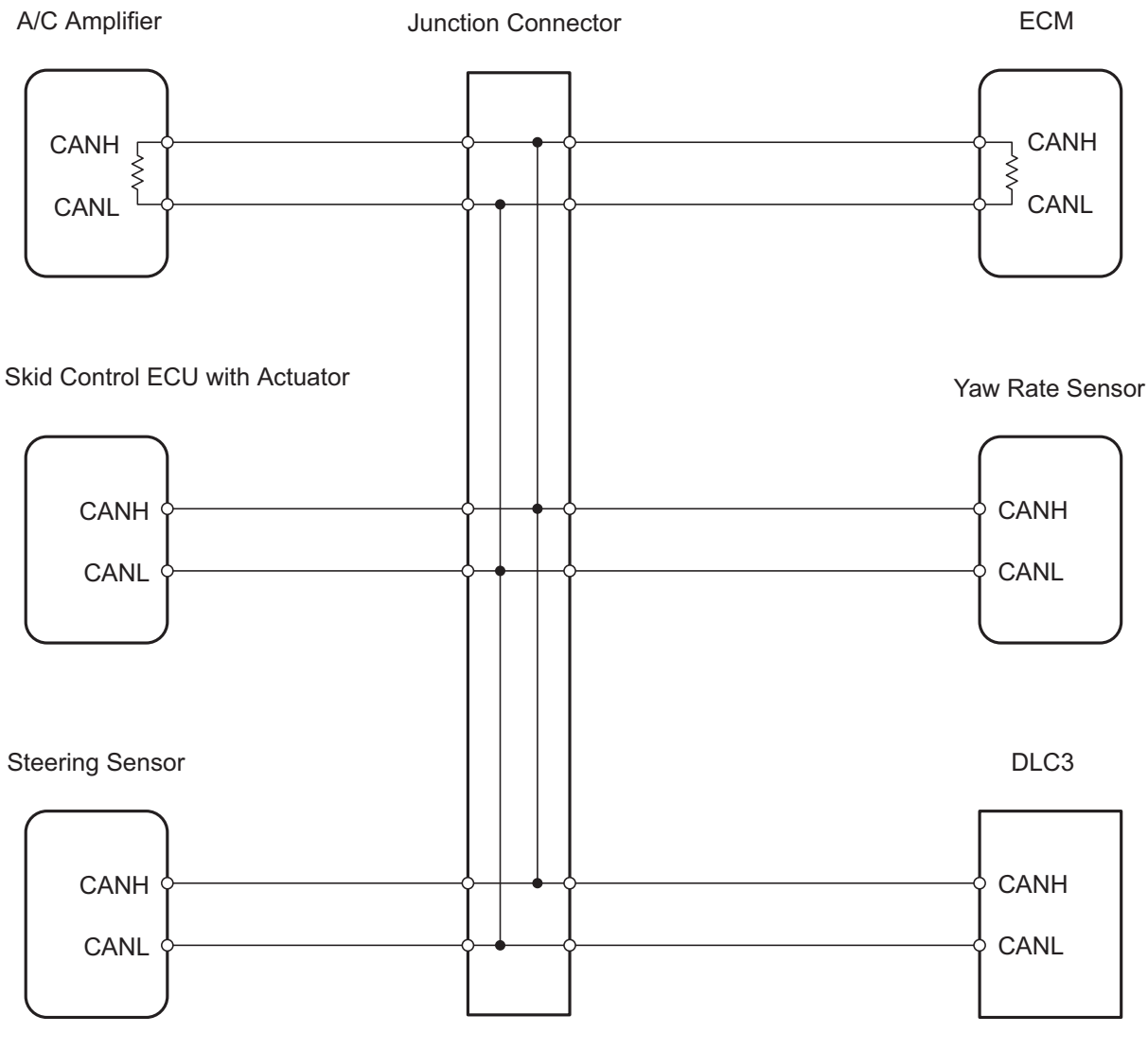
Short in CAN Bus Lines

DESCRIPTION

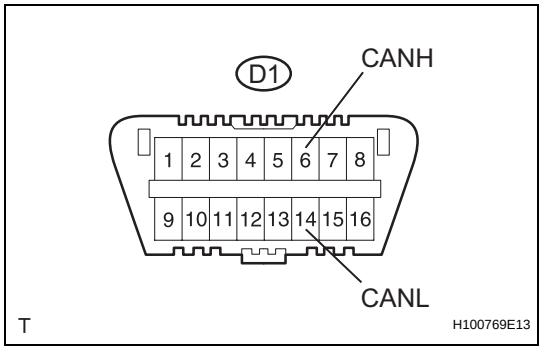
The CAN bus lines are considered to be shorted when the resistance between terminals 6 (CANH) and 14 (CANL) of the DLC3 is below 54 Ω.

