

Service manual

British English

Permobil VoltPro service kit

CE

Introduction

This service kit manual is intended for technical personnel who maintain and repair Permobil power wheelchairs and their accessories. It is important that anyone who performs maintenance and repairs described in this manual reads and understands the content of this manual so that the work is performed professionally. Always state the model number and serial number of the battery charger when contacting Permobil, to ensure that the correct information is provided.

How to contact Permobil



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1 Important information

All information, pictures, illustrations and specifications are based upon the product information available at the time this manual was released. Pictures and illustrations used in this manual are representative examples and not intended to be exact depictions of the various parts of the wheelchair.

We reserve the right to make changes to the product without prior notice.

If you are visually impaired, this document can be downloaded at www.permobil.com. Use the magnifying tool in your PDF reader to achieve the desired text and picture size.

It is also possible to obtain information concerning our products from our website: www.permobil.com.

1.1 Technical support

Be prepared to provide the model number and serial number of the battery charger, and the wheelchair's serial number, located on the chassis, to ensure proper support.

In the event of technical problems, contact Permobil.

1.2 Scrapping

Contact Permobil for information about disposal agreements in force.

The recycling system is obligatory under European legislation.

2 Types of warning signs

The following types of warning signs are used in this manual:



WARNING!

Indicates a hazardous situation which, if not avoided, could result in serious injury or death as well as damage to the product or other property.



CAUTION!

Indicates a hazardous situation which, if not avoided, could result in damage to the product or other property.



IMPORTANT

Indicates important information.

3 Service kit instructions

The Permobil battery charger has an internal switch. This switch determines which of the two pre-programmed charging curves is applied when the battery charger is connected to a power wheelchair. The switch can be accessed through an opening in the bottom of the charger which is concealed by a warning label, see figures 1 and 2. The warning label confirms that the IP44 rating is maintained, i.e. that water and/or dust do not get into the battery charger.

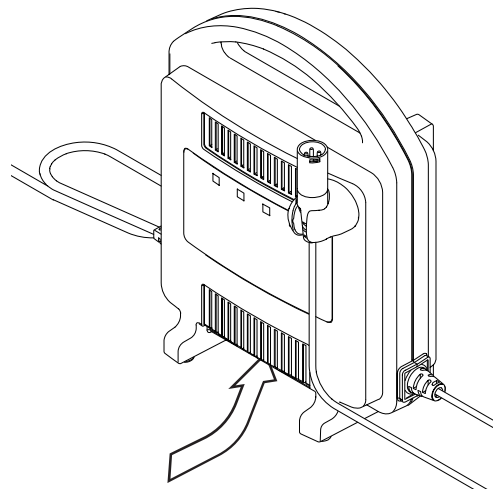


Figure 1. Location of the switch in the bottom of the battery charger.

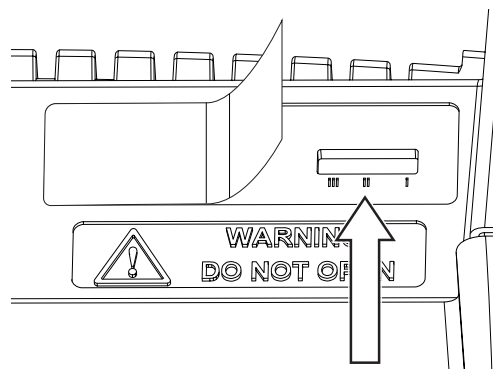


Figure 2. The exposed switch after removing the warning label.

The switch has three positions, see figure 3:

- **A** indicates position “I” and corresponds to the charging curve intended for Permobil AGM GEL batteries.
- **B** indicates position “II” and is a separator, or neutral position.
- **C** indicates position “III” and corresponds to the charging curve intended for MK GEL batteries.

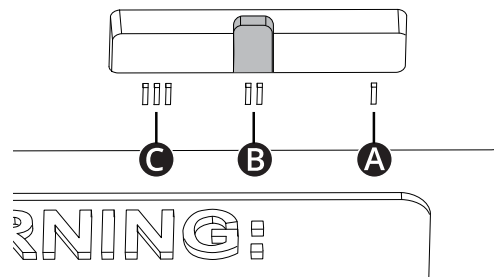


Figure 3. The three switch positions.

If position “II” is selected it will result in an error and the LEDs **D** and **E** will flash yellow on the front display, see figure 4.

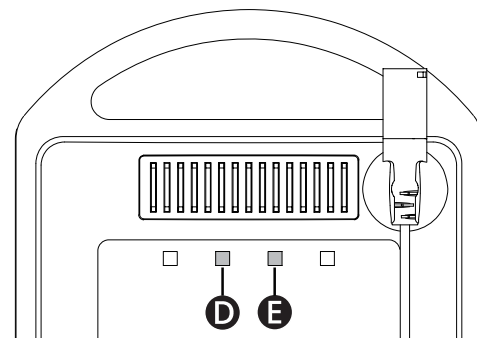


Figure 4. If an error has occurred, these LEDs will flash yellow.

