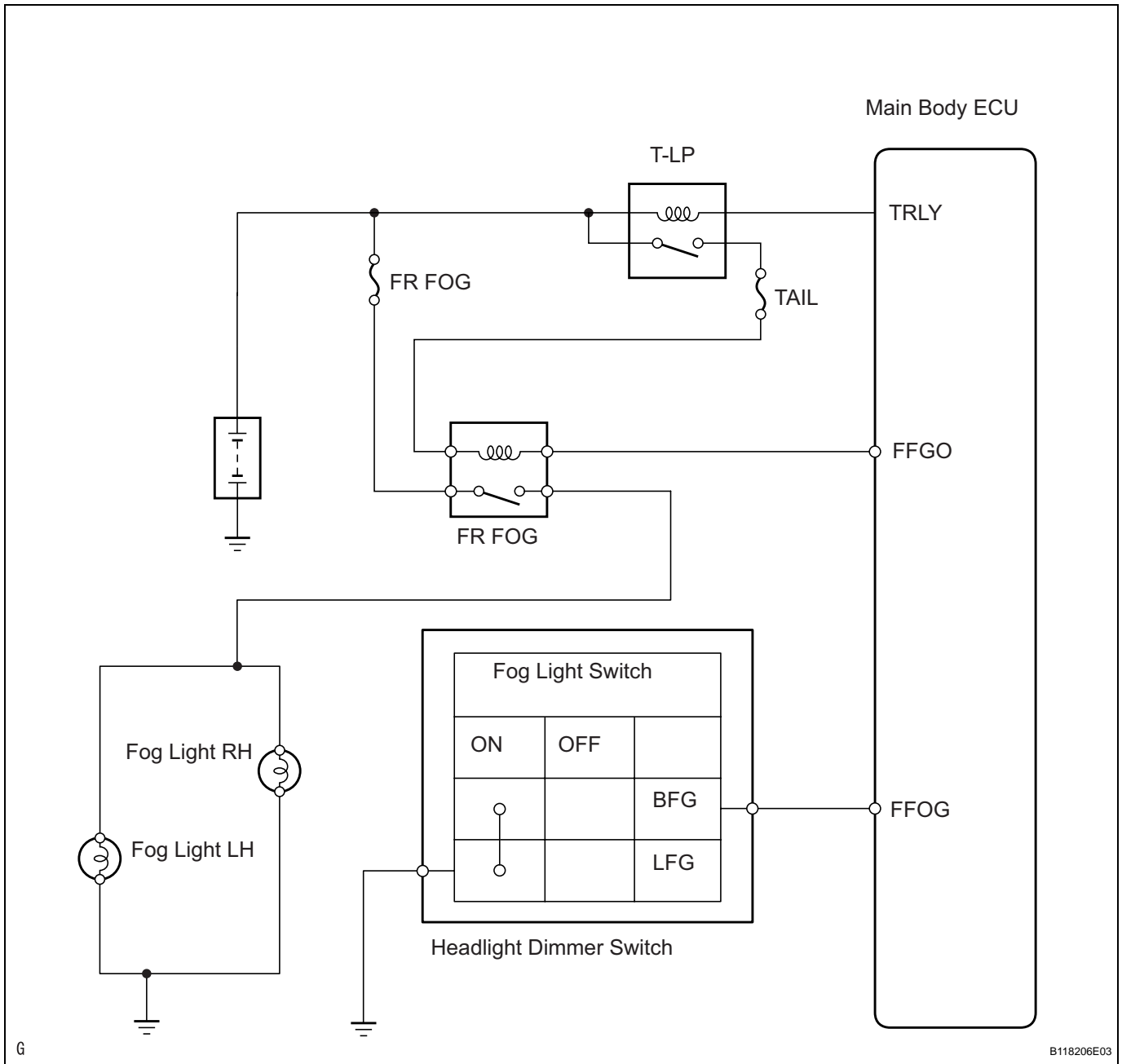


# Front Fog Light Circuit

## DESCRIPTION

The main body ECU controls the front fog light relay (Marking: FR FOG) when a signal is received from the headlight dimmer switch.

