DTC	B1214	DOOR SYSTEM COMMUNICATION BUS MALFUNCTION (+B SHORT)

DTC	B1215	DOOR SYSTEM COMMUNICATION BUS MALFUNCTION (GND SHORT)

CIRCUIT DESCRIPTION

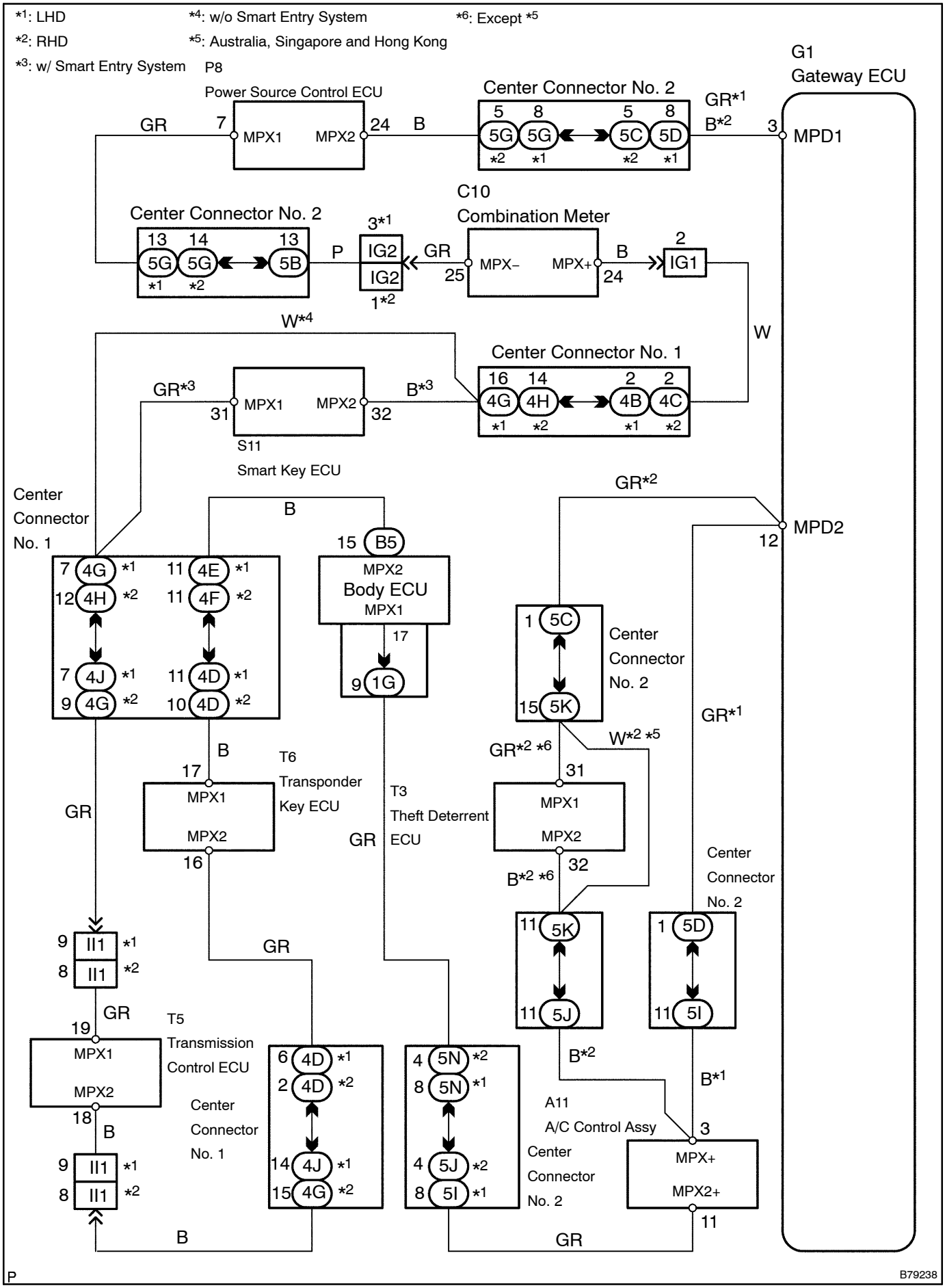
DTCs B1214 and B1215 are detected when +B and body ground is short–circuited on the door system communication bus. Detecting this condition will disable the door system communication bus (BEAN) and output some diagnosis codes.

