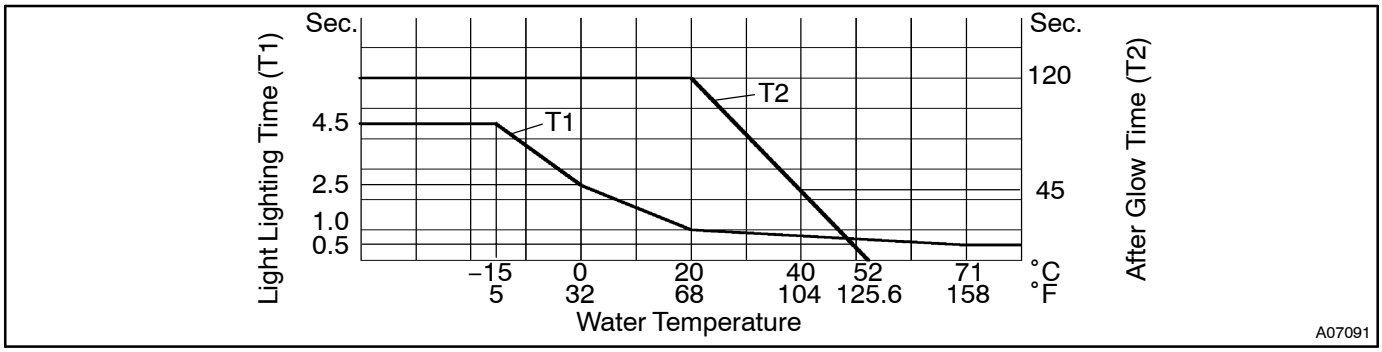
DI3UO–02

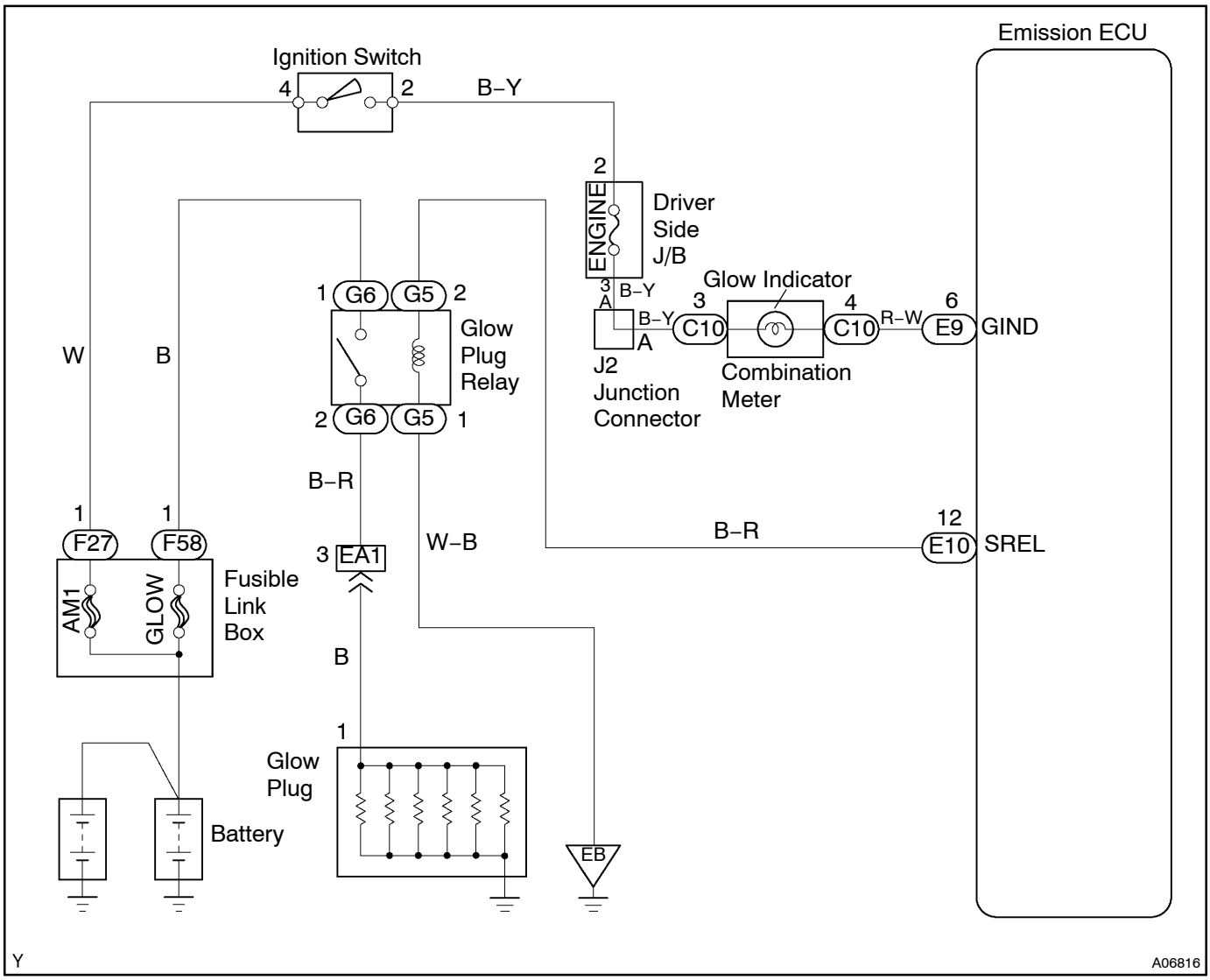
Pre–Heating Control Circuit

CIRCUIT DESCRIPTION

When the ignition switch turns ON, the emission 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 is used for a glow plug material, the current control is not performed.



WIRING DIAGRAM



INSPECTION PROCEDURE

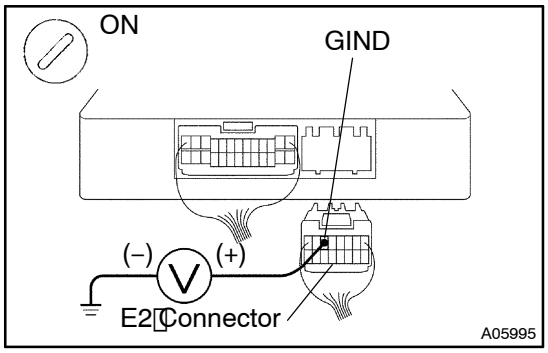
1	**Does glow indicator light up?**

PREPARATION:
Turn ignition switch ON.
CHECK:
Does the glow indicator light up?
OK:
The glow indicator light up for 0.5 sec. or more.

OK → **Go to step 5.**

NG

2	**Check voltage between terminal GIND of emission ECU connector and body ground.**

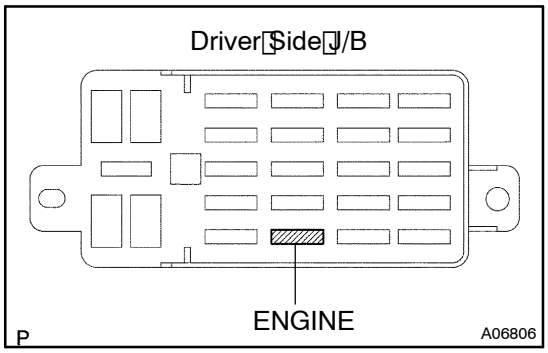


PREPARATION:
(a) Disconnect the emission ECU from the body panel.
(See page EC–10)
(b) Disconnect the "E2" connector of emission ECU.
(c) Turn ignition switch ON.
CHECK:
Measure voltage between terminal GIND of emission ECU connector and body ground.
OK:
Voltage: 18 – 28 V

OK → **Check and replace emission ECU.**
(See page EC–10)

NG

3	Check ENGINE fuse.



PREPARATION:
Remove the ENGINE fuse.
CHECK:
Measure continuity of ENGINE fuse.
OK:

Continuity

