ENGINE CONTROL SYSTEM

030GC–01

SERVICE DATA

1AZ–FE

Throttle body		
	Standard throttle valve opening percentage	60 % or more
Accelerator pedal position sensor		
	Standard voltage	0.6 – 1.0 V
Camshaft timing oil control valve assy		
Standard	VVT system is OFF (OCV is OFF)	Normal engine speed
	VVT system is ON (OCV is ON)	Rough idle or engine stalled
Intake air flow meter sub–assy		
Resistance	at –20°C(–4°F)	13.6 – 18.4 kΩ
	at 20°C(68°F)	2.21 – 2.69 kΩ
	at 60°C(140°F)	0.493 – 0.667 kΩ
Camshaft timing oil control valve assy		
Resistance	at 20 °C (68 °F)	6.9 – 7.9 Ω
Accelerator pedal assy (LHD)		
Resistance	2 (VPA2) – 3 (EP1)	5.0 kΩ or less
	5 (VPA1) – 1 (EP2)	5.0 kΩ or less
	6 (VCP1) – 3 (EP1)	2.25 – 4.75 kΩ
	4 (VCP2) – 1 (EP2)	2.25 – 4.75 kΩ
Accelerator pedal assy (RHD)		
Resistance	2 (VPA2) – 1 (EP1)	5.0 kΩ or less
	5 (VPA1) – 3 (EP2)	5.0 kΩ or less
	4 (VCP1) – 1 (EP1)	2.25 – 4.75 kΩ
	6 (VCP2) – 3 (EP2)	2.25 – 4.75 kΩ
Throttle body assy		
	3 (VC) – 6 (GND)	1.2 – 3.2 kΩ at 20 °C (68 °F)
	2 (M+) – 1 (M–)	0.3 – 100 kΩ at 20 °C (68 °F)
E.F.I. Engine coolant temperature sensor		
Resistance	Approx. 20°C (68°F)	2.29 – 2.6 kΩ
	Approx. 80°C (176°F)	0.300 – 0.327 kΩ
E.F.I. Circuit opening relay assy		
Specified condition	1 – 2	Continuity
	3 – 5	No continuity

2AZ–FE

Throttle body		
	Standard throttle valve opening percentage	60 % or more
Accelerator pedal position sensor		
	Standard voltage	0.6 – 1.0 V
Camshaft timing oil control valve assy		
Standard	VVT system is OFF (OCV is OFF)	Normal engine speed
	VVT system is ON (OCV is ON)	Rough idle or engine stalled
Intake air flow meter sub–assy		
Resistance	at –20°C(–4°F)	13.6 – 18.4 kΩ
	at 20°C(68°F)	2.21 – 2.69 kΩ
	at 60°C(140°F)	0.493 – 0.667 kΩ
Camshaft timing oil control valve assy		
Resistance	at 20 °C (68 °F)	6.9 – 7.9 Ω
Accelerator pedal assy (LHD)		
Resistance	2 (VPA2) – 3 (EP1)	5.0 kΩ or less
	5 (VPA1) – 1 (EP2)	5.0 kΩ or less
	6 (VCP1) – 3 (EP1)	2.25 – 4.75 kΩ
	4 (VCP2) – 1 (EP2)	2.25 – 4.75 kΩ

Accelerator pedal assy (RHD)		
Resistance	2 (VPA2) – 1 (EP1)	5.0 kΩ or less
	5 (VPA1) – 3 (EP2)	5.0 kΩ or less
	4 (VCP1) – 1 (EP1)	2.25 – 4.75 kΩ
	6 (VCP2) – 3 (EP2)	2.25 – 4.75 kΩ
Throttle body assy		
	3 (VC) – 6 (GND)	1.2 – 3.2 kΩ at 20 °C (68 °F)
	2 (M+) – 1 (M–)	0.3 – 100 kΩ at 20 °C (68 °F)
E.F.I. Engine coolant temperature sensor		
Resistance	Approx. 20°C (68°F)	2.29 – 2.6 kΩ
	Approx. 80°C (176°F)	0.300 – 0.327 kΩ
E.F.I. Circuit opening relay assy		
Specified condition	1 – 2	Continuity
	3 – 5	No continuity

1MZ–FE

Throttle body		
	Standard throttle valve opening percentage	60 % or more
Accelerator pedal position sensor		
	Standard voltage	0.6 – 1.0 V
Intake air flow meter assy		
Resistance	at –20°C(–4°F)	13.6 – 18.4 kΩ
	at 20°C(68°F)	2.21 – 2.69 kΩ
	at 60°C(140°F)	0.493 – 0.667 kΩ
Accelerator pedal assy (LHD)		
Resistance	2 (VPA2) – 3 (EP1)	5.0 kΩ or less
	5 (VPA1) – 1 (EP2)	5.0 kΩ or less
	6 (VCP1) – 3 (EP1)	2.25 – 4.75 kΩ
	4 (VCP2) – 1 (EP2)	2.25 – 4.75 kΩ
Accelerator pedal assy (RHD)		
Resistance	2 (VPA2) – 1 (EP1)	5.0 kΩ or less
	5 (VPA1) – 3 (EP2)	5.0 kΩ or less
	4 (VCP1) – 1 (EP1)	2.25 – 4.75 kΩ
	6 (VCP2) – 3 (EP2)	2.25 – 4.75 kΩ
Throttle body assy		
	M+ – M–	0.3 – 100 kΩ at 20 °C (68 °F)
Throttle position sensor		
Resistance	VC – E2	1.2 – 3.2 kΩ
Coolant temperature sensor		
Resistance	Approx. 20°C (68°F)	2.32 – 2.59 kΩ
	Approx. 80°C (176°F)	0.310 – 0.326 kΩ