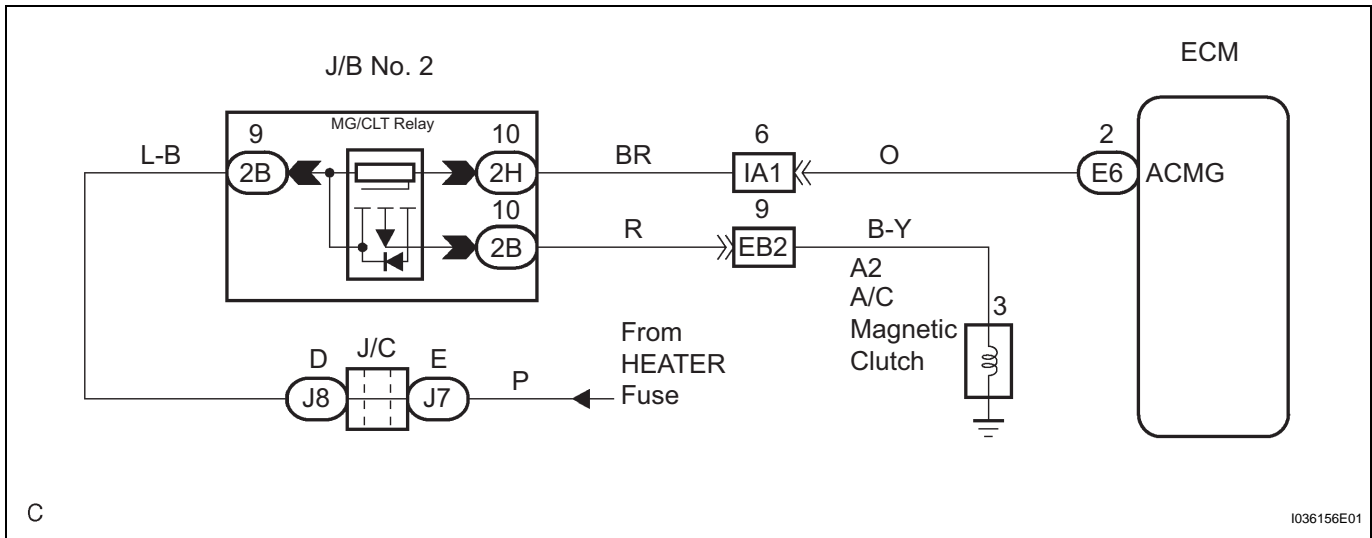


Compressor Circuit

DESCRIPTION

The air conditioning amplifier outputs the magnetic clutch ON signal from the MPX terminal to the ECM which receives this signal. It then sends the signal from the ACMG terminal and switches the magnetic clutch relay on, thus turning on the magnetic clutch.

WIRING DIAGRAM



AC

1 READ VALUE OF INTELLIGENT TESTER

- (a) Connect the intelligent tester to DLC3.
- (b) Turn the ignition switch ON and push the intelligent tester main switch ON.
- (c) Select the items below in the DATA LIST, and read the displays on the intelligent tester.

ALL

Item	Measurement Item / Display (Range)	Normal Condition	Diagnostic Note
A/C SIG	A/C signal / ON or OFF	A/C ON: ON	-

NG → Go to step 7

OK

2 PERFORM ACTIVE TEST BY INTELLIGENT TESTER

- (a) Connect the intelligent tester to DLC3.
- (b) Turn the ignition switch ON and push the intelligent tester main switch ON.
- (c) Select the item below in the ACTIVE TEST and then check that the relay operates.

AC:

Item	Test Details / Display (Range)	Diagnostic Note
A/C MAG CLUTCH	Magnetic clutch relay / OFF, ON	-

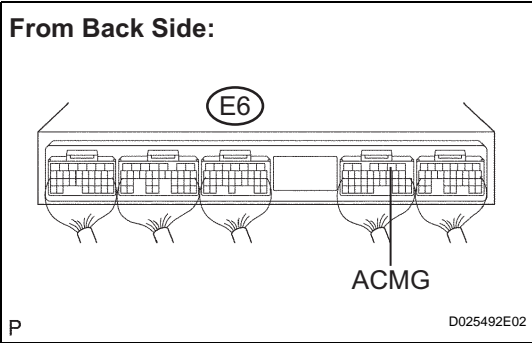
NG → **Go to step 3**

OK

PROCEED TO NEXT CIRCUIT INSPECTION SHOWN IN PROBLEM SYMPTOMS TABLE

3 INSPECT ECM (ACMG - BODY GROUND)

AC



- (a) Remove the ECM with connectors still connected.
- (b) Start the engine and push the AUTO switch.
- (c) Measure the voltage according to the value(s) in the table below.

