

<b>Last Modified:</b> 12-04-2024	6.11:8.1.0	<b>Doc ID:</b> RM100000029V4P
<b>Model Year Start:</b> 2023	<b>Model:</b> Prius Prime	<b>Prod Date Range:</b> [12/2022 - ]
<b>Title:</b> WIPER / WASHER: WIPER AND WASHER SYSTEM: B127987; Humidity/Rain Sensor Missing Message; 2023 - 2024 MY Prius Prime [12/2022 - ]		

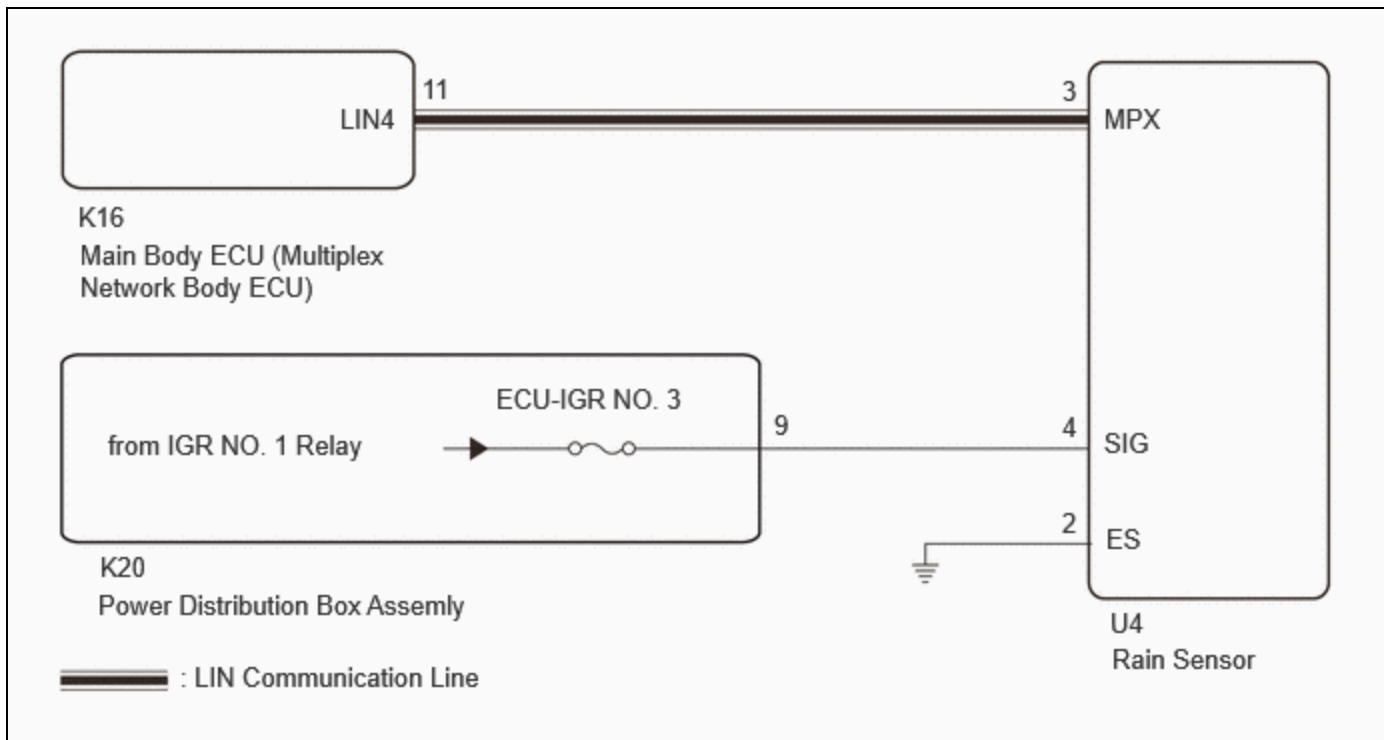
<b>DTC</b>	<b>B127987</b>	<b>Humidity/Rain Sensor Missing Message</b>
------------	----------------	---------------------------------------------

