

DTC	C0278/11, C0279/12	ABS Solenoid Relay Circuit
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CIRCUIT DESCRIPTION

This ABS solenoid relay (Marking: ABS SOL) 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 Detection Condition	Trouble Area
C0278/11	Condition 1. or 2. continues for 0.2 sec. or more: 1. IG1 terminal voltage of ABS ECU is 9.5 – 18.5 V, and when the solenoid relay is ON.*1 2. With solenoid relay ON, when IG1 terminal of ABS ECU is less than 9.5 V.*1	<ul style="list-style-type: none"> • ABS solenoid relay • ABS solenoid relay circuit
C0279/12	Immediately after IG switch has been turned ON, when the solenoid relay is OFF.*2	

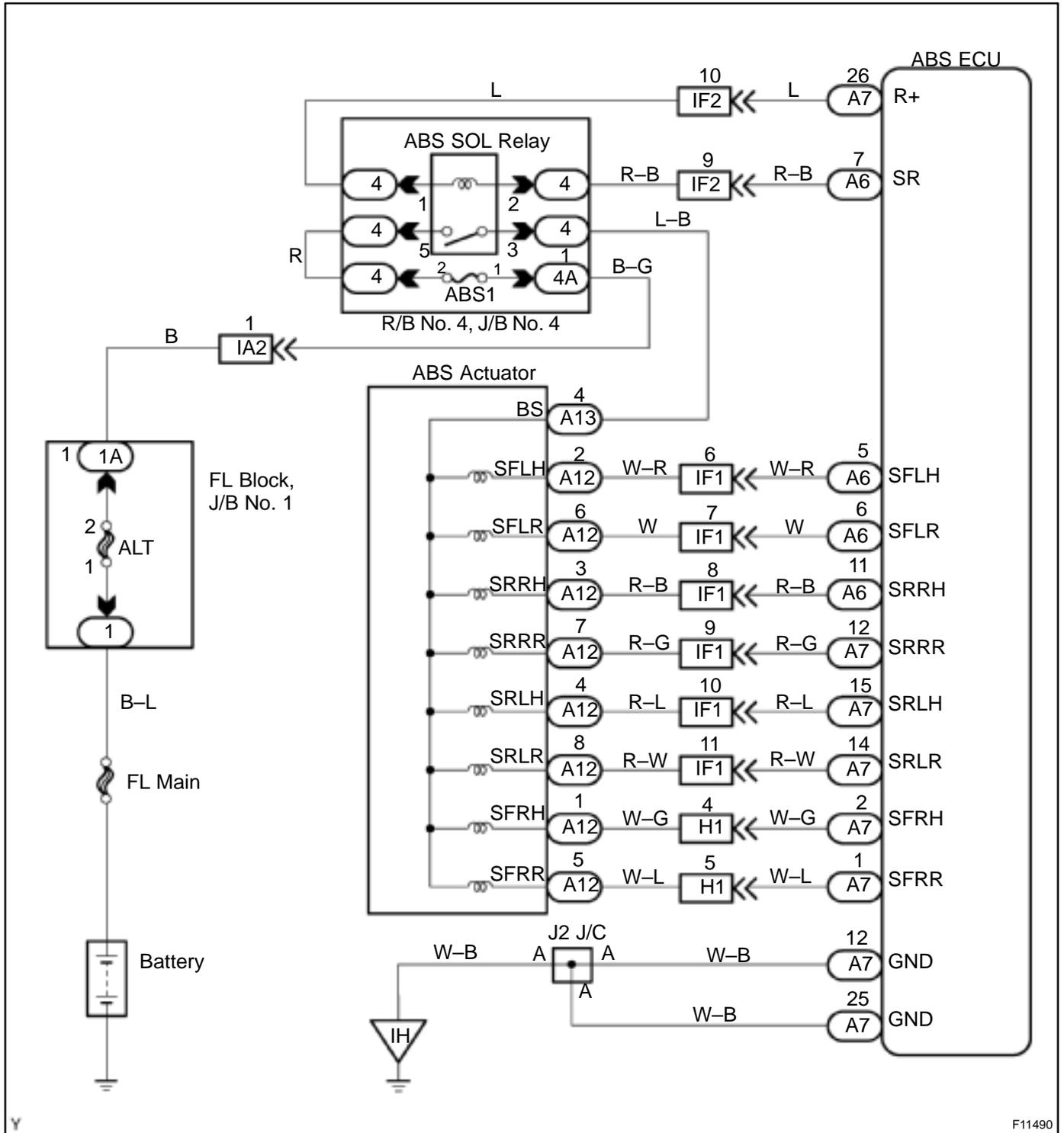
*1: Solenoid relay contact OFF condition:

All of solenoid terminal voltage is half or less than IG1 terminal voltage.

*2: Solenoid relay contact ON condition:

All of solenoid terminal voltage is half of IG1 terminal voltage or more.

WIRING DIAGRAM



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F11490

INSPECTION PROCEDURE

HINT:

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

1	Check ABS solenoid relay (Marking: ABS SOL) operation.
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PREPARATION:

- (a) Connect the TOYOTA hand-held tester to the DLC3.
- (b) Turn the ignition switch ON and push the TOYOTA hand-held tester main switch ON.
- (c) Select the ACTIVE TEST mode on the TOYOTA hand-held tester.

