

CHECK CAN BUS LINE (CAN-H) FOR SHORT TO +B

CIRCUIT DESCRIPTION

A short to +B is suspected in the CAN bus line when there is continuity between terminals 16 (BAT) and 6 (CANH) of the DLC3.

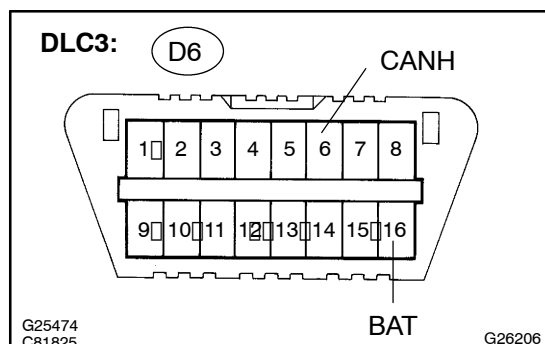
Symptom	Trouble Area
There is continuity between terminals 16 (BAT) and 6 (CANH) of DLC3.	<ul style="list-style-type: none">• Short to +B in CAN bus line (CANH)• Skid control ECU• Steering sensor• Yaw rate sensor

The diagram illustrates the CAN bus system architecture. Key components and their connections include:

- Y1 Yaw Rate Sensor:** Connected to CANL (pin 2) and CANH (pin 3) via a relay (II2) and a fuse (F5). The sensor is powered by the battery (BAT) through a fuse (F3).
- S53 Steering Sensor:** Connected to CANH (pin 10) and CANL (pin 9) via a relay (II2) and a fuse (F4). The sensor is powered by the battery (BAT) through a fuse (F3).
- Skid Control ECU with Actuator:** Connected to CANL (pin 25) and CANH (pin 11) via a relay (IH1) and a fuse (F6). The ECU is powered by the battery (BAT) through a fuse (F3).
- Engine Room R/B:** Contains the ECU-B, DCC, ALT, ABS No.2, and OBD. It is connected to the CAN bus and the battery (BAT) through a fuse (F3).
- Instrument Panel J/B:** Contains the IB and IL relays, connected to the battery (BAT) and the engine room R/B.
- Power Supply:** The battery (BAT) is connected to the system via a fuse (F3) and a main fuse (FL MAIN).

INSPECTION PROCEDURE

1 CHECK CAN BUS LINE FOR SHORT TO +B (DLC3 SUB BUS LINE, CAN-H)



(a) Disconnect the wire harness connector (J40) from the junction connector.

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

Standard:

Tester connection	Condition	Specified value
D6-6 (CANH) – D6-16 (BAT)	IG switch OFF	1 MΩ or higher

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REPAIR OR REPLACE DLC3 SUB BUS LINE OR CONNECTOR (CAN-H)

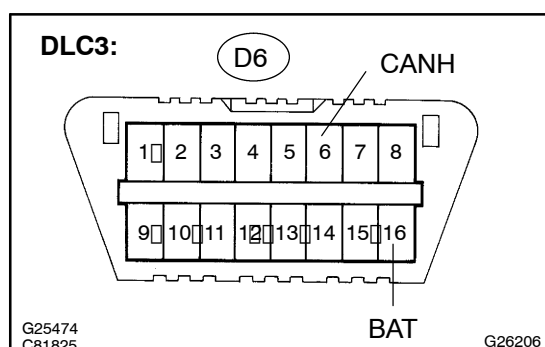
OK

2 CONNECTION OF CONNECTORS

(a) Reconnect the wire harness connector (J40) to the junction connector.



3 CHECK CAN BUS LINE FOR SHORT TO +B (SKID CONTROL ECU, CAN-H)



(a) Disconnect the connector (S1) from the skid control ECU.

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

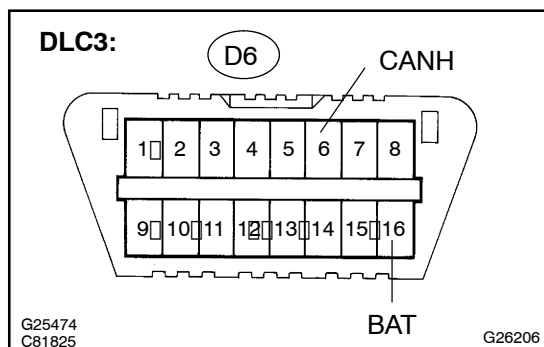
Standard:

Tester connection	Condition	Specified value
D6-6 (CANH) – D6-16 (BAT)	IG switch OFF	1 MΩ or higher

OK

REPLACE SKID CONTROL ECU WITH ACTUATOR (SEE PAGE 32-20)

