

DTC	C1241/41	Low Battery Positive Voltage or Abnormally High Battery Positive Voltage
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DTC	C1242/42	Open in IG1 / IG2 Power Source Circuit
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DESCRIPTION

These codes are memorized when the power source voltage for the skid control ECU drops or the voltage for the ABS NO. 1, ABS NO. 2 relay operation drops.

Codes may be memorized when the voltage of the auxiliary battery temporarily drops.

When the power source voltage is too high, the skid control ECU stops functioning and outputs no DTCs, and the ABS and BRAKE warning light remain on.

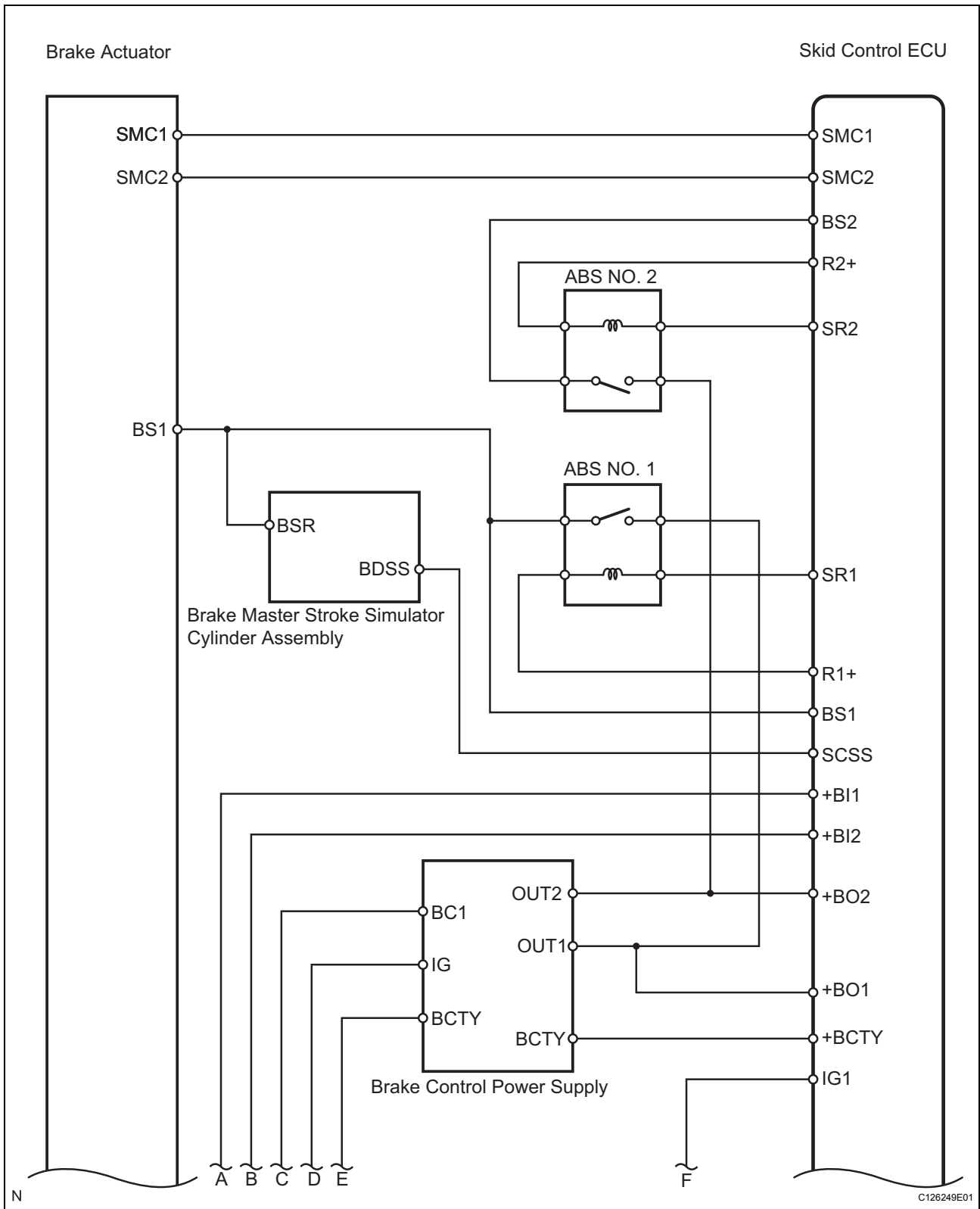
HINT:

