

1-14 GENERAL INFORMATION

Torque and Locking Agent

The following tables list the tightening torque for the major fasteners requiring use of a non-permanent locking agent or liquid gasket.

Letters used in the "Remarks" column mean:

A : Apply a non-permanent locking agent to the threads.

G : Apply a liquid gasket to the threads or washers.

S : Tighten the fasteners following the specified sequence.

St : Stake the fasteners to prevent loosening.

Engine Parts	Threads Dia. (mm)	Quantity	Torque			Remarks
			N-m	kg-m	ft-lb	
DFI System Parts:						
Engine temperature sensor	10	1	13	1.3	9.5	—
Fuel injector mounting bolts	5	8	4.9	0.50	43 in-lb	—
Accessories:						
Oil cooler hose fitting:						
Bolts	6	4	9.8	1.0	87 in-lb	—
Nuts	6	2	7.8	2.2	69 in-lb	—
Engine Mounting:						
Engine mounting bolts:	10	4	39	4.0	29	—
Engine mounting bracket bolts	8	8	24	2.4	17.5	—
Top End:						
Breather cover bolt	8	1	5.9	0.60	52 in-lb	—
Camshaft bearing cap bolts	6	16	12	1.2	104 in-lb	S
Camshaft chain tensioner cap	18	1	25	2.5	18	—
Camshaft sprocket bolts	6	4	15	1.5	11.0	A
Cylinder head: Bolts	8	2	29	3.0	22	S
Nuts	10	12	39	4.0	29	S
Cylinder head cover bolts	6	24	7.8	0.80	69 in-lb	—
Spark plugs	14	4	27	2.8	20	—
Studs:						
Cylinder head	6	8	—	—	—	A
Crankcase	10	12	—	—	—	A
Throttle valve holder bolts	6	8	14	1.4	10.0	A
Left Side:						
Engine sprocket nut	20	1	98	10.0	72	—
Alternator cover bolts	6	4	—	—	—	A
Alternator rotor bolt	12	1	125	13.0	94	—
Alternator stator bolts	6	3	9.8	1.0	87 in-lb	A
Neutral switch	12	1	15	1.5	11	—

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Engine Parts	Threads Dia. (mm)	Quantity	Torque			Remarks
			N-m	kg-m	ft-lb	
Shift pedal return spring pin	8	1	25	2.5	18.0	A
Starter clutch bolts	8	3	34	3.5	25	—
Secondary shaft nut	18	1	59	6.0	43	—
Right Side:						
Clutch hub nut	20	1	130	13.5	98	—
Clutch spring bolts	6	5	8.8	0.90	78 in-lb	—
Oil pressure switch	—	1	15	1.5	11.0	—
Timing rotor mounting bolt	8	1	25	2.5	18.0	—
Bottom Side:						
Engine drain plug	12	1	37	3.8	27	—
Oil filter mounting bolt	20	1	20	2.0	14.5	—
Oil pan bolts	6	17	9.8	1.0	87 in-lb	—
Sub oil pan bolts	6	2	9.8	1.0	87 in-lb	—
Oil pressure relief valve	12	1	15	1.5	11.0	A
Turbocharger mounting bolts	6	2	—	—	—	—
Oil pipe banjo bolts	10	2	20	2.0	14.5	—
Oil hose elbow mounting bolts	2	—	—	—	—	—
Shift drum pin plate screw	6	1	—	—	—	A
Internal Parts:						
Crankcase bolts:						
6 mm dia.	6	20	9.8	1.0	87 in-lb	A
8 mm dia.	8	10	25	2.5	18.0	A, S
Connecting rod big end cap nuts	8	8	36	3.7	27	—

Chassis Parts	Threads Dia. (mm)	Quantity	Torque			Remarks
			N-m	kg-m	ft-lb	
Wheels:						
Front axle nut	14	1	59	6.0	43	—
Front axle clamp nut	8	1	20	2.0	14.5	—
Front fender mounting bolts	8	4	—	—	—	—
Rear axle nut	16	1	93	9.5	69	—
Tire air valve nuts	8	4	1.5	0.15	13 in-lb	—
Muffler:						
Exhaust pipe holder nuts	8	8	—	—	—	—
Exhaust manifold mounting nuts	8	3	20	2.0	14.5	—
Connecting pipe mounting bolts	8	2	20	2.0	14.5	—
Muffler body clamp bolts	8	2	—	—	—	—
Rear mounting bolts	8	4	—	—	—	—

