DI1GK–06

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	Conditions 1. and 2. continue for 0.2 sec. or more: 1. ECU terminal IG1 voltage is 19 V to 36 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 19 V or less and the contact point of the solenoid relay does not become ON.	• ABS solenoid relay • ABS solenoid relay circuit
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.	

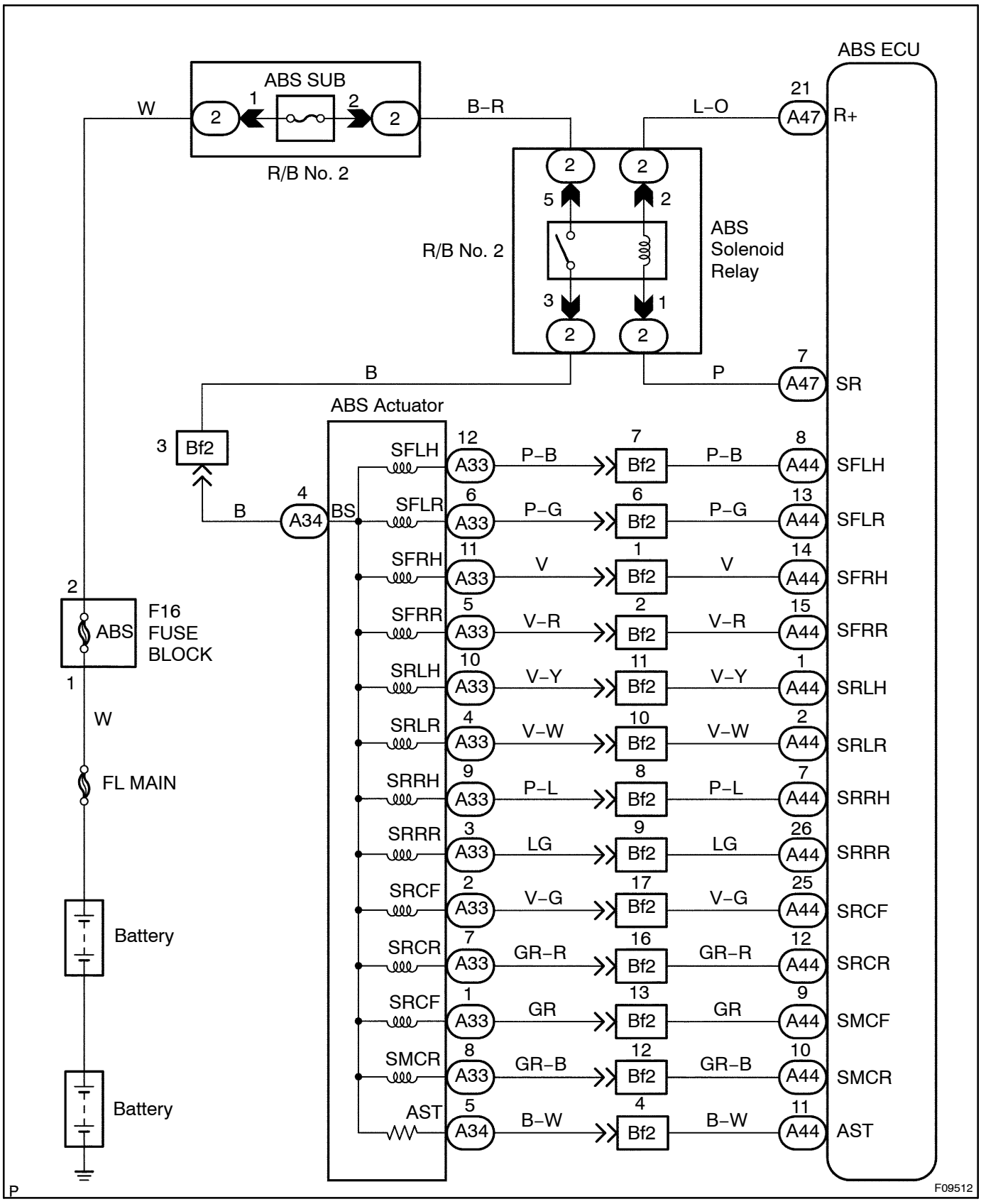
Fail safe function:

If any trouble occurs in the ABS solenoid relay circuit, the ECU cuts off current to the ABS solenoid relay and prohibits ABS control and BRAKE PRESSURE INCREASE FUNCTION.

HINT:

When the brake pedal is depressed firmly, the brake force may be lowered.

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.

