DTC	B1291	LIGHT SYSTEM COMMUNICATION BUS MALFUNCTION (+B SHORT)

DTC	B1292	LIGHT SYSTEM COMMUNICATION BUS MALFUNCTION (GND SHORT)

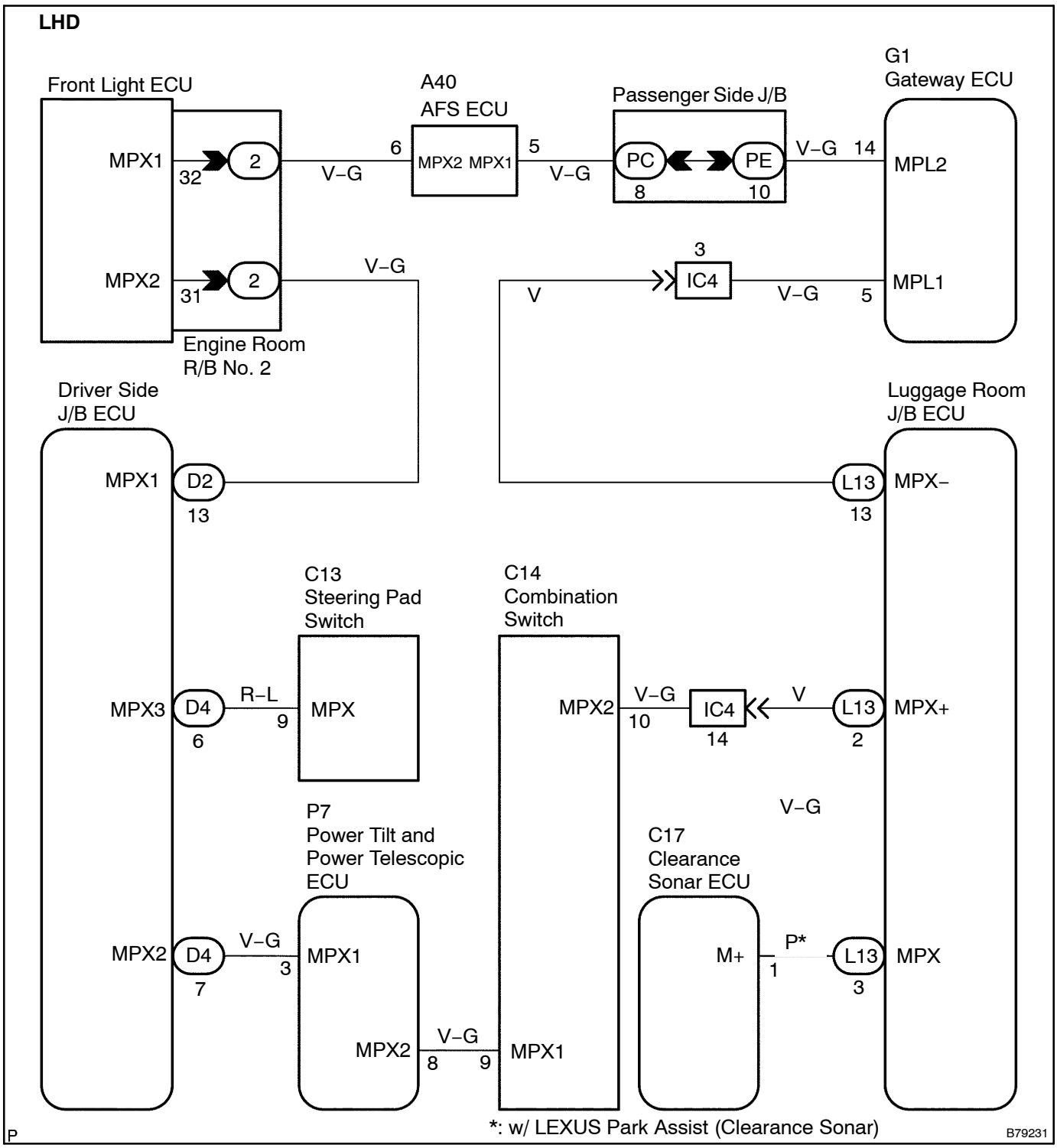
CIRCUIT DESCRIPTION

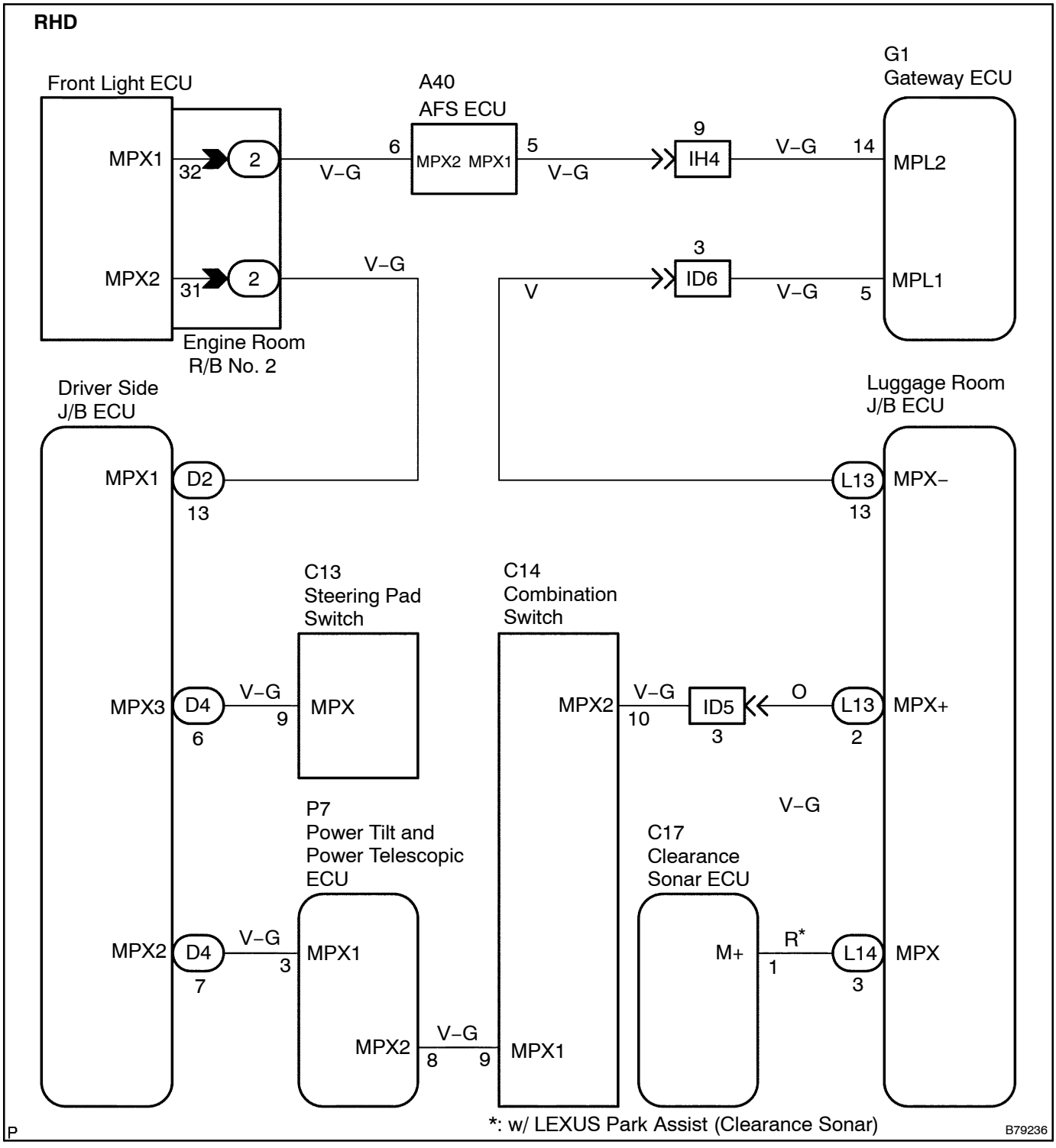
B1291 and B1292 are detected when +B and body ground is short–circuited on the light system (column bus) communication bus. Detecting this condition will disable the light system communication bus (BEAN) and output some diagnosis codes.

