

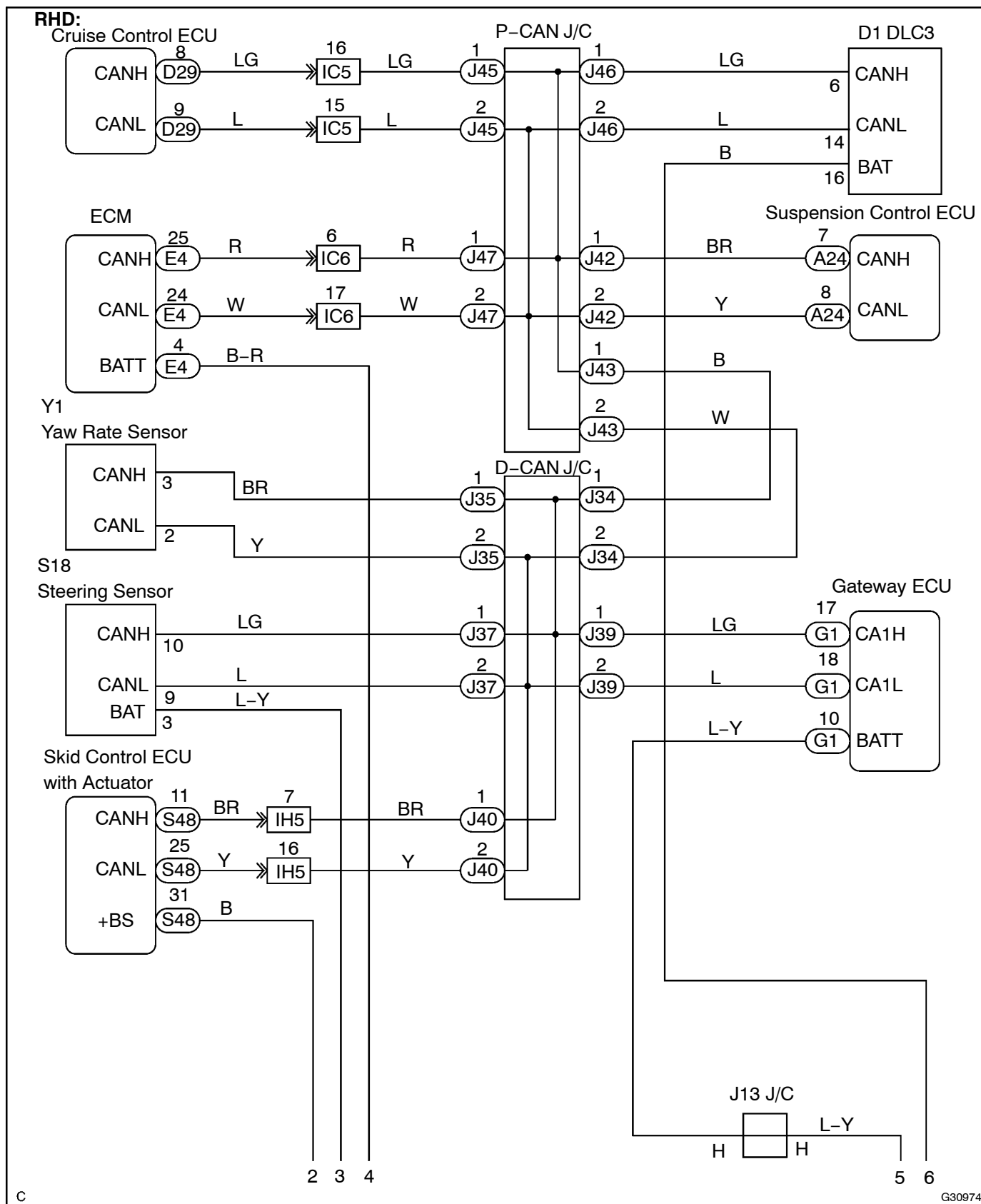
CHECK CAN BUS LINE FOR SHORT TO +B (RHD, w/o LEXUS Navigation System)

CIRCUIT DESCRIPTION

There may be a short circuit between the CAN bus line and +B when there is resistance between terminals 6 (CANH) and 16 (BAT) or terminals 14 (CANL) and 16 (BAT) of the DLC3.

