

Tightening Torque List

B838H20307002

Engine

Item		N·m	kgf·m	lb·ft
Exhaust pipe bolt		23	2.3	16.5
Exhaust pipe mounting bolt		23	2.3	16.5
Exhaust pipe bracket bolt		25	2.5	18.0
Muffler connecting bolt		23	2.3	16.5
Muffler cover bolt		5.5	0.55	4.0
Muffler mounting bolt		25	2.5	18.0
Speed sensor rotor bolt		25	2.5	18.0
Speed sensor bolt		4.5	0.45	3.0
Engine sprocket nut		115	11.5	83.0
Engine mounting bolt (Cylinder)		55	5.5	39.8
Engine mounting nut (Crankcase)		75	7.5	54.0
Engine mounting thrust adjuster		23	2.3	16.5
Engine mounting thrust adjuster lock-nut		45	4.5	32.5
Engine mounting pinch bolt		23	2.3	16.5
Cylinder head cover bolt		14	1.4	10.0
Spark plug		11	1.1	8.0
Cam chain guide No. 2 bolt		10	1.0	7.0
Cam chain guide No. 1 bolt		23	2.3	16.5
Camshaft journal holder bolt		10	1.0	7.0
Cam chain tension adjuster service cap		23	2.3	16.5
Cam chain tension adjuster mounting bolt		10	1.0	7.0
Cam chain tensioner bolt		23	2.3	16.5
CKP sensor rotor/Cam chain drive sprocket bolt		54	5.4	39.0
Cylinder head bolt	[M10]	31 N·m (3.1 kgf·m, 22.5 lb·ft) then turn in 1/6 (60°) turn		
	[M6]	10	1.0	7.0
Water jacket plug		9.5	0.95	6.9
Clutch cover bolt		10	1.0	7.0
Clutch sleeve hob nut		95	9.5	68.5
Clutch spring set bolt		10	1.0	7.0
Clutch release adjuster cap		11	1.1	8.0
Clutch lifter adjuster lock-nut		23	2.3	16.5
Starter idle gear cover bolt		10	1.0	7.0
Valve timing inspection cap		11	1.1	8.0
Starter clutch bolt		13	1.3	9.5
Generator cover bolt		10	1.0	7.0
Generator rotor bolt		120	12.0	87.0
Generator stator set bolt		11	1.1	8.0
Gearshift cam stopper bolt		10	1.0	7.0
Gearshift cam stopper plate bolt		13	1.3	9.5
Oil pressure switch		14	1.4	10.0
Oil filter		20	2.0	14.5
Crankshaft journal bolt	[M9]	18 N·m (1.8 kgf·m, 13.0 lb·ft) then turn in 50°		
Crankcase bolt	[M6]	Initial	6	0.6
		Final	11	1.1
	[M8]	Initial	15	1.5
		Final	26	2.6
Crankcase bolt (Inner hexagon)	[M8]	Initial	15	1.5
		Final	22	2.2
Oil gallery plug	[M6]	10	1.0	7.0
	[M10]	18	1.8	13.0
	[M12]	15	1.5	11.0
	[M16]	35	3.5	25.5
Oil drain plug		23	2.3	16.5
Piston cooling oil jet bolt		10	1.0	7.0
Oil pump mounting bolt		10	1.0	7.0
Conrod cap bolt		15 N·m (1.5 kgf·m, 11.0 lb·ft) then turn in 1/4 (90°) turn		

Item	N·m	kgf-m	lb-ft
Breather cover bolt	10	1.0	7.0
Oil pan bolt	10	1.0	7.0
Oil cooler mounting bolt	10	1.0	7.0
Driveshaft bearing case bolt (LH and RH)	12	1.2	8.7
Gearshift arm stopper	19	1.9	13.5
Gearshift cam stopper bolt	10	1.0	7.0
Gearshift cam stopper plate bolt	13	1.3	9.5
Driveshaft retainer bolt	12	1.2	8.7
Gearshift cam bearing retainer screw	10	1.0	7.0
Starter motor mounting bolt	10	1.0	7.0
Starter motor lead wire mounting nut	6	0.6	4.5
Starter motor housing bolt	3.5	0.35	2.5
Regulator/rectifier mounting bolt	10	1.0	7.0

FI System

Item	N·m	kgf-m	lb-ft
CMP sensor bolt	10	1.0	7.0
TP sensor mounting screw	3.5	0.35	2.5
STP sensor mounting screw	3.5	0.35	2.5
ISC valve mounting screw	2	0.2	1.5
CKP sensor mounting screw	8	0.8	6.0
HO2 sensor	25	2.5	18.0
Fuel delivery pipe mounting screw	3.5	0.35	2.5
Fuel pump mounting bolt	10	1.0	7.0
EXCVA pulley mounting bolt	5	0.5	3.5
EXCV cable bracket mounting bolt	5.5	0.55	4.0
IAT sensor mounting bolt	1.3	0.13	1.0

