ILLUMINATION CIRCUIT

CIRCUIT DESCRIPTION

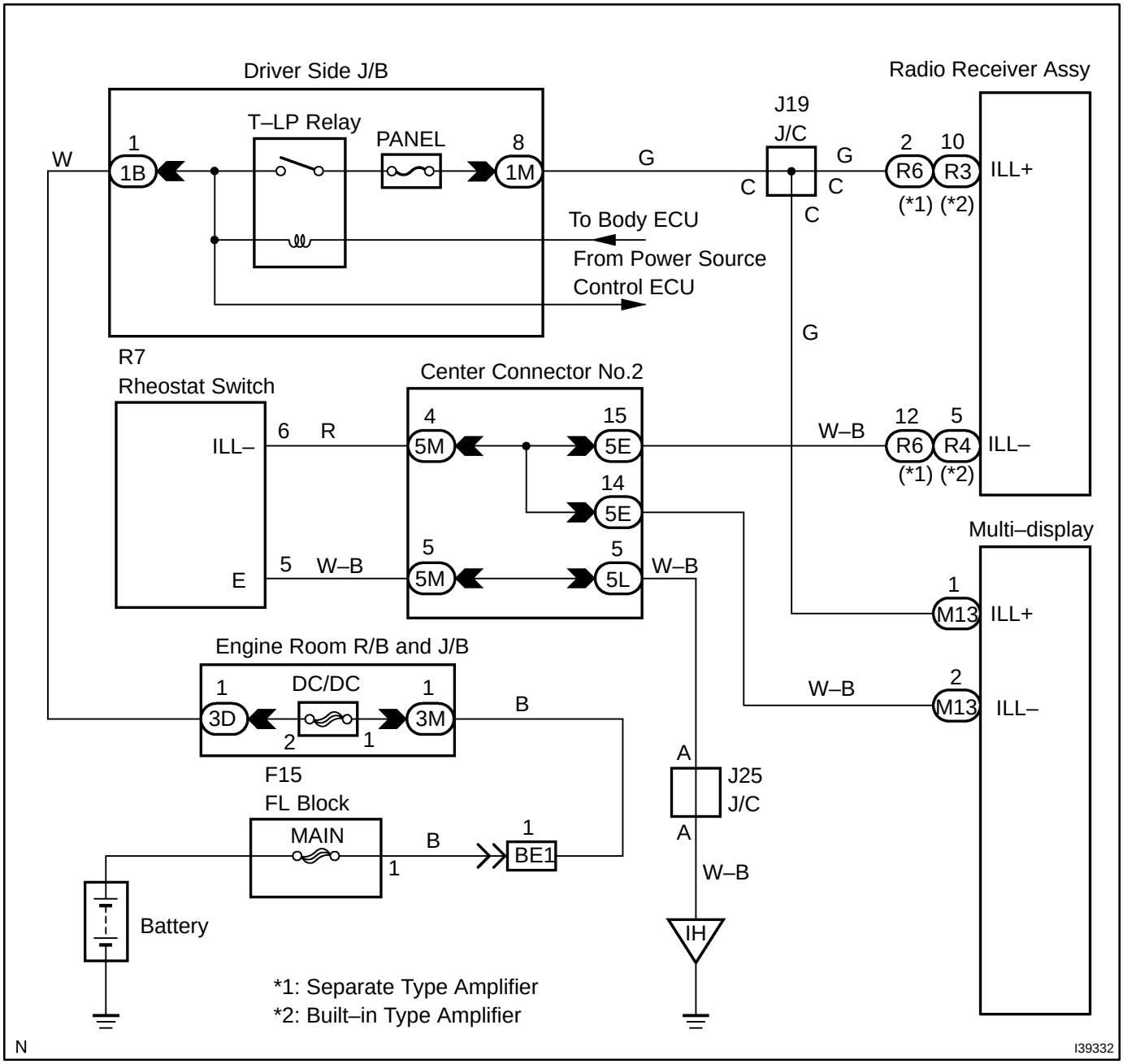
When the light control switch is turned to TAIL or HEAD position, the T–LP relay activates and power is supplied to the radio receiver assy and the multi–display panel illumination. The body ECU determines the surrounding illumination intensity according to the illumination intensity detected by the automatic light control sensor and activates the T–LP relay, allowing power to be supplied to the radio receiver assy and the multi–display panel illumination.