DTC NO.	DTC Detection Condition	Trouble Area
B1214	Door system communication circuit and +B battery system short	• Body ECU • Smart ECU* • Power source control ECU • Transmission control ECU • A/C ECU • Theft warning ECU • Combination meter • Theft warning ECU • Transponder key ECU (Immobilizer ECU) • Wire harness
B1215	Door system communication circuit and body ground short	• Body ECU • Smart ECU* • Power source control ECU • Transmission control ECU • A/C ECU • Theft warning ECU • Combination meter • Theft warning ECU • Transponder key ECU (Immobilizer ECU) • Wire harness

*: Smart Entry System

WIRING DIAGRAM

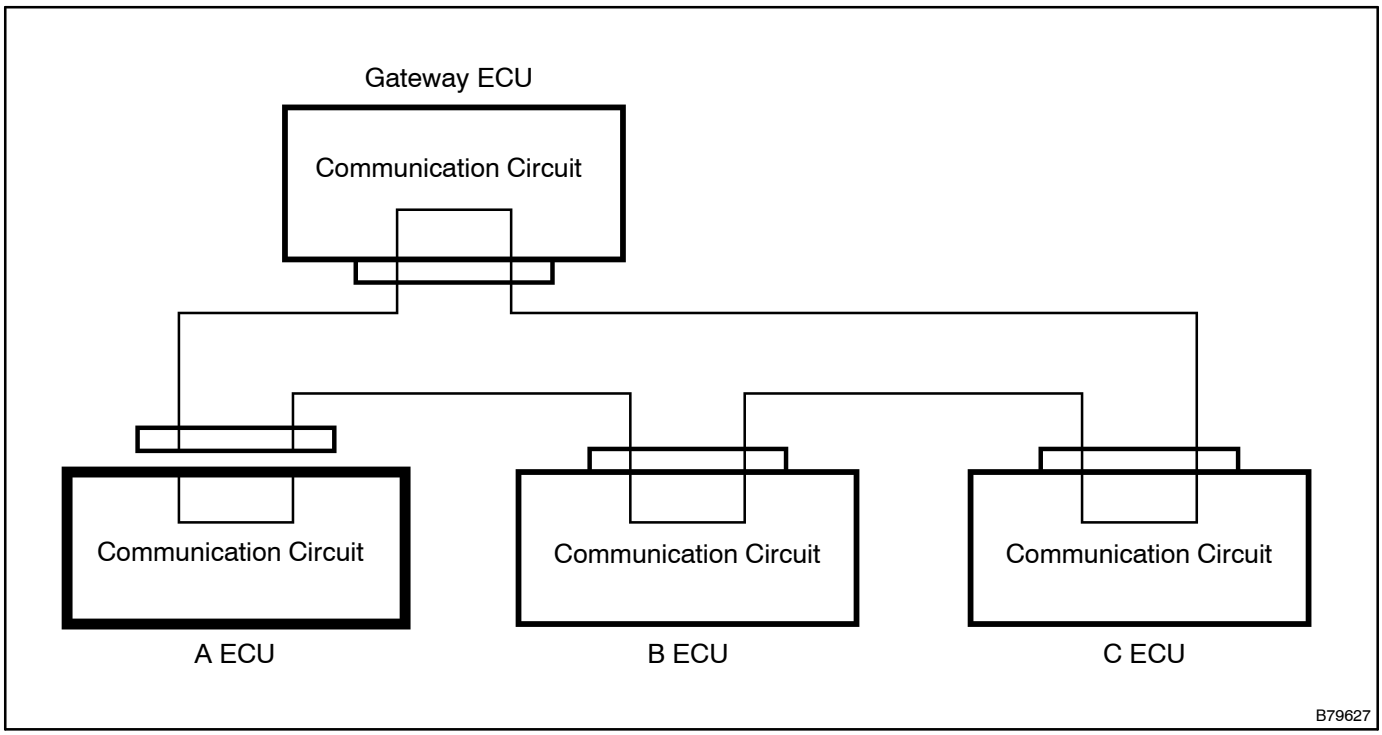
The wiring diagram is shown on the next page.


