

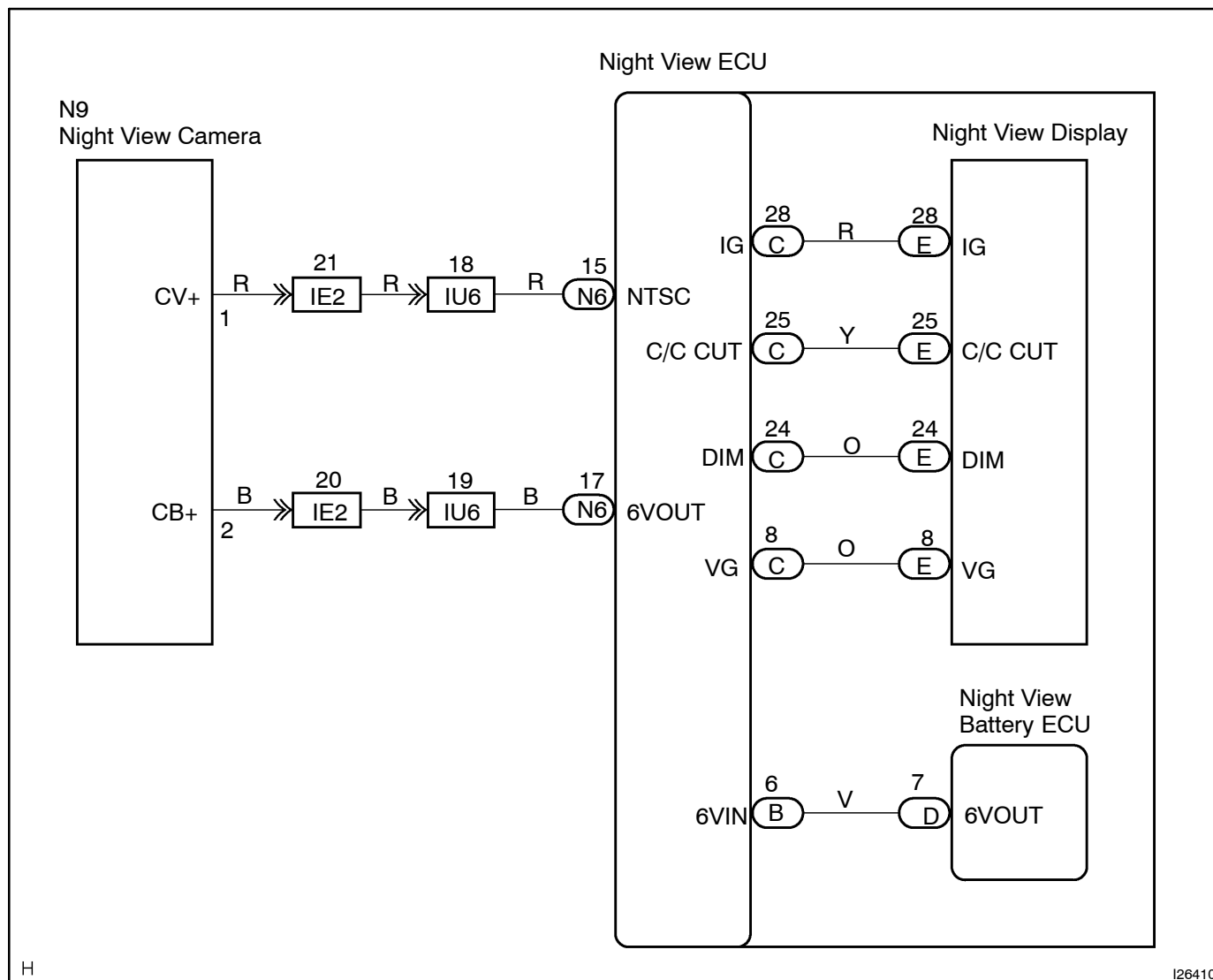
7. Screen is black

CIRCUIT DESCRIPTION

Black screen occurs by a malfunction of the Night View ECU.

Power source of the Night View ECU is provided by the Night View Battery ECU.

WIRING DIAGRAM



INSPECTION PROCEDURE

1	Check the back light condition of Night View Display.
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PREPARATION:

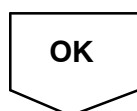
- (a) Turn the ignition switch ON.
- (b) Switch to Inspection Mode (See page [DI-1077](#)).

