REAR WINDOW DEFOGGER SYSTEM DOES NOT OPERATE

CIRCUIT DESCRIPTION

When the defogger switch is turned on, a rear defogger activation request signal is input to the A/C control assembly (A/C ECU) from the multi–display*1 or center cluster integration panel*2. Then, the A/C control assembly outputs this signal to the defogger relay (Marking: DEFOG) and the rear window defogger system is activated.

HINT:

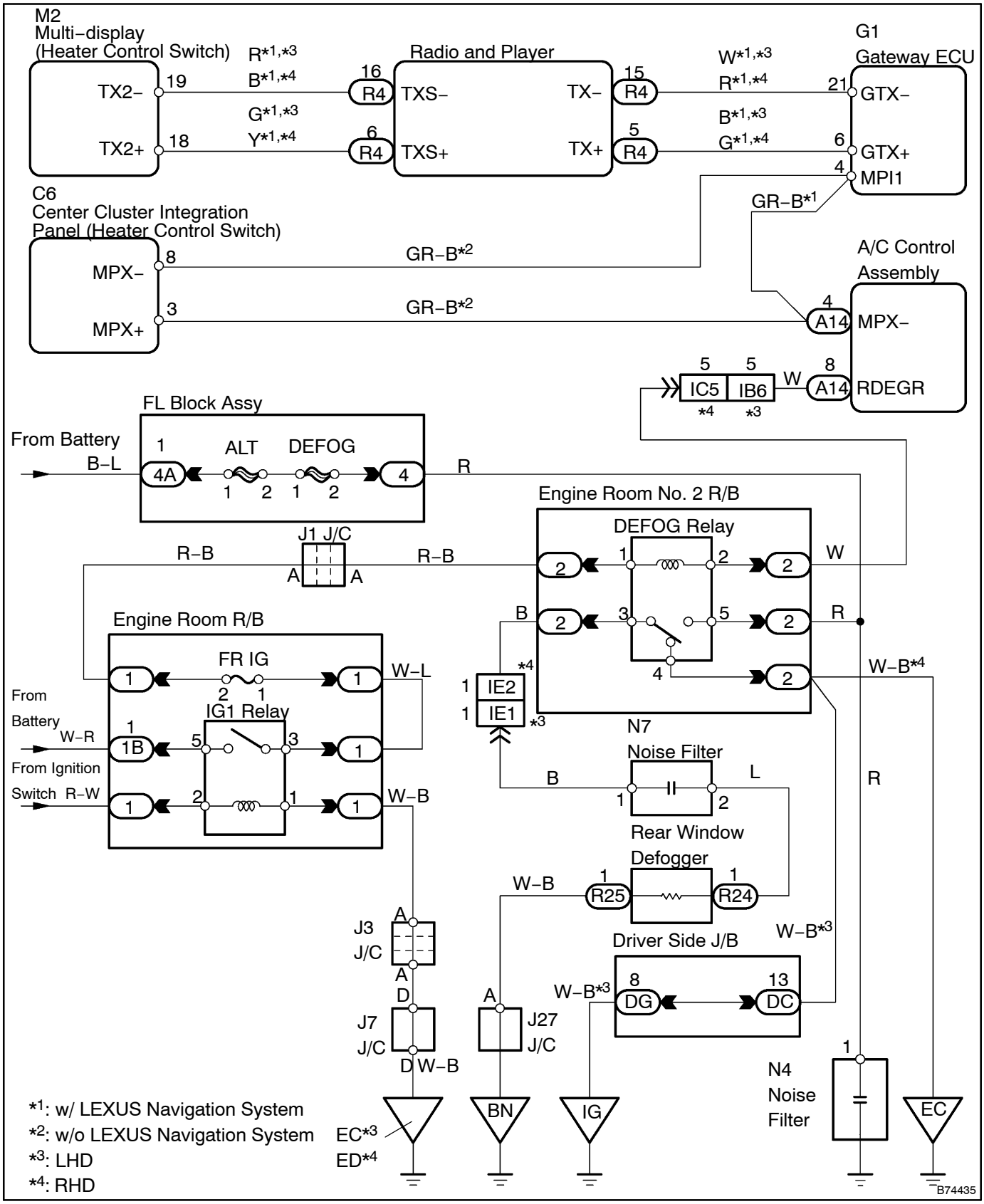
*1: w/ LEXUS navigation system

*2: w/o LEXUS navigation system

NOTICE:

The rear window defogger system is part of the large–scale body multiplex communication system. The first step in any repair is to confirm the proper operation of the communication system. Proceed with troubleshooting after the communication has been verified.