*1: LHD
*2: RHD
*3: w/ Smart Entry System
*4: w/o Smart Entry System
*5: Australia, Singapore and Hong Kong
*6: Except *5
P8
Power Source Control ECU
MPX1
MPX2
Center Connector No. 2
G1
Gateway ECU
MPD1
MPD2
C10
Combination Meter
MPX–
MPX+
IG1
IG2
Center Connector No. 1
S11
Smart Key ECU
Center Connector No. 1
Center Connector No. 2
MPX2
Body ECU
MPX1
T6
Transponder Key ECU
T3
Theft Deterrent ECU
T5
Transmission Control ECU
A11
A/C Control Assy
MPX+
MPX2+
P
B79238

INSPECTION PROCEDURE

1	CHECK DIAGNOSTIC TROUBLE CODE (A ECU)

(a) Disconnect the A ECU connector and check for DTCs B1214 and B1215.



OK: DTCs B1214 and B1215 are not output.

NOTICE:

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

HINT:

- The A ECU in the door system bus represents the power source control ECU.
- If the result is as specified, the disconnected A ECU (power source control ECU) is malfunctioning.

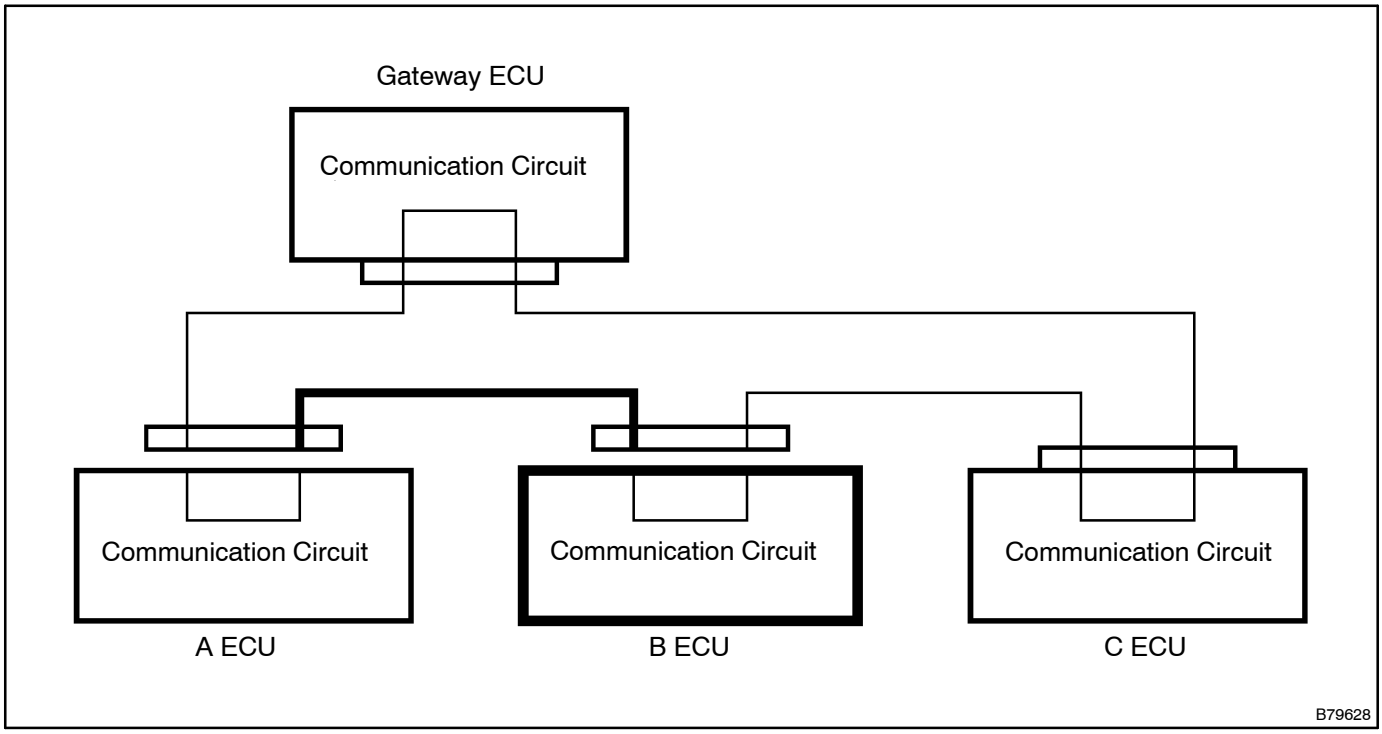
NG → **Go to step 2**

OK

REPLACE A ECU

2	CHECK DIAGNOSTIC TROUBLE CODE (B ECU)

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



OK: DTCs B1214 and B1215 are not output.

