

Aegis Battery Mobility Upgrade Kit - Installation Guide

Thank you for purchasing a mobility upgrade kit from Aegis Battery. Please see the following for our recommended steps for installing and using your mobility scooter battery upgrade kit.

Please note: Depending on your specific mobility scooter, there may be some different or extra steps required. If you are unsure about the battery installation, please feel free to reach out to us and we'd be happy to help.

Disclaimer: This is to be done at your own risk. We do recommend wearing rubber gloves and safety glasses for your safety and protection.

Installation

1. Power off and disconnect your mobility scooter from the power outlet.



2. Remove the cover or battery compartment to get to the original batteries.



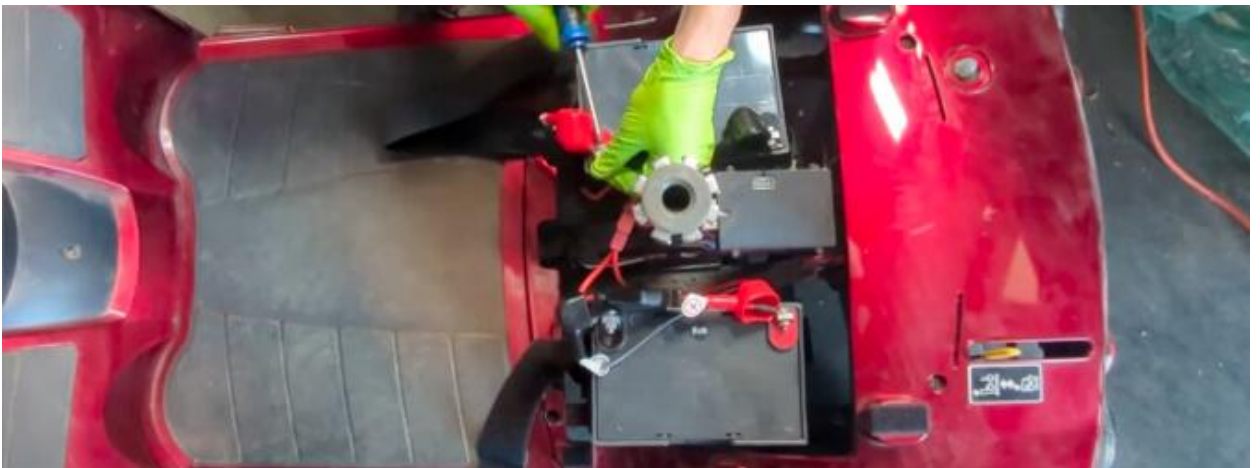
3. Take a few pictures of the original cabling. (in case needed for reference) Please note, if your batteries are in “Series” or “Parallel” connection. Most mobility scooters will use two 12V batteries and are set up for “Series” connection.

For reference on the connections, please see the “Connections” section of this guide or you can visit our webpage:

<https://www.aegisbattery.com/pages/lithium-battery-series-vs-parallel-connection>



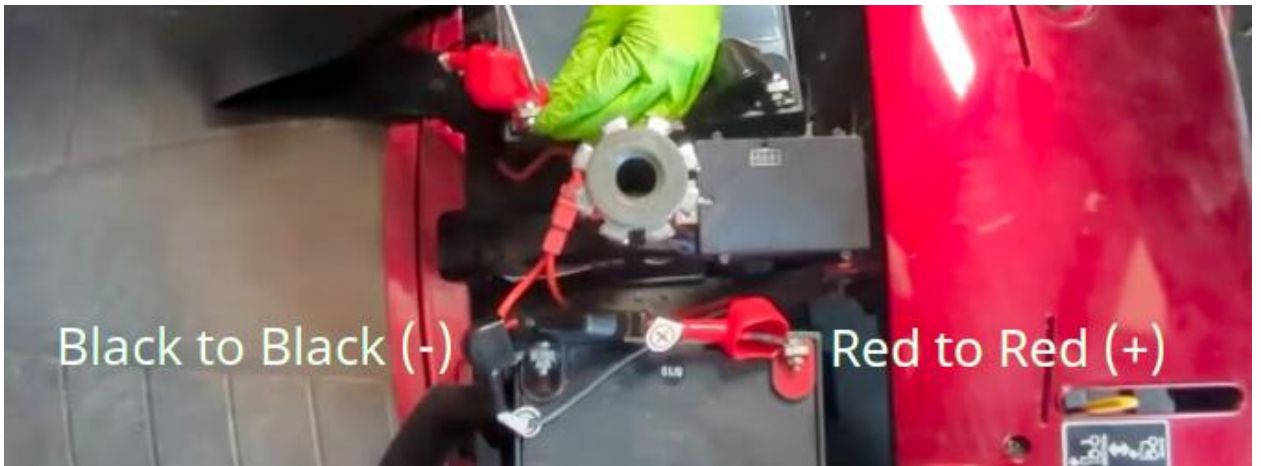
4. If two batteries are inside, we recommend removing and installing one at a time to avoid confusion with cabling.