DTC NO.	DTC detection condition	Trouble area
B1291	Lighting system communication circuit and +B battery system short	• AFS ECU • Front light control ECU • Driver side J/B (Driver side J/B ECU) • Steering pad switch • Tilt and telescopic ECU • Combination switch • Luggage room J/B assy (Luggage room J/B ECU) • Clearance sonar ECU* • Wire harness
B1292	Lighting system communication circuit and body ground short	• AFS ECU • Front light control ECU • Driver side J/B (Driver side J/B ECU) • Steering pad switch • Tilt and telescopic ECU • Combination switch • Luggage room J/B assy (Luggage room J/B ECU) • Clearance sonar ECU* • Wire harness

*: w/ LEXUS park assist (clearance sonar) system

WIRING DIAGRAM

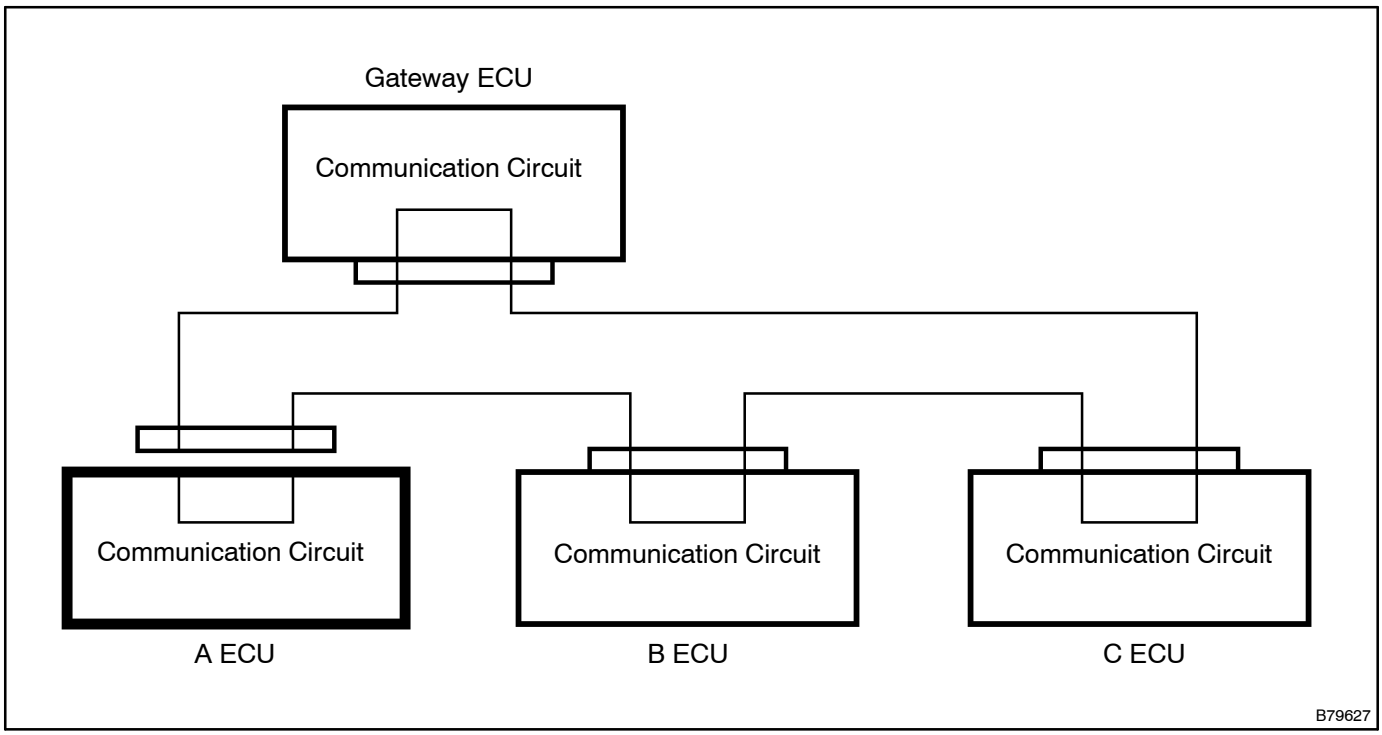



RHD
Front Light ECU
MPX1
32
2
MPX2
31
2
Engine Room
R/B No. 2
V–G
6
A40
AFS ECU
MPX2 MPX1
5
V–G
9
IH4
V–G
14
G1
Gateway ECU
MPL2
3
ID6
V
V–G
5
MPL1
Driver Side
J/B ECU
MPX1
D2
13
Luggage Room
J/B ECU
L13
13
MPX–
C13
Steering Pad
Switch
MPX3
D4
6
V–G
9
MPX
C14
Combination
Switch
MPX2
V–G
10
ID5
3
O
L13
2
MPX+
P7
Power Tilt and
Power Telescopic
ECU
MPX2
D4
7
V–G
3
MPX1
MPX2
V–G
8
9
MPX1
C17
Clearance
Sonar ECU
V–G
M+
R*
1
L14
3
MPX
*: w/ LEXUS Park Assist (Clearance Sonar)
P
B79236

INSPECTION PROCEDURE

1	CHECK DIAGNOSTIC TROUBLE CODE (A ECU)

(a) Disconnect the A ECU connector and check for DTCs B1291 and B1292.



OK: DTCs B1291 and B1292 are not output.

NOTICE:

Disconnect the connectors one by one. Reconnect the connector before starting the next check.

HINT:

- The A ECU in the light system bus represents the AFS ECU.
- If the result is as specified, the disconnected A ECU (AFS ECU) is malfunctioning.

