

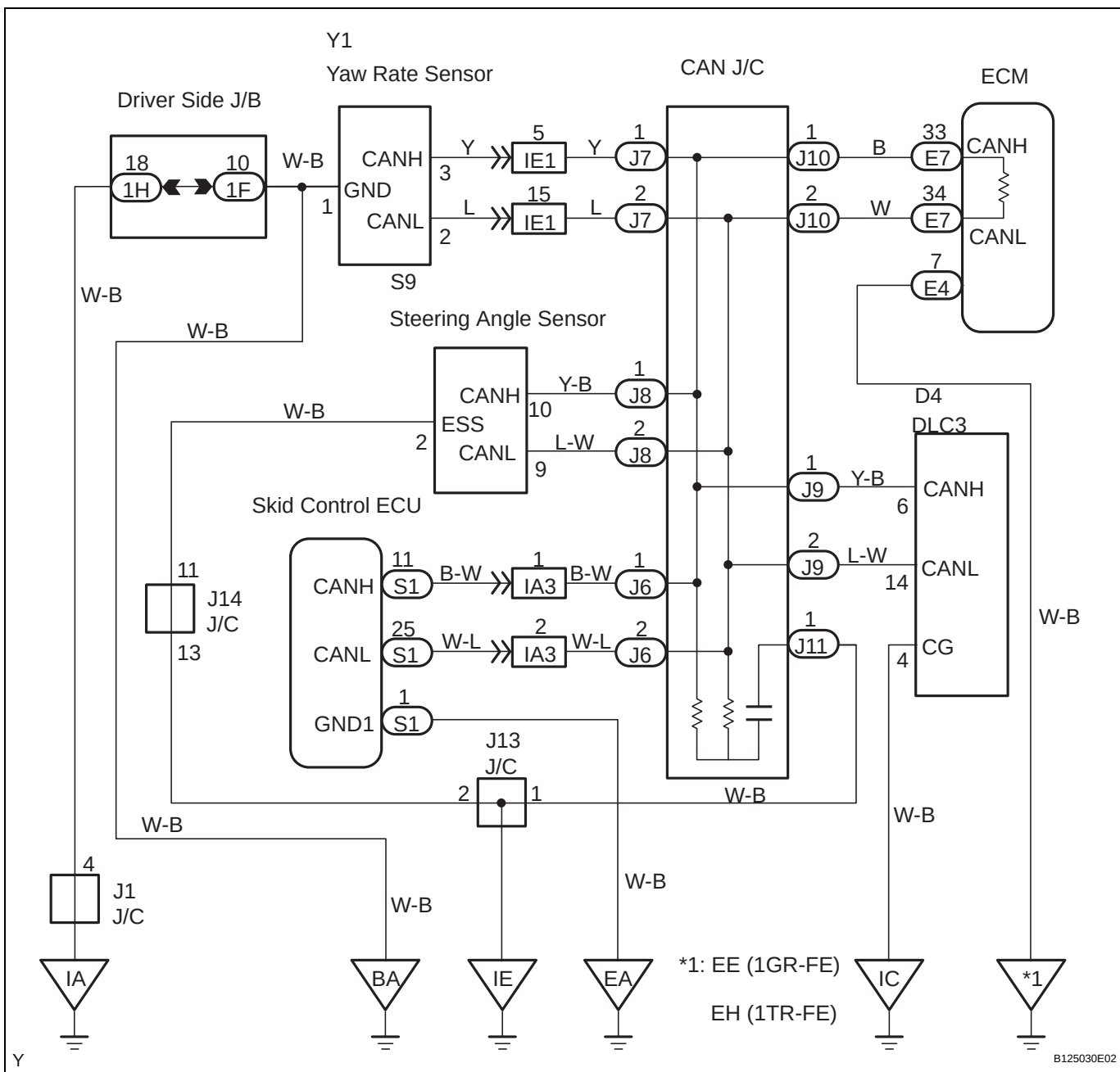
Short to GND in CAN Bus Line

DESCRIPTION

A short to GND is suspected in the CAN bus line when there is continuity between terminals 4 (CG) and 6 (CANH) or terminals 4 (CG) and 14 (CANL) of the DLC3.

