

*Towing and
Road Service Guide
For The
2010 Lexus HS250H*



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General Towing Information

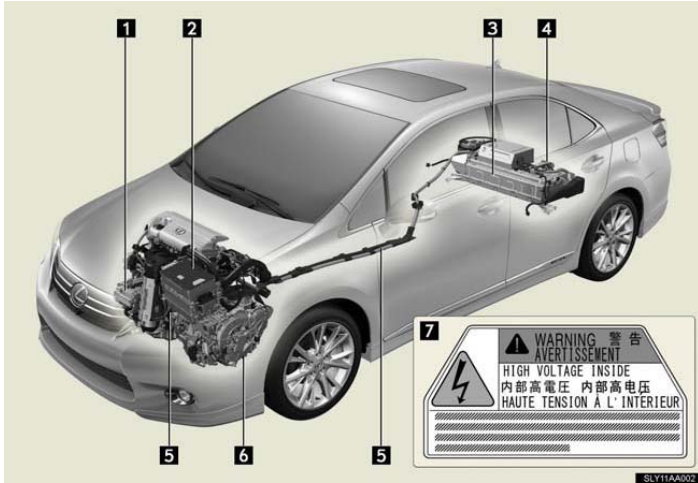
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General Information

The hybrid system combines the use of a gasoline engine and an electric motor (traction motor) according to driving conditions, improving fuel efficiency and reducing exhaust emissions.



1. Air Conditioning Compressor
2. Power Control Unit
3. Hybrid Battery and DC/DC Converter
4. Service Plug
5. High Voltage Cables (Orange)
6. Electric Motor (Traction motor)
7. Caution Label

Take care when handling the hybrid system, as it contains a high voltage system (about 650V at maximum) as well as parts that become extremely hot when the hybrid system is operating. Obey the caution labels attached to the vehicle.

Sounds and vibrations specific to a hybrid vehicle:

There may be no engine sounds or vibration even though the vehicle is able to move.

Always change the shift position to P when parked.

The following sounds or vibrations may occur when the hybrid system is operating and are not a malfunction:

- Sounds may be heard from the hybrid battery (traction battery) behind the rear seats when the hybrid system starts or stops.
- Motor sounds may be heard from the engine compartment.
- Sounds from the hybrid system may be heard when the trunk lid is open.
- Sounds may be heard from the transaxle when the hybrid system starts or stops, or while the vehicle is idling.
- Engine sounds may be heard when accelerating sharply.
- Sounds may be heard due to regenerative braking when the brake pedal is depressed and accelerator is loosened.
- Other sounds, such as motors and mechanical noises, may be heard from the brake system when the brake pedal is depressed.
- Vibration may be felt when the gasoline engine starts or stops.
- Cooling fan sounds may be heard from the air intake vent on the side of rear left seatback. When driving in Eco mode, the fan noise may be louder than when driving normally.

GENERAL TOWING INFORMATION

EQUIPMENT AVAILABILITY:

- To eliminate the need to remove the eye bolt from the vehicle's tool kit during loading or recovery, a screw-in eyebolt is available from any authorized Lexus dealer's parts department.



Towing Eyebolt Part number 5196148202

- The towing and tie-down equipment discussed in this guide is available through AW Direct, a preferred AAA supplier. Contact your local AAA club representative for special offers available to AAA contractors.

SPECIAL PRECAUTIONS:

- The HS250H **does not** have a locking steering column.
- If the vehicle needs to be towed, do so with front wheels raised. If the wheels connected to the electric motor (traction motor) are on the ground when towing, the motor may continue to generate electricity. This may cause an electricity leakage leading to a fire.
- Wheel-lift or car carrier equipment are authorized methods of towing this vehicle. A car carrier is the preferred method of transporting. **THERE IS NO APPROVED PROCEDURE FOR THE USE OF SLING-TYPE EQUIPMENT ON THIS VEHICLE.**
- When loading or pulling the HS250H, **DO NOT USE HOOKS OF ANY TYPE ON THE LOWER CONTROL ARMS.** Follow only the approved loading procedures specified in the following pages and listed in the AAA Towing & Service manual.
- In an emergency situation where the vehicle will not roll or must be moved for towing access, wheel-jacking equipment, such as Go-Jacks are recommended.

