

Battery Installation

Assembly, Installation and Operating Instructions



This instruction sheet applies to Pronto® M50™, M51™ and M61™ wheelchairs.

Yes, you can:

SAVE THESE INSTRUCTIONS

NOTE: Check all parts for shipping damage. In case of damage, DO NOT use. Contact Carrier/Invacare for further instructions.

Safety Summary

To ensure the safe and proper installation and use of the batteries on the M50, M51 and M61, these instructions **MUST** be followed:

⚠ WARNING

After ANY adjustments, repair or service and BEFORE use, make sure that all attaching hardware is tightened securely - otherwise injury or damage may result.

Make sure power to the wheelchair is OFF before performing this section.

The use of rubber gloves and chemical goggles or face shields is recommended when working with batteries.

Invacare strongly recommends that battery installation and battery replacement ALWAYS be done by a qualified technician.

UI batteries weigh 24 pounds each. Use proper lifting techniques (lift with your legs) to avoid injury.

Use UI batteries only. Failure to use the correct battery size and/or voltage may cause damage to your wheelchair and give you unsatisfactory performance.

ALWAYS use a battery lifting strap when lifting a battery. It is the most convenient method and assures that the battery acid will not spill. It also helps to prolong the life of the battery.

DO NOT tip the batteries. Keep the batteries in an upright position.

NEVER allow any of your tools and/or battery cable(s) to contact BOTH battery posts at the same time. An electrical short may occur and serious personal injury or damage may occur.

The POSITIVE (+) RED battery cable must connect to the POSITIVE (+) battery terminal, otherwise serious damage will occur to the electrical system.

Avoid storage or use near external flame or combustible products.

For more information regarding Invacare products, parts, and services, please visit www.invacare.com

⚠ ACCESSORIES WARNING

Invacare products are specifically designed and manufactured for use in conjunction with Invacare accessories. Accessories designed by other manufacturers have not been tested by Invacare and are not recommended for use with Invacare products.

NOTE: If there is battery acid in the bottom of the battery tray or on the sides of the battery(ies), apply baking soda to these areas to neutralize the battery acid. Before reinstalling the existing or new battery(ies), clean the baking soda from the battery tray or battery(ies) being sure to avoid contact with skin and eyes. Determine source of contamination. Never install/reinstall a battery with a cracked or otherwise damaged case.

Using the Proper Batteries

NOTE: For this procedure, refer to FIGURE 1.

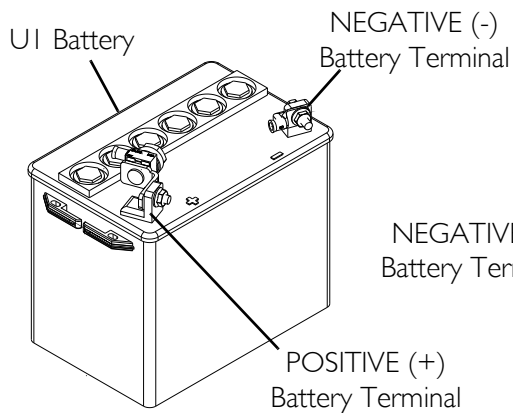
1. Place battery on ground/flat surface.
2. Visually draw a horizontal and vertical centerline through the middle of battery.
3. Position the battery so that the terminals are above the horizontal centerline.
4. Visually inspect the battery to ensure the correct position of the POSITIVE and NEGATIVE terminals:

⚠ WARNING

Batteries with terminal configuration as shown below MUST be used. Batteries that have the reverse terminal configuration MUST NOT be used - otherwise injury and damage may occur.