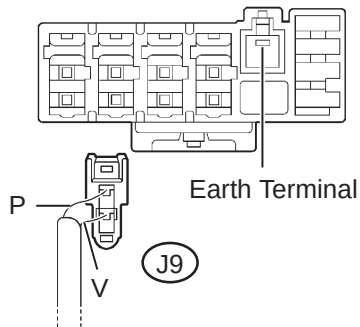
Symptoms	Trouble Area
There is continuity between terminals 4 (CG) and 6 (CANH) or terminals 4 (CG) and 14 (CANL) of the DLC3.	- Short to GND in CAN bus line - ECM - Skid control ECU - Steering angle sensor - Yaw rate sensor - CAN J/C

WIRING DIAGRAM



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

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



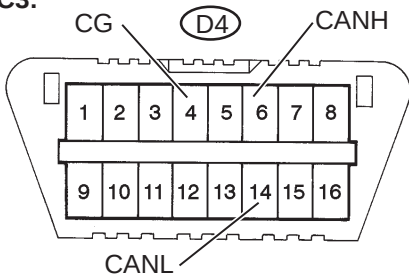
G031933E13

- (a) Disconnect the DLC3 sub bus line connector (J9) from the CAN J/C.

NOTICE:

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

DLC3:



G026206E59

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

Standard resistance

Tester Connection	Condition	Specified Value
D4-6 (CANH) - D4-4 (CG)	• Ignition switch OFF • Stop light switch OFF	1 MΩ or more
KD4-14 (CANL) - D4-4 (CG)		

NG

REPAIR OR REPLACE DLC3 BRANCH LINE OR CONNECTOR (CAN-H,CAN-L)

OK

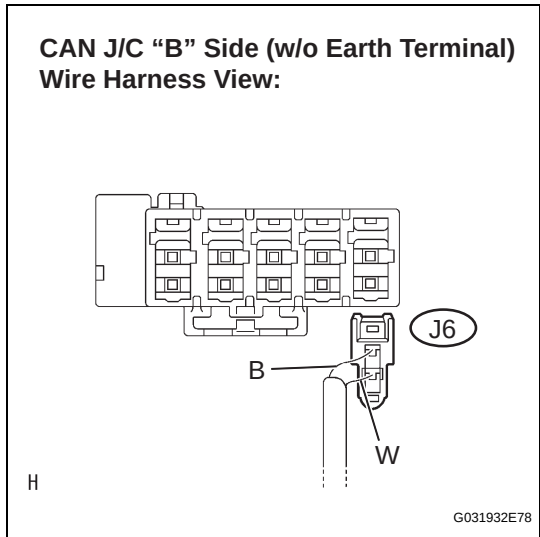
2 CONNECT CONNECTOR

- (a) Reconnect the DLC3 sub bus line connector (J9) to the CAN J/C.

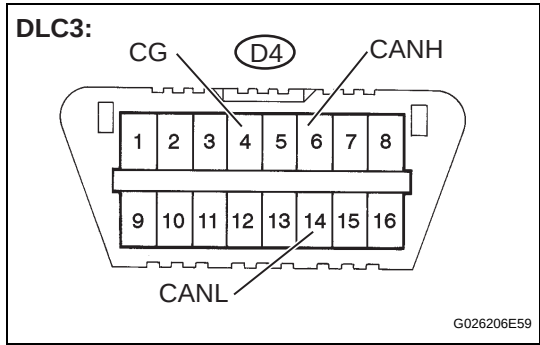
NEXT

3

CHECK CAN BUS LINE FOR SHORT TO GND (SKID CONTROL ECU SUB BUS LINE)



- (a) Disconnect the skid control ECU sub bus line connector (J6) from the CAN J/C.
- 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 resistance**

Tester Connection	Condition	Specified Value
D4-6 (CANH) - D4-4 (CG)	•Ignition switch OFF •Stop light switch OFF	3 kΩ or more
D4-14 (CANL) - D4-4 (CG)		

OK

Go to step 10

NG

4

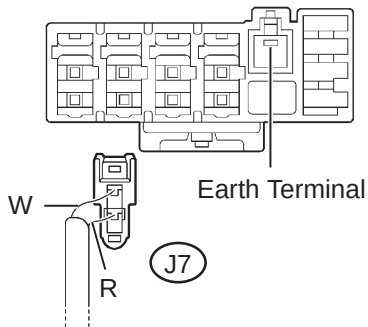
CONNECT CONNECTOR

- (a) Reconnect the skid control ECU sub bus line connector (J6) to the CAN J/C.

NEXT

5**CHECK CAN BUS LINE FOR SHORT TO GND (YAW RATE SENSOR SUB BUS LINE)**

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

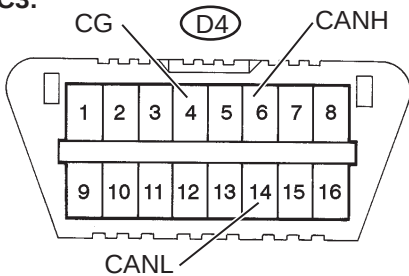


G031933E10

- (a) Disconnect the yaw rate sensor sub bus line connector (J7) from the CAN J/C.

