



MEGA HERC

OWNER'S MANUAL



- 1400 SERIES WITH LITHIUM BATTERY -

97026-1

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MADE IN THE USA GUARANTEE



Our American made products are engineered, manufactured and assembled in Archbold, OH using USA made steel.



Expect more, get more.
FROM GRANITE INDUSTRIES

- Exceptional quality and service on every single product.
- Professional grade designs by our in house engineers.
- Industry leading warranties.
- Family owned and operated in the USA.

To view more products from
Overland Carts scan the QR code
with your phone
or visit OverlandCarts.com



1 YEAR WARRANTY

- **Electronics:** Includes controller, s-drive, and wiring
- **Powertrain:** Includes transaxle containing the motor and differential
- **Wheels, Casters & Tires**
- **Batteries & Charger**
- **Chassis:** Includes steel frame and powder coating

TERMS

Warranty starts from the delivery date of the cart.

We will repair, without charge, any defect due to faulty material or workmanship. These warranties do not cover failures due to abuse, misuse, improper installation, accidental damage or when repairs or modifications have been made or attempted to be made by anyone other than Granite Industries. Any defective products that meet warranty specifications and Granite Industries approval, may be returned to the factory to be repaired or replaced free of charge. (Granite Industries will pay to ship replacement item(s) to the customer; however the customer is responsible for shipment of products to the factory.)

This remedy is the sole remedy in contract, tort or otherwise, and Granite Industries is not liable for incidental, consequential or special damages.

These warranties give you specific legal rights, and you may have other rights which vary from state to state.

Should you have any questions, contact Granite Industries at 877-447-2648. (Proof of purchase may be required).

Overland Carts are covered by one or more of the following patents:

US D752,834 S	US D752,838 S	US D779,762 S
US D752,835 S	US D752,307 S	US D779,765 S
US D752,836 S	US D752,308 S	US D781,020 S
US D752,837 S		

Overland carts are a part of the Granite Industries family. All carts are manufactured by Granite Industries in Archbold, Ohio.



**GRANITE
INDUSTRIES**

Customer Service

877-447-2648

M-F, 8am - 5pm EST

CART FEATURES

Built with you in mind.

Our carts come fully assembled

All Overland Carts come fully assembled, charged and ready to use. All you have to do is power the cart on and drive away. (We do recommend charging overnight after receiving.)

Crate Disassembly Instructions:

We recommend using a drill or an electric screwdriver with a #2 Phillips bit or a #2 square bit to remove the screws.

We recommend using a hammer or crowbar to remove the portions that are nailed down.

We designed our carts to be simple to operate:

- To turn on, pull the red On/Off switch out towards you.
- Toggle the black switch for forward and reverse.
- Grasp and twist the throttle.
- To turn the cart off, simply push the red button in.

Safety Features

- **Emergency Stop** – The red E-Stop button allows the user to immediately stop the progress of the cart.
- **AutoLock** – Automatically locks the wheels when the throttle is not being applied. This feature prevents the cart from rolling away from the user and also provides easy loading and unloading on inclines.
- **HillSense** – Allows the cart to be used safely on inclines and declines. The cart will travel at the speed set by the user, not by the incline or decline.
- **SmoothStart** – On acceleration, power is applied to the drive tires in a controlled manner ensuring a smooth start each time.
- **Four Wheel Design** – All Overland Carts have at least four wheels to provide maximum stability.

They've been tested (again and again)

The standard 20 amp-hr lithium rechargeable battery packs have been extensively tested. We are confident to rate the batteries with a 4-6 hour real world capacity.



Satisfaction Guaranteed

Granite Industries is committed to making sure each Overland Cart meets your expectations. To ensure customer satisfaction, we offer a 15 day money back guarantee. Use the cart and see how much easier the cart makes your projects. If you're not satisfied, simply contact Granite Industries at 877-447-2648 for a return authorization and details.

Orders and quote requests can be emailed to support@graniteind.com or faxed to 419-445-3304

FREQUENTLY ASKED QUESTIONS

How long do the batteries last on a single charge?

It is completely dependent upon how much weight is being carried, the type of terrain, and the softness or hardness of the surface. We estimate a range of 4-6 hours of "real world" use. PLEASE NOTE: Most use is not as intense as our "real world" estimates, so actual use time is typically much longer. Visit [YouTube.com/OverlandCarts](https://www.youtube.com/OverlandCarts) to view videos of our product testing.

When and how long should I charge my cart?

Charge your cart immediately after using. If, during operation, the battery indicator light goes to red, it is time to recharge. It is recommended to leave the cart on the charger overnight to extend the life of the batteries.

How long will the batteries last before needing to be replaced?

The batteries are designed to last for 1,000-2,000 charge/discharge cycles, which translate into approximately 2-4 years. The batteries are common and can be purchased from Granite, your local battery supplier, or on Amazon.

Will tipping the unit hurt the batteries, electronics, or drive system?

No. Batteries, electronics, and drives can operate in any orientation.

What is the maximum speed?

All 1400 series carts operate from 0 to 3.5 miles per hour in both forward and reverse.

While pushing my cart in manual/freewheel mode, it suddenly decelerates aggressively. What causes this?

There is a safety feature on your Overland Cart that is designed to prevent the cart from running away when the brake is manually disengaged.

How much weight can my cart handle?

1200 lbs is the maximum load for level ground.

Why does my cart lose traction when one wheel is off the ground?

The drive system is an open differential that allows the machine to efficiently make turns without skidding the tires. The drawback is that if one of the drive tires leaves the ground, it will simply spin until all tires are back on the ground.

Is a balanced load important to the performance?

Yes. Balancing the load so that it is not top-heavy or side-loaded, will allow much safer operation. Furthermore, most of the load should be located over top of the drive wheels for better traction.

How do I clean my Overland Cart?