5. Disconnect and remove your old battery.



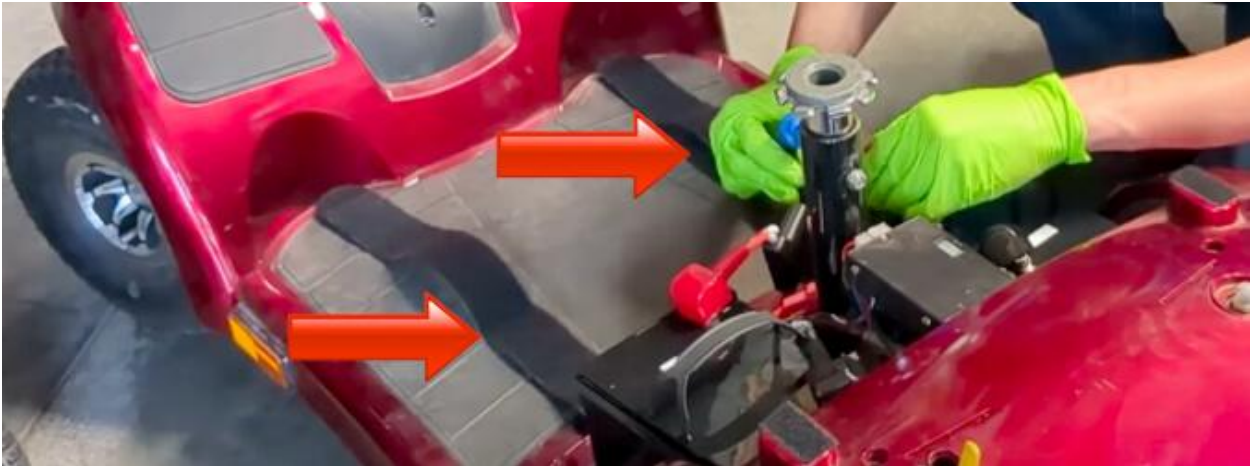
6. Place the new lithium batteries. Most mobility scooter's cabling will already be set up for series connection and you just need to connect the original cabling: red cable to the red terminal (+) and black cable to black terminal (-) on each battery.



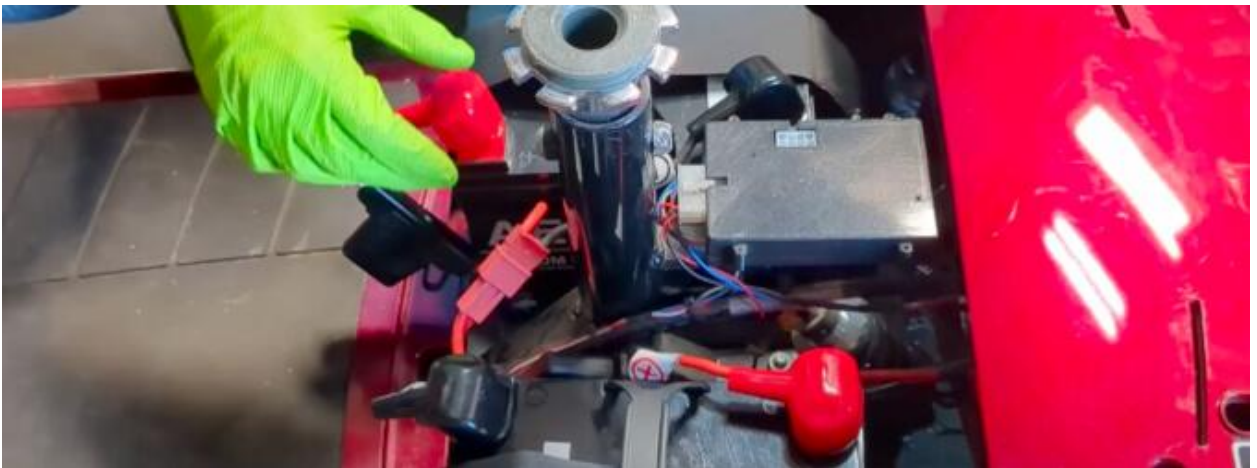
7. Please make sure all the terminal screws are securely fastened.



