



Product News

Date: 1/20/2011

Product Newsletter: 1219

Subject: High Frequency Charger and Higher Amp Hour battery

Product Class: III

Series / Models Affected: MPB (B827)

We are pleased to announce two new enhancements to our MPB product offering. These changes were implemented into production January 3, 2011.

- 1. The 110 and 220 volt 12 amp on-board charger contained in the MPB battery pack has been replaced by a High Efficiency 20 Amp Smart charger. This upgrade provides the following benefits:**

Serviceability -

- Charging profiles can be changed to any one of 8 profiles by simply changing a technician accessible and labeled "Mode key"
- For applications that want a wall mounted charger, our new physically smaller HF smart charger can be easily adapted to be wall mounted.

Cost of Operation -

- The new HF Smart charger has been designed to provide efficient charge times throughout the entire charge cycle. The HF charger excels in applications where charging occurs in the 25% and under discharge zone (applications that have the truck on charge when the truck is not in operation)
- Conventional chargers continually over charge batteries which results in reduced battery life and increased battery replacement frequency. Our new HF charger closely monitors the charge profile finish rate which minimizes cell damage due to overcharging. This maintains battery integrity and reduces battery replacement.
- The new transistor controlled HF charger utilizes a high switching speed processor that provides greater electrical efficiency while decreasing charging cost.

Productivity -

- Faster charge times are a benefit of our new HF charger. The faster charge time reduces energy cost and will allow a fully charged truck/battery pack to be returned to service sooner.
- The challenge in Opportunity Charging is the accuracy in the return charge to the battery. Lead acid batteries need to be charged to 110% to ensure a full charge. Our High Frequency Smart charger hits 110% +/-3% for the full range of discharges. For customers that want to opportunity

charge, the High Frequency Smart charger will provide more truck up time, better care for the batteries and use less energy when charging.

Ergonomics -

- The new HF charger offers the same One Step charging process. Operators simply utilize the supplied power cord to plug the charger into a wall socket. The system automatically disengages all trucks functions while engaging the charging system.

Dependability -

- On-board chargers have historically failed due to truck vibration. The normal test process subjects a charger to a 2 hour shaker test. We subjected our new HF Smart charger to the shaker test for 2 full days without failure.

2. Increase flooded battery amp hour capacity

Efficiency and Durability

- The new standard flooded battery has been changed from a 158 amp capacity to 170 amp capacity based on a 6 hour discharge rate. Your customers will experience greater operational efficiency, longer run time between charge and more durability from these battery and charger offerings.

Regards,

A handwritten signature in black ink, reading "Lou Micheletto". The signature is fluid and cursive, with a long horizontal line extending from the end of the name.

Lou Micheletto, Manager, Product Strategy – Warehouse