

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

## 18 Drivebelt check and replacement (every 15,000 miles [24,000 km] or 12 months)

### Accessory drivebelt

1 A single serpentine drivebelt is located at the front of the engine and plays an important role in the overall operation of the engine and its components. Due to its function and material make up, the belt is prone to wear and should be periodically inspected. The serpentine belt drives the alternator and air conditioning compressor. Although the belt should be inspected at the recommended intervals, replacement may not be necessary for more than 100,000 miles.

### Check

Refer to illustration 18.3

2 With the engine stopped, inspect the full length of the drivebelt for cracks and separation of the belt plies. It will be necessary to turn the engine (using a wrench or socket and bar on the crankshaft pulley bolt) in order to move the belt from the pulleys so that the belt can be inspected thoroughly. Twist the belt between the pulleys so that both sides can be viewed. Also check for fraying, and glazing which gives the belt a shiny appearance. Check the pulleys for nicks, cracks, distortion and corrosion.

3 Note that it is not unusual for a ribbed belt to exhibit small cracks in the edges of the belt ribs, and unless these are extensive or very deep, belt replacement is not essential (see illustration).

### Replacement

Refer to illustration 18.5

4 To remove the drivebelt, loosen the right

front wheel lug nuts, then raise the front of the vehicle and support it on jackstands. Remove the right front wheel and remove the lower splash shield from the underbody.

5 Note how the drivebelt is routed, then remove the belt from the pulleys. If you're working on a V6 engine, use a wrench on the tensioner center bolt and turn the tensioner clockwise to release the drivebelt tension. If you're working on a four-cylinder engine, insert a 3/8-inch drive ratchet or breaker bar into the tensioner hole and pull the handle counterclockwise to release the drivebelt tension (see illustration).

6 Fit the new drivebelt onto the crankshaft, alternator, power steering pump, and air conditioning compressor pulleys, as applicable, then turn the release the tensioner and locate the drivebelt on the pulley. Make sure that the drivebelt is correctly seated in



**18.9** On V6 models, remove the tensioner mounting bolts, then remove the tensioner



**18.5** Rotate the tensioner arm to relieve belt tension

all of the pulley grooves, then release the tensioner.

7 Install the lower splash shield and wheel, then lower the car to the ground. Tighten the lug nuts to the torque listed in this Chapter's Specifications.

### Tensioner replacement

Refer to illustration 18.9

8 Remove the drivebelt as described previously.

9 On four-cylinder models, remove the bolt securing the tensioner to the engine block. On V6 models, remove the two bolts securing the tensioner, then detach the tensioner from the engine (see illustration).

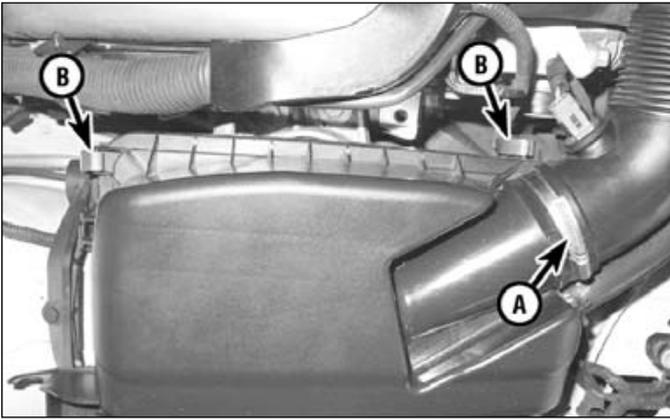
10 Installation is the reverse of removal. Be sure to tighten the tensioners bolt(s) to the torque listed in this Chapter's Specifications.

## 19 Air filter check and replacement (every 30,000 miles [48,000 km] or 24 months)

Refer to illustrations 19.1a and 19.1b

1 The air filter is located inside a housing at the right (passenger's) side of the engine compartment. To remove the air filter, loosen the clamp securing the inlet tube to the air filter cover, release the clamps that secure the two halves of the air cleaner housing together, then separate the cover halves and remove the air filter element (see illustrations).

2 Inspect the outer surface of the filter element. If it is dirty, replace it. If it is only moderately dusty, it can be reused by blowing it clean from the back to the front surface with compressed air. Because it is a pleated paper type filter, it cannot be washed or oiled. If it cannot be cleaned satisfactorily with compressed air, discard and replace it. While the cover is off, be careful not to drop anything down into the housing. **Caution:** Never drive the vehicle with the air cleaner removed. Excessive engine wear could result and backfiring could even cause a fire under the hood.



19.1a Loosen the intake hose clamp (A), then unlatch these clips (B) . . .



