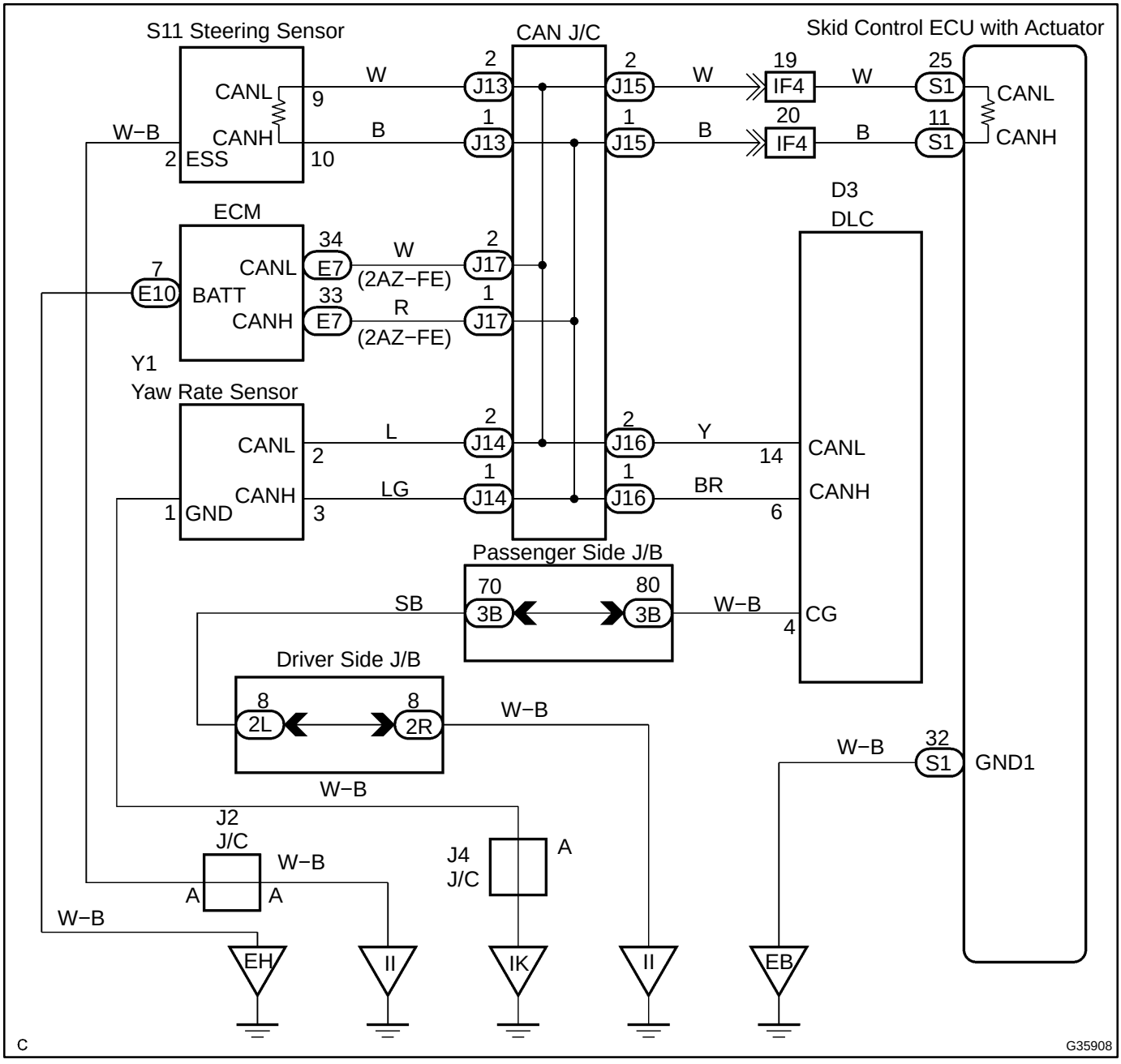
CHECK CAN BUS LINE FOR SHORT TO GND

CIRCUIT 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.

Symptom	Trouble Area
There is continuity between terminals 4 (CG) and 6 (CANH) or terminals 4 (CG) and 14 (CANL) of DLC3.	• Short to GND in CAN bus line • Skid control ECU • Steering sensor • Yaw rate sensor • ECM (2AZ−FE)

