

10.8 Remove the Hall effect switch

- 6 Push the shaft from the housing.
- 7 Remove both external snap-rings from the shaft with snapping pliers.
- 8 Remove the Hall effect switch (see illustration).
- 9 Refitting is the reverse of removal.

11 Charging system - general information and precautions

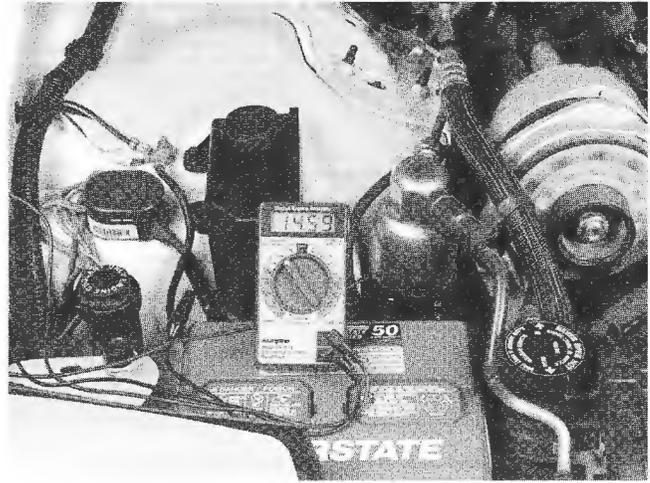
The charging system consists of a belt-driven alternator with an integral voltage regulator and the battery. These components work together to supply electrical power for the ignition system, the lights and all accessories.

A 90 or 100 amp Bosch alternator is used on V6 models. V8 models use a 120 amp alternator. Both use a conventional pulley. Because of the expense and the limited availability of parts, no alternator overhaul information is included in this manual. Normally, if a particular component of the unit has failed, there are several other parts which are likewise nearing the ends of their service lives. The amount of time spent in diagnosis of internal alternator components generally outweighs any savings in cost.

The purpose of the voltage regulator is to limit the alternator's voltage to a preset value. This prevents power surges, circuit overloads, etc., during peak voltage output. On all models with which this manual is concerned, the voltage regulator is contained within the alternator housing.

The charging system does not ordinarily require periodic maintenance. The drivebelt, electrical wiring and connections should, however, be inspected at the intervals suggested in Chapter 1.

Take extreme care when making circuit connections to a vehicle equipped with an alternator and note the following. When making connections to the alternator from a battery, always match correct polarity. Before using arc welding equipment to repair any part of the vehicle, disconnect the wires from the alternator and the battery terminal. Never start the engine with a battery charger connected. Always disconnect both battery leads before using a battery charger.



12.3 Monitor the battery voltage after the engine is started - the voltage should be between 14 to 15 volts

The charging indicator light on the dash lights when the ignition switch is turned on and goes out when the engine starts. If the light stays on or comes on once the engine is running, a charging system problem has occurred.

12 Charging system - check

Refer to illustration 12.3

- 1 If a malfunction occurs in the charging circuit, do not immediately assume that the alternator is causing the problem. First check the following items:
 - a) Make sure the battery cable connections at the battery are clean and tight.
 - b) The battery electrolyte specific gravity (if possible). If it is low, charge the battery.
 - c) Check the external alternator wiring and connections. They must be in good condition.
 - d) Check the drivebelt condition and tension (Chapter 1).
 - e) Make sure the alternator mounting bolts are tight.
 - f) Run the engine and check the alternator for abnormal noise (may be caused by a loose drive pulley, loose mounting bolts, worn or dirty bearings, defective diode or defective stator).
- 2 Using a voltmeter, check the battery voltage with the engine off. It should be approximately 12 volts.
- 3 Start the engine and check the battery voltage again. It should now be approximately 13.5 to 14.5 volts (see illustration).

