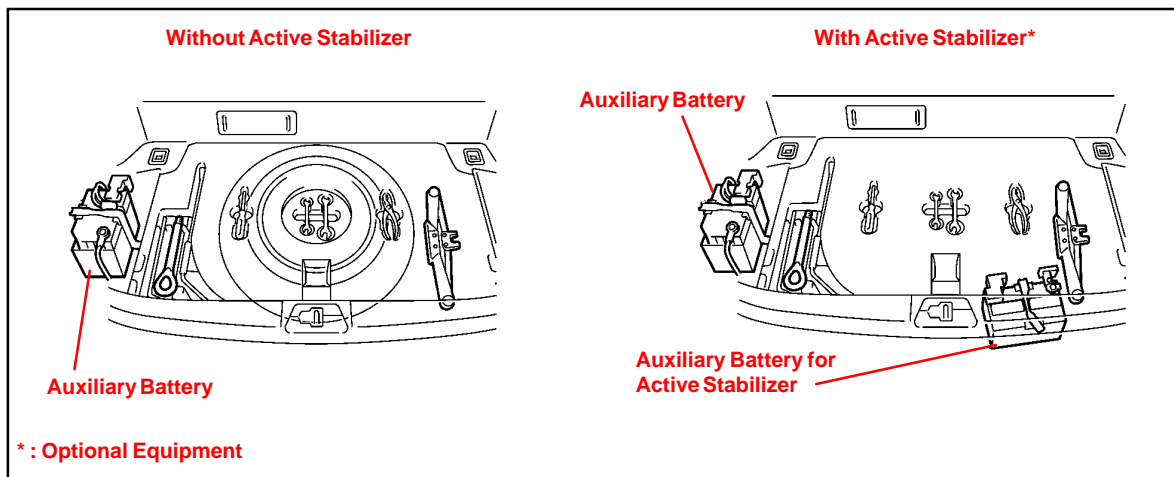


**Introduction** The GS 450h is equipped with 2 types of batteries:

- Hybrid Vehicle (HV) battery
- 12-volt auxiliary battery and 12-volt battery for active stabilizer, if equipped

If the GS 450h is put into storage, the state of charge (SOC) of its HV battery and auxiliary battery(s) will gradually decrease. To prevent the auxiliary battery(s) from deteriorating during storage, proper maintenance is **necessary and required**.

Perform the following maintenance service for the HV battery and 12-volt auxiliary battery(s).



**NOTE:**

- After the auxiliary battery terminals have been reconnected, the power windows, sliding roof, and etc., must be initialized.
- Before disconnecting the auxiliary battery(s), confirm the shift lever is in the “P” position and apply the parking brake completely. The shift lever cannot be shifted from the “P” position with the 12-volt auxiliary battery disconnected.
- If the negative (–) terminal of the auxiliary battery is reconnected, even if the power switch is selected to the “START” mode, the hybrid system may NOT start. In this case, push the power switch to select “START” again to start the hybrid system (the “READY” light is ON). If the hybrid system still does NOT start (the “READY” light is OFF), refer to the Repair Manual.

**Applicable Vehicles**

- 2007 model year **GS 450h** vehicles.

**Warranty Information**

OP CODE	DESCRIPTION	TIME	OFF	T1	T2
N/A	Not Applicable to Warranty	–	–	–	–

**Maintenance Items**

CONDITION*	MAINTENANCE OPERATION
Before Delivery (To Customer)	<b>ONLY</b> fully charge 12-volt auxiliary battery(s) (5 amp max. setting) <b>Quick charge is prohibited.</b> (Deliver the vehicle to the customer after it is fully charged [12.6 V].)
To Store for 30 Days or More	Disconnect the negative (-) terminal of the 12-volt auxiliary batteries in the luggage compartment to prevent the SOC of the auxiliary battery(s) from decreasing during storage due to parasitic current drain.
Just After Unloading & Every 2 Months	Keep the Hybrid System on for a minimum of 30 minutes (in order to charge the HV battery and the auxiliary battery[s]).

\* The condition also corresponds with the section titles within this TSIB.

