# HOBIT Technical Safety Bulletin No. 5

**SUBJECT: Charging Ohmeda Battery Packs**

**Issue Date: 2/27/19**

# NOTICE:

**NEVER ATTEMPT TO CHARGE OR DISCHARGE A BATTERY PACK WITH KNOWN OR VISIBLE SIGNS OF DAMAGE TO THE BATTERY PACK, CHARGING UNIT, POWER CORD OR THE CONNECTING LEAD WIRES.**

**CAUTION AND DISCUSSION:**

The Ohmeda Monitor battery pack (See Fig. 1 below), has a voltage of 4.8 VDC, which is a little over half of the typical 9 VDC battery (Fig. 2). There are two exposed metal terminals (positive and negative). If these two terminals are connected by a conductive material such a metal, it can cause the battery to spark and rapidly heat-up and even burn the metal terminals. This is a potential hazard for both fire and personal injury resulting in a burn. **Caution** should always be used when connecting the battery pack for charging. If there are any visible signs of damage to the charger unit, power cord, connecting cables or to the battery itself, never attempt to charge the battery. Unplug the charging unit and contact Bill Gossett, HOBIT Trial Hyperbaric Technical Director, via contact information is listed below.

A smart charger (Fig. 3) has been provided to each site along with instructions for charging the battery packs that power the Ohmeda Volume Monitor (Fig. 4). These smart chargers require the user to select specific items from the menu which are detailed in the instructions we provided. Please read all of these instructions carefully and also consult with someone who is familiar with the charging procedure before attempting to charge these batteries.

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**CAUTIONS AND RECOMMENDATIONS FOR OHMEDA BATTERY PACK CHARGING**

1. Never charge batteries in close proximity to the hyperbaric chamber. Increased oxygen levels from the chamber can increase the risk of fire. **Recommendation:** Charge batteries in a room that is separated from the hyperbaric chambers.

2. Never attempt to charge a battery if there are visible signs of damage to equipment or batteries. **Recommendation:** Always inspect the equipment and battery before connecting to charge.

    a. Burn marks on the battery or the battery terminals.
    b. White powder anywhere around the battery.
    c. Torn or damaged battery jacket.
    d. Loose batteries in the battery pack.
    e. Burn smell on battery or charger.
    f. Charger not programming properly.
    g. Damage to the charger unit housing.

3. Only those who are trained and experienced should be tasked with the responsibility of charging these batteries. **Recommendation:** Ensure that those who are charging the Ohmeda batteries have been properly trained and are aware of the procedure as well as the risks and hazards. Detailed charging and discharging instructions were provided to each site. Please contact us if you need another copy.

4. Never place the Ohmeda battery pack with the metal terminals down in contact with any surface. **Recommendation:** Place charging unit on a large rubber or neoprene type pad that extends beyond the charging unit.

**NOTE:** some surfaces may look safe, i.e., non-conductive, like plastic, but may contain conductive materials. As a safe rule, never place a battery with the terminal down and always place on a clearly non-conductive surface such as a rubber pad.

5. Never charge these batteries without someone nearby to supervise and never charge batteries overnight or times when unattended. **Recommendation:** Charging should always be done when there are staff close-by who can detect any signs of burning or any unusual events with the charging process.

6. Battery packs should be replace with a fresh battery pack when there are any sings of damage or deterioration of power (see No. 2 above). **Recommendation:** The battery packs supplied to each HOBIT monoplace site were ordered from OSI Batteries: website www.osibatteries.com for approximately $15.00 each in January 2018. They are the blue wrapped battery packs seen in fig. 1. OSI says these batteries may last 2-3 years with the low use and with proper battery care. There are other companies besides OSI Batteries who provide the same battery service.

7. Use care to not damage the battery terminals when connecting and disconnecting. Roughness or inattention to connecting or disconnecting the charging leads to the battery terminals can damage the terminals and battery. **Recommendation:** Always use care when handling these batteries. If the battery is damaged it should be discarded. Notify whoever is responsible to order a replacement battery. Note: We recommend that a minimum of three (3) batteries be kept on hand and ready for treating HOBIT subjects. Latex or non-Latex gloves can also be worn when charging batteries. This will provide protection again small shocks if the battery terminals are accidently touched.

8. Battery packs should always be stored separately in a non-conductive container (e.g., Tupperware plastic container) to avoid the risks of battery terminals touching other batteries or touching a surface that is conductive. **Recommendation:** Store each charged battery in its own non-conductive container and labeled for example: "**Charged** Ohmeda Monitor Battery Packs". Store uncharged batteries separately in a similar container labeled for example: "**Uncharged** Ohmeda Monitor Battery Packs".
9. For longer service, batteries should be "cycled", i.e., fully discharged and charged every 3 months. Every six months battery packs should have three repetitive "cycles".
10. A charging cradle to place the battery pack into for charging, will be provided to each site along with instructions for connecting and using the battery cradle for charging.

Please contact me with any concerns or questions.

Thank you,


**Bill Gossett** CHT, RRT
Director of Hyperbaric Technical Operations
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**Fig. 1**
**Ohmeda Batterv Pack**


**Fig. 2**
**9 VDC Battery**


**Fig. 3**
**Smart Charger**


**Fig. 4**
**Ohmeda Volume Monitor**