

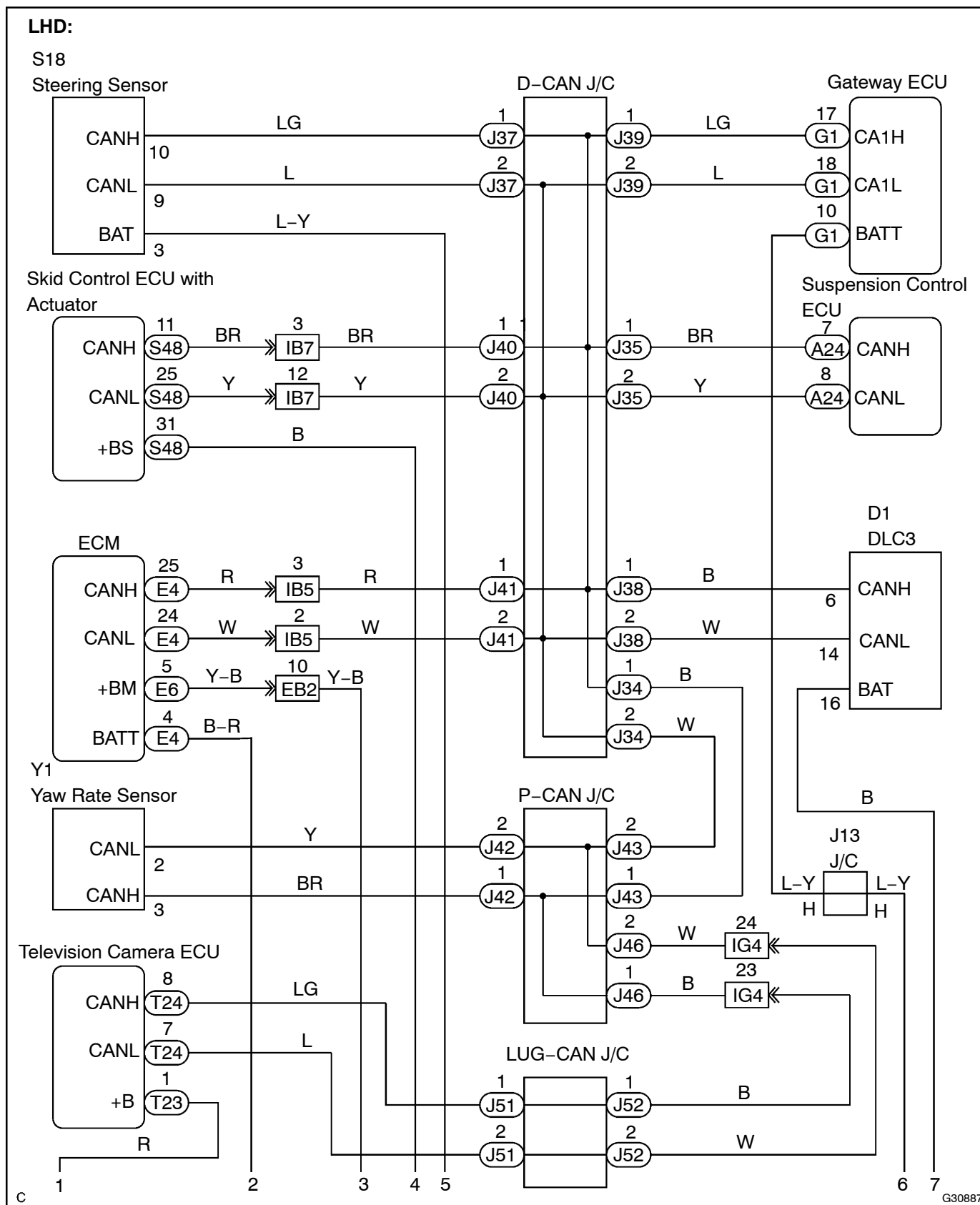
CHECK CAN BUS LINE FOR SHORT TO +B (LHD, w/ LEXUS Navigation System)

