



Electric Wheelchair Lift Operations & Parts Manual

Maintenance Schedule



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• Overview •



The KCI Electric Wheelchair Lift eliminates the need for ground handling personnel to lift wheelchairs on to the belt loader during ground operations. The lift bed is electrically operated and utilizes limit switches to automatically stop the lift bed when it reaches critical points such as the upper height limit as well as when it encounters the belt on the belt loader. The Electric Wheelchair Lift can be plugged in to a standard 115 Volt GFCI protected outlet when not in use to recharge the batteries and the battery charger will not overcharge or damage the batteries if left plugged in for extended periods of time.

• Safety •

Please read and understand this operations manual and observe posted precautions and warnings prior to using the Electric Wheelchair Lift.

1. CONNECT the power cord to a standard 115 VAC receptacle when not in use to recharge the battery.
2. ONLY plug the power cord into outdoor receptacles equipped with a ground fault circuit interrupt device (GFCI).
3. NEVER connect the power cord to a 115VAC receptacle while standing in water or other liquids.
4. KEEP HANDS, hair, and all loose fitting clothing away from lift cables while lowering or raising the lift bed.
 - NEVER place your feet or hands under the unit while lowering the lift bed.
 - NEVER activate any controls while other personnel are performing maintenance on the equipment.
 - ENSURE that the RED brake pedal is properly engaged when the lift is parked for lifting or lowering the lift bed.
 - Read and follow all warning labels on the machine and all DANGER, WARNING, and CAUTION notices in the instruction manual.

• Specifications •

With the creation of the Electric Wheelchair Lift, ramp personnel no longer have to lift heavy loads from the baggage lifts or belt-loaders on the AOA. The Electric Wheelchair Lift facilitates moving powered wheel chairs, baby strollers, and luggage around the tarmac with ease.

The lift bed of the Electric Wheelchair Lift is electrically operated. Limit switches located in the machine, automatically stop the lift bed when it reaches critical points such as: The upper height limit; the lower height limit; and when it encounters objects such as the belt on a belt-loader or the tarmac surface.

The unit must be plugged into a standard 115 VAC outlet with GFCI protection, when not in use, to recharge the battery. The battery charger will not over charge or damage the battery if plugged in with a full charge or left plugged in for an extended period of time.

• *Electrical Specifications* •

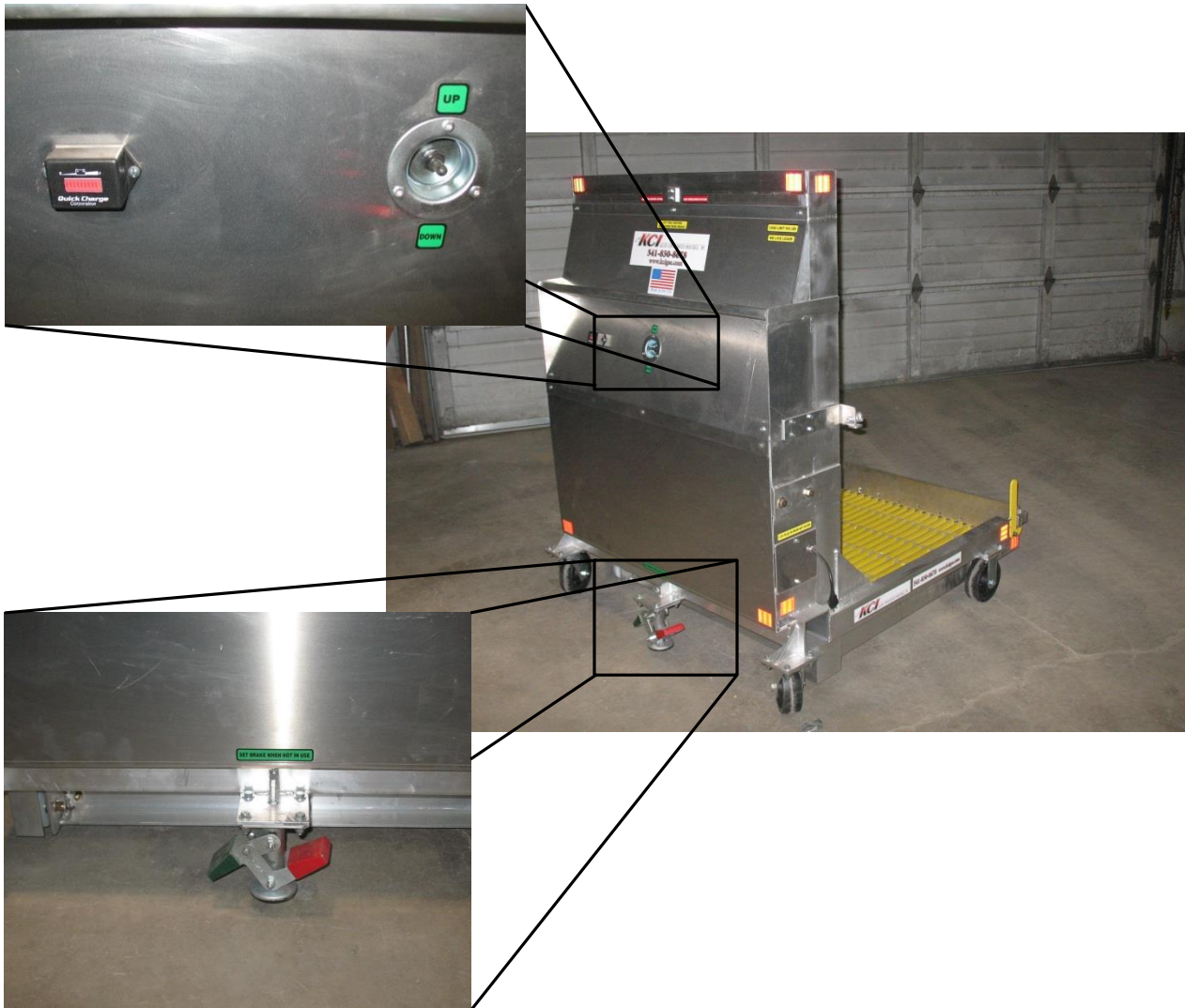
Power Data	
Input Power Supply	115VAC/6 A receptacle with GFCI protection
Enclosure	In-frame construction with bolted cover
Battery Charger	12 Volt
Circuit Breaker	50 amps.
Battery	12 Volt 33AH AGM VRLA
Switches	3-position toggle from center (off)/up/down control (3) Limit switches, (2) cable limit and (1) carriage limit
Winch	12 VDC 150 amps. Max

