

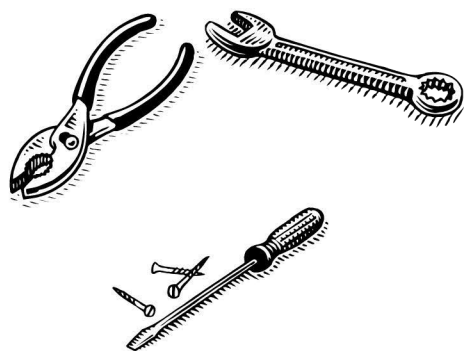
C-1000

By: Vancare, Inc.



Technical Manual

*Troubleshooting
Repairs
Replacements*



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SYMPTOMS AND PROBLEMS

Finding the Problem – Before Getting Inside

Please note that the majority of technical problems that can occur with the C-1000 occur with external system components. The following are the key components to check before removing any lift cover:

- Charger and Charge Connections
- Hand Control and Airline Problems
- Twisted Strap or Slack Tape Issues
- External Thermal Breaker
- Review Trouble Shooting Points in Owner's Manual

The ceiling lift is a pneumatically operated electro-mechanical device. To diagnose performance interruption it is useful to think of the product as three separate systems:

1. Pneumatic System

- Hand Control Unit
- Airline Tubing (2, 4, 6-way)
- Grommet Connectors
- Connector Pins
- Air Tubes
- Air Receiver Mechanism

2. Electrical System

- Charger and Charger Connections
- Main PCB – Printed Circuit Board
- Wire Harnesses
- Microswitch Up Limit Switch
- Microswitch Down Limit switch
- Quick Disconnects
- LED Indicator & LCD Display
- Electric ON/OFF, Emergency Lowering and Emergency Shut-Off

3. Mechanical System

- Carry Bar or Lifting Hook
- Lifting Strap
- Tape Switch Assembly
- Motors and Gears
- Trolley Wheels

Pneumatic Systems

The pneumatically operated functions control on/off, up, down and, where applicable, the side-to-side traversing motion of the lift and/or gantry. A methodical check of the pneumatic system starts from the hand control and works forward through the pneumatic switches on the circuit board.

1. Hand control & Airline

- Unplug the hand control airline from the lift and check for blockage of the airlines by pressing each of the function buttons in turn. A small blast of air can be felt from the brass pins at the end of the curly cord.

2. Air tubes

- Re-attach the hand control airline to the lift. (The airline end plug has a cap that has a raised ridge on one face. The raised cap ridge aligns with and slides over the ridge on the grommet. Correct insertion can thus be verified by touch and by sight.) Check to see that the air tubes have been routed free and clear. If not routed properly, air tubes can get trapped by wires, other lift components or the lift cover.
- Check to see that the air tubes are correctly connected to the circuit board switches. The air tubes attached to the main board are color coded to correspond to the circuit board functions (up, down X+, X-, Y+ and Y-).
- Next detach one air tube at a time from the circuit board. Check for leaks in an air tube by pressing the function key corresponding to that air tube (the function is printed by the air switches), *then* pinch the open end of the air tube between two fingers, *then* release the function button. The dome of the button should stay slightly compressed when the button is released. Repeat for each air tube.
- Air tubes are fragile. In detaching and re-attaching air tubes, do not press on the air tubes with fingernails and be careful not to pierce the tubes with the connector pins.

If NO air leak is found then proceed to check the electrical system.

Electrical Systems

Ensure that the batteries are charged. Turn the lift on & look at the LCD reading to check the battery charge level. If the batteries are not charged, put them on charge before servicing the equipment or connect a fresh set of batteries. If the charger indicator does not give any reading, batteries can be tested “outside the system” with a load tester or, again, a fresh set of batteries should be hooked up. An occasional battery problem is acid leaks at the vents. Sometimes a leak shows up as corrosion of the battery leads.

Do a preliminary inspection of the circuit boards for burn marks or burn odors. A single or series of components may have failed. The PCB will have to be replaced.