NOTICE:

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

HINT:

- The B ECU in door system bus represents one of the following: combination meter, smart ECU*1, transmission control ECU, transponder key ECU, body ECU, A/C control assy*2, *3 or theft deterrent ECU*4.
- 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.

*1: w/ Smart Entry System

*2: LHD models

*3: RHD models Australia, Singapore and Hong Kong

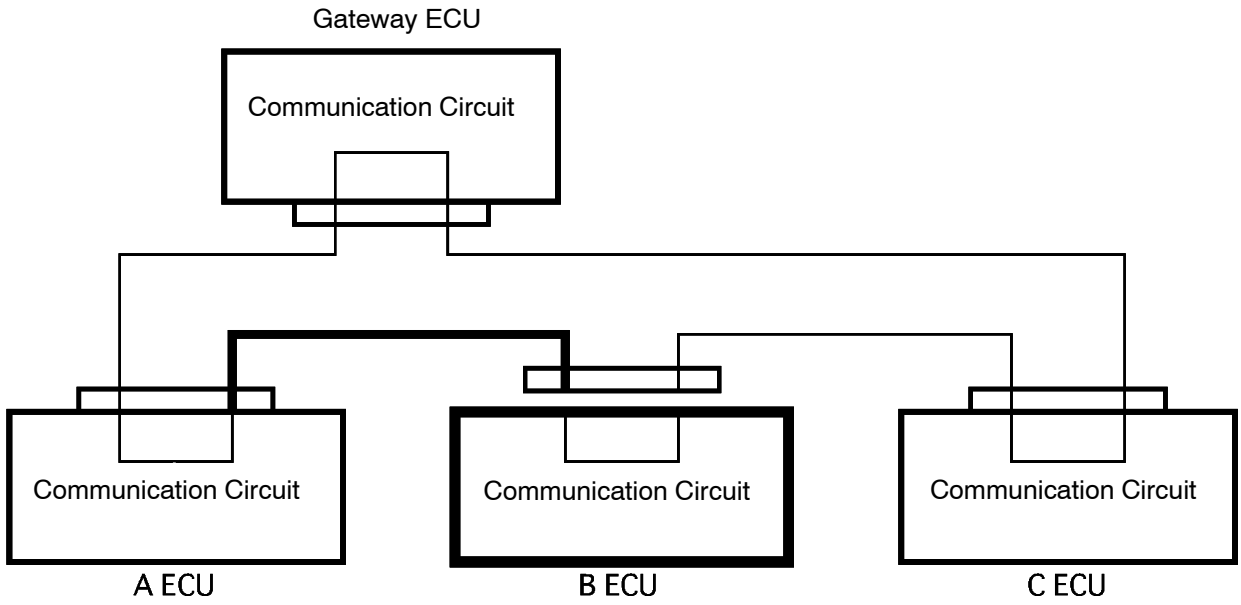
*4: Except*3

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 B1214 and B1215.



OK: DTCs B1214 and B1215 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.