• *Mechanical Specifications* •

Frame	Welded Aluminum Construction
Guards	Bolted Covers
Payload	500 lbs.
Motor Power	1.5 H.P.
Wheels	Rigid front, swivel rear
Wire Rope	5/32" 7X19
Brake	Lever Foot Lock Type
Design Spec	ASME A18.1b-2001
Weight	250 lbs.
Max Lift Height	42"

• Operations •

• *Initial Startup* •



1. Unplug the Electric Wheelchair Lift from the power supply.
2. Ensure the lift bed is slightly off the ground for movement of the Electric Wheelchair Lift.
3. Press the green pedal to release the brake.
4. The electric Wheelchair lift is now ready for operations.

• Operations •

• *Raising and Lowering the Lift Bed* •

1. From the 3 position toggle switch on the operators' panel, hold the switch in the up position to raise the lift bed to the desired height. Once the lift bed is slightly off the ground it may be safely transported.
2. To lower the lift bed, hold the switch in the down position until the bed has lowered.



The lift bed must be fully lowered to the ground for loading powered chairs.



The lift bed must be slightly raised off the ground and brake released prior to moving the unit.



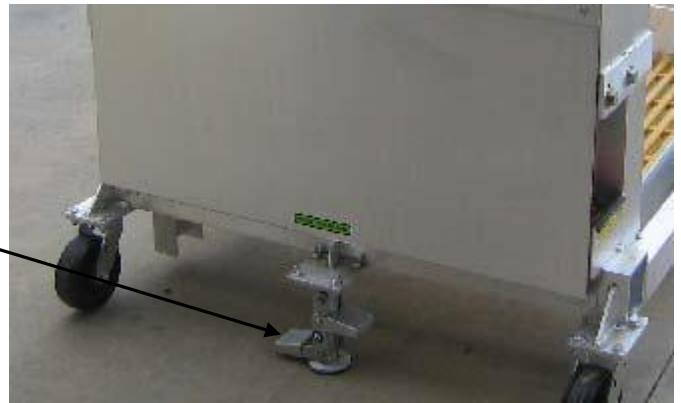
3 Position Toggle Switch



• Operations •

• *Transferring Powered Chairs from the PBB to the Lift* •

1. Lower the PBB baggage lift to the tarmac level.
2. Roll the wheelchair out of the lift and clear of the lift car.
3. Set the brake on the wheelchair.
4. Raise the PBB baggage lift back to its home position.
5. Position the Dash Cart in front of the wheelchair.
6. Set the brake on the Dash Cart by pressing down on the RED brake pedal



7. Lower the lift bed of the Dash Cart all the way down to the tarmac level.
8. Use the yellow release handle to unlock and lower the ramp, on the front of the lift bed, to the tarmac. →



• Operations •

1. Release the brake on the wheelchair and push the wheelchair onto the Dash Cart lift bed. (Note: The heavy end of the wheelchair should go on the belt-loader first.)
2. Set the brake on the wheelchair.
3. Raise the Dash Cart ramp back to the vertical position and reset the yellow release handle.
4. Move the Dash Cart to the offload area.



