CHECK CAN MAIN BUS LINE FOR DISCONNECTION (LHD)

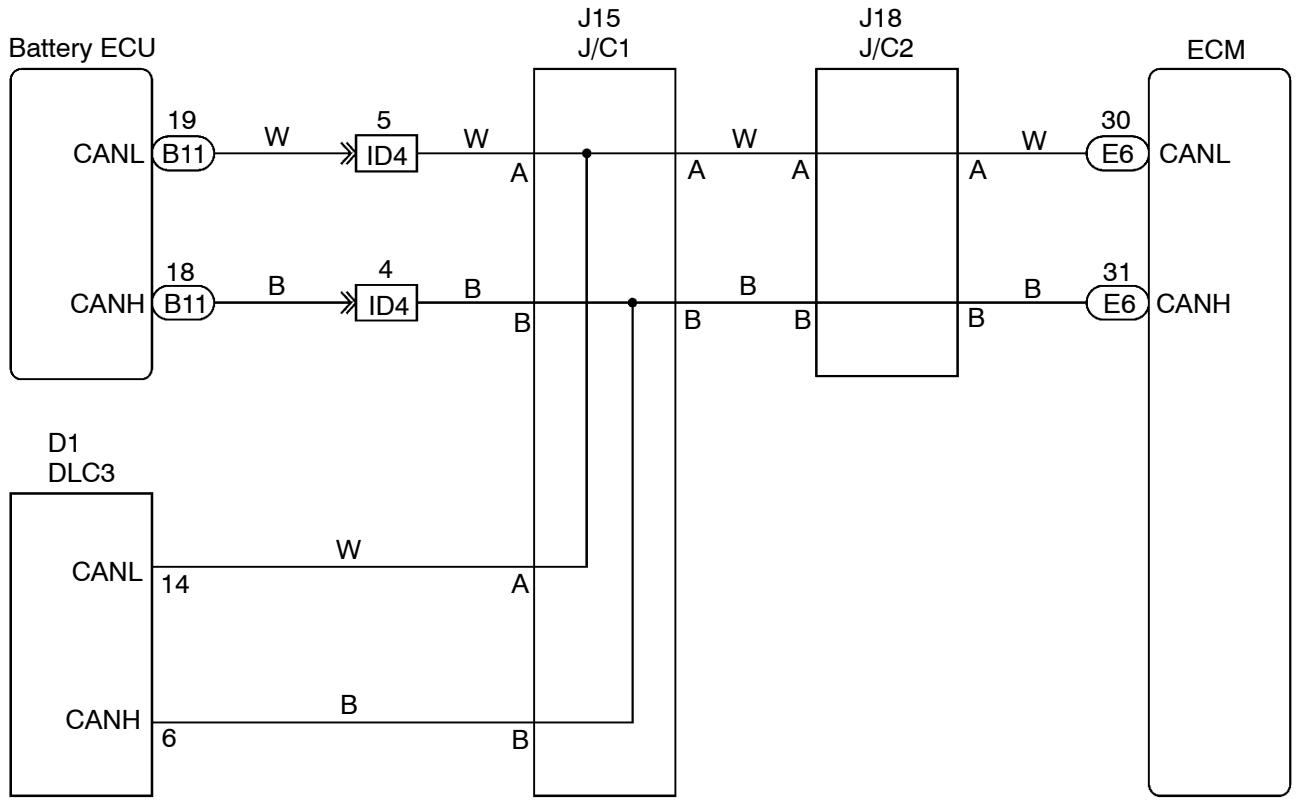
CIRCUIT DESCRIPTION

There may be an open circuit in the CAN bus main line and/or the DLC3 sub bus line when the resistance between terminals 6 (CANH) and 14 (CANL) of the DLC3 is 69 Ω or more.