**Required Equipment**

TOOLS & EQUIPMENT	MANUFACTURER	PART NUMBER
Battery Charger*	Associated	ASE6018 or equivalent

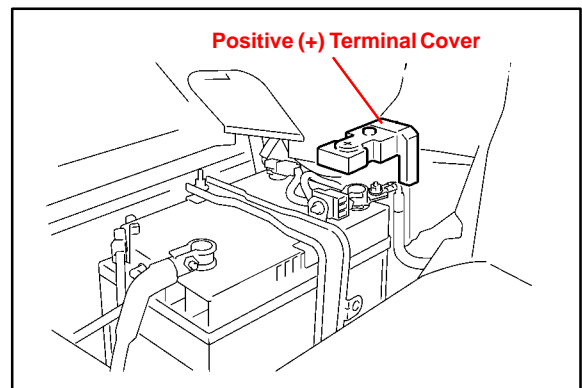
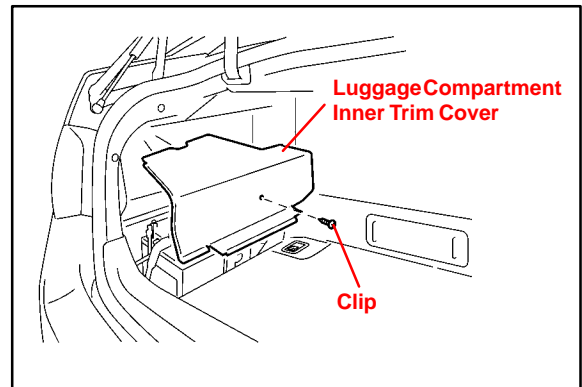
\* The charger MUST have low amp charge capability.

**NOTE:**  
 This equipment can be ordered through the Lexus Approved Dealer Equipment program by calling 1-800-368-6787.

**Before Delivery**

**Fully charge the 12-volt auxiliary battery:**

1. Before charging the auxiliary battery, turn off all lights, accessories, and hybrid system.
2. Open the luggage compartment door.
3. Push the core of the clip and remove the clip.
4. Remove the left side of the luggage compartment inner trim cover.
5. Remove the positive (+) terminal cover.



**Before Delivery**  
(Continued)

**NOTE:**

If the auxiliary battery was stored at 32°F (0°C) or below, charge the auxiliary battery in a room above 32°F (0°C) in the following procedure.

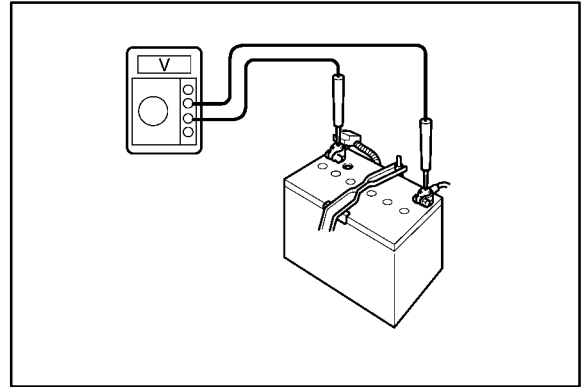
6. Charge the auxiliary battery.

A. Using a digital voltmeter, measure the auxiliary battery voltage between the terminals to determine the charging time.

AUXILIARY BATTERY VOLTAGE	CHARGING TIME**
Above 12.4 V	2 – 3 hours
12.0 – 12.4 V	5 – 6 hours
11.9 V or below	8 – 10 hours*

\* Do NOT charge for over 10 hours.

\*\* Charging time is based on standard 5-amp charge setting (do NOT exceed 5 amps).



