

DTC	C1378/44	CAPACITOR COMMUNICATION CIRCUIT MALFUNCTION
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CIRCUIT DESCRIPTION

The brake control power supply assy (capacitor) provides auxiliary power for brake control when an auxiliary battery (12 V) voltage drops.

The FAIL and ENA line are placed between the skid control ECU and the brake control power supply assy. Signals indicating that the brake control power supply is in auxiliary mode are sent to the skid control ECU through the FAIL line.

Charge permit prohibition signals are sent to the brake control power supply through the ENA line.

DTC No.	Detailed Code	DTC Detecting Condition	Trouble Area
C1378/44	112	<ul style="list-style-type: none"> • Open or short in FAIL line. • Malfunction inside the power back up unit. 	<ul style="list-style-type: none"> • Harness and connector • Skid control ECU
C1378/44	113	<ul style="list-style-type: none"> • Open or short in ENA line • Malfunction inside the skid control ECU (circuit for communication with the capacitor) 	<ul style="list-style-type: none"> • Harness and connector • Skid control ECU

B18
Brake Control Power Supply

Skid Control ECU

BCTY 2 V 8 IK1 V 5 S7 +BCTY

ENA 12 B 9 IK1 B 30 S8 ENA

FAIL 13 P 10 IK1 P 20 S8 FAIL

OUT2 7 W 6 IN1 W 4 S9 +BO2

OUT 1 Y 7 IN1 Y J8 J/C C J7 C 5 S8 +BO1

Center Connector No.2

Driver Side J/B

IG 5 B 7 IM1 B 8 5L 15 5H O 7 1L ECU-IG

W 1 1B IG1 Relay

Power Source Control ECU

Center Connector No.1

IG1D 34 P6 B 7 4J 7 4G B 3 1J

AM1 33 P6 R 8 4J 8 4G R 1 1J

Engine Room R/B and J/B

W 1 3D DC / DC 1 3M B 1 BE1

BC 8 L 5 IN1 L 3 3 ABS MAIN 3 1 2 1

Auxiliary Battery

F15 FL Block

MAIN 1 B

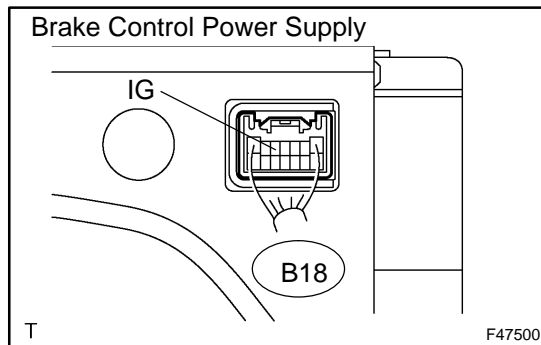
IH

C

F4731

INSPECTION PROCEDURE

1	INSPECT BRAKE CONTROL POWER SUPPLY TERMINAL VOLTAGE (IG TERMINAL)
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- (a) Measure the voltage according to the value(s) in the table below.

HINT:

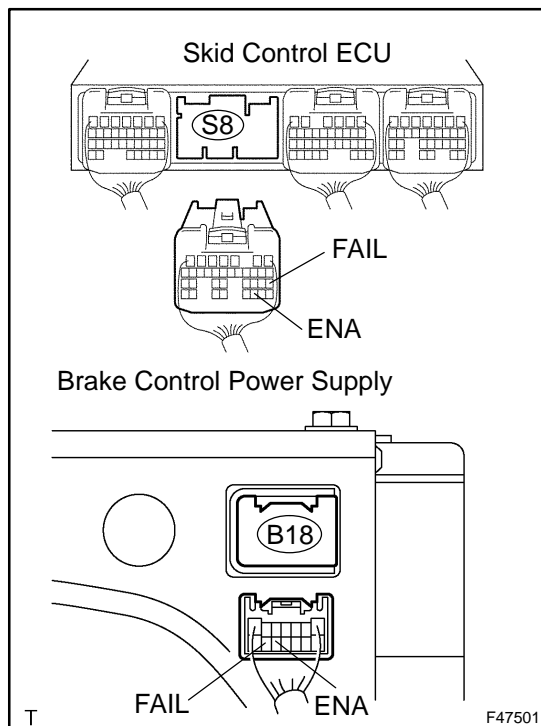
Measure the voltage from behind the connector with the connector connected to the skid control ECU.