CHECK:

Check that the back light of the Night View Display turns on.

OK:

The back light turns on.



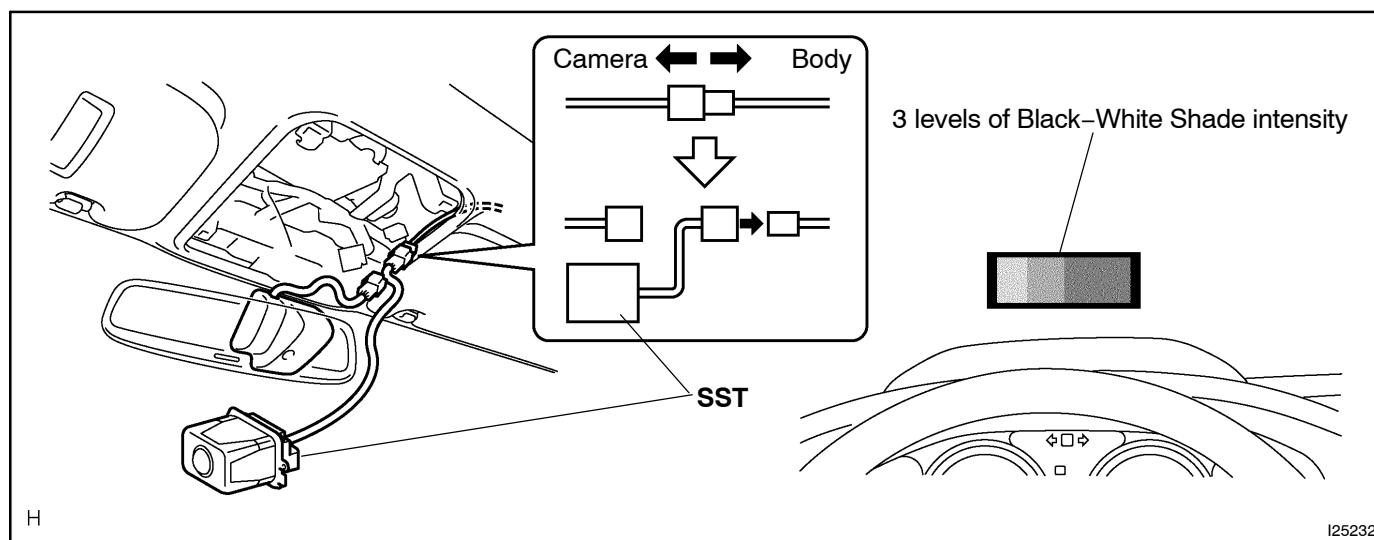
Go to step 6.

2 Check Night View Camera using SST.

PREPARATION:

- Remove the over head junction (map light cover).
- Remove the connector from the Night View Camera.
- Connect SST to the wire harness of the Night View Camera on the body side as shown in the illustration.

SST 09991-00610



- Ignition switch ON.
- Inspection Mode ON (See page [DI-1077](#)).

CHECK:

Check the screen of the Night View Display.

OK:

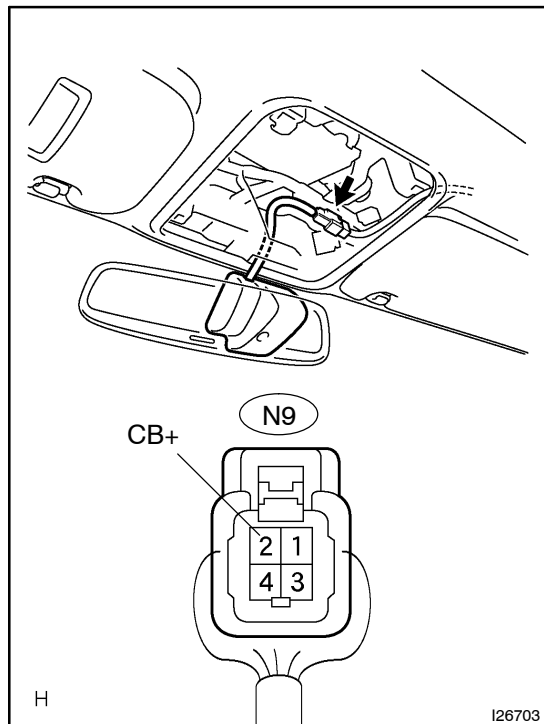
3 levels of Black-White shade intensity displayed.

