



LiftPlus[®] Lite Owner's Manual

Important Startup Instructions

1. Read the Owner's Manual thoroughly before first use.
2. Charge the LiftPlus for six hours before using it for the first time. If the LiftPlus battery completely discharges, recharging will take 72 hours. See page 5 for battery and charging information.
3. The lead screw requires regular lubrication for proper working condition. See page 12 for maintenance schedule.

Serial #: _____

Date of Purchase: _____

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Warranty

Magliner products have a one (1) year warranty unless otherwise specified from the date of purchase against defects in workmanship or material. Any part or component, except items covered by warranties of other manufacturers, returned to the factory or service center freight prepaid by the owner, found upon examination by Magline, Inc. to be defective or the result of improper workmanship by the factory will be repaired or replaced without charge and returned to the owner freight prepaid by Magline, Inc.

Alterations of Magliner products void any warranty or liability on the part of Magline, Inc.

Magline, Inc. does not guarantee product capacity if alterations are made.



Thank you for purchasing the Magliner LiftPlus®! If you have any questions regarding your new Magliner product please call our customer service department at 1-800-MAGLINE (624-5463) or (989) 512-1000. Please read this manual thoroughly to become familiar with the safe operation and maintenance of your new LiftPlus system.

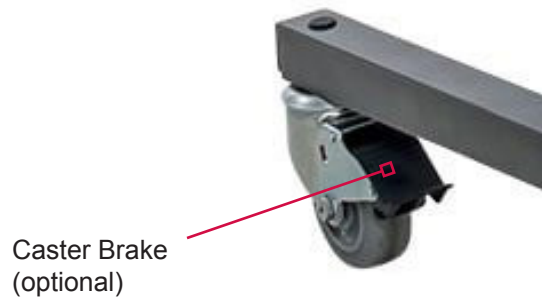
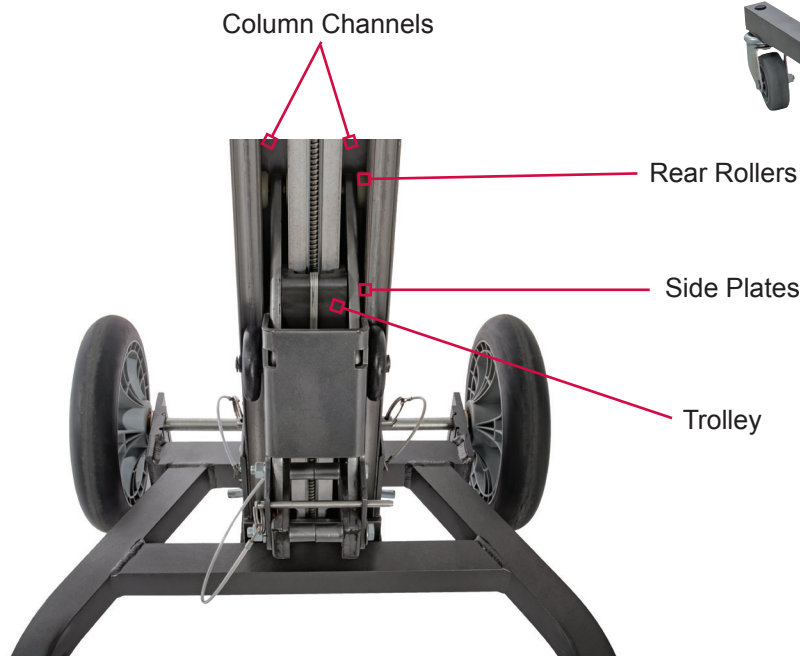
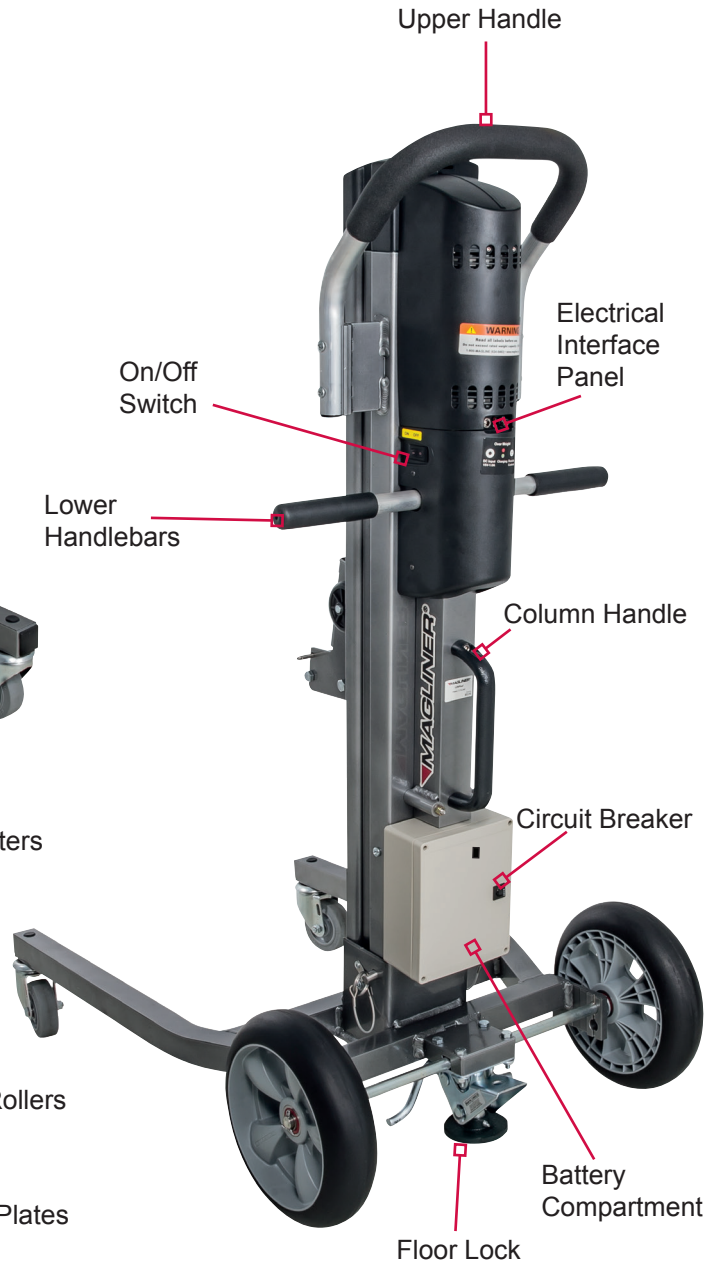
General Safety Instructions