• Operations •

• *Transferring Powered Chairs from the Lift to the Beltloader* •

1. Release the Dash Cart brake by pressing down on the GREEN pedal.
2. Raise the Dash Cart bed to the desired position or to the upper travel limit. It is acceptable to push the cart while pressing the UP-DOWN button to achieve the proper height.
3. Maneuver the Dash Cart behind the belt-loader so the end gate, when lowered, will be resting on a flat section of the belt-loader bed.



NOTE:

DO NOT SET THE GATE ON THE CIRCUMFERENCE OF THE END OF THE BELT PULLEY.



WARNING:

MAKE SURE THE BELT-LOADER BELT IS NOT MOVING WHILE SETTING UP TO UNLOAD THE DASH CART.

1. When the Dash Cart is in position, set the brake by pressing the RED pedal.
2. Pull the lock lever forward to release the gate at the front of the lift bed and allow the gate to rest on the belt of the belt-loader.
3. Release the brake on the wheelchair and roll the chair onto the belt-loader until the rear wheels are fully on the belt-loader belt.
4. Run the belt-loader belt until the wheelchair is fully loaded onto the belt-loader.
5. Place a wheel chock behind the wheels of the wheelchair. Once the load is stable, run the belt-loader until the wheelchair is inside the cargo hold.
6. **Stop the beltloader belt** and raise the dash cart end gate until the lock lever is fully engaged. Raise the lift bed clear of the belt-loader.
7. Release the Dash Cart brake by pressing the GREEN pedal and push the cart back to its storage location.
8. Plug the Dash Cart back into an 115VAC GFI receptacle and reset the brake by pressing the RED brake pedal.

• Operations •

• *Transferring Powered Chairs from the Beltloader* •



WARNING:

MAKE SURE THE BELT-LOADER BELT IS NOT MOVING WHILE SETTING UP TO LOAD THE DASH CART.

1. Place a wheelchair onto the beltloader with a wheel chock behind the wheels of the wheelchair. Once the load is stable, set the wheelchair brake and run the beltloader until the wheelchair is positioned for transfer onto the Dash Cart. The wheelchair must be positioned to load the rear wheels onto the Dash Cart first.
2. Stop the beltloader belt and insure the dash cart end gate is raised and the lock lever is fully engaged.
3. Release the Dash Cart brake by pressing down on the GREEN pedal.
4. Raise the Dash Cart bed to the desired position or to the upper travel limit. It is acceptable to push the cart while pressing the UP-DOWN button to achieve the proper height.
5. Maneuver the Dash Cart behind the belt-loader so the end gate, when lowered, will be resting on a flat section of the belt-loader bed.
6. Lower the Dash Cart lift bed onto the beltloader belt and set the Dash Cart brake by pressing down on the RED pedal.
7. Pull the lock lever forward to release the gate at the front of the lift bed and allow the gate to rest on the belt of the belt-loader.



NOTE:

DO NOT SET THE GATE ON THE CIRCUMFERENCE OF THE END OF THE BELT PULLEY.

8. Release the brake on the wheelchair, remove the wheel chock and roll the chair onto the Dash Cart until the chair is all the way against the back of the lift bed, rear wheels first.
9. Set the wheelchair brake and raise the dash cart end gate until the lock lever is fully engaged.
10. Raise the lift bed clear of the belt-loader.
11. Release the Dash Cart brake by pressing the GREEN pedal.
12. Maneuver the Dash Cart away from the beltloader and lower the lift bed to just clear of the ground to allow transporting the wheelchair to the next desired location.

• Operations •

• *Transferring Powered Chair from the Lift to the PBB* •

1. Lower the PBB baggage lift to the tarmac level and open the lift car gate.
2. Position the Dash Cart in front of the PBB lift car.
3. Set the brake on the Dash Cart by pressing down on the RED brake pedal.
4. Pull the lock lever forward to release the gate at the front of the lift bed and allow the gate to rest on the tarmac.
5. Release the brake on the wheelchair.
6. Roll the wheelchair out of the Dash Cart and into the lift car of the PBB.
7. Set the brake on the wheelchair and close the lift car gate.
8. Raise the PBB baggage lift back to its home position.
9. Release the Dash Cart brake by pressing the GREEN pedal and push the cart back to its storage location.
10. Plug the Dash Cart back into an 115VAC GFI receptacle and reset the brake by pressing the RED brake pedal.

