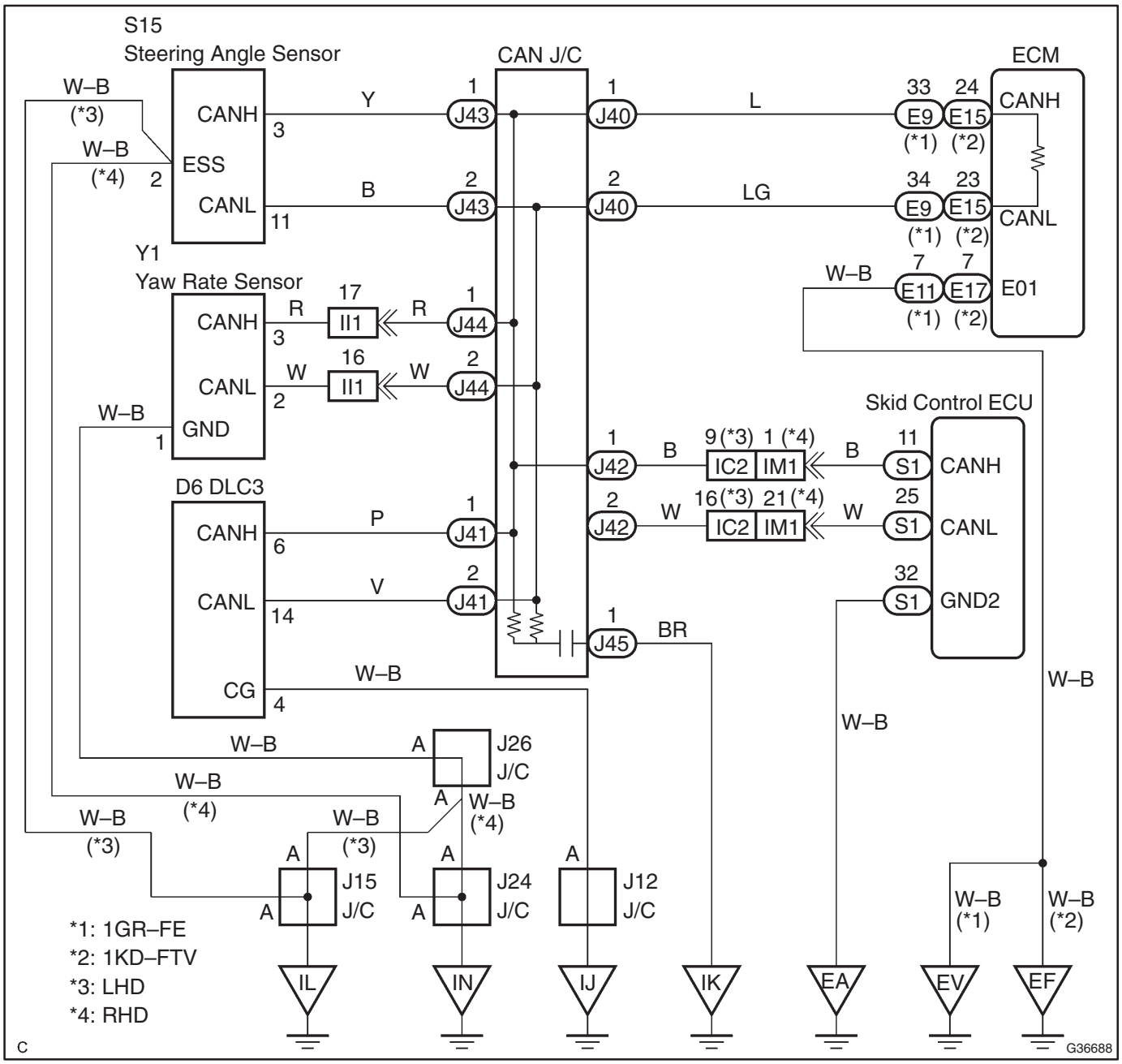
CHECK CAN BUS LINE FOR SHORT TO GND

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 the DLC3.	• Short to GND in CAN bus line • ECM • Skid control ECU • Steering angle sensor • Yaw rate sensor • CAN J/C