- Inspect before each use for damaged and loose fasteners/connections.
- Inspect the unit for cracks, wear or damage. Replace damaged components immediately.
- Keep hands and feet away from all moving parts.
- Never stand or sit on the platform.
- Do not use this product to lift or to transport people.
- Never use as a step ladder.
- Never use on a moving vehicle.
- Never operate when any of the housing components have been removed.
- Keep all loose items away from the lift screw, as they may become entangled during use.
- Never use or store in wet environments or get any of the unit wet. The unit may be used indoors or outside, but always use caution to keep the unit from getting wet; dry as soon as possible.
- Never exceed 150 lbs. capacity. Damage to the lift and personal injury could result.
- Never raise or lower the platform unless the column is inserted in the chassis socket and the two spring pins are properly inserted in the chassis socket and column.
- Use extreme care when raising or lowering in close proximity to other objects. Hands and other items may get pinched or injured as the moving attachment passes non-moving objects.
- Never place a load's center of gravity near the platform edge; always keep the load center of gravity centered on the platform.
- Never tilt the unit back with a raised load.
- Always check that the caster brakes and floor brake are working correctly before operating with a load.
- Always keep the power switch off when the unit is disassembled into three pieces for storage or transport.
- Never go over a curb or any other multi-level transition with a raised load.
- Do not operate when the battery charger is plugged in.
- Never attempt to open the battery. If the battery is cracked or leaking, do not recharge it - it must be replaced.
- Always use a Magliner battery charger to charge your battery.

Startup Instructions

1. Read this Owner's Manual thoroughly before first use.
2. Charge the LiftPlus for six hours before using it for the first time. If the LiftPlus battery completely discharges, recharging will take 72 hours. See page 5 for battery and charging information.
3. See pages 6-8 for assembly instructions.
4. The lead screw requires regular lubrication for proper working condition. See page 13 for maintenance schedule.