WIRING DIAGRAM



INSPECTION PROCEDURE

1	PERFORM ACTIVE TEST USING INTELLIGENT TESTER II

(a) Select the ACTIVE TEST, use the intelligent tester II to generate a control command, and then check that the A/C control assembly is turned on and off.
A/C control assembly:

Item	Test Details	Diagnostic Note
Defogger Rly–R	Operate rear window defogger OFF/ON	–

OK:
When OFF is selected on the hand–held tester, the rear defogger should turn off.
When ON is selected on the hand–held tester, the rear defogger should become active.

NG → **Go to step 2**

OK

REPLACE A/C CONTROL ASSEMBLY
AND IF DEFOGGER STILL DOES NOT OPERATE, REPLACE MULTI–DISPLAY OR CLUSTER INTEGRATION PANEL

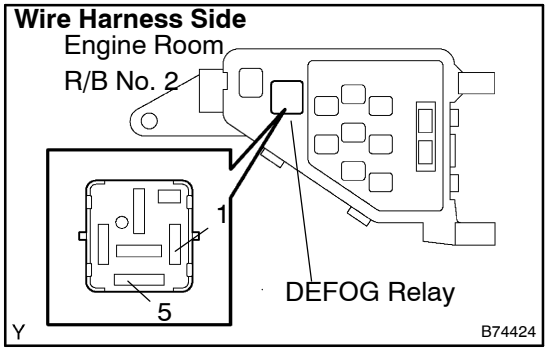
2	CHECK FUSE (DEFOG, FR IG)

(a) Remove the DEFOG H–fuse from the FL block.
(b) Remove the FR IG fuse from the engine room R/B.
(c) Measure the resistance.
Standard: 1 Ω

NG → **REPLACE FUSE**

OK

3	CHECK WIRE HARNESS (ENGINE ROOM R/B NO. 2 – BODY GROUND)



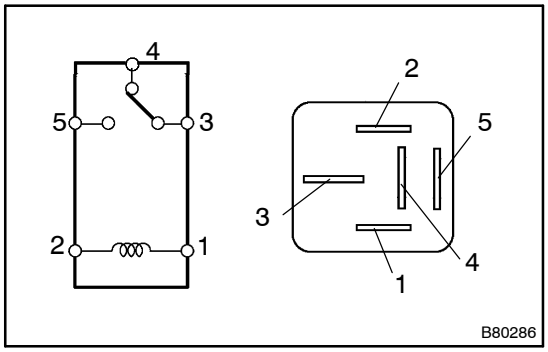
(a) Remove the DEFOG relay from the engine room R/B No. 2.
(b) Measure the voltage between the engine room R/B No. 2 and body ground.
Standard:

Tester Connection	Condition	Specified Condition
1 – Body ground	Ignition switch ON	10 to 14 V
5 – Body ground	Constant	10 to 14 V

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

OK

4 INSPECT RELAY (DEFOG)



(a) Remove the DEFOG relay from the engine room R/B No. 2.

(b) Measure the resistance.