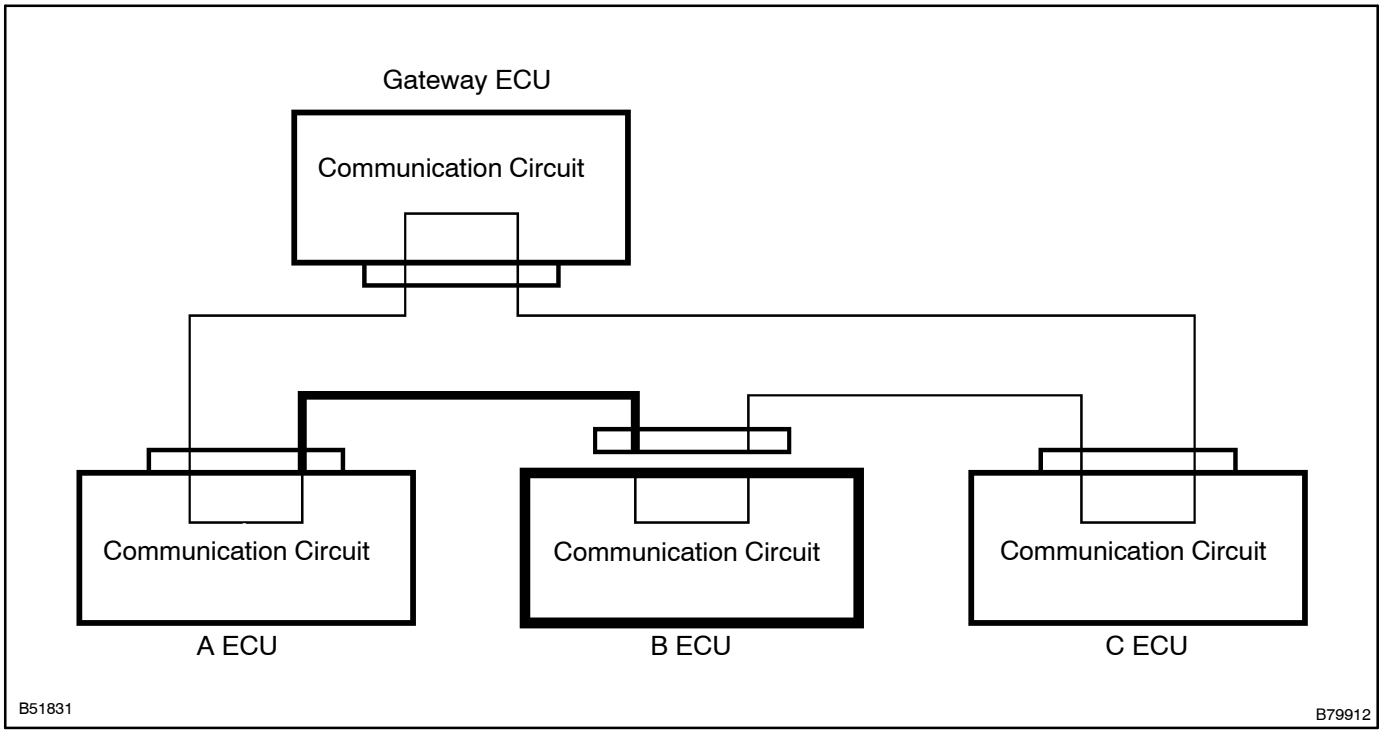
NG → **Go to step 2**

OK

REPLACE A ECU

2	CHECK DIAGNOSTIC TROUBLE CODE (B ECU)

(a) Disconnect the A ECU and B ECU connectors and check for DTCs B1291 and B1292.



OK: DTCs B1291 and B1292 are not output.

NOTICE:

Disconnect the connectors one by one. Reconnect the connector before starting the next check.

HINT:

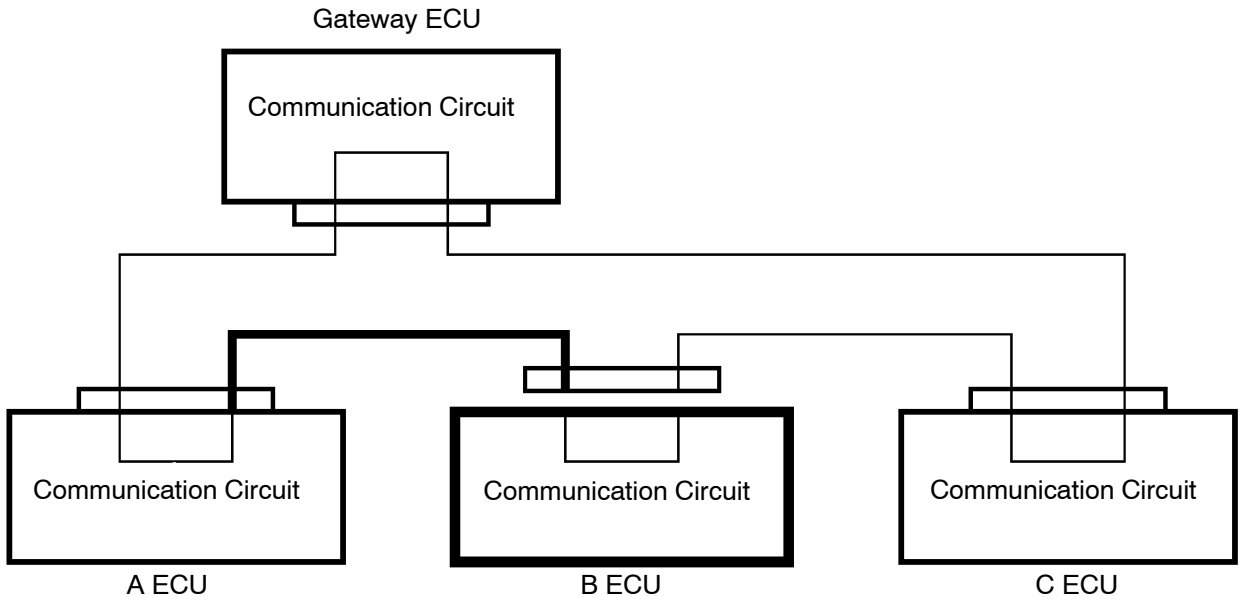
- The B ECU in light system bus represents one of the following: front light control ECU, driver side J/B (driver side J/B ECU), steering pad switch, tilt and telescopic ECU, luggage room J/B (luggage room J/B ECU) or clearance sonar ECU
- If the result is as specified, the disconnected B ECU (one of the ECUs from the above list) or the wire harness between the A ECU and B ECU is malfunctioning.