CIRCUIT DESCRIPTION

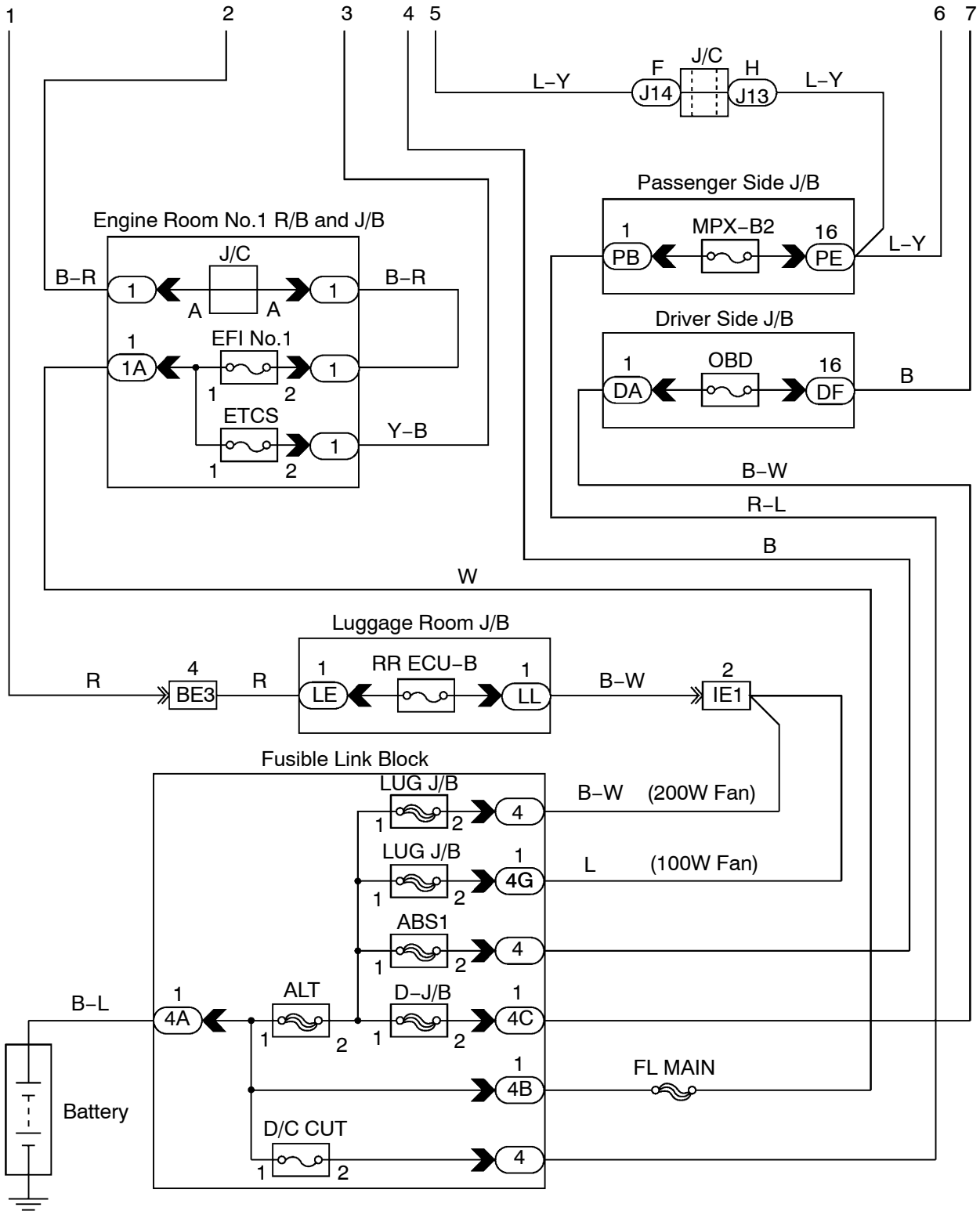
There may be a short circuit between the CAN bus line and +B when there is resistance between terminals 6 (CANH) and 16 (BAT) or terminals 14 (CANL) and 16 (BAT) of the DLC3.

