DTC	C0278/11	OPEN CIRCUIT IN ABS SOLENOID RELAY CIRCUIT

DTC	C0279/12	SHORT CIRCUIT IN 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 will turn ON.

DTC No.	DTC Detection 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 solenoid relay is ON, however, contact point of solenoid relay is OFF 2. With solenoid relay ON driving, ECU terminal IG1 voltage becomes 19 V or less and contact point of solenoid relay does not become ON	• ABS solenoid relay (Marking: ABS SOL) • ABS solenoid relay circuit
C0279/12	Immediately after ECU terminal IG1 becomes ON, solenoid relay is OFF, however, when condition that contact point of the solenoid relay is ON continues for 0.2 sec. or more	

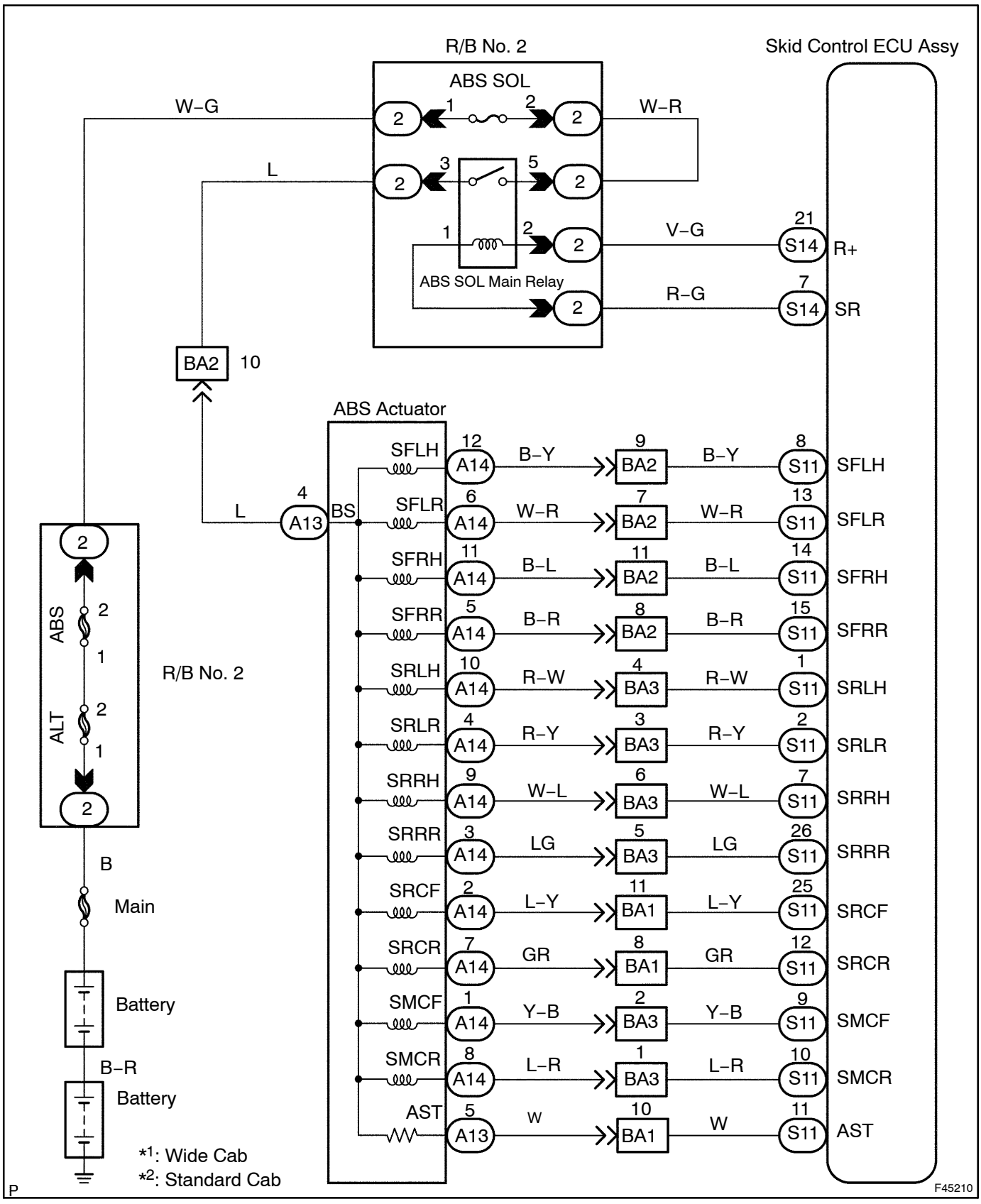
Fail–safe function:

If any trouble occurs in the ABS solenoid relay circuit, the ECU will cut off the current to the ABS solenoid relay and prohibit the ABS control and BRAKE ASSIST.

HINT:

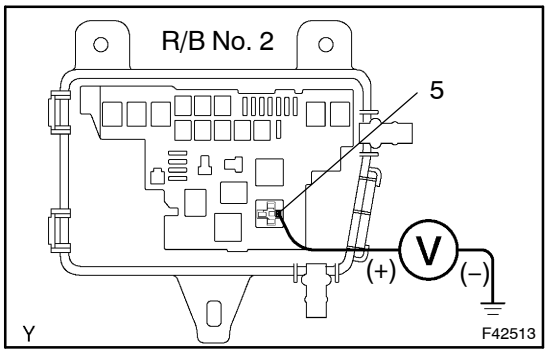
If the brake pedal is depressed firmly, the brake force may be lowered.