Simply remove all debris, hose it down with soapy water, and towel dry. We do not recommend using a pressure washer.

Can I use my Overland Cart in cold temperatures?

You certainly can, but we recommend that you charge and store the batteries at room temperature.

What maintenance is required?

Not much, really! Simply remember to always recharge when not in use - it's okay to leave the cart on the charger. The drive system is sealed for life, thus no lubrication is required. Also, keep the unit dry to enhance its life and appearance.

How should I store my cart?

We recommend keeping your cart indoors, out of the rain and other elements. For long-term or "off season" storage, give the battery an overnight charge, then disconnect the battery pack from the cart and store it indoors at room temperature. Every 3-4 months, fully charge the battery even though it's not in use. This helps to prolong the life of the batteries.

Where is the serial number?

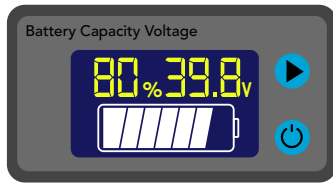
Every Overland Cart comes with its own serial number. On the Mega Herc, this is located on the front side of the upper control box.



CHARGING INFORMATION

CHARGE YOUR CART

When your cart arrives, please plug it in and make sure the battery is fully charged. There is a battery charge display on the side of the battery pack.



The smart charger uses a three-stage charging system to optimize battery longevity. To charge the battery pack, start by plugging the charger into a 110V outlet. The charger light will flash between orange and green until it is plugged into the battery pack. At that point, the charger will detect the battery pack and the light will turn orange. After a few moments the fan will kick on in the charger and begin the charge. It will take anywhere from 2-6 hours for the battery pack to charge depending on the state of discharge.

NOTE: If the charger continues to flash orange and green after it has been plugged into the battery, check to make sure the proper charger is being used and that there are no loose connections in the battery pack.

The battery pack will complete the charge cycle by taking the battery pack up to 42V+ and then the charger fan will shut off and the charger light will turn green. The battery pack voltage will drop to its normal stand by voltage of 40.5V or higher and the battery should read 100% at this time. It will stay at 100% for an hour or so and then slowly drop over the next 6 hours to around 90%. This is normal.

The charger is specifically designed to complete its charge cycle and then to not turn back on. Lithium batteries should not have a float charge applied to them. This means that if a battery pack is plugged in at the end of the day and left to charge overnight, the charger will complete its charge cycle and go into standby mode with a green light showing. It is likely that arriving to work the following day the battery pack will show 90% due to the batteries stabilizing. If the battery pack is plugged back in, the percent will quickly go up to 100%.

For the best battery life, charge the cart after each use or at the end of the work day. It is preferable to let the batteries charge overnight by plugging the cart into a 110V outlet.

BATTERY PACK IN USE

With a full charge the battery pack will drop from 100% to 85% rather quickly when in use. Then it will more slowly drop from 85% down to 40%. This is due to the discharge characteristics of the lithium battery, which has a flatter discharge curve than AGM batteries. See charge below. For an accurate battery pack reading, let the cart rest for at least 5 minutes (ideally 15 minutes) after being used or being charged. For optimal battery life and long-term performance recharge when the battery pack reaches 40%. We have done extensive testing and are confident that the battery pack will last through an entire work day.

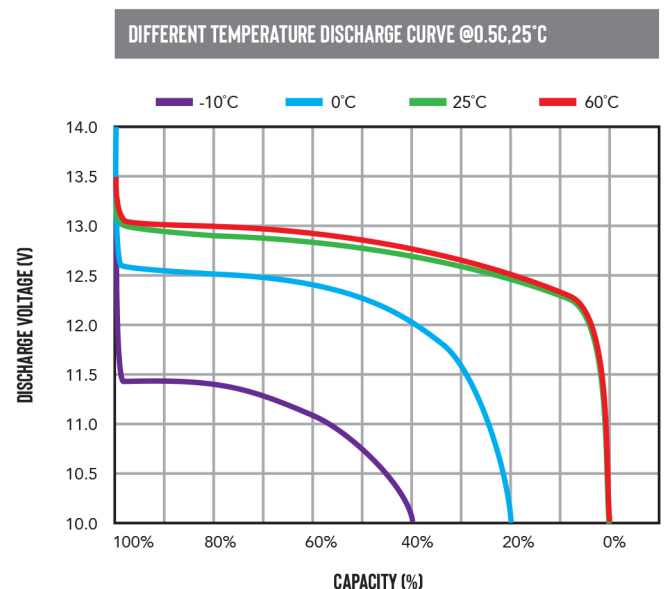
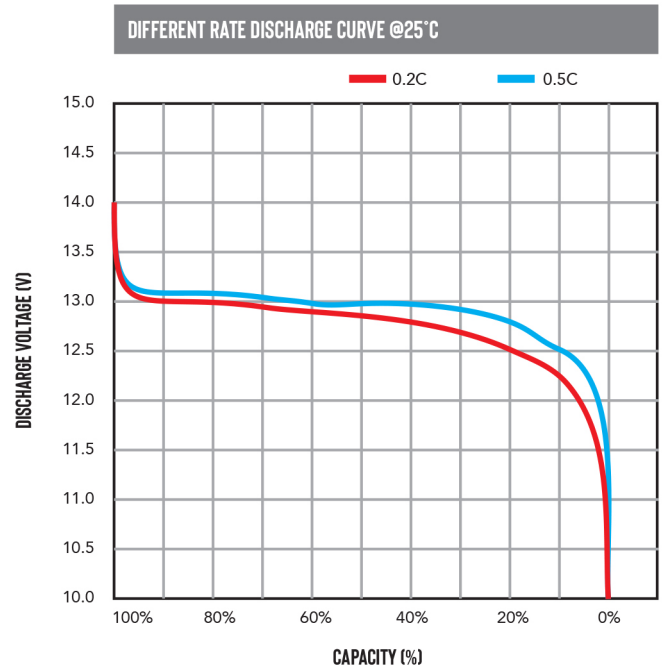


Image credit: Dakota Lithium

CHARGING INFORMATION

CHECKING VOLTAGE ON INDIVIDUAL BATTERIES

To check each battery individually, use the state of charge chart and check only after the batteries have rested for 15 minutes or more. Use a multimeter with the setting on DC voltage. When fully charged the batteries should read 13.5V or more. Each battery should be close in voltage to the other batteries (within .1V or .2V). If one battery is reading lower than the rest, they may all need rebalanced (see below). If one battery is reading very low, such as 1.5V or less, the BMS has been triggered and battery will need to be rebalanced (see below).

