SERVICE TRAINING AND PUBLICATION BULLETIN

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TRAINING	
PUBLICATION	■
INFORMATION	
ADVANCE ORDER	
OTHERS	

APPLICABLE COUNTRIES:

	ALL COUNTRIES		N. AMERICA	■	GENERAL COUNTRIES, EUROPE
	Other				

To: Service Manager

CORRECTION TO
- [x] REPAIR MANUAL
- [ ] ELECTRICAL WIRING DIAGRAM
- [ ] NEW CAR FEATURES
- [ ] BODY REPAIR MANUAL
- [ ] SERVICE DATA SHEET

The following manual has revised service information:

Pub. No.: **RM1076E** Pub. Name: **PRIUS Repair Manual**

Section	Title	Paragraph
DIAGNOSTICS	HYBRID CONTROL SYSTEM	P3107/213

The revised pages listed above are attached.
(The corrected parts are indicated by arrows.)

Please attach the accompanying revised pages to the applicable pages in the manual above.

This Bulletin does not cause the Flat Rate Manual to be changed.

This bulletin is also available on the OASIS Global Service Information Center.
Inquiries : BM_correction_information@mta.mx.toyota.co.jp

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TOYOTA QUALITY SERVICE

TOYOTA MOTOR CORPORATION
SERVICE ENGINEERING DEPARTMENT
TECHNICAL SERVICE DIVISION
CUSTOMER FIRST PROMOTION GROUP

DTC	P3107/213	LOST COMMUNICATION WITH AIRBAG SYSTEM CONTROL MODULE

DTC	P3107/214	LOST COMMUNICATION WITH AIRBAG SYSTEM CONTROL MODULE

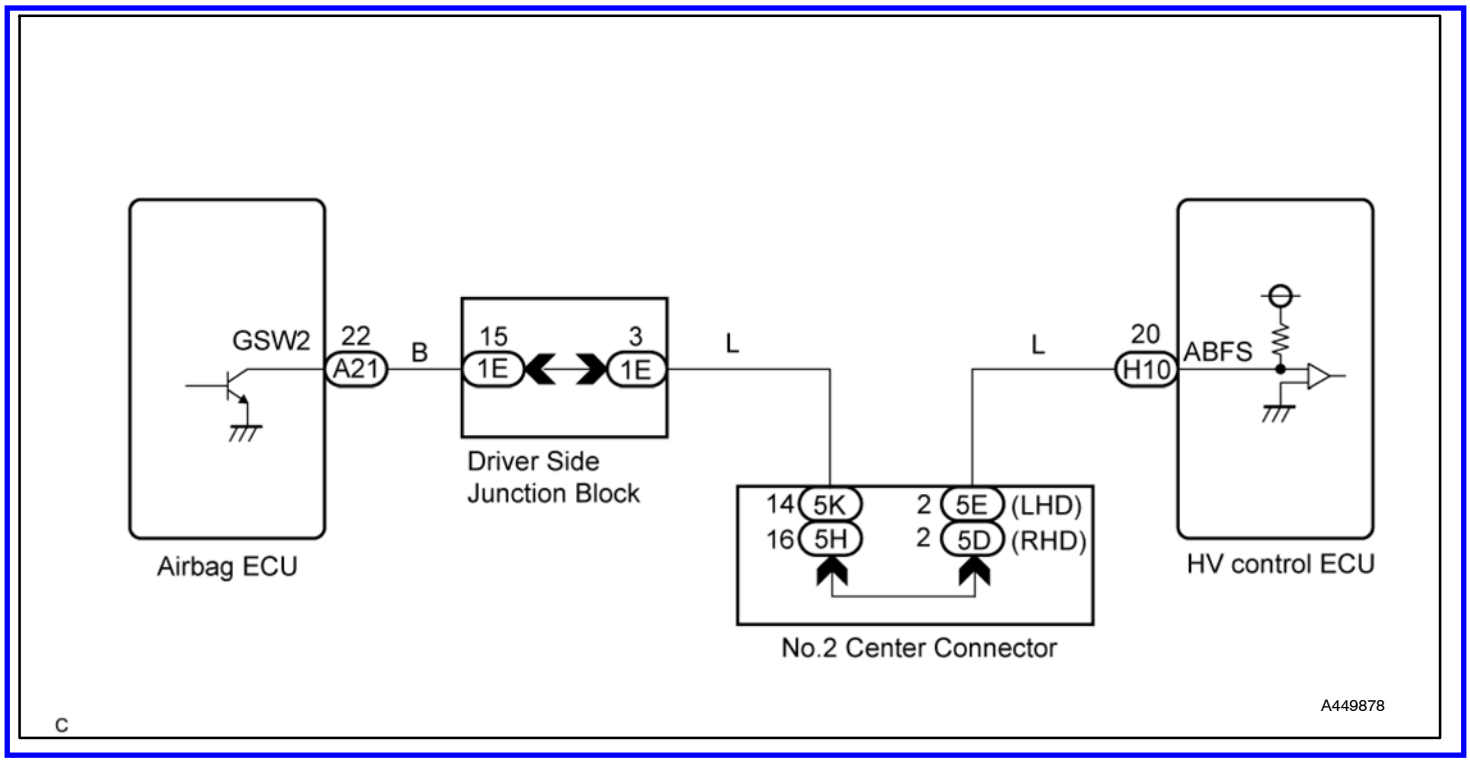
DTC	P3107/215	LOST COMMUNICATION WITH AIRBAG SYSTEM CONTROL MODULE

CIRCUIT DESCRIPTION

The HV control ECU detects a malfunction of the collision signal circuit from the airbag ECU and gives warning to the driver.

DTC No.	INF Code	DTC Detection Condition	Trouble Area