Terminals MUST have a cross hole in them as shown below

USE THIS CONFIGURATION



DO NOT USE

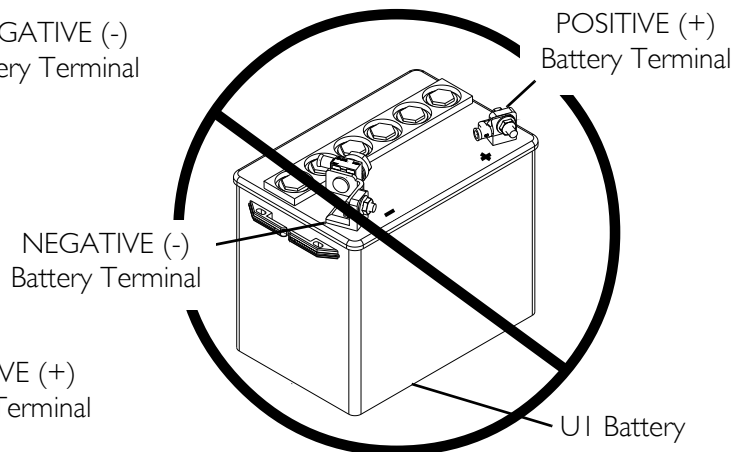


FIGURE 1 Using the Proper Batteries

Removing/Installing Batteries From/Into Battery Tray

⚠ WARNING

Always use the battery handle or lifting strap when lifting the battery. It is the most convenient method and assures that the battery acid will not spill. It also helps to prolong the life of the battery.

DO NOT tip the batteries. Keep the batteries in an upright position.

NOTE: For this procedure, refer to FIGURE 2.

NOTE: If there is battery acid in the bottom of the battery tray or on the sides of the battery(ies), apply baking soda to these areas to neutralize the battery acid. Before reinstalling the existing or new battery(ies), clean the baking soda from the battery tray or battery(ies) being sure to avoid contact with skin and eyes. Determine source of contamination. Never install/reinstall a battery with a cracked or otherwise damaged case.

NOTE: Have the following tools available:

TOOL	QTY	COMMENTS
7/16-INCH (6PT) BOX WRENCH	1	Not Supplied
DIAGONAL CUTTERS	1	Not Supplied

Removing

NOTE: For M50/51 wheelchairs manufactured BEFORE 11/01/04, refer to Owner's manual P/N 1110521. For M50/51 wheelchairs manufactured AFTER 11/01/04 and all M61 wheelchairs, refer to Owner's manual P/N 1125085.

1. Place the wheelchair in a well ventilated area where work can be performed without risking damage to carpeting or floor covering.
2. Verify the joystick on/off switch is in the off position and disconnect joystick cable (not shown). Refer to Disconnecting/Connecting the Joystick in the owner's manual.
3. Remove the seat. Refer to Removing/Installing the Seat Assembly in the owner's manual.
4. Remove the top shroud. Refer to Removing/Installing the Top Shroud in the owner's manual.
5. Disconnect the front battery from the controller by disconnecting the BLACK connector on the front battery from the BLACK connector on the controller.
6. Disconnect the rear battery from the front battery by disconnecting the BLACK and RED connectors on the rear battery from the BLACK and RED connectors on the front battery.
7. Lift the rear battery first, then the front battery out of the battery tray using the battery handles.

Installing

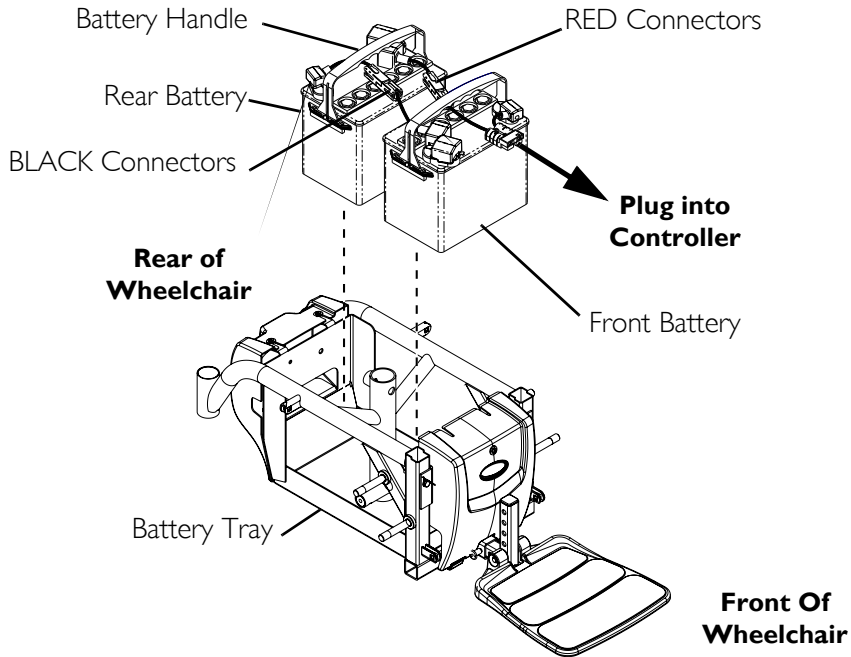
NOTE: For M50/51 wheelchairs manufactured BEFORE 11/01/04, refer to Owner's manual P/N 1110521. For M50/51 wheelchairs manufactured AFTER 11/01/04 and all M61 wheelchairs, refer to Owner's manual P/N 1125085.