NG

Go to step 3.

OK

Replace Night View Camera.

3 Check voltages between terminal CB+ of Night View Camera and body ground.**PREPARATION:**

- (a) Disconnect the SST.
- (b) Ignition switch ON.
- (c) Inspection Mode ON (See page [DI-1077](#)).

CHECK:

Measure voltage of terminal CB+ on the vehicle side as shown in the illustration.

OK:

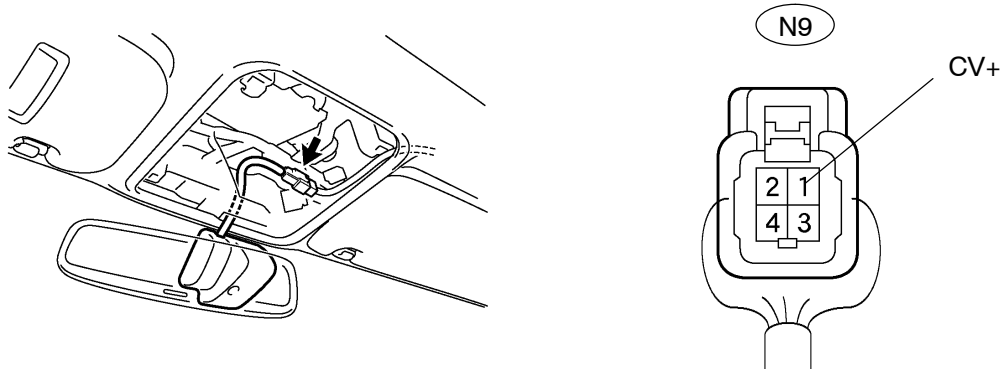
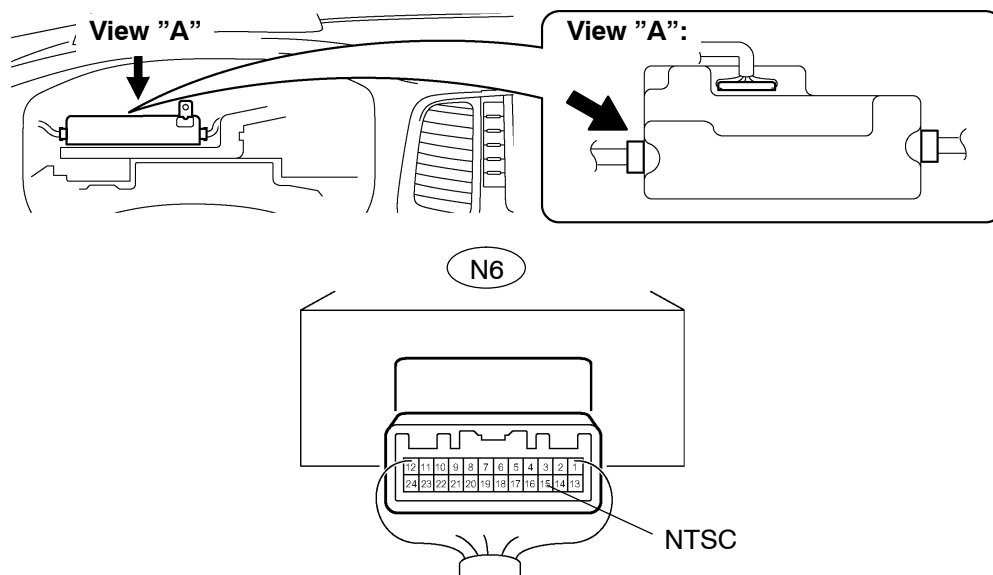
Voltage: Above 6 V

NG**Go to step 7.****OK**

- 4 Check for open or short circuit in the wire harness between the Night View Camera (CV+) and Night View ECU (NTSC) (See page [IN-36](#)).**

PREPARATION:

- (a) Remove the combination meter.
 (b) Remove the connector "N6" from Night View ECU.