DTC C1256/56 (accumulator low voltage malfunction) may be memorized if the power source voltage drops.

DTC No.	Detailed Code	DTC Detection Condition	Trouble Area
C1241/41	81	System 1 is under the following conditions when READY is on: <ul style="list-style-type: none"> Linear solenoid cannot receive enough current (brake is applied). BS voltage is less than 8.9 V for at least 3 sec. (brake is not applied). 12 V-power source voltage inside ECU is less than 8.5 V when main relay is opened or VCM voltage is less than 4.7 V or 5 V or more for at least 0.05 sec. 	<ul style="list-style-type: none"> ABS NO. 1 relay Harness and connector Skid control power supply circuit Brake control power supply assembly Hybrid control system
C1241/41	82	System 2 is under the following conditions when READY is on: <ul style="list-style-type: none"> Linear solenoid cannot receive enough current (brake is applied). BS voltage is less than 8.9 V for at least 3 sec. (brake is not applied). 12 V-power source voltage inside ECU is less than 8.5 V when main relay is opened or VCM voltage is less than 4.7 V or 5.3 V or more for at least 0.05 sec. 	<ul style="list-style-type: none"> ABS NO. 2 relay Harness and connector Skid control power supply circuit Brake control power supply assembly Hybrid control system
C1241/41	83	Capacitor mode signal is received from brake control power supply for 3 sec. or more when READY is on.	<ul style="list-style-type: none"> Brake control power supply assembly Brake control power supply Hybrid control system
C1241/41	84	ABS is requested to operate when the power source voltage of the main relay system is dropping.	<ul style="list-style-type: none"> ABS NO. 1 relay ABS NO. 2 relay Harness and connector
C1242/42	87	Voltage is applied to IG2 terminal, but not applied to IG1 terminal for at least 4 sec.	<ul style="list-style-type: none"> ABS NO. 1 relay Harness and connector Skid control power supply circuit Brake control power supply assembly Hybrid control system