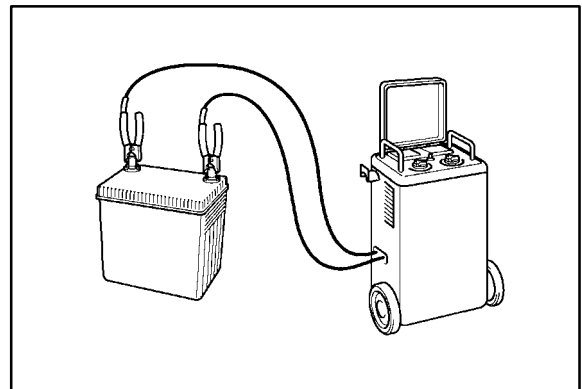
**HINT:**

- If measuring the voltage with the negative (–) terminal connected, push the power switch to select the “OFF” mode, turn OFF all electrical systems and wait 60 seconds or more.
- If the hybrid system has been running before measuring the voltage, wait a minimum of 20 minutes after the hybrid system stops. This removes the surface charge and stabilizes the battery’s SOC.

B. Charge the auxiliary battery at a maximum of 5 amperes for the time determined above.

**CAUTION:**

- Fast charging is NOT recommended on the 12-volt auxiliary battery in order to prevent battery damage.
- Charge in a well-ventilated area.
- Do NOT allow sparks or fire near the auxiliary battery.



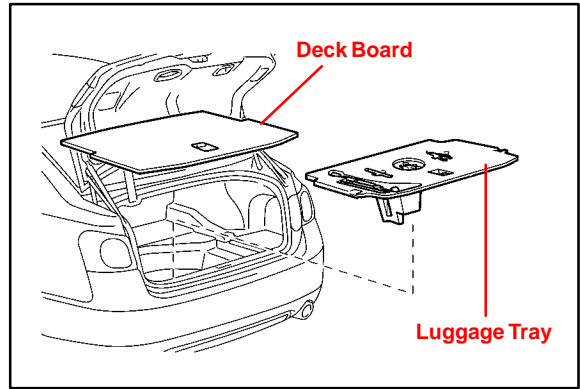
C. After charging, check that the auxiliary battery SOC is 12.6 V or more. If BELOW 12.6 V, recharge the auxiliary battery for the time determined in step 6A above.

7. After charging, reinstall the positive (+) terminal cover and the left side luggage compartment inner trim cover.

**Before Delivery**  
(Continued)

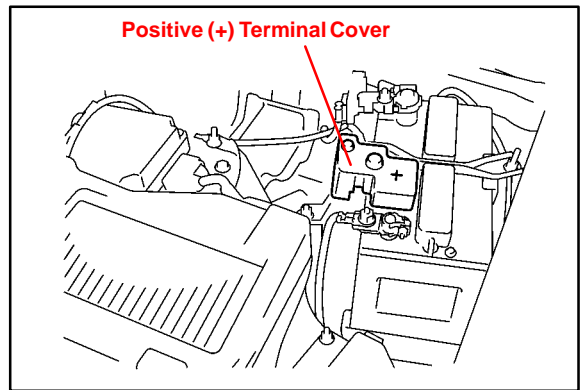
**Fully charge the 12-volt active stabilizer battery (if equipped):**

1. Before charging the active stabilizer battery, turn off all lights, accessories, and hybrid system.
2. Open the luggage compartment door.
3. Remove the deck board and luggage tray.



4. Remove the positive terminal cover.

**NOTE:**  
If the active stabilizer battery was stored at 32°F (0°C) or below, charge the auxiliary battery in a room above 32°F (0°C) in the following procedure.



5. Charge the active stabilizer battery.
  - A. Using a digital voltmeter, measure the active stabilizer battery voltage between the terminals to determine the charging time.

ACTIVE STABILIZER BATTERY VOLTAGE	CHARGING TIME**
Above 12.4 V	2 – 3 hours
12.0 – 12.4 V	5 – 6 hours
11.9 V or below	8 – 10 hours*

\* Do NOT charge for over 10 hours.

\*\* Charging time is based on standard 5-amp charge setting (do NOT exceed 5 amps).

**HINT:**

- If measuring the voltage with the negative (–) terminal connected, push the power switch to select the “OFF” mode, turn OFF all electrical systems and wait 60 seconds or more.
- If the hybrid system has been running before measuring the voltage, wait a minimum of 20 minutes after the hybrid system stops. This removes the surface charge and stabilizes the battery’s SOC.