Capacity	Single 12V Lithium Battery	36V Lithium Battery Pack (Three 12V Batteries in series)
100% Floating Charge (when plugged in)	13.80V	41.40V
100%	13.50V	40.50V
99%	13.40V	40.20V
90%	13.30V	39.90V
80%	13.25V	39.75V
70%	13.20V	39.60V
60%	13.17V	39.51V
50%	13.14V	39.42V
40% *Recharge Batteries*	13.10V	39.30V
30%	13.00V	39.00V
20%	12.90V	38.70V
10%	12.80V	38.40V
1%	10.80V	32.40V
0%	9.50V	28.50V

STATE OF CHARGE

The battery capacity can roughly be estimated by its voltage. As there are subtle differences in the voltage of each battery, the below parameters are for reference only.

The chart below shows how each individual 12V battery should perform and then also shows how three 12V batteries should perform when put into series. This is the configuration for the battery pack on the Mega Herc.

BALANCING BATTERIES / ROUTINE MAINTENANCE.

As a part of routine battery maintenance, you may want to rebalance the batteries once or twice a year. We recommend a charger like the Noco Genius GEN5X1. It charges and balances one 12V battery at a time. Each battery can be rebalanced and then put back into the battery pack. This can also be helpful if the battery pack is dropping to 90% quickly after being recharged.

BATTERY INFORMATION

BATTERY CAUTIONS AND WARNINGS

- Before using the battery charger, read all instructions and cautionary markings on the battery charger, batteries and the product using the batteries.
- Only use the type of batteries that the charger is specified for. Other types of batteries may burst, causing personal injury or damage.
- Do not expose charger to rain or snow.
- Do not cover the charger or charge battery in an airtight enclosure. Ventilation is important to prevent overheating.
- Make sure extension cord is not used unless absolutely necessary. Use of improper extension cord could result in risk of fire and electric shock. If extension cord must be used, make sure:
 - The pins on the plug of the extension cord are the same number, size and shape as those on the charger. (3 prong with ground)
 - The extension cord is properly wired and in good electrical condition. A 16 ga cord or heavier duty extension cord is recommended.
- Do not operate a charger that has been dropped, damaged or has a damaged cord or plug - replace immediately if there are signs of damage!
- Do not disassemble the charger.

IMPORTANT RECOMMENDATIONS

- It is recommended to wear insulated gloves when handling batteries.
- If equipment is to be stored for a long period of time, the batteries should be disconnected to avoid undue drain.
- When replacing your batteries, fasten them tightly, but do not apply undue force to the terminals or bend them.
- Do not place batteries in close proximity to objects which can produce sparks or flames.
- Avoid exposing batteries to heat.
- Do not mix batteries with different capacities, different ages or different makes.
- For best results and generally acceptable performance and longevity, keep operating temperature range between -4° F (-20° C) and 140° F (60° C)
- It is good practice to ensure that the connections are re-torqued and the batteries are cleaned periodically.
- Do not attempt to disassemble batteries. Contact with sulfuric acid may cause harm. If it should occur, wash skin and clothing with liberal amounts of water.
- Batteries should not be stored in a discharged state or at elevated temperatures.

BATTERY INFORMATION

- Please recycle old batteries. Do not throw them away, or attempt to burn them. Attempting to burn batteries (new or old) may cause them to rupture or explode.

LiFePO4 BATTERY FEATURES

- **Longer Cycle Life:** Offers up to 20 times longer cycle life and five times longer float/calendar life than lead acid batteries, helping to minimize replacement cost and reduce total cost of owner.
- **Lighter Weight:** about 40% of the weight of a comparable lead acid battery.
- **Higher Power:** Delivers twice the power of lead acid batteries, even higher discharge rates, while maintaining high energy capacity.
- **Wider Temperature Range:** Batteries may be discharged over a temperature range of -4° F (-20° C) and 140° F (60° C) and charged at a temperature range of 32° F (0° C) and 113° F (45° C)
- **Superior Safety:** Automatic protection with internal battery management system. Lithium Iron Phosphate chemistry eliminates the risk of explosion or combustion due to high impact, overcharging or short circuit situation.
- **Increased Flexibility:** Modular design enables deployment of up to four batteries in a series and up to ten batteries in parallel.

OPERATING INSTRUCTIONS

SAFETY INFORMATION

- Only use chargers and batteries issued by Overland Carts. Use of third party batteries or chargers may cause harm to the user and the cart.
- Always make sure the load is distributed evenly in the hopper and the cart is stable before operating.
- Push in the red E-Stop whenever the cart is sitting still or whenever the batteries are charging.
- Do not exceed the rated capacity of 1200 pounds for the cart on flat surfaces.
- Exercise caution when operating on inclines or declines.
- Do not drive the cart over sudden drops such as curbs, steps, or ledges. We recommend using ramps to navigate uneven surfaces.
- The metal battery pack can be opened to reveal the batteries; however, the physical batteries should never be opened. They are sealed lithium batteries and cannot be resealed. Do not attempt to add more battery acid or water. If the batteries need replaced, please purchase new batteries.

