



**10.7a** When cleaning the cable clamps, all corrosion must be removed (the inside of the clamp is tapered to match the taper on the post, so don't remove too much material)

7 Clean the cable clamps thoroughly with a battery brush or a terminal cleaner and a solution of warm water and baking soda (**see illustration**). Wash the terminals and the top of the battery case with the same solution but make sure that the solution doesn't get into the battery. When cleaning the cables, terminals and battery top, wear safety goggles and rubber gloves to prevent any solution from coming in contact with your eyes or hands. Wear old clothes too - even diluted, sulfuric acid splashed onto clothes will burn holes in them. If the terminals have been extensively corroded, clean them up with a terminal cleaner (**see illustration**). Thoroughly wash all cleaned areas with plain water.

8 Make sure the battery tray is in good condition and the hold-down clamp bolt or nut is tight. If the battery is removed from the tray, make sure no parts remain in the bottom of the tray when the battery is reinstalled. When reinstalling the hold-down clamp bolt or nut, do not over-tighten it.

9 Information on removing and installing the battery can be found in Chapter 5. Information on jump starting can be found at the front of this manual. For more detailed battery checking procedures, refer to the *Haynes Automotive Electrical Manual*.

### Cleaning

10 Corrosion on the hold-down components, battery case and surrounding areas can be removed with a solution of water and baking soda. Thoroughly rinse all cleaned areas with plain water.

11 Any metal parts of the vehicle damaged by corrosion should be covered with a zinc-based primer, then painted.

### Charging

**Warning:** When batteries are being charged, hydrogen gas, which is very explosive and flammable, is produced. Do not smoke or allow open flames near a charging or a



**10.7b** Regardless of the type of tool used to clean the battery posts, a clean, shiny surface should be the result

recently charged battery. Wear eye protection when near the battery during charging. Also, make sure the charger is unplugged before connecting or disconnecting the battery from the charger.

12 Slow-rate charging is the best way to restore a battery that's discharged to the point where it will not start the engine. It's also a good way to maintain the battery charge in a vehicle that's only driven a few miles between starts. Maintaining the battery charge is particularly important in the winter when the battery must work harder to start the engine and electrical accessories that drain the battery are in greater use.

13 It's best to use a one or two-amp battery charger (sometimes called a "trickle" charger). They are the safest and put the least strain on the battery. They are also the least

expensive. For a faster charge, you can use a higher amperage charger, but don't use one rated more than 1/10th the amp/hour rating of the battery. Rapid boost charges that claim to restore the power of the battery in one to two hours are hardest on the battery and can damage batteries not in good condition. This type of charging should only be used in emergency situations.

14 The average time necessary to charge a battery should be listed in the instructions that come with the charger. As a general rule, a trickle charger will charge a battery in 12 to 16 hours.

