DI6QJ–01

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

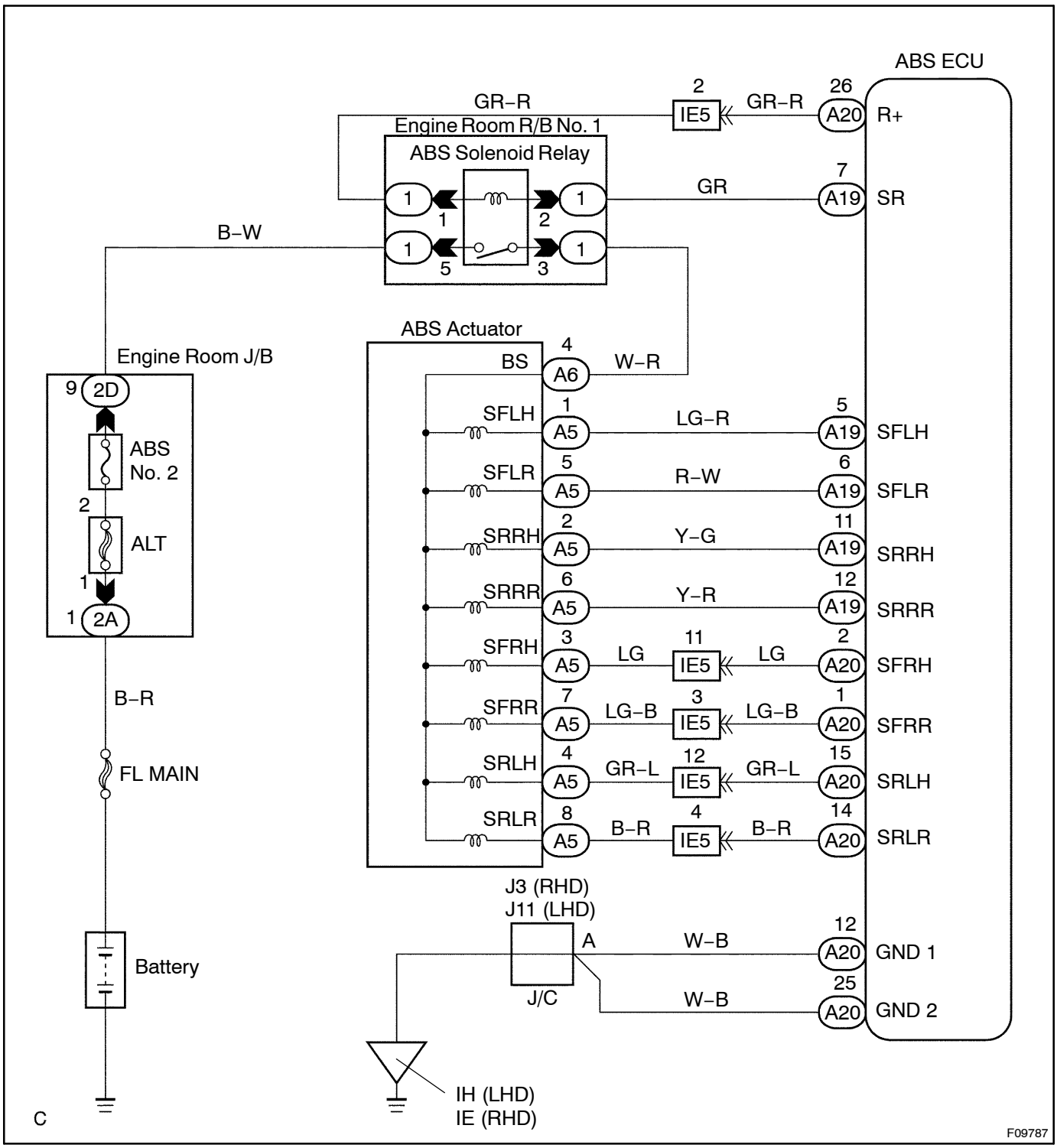
CIRCUIT DESCRIPTION

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	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 driving, when IG1 terminal of ABS ECU is less than 9.5 V.*1	• 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 of IG1 terminal voltage or less than.
*2 Solenoid relay contact ON condition:
All of solenoid terminal voltage is half of IG 1 terminal voltage 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:
(a) Connect the hand–held tester to the DLC3.
(b) Turn the ignition switch ON and push the hand–held tester main switch ON.
(c) Select the ACTIVE TEST mode on the hand–held tester.

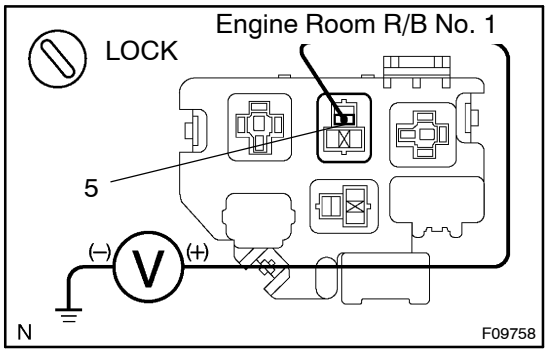
CHECK:
Check the operation sound of the ABS solenoid relay when operating it with the hand–held tester.