Symptom	Trouble Area
Resistance between terminals 6 (CANH) and 14 (CANL) of DLC3 is below 54 Ω	• Short in CAN bus lines • Skid control ECU with actuator • Steering sensor • Yaw rate sensor • ECM • A/C amplifier • Junction connector

WIRING DIAGRAM



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



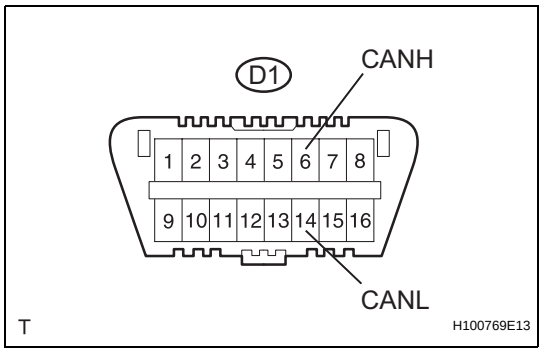
(a) Disconnect the J5 junction connector.
(b) Measure the resistance of the DLC3.
Standard resistance

Tester Connection	Condition	Specified Condition
D1-6 (CANH) - D1-14 (CANL)	Ignition switch OFF	1 MΩ or higher

NG → **REPAIR OR REPLACE DLC3 SUB BUS LINE AND CONNECTOR (CANH, CANL)**

OK

2 CHECK CAN BUS LINE FOR SHORT (ECM)



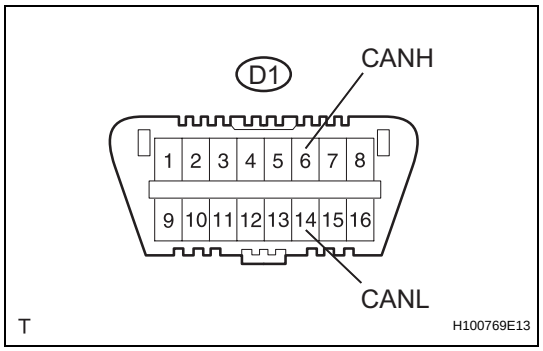
(a) Reconnect the J5 junction connector.
(b) Disconnect the E4 ECM connector.
(c) Measure the resistance of the DLC3.
Standard resistance

Tester Connection	Condition	Specified Condition
D1-6 (CANH) - D1-14 (CANL)	Ignition switch OFF	1 MΩ or higher

OK → **REPLACE ECM**

NG

3 CHECK CAN BUS LINE FOR SHORT (A/C AMPLIFIER)



(a) Reconnect the E4 ECM connector.
(b) Disconnect the A17 amplifier connector.
(c) Measure the resistance of the DLC3.
Standard resistance

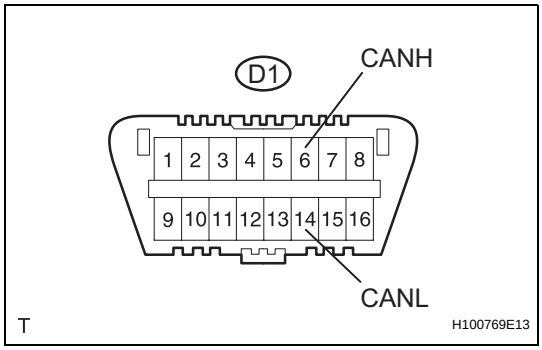
Tester Connection	Condition	Specified Condition
D1-6 (CANH) - D1-14 (CANL)	Ignition switch OFF	1 MΩ or higher

OK → **REPLACE A/C AMPLIFIER**

NG

CA

4 CHECK CAN BUS LINE FOR SHORT (SKID CONTROL ECU)



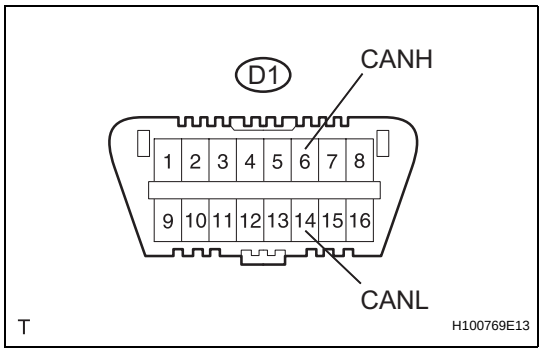
(a) Reconnect the A17 amplifier connector.
(b) Disconnect the S3 ECU connector.
(c) Measure the resistance of the DLC3.
Standard resistance

