)	NOTE 3
Shift drum reverse lock cam bolt	1	6	12 (1.2, 9)	NOTE 3
Shift drum bearing setting plate bolt	2	6	12 (1.2, 9)	NOTE 3
Gearshift spindle arm bolt	1	8	25 (2.5, 18)	
Gearshift spindle return spring pin	1	8	25 (2.5, 18)	
Final drive gear lock nut	1	22	186 (19.0, 137)	NOTE 1, 6, 9
Alternator drive gear bolt	6	8	25 (2.6, 19)	NOTE 1
Oil pump driven sprocket bolt	1	6	18 (1.8, 13)	NOTE 3
Starter clutch bolt	1	12	74 (7.5, 54)	NOTE 9
Primary driven gear bearing setting plate bolt (rear crankcase cover)	4	6	12 (1.2, 9)	NOTE 3
Rear crankcase cover bolt	16	8	24 (2.4, 17)	
Output shaft lock nut	1	30	186 (19.0, 137)	NOTE 6
Output shaft bearing holder bolt	3	8	28 (2.9, 21)	

### CYLINDER/PISTON/CRANKSHAFT

ITEM	Q'TY	THREAD DIA. (mm)	TORQUE N·m (kgf·m, lbf·ft)	REMARKS
Connecting rod bearing cap nut	12	8	31 (3.2, 23)	NOTE 1
Crankshaft main journal bearing cap bolt	8	12	20 (2.0, 14) + 45°	NOTE 1
Left crankcase bolt	4	8	25 (2.6, 19)	
Right crankcase bolt	8	10	34 (3.5, 25)	NOTE 1
	11	6	12 (1.2, 9)	
Sealing bolt (left crankcase)	4	20	44 (4.5, 33)	NOTE 3

## GENERAL INFORMATION

### BATTERY/CHARGING SYSTEM

ITEM	Q'TY	THREAD DIA. (mm)	TORQUE N·m (kgf·m, lbf·ft)	REMARKS
Alternator mounting bolt	3	8	29 (3.0, 22)	

### IGNITION SYSTEM

ITEM	Q'TY	THREAD DIA. (mm)	TORQUE N·m (kgf·m, lbf·ft)	REMARKS
Ignition pulse generator bolt	2	6	12 (1.2, 9)	NOTE 3

### STARTER/REVERSE SYSTEM

ITEM	Q'TY	THREAD DIA. (mm)	TORQUE N·m (kgf·m, lbf·ft)	REMARKS
Starter motor mounting bolt	3	8	29 (3.0, 22)	
Reverse switch	1	10	12 (1.2, 9)	
Shift drum lock arm bolt	1	6	12 (1.2, 9)	NOTE 3
Reverse shifter shaft bolt	1	6	14 (1.4, 10)	NOTE 3
Reverse shifter cable holder bolt	2	6	12 (1.2, 9)	NOTE 3
Reverse switch terminal nut	1	4	2 (0.2, 1.4)	

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**FRAME**

**FRAME/BODY PANELS/EXHAUST SYSTEM**

ITEM	Q'TY	THREAD DIA. (mm)	TORQUE N·m (kgf·m, lbf·ft)	REMARKS
Center fresh air visor socket bolt	2	5	1 (0.1, 0.7)	
Exhaust pipe joint nut	12	6	12 (1.2, 9)	
Exhaust pipe mounting bolt	2	8	26 (2.7, 20)	
Exhaust pipe band bolt	2	8	26 (2.7, 20)	
Muffler band bolt	4	8	26 (2.7, 20)	
Front exhaust pipe protector bolt	2	6	12 (1.2, 9)	
Rear exhaust pipe protector bolt	2	6	14 (1.4, 10)	
Saddlebag/trunk stay bolt	6	8	26 (2.7, 20)	

**MAINTENANCE**

ITEM	Q'TY	THREAD DIA. (mm)	TORQUE N·m (kgf·m, lbf·ft)	REMARKS
Air cleaner cover screw	7	5	1 (0.1, 0.7)	
Final drive oil filler cap	1	30	12 (1.2, 9)	
Final drive oil drain bolt	1	14	20 (2.0, 14)	

**COOLING SYSTEM**

ITEM	Q'TY	THREAD DIA. (mm)	TORQUE N·m (kgf·m, lbf·ft)	REMARKS
Radiator assembly mounting bolt	4	6	14 (1.4, 10)	