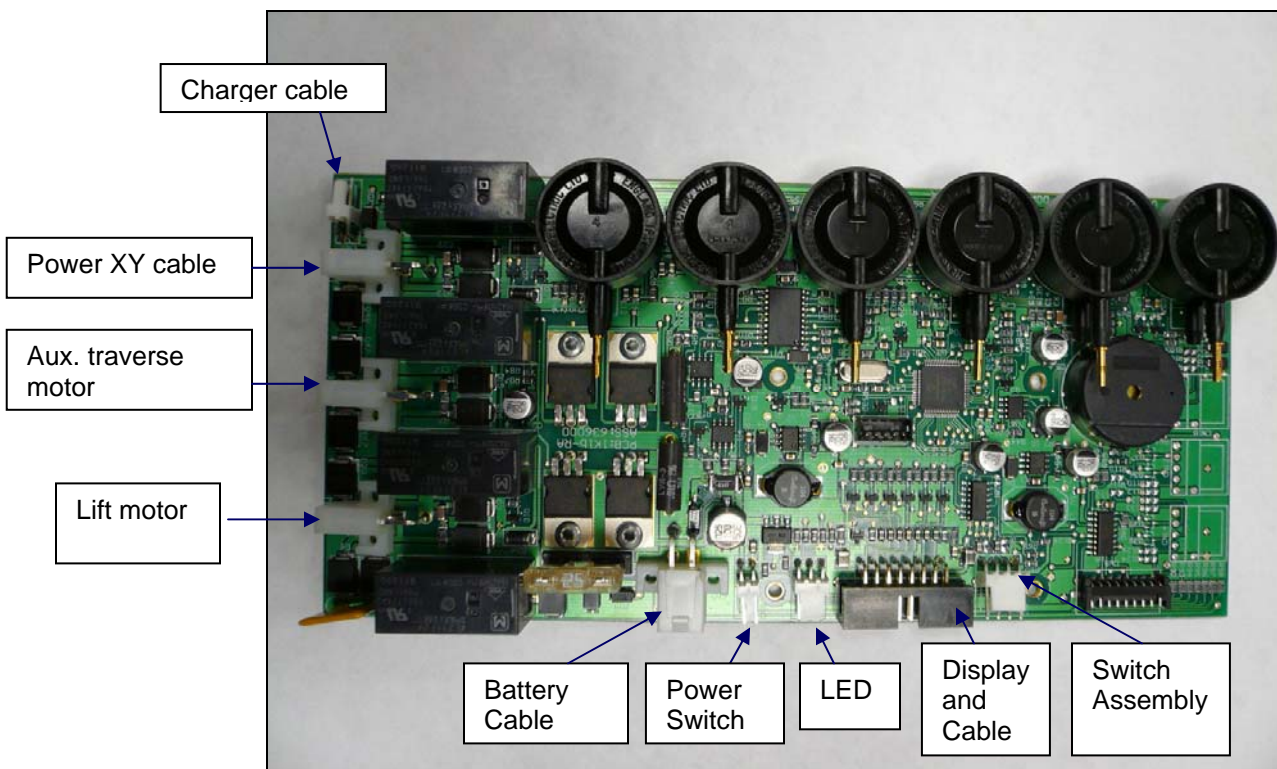
When an electrical problem seems to be the cause of the malfunction, it is important to first check that all the wire harnesses are plugged in. Secondly it is important to check all wire harnesses for cuts and/or exposed wires. If this is found, the wire harness must be replaced.

1. The main board on manual and power traversing systems

The *white power plug*, located next to the fuse connects the batteries to the circuit board. The circuit board is connected to the main motor via the *white plug* on the left bottom most side of the board. The board and motor plugs have the same type of connector but differ from the other function connectors to prevent erroneous hook-up. The battery cables are color-coded black and red to match the battery leads. **Check to see that the board, lift motor and battery plugs are properly connected.**

The upper left most *large 2-pin white plug* on the PCB, connects the charger to the PCB. The 2 pin connector next to the white power plug, connects the power switch. The *3-pin white plug*, connects the LED indicator to the PCB. The *16-pin connector*, fourth from the left connects the LCD display to the PCB. The *4-pin white plug*, second from the right, connects the “slack tape” and “tape thickness” limit switches on the tape switch assembly to the circuit board. Check to see that the functionality plugs are properly connected (when connecting a plug, it is easy to miss a prong) and that the wires do not pull out of the functionality plugs (if a wire does pull out, it was either connected incompletely or connected upside down).

