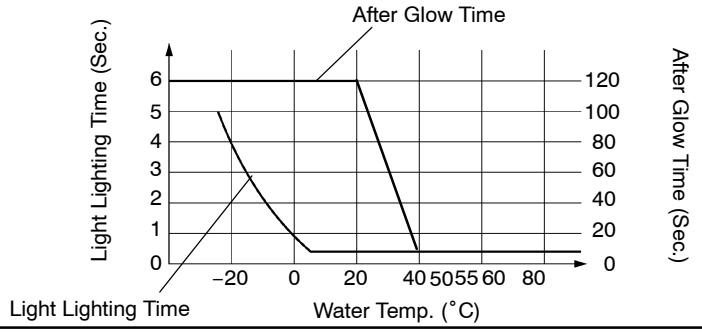
DI8NW–01

Pre–Heating Control Circuit

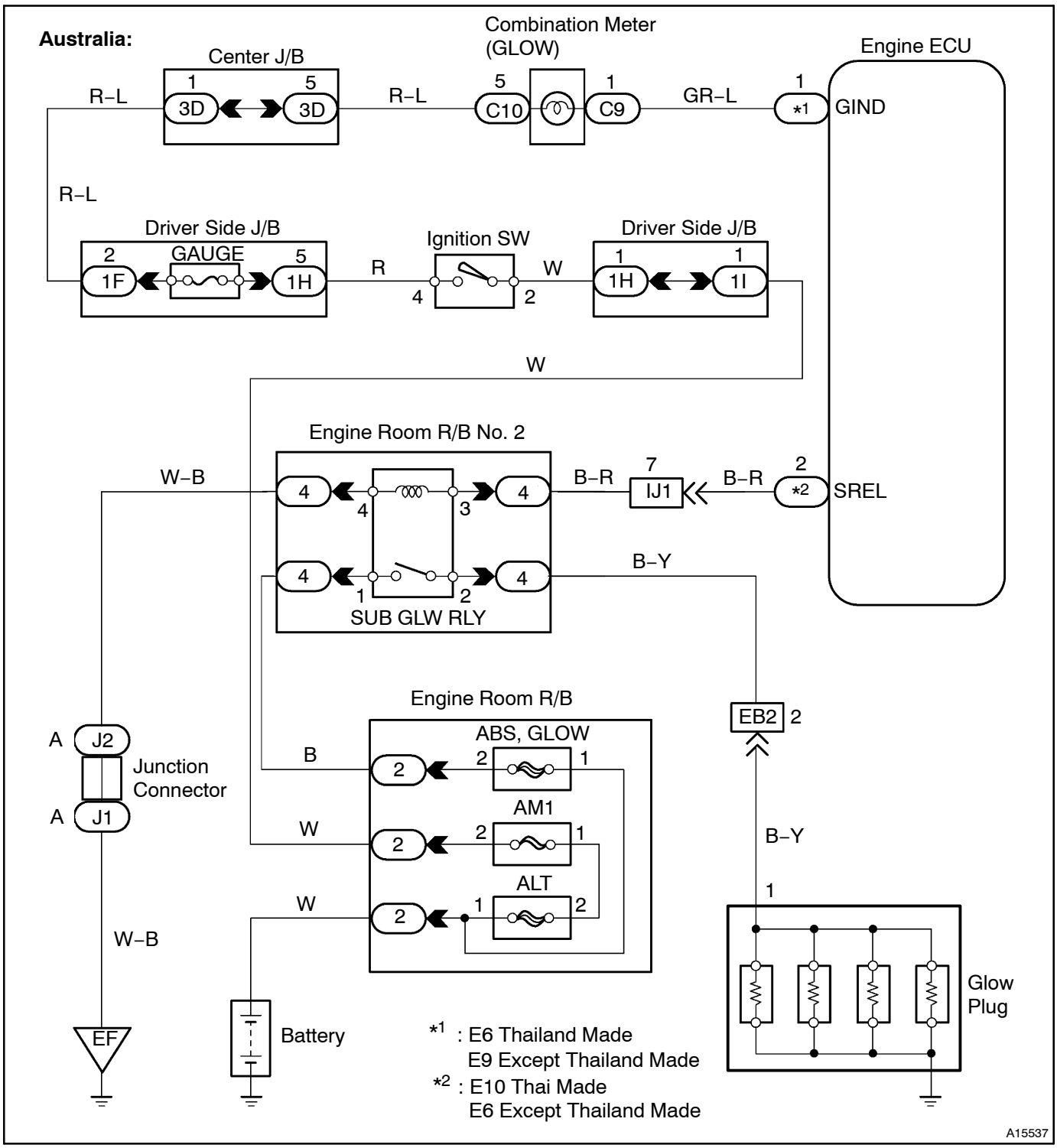
CIRCUIT DESCRIPTION

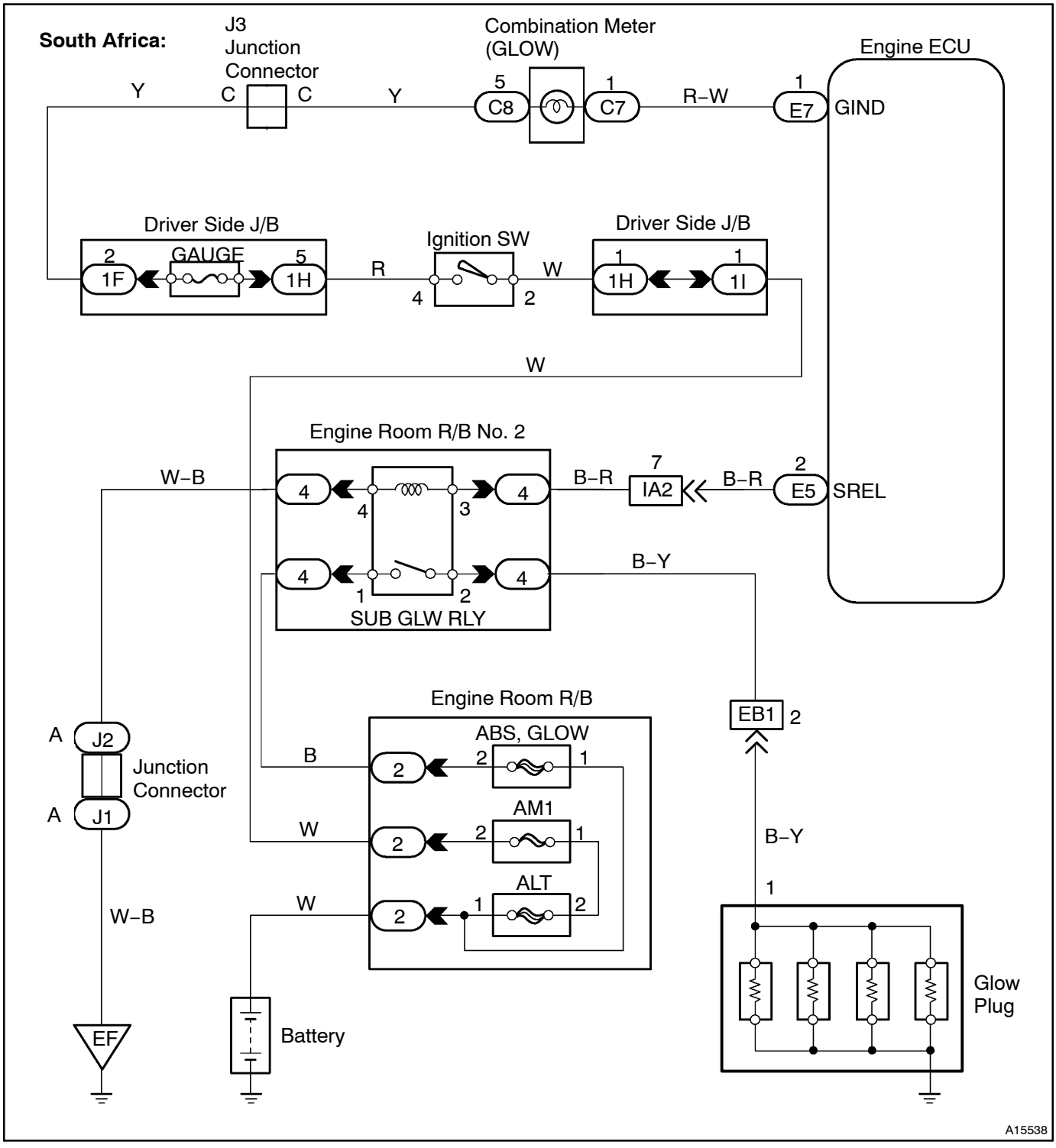
When the ignition switch turns ON, the engine ECU calculates the glow indicator lighting time/heating corresponding to the coolant temperature at that time and turns ON the glow indicator light/glow plug relay.
As the ceramics is used for a flow plug material, the current control is not performed.

