

Maintenance and Service of Traction Batteries

Hawker perfect plus (PzS/PzB)/wf 200 plus (PzW)



DAILY

<p>1 Disconnect the electrical connection between the battery and the vehicle by separating the plugs.</p>	<p>2 Remove battery cover. Leave vent plugs closed.</p>	<p>3a Check level sensor: flashing green = electrolyte level ok flashing red = fill up water!</p>	<p>3b Check electrolyte and temperature LEDs on the easyplus, if fitted.</p>
<p>4 Measure electrolyte temperature. If over 45°C. leave to cool down.</p>	<p>5 Connect charger plug.</p>	<p>6 If applicable, connect electrolyte circulation system (if connector w/o integrated air supply). *EC = Electrolyte circulation</p>	<p>7 Switch on charger or check if charger has switched on. Charge battery.</p>
<p>8 Add water until "max." mark or alternatively connect aquamatic tube and see if all plugs show "max." indication.</p>		<p>9 Switch off charger or check if charger has switched off. Disconnect electrolyte circulation, if connected. Check final values if applicable; clean battery if dirty.</p>	

WEEKLY

<p>1 PzS/PzB: Check electrolyte level as in "Daily" item 3; charge battery as from "Daily" item 5 onwards. At the end of the charging process, add water until "max" level or alternatively connect aquamatic tube and see if plugs show "max". Go on from "Daily" item 8.</p>	<p>2 Visually inspect all battery components for mechanical damage (particularly charging plug and cables).</p>	<p>3 Carry out weekly equalizing charge</p>

MONTHLY

<p>1 Measure cell voltages</p>	<p>2 Measure electrolyte specific gravities and temperature.</p>	<p>3 PzW: After full charging leave to stand min. 2 h; measure total voltage, voltages per cell, and, if the voltage readings are irregular, also check the S.G. of each cell</p>	<p>4 If significant changes from earlier measurements or differences between the cells are found, request further testing and maintenance by the Service department.</p>

ANNUALLY

<p>1 Measure insulation value. Must be < 50 Ω per V of nominal voltage.</p>	<p>2 If insulation values are too high: Clean battery and extract liquid from inside the container. Repair small damages to the container insulation.</p>	<p>3 Exchange aeromatic filter. Check air pump function. *EC = Electrolyte circulation</p>	<p>4 PzW: Add water if electrolyte level LED indicates so or after about 1 year or after 200 cycles; please call EnerSys Service.</p>

SAFETY

- Pay attention to the operation instruction and fix them close to the battery.
- Work on batteries to be carried out by skilled personnel only!
- Use protective glasses and clothes when working on batteries. Pay attention to the accident prevention rules as well as EN 50272-3 and EN 50110-1.
- No smoking!
- Do not expose batteries to naked flames, glowing embers or sparks, as it may cause the battery to explode.
- Acid splashes in the eyes or on the skin must be washed with water. In case of accident consult a doctor immediately!
- Clothing contaminated by acid should be washed in water.
- Risk of explosion and fire, avoid short circuits!
- Caution: Metal parts of the battery are always live. Do not place tools or other metal objects on the battery!
- Electrolyte is highly corrosive.
- Batteries and cells are heavy. Ensure secure installation! Use only suitable handling equipment e.g. lifting gear in accordance with VDI 3616.
- Dangerous electrical voltage!
- Pay attention to the hazards that can be caused by batteries.

Ignoring the operation instructions, repair with non-original parts or using additives for the electrolyte will render the warranty void. For batteries according to the ATEX directive 94/9 EC, the instructions for maintaining the appropriate protection class during operation must be complied with (see relevant certificate).

wf200 plus

The special vent plugs prevent the escape of acid aerosols during charging and minimize water loss. This ensures a dry and clean battery surface and further reduces maintenance cost.

Topping-up interval:

- 6 months**
In two-shift operation or after 200 cycles
- 12 months**
In single-shift operation or after 200 cycles

Back to the manufacturer!
Batteries with this sign must be recycled. Batteries which are not returned for the recycling process must be disposed of as hazardous waste!
When using motive power batteries and chargers, the operator must comply with the current standards, laws, rules, and regulations in force in the country of use!

The PLUS

perfect plus / wf200 plus:
To get the hard work done

