1ZZ-FE ENGINE CONTROL SYSTEM

SERVICE DATA

Intake air flow meter sub-assembly		
Resistance 4 (THA) - 5 (E2)	Standard	13.6 to 18.4 kΩ at -20°C (-4°F) 2.21 to 2.69 kΩ at 20°C (68°F) 0.493 to 0.667 kΩ at 60°C (140°F)
Camshaft timing oil control valve assembly		
Resistance 1 (+B) - 2 (GND)		6.9 to 7.9 Ω at 20°C (68°F)
Throttle body assembly		
Resistance	1 (M-) - 2 (M+)	0.3 to 100 Ω at 20°C (68°F)
	3 (E2) - 5 (VC)	2.0 to 4.0 kΩ at 20°C (68°F)
Accelerator pedal assembly		
Resistance	3 (EP1) - 6 (VCP1)	1.5 to 6.0 kΩ
	1 (EP2) - 4 (VCP2)	1.5 to 6.0 kΩ
E.F.I. Engine coolant temperature sensor		
Resistance	1 (E2) - 2 (THW)	2.32 to 2.59 kΩ at 20°C (68°F)
	1 (E2) - 2 (THW)	0.310 to 0.326 kΩ at 80°C (176°F)
Knock control sensor		
Resistance		120 to 280 kΩ at 20°C (68°F)
E.F.I. Circuit opening relay assembly		
Resistance (3 - 5)	Standard	10 kΩ or higher Below 1 Ω (Apply battery voltage to terminal 1 and 2)
E.F.I. ECU relay		
Resistance (3 - 5)	Standard	10 kΩ or higher Below 1 Ω (Apply battery voltage to terminal 1 and 2)

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TORQUE SPECIFICATIONS

Part Tightened	N*m	kgf*cm	ft*lbf
Throttle body assembly x Intake manifold	9.0	90	80 in.*lbf
Air cleaner hose x Throttle body assembly	2.0	20	18 in.*lbf
Battery negative terminal x Battery	5.4	55	48 in.*lbf
Cylinder head cover No. 2 x Cylinder head sub-assembly	7.0	71	62 in.*lbf
Accelerator pedal assembly x Body	5.4	55	48 in.*lbf
ECM Bracket x ECM	3.2	33	28 in.*lbf
ECM Bracket No. 2 x ECM	3.2	33	28 in.*lbf
ECM Bracket No. 3 x ECM	3.2	33	28 in.*lbf
ECM x Blower assembly	3.0	31	27 in.*lbf

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