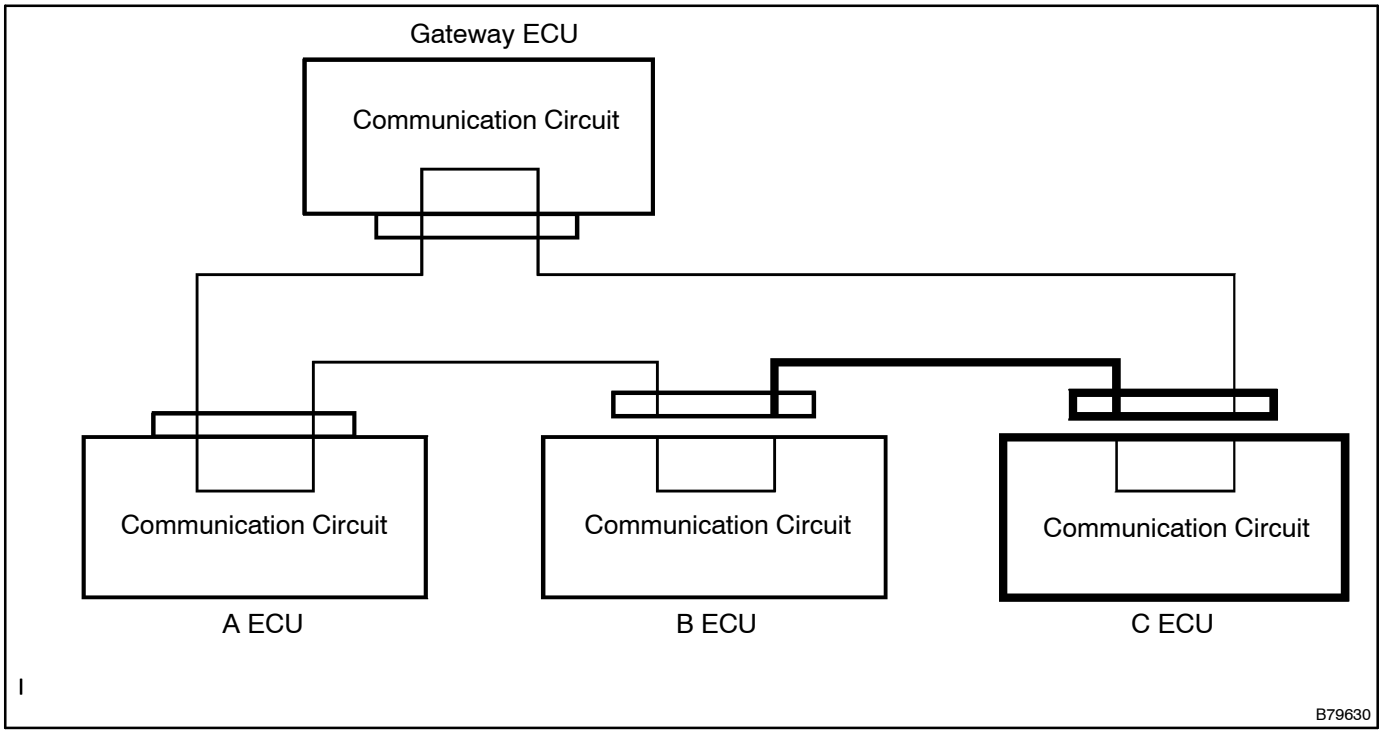
NG → **REPAIR OR REPLACE BETWEEN WIRE HARNESS OF A ECU AND B ECU**

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 B1214 and B1215 are not output.

NOTICE:

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

HINT:

- The C ECU in the door system bus represents the A/C control assy*1, *2 or theft deterrent ECU*3.
- If the result is as specified, the disconnected C ECU (A/C control assy*1, *2 or theft deterrent ECU*3) or the wire harness between the B ECU and C ECU is malfunctioning.