• Preventative Maintenance Checklist •

• *Periodic Maintenance Schedule* •

The following table outlines the required periodic maintenance for the Electric Wheelchair Lift

COMPONENT	SUGGESTED ACTION	SCHEDULE			
		Daily	Monthly	Quarterly	Bi-Annually
WHEELS	Check wheels for excessive wear and replace as needed.				
WINCH CABLES	Visually check for damage, wear and debris. Replace as needed.				
COVERS/GUARDS	Visually check all covers and guards are in place and hardware is secure.				
BEARINGS	Lubricate as needed				
WINCH BRAKE	Visual check.				
SAFETY DECALS	Visually check all safety placards are in place				

• Lock Out Tag Out •

• *Lock Out/Tag Out Procedure* •



WARNING: Follow Lock Out/ Tag Out Procedures When Servicing this Unit.

Before performing any maintenance on the electrical system or the mechanical components for this machine, make sure that the power cord is disconnected from a 115 VAC GFI receptacle. Also disconnect the battery cables from the battery.

If the machine is to be left unattended in an uncompleted service or maintenance condition, the battery cables must remain disconnected from the battery and the power cord must not be connected to a 115 VAC GFI receptacle.

An out of service tag must be attached to the machine at all times during any maintenance and until the machine is returned to normal service.

The service technician will recharge and test the functionality of the machine before removing the out of service tag and returning the machine to normal service.



Risk of electric shock exists, only trained and qualified personnel should access the electrical components of the Electric Wheelchair Lift!



Pinch points exist when servicing cables, pulleys and the winch. Exercise caution when servicing these areas!

• Preventative Maintenance •

• *Cable Replacement Procedure* •

1. Lower tray to the floor.
2. Open bottom panel by removing five 1/4-20 screws – 3 front; 2 bottom.
3. Remove cable guards (black plastic) un-bolt two 1/4" bolts through mounting panel.
4. Loosen 1/4-20 set screw in shaft – remove cable.
5. Thread new cable through hole in lift carriage and over the cable sheave.
6. Pull down on cable to take out the slack from the spring assembly.
7. Starting from the third row from away from the set screw hole, wrap the cable tightly.
8. Shaft includes a through hole for the cable and a threaded hole with a setscrew. Insert cable in through hole and tighten set screw, tie wrap excess cable to shaft.
9. Always replace both cables at the same time.
10. Raise tray to top limit switch and remove top cover (four 1/4-20 screws).
11. Adjust cables by loosening or tightening the 1/4-20 sheave bolts so the tray is even at the top. Verify proper adjustment and operation of cable limit switches.
12. Lower tray and replace guards and covers.



Risk of electric shock exists, only trained and qualified personnel should access the electrical components of the Electric Wheelchair Lift!



Pinch points exist when servicing cables, pulleys and the winch. Exercise caution when servicing these areas!

• Preventative Maintenance •

• *Limit Switch Adjustment Procedure* •

1. Raise the tray to a level that insures that the full weight of the tray is supported by the cables.
2. Set the brake by pressing the green pedal.
3. Remove the top cover to expose the limit switch actuators.
4. Loosen the jam nuts on the switch actuators located under the top cover on the left and right hand side.
5. Adjust the spring tension on the switch actuators by tightening or loosening the nuts compressing the spring until the tray is level to the ground.
6. Tighten jam nuts to lock the spring tension.
7. Test to insure that the tray maintains a level position during up/down travel.
8. The center limit switch is the maximum up limit switch for the carriage and is not adjustable.



Risk of electric shock exists, only trained and qualified personnel should access the electrical components of the Electric Wheelchair Lift!



Pinch points exist when servicing cables, pulleys and the winch. Exercise caution when servicing these areas!



• *Warnings and Restrictions Summary* •



1. It is the responsibility of the operating staff to ensure that the aircraft, beltloader or powered chair is not damaged when using the KCI Electric Wheelchair Lift.
2. ONLY plug the power cord into outdoor receptacles equipped with a ground fault circuit interrupt device (GFCI).
3. Only trained and authorized personnel should raise, lower, or load powered wheelchairs onto the electric wheelchair lift.
4. NEVER connect the power cord to an 115VAC receptacle while standing in water or other liquids.
5. KEEP HANDS, hair, and all loose fitting clothing away from lift cables while lowering or raising the lift bed.
6. Under no circumstances should the electric wheelchair lift be raised, lowered, or moved with any person on it.
7. Water, ice, snow or any other natural or foreign substance should not be allowed to accumulate on the lift.
8. The lift tray gate should always up and locked when not in use.
9. The electric wheelchair lift has a maximum capacity of 500 lbs. Do not exceed the maximum load rating.
10. NEVER place your feet or hands under the unit while lowering the lift bed.
11. NEVER activate any controls while other personnel are performing maintenance on the equipment.
12. ENSURE that the RED brake pedal is properly engaged when the lift is parked for lifting or lowering the lift bed.
13. Read and follow all warning labels on the machine and all DANGER, WARNING, and CAUTION notices in the instruction manual.
14. The lift bed must be fully lowered to the ground for loading powered chairs.
15. Do not set the gate on the circumference of the end of the belt pulley.
16. Make sure the beltloader is NOT running when setting up to load the electric wheelchair lift.