LiftPlus Lite Unit



Battery

The LiftPlus® must be charged for six hours before using it the first time. If the LiftPlus battery completely discharges, recharging will take 72 hours. When not in use, it is recommended to flip the power switch to the Off position and to keep the LiftPlus plugged in to maintain a maximum charge.

General Battery Warnings

- Do not connect accessories to the battery; this will cause premature battery failure.
- Unauthorized modification could create a hazardous condition and result in serious injury.
- Batteries contain sulfuric acid, which can burn eyes, skin, clothes, etc. Use caution! Always wear gloves when working with batteries. If contact occurs, flush immediately with water and get medical attention. Protect surfaces from battery damage by placing batteries on rubber or plastic surfaces.
- To prevent electrical shock, do not touch non-insulated parts of the charger output connectors, battery connectors or battery terminals. Do not use connectors that are cracked, corroded, or do not make adequate electrical contact. Use of damaged or defective connectors could result in fire or electrical shock.
- Keep sparks, flame, and smoking materials away from batteries.
- Batteries can supply a large amount of current. Do not wear jewelry or watches when working on the batteries as an accidental shorting could occur and cause severe burning.

Battery Life

The LiftPlus is powered by one 12V battery.* The lift motor draws current from the battery based on the amount of effort required to lift the load. A fully-charged battery will power 60-75 lift cycles with a median load; however, extreme temperature ranges and extreme loads can have an effect on the amount of power available during one charging cycle.

General Charging Warnings

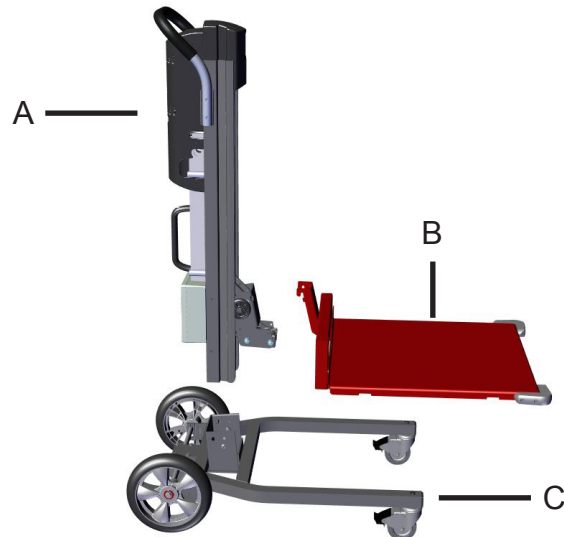
- Use only the Magliner 15V charger designated for use with LiftPlus. Charge using a grounded 120V electrical outlet.
- Do not operate the unit when the battery charger is plugged in.
- Do not expose the charger to rain or snow.
- To prevent risk of fire, use the charger only in a dry, well ventilated room without flammable fluids or explosive gases.
- Make sure the cord is located such that it will not be a trip hazard or otherwise subject to damage or stress.
- Do not operate a charger with a damaged cord or plug – replace immediately.
- To reduce risk of electrical shock, unplug the charging unit from the AC power supply source before attempting any maintenance or cleaning.
- Always use battery chargers supplied by Magline, Inc. Other battery charging units could cause damage to your batteries or personal injury.
- To avoid damage to battery charger connectors and cords, disconnect by grasping the plug body and pulling it straight out of the outlet or receptacle. DO NOT pull on the cord. DO NOT twist, rock, or pull the connector sideways.
- The metal tip on the end of the plug may be hot when it is first unplugged.

*Battery has a warranty of six (6) months

Introduction

Assembly

1. Remove the LiftPlus components from the packaging. The assembled LiftPlus is composed of the (A) lift section, (B) attachment, and (C) chassis section.
 - Charge the LiftPlus for six hours with the included AC plug before using it for the first time.
 - Dispose of the packaging after all components have been removed
 - Ensure that the right and left locking pins are securely connecting the lift section to the chassis, and the detent pin that secures the attachment, before using (see page 8).



