

## AGM220 MOTIVE POWER VALVE REGULATED LEAD ACID BATTERIES WITH ONBOARD CHARGING SYSTEM INSTALLATION AND OPERATING INSTRUCTIONS

PLEASE READ BEFORE PLACING BATTERIES IN SERVICE  
THESE INSTRUCTIONS TO BE SHIPPED WITH BATTERY AND DELIVERED TO USER

Previously Marathon Pow'r Pak LD.

### 1. RECEIVING BATTERIES

Immediately upon receipt of shipment, examine the outside of the packing for signs of rough handling before accepting battery from carrier. If there is evident damage, the receipt should be signed and both copies (carrier's and receiving copies) marked "Shipment Received Damaged". The carrier should be called immediately and asked to make a "Carrier's Inspection for Damage Report". If "concealed" damage is later detected, the carrier should be called immediately and requested to make a "Carrier's Inspection for Concealed Damage Report". After inspection by the carrier, arrangements should be made with the local representative to have the battery repaired before placing it in service.

### BEFORE PLACING BATTERIES IN SERVICE, REVIEW AND ADHERE TO THE SAFETY GUIDELINES (ITEM 4)

### 2. PLACING IN SERVICE

All AGM VRLA batteries must be given an equalizing charge prior to their use. To accomplish this, connect the battery to the onboard charger and commence charging until the automatic charge control terminates.

### 3. CHARGING\*

The charger is matched to the battery with respect to voltage and ampere-hour capacity. The charger is a Stryten Energy-approved high frequency charger with a CC-CV-CC profile which includes automatic charge control features. The constant voltage portion of the curve is set at 2.37 volts per cell.

**TO BEGIN CHARGING: ALWAYS CONNECT THE BATTERY TO THE CHARGER PRIOR TO CONNECTING THE CHARGER TO AC POWER. TO STOP CHARGING: ALWAYS DISCONNECT THE CHARGER FROM AC POWER PRIOR TO DISCONNECTING THE BATTERY FROM THE CHARGER. FAILURE TO FOLLOW THIS SEQUENCE MAY CAUSE CHARGER DAMAGE.**

### 4. SAFETY

- Wear appropriate safety equipment when working around electrically live batteries.
- The AGM220 battery can emit hydrogen gases under some conditions. Whenever possible, charge in a well ventilated area and keep open flames away from batteries.
- Lift batteries with hoist, crane, lift truck, or similar equipment; move batteries on trucks, conveyors, or rollers. Make sure equipment is of ample strength and properly installed.
- Disconnect battery from the truck when performing maintenance and repair on motor or electrical system.
- Open, or "break" battery circuit before attempting repairs to charging plug or receptacles.
- Familiarize yourself with batteries and rules for charging and handling. Contact your local representative for information.
- Assign battery and charger care to properly trained personnel.
- Review your company safety regulations, and familiarize yourself with industry and government guidelines (OSHA, ANSI, etc.) to help reduce personal accidents and equipment damage.

## 5. OPERATION

Batteries are rated in ampere-hours and are selected to perform a specific work load within an established period of time. Increasing the work load or time period could result in over-discharging, thus shortening battery life. Generally speaking, all lead-acid batteries should not be discharged to more than 80 percent of its six-hour rated capacity.

**THE BATTERY SHOULD NOT BE DISCHARGED BELOW 1.90 VPC (80% DEPTH OF DISCHARGE)**

## 6. MAINTENANCE

Being a low maintenance battery, little need be said regarding maintenance operations. The top of the battery should be kept clean and dry and may be washed to remove any accumulated foreign matter. In the unlikely event of accidental contamination with electrolyte, wash with a neutralizing solution (or one gallon water mixed with one pound of baking soda or commercial soda ash). Follow with a rinse using clear water.

**NEVER ATTEMPT TO ADD WATER TO THE BATTERY—IT HAS BEEN DESIGNED TO FUNCTION WITHOUT AN SUCH ADDITIONS OVER ITS ENTIRE LIFE. ANY ATTEMPT TO REMOVER THE COVER OFF THE BATTERY SHALL VOID THE WARRANTY**

## 7. SERVICE

Additional information and assistance can be obtained by contacting your local sales representative.

If you are in the United States, call toll free **1-888-563-6300**.