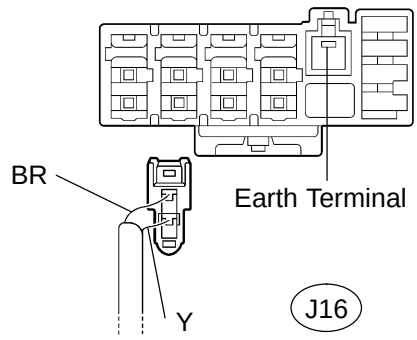
WIRING DIAGRAM



INSPECTION PROCEDURE

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

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



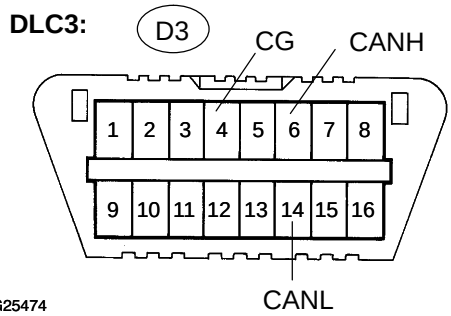
G25695 G31933

(a) Disconnect the DLC3 sub bus line connector (J16) 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:



G25474 C81825 G26206

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

Standard:

Tester connection	Condition	Specified value
D3−4 (CG) − D3−6 (CANH)	IG switch OFF	1 MΩ or higher
D3−4 (CG) − D3−14 (CANL)	IG switch OFF	1 MΩ or higher

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

OK

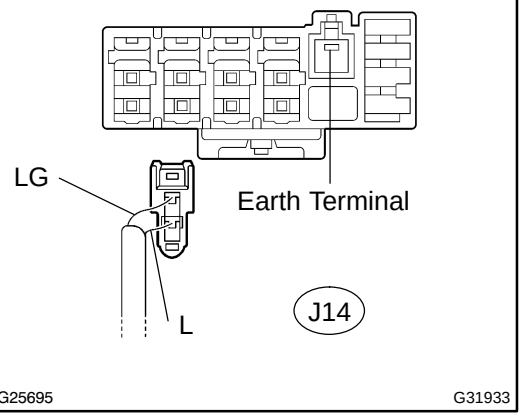
2	CONNECT CONNECTOR

(a) Reconnect the DLC3 sub bus line connector (J16) to the CAN J/C.

NEXT

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

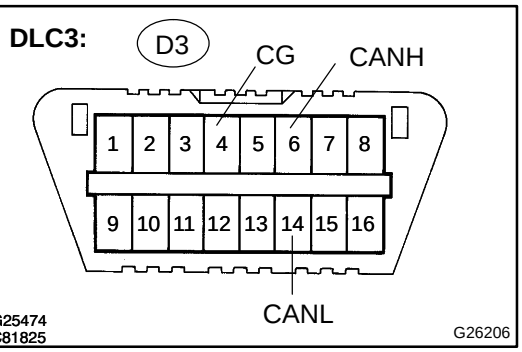
CAN J/C A Side (w/ Earth Terminal) Wire Harness View:



(a) Disconnect the yaw rate sensor sub bus line connector (J14) 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:

Tester connection	Condition	Specified value
D3−4 (CG) − D3−6 (CANH)	IG switch OFF	3 kΩ or higher
D3−4 (CG) − D3−14 (CANL)	IG switch OFF	3 kΩ or higher

OK	Go to step 10

NG

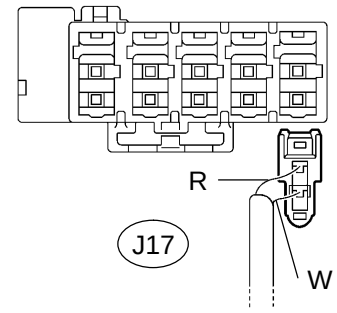
4	CONNECT CONNECTOR

(a) Reconnect the yaw rate sensor sub bus line connector (J14) to the CAN J/C.

NEXT

5 CHECK CAN BUS LINE FOR SHORT TO GND(ECM SUB BUS LINE)

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



NOTICE:

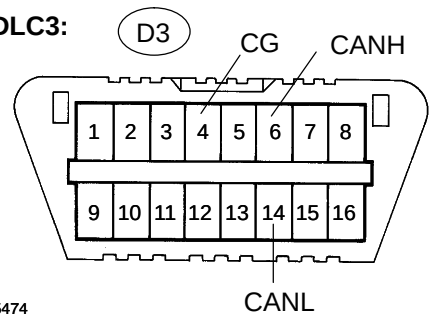
For vehicles without enhanced 2AZ−FE engine go to step 7.

(a) Disconnect the ECM sub bus line connector (J17) 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:



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

Standard:

Tester connection	Condition	Specified value
D3−4 (CG) − D3−6 (CANH)	IG switch OFF	3 kΩ or higher
D3−4 (CG) − D3−14 (CANL)	IG switch OFF	3 kΩ or higher

OK → **Go to step 12**

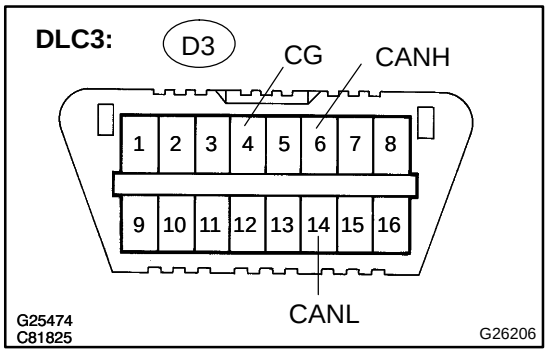
NG

6 CONNECT CONNECTOR

(a) Reconnect the ECM sub bus line connector (J17) to the CAN J/C.

