

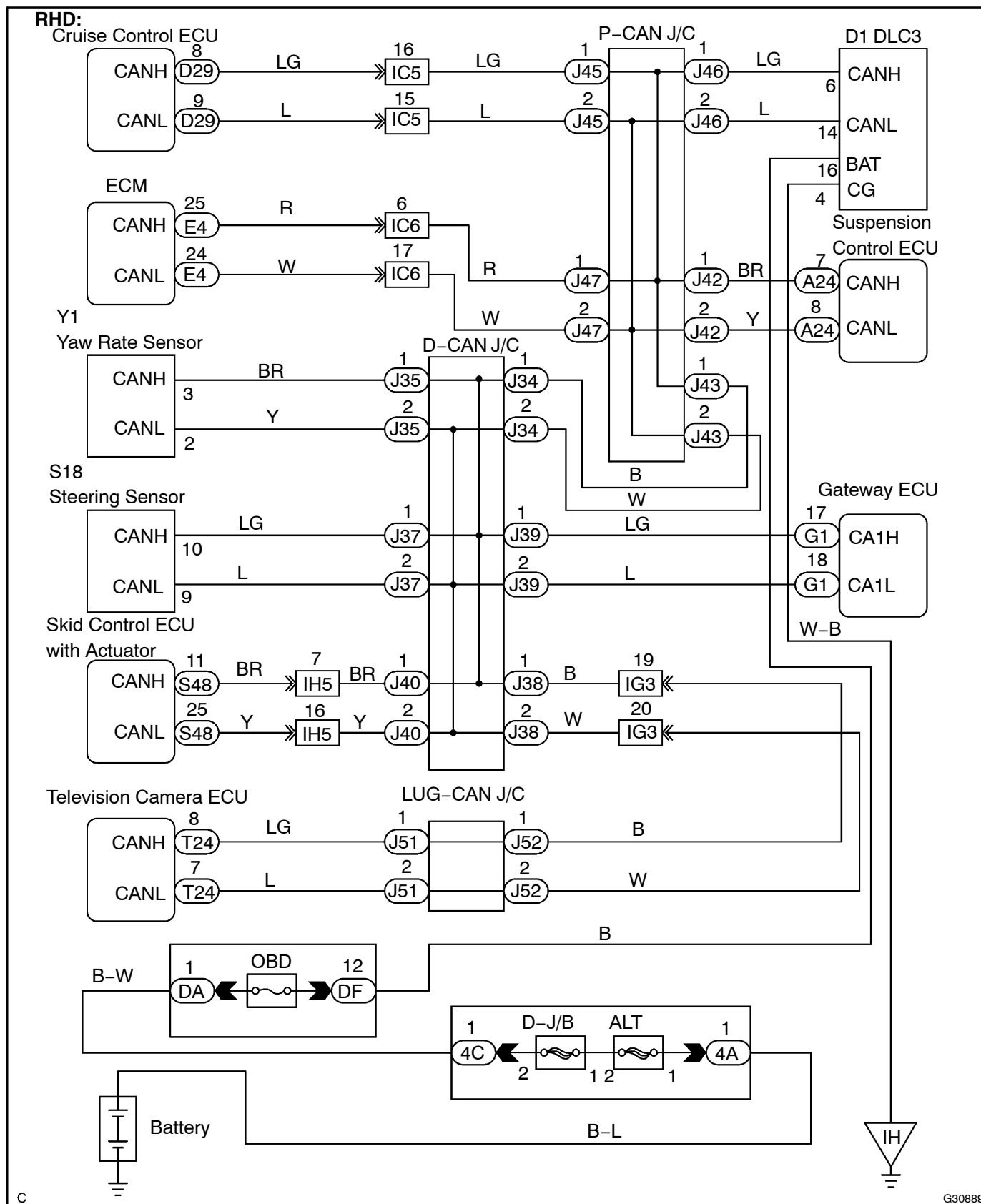
## CHECK CAN BUS LINES FOR SHORT CIRCUIT (RHD, w/ LEXUS Navigation System)

### CIRCUIT DESCRIPTION

There may be a short circuit between the CAN bus lines when the resistance between terminals 6 (CANH) and 14 (CANL) of the DLC3 is below 54  $\Omega$ .

