

Last Modified: 7-13-2007		1.6 J
Service Category: Vehicle Exterior	Section: Lighting (ext)	
Model Year: 2008	Model: ES350	Doc ID: RM0000011T4011X
Title: LIGHTING: LIGHTING SYSTEM: Front Fog Light Circuit (2008 ES350)		

Front Fog Light Circuit

DESCRIPTION

When all of the following conditions are met, the front fog lights come on.

- Low beam headlights are ON.
- Front fog light switch is ON.
- High beam headlights are OFF.

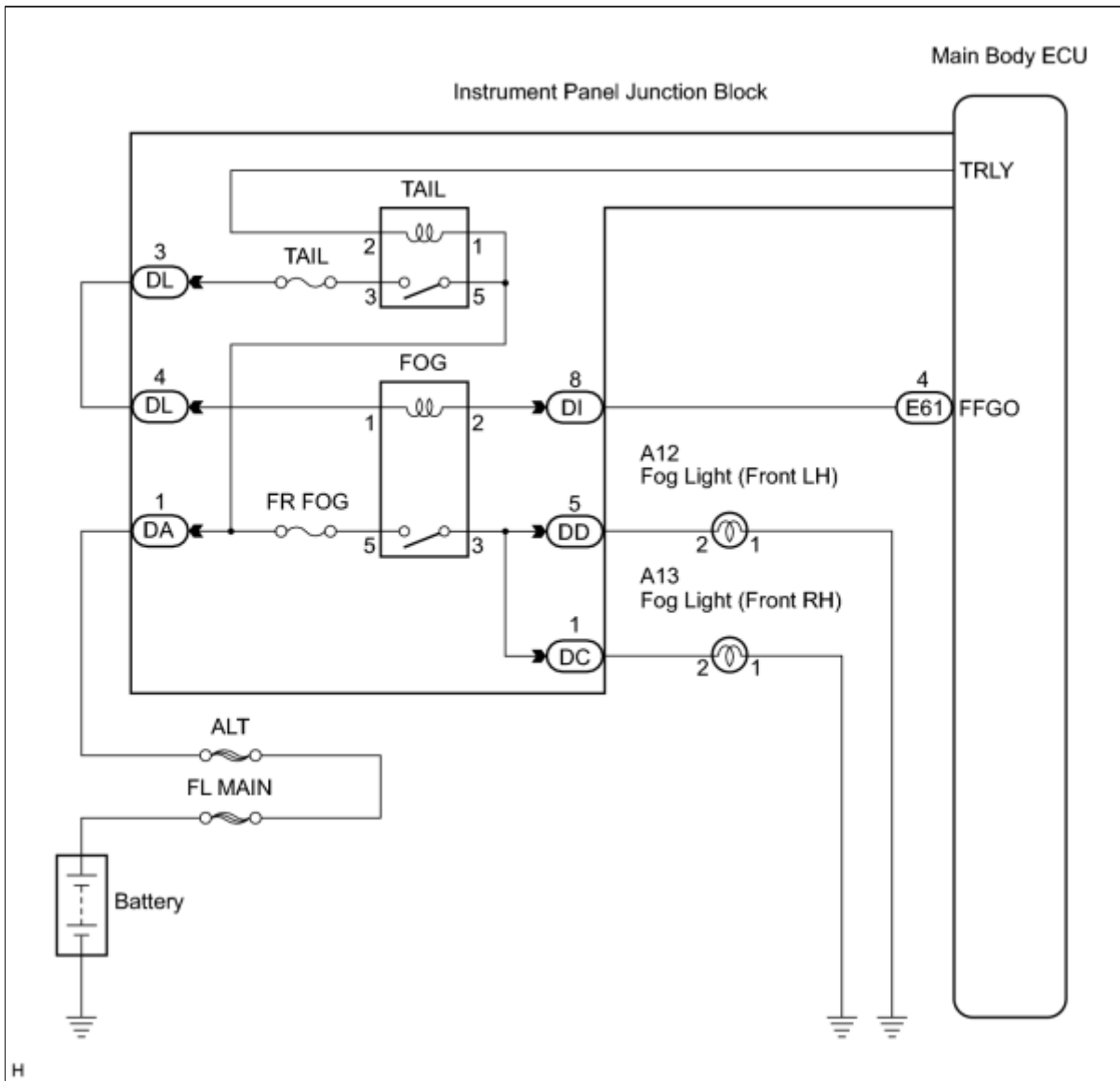
When any of the following conditions is met, the front fog lights turn off.