**Before Delivery**  
(Continued)

- B. Charge the active stabilizer battery at a maximum of 5 amperes for the time determined above.

**CAUTION:**

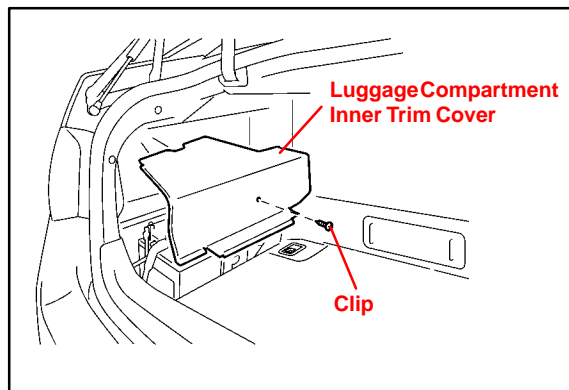
- Fast charging is NOT recommended on the 12-volt active stabilizer battery in order to prevent battery damage.
- Charge in a well-ventilated area.
- Do NOT allow sparks or fire near the active stabilizer battery.

- C. After charging, check that the active stabilizer battery SOC is 12.6 V or more. If BELOW 12.6 V, recharge the active stabilizer battery for the time determined in step 5A above.
- 6. After charging, reinstall the positive (+) terminal cover, the luggage tray, and the deck board.

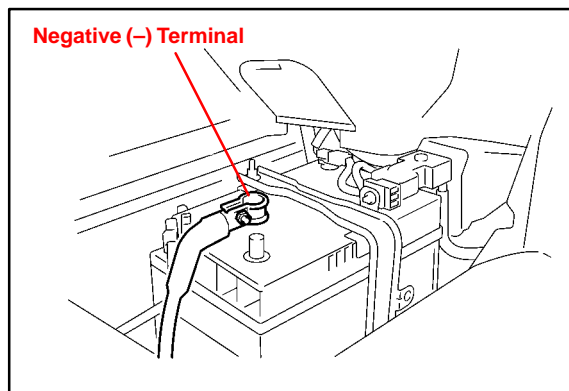
**To Store for 30 Days or More**

**Disconnect the negative (–) terminal on the auxiliary battery:**

1. Turn OFF all lights, accessories, and the hybrid system.
2. Open the luggage compartment.
3. Push the core of the clip and remove the clip.
4. Remove the left side luggage compartment inner trim cover.



5. Disconnect the negative (–) terminal.
6. Reinstall the left side luggage compartment inner trim cover and clip.
7. Close the luggage compartment door.



**NOTE:**  
When necessary to move the vehicle, reconnect the negative (–) terminal.

**Reconnect the negative (–) terminal on the auxiliary battery:**

1. Remove the left side luggage compartment inner trim cover and then reconnect the negative (–) terminal.  
**Torque: 6.0 N•m (61 kgf•cm, 4.4 ft•lbf)**

To Store  
for 30 Days  
or More  
(Continued)

2. Reinstall the left side luggage compartment inner trim cover.

**HINT:**

After recharging the auxiliary battery, the hybrid system may NOT start. Follow the procedure below to initialize the system.

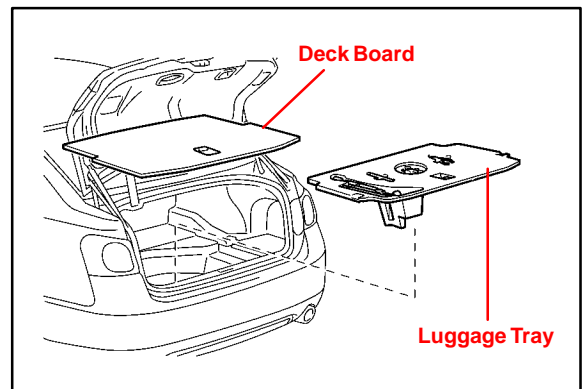
- Put the shift lever to the “P” position.
- Open and close any of the doors.
- Restart the hybrid system.

