

SERVICE SPECIFICATIONS

EG02A-08

SERVICE DATA

Fuel pressure regulator	Fuel pressure at no vacuum	265 – 304 kPa (2.7 – 3.1 kgf/Cm ² , 38 – 44 psi)
Fuel pump	Resistance	0.2 – 3.0 Ω at 20° C (68°F)
Injector	Resistance Injection volume Difference between each cylinder Fuel leakage	12 – 16 Ω at 20° C (68°F) 66 – 82 cm ³ (4.0 – 5.0 cu in.) per 15 seconds 5 cm ³ (0.3 cu in.) or less One drop or less per minute
VAF meter	Resistance Terminals VS – E2 VS – E2 VC – E2 THA – E2 THA – E2 THA – E2 THA – E2 THA – E2	Resistance 200 – 600Ω (Measuring plate fully closed) 20 – 1,200Ω (Measuring plate fully open) 200 – 400Ω 10 – 20 kΩ at –20° C (–4° F) 4 – 7 kΩ at 0° C (32° F) 2 – 3 kΩ at 20° C (68° F) 0.9 – 1.3 kΩ at 40° C (104° F) 0.4 – 0.7 kΩ at 60° C (140° F)
Throttle body	Throttle valve fully closed angle Dashpot setting speed Throttle opener setting speed	6° 2,200±300 rpm 700 – 1,000 rpm
TP sensor	Clearance between stop screw and lever Terminals	Resistance
	0 mm (0 in.) 0.50 mm (0.020 in.) 0.75 mm (0.030 in.) Throttle valve fully open VTA – E2 IDL – E2 IDL – E2 VTA – E2 VC – E2	0.2 – 5.7 kΩ 2.3 kΩ or less Infinity 2.0 – 10.2 kΩ 2.5 – 5.9 kΩ
IAC valve	Resistance B1 – S1, S3 B2 – S2, S4	10 – 30Ω at 20° C (68° F) 10 – 30Ω at 20° C (68° F)
ECT sensor	Resistance	10 – 20 kΩ at –20° C (–4° F) 4 – 7 kΩ at 0° C (32° F) 2 – 3 kΩ at 20° C (68° F) 0.9 – 1.3 kΩ at 40° C (104° F) 0.4 – 0.7 kΩ at 60° C (140° F) 0.2 – 0.4 kΩ at 80° C (176° F)
Fuel pump resistor	Resistance (Cold)	ApproX. 0.73Ω at 200C (680F)
VSV for EVAP	Resistance	30 – 33Ω at 20° C (68° F)
VSV for fuel pressure control	Resistance	37 – 44 Ω at 20° C (68° F)
VSV for EG R	Resistance	30 – 34 Ω at 20° C (68° F)
vsv for PAIR	Resistance	37 – 44Ω at 20° C (68° F)
EGR gas temp. sensor	Resistance	69 – 89 kΩ at 50° C (122° F) 11 – 15 kΩ at 1000C (2120F) 2 – 4 kΩ at 150° C (3020F)
Heated oxygen sensor	Heater coil resistance	5.0 – 6.5Ω at 20° C (68° F)