Shifting out of Park and into Neutral:

The vehicle may be shifted out of **Park** into **Neutral** by turning the ignition-on and READY-on modes. To select **Neutral**, it is necessary to hold the shift selector in the **N** position for approximately 0.5 seconds.

If the 12 Volt auxiliary battery is discharged, the vehicle will not start and shifting out of park is not possible. **There is no manual override to shift out of Park, except to jump start the vehicle.**

CAR CARRIER LOADING AND TRANSPORTING:

The use of car carrier equipment is the preferred method of transporting the new Lexus, HS250H vehicle.

Note: The curb weight for the HS250H is 3,770 lbs/1,710 kg

The HS250H has a moderate amount of ground clearance at front and rear. Loading onto a conventional car carrier may require additional ramping in some circumstances. However, clearance at the trailing end of the vehicle should always be monitored as it is loaded.

The towing eye bolt should be used for front loading of the HS250H. The eye bolt is located in the tool tray located in the center of the floor in the trunk area (See Figure 1).



Figure 1

If the towing eye bolt is missing or otherwise inaccessible, the tie-down slots on the undercarriage can be used to load the vehicle.

NOTE: Use a plastic trim tool or a plastic card, such as an old credit card to avoid damaging the painted surface when removing the plug from the bumper to gain access to the eyebolt receiver. The eyebolt on this model has RIGHT-HAND THREADS. Screw the eye bolt clockwise into the front pull point and attach the winch line to the eyebolt with the open side of the hook facing upward (See Figure 2 and 3).



Figure 2



Figure 3

Before loading, ensure that the transmission is in "Neutral" and the ignition switch is in position to unlock the steering. When loading, remember that the eye bolts are designed for a straight ahead pull within a 20 degree window, so stop the vehicle as the winch wire rope begins to pull downward. To prevent too much downward pull you will need to keep the leading edge of the HS250H about 3 feet or more from the winch drum

Once loaded, set the parking brake and secure the vehicle onto the carrier.

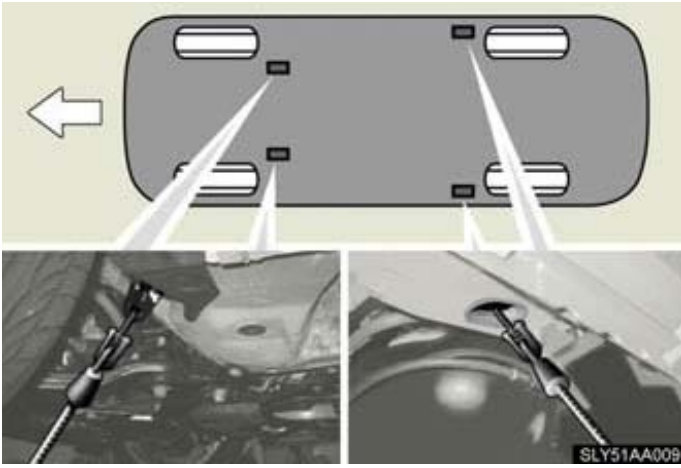


Figure 4 (Tie down points)

NOTE: Lexus states that the four tie-downs slots in the frame can be used to secure the vehicle. Slots are provided in the frame to take either “T” or “mini-J” type hooks. (See Figure 4). If you use chains or cables to tie down your vehicle, the angles shaded in black must be 45°.

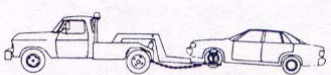
Do not overly tighten the tie downs or the vehicle may be damaged AAA recommends the use of wheel strap tie-downs around each wheel.