- Front fog light switch is OFF.
- Low beam headlights are OFF.
- High beam headlights are ON.

HINT:

- Before performing troubleshooting of the front fog light system, check that the taillight system and headlight system are normal.
- If only a front fog light on one side does not illuminate, inspect the bulb or wire harness that is related to the bulb.
- If both right and left front fog lights do not illuminate, read the front fog light switch value in the data list and perform the front fog light relay active test to determine if the malfunction exists on either the switch side or the relay side.

WIRING DIAGRAM



INSPECTION PROCEDURE

PROCEDURE

1. PERFORM ACTIVE TEST BY TECHSTREAM

- (a) Connect Techstream to the DLC3.
- (b) Turn the engine switch on (IG).
- (c) Turn Techstream on.
- (d) Select the following menu items: Body Electrical / Main Body / Active Test.
- (e) Check that the relay operates.

Main Body:

TESTER DISPLAY	TEST PART	CONTROL RANGE	DIAGNOSTIC NOTE
Front Fog Light Relay	Front fog light relay	ON/OFF	-

OK:

Front fog light relay operates. (Front fog lights come on.)

OK ▶ PROCEED TO NEXT CIRCUIT INSPECTION SHOWN IN
PROBLEM SYMPTOMS TABLE

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2. INSPECT FUSE (FR FOG)

(a) Remove the FR FOG fuse from the instrument panel J/B assembly.

(b) Measure the resistance of the fuse.

Standard resistance:

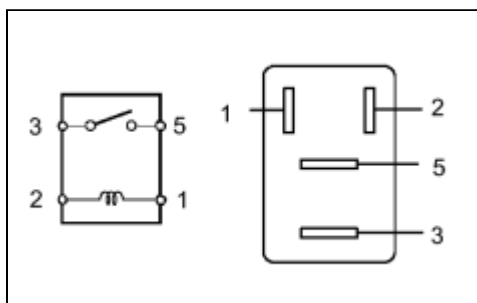
Below 1 Ω

NG ▶ REPLACE FUSE

OK



3. INSPECT FOG LIGHT RELAY



(a) Remove the front fog light relay from the instrument panel junction block assembly.

(b) Measure the resistance according to the value(s) in the table below.

Standard resistance:

TESTER CONNECTION	SPECIFIED CONDITION
3 - 5	10 k Ω or higher
	Below 1 Ω (When battery voltage is applied to terminals 1 and 2)

NG ▶ REPLACE FOG LIGHT RELAY

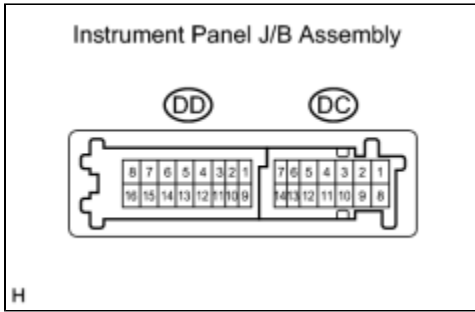
OK



4. INSPECT INSTRUMENT PANEL JUNCTION BLOCK ASSEMBLY

(a) Measure the voltage according to the value(s) in the table below.

Standard voltage:



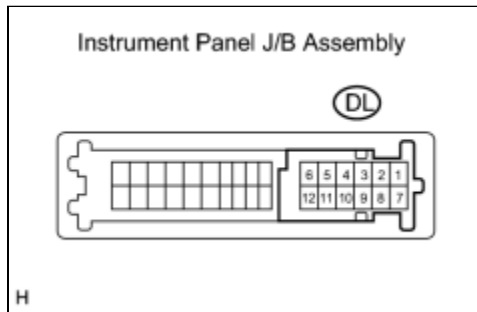
TESTER CONNECTION	CONDITION	SPECIFIED CONDITION
DC-1 - Body ground	Light control switch in HEAD, front fog light switch OFF → ON	Below 1 V → 10 to 14 V
DD-5 - Body ground	Light control switch in HEAD, front fog light switch OFF → ON	Below 1 V → 10 to 14 V

OK ▶ REPAIR OR REPLACE HARNESS OR CONNECTOR
(INSTRUMENT PANEL J/B ASSEMBLY - BODY GROUND)

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5. INSPECT INSTRUMENT PANEL JUNCTION BLOCK ASSEMBLY



(a) Measure the voltage according to the value(s) in the table below.