- Secure the batteries with the original straps or other methods to ensure the battery does not move around.



- Check and cover for any exposed connections that might create a short by touching each other while your mobility scooter is in use.



- Replace the cover or battery compartment.



11. If you set your lever to neutral, set the lever to drive.



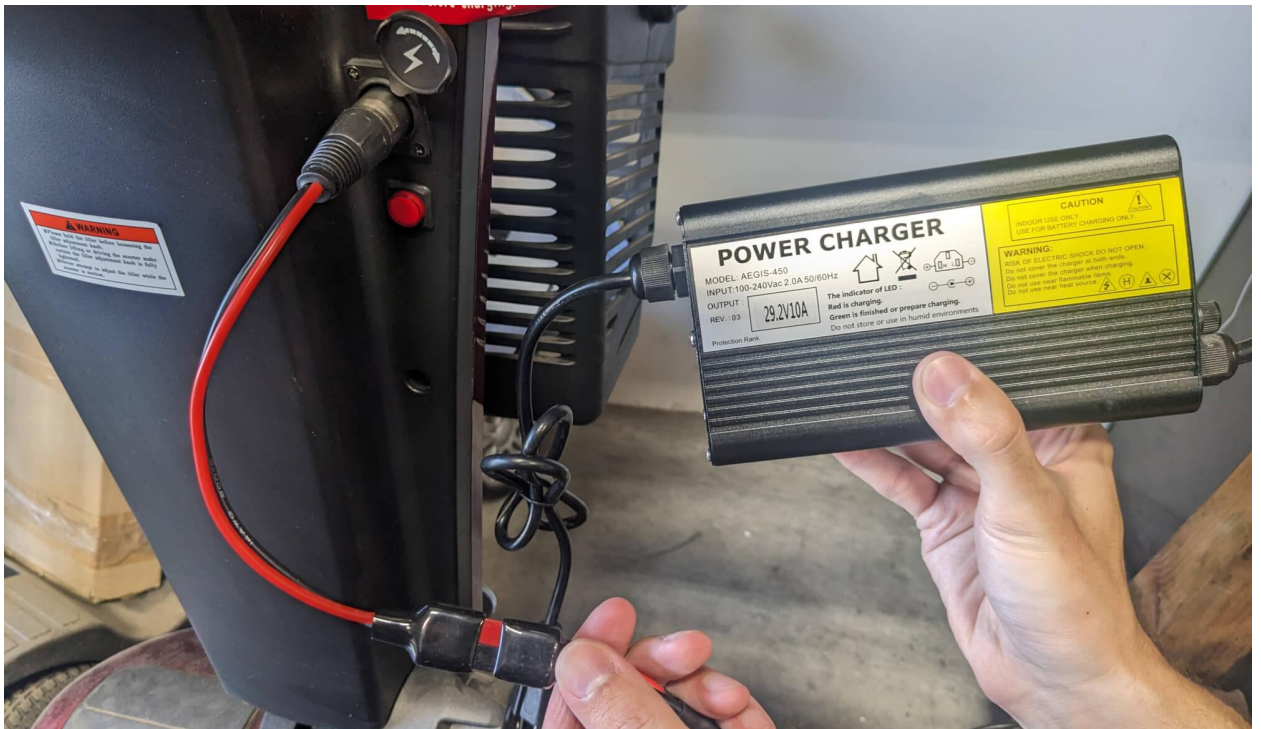
12. Turn on the scooter and try testing with a small power forward. If the scooter moves forward, you have successfully installed your batteries!



Charging

1. For Aegis Battery Mobility Kits, we include a 24V lithium battery charger and XLR (3-prong male) adapter cable to connect directly to your mobility scooter's charging port.