Electrical Systems



Electrical Systems

3. If the batteries and circuit boards appear in order, no air leak is found and no fault is found with the wiring
 - Proceed to check that the lift and traversing motors are functioning by removing the motor and battery leads and running jumper cables from the motor leads to the battery leads. (Reversing polarity causes the motors run in reverse)
4. If the batteries and circuit board appear in order, no air leak is found and no fault is found with the wiring or with the motors
 - The most likely cause of failure is a blown fuse on the circuit board. To confirm, check the fuses on the board and verify they are both operable. If a fuse is blown replace it with another fuse (15 amp) and test the lift. Under no circumstances should a fuse with a fuse rating other than the specified amperage be used. Using such a fuse can result

in damage to the lift and /or personal injury. If the problem persists after testing, replace the circuit board. If the problem still persists contact customer service at 1-800-441-1131

- The other likely cause of failure is a circuit board failure that is not readily visible. To confirm, connect the non-functioning lift to a board from service parts or from another lift. (There is no need for a complete board installation: the replacement board used for confirmation can be hooked up provisionally outside the lift.)

5. If the on/off buttons (and/or emergency lowering buttons) on both the hand control and the lift do not work

- Check the Emergency Shut-Off with Pull Cord. If it has been activated during an emergency, call customer service. If it has been activated accidentally push the button towards the lift until you hear a click. This will allow you to operate the lift again. If the lift still fails to operate examine the Emergency Shut-Off assembly to make sure it is not obstructed and activates and deactivates the switch, repair as required. If the problem persists, replace the Emergency Shut-Off switch.

Mechanical Systems

1. If the lift goes down to the end of the strap and then goes up again with the up and down functions reversed, the “slack strap” safety feature is not working:

- Because the roller assembly inside the tape switch assembly is stuck and is therefore not activating the micro switch. Clean the inside assembly of all debris and make sure all parts are loose. Then check for the click of the switch as the roller assembly comes to the end of the slot. If there is no click, The 2 switch screws should be loosened and the switch pushed closer to the tape switch roller. Make sure that nothing is stuck or jammed in the assembly.
- Because the switch is too close to the roller assembly. The 2 switch screws should be loosened and the switch pushed farther away from the tape switch roller.
- Because of a wiring problem. Check the wiring from the tape switch assembly to the main circuit board.
- Because the micro switch is malfunctioning. Replace the switch.

2. The lift intermittently performs a pneumatically controlled function by itself (pneumatically controlled functions are on/off, emergency lowering, up, down and, where applicable, power traversing of lift and gantry)

- There is likely a slow leak in the pneumatic system. The first elements of the pneumatic system to be checked are the grommets (there is one on the hand control and one on the lift). For a complete check of the pneumatic system, see sections 1 and 2. Frequent detachment and re-attachment of the airline or rough usage causes wear and tear in the air holes of the grommets. Clients should NEVER use the hand control/airline to pull the lift along the track.

3. The strap goes all the way into the gearbox

The “thick strap” safety feature is not working:

- Because the moving roller assembly does not activate the switch. Introduce a slight bend in the metal strip (which activates the switch) such that activation takes place when a double thickness of strap is forced between moving rollers inside the tape switch assembly. Make sure that nothing is stuck or jammed in the assembly.
- Because of a wiring problem. Check the wiring from tape switch assembly to the main circuit board.
- Because the Microswitch is malfunctioning. Replace the switch or re-align it.

Mechanical Systems

4. The lift traverses poorly at specific points in the track system

Identify the points of blockage:

- Is the blockage at the seam of two pieces of track? Correct the vertical and/or horizontal alignment.
- Is the blockage in a curved section? Check the curve for clearance. Curve walls sometimes collapse in the bending process. Replace an improperly bent curve or try to correct it using a track bending tool.
- Is the blockage in a turntable? Check the vertical and/or horizontal alignment of turntable and track. Brackets should be used to “force” permanent proper alignment.
- Clean inside of track with alcohol.

