

DTC	B1451/51	Compressor Solenoid Circuit (2006/01-)
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DESCRIPTION

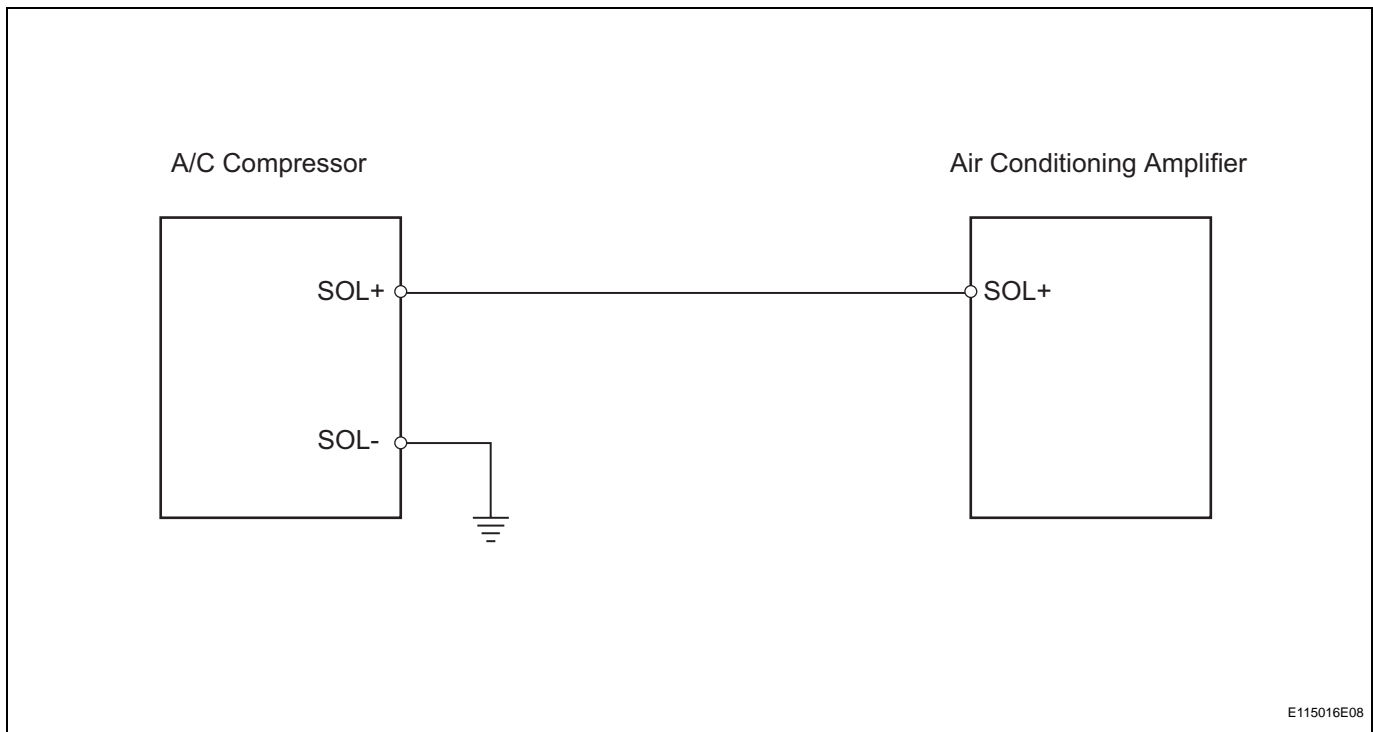
In this circuit, the compressor receives a refrigerant compression demand signal from the air conditioning amplifier. Based on this signal, the compressor changes the degree of refrigerant compression.

DTC No.	DTC Detection Condition	Trouble Area
B1451/51	Open or short in solenoid of externally changeable compressor circuit	<ul style="list-style-type: none"> • A/C compressor* • Wire harness between air conditioning amplifier and A/C compressor* • Air conditioning amplifier

HINT:

*: Compressor and pulley for 2AZ-FE, compressor and magnetic clutch for 2GR-FE

WIRING DIAGRAM



AC

INSPECTION PROCEDURE

1	READ VALUE OF INTELLIGENT TESTER (REG CTRL CURRNT)
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- (a) Connect the intelligent tester (with CAN VIM) to the DLC3.
- (b) Turn the ignition switch ON and turn the intelligent tester main switch ON.
- (c) Select the items below in the DATA LIST, and read the value displayed on the intelligent tester.

Air conditioning amplifier

Item	Measurement Item / Display (Range)	Normal Condition	Diagnostic Note
REG CTRL CURRNT	Regulator control current / Min.: 0 A Max.: 0.997 A	Value changes between 0 A and 0.997 A in accordance with A/C compressor operation	-

OK:
The display is as specified in the normal condition column.