• *Warnings and Restrictions Summary* •



17. Before performing any maintenance on the electrical system or the mechanical components for this machine, make sure that the power cord is disconnected from a 115 VAC GFI receptacle. Also disconnect the battery cables from the battery.
18. An out of service tag must be attached to the machine at all times during any maintenance and until the machine is returned to normal service.
19. Risk of electric shock exists, only trained and qualified personnel should access the electrical components of the Electric Wheelchair Lift!
20. Pinch points exist when servicing cables, pulleys and the winch. Exercise caution when servicing these areas!
21. Do not use the winch on this equipment for any purpose other than the manufacturers original intention.
22. Do not rely on the winch to maintain a load in the up position for an extended period of time.
23. Before performing any maintenance on the electrical system or the mechanical components for this machine, make sure that the power cord is disconnected from a 115 VAC GFI receptacle. Also disconnect the battery cables from the battery.
24. If the machine is to be left unattended in an uncompleted service or maintenance condition, the battery cables must remain disconnected from the battery and the power cord must not be connected to a 115 VAC GFI receptacle. An out of service tag must be attached to the machine at all times during any maintenance and until the machine is returned to normal service.

• How to Order Replacement Parts •

Please have model number and serial number available when ordering replacement parts

When ordering replacement parts:

- Contact the KCI parts dept. at (541) 830-4877 or email msankey@kci.nu
- Give the Model Number, Serial Number, and Mfg. Date) to the parts representative.
- If possible, give the part number and a description from the parts list. Or describe the needed part(s) to the best of your ability.
- If you are in a breakdown situation, please tell us, we will try to get your unit operational as soon as possible.



Serial Number
(The ID Plate is located on the frame.)

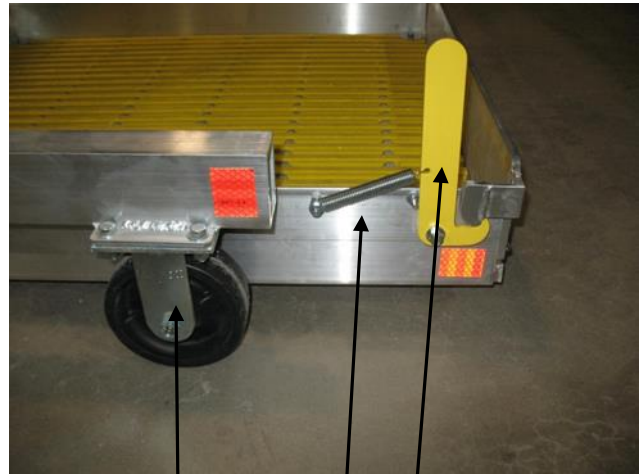
Mfg. Date
(You may be asked the Mfg. Date of your unit, have it ready if you are asked for it)



• Parts Breakdown •



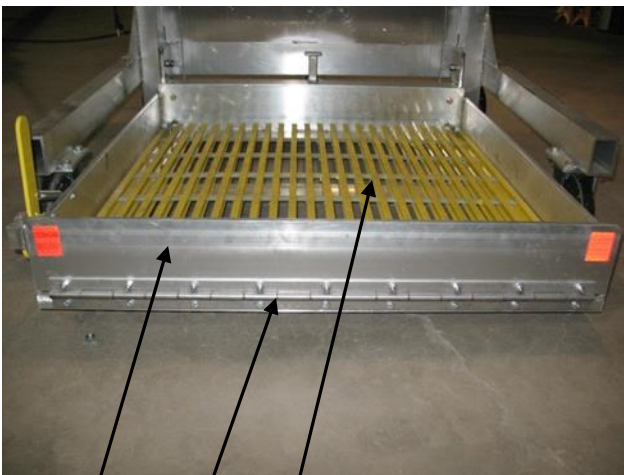
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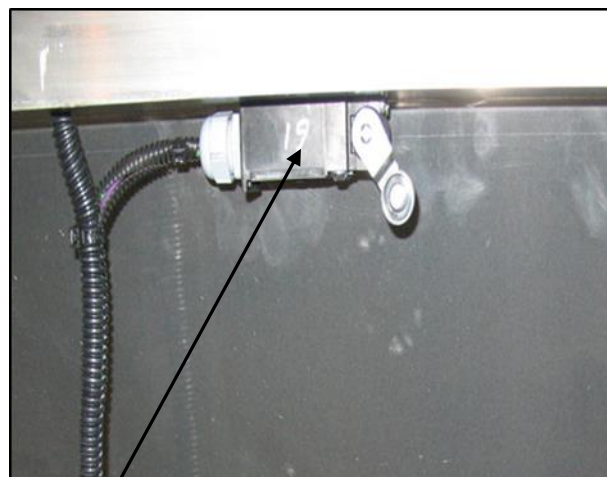
<i>Item</i>	<i>Description</i>	<i>Part Number</i>
1	Electric Wheelchair Lift	K00427
2	6" x 2" Rigid Castor	P00143
3	Lift Gate Latch Spring	P00034
4	Lift Gate Latch	DC-1034
5	Lift Gate	DC-1013-5
5A	Lift Gate with Hinge	DC-1013G
6	Lift Gate Hinge	P00142-34
7	Lift Tray Grating	I-10-60
8	Floor Lock	P00159
9	6" x 2" Swivel Castor	P00144