5. The lift does not power traverse well anywhere along the track

Open up the lift and check the alignment of the traversing system. There should be little noise in the gears and minimal sway in the motor bracket when the motor is running. Ensuring that the motor is tightly fastened and the gears are mounted securely, aligned with each other can eliminate “Laboured noise and excessive sway”.

6. The lift motor seems to be running, but does not work in UP or DOWN direction.

The motor output shaft or worm wheel of the motor may have worn out. The acceleration activated the overspeed governor, which is designed to prevent further use until the lift has been repaired. (The overspeed governor is a universal, failsafe mechanical brake, which is triggered by centrifugal force and functions independently of the lift’s pneumatic electro-mechanical system.) The motor will need to be replaced.

Mechanical Systems

7. The charger system does not work

The C-1000 lift charger system has five components: a charger, charger end stop, charger plates, wiring harness and circuit board.

- Check that power is coming into the charger: the indicator light on the charger should be green when the lift is not parked in the charging station.
- Check that the charging strips of the charging station (bent in a wave pattern with the middle section tensed and clear) make contact with the stainless steel contacts on the trolley block.
- Check the plugs along the wiring harness. The black wire from the charger should correspond to the black wire from the harness.
- Check the board by plugging the white plug into a replacement board.

8. The on/off buttons (and/or emergency lowering buttons) on the hand control and the lift do not work

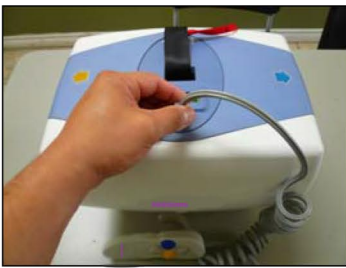
- Simultaneous failure of the pneumatic and electrical systems, strongly indicate a circuit board failure. Confirm this by hooking a replacement board. In the case of emergency lowering, if the replacement board does not resolve the problem, the fault is in the “slack tape” lower limit switch. (See point #1 ‘If the lift goes down to the end of the strap and then goes up again with up and down functions reversed.’)

BASIC INSTRUCTION SHEETS

B1 - Getting Access to the C-1000

IMPORTANT NOTE: Service lift in a clean, dust free environment. Extreme care must be exercised when removing the cover. Electric shock may occur.

1. Use support blocks to keep the lift balanced while servicing.
2. Disconnect the hand control airline tubing from the grey grommet on the lift unit.
3. Grasp the middle bottom cover at one of the short sides, pressing inwards to allow the tab to be snapped out. Repeat this on the opposite short side and then pull the cover away from the lift along its length to remove it.
4. IMMEDIATELY disconnect the RED wire lead to the batteries to prevent shock and damage.
5. Now the batteries are accessible for replacement and can be taken out once their brackets are removed.
6. Remove two 10-32 screws using a 1/8" Allen key from the bottom face of one of the side covers.
7. Turn the lift unit over to the opposite side and remove the two remaining #10-32 screws from the top face of the same cover.
8. Use caution when handling lift. The stand-offs supporting the PCB may be damaged if the lift is not properly supported.
9. Be extremely careful and remember that the back of the PCB (Printed Circuit Board) will be exposed. Contact with metal will short and destroy the PCB. Usage of proper E.S.D. protection to prevent damage to the circuit board is highly recommended.
10. Remove this cover, detaching it from the elliptical, centre control cover. Place screws in the side cover and use it to hold all loose parts.
11. Repeat Steps 6 – 10 for the remaining side cover.



