Battery Electric Vehicle (BEV) -12v Batteries Dying Prematurely - Truck Will Not Key And/Or Driveline Will Not Engage

After programming the Hybrid Powertrain Control Unit (HPCU) or if incorrectly set in production, the Automatic Traction Voltage System Activation (ATVSA) is set to OFF which results in premature discharge of 12v batteries.

To correct:

Connect Tech Tool and run calibration function **3650-05-03-01**(ATVSA calibration) and verify it is Enabled.

If Disabled:

Follow the prompts in Tech Tool to change to Enabled. After that is Enabled, the truck should now charge 12v batteries correctly.

Please refer to **CBR-2184** for the proper charging procedures.

When Parking

When parking the truck, it is important to take into account:

- The length of the parking period
- The ambient temperature during the parking period
- The current state of charge of the traction batteries

To have sufficient battery capacity after parking is completed and also to prolong the traction batteries life time, it is important to follow the guidelines.

Daily parking, up to 8 hours

Check the State Of Charge (SOC) (SOC must be minimum 50%). If the State Of Charge (SOC) is less than the minimum, charge the traction batteries to 50% and disconnect the charger from truck before parking.

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Do not disconnect the 12v batteries. **Do not turn-off the chassis switch.**

Or

Connect the charger to the truck during parking. Do not disconnect the 12v batteries. **Do not turn-off the chassis switch.**

Weekend parking, 1-2 days

Check the State Of Charge (SOC) (SOC must be minimum 75%). If the State Of Charge (SOC) is less than the minimum, charge the traction batteries to 75% and disconnect the charger from truck before parking. Do not disconnect the 12v batteries. **Do not turn-off the chassis switch.**

Or

Connect the charger to the truck during parking. Do not disconnect the 12v batteries. **Do not turn-off the chassis switch.**

Longer parking, up to one week Ambient Temperature above -10°C (14° F):

Check the State Of Charge (SOC) (SOC must be minimum 100%). If the State Of Charge SOC is less than the minimum, charge the traction batteries to 100% and disconnect the charger from truck before parking. Do not disconnect the 12v batteries. Do not turn-off the chassis switch.

Or

Connect the charger to the truck during parking. Do not disconnect the 12v batteries. **Do not turn-off the chassis switch.**

Ambient Temperature below -10°C (14° F):

Check the State Of Charge (SOC) (SOC must be minimum 100%). If the State Of Charge SOC is less than the minimum, charge the traction batteries to 100% and disconnect the charger from truck before parking. Do not disconnect the 12v batteries. **Do not turn-off the chassis switch.** Check the State Of Charge SOC of the traction batteries once in every two days and charge the traction batteries if the State Of Charge (SOC) is less that 50%.

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Note: Do not connect the charger to the vehicle during parking when the ambient temperature is below -10°C (14° F).

To restart the vehicle after a week long parking at ambient temperature of below -10°C (14° F):

- Ensure that the chassis switch is on position and connect the charger to the vehicle at least 12 hours before operation.

Longer parking, more than one week

Check the State Of Charge (SOC) (SOC must be minimum 20%). If the State Of Charge (SOC) is less than the minimum, charge the traction batteries to 20% and disconnect the charger from truck before parking. Turn-off the chassis switch and disconnect the 12v batteries. If possible, avoid parking at hot environment.

To restart the vehicle after a long parking:

- Connect the 12v batteries.
- Turn the chassis switch to on position and connect the charger to charge the traction batteries before starting the vehicle operation.

To restart the vehicle after a week long parking at ambient temperature of below -10°C (14 ° F):

- Connect the 12v batteries.
- Turn the chassis switch to on position and connect the charger to the vehicle at least 12 hours before operation.

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