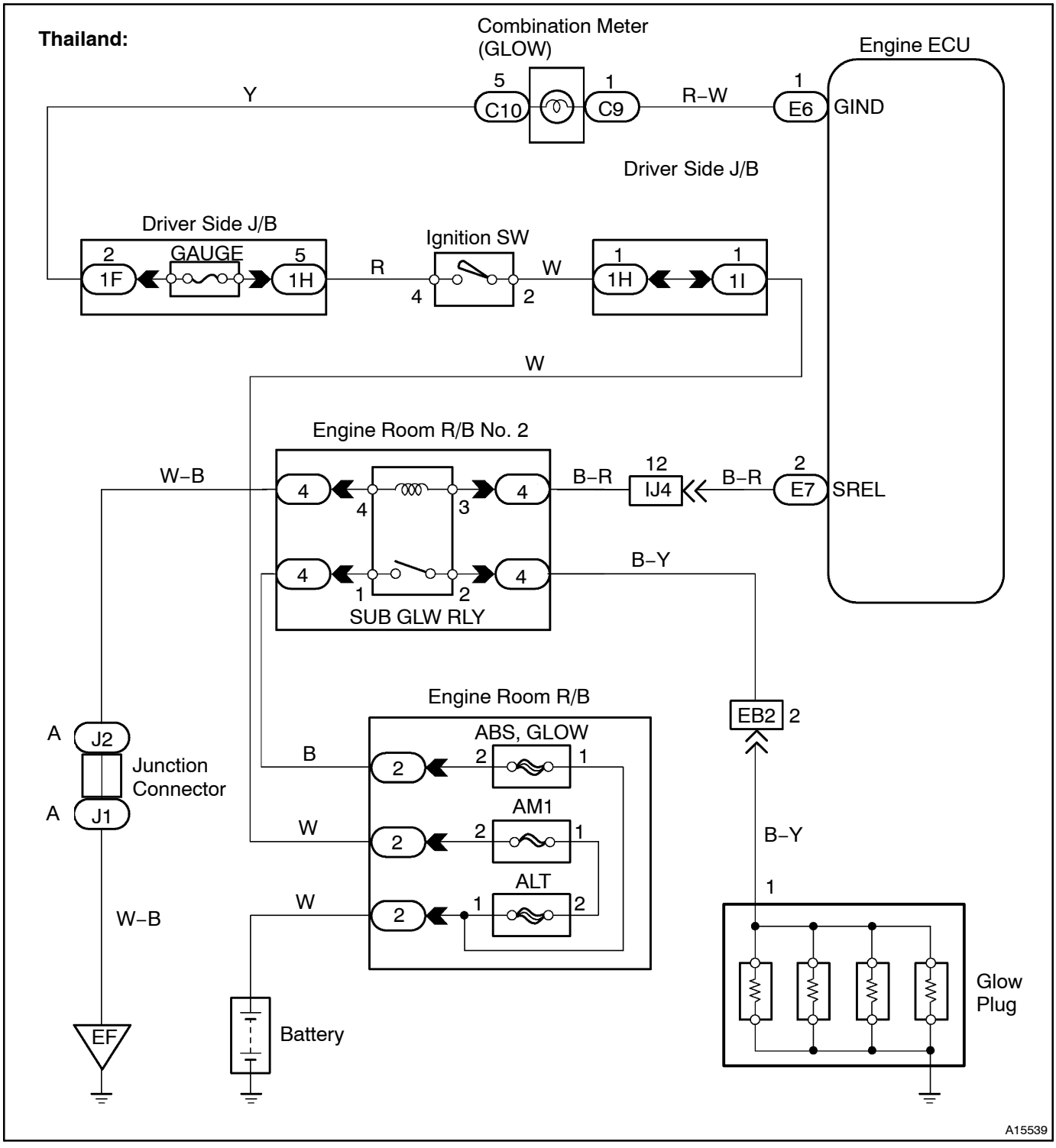


A15544

WIRING DIAGRAM




South Africa:
J3
Junction
Connector
Combination Meter
(GLOW)
Engine ECU
Y
C
C
Y
5
C8
1
C7
R–W
1
E7
GIND
Driver Side J/B
2
1F
GAUGE
5
1H
R
Ignition SW
4
2
W
Driver Side J/B
1
1H
1
1I
W
Engine Room R/B No. 2
W–B
4
4
4
3
B–R
7
IA2
B–R
2
E5
SREL
4
4
1
2
4
SUB GLW RLY
B–Y
Engine Room R/B
ABS, GLOW
AM1
ALT
EB1
2
A
J2
Junction
Connector
A
J1
B
W
W
2
2
2
2
2
1
2
1
2
1
2
1
B–Y
1
W–B
EF
Battery
Glow
Plug
A15538


Thailand:
Combination Meter
(GLOW)
Engine ECU
5
C10
1
C9
Y
R–W
1
E6
GIND
Driver Side J/B
Driver Side J/B
2
1F
GAUGE
5
1H
R
Ignition SW
4
2
W
1
1H
1
1I
W
Engine Room R/B No. 2
W–B
4
4
4
3
B–R
12
IJ4
B–R
2
E7
SREL
4
1
4
2
4
SUB GLW RLY
B–Y
Engine Room R/B
EB2
2
A
J2
Junction
Connector
A
J1
ABS, GLOW
B
2
2
1
AM1
W
2
2
1
ALT
W
2
1
2
B–Y
1
W–B
EF
Battery
Glow
Plug
A15539

INSPECTION PROCEDURE

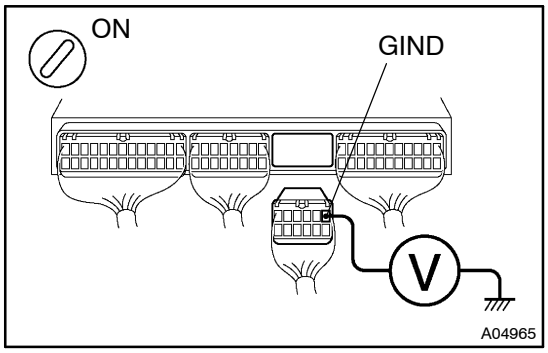
1	**Does glow indicator light up?**

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

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 (See page ED–25).
(b) Disconnect the connector of engine ECU.