## WIRING DIAGRAM



## INSPECTION PROCEDURE

### 1 PERFORM ACTIVE TEST BY INTELLIGENT TESTER

- (a) Connect the intelligent tester (with CAN VIM) to the DLC3.

- (b) Turn the ignition switch to the ON position and press the intelligent tester main switch ON.
- (c) Select the item below in the ACTIVE TEST and then check the relay operation.

**Main body ECU**

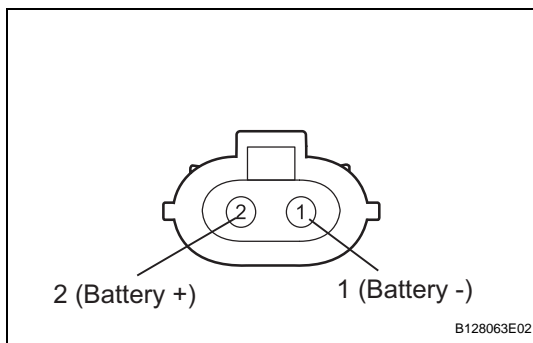
Item	Test Details	Diagnostic Note
F FOG LIGHT RLY	Turn front fog light relay: ON / OFF	-

**OK:****Front fog light comes on.****OK** →**Go to step 9****NG****2****CHECK TAILLIGHT**

- (a) Check that the taillight comes on when the light control switch is on (TAIL).

**OK:****Taillight comes on.****NG** →**GO TO TAILLIGHT RELAY CIRCUIT****OK****3****INSPECT FUSE (FR FOG)**

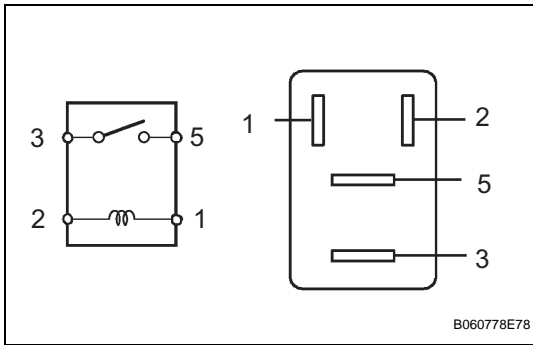
- (a) Remove the FR FOG fuse from the instrument panel junction block.
- (b) Measure the resistance of the fuses.

**Standard resistance:****Below 1 Ω****NG** →**REPLACE FUSE****OK****4****INSPECT FOG LIGHT BULB**

- (a) Remove the fog light bulb.
- (b) Connect the positive (+) lead from the battery to terminal 2 and the negative (-) lead to terminal 1, then check that the bulb illuminates.

**OK:****Bulb illuminates.****NG** →**REPLACE FOG LIGHT BULB****OK**

**5 INSPECT FRONT FOG LIGHT RELAY (Marking: FR FOG)**



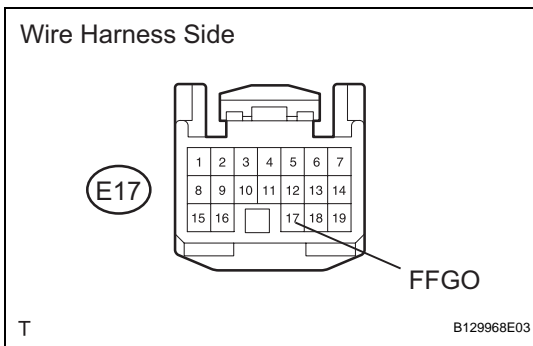
- (a) Remove the front fog light relay from the No. 6 relay block.
  - (b) Measure the resistance of the relay.
- Standard resistance**

Tester Connection	Specified Condition
3 - 5	10 kΩ or higher
3 - 5	Below 1 Ω (Battery voltage applied to terminals 1 and 2)