Illumination intensity adjustment for the radio receiver assy and multi–display panel illumination is performed with the rheostat switch.

HINT:

If a problem exists in the automatic light control sensor, DTC B1244 is output.

WIRING DIAGRAM



INSPECTION PROCEDURE

1	CHECK CONDITION

(a) Check all components with illumination malfunctions.

Components with malfunction	Go to step
Radio receiver assy or/and multi–display	A
All illumination (Radio receiver assy, multi–display combination meter and hazard warning switch)	B

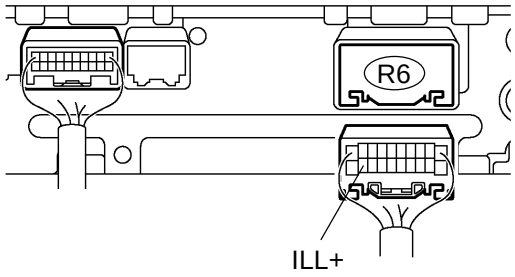
HINT:
If all the illuminations have malfunctions, check the rheostat switch.

B → **GO TO COMBINATION METER SYSTEM (SEE PAGE 05–1983)**

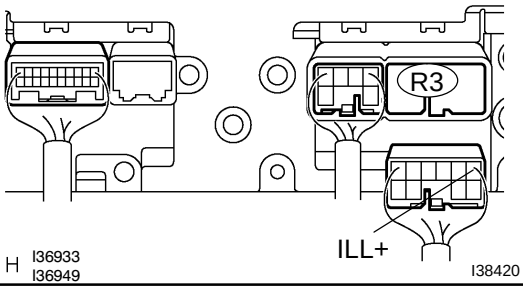
A

2	CHECK HARNESS AND CONNECTOR (COMPONENTS WITH MALFUNCTION – BATTERY)

Separate Type Amplifier
Wire Harness View:



Built–in Type Amplifier
Wire Harness View:



H I36933 I36949 I38420

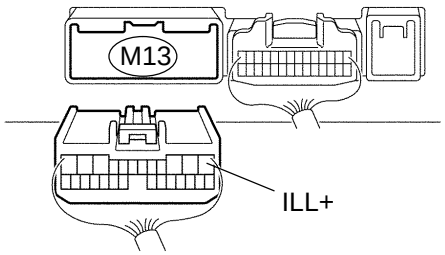
(a) RADIO RECEIVER ASSY
(1) Disconnect the radio receiver assy R6 or R3 connector.
(2) Measure the voltage according to the values in the table below.

Standard:

Tester connection	Condition	Specified condition
ILL+ (R6–2) – Body ground *1	Light control switch TAIL or HEAD	10 to 14 V
ILL+ (R3–10) – Body ground *2	Light control switch TAIL or HEAD	10 to 14 V

*1: Separate Type Amplifier
*2: Built–in Type Amplifier

Multi–display Wire Harness View:



(b) MULTI–DISPLAY

(1) Disconnect the multi–display M13 connector.

(2) Measure the voltage according to the values in the table below.

Standard:

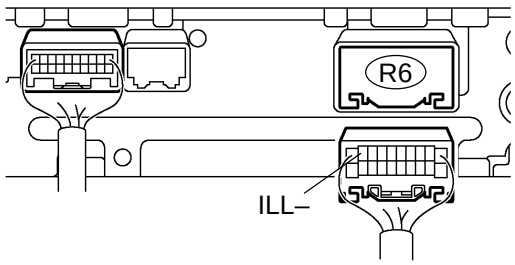
Tester connection	Condition	Specified condition
ILL+ (M13–1) – Body ground	Light control switch TAIL or HEAD	10 to 14 V

NG → **REPAIR OR REPLACE HARNESS OR CONNECTOR**

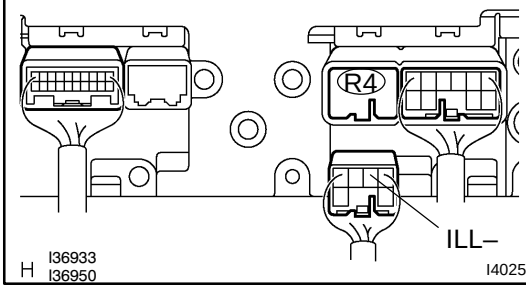
OK

3 CHECK HARNESS AND CONNECTOR (COMPONENTS WITH MALFUNCTION – RHEOSAT SWITCH)

Separate Type Amplifier Wire Harness View:



Built–in Type Amplifier Wire Harness View:



(a) RADIO RECEIVER ASSY

(1) Disconnect the radio receiver assy R4 or R6 connector and rheostat switch R7 connector.

