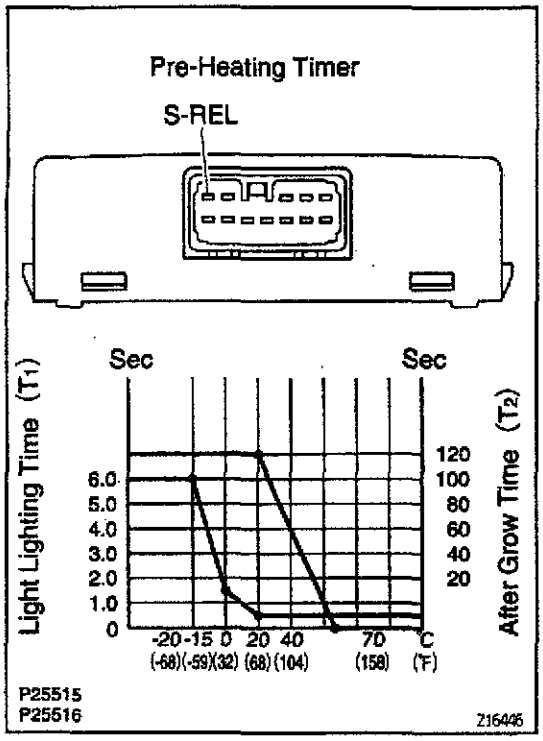


PRE–HEATING SYSTEM (Super Glow Type)

ST08Q–07

On–Vehicle Inspection

1. **INSPECT LIGHTING TIME OF GLOW INDICATOR LIGHT**

   Turn the ignition switch ON, and measure the lighting time.

   Light lighting time:

   Refer to the chart graph

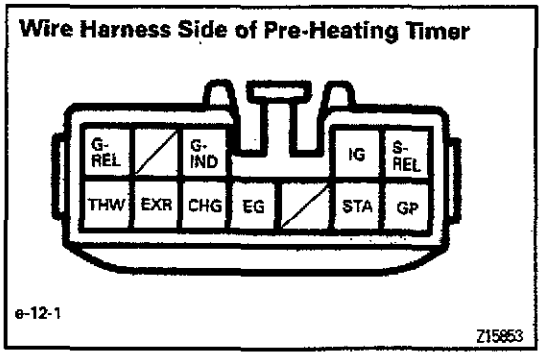
2. **INSPECT AFTER GLOW**

   Turn the ignition switch ON, and measure the time battery voltage is applied to terminal S–REL of the pre–heating timer.

   After glow time:

   Refer to the chart graph

S1



ST0AV–02

Pre–Heating Timer

PRE–HEATING TIMER INSPECTION

1. **DISCONNECT PRE–HEATING TIMER CONNECTOR**

   LOCATION: See relay locations in Electrical Wiring Diagram.

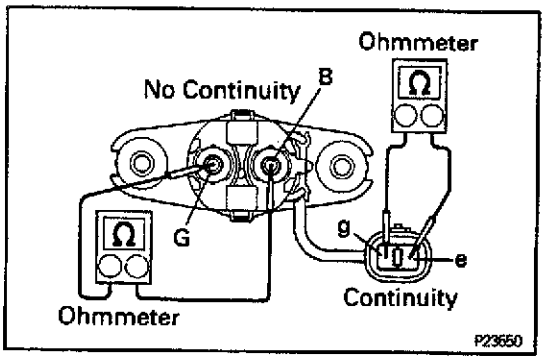
2. **INSPECT PRE–HEATING TIMER CIRCUIT**

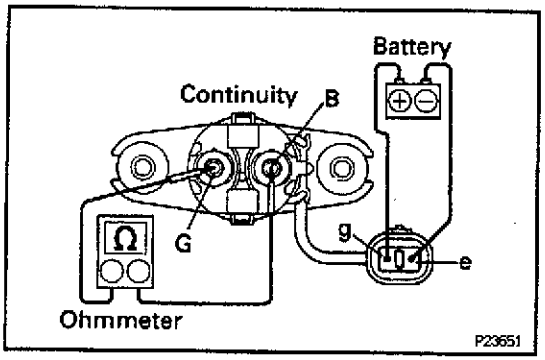
   Check the connector on the wire harness side as shown in these chart:

Check for	Tester connection	Condition	Specified value
Voltage	G-IND – Ground	Ignition switch OFF	No voltage
		Ignition switch ON	Battery voltage
Voltage	IG – Ground	Ignition switch OFF	No voltage
		Ignition switch ON	Battery voltage
Voltage	STA – Ground	Ignition switch OFF	No voltage
		Ignition switch START	Battery voltage
Continuity	G-REL, S-REL – Ground	–	Continuity
Continuity	GP – Ground	–	Continuity
Continuity	THW – Ground	–	Continuity
Continuity	EG – Ground	–	Continuity

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3. **RECONNECT PRE–HEATING TIMER CONNECTOR**





No.1 Glow Plug Relay

NO.1 GLOW PLUG RELAY INSPECTION

1. **REMOVE NO.1 GLOW PLUG RELAY**
   LOCATION: See relay locations in Electrical Wiring Diagram.
2. **INSPECT NO.1 GLOW PLUG RELAY**

A. Inspect relay continuity

(a) Using an ohmmeter, check that there is continuity between terminals e and g.

(b) Check that there is no continuity between terminals B and G.

If continuity is not as specified, replace the relay.

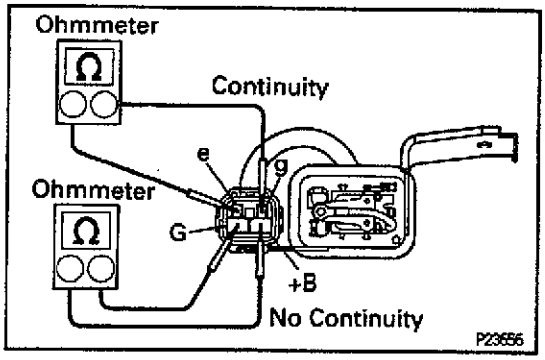
B. Inspect relay operation

(a) Apply battery voltage across terminals e and g.

(b) Using an ohmmeter, check that there is continuity between terminals B and G.

If operation is not as specified, replace the relay.

3. **REINSTALL NO.1 GLOW PLUG RELAY**



No.2 Glow Plug Relay

NO.2 GLOW PLUG RELAY INSPECTION

1. **REMOVE NO.2 GLOW PLUG RELAY**
   LOCATION: See relay locations in Electrical Wiring Diagram.
2. **INSPECT NO.2 GLOW PLUG RELAY**

A. Inspect relay continuity

(a) Using an ohmmeter, check that there is continuity between terminals e and g.

(b) Check that there is no continuity between terminals B and G.

If continuity is not as specified, replace the relay.

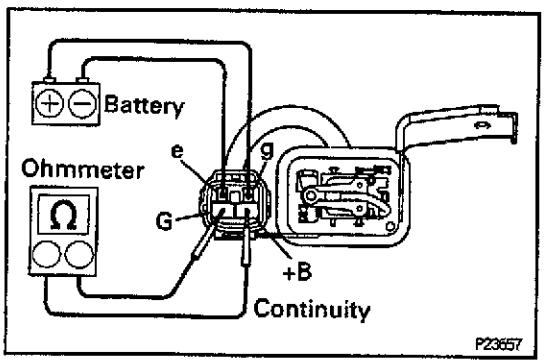
B. Inspect relay operation

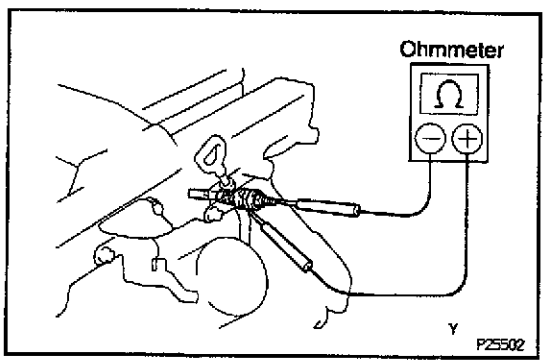
(a) Apply battery voltage across terminals e and g.

(b) Using an ohmmeter, check that there is continuity between terminals B and G.

If operation is not as specified, replace the relay.