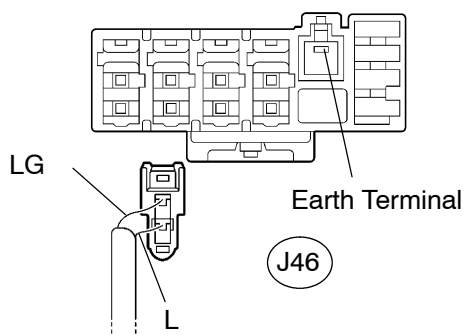
| Symptom                                                                                 | Trouble Area                                                                                                                                                                                                                                                                                                                                                                                                                                |
|-----------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Resistance between terminals 6 (CANH) and 14 (CANL) of the DLC 3 is below 54 $\Omega$ . | <ul style="list-style-type: none"><li>• Short between CAN bus lines</li><li>• Cruise control ECU</li><li>• Television camera ECU</li><li>• Skid control ECU with actuator</li><li>• Steering sensor</li><li>• Yaw rate sensor</li><li>• Suspension control ECU</li><li>• ECM</li><li>• Gateway ECU</li><li>• Junction connector (LUG-CAN J/C)</li><li>• Junction connector ( P-CAN J/C)</li><li>• Junction connector ( D-CAN J/C)</li></ul> |

## WIRING DIAGRAM



## INSPECTION PROCEDURE

## 1 CHECK CAN BUS LINES FOR SHORT CIRCUIT(DLC3 SUB BUS LINE)

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

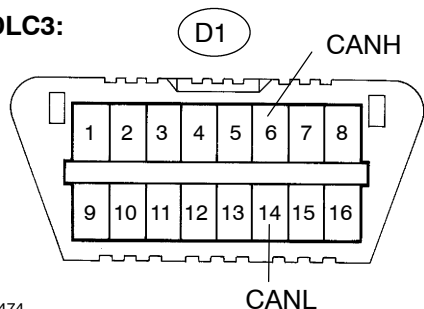
G25695

G31933

- (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.

**DLC3:**G25474  
C81825

G26206

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

**Standard:**

| Tester connection             | Condition           | Specified value |
|-------------------------------|---------------------|-----------------|
| D1-6 (CANH) -<br>D1-14 (CANL) | Ignition Switch OFF | 1 MΩ or more    |

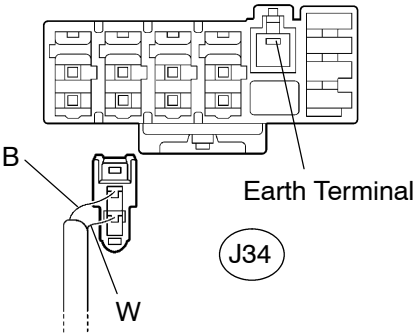
**NG****REPAIR OR REPLACE DLC3 SUB BUS LINE OR CONNECTOR (CAN-H, CAN-L)****OK**

## 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 LINES FOR SHORT CIRCUIT(CAN BUSES TO P-CAN J/C)

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



G25695

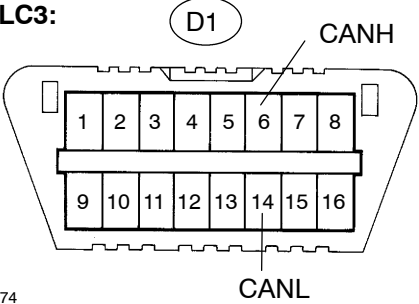
G31933

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

**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) -<br>D1-14 (CANL) | Ignition Switch OFF | 108 to 132 Ω    |

**OK**

**Go to step 18**

**NG**

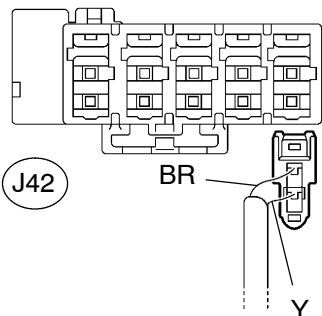
4 CONNECT CONNECTOR

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



## 5 CHECK CAN BUS LINES FOR SHORT CIRCUIT(SUSPENSION CONTROL ECU SUB BUS LINE)

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



G25693

G31932

#### NOTICE:

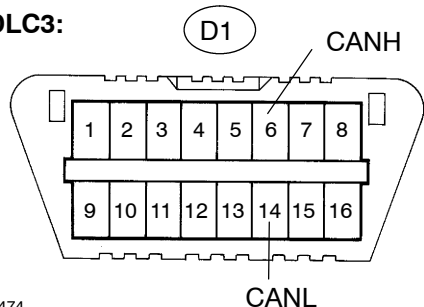
For vehicles without electronic modulated air suspension, go to step 7.

