

GROUP 16

ENGINE ELECTRICAL

GLOW SYSTEM

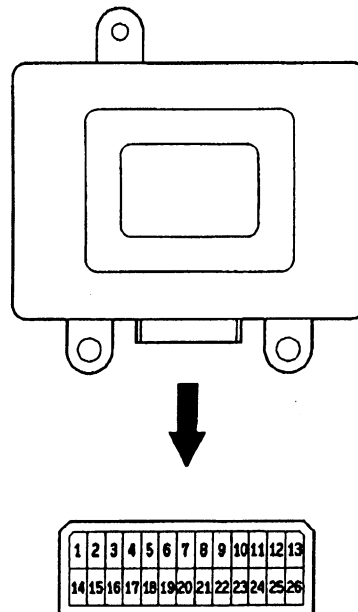
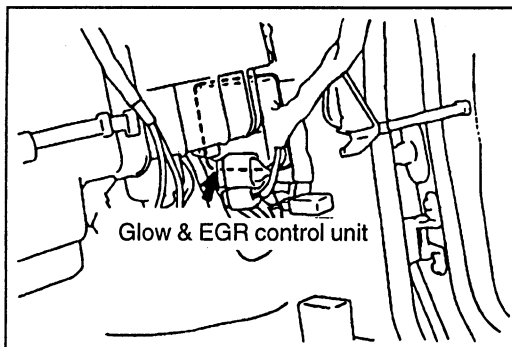
GENERAL

OUTLINE OF CHANGE(S)

The engine with the exhaust gas recirculation (EGR) system has been newly used. Therefore, procedure to check the glow & EGR control unit has been added.

ON-VEHICLE SERVICE

GLOW & EGR CONTROL UNIT CHECK



1	2	3	4	5	6	7	8	9	10	11	12	13
14	15	16	17	18	19	20	21	22	23	24	25	26

DEN0294

1. Measure voltage at the control unit terminal.

NOTE

1. Check with the control unit connector connected.
2. When measuring the voltage, connect the control unit terminal (26) (terminal (10) for vehicles without EGR) to the earth.

Terminal Voltage Reference Table

Inspection terminal	Inspection item	Inspection condition		Standard value
5	Engine coolant temperature sensor (Engine coolant temperature detection)	Ignition switch “ON” to “off”	Engine coolant temperature: – 20°C	4.3 – 4.5 V
			Engine coolant temperature: 0°C	3.7 – 3.9 V
			Engine coolant temperature: 20°C	2.8 – 3.0 V
			Engine coolant temperature: 40°C	1.9 – 2.1 V
			Engine coolant temperature: 80°C	0.5 – 0.7 V
12	Ignition switch (power supply)	Ignition switch “off” to “START”		8 V or more
14	Glow plug relay (glow time control)	Ignition switch “off” to “ON” Engine coolant temperature: 40°C or less (Pre-glow function inspection)		9 – 12 V 0 – 0.5 V after approx. 8 sec. (when engine coolant temperature is 20°C)
17	Glow indicator lamp	Ignition switch “off” to “ON” Engine coolant temperature: 40°C or less		0 – 1 V 11 – 13 V after approx. 1 sec. (when engine coolant temperature is 20°C)
23	Alternator charging signal (“L” terminal)	Ignition switch “off” to “ON”		1 – 4 V
		Engine is idling		11 V or more
26	Earth	–		–

Glow control unit harness-side connector as seen from the terminal side

13	12	11	10	9	8	7	6	5	4	3	2	1
26	25	24	23	22	21	20	19	18	17	16	15	14

DEM0026

2. Remove the control unit connector and check continuity between the harness-side connector terminals.

Inspection terminal	Inspection item	Continuity (resistance value)
14 – 26	Glow plug relay	Continuity (approx. 3 Ω)