2. If your model includes the optional caster brake, lock the casters in place to ensure the chassis remains stationary.

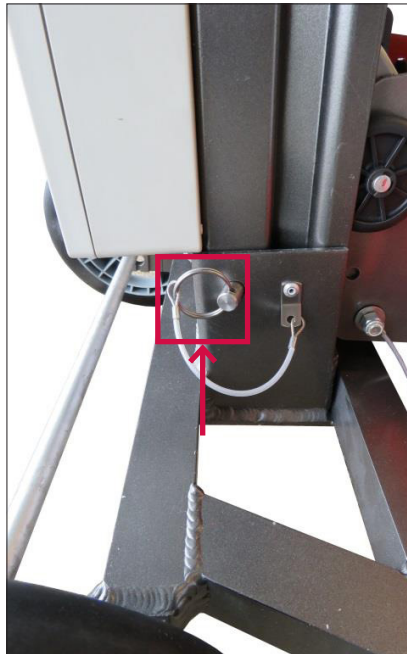


Unlocked

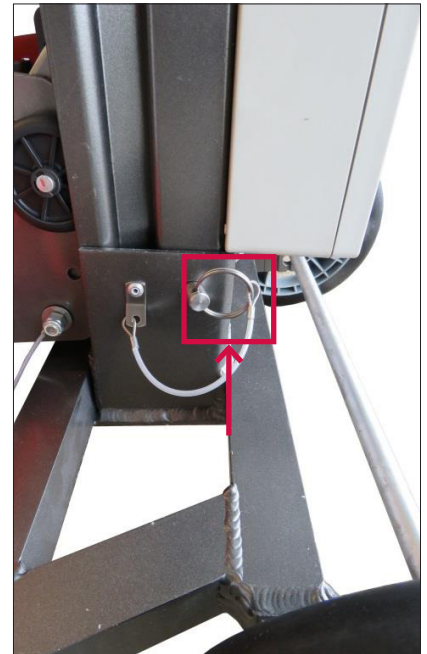


Locked

3. To assemble the LiftPlus, lower the lift section into the chassis opening. Insert the right and left locking pins to secure the lift section in the chassis.



Right Side



Left Side

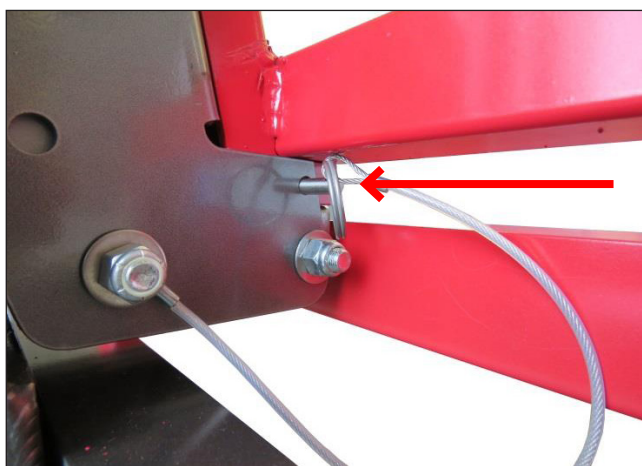
4. Place the platform on the lift section at the quick change latch. Make sure to properly align the platform hinge with the quick change latch. Please Note: You may reposition quick change latch to attach the platform at a comfortable height.



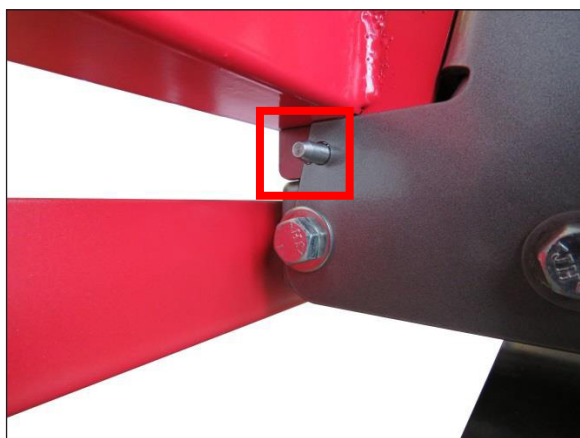
5. To secure the platform to the lift section, insert the platform pin. The pin is located on the right side of the quick change latch. The pin must be threaded through the opening on the left side of the quick change latch to fully secure the platform.