Standard:

Tester Connection	Condition	Specified Condition
B18-5 (IG) - Body ground	Power switch ON (READY)	10 to 14 V

NG**REPLACE HARNESS OR CONNECTOR****OK**

2	INSPECT SKID CONTROL ECU TERMINAL VOLTAGE (FAIL, ENA TERMINAL)
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- (a) Turn the power switch OFF.
 (b) Disconnect the skid control ECU connector and brake control power supply connector.
 (c) Measure the resistance according to the value(s) in the table below.

Standard:

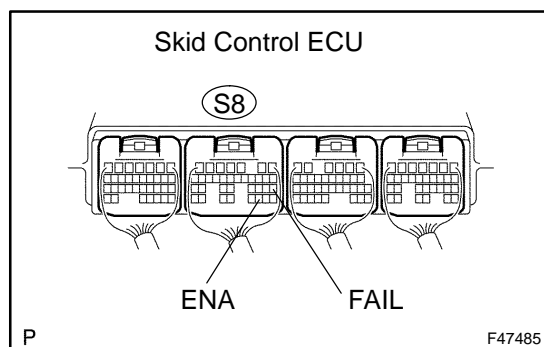
Tester Connection	Specified Condition
S8-30 (ENA) - B18-12 (ENA)	Below 1 Ω
S8-20 (FAIL) - B18-13 (FAIL)	Below 1 Ω

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

Tester Connection	Specified Condition
S8-30 (ENA) - Body ground	10 k Ω or higher
S8-20 (FAIL) - Body ground	10 k Ω or higher

NG**REPLACE BRAKE CONTROL POWER SUPPLY****OK**

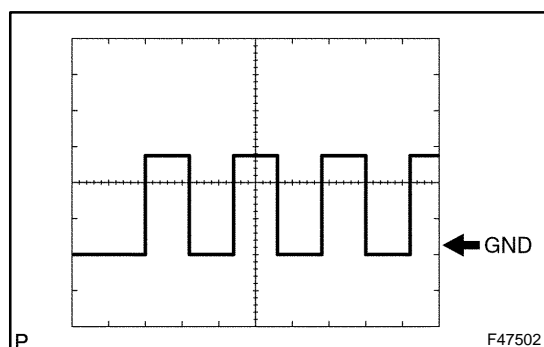
3 INSPECT SKID CONTROL ECU ASSY



- Check the waveform between terminal S8-20 (FAIL) and the ground of the skid control ECU using an oscilloscope.
- Check the waveform between terminal S8-30 (ENA) and the ground of the skid control ECU using an oscilloscope.

OK:

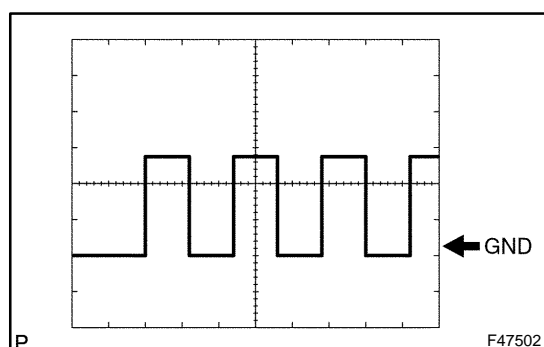
Waveform is output as shown in the illustration.



(1) Oscilloscope waveform (FAIL)

HINT:

- Terminals FAIL \leftrightarrow GND
- Instrument 5 V / DIV, 200 ms / DIV
- Condition READY is displayed on the meter



(2) Oscilloscope waveform (ENA)

HINT:

- Terminals ENA \leftrightarrow GND
- Instrument 5 V / DIV, 100 ms / DIV
- Condition READY is displayed on the meter

Result:

A	Both waveforms are normal
B	Waveform (ENA) is abnormal
C	Waveform (FAIL) is abnormal

B

REPLACE BRAKE CONTROL POWER SUPPLY

C

**REPLACE SKID CONTROL ECU ASSY
(SEE PAGE 32-68)**

A

REPLACE SKID CONTROL ECU ASSY (SEE PAGE 32-68)

NOTICE:

When replacing the skid control ECU assy, perform initialization of linear solenoid valve and calibration (see page 05-956).