Remove airline



Detach bottom cover



Repeat on other side and remove bottom cover



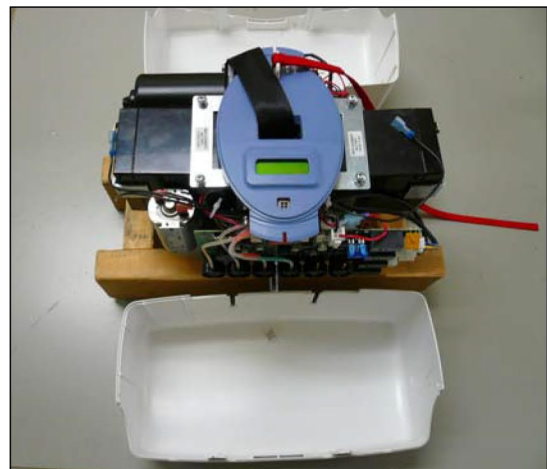
Disconnect the batteries



Remove side cover bottom screw



Remove side cover top screws



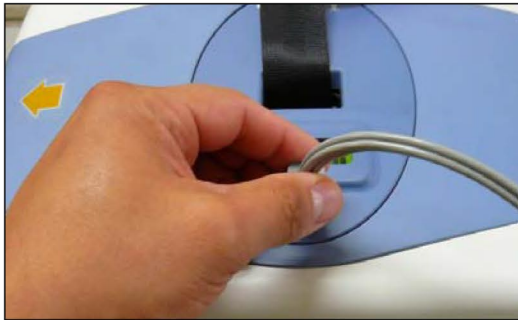
Remove side covers

PNEUMATIC INSTRUCTION SHEETS

P1 - Replace Airline Tubing

IMPORTANT NOTE: If an air leak is suspected, it is important to check the entire pneumatic system for air leaks.

1. Separate the Airline tubing from the grommet on the lift unit.
2. Take note of the force required to separate these items. The connection should be very tight. If the connection appears somewhat loose, an air leak may develop and cause a problem.
3. Air leaks occur at the grommet connections because the hand control and airline tubing are frequently used to pull the lift along the track. This results in the frequent disconnection of the airline and grommet.
4. Remember to reassemble the airline to the grommet by aligning the ribs. *If not connected correctly, operating buttons on the hand control will not function properly.*



Separate airline

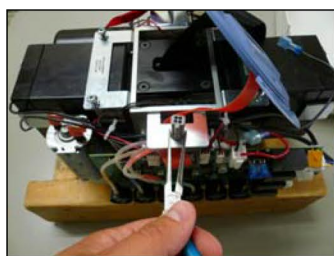


Rejoin airline

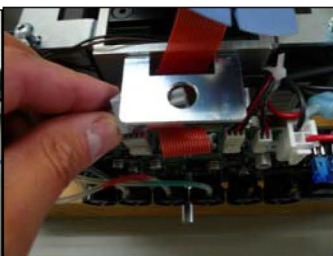
P2 - Replace Grommet

IMPORTANT NOTE: There are NO serviceable parts inside the pneumatic Hand Control.

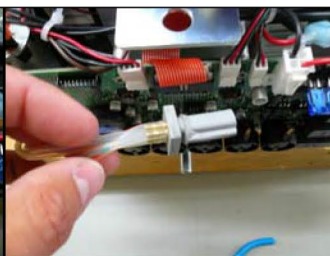
1. If an air leak is suspected but there is no detected failure, there may be an air leak at the lift grommet because the airline pins do not fit tightly. This lift grommet may be replaced using the following steps.
2. Follow steps 1 - 11 in section B1.
3. Before starting, take note of the positions of the individual airline tubes inside the lift unit. These should be marked in a way that they can be replaced in the exact same places. Check the wire diagrams if not sure.
4. Lift away the blue oval plate to access the damaged grommet & clasp & flatten the rubber using pliers to reduce the diameter enough to fit through the mounting hole. Then gently rock the grommet back and forth while PUSHING the grommet through the lift control panel.
5. Disconnect the airline tubing from the grommet & discard the damaged grommet.
6. Reattach the internal air tubes and replace covers to reattach hand control airline
7. Replace the new grommet by gently PULLING the grommet through the lift control panel.
8. Retest the entire pneumatic system to ensure that all hand control buttons function.



