

# EFI SYSTEM

## Specifications

Fuel pressure regulator	Fuel pressure	at No vacuum	2.7 – 3.1 kg/cm <sup>2</sup> (38 – 44 psi, 265 – 304 kPa)
Cold start injector	Resistance		2 – 4 Ω
	Fuel leakage		One drop or less of fuel per minute
Injector	Resistance		Approx. 13.8 Ω
	Injection volume		69 – 85 cc (4.2 – 5.2 cu in.)/15 sec
	Difference volume between each injector		9 cc (0.31 cu in.) or less
	Fuel leakage		One drop or less of fuel per minute
Air flow meter	Resistance		
	E2 – VS		200 – 600 Ω (Measuring plate fully closed)
	E2 – VC		20 – 1,200 Ω (Measuring plate fully open)
	E1 – FC		200 – 400 Ω
			Infinity (Measuring plate fully closed)
			Zero (Others)
	E2 – THA	at –20°C (–4°F)	10 – 20 kΩ
		at 0°C (32°F)	4 – 7 kΩ
		at 20°C (68°F)	2 – 3 kΩ
		at 40°C (104°F)	0.9 – 1.3 kΩ
		at 60°C (140°F)	0.4 – 0.7 kΩ
Throttle position sensor	Clearance between stop screw and lever	Between terminals	Resistance
	0 mm (0 in.)	VTA – E2	0.3 – 6.3 kΩ
	0.50 mm (0.0197 in.)	IDL – E2	2.3 kΩ or less
	0.90 mm (0.0354 in.)	IDL – E2	Infinity
	Throttle valve fully opened position	VTA – E2	3.5 – 10.3 kΩ
	–	VC – E2	4.25 – 8.25 kΩ
ISC valve	Resistance	B1 – S1 or S3	10 – 30 Ω
		B2 – S2 or S4	10 – 30 Ω
Cold start injector time switch	Resistance	STA – STJ	below 15°C (59°F)
			above 30°C (86°F)
	STA – Ground		25 – 45 kΩ
			65 – 85 kΩ
			25 – 85 kΩ
Water temp. sensor	Resistance	at –20°C (–4°F)	10 – 20 kΩ
		at 0°C (32°F)	4 – 7 kΩ
		at 20°C (68°F)	2 – 3 kΩ
		at 40°C (104°F)	0.9 – 1.3 kΩ
		at 60°C (140°F)	0.4 – 0.7 kΩ
		at 80°C (176°F)	0.2 – 0.4 kΩ
Fuel pump resistor	Resistance		Approx. 0.7 Ω
Oxygen sensor	Heater resistance	at 20°C (68°F)	5.1 – 6.3 Ω
EGR gas temp. sensor	Resistance	at 50°C (122°F)	69.40 – 88.50 kΩ
		at 100°C (212°F)	11.89 – 14.37 kΩ
		at 150°C (302°F)	2.79 – 3.59 kΩ

## Specifications (Cont'd)

ECU	NOTE:		
	<ul style="list-style-type: none"> <li>Perform all voltage and resistance measurements with the computer connected.</li> <li>Verify that the battery voltage is 11 V or above when the ignition switch is ON.</li> </ul>		
Voltage			
Terminals	Condition		STD voltage (V)
<b>BATT - E1</b>	-		10 - 14
<b>IG SW - E1</b>	Ignition SW ON		10 - 14
<b>M-REL - E1</b>	Ignition SW ON		10 - 14
<b>+B (+B1) - E1</b>	Ignition SW 4N		10 - 14
<b>IDL - E2</b>	Ignition SW ON	Throttle valve open	4 - 6
<b>VC - E2</b>	Ignition SW ON	-	4 - 6
<b>VTA - E2</b>	Ignition SW ON	Throttle valve fully closed	0.1 - 1.0
		Throttle valve fully open	3.2 - 4.2
<b>VS - E2</b>	Ignition SW ON	Measuring plate fully closed	3.7 - 4.3
		Measuring plate fully open	0.2 - 0.5
	Idling		2.3 - 2.8
	3,000 rpm		1.0 - 2.0
<b>No.10 No.20 - E01 No.30 - E02</b>	Ignition SW ON		10 - 14
<b>THA - E2</b>	Ignition SW ON	Intake air temperature 20°C (68°F)	1 - 3
<b>THW - E2</b>	Ignition SW ON	Coolant temperature 80°C (176°F)	0.1 - 1.0
<b>STA - E1</b>	Cranking		6 - 14
<b>IGT - E1</b>	Ignition SW ON		0.7 - 1.0
<b>ISC1 ISC4 - E1</b>	Ignition SW ON		9 - 14
<b>W - E1</b>	No trouble ("CHECK" engine warning light off) and engine running		8 - 14
<b>A/C - E1</b>	Ignition SW ON	Air conditioning ON	10 - 14
<b>TE1 - E1</b>	Ignition SW ON	Check connector TE 1 - E1 not connect	4 - 6
		Check connector TE 1 - E1 connect	0
<b>NSW - E1</b>	Ignition SW ON	Shift position P or N range	0
		Ex. P or N range	10 - 14

## Specifications (Cont'd)

ECU (cont'd)	Resistance		
	Terminals	Condition	Resistance ( $\Omega$ )
IDL - E2		Throttle valve fully open	Infinity
		Throttle valve fully closed	2,300 or less
VTA - E2		Throttle valve fully open	3,500 - 10,300
		Throttle valve fully closed	200 - 1,200
VC - E2		-	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, G2 - G ⊖		-	140 - 180
NE - G ⊖		-	180 - 220
ISC1, ISC2 ISC3, ISC4 - +B1		-	10 - 30
Fuel cut rpm	w/ Vehicle speed 0 km/h and coolant temp. 80°C (176°F)		
	Fuel cut rpm		1,800 rpm
	Fuel return rpm		1,200 rpm

## Torque Specifications

Part tightened	kg-cm	ft-lb	N·m
Fuel line			
Union bolt type	300	22	29
Flare nut type	310	22	30
Fuel pump x Fuel tank	30	26 in.-lb	2.9
Cold start injector x Air intake chamber	55	48 in.-lb	5.4
Cold start injector tube x Cold start injector	115	8	11
Cold start injector tube x Delivery pipe	320	23	31
Fuel pressure regulator x Delivery pipe	250	18	25
No.2 fuel pipe x Delivery pipe	250	18	25
Delivery pipe x Cylinder head	180	13	18
No.1 fuel pipe x Delivery pipe	320	23	31
No. i fuel pipe x Fuel filter	300	22	29
Fuel sender gauge x Fuel tank	30	26 in.-lb	2.9
Fuel tank bracket x Body	190	14	19
Fuel tank band x Body	400	29	39
Throttle body x Air intake chamber	130	9	13
ISC valve x Air intake chamber	130	9	13