Symptom	Trouble Area
There is resistance between terminals 6 (CANH) and 16 (BAT) or terminals 14 (CANL) and 16 (BAT) of the DLC3.	• Short to +B • Cruise control ECU • Skid control ECU with actuator • Steering sensor • Yaw rate sensor • Suspension control ECU • ECM • Gateway ECU

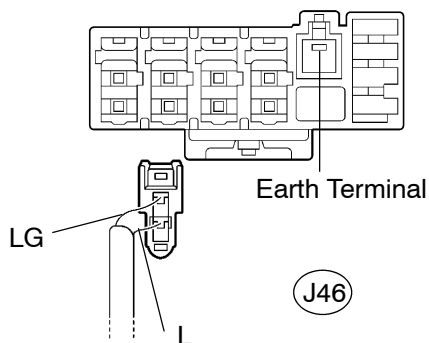
WIRING DIAGRAM



Wiring diagram for the 2000 Nissan Xterra 2.5L engine compartment. The diagram shows the battery connected to a fusible link block, which then branches out to various components including the engine room No.1 R/B and J/B, the passenger side J/B, the driver side J/B, and the ABS 2. The diagram includes labels for wires (B-R, L-Y, B-W, R-L, B, W, B-L) and components (J/C, MPX-B2, OBD, D-J/B, ALT, D/C CUT, FL MAIN).

INSPECTION PROCEDURE

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

P-CAN J/C A Side (w/ Earth Terminal)
Wire Harness View:

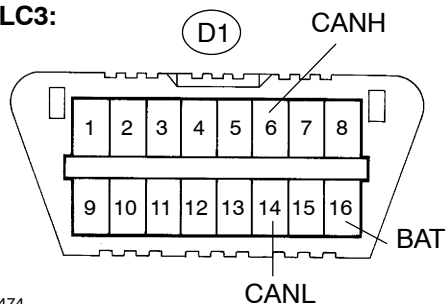
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- (a) Turn the ignition switch to the LOCK position.
- (b) Disconnect the DLC3 sub bus line connector (J46) from the P-CAN J/C A side (w/ earth terminal).

NOTICE:

- Before disconnecting the connector, make a note of where it is connected.
- Reconnect the connector to its original position.

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

Standard:

Tester connection	Condition	Specified value
D1-6 (CANH) - D1-16 (BAT)	Ignition Switch OFF	1 MΩ or more
D1-14 (CANL) - D1-16 (BAT)	Ignition Switch OFF	1 MΩ or more

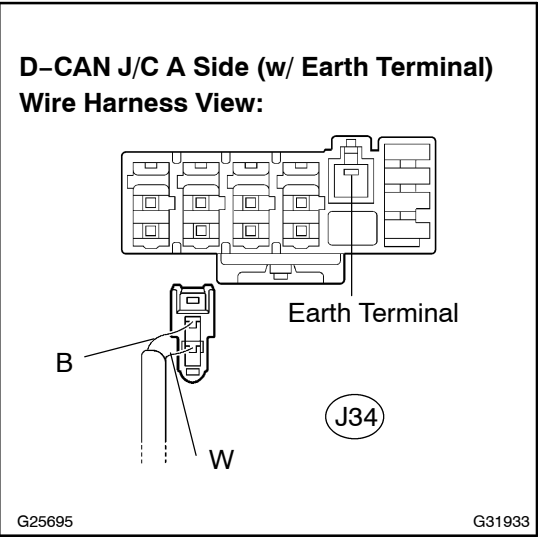
NG**REPAIR OR REPLACE DLC3 SUB BUS LINE OR CONNECTOR (CAN-H, CAN-L)****OK**

2 CONNECT CONNECTOR

- (a) Reconnect the DLC3 sub bus line connector (J46) to the P-CAN J/C A side (w/ earth terminal).