Standard voltage

Tester connection	Condition	Specified condition
E6-2 (ACMG) - Body ground	A/C switch OFF	11 to 14 V
E6-2 (ACMG) - Body ground	A/C switch ON	Below 1 V

Result

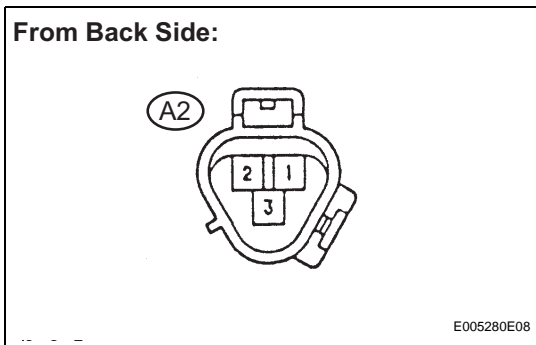
Condition	Proceed to
OK	A
NG (Always 11 to 14 V)	B
NG (Always below 1.0 V)	C

B → **REPLACE ECM**

C → **Go to step 10**

A

4 INSPECT MAGNETIC CLUTCH ASSEMBLY



- (a) Disconnect the connector from the magnet clutch assembly.
- (b) Connect the positive (+) lead from the battery to terminal 3 and negative (-) lead to terminal body ground, then check that the magnetic clutch assembly is engaged.

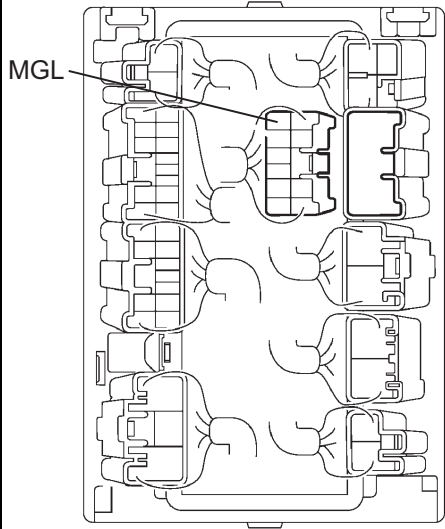
NG → **REPLACE MAGNET CLUTCH ASSEMBLY**

OK

5 CHECK HARNESS AND CONNECTOR (MAGNETIC CLUTCH ASSEMBLY - ENGINE ROOM JUNCTION BLOCK)

AC

Wire Harness Side:

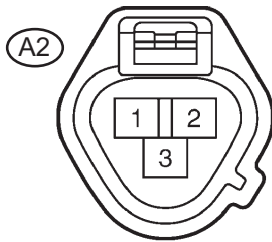


H

I037261E01

(a) Disconnect the connector from the engine room junction block.

Wire Harness Side:



P

E051630E03

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

Standard resistance

Tester connection	Condition	Specified condition
2B-10 (MGL) - A2-3	Always	Below 1 Ω

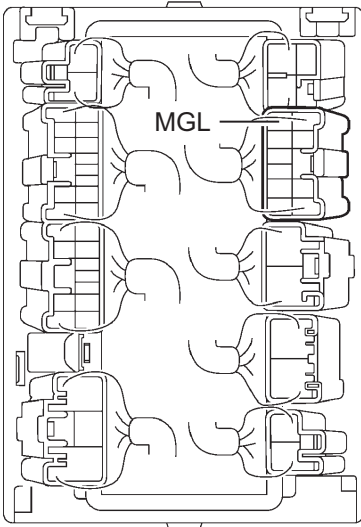
NG

REPAIR OR REPLACE HARNESS AND CONNECTOR

OK

6 INSPECT ENGINE ROOM JUNCTION BLOCK (MGL - BODY GROUND)

From Back Side:



H

I037260E01

- (a) Start the engine and push AUTO switch.
- (b) Measure the voltage according to the value(s) in the table below.

Standard voltage

Tester connection	Condition	Specified condition
2B-10 (MGL) - Body ground	AUTO switch ON	11 to 14 V

NG → **REPLACE ENGINE ROOM JUNCTION BLOCK**

AC

OK

PROCEED TO NEXT CIRCUIT INSPECTION SHOWN IN PROBLEM SYMPTOMS TABLE

7 CONFIRM MODEL

Result:

A:
w/o LEXUS Navigation System

B:
w/ LEXUS Navigation System

B → **Go to step 9**

A

8 REPLACE AIR CONDITIONING AMPLIFIER

NG → **REPLACE CENTER CLUSTER INTEGRATION SWITCH ASSEMBLY**

OK

PROCEED TO NEXT CIRCUIT INSPECTION SHOWN IN PROBLEM SYMPTOMS TABLE

9 REPLACE AIR CONDITIONING AMPLIFIER

NG **REPLACE MULTI-DISPLAY ASSEMBLY**

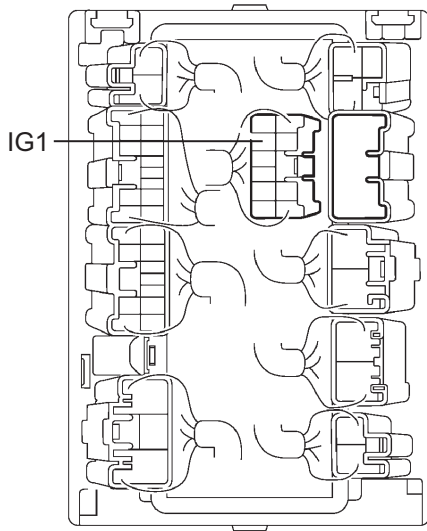
OK

PROCEED TO NEXT CIRCUIT INSPECTION SHOWN IN PROBLEM SYMPTOMS TABLE

AC

10 INSPECT ENGINE ROOM JUNCTION BLOCK (IG1 - BODY GROUND)

Wire Harness Side:



H

1037261E02

- (a) Disconnect the connector.
- (b) Measure the voltage according to the value(s) in the table below.

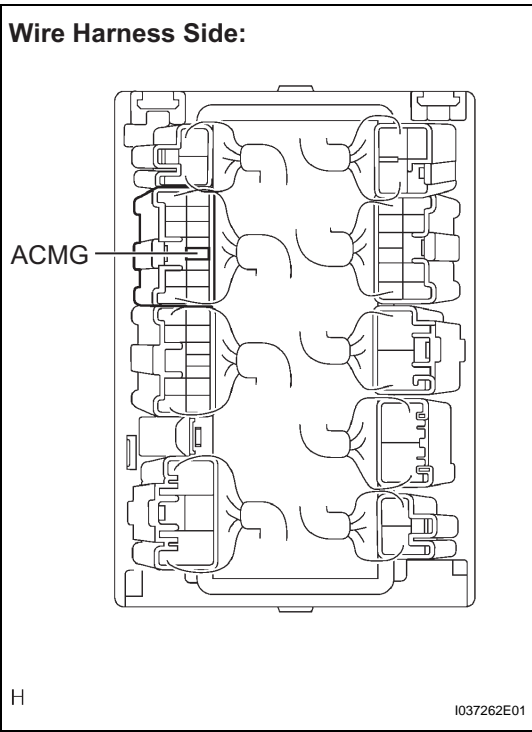
Standard voltage

Tester connection	Condition	Specified condition
2B-9 (IG1) - Body ground	Always	11 to 14 V

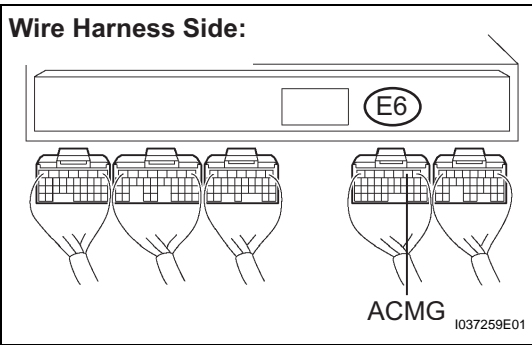
NG **REPAIR OR REPLACE HARNESS AND CONNECTOR**

OK

11 CHECK HARNESS AND CONNECTOR (ENGINE ROOM JUNCTION BLOCK - ECM)



(a) Reconnect the connector to the engine room junction block.



(b) Disconnect the connector from the ECM.
 (c) Measure the resistance according to the value(s) in the table below.

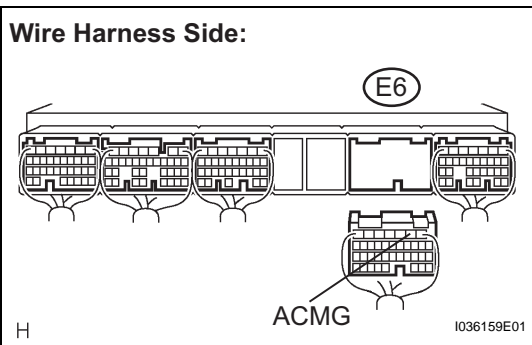
Standard resistance

Tester connection	Condition	Specified condition
2H-10 (ACMG) - E6-2 (ACMG)	Always	Below 1 Ω

NG REPAIR OR REPLACE HARNESS AND CONNECTOR

OK

12 INSPECT ECM (ACMG - BODY GROUND)



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

Standard voltage

Tester connection	Condition	Specified condition
E6-2 (ACMG) - Body ground	Always	11 to 14 V

NG REPLACE ENGINE ROOM JUNCTION BLOCK

OK

REPLACE ECM

AC