CHECK:**Night View Camera:****Night View ECU:**

I26693

Check resistance between terminal NTSC of connector "N6" and CV+ of connector "N9".
 (Terminals of ECU: See page [DI-1081](#))

OK:

Resistance: Less than 1 Ω

CHECK:

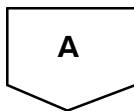
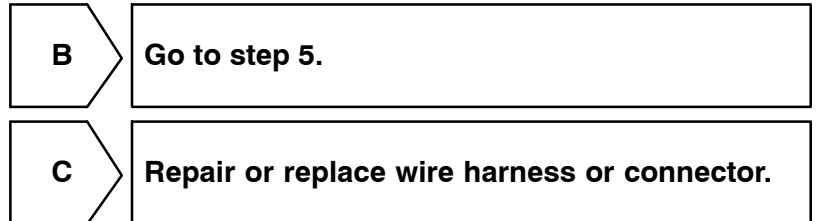
Check resistance between terminal NTSC of connector "N6" and body ground.

OK:

Resistance: More than 10 k Ω

RESULT:

OK	A (When not using oscilloscope)
	<Reference> B (when using oscilloscope)
NG	C



Replace Night View ECU.

HINT:

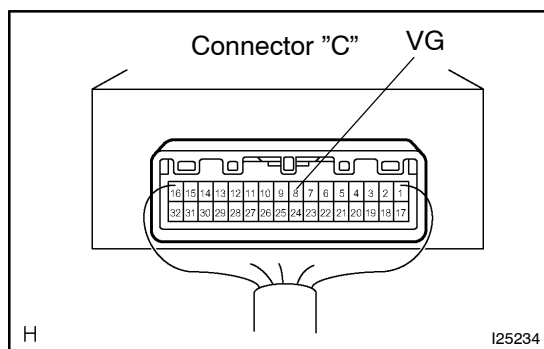
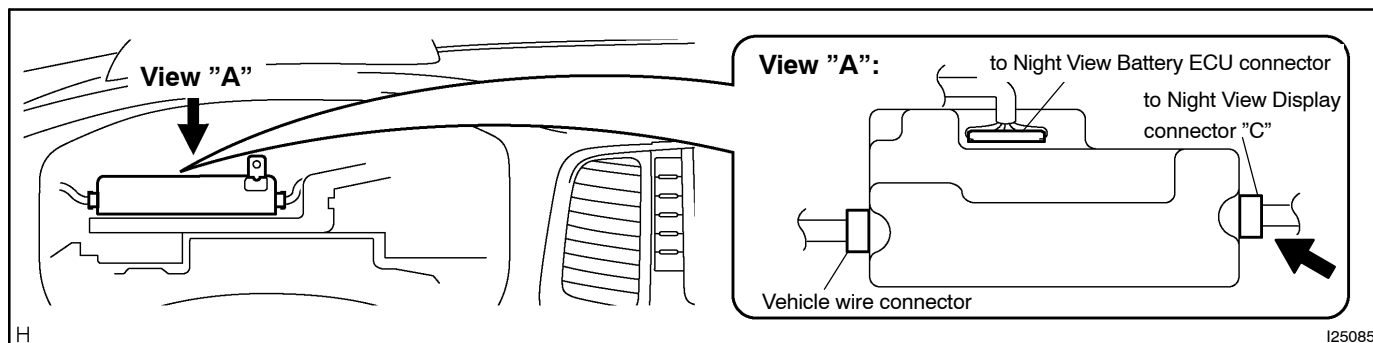
If the symptom still occurs, replace the Night View Display.

5 Using an oscilloscope, check the output waveform between terminal VG of Night View ECU and body ground.

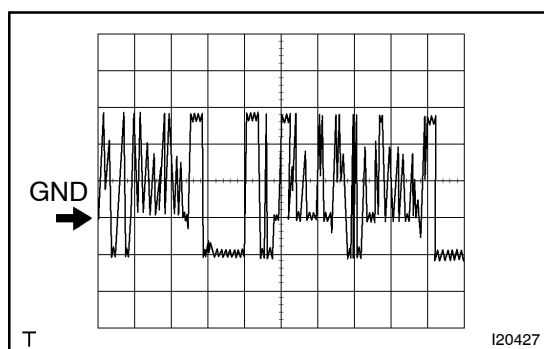
PREPARATION:

- Connect the connector of the Night View Camera.
- Turn the ignition switch ON.
- Switch to Inspection Mode (See page [DI-1077](#)).

CHECK:



Using an oscilloscope, check the output waveform between terminal VG of the Night View ECU connector "C" and body ground. (Terminals of ECU: See page [DI-1081](#))



OK:

The output waveform is as shown in the illustration.
(Reference) oscilloscope condition:

Item	Contents
Tool setting	200 mV / DIV, 10 μ s / DIV
Vehicle condition	When Night View System starts up

NG

Replace Night View ECU.

