

# TIGHTENING TORQUE

## ENGINE

### Model G100

Tightening components		Tightening torque		
		ft-lb	kg-m	N-m
Air conditioner drive belt idler pulley x Pulley mount shaft		23.1 - 34.7	3.2 - 4.8	31.4 - 47.1
Cylinder head x Spark plug		10.8 - 15.9	1.5 - 2.2	14.7 - 21.6
Cylinder head x Front mounting bracket	M10	21.7 - 32.5	3.0 - 4.5	29.4 - 44.1
	M12	36.2 - 50.6	5.0 - 7.0	49.0 - 68.6
Cylinder head x Intake pipe		10.8 - 15.9	1.5 - 2.2	14.7 - 21.6
Cylinder head x Distributor housing		2.9 - 5.1	0.4 - 0.7	3.9 - 6.9
Cylinder head x Timing belt upper cover		1.4 - 2.9	0.2 - 0.4	2.0 - 3.9
Cylinder head x Exhaust manifold		10.8 - 15.9	1.5 - 2.2	14.7 - 21.6
Cylinder head x Cylinder head cover		5.8 - 8.7	0.8 - 1.2	7.8 - 11.8
Cylinder head cover x Surge tank stay		7.2 - 11.6	1.0 - 1.6	9.8 - 15.7
Cylinder head x BVS		18.1 - 25.3	2.5 - 3.5	24.5 - 34.3
Cylinder head x Cylinder block		39.8 - 47.0	5.5 - 6.5	53.9 - 63.7
Cylinder block x Balance shaft gear cover		7.2 - 11.6	1.0 - 1.6	9.8 - 15.7
Cylinder block x Crankshaft bearing cap		39.1 - 47.7	5.4 - 6.6	53.0 - 64.7
Cylinder block x Balance shaft thrust plate		7.2 - 10.8	1.0 - 1.5	9.8 - 14.7
Cylinder block x Oil pump		7.2 - 11.6	1.0 - 1.6	9.8 - 15.7
Cylinder block x Oil pan		2.9 - 5.1	0.4 - 0.7	3.9 - 6.9
Cylinder block x Oil filter bracket		7.2 - 11.6	1.0 - 1.6	9.8 - 15.7
Cylinder block x Water pump		10.8 - 15.9	1.5 - 2.2	14.7 - 21.6
Cylinder block x Oil outlet pipe		4.3 - 6.5	0.6 - 0.9	5.9 - 8.8
Cylinder block x Exhaust manifold stay		21.7 - 32.5	3.0 - 4.5	29.4 - 44.1
Cylinder block x Compressor bracket		34.4	4.75	46.6
Camshaft x Camshaft timing belt pulley		21.7 - 32.5	3.0 - 4.5	29.4 - 44.1
Crankshaft x Crankshaft pulley		65.1 - 72.0	9.0 - 10.0	88.3 - 98.0
Crankshaft x Flywheel		28.9 - 36.2	4.0 - 5.0	39.2 - 49.0
Connecting rod x Connecting rod cap		17.4 - 22.4	2.4 - 3.1	23.5 - 30.4
Delivery pipe x Pressure regulator		25.3 - 32.5	3.5 - 4.5	34.3 - 44.1
Distributor housing x Distributor		10.8 - 15.9	1.5 - 2.2	14.7 - 21.6
Exhaust manifold x Oxygen sensor		21.7 - 28.9	3.0 - 4.0	29.4 - 39.2
Exhaust manifold x Exhaust manifold cover		4.3 - 6.5	0.6 - 0.9	5.9 - 8.8
Exhaust manifold x Exhaust pipe		36.2 - 55.0	5.0 - 7.6	49.0 - 74.5
Exhaust manifold No.1 x Exhaust manifold No.2		14.5 - 21.7	2.0 - 3.0	19.6 - 29.4
Exhaust manifold No.2 x Exhaust manifold stay		21.7 - 32.5	3.0 - 4.5	29.4 - 44.1
Exhaust pipe clamp		14.5 - 21.7	2.0 - 3.0	19.6 - 29.4