BEST PRACTICES

- Hand wash your Overland Cart with soapy water. Never use a pressure washer.
- Do not drive your cart through deep puddles of water and do not submerge the drive system or battery box.

POWER YOUR CART ON

To power your cart on, pull the red E-stop button out. You will notice the battery indicator lights light up and your cart is now ready for operation.

If the Overland Cart sits inactive for 20 minutes while on, it will go to sleep in order to conserve power. To wake the cart up, push the E-Stop button in, and pull it back out to power your cart on again.

- The drive system is lubricated for life, so no maintenance is required.
- When the battery indicator light goes to red, it is time to recharge.
- Recharge cart immediately after using.



TROUBLESHOOTING

Issue	Possible Problem	Solution
Cart will not run	Batteries are dead	Charge the Overland Cart
	E-Stop is in the OFF position	Pull e-stop out, to the ON position
	Unit is in sleep mode	Cycle the unit OFF for a couple seconds, then back ON
	Cart is in freewheel mode (brake is disengaged)	Re-engage motor brake (see free wheel mode section)
	Electrical malfunction	Disconnect and connect all electrical connections, and make sure they are all secure
	Moisture issue	Let dry, avoid getting the s-drive and battery box wet
Cart shuts off during use	Circuit breaker has tripped	Push the reset button on the battery pack (see diagram below).
	Thermal overload (weight, climb angle, or terrain may have exceeded transaxle capacity)	Release throttle, allow transaxle to cool down at least 30 seconds. Unload some weight, cycle power switch and operate machine again. Reset button will likely need to be pushed.
Cart suddenly stops	Broken or loose motor wire or connector	Check motor wires and brake wires to make sure none are broken, and also check connector to make sure wires are secure
Cart abruptly slows down while in freewheel mode	Safety feature has triggered preventing the cart from rolling away	Push the cart slower while in freewheel mode
Batteries are not lasting as long as desired	Cold batteries	Keep batteries warm
	Batteries not fully charged	Make sure your cart is fully charged before using
	Batteries are damaged or too old	Replace your batteries
	Loose wire connections	Check all connections to make sure everything is secure
Charger light goes directly to green when charging, but battery is not charged	The battery and/or charger may have gone bad	Test the charger on another battery if possible. Replace battery and/or charger
	The connections may have come loose, or disconnected	Check charger and battery connections

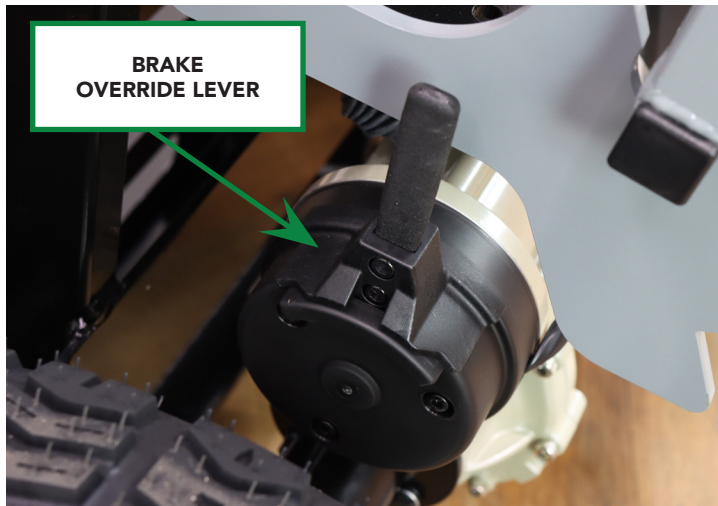


FREE WHEEL MODE

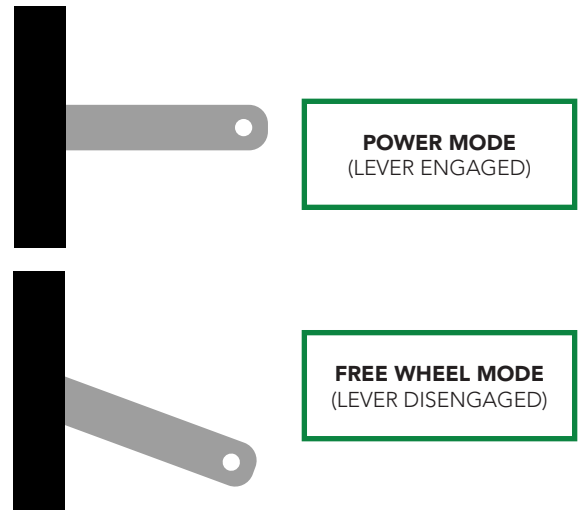
FREE WHEEL MODE

The drive system is equipped with a lever that overrides the electromechanical brake for manually operating your Overland Cart. The brake lever allows you to override the electric brake when you need to push the cart manually, when loss of power had occurred. With the brake in the disengaged position, the E-Stop button must be pushed in, and the power turned off or the drive system will not move freely. The controller will NOT operate the motor when the brake is disengaged.

When the lever is in the down position the brake is engaged. When the lever is in the up position, the brake is disengaged. When you reset the brake system the unit will not operate until you toggle the power button off and back on. This process will need to be repeated every time the brake is manually disengaged.



