

ENGINE MECHANICAL

TORQUE SPECIFICATION

SS12J-02

Part tightened		N.m	kgf.cm	ft.lbf
V-ribbed belt tensioner x Cylinder block		38	390	28
Idler pulley x V-ribbed belt tensioner		68	695	50
Idler pulley No.1 x Cylinder block		57	580	42
Idler pulley No.2 x Cylinder block		57	580	42
A/C compressor x Cylinder block		49	500	36
Oil pump x Cylinder block		19	195	14
Tensioner plate x Cylinder block		8.0	80	69 in. lbf
Tensioner slipper x Cylinder block		24	245	18
Vibration damper No.1 x Cylinder block		20	205	15
Timing chain guide x Cylinder block		8.0	80	69 in. lbf
Timing chain cover x Cylinder cover		30	305	22
Oil pan x Cylinder block	Bolt A, Nut D	30	305	22
	Bolt B	38	390	28
	Bolt C	8.0	80	69 in. lbf
Oil pump bracket x Oil pan		19	195	14
Oil strainer x Oil pump bracket		24	245	18
Oil pan No.2 x Oil pump		8.0	80	69 in. lbf
Crank position sensor x Timing chain cover		8.0	80	69 in. lbf
Crank shaft damper x Crankshaft		270	2,755	199
Intake air surge tank x Intake manifold		12	120	9
Throttle body x Intake air connector		21	215	15
Emission control valve set x Intake air connector		19	195	14
Camshaft bearing cap x Cylinder head		16	195	12
Cylinder head x Cylinder block	1st	54	550	40
	2nd	Turn 90°	Turn 90°	Turn 90°
Cylinder head x Timing chain cover		21	215	16
Camshaft No.2 x Camshaft gear assembly		47	480	35
Exhaust manifold x Cylinder head		26	265	19
Heat insulator x Exhaust manifold		10	102	7
Water by-pass joint FR x Cylinder head		19	195	14
Water pump x Cylinder block		19	195	14
Exhaust manifold x Exhaust pipe		43	440	32
Exhaust pipe support bracket x Transmission		44	449	32
Exhaust pipe support bracket x Exhaust manifold		44	449	32
Intake manifold x Cylinder block		25	255	18
Connecting rod cap x Connecting rod	1st	20	205	15
	2nd	Turn 90°	Turn 90°	Turn 90°
Main bearing cap x Cylinder head	1st	27	275	20
	2nd	Turn 90°	Turn 90°	Turn 90°
Cylinder block x Main bearing cap		27	275	20
Engine coolant drain union x Cylinder block		49	500	36
Engine mounting bracket x Cylinder block		36	370	27
Oil filter bracket x Cylinder block		19	195	14

SERVICE SPECIFICATIONS - ENGINE MECHANICAL

Alternator bracket x Cylinder block		19	195	14
Water by-pass pipe No.3 x Cylinder block	Bolt	19	195	14
	Nut	12	125	9
Drive plate x Crankshaft		83	850	61