Symptom	Trouble Area
There is resistance between terminals 6 (CANH) and 16 (BAT) or terminals 14 (CANL) and 16 (BAT) of the DLC 3.	• Short to +B • Television camera ECU • Skid control ECU with actuator • Steering sensor • Yaw rate sensor • Suspension control ECU • ECM • Gateway ECU

WIRING DIAGRAM

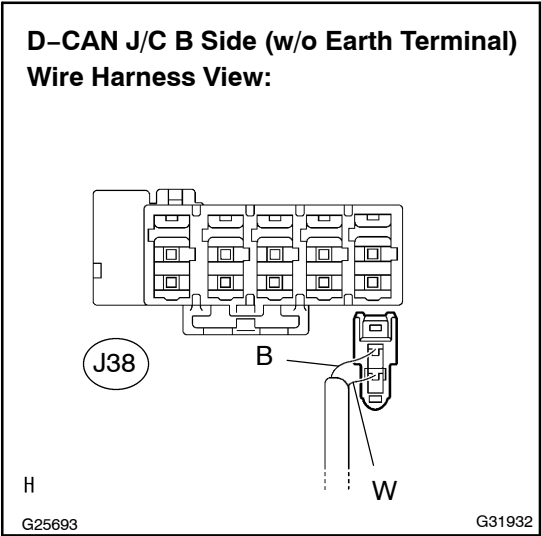


LHD:



INSPECTION PROCEDURE

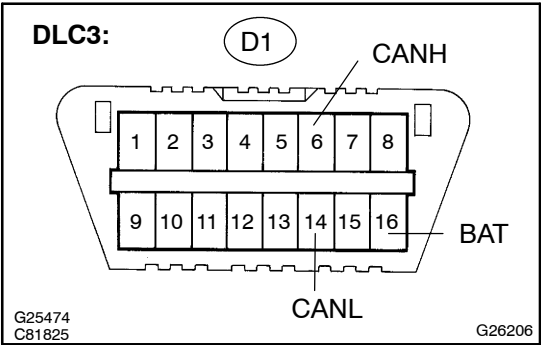
1 CHECK CAN BUS LINE FOR SHORT TO +B(DLC3 SUB BUS LINE)



- (a) Turn the ignition switch to the LOCK position.
- (b) Disconnect the DLC3 sub bus line connector (J38) 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.**



- (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

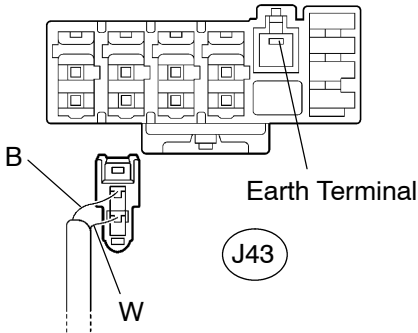
2 CONNECT CONNECTOR

- (a) Reconnect the DLC3 sub bus line connector (J38) to the D-CAN J/C B side (w/o earth terminal).



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

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



G25695

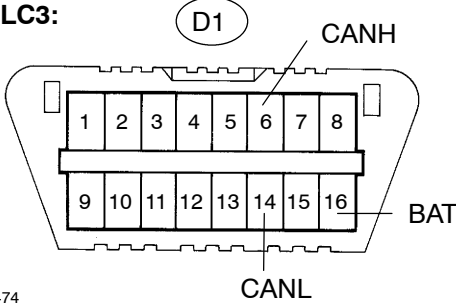
G31933

- (a) Disconnect the CAN main bus line connector (J43) 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.**

DLC3:



G25474
C81825

G26206

- (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

NG

4 CONNECT CONNECTOR

- (a) Reconnect the CAN main bus line connector (J43) to the P-CAN J/C A side (w/ earth terminal).