**BRAKE
OVERRIDE LEVER**



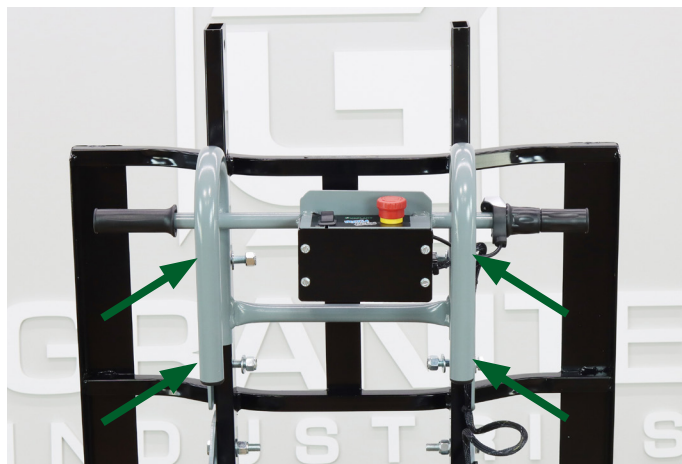
**POWER MODE
(LEVER ENGAGED)**

**FREE WHEEL MODE
(LEVER DISENGAGED)**

HANDLE ADJUSTMENT



1 The handle on the Mega Herc needs to be adjusted when you receive your cart. For shipping purposes, it arrives in a lowered position to reduce the overall height.



2 You will see four bolt sets that have not been tightened down.



3 You should be able to remove them by hand. However if needed, you can use a 3/4" wrench and socket.



4 We recommend that you slide the handle up to the top two sets of holes. However, you can put the handle at the level that best suits your needs (72" or 66" high).



5 Align the handle over the holes and insert the bolts and washers to hold it in place.



6 Install a washer and nut onto the bolt and tighten down using a 3/4" wrench and socket.

HANDLE ADJUSTMENT

Your handle is now correctly installed and your Mega Herc is ready for use.



OPERATING THE KICK STAND



1 The kickstand is located on the back of the cart.



2 Stand the cart up into the upright position. Pull the kick stand off of the magnetic holding plate.



3 Lower the kick stand to the floor.



4 To lock it into place, lean the cart forward slightly, and slide the bar up into the notches to secure into place.



5 To return the kickstand into the upright position, rock the cart forward slightly again to disengage the kick stand from the notches. Repeat the remaining steps in reverse order.

BATTERY REPLACEMENT

TOOLS

#2 or #3 Phillips screwdriver

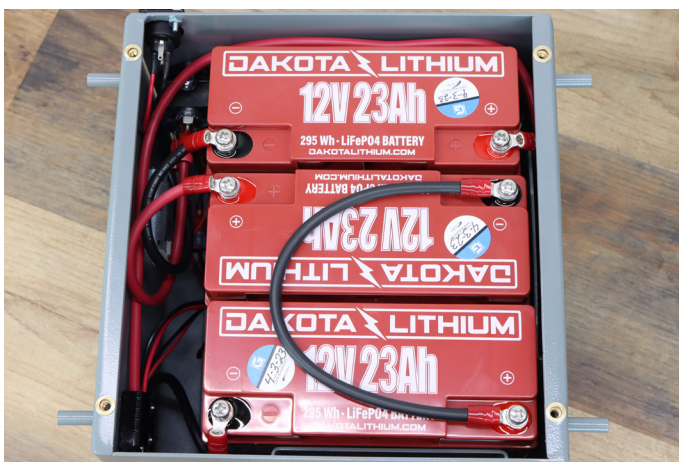
NOTE: If you are using a different brand battery than the ones that came with your cart, you may need to change your connectors to accommodate the different size screws.



1 Disconnect the wires going to the battery box. Remove the battery from the cart by taking out the hair pin and removing the rod. Slide the battery box out from its housing.