WIRING DIAGRAM



INSPECTION PROCEDURE

1 CHECK ABS SOLENOID RELAY (VOLTAGE)

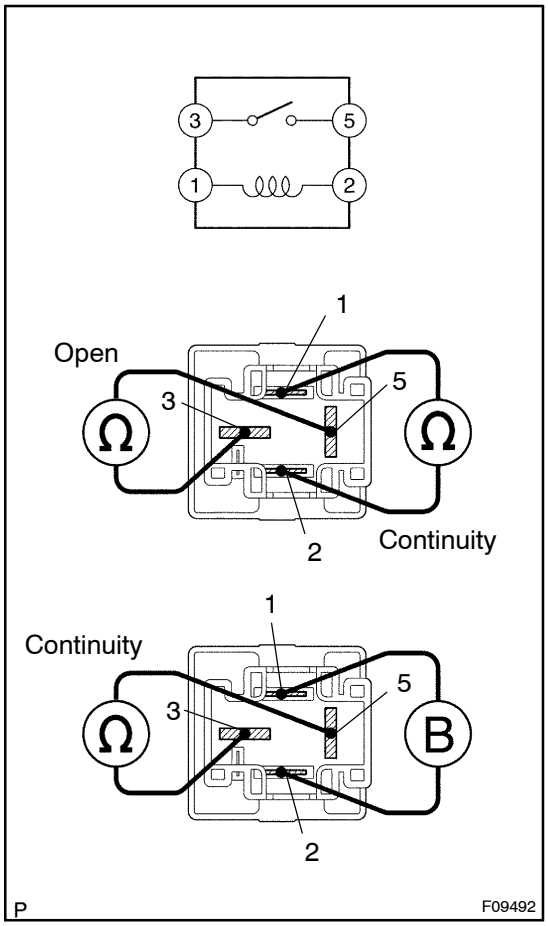


(a) Remove the relay from the R/B No. 2.
(b) Measure the voltage between R/B No. 2 relay terminal and the body ground.
Standard: Voltage: 20 – 28 V

NG → **Go to step 7**

OK

2 INSPECT ABS SOLENOID RELAY



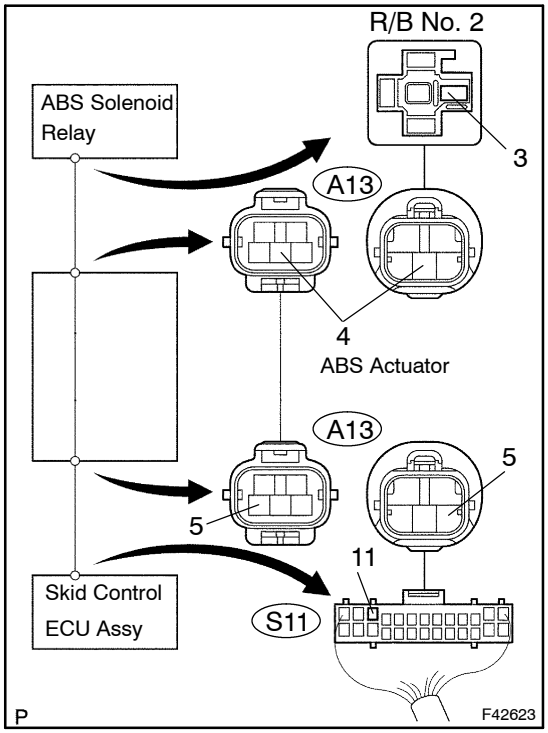
(a) Remove the relay.
(b) Check the relay continuity.
Standard:

Terminal No.	Condition	Specified Condition
1 ⇔ 2	Constant	Continuity (Reference value 150 ± 30 Ω)
3 ⇔ 5	Apply B+ between terminals 1 and 2	Continuity

NG → **REPLACE ABS SOLENOID RELAY**

OK

3	CHECK WIRE HARNESS (ABS SOLENOID RELAY ⇔ SKID CONTROL ECU ASSY)



(a) Check the continuity between terminal 3 of the R/B No. 2 (for ABS solenoid relay) and terminal AST (S11–11) of the skid control ECU.
Standard: Continuity

NG → **REPAIR OR REPLACE HARNESS AND CONNECTOR**

OK

4	CHECK WIRE HARNESS (ABS SOLENOID RELAY ⇔ SKID CONTROL ECU ASSY)

(a) Check for open and short circuit in the harness and connector between the relay and S14 ECU connectors (See page 01–27).

NG → **REPAIR OR REPLACE HARNESS AND CONNECTOR (CONNECTOR OR ABS ACTUATOR)**

OK

5	RECONFIRM DTC

(a) Check the DTC on page 05–205.

HINT:
After erasing the DTC and driving the vehicle more than 7 km/h (4 mph), check for DTC.

A	Malfunction Code
B	Normal Code

B → **NO PROBLEM**

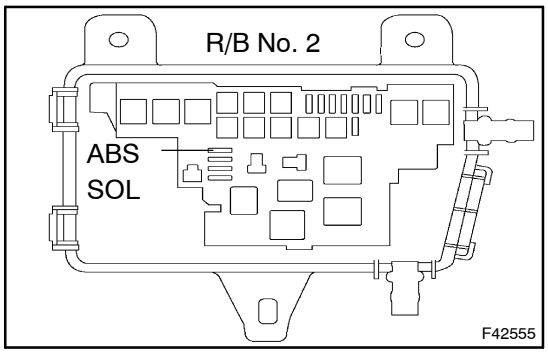
A

6	CHECK CONTACT CONDITION (EACH CONNECTION)

OK → CHECK AND REPLACE SKID CONTROL ECU ASSY (See page 01–27)

NG → REPAIR OR REPLACE HARNESS AND CONNECTOR

7	CHECK FUSE (ABS SOL)



(a) Remove the ABS SOL fuse from the R/B No. 2.
(b) Check the continuity.
Standard: Continuity

NG → REPLACE FUSE

OK

REPAIR OR REPLACE HARNESS AND CONNECTOR