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

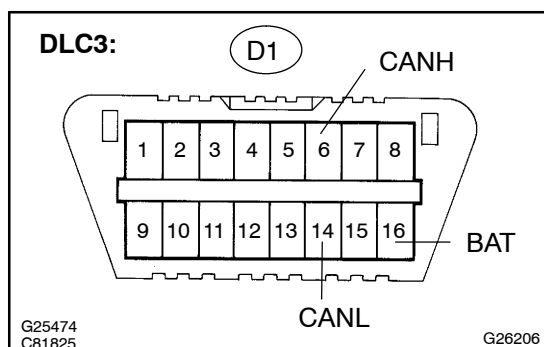
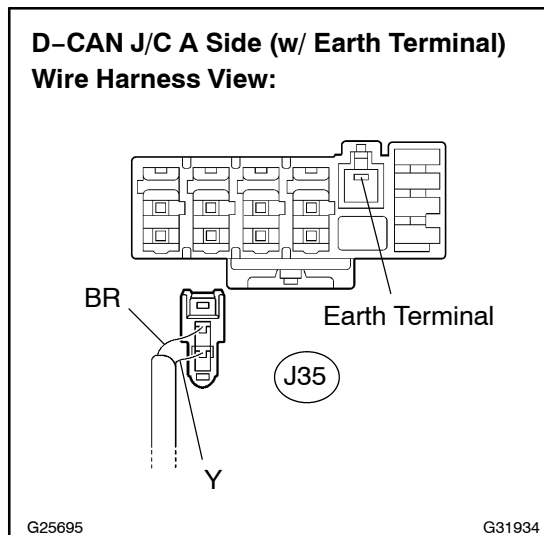
NOTICE:

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

- (a) Disconnect the suspension control ECU sub bus line connector (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 14

NG

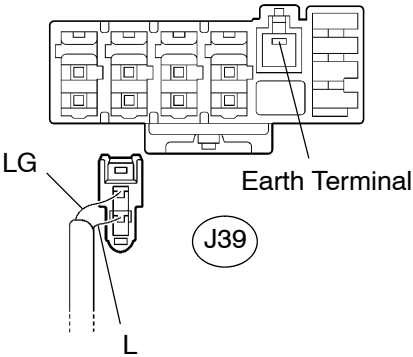
6 CONNECT CONNECTOR

- (a) Reconnect the suspension control ECU sub bus line connector (J35) to the D-CAN J/C A side (w/ earth terminal).



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

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



G25695

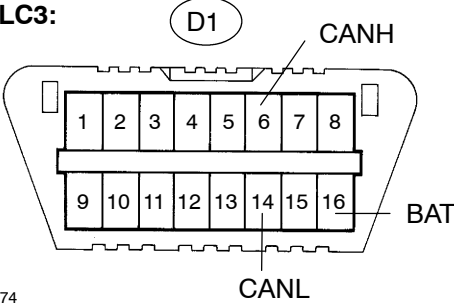
G31934

- (a) Disconnect the gateway ECU sub bus line connector (J39) 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.

DLC3:



G25474
C81825

G26206

- (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

NG

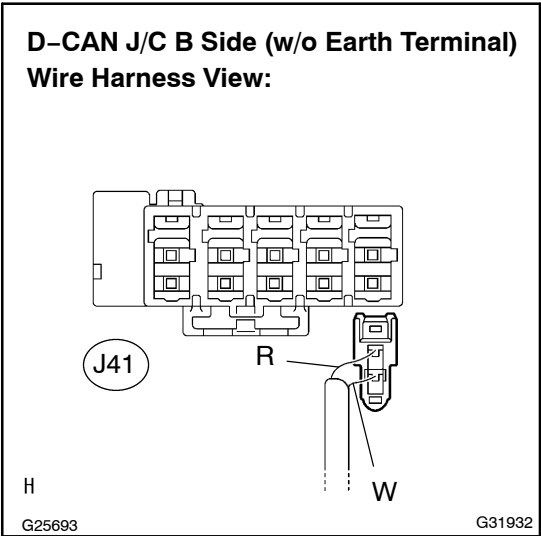
8 CONNECT CONNECTOR

- (a) Reconnect the gateway ECU sub bus line connector (J39) to the D-CAN J/C A side (w/ earth terminal).