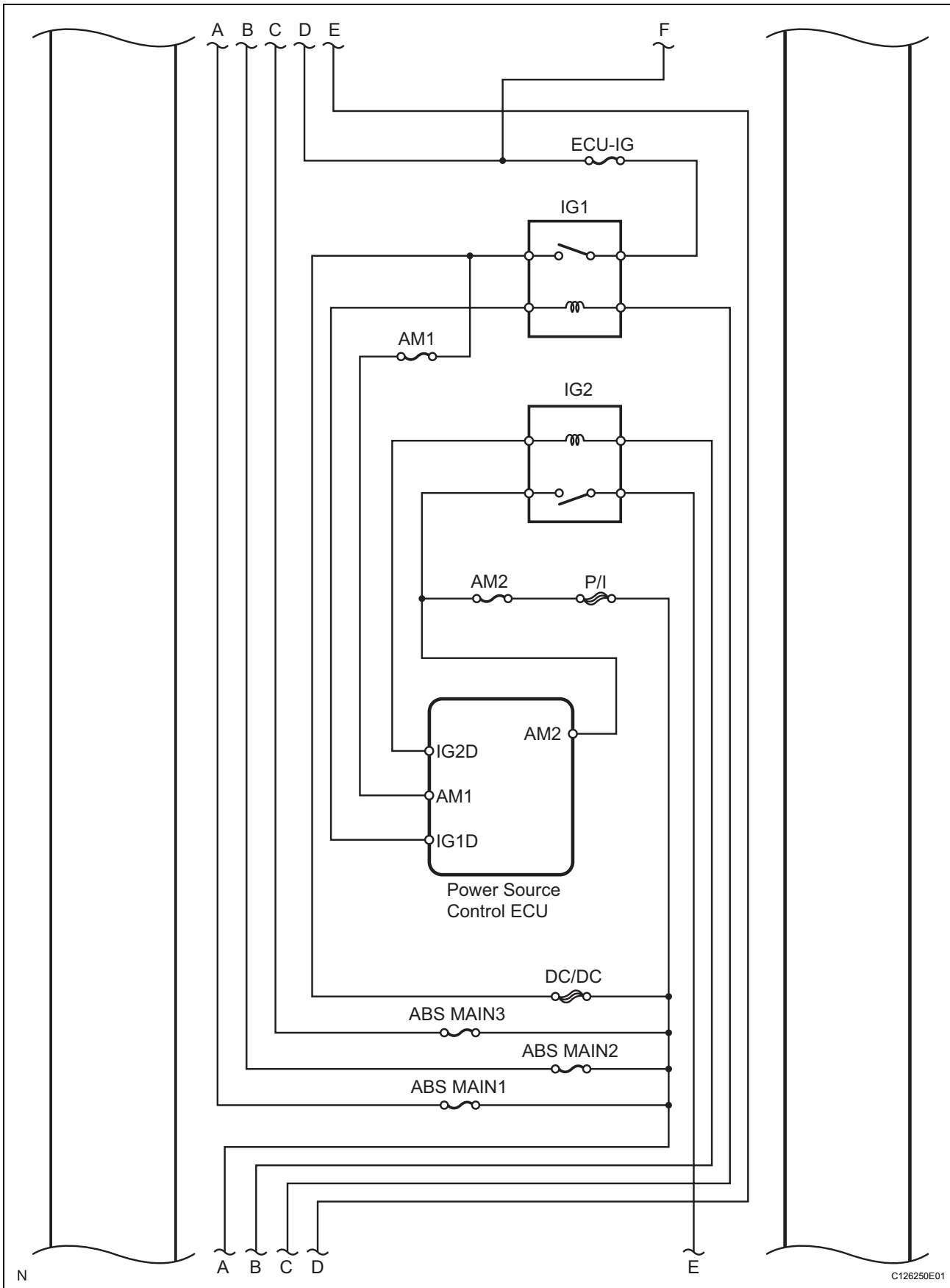
DTC No.	Detailed Code	DTC Detection Condition	Trouble Area
C1242/42	88	Voltage is applied to IG1 terminal, but not applied to IG2 terminal for at least 4 sec.	<ul style="list-style-type: none">• ABS NO. 2 relay• Harness and connector• Skid control power supply circuit• Brake control power supply assembly• Hybrid control system

