

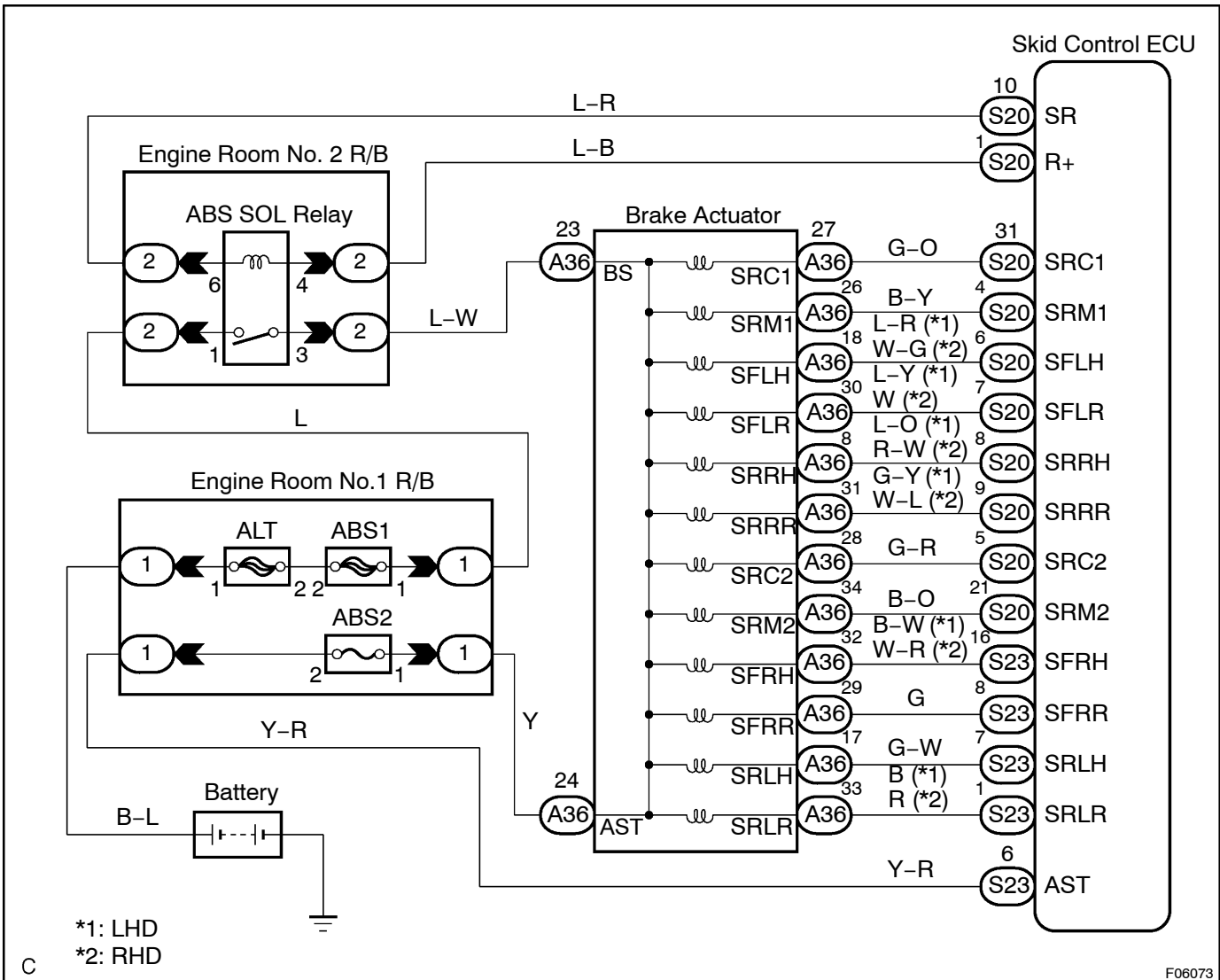
<b>DTC</b>	<b>C0278 / 11, C0279 / 12</b>	<b>ABS Solenoid Relay Circuit</b>
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**CIRCUIT DESCRIPTION**

This relay supplies power to each ABS solenoid. After the ignition switch is turned ON, if the initial check is OK, the relay goes on.

DTC No.	DTC Detecting Condition	Trouble Area
C0278 / 11	Conditions 1. and 2. continue for 0.2 sec. or more: 1. ECU terminal IG1 voltage is 9.5 V to 17.2 V and the solenoid relay is ON, however, the contact point of the solenoid relay is OFF. 2. With solenoid relay ON driving, ECU terminal IG1 voltage becomes 9.5 V or less and the contact point of the solenoid relay does not become ON.	<ul style="list-style-type: none"> <li>• ABS solenoid relay</li> <li>• ABS solenoid relay circuit</li> <li>• Skid control ECU</li> </ul>
C0279 / 12	Immediately after ECU terminal IG1 becomes ON, and solenoid relay is OFF, however, when the condition that the contact point of the solenoid relay is ON continues for 0.2 sec. or more.	

**WIRING DIAGRAM**



## INSPECTION PROCEDURE

### HINT:

Start the inspection from step 1 in case of using the hand-held tester and start from step 2 in case of not using the hand-held tester.

### 1 Check ABS solenoid relay operation.

#### PREPARATION:

- Connect the hand-held tester to the DLC3.
- Turn the ignition switch ON and push the hand-held tester main switch ON.
- Select the ACTIVE TEST mode on the hand-held tester.

#### CHECK:

Check the operation sound of the ABS solenoid relay when operating it with the hand-held tester.