P3107	213	GND short in communication circuit between center airbag sensor and HV control ECU Communication from the airbag ECU stopped and Circuit Low has been detected for a certain period. (1 trip detection logic)	• Wire harness or connector • Airbag ECU • HV control ECU ← [Added]
P3107	214	Open or +B short in communication circuit between airbag ECU and HV control ECU	• Wire harness or connector • Airbag ECU • HV control ECU ← [Added]
P3107	215	Abnormal communication signals between airbag ECU and HV control ECU	• Wire harness or connector • Airbag ECU • HV control ECU ← [Added]

WIRING DIAGRAM



[Corrected]

INSPECTION PROCEDURE

HINT:

After the repair, clear the DTCs and perform the following procedure to check that DTCs are not output.

1. Turn the power switch on (IG) and wait for 15 seconds or more.

1 READ OUTPUT DTC (HV ECU)

(a) Connect the intelligent tester to the DLC3.
(b) Turn the power switch ON (IG).
(c) Turn the intelligent tester ON.
(d) Enter the following menus: DIAGNOSIS / OBD / MOBD /HV ECU / DTC INFO / CURRENT CODES.
(e) Read DTCs.

Result:

Display (DTC Output)	Proceed to
DTC P3107 (INF 213) is output	A
DTC P3107 (INF 214) is output	B
DTC P3107 (INF 215) is output	C

B → **Go to step 7**

C → **Go to step 12**

A

2 CHECK DTC OUTPUT (AIRBAG)

(a) Connect the intelligent tester to the DLC3.
(b) Turn the power switch ON (IG).
(c) Turn the intelligent tester ON.
(d) Enter the following menus: Body Electrical / SRS Airbag/ Trouble Codes.
(e) Check if DTCs are output.

Result:

Result	Proceed to
Airbag system DTCs are not output.	A
Airbag system DTCs are output.	B