• Parts Breakdown •

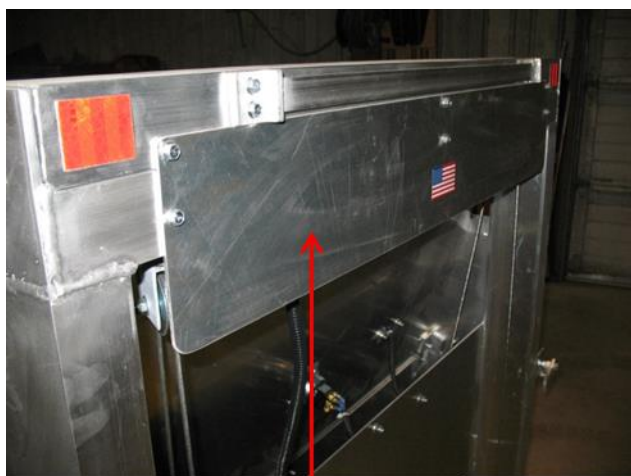


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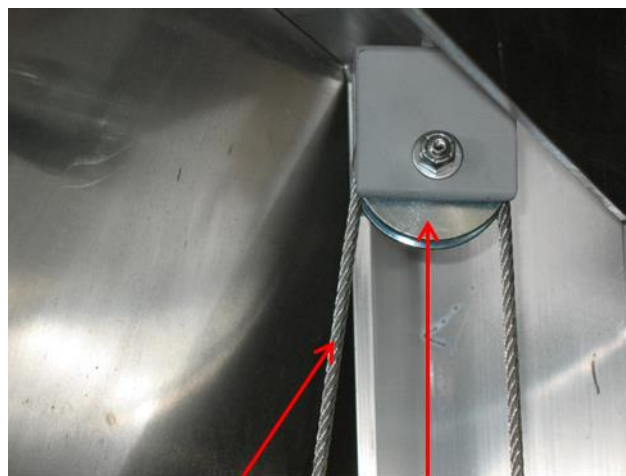
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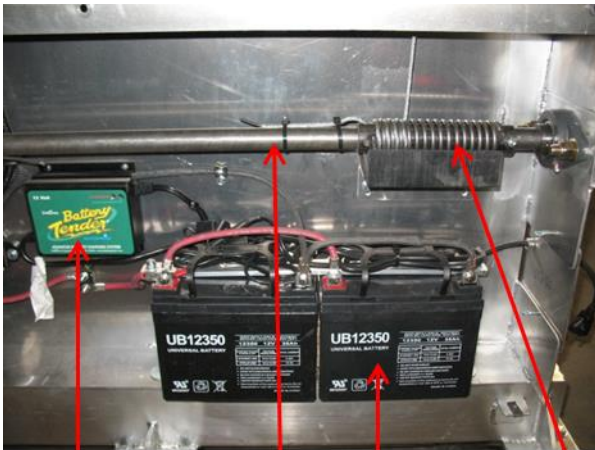


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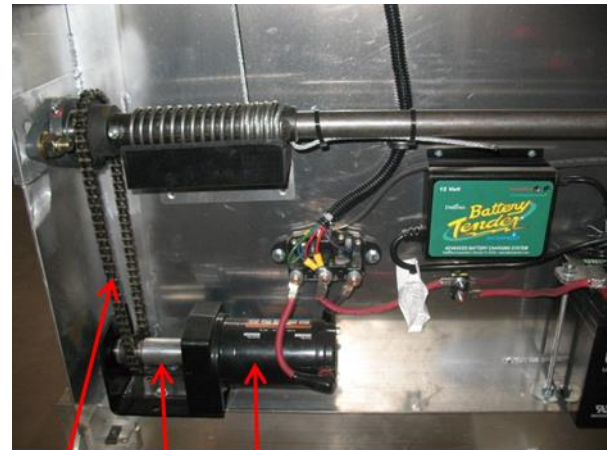
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<i>Item</i>	<i>Description</i>	<i>Part Number</i>
10	Battery Charge Gauge	P00156
11	3 Position ON/OFF Toggle Switch	P00154
11A	Toggle Switch Black Boot	P00155
12	Roller Switch	P00157
13	Front Cover, Flat	DC-1037
14	Lift Cable	P00055
15	Cable Pulley	WCL-DP02