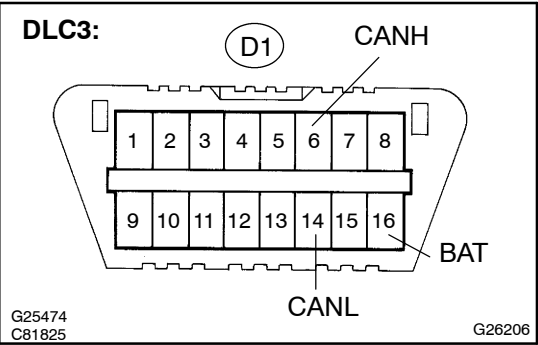
3 CHECK CAN BUS LINE FOR SHORT TO +B(CAN BUSES TO D-CAN J/C)



- (a) Disconnect the CAN main bus line connector (J34) from the D-CAN J/C A side (w/ earth terminal).

NOTICE:

- **Before disconnecting the connector, make a note of where it is connected.**
- **Reconnect the connector to its original position.**



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

Standard:

Tester connection	Condition	Specified value
D1-6 (CANH) - D1-16 (BAT)	Ignition Switch OFF	1 MΩ or more
D1-14 (CANL) - D1-16 (BAT)	Ignition Switch OFF	1 MΩ or more

OK

Go to step 16

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4 CONNECT CONNECTOR

- (a) Reconnect the CAN main bus line connector (J34) to the D-CAN J/C A side (w/ earth terminal).



5 CHECK CAN BUS LINE FOR SHORT TO +B(SUSPENSION CONTROL ECU SUB BUS LINE)

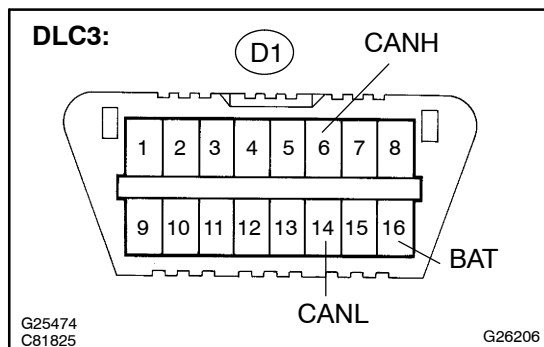
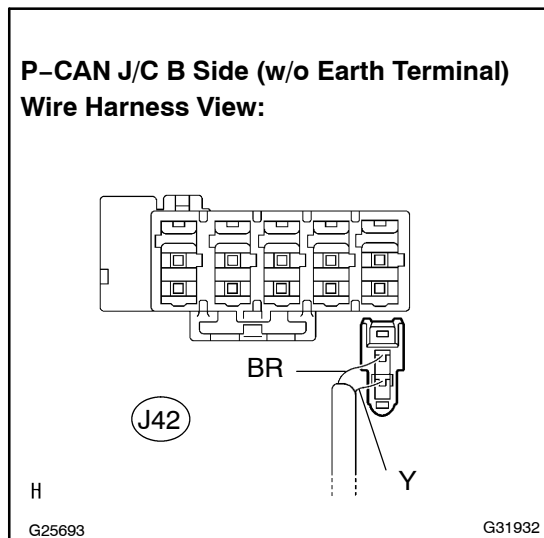
NOTICE:

For vehicles without electronic modulated air suspension, go to step 7.

- (a) Disconnect the suspension control ECU sub bus line connector (J42) from the P-CAN J/C B side (w/o earth terminal).

NOTICE:

- Before disconnecting the connector, make a note of where it is connected.
- Reconnect the connector to its original position.



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

Standard:

Tester connection	Condition	Specified value
D1-6 (CANH) - D1-16 (BAT)	Ignition Switch OFF	1 MΩ or more
D1-14 (CANL) - D1-16 (BAT)	Ignition Switch OFF	1 MΩ or more