- (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.

### 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) –<br>D1-14 (CANL) | Ignition Switch OFF | 54 to 69 $\Omega$ |

OK

Go to step 12

NG

## 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).



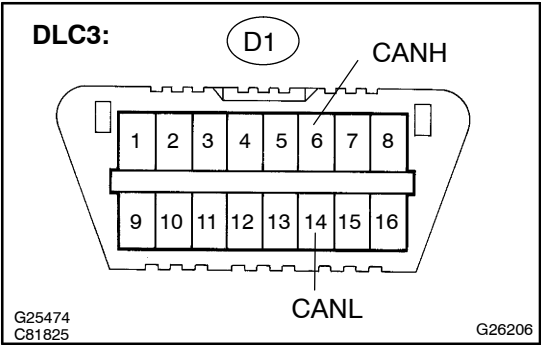
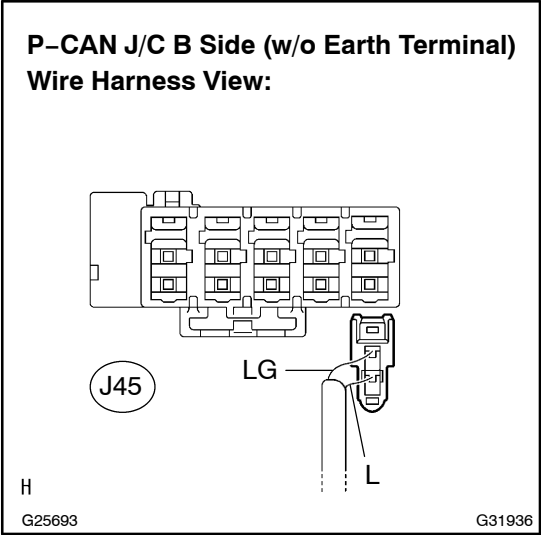
**7 CHECK CAN BUS LINES FOR SHORT CIRCUIT(CRUISE CONTROL ECU SUB BUS LINE)**

**NOTICE:**  
For vehicles without dynamic laser cruise control, go to step 9.

- (a) Disconnect the cruise control ECU sub bus line connector (J45) 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) –<br>D1-14 (CANL) | Ignition Switch OFF | 54 to 69 Ω      |

**OK**

**Go to step 14**

**NG**

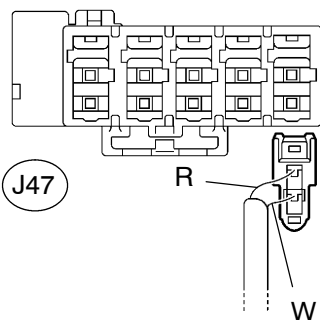
## 8 CONNECT CONNECTOR

- (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 LINES FOR SHORT CIRCUIT(ECM SUB BUS LINE)

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

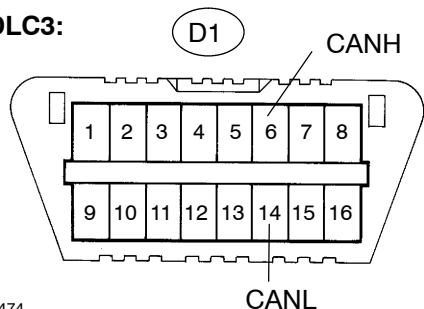


- (a) Disconnect the ECM sub bus line connector (J47) from the P-CAN J/C B side (w/o earth terminal).

#### NOTICE:

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

### DLC3:



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

#### Standard:

| Tester connection             | Condition           | Specified value   |
|-------------------------------|---------------------|-------------------|
| D1-6 (CANH) -<br>D1-14 (CANL) | Ignition Switch OFF | 54 to 69 $\Omega$ |

OK

Go to step 16

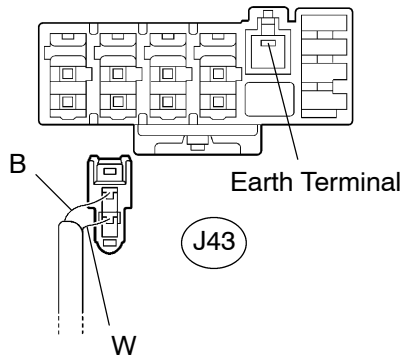
NG

**10 CONNECT CONNECTOR**

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

**11 CHECK CAN BUS LINES FOR SHORT CIRCUIT(P-CAN J/C)**

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



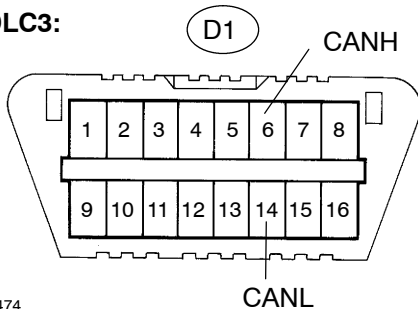
G25695

G31934

- (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) –<br>D1-14 (CANL) | Ignition Switch OFF | 108 to 132 Ω    |