Tester Connection	Condition	Specified Condition
D1-6 (CANH) - D1-14 (CANL)	Ignition switch OFF	1 MΩ or higher

OK → **REPLACE BRAKE ACTUATOR ASSEMBLY**

NG

5 CHECK CAN BUS LINE FOR SHORT (STEERING SENSOR)



(a) Reconnect the S3 ECU connector.
(b) Disconnect the S7 sensor connector.
(c) Measure the resistance of the DLC3.
Standard resistance

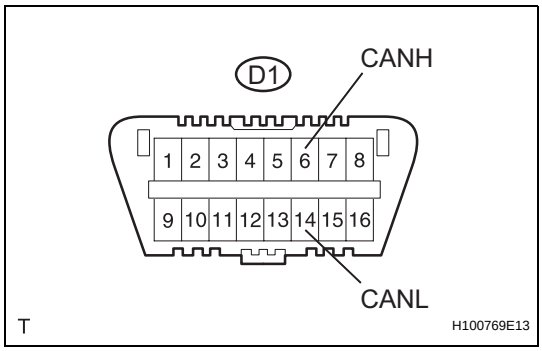
Tester Connection	Condition	Specified Condition
D1-6 (CANH) - D1-14 (CANL)	Ignition switch OFF	1 MΩ or higher

OK → **REPLACE STEERING SENSOR**

NG

CA

6 CHECK CAN BUS LINE FOR SHORT (YAW RATE SENSOR)



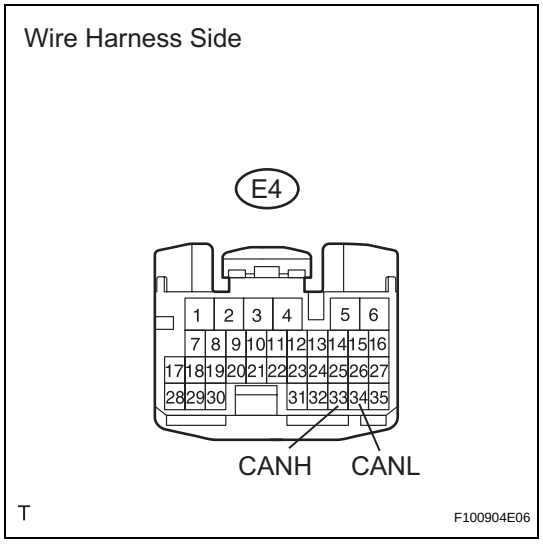
(a) Reconnect the S7 sensor connector.
(b) Disconnect the Y1 sensor connector.
(c) Measure the resistance of the DLC3.
Standard resistance

Tester Connection	Condition	Specified Condition
D1-6 (CANH) - D1-14 (CANL)	Ignition switch OFF	1 MΩ or higher

OK → **REPLACE YAW RATE SENSOR**

NG

7 CHECK CAN BUS LINE FOR SHORT (ECM - JUNCTION CONNECTOR)



(a) Reconnect the Y1 sensor connector.
(b) Disconnect the J5 connector from the junction block.
(c) Disconnect the E4 ECM connector.
(d) Measure the resistance of the wire harness side connector.

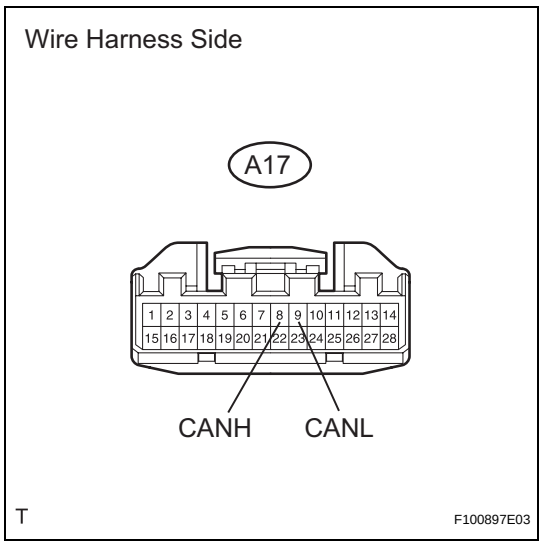
Standard resistance

Tester Connection	Condition	Specified Condition
E4-33 (CANH) - E4-34 (CANL)	Ignition switch OFF	1 MΩ or higher

NG → **REPAIR OR REPLACE CAN MAIN BUS LINE AND CONNECTOR (ECM - JUNCTION CONNECTOR)**

OK

8 CHECK CAN BUS LINE FOR SHORT (A/C AMPLIFIER - JUNCTION CONNECTOR)



(a) Disconnect the A17 amplifier connector.
(b) Measure the resistance of the wire harness side connector.