ECM	Condition	Terminals	Voltage
		BATT - E1	9 - 14V
	IG SW ON	IG SW - E1	9 - 14V
	IG SW ON	M-REL - E1	9 - 14V
	IG SW ON	+B, +B1 - E1	9 - 14V
	IG SW ON - Throttle valve open	IDL - E2	9 - 14V
	IG SW ON	VCC - E2	4.5 - 5.5 V
	IG SW ON - Throttle valve fully closed	VTA - E2	0.3 - 0.8 v
	(Throttle opener must be cancelled first)		
	IG SW ON - Throttle valve fully open	VTA - E2	3.2 - 4.9 V
	IG SW ON - Measuring plate fully closed	VS - E2	3.5 - 4.5 V
	IG SW ON - Measuring plate fully open	VS - E2	0.2 - 0.5 V
	Idling	VS - E2	1.2 - 2.4 V
	3,000 rpm	VS - E2	0.8 - 1.3 V
	IG SW ON	#10 N #60 - E01	9 - 14V
	IG SW ON	#10 - #60 - E02	9 - 14V
	IG SW ON - IAT 20° C (68° F)	THA - E2	0.5 - 3.4 V
	IG SW ON - ECT 80-C (176° F)	THW - E2	0.2 - 1.0 V
	Cranking	STA - E1	6 V or more
	Idling	IGT - E1	Pulse generation
	IG SW ON	ISC1~ ISC4 - E1	9 - 14V
	No trouble (MIL light off) and engine running		
		W-E1	9 - 14V
	IG SW ON	IGF - E1	2 V or less
	Idling	IGF - E1	Pulse generation
	Idling	G1, G2 - G(-)	Pulse generation
	Idling	NE - G(-)	Pulse generation
	Idling	KNK1, KNK2 - E1	Pulse generation
	Maintain engine speed at 2,500 rpm for 120 seconds after warming up then return to idling		
		VF1, VF2 - E1	1.8 - 3.2 V
	IG SW ON - Shift position P or N	NSW - E1	3 V or less
	IG SW ON - Ex. shift position P or N	NSW - E1	9 - 14V
	IG SW ON - Rotate driving wheel slowly		Pulse generation
		SPD - E1	
	IGSWON		
	- DLC1 TE1 - E1 not connected	TE1, TE2 - E1	9 - 14V
	IG SW ON		
	- DLC1 TE1 - E1 connected	TE1, TE2 - E1	1.5 V or less
	IG SW 0 N - A/C ON	A/C - E1	7.5 - 14 V
	IG SW 0 N - A/C OFF	A/C - E1	1.5 V or less
	Stop light SW ON (Brake pedal depressed)	STP - E1	7.5 - 14 V
	Stop light SW OFF	STP - E1	1.5 V or less

ECM	Condition	Terminals	Resistance
	Throttle valve open	IDL - E2	Infinity
	Throttle valve fully closed (Throttle opener must be cancelled first)	IDL - E2	2,300Ω or less
	Throttle valve fully open	VTA - E2	2,000 - 10,200Ω
	Throttle valve fully closed (Throttle opener must be cancelled first)	VTA - E2	200 - 5,700Ω
	-	VCC - E2	2,500 - 5,900Ω
	Measuring plate fully closed	VS - E2	200 - 600Ω
	Measuring plate fully open	VS - E2	20 - 1,200Ω
	IAT 20°C (68°F)	THA - E2	2,000 - 3,000 Ω
	ECT 80° C (176° F)	THW - E2	200 - 400Ω
	Cold (-10° C (14° F) to 50° C (122° F))	G1, G2 - G(-)	185-275Ω
	Hot (50° C (122° F) to 100° C (212° F))	G1, G2 - G(-)	240-325Ω
	Cold (-10° C (14° F) to 50° C (122° F))	NE - G(-)	185 - 275Ω
	Hot (50° C (122° F) to 100° C (212° F))	NE - G(-)	240-325Ω
	-	+ B + B1 - ISC 1 ~ ISC4	10-300
Fuel cut RPM	Fuel return rpm		1,200 rpm

TORQUE SPECIFICATIONS

Part tightened	N-m	kgf-cm	fft-lbf
Fuel line (Union bolt type)	29	300	22
Fuel line (Flare nut type)	30	310	22
Fuel pump bracket assembly x Fuel tank	3.9	40	35 in. lbf
Second seat x Body	39	400	29
Drain plug x Fuel tank	6.5	65	57 in. lbf
Fuel tank breather tube x Fuel tank	1.5	15	13 in. lbf
Fuel tank filler pipe x Fuel tank	3.5	35	31 in. lbf
Fuel tank band x Body	39	400	29
Fuel pressure regulator x Delivery pipe	25	250	18
Fuel inlet hose x Fuel filter	29	300	22
Delivery pipe x Intake manifold	21	210	15
No.1 fuel pipe x Delivery pipe (Union bolt)	29	300	22
No.1 fuel pipe x Delivery pipe (Bolt)	20	200	14
No.1 fuel pipe x Fuel filter	29	300	22
Fuel return pipe x Intake manifold	20	200	14
Air intake chamber x Intake manifold	21	210	15
PS reservoir tank x Air intake chamber	18	185	13
Oil dipstick guide x Intake manifold	20	200	14
Oil dipstick guide x No.1 oil pan	20	200	14
Heater inlet pipe x Air intake chamber	20	200	14
EGR valve x Air intake chamber (Stud bolt)	10	105	8
EGR valve x Air intake chamber (Nut)	19	195	14
EGR valve x EGR pipe	64	650	47
VAF meter x Bracket	4.9	50	43 in. lbf
VAF meter x Air cleaner cap	10	100	7
Throttle body x Air intake chamber	21	210	15
ECT sensor x Cylinder head	20	200	14
Knock sensor x Cylinder block	44	450	33