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BATTERY SAFETY: CHARGING

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Every year there are reports of injuries resulting from incorrectly charging batteries. Severe and sometimes fatal injuries have resulted from battery explosions during charging. Battery explosions and fires can and do cause personal injuries and equipment losses. Many of these incidents and injuries can be prevented when proper safety guidelines are followed.

Batteries produce **explosive hydrogen gas during charging**, which can be ignited during the charging process. **Keep sparks, flames, burning cigarettes, or other ignition sources away from batteries at all times. Batteries contain sulfuric acid that can spew out. Always wear safety goggles and a face shield when charging batteries.** Gloves are also recommended.

The following guidelines for charging batteries should be followed to reduce the chance of personal injury or equipment damage.

Always assume that explosive mixtures of hydrogen gas are present. Even a battery standing idle generates small quantities of hydrogen due to the self-discharge action, so make sure the area is well ventilated. **Do not charge a battery unless you are thoroughly familiar with safe operating procedures. Never attempt to charge a frozen battery.**

General procedures (**SEE *NOTE* BELOW**) for charging a battery are as follows:

1. Turn the charger rate switch and timer to the "off" position, and disconnect AC cord from the outlet before connecting the leads to the battery.
2. Connect the charger leads to the battery terminals, red positive (+) lead to positive terminal and black negative (-) lead to negative terminal.
3. If the battery is in the vehicle, connect the negative lead to the engine block, if the vehicle has a negative ground (negative battery terminal is connected to ground). Connect the positive lead to ground if the vehicle has a "positive" ground (which is now rarely the case).
4. "Rock" the charger lead clamps to make certain a good connection has been made.
5. Plug in the AC cord to the outlet, turn on the charger, and slowly increase the charging rate to the desired ampere value.
6. Never touch the charger leads when the charger is "on." Always turn the charger "off," and unplug the AC cord from the outlet before removing a charger lead from the battery.

NOTE: Some chargers may require different procedures. Always follow the manufacturer's instructions.