Compress Grommet



Gently push through



Remove air tubes

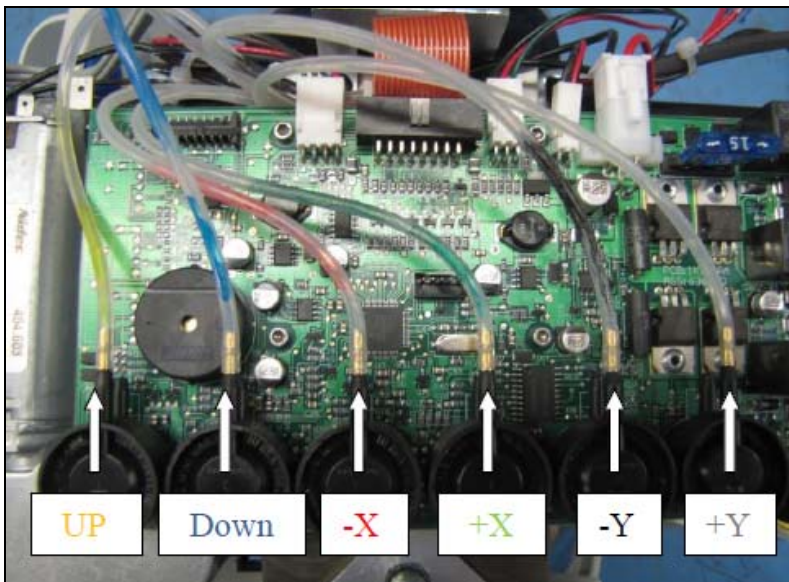


Reattach airline

P3 – Faulty Main PCB Air Switches

IMPORTANT NOTE: There are no serviceable parts on the Main PCB. These air switches are not serviceable and the whole board must be replaced if they fail. As this is part of the pneumatic system, it is important that all connections are airtight.

1. If there are no leaks in the hand control, airline tubing and grommets, there could be a leak in air tubes to the pressure switch or failure of air switch. Check by performing the air leak test with the hand control buttons.
2. If there is an air leak, tighten all air tubes and recheck.

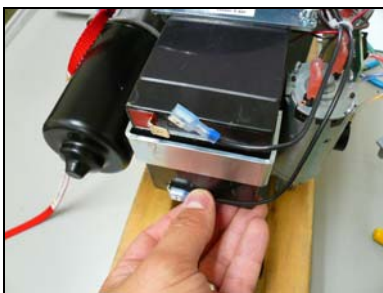


ELECTRICAL INSTRUCTION SHEETS

E1 - Test and/or Replace Batteries

IMPORTANT NOTE: Sealed Lead Acid batteries must be handled with extreme care. Any leakage or warpage of the battery cover indicates battery failure. Replace immediately.

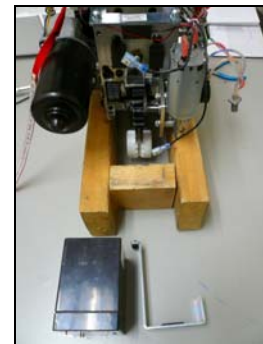
1. If the indicator light (LED) on the control panel turns RED and an audible alarm sounds, the batteries may not have sufficient power to operate the lift under load. Lift should be returned to charger.
2. Using a voltmeter (set for DC volts 100 scale) measure the voltage across the RED and Black wire terminals on the batteries. The reading should be greater than 27.5 VDC if fully charged.
3. With the lift on charge, measure VDC. The reading should be between 27 to 30 VDC indicating that the batteries are being charged. The lift should be left on charge for 30 minutes and retested. If the low battery indication still persists, the batteries should be replaced.
4. Disconnect all wires from the batteries.
5. Using a 1/8" Allen key, unscrew the #10-32 screw that fastens the battery bracket to the gearbox and remove the batteries.
6. Ensure that an equivalent battery set is used to replace the original batteries (see specifications).
7. Install the batteries. Ensure that any wire harnesses or airline tubing are loose, free of obstructions. A blockage of the airlines will cause hand control problems.
8. Connect the SEPARATE BLACK wire across the inside RED and BLACK battery terminals. Reconnect the (+) and (-) wire harness wires to the matching terminals on the batteries.