9

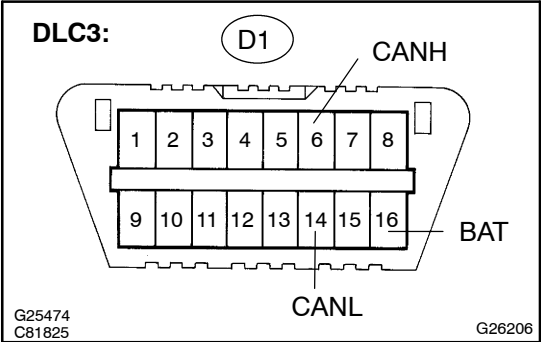
CHECK CAN BUS LINE FOR SHORT TO +B(ECU SUB BUS LINE)



- (a) Disconnect the ECM sub bus line connector (J41) 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 18

NG

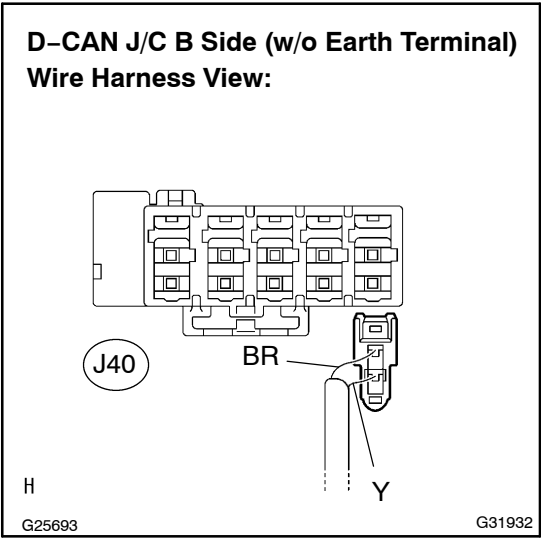
10

CONNECT CONNECTOR

- (a) Reconnect the ECM sub bus line connector (J41) to the D-CAN J/C B side (w/o earth terminal).



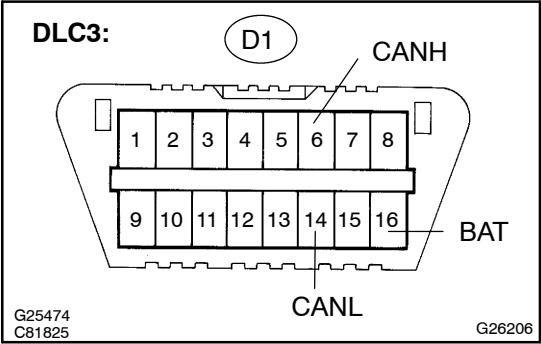
11 CHECK CAN BUS LINE FOR SHORT TO +B(SKID CONTROL ECU SUB BUS LINE)