**NG**

**REPLACE JUNCTION CONNECTOR  
(P-CAN J/C)**

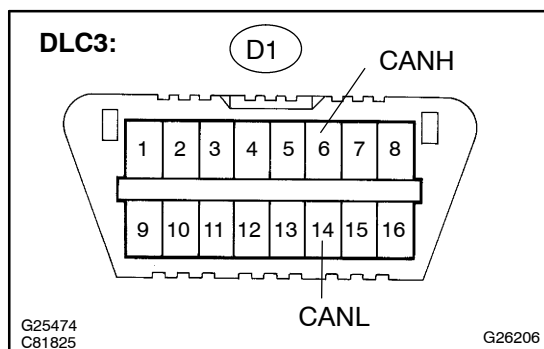
**OK**

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



**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 LINES FOR SHORT CIRCUIT(SUSPENSION CONTROL ECU SUB BUS LINE)**

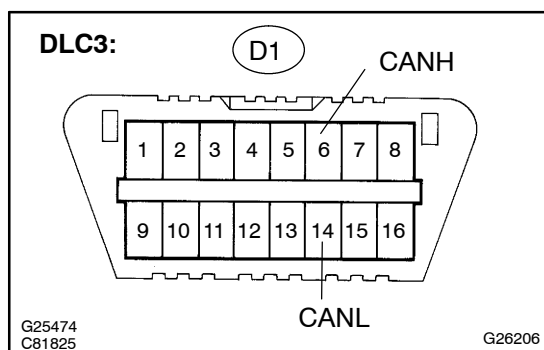
- (a) Disconnect the suspension control ECU connector (A24).  
 (b) Measure the resistance according to the value(s) in the table below.

**Standard:**

| Tester connection             | Condition           | Specified value |
|-------------------------------|---------------------|-----------------|
| D1-6 (CANH) –<br>D1-14 (CANL) | Ignition Switch OFF | 54 to 69 Ω      |

**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)****14 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).

**15 CHECK CAN BUS LINES FOR SHORT CIRCUIT(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) –<br>D1-14 (CANL) | Ignition Switch OFF | 54 to 69 Ω      |

**OK****REPLACE CRUISE CONTROL ECU ASSY (SEE PAGE 82-2)****NG****REPAIR OR REPLACE CRUISE CONTROL ECU SUB BUS LINE OR CONNECTOR (CAN-H, CAN-L)**

16

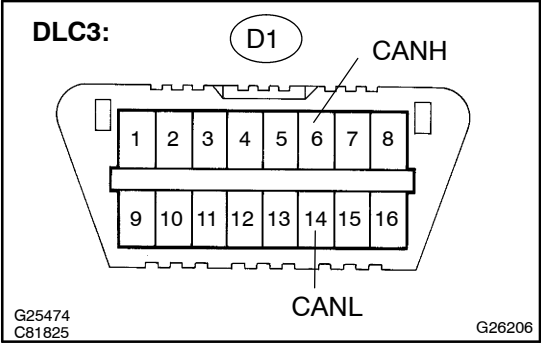
CONNECT CONNECTOR

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



17

CHECK CAN BUS LINES FOR SHORT CIRCUIT(ECM SUB BUS LINE)



- (a) Disconnect the ECU connector (E4).  
(b) Measure the resistance according to the value(s) in the table below.