(c) Turn ignition switch ON.
CHECK:
Measure voltage between terminal GIND of engine ECU connector and body ground.
OK:
Voltage: 9 – 14 V

OK → **Check and replace engine ECU (See page IN–19).**

NG

3	**Check GLOW fuse.**

PREPARATION:
Remove the GLOW fuse.
CHECK:
Measure continuity of GAUGE fuse.
OK:
Continuity

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 IN–19).

5	Check glow indicator lighting time and after glow time (Refer to Pub. No. RM582E on ST section).

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

OK

6	Are there any DTC being output?

YES → Go to relevant DTC chart.

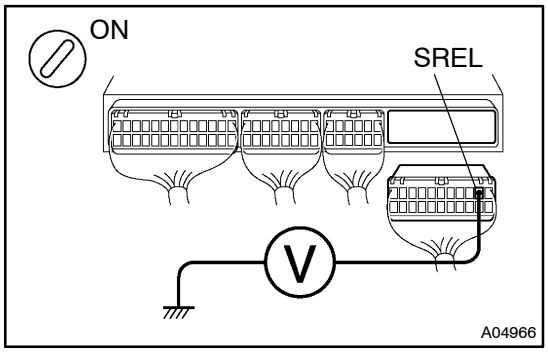
NO

7	Check glow plug relay (Refer to Pub. No. RM582E on ST section).

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 (See page ED–25).

(b) Disconnect the connector of engine ECU.

(c) Turn ignition switch STA.

CHECK:

Measure voltage between terminal SREL of engine ECU and 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 (Refer to Pub. No. RM582E on ST section).

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–25).