OK

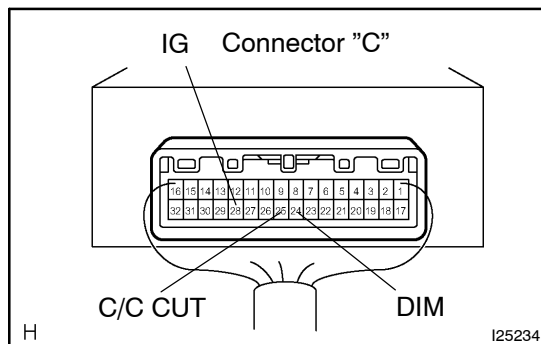
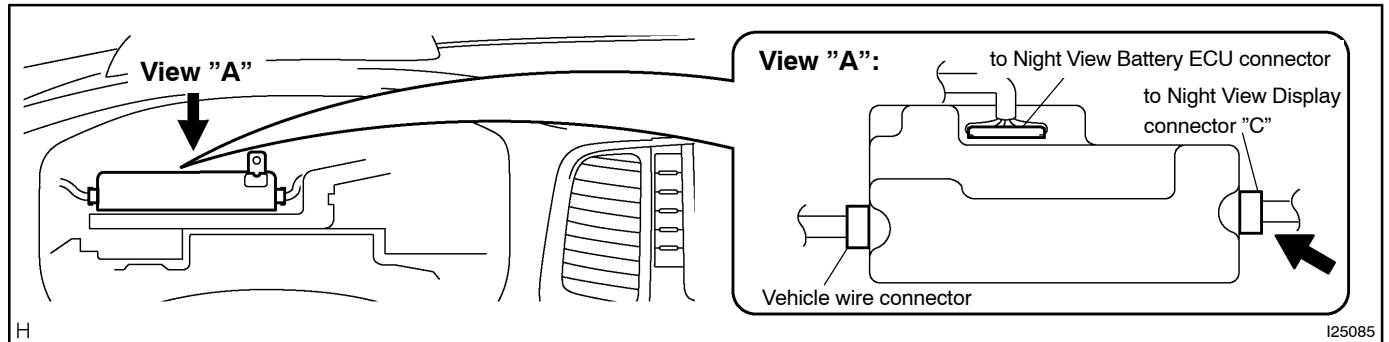
Replace Night View Display.

6 Check voltage between terminal DIM, C/C CUT, IG of Night View ECU and body ground.

PREPARATION:

- (a) Remove the combination meter.
- (b) Ignition switch ON.

CHECK:



Measure voltage between terminal DIM, C/C CUT, IG of the Night View ECU connector "C" and body ground.
(Terminals of ECU: See page [DI-1081](#))

OK:

Voltage:

DIM: Approx. 5 V

C/C CUT: Approx. 5 V

IG: Above 10 V

(All the 3 terminal voltages must meet the standard.)

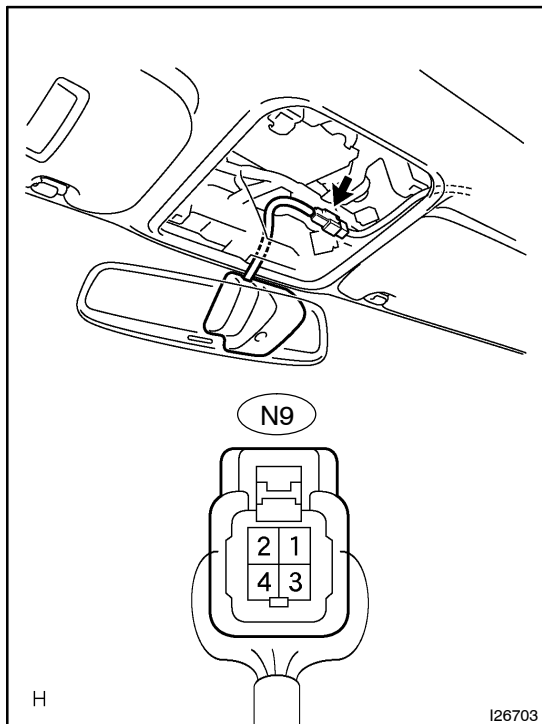
NG

Replace Night View ECU.