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## TIGHTENING TORQUE

Tightening component	Tightening torque		
	ft-lb	kg-m	N-m
Fuel hose No.1 x Fuel filter	25.3 - 32.5	3.5 - 4.5	34.3 - 44.1
Fuel hose No.1 x Delivery pipe	25.3 - 32.5	3.5 - 4.5	34.3 - 44.1
Fuel pipe No.2 x Delivery pipe	8.7 - 13.0	1.2 - 1.8	11.8 - 17.7
Fuel pipe No.2 x Cold start injector	8.7 - 13.0	1.2 - 1.8	11.8 - 17.7
Fuel filter x Fuel pipe	25.3 - 31.8	3.5 - 4.4	34.3 - 43.1
Front mounting x Front mounting bracket	28.9 - 39.8	4.0 - 5.5	39.2 - 53.9
Balance shaft gear cover x Timing belt lower cover	1.4 - 2.9	0.2 - 0.4	2.0 - 3.9
Balance shaft gear cover x Timing belt tensioner	21.7 - 32.5	3.0 - 4.5	29.4 - 44.1
Balance shaft x Balance weight	21.7 - 32.5	3.0 - 4.5	29.4 - 44.1
Intake manifold x Delivery pipe	7.2 - 11.6	1.0 - 1.6	9.8 - 15.7
Oil pan x Drain plug	14.5 - 21.7	2.0 - 3.0	19.6 - 29.4
Oil pump x Oil pump sprocket	10.8 - 15.9	1.5 - 2.2	14.7 - 21.6
Oil filter bracket x Oil cooler	18.1 - 25.3	2.5 - 3.5	24.5 - 34.3
Oil cooler x Oil filter	8.7 - 11.6	1.2 - 1.6	11.8 - 15.7
Oil filter bracket x Pressure regulator valve	36.2 - 50.6	5.0 - 7.0	49.0 - 68.6
Oil pump body x Oil pump cover	2.9 - 5.1	0.4 - 0.7	3.9 - 6.9
Surge tank x Intake manifold	10.8 - 15.9	1.5 - 2.2	14.7 - 21.6
Surge tank x Surge tank stay	7.2 - 11.6	1.0 - 1.6	9.8 - 15.7
Throttle body x Accelerator outer cable	7.2 - 11.6	1.0 - 1.6	9.8 - 15.7
Valve adjusting screw x Lock nut	9.4 - 13.0	1.3 - 1.8	12.7 - 17.7
Water pump x Water pump pulley	4.3 - 6.5	0.6 - 0.9	5.9 - 8.8
Intake manifold x Radiator thermo control switch	18.1 - 25.3	2.5 - 3.5	24.5 - 34.3
Intake manifold x BSV	18.1 - 25.3	2.5 - 3.5	24.5 - 34.3
Intake manifold x Water temperature sender gauge	8.7 - 14.5	1.2 - 2.0	11.8 - 19.6
Cylinder head x Water temperature switch (for air conditioner)	21.7 - 28.9	3.0 - 4.0	29.4 - 39.2
Intake manifold x Water temperature sensor	9.4 - 13.0	1.3 - 1.8	12.7 - 17.7
Intake manifold x Cold start injector time switch	21.7 - 28.9	3.0 - 4.0	29.4 - 39.2
Surge tank x Gas filter	8.7 - 14.5	1.2 - 2.0	11.8 - 19.6
Surge tank x Intake air temperature sensor	21.7 - 28.9	3.0 - 4.0	29.4 - 39.2
Surge tank x Cold start injector	2.9 - 5.1	0.4 - 0.7	3.9 - 6.9
Surge tank x Throttle body	10.8 - 15.9	1.5 - 2.2	14.7 - 21.6
Compressor x Compressor bracket	18.1	2.5	24.5
EGR pipe x EGR valve	34.7 - 52.1	4.8 - 7.2	47.1 - 70.6
EGR pipe x Exhaust manifold	7.2 - 11.6	1.0 - 1.6	9.8 - 15.7
Intake manifold x Heater union	18.1 - 25.3	2.5 - 3.5	24.5 - 34.3

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