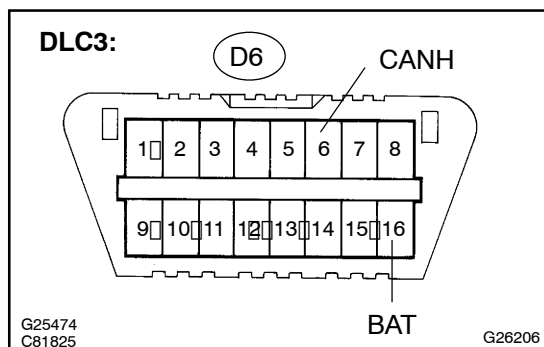
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4 CHECK CAN BUS LINE FOR SHORT TO +B (STEERING SENSOR, CAN-H)

- (a) Reconnect the connector (S1) to the skid control ECU.
 (b) Disconnect the connector (S53) from the steering sensor.
 (c) Measure the resistance according to the value(s) in the table below.

Standard:

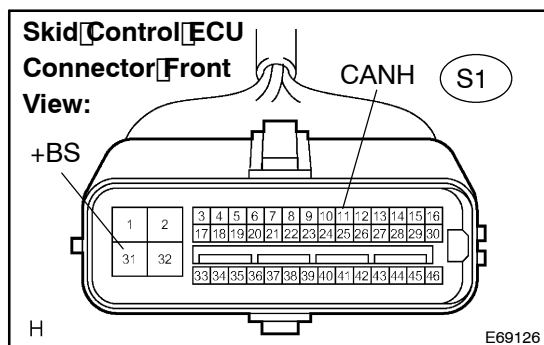
Tester connection	Condition	Specified value
D6-6 (CANH) – D6-16 (BAT)	IG switch OFF	1 MΩ or higher

OK**REPLACE STEERING SENSOR**
(SEE PAGE 32-23)**NG****5 CHECK CAN BUS LINE FOR SHORT TO +B (YAW RATE SENSOR, CAN-H)**

- (a) Reconnect the connector (S53) to the steering sensor.
 (b) Disconnect the connector (Y1) from the yaw rate sensor.
 (c) Measure the resistance according to the value(s) in the table below.

Standard:

Tester connection	Condition	Specified value
D6-6 (CANH) – D6-16 (BAT)	IG switch OFF	1 MΩ or higher

OK**REPLACE YAW RATE SENSOR**
(SEE PAGE 32-22)**NG****6 CHECK CAN BUS LINE FOR SHORT TO +B (SKID CONTROL ECU – JUNCTION CONNECTOR, CAN-H)**

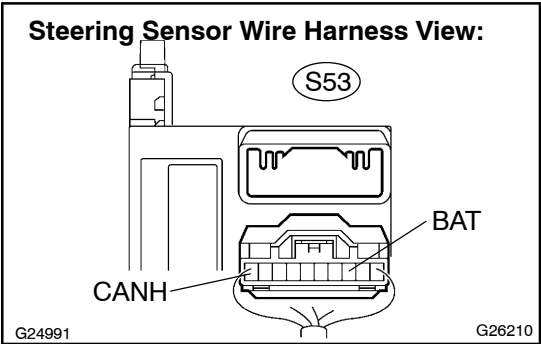
- (a) Reconnect the connector (Y1) to the yaw rate sensor.
 (b) Disconnect the wire harness connector (J40) from the junction connector.
 (c) Disconnect the connector (S1) from the skid control ECU.
 (d) Measure the resistance according to the value(s) in the table below.

Standard:

Tester connection	Condition	Specified value
S1-11 (CANH) – S1-31 (+BS)	IG switch OFF	1 MΩ or higher

NG**REPAIR OR REPLACE CAN MAIN BUS LINE OR CONNECTOR (SKID CONTROL ECU – JUNCTION CONNECTOR, CAN-H)****OK**

7 CHECK CAN BUS LINE FOR SHORT TO +B(STEERING SENSOR - JUNCTION CONNECTOR, CAN-H)



- (a) Disconnect the connector (S53) from the steering sensor.
- (b) Measure the resistance according to the value(s) in the table below.

Standard:

Tester connection	Condition	Specified value
S53-10 (CANH) - S53-3 (BAT)	IG switch OFF	1 MΩ or higher

HINT:

Check the wire harness connector connected to the junction connector while disconnecting it.

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REPAIR OR REPLACE CAN MAIN BUS LINE OR CONNECTOR (STEERING SENSOR - JUNCTION CONNECTOR, CAN-H)

OK

REPAIR OR REPLACE YAW RATE SENSOR SUB BUS LINE OR CONNECTOR (CAN-H)