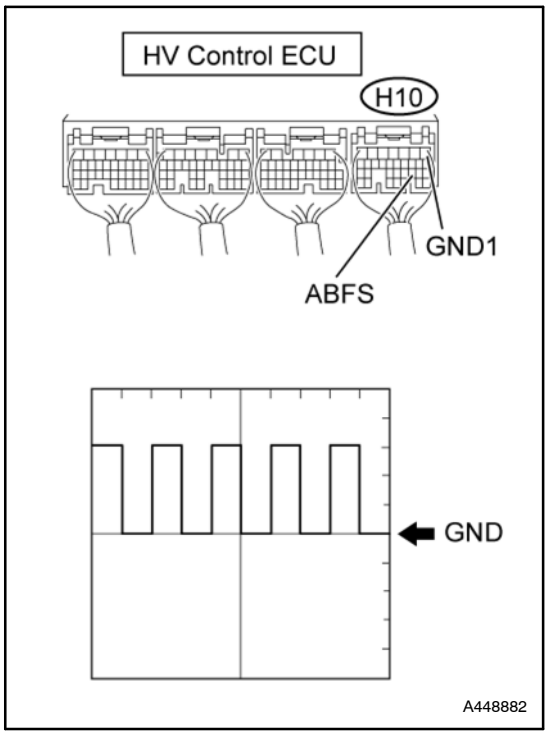
B → **GO TO DTC CHART**

A

3 CHECK HV CONTROL ECU (CHECK WAVEFORM)

(a) Turn the power switch ON (READY).

[Corrected]



(b) Connect an oscilloscope between the HV control ECU terminals specified in the table below, and measure the waveform.

Item	Contents
Terminal	H10−20 (ABFS) – H10−1 (GND1)
Equipment Setting	1 V / DIV, 500 ms / DIV
Condition	Power switch ON (READY)

Result:

Result	Proceed to
The waveform appears as shown in the illustration.	A
The waveform differs from the one shown in the illustration.	B

B → **Go to step 5**

A

4 CHECK FOR INTERMITTENT PROBLEMS

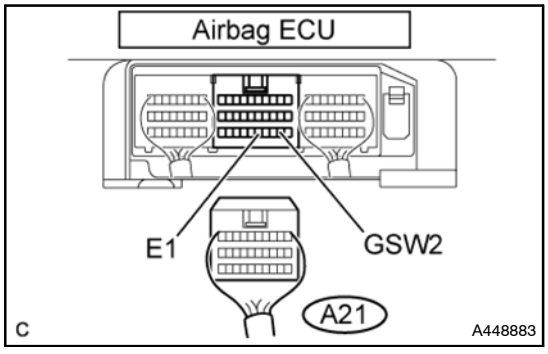
(a) Check for intermittent problems.

NG → **REPAIR OR REPLACE MALFUNCTIONING PARTS, COMPONENT AND AREA**

OK

REPLACE HV CONTROL ECU

5 CHECK AIRBAG ECU



(a) Disconnect connector A21 from the airbag ECU.
(b) Check the connection condition of all the connectors at the HV control ECU.

Standard Resistance:

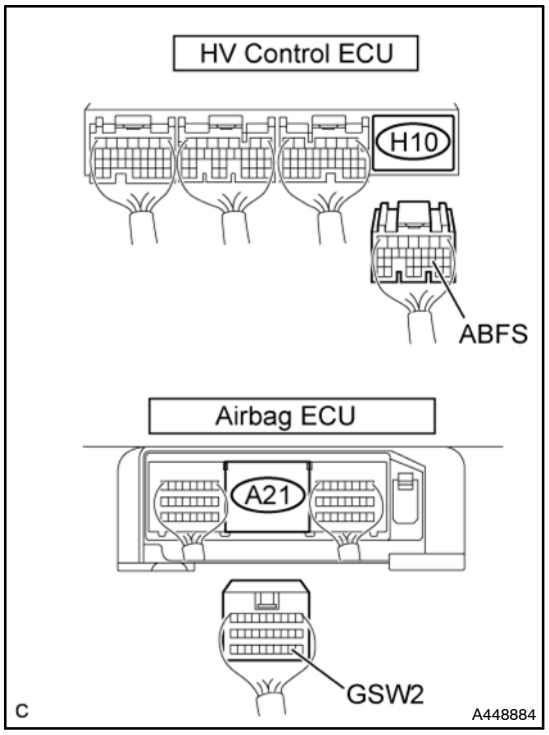
Tester Connection	Switch Condition	Specified Condition
A21−22 (GSW2) – A21−25 (E1)	Power switch OFF	10 kΩ or higher

NG → **REPLACE AIRBAG ECU**

OK

[Added]

6 CHECK HARNESS AND CONNECTOR (HV CONTROL ECU – AIRBAG ECU)



(a) Disconnect connector H10 from the HV control ECU.
(b) Measure the resistance between the wire harness side connectors.