Please note: While you can charge your 12V batteries individually with a 12V lithium charger. The included 24V charger is meant for charging your batteries connected together in series (x2 12V = 24V) and connected to the XLR port.



2. If the XLR cable is not connected already, you can connect the XLR cable to the charger by connecting the PP45 connections together via the adapter cable.



3. When charging, a LED on the charger will turn RED. When fully charged, the LED on the charger will turn GREEN. Please note: For safety, we do not recommend leaving your batteries charging overnight or for long periods unsupervised.

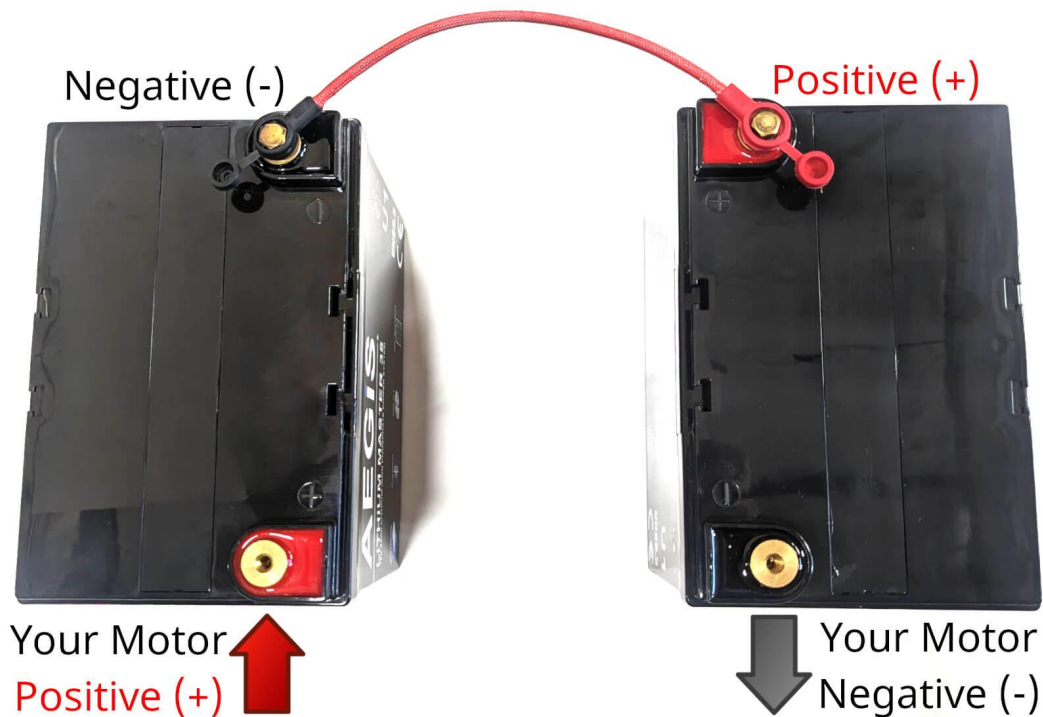


4. While you can make full use of the battery. For optimal performance and longevity, we recommend charging before you reach 20% remaining battery and charge to 90-95% for the full charge.