3.1 List of tools and materials

The following items are necessary for this task:

- Alcohol-based cleaning agent. (Not included)
- Protective gloves. (Not included)

3.2 List of hardware

The following hardware is included in the kit:

- A blue replacement label.
- A plastic configuration tool, see figure 5.

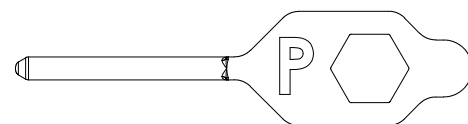


Figure 5. Configuration tool for sliding the configuration switch.

3.3 Configuring the charging curve

The following instructions describe the process for configuring the charging curve of the battery charger and the process to confirm that the IP44 rating is maintained. It is important to follow these instructions every time the charging curve is configured.

1. Read all instructions before you begin.

2. Make sure that all tools required for the job are on hand. A new and unused replacement label must be used every time the charging curve is configured.
3. In order to complete the following step, determine the battery type of the intended replacement batteries that are about to be installed on the power wheelchair:
 - Permobil AGM GEL batteries.
 - MK GEL batteries.
 - Other valve-regulated lead acid batteries. (Not recommended by Permobil for use. Check with the battery manufacturer to determine which of the above two charging curves is appropriate.)
4. Before you remove the warning label, determine which of the two charging curve configurations is applied to the battery charger by observing the number of times the LEDs flash during start-up.
 - Make sure that the charging connector is **not** inserted into the power wheelchair.
 - Note whether the LEDs flash once or three times. The LEDs **B**, **C**, and **D** will flash as soon as you connect the battery charger's power cable to a suitable power outlet, see figure 6.
 - One flash indicates that the switch configuration is in position "I".
 - Three flashes indicate that the switch configuration is in position "III".
5. If the charging curve is not suitable for the battery type of the intended replacement batteries (identified in step 3), follow the steps below to configure the charging curve. If the charging curve already matches the battery type of the intended replacement batteries, then no changes are necessary. The battery charger is ready for use.
6. Disconnect the power cable from the power outlet. Make sure that the charging connector is **not** inserted into the power wheelchair.
7. Remove the warning label from the bottom of the battery charger.

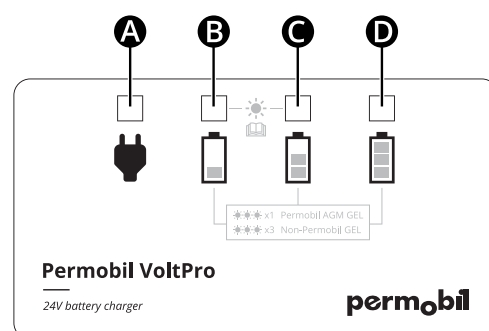


Figure 6. LED lights showing the battery levels.



WARNING!

High voltage shock

Do not expose the charger to excessive amounts of water. If you do, you can experience a high voltage shock.

8. Use the included configuration tool to change the configuration by sliding the switch to the correct position for the batteries intended for the power wheelchairs, see figure 7.

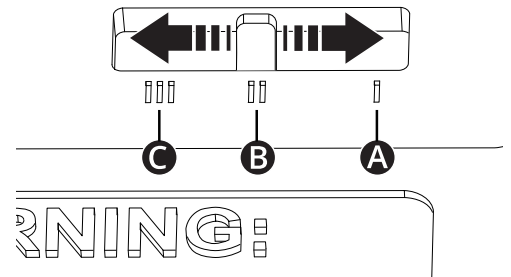


Figure 7. Slide the switch to the correct position.

9. Repeat step 4 to confirm that the switch is correctly configured for the intended batteries. Regardless of the result, **disconnect** the battery charger from the power outlet before proceeding.
- If the switch is not correctly configured, repeat step 8.
 - Once you have confirmed that the switch is correctly configured, continue with the next step.
10. Use an alcohol-based agent to clean the surface where the new label will be placed.
11. Use protective gloves to preserve the adhesive on the new and unused replacement label. Attach the new and unused replacement label in the designated groove shown in figure 8.

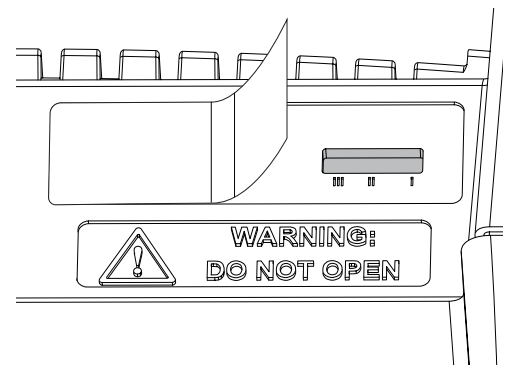


Figure 8. Attach the replacement label in the designated groove.

12. To ensure that the IP44 rating is restored, it is important that a new and unused replacement label is used every time the charging curve is configured, and that the label is properly attached. Press down firmly on the edges of the label to ensure proper adhesion.
13. The battery charger is now configured and is ready for use.

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