Last Modified: 12-04-2024	6.11:8.1.0	**Doc ID:** RM100000002A2JP
Model Year Start: 2023	**Model:** Prius Prime	**Prod Date Range:** [12/2022 -]
Title: POWER OUTLETS (INT): WIRELESS CHARGING SYSTEM: Status Signal Circuit; 2023 - 2024 MY Prius Prius Prime [12/2022 -]		

Status Signal Circuit

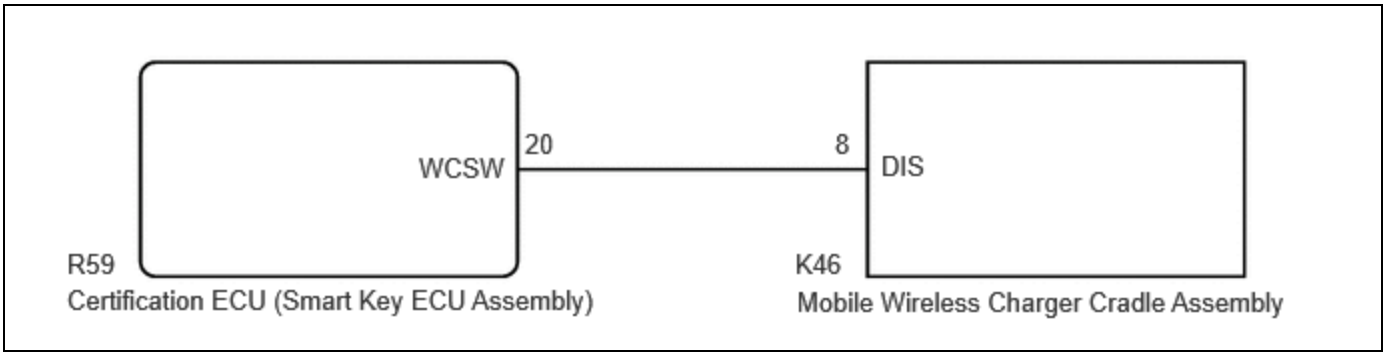
DESCRIPTION

This circuit sends a charging suspension signal from the certification ECU (smart key ECU assembly) to the mobile wireless charger cradle assembly. Based on this signal, the mobile wireless charger cradle assembly suspends or resumes wireless charging.

HINT:

The wireless charging system uses the same radio wave frequency that is used to perform verification of the electrical key transmitter sub-assembly. Therefore, when the electrical key transmitter sub-assembly verification is being performed, the certification ECU (smart key ECU assembly) sends a charging suspension signal to the wireless charging system to suspend charging.

WIRING DIAGRAM



CAUTION / NOTICE / HINT

NOTICE:

Before replacing the certification ECU (smart key ECU assembly), refer to Registration.

Click here INFO

PROCEDURE

1.	**CHECK MOBILE WIRELESS CHARGER CRADLE ASSEMBLY (DIS TERMINAL)**

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

Standard Voltage:

EWD INFO

Click Location & Routing(K46)
Click Connector(K46)

TESTER CONNECTION	CONDITION	SPECIFIED CONDITION
K46-8 (DIS) - Body ground	For 5 seconds after turning ignition switch from off to ACC*1	4.5 to 6.0 V
	Device being charged	Below 1 V
	Charging suspended due to smart key system status*2	4.5 to 6.0 V

*1: When the ignition switch is turned from off to ACC, the mobile wireless charger cradle assembly monitors the charging suspension signal for 5 seconds. If the charging suspension signal is not 4 V or more for 0.8 seconds or more during monitoring, the mobile wireless charger cradle assembly determines that there is an open in the charging suspension signal line, blinks (pattern 1) the indicator light (amber), and prohibits operation until the ignition switch is turned from off to ACC again.
*2: For details about conditions when the certification ECU (smart key ECU assembly) sends the charging suspension signal, refer to System Description.

Click here INFO

OK ▶ **PROCEED TO NEXT SUSPECTED AREA SHOWN IN PROBLEM SYMPTOMS TABLE**

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2.	**CHECK HARNESS AND CONNECTOR (CERTIFICATION ECU (SMART KEY ECU ASSEMBLY) - MOBILE WIRELESS CHARGER CRADLE ASSEMBLY**

(a) Disconnect the R59 certification ECU (smart key ECU assembly) connector.

(b) Disconnect the K46 mobile wireless charger cradle assembly connector.

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

Standard Resistance:

EWD INFO

Click Location & Routing(R59,K46)
Click Connector(R59)
Click Connector(K46)

TESTER CONNECTION	CONDITION	SPECIFIED CONDITION
R59-20 (WCSW) - K46-8 (DIS)	Always	Below 1 Ω
R59-20 (WCSW) or K46-8 (DIS) - Body ground	Always	10 kΩ or higher

OK ▶ **REPLACE CERTIFICATION ECU (SMART KEY ECU ASSEMBLY)** INFO

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