- (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 20

NG

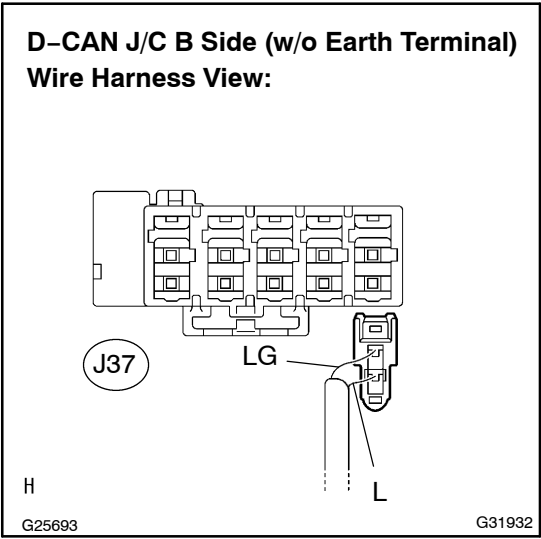
12 CONNECT CONNECTOR

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



13

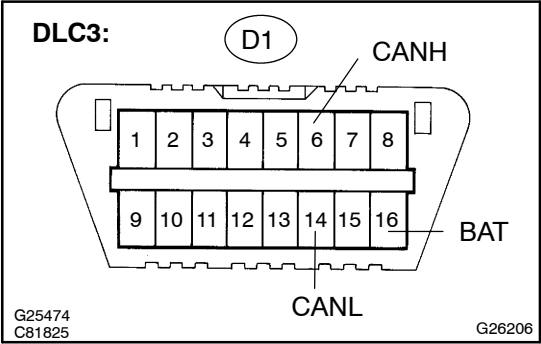
CHECK CAN BUS LINE FOR SHORT TO +B(STEERING SENSOR SUB BUS LINE)



- (a) Disconnect the steering sensor sub bus line connector (J37) 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

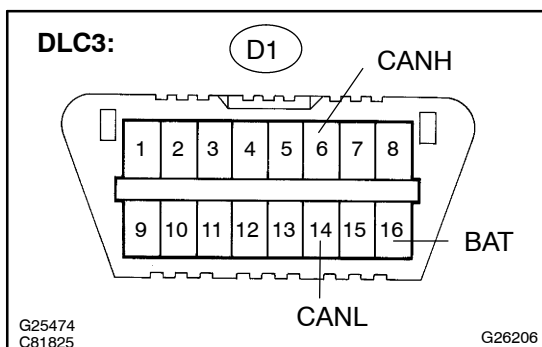
Go to step 22

NG

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

14 CONNECT CONNECTOR

- (a) Reconnect the suspension control ECU sub bus line connector (J35) to the D-CAN J/C A side (w/ earth terminal).

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

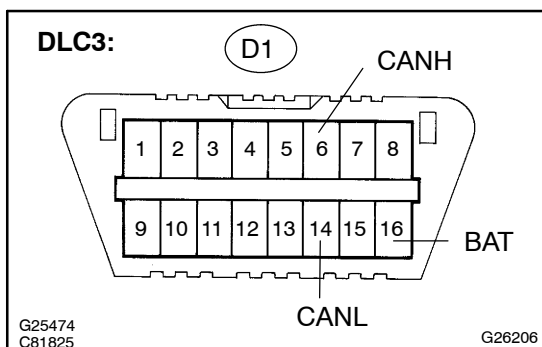
- (a) Disconnect the suspension control ECU connector (A24).
 (b) Measure the resistance according to the value(s) in the table below.

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)****NG****REPAIR OR REPLACE SUSPENSION CONTROL ECU SUB BUS LINE OR CONNECTOR (CAN-H, CAN-L)****16 CONNECT CONNECTOR**

- (a) Reconnect the gateway ECU sub bus line connector (J39) to the D-CAN J/C A side (w/ earth terminal).

**17 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.

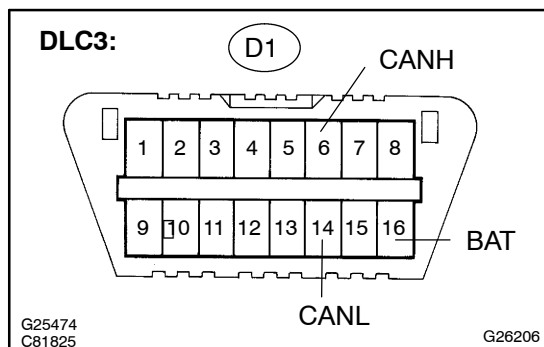
Standard:

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

18 CONNECT CONNECTOR

- (a) Reconnect the ECM sub bus line connector (J41) to the D-CAN J/CB side (w/o earth terminal).