**Standard:**

| Tester connection             | Condition           | Specified value |
|-------------------------------|---------------------|-----------------|
| D1-6 (CANH) –<br>D1-14 (CANL) | Ignition Switch OFF | 54 to 69 Ω      |

OK

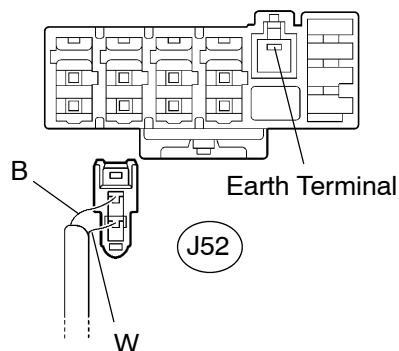
REPLACE ECM (SEE PAGE 10-21)

NG

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

**18 CONNECT CONNECTOR**

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

**19 CHECK CAN BUS LINES FOR SHORT CIRCUIT(CAN BUSES TO LUG-CAN J/C)****LUG-CAN J/C A Side  
(w/ Earth Terminal):**

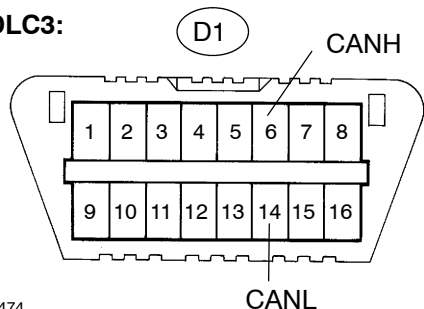
G25695

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) –<br>D1-14 (CANL) | Ignition Switch OFF | 108 to 132 Ω    |

**OK****Go to step 38****NG**

20

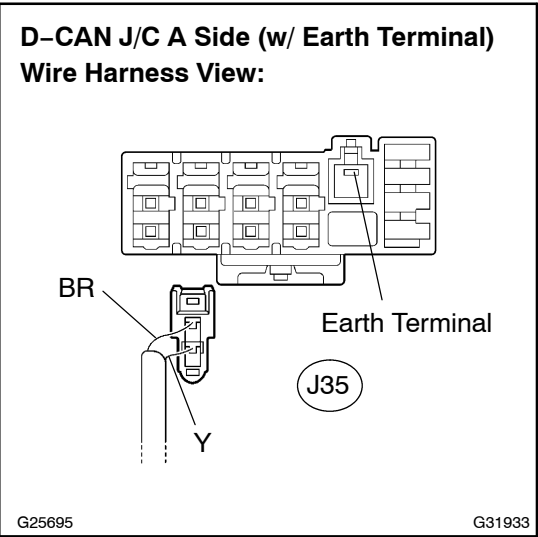
CONNECT CONNECTOR

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



21

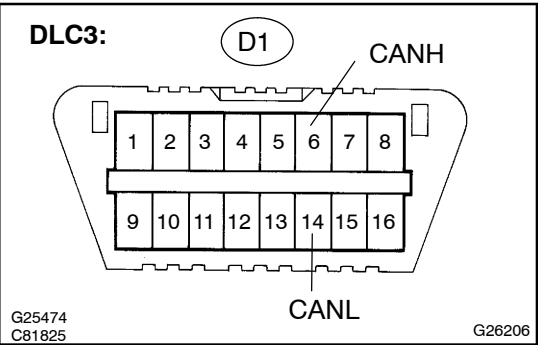
CHECK CAN BUS LINES FOR SHORT CIRCUIT(YAW RATE SENSOR SUB BUS LINE)



- (a) Disconnect the yaw rate sensor 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) -<br>D1-14 (CANL) | Ignition Switch OFF | 54 to 69 Ω      |

OK

Go to step 30

NG

22

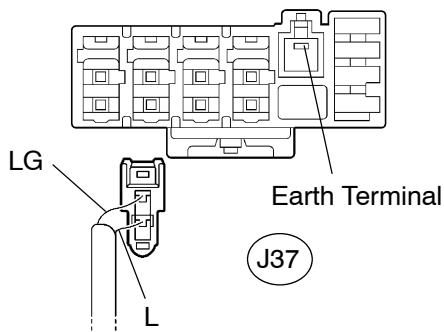
CONNECT CONNECTOR

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



## 23 CHECK CAN BUS LINES FOR SHORT CIRCUIT(STEERING SENSOR SUB BUS LINE)

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



G25695

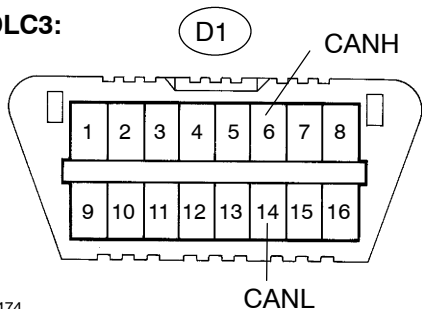
G31933

- (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.