## 11 Drivebelt check (every 7500 miles or 6 months) and replacement

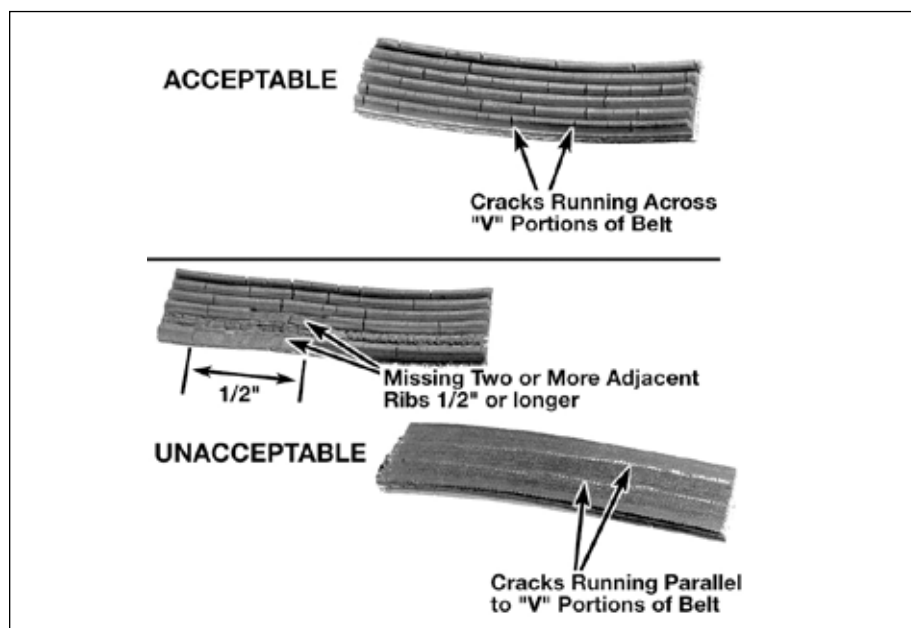
### Check

Refer to illustrations 11.3 and 11.4

1 These models use a serpentine drivebelt with a tensioner (automatic adjuster). The good condition and proper tension of the belt is critical to the operation of the engine. Because of their composition and the high stresses to which they are subjected, drivebelts stretch and deteriorate as they get older. They must therefore be periodically inspected.

2 The serpentine drivebelt transmits power to all the accessories.

3 With the engine off, open the hood and locate the drivebelt. With a flashlight, check each belt for separation of the adhesive rubber on both sides of the core, core separation from the belt side, a severed core, separation of the ribs from the adhesive rubber, cracking or separation of the ribs, and torn or worn ribs or cracks in the inner ridges of the ribs (**see illustration**). Also check for fraying and glaz-



**11.3** Here are some of the more common problems associated with drivebelts (check the belts very carefully to prevent an untimely breakdown)

ing, which gives the belt a shiny appearance. Both sides of the belt should be inspected, which means you will have to twist the belt to check the underside. Use your fingers to feel the belt where you can't see it. If any of the above conditions are evident, replace the belt (see Steps 5 through 7).

4 Check the drivebelt indicator for excessive stretch (see illustration). If the drivebelt indicator is out of limit, replace the drivebelt (see Steps 5 through 7).

**Drivebelt replacement**

Refer to illustrations 11.7, 11.9a and 11.9b

5 Disconnect the cable from the negative terminal of the battery (see Chapter 5).

6 Loosen the right front wheel lug nuts. Raise the vehicle and support it securely on jackstands. Remove the right inner fender splash shield.

7 Rotate the belt tensioner clockwise using a wrench on the pulley bolt to release tension on the drivebelt. **Caution:** Do not loosen the drivebelt tensioner pulley bolt or it will be necessary to replace the entire tensioner with a new one. The tensioner can be locked in position by inserting a drill bit or other metal rod into the lock holes (see illustration).

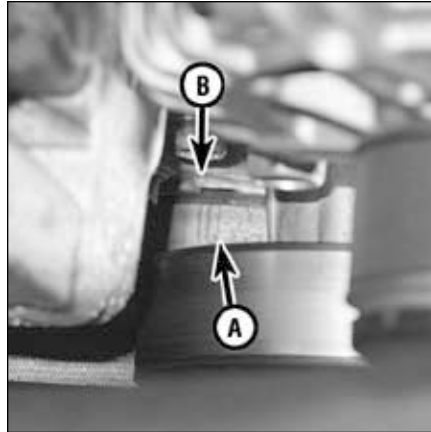
8 Remove the drivebelt from the tensioner and all accessories.

9 Install the new drivebelt, making sure that it's properly routed (see illustrations).

10 Reconnect the battery and perform the necessary re-learn procedures (see Chapter 5).

**Tensioner replacement**

11 Remove the drivebelt (see Steps 5 through 8).



**11.4** If the indicator notch (A) on the moveable part of the tensioner passes the stationary mark (B) on the tensioner body, the drivebelt has stretched beyond its limit and should be replaced (four-cylinder engine shown)



**11.7** Release the tension using a wrench, then insert a drill bit or rod to lock the tensioner in place (four-cylinder engine)

air conditioning components or hoses until the system has been depressurized.