OK

Go to step 12

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6 CONNECT CONNECTOR

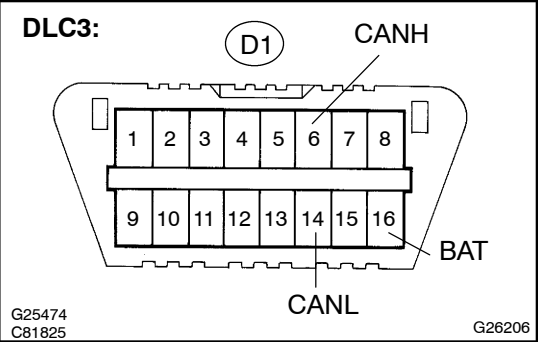
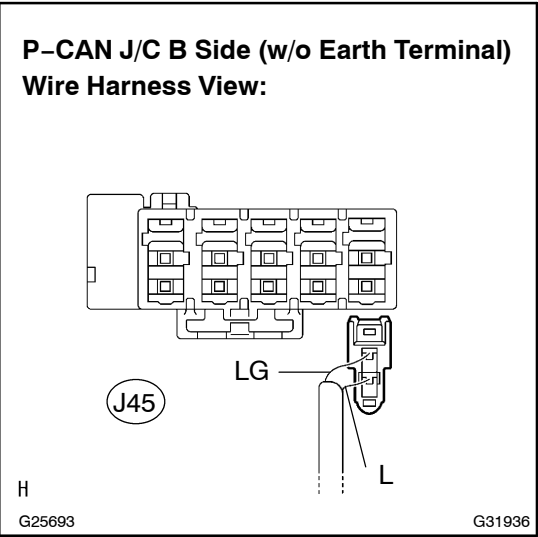
- (a) Reconnect the suspension control ECU sub bus line connector (J42) to the P-CAN J/C B side (w/o earth terminal).



7 CHECK CAN BUS LINE FOR SHORT TO +B(CRUISE CONTROL ECU SUB BUS LINE)

- NOTICE:**
For vehicles without dynamic laser cruise control, go to step 9.
- (a) Disconnect the cruise control ECU sub bus line connector (J45) the P-CAN J/C B side (w/o earth terminal).

- NOTICE:**
- Before disconnecting the connector, make a note of where it is connected.
 - Reconnect the connector to its original position.



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

Standard:

Tester connection	Condition	Specified value
D1-6 (CANH) - D1-16 (BAT)	Ignition Switch OFF	1 MΩ or more
D1-14 (CANL) - D1-16 (BAT)	Ignition Switch OFF	1 MΩ or more

OK

Go to step 14

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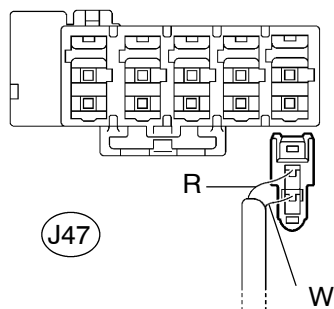
8 CONNECT CONNECTOR

- (a) Reconnect the cruise control ECU sub bus line connector (J45) to the P-CAN J/C B side (w/o earth terminal).



9 CHECK CAN BUS LINE FOR SHORT TO +B(ECM SUB BUS LINE)

P-CAN J/C B Side (w/o Earth Terminal) Wire Harness View:



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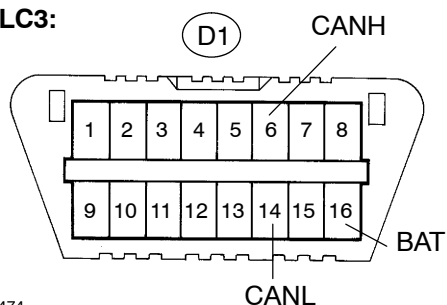
G31932

- (a) Disconnect the ECM sub bus line connector (J47) from the P-CAN J/C B side (w/o earth terminal).

NOTICE:

- Before disconnecting the connector, make a note of where it is connected.
- Reconnect the connector to its original position.

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

Standard:

Tester connection	Condition	Specified value
D1-6 (CANH) - D1-16 (BAT)	Ignition Switch OFF	1 MΩ or more
D1-14 (CANL) - D1-16 (BAT)	Ignition Switch OFF	1 MΩ or more

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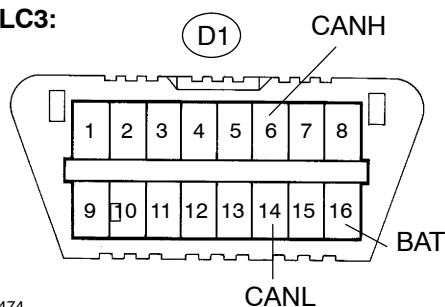
REPAIR OR REPLACE CAN MAIN BUS LINE OR CONNECTOR (D-CAN J/C - P-CAN J/C)

OK

10 CONNECT CONNECTOR

- (a) Reconnect the ECM sub bus line connector (J47) to the P-CAN J/C B side (w/o earth terminal).