1. Position the wheelchair in a well ventilated area where work can be performed without risking damage to carpeting or floor covering.
2. Verify the joystick on/off switch is in the off position and the joystick cable is disconnected.
3. Install the front battery in the front of the battery tray.
4. Position the rear battery in rear of battery tray.
5. Ensure both batteries are properly seated and resting on the battery tray.
6. Connect the rear battery to the front battery by connecting the BLACK connector to the BLACK connector and the RED connector to the RED connector.
7. Connect the front battery to the controller by connecting the BLACK connectors.
8. Reinstall the top shroud. Refer to Removing/Installing the Top Shroud in the owner's manual.

NOTE: Ensure that the joystick cable is pulled through the center hole on the top shroud.

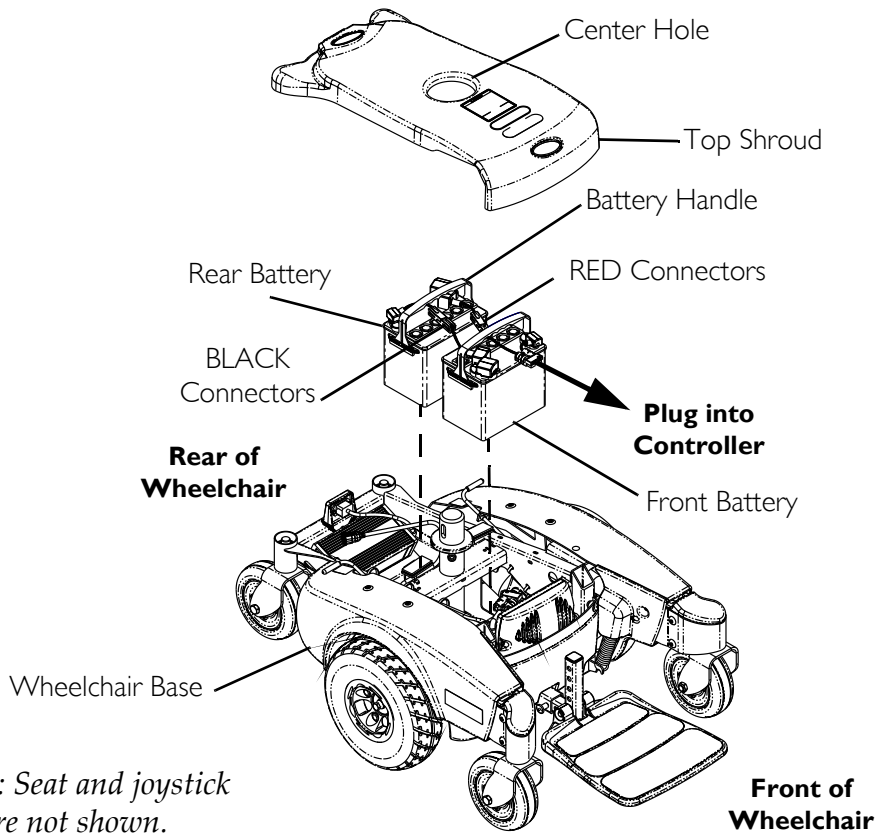
9. Install the seat. Refer to Removing/Installing the Seat Assembly in the owner's manual.
10. Connect joystick cable (not shown). Refer to Disconnecting/Connecting the Joystick in the owner's manual.

DETAIL "A" - M50/51 WHEELCHAIRS MANUFACTURED BEFORE 11/01/04



NOTE: Seat, joystick cable, side shrouds and top shroud are not shown.

DETAIL "B" - M50/51 WHEELCHAIRS MANUFACTURED AFTER 11/01/04 AND ALL M61 WHEELCHAIRS



NOTE: Seat and joystick cable are not shown.