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Chassis Parts	Threads Dia. (mm)	Quantity	Torque			Remarks
			N-m	kg-m	ft-lb	
Brakes:						
Air bleed valves	7	5	7.8	0.80	69 in-lb	—
Brake hose banjo bolts	10	9	29	3.0	22	—
Brake lever pivot bolt	6	1	2.9	0.30	26 in-lb	—
Brake lever pivot bolt locknut	6	1	5.9	0.60	52 in-lb	—
Brake pipe nipples	10	4	23	2.3	16.5	—
Brake pedal bolt	8	1	—	—	—	—
Caliper mounting bolt (front and rear)	10	6	32	3.3	24	—
Disc mounting bolts	8	18	23	2.3	16.5	—
Front brake light switch mounting screw	4	1	—	—	—	A
Front master cylinder clamp bolts	6	2	8.8	0.90	78 in-lb	—
Torque link nuts	10	2	29	3.0	22	—
Steering:						
Handlebar clamp bolts	6	4	9.8	1.0	87 in-lb	—
Handlebar holder mounting bolts	32	2	74	7.5	54	—
Handlebar weight mounting bolts	8	2	—	—	—	A
Steering stem head bolt	14	1	42	4.3	31	—
Clutch lever holder bolt	6	1	—	—	—	—
Suspension and Drive Train:						
Anti-Dive brake plunger assembly mounting bolts	5	4	4.4	0.45	39 in-lb	—
Anti-Dive valve assembly mounting bolts	6	4	6.9	0.70	61 in-lb	—
Eccentric chain adjuster clamp bolts	10	2	32	3.3	24	—
Front fork air valve	8	1	7.8	0.80	69 in-lb	A
Front fork bottom bolts	8	2	23	2.3	16.5	A, G
Front fork clamp bolts: Upper	8	2	20	2.0	14.5	—
Lower	12	2	39	4.0	29	—
Front fork drain screws	4	2	—	—	—	G
Front fork top plugs	32	2	23	2.3	16.5	—
Rear shock absorber nuts:						
Upper	10	1	37	3.8	27	—
Lower	12	1	69	7.0	51	—
Rear shock absorber air valve	8	1	7.8	0.80	69 in-lb	A
Rear shock absorber air hose male pipe	8	1	12	1.2	104 in-lb	A
Rear sprocket nuts	10	6	39	4.0	29	—

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Chassis Parts	Threads Dia. (mm)	Quantity	Torque			Remarks
			N-m	kg-m	ft-lb	
Swing arm pivot shaft nut	16	1	98	10.0	72	—
Uni-trak links:						
Rocker arm pivot shaft nut	12	1	69	7.0	51	—
Tie-rod nuts: Upper	10	2	37	3.8	27	—
Lower	12	1	69	7.0	51	—
Electrical Equipments:						
Front brake light switch mounting screw	4	1	—	—	—	A
Starter motor end cover screws	6	2	5.4	0.55	48 in-lb	—
Starter motor terminal nut	6	1	11	1.1	95 in-lb	—
Turn signal mounting nuts	10	4	13	1.3	113 in-lb	—
Side stand switch mounting screws	5	2	—	—	—	A

The table below, relating tightening torque to thread diameter, lists the basic torque for the bolts and nuts used on Kawasaki Motorcycles. However, the actual torque that is necessary may vary among bolts and nuts with the same thread diameter. Tightening torque listed in the preceding tables varies to a greater or lesser extent from what is given in the table below. Refer to this table for only the bolts and nuts not included in the tables on the previous pages. All of the values are for use with dry, solvent cleaned threads.

General Fasteners:

Threads dia. (mm)	Torque		
	N-m	kg-m	ft-lb
5	3.4 – 4.9	0.35 – 0.50	30 – 43 in-lb
6	5.9 – 7.8	0.60 – 0.80	52 – 69 in-lb
8	14 – 19	1.4 – 1.9	10.0 – 13.5
10	25 – 39	2.6 – 3.5	19.0 – 25
12	44 – 61	4.5 – 6.2	33 – 45
14	73 – 98	7.4 – 10.0	54 – 72
16	115 – 155	11.5 – 16.0	83 – 115
18	165 – 225	17.0 – 23	125 – 165
20	225 – 325	23 – 33	165 – 240