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Model Year Start: 2023	Model: Prius Prime	Prod Date Range: [12/2022 -]
Title: WIPER / WASHER: WIPER AND WASHER SYSTEM: B235787; Wiper Module Missing Message; 2023 - 2024 MY Prius Prius Prime [12/2022 -]		

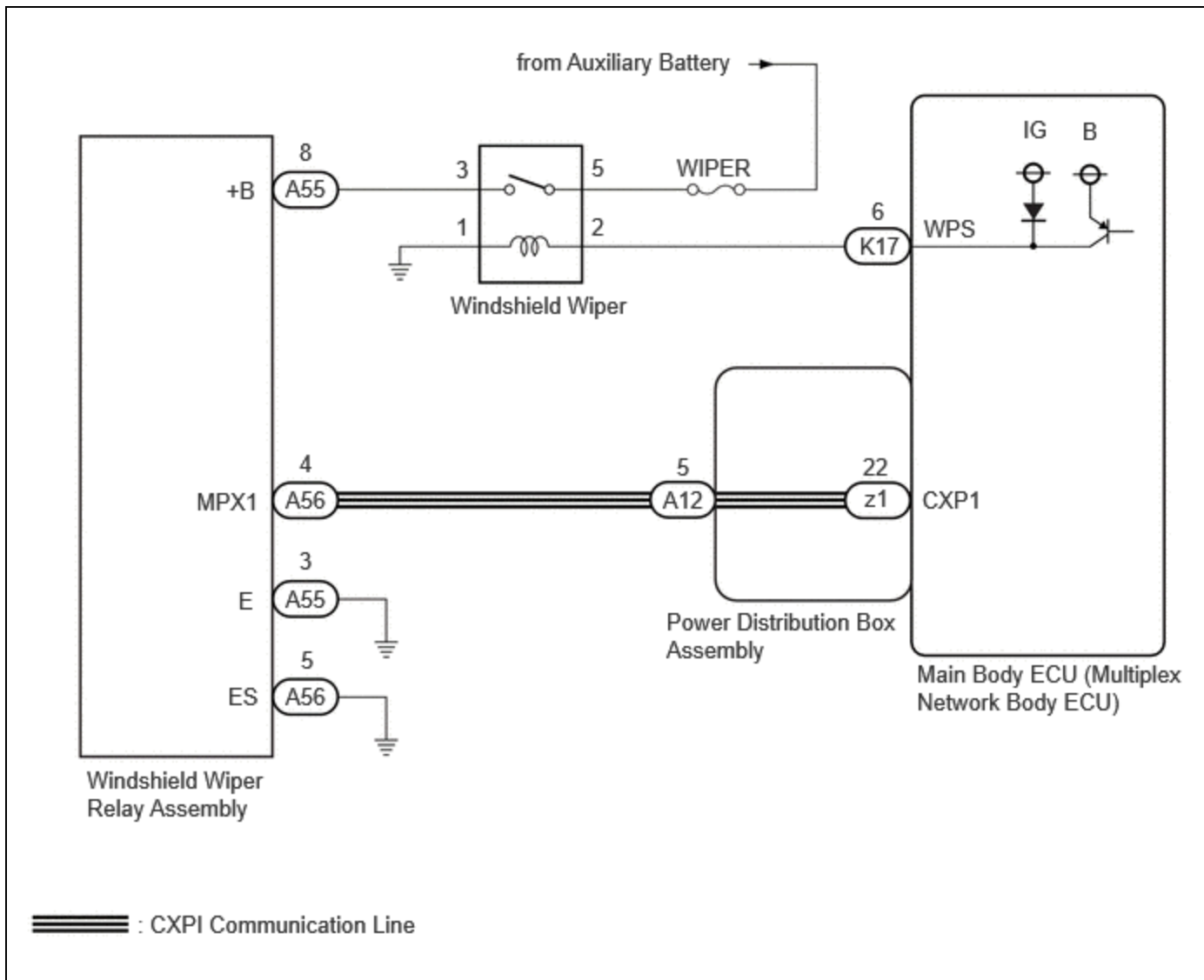
DTC	B235787	Wiper Module Missing Message
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DESCRIPTION

The main body ECU (multiplex network body ECU) and windshield wiper relay assembly communicate via CXPI communication. The main body ECU (multiplex network body ECU) stores this DTC if communication becomes abnormal.