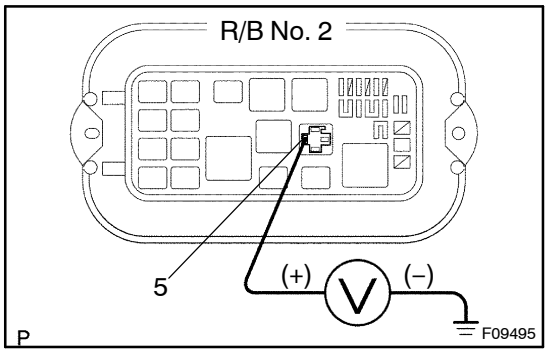
CHECK:
Check the operation sound of the ABS solenoid relay when operating it with the hand–held tester.

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

OK → **Go to step 4.**

NG

2	**Check voltage between terminals 5 of R/B No. 2 (for ABS solenoid relay) and body ground.**



PREPARATION:
Remove the ABS solenoid relay from the R/B No. 2.

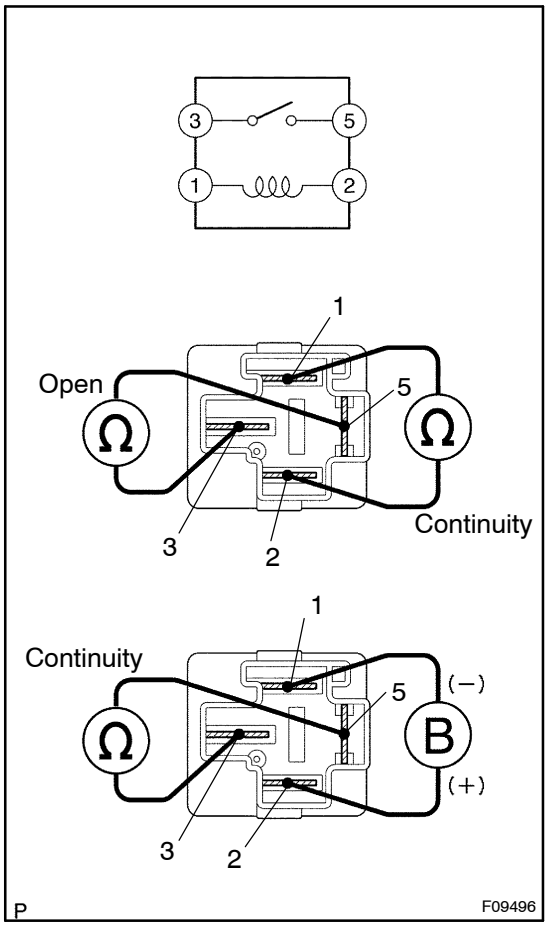
CHECK:
Measure the voltage between terminals 5 of R/B No. 2 (for ABS solenoid relay) and body ground.

OK:
Voltage: 20 – 28 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 1 and 2	Continuity (Reference value 240 ± 48 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.

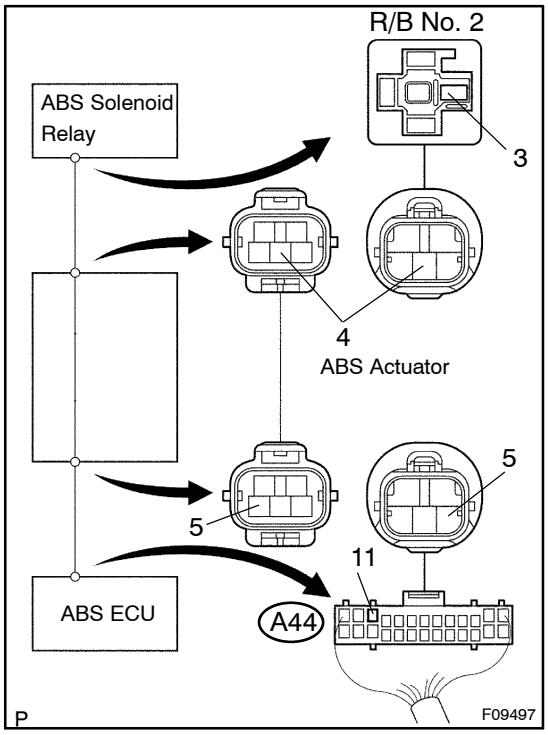
OK:

Terminals 3 and 5	Continuity

NG → **Replace ABS solenoid relay.**

OK

4	Check continuity between terminals 3 of R/B No. 2 (for ABS solenoid relay) and terminal AST (A44 – 11) of ABS ECU.



CHECK:

Check continuity between terminals 3 of R/B No. 2 (for ABS solenoid relay) and terminal AST (A44 – 11) of ABS ECU.

OK:

Continuity

NG	Repair or replace harness or ABS actuator.

OK

5	Check for open and short circuit in harness and connector between ABS solenoid relay and ABS ECU (See page IN–21).

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.