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

- (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

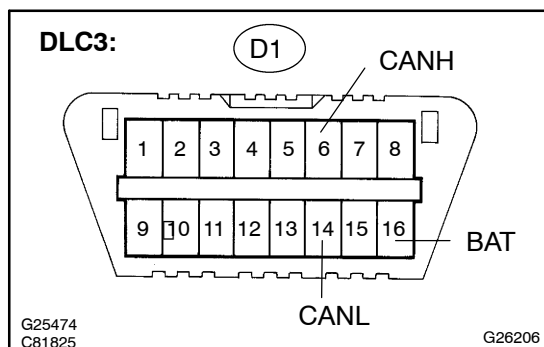
OK

REPLACE ECM (SEE PAGE 10-21)

NG

REPAIR OR REPLACE ECM SUB BUS LINE OR CONNECTOR (CAN-H, CAN-L)**20 CONNECT CONNECTOR**

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

**21 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)

NG

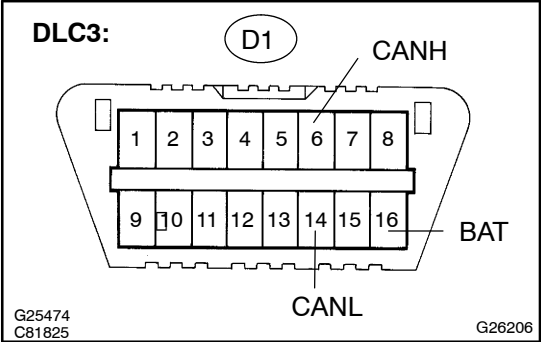
REPAIR OR REPLACE SKID CONTROL ECU WITH ACTUATOR (CAN-H, CAN-L)

22 CONNECT CONNECTOR

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



23 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

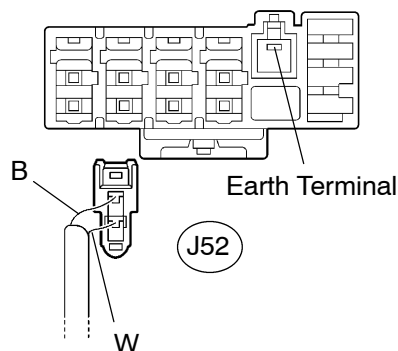
REPLACE STEERING SENSOR
(SEE PAGE 32-65)



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

24 CONNECT CONNECTOR

- (a) Reconnect the CAN main bus line connector (J43) to the P-CAN J/C A side (w/ earth terminal).

**25 CHECK CAN BUS LINE FOR SHORT TO +B(CAN BUSES TO LUG-CAN J/C)****LUG-CAN J/C A Side
(w/ Earth Terminal):**

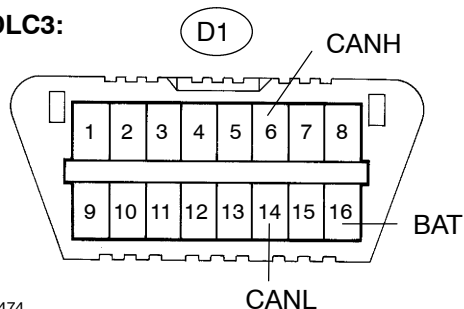
G25695

G31935

- (a) Disconnect the CAN main bus line connector (J52) from the LUG-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.**

DLC3:G25474
C81825

G26206

- (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

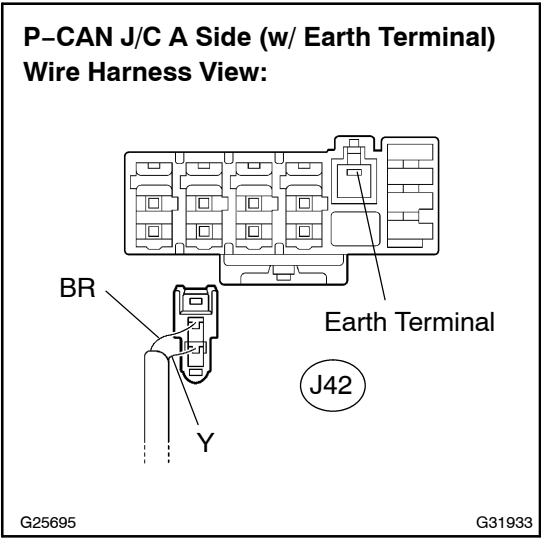
OK**Go to step 30****NG****26 CONNECT CONNECTOR**

- (a) Reconnect the CAN main bus line connector (J52) to the LUG-CAN J/C A side (w/ earth terminal).



