DTC	C0278/11	OPEN CIRCUIT IN ABS SOLENOID RELAY CIRCUIT

DTC	C0279/12	SHORT CIRCUIT IN ABS SOLENOID RELAY CIRCUIT

CIRCUIT DESCRIPTION

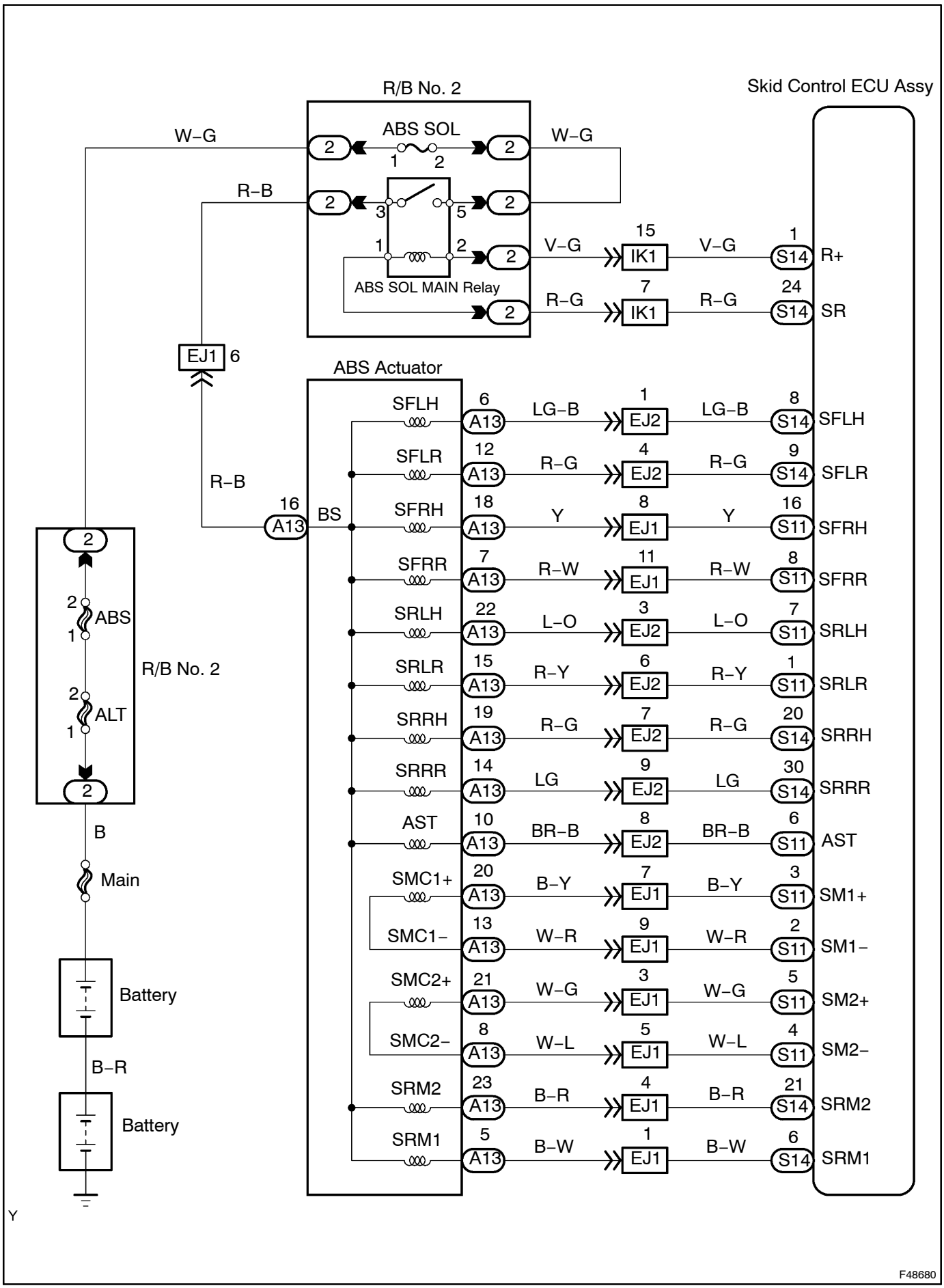
This relay supplies power to each ABS solenoid. After the ignition switch is turned ON, if the initial check is OK, the relay will turn ON.

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 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 SOL MAIN relay • ABS SOL MAIN relay circuit • ABS SOL fuse
C0279/12	Immediately after ECU terminal IG1 is ON, solenoid relay is OFF; however, contact point of solenoid relay is ON for 0.2 sec. or more.	• ABS SOL MAIN relay • ABS SOL MAIN relay circuit • ABS SOL fuse

HINT:

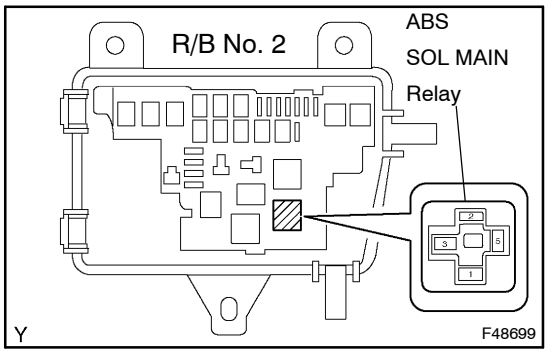
- If the brake pedal is depressed firmly, the brake force may be lowered.
- Fail–safe function:
  If any trouble occurs in the ABS SOL relay circuit, the ECU will cut off current to the ABS SOL MAIN relay and prohibit ABS control and BRAKE ASSIST.