**ENGINE MOUNTING**

ITEM	Q'TY	THREAD DIA. (mm)	TORQUE N·m (kgf·m, lbf·ft)	REMARKS
Engine hanger bolt				
– front/rear	4	12	64 (6.5, 47)	
– center	2	10	39 (4.0, 29)	
Left engine hanger adjusting bolt				
– front	1	22	2 (0.2, 1.4)	
– center	1	20	4 (0.4, 2.9)	
– rear	1	22	4 (0.4, 2.9)	
Left engine hanger adjusting bolt lock nut				
– front/rear	2	22	54 (5.5, 40)	
– center	1	20	54 (5.5, 40)	

**CLUTCH**

ITEM	Q'TY	THREAD DIA. (mm)	TORQUE N·m (kgf·m, lbf·ft)	REMARKS
Clutch master cylinder reservoir cap screw	2	4	2 (0.2, 1.4)	
Clutch lever pivot bolt	1	6	1 (0.1, 0.7)	
Clutch lever pivot nut	1	6	6 (0.6, 4.3)	
Clutch switch screw	1	4	1 (0.1, 0.7)	
Clutch cruise switch screw	1	4	1 (0.1, 0.7)	
Clutch master cylinder holder bolt	2	6	12 (1.2, 9)	
Clutch hose oil bolt	2	10	34 (3.5, 25)	

**FINAL DRIVE**

ITEM	Q'TY	THREAD DIA. (mm)	TORQUE N·m (kgf·m, lbf·ft)	REMARKS
Pinion retainer	1	70	147 (15.0, 108)	NOTE 1
Pinion retainer lock tab bolt	1	6	10 (1.0, 7)	
Pinion joint nut	1	16	108 (11.0, 80)	NOTE 3
Final side flange screw	2	6	9 (0.9, 6.5)	NOTE 7
Gear case cover bolt	2	10	62 (6.3, 46)	NOTE 3
	6	8	25 (2.6, 19)	NOTE 3
Final gear case assembly mounting nut	4	12	88 (9.0, 65)	

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## GENERAL INFORMATION

### FRONT WHEEL/SUSPENSION/STEERING

ITEM	Q'TY	THREAD DIA. (mm)	TORQUE N·m (kgf·m, lbf·ft)	REMARKS
Handlebar weight mounting screw	2	6	10 (1.0, 7)	NOTE 7
Handlebar mounting bolt	4	10	26 (2.7, 20)	
Front brake disc bolt	12	6	20 (2.0, 14)	NOTE 7
Front pulser ring bolt (ABS model only)	3	5	8 (0.8, 5.8)	NOTE 7
Front axle bolt	1	14	59 (6.0, 43)	
Front axle holder bolt	4	8	22 (2.2, 16)	
Fork center bolt	2	8	20 (2.0, 14)	NOTE 3
Fork damper lock nut	1	10	20 (2.0, 14)	
Fork cap	2	42	23 (2.3, 17)	
Anti-dive plunger case bolt	2	5	4 (0.4, 2.9)	NOTE 7
Fork top bridge pinch bolt	2	8	26 (2.7, 20)	
Fork bottom bridge pinch bolt	4	8	29 (3.0, 22)	
Brake hose oil bolt (anti-dive)	1	10	34 (3.5, 25)	
Steering bearing adjustment nut	1	26	27 (2.8, 20)	NOTE 1
Steering bearing adjustment nut lock nut	1	26	-	See page 13-41
Steering stem nut	1	24	103 (10.5, 76)	

### REAR WHEEL/SUSPENSION

ITEM	Q'TY	THREAD DIA. (mm)	TORQUE N·m (kgf·m, lbf·ft)	REMARKS
Rear wheel nut	5	12	108 (11.0, 80)	
Rear pulser ring bolt (ABS model only)	6	5	8 (0.8, 5.8)	NOTE 7
Shock absorber mounting nut	2	10	42 (4.3, 31)	NOTE 10
Suspension level actuator mounting bolt	2	8	26 (2.7, 20)	
Shock arm-to-swingarm nut	1	12	64 (6.5, 47)	NOTE 10
Shock arm-to-shock link nut	1	12	64 (6.5, 47)	NOTE 10
Shock link-to-frame nut	1	12	64 (6.5, 47)	NOTE 10
Swingarm right pivot bolt	1	36	108 (11.0, 80)	
Swingarm left pivot bolt	1	36	34 (3.5, 25)	
Swingarm left pivot lock nut	1	36	108 (11.0, 80)	

