

placing tester knob in either the 18 volt or 1.8 volt position. Use the red probe and black clip leads for testing.

ALTERNATOR SERVICE PROCEDURES (All Except 100 Amp Alternator)

If alternator performance does not meet current output specifications limits, it will have to be removed and disassembled for further test and servicing.

- (1) Disconnect battery ground cable at battery negative terminal.
- (2) Disconnect alternator output "BAT" and field "FLD" leads and disconnect ground wire.
- (3) Remove alternator mounting bolts and remove alternator.

BENCH TESTS

Rotor Field Coil Current Draw Test

If alternator field coil draw has not been tested on vehicle it may be tested on test bench as follows:

Preparation

Connect a jumper wire between one field terminal of the alternator and the positive terminal of a fully charged battery. Connect test ammeter positive lead to the other field terminal of the alternator and the negative lead to the battery negative terminal.

Test

Slowly rotate alternator rotor by hand. Observe ammeter reading.

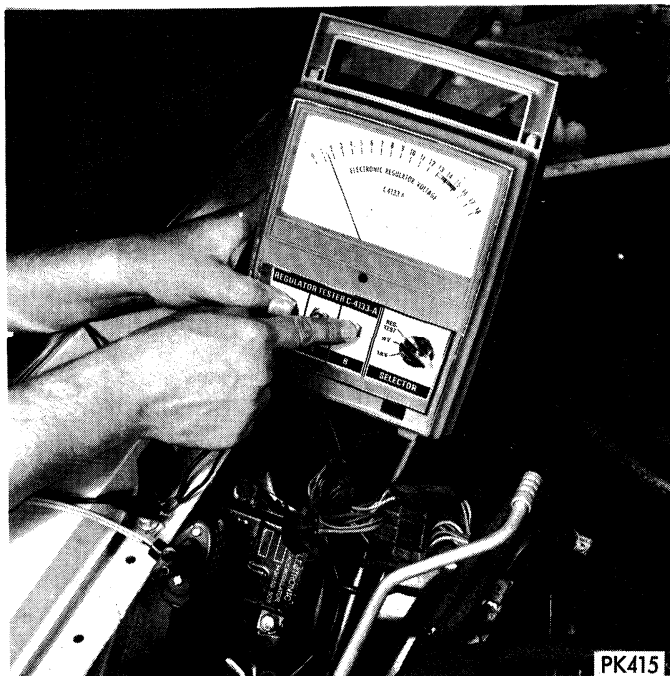


Fig. 11—Voltage Regulator Test (Depressing Test Button "B")

Results

Field coil draw should be 4.5 amperes to 6.5 amperes at 12 volts. A low rotor coil draw is an indication of high resistance in field coil circuit, (brushes, slip rings, or rotor coil). A higher rotor coil draw indicates possible shorted rotor coil or grounded rotor.

No reading indicates an open rotor or defective brushes.

ALTERNATOR DISASSEMBLY AND TESTING

Separating Alternator End Shields

To prevent possible damage to brush assemblies, they should be removed before separating the end shields. The field brushes are mounted in plastic holders that position the brushes against the slip rings of the rotor.

- (1) Remove the brush screws, insulating washers and lift brush assemblies from end shield (Fig. 12).

CAUTION: Stator is laminated, do not burr stator or end shield.

- (2) Remove through bolts and pry between the stator and drive end shield with blade of a screwdriver (Fig. 13). Carefully separate drive end shield, pulley and rotor assembly away from stator and rectifier end shield assembly.

Testing Rectifiers With Tester Tool C-3829

The Rectifier Tester Tool C-3829 provides a quick, simple and accurate test of the alternator rectifiers without the necessity of disconnecting the stator phase leads. With alternator rectifier end shield separated from drive end housing proceed with rectifier test as follows:

Positive Rectifier Test (Fig. 14)

CAUTION: Do not break the plastic cases of the diodes. The cases are for protection against corrosion. Always touch test probe to metal strap nearest rectifier.

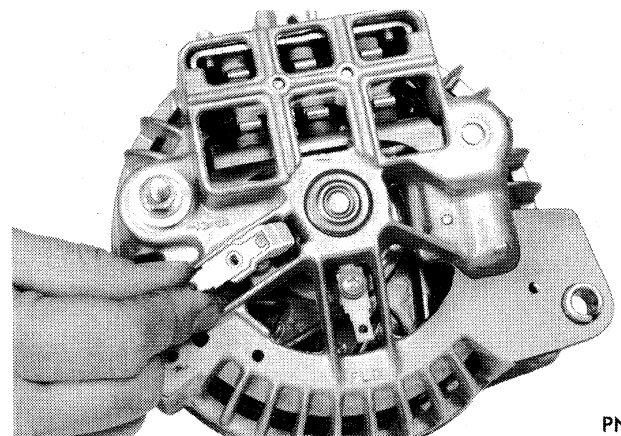


Fig. 12—Removing Field Brushes

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