3. **REINSTALL NO.2 GLOW PLUG RELAY**





Glow Plug Resistor

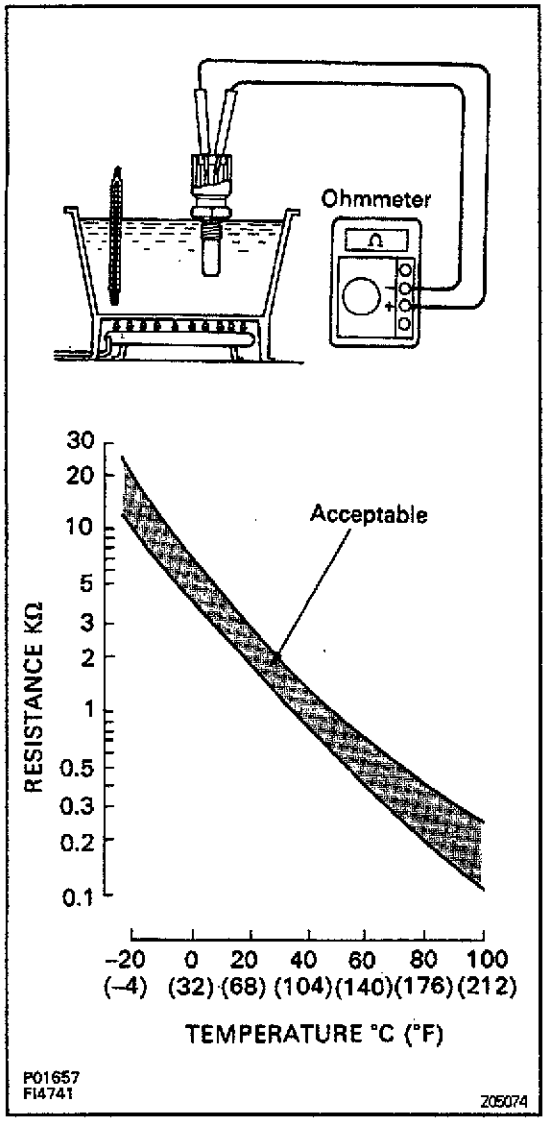
GLOW PLUG RESISTOR INSPECTION

INSPECT GLOW PLUG RESISTOR

Using an ohmmeter, check that there is continuity between the glow plug resistor terminal and ground.

If there is no continuity, replace the glow plug resistor.

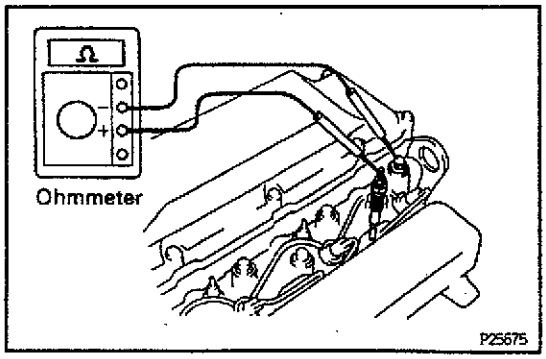
Torque: 34 N·m (350 kgf·cm, 25 ft·lbf)



Water Temperature Sensor

WATER TEMPERATURE SENSOR INSPECTION

1. **REMOVE WATER TEMPERATURE SENSOR**
   LOCATION: In water outlet housing.
2. **INSPECT WATER TEMPERATURE SENSOR**
   Using an ohmmeter, measure the resistance between the terminals.
   Resistance:
   Refer to the chart graph
   If the resistance is not as specified, replace the sensor.
3. **REINSTALL WATER TEMPERATURE SENSOR**
   Torque: 17.5 N·m (178 kgf·cm, 13 ft·lbf)



Glow Plugs

GLOW PLUGS INSPECTION

INSPECT GLOW PLUGS

Using an ohmmeter, check that there is continuity between the glow plug terminal and ground.
If there is no continuity, replace the glow plug.
Torque: 12.7 N·m (130 kgf·cm, 9.4 ft·lbf)
NOTICE:

- **Be careful not to damage the glow plug pipes as it could cause an open circuit or shorten life of the glow plugs.**
- **Avoid getting oil and gasoline on the glow plug when cleaning.**
- **During inspection, be sure to wipe any oil off the terminal and bakelite washer with a dry cloth.**
- **Be careful not to apply more than 11 V (12 V type) or 22 V (24 V type) to the glow plug as it could cause an open circuit.**