WIRING DIAGRAM

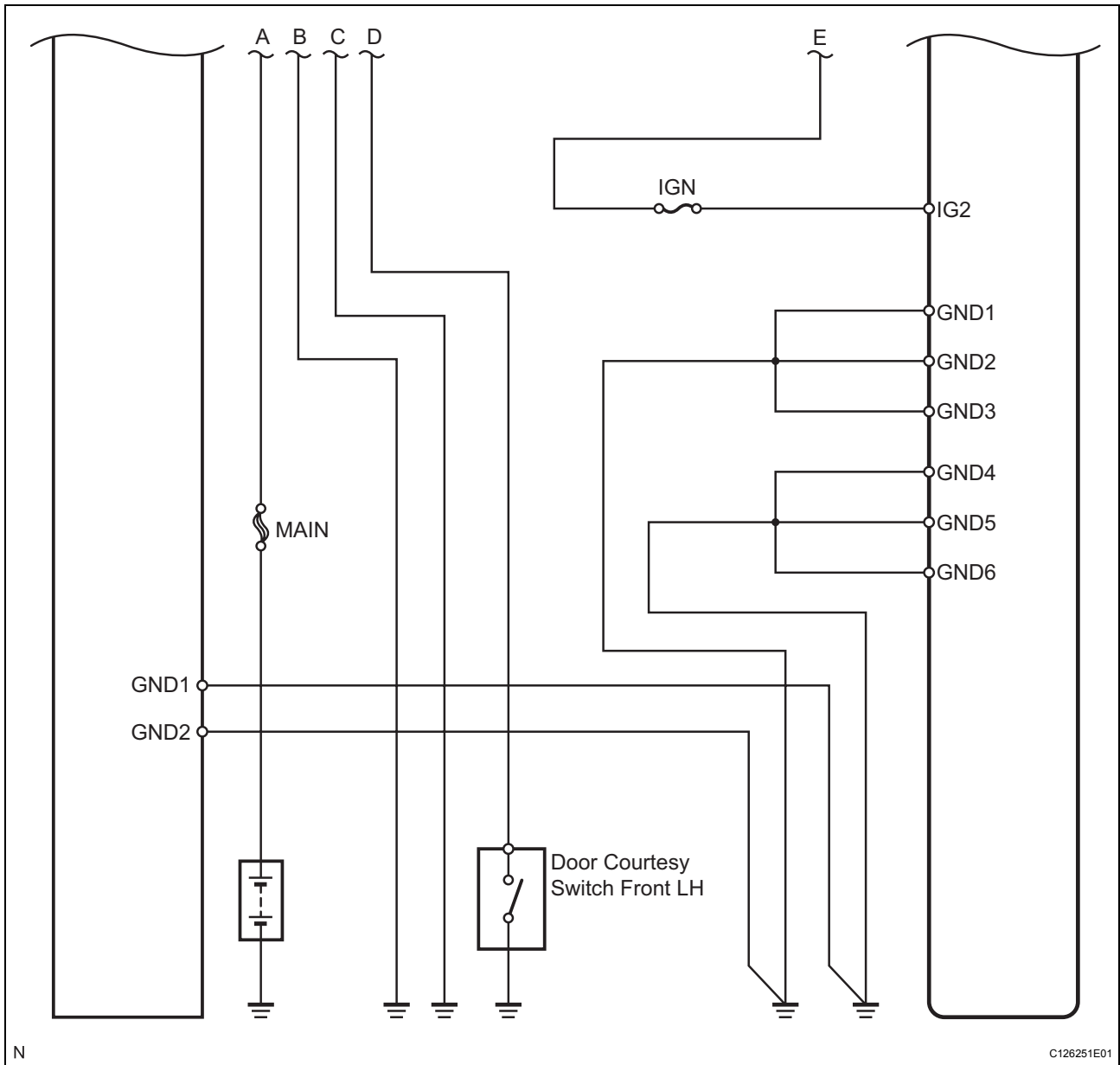


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INSPECTION PROCEDURE

1 CHECK DTC (HYBRID CONTROL SYSTEM)

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(a) Check that hybrid control system DTCs are output.

Result

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

B **REPAIR HYBRID CONTROL SYSTEM**

A

2 CHECK AUXILIARY BATTERY VOLTAGE

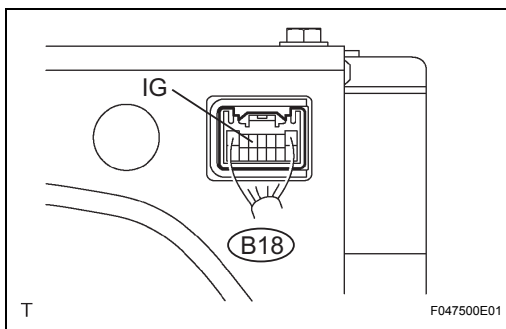
(a) Check the auxiliary battery voltage.