#### OK:

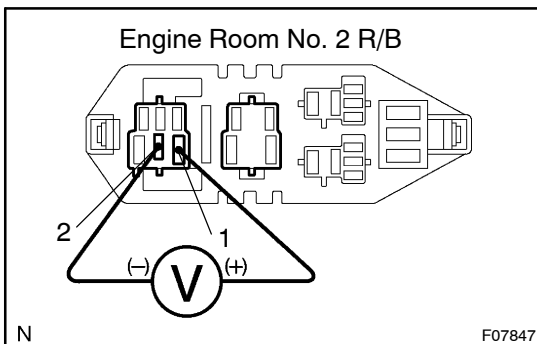
The operation sound of the ABS solenoid relay should be heard.

OK

Go to step 4.

NG

### 2 Check voltage between terminals 1 and 2 of engine room No. 2 R/B (for ABS solenoid relay).



#### PREPARATION:

Remove the ABS solenoid relay from the engine room No. 2 R/B.

#### CHECK:

Measure the voltage between terminals 1 and 2 of engine room No. 2 R/B (for ABS solenoid relay).

#### OK:

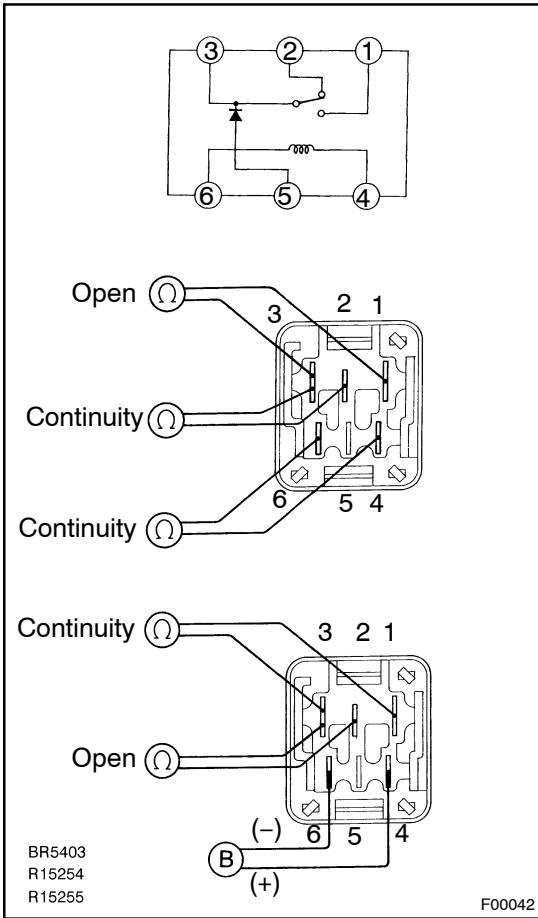
Voltage: 10 - 14 V

NG

Check and repair harness or connector.

OK

**3 Check ABS solenoid relay.**



**CHECK:**

Check continuity between each terminal of ABS solenoid relay.

**OK:**

Terminals 4 and 6	Continuity (Reference value 80 Ω)
Terminals 2 and 3	Continuity
Terminals 1 and 3	Open

**CHECK:**

- (a) Apply battery voltage between terminals 4 and 6.
- (b) Check continuity between each terminal of ABS solenoid relay.

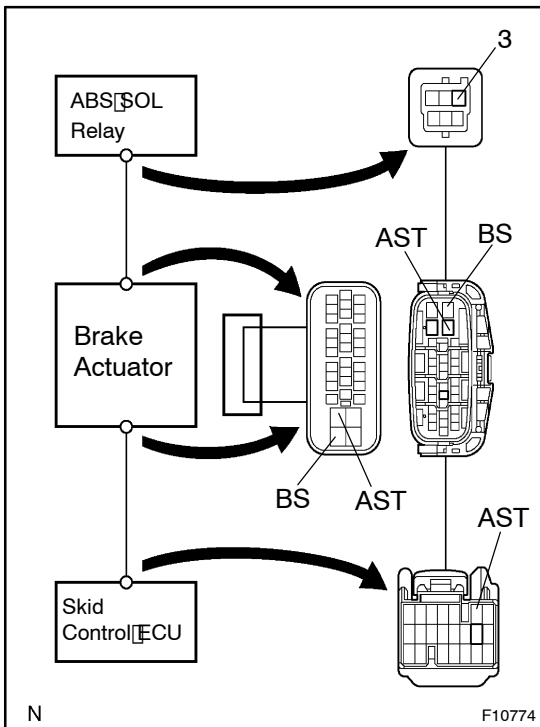
**OK:**

Terminals 2 and 3	Open
Terminals 1 and 3	Continuity

**NG** Replace ABS solenoid relay.

**OK**

- 4 Check continuity between terminals 3 of engine room No. 2 R/B (for ABS solenoid relay) and terminal AST of skid control ECU.

**PREPARATION:**

- (a) Remove the ABS solenoid relay from the engine room No. 2 R/B.  
 (b) Disconnect the connector from the skid control ECU.

**CHECK:**

Check continuity between terminals 3 of engine room No. 2 R/B (for ABS solenoid relay) and terminal AST of skid control ECU harness side connector.

**OK:**

Continuity

NG

Repair or replace harness or brake actuator.

OK

- 5 Check for open and short circuit in harness and connector between ABS solenoid relay and skid control ECU (See page N-34).

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Repair or replace harness or connector.

OK

If the same code is still output after the DTC is deleted, check the contact condition of each connection. If the connections are normal, the ECU may be defective.