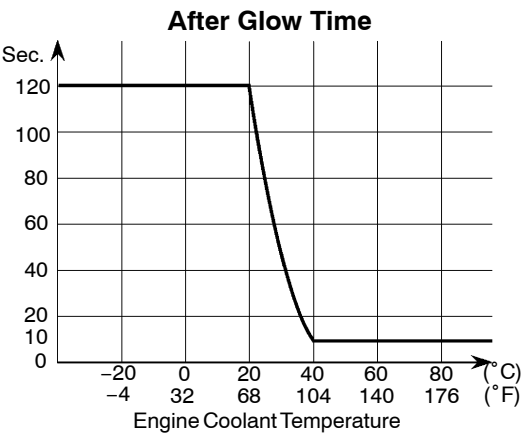
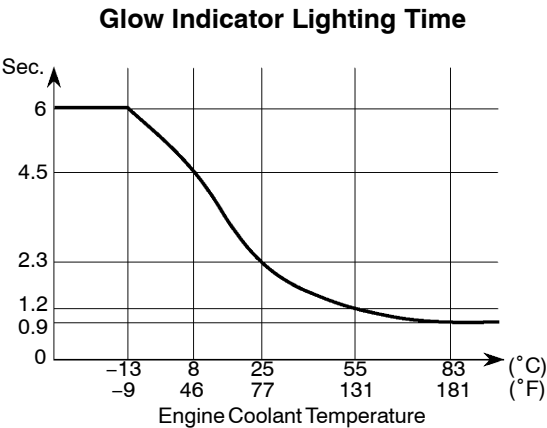


Pre-Heating Control Circuit

CIRCUIT DESCRIPTION

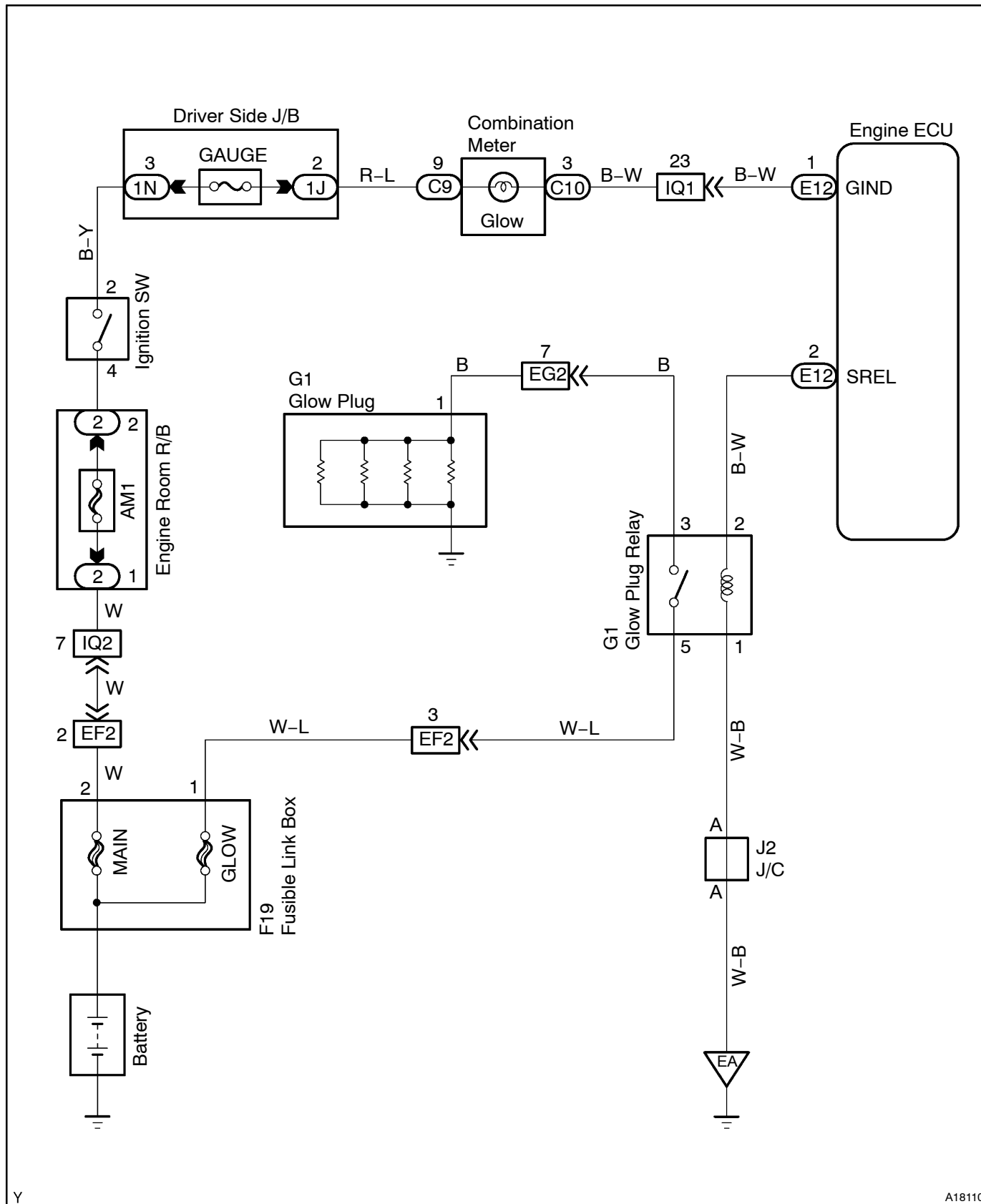
When the ignition switch turns ON, the engine ECU calculates the glow indicator lighting time/heating corresponding to the coolant temperature at that time and turns on the glow indicator light/glow plug relay. As the ceramics are used for a flow plug material, the current control is not performed.