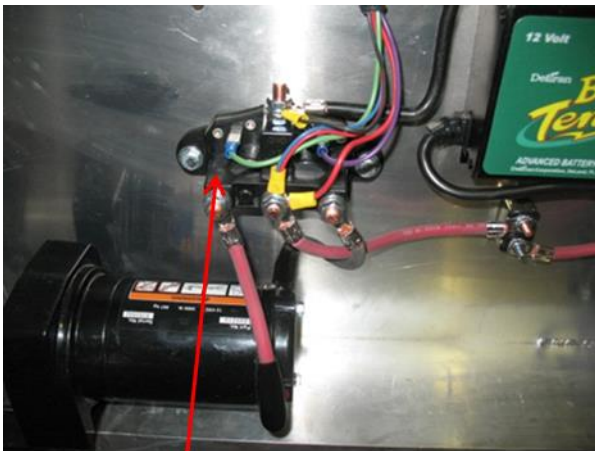
• Parts Breakdown •



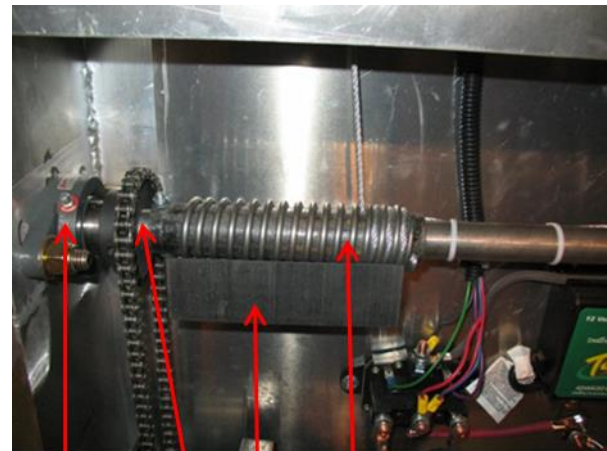
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24 25 26 27

Item	Description	Part Number
16	Battery Charger	P00152
17	Cable Guide Bar	K00426
18	Battery	P00158
19	Cable Guide, Left Side	K00425
20	Drive Chain	P00163
21	Winch Spindle	K00435
22	Winch	P00149
23	Solenoid	P00150
24	Bearing	P00146
25	Sprocket, Upper	P00148
25A	Sprocket, Lower	P00147
26	Cable Guide Block	P00433
27	Cable Guide, Right Side	K00425

