

INSTALLATION AND OPERATING INSTRUCTIONS

For Industrial Batteries

Receiving

Before signing a freight company's Bill of lading, always examine the battery and pallet for signs of damage. If you see any wet spots, the battery may have been tipped or damaged during shipment. Be careful when handling packing material that's contaminated with spilled electrolyte. Chemical burns can result if skin or clothing comes in contact with the spillage.

If you see signs of damage, the trucker's Bill of Lading must be marked "Shipment Received Damaged." The freight company must then be called immediately so you can file a damage claim.

If during the unpacking of the product you find damage that was not visibility evident, the carrier must also be called immediately.

Putting the Battery in Service

Give a freshening charge to a new battery before putting it into service. On the auto-start-stop charger, set the control to "Daily Charge." On a time-controlled charger, set it to "4 hours". Charge the battery until the Specific Gravity and all cell voltages have stabilized. The fully charged Specific Gravity is 1.280 to 1.290 at 77°F. When installing a battery, make sure that the battery compartment is clear, corrosion-free, and the ventilation openings aren't obstructed or blocked off.

Operation

- A. Your charge must be the proper match to the voltage and ampere hour rating of the battery. This information should be notated on the charger nameplate.
- B. Discharging a battery below 1.130 Specific Gravity is considered over-discharged and can shorten the life of your battery. A battery should only be discharged to 1.130 to 1.140 Specific Gravity.
- C. If the temperature is below 115°F, batteries should be charged after your work shift. If the temperature is above 115°F, let the battery cool off before charging. Batteries should not be allowed to remain in a discharged condition. They should be charged after the temperature of the electrolyte is below 115°F.
- D. Batteries require the addition of water (*never add acid*) once per week under normal work loads. Fill the approved water after charge to approximately ½ inch below the filler well. If you overfill the battery, it will result in a loss of electrolyte, loss of capacity, and cause tray corrosion. If you under fill the battery, you will damage the battery plates and shorten the life of the battery.

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Safety

- Keep flame and metal objects away from the top of the battery.
- Do not smoke when in the battery area.
- Use a non-conductive spreader bar for lifting or hoisting a battery.
- Wear safety gloves and protective safety glasses when working with a battery. (i.e. adding water, checking gravities, etc.)
- Keep vent caps securely in place at all times, especially during charging and cleaning.
- To neutralize sulfuric acid spills, create a neutralizing solution; mix one pound of baking soda or soda ash with one gallon of water. This mixture releases bubbles of carbon dioxide while neutralizing acid. When the bubbling stops, the acid is completely neutralized.

Maintaining Your Battery

Daily:

Turn your charge control to the "Daily" position for charging. Take a hydrometer reading afterward to make certain the battery is fully charged. The Range should be 1.280 to 1.290 Specific Gravity at 77°F.

Weekly:

Check electrolyte levels after charge. Bring level up to the indicator or ½ inch below the filler well by adding pure water to the cells. DO NOT ADD ACID.

Place the charger switch to *equalize* position.

Monthly:

After charging, take Specific Gravity readings on all cells. The gravities should read 1.280 to 1.290. If they are less, the charger should be checked. (If there are any cells that are 20 or more points less than average and do not improve over the next month, the battery should be sent to an authorized repair shop for acid adjustment and evaluation.)

Wash batteries with Battery Builders Cleaner & Neutralizer. This will eliminate acid shorts, reduces tray corrosion, and will keep your battery in peak and operating condition.

Check Cables and battery connector for loose connections, fraying and buns.