11 CHECK CAN BUS LINE FOR SHORT TO B(D-CAN J/C)**DLC3:**G25474
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- (a) Disconnect the ECM connector (E4).
 (b) Measure the resistance according to the value(s) in the table below.

Standard:

Tester Connection	Condition	Specified Value
D1-6 (CANH) - D1-16 (BAT)	Ignition Switch OFF	1 MΩ or more
D1-14 (CANL) - D1-16 (BAT)	Ignition Switch OFF	1 MΩ or more

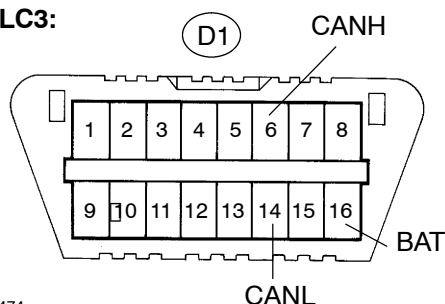
OK

REPLACE ECM (SEE PAGE 10-21)

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REPAIR OR REPLACE ECM SUB BUS LINE OR CONNECTOR (CAN-H, CAN-L)**12 CONNECT CONNECTOR**

- (a) Reconnect the suspension control ECU sub bus line connector (J42) to the P-CAN J/C B side (w/o earth terminal).

13 CHECK CAN BUS LINE FOR SHORT TO B(SUSPENSION CONTROL ECU SUB BUS LINE)**DLC3:**G25474
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- (a) Disconnect the suspension control ECU connector (A24).
 (b) Measure the resistance according to the value(s) in the table below.

Standard:

Tester Connection	Condition	Specified Value
D1-6 (CANH) - D1-16 (BAT)	Ignition Switch OFF	1 MΩ or more
D1-14 (CANL) - D1-16 (BAT)	Ignition Switch OFF	1 MΩ or more

OK

REPLACE SUSPENSION CONTROL ECU (SEE PAGE 25-20)

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REPAIR OR REPLACE SUSPENSION CONTROL ECU SUB BUS LINE OR CONNECTOR (CAN-H, CAN-L)

14

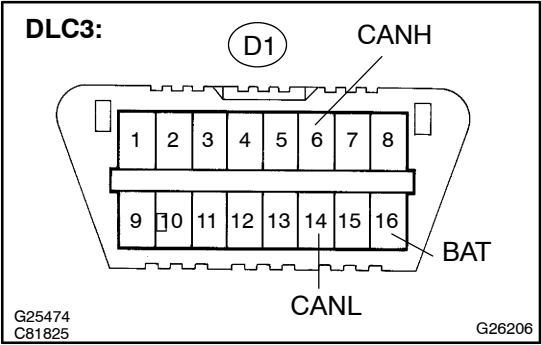
CONNECT CONNECTOR

(a) Reconnect the cruise control ECU sub bus line connector (J45) to the P-CAN/J/CB side (w/o earth terminal).



15

CHECK CAN BUS LINE FOR SHORT TO +B (CRUISE CONTROL ECU SUB BUS LINE)



- (a) Disconnect the cruise control ECU connector (D29).
(b) Measure the resistance according to the value(s) in the table below.

Standard:

Tester connection	Condition	Specified value
D1-6 (CANH) - D1-16 (BAT)	Ignition Switch OFF	1 MΩ or more
D1-14 (CANL) - D1-16 (BAT)	Ignition Switch OFF	1 MΩ or more

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REPAIR OR REPLACE CRUISE CONTROL ECU SUB BUS LINE OR CONNECTOR (CAN-H, CAN-L)