• Parts Breakdown •



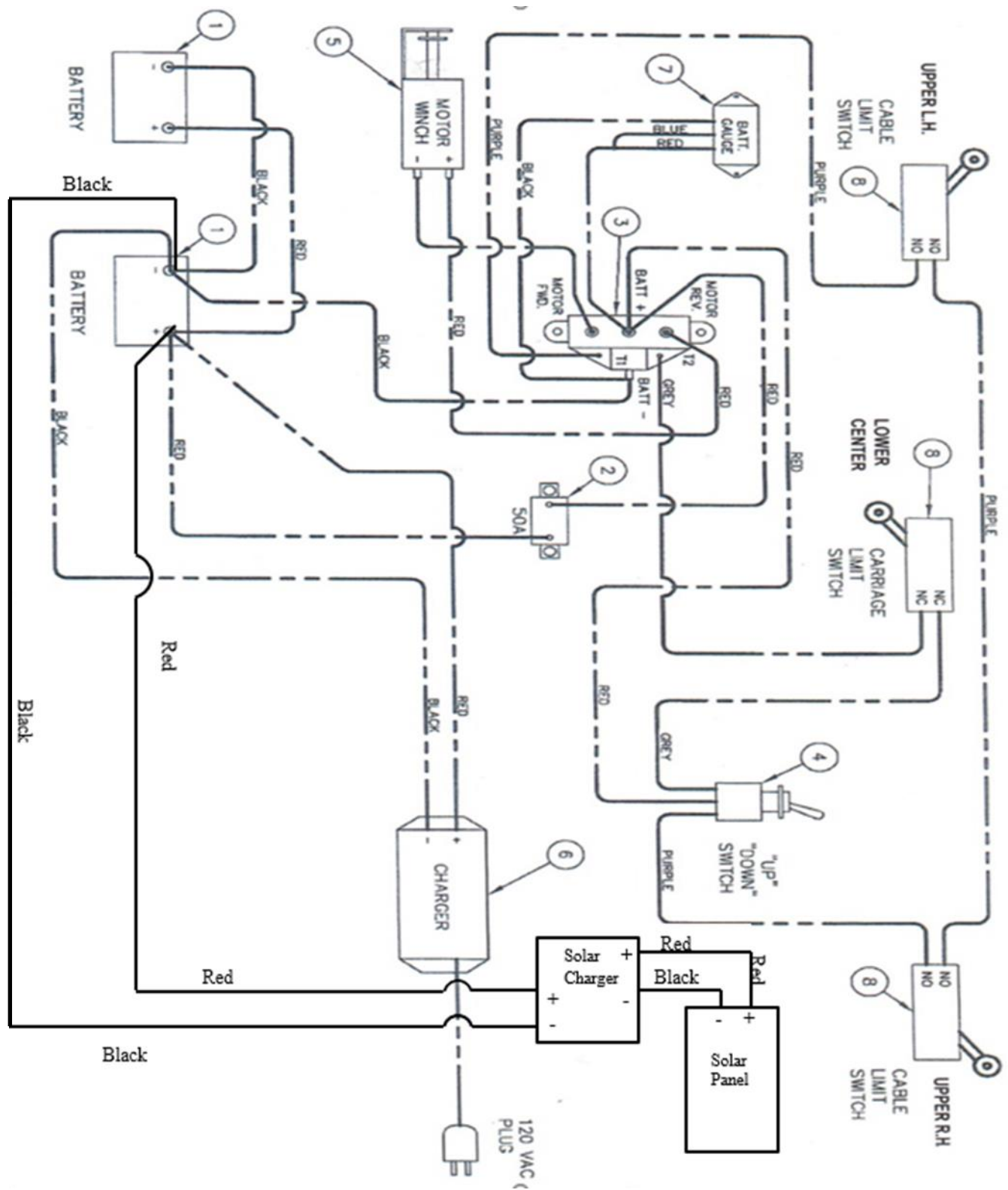
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<i>Item</i>	<i>Description</i>	<i>Part Number</i>
28	Top Cover	DC-1032
29	Cover Assembly, Back	DC-1022
30	Cover Handle, Back	P00064
31	Cover Panel, Front Bottom	K00429
32	Lift Tray Assembly	K00427

• Electrical Schematic •



• Troubleshooting •

<i>Problem</i>	<i>Action</i>
The lift bed does not move when the toggle switch is actuated.	<i>Check battery charge meter, charge as needed. Check battery cable connection. Check for debris that would prevent movement of the lift bed Check winch cable.</i>
The lift bed is stuck in the up/down position.	<i>Check to insure that the bed is not higher on one side causing the limit switch to be engaged. Check all limit switches are functioning properly.</i>
Battery will not charge or will not hold a charge.	<i>Check all cable and wiring connections. Replace battery.</i>

• Warranty •

This warranty is in lieu of all other warranties, either expressed or implied.

What is Covered:

This warranty covers equipment manufactured by KCI, Inc. from any defects in materials, workmanship and/or installations performed.

Period of Coverage:

This warranty lasts for a period of two years, electrical component coverage is for one year from the date the product ships, or until the original ownership of the ramp is transferred to another party, whichever comes first. Any repairs or modifications without the express written consent of KCI, Inc. will be grounds to immediately void all or part of this warranty.

What is Not Covered:

This warranty does not cover the following:

1. Accidental damage.
2. Misuse or abuse.
3. Damage caused by adverse weather, disasters, or other forces of nature.
4. Worn out adhesive skid walk.
5. Worn out tires/wheels.
6. Worn out/faded canvas canopies.
7. Any other wear or damage caused by the equipment's general use.
8. Any consequential or incidental damages to include:
 - a. Any loss of profit.
 - b. Loss by reason of airport or flight line shutdown.
 - c. Non-operation or increased expense of operation.
 - d. Loss of passengers or business.

What KCI Will Do:

Repair or replace any original part, component or piece of equipment that is found to have defects from time of shipment through the end of the period of coverage.

How to Make a Service Claim:

Provide a claim in writing within the period of coverage to the address listed below or email to msankey@kci.nu. We will then determine if the problem is a defect with the product. Once the nature of the problem is ascertained, we will notify the buyer of our planned resolution. This may include an on-site visit by KCI, Inc. for repairs, or that the buyer ships the defective part or component to us for inspection and replacement at KCI's expense.

KCI GSE Inc.
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White City, Oregon 97503