Standard Resistance:

Tester Connection	Switch Condition	Specified Condition
H10−20 (ABFS) or A21−22 (GSW2) – Body ground and other terminals	Power switch OFF	10 kΩ or higher

NG → **REPAIR OR REPLACE HARNESS OR CONNECTOR (HV CONTROL ECU – AIRBAG ECU)**

OK

REPLACE HV CONTROL ECU

7 CHECK DTC OUTPUT (AIRBAG)

(a) Connect the intelligent tester to the DLC3.
(b) Turn the power switch ON (IG).
(c) Turn the intelligent tester ON.
(d) Enter the following menus: Body Electrical / SRS Airbag/ Trouble Codes.
(e) Check if DTCs are output.

Result:

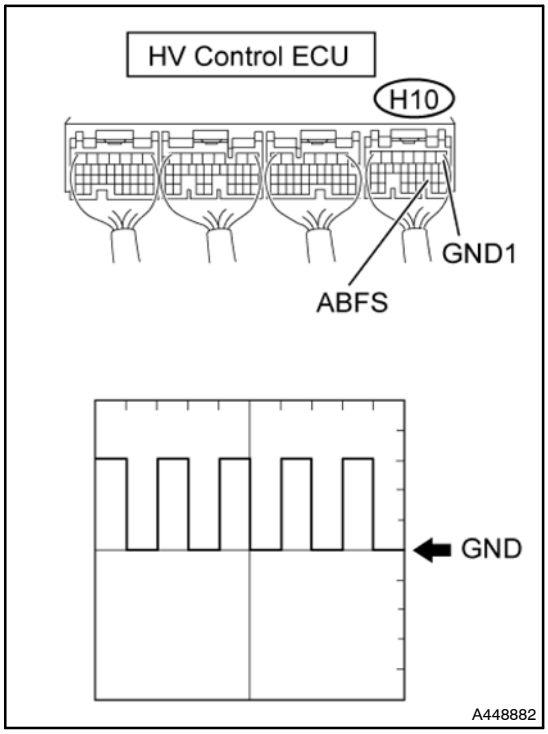
Result	Proceed to
Airbag system DTCs are not output.	A
Airbag system DTCs are output.	B

B → **GO TO DTC CHART**

A

[Added]

8 CHECK HV CONTROL ECU (CHECK WAVEFORM)



(a) Turn the power switch ON (READY).
(b) Connect an oscilloscope between the HV control ECU terminals specified in the table below, and measure the waveform.

Item	Contents
Terminal	H10−20 (ABFS) – H10−1 (GND1)
Equipment Setting	1 V / DIV, 500 ms / DIV
Condition	Power switch ON (READY)

Result:

Result	Proceed to
The waveform appears as shown in the illustration.	A
The waveform differs from the one shown in the illustration.	B

B → **Go to step 10**

A

9 CHECK FOR INTERMITTENT PROBLEMS

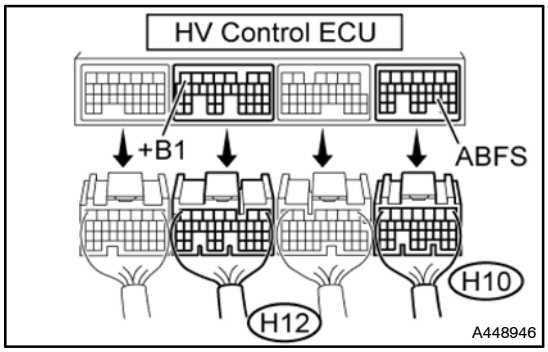
(a) Check for intermittent problems.

NG → **REPAIR OR REPLACE MALFUNCTIONING PARTS, COMPONENT AND AREA**

OK

REPLACE HV CONTROL ECU

10 CHECK HV CONTROL ECU



(a) Disconnect all the connectors from the HV control ECU.
(b) Measure the resistance according to the value(s) in the table below.