NOTICE:

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

DLC3:

G026206E59

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

Standard resistance

Tester Connection	Condition	Specified Value
D4-6 (CANH) - D4-4 (CG)	• Ignition switch OFF • Stop light switch OFF	3 kΩ or more
D4-14 (CANL) - D4-4 (CG)		

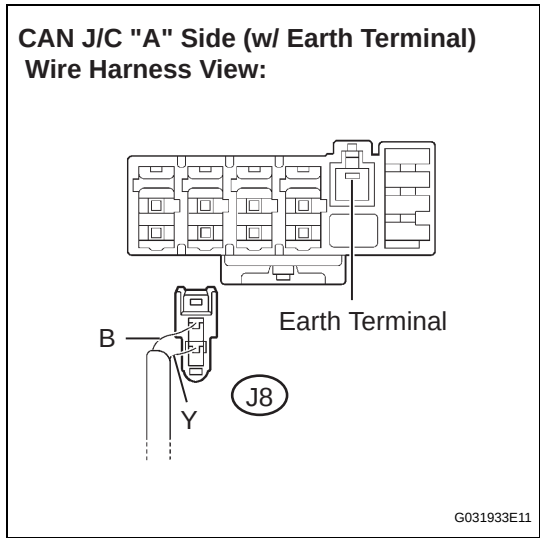
NG**Go to step 12****OK****6****CONNECT CONNECTOR**

- (a) Reconnect the yaw rate sensor sub bus line connector (J7) to the CAN J/C.

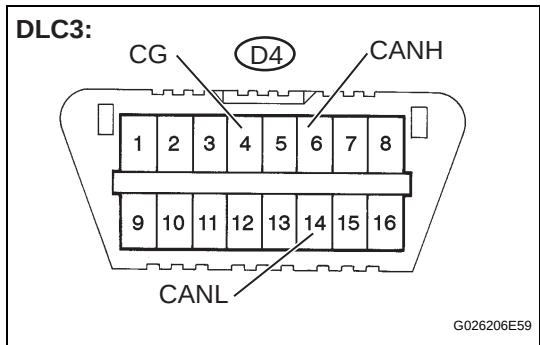
NEXT

7

CHECK CAN BUS LINE FOR SHORT TO GND (STEERING ANGLE SENSOR SUB BUS LINE)



- (a) Disconnect the steering angle sensor sub bus line connector (J8) from the CAN J/C.
- 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 resistance**

Tester Connection	Condition	Specified Value
D4-6 (CANH) - D4-4 (CG)	• Ignition switch OFF • Stop light switch OFF	3 kΩ or more
D4-14 (CANL) - D4-4 (CG)		

OK

Go to step 14

NG

8

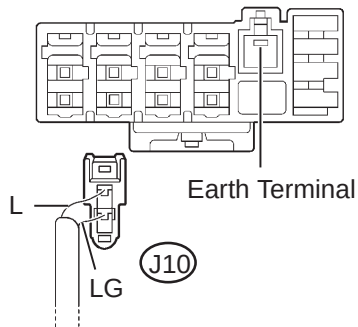
CONNECT CONNECTOR

- (a) Reconnect the steering angle sensor sub bus line connector (J8) to the CAN J/C.

NEXT

9**CHECK CAN BUS LINE FOR SHORT TO GND (ECM MAIN BUS LINE)**

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

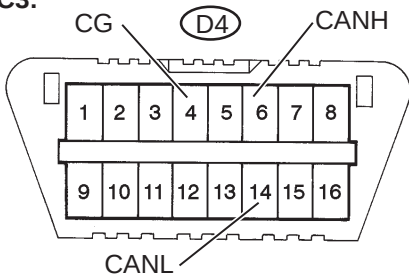


G031933E12

- (a) Disconnect the ECM main bus line connector (J10) from the CAN J/C.

NOTICE:

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

DLC3:

G026206E59

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

Standard resistance

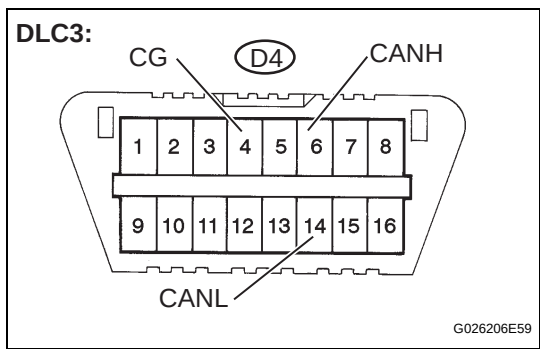
Tester Connection	Condition	Specified Value
D4-6 (CANH) - D4-4 (CG)	• Ignition switch OFF • Stop light switch OFF	3 k Ω or more
D4-14 (CANL) - D4-4 (CG)		

OK**Go to step 16****NG****REPLACE CAN J/C****10****CONNECT CONNECTOR**

- (a) Reconnect the skid control ECU sub bus line connector (J6) to the CAN J/C.