Disconnect batteries



Loosen screw

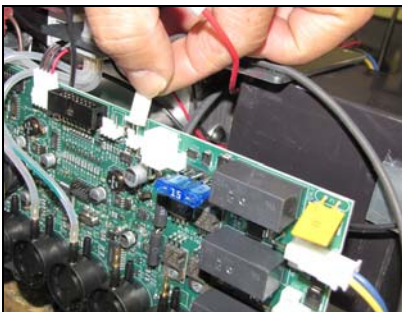


Remove battery

E2 - Replace Main PCB (Printed Circuit Board)

IMPORTANT NOTE: Use extreme caution when servicing the lift. The PCB should be handled with care. Use of proper E.S.D. protection to prevent damage to the circuit board is highly recommended. Contact with metal objects (screw drivers, rings, etc.) will damage the PCB.

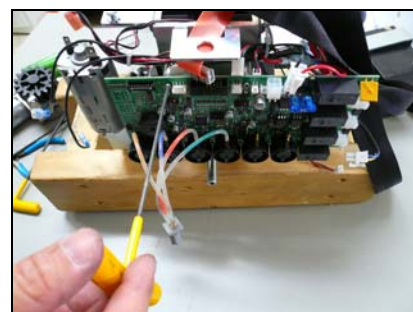
1. Before starting, disconnect the RED battery wire and all wire harnesses and all air tubes (remove off from the steel pins) from the PCB.
2. Before installation of new PCB, test the new PCB to ensure that the diagnosed problem will be solved. Attach all wire harnesses and reconnect the battery wire. Test lift unit. If lift unit still does not function, the problem is elsewhere. Contact customer service for further instructions.
3. Remove the four “socket head cap screw 4-40 X ¼” using a 3/32” Allen Key.
4. Carefully remount the PCB and tighten screws. Do not over-tighten screws.
5. Attach all wire harnesses and reconnect the battery wire. Test lift unit.



Disconnect harness



Remove harnesses



Unscrew #3-32 screws

E3 - Repair/Replace Charger and End Stop

IMPORTANT NOTE: There are no serviceable parts in the C-1000 charger. Use extreme caution when performing internal servicing on the lift. Ensure that the charger has been disconnected from the power supply before starting.

REPAIR Charger End Stop

1. The C-1000 charger end stop consists of the end stop components and the charging spring clips. If it has been determined that the lift is no longer charging because there is poor contact with the charge strips, an adjustment can be made.
2. Remove the charger end stop from the track.
3. While holding the end stop gently pull up on the charge strips and bend to desired tension.
4. If too much tension is generated, the lift will not be able to be driven out of the charger end stop. Adjust the tension so that lift can be driven in and out of the charger end stop.
5. With the manual traverse C-1000, there is a tendency to pull the lift into the charger end stop at an angle. This can cause one of the charger strips to lose tension. Please explain to client that the lift should be placed on the charger gently.

REPLACE Charger End Stop

1. Should the charger strips bend and snap, a new charger end stop needs to be installed. Remove the old end stop and disconnect the charger wires.
2. Reconnect the charger wires to the new end stop. Match the Red wire to the POSITIVE marker on the charger end stop. The polarity of the RED and BLACK wires is critical.
3. Replace the end stop and tighten bolts. Adjust tension as above.



Disconnect End stop



Gently bend strip



Correct positioning



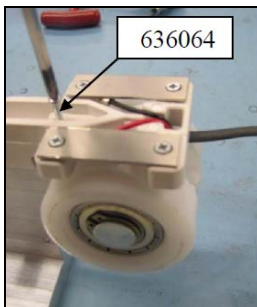
Connector
Polarity

E4 - Repair C-450/C-625 Charger Contact Strips

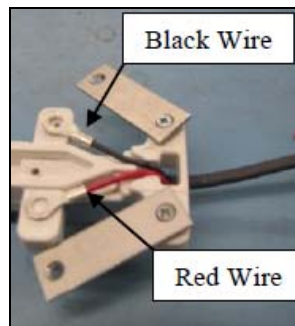
IMPORTANT NOTE: Use extreme caution when performing internal servicing on the lift. Ensure that the battery has been disconnected before starting.

