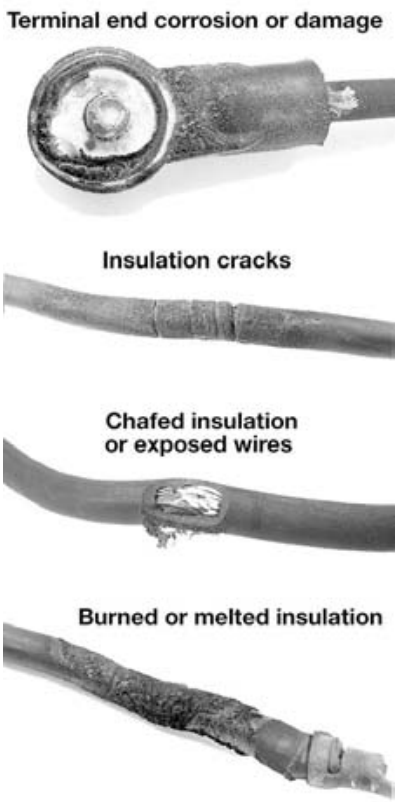


5.7 Typical battery cable problems

the mixture with a small brush, let it work, then rinse it off with plenty of clean water.

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

12 Additional information on the battery and jump starting can be found in Chapter 5 and at the front of this manual.

Charging

13 Remove all of the cell caps (if equipped) and cover the holes with a clean cloth to prevent spattering electrolyte. Disconnect the negative battery cable and hook the battery charger leads to the battery posts (positive to positive, negative to negative), then plug in the charger. Make sure it is set at 12-volts if it has a selector switch.

14 If you're using a charger with a rate higher than two amps, check the battery regularly during charging to make sure it doesn't overheat. If you're using a trickle charger, you can safely let the battery charge overnight after you've checked it regularly for the first couple of hours.

15 If the battery has removable cell caps, measure the specific gravity with a hydrometer every hour during the last few hours of the charging cycle. Hydrometers are available inexpensively from auto parts stores - follow the instructions that come with the hydrometer. Consider the battery charged when there's no change in the specific gravity reading for two hours and the electrolyte in the cells is gassing (bubbling) freely. The specific gravity reading from each cell should be very close to the others. If not, the battery probably has a bad cell(s).

16 Some batteries with sealed tops have built-in hydrometers on the top that indicate the state of charge by the color displayed in the hydrometer window. Normally, a bright-colored hydrometer indicates a full charge and a dark hydrometer indicates the battery still needs charging. Check the battery manufacturer's instructions to be sure you know what the colors mean.

17 If the battery has a sealed top and no built-in hydrometer, you can hook up a voltmeter across the battery terminals to check the charge. A fully charged battery should read 12.6-volts or higher.

18 Further information on the battery and jump starting can be found in Chapter 5 and at the front of this manual.

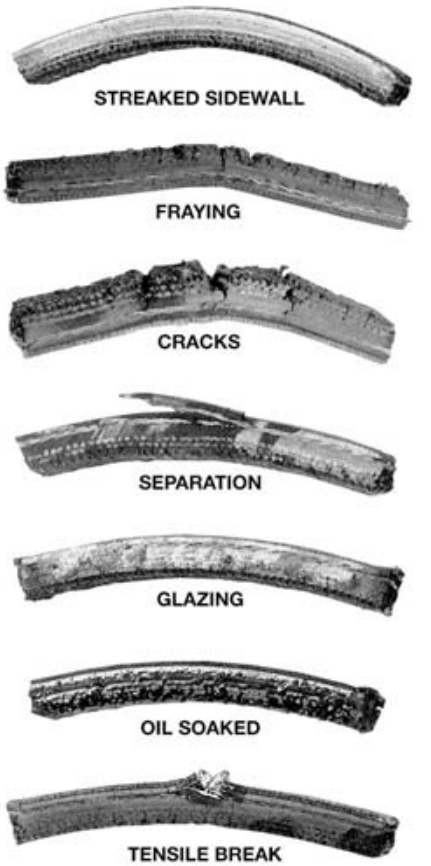
6 Drivebelt check and adjustment (every 6000 miles or 6 months)

Refer to illustrations 6.1, 6.4, 6.9a, 6.9b and 6.9c

1 The drivebelts, or V-belts as they are often called, are located at the front of the engine and play an important role in the overall operation of the vehicle and its components. Due to their function and material make-up, the belts are prone to failure after a period of time and should be inspected and adjusted periodically to prevent major engine damage **(see illustration)**.

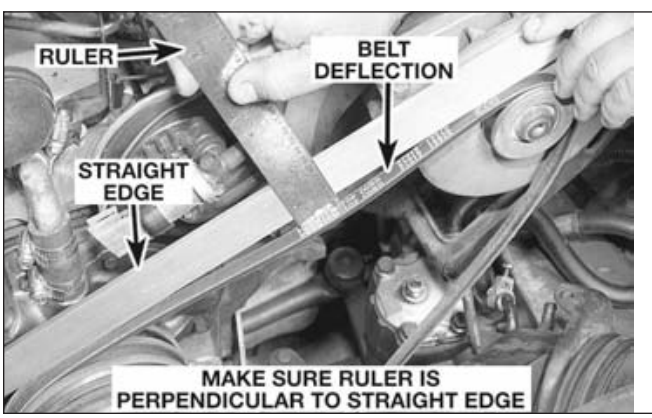
2 The number of belts used on a particular vehicle depends on the accessories installed. Drivebelts are used to turn the gener-ator/alternator, power steering pump, water pump and air-conditioning compressor. Depending on the pulley arrangement, more than one of these components may be driven by a single belt.