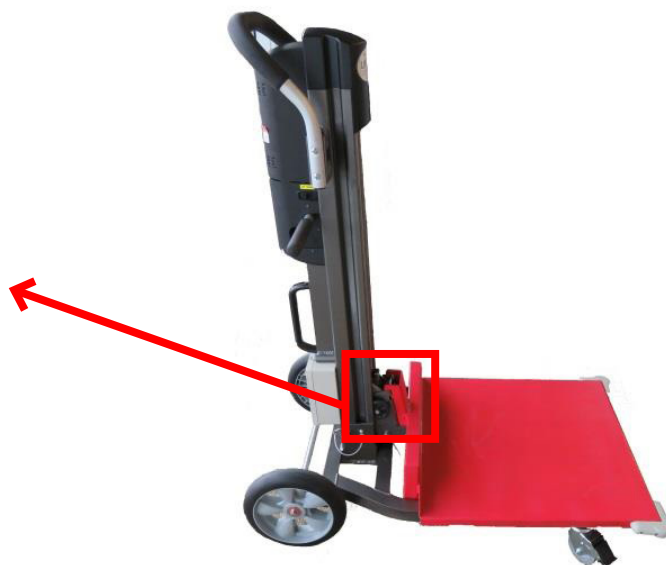
Aligning Platform to Quick Change Latch



Right Side



Left Side



Disassembly

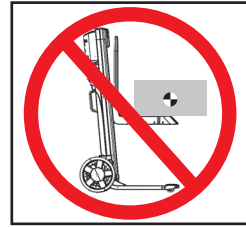
6. Lock the casters and reverse the above steps for disassembly.

Using the LiftPlus

NOTE: The LiftPlus must be fully assembled with both pins inserted into the chassis socket and column before the quick change latch is lifted or lowered. Failure to do so can damage the unit.

General Loading Instructions

1. Do not exceed the load capacity of 150 lbs.
2. Set the caster brakes before loading.
3. Be sure the load center of gravity is located as close as possible to the center or rear of the attachment.



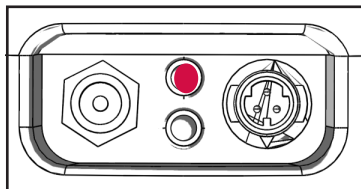
Lift/Lower Operation

1. Move the power switch to the On position.
2. To lift the load, pull the lift actuation switch toward the back of the unit.
3. To lower the load, press the lift actuation switch toward the front of the unit.
4. When not in use, turn the power switch to the Off position to prevent draining the battery.



Lift Overload

1. The overload protection circuit prevents lifting motion when it senses an excessive load. When the circuit is triggered, a red light illuminates on the back of the LiftPlus.
2. To reset the overload circuit, lower the platform all the way to the bottom. The red light will turn off when lifting function has been restored.



Circuit Breaker

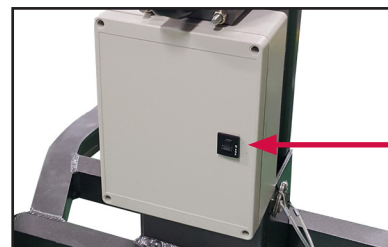
1. When the circuit breaker trips, the button will pop-up and show a white face.
2. Reset the circuit breaker by pressing the button down until you hear a click. It will not reset for the first few seconds after tripping.
3. If the circuit breaker tips repeatedly, contact Magline.



Normal



Tripped



Circuit Breaker

General Warnings for Moving Loads

- Always stay behind the unit when moving it. Use both hands on the upper or lower handlebars.
- Never turn the unit quickly - this can cause the load to slide off the lift attachment.
- When maneuvering the lift inside a small area, always remain aware of the positioning of the platform.
- Before moving an item, lower the platform into the down position.
- Do not raise the platform until you are ready to move an item.
- Do not raise the platform higher than surface on which the item sits. This will help prevent the user from accidentally lowering the platform onto a desk or other furniture. The bottom edges of the platform are sharp and can easily damage surfaces.

Transporting the LiftPlus Lite

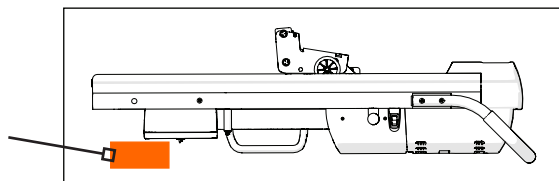
Remove the attachment from the lift section; place the lift attachment carefully into vehicle. Secure the detent pin into the quick change adapter so that the pin and lanyard are not damaged.