Y

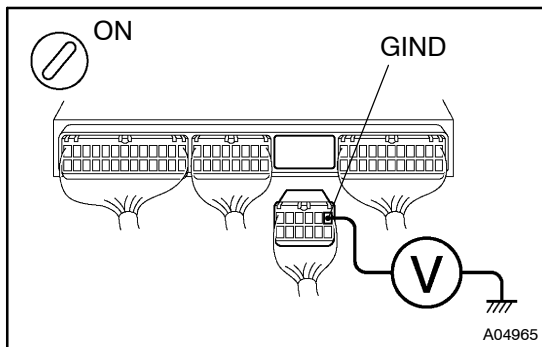
A18109

WIRING DIAGRAM



INSPECTION PROCEDURE**1 Check glow indicator.****OK:**

The glow indicator lights up for 0.5 seconds or more when turning the ignition switch ON.

OK**Go to step 5.****NG****2 Check voltage between terminal GIND of engine ECU connector and body ground.****PREPARATION:**

- (a) Remove the glove compartment door.
- (b) Disconnect the connector of the engine ECU.
- (c) Turn the ignition switch ON.

CHECK:

Measure the voltage between terminal GIND of the engine ECU connector and the body ground.

OK:**Voltage: 9 – 14 V****OK****Check and replace engine ECU (See page IN-19).****NG****3 Check GLOW fuse.****NG****Check for short in all the harness and components connected to GLOW fuse.****OK**

4 Check glow indicator light bulb.

NG

Replace bulb.

OK

Check for open in harness and connector between combination meter and engine ECU, combination meter and GLOW fuse (See page N-19).

5 Check glow indicator lighting time and after glow time (See Pub. No. RM520E on ST-6).

NG

Check and replace engine ECU (See page N-19).

OK

6 Are there any DTC being output?

YES

Go to relevant DTC chart.

NO

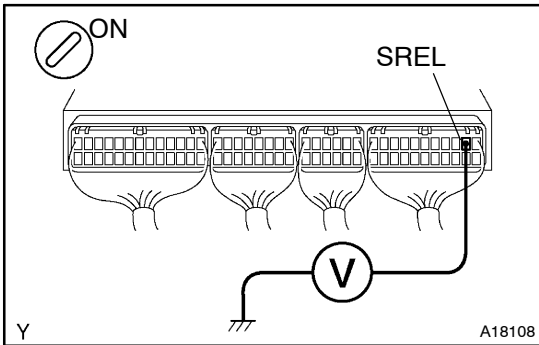
7 Check glow plug relay (See Pub. No. RM520E on page ST-50).

NG

Replace glow plug relay.

OK

8 Check voltage between terminal SREL of engine ECU and body ground at cranking.



PREPARATION:

- (a) Remove the glove compartment door.
- (b) Disconnect the engine ECU connector.
- (c) Turn the ignition switch to START.

CHECK:

Measure the voltage between terminal SREL and the body ground at cranking.

OK:

Voltage: 9 – 14 V

NG

Check and replace engine ECU
(See page IN-19).

OK

9 Check for open and short in harness and connector between glow plug relay and engine ECU, glow plug relay and body ground (See page IN-19).

NG

Repair harness or connector.

OK

10 Check resistance of glow plug (See Pub. No. RM520E on page ST-10).

NG

Replace glow plug.

OK

11

Check glow plug installation.

NG

Tighten glow plug.

OK

12

Check for open in harness and connector between glow plug relay and glow plug (See page IN-19).

NG

Repair harness or connector.

OK

Proceed to next circuit inspection shown on problem symptoms table (See page DI-18).