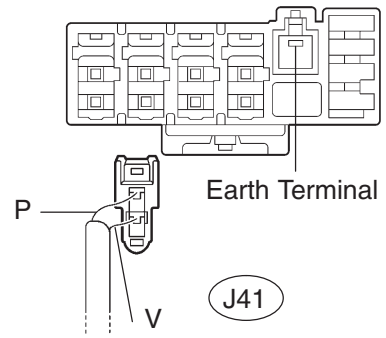
WIRING DIAGRAM



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:



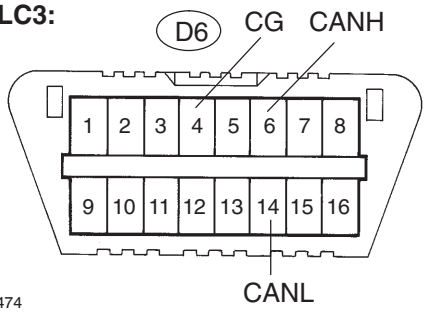
G25695 G31933

(a) Disconnect the DLC3 sub bus line connector (J41) 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
D6–4 (CG) – D6–6 (CANH)	• IG switch OFF • Stop light switch OFF	1 MΩ or higher
D6–4 (CG) – D6–14 (CANL)	• IG switch OFF • Stop light switch OFF	1 MΩ or higher

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

OK

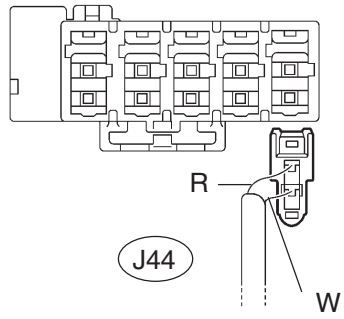
2	CONNECT CONNECTOR

(a) Reconnect the DLC3 sub bus line connector (J41) to the CAN J/C.

NEXT

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

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

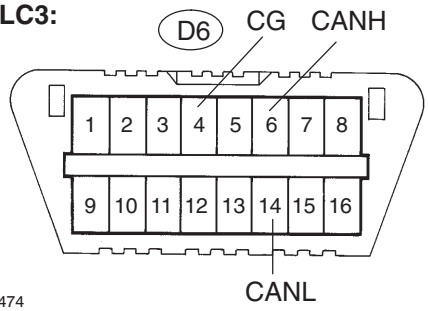


(a) Disconnect the yaw rate sensor sub bus line connector (J44) from the CAN J/C.

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
D6–4 (CG) – D6–6 (CANH)	• IG switch OFF • Stop light switch OFF	3 kΩ or higher
D6–4 (CG) – D6–14 (CANL)	• IG switch OFF • Stop light switch OFF	3 kΩ or higher

OK	Go to step 10

NG

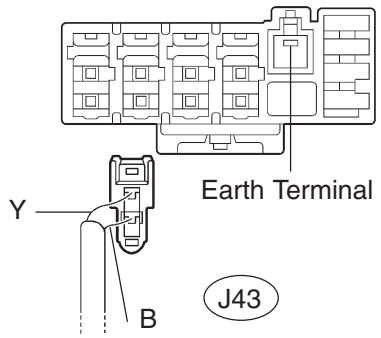
4	CONNECT CONNECTOR

(a) Reconnect the yaw rate sensor sub bus line connector (J44) to the CAN J/C.

NEXT

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

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



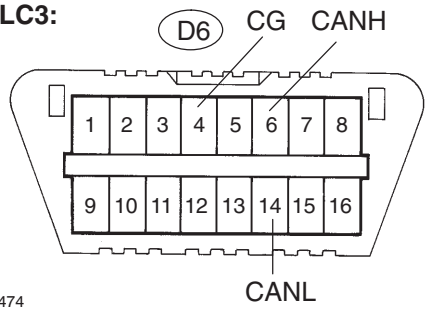
G25695 G31933

(a) Disconnect the steering angle sensor sub bus line connector (J43) 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
D6–4 (CG) – D6–6 (CANH)	• IG switch OFF • Stop light switch OFF	3 kΩ or higher
D6–4 (CG) – D6–14 (CANL)	• IG switch OFF • Stop light switch OFF	3 kΩ or higher

OK → **Go to step 12**

NG

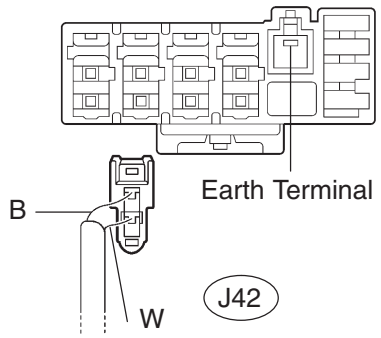
6	CONNECT CONNECTOR

(a) Reconnect the steering angle sensor sub bus line connector (J43) to the CAN J/C.