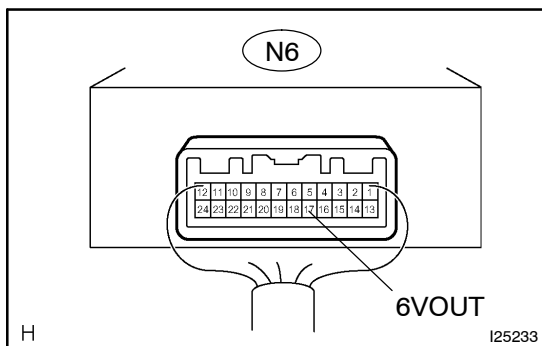
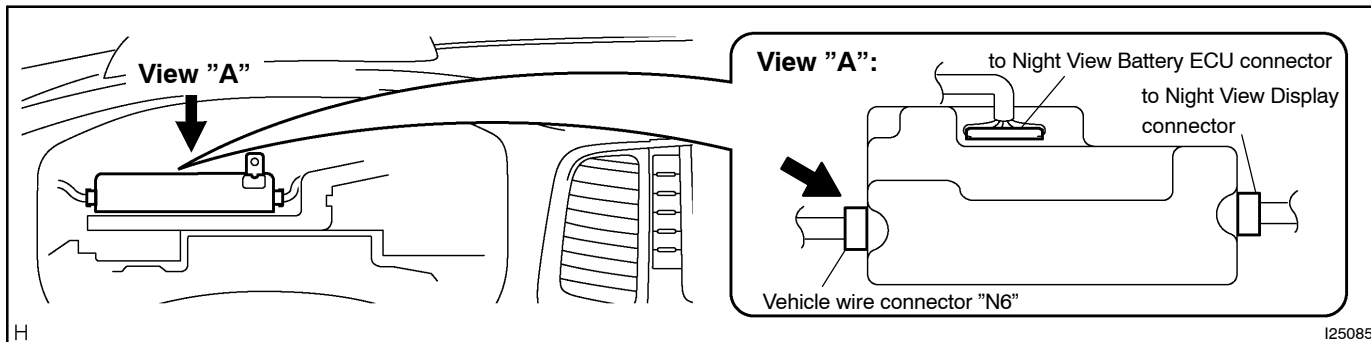
OK

Replace Night View Display.

7

Check voltage between terminal 6VOUT of Night View ECU and body ground.**PREPARATION:**

- Disconnect the connector "N9" from the Night View Camera.
- Remove the combination meter.
- Ignition switch ON.
- Inspection Mode ON (See page [DI-1077](#)).

CHECK:

Measure voltage between terminal 6VOUT of the Night View ECU connector "N6" and body ground.
(Terminals of ECU: See page [DI-1081](#))

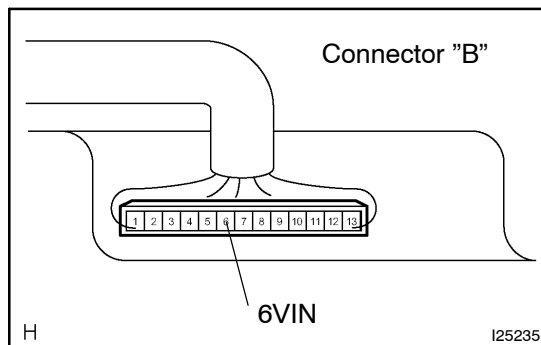
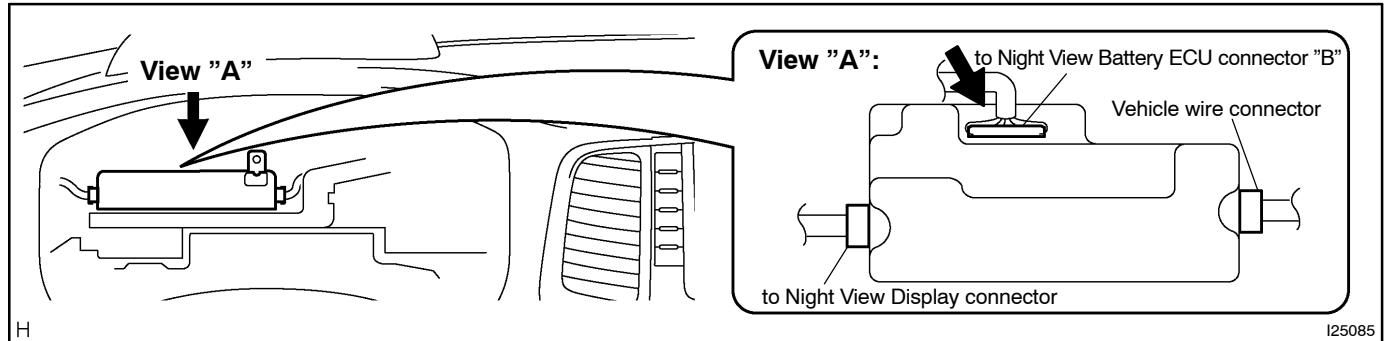
OK:

Voltage: 5.7 to 6.3 V

OK**Repair or replace wire harness or connector.****NG**

8 Check voltage between terminal 6VIN of Night View ECU and body ground.**PREPARATION:**

- (a) Ignition switch ON.
- (b) Inspection Mode ON (See page [DI-1077](#)).

CHECK:

Measure voltage between terminal 6VIN of the Night View ECU connector "B" and body ground.
(Terminals of ECU: See page [DI-1081](#))

OK:

Voltage: 5.7 to 6.3 V

NG

Go to step 9.

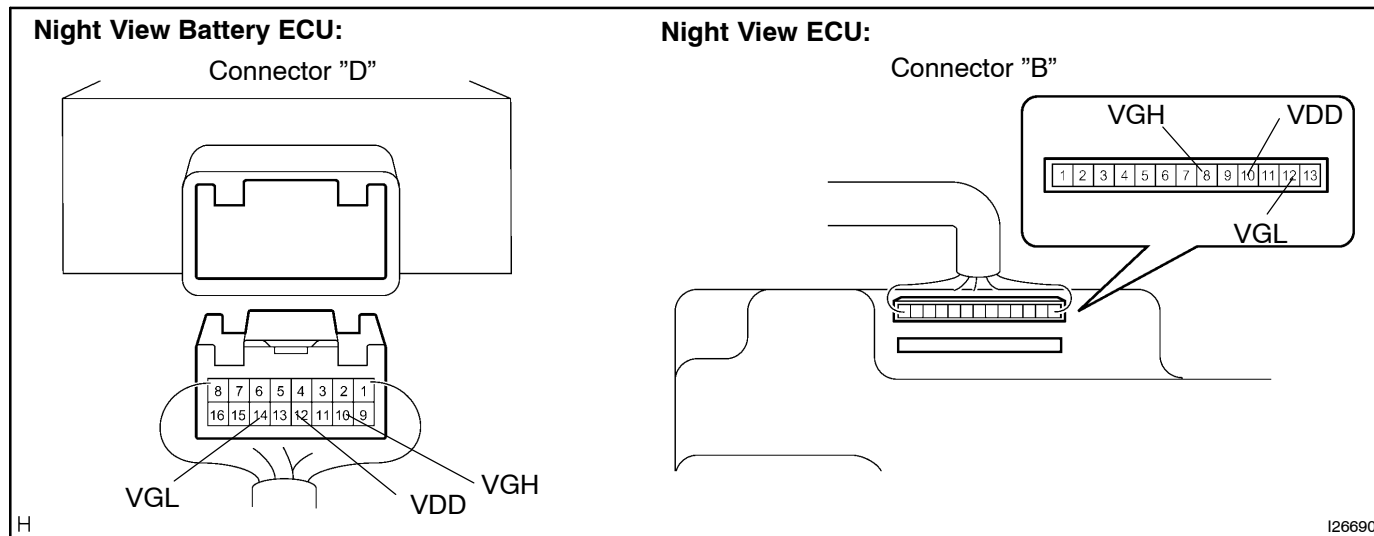
OK

Replace Night View ECU.

9 Check wire harness between terminals VGL, VDD, VGH of Night View Battery ECU and Night View ECU (See page [IN-36](#)).

PREPARATION:

Remove the wire harness between the Night View Battery ECU and the Night View ECU.



CHECK:

Check the resistance between terminals VGL, VDD, VGH of connector "D" to "B".

(Terminals of ECU: See page [DI-1081](#))

OK:

Resistance: Less than 1 Ω

NG

Replace wire harness.

OK

Replace Night View Battery ECU.