Connections

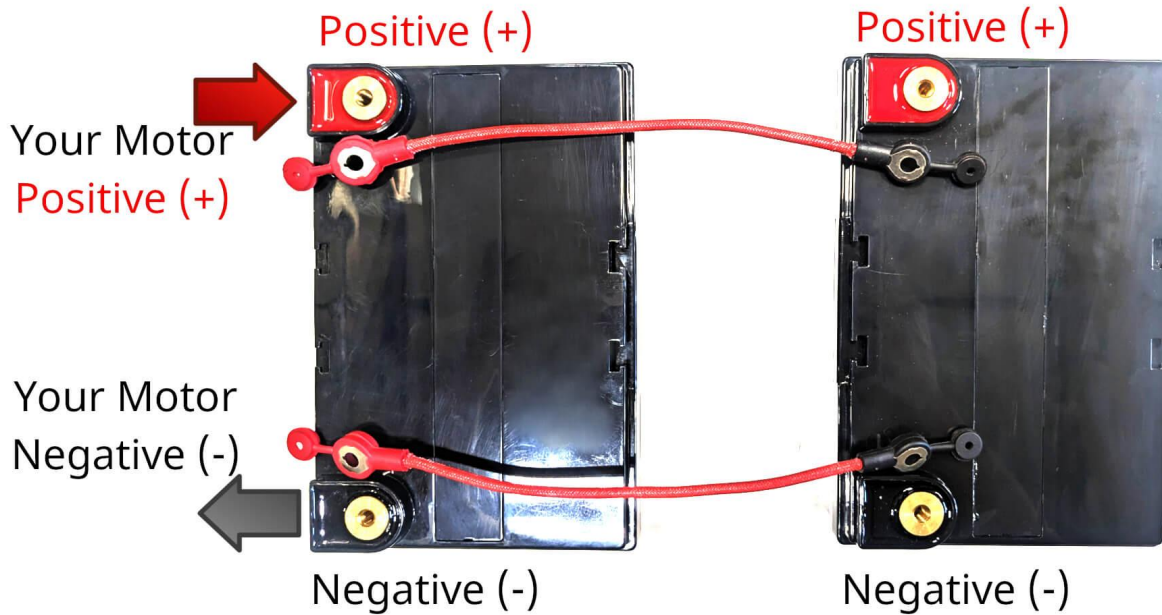
Series Connection:



The diagram above demonstrates “Series” connection for batteries. In series, the voltage is doubled to meet your application motor needs. For example, two 12V batteries connected in series will output 24V to your motor.

To connect the battery in series, you should connect one side of the batteries from one red positive terminal (+) to black negative terminal (-) on the other battery. The remaining open terminals are to connect to your motor’s cabling.

Parallel Connection:



The diagram above demonstrates "Parallel" connection for batteries. In parallel, the amp hour is doubled to extend your battery capacity. For example, two 12V 25Ah batteries connected in parallel will output 12V 50Ah to your motor.

To connect the battery in parallel, you should connect one side of the batteries from one red positive terminal (+) to red positive terminal (+) on the other battery and same for the black negative (-) terminals on each battery. Then connect your motor to one battery's positive and negative terminals.

Battery Meter



Your mobility kit's battery meter should come pre-calibrated to match your batteries and is connected via the XLR adapter to your mobility scooter's XLR charging port.

Aegis Battery sets the ranges to a more conservative setting to help protect the battery and give users a bit of time to get to a charging port if necessary. By default, our 0% setting for the battery meter is ~10-20% remaining capacity.

If you did want to customize the voltage range to better match your personal mobility scooter's driving range, please see instructions steps below:

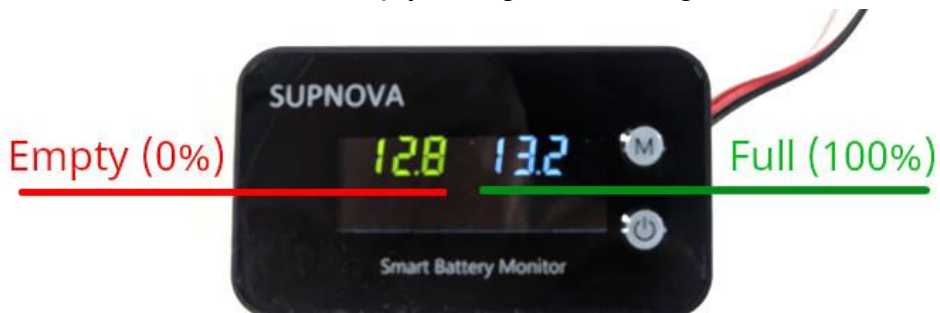
1. Long Press (2-3 seconds) the "M" button.



2. You should see the sub-menu below. Short Press the "M" button until you see #3 as shown below. Then press the "Power" button below once.



3. You should see the sub-menu below with blinking numbers. The left side numbers = empty voltage and the right side = full voltage.



- To cycle through the voltage numbers, short press the “M” button. Once you reach the number you wanted, short press the “Power” button to move to the next number column.



- Once you have the voltages you wanted, long press the “Power” button to save the settings. The numbers should stop blinking and be solid.



- Long press the “M” button to return to the main screen.



If you have any further questions, please feel free to contact us at 949-469-1776 or email us at contact@aegisbattery.com