OK

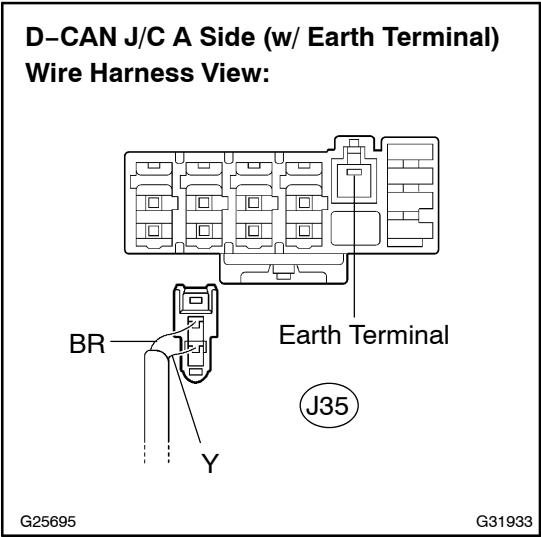
REPLACE CRUISE CONTROL ECU ASSY (SEE PAGE 82-2)

16 CONNECT CONNECTOR

- (a) Reconnect the CAN main bus line connector (J34) to the D-CAN J/C A side (w/ earth terminal).



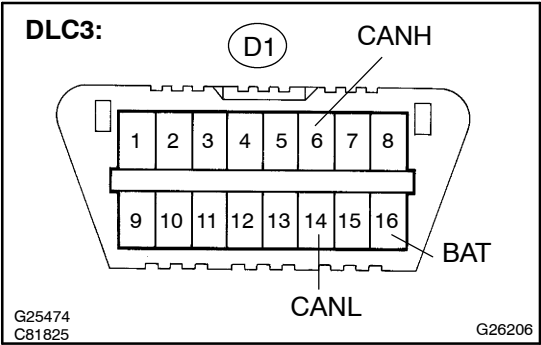
17 CHECK CAN BUS LINE FOR SHORT TO +B(YAW RATE SENSOR SUB BUS LINE)



- (a) Disconnect the yaw rate sensor sub bus line (J35) from the D-CAN J/C A side (w/ earth terminal).

NOTICE:

- **Before disconnecting the connector, make a note of where it is connected.**
- **Reconnect the connector to its original position.**



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

Standard:

Tester connection	Condition	Specified value
D1-6 (CANH) - D1-16 (BAT)	Ignition Switch OFF	1 MΩ or more
D1-14 (CANL) - D1-16 (BAT)	Ignition Switch OFF	1 MΩ or more

OK **Go to step 24**

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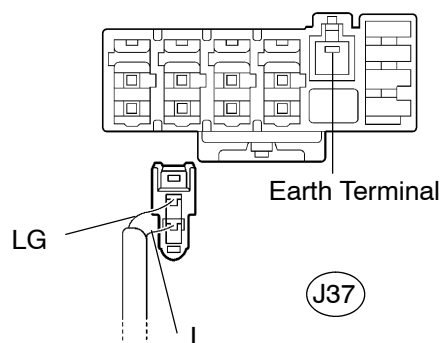
18 CONNECT CONNECTOR

- (a) Reconnect the yaw rate sensor sub bus line connector (J35) to the D-CAN J/C A side (w/ earth terminal).



19 CHECK CAN BUS LINE FOR SHORT TO +B(STEERING SENEOR SUB BUS LINE)

D-CAN J/C A Side (w/ Earth Terminal) Wire Harness View:



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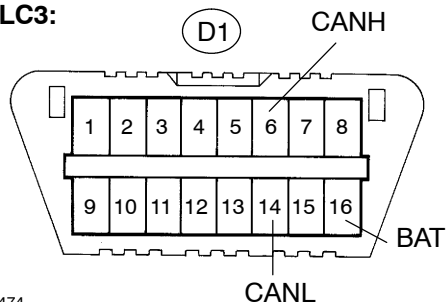
G31933

- (a) Disconnect the steering sensor sub bus line connector (J37) from the D-CAN J/C A side (w/ earth terminal).

NOTICE:

- Before disconnecting the connector, make a note of where it is connected.
- Reconnect the connector to its original position.