2 Remove the four (4) #10 screws holding the lid in place. Remove the lid and set aside.

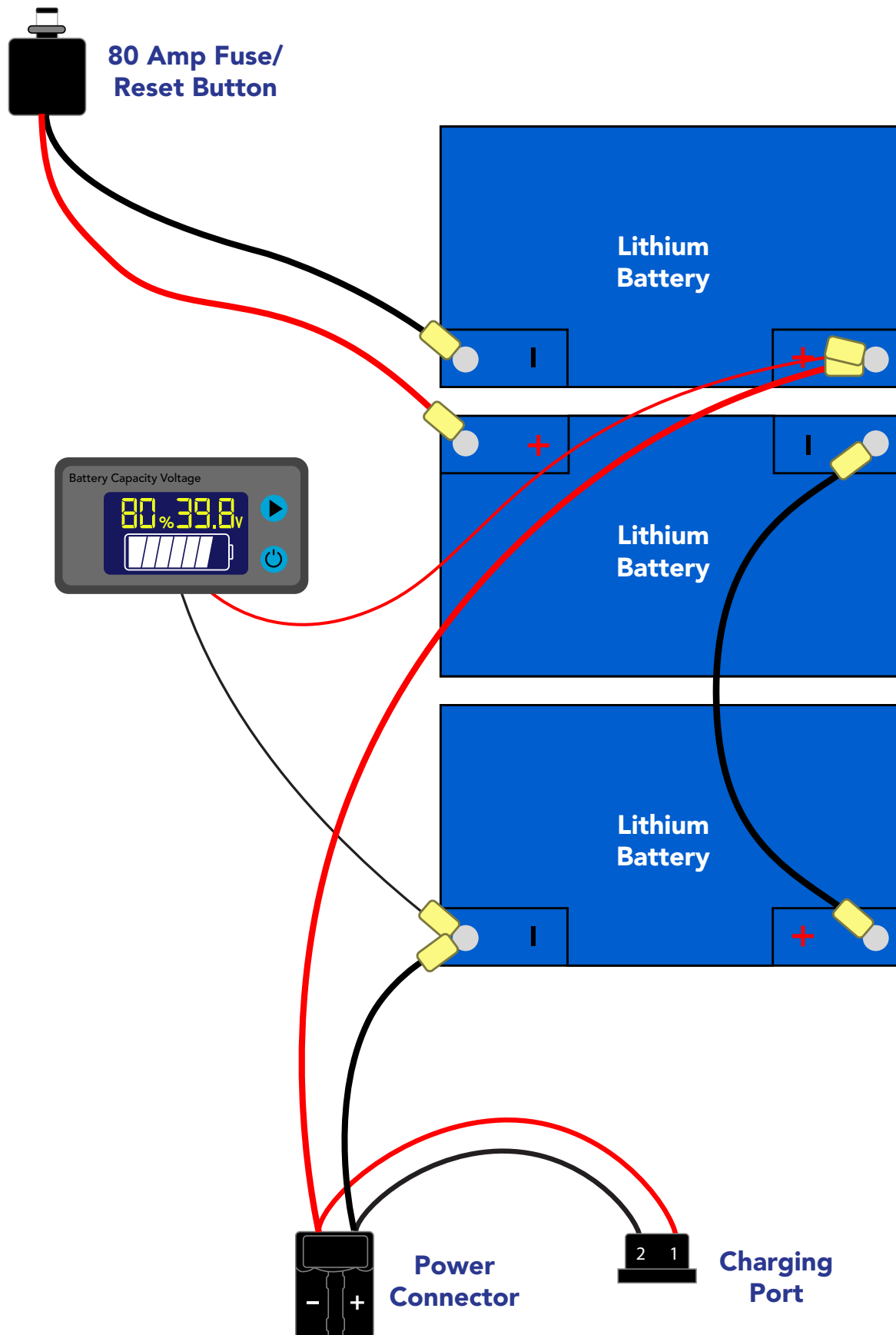


3 Remove the rubber insulator sheet and set aside.



4 Carefully remove the batteries, and disconnect the screw style connectors. PLEASE RECYCLE YOUR OLD BATTERIES

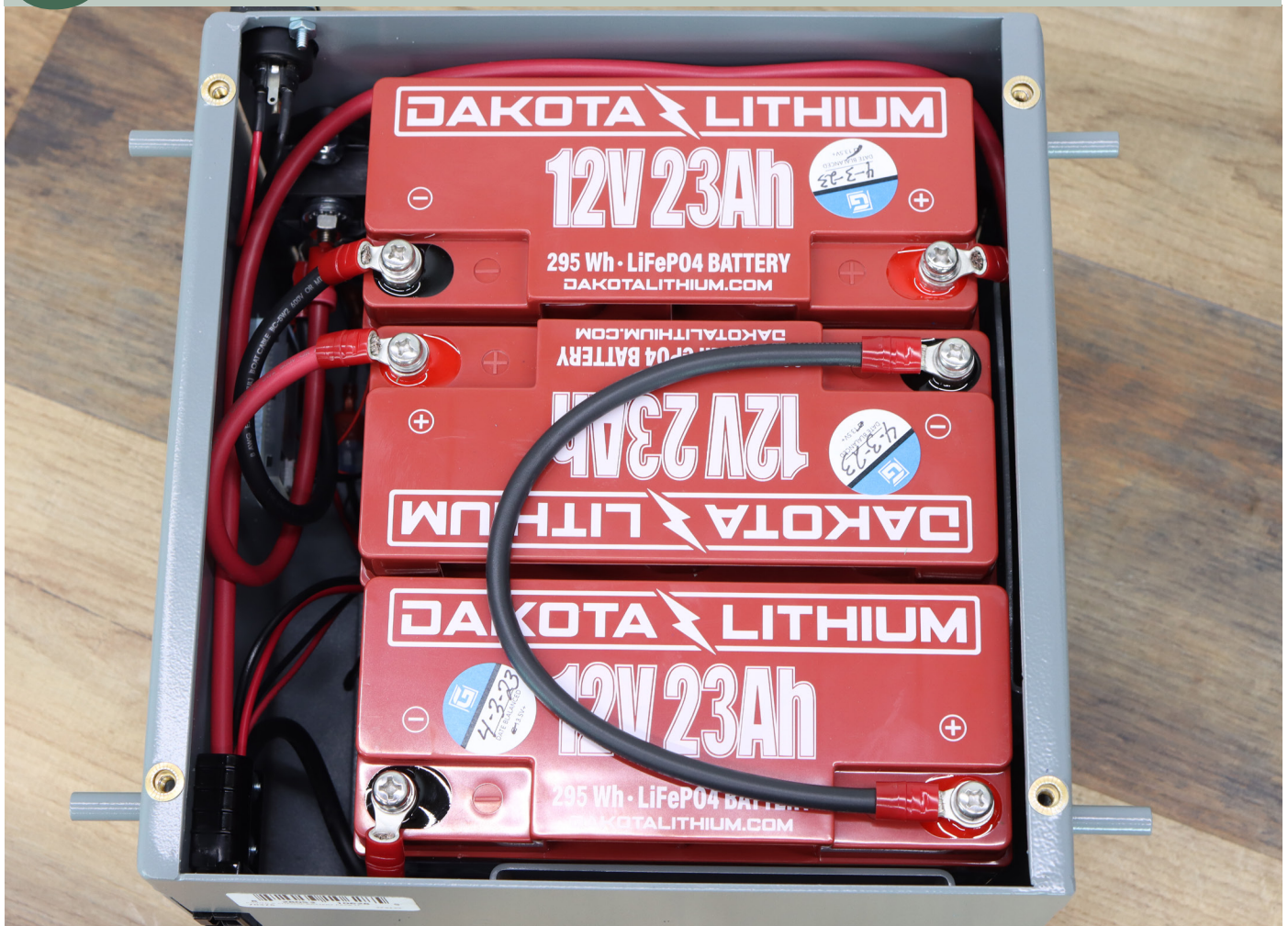
BATTERY REPLACEMENT



BATTERY REPLACEMENT

5

Place the batteries back into the box one at a time. Tuck the wires into the box and out of the way.