27

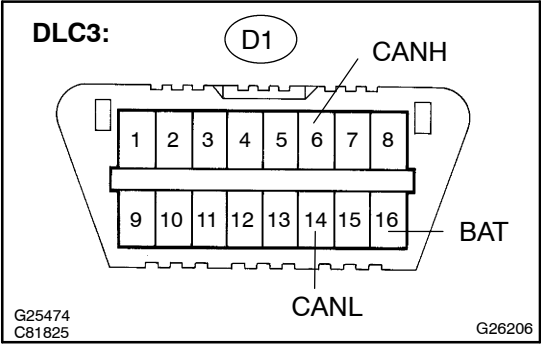
CHECK CAN BUS LINE FOR SHORT TO +B(YAW RATE SENSOR SUB BUS LINE)



- (a) Disconnect the yaw rate sensor sub bus line connector (J42) 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.**



- (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

NG

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

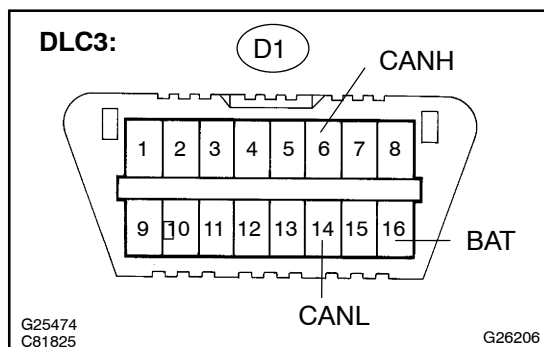
OK

28

CONNECT CONNECTOR

- (a) Reconnect the yaw rate sensor sub bus line connector (J42) to the P-CAN J/C A side (w/ earth terminal).



29 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:

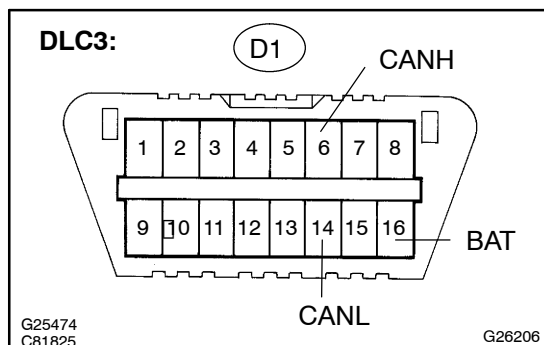
Tester Connection	Condition	Specified Value
D1-6 (CANH) - D1-16 (BAT)	Ignition Switch OFF	1 MΩ or more
D1-14 (CANL) - D1-16 (BAT)	Ignition Switch OFF	1 MΩ or more

OK

REPLACE YAW RATE SENSOR
 (SEE PAGE 32-63)

NG**REPAIR OR REPLACE YAW RATE SENSOR SUB BUS LINE OR CONNECTOR (CAN-H, CAN-L)****30 CONNECT CONNECTOR**

- (a) Reconnect the CAN main bus line connector (J52) to the LUG-CAN/C/A side (w/earth terminal).

31 CHECK CAN BUS LINE FOR SHORT TO +B (TELEVISION CAMERA ECU SUB BUS LINE)

- (a) Disconnect the television camera ECU connector (T24).
 (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 TELEVISION CAMERA ECU
 (SEE PAGE 67-15)

NG**REPAIR OR REPLACE TELEVISION CAMERA ECU SUB BUS LINE OR CONNECTOR (CAN-H, CAN-L)**