DESCRIPTION AND OPERATION > CHARGING SYSTEM - 2.7L ECOBOOST (238KW/324PS) - OVERVIEW > OVERVIEW

The generator is driven by the FEAD belt. When the engine is started, the generator begins to generate AC voltage which is internally converted to DC voltage. The DC voltage level is controlled by the voltage regulator (located on the rear of the generator) and is supplied to the battery.

The PCM controls the voltage regulation setpoint and communicates this information to the generator internal voltage regulator over a generator communication (GENCMD) communication circuit. The PCM receives generator load and error conditions from the generator over the generator monitor (GENMON) circuit.

This vehicle is equipped with a load shed strategy. The BCM uses the battery monitoring sensor to monitor the battery state of charge and condition. The battery monitoring sensor is attached to the negative battery post.

The PCM adjusts the engine idle stability and torque control using information from the generator current sensor.

DESCRIPTION AND OPERATION > CHARGING SYSTEM - 3.5L DURATEC (209KW/284PS)/3.5L ECOBOOST (209KW/284PS)/5.0L 32V TI-VCT - OVERVIEW > OVERVIEW

The generator is driven by the FEAD belt. When the engine is started, the generator begins to generate AC voltage which is internally converted to DC voltage. The DC voltage level is controlled by the voltage regulator (located on the rear of the generator) and is supplied to the battery.

The PCM controls the voltage regulation setpoint and communicates this information to the generator internal voltage regulator over a generator communication (GENCMD) communication circuit. The PCM receives generator load and error conditions from the generator over the generator monitor (GENMON) circuit.

This vehicle is equipped with an Electrical energy management system (load shed strategy). With the engine off, the BCM monitors the battery state of charge using the battery current sensor. With the engine running, the PCM monitors system voltage on the VPWR circuits and PSCM load.

The PCM monitors the generator current using the generator current sensor attached to the generator B+ battery cable. The information supplied to the PCM from the generator current sensor is used by the PCM to adjust the engine idle stability and torque control.

DESCRIPTION AND OPERATION > CHARGING SYSTEM - 2.7L ECOBOOST (238KW/324PS) - SYSTEM OPERATION AND COMPONENT DESCRIPTION

System Operation