Standard voltage:
10 to 14 V

NG CHARGE OR REPLACE AUXILIARY BATTERY

OK

3 CHECK BRAKE CONTROL POWER SUPPLY (IG VOLTAGE)



(a) Measure the voltage of the connector.

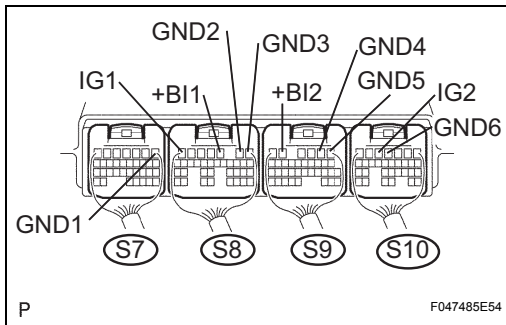
Standard voltage

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

NG REPLACE BRAKE CONTROL POWER SUPPLY

OK

4 CHECK SKID CONTROL ECU



(a) Measure the voltage of the connectors.

HINT:

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

Standard voltage

Tester Connection	Condition	Specified Condition
S8-7 (IG1) - Body ground	Power switch ON (READY)	10 to 14 V
S10-5 (IG2) - Body ground	Power switch ON (READY)	10 to 14 V
S8-3 (+BI1) - Body ground	Always	10 to 14 V
S9-5 (+BI2) - Body ground	Always	10 to 14 V

(b) Measure the resistance of the connectors.

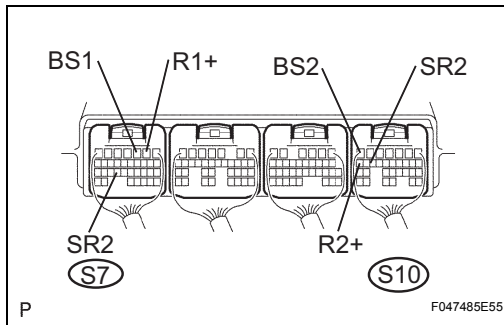
Standard resistance

Tester Connection	Specified Condition
S7-1 (GND1) - Body ground	Below 1 Ω
S8-2 (GND2) - Body ground	Below 1 Ω
S8-1 (GND3) - Body ground	Below 1 Ω
S9-2 (GND4) - Body ground	Below 1 Ω
S9-1 (GND5) - Body ground	Below 1 Ω
S10-4 (GND6) - Body ground	Below 1 Ω

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

OK

5 CHECK SKID CONTROL ECU (BS1, R1+, SR1, BS2, R2+, DSR2 VOLTAGE)



- (a) Measure the voltage of the connectors.
HINT:
 Measure the voltage from behind the connector with the connector connected to the skid control ECU.

Standard voltage

Tester Connection	Condition	Specified Condition
S7-2 (R1+) - Body ground	Power switch ON (READY)	8 to 13 V
S10-17 (R2+) - Body ground	Power switch ON (READY)	8 to 13 V
S7-12 (SR1) - Body ground	Power switch ON (READY)	Below 1.5 V
S10-15 (SR2) - Body ground	Power switch ON (READY)	Below 1.5 V
S7-3 (BS1) - Body ground	Power switch ON (READY)	10 to 14 V
S10-7 (BS2) - Body ground	Power switch ON (READY)	10 to 14 V

Result

Result	Proceed to
All OK	A
NG (R1+, R2+)	B
NG (SR1, SR2, BS1, BS2)	C

B → **REPLACE SKID CONTROL ECU**

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

A

6 RECONFIRM DTC

- (a) Clear the DTCs (see page [BC-38](#)).
 (b) Turn the power switch ON (READY).
 (c) Check the same DTCs are recorded (see page [BC-38](#)).

Result

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

B → **REPLACE SKID CONTROL ECU**

BC-94

BRAKE CONTROL – ELECTRONICALLY CONTROLLED BRAKE SYSTEM

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END (DTC MAY BE STORED DUE TO TEMPORARY POWER SOURCE VOLTAGE DROP)

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