

TITLE: Karma Revero Long Term Storage Guide

DATE: April 2017

INTRODUCTION:

Long term storage of a vehicle can affect its systems and components and will require special requirements and regular maintenance to ensure the vehicle is stored properly. Use the following guidelines to extend the life of the vehicle and minimize any issues that can be caused by long term storage.

BATTERY:

The Karma is equipped with two separate types of batteries:

- 12 Volt Auxiliary Battery
- High Voltage (HV) Battery

The 12 volt and HV battery's SOC (State of Charge) will gradually decrease over time when the vehicle has been put in storage. To prevent the 12 volt battery from discharging while in storage, it must be properly maintained.

12 Volt Battery

– Before storing the vehicle, the 12 volt battery should be fully charged. Use an approved battery maintainer/charger with a setting for charging AGM (Absorbed Glass Mat) batteries to limit charging to 14.8 volts. If an approved charger is not available, turn the vehicle ON to READY mode for a minimum of 30 minutes with all accessories and loads turned off to charge the auxiliary battery. Although 12 Volt maintenance is available on Reveros, the State of Charge of the HV battery may contribute to effectiveness.

NOTE: Before disconnecting the 12 volt battery, the vehicle should be placed in PARK. The parking brake should NOT be applied.

– If storing the vehicle for 30 days or longer, it is recommended to disconnect the Negative (-) 12 volt battery cable for the duration. Alternatively, a battery tender can be connected to the battery.

NOTE: If using a battery maintainer, it should have the capability to charge AGM (Absorbed Glass Mat) style batteries to prevent overcharging and damaging the battery.

– Remember to reconnect the 12 volt battery when the vehicle is taken out of storage.

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High Voltage Battery:

- The high voltage battery should be stored with an approximate SOC between 40% - 60%.
- Store the vehicle in an environment between 14°F (-10°C) and 86°F (30°C)

NOTE: Do not leave the vehicle plugged into an external HV battery charger when the vehicle is being stored.

NOTE: Storing the vehicle at extreme temperatures can cause damage to both the 12 volt and the high voltage battery.

TIRES:

Vehicles that will be parked for long periods of time without moving should have the tire inflation pressures increased to prevent flat spots from forming on the tires that can occur when stored at normal inflation pressures.

- Tire inflation specification for storage purposes only: 45 psi
- When the vehicle is removed from storage, tire pressures should be reset to the proper inflation pressures specified on the Tire and Loading information label located on the driver's side center door post



45 PSI

in Storage Pressures

45 PSI

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AIR CONDITIONING SYSTEM:

To ensure the A/C system remains properly lubricated and functional when removed from storage, it is essential to perform regular maintenance while the vehicle is stored.

- Reconnect the 12 volt battery Negative (-) cable if disconnected
- Turn the vehicle ON to READY mode
- In the climate control settings, turn the A/C system ON with the blower speed set to 10
- The Air/Mix Blend doors should be set to Recirculation
- Leave the A/C running for a minimum
- Return vehicle to storage

BI-MONTHLY MAINTENANCE PROCEDURES FOR VEHICLES IN STORAGE:

Every two months while the vehicle is in storage, perform the following regular maintenance:

NOTE: *If the 12 volt battery has been disconnected; use the mechanical key to open the right-front door and gain entry to the vehicle.*

- Open the hood and reconnect the Negative (-) 12 volt battery cable connector.
- Depress the brake pedal and press the Start/Stop Button to power the vehicle ON to READY mode.
- Calibrate the parking brake by applying and then releasing the parking brake.
- Keep the vehicle in READY mode for a minimum of 30 minutes to charge the 12 volt battery.

NOTE: *If the HV battery SOC is low or if the 12 volt battery has been disconnected, the engine may start to maintain the HV battery SOC or for normal diagnostic purposes. Ensure there is enough fuel in the gas tank to run for 30 minutes and that the storage location is properly ventilated.*

- Deflate the tire pressures to the specifications listed on the Tire and Loading information label located on the driver's side center door post.
- Drive the vehicle at least 30 feet so that a different portion of the tread contacts the ground.
- While driving the vehicle, use the brakes normally; stopping from about 30 mph at least 20 times to prevent rust build up on the brake rotors and to prevent unwanted brake vibrations from rust build up.



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Returning the vehicle to storage:

When the vehicle is ready to be put back into storage, perform the following:

- Change the HVAC vent controls to recirculation mode.
- Charge HV battery until the SOC is between 40% - 60%.
- Disconnect HV charger from vehicle.
- Release the parking brake if applied.
- Verify vehicle is in Park, the key FOBs have been removed from the vehicle, and all windows have been rolled up.
- Disconnect 12 volt battery Negative (-) cable or connect an approved AGM compatible battery maintainer to the 12 volt battery.
- Reinflate tire pressure to storage specifications (45 psi).

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