Result

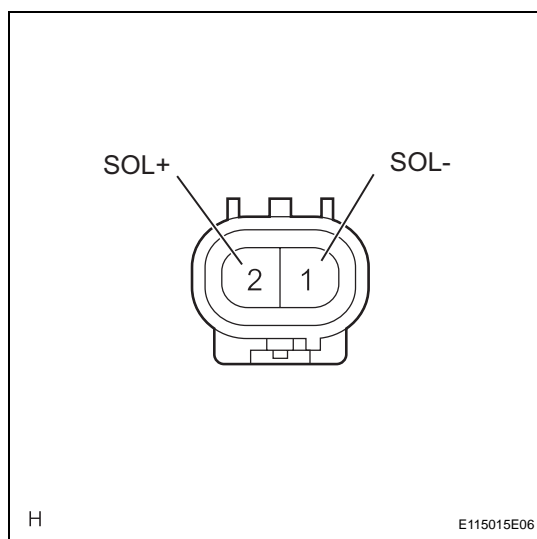
Result	Proceed to
NG	A
OK (Checking from the PROBLEM SYMPTOMS TABLE)	B
OK (Checking from the DTC)	C

B → PROCEED TO NEXT CIRCUIT INSPECTION SHOWN IN PROBLEM SYMPTOMS TABLE

C → REPLACE AIR CONDITIONING AMPLIFIER

A

2 INSPECT A/C COMPRESSOR



- (a) Disconnect the A/C compressor connector.
- (b) Measure the resistance of the connector.

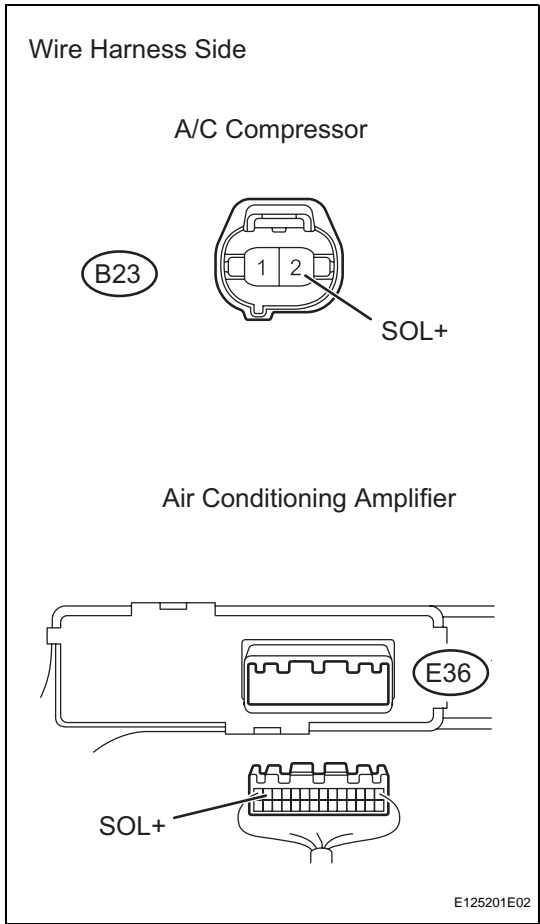
Standard resistance

Tester Connection	Condition	Specified Condition
1 (SOL-) - 2 (SOL+)	25°C (77°F)	10.1 to 11.1 Ω

NG → REPLACE A/C COMPRESSOR

OK

3 CHECK WIRE HARNESS (A/C COMPRESSOR - AIR CONDITIONING AMPLIFIER)



- (a) Disconnect the B23 A/C compressor connector.
- (b) Disconnect the E36 amplifier connector.
- (c) Measure the resistance of the wire harness side connectors.

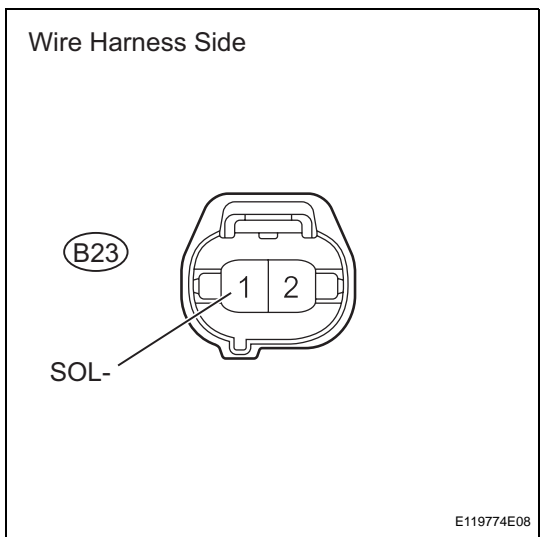
Standard resistance

Tester Connection	Specified Condition
B23-2 (SOL+) - E36-13 (SOL+)	Below 1 Ω
B23-2 (SOL+) - Body Ground	1 MΩ or higher

NG REPAIR OR REPLACE HARNESS AND CONNECTOR

OK

4 CHECK WIRE HARNESS (A/C COMPRESSOR - BODY GROUND)



- (a) Disconnect the B23 A/C compressor connector.
- (b) Measure the resistance of the wire harness side connector.

Standard resistance

Tester Connection	Specified Condition
B23-1 (SOL-) - Body ground	Below 1 Ω

NG REPAIR OR REPLACE HARNESS AND CONNECTOR

AC

OK

REPLACE AIR CONDITIONING AMPLIFIER