DTC NO.	DETECTION ITEM	DTC DETECTION CONDITION	TROUBLE AREA	MEMORY	DTC OUTPUT FROM	PRIORITY
B235787	Wiper Module Missing Message	<p>Detection condition:</p> <p>Auxiliary battery voltage is 9.5 V or more</p> <p>Malfunction Status:</p> <p>Communication malfunction between the main body ECU (multiplex network body ECU) and windshield wiper relay assembly</p> <p>Malfunction Time:</p> <p>10 seconds or more</p>	<ul style="list-style-type: none"> • Windshield wiper relay assembly • Main body ECU (multiplex network body ECU) • Harness or connector • WIPER relay • Power distribution box assembly 	○	Main Body	A

WIRING DIAGRAM



CAUTION / NOTICE / HINT

NOTICE:

- Inspect the fuses of circuits related to this system before performing the following procedure.
- Before replacing the main body ECU (multiplex network body ECU), refer to Service Bulletin.

PROCEDURE

1.	CHECK HARNESS AND CONNECTOR (WINDSHIELD WIPER RELAY ASSEMBLY - MAIN BODY ECU (MULTIPLEX NETWORK BODY ECU))
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Pre-procedure1

- (a) Disconnect the A56 windshield wiper relay assembly connector.
- (b) Disconnect the A12 power distribution box assembly connector.

Procedure1

- (c) Measure the resistance according to the value(s) in the table below.

Standard Resistance:



[Click Location & Routing\(A56,A12\).](#)

[Click Connector\(A56\).](#)

[Click Connector\(A12\).](#)

TESTER CONNECTION	CONDITION	SPECIFIED CONDITION
A56-4 (MPX1) - A12-5	Always	Below 1 Ω
A56-4 (MPX1) or A12-5 - Body ground	Always	10 kΩ or higher

Post-procedure1

(d) None

NG ► REPAIR OR REPLACE HARNESS OR CONNECTOR

OK



2. CHECK MAIN BODY ECU (MULTIPLEX NETWORK BODY ECU)

(a) Check for voltage and pulses according to the value(s) in the table below.

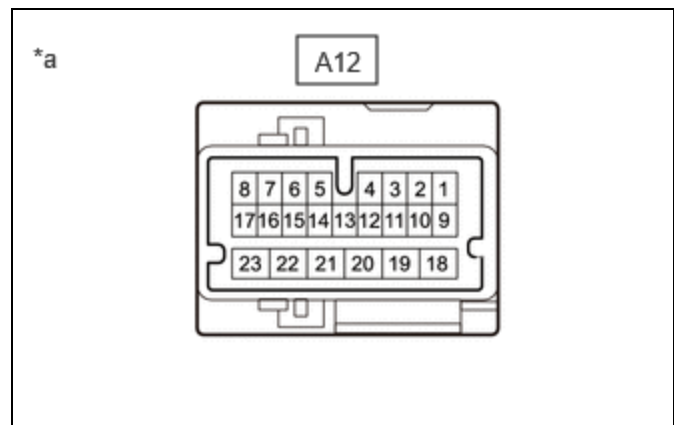
Standard Voltage and Pulse:



[Click Location & Routing\(A12\).](#)

[Click Connector\(A12\).](#)

TESTER CONNECTION	CONDITION	SPECIFIED CONDITION
A12-5 - Body ground	Ignition switch ON	Pulse generation
	Ignition switch off	Below 1 V



*a Component without harness connected (Power Distribution Box Assembly)

NG ► GO TO STEP 12

OK



3. PERFORM ACTIVE TEST USING GTS

(a) Perform the Active Test according to the display on the GTS.

Body Electrical > Main Body > Active Test

TESTER DISPLAY	MEASUREMENT ITEM	CONTROL RANGE	DIAGNOSTIC NOTE
Wiper Power Relay	Function to operate the Windshield Wiper relay	OFF or ON	-

Body Electrical > Main Body > Active Test

TESTER DISPLAY
Wiper Power Relay

OK:
Windshield Wiper relay operates normally.

NG  **GO TO STEP 9**

OK


4. CHECK HARNESS AND CONNECTOR (WINDSHIELD WIPER RELAY ASSEMBLY - BODY GROUND)

Pre-procedure1

(a) Disconnect the A55 windshield wiper relay assembly connector.

Procedure1

(b) Measure the resistance according to the value(s) in the table below.

