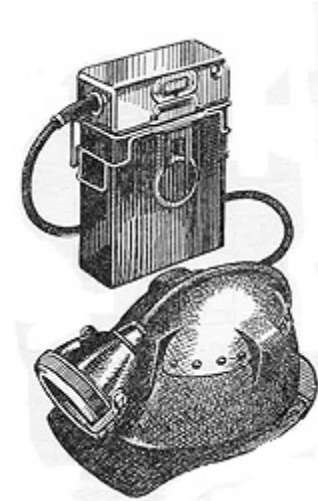


ALERT FOR CAP LAMPS THAT USE LEAD-ACID BATTERIES

Users of cap lamps powered by lead-acid batteries need to be aware of a potential possibility of explosions involving the batteries. There have been reports over the last five years of four lead-acid batteries experiencing an ignition of hydrogen gas that has ruptured the battery case.



All lead-acid batteries produce hydrogen when charging. As a lead-acid battery gets older, it will begin to produce hydrogen gas earlier in the recharging cycle and generate a larger volume of hydrogen gas. The amount of water the battery consumes during charging is a non-quantitative guide to gas generation in a lead-acid battery; the more water that is used, the more hydrogen gas that is generated. An older lead-acid battery or one that has not been maintained properly will consume more water. As the water is consumed, the plates will be exposed causing a possible internal source of ignition from a spark. However, an ignition source does not have to be internal. The battery will be releasing hydrogen gas that can be ignited from any external spark or heat source. If the hydrogen gas is ignited, the battery case can rupture with the possibility of injury to the user or a bystander from shrapnel from the case or from the acid ejected from the battery.

A good maintenance program will help to catch and prevent the conditions described above. Indicators to look for that can lead to the build up of hydrogen gas and possible internal sparking are:

- an unusual consumption of water in the battery, and/or
- a charging indicator that shows the current is not decreasing into "trickle charge" (indicator light that stays on continuously or meter that never shows the charging current decrease).

A WELL-MAINTAINED BATTERY IS A SAFER BATTERY.

The following practices are recommended by manufacturers of lead-acid cap lamp batteries:

- Leave battery on charger when not in use.
- Check electrolyte level weekly and add distilled water as necessary.
- Add water only when the battery is fully charged.