NEXT

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

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



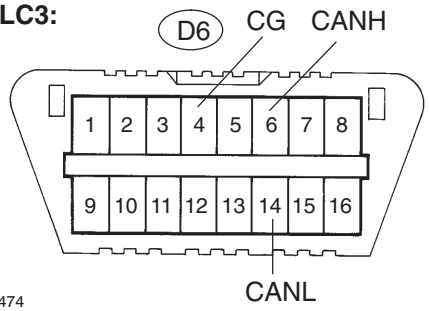
G25695 G31933

(a) Disconnect the skid control ECU sub bus line connector (J42) 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
D6–4 (CG) – D6–6 (CANH)	• IG switch OFF • Stop light switch OFF	3 kΩ or higher
D6–4 (CG) – D6–14 (CANL)	• IG switch OFF • Stop light switch OFF	3 kΩ or higher

OK	Go to step 14

NG

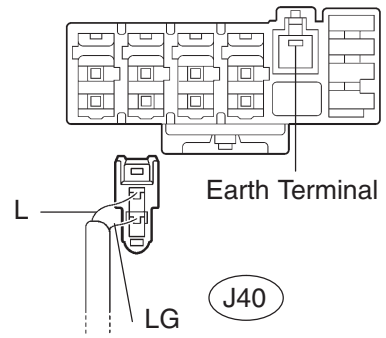
8	CONNECT CONNECTOR

(a) Reconnect the skid control ECU sub bus line connector (J42) 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:

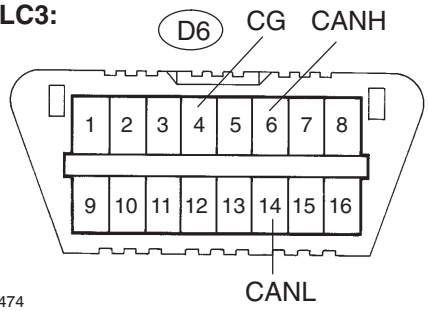


(a) Disconnect the ECM main bus line connector (J40) from the CAN J/C.

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
D6–4 (CG) – D6–6 (CANH)	• IG switch OFF • Stop light switch OFF	3 kΩ or higher
D6–4 (CG) – D6–14 (CANL)	• IG switch OFF • Stop light switch OFF	3 kΩ or higher

OK → **Go to step 16**

NG

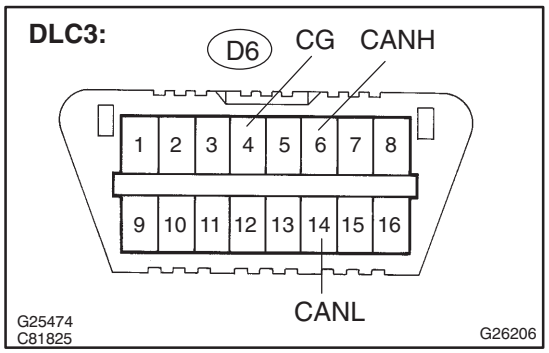
REPLACE CAN J/C

10 CONNECT CONNECTOR

(a) Reconnect the yaw rate sensor sub bus line connector (J44) 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
D6–4 (CG) – D6–6 (CANH)	• IG switch OFF • Stop light switch OFF	3 kΩ or higher
D6–4 (CG) – D6–14 (CANL)	• IG switch OFF • Stop light switch OFF	3 kΩ or higher