3 With the engine off, open the hood and locate the various belts at the front of the engine. Using your fingers (and a flashlight, if necessary) , move along the belts checking for cracks and separation of the belt plies. Also check for fraying and glazing, 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.

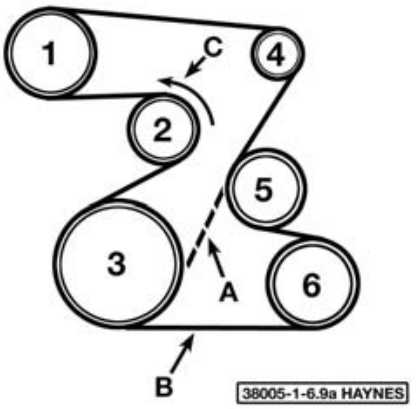


6.1 Here are some of the more common problems associated with drivebelts (check the belts carefully to prevent an untimely breakdown

4 The tension of each belt is checked by pushing on the belt at a distance halfway between the pulleys. Push firmly with your thumb and see how much the belt moves (deflects). A rule of thumb is that if the distance from pulley center to pulley center is between 7 and 11 inches, the belt should deflect 1/4-inch. If the belt travels between pulleys spaced 12 to 16 inches apart, the belt should deflect 1/2-inch **(see illustration)**.

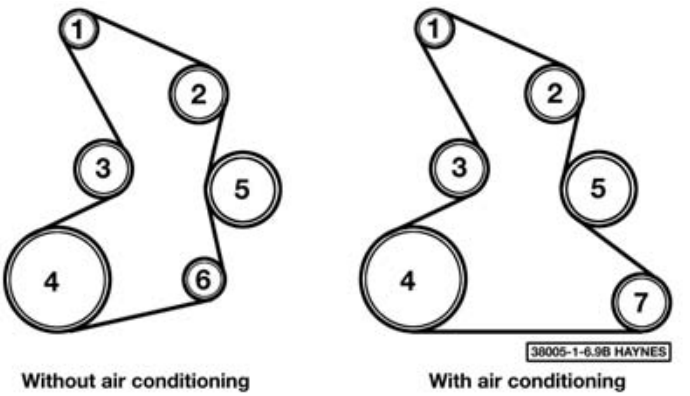


6.4 Drivebelt tension can be checked with a straightedge and ruler



6.9a Serpentine drivebelt routing diagram - 2.2L and 2.5L four cylinder engine

1 Power steering pulley
2 Belt tensioner
3 Crankshaft pulley
4 Alternator pulley
5 Idler pulley
6 Air conditioning compressor pulley
A Without air conditioning
B With air conditioning
C Tensioner - rotate in direction of arrow to remove or install belt



6.9b Serpentine drivebelt routing diagram - 2.8/3.1L V6 engines

1 Alternator
2 Power steering pump
3 Belt tensioner
4 Crankshaft pulley
5 Water pump
6 Idler pulley
7 Air conditioning compressor

5 If it is necessary to adjust the belt tension, either to make the belt tighter or looser, it is done by moving the belt-driven accessory on the bracket.

6 For each component there will be an adjusting bolt and a pivot bolt. Both bolts must be loosened slightly to enable you to move the component.

7 After the two bolts have been loosened, move the component away from the engine to tighten the belt or toward the engine to loosen the belt. Hold the accessory in position and check the belt tension. If it is correct, tighten the two bolts until just snug, then recheck the tension. If the tension is all right, tighten the bolts.

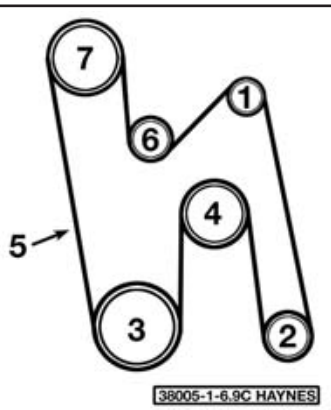
8 It will often be necessary to use some sort of prybar to move the accessory while the belt is adjusted. If this must be done to gain the proper leverage, be very careful not to damage the component being moved or the part being pried against.

9 Later models are equipped with a single “serpentine” drivebelt, which powers all engine accessories **(see illustrations)**. This style belt requires no adjustment; it is handled by a spring loaded tensioner pulley. The belt should be inspected regularly for missing ribs and frayed plies. Cracks in the belt ribs do not necessarily indicate a faulty or damaged belt, since they will not impair belt performance.

10 To replace the belt, insert a half-inch drive breaker bar (some models require a 15 mm socket) into the tensioner and rotate the pulley counterclockwise, releasing belt tension.

11 Remove the drivebelt from the pulleys.

12 Install the new belt, starting with the bottom pulleys, then release the tensioner. Make sure the belt is properly centered on each pulley.



6.9c Serpentine drivebelt routing diagram - 3.0, 3.3 and 3.8L V6 engines

1 Alternator pulley
2 Air conditioning compressor
3 Crankshaft balancer
4 Water pump pulley
5 Serpentine belt
6 Belt tensioner
7 Power steering pump pulley

7 Cooling system check (every 6000 miles or 6 months)

Refer to illustrations 7.4a and 7.4b

1 Many major engine failures can be attributed to a faulty cooling system. If the vehicle is equipped with an automatic transmission, the cooling system also plays an important role in prolonging transmission life.

2 The cooling system should be checked with the engine cold. Do this before the vehicle is driven for the day or after it has been shut off for at least three hours.

3 Remove the radiator cap and thoroughly clean the cap, inside and out, with

7.4a Hoses, like drivebelts, have a habit of failing at the worst possible time - to prevent the inconvenience of a blown radiator or heater hose, inspect them carefully as shown here