

Torque Specifications

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

EFI SYSTEM Specifications

Fuel pressure regulator	Fuel pressure at No vacuum	2.6 – 3.2 kg/cm ² (37 – 46 psi, 255 – 314 kPa)
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 cc (2.9 – 3.6 cu in.) per 15 sec. 5 cc (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) STA – Ground	30 – 50 Ω 70 – 90 Ω 30 – 90 Ω	
Air flow meter	Resistance	E2 – VS E2 – VC E1 – FC E2 – THA 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)	200 – 600 Ω (Measuring plate fully closed) 20 – 1,200 Ω (Measuring plate fully open) 200 – 400 Ω Infinity (Measuring plate fully closed) 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 is ON.			
	Voltage			
	Terminals	Condition		STD voltage (V)
	BATT – E1	—		10 – 14
	IG SW – E1	Ignition switch ON		10 – 14
	M-REL – E1	Ignition switch ON		10 – 14
	+ B (+ B1) – E1	Ignition switch ON		10 – 14
	IDL – E2	Ignition switch ON	Throttle valve open	4 – 6
	VC – E2		—	4 – 6
	VTA – E2		Throttle valve fully closed	0.1 – 1.0
			Throttle valve fully open	4 – 5
	VC – E22	Ignition switch ON	—	4 – 6
	VS – E22		Measuring plate fully closed	4 – 5
			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)	1 – 3
	THW – E2	Ignition switch ON	Coolant temperature 80°C (176 °F)	0.1 – 1.0
	No.10 – E01 No.20 – E02	Ignition switch ON		10 – 14
	STA – E1	Cranking		6 – 14
	ISC1 – E1 ISC4	Ignition switch		10 – 14
	IGT – E1	Idling		0.7 – 1.0
	W – E1	No trouble ("CHECK" engine warning light off) and engine running		10 – 14
	A / C – E1	Air conditioning ON		10 – 14
	T – E1	Ignition switch ON	Check connector TE1 – E1 not connect	4 – 6
			Check connector TE1 – E1 connect	0
	NSW – E1	Ignition switch ON	Shift position P or N range	0
			Ex. P or N range	10 – 14
	4WD – E1	Ignition switch ON	4WD switch OFF	0
			4WD switch OFF	0
	STP – E1	Ignition switch ON	Stop light S / W ON	10 – 14
			Stop light S/W OFF	0

Specifications (Cont'd)

ECU (Cont'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		—	4,250 – 8,250
VC – E22		—	200 – 400
VS – E22		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
GI – G –		—	140 – 180
NE – G –		—	140 – 180
ISC1, ISC2 ISC3, ISC4 – + B		—	10 – 30
Fuel cut rpm	Fuel cut rpm		1,300 rpm
	Fuel return rpm		1,000 rpm

Torque Specifications

Part tightened	kg-cm	ft-lb	N-m
Cold start injector pipe x Cold start injector	180	13	18
Cold start injector pipe x Delivery pipe	180	13	18
Cold start injector clamp bolt	120	9	12
Fuel pump bracket x Fuel tank	35	30 in.-lb	3.4
Pressure regulator x Delivery pipe	50	43 in.-lb	4.9
Fuel return pipe x Pressure regulator	180	13	18
Delivery pipe x Intake manifold	120	9	12
Pulsation damper x Delivery pipe	300	22	29
Air intake chamber x Intake manifold	250	18	25
Intake chamber stay mount bolt	120	9	12
EGR pipe union nut	800	58	78
Throttle body x Air intake chamber	120	9	12
ISC valve x Air intake chamber	120	9	12