## DESCRIPTION

The main body ECU (multiplex network body ECU) and rain sensor communicate via LIN 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
B127987	Humidity/Rain Sensor Missing Message	<p><b>Detection Condition:</b></p> <p>Auxiliary battery voltage is 9.5 V or more</p> <p><b>Malfunction Status:</b></p> <p>Communication malfunction with rain sensor</p> <p><b>Malfunction Duration:</b></p> <p>10 seconds or more</p>	<ul style="list-style-type: none"> <li>• Rain sensor</li> <li>• Harness or connector</li> <li>• Main body ECU (multiplex network body ECU)</li> </ul>	○	Main Body	A

## WIRING DIAGRAM



## CAUTION / NOTICE / HINT

### NOTICE:

- Inspect the fuses for 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

<b>1.</b>	<b>CHECK FOR DTC</b>
-----------	----------------------

(a) Check for DTCs.

**Body Electrical > Main Body > Trouble Codes**

RESULT	PROCEED TO
Only B127987 is output	A
B127987 and B276C88 are output	B

**B** **GO TO DTC B276C88**

**A**

**2. CHECK HARNESS AND CONNECTOR (MAIN BODY ECU (MULTIPLEX NETWORK BODY ECU) - RAIN SENSOR)**

Pre-procedure1

- (a) Disconnect the K16 main body ECU (multiplex network body ECU) connector.
- (b) Disconnect the U4 rain sensor connector.

Procedure1

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

Standard Resistance:



[Click Location & Routing\(K16,U4\).](#)

[Click Connector\(K16\).](#)

[Click Connector\(U4\).](#)

TESTER CONNECTION	CONDITION	SPECIFIED CONDITION	RESULT
K16-11 (LIN4) - U4-3 (MPX)	Always	Below 1 $\Omega$	$\Omega$

Post-procedure1

- (d) None

**NG** **REPAIR OR REPLACE HARNESS OR CONNECTOR**

**OK**



**3. CHECK MAIN BODY ECU (MULTIPLEX NETWORK BODY ECU)**

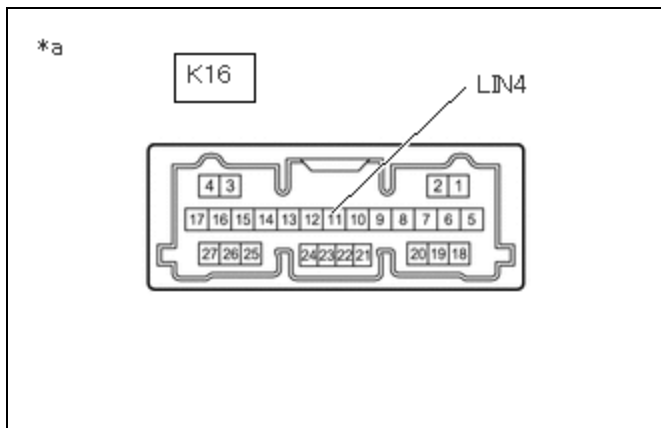
(a) Check for pulses according to the value(s) in the table below.

Standard Pulse:



[Click Location & Routing\(K16\)](#)

[Click Connector\(K16\)](#)



*a	Component without harness connected (Main Body ECU (Multiplex Network Body ECU))
----	----------------------------------------------------------------------------------

TESTER CONNECTION	CONDITION	SPECIFIED CONDITION
K16-11 (LIN4) - Body ground	Ignition switch ON	Pulse generation

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

**OK**

**4. CHECK HARNESS AND CONNECTOR (POWER SOURCE - RAIN SENSOR)**

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

Standard Voltage:



[Click Location & Routing\(U4\)](#)

[Click Connector\(U4\)](#)

TESTER CONNECTION	CONDITION	SPECIFIED CONDITION	RESULT
U4-4 (SIG) - Body ground	Ignition switch ON	11 to 14 V	V

**NG** **REPAIR OR REPLACE HARNESS OR CONNECTOR**

**OK**

**5. CHECK HARNESS AND CONNECTOR (RAIN SENSOR - BODY GROUND)**

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

Standard Resistance:



[Click Location & Routing\(U4\)](#)

[Click Connector\(U4\)](#)

TESTER CONNECTION	CONDITION	SPECIFIED CONDITION	RESULT
U4-2 (ES) - Body ground	Always	Below 1 $\Omega$	$\Omega$

**OK** ► REPLACE RAIN SENSOR

**NG** ► REPAIR OR REPLACE HARNESS OR CONNECTOR