Standard resistance

Tester Connection	Condition	Specified Condition
A17-8 (CANH) - A17-9 (CANL)	Ignition switch OFF	1 MΩ or higher

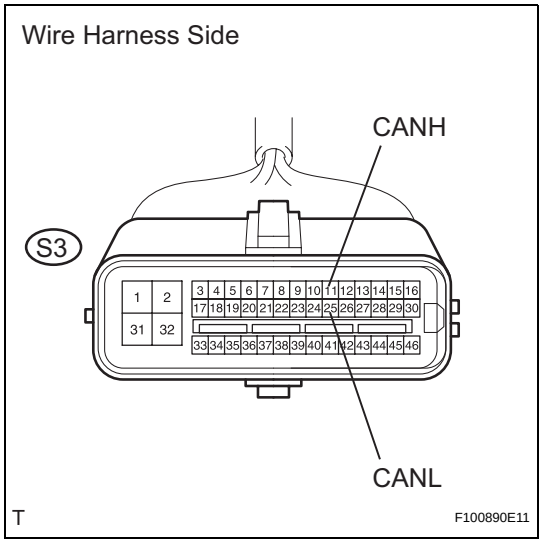
HINT:
Check the wire harness of the connector that was connected to the junction connector.

NG → **REPAIR OR REPLACE CAN MAIN BUS LINE AND CONNECTOR (A/C AMPLIFIER - JUNCTION CONNECTOR)**

OK

CA

9 CHECK CAN BUS LINE FOR SHORT (SKID CONTROL ECU - JUNCTION CONNECTOR)



(a) Disconnect the S3 ECU connector.
(b) Measure the resistance of the wire harness side connector.

Standard resistance

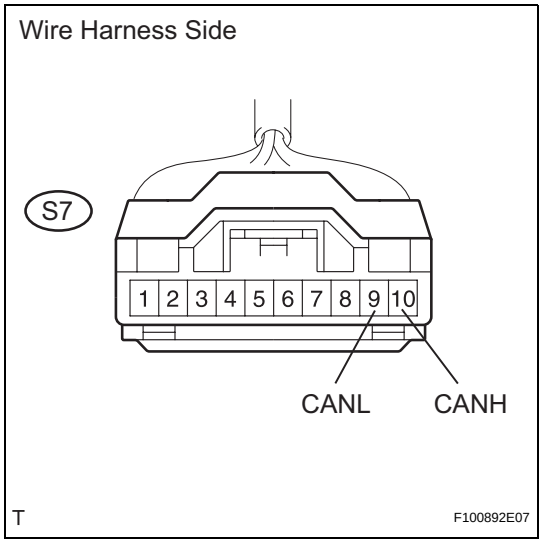
Tester Connection	Condition	Specified Condition
S3-11 (CANH) - S3-25 (CANL)	Ignition switch OFF	1 MΩ or higher

HINT:
Check the wire harness of the connector that was connected to the junction connector.

NG → **REPAIR OR REPLACE CAN SUB BUS LINE AND CONNECTOR (SKID CONTROL ECU - JUNCTION CONNECTOR)**

OK

10 CHECK CAN BUS LINE FOR SHORT (STEERING SENSOR - JUNCTION CONNECTOR)



(a) Disconnect the S7 sensor connector.
(b) Measure the resistance of the wire harness side connector.

Standard resistance

Tester Connection	Condition	Specified Condition
S7-10 (CANH) - S7-9 (CANL)	Ignition switch OFF	1 MΩ or higher

HINT:
Check the wire harness of the connector that was connected to the junction connector.

NG → **REPAIR OR REPLACE CAN SUB BUS LINE AND CONNECTOR (STEERING SENSOR - JUNCTION CONNECTOR)**

OK

REPAIR OR REPLACE YAW RATE SENSOR SUB BUS LINE AND CONNECTOR

CA