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

OK → **Go to step 5.**

NG

2	**Check voltage between terminal 5 of engine room R/B No. 1 (for ABS solenoid relay) and body groud.**



PREPARATION:
Remove the ABS solenoid relay from engine room R/B No. 1.

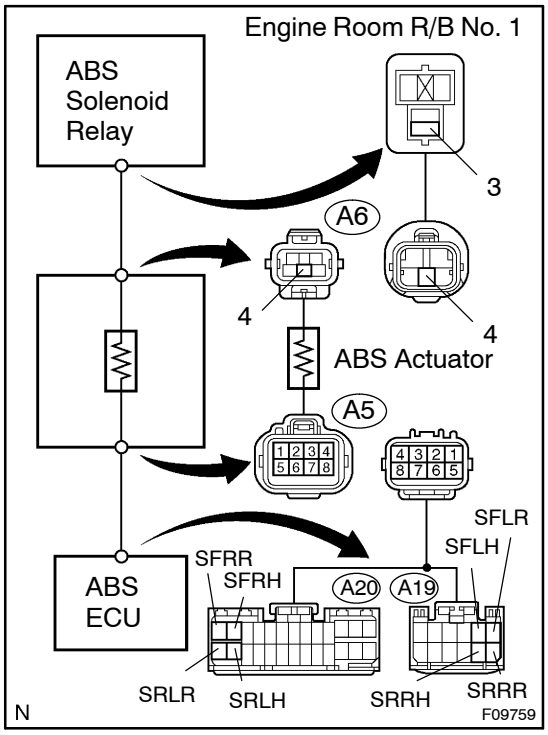
CHECK:
Measure the voltage between terminal 5 of engine room R/B No. 1 (for ABS solenoid relay) and body ground.

OK:
Voltage: 10 – 14 V

NG → **Check and repair harness or connector.**

OK

3	**Check continuity between terminal 3 of engine room R/B No. 1 (for ABS solenoid relay) and each solenoid terminal of ABS ECU.**



CHECK:

Check continuity between terminal 3 of engine room R/B No. 1 (for ABS solenoid relay) and terminal SRLR, SRLH, SRRR, SRRH, SFLR, SRLH, SFRR or SFRH of ABS ECU.

OK:

Continuity

HINT:

Resistance of each solenoid coil

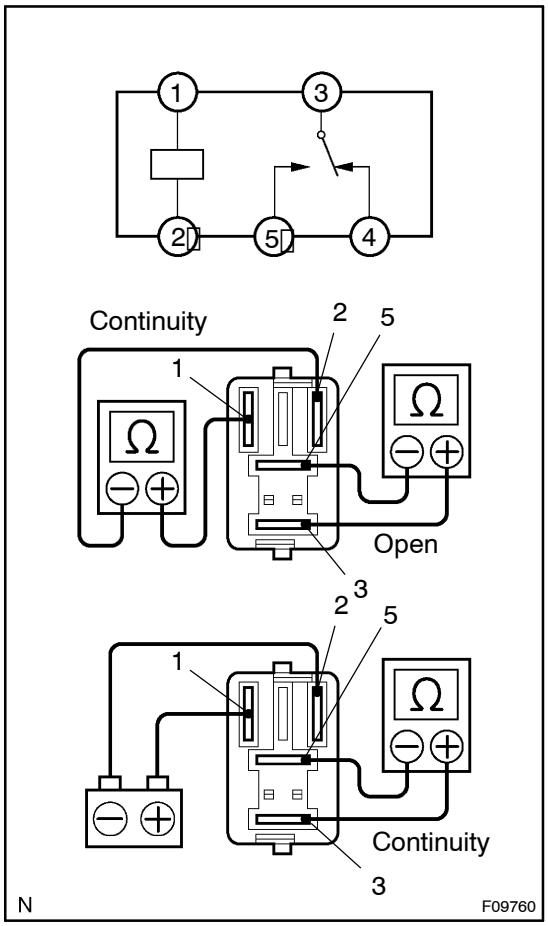
SRLR, SRRR, SFLR, SFRR: 4.3 Ω

SRLH, SRRH, SFLH, SFRH: 8.8 Ω

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

OK

4	Check ABS solenoid relay.



CHECK:

Check 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 voltage between terminals 1 and 2.

(b) Check continuity between each terminal of ABS solenoid relay.

OK:

Terminals 3 and 5	Continuity

NG → **Replace ABS solenoid relay.**

OK

5	Check for open and short circuit in harness and connector between ABS solenoid relay and ABS ECU (See page IN–30).

NG → **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.