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) -<br>D1-14 (CANL) | Ignition Switch OFF | 54 to 69 $\Omega$ |

OK

Go to step 34

NG

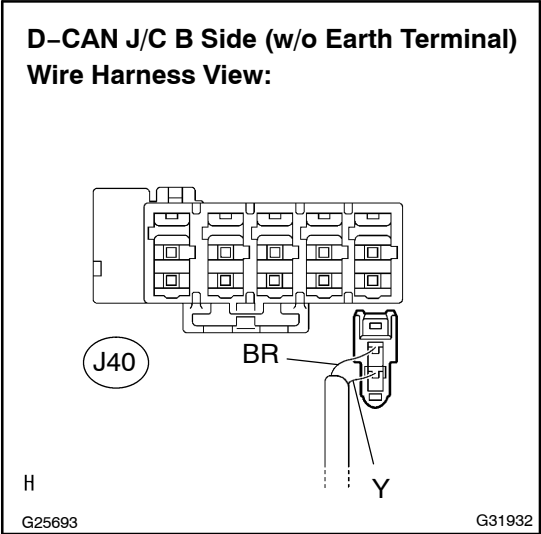
## 24 CONNECT CONNECTOR

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



25

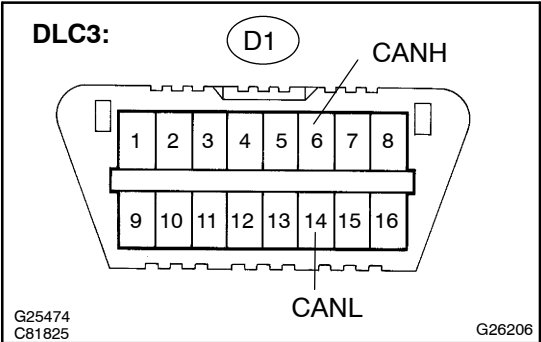
CHECK CAN BUS LINES FOR SHORT CIRCUIT(SKID CONTROL ECU SUB BUS LINE)



- (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) -<br>D1-14 (CANL) | Ignition Switch OFF | 54 to 69 Ω      |

OK

Go to step 32

NG

26

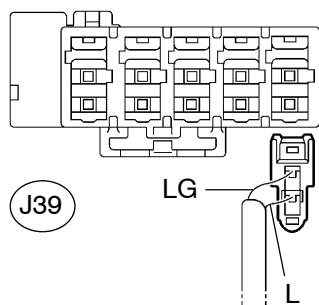
CONNECT CONNECTOR

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



**27 CHECK CAN BUS LINES FOR SHORT CIRCUIT(GATEWAY ECU SUB BUS LINE)**

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

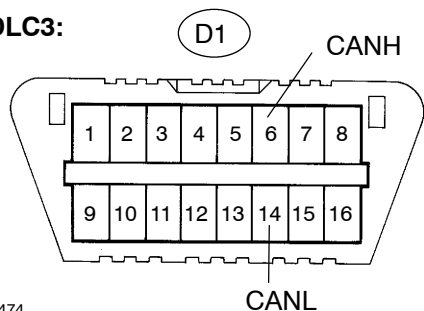


- (a) Disconnect the gateway ECU sub bus line connector (J39) from the D-CAN J/C B side (w/o earth terminal).

**NOTICE:**

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

**DLC3:**



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

**Standard:**

| Tester connection             | Condition           | Specified value   |
|-------------------------------|---------------------|-------------------|
| D1-6 (CANH) -<br>D1-14 (CANL) | Ignition Switch OFF | 54 to 69 $\Omega$ |