Standard Resistance:

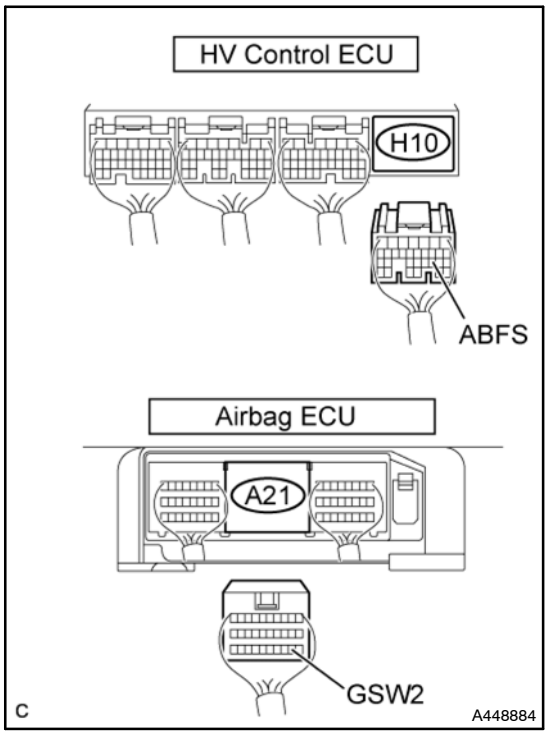
Tester Connection	Switch Condition	Specified Condition
H10−20 (ABFS) – H12−7 (+B1)	Power switch OFF	9.5 to 10.5 kΩ

NG → **REPLACE HV CONTROL ECU**

OK

[Added]

11	CHECK HARNESS AND CONNECTOR (HV CONTROL ECU – AIRBAG ECU)



(a) Connect the HV control ECU connector other than H10 connector.
(b) Disconnect connector A21 from the airbag ECU.
(c) Measure the voltage between the terminals of the H10 HV control ECU connectors and body ground.

Standard Voltage:

Tester Connection	Switch Condition	Specified Condition
H10−20 (ABFS) – Body ground	Power switch ON (IG)	Below 1 V

(d) Turn the power switch OFF.
(e) Measure the resistance between the wire harness side connectors.

Standard Resistance:

Tester Connection	Switch Condition	Specified Condition
H10−20 (ABFS) – A21−22 (GSW2)	Power switch OFF	Below 1 Ω

NG → **REPAIR OR REPLACE HARNESS OR CONNECTOR (HV CONTROL ECU – AIRBAG ECU)**

OK

REPLACE AIRBAG ECU

12	CLEAR DTC (HV ECU)

(a) Connect the intelligent tester to the DLC3.
(b) Turn the power switch ON (IG) and turn the intelligent tester ON.
(c) Check that the shift position is in P.
(d) Clear DTCs and freeze frame data with the intelligent tester.
(e) Read DTCs.

NEXT

13	CHECK DTC OUTPUT (HV ECU)

(a) Check the DTCs that were output when the vehicle was brought to the workshop.

NOTICE:

- **Refer to the DTC Malfunctioning Area Table.**
- **Using only the DTCs listed in the DTC Malfunctioning Area Table, perform the following judgment.**

[Added]

Result:

Result	Proceed to
DTC P3107−215 is not output.	A
DTC P3107−215 is output again.	B