OK → **REPLACE YAW RATE SENSOR (SEE PUB. No. RM990E, PAGE 32–91)**

NG

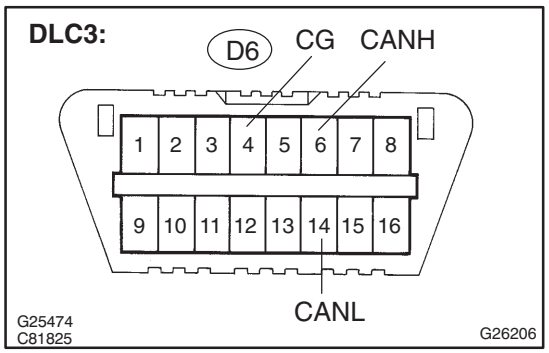
REPAIR OR REPLACE YAW RATE SENSOR SUB BUS LINE OR CONNECTOR

12	CONNECT CONNECTOR

(a) Reconnect the steering angle sensor sub bus line connector (J43) to the CAN J/C.

NEXT

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



(a) Disconnect the steering angle sensor connector (S15).
(b) Measure the resistance according to the value(s) in the table below.

Standard:

Tester connection	Condition	Specified value
D6–4 (CG) – D6–6 (CANH)	• IG switch OFF • Stop light switch OFF	3 kΩ or higher
D6–4 (CG) – D6–14 (CANL)	• IG switch OFF • Stop light switch OFF	3 kΩ or higher

OK → **REPLACE STEERING ANGLE SENSOR (SEE PAGE 32–26)**

NG

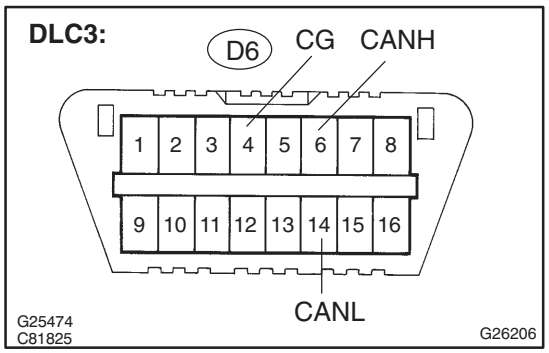
REPAIR OR REPLACE STEERING ANGLE SENSOR SUB BUS LINE OR CONNECTOR (CAN–H, CAN–L)

14	CONNECT CONNECTOR

(a) Reconnect the skid control ECU sub bus line connector (J42) to the CAN J/C.

NEXT

15	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:

Tester connection	Condition	Specified value
D6–4 (CG) – D6–6 (CANH)	• IG switch OFF • Stop light switch OFF	3 kΩ or higher
D6–4 (CG) – D6–14 (CANL)	• IG switch OFF • Stop light switch OFF	3 kΩ or higher

OK → **REPLACE MASTER CYLINDER SOLENOID (SEE PAGE 32–12)**

NG

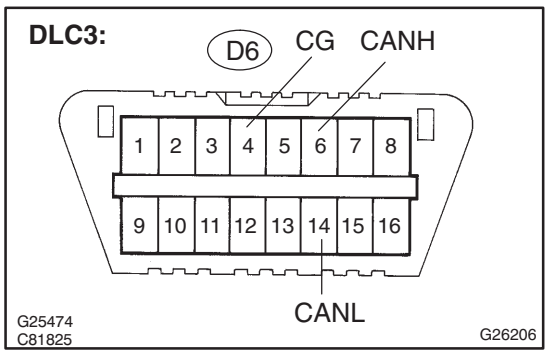
REPAIR OR REPLACE SKID CONTROL ECU SUB BUS LINE OR CONNECTOR (CAN–H, CAN–L)

16	CONNECT CONNECTOR

(a) Reconnect the ECM main bus line connector (J40) to the CAN J/C.

NEXT

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



(a) Disconnect the ECM connector (E9) or (E14).

HINT:
- E9 ..... 1GR–FE
- E14 ..... 1KD–FTV

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

Standard:

Tester connection	Condition	Specified value
D6–4 (CG) – D6–6 (CANH)	• IG switch OFF • Stop light switch OFF	3 kΩ or higher
D6–4 (CG) – D6–14 (CANL)	• IG switch OFF • Stop light switch OFF	3 kΩ or higher

HINT:
- OK–A 1GR–FE
- OK–B 1KD–FTV

OK–A → **REPLACE ECM (SEE PUB. No. RM1017E, PAGE 10–11)**

OK–B → **REPLACE ECM (SEE PUB. No. RM990E, PAGE 10–34)**

NG

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