6

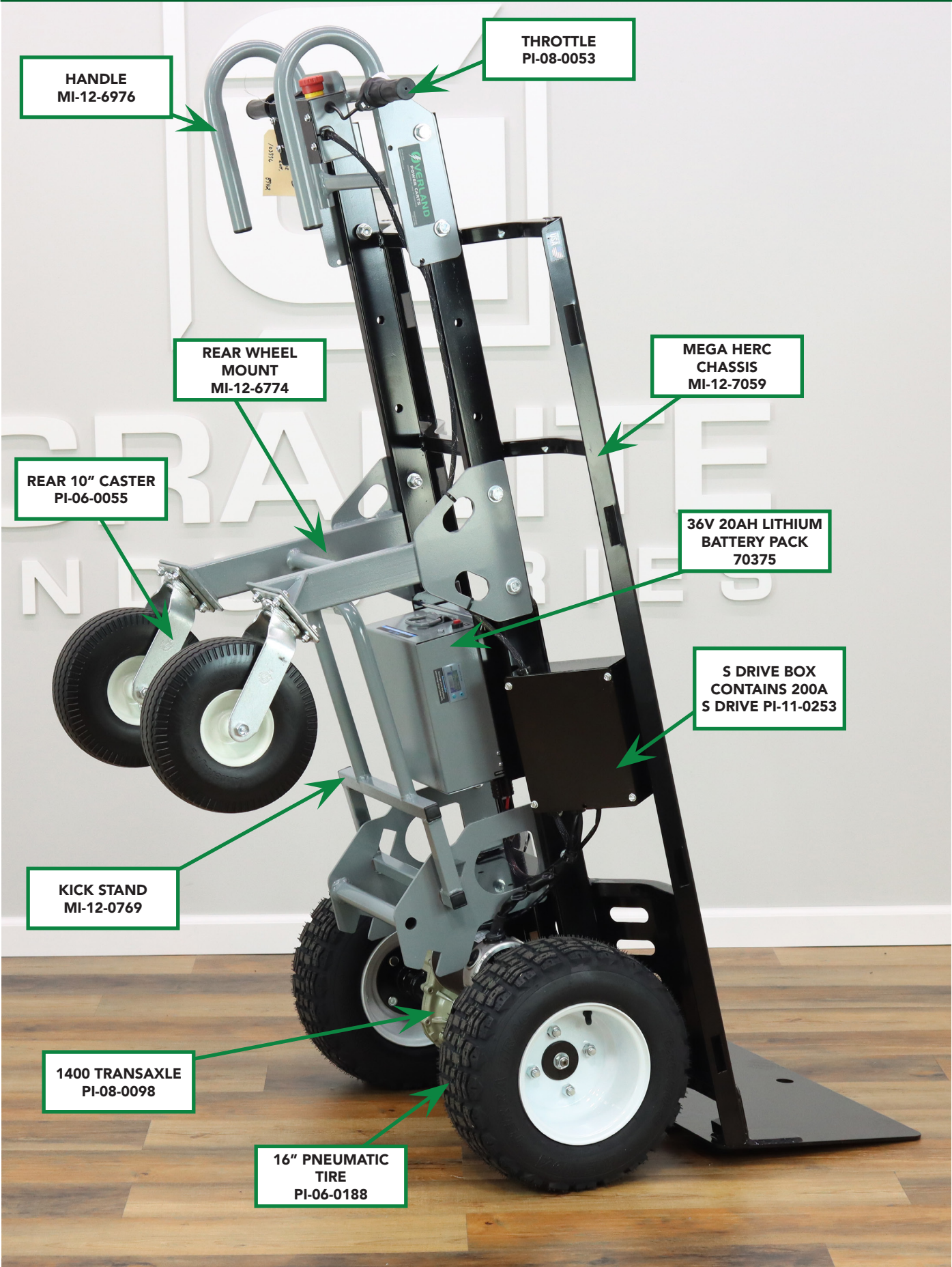
Replace the rubber insulator sheet and then the box lid. Secure the lid with four (4) #10 screws.



