# SECTION 14-02A Generator, Integral Rear Mount Regulator—Internal Fan Type



## VEHICLE APPLICATION

Taurus / Sable Vehicles with 3.0L and 3.8L EFI Engines.

## DESCRIPTION AND OPERATION

The electrical charging system is a negative ground system consisting of an integral generator / voltage regulator (IGR), charge indicator, storage battery, and the necessary wiring and cables. Refer to the Electrical and Vacuum Troubleshooting manual for schematics and locations of components and wiring.

With the ignition key in the RUN position, voltage is applied through the charge indicator lamp 'I' circuit to the voltage regulator. This turns the regulator on allowing current to flow from the battery sense 'A' circuit to the generator field coil. 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 vehicle's electrical system through the output connector Battery Positive Voltage (B+) 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 'S' circuit, turning off the charge indicator.

With the system functioning normally, the generator output current is determined by the voltage at 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.