CHECK:

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

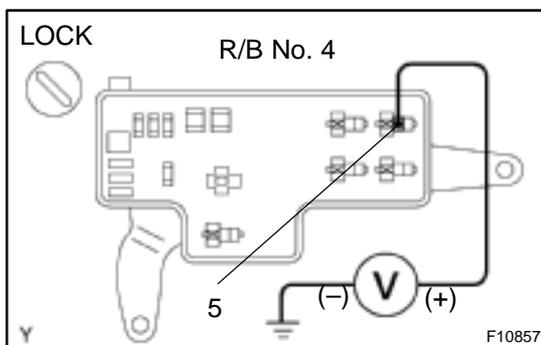
OK:

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

OK	Go to step 5.
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2	Check voltage between terminal 5 of R/B No. 4 (for ABS solenoid relay (Marking: ABS SOL)) and body ground.
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PREPARATION:

Remove the ABS solenoid relay from the R/B No. 4.

CHECK:

Measure the voltage between terminal 5 of the R/B No. 4 (for ABS solenoid relay) and body ground.

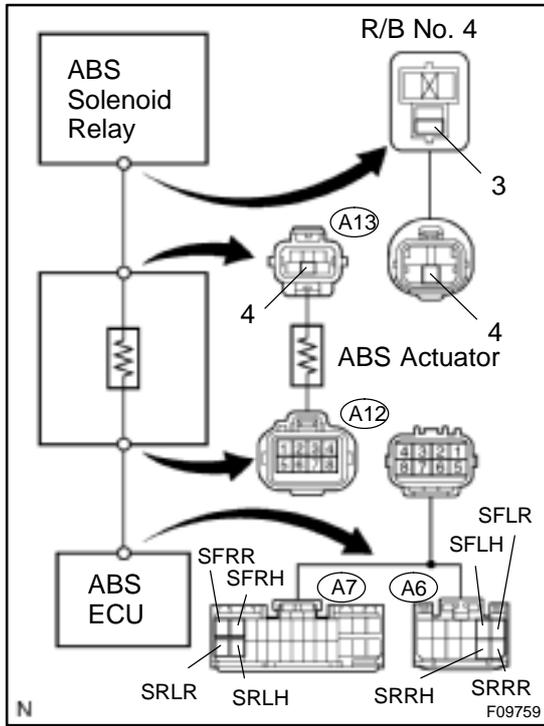
OK:

Voltage: 10 – 14 V

NG	Check and repair harness or connector between R/B No. 4 and battery.
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- 3 Check continuity between terminal 3 of R/B No. 4 (for ABS solenoid relay (Marking: ABS SOL)) and each solenoid terminal of ABS ECU.**

**CHECK:**

Check the continuity between terminal 3 of the R/B No. 4 (for ABS solenoid relay) and terminal SRLR, SRRR, SFLR, SFLH, SFRH or SFRH of the ABS ECU.

OK:**Continuity****HINT:**

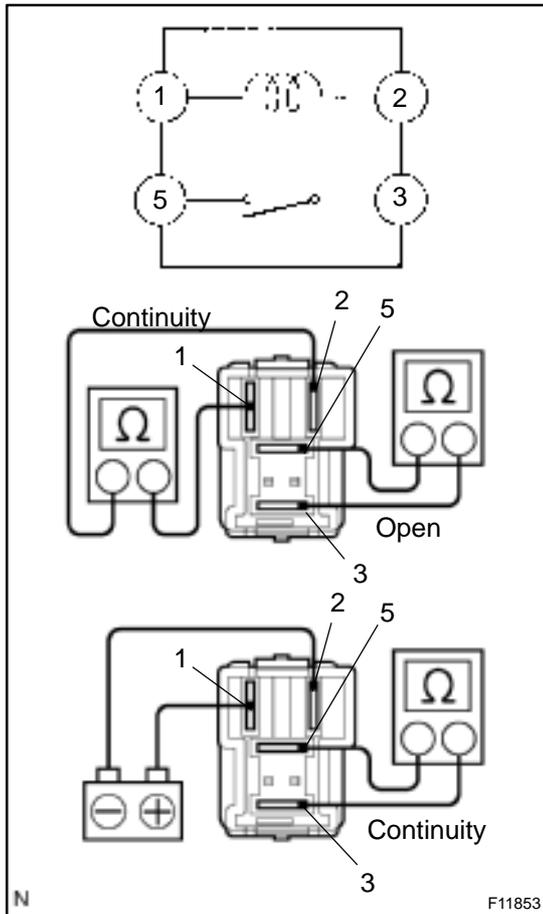
Resistance of each solenoid coil

SRLR, SRRR, SFLR, SFRH: 4.3 Ω

SRLH, SRRH, SFLH, SFRH: 8.8 Ω

NG**Repair or replace harness or ABS actuator.****OK**

4 Check ABS solenoid relay (Marking: ABS SOL).



PREPARATION:

Remove the ABS motor relay from the R/B No. 4.

CHECK:

Check the continuity between each terminal of ABS solenoid relay.

OK:

Terminals 1 and 2	Continuity (Reference value 100 Ω)
Terminals 3 and 5	Open

CHECK:

- (a) Apply battery positive voltage between terminals 1 and 2.
- (b) Check continuity between each terminal of the ABS solenoid relay.

OK:

Terminals 3 and 5	Continuity
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NG → Replace ABS solenoid relay.

OK

5 Check for open and short circuit in harness and connector between ABS solenoid relay (Marking: ABS SOL) and ABS ECU (See page IN-28).

NG → Repair or replace harness or connector.

OK

If same code is still output after DTC is deleted, check connections. If connections are normal, ECU may be defective.