NG	Go to step 4

OK

3	CHECK WIRE HARNESS BETWEEN A ECU AND B ECU

(a) Disconnect the B ECU connectors and check for DTCs B1291 and B1292.



OK: DTCs B1291 and B1292 are not output.

NOTICE:

Disconnect the connectors one by one. Reconnect the connector before starting the next check.

HINT:

If the result is as specified, the wire harness between the A ECU and B ECU is functioning normally but the disconnected B ECU is malfunctioning.

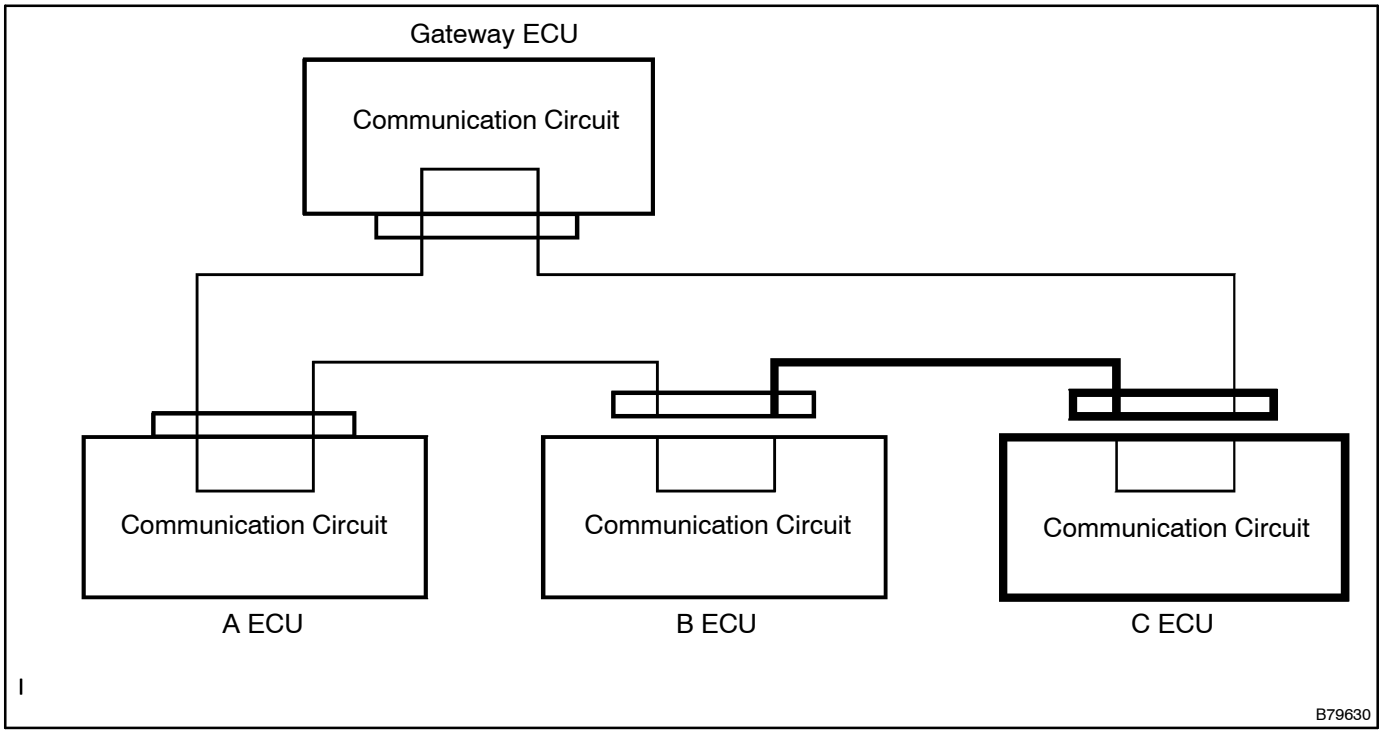
NG → **REPAIR OR REPLACE BETWEEN WIRE HARNESS OF A ECU AND B ECU**

OK

REPLACE B ECU

4	CHECK DIAGNOSTIC TROUBLE CODE (C ECU)