After securing, return the bed to the transporting position, then slacken the winch wire rope slightly to prevent downward pull on the towing eye bolt as bumps are encountered during transport. Make sure that the ignition is in the OFF position and the smart key is located in the cab of the tow vehicle.

WHEEL-LIFT TOWING PROCEDURE:

If a wheel-lift is used, the procedures shown below must be used. Refer to the AAA/CAA Tow and Service Manual for detailed information regarding towing this vehicle. Follow all general towing precautions.

Front Tow:



To tow HS250H with a wheel-lift from the front of the vehicle, observe the following:

- Secure the front wheels firmly to the wheel-lift
- Use a steering wheel securing device.
- Attach safety chains and tow lights to the vehicle.
- Ensure that the ignition is turned OFF to prevent unnecessary battery drain and smart key is removed from the vehicle and placed in the cab of the tow vehicle.

Rear Tow:



To tow HS250H with a wheel-lift and dolly, observe the following:

- Secure the rear wheels firmly to the wheel-lift and the front set of wheels firmly to the dolly.
- After loading the HS250H onto the dolly and wheel-lift, place the transmission in Park and set the parking brake.
- Use a steering wheel securing device.
- Attach safety chains and tow lights to the vehicle.
- Ensure that the ignition is turned OFF to prevent unnecessary battery drain and smart key is removed from the vehicle and placed in the cab of the tow vehicle.

Note: the HS250H does not have a locking steering column .

EMERGENCY ROAD SERVICE PROCEDURES

JACKING/TIRE SERVICE:

The jack supplied with the HS250H is located in the tool tray in the center of the trunk (See Figure 5).



Figure 5

The approved lifting locations are on the pinch weld or rocker sills, located inboard of the wheels.

Observe all standard jacking precautions and ensure that the vehicle is on firm, level ground and the chock the wheel diagonal from the one you will be raising. Prior to jacking the vehicle, loosen the lug nuts. As the jack comes in contact with the vehicle body, ensure that it is contacting the correct location on the vehicle (See Figure 6). Continue lifting to raise the vehicle high enough to change the tire. Clean all debris or rust from the tire mounting surfaces. Use a rag and or wire brush (Figure 7).

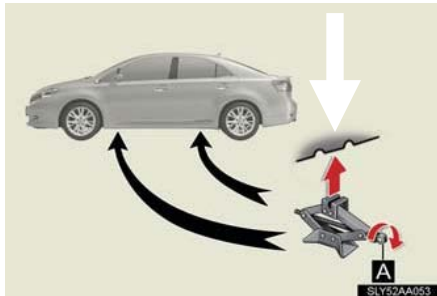


Figure 6



Figure 7

Install the spare tire and tighten lug nuts until they contact the tapered portion of the rim then lower the vehicle. Firmly tighten each wheel nut two or three times in the order shown in the illustration below (Figure 8).

Lug Nut Tightening Specification: Tightening torque: 76 ft•lbs/103 N•m, / 10.5 kgf•m

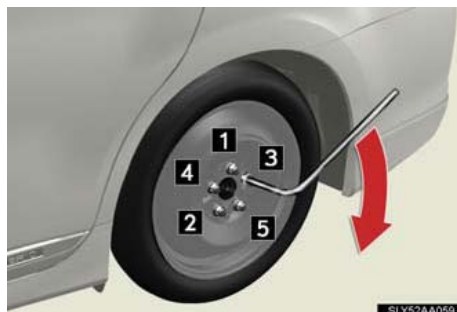


Figure 8

When using the compact spare tire:

As the compact spare tire is not equipped with a tire pressure warning valve and transmitter, low inflation pressure of the spare tire will not be indicated by the tire pressure warning system. Also, if you replace the compact spare tire after the tire pressure warning light comes on, the light remains on.

CAUTION: Before mounting the spare tire on the vehicle, ensure that the rim and axle mounting surfaces are clean and free from dirt and corrosion. If the spare rim is badly corroded, mounting the spare on the vehicle is not recommended. Instead, transport the vehicle to a repair facility to have the problem corrected.