Standard Resistance:



[Click Location & Routing\(A55,A56\)](#)

[Click Connector\(A55\)](#)

[Click Connector\(A56\)](#)

TESTER CONNECTION	CONDITION	SPECIFIED CONDITION
A55-3 (E) - Body ground	Always	Below 1 Ω
A56-5 (ES) - Body ground	Always	Below 1 Ω

Post-procedure1

(c) None

NG  **REPAIR OR REPLACE HARNESS OR CONNECTOR**

OK



5. CHECK HARNESS AND CONNECTOR (POWER SOURCE - WINDSHIELD WIPER RELAY ASSEMBLY)

(a) Measure the voltage according to the value(s) in the table below.

Standard Voltage:



[Click Location & Routing\(A55\)](#)

[Click Connector\(A55\)](#)

TESTER CONNECTION	CONDITION	SPECIFIED CONDITION
A55-8 (+B) - Body ground	Ignition switch ON	11 to 14 V
	Less than approximately 60 seconds after ignition switch turned off	11 to 14 V
	Approximately 60 seconds or more after ignition switch turned off	Below 1 V

OK  **REPLACE WINDSHIELD WIPER RELAY ASSEMBLY**

[INFO](#)

NG



6. INSPECT WINDSHIELD WIPER RELAY

HINT:

[Click here](#) [INFO](#)

NG  **REPLACE WINDSHIELD WIPER RELAY**

OK

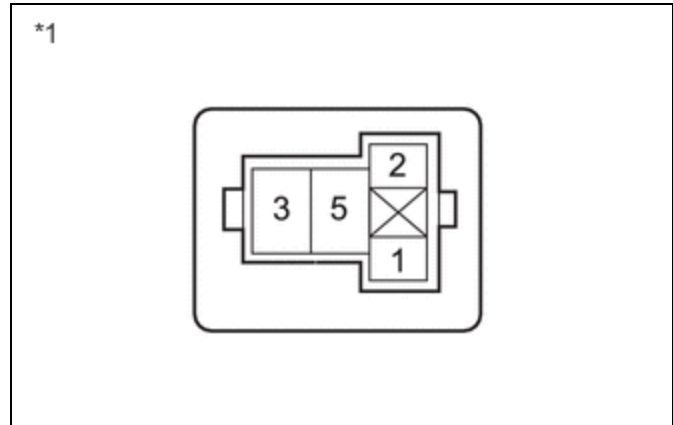


7. CHECK HARNESS AND CONNECTOR (POWER SOURCE - WINDSHIELD WIPER RELAY)

(a) Measure the voltage according to the value(s) in the table below.

Standard Voltage:

TESTER CONNECTION	CONDITION	SPECIFIED CONDITION
5 (Windshield Wiper Relay) - Body ground	Ignition switch off	11 to 14 V



*1 NO. 1 ENGINE ROOM RELAY BLOCK AND NO. 1 JUNCTION BLOCK ASSEMBLY

NG **REPAIR OR REPLACE HARNESS OR CONNECTOR**

OK



8. CHECK HARNESS AND CONNECTOR (WINDSHIELD WIPER RELAY ASSEMBLY - WINDSHIELD WIPER RELAY)

(a) Measure the resistance according to the value(s) in the table below.

Standard Resistance:



[Click Location & Routing\(A55\)](#)

[Click Connector\(A55\)](#)

TESTER CONNECTION	CONDITION	SPECIFIED CONDITION
A55-8 (+B) - 3 (Windshield Wiper Relay)	Always	Below 1 Ω
A55-8 (+B) or 3 (Windshield Wiper Relay) - Body ground	Always	10 kΩ or higher

OK **REPLACE MAIN BODY ECU (MULTIPLEX NETWORK BODY ECU)**

NG ▶ REPAIR OR REPLACE HARNESS OR CONNECTOR

9. INSPECT WINDSHIELD WIPER RELAY

HINT:

Click here [INFO](#)

NG ▶ REPLACE WINDSHIELD WIPER RELAY

OK

10. CHECK HARNESS AND CONNECTOR (WINDSHIELD WIPER RELAY - MAIN BODY ECU (MULTIPLEX NETWORK BODY ECU))

Pre-procedure1

(a) Disconnect the K17 main body ECU (multiplex network body ECU) connector.