12 Remove the drivebelt tensioner mounting bolts.

13 Installation is the reverse of removal. Tighten the tensioner mounting fasteners to the torque listed in this Chapter's Specifications.

**12 Underhood hose check and replacement (every 7500 miles or 6 months)**

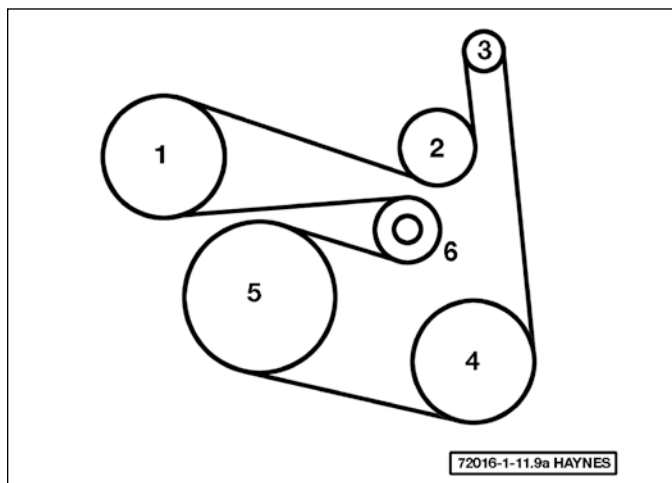
**Caution:** Replacement of air conditioning hoses must be left to a dealer service department or air conditioning shop that has the equipment to depressurize the system safely. Never remove

**General**

1 High temperatures in the engine compartment can cause the deterioration of the rubber and plastic hoses used for engine, accessory and emission systems operation. Periodic inspection should be made for cracks, loose clamps, material hardening and leaks.

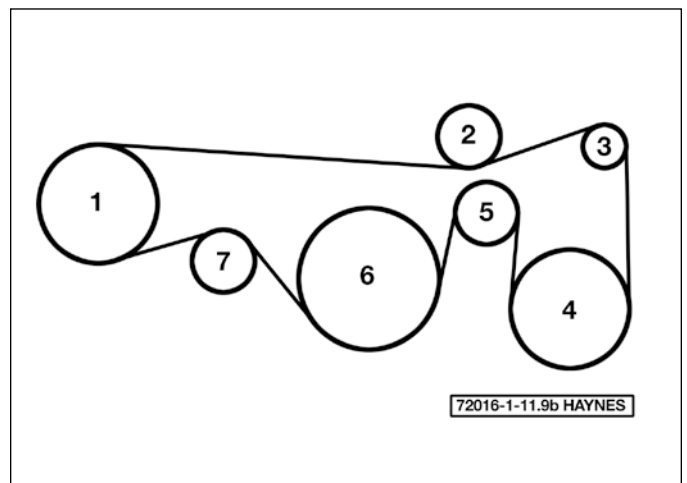
2 Information specific to the cooling system hoses can be found in Section 13.

3 Some, but not all, hoses are secured to the fittings with clamps. Where clamps are used, check to be sure they haven't lost their tension, allowing the hose to leak. If clamps aren't used, make sure the hose has not expanded and/or hardened where it slips over the fitting, allowing it to leak.



**11.9a** Drivebelt routing diagram - four-cylinder engine

- |                       |                               |
|-----------------------|-------------------------------|
| 1 Power steering pump | 4 Air conditioning compressor |
| 2 Water pump          | 5 Crankshaft pulley           |
| 3 Alternator          | 6 Tensioner pulley            |



**11.9b** Drivebelt routing diagram - V6 engine

- |                               |                     |
|-------------------------------|---------------------|
| 1 Power steering pump         | 5 Idler pulley      |
| 2 Idler pulley                | 6 Crankshaft pulley |
| 3 Alternator                  | 7 Tensioner pulley  |
| 4 Air conditioning compressor |                     |