After completing the tire change

The tire pressure warning system must be reset.

How to initialize the tire pressure warning system:

1. Park the vehicle in a safe place and turn the “POWER” switch off. Initialization cannot be performed while the vehicle is moving.
2. Adjust the tire inflation pressure to the specified cold tire inflation pressure level. Make sure to adjust the tire pressure to the specified cold tire inflation pressure level. The tire pressure warning system will operate based on this pressure level.
3. Turn the “POWER” switch to ON mode.
4. Press and hold the tire pressure warning reset switch until the tire pressure warning light flashes slowly 3 times and the message “TIRE PRESSURE RESET PROCEEDING” appears on the multi-information display.



5. Wait for a few minutes with the “POWER” switch in ON mode and then turn the “POWER” switch off.

OUT OF FUEL SERVICE:

The fuel filler is located on the left-hand (driver's) side of the vehicle's rear quarter panel and is covered by a locking door. A button on the lower left side of the dash opens the fuel filler door (Figure 8 and 9).



Figure 9



Figure 10

Electric fuel door opener:

The HS250h is equipped with an electric fuel door opener. In the event of 12 Volt power loss, the fuel door can only be opened using the manual release located inside the trunk (Figure 10).

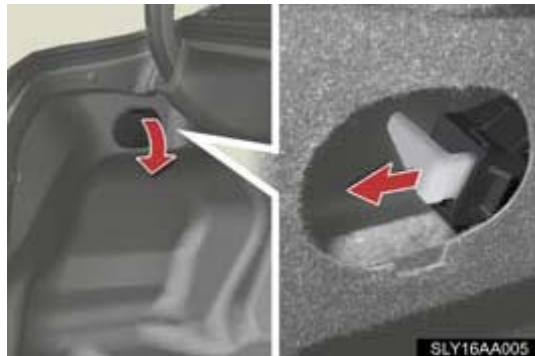


Figure 10

Running out of fuel:

When the vehicle has run out of fuel and the hybrid system cannot be started, refuel the vehicle with at least enough gasoline to make the low fuel level warning light, go off. If there is only a small amount of fuel, the hybrid system may not be able to start. (The minimum amount of fuel to add to make the low fuel level warning light go out is more than **2.6 gal**, when the vehicle is on a level surface. This value may vary when the vehicle is on a slope.)

NOTE: If the HS250H runs out-fuel (warning light is on) and the engine quits running, add fuel to the vehicle and try to start the engine (as long as the READY light is ON) if the READY light is not illuminating. The vehicle MUST go to the Lexus dealer for service. If the READY light does not illuminate, multiple attempts to start the vehicle may have been performed prior to adding fuel, and the vehicle will not start, even if fuel is added.

BATTERY & JUMP-STARTING:

The Lexus HS250H battery is located in the passenger side of the trunk, behind the rear passenger seat. However to perform jump-starting procedures, **use the dedicated jump post** located in the under-hood fuse panel (Figure 11 & 12).

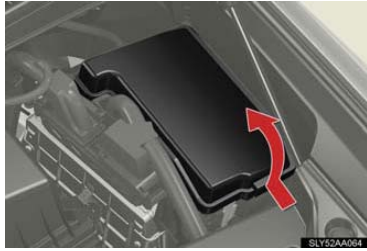


Figure 11

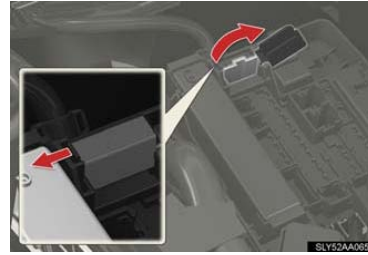


Figure 12

The following jump-starting procedures should be followed when rendering assistance to a Lexus HS250H:

- Never use jump-starting equipment that can exceed normal 12-volt charging system voltage.
- Ensure that all electrical accessories and the ignition are OFF and the all key fobs are at least 10 feet away from the vehicle before connecting jumper cables or a jumper box to the discharged vehicle.