(a) Disconnect the B ECU and C ECU connectors and check for DTCs B1214 and B1215.



OK: DTCs B1291 and B1292 are not output.

NOTICE:

Disconnect the connectors one by one. Reconnect the connector before starting the next check.

HINT:

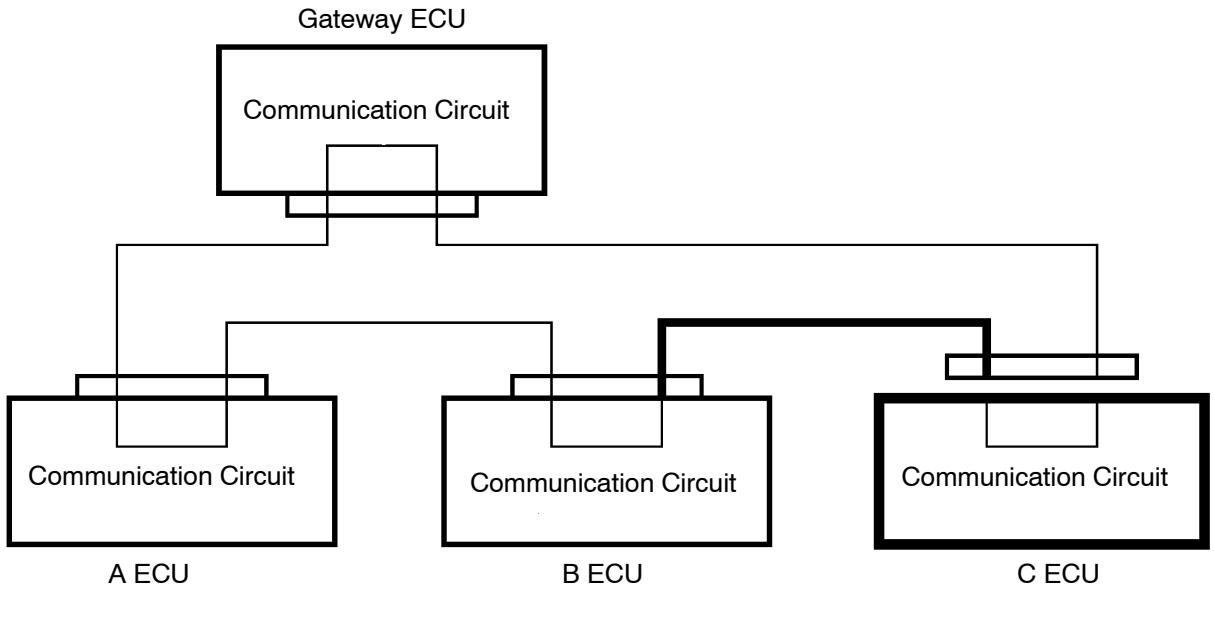
- The C ECU in the light system bus represents the combination switch.
- If the result is as specified, the disconnected C ECU (combination switch) or the wire harness between the B ECU and C ECU is malfunctioning.

NG	Go to step 6

OK

5	CHECK WIRE HARNESS BETWEEN B ECU AND C ECU

(a) Disconnect the C ECU connector and check for DTCs B1291 and B1292.