NEXT

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



(a) Disconnect the skid control ECU connector (S1).
(b) Measure the resistance according to the value(s) in the table below.

Standard:

Tester connection	Condition	Specified value
D3−4 (CG) − D3−6 (CANH)	IG switch OFF	3 kΩ or higher
D3−4 (CG) − D3−14 (CANL)	IG switch OFF	3 kΩ or higher

OK	REPLACE SKID CONTROL ECU WITH ACTUATOR (SEE PAGE 32−63)

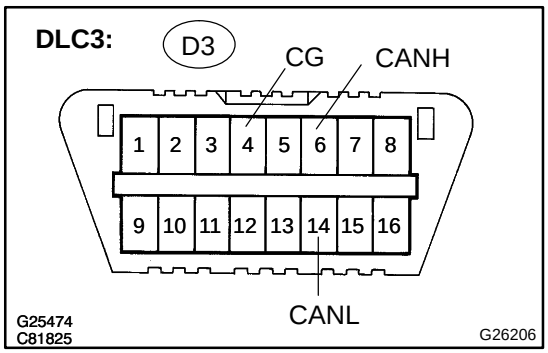
NG

8 CONNECT CONNECTOR

(a) Reconnect the connector (S1) to the skid control ECU.

NEXT

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



(a) Disconnect the steering sensor connector (S11)
(b) Measure the resistance according to the value(s) in the table below.

Standard:

Tester connection	Condition	Specified value
D3−4 (CG) − D3−6 (CANH)	IG switch OFF	3 kΩ or higher
D3−4 (CG) − D3−14 (CANL)	IG switch OFF	3 kΩ or higher

OK	REPLACE STEERING SENSOR (SEE PAGE 32−72)

NG

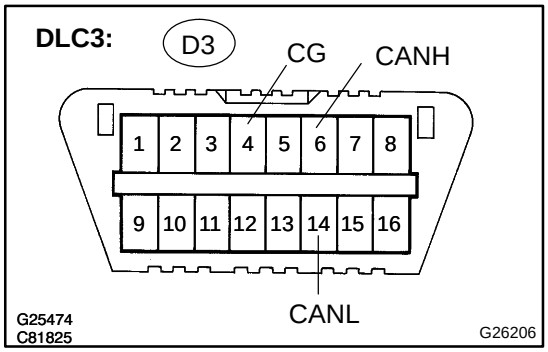
REPAIR OR REPLACE CAN MAIN BUS LINE OR CONNECTOR (SKID CONTROL ECU − STEERING SENSOR)

10	CONNECT CONNECTOR

(a) Reconnect the yaw rate sensor sub bus line connector (J14) to the CAN J/C.

NEXT

11	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:

Tester connection	Condition	Specified value
D3−4 (CG) − D3−6 (CANH)	IG switch OFF	3 kΩ or higher
D3−4 (CG) − D3−14 (CANL)	IG switch OFF	3 kΩ or higher

OK → **REPLACE YAW RATE SENSOR (SEE PAGE 32−71)**

NG

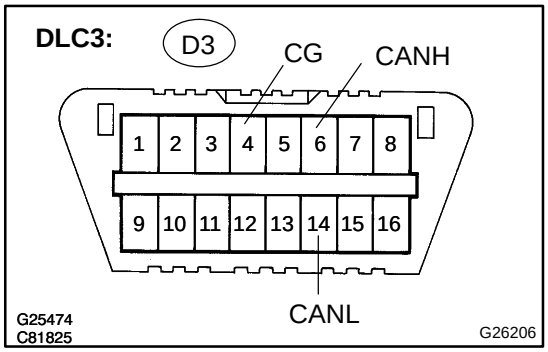
REPAIR OR REPLACE YAW RATE SENSOR SUB BUS LINE OR CONNECTOR (CAN−H, CAN−L)

12	CONNECT CONNECTOR

(a) Reconnect the ECM sub bus line connector (J17) to the CAN J/C.

NEXT

13	CHECK CAN BUS LINE FOR SHORT TO GND(ECM SUB BUS LINE)



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

Standard:

Tester connection	Condition	Specified value
D3−4 (CG) − D3−6 (CANH)	IG switch OFF	3 kΩ or higher
D3−4 (CG) − D3−14 (CANL)	IG switch OFF	3 kΩ or higher

OK → **REPLACE ECM (SEE PAGE 10−9)**

NG

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