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

Standard:

Tester connection	Condition	Specified value
D1-6 (CANH) - D1-16 (BAT)	Ignition Switch OFF	1 MΩ or more
D1-14 (CANL) - D1-16 (BAT)	Ignition Switch OFF	1 MΩ or more

OK

Go to step 28

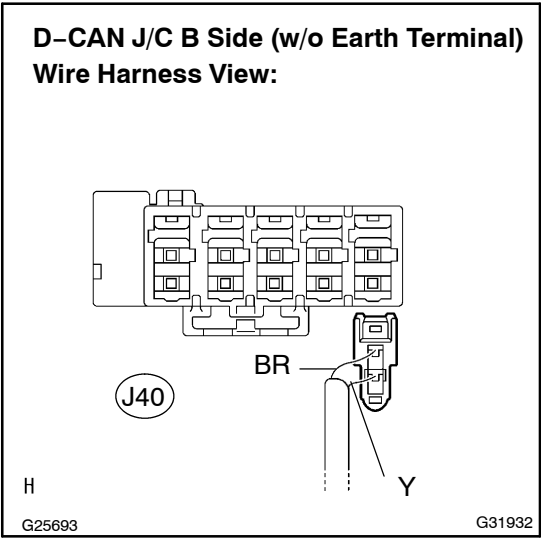
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20 CONNECT CONNECTOR

- (a) Reconnect the steering sensor sub bus line connector (J37) to the D-CAN J/C A side (w/ earth terminal).



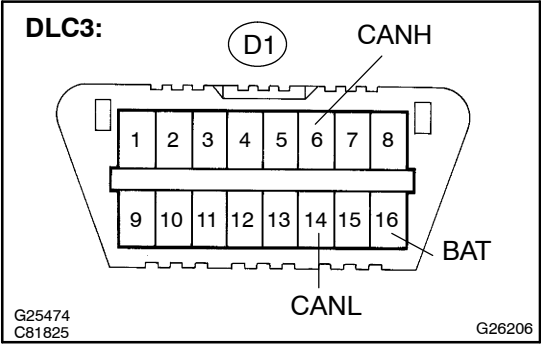
21 CHECK CAN BUS LINE FOR SHORT TO +B(SKID CONTROL ECU SUB BUS LINE)



- (a) Disconnect the skid control ECU sub bus line connector (J40) from the D-CAN J/C B side (w/o earth terminal).

NOTICE:

- **Before disconnecting the connector, make a note of where it is connected.**
- **Reconnect the connector to its original position.**



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

Standard:

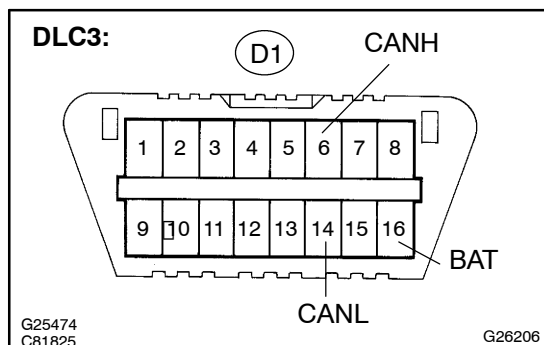
Tester connection	Condition	Specified value
D1-6 (CANH) - D1-16 (BAT)	Ignition Switch OFF	1 MΩ or more
D1-14 (CANL) - D1-16 (BAT)	Ignition Switch OFF	1 MΩ or more

OK Go to step 26

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22 CONNECT CONNECTOR

- (a) Reconnect the skid control ECU sub bus line connector (J40) to the D-CAN/CB side (w/o earth terminal).

**23 CHECK CAN BUS LINE FOR SHORT TO +B (GATEWAY ECU SUB BUS LINE)**

- (a) Disconnect the gateway ECU connector (G1).
 (b) Measure the resistance according to the value(s) in the table below.

Standard:

Tester connection	Condition	Specified value
D1-6 (CANH) - D1-16 (BAT)	Ignition Switch OFF	1 MΩ or more
D1-14 (CANL) - D1-16 (BAT)	Ignition Switch OFF	1 MΩ or more

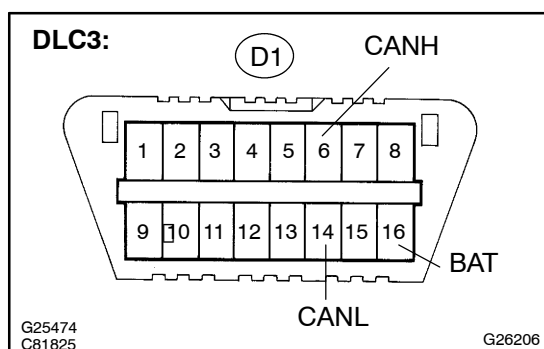
OK

REPLACE GATEWAY ECU

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REPAIR OR REPLACE GATEWAY ECU SUB BUS LINE OR CONNECTOR (CAN-H, CAN-L)**24 CONNECT CONNECTOR**

- (a) Reconnect the yaw rate sensor sub bus line connector (J35) to the D-CAN/CA side (w/ earth terminal).

