THE 10 COMMANDMENTS OF GOOD BATTERY CARE FOR ENVIROLINK™ (VRLA) BATTERIES

1. **Do not add water and never dismantle or remove the vent plugs or the safety valve from the cell. This is a valve-regulated (VRLA) lead-acid battery.**
2. **Keep battery top clean and dry.**
3. **Before placing into service give the battery a refresh charge at a rate of 1 ½ to 2% of the batteries capacity.**
4. **Keep flame and metal away from battery top.**
5. **Set truck lift interrupts to discharge to a maximum of 80% or 1.90 volts per cell under load. See Envirolink Installation and Operating Instructions for applications, use, charge and discharge restrictions.**
6. **The optimal ambient temperature for usage is between 77F-86F. The battery temperature for use is between 60°F-100°F maximum as measured by the Battery Boss or Battery Boss WC monitoring device. Any use outside this range must be approved by** HAWKER**.**
7. **Battery MUST be charged by a Hawker approved VRLA charger of the correct voltage and current output.**
8. **Keep truck compartment and battery cover open during charging and use fans to keep battery cool during charge if possible.**
9. **The battery must be allowed to cool to 90°F or below before charging.**
10. **When in doubt, call your HAWKER service representative for long, reliable battery life.**

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Installation Instructions
for Envirolink™ (VRLA) Motive Power Batteries

Receiving a Battery

Inspecting the Shipping Container — The electrolyte in the VRLA battery is gelled rather than free acid. Immediately upon receiving a battery, inspect the outside of the corrugated container (or crate) and the pallet. Look for wet spots on the sides and bottom. Wet spots generally indicate that the battery jars are broken, or that the battery was tipped over in transit. Make sure that all vent plugs are in place. After inspection and before placing the battery into service give the battery a refresh charge on a Hawker approved VRLA charger when received at @ 1 ½ to 2% of the batteries rated capacity.

Making a Claim — Shipments are generally made FOB, Hawker Plant or stocking location. Therefore, making a claim to the carrier is the responsibility of the customer. If there is evidence that the battery was damaged in shipment, a proper claim should be filed with the carrier.

The services of a professional industrial battery repairman may be required to evaluate the extent of the damage. Contact Hawker or the nearest Hawker representative.

Lifting Batteries — The ideal rig for lifting batteries is an overhead hoist equipped with an adjustable, insulated battery lifting beam as illustrated in the Battery Service Manual. When attached to the lifting "eyes" of a battery, the lifting beam exerts a vertical pull on the eyes. This method prevents damage to the battery that might occur using lifting methods that tend to squeeze or stretch the battery tray. If there is a possibility that the chain or cable of the hoist might come in contact with the battery post, cover the battery with a piece of plywood or another type of nonconducting material.

Maintenance

Envirolink™ is a valve-regulated (VRLA) lead-acid battery. This battery operates with a valve and may not at any time during the life of the battery be watered. Never dismantle or remove the safety valve or the vent caps from the cell. The vent caps are non-removable. If the vent plugs are removed, capacity loss will occur and fail prematurely and the battery warranty is voided. Keep the battery clean and dry, in order to avoid self-discharge and current leakage. Contact a Hawker representative in your area for programmed maintenance.

Installing the Battery

The battery compartment of the vehicle must be well ventilated to allow the heat generated by the battery during discharge to dissipate. If the battery is to be installed in a metal compartment, make sure the compartment is clean and dry prior to installation.

Seat the battery in the compartment firmly and evenly. Then block it in position. Many vehicles have adjustable clips for blocking the battery into place. Allow 1/8" to 1/4" clearance between the block (or clip) and the battery tray. Do not wedge the battery into the compartment because some room is needed for expansion.

Charging the Battery

The sealed VRLA battery MUST be charged with a Hawker approved charger and Hawker approved charge profile. To avoid accidental connection to the wrong type of charger, it's recommended that specific connectors be used to separate the VRLA batteries and chargers from other battery types. BATTERY MUST BE CHARGED on A HAWKER APPROVED VRLA CHARGER.

The charging time for an 80% discharged battery is approximately 9-16 hours depending on charger model. **VRLA Batteries are only rated for light and medium duty application use. Refer to the Envirolink Installation and operators Instructions for discharge requirements and application definitions.** If the run time of the battery is not sufficient, check that the work required is compatible with the battery capacity and that the setting of the charger is suitable for the valve regulated battery.

Ventilation During the Charging Cycle – During the charge cycle, in spite of the gas recombination, cells may emit hydrogen and oxygen gas. Although the gas emission is very low, it is necessary to ensure that there is adequate ventilation in the room especially during the recharge. The use of fans to help cool the batteries during charge is highly recommended.

Storage – Store the battery in a dry, clean and frost free area, before and after operating.
During storage check the voltages of several cells at regular interval and when the voltage falls to 2.12 or below, give the battery an equalize charge at a 1.1/2 to 2% of the batteries rated capacity for 7 hours.
For an easy recharge of the batteries, it is advised not to store without recharge for more than 1 month at 100F and 2 months at 86°F or 3 months at 68°F.

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