

Torque Specifications

Part tightened	N·m	kgf·cm	ft·lbf
Cylinder head x Cylinder block	123	1,250	90
Valve rocker support x Cylinder head			
12 mm bolt head	24	240	17
14 mm bolt head and.nut	33	340	25
Manifold x Cylinder head			
14 mm bolt head	50	510	37
17 mm bolt head	69	700	51
Nut	56	570	41
Cylinder head cover x Cylinder head	8.8	90	78 in.·lbf
Intake manifold x Intake manifold stay	29	300	22
Cylinder block x Intake manifold stay	29	300	22
Air injection manifold x Cylinder head	21	210	15
Exhaust manifold x Exhaust pipe	62	630	46
Water outlet housing x Cylinder head	25	250	18
Camshaft thrust washer x Cylinder block	12	120	9
Timing gear cover x Front end plate or cylinder block			
10 mm bolt head	4.9	50	43 in.·lbf
14 mm bolt head	25	250	18
Crankshaft pulley x Crankshaft	343	3,500	253
PS pulley x Crankshaft pulley	18	185	13
Push rod cover x Cylinder block	3.9	40	35 in.·lbf
Main bearing cap x Cylinder block			
19 mm bolt head	135	1,375	99
17 mm bolt head	115	1,175	85
Connecting rod cap x Connecting rod	59	600	43
Front end plate x Cylinder block			
Screw	25	250	18
Bolt	30	310	22
Drive plate x Crankshaft	87	890	64

EFI SYSTEM

Specifications

Fuel pressure regulator	Fuel pressure at No vacuum	255 – 314 kPa (2.6 – 3.2 kgf/cm ² , 37 – 46 psi)
Cold start injector	Resistance Fuel leakage	2 – 4 Ω One drop or less per minute
Injector	Resistance Injection volume Difference between each injector Fuel leakage	Approx. 13.8 Ω 47 – 59 cm ³ (2.9 – 3.6 cu in.) per 15 sec. 5 cm ³ (0.31 cu in.) or less One drop or less per minute

Specifications (Cont'd)

Throttle position sensor	Clearance between stop screw and lever		Between terminals	Resistance
	0 mm	0 in.	VTA - E2	0.3 - 6.3 k Ω
	0.77 mm	0.0303 in.	IDL - E2	Less than 2.3 k Ω
	1.09 mm	0.0429 in.	IDL - E2	Infinity
	Throttle valve fully opened position		VTA - E2	3.5 - 10.3 k Ω
	—		VC - E2	4.25 - 8.25 k Ω
ISC valve	Resistance		B1 - S1 or S3 B2 - S2 or S4	10 - 30 Ω 10 - 30 Ω
Cold start injector time switch	Resistance		STA - E1 below 15°C (59°F) above 30°C (86°F)	30 - 50 Ω 70 - 90 Ω
			STA - Ground	30 - 90 Ω
Air flow meter	Resistance		E2 - VS	200 - 600 Ω (Measuring plate fully closed)
			E2 - VC E1 - FC	20 - 1,200 Ω (Measuring plate fully open)
			E2 - THA	200 - 400 Ω Infinity (Measuring plate fully closed)
			at -20°C (-4°F) at 0°C (32°F) at 20°C (68°F) at 40°C (104°F) at 60°C (140°F)	Zero (Other than closed position) 10 - 20 k Ω 4 - 7 k Ω 2 - 3 k Ω 0.9 - 1.3 k Ω 0.4 - 0.7 k Ω
Water temp. sensor	Resistance		at -20°C (-4°F) at 0°C (32°F) at 20°C (68°F) at 40°C (104°F) at 60°C (140°F) at 80°C (176°F)	10 - 20 k Ω 4 - 7 k Ω 2 - 3 k Ω 0.9 - 1.3 k Ω 0.4 - 0.7 k Ω 0.2 - 0.4 k Ω
Oxygen sensor	Heater resistance			5.1 - 6.3 Ω
EGR gas temp. sensor (Calif. only)	Resistance		at 50°C (112°F) at 100°C (212°F) at 150°C (302°F)	69.40 - 88.50 k Ω 11.89 - 14.37 k Ω 2.79 - 3.59 k Ω

