DTC	C0278/11	Open in ABS Solenoid Relay Circuit

DTC	C0279/12	Short to B+ in ABS Solenoid Relay Circuit

DESCRIPTION

This relay supplies power to each ABS solenoid.
Immediately after the ignition switch is turned to the ON position, the relay turns on if the solenoid is determined to be normal as a result of self-diagnosis during initial check.
The relay turns off if an open/short is detected.
If the voltage supplied to the motor relay (+BS) is below the DTC detection threshold due to low voltage from the battery/alternator, the DTCs may be stored.

DTC No.	DTC Detection Condition	Trouble Area
C0278/11	The solenoid relay contact is OFF for 0.2 seconds or more when the solenoid relay is turned ON.	• ABS 2 fuse • ABS solenoid relay • ABS solenoid relay circuit • Brake actuator assembly
C0279/12	The solenoid relay contact is ON for 0.2 seconds or more when the solenoid relay is OFF.	• ABS 2 fuse • ABS solenoid relay • ABS solenoid relay circuit • Brake actuator assembly

WIRING DIAGRAM

Refer to DTCs C0226/21, C0236/22, C0246/23 and C0256/24 (See page BC-29).

INSPECTION PROCEDURE

1	INSPECT FUSE (ABS 2 FUSE)

(a) Remove the ABS 2 fuse from the FL block.
(b) Measure the resistance according to the value(s) in the table below.

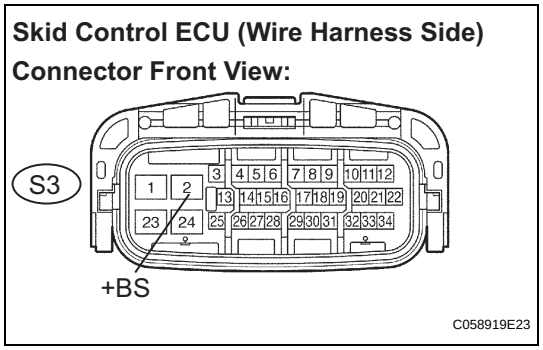
Standard resistance

Tester Connection	Specified Condition
ABS 2 (30 A) fuse	Below 1 Ω (Continuity)

NG → **REPLACE FUSE (ABS 2 FUSE)**

OK

2 INSPECT SKID CONTROL ECU (+BS TERMINAL VOLTAGE)



(a) Install the ABS 2 fuse.
(b) Disconnect the skid control ECU connector.
(c) Measure the voltage according to the value(s) in the table below.

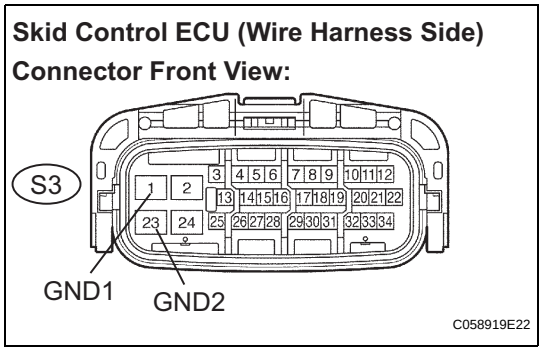
Standard voltage

Tester Connection	Condition	Specified Condition
S3-2 (+BS) - Body ground	Always	10 to 14 V

NG → **REPAIR OR REPLACE HARNESS OR CONNECTOR (+BS CIRCUIT)**

OK

3 INSPECT SKID CONTROL ECU (GND TERMINAL CONTINUITY)



(a) Measure the resistance according to the value(s) in the table below.

Standard resistance

Tester Connection	Specified Condition
S3-1 (GND1) - Body ground	Below 1 Ω
S3-23 (GND2) - Body ground	Below 1 Ω

NG → **REPAIR OR REPLACE HARNESS OR CONNECTOR (GND CIRCUIT)**

OK

4 RECONFIRM DTC

(a) Clear the DTCs (See page BC-10).
(b) Start the engine.
(c) Drive the vehicle at the speed of 6 km/h (4 mph) or more.
(d) Check that the same DTCs are recorded (See page BC-10).
HINT:
- Reinstall the sensors, connectors, etc. and restore the vehicle to its prior condition before rechecking for DTCs.
- If a speed signal of 6 km/h (4 mph) or more is input to the skid control ECU, with the ignition switch on and the stop light switch off, the ECU performs self-diagnosis of the motor and solenoid circuits.

Result

Condition	Proceed to
DTCs (C0278/11 and C0279/12) are output	A
DTCs (C0278/11 and C0279/12) are not output	B

BC

HINT:

- If any DTCs are output while jiggling a connector or wire harness of the brake actuator (skid control ECU), inspect and repair the connector or wire harness.
- If the normal system code is output, slightly jiggle the connectors, wire harnesses, and fuses of the brake actuator assembly. Make sure that no DTCs are output.
- These DTCs may be memorized due to a malfunction in the connector terminal connection, etc.

B → **END**

A

REPLACE BRAKE ACTUATOR ASSEMBLY