Remove the right and left locking pins from the chassis/lift section assembly. Carefully place the lift section into the vehicle - you may use the loop handle and column handle to lift into the vehicle. HOWEVER - the final position of the lift section should be on its back. The lift section should be transported while lying completely on a moving blanket. A hard surface like a block can be used; if a block is to be used, make sure it is wider than the battery box and that it is placed as shown below to prevent damage to the circuit breaker.

Place the chassis into the vehicle in a way where it will not impact the lift section during transport.



If you use a block to stabilize the unit during transit, make sure it is wider than the battery box and that it is placed below the circuit breaker.



At the End of the Day

Flip the power switch to the Off position when the LiftPlus is not in use. Leaving the switch in the On position will drain the battery.

If the LiftPlus battery completely discharges, recharging will take 72 hours. A fully-charged battery will power 60-75 lift cycles with a median load; however, extreme temperature ranges and extreme loads can have an effect on the amount of power available during one charging cycle.

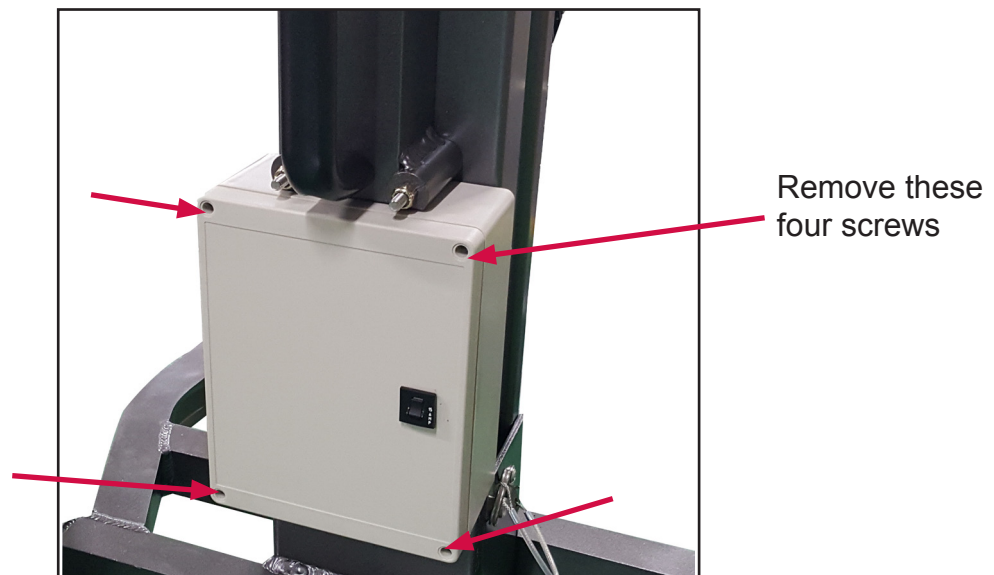
Replacing the Battery

If the LiftPlus battery completely discharges, recharging will take 72 hours. A fully-charged battery will power 60-75 lift cycles with a median load; however, extreme temperature ranges and extreme loads can have an effect on the amount of power available during one charging cycle.

If the unit appears sluggish even after charging or if the battery does not hold its charge for very long, the battery may need to be replaced. Use only Magliner replacement parts. The battery has a warranty of six (6) months.

Caution: Never attempt to open the battery. If the battery is cracked or leaking, do not recharge it; the battery must be replaced.