**OK**

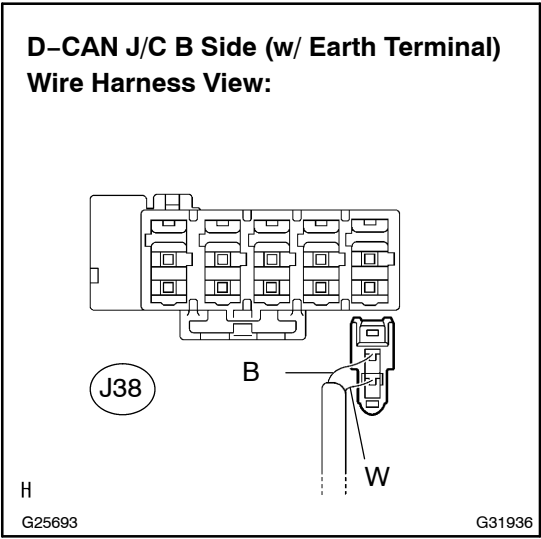
**Go to step 36**

**NG**

**28 CONNECT CONNECTOR**

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

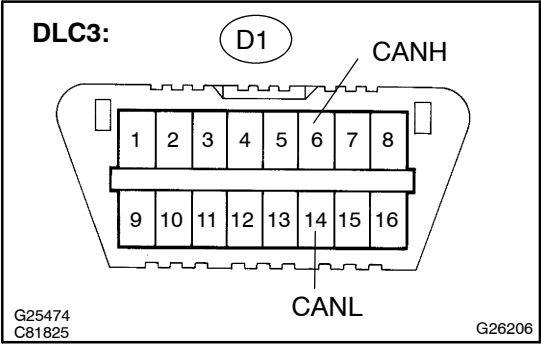
29 CHECK CAN BUS LINES FOR SHORT CIRCUIT(D-CAN J/C)



- (a) Disconnect the CAN main bus line connector (J38) from the D-CAN J/C B 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) -<br>D1-14 (CANL) | Ignition Switch OFF | 108 to 132 $\Omega$ |

**NG** **REPLACE JUNCTION CONNECTOR (D-CAN J/C)**

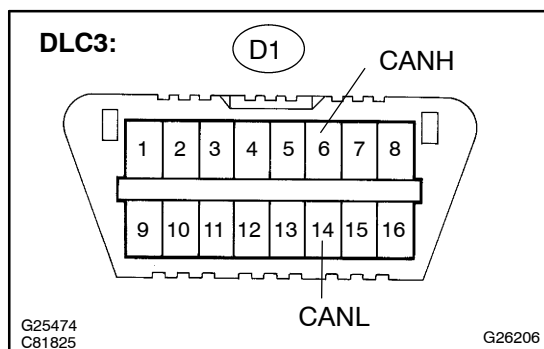
**OK**

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



**30 CONNECT CONNECTOR**

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

**31 CHECK CAN BUS LINES FOR SHORT CIRCUIT(YAW RATE SENSOR SUB BUS LINE)**

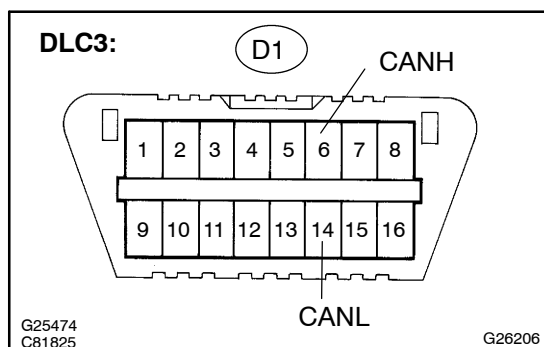
- (a) Disconnect the yaw rate sensor connector (Y1).  
 (b) Measure the resistance according to the value(s) in the table below.

**Standard:**

| Tester connection             | Condition           | Specified value |
|-------------------------------|---------------------|-----------------|
| D1-6 (CANH) –<br>D1-14 (CANL) | Ignition Switch OFF | 54 to 69 Ω      |

**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)****32 CONNECT CONNECTOR**

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

**33 CHECK CAN BUS LINES FOR SHORT CIRCUIT(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.

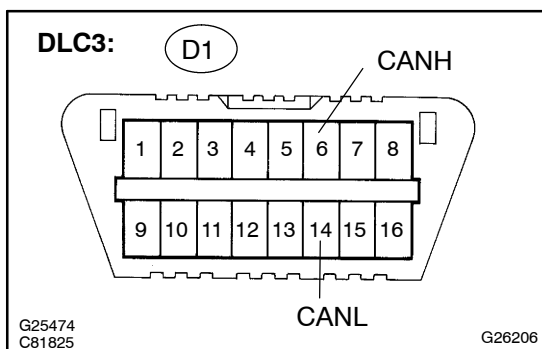
**Standard:**

| Tester connection             | Condition           | Specified value |
|-------------------------------|---------------------|-----------------|
| D1-6 (CANH) –<br>D1-14 (CANL) | Ignition Switch OFF | 54 to 69 Ω      |

**OK****REPLACE SKID CONTROL ECU WITH ACTUATOR (SEE PAGE 32-53)****NG****REPAIR OR REPLACE SKID CONTROL ECU SUB BUS LINE OR CONNECTOR (CAN-H, CAN-L)**