**25 CHECK CAN BUS LINE FOR SHORT TO +B (YAW RATE SENSOR SUB BUS LINE)**

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

Standard:

Tester connection	Condition	Specified value
D1-6 (CANH) - D1-16 (BAT)	Ignition Switch OFF	1 MΩ or more
D1-14 (CANL) - D1-16 (BAT)	Ignition Switch OFF	1 MΩ or more

OK

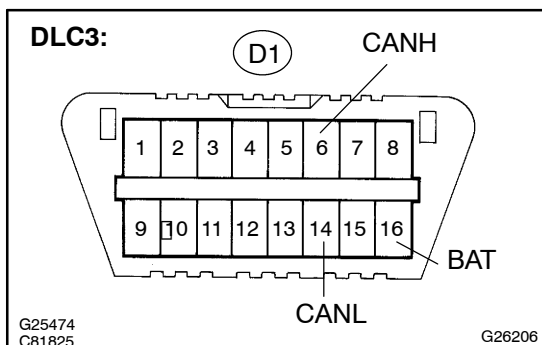
REPLACE YAW RATE SENSOR (SEE PAGE 32-63)

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

26 CONNECT CONNECTOR

- (a) Reconnect the skid control ECU sub bus line connector (J40) to the D-CAN/CB side (w/o earth terminal).

**27 CHECK CAN BUS LINE FOR SHORT TO +B (SKID CONTROL ECU SUB BUS LINE)**

- (a) Disconnect the skid control ECU connector (S48).
 (b) Measure the resistance according to the value(s) in the table below.

Standard:

Tester connection	Condition	Specified value
D1-6 (CANH) - D1-16 (BAT)	Ignition Switch OFF	1 MΩ or more
D1-14 (CANL) - D1-16 (BAT)	Ignition Switch OFF	1 MΩ or more

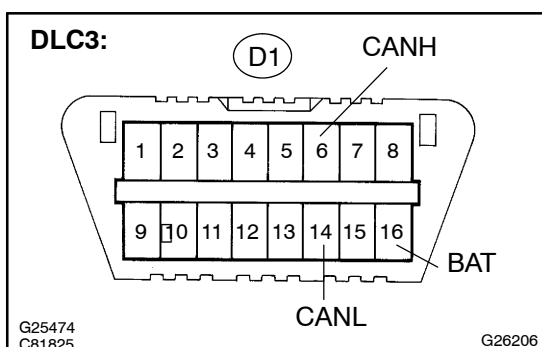
OK

REPLACE SKID CONTROL ECU WITH ACTUATOR (SEE PAGE 32-53)

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REPAIR OR REPLACE SKID CONTROL ECU SUB BUS LINE OR CONNECTOR (CAN-H, CAN-L)**28 CONNECT CONNECTOR**

- (a) Reconnect the steering sensor sub bus line connector (J37) to the D-CAN/CA side (w/ earth terminal).

**29 CHECK CAN BUS LINE FOR SHORT TO +B (STEERING SENSOR SUB BUS LINE)**

- (a) Disconnect the steering sensor connector (S18).
 (b) Measure the resistance according to the value(s) in the table below.

Standard:

Tester connection	Condition	Specified value
D1-6 (CANH) - D1-16 (BAT)	Ignition Switch OFF	1 MΩ or more
D1-14 (CANL) - D1-16 (BAT)	Ignition Switch OFF	1 MΩ or more

OK

REPLACE STEERING SENSOR (SEE PAGE 32-65)

NG

REPAIR OR REPLACE STEERING SENSOR SUB BUS LINE OR CONNECTOR (CAN-H, CAN-L)