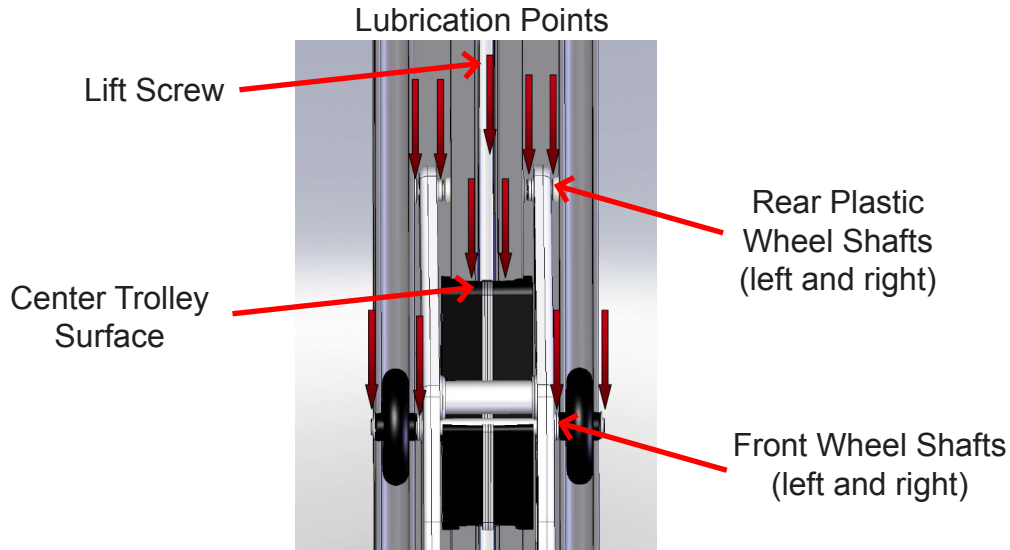
1. Disconnect from the charging port.
2. Turn the power switch to "Off."
3. Use a Phillips screwdriver to remove the four screws in the battery box cover; lift the cover from the box.
4. Carefully slide the connectors off of the red and black terminals.
5. Using a Phillips screwdriver, remove the battery bracket.
6. Inspect the Battery for cracks, leakage, or corrosion. If you find cracks, leakage or corrosion on the battery:
 - a. Contact Customer Service toll free at (800) 624-5463. Do not operate the unit until repairs are made.
 - b. Do not let the leakage get onto your skin. Wear acid-resistant gloves and chemical goggles.
 - c. If leakage gets onto the skin, flush immediately with water and mild soap. If irritation develops, seek medical attention. If the leakage gets into the eyes, flush with clean water for 15 minutes and seek immediate medical attention.
8. Remove the battery.
9. Clean any dirt or debris from the battery compartment.
10. Place the replacement battery into the battery compartment.
11. Slide the red and black wire connectors onto the matching battery terminals. If the connectors do not fit securely on the battery terminals, contact Customer Service toll free at (800) 624-5463.
12. Reinstall the battery cover and secure with the previously removed screws.



Maintenance

Lubricate with CRC Industrial Technical Grade 3-36 every 30 days.

1. Apply a drop or two of lubricant to the lift screw, the center trolley surface, and front and rear plastic wheel shafts (see diagram below).
2. Lift and lower unloaded attachment for 5 full cycles to distribute lubricant.

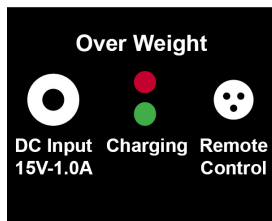


Area	Inspection Frequency	Procedure/Normal Condition
Outside Surfaces	Daily	Keep clean and dry. Replace any cracked or missing covers.
Fasteners	Daily	Tighten any loose hardware.
Battery Charging	Daily	Green charging light should turn on when charging.
Rear Wheels	Daily	Inspect wheels and tires for wear and cracks.
Front Casters	Daily	Inspect for wear; clean dirt and debris.
Rolling Function	Daily	Unit should roll easily in all directions: forward/backward and left/right
Trolley (quick change latch)	Daily	Inspect for wear or damage. Trolley should move up and down smoothly within the lift assembly.
Lift Screw	Daily	Inspect before each use; keep free of dirt and debris. Lifting and lowering motions should be smooth.
Attachments/Accessories	Daily	Inspect for wear and damage; replace as needed.
Battery Connections	Weekly	Tighten any loose connections to the battery terminals. Check for any cracked or damaged wires; replace parts as needed.

Troubleshooting Guide

Problem	Solution(s)
The lift does not respond, and does not make any noise when the lift switch is activated.	<ol style="list-style-type: none"> 1. Is the power switch turned on? 2. Has the circuit breaker tripped? 3. Check the battery connections. 4. Recharge the battery. 5. Replace the battery.
The lift struggles to raise objects and works very slowly.	<ol style="list-style-type: none"> 1. Check for dirt or other obstruction around the lift screw. 2. Recharge the battery. 3. Replace the battery.
The lift will not rise for more than a second, but it will lower.	<ol style="list-style-type: none"> 1. If the red light is on, you may have exceeded the weight limit. Try less weight. 2. Lower the lift all the way to the bottom and the red light should go out, resetting the protection circuit. 3. Check for dirt or other foreign materials in the lift mechanisms and for interference of the lifting attachment with other objects. If the lift is obstructed, this may activate the overload protection circuit. To reset the circuit, repeat Step 2.
The unit is very difficult to roll.	<ol style="list-style-type: none"> 1. Check that the floor and/or caster brake(s) is/are not engaged. 2. Lift the lifting attachment and inspect the front casters for obstructions.
The unit will not charge.	<ol style="list-style-type: none"> 1. Check to make sure the charger is fully plugged into the outlet and the charging port of the unit. 2. Check that the circuit breaker is not tripped. 3. Check that the battery is connected.