**34 CONNECT CONNECTOR**

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

**35 CHECK CAN BUS LINES FOR SHORT CIRCUIT(STEERING SENSOR SUB BUS LINE)**

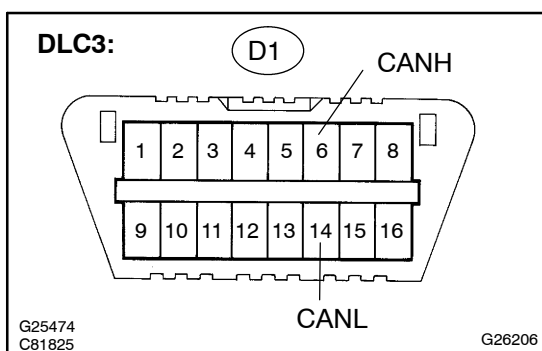
- (a) Disconnect the steering sensor connector (S18).  
 (b) Measure the resistance according to the value(s) in the table below.

**Standard:**

| Tester connection             | Condition           | Specified value |
|-------------------------------|---------------------|-----------------|
| D1-6 (CANH) –<br>D1-14 (CANL) | Ignition Switch OFF | 54 to 69 Ω      |

**OK****REPLACE STEERING SENSOR (SEE PAGE 32-65)****NG****REPAIR OR REPLACE STEERING SENSOR SUB BUS LINE OR CONNECTOR (CAN-H, CAN-L)****36 CONNECT CONNECTOR**

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

**37 CHECK CAN BUS LINES FOR SHORT CIRCUIT(GATEWAY ECU)**

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

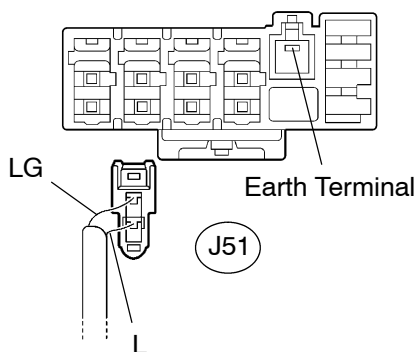
**Standard:**

| Tester connection             | Condition           | Specified value |
|-------------------------------|---------------------|-----------------|
| D1-6 (CANH) –<br>D1-14 (CANL) | Ignition Switch OFF | 54 to 69 Ω      |

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

**38 CONNECT CONNECTOR**

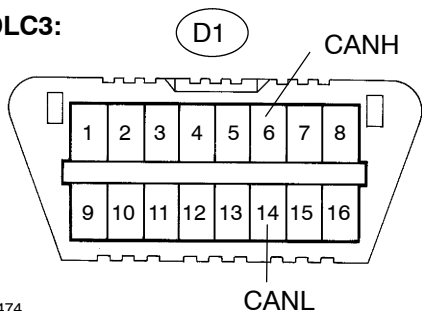
- (a) Reconnect the CAN main bus line connector (J52) to the LUG-CAN J/C A side (w/ earth terminal).

**39 CHECK CAN BUS LINES FOR SHORT CIRCUIT(TELEVISION CAMERA ECU SUB BUS LINE)****LUG-CAN J/C A Side  
(w/ Earth Terminal):**

G25695

G31935

- (a) Disconnect the television camera ECU sub bus line connector (J51) from the LUG-CAN J/C A side (w/ earth terminal).

**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) -<br>D1-14 (CANL) | Ignition Switch OFF | 108 to 132 $\Omega$ |

**NG****REPLACE JUNCTION CONNECTOR  
(LUG-CAN J/C)****OK**

40

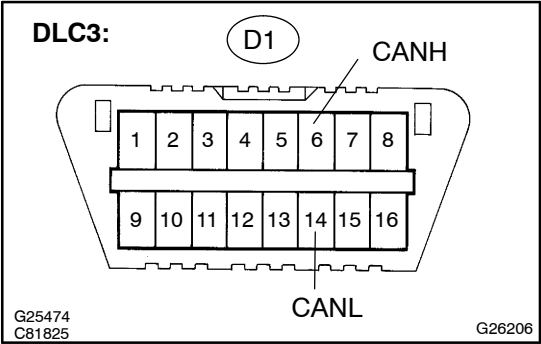
CONNECT CONNECTOR

- (a) Reconnect the television camera ECU sub bus line connector (J51) to the LUG-CAN J/C A side (w/ earth terminal).



41

CHECK CAN BUS LINES FOR SHORT CIRCUIT(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) –<br>D1-14 (CANL) | Ignition Switch OFF | 54 to 69 Ω      |

OK

REPLACE TELEVISION CAMERA ECU (SEE PAGE 67-15)



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