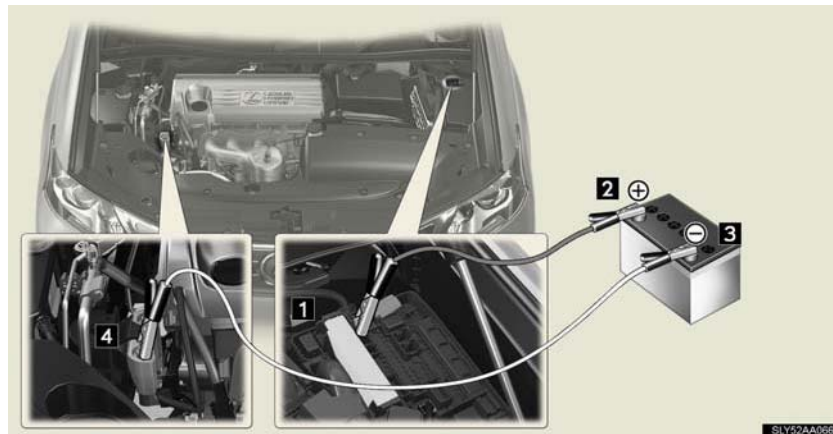


Figure 13

Connect cables to the designated locations and in the order shown above 1-4. Disconnect cables in reverse order:

- Connect a positive jumper cable clamp to the exclusive jump starting terminal on your vehicle. Note that only one side of the connector is conductive, the other side is insulated with plastic. Connect the cable so the voltage side (where the clamp connects to the cable) connects to the conductive metal contact side.
- Connect the clamp on the other end of the positive cable to the positive (+) battery terminal on the second vehicle
- Connect a negative cable clamp to the negative (-) battery terminal on the second vehicle
- Connect the clamp at the other end of the negative cable to a solid, stationary, unpainted metallic point away from the exclusive jump starting terminal and any moving parts, as shown (Figure 13).

(Jump-starting continued)

- Start the engine of the second vehicle. Increase the engine speed slightly and maintain that level for approximately 5 minutes to recharge the 12-volt battery of your vehicle.
- Maintain the engine speed of the second vehicle and start the hybrid system of your vehicle by turning the “POWER” switch to ON mode.
- Make sure the “READY” indicator comes on. If the indicator does not come on, contact your Lexus dealer.
- Once the hybrid system has started, remove the jumper cables in the exact reverse order from which they were connected.

After recharging/reconnecting the 12-volt battery:

Unlocking the doors using the smart key system may not be possible immediately after disconnecting the 12-volt battery. If this happens, use the wireless remote control or the mechanical key to lock/unlock the doors.

Start the hybrid system with the “POWER” switch in ACCESSORY mode. The hybrid system may not start with the “POWER” switch turned OFF. However, the hybrid system will operate normally from the second attempt.

The “POWER” switch mode is recorded by the vehicle. If the battery is reconnected, the vehicle will return the “POWER” switch mode to the status it was in before the battery was disconnected. Make sure to turn off the power before disconnect the battery. Take extra care when connecting the battery if the “POWER” switch mode prior to discharge is unknown.

Caution: When recharging the 12-volt battery Never recharge the 12-volt battery while the hybrid system is operating. Also, be sure all accessories are turned off.

Starting with a dead key fob battery:



- Depress and hold the brake pedal
- Hold the Lexus emblem side of the key fob next to the Power Button allowing system to recognize the key fob
- Depress and hold the start button

Emergency Start Function:

When the hybrid system does not start, the following steps can be used as an interim measure to start the hybrid system if the “POWER” switch is functioning normally:

1. Set the parking brake.
2. Turn the “POWER” switch to ACCESSORY mode.
3. Press and hold the “POWER” switch for about 15 seconds while depressing the brake pedal firmly.

Even if the hybrid system can be started using the above steps, the system may be malfunctioning.