

DTC	C0278/11	Open in ABS Solenoid Relay Circuit
DTC	C0279/12	Short to B+ in ABS Solenoid Relay Circuit

DESCRIPTION

The solenoid relay supplies power to the ABS solenoid and TRC solenoid.

After the ignition switch is turned ON, the vehicle speed has reached 6 km/h (4 mph) and the solenoid is determined to be normal by the initial check self-diagnosis, the relay switches on. If any open or short circuits are detected, the relay switches off.

These DTCs may be set if the voltage supply to the solenoid relay (+BS) falls below the DTC detection threshold due to the battery or alternator outputs being insufficient.

DTC No.	DTC Detection Condition	Trouble Area
C0278/11	When either condition below is met: 1. Both of following conditions continue for 0.2 seconds or more. (a) IG1 terminal voltage between 9.5 V and 17.2 V. (b) Solenoid relay contact open when relay on. 2. Both of following conditions continue for 0.2 seconds or more. (a) IG1 terminal voltage becomes lower than 9.5 V when relay turned on. (b) Relay contact remains open.	<ul style="list-style-type: none"> • ABS2 H-fuse • Wire harness (+BS circuit) • ABS and TRACTION actuator
C0279/12	Immediately after ignition switch turned ON, solenoid relay contact closed for 0.2 seconds or more when relay off.	<ul style="list-style-type: none"> • ABS2 H-fuse • Wire harness (+BS circuit) • ABS and TRACTION actuator

HINT:

DTCs C0278/11 and C0279/12: The skid control ECU begins to detect these DTCs when the vehicle speed exceeds 6 km/h (4 mph).

WIRING DIAGRAM

Refer to DTC C0273/13, C0274/14, C1361/91 (see page [BC-79](#)).

INSPECTION PROCEDURE

1	INSPECT FUSES (ABS2)
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- Remove the ABS2 H-fuse from the engine room No. 1 relay block.
- Measure the resistance of the fuse.

Standard resistance:

Below 1 Ω

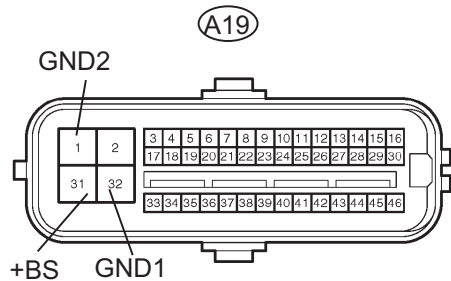
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REPLACE FUSE

OK

2 CHECK WIRE HARNESS (SKID CONTROL ECU - BATTERY AND BODY GROUND)

Wire Harness Side



C121700E39

- (a) Disconnect the A19 ECU connector.
(b) Measure the voltage of the wire harness side connector.

Standard voltage

Tester Connection	Specified Condition
A19-31 (+BS) - Body ground	10 to 14 V

- (c) Measure the resistance of the wire harness side connector.

Standard resistance

Tester Connection	Specified Condition
A19-32 (GND1) - Body ground	Below 1 Ω
A19-1 (GND2) - Body ground	Below 1 Ω

NG**REPAIR OR REPLACE HARNESS AND CONNECTOR****OK****3 RECONFIRM DTC**

- (a) Clear the DTCs (see page [BC-47](#)).
(b) Start the engine.
(c) Drive the vehicle at 6 km/h (4 mph) or more to activate the initial check.

- (d) Check if the same DTCs is output (see page [BC-47](#)).

Result

Result	Proceed to
DTC is output	A
DTC is not output	B

B**END****A****BC****REPLACE ABS AND TRACTION ACTUATOR ASSEMBLY**