

2TR-FE ENGINE CONTROL SYSTEM

SERVICE DATA

Intake air flow meter sub-assembly	Resistance 4 (THA) - 5 (E2)	Standard	12.5 to 16.9 k Ω at -20°C (-4°F)
			2.19 to 2.67 k Ω at 20°C (68°F)
			0.50 to 0.68 k Ω at 60°C (140°F)
Camshaft timing oil control valve assembly	Resistance 1 (+B) - 2 (GND)	Standard	6.9 to 7.9 k Ω at 20°C (68°F)
Throttle with motor 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 k Ω at 20°C (68°F)
Accelerator pedal rod assembly	Resistance	5 (EP1) - 4 (VCP1)	1 M Ω or higher
		2 (EP2) - 1 (VCP2)	1 M Ω or higher
E.F.I. Engine coolant temperature sensor	Resistance	1 (E2) - 2 (THW)	2.23 to 2.59 k Ω at 20°C (68°F)
		1 (E2) - 2 (THW)	0.310 to 0.326 k Ω at 80°C (176°F)
Knock sensor	Resistance 1 (Ground) - 2 (Output)	Standard	120 to 280 k Ω at 20°C (68°F)
E.F.I. Circuit opening relay assembly	Resistance (3 - 5)	Standard	10 k Ω or higher
			Below 1 Ω (Apply battery voltage to terminal 1 and 2)
E.F.I. Relay	Resistance (3 - 5)	Standard	10 k Ω or higher
			Below 1 Ω (Apply battery voltage to terminal 1 and 2)

TORQUE SPECIFICATIONS

Part Tightened	N*m	kgf*cm	ft.*lbf
Throttle body assembly x Intake manifold	9	92	80 in.*lbf
Intake air connector x Cylinder head cover sub-assembly	8	82	71 in.*lbf
Intake air connector x Throttle body assembly	5	51	44 in.*lbf
Intake air connector x Air cleaner hose	5	51	44 in.*lbf
Battery x Battery negative terminal	3.9	40	35 in.*lbf
Knock control sensor x Cylinder block sub-assembly	20	204	15
Intake manifold x Cylinder head sub-assembly	25	255	18
Intake manifold x Cylinder block sub-assembly	25	255	18
Intake manifold x Wire harness clamp bracket	8.2	84	73 in.*lbf
Accelerator pedal rod assembly x Body	5	51	44 in.*lbf
ECM x ECM bracket	3	32	28 in.*lbf
ECM x ECM bracket No. 2	3	32	28 in.*lbf
ECM x Blower assembly	5	51	44 in.*lbf

SS