

OPERATION

With the ignition key in the RUN position, voltage is applied through the charge indicator 'I' circuit to the voltage regulator. This turns on the regulator and the indicator. When the engine is started, the generator begins to generate alternating (AC) current which is converted to direct (DC) current by the rectifier assembly internal to the generator. This current is then supplied to the vehicles electrical system through the generator Battery Positive Voltage (B+) connection located on the rear of the generator.

Once the generator begins generating current, a voltage signal is taken from the generator stator and fed back to the regulator warning circuit, turning off the charge indicator.

With the system functioning normally, the generator output current is determined by the voltage of the 'A' circuit (battery sense voltage). The 'A' circuit voltage is compared to a set voltage internal to the regulator, and the regulator controls the generator field current to maintain proper generator output. The set voltage will vary with temperature and is typically higher in the winter than in the summer, allowing for better battery recharge in the winter and reducing the chance of overcharging the battery in the summer.



Circuit Description

Battery Positive Voltage (B+) Output

The generator output is supplied through the Battery Positive Voltage (B+) output connection to the battery and electrical system.

'I' Circuit

The 'I' circuit, or ignition circuit, is used to turn on the voltage regulator. This circuit is powered up with the ignition key in the RUN position. This circuit is also used to turn the indicator on if there is a fault in the charging system operation or associated wiring circuits.