NEXT**11****CHECK CAN BUS LINE FOR SHORT TO GND (SKID CONTROL ECU SUB BUS LINE)**

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



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

Standard resistance

Tester Connection	Condition	Specified Value
D4-6 (CANH) - D4-4 (CG)	• Ignition switch OFF • Stop light switch OFF	3 kΩ or more
D4-14 (CANL) - D4-4 (CG)		

OK

REPLACE MASTER CYLINDER SOLENOID

NG

REPAIR OR REPLACE SKID CONTROL ECU BRANCH LINE OR CONNECTOR (CAN-H,CAN-L)

12

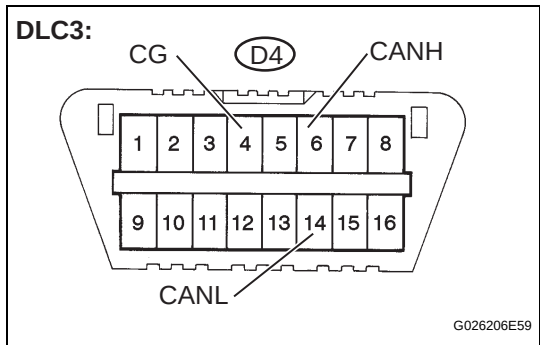
CONNECT CONNECTOR

(a) Reconnect the yaw rate sensor sub bus line connector (J7) to the CAN J/C.

NEXT

13

CHECK CAN BUS LINE FOR SHORT TO GND (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 resistance

Tester Connection	Condition	Specified Value
D4-6(CANH) - D46-4(CG)	•Ignition switch OFF •Stop light switch OFF	3 kΩ or more
D4-14(CANL) - D4-4(CG)		

OK

REPLACE YAW RATE SENSOR

NG

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

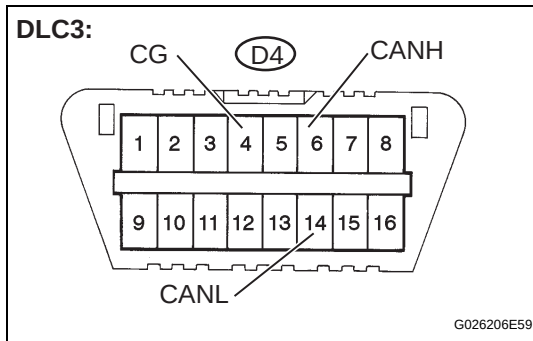
14

CONNECT CONNECTOR

(a) Reconnect the steering angle sensor sub bus line connector (J8) to the CAN J/C.

NEXT

15 CHECK CAN BUS LINE FOR SHORT TO GND (STEERING ANGLE SENSOR SUB BUS LINE)



- (a) Disconnect the steering angle sensor connector (S9).
 (b) Measure the resistance according to the value(s) in the table below.

Standard resistance

Tester Connection	Condition	Specified Value
D4-6 (CANH) - D4-4 (CG)	- Ignition switch OFF - Stop light switch OFF	3 kΩ or more
D4-14 (CANL) - D4-4 (CG)		

OK

REPLACE STEERING ANGLE SENSOR

NG

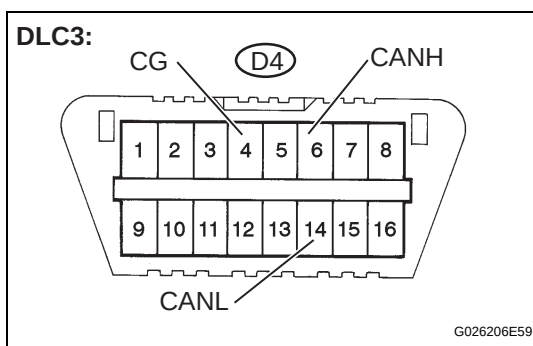
REPAIR OR REPLACE STEERING ANGLE SENSOR BRANCH LINE OR CONNECTOR (CAN-H,CAN-L)

16 CONNECT CONNECTOR

- (a) Reconnect the ECM main bus line connector (J10) to the CAN J/C.

NEXT

17 CHECK CAN BUS LINE FOR SHORT TO GND (ECM MAIN BUS LINE)



- (a) Disconnect the ECM connector (E7).
 (b) Measure the resistance according to the value(s) in the table below.

Standard resistance

Tester Connection	Condition	Specified Value
D4-6 (CANH) - D4-4 (CG)	- Ignition switch OFF - Stop light switch OFF	3 kΩ or more
D4-14 (CANL) - D4-4 (CG)		

OK

REPLACE ECM

NG

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