OK: DTCs B1291 and B1292 are not output.

NOTICE:

Disconnect the connectors one by one. Reconnect the connector before starting the next check.

HINT:

If the result is as specified, the wire harness between the B ECU and C ECU is functioning normally but the disconnected C ECU is malfunctioning.

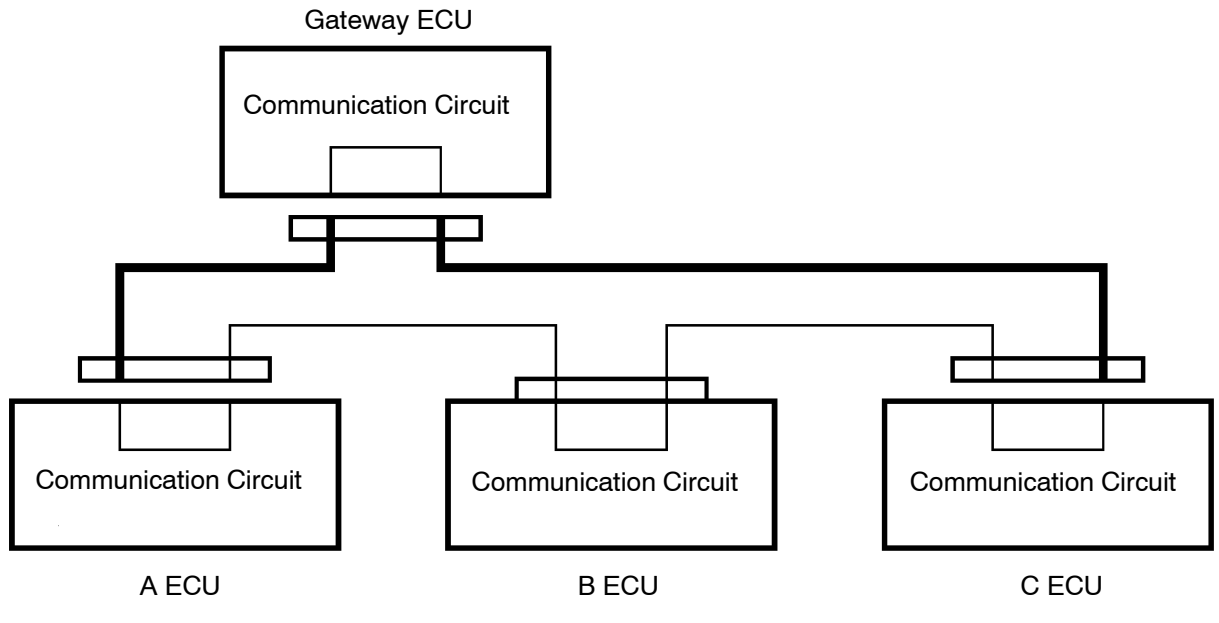
NG → **REPAIR OR REPLACE BETWEEN WIRE HARNESS OF B ECU AND C ECU**

OK

REPLACE C ECU

6	CHECK WIRE HARNESS BETWEEN GATEWAY ECU AND A ECU OR C ECU

(a) Check for a short–circuit in +B or body ground.



(1) Disconnect the A ECU, C ECU and gateway ECU connectors.
(2) Measure the voltage and resistance of the wire harness side connectors.

Standard:

Tester Connection	Specified Condition
A ECU connector / gateway ECU connector – body ground	0 V
C ECU connector / gateway ECU connector – body ground	0 V
A ECU connector / gateway ECU connector – body ground	10 kΩ or higher
C ECU connector / gateway ECU connector – body ground	10 kΩ or higher

HINT:

- The A ECU in the light system bus represents the AFS ECU.
- The C ECU in the light system bus represents the combination switch.

NG → **REPAIR OR REPLACE BETWEEN WIRE HARNESS OF GATEWAY ECU AND A ECU OR C ECU**

OK

REPLACE NETWORK GATEWAY ECU