*1: LHD models

*2: RHD models Australia, Singapore and Hong Kong

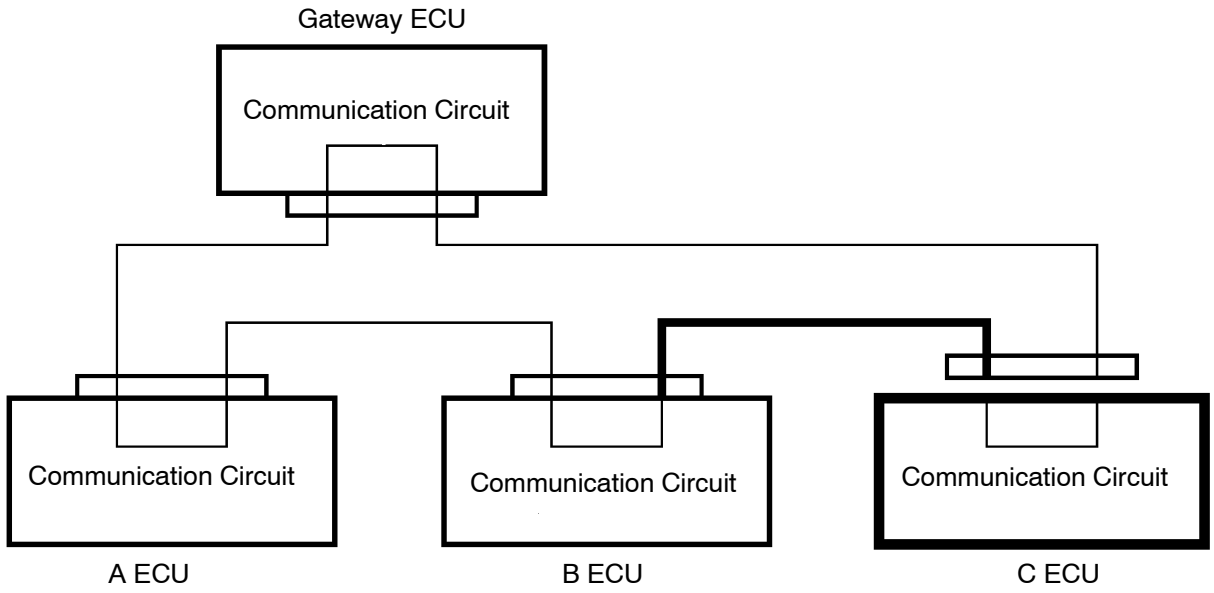
*3: Except*2

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 B1214 and B1215.



OK: DTCs B1214 and B1215 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 malfunctioning.

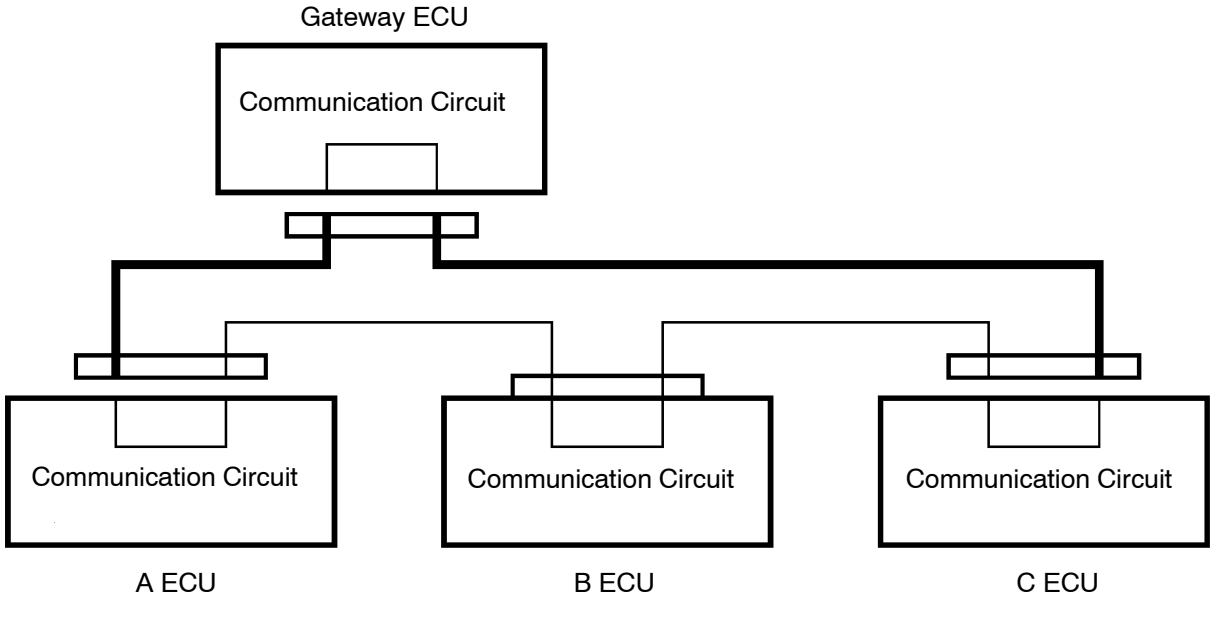
NG → **REPAIR OR REPLACE BETWEEN WIRE HARNESS OF B ECU AND C ECU**

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 door system bus represents the power source control ECU.
- The C ECU in the door system bus represents the A/C control assy*1, *2 or theft deterrent ECU*3.

*1: LHD models
*2: RHD models Australia, Singapore and Hong Kong
*3: Except*2

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

OK

REPLACE GATEWAY ECU