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<b>Model Year Start:</b> 2023	<b>Model:</b> Prius Prime	<b>Prod Date Range:</b> [03/2023 - ]
<b>Title:</b> HYBRID / BATTERY CONTROL: PLUG-IN CHARGE CONTROL SYSTEM (for PHEV Model): Charging Stops before Scheduled Stop Time; 2023 - 2024 MY Prius Prime [03/2023 - ]		

**Charging Stops before Scheduled Stop Time**

**PROCEDURE**

**1. CHECK DTC OUTPUT (HEALTH CHECK)**

(a) Enter the following menus: Health Check.

(b) Check DTCs.

RESULT	PROCEED TO
No DTCs are output	A
DTCs are output	B

**B**  **GO TO DTC CHART**

**A**



**2. CHECK FOR VEHICLE CONTROL HISTORY (RoB)**

(a) Enter the following menus.

**Powertrain > Plug-in Control > Utility**

TESTER DISPLAY
Vehicle Control History (RoB)

(b) Check for Vehicle Control History (RoB) except AC Charging History (X10F0).

**HINT:**

Vehicle Control History (RoB) items AC Charging History (X10F0) is stored each time plug-in charging is performed, and is also stored when plug-in charging completes without error from start to finish.

For this reason, the fact that they are output does not directly indicate any malfunction or problem.

(c) Enter the following menus.

**Powertrain > Hybrid Control > Utility**

TESTER DISPLAY
Vehicle Control History (RoB)

(d) Check for Vehicle Control History (RoB).

RESULT	PROCEED TO
Vehicle Control History (RoB) not stored	A
Vehicle Control History (RoB) stored	B

(e) Turn the ignition switch off.

### **B** ▶ **GO TO VEHICLE CONTROL HISTORY (RoB)**

- PLUG-IN CHARGE CONTROL SYSTEM

Click here [INFO](#)

- HYBRID CONTROL SYSTEM

Click here [INFO](#)

**A**



### **3. SIMULATION TEST (SETTING CHARGE SCHEDULE)**

#### **NOTICE:**

Make sure to use a known good external AC power source.

#### **HINT:**

- When using the stop time setting, if a full charging cannot be completed by the scheduled stop time, charging will start immediately. Also, when the scheduled stop time is reached, if full charging has not been completed, charging will continue.

During reproduction testing, to allow for the time necessary to obtain a full charge, be sure to set a stop time that is sufficiently far into the future when compared to the current time.

- Setting the time:  
Make sure to check that the time setting GPS compensation on the navigation receiver assembly clock setting screen is set to ON. If the setting is OFF, then after turning it ON, move the vehicle to a location where it can receive a GPS signal.

(a) Using the GTS, enter the following menus: Health Check.

(b) Clear DTCs.

(c) Enter the following menus.

**Powertrain > Plug-in Control > Utility**

TESTER DISPLAY
Vehicle Control History (RoB)

(d) Clear all Vehicle Control History (RoB) items.

(e) Enter the following menus.

**Powertrain > Hybrid Control > Utility**

TESTER DISPLAY
Vehicle Control History (RoB)

(f) Clear all Vehicle Control History (RoB) items.

(g) Check that the date and time displayed on the Multimedia Display are correct and adjust them if necessary.

**HINT:**

As timer charging is performed based on the time, year, month and day of the Multimedia Display, make sure that they are set correctly.

(h) Using the Multimedia Display, select the charging mode "Start-Stop" or "Start and stop at set times".

(i) Connect the electric vehicle charger cable assembly to the vehicle and charge the HV battery using the timer charging until the set stop time.

(j) Using the GTS, enter the following menus: Health Check.

(k) Check DTCs.

(l) Enter the following menus.

**Powertrain > Plug-in Control > Utility**

TESTER DISPLAY
Vehicle Control History (RoB)

(m) Check for Vehicle Control History (RoB) except AC Charging History (X10F0).

**HINT:**

Vehicle Control History (RoB) items AC Charging History (X10F0) is stored each time plug-in charging is performed, and is also stored when plug-in charging completes without error from start to finish.

For this reason, the fact that they are output does not directly indicate any malfunction or problem.

(n) Enter the following menus.

**Powertrain > Hybrid Control > Utility**

TESTER DISPLAY
Vehicle Control History (RoB)

- (o) Check for Vehicle Control History (RoB).
- (p) Turn the ignition switch off.
- (q) Disconnect the electric vehicle charger cable assembly.

RESULT	PROCEED TO
DTCs are output	A
Vehicle Control History (RoB) items are output	B
DTCs and Vehicle Control History (RoB) items are not output but timer charging cannot complete by scheduled charging stop time	C
DTCs and Vehicle Control History (RoB) items are not output and charging completed by scheduled charging stop time	D

**A** ► **GO TO DTC CHART**

**B** ► **GO TO VEHICLE CONTROL HISTORY (RoB)**

- PLUG-IN CHARGE CONTROL SYSTEM

Click here [INFO](#)

- HYBRID CONTROL SYSTEM

Click here [INFO](#)

**C** ► **GO TO CHARGING STOPS DURING AC CHARGING**

- D** ► (a) Perform cause analysis in the order of "User Related Cause" and "Environment Related Cause" categories as specified in the following tables.

**HINT:**

Because the objective of the stop time setting is to complete the charging before the scheduled stop time, charging is performed so that charging completes before the configured time.

**User Related Cause**

POSSIBLE CAUSE	ACTION TO BE TAKEN
Timer charging was attempted	Explain to the customer that charging will end if the HV battery is fully

POSSIBLE CAUSE	ACTION TO BE TAKEN
when HV battery was fully charged	charged before scheduled stop time.
Incorrect time, year, month or day set on multi display	Explain to the customer that if the time setting GPS compensation is OFF, the time and date (day of week) information stored by the vehicle may deviate from the real-world values.

**Environment Related Cause**

POSSIBLE CAUSE	ACTION TO BE TAKEN
Timer charging was suspended due to power outage, circuit breaker operation, etc.	Interview customer and provide instruction on usage. <a href="#">CAUSE ANALYSIS (USER / ENVIRONMENT RELATED CAUSE)</a>  Explain to the customer that the timer charging was suspended due to power outage, circuit breaker operation, etc.

(b) Take appropriate action in accordance with the result of the cause analysis.