19.1b . . . pull the cover out of the way and lift the element out (four-cylinder engine shown, V6 similar)

- 3 Wipe out the inside of the air cleaner housing.
- 4 Place the new filter into the air cleaner housing, making sure it seats properly.
- 5 Installation of the housing is the reverse of removal.

## 20 Cooling system servicing (draining, flushing and refilling) (every 30,000 miles [48,000 km] or 24 months)

**Warning:** Do not allow antifreeze to come in contact with your skin or painted surfaces of the vehicle. Rinse off spills immediately with plenty of water. Antifreeze is highly toxic if ingested. Never leave antifreeze lying around in an open container or in puddles on the floor; children and pets are attracted by its sweet smell and may drink it. Check with local authorities on disposing of used anti-freeze. Many communities have collection centers that will see that antifreeze is disposed of safely.

**Note:** Non-toxic antifreeze is now manufactured and available at local auto parts stores, but even this type should be disposed of properly.

### Draining

Refer to illustration 20.3

1 Periodically, the cooling system should be drained, flushed and refilled to replenish the antifreeze mixture and prevent formation of rust and corrosion, which can impair the performance of the cooling system and cause engine damage. When the cooling system is serviced, all hoses and the expansion tank cap should be checked and replaced if necessary.

2 Apply the parking brake and block the wheels. Raise the front of the vehicle and support it securely on jackstands, then remove the under-vehicle splash shield.

**Warning:** If the vehicle has just been driven, wait several hours to allow the engine to cool down before beginning this procedure.

3 Move a large container under the radia-

tor to drain the coolant. The coolant can be drained either by detaching the lower radiator hose from the radiator or by turning the knob on the radiator drain valve (see illustration). Remove the cap from the coolant expansion tank and allow the coolant to drain.

4 While the coolant is draining, check the condition of the radiator hoses, heater hoses and clamps (refer to Section 9 if necessary).

5 Replace any damaged clamps or hoses.

### Flushing

6 Fill the cooling system with clean water, following the Refilling procedure (see Step 12).

7 Start the engine and allow it to reach normal operating temperature, then rev up the engine a few times.

8 Turn the engine off and allow it to cool completely, then drain the system as described earlier.

9 Repeat Steps 6 through 8 until the water being drained is free of contaminants.

10 In severe cases of contamination or clogging of the radiator, remove the radiator (see Chapter 3) and have a radiator repair facility clean and repair it if necessary.

11 Many deposits can be removed by the chemical action of a cleaner available at auto parts stores. Follow the procedure outlined in the manufacturer's instructions. **Note:** When the coolant is regularly drained and the system refilled with the correct antifreeze/water mixture, there should be no need to use chemical cleaners or descalers.

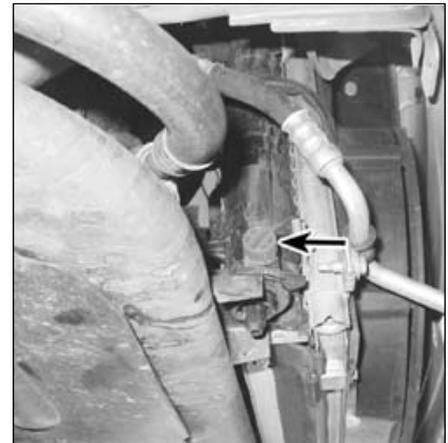
### Refilling

12 Close and tighten the radiator drain.

13 Place the heater temperature control in the maximum heat position.

14 Slowly add new coolant (a 50/50 mixture of water and antifreeze) to the expansion tank until the level is at the COLD mark on the expansion tank.

15 Leave the expansion tank cap off and run the engine in a well-ventilated area until the thermostat opens (coolant will begin flowing through the radiator and the upper radiator hose will become hot).



20.3 The radiator drain fitting is located at the bottom of the radiator - before opening the valve, push a short length of rubber hose onto the plastic fitting to prevent the coolant from splashing

16 Turn the engine off and let it cool. Add more coolant mixture to bring the level to the COLD mark on the expansion tank.

17 Squeeze the upper radiator hose to expel air, then add more coolant mixture if necessary. Replace the expansion tank cap.

18 Start the engine, allow it to reach normal operating temperature and check for leaks. Also, set the heater and blower controls to the maximum setting and check to see that the heater output from the air ducts is warm. This is a good indication that all air has been purged from the cooling system.

## 21 Brake fluid change (every 30,000 miles [48,000 km] or 24 months)

**Warning:** Brake fluid can harm your eyes and damage painted surfaces, so use extreme caution when handling or pouring it. Do not use brake fluid that has been standing open or is more than one year old. Brake fluid absorbs moisture from the air. Excess mois-