FIGURE 2 Removing/Installing Batteries From/Into Battery Tray

Connecting/Disconnecting Battery Cables

⚠ WARNING

NEVER allow any of your tools and/or battery cable(s) to contact **BOTH** battery terminal(s)/post(s) at the same time. An electrical short may occur and serious personal injury or damage may occur.

The use of rubber gloves and chemical goggles and face shield is recommended when working with batteries.

Read and understand Using the Proper Batteries on page 2 before performing this procedure.

DO NOT remove fuse or mounting hardware from **POSITIVE (+) RED** battery cable/mounting screw.

Battery terminal configuration as shown in Detail “A” of **FIGURE 4** **MUST** be used. Batteries that have the terminal configuration reversed **MUST NOT** be used - otherwise serious injury or damage may occur.

All battery terminal covers (two [2] on the front battery and two [2] on the rear battery) **MUST** be installed prior to use.

DO NOT route wires under the battery lifting strap.

NOTE: For this procedure, refer to FIGURE 3 and FIGURE 4.

Connecting

1. Install RED battery terminal cap onto RED battery cable (FIGURE 3).
 2. Install GREY battery terminal cap onto BLACK battery cable (FIGURE 3).
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⚠ CAUTION

When connecting the battery cables to the battery(ies), the battery cable(s) MUST be connected to the battery terminal(s)/post(s) as shown in FIGURE 4, Detail “B”, (depending on battery type), otherwise damage to the battery cable may result when installing battery terminal caps.

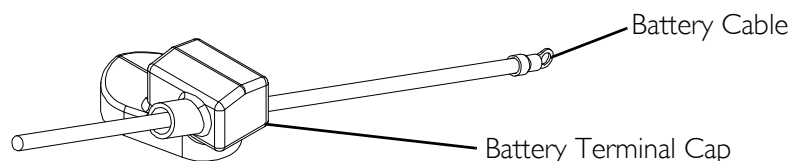


FIGURE 3 Connecting Battery Cables

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3. Connect NEGATIVE (-) BLACK battery cable to NEGATIVE (-) battery terminal/post (FIGURE 4).
 4. Connect POSITIVE (+) RED battery cable to POSITIVE (+) battery terminal/post (FIGURE 4).
 5. Secure the battery cable(s)/ring terminal(s) to the battery terminal(s)/post(s), BLACK to NEGATIVE (-) and RED to POSITIVE (+), with the provided 1/4-20 x 5/8-inch hex flange screw and hex flange locknut. Securely tighten. Refer to Detail "A" of FIGURE 4.
 6. Verify all battery cable(s)/ring terminal(s) are correctly installed and securely tightened.
 7. Slide terminal cap(s) down battery cable(s) and onto battery clamps (FIGURE 3).
 8. Secure each terminal cap in place with a tie-wrap [use tie-wraps 11½ inches long]. Refer to Detail "B" of FIGURE 4.
 9. Position the batteries into the wheelchair. Refer to Removing/Installing Batteries From/Into Battery Tray on page 3.

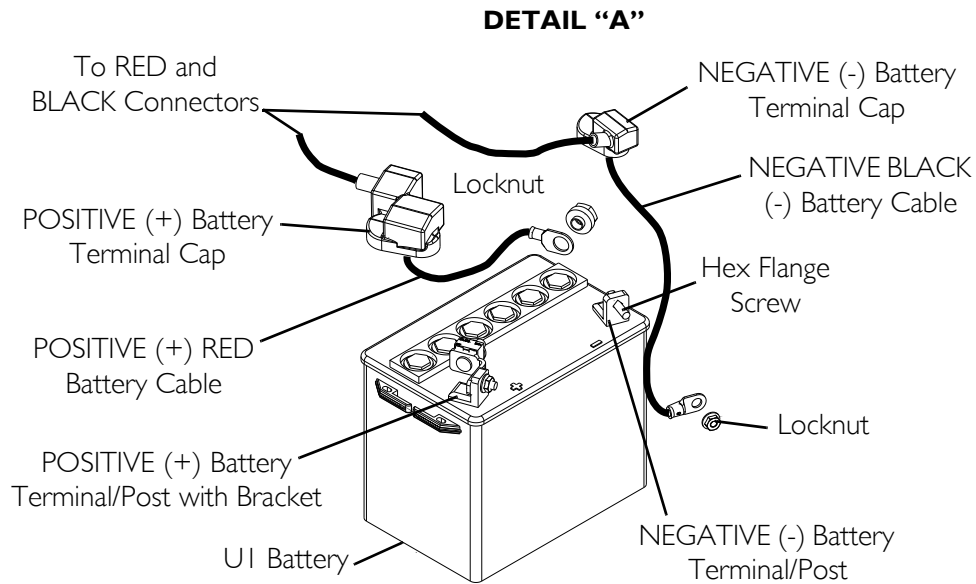
NOTE: New Battery(ies) MUST be fully charged BEFORE using, otherwise the life of the battery(ies) will be reduced.