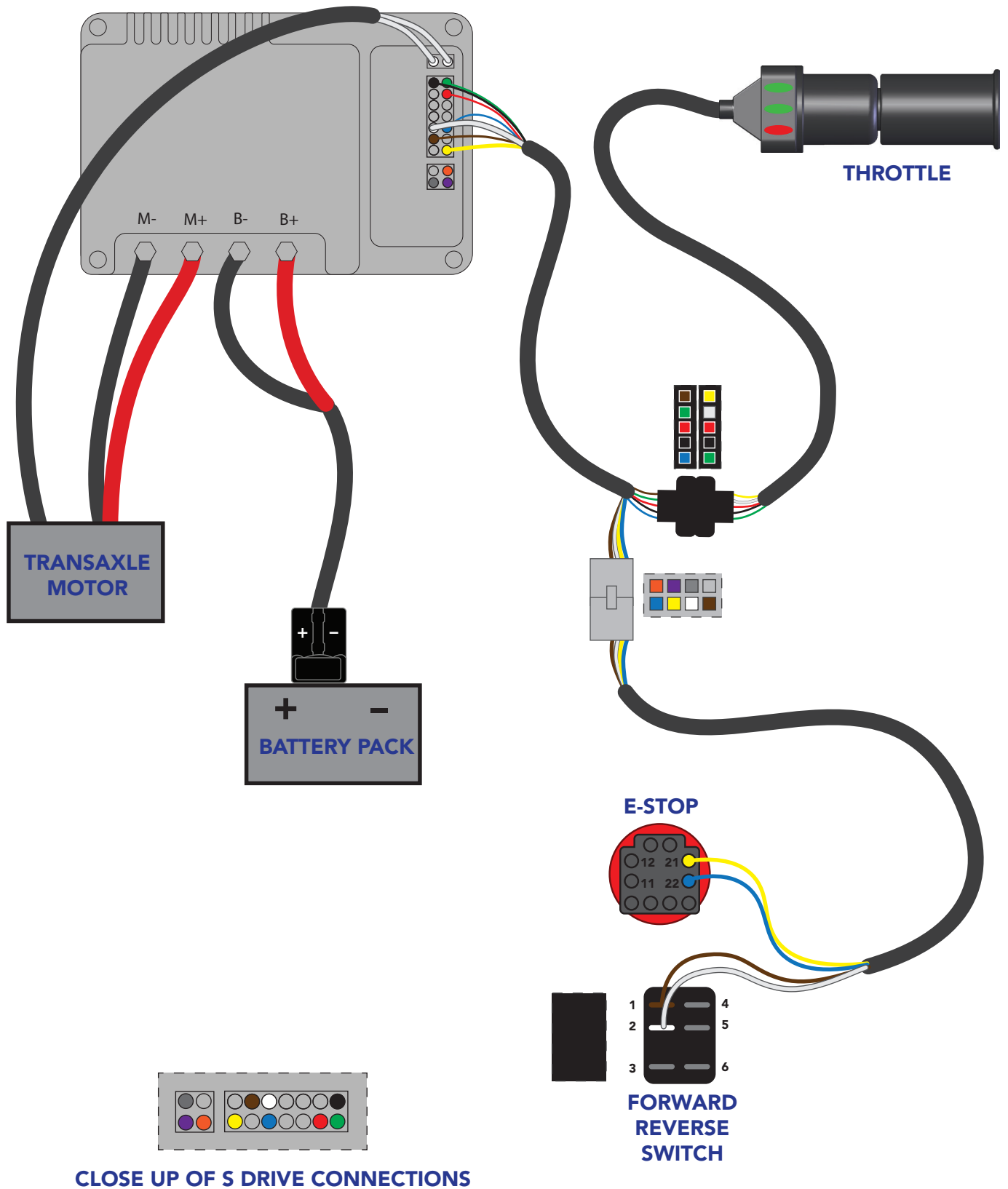
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Place the battery box back onto the cart, insert the rod and secure with the hair pin. Finally, reconnect the wires to the power terminal.

PARTS



WIRING DIAGRAM



REPLACEMENT PARTS LISTING



36V, 20AH LITHIUM
Battery Pack
70375



5AH LITHIUM
Charger
PI-11-0273



12V 20/23AH Lithium
Battery (3 required)
PI-11-0271



Battery Indicator
PI-08-0108



16" Pneumatic Tire
PI-06-0188



Rear Caster with
10" Flat Free Tire
PI-06-0055

BATTERY PACKS & CHARGERS

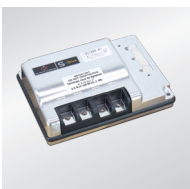
Part No	Description	Weight	Dimensions
70375	36V 20/23A Lithium Battery Pack with 80A Breaker	32 lb	7"H x 10"W x 10"D
PI-11-0273	36V 5A Lithium Charger	2 lb	10' Cord
PI-11-0273	12V 20/23AH Lithium Battery	12 lb	3.5"H x 11.5"W x 8.5"D
PI-08-0108	Battery Indicator	1 oz	1.25"H x 2.25"W x .5"D
PI-06-0188	Kenda 16" All Terrain Tire for Mega Herc	12 lb	16" Diameter - 6.5"W
PI-06-0055	Rear Swivel Caster with 10" Flat Free Tire	10 lb	10" Diameter - 3"W



TransAxle 1400
PI-08-0098



TransAxle Hub 1400
PI-08-0250



S Drive 200
PI-11-0253



Throttle Kit
PI-08-0053



Fwd / Rev Switch
PI-08-0145



E-Stop Switch
PI-08-0075



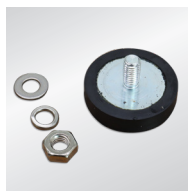
80AH Circuit Breaker
PI-08-0147

SWITCHES AND OTHER COMPONENTS

Part No	Description	Weight	Dimensions
PI-08-0098	36V 1400W Transaxle	47 lb	10"H x 6"W x 27"D
PI-11-0250	36V 1400W Transaxle Hub (Need QTY: 2)	3 lb	5" Diameter - 2" Depth
PI-11-0253	S Drive 200	2 lb	2"H x 7"W x 5"D
PI-08-0053	Throttle Kit	8 oz	4' cord
PI-08-0145	Forward/Reverse Switch - NEW	1 oz	1.75"H x 2"W x 1"W
PI-08-0075	E-Stop Switch	2 oz	1.5"H x 3"W x 1.5"D
PI-08-0147	80A Replacement Circuit Breaker	3 oz	3"H x 1.5"W x 2"D



Kick Stand
MI-12-7069



Magnet
PI-11-0267



Winch Kit
70389



Winch
PI-11-0264



12V 20AH Lithium Battery Pack for Winch
70379




12V 3AH Lithium Battery Charger for Winch
PI-11-0274

KICK STAND AND WINCH COMPONENTS

Part No	Description	Weight	Dimensions
MI-12-7069	Mega Herc Kick Stand	14 lb	26"H x 15"W x 12"D
PI-11-0267	Magnet Kit for Kick Stand	0.5 lb	1.5" Diameter
70389	Winch Kit	34 lb	
PI-11-0264	3500 lb Champion Winch - 50 ft	20 lb	4"H x 13"W x 4"D
70379	12V 20/23AH Lithium Battery Pack for Winch	12 lb	3.5"H x 11.5"W x 8.5"D
PI-11-0274	12V 3AH Lithium Battery Charger for Winch	2 lb	10' cord

NOTES

[illegible]



GRANITE
INDUSTRIES

All Overland Carts are manufactured by:

Granite Industries
595 East Lugbill Rd.
Archbold, Ohio 43502

877-447-2648
OverlandCarts.com | GraniteInd.com