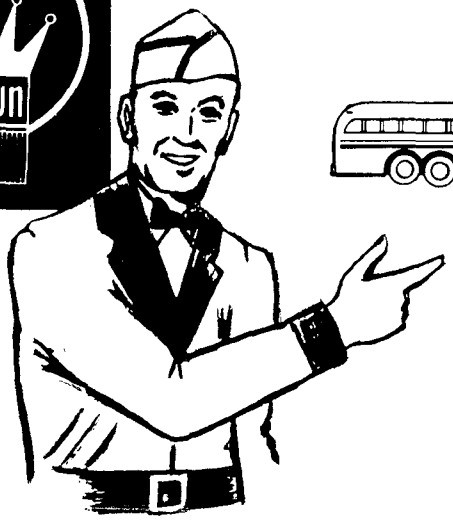
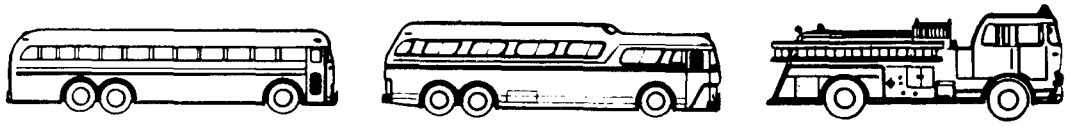
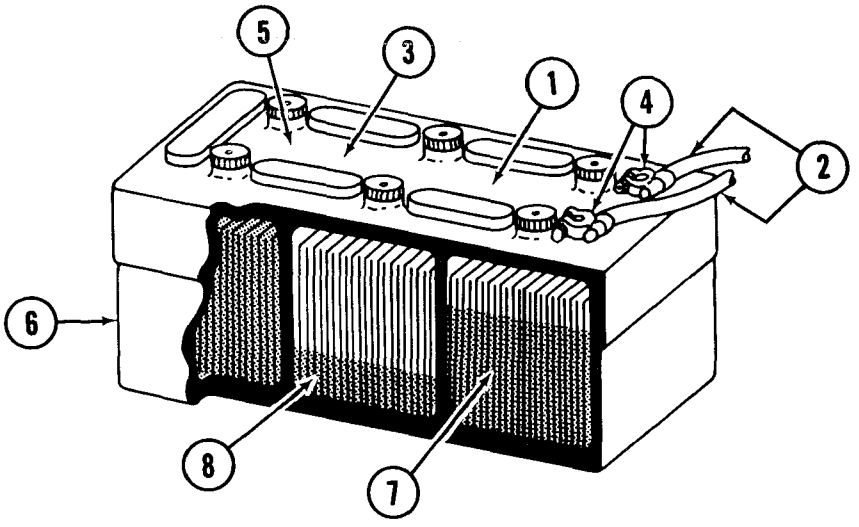
CROWN TIP SHEET





"YOUR CROWN COACH DESERVES THE BEST POSSIBLE CARE

MAY WE HELP YOU?"



BATTERY CARE

Knowing what to look for can help you spot bad batteries even without the help of a battery tester. If you do spot any of the symptoms below, you should, of course, do a professional test job, but quick spotting is a very helpful faculty if you can get the hang of it. Here's the list of potential danger signs and ways of preventing these problems:

1. Dirty batteries. Maybe you think this is just for looks alone, but it's a genuine problem. Dirt on a battery top can drain off power in a slow continuous leak that may not show up for quite a while, but will materially shorten the power and the service life of the battery. Cleaning of the battery top with a solution of baking soda and water will help eliminate this problem.

2. Frayed or worn cables. The cables are the connecting link between the battery and the rest of the electrical system. Worn cables will interupt the flow of power and cause erratic service. These cables should be replaced if not in good condition.

3. Raised or cracked cell covers. This condition is usually caused by freezing or severe overcharging, both of which shorten battery life. Care should be taken in colder weather that freezing does not occur and the charging circut should be checked for overcharging periodically.

4. Corrosion at terminal posts and cables. This is a tipoff that the battery is old, has been improperly installed or hasn't recieved attention. The cleaning of terminal posts with baking soda and water, and the application of light coating of petroleum jelly will prolong battery life.