**BRAKE SYSTEM**

ITEM	Q'TY	THREAD DIA. (mm)	TORQUE N·m (kgf·m, lbf·ft)	REMARKS
Brake caliper bleed valve	6	8	6 (0.6, 4.3)	
Front fork anti-dive plunger bleed valve	1	8	6 (0.6, 4.3)	
Front master cylinder reservoir cap screw	2	4	2 (0.2, 1.4)	
Brake pad pin	3	10	18 (1.8, 13)	
Brake hose oil bolt	12	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, 4.3)	
Front brake light/cruise cancel switch screw	1	4	1 (0.1, 0.7)	
Front master cylinder holder bolt	2	6	12 (1.2, 9)	
Rear master cylinder reservoir mounting bolt	1	6	12 (1.2, 9)	
Rear master cylinder switch plate lock nut	1	8	18 (1.8, 13)	
Rear master cylinder joint nut	1	8	18 (1.8, 13)	
Rear master cylinder mounting bolt	2	6	12 (1.2, 9)	
Brake pedal pinch bolt	1	8	26 (2.7, 20)	
Rear brake light/cruise cancel switch holder screw	2	4	2 (0.2, 1.4)	NOTE 3
Secondary master cylinder mounting bolt	2	8	31 (3.2, 23)	NOTE 7
Front brake caliper bracket pin	2	8	13 (1.3, 9)	NOTE 3
Front brake caliper pin	2	8	23 (2.3, 17)	
Front brake caliper assembly bolt	6	8	32 (3.3, 24)	NOTE 7
Left front brake caliper lower mounting bolt	1	8	31 (3.2, 23)	NOTE 7
Left front brake caliper-to-secondary master cylinder joint bolt	1	8	25 (2.6, 19)	NOTE 7
Right front brake caliper mounting bolt	2	8	31 (3.2, 23)	NOTE 7
Rear brake caliper bracket pin	1	8	23 (2.3, 17)	NOTE 3
Rear brake caliper pin bolt	1	12	27 (2.8, 20)	
Rear brake caliper assembly bolt	3	8	32 (3.3, 24)	NOTE 7
Rear brake disc screw	2	6	9 (0.9, 6.5)	NOTE 7
Rear brake caliper mounting bolt	2	10	45 (4.6, 33)	NOTE 7
Proportional control valve mounting bolt	2	6	12 (1.2, 9)	
Delay valve mounting bolt	1	6	12 (1.2, 9)	
Brake pipe joint nut (ABS model)	28	10	17 (1.7, 12)	NOTE 5
(Non-ABS model)	20	10	17 (1.7, 12)	NOTE 5
Brake hose clamp bolt ('01 - '03:)	9	6	12 (1.2, 9)	
(After '03)	8	6	12 (1.2, 9)	
Rear brake hose guide bolt (After '03)	2	6	12 (1.2, 9)	
Brake hose joint attaching bolt	7	6	12 (1.2, 9)	
Wheel speed sensor bolt (ABS model only)	4	6	12 (1.2, 9)	
Modulator mounting screw (ABS model only)	6	6	12 (1.2, 9)	
Ignition coil/modulator stay bolt	2	6	12 (1.2, 9)	
Modulator brake pipe joint bolt (ABS model only)	8	10	34 (3.5, 25)	

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## GENERAL INFORMATION

### LIGHTS/METERS/SWITCHES

ITEM	Q'TY	THREAD DIA. (mm)	TORQUE N·m (kgf·m, lbf·ft)	REMARKS
Side stand switch bolt	1	6	10 (1.0, 7)	
Ignition switch mounting bolt	2	8	25 (2.5, 18)	NOTE 8

### AUDIO SYSTEM

ITEM	Q'TY	THREAD DIA. (mm)	TORQUE N·m (kgf·m, lbf·ft)	REMARKS
Antenna base mounting bolt	2	6	14 (1.4, 10)	

### OTHERS

ITEM	Q'TY	THREAD DIA. (mm)	TORQUE N·m (kgf·m, lbf·ft)	REMARKS
Bank angle sensor screw (sensor-to-stay)	2	4	2 (0.2, 1.4)	
Side stand pivot bolt	1	10	10 (1.0, 7)	
Side stand pivot lock nut	1	10	29 (3.0, 22)	
Side stand bracket bolt	2	10	44 (4.5, 33)	
	1	8	26 (2.7, 20)	
Left center stand pivot bolt	1	10	54 (5.5, 40)	NOTE 7
Right center stand pivot bolt	1	10	54 (5.5, 40)	NOTE 7, 9
Driver footpeg mounting bolt	4	8	26 (2.7, 20)	
Passenger footrest mounting bolt	4	8	26 (2.7, 20)	
Gearshift pedal pivot bolt	1	8	26 (2.7, 20)	