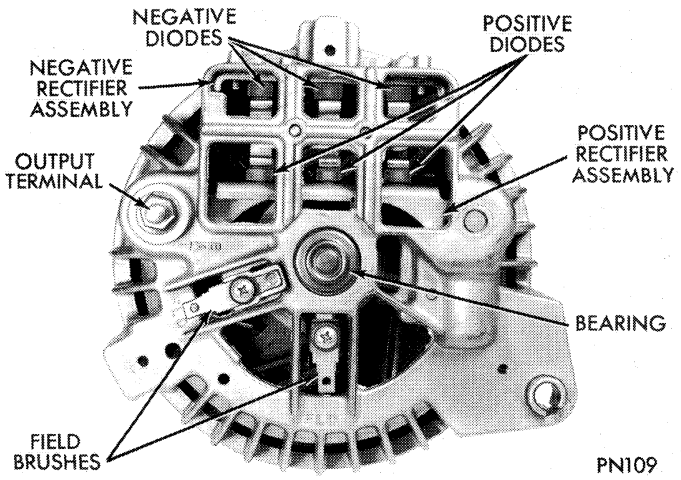

Fig. 2—Alternator Assembly

con rectifiers, that convert AC current into DC current. Current at the "Output" terminal is DC.

The main components are the rotor, stator, rectifiers, end shields and pulley.

The alternator is Chrysler designed and manufactured and is capable of supplying 100 amperes. The alternator is installed with three polypropylene oxide rubber isolation mounts. This type of rubber has good heat resistance and low temperature qualities combined with good sound and vibration characteristics.

Regulator Operation

The electronic voltage regulator is a device that regulates the vehicle electrical system voltage by limiting the output voltage that is generated by the alternator. This is accomplished by controlling the amount of current that is allowed to pass through the alternator field winding. The electronic voltage regulator has no moving parts and requires no adjustment after it is set internally at the factory. There are several semiconductor components, transistors and diodes, in the regulator plus some resistors and a capacitor. Basically the electronic regulator operates as a voltage sensitive switch. There is a large transistor which is placed in series with the alternator field winding and a control circuit that senses the system voltage and turns the large transistor on and off as load conditions change, the control circuit is turning the transistor on and off many times per second most of the time that the vehicle is in operation. The only time that the transistor is not turning on and off rapidly is during low engine speed operation when high electrical loads are present and require that the alternator field be in the on state continuously. One required. As alternator speed and electrical system other important feature of the electronic regulator is the ability of its control circuit to vary the regulated system voltage up or down as the temperature changes. This provides the best charging conditions for the battery throughout the seasons of the year.

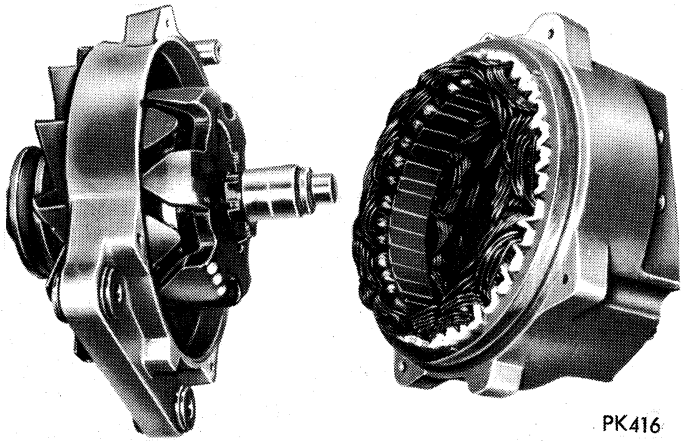

Fig. 3—Alternator Assembly (100 Amp)

CHARGING CIRCUIT RESISTANCE TEST (Fig. 4)

The charging circuit resistance test will show the amount of "voltage drop" between the alternator output terminal wire and battery. For the charging circuit resistance test:

Preparation

(1) Disconnect the battery ground cable.

(2) Disconnect the "BAT" lead at the alternator output terminal.

(3) Connect a 0-100 ampere scale D.C. ammeter in series between the alternator "BAT" terminal and the disconnected "Bat" lead wire.

(4) Connect the positive lead of a test voltmeter to the disconnected "BAT" lead wire. Connect the negative lead of the test voltmeter to battery positive post.

(5) Disconnect the green (Regulator) field lead wire from the alternator.

(6) Connect a "jumper" lead from the alternator field terminal to ground.

(7) Connect an engine tachometer and reconnect the battery ground cable.

(8) Connect a variable carbon pile rheostat to the battery terminals. **Be sure the carbon pile is in the "OPEN" or "OFF" position before connecting the leads.**

Test

(1) Start and operate the engine at idle. **Immediately after starting, reduce engine speed to idle.**

(2) Adjust the engine speed and carbon pile to maintain 20 amperes flowing in the circuit. Observe the voltmeter reading. The voltmeter reading should not exceed .7 volts.

Results

If a higher voltage drop is indicated, inspect, clean and tighten all connections in the charging circuit. A