Procedure1

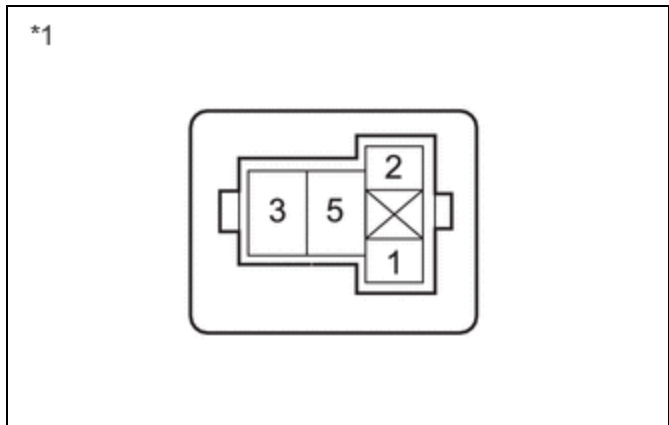
(b) Measure the resistance according to the value(s) in the table below.

Standard Resistance:



[Click Location & Routing\(K17\)](#)

[Click Connector\(K17\)](#)



*1 NO. 1 ENGINE ROOM RELAY BLOCK AND NO. 1 JUNCTION BLOCK ASSEMBLY

TESTER CONNECTION	CONDITION	SPECIFIED CONDITION
2 (Windshield Wiper Relay) - K17-6 (WPS)	Always	Below 1 Ω
2(Windshield Wiper Relay) or K17-6 (WPS) - Body ground	Always	10 kΩ or higher

Result:

PROCEED TO
OK

PROCEED TO
NG

Post-procedure1

(c) None

NG ▶ REPAIR OR REPLACE HARNESS OR CONNECTOR

OK



11. CHECK HARNESS AND CONNECTOR (WINDSHIELD WIPER RELAY - BODY GROUND)

(a) Measure the resistance according to the value(s) in the table below.

Standard Resistance:

TESTER CONNECTION	CONDITION	SPECIFIED CONDITION
1 (Windshield Wiper Relay) - Body ground	Always	Below 1 Ω

OK ▶ REPLACE MAIN BODY ECU (MULTIPLEX NETWORK BODY ECU) INFO

NG ▶ REPAIR OR REPLACE HARNESS OR CONNECTOR

12. CHECK POWER DISTRIBUTION BOX ASSEMBLY

Pre-procedure1

(a) Remove the main body ECU (multiplex network body ECU) from the power distribution box assembly.

HINT:

[Click here](#) INFO

Procedure1

(b) Measure the resistance according to the value(s) in the table below.

Standard Resistance:



[Click Location & Routing\(A12,z1\).](#)

[Click Connector\(A12\).](#)

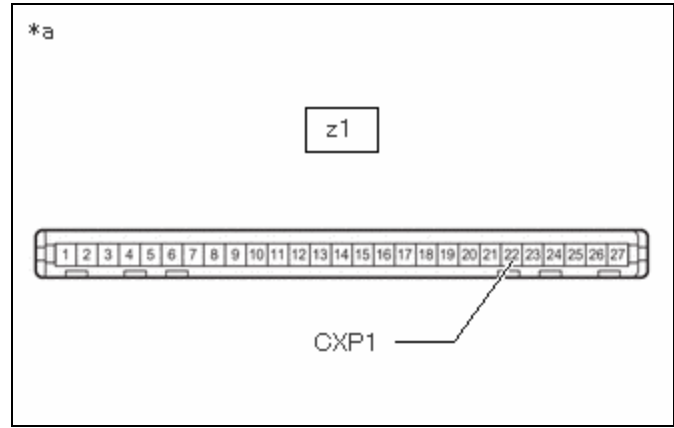
[Click Connector\(z1\).](#)

TESTER CONNECTION	CONDITION	SPECIFIED CONDITION
A12-5 - z1-22 (CXP1)	Always	Below 1 Ω
A12-5 or z1-22 (CXP1) - Body ground	Always	10 kΩ or higher

Result:

Pre-procedure1

PROCEED TO
OK
NG



*a	Component without harness connected (Power Distribution Box Assembly)
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Post-procedure1

(c) None

OK ▶ REPLACE MAIN BODY ECU (MULTIPLEX NETWORK BODY ECU) [INFO](#)

NG ▶ REPLACE POWER DISTRIBUTION BOX ASSEMBLY [INFO](#)