NG → Check for short in all the harness and components connected to ENGINE fuse.

OK

4	Check glow indicator light bulb.

NG → Replace bulb.

OK

Check for open in harness and connector between combination meter and emission ECU, combination meter and GAUGE fuse. (See page IN–19)

5	Check glow indicator lighting time and after glow time. (See page ST–1)

NG → Check and replace emission ECU. (See page EC–10)

OK

6	Are there any DTC being output?

YES → Go to relevant DTC chart.

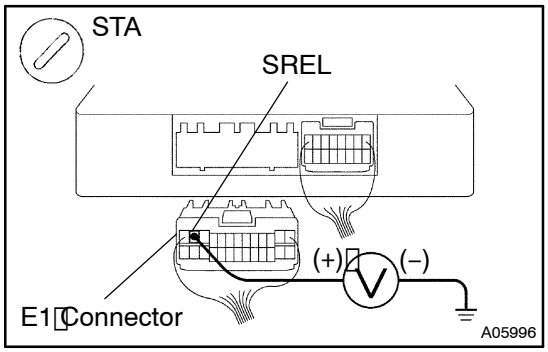
NO

7	Check glow plug relay. (See page ST–1)

NG → Replace glow plug relay.

OK

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



PREPARATION:

(a) Disconnect the emission ECU from the body panel. (See page EC–10)

(b) Disconnect the "E1" connector of emission ECU.

(c) Turn ignition switch STA.

CHECK:

Measure voltage between terminal SREL of emission ECU and body ground at cranking.

OK:

Voltage: 18 – 28 V

NG → Check and replace emission ECU. (See page IN–19)

OK

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

NG → Repair harness or connector.

OK

10	Check resistance of glow plug. (See page ST-1)

NG → Replace glow plug.

OK

11	Inspect 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-12)