WIRING DIAGRAM



INSPECTION PROCEDURE

1	CHECK RELAY (Marking: ABS SOL MAIN) (VOLTAGE)



(a) Remove the relay from the R/B No. 2.
(b) Measure the voltage according to the table below.

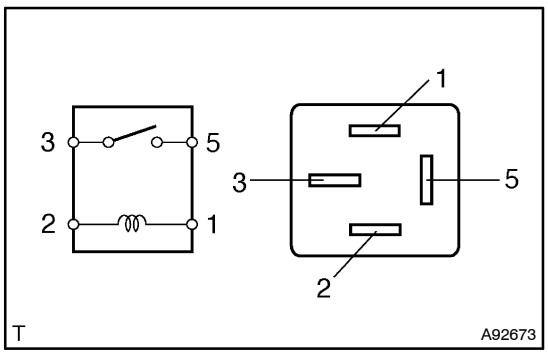
Standard:

Tester Connection	Specified Condition
Terminal 5 – Body ground	20 to 32 V

NG → **Go to step 5**

OK

2	INSPECT RELAY (Marking: ABS SOL MAIN)



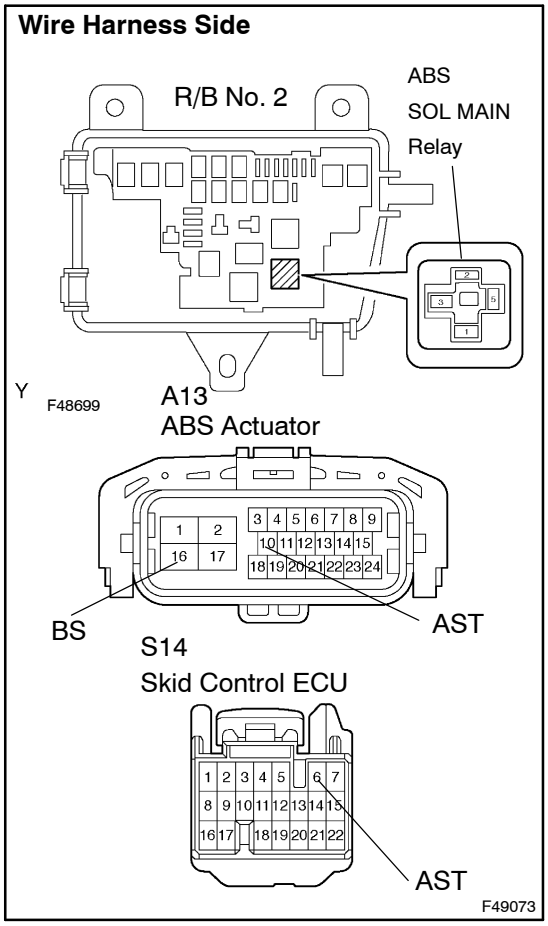
(a) Measure the resistance according to the table below.

Tester Connection	Specified Condition
3 – 5	10 kΩ or higher
3 – 5	Below 1 Ω (when battery voltage is applied to terminals 1 and 2)

NG → **REPLACE RELAY**

OK

3 CHECK WIRE HARNESS (ABS SOL MAIN RELAY – SKID CONTROL ECU ASSY)



(a) Remove the relay from the R/B No. 2.
(b) Disconnect the A13 actuator connector.
(c) Disconnect the S11 ECU connector.
(d) Measure the resistance according to the table below.

Standard:

Tester Connection	Specified Condition
R/B No. 2 ABS SOL MAIN Relay terminal 2 – S14–1 (R+)	Below 1 Ω
R/B No. 2 ABS SOL MAIN Relay terminal 1 – S14–24 (SR)	Below 1 Ω
R/B No. 2 ABS SOL MAIN Relay terminal 3 – A13–16 (BS)	Below 1 Ω
A13–16 (BS) – A13–10 (AST)	Below 1 Ω
A13–10 (AST) – S11–6 (AST)	Below 1 Ω

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

OK

4 CHECK CONTACT CONDITION (EACH CONNECTION)

(a) Check if the same code is still output after the DTC is deleted. Then check the condition of each connection.

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

OK

REPLACE SKID CONTROL ECU ASSY (See page 01–27)

5	INSPECT FUSE (ABS SOL)

(a) Remove the ABS SOL fuse from the R/B No. 2.
(b) Measure the resistance.
Standard: Below 1 Ω

NG → **REPLACE FUSE**

OK

REPAIR OR REPLACE HARNESS AND CONNECTOR