10. If necessary, charge the battery(ies). Refer to Charging Batteries in the wheelchair owner's manual.

NOTE: For M50/51 wheelchairs manufactured BEFORE 11/01/04, refer to owner's manual P/N 1110521. For M50/51 wheelchairs manufactured AFTER 11/01/04 and all M61 wheelchairs, refer to owner's manual P/N 1125085.

Disconnecting

1. Remove the batteries from the wheelchair. Refer to Removing/Installing Batteries From/Into Battery Tray on page 3.
2. Cut the tie-wrap that secures the battery terminal cap in place. Refer to Detail "B" of FIGURE 4.
3. Slide terminal cap(s) up on the battery cable(s). Refer to FIGURE 3.
4. Disconnect POSITIVE (+) RED battery cable from the POSITIVE (+) battery terminal/post (FIGURE 4).
5. Disconnect NEGATIVE (-) BLACK battery cable from NEGATIVE (-) battery terminal/post (FIGURE 4).



NOTE: Handle on battery removed for clarity.

NOTE: Front battery is shown.

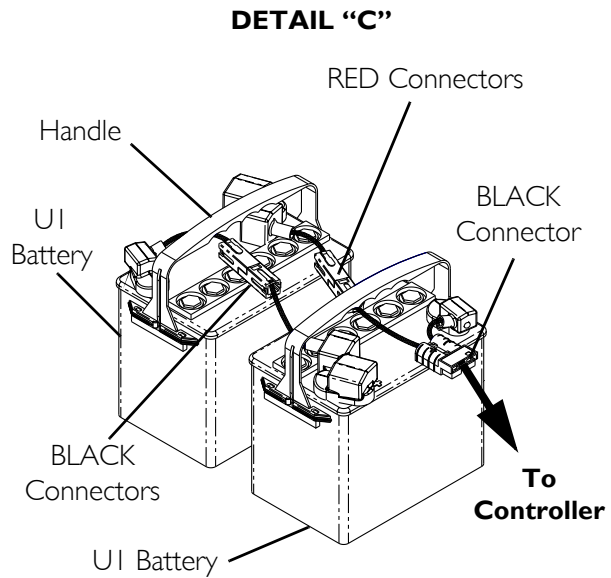
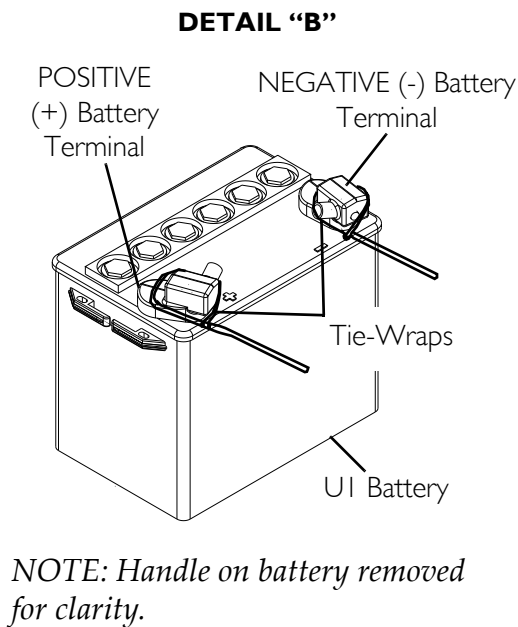


FIGURE 4 Connecting/Disconnecting Battery Cables



Yes, you can.

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