LiftPlus Labels



Platform Label



Accessories	Part Number
Platform assembly - 24" x 24" with corner bumpers - 6-1/16" height from floor (includes parts below)	536130
Corner bumper	33014
Round head machine screw - 10-32 UNF x .875" long	80122
Hex lock nut - 10-32 UNF	80684
Square plug	536127
Work Bench - 18" x 18" (includes platform, vice clamps, vice handle and back bar) - 6-1/16" height from floor	536020
Quick change adapter for use with 536020 work bench only	536026
Arbor - 1.6" diameter x 24" long	536039
Adjustable boom with chain/hook assembly	536088
Straight forks - 21" wide x 18" long - 10-1/2" height from floor	536060
Straight forks - 20" wide x 32" long - 10-1/2" height from floor	536048
Straight forks - 18-1/2" wide x 18-1/2" long - 10-1/2" height from floor	536053
V-Tray (requires 18-1/2" wide x 18-1/2" long forks)	536054
24" square steel pallet (requires 21" wide x 18" long forks)	536025
34" steel pallet (requires 20" wide x 32" long forks)	536033
Tethered remote control	534200
External battery charger	63027
Tote bag	534500
Lift Section Parts	Part Number
Lift section, complete	531025
Axle, front roller	22145
Front roller	531708
Axle, rear roller	22146
Rear roller	531709
Battery - 12V-7.0 Ah	61024
Battery box (batteries not included)	531020
Charger assembly, 12V with U.S. blade plug	63030
Circuit breaker - 15A, 32VDC, 250 VAC (includes power supply wiring harness)	64076
Electrical board	63025
Hand grip	532144
Handle, U-Loop	301188
Handlebar kit	86078
Lift screw assembly (includes #4 pulley, 531117)	531121
Limit switch (used for upper and lower)	62067

Motor assembly - standard speed (includes motor, mounting bracket, solenoid,brake, pulley #1, pulley #2-3, and timing belt)	534100
Motor cover	533505
Nut, trolley drive	531705
Pin for quick change latch	81169
Pulley assembly #1 (top gear)	534106
Pulley assembly #2-3 (intermediate)	534107
Pulley assembly #4 (lower)(part of 531121 lift screw assembly)	531117
Side plate assembly with quick change latch	536034
Switch - On/Off (includes wiring harness)	534410
Switch - Up/Down (includes wiring harness)	534416
Timing belt - 5mm pitch x 15mm W x 60 grooves	534118
Top cover assembly	533502
Trolley assembly	531700
Wiring harness for lower limit switch	64079
Wiring harness for upper limit switch	534401
Wiring harness for negative power (ground)	64077
Wiring harness for positive power	64078
Wiring harness for positive power to control board	64078
Wiring harness - adapter for motor solenoid	534421
Wiring harness/connector assembly for remote control input	534409
Wiring harness/connector assembly for power jack (charger input)	534408
Wiring harness for green charging light	534411
Wiring harness for red overload light	534412

Chassis Parts	Part Number
Chassis assembly, standard caster	530124
Chassis assembly, caster with brakes	530110
Axle, 10" wheels	532311
Axle spring pin	190104
Axle cotter pin	81077
Locking pin - 1/2" x 5/8" with lanyard	81194
Caster - 3-1/2" dia. x 1-1/4" wide	130034
Caster with brake - 3-1/2" dia. x 1-1/4" wide	130035
Floor brake	33051
Plug for round tube	530115
Plug for square tube	530123
Washer, thick - 5/8"	80705
Washer, thin - 5/8" x 1/32"	80707
Wheel - 1075 microcellular foam, HDPE hub - 10" x 2-3/4"	111075



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