**NOTE:**

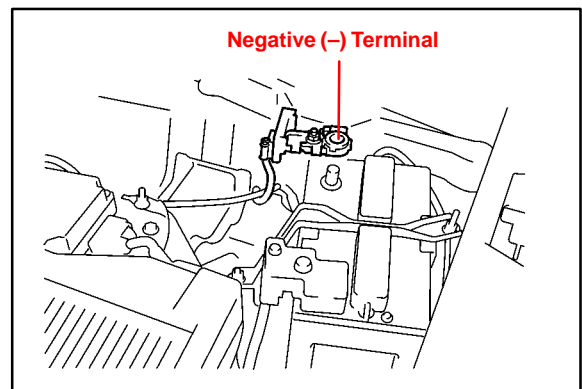
Any time the negative (-) battery terminal has been disconnected, systems requiring initialization may need to be re-initialized after the negative (-) battery terminal has been reconnected.

**Disconnect the negative (-) terminal on the active stabilizer battery:**

1. Turn OFF all lights, accessories, and the hybrid system.
2. Open the luggage compartment.
3. Remove the deck board and luggage tray.



4. Disconnect the negative (-) terminal.
5. Reinstall the luggage tray and deck board.
6. Close the luggage compartment door.



**NOTE:**

When necessary to move the vehicle, reconnect the negative (-) terminal.

**Reconnect the negative (-) terminal on the active stabilizer battery:**

1. Remove the deck board and the luggage tray and then reconnect the negative (-) terminal.

**Torque: 6.0 N•m (61 kgf•cm, 4.4 ft•lbf)**

To Store  
for 30 Days  
or More  
(Continued)

2. Reinstall the luggage tray and deck board.

**NOTE:**

Any time the negative (-) battery terminal has been disconnected, systems requiring initialization may need to be re-initialized after the negative (-) battery terminal has been reconnected.

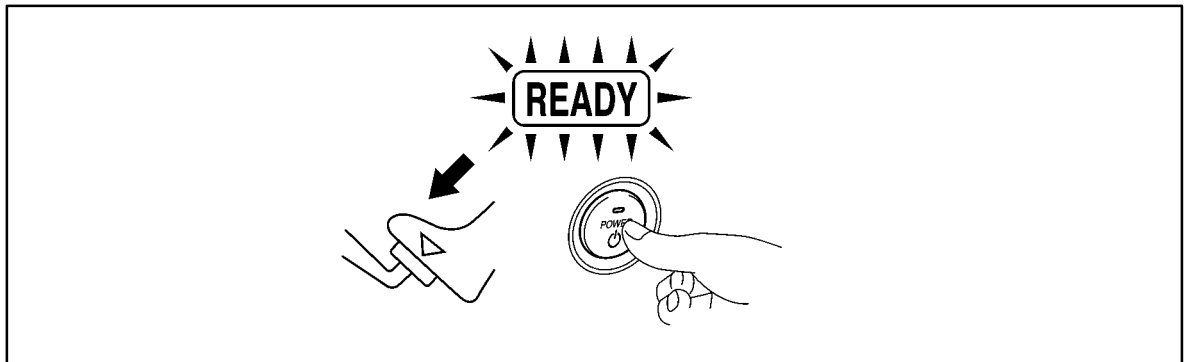
Every Two  
Months

Turn vehicle to “READY” on:

**NOTE:**

When the remaining capacity of the HV battery is low, the gasoline engine automatically starts and the HV battery is charged by the generator. The 12-volt auxiliary battery (and active stabilizer battery, if equipped) is also charged by the HV battery regardless of the gasoline engine operation.

1. Park the vehicle in open air or connect the exhaust extraction hose to the exhaust pipe.
2. Apply the parking brake.
3. With the brake pedal depressed, push the power switch and check that the “READY” light in the combination meter illuminates when the hybrid system starts (the “READY” light is ON).



4. Turn off all lights and accessories.
5. Check that the shift lever is in the “P” position.

Every Two  
Months  
(Continued)

6. Keep the “READY” light ON and charge the HV battery for a minimum of 30 minutes.

**NOTE:**

- If the amount of charging energy is small, the display may not indicate the energy flow.
- The I.C. engine may start at any time while in this mode.