Specifications (Cont'd)

ECU	HINT:		
	- Perform all voltage and resistance measurements with the computer connected. - Verify that the battery voltage is 11 V or above with the ignition switch ON.		
	Voltage		
	Terminals	Condition	STD voltage (V)
	BATT - E1 (E11)	—	10 - 14
	IG SW - E1 (E11)	Ignition switch ON	10 - 14
	M-REL - E1 (E11)	Ignition switch ON	10 - 14
	+B (+B1) - E1 (E11)	Ignition switch ON	10 - 14
	IDL - E2	Throttle valve open	4 - 6
	VC - E2	—	4 - 6
	VTA - E2	Ignition switch ON	Throttle valve fully closed
		Throttle valve fully open	3 - 5
		Throttle valve fully closed	0.1 - 1.0
	VC - E2	—	4 - 6
	VS - E2	Ignition switch ON	Measuring plate fully closed
		Measuring plate fully open	0.02 - 0.08
		Idling	2 - 4
		3,000 rpm	0.3 - 1.0
	THA - E2	Ignition switch ON	Intake air temperature 20°C (68°F)
	THW - E2	Ignition switch ON	Coolant temperature 80°C (176°F)
	No.10 - E01 No.20 - E02	Ignition switch ON	10 - 14
	STA - E1 (E11)	Cranking	6 - 14
	ISC1 - E1 (E11) ISC4	Ignition switch ON	10 - 14
	IGT - E1 (E11)	Idling	0.7 - 1.0
	W - E1 (E11)	No trouble ("CHECK" engine warning light off) and engine running	10 - 14
	A/C - E1 (E11)	Air conditioning ON	10 - 14
	T - E1 (E11)	Ignition switch ON	Check connector TE1 - E1 not connect
		Check connector TE1 - E1 connect	0
	NSW - E1 (E11)	Ignition switch ON	Shift position P or N range
		Ex. P or N range	10 - 14
	4WD - E1 (E11)	Ignition switch ON	Center difflock switch OFF
		Center difflock switch OFF	0
	STP - E1 (E11)	Ignition switch ON	Stop light switch ON
		Stop light switch OFF	0

Specifications (Cont'd)

ECU (Cant'd)	Resistance		
	Terminals	Condition	Resistance (Ω)
	IDL – E2	Throttle valve fully open	Infinity
		Throttle valve fully closed	Less than 2,300
	VTA – E2	Throttle valve fully open	3,500 – 10,300
		Throttle valve fully closed	300 – 6,300
	VC – E2	Air flow meter connector disconnected	4,250 – 8,250
	VC – E2	Throttle position sensor connector disconnected	200 – 400
	VS – E2	Measuring plate fully closed	200 – 600
		Measuring plate fully open	20 – 1,200
	THA – E2	Intake air temperature 20°C (68°F)	2,000 – 3,000
	THW – E2	Coolant temperature 80°C (176°F)	200 – 400
	G1 – G ⊖	—	140 – 180
	NE – G ⊖	—	140 – 180
	ISC1, ISC2 ISC3, ISC4 – + B	—	10 – 30
Fuel cut rpm	Fuel cut rpm Fuel return rpm	1,300 rpm 1,000 rpm	

Torque Specifications

Part tightened	N·m	kgf·cm	ft·lbf
Cold start injector pipe x Cold start injector	19	195	14
Cold start injector pipe x Delivery pipe	19	195	14
Cold start injector clamp bolt	12	120	9
Fuel pump bracket x Fuel tank	3.9	40	35 in.·lbf
Pressure regulator x Delivery pipe	5.4	55	48 in.·lbf
Fuel return pipe x Pressure regulator	19	195	14
Delivery pipe x Intake manifold	13	130	9
Pulsation damper x Delivery pipe	29	300	22
Air intake chamber x Intake manifold	25	250	18
Intake chamber stay mount bolt	12	120	9
EGR pipe union nut	64	650	47
Throttle body x Air intake chamber	12	120	9
ISC valve x Air intake chamber	12	120	9