**NG** → **REPLACE FRONT FOG LIGHT RELAY**

**OK**

**6 CHECK WIRE HARNESS (BATTERY - MAIN BODY ECU)**



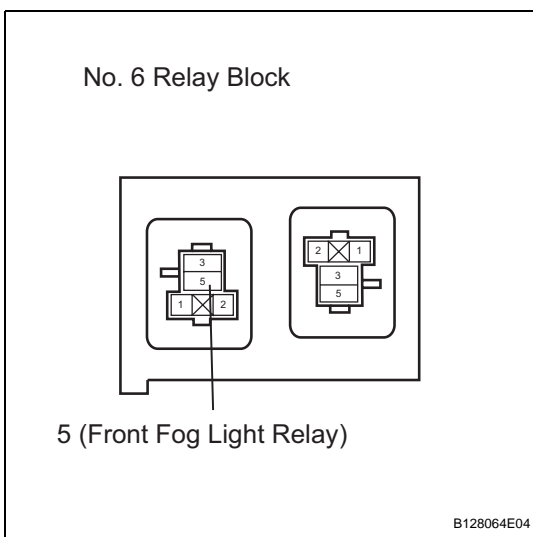
- (a) Disconnect the E17 ECU connector.
  - (b) Measure the voltage of the wire harness side connector.
- Standard voltage**

Tester Connection	Condition	Specified Condition
E17-17 (FFGO) - Body ground	Light control switch on (TAIL)	10 to 14 V

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

**OK**

**7 CHECK WIRE HARNESS (FRONT FOG LIGHT RELAY - BATTERY)**



- (a) Remove the front fog light relay from the No. 6 relay block.
  - (b) Measure the voltage of the relay block.
- standard voltage**

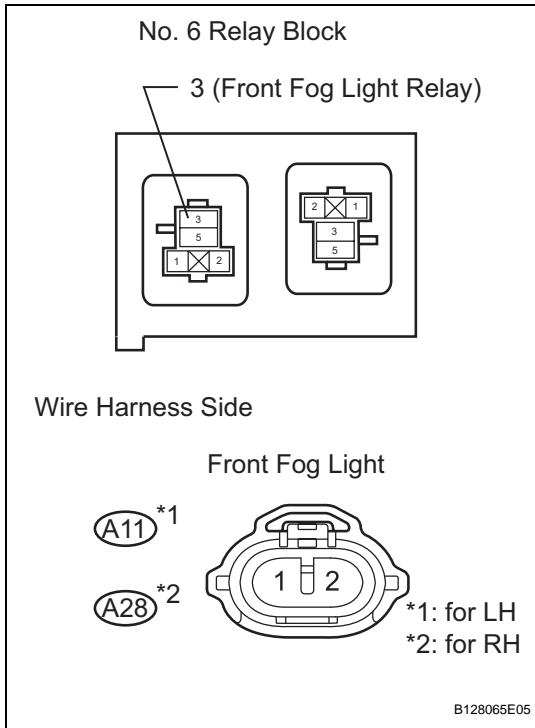
Tester Connection	Specified Condition
No. 6 relay block front fog light relay terminal 5 - Body ground	10 to 14 V

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

**OK**



**8 CHECK WIRE HARNESS (FRONT FOG LIGHT RELAY - FRONT FOG LIGHT AND BODY GROUND)**



- (a) Remove the front fog light relay from the No. 6 relay block.
- (b) Disconnect the A11 and A28 front fog light connectors.
- (c) Measure the resistance of the wire harness side connectors.