13 Alternator - removal and refitting

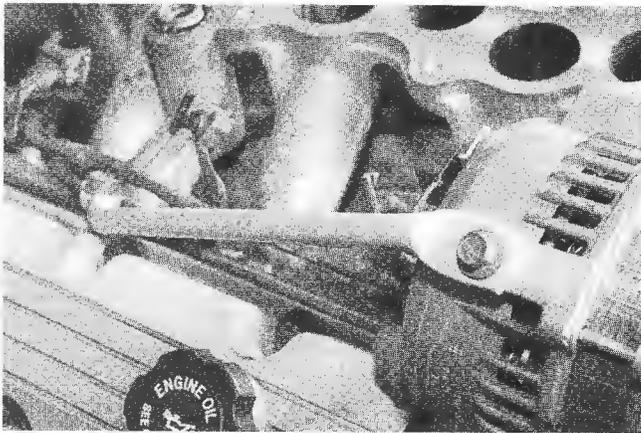
Refer to illustrations 13.4a and 13.4b



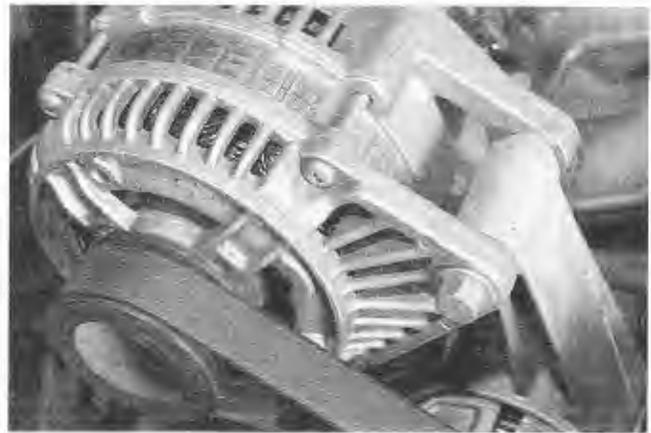
Caution: Whenever the battery is disconnected or a power failure occurs, the radio will not operate until the owner's personal PIN number is entered. Make sure you have the correct PIN number before disconnecting the battery.

V6 AND 5.0 LITRE V8 ENGINES

- 1 Disconnect the earth (-) lead from the battery.



13.4a The alternator is secured by a brace which must be removed...



13.4b ... as well as the mounting bolts



Caution: On models equipped with the Anti-theft audio system, be sure to have the correct radio code before performing any procedure which requires disconnecting the battery (see the front of this manual).

On V6 models, remove the dress cover from the engine.

- 2 Clearly label, if necessary, then unplug and unbolt the electrical connectors from the alternator.
- 3 Remove the serpentine drivebelt on V6 models (see Chapter 1). On V8 models, loosen the mounting and adjusting bolts enough to allow the drivebelt to be slipped off.
- 4 Remove the alternator mounting bolts and brace (see illustrations). Remove the alternator.



Note: On 3.6 litre V6 engines, once the mounting nuts are removed, remove the mounting studs to allow easier removal of the alternator. The studs have hexagonal heads on them.

- 5 Refitting is the reverse of removal.

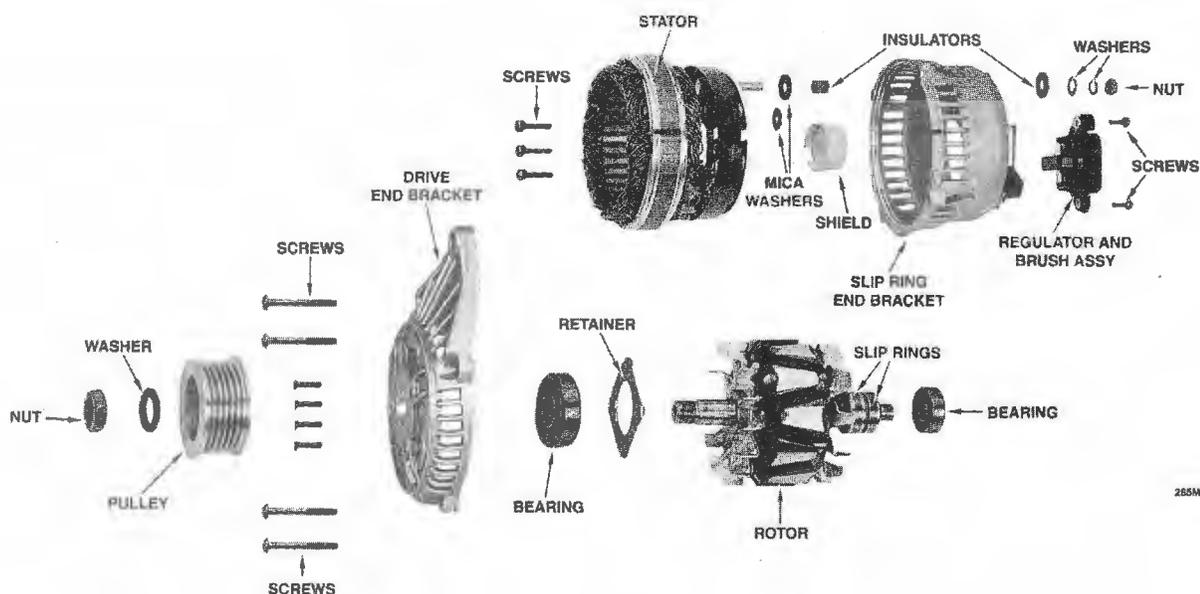
5.7 LITRE GEN III AND 6.0 LITRE GEN IV V8 ENGINES

- 6 Disconnect the earth (-) lead from the battery.



Caution: On models equipped with the Anti-theft audio system, be sure to have the correct radio code before performing any procedure which requires disconnecting the battery (see the front of this manual).

- 7 Remove the engine cover mounting nuts (see Chapter 1).
- 8 Remove the air inlet hose and disconnect the airflow meter electrical connection.
- 9 Remove the PCM heat shield and air filter housing (see Chapter 4).
- 10 Use a 15 mm spanner to rotate the drivebelt tensioner anti-clockwise and remove the belt (see Chapter 1).
- 11 Remove the power steering reservoir and hold it to the side.
- 12 Disconnect the electrical connections to the alternator.



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14.1 Alternator - exploded view