Symptom	Trouble Area
Resistance between terminals 6 (CANH) and 14 (CANL) of the DLC3 is 69 Ω or more.	• CAN main bus line or connector • Junction connector (J/C1) • Junction connector (J/C2) • DLC3 sub bus line or connector • ECM • Battery ECU

WIRING DIAGRAM

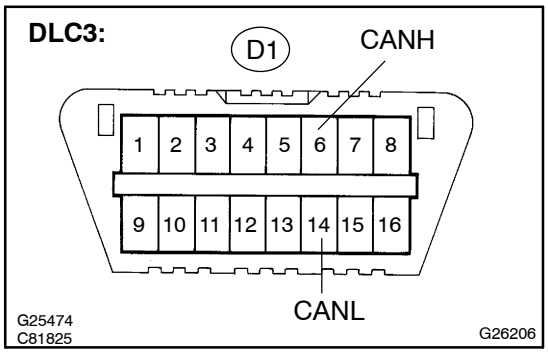
LHD:



C G30911

INSPECTION PROCEDURE

1	CHECK DLC3



(a) Turn the power switch off.
(b) Measure the resistance according to the value(s) in the table below.

Result:

Tester connection	Condition	Specified value	Result
D1–6 (CANH) – D1–14 (CANL)	Power Switch OFF	108 to 132 Ω	A
D1–6 (CANH) – D1–14 (CANL)	Power Switch OFF	132 Ω or more	B

NOTICE:

When the measured value is 132 Ω or more and the CAN communication system diagnostic code is output, there may be a fault besides disconnection of the DLC3 sub bus line. For that reason, troubleshooting should be performed again from "HOW TO PROCEED WITH TROUBLESHOOTING" (see page 05–2312) after repairing the trouble area.

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

A

2	CHECK CAN MAIN BUS LINE FOR DISCONNECTION(BUS CHECK)

(a) Perform "Communication Bus Check" using the Intelligent Tester II (see page 05–2328).

Result:

Specified Value	Result
Only "Engine" is not displayed	A
Only "HV Battery" is not displayed	B
Other	C

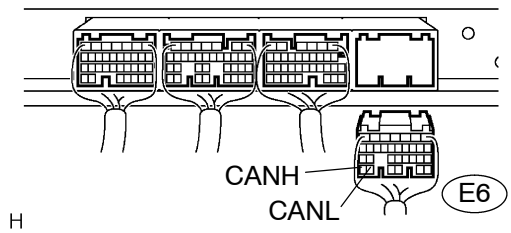
B → **Go to step 4**

C → **Go to step 5**

A

3 CHECK CAN MAIN BUS LINE FOR DISCONNECTION(ECM – J/C2)

ECM Wire Harness View:



(a) Disconnect the ECM connector (E6).
(b) Measure the resistance according to the value(s) in the table below.

Standard:

Tester connection	Condition	Specified value
E6–31 (CANH) – E6–30 (CANL)	Power Switch OFF	108 to 132 Ω

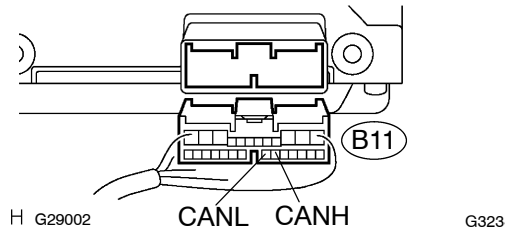
NG → **REPLACE CAN MAIN BUS LINE OR CONNECTOR (ECM – J/C2)**

OK

REPLACE ECM (SEE PAGE 10–24)

4 CHECK CAN MAIN BUS LINE FOR DISCONNECTION(BATTERY ECU – J/C1)

BATTERY ECU Wire Harness View:



(a) Disconnect the battery ECU connector (B11).
(b) Measure the resistance according to the value(s) in the table below.

Standard:

Tester connection	Condition	Specified value
B11–18 (CANH) – B11–19 (CANL)	Power Switch OFF	108 to 132 Ω

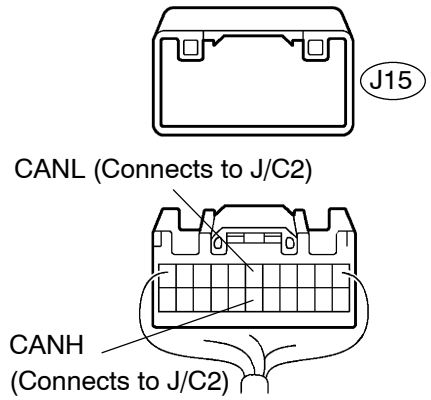
NG → **REPLACE CAN MAIN BUS LINE OR CONNECTOR (BATTERY ECU – J/C1)**

OK

REPLACE BATTERY ECU ASSY (SEE PAGE 21–100)

5 CHECK CAN MAIN BUS LINE FOR DISCONNECTION(J/C1 – ECM)

Junction Connector (J/C1)
Wire Harness View:



(a) Disconnect the J/C1 connector (J15).
(b) Measure the resistance according to the value(s) in the table below.