(2) Measure the resistance according to the values in the table below.

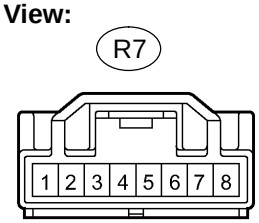
Standard:

Tester connection	Condition	Specified condition
ILL– (R6–12) – ILL– (R7–6) *1	Always	Below 1 Ω
ILL– (R4–5) – ILL– (R7–6) *2	Always	Below 1 Ω

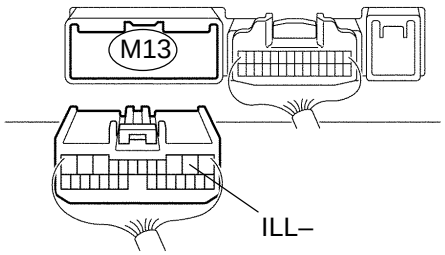
*1: Separate Type Amplifier

*2: Built–in Type Amplifier

Light Control Rheostat Wire Harness View:



Multi–display Wire Harness View:

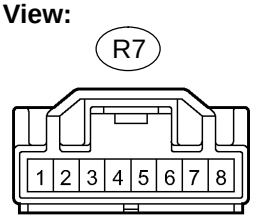


(b) MULTI–DISPLAY
(1) Disconnect the rheostat switch R7 connector.
(2) Measure the resistance according to the values in the table below.

Standard:

Tester connection	Condition	Specified condition
ILL– (M13–2) – ILL– (R7–6)	Always	Below 1 Ω

Light Control Rheostat Wire Harness View:

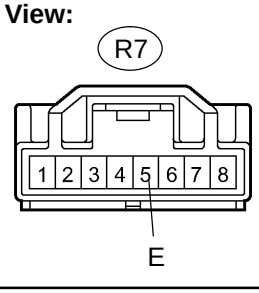


NG → **REPAIR OR REPLACE HARNESS OR CONNECTOR**

OK

4 CHECK HARNESS AND CONNECTOR (RHEOSTAT SWITCH – BODY GROUND)

Light Control Rheostat Wire Harness View:



(a) Measure the resistance according to the values in the table below.

Standard:

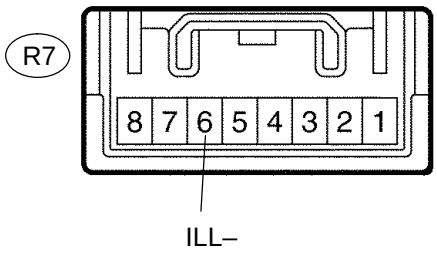
Tester connection	Condition	Specified condition
E (R7–5) – Body ground	Always	Below 1 Ω

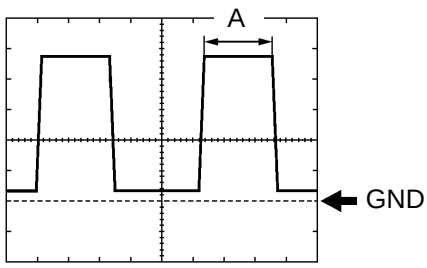
NG → **REPAIR OR REPLACE HARNESS OR CONNECTOR (RHEOSTAT SWITCH – BODY GROUND)**

OK

5	INSPECT LIGHT CONTROL RHEOSTAT

Light Control Rheostat Connector Front View:





(a) Reconnect the connectors.

(b) Measure the voltage according to the values in the table below.

Standard:

Tester connection	Condition	Specified condition
ILL– (R7–6) – Body ground	Light control rheostat is turned volume up → volume down	Pulse generation (see waveform 1)

HINT:

Waveform 1: Inspection using oscilloscope.

Standard:

Item	Condition
Tool setting	2 V/DIV, 1 ms/DID
Vehicle condition	Light control switch TAIL or HEAD

HINT:

Duty ratio changes as illumination becomes darker (”A” becomes longer).

NG → **REPLACE LIGHT CONTROL RHEOSTAT**

OK

PROCEED TO NEXT CIRCUIT INSPECTION SHOWN IN PROBLEM SYMPTOMS TABLE (SEE PAGE 05–1778)