5. Wet battery tops. This usually means that electrolyte is leaking and settling on top of the battery. This forms an electrical path that puts a

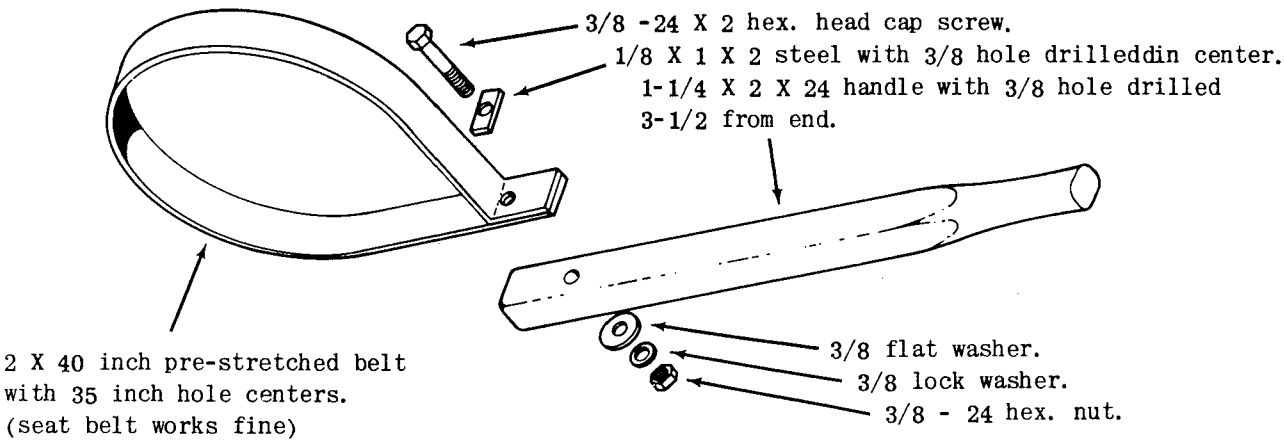
constant drain on the battery, causing early failure. The electrolyte can be removed by neutralization with a baking soda and water solution.

6. A bulging battery case is another pretty sure sign that the battery has had it. This is caused by charging improperly or to fast. Here again the charging circut should be checked.

7. Improper electrolyte level is another sign to look for. Too much fluid is just as damaging as too little. Too much causes the battery to lose part of its acid, which seeps out on top of the battery and causes voltage drain as mentioned in number 5 above. Not enough solution exposes the battery plates, allowing them to oxidize quickly and lose charge capacity. Systematic maintenance will prevent both of these problems.

8. Thirsty cells. When one or more cells take a lot of water and others take little or none, this indicates the battery is near the end of its life. If four cells of a 12-volt battery have sufficient fluid but the level of two cells are low, get out your tester. The declining condition of such cells is causing them to run dry.

CUMMINS DAMPER DAMAGE



When ever the crankshaft of the Cummins horizontal engines needs to be turned by hand this tool will make the job easier and will prevent damage to the viscous-type vibration damper which is part of the crankshaft pulley. It might be noted that the engines compression has to be released before atempting to turn the crankshaft by hand.

The viscous-type vibration damper which is used on the Cummins engines relies on a combination of free-floating discs suspended in a heavy fluid. If the outer housing of the damper is damaged the fluid leaks out and being a heavy fluid the leak usually does not show while the vehicle is standing but rather while the engine is running and is seldom noticed. The tell-tale symptom is a rough running engine or a broken crankshaft. It is there fore necessary to inspect the damper housing for damage periodically and replace if needed. There is no way to repair a damaged damper and the rebalancing of damaged dampers is not recommended.

AIR FILTER ELEMENT REPLACEMENT

The dry type air filter element which is used in the Crown designed air intake system is Purolator Products part number AF-1215.

DO NOT USE AF-1215-1 element which has a larger filter paper opening and is harmful to the engine.

Other manufacturers of air filter elements make a replacement for the AF-1215, which will filter just as well, but we do not recommend using these replacements. Due to inherent design features in the filter housing the sealing ends of these replacement elements do not mate correctly with the housing surfaces and a leaking condition may result causing damage to the engine.

For greater engine life use only the element that was designed to fit in the system. This also is true for the Donaldson and Farr air filters.