Standard:

Tester connection	Condition	Specified value
J15–17 (CANH) – J15–6 (CANL)	Power Switch OFF	108 to 132 Ω

NG → **Go to step 8**

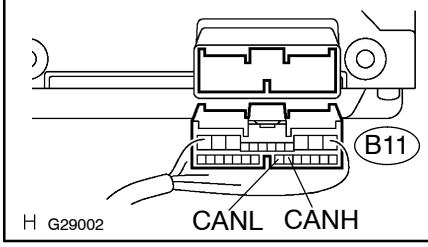
OK

6 CONNECT CONNECTOR

(a) Reconnect the J/C1 connector (J15).

7 CHECK CAN MAIN BUS LINE FOR DISCONNECTION(BATTERY ECU – J/C1)

BATTERY ECU Wire Harness View:



(a) Disconnect the battery ECU connector (B11).
(b) Measure the resistance according to the value(s) in the table below.

Standard:

Tester connection	Condition	Specified value
B11–18 (CANH) – B11–19 (CANL)	Power Switch OFF	108 to 132 Ω

NG → **REPLACE CAN MAIN BUS LINE OR CONNECTOR (BATTERY ECU – J/C1)**

OK

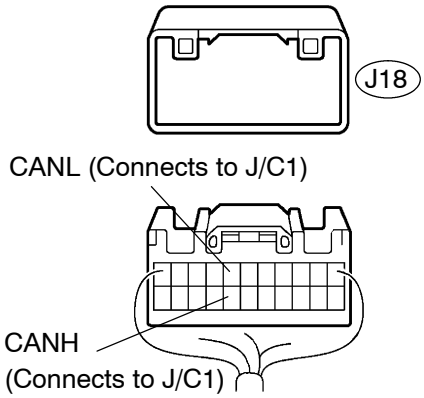
REPLACE BATTERY ECU ASSY (SEE PAGE 21–100)

8	CONNECT CONNECTOR

(a) Reconnect the J/C1 connector (J15).

9	CHECK CAN MAIN BUS LINE FOR DISCONNECTION(J/C2 – J/C1)

Junction Connector (J/C2)
Wire Harness View:



(a) Disconnect the J/C2 connector (J18).
(b) Measure the resistance according to the value(s) in the table below.

Standard:

Tester connection	Condition	Specified value
J18–18 (CANH) – J18–7 (CANL)	Power Switch OFF	108 to 132 Ω

NG → **REPLACE CAN MAIN BUS LINE OR CONNECTOR (J/C2 – J/C1)**

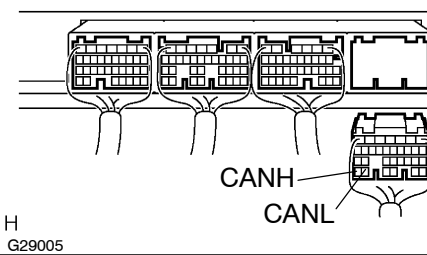
OK

10	CONNECT CONNECTOR

(a) Reconnect the J/C2 connector (J18).

11	CHECK CAN MAIN BUS LINE FOR DISCONNECTION(ECM – J/C2)

ECM Wire Harness View:



(a) Disconnect the ECM connector (E6).
(b) Measure the resistance according to the value(s) in the table below.

Standard:

Tester connection	Condition	Specified value
E6–31 (CANH) – E6–30 (CANL)	Power Switch OFF	108 to 132 Ω

NG → **REPLACE CAN MAIN BUS LINE OR CONNECTOR (ECM – J/C2)**

OK

REPLACE ECM (SEE PAGE 10–24)