

## BATTERY CARE

This is an article about battery maintenance. The information is taken from Interstate Battery Company's website at [www.interstatebatteries.com](http://www.interstatebatteries.com). This installment will cover frequently asked questions. Remember to follow all proper safety precautions when working around any battery and when in double, contact a qualified professional for help.

### Maintaining Batteries

**How do I maintain my battery?** Follow these guidelines every three to six months to extend the life of your low-maintenance Interstate Battery:

- **Maintain Water Level.** If your battery has removable vent caps, you should regularly check the water level and add water when it is low.
- **Keep Terminals Clean.** Visually inspect the terminals and cables at least once a year for signs of corrosion. If dirty or corroded, clean the connections with a scraper and wire brush. This will ensure a good connection and proper starting.
- **Keep Case Clean.** Keep the top of the battery clean of heavy dirt and oil with a cloth dampened by ammonia or a 50/50 solution of baking soda and water. Then rinse with clear water and thoroughly dry.
- **Keep Battery Charged.** If your vehicle is not driven weekly, it may be necessary to charge your battery before use. Lack of use is hard on a battery, especially an automotive battery, which is designed to be charged regularly by an alternator. Any unused battery, regardless of its chemistry, will self-discharge over time and, if allowed to remain discharged, will undergo severe corrosion and battery failure. The rate of discharge depends on the type of battery and the storage temperature. So, it's important to keep your battery charged.

If you prefer that your mechanic take care of your battery, be sure to ask him to maintain the water levels and to keep the connections and case clean of corrosion and dirt.

**As batteries age, do their maintenance requirements change?** Yes. Typically the specific gravity gets higher and gassing increases due to some battery deterioration and/or loss of reserve capacity. An older battery normally requires more charging.

### Watering Batteries

**Do I need to add acid to my battery?** No! Add distilled water only. When electrolyte is lost under normal use, the water evaporates while the acid remains in the battery. Adding acid will, therefore, alter the chemical composition of the electrolyte and cause the battery to fail more quickly. The only time electrolyte should be added is after accidental spillage.

**How often should I water my batteries?** How often you use your batteries will determine the frequency of watering. For example, the weekend fisherman may find he only needs to water the batteries in his boat once a month. While a maintenance supervisor for a golf course might need to service the batteries in their golf cars every week. Also, using batteries in a hot climate may require more frequent watering. It is best to check your new batteries regularly as this will give you a good feel for how often your application will require battery watering.

**NOTE:** A brand new battery may have a low electrolyte level. Charge the battery first and then add water if needed. Adding water to a battery before charging may result in overflow of the electrolyte. If the lead plates of the battery are exposed, you need to add water. To be safe, you can add water any time it falls below the proper level. Ideally, the water level should be no higher than 1/8 inch below the bottom of the vent well. To avoid irreparable damage, make sure the electrolyte level never drops below the top of the plates. Also, avoid over watering, which may result in electrolyte overflow.

**Isn't a sealed no-maintenance battery better?** Actually, a low-maintenance battery with removable vent caps has advantages over a sealed no-maintenance battery. Access to the cells allows you or your mechanic to:

- Extend the life of your battery when water evaporation has occurred and delay the purchase of a new one. If a sealed no-maintenance battery has water evaporation or if it is affected by a charging system problem, nothing can be done to extend the life of the battery; it must be replaced.
- Perform a specific gravity test on each cell with a hydrometer, which may reveal important information about the state of the battery, including if one or more of the cells is defective. This test may not be performed on a sealed battery.

### Electrolyte Freezing Point

As a battery approaches the discharged state, the easier it becomes for the electrolyte to freeze. However, a fully charged battery can be stored at subfreezing temperatures without freezing the electrolyte.

The accompanying chart shows the approximate freezing points of electrolyte at various specific gravities:

<b>Freezing Point Temperature</b>			
Percentage of charge	Freezing Point Temp (approx)	Specific Gravity Corrected to 80F	Battery Voltage
100	-92F	1.277	12.73
90	-65F	1.258	12.62
80	-45F	1.238	12.50
70	-25F	1.217	12.37
60	-13F	1.195	12.24
50	-3F	1.172	12.10
40	+5F	1.148	11.96
30	+15F	1.124	11.81
20	+25F	1.098	11.66
10	+32F	1.073	11.51