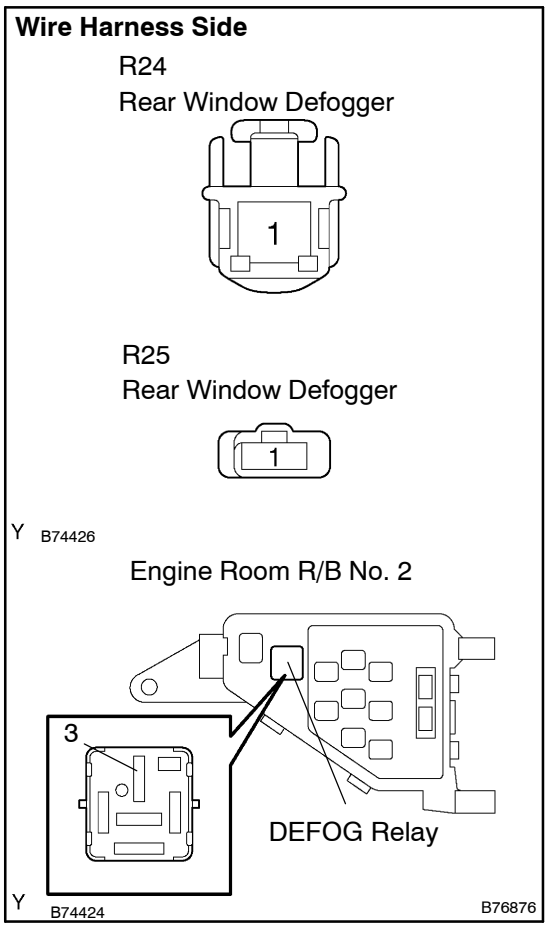
Standard:

Tester Connection	Specified Condition
3 – 4	Below 1 Ω
3 – 5	10 kΩ or higher
3 – 5	Below 1 Ω (when battery voltage is applied to terminals 1 and 2)

NG → **REPLACE RELAY**

OK

5 CHECK WIRE HARNESS (REAR WINDOW DEFOGGER – ENGINE ROOM R/B NO. 2 AND BODY GROUND)



(a) Disconnect the R24 and R25 defogger connectors.

(b) Disconnect the DEFOG relay from the engine room R/B No. 2.

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

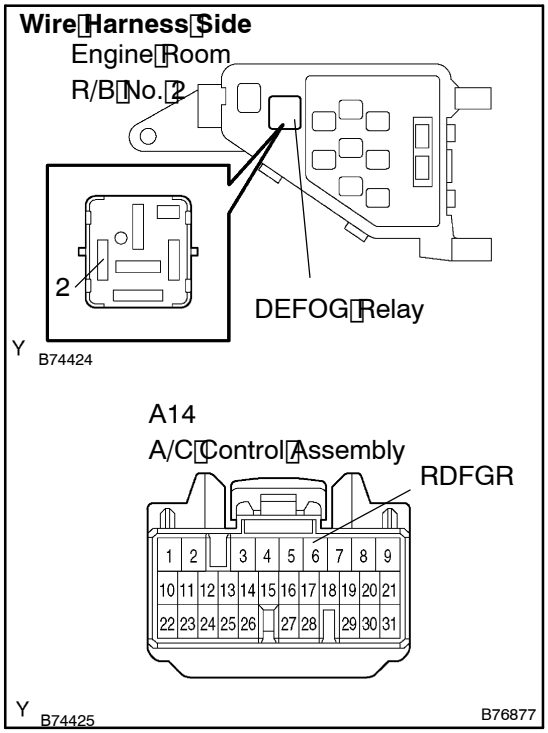
Standard:

Tester Connection	Specified Condition
R24–1 – R/B No. 2 DEFOG relay terminal 3	Below 1 Ω
R25–1 – Body ground	Below 1 Ω

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

OK

6	CHECK WIRE HARNESS (ENGINE ROOM R/B NO. 2 – A/C CONTROL ASSEMBLY)



(a) Remove the DEFOG relay from the engine room R/B No. 2.

(b) Disconnect the A14 A/C control assembly connector.

(c) Measure the resistance of the wire harness side connector.

Standard:

Tester Connection	Specified Connection
A14–8 (RDFGR) – R/B No. 2 DEFOG relay terminal 2	Below 1 Ω

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

OK

7	INSPECT REAR WINDOW DEFOGGER (WIRE) (See page 70–26)

NG → **REPAIR OR REPLACE REAR WINDOW DEFOGGER**

OK

REPLACE A/C CONTROL ASSEMBLY