NG → **Go to step 15**

A

14 CHECK FOR INTERMITTENT PROBLEMS

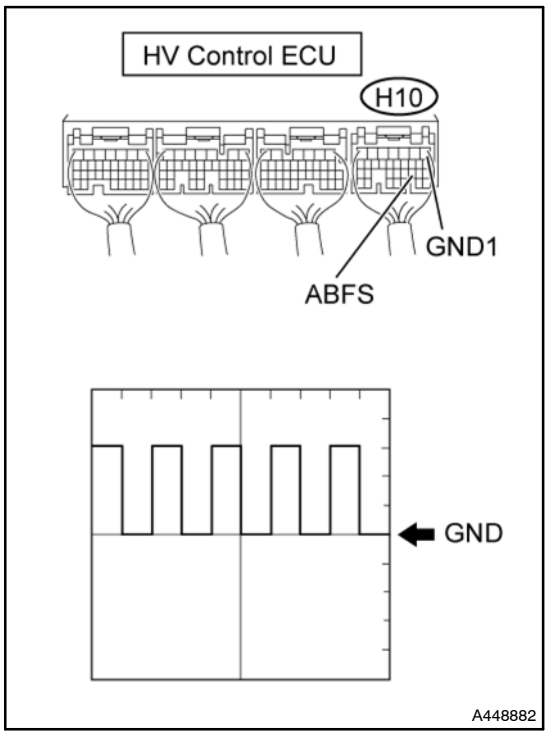
(a) Check for intermittent problems.

NG → **REPAIR OR REPLACE MALFUNCTIONING PARTS, COMPONENT AND AREA**

OK

REPLACE AIRBAG ECU

15 CHECK HV CONTROL ECU (CHECK WAVEFORM)



(a) Turn the power switch ON (READY).
(b) Connect an oscilloscope between the HV control ECU terminals specified in the table below, and measure the waveform.

Item	Contents
Terminal	H10−20 (ABFS) – H10−1 (GND1)
Equipment Setting	1 V / DIV, 500 ms / DIV
Condition	Power switch ON (READY)

Result:

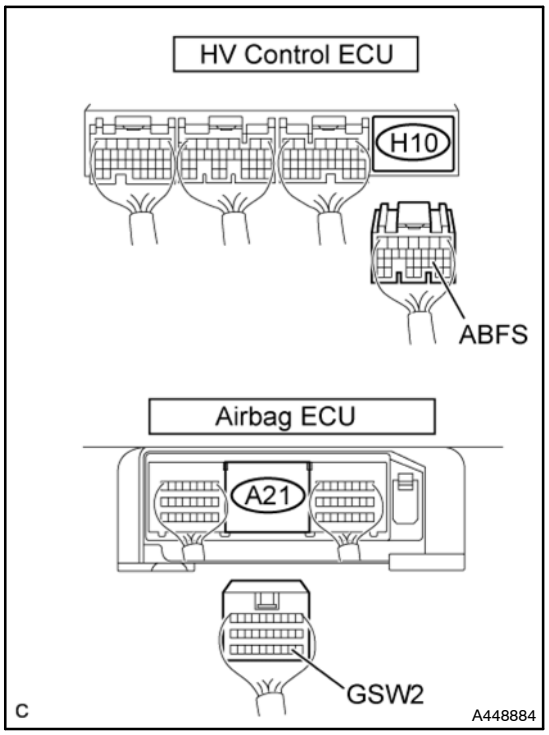
Result	Proceed to
The waveform appears as shown in the illustration.	A
The waveform differs from the one shown in the illustration.	B

B → **REPLACE HV CONTROL ECU**

A

16 CHECK HARNESS AND CONNECTOR (HV CONTROL ECU – AIRBAG ECU)

[Added]



(a) Disconnect connector H10 from the HV control ECU.
(b) Disconnect connector A21 from the airbag ECU.
(c) Measure the voltage between the terminals of the H10 HV control ECU connectors and body ground.

Standard Voltage:

Tester Connection	Switch Condition	Specified Condition
H10−20 (ABFS) − Body ground	Power switch ON (IG)	Below 1 V

(d) Turn the power switch OFF.
(e) Measure the resistance between the wire harness side connectors.

Standard resistance (Check for open):

Tester Connection	Switch Condition	Specified Condition
H10−20 (ABFS) − A21−22 (GSW2)	Power switch OFF	Below 1 Ω

Standard resistance (Check for short):

Tester Connection	Switch Condition	Specified Condition
H10−20 (ABFS) or A21−22 (GSW2) − Body ground and other terminals	Power switch OFF	10 kΩ or higher

NG → **REPAIR OR REPLACE HARNESS OR CONNECTOR (HV CONTROL ECU − AIRBAG ECU)**

A

REPLACE AIRBAG ECU

[Added]