**Standard resistance**

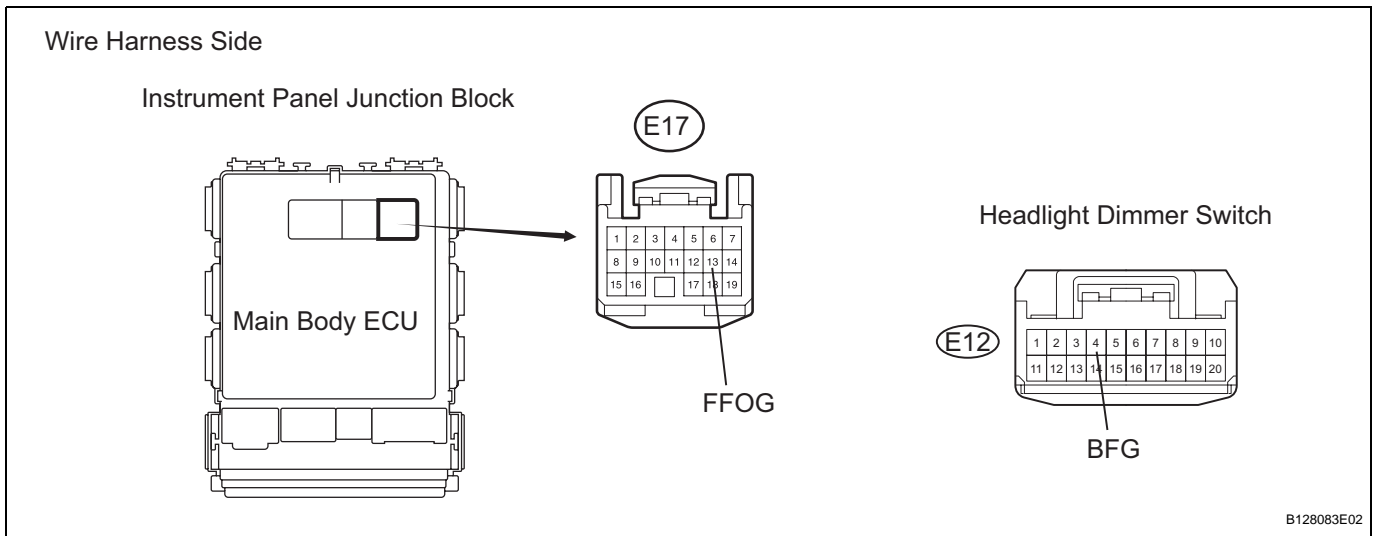
Tester Connection	Specified Condition
No. 6 relay block front fog light relay terminal 3 - A11-2	Below 1 Ω
No. 6 relay block front fog light relay terminal 3 or A11-2 - Body ground	10 kΩ or higher
No. 6 relay block front fog light relay terminal 3 - A28-2	Below 1 Ω
No. 6 relay block front fog light relay terminal 3 or A28-2 - Body ground	10 kΩ or higher
A11-1 - Body ground	Below 1 Ω
A28-1 - Body ground	Below 1 Ω

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

**OK**

**REPLACE INSTRUMENT PANEL JUNCTION BLOCK (MAIN BODY ECU)**

**9 CHECK WIRE HARNESS (DIMMER SWITCH - MAIN BODY ECU AND BODY GROUND)**



- (a) Disconnect the E12 headlight dimmer switch connector.
- (b) Disconnect the E17 main body ECU connector.

- (c) Measure the resistance of the wire harness side connectors.

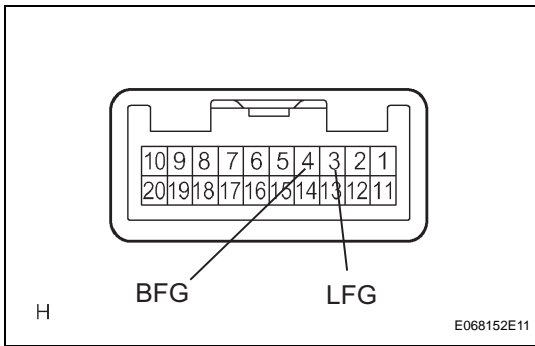
**Standard resistance**

Tester Connection	Specified Condition
E17-13 (FFOG) - E12-4 (BFG)	Below 1 $\Omega$
E17-13 (FFOG) or E12-4 (BFG) - Body ground	10 k $\Omega$ or higher

**NG** REPAIR OR REPLACE HARNESS AND CONNECTOR

**OK**

**10 INSPECT FOG LIGHT SWITCH**



- (a) Remove the headlight dimmer switch.
- (b) Measure the resistance of the switch.

**Standard resistance**

Tester Connection	Condition	Specified Condition
4 (BFG) - 3 (LFG)	Fog light switch OFF	10 k $\Omega$ or higher
4 (BFG) - 3 (LFG)	Fog light switch ON	Below 1 $\Omega$

**NG** REPLACE HEADLIGHT DIMMER SWITCH ASSEMBLY

**OK**

**REPAIR OR REPLACE HARNESS AND CONNECTOR (HEADLIGHT DIMMER SWITCH - BODY GROUND)**