Cooling System

Item	N·m	kgf-m	lb-ft
Impeller securing bolt	8	0.8	6.0
Water pump case screw	5.5	0.55	4.0
Water pump mounting bolt	10	1.0	7.0
ECT sensor	18	1.8	13.0
Thermostat connector bolt	10	1.0	7.0
Thermostat cover bolt	10	1.0	7.0
Water inlet connector bolt	10	1.0	7.0
Water pump air bleeder bolt	13	1.3	9.5

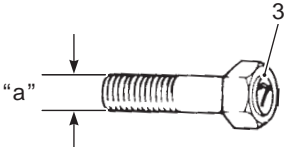
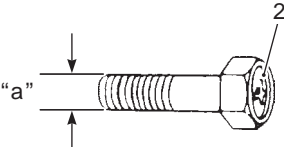
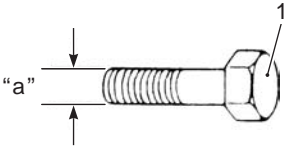
0C-11 Service Data:**Chassis**

Item	N·m	kgf·m	lb·ft
Steering stem head nut	90	9.0	65.0
Steering stem lock-nut	90	9.0	65.0
Steering damper bolt	23	2.3	16.5
Steering damper nut	23	2.3	16.5
Front fork upper clamp bolt	23	2.3	16.5
Front fork lower clamp bolt	23	2.3	16.5
Front fork cap bolt	35	3.5	25.5
Front fork inner rod lock-nut	20	2.0	14.5
Front fork damper rod bolt	35	3.5	25.5
Front axle bolt	100	10.0	72.5
Front axle pinch bolt	23	2.3	16.5
Handlebar clamp bolt	23	2.3	16.5
Master cylinder holder bolt (Upper and Lower)	10	1.0	7.0
Front brake caliper mounting bolt	39	3.9	28.0
Front brake caliper housing bolt	22	2.2	16.0
Front brake pad mounting pin	16	1.6	11.5
Brake hose union bolt	23	2.3	16.5
Air bleeder valve (Front caliper)	7.5	0.75	5.5
Air bleeder valve (Rear caliper)	7.5	0.75	5.5
Air bleeder valve (Front master cylinder)	6.0	0.6	4.5
Brake disc bolt (Front)	18	1.8	13.0
Brake disc bolt (Rear)	35	3.5	25.5
Rear brake caliper mounting bolt	18	1.8	13.0
Rear brake pad mounting pin	16	1.6	11.5
Rear brake master cylinder mounting bolt	10	1.0	7.0
Rear brake master cylinder rod lock-nut	18	1.8	13.0
Rear brake caliper sliding pin	33	3.3	24.0
Brake lever pivot bolt	1	0.1	0.7
Brake lever pivot bolt lock-nut	6	0.6	4.5
Swingarm pivot shaft	15	1.5	11.0
Swingarm pivot nut	100	10.0	72.5
Swingarm pivot lock-nut	90	9.0	65.0
Cushion lever mounting nut	98	9.8	71.0
Cushion rod mounting nut (Front side)	98	9.8	71.0
Cushion rod mounting nut (Rear side)	78	7.8	56.5
Rear shock absorber mounting nut (Upper and Lower)	50	5.0	36.0
Rear axle nut	100	10.0	72.5
Rear sprocket nut	60	6.0	43.0
Rear combination light mounting bolt	2.8	0.28	2.0
License plate light mounting nut	5	0.5	3.5
Side-stand nut	40	4.0	29.0
Side-stand bolt	50	5.0	36.0
Side-stand bracket mounting bolt	50	5.0	36.0
Bank sensor bolt	18	1.8	13.0
Footrest bracket bolt	23	2.3	16.5
Footrest guard screw	4.5	0.45	3.0
Footrest holder bolt	35	3.5	25.5
Seat rail mounting bolt	50	5.0	36.0
Cowling brace mounting bolt	23	2.3	16.5
Under cowl screw	5.5	0.55	4.0
Rear view mirror mounting bolt	10	1.0	7.0

Tightening Torque Chart

For other bolts and nuts not listed in the preceding page, refer to this chart:

Bolt Diameter "a" (mm)	Conventional or "4" marked bolt			"7" marked bolt		
	N·m	kgf·m	lb·ft	N·m	kgf·m	lb·ft
4	1.5	0.15	1.0	2.3	0.23	1.5
5	3	0.3	2.0	4.5	0.45	3.0
6	5.5	0.55	4.0	10	1.0	7.0
8	13	1.3	9.5	23	2.3	16.5
10	29	2.9	21.0	50	5.0	36.0
12	45	4.5	32.5	85	8.5	61.5
14	65	6.5	47.0	135	13.5	97.5
16	105	10.5	76.0	210	21.0	152.0
18	160	16.0	115.5	240	24.0	173.5



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1. Conventional bolt	2. "4" marked bolt	3. "7" marked bolt
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