Standard voltage:

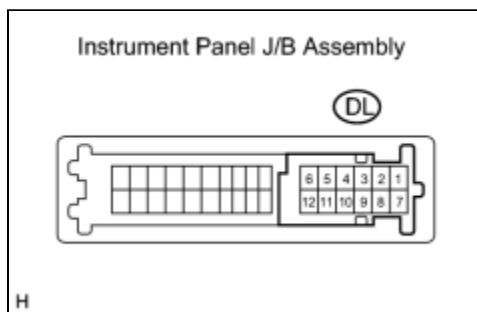
TESTER CONNECTION	CONDITION	SPECIFIED CONDITION
DL-3 - Body ground	Light control switch OFF → TAIL	Below 1 V → 10 to 14 V

NG ▶ REPLACE INSTRUMENT PANEL JUNCTION BLOCK ASSEMBLY

OK



6. CHECK HARNESS AND CONNECTOR (BETWEEN CONNECTOR DL-3 AND CONNECTOR DL-4)



(a) Measure the voltage according to the value(s) in the table below.

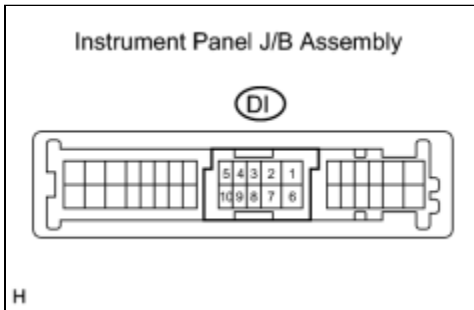
Standard voltage:

TESTER CONNECTION	CONDITION	SPECIFIED CONDITION
DL-4 - Body ground	Light control switch OFF → TAIL	Below 1 V → 10 to 14 V

NG ▶ REPAIR OR REPLACE HARNESS OR CONNECTOR



7. INSPECT INSTRUMENT PANEL JUNCTION BLOCK ASSEMBLY



(a) Disconnect the DI instrument panel assembly connector.

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

Standard voltage:

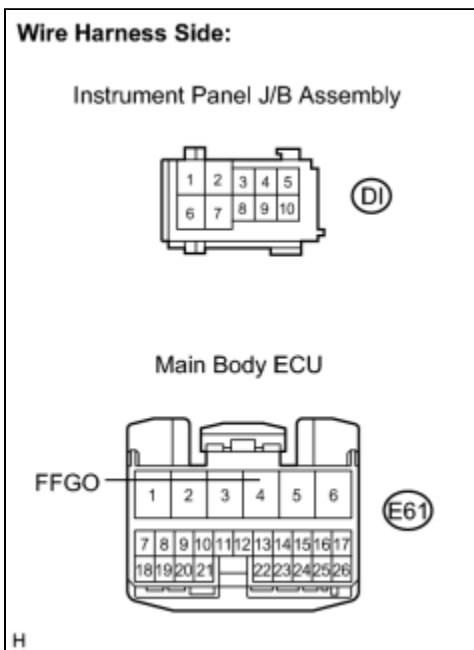
TESTER CONNECTION	CONDITION	SPECIFIED CONDITION
DI-8 - Body ground	Light control switch OFF → TAIL	Below 1 V → 10 to 14 V

NG REPLACE INSTRUMENT PANEL JUNCTION BLOCK ASSEMBLY

OK



8. CHECK HARNESS AND CONNECTOR (BODY ECU - INSTRUMENT PANEL JUNCTION BLOCK ASSEMBLY)



(a) Disconnect the E61 main body ECU connector.

(b) Measure the resistance according to the value(s) in the table below.

Standard resistance:

TESTER CONNECTION	CONDITION	SPECIFIED CONDITION
E61-4 - DI-8	Always	Below 1 Ω

NG ► REPAIR OR REPLACE HARNESS OR CONNECTOR

OK ► REPLACE INSTRUMENT PANEL JUNCTION BLOCK ASSEMBLY