1. Ensure that the RED battery lead has been disconnected.
2. Remove 4x 4-40 screws in charger block on trolley to detach the charger strips.
3. Attach the stainless steel strips. Ensure that the ring terminals on the wire harness are centered under the screw holes. The polarity of the RED and BLACK wires is critical.
4. If the Wire Harness requires replacement, cut cable tie and remove.
5. Disconnect the charger harness from the PCB and replace with new harness.
6. Reconnect the cable tie and ensure harness does not conflict with movement along the track.
7. Test system to ensure that charging is occurring.

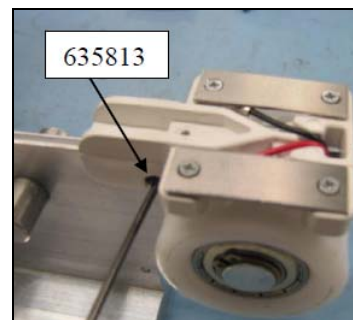
When attaching screws take care not to over tighten screws as you may strip the plastic thread.



Remove screw



Replace charger strips

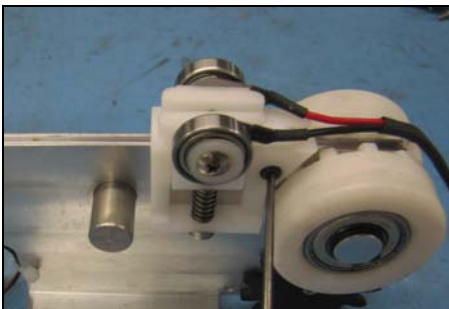


Red wire on left

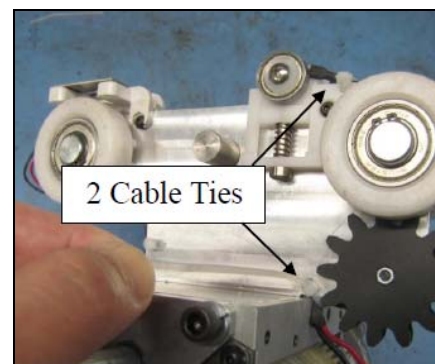
E5 - Repair C-1000 Constant Charger System

IMPORTANT NOTE: Use extreme caution when performing internal servicing on the lift. Ensure that the battery has been disconnected before starting.

1. The bearings and contact strips can become dirty, oily, and corrode in very humid and acidic environments. The first step to repairing a faulty connection is to wipe the bearings and contact strip in the track with a clean rag. If problems persist, the following steps outline how to replace the constant charger system.
2. Ensure that the RED battery lead has been disconnected.
3. Remove the charger block screw and nut that holds the constant charger to the trolley base.
4. Cut the cable tie that holds the constant charger wire to the trolley base.
5. Unplug the constant charger cable to the circuit board.
6. Remove the constant charger unit, and replace with a new unit.
7. Reconnect the charger block screw, cable tie, and cable to the circuit board. Ensure that the wire does not conflict with the wheels or any movement along the track.
8. Test system to ensure that charging is occurring.



Unscrew Screw



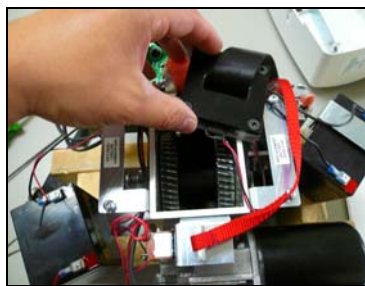
Cable Tie Wire Holder

E6 - Adjust/Replace UP/DOWN Micro Switch Assembly

IMPORTANT NOTE: Use extreme caution when performing internal servicing on the lift. Ensure that the battery has been disconnected before starting.

The UP/DOWN micro switch assembly controls numerous safety functions and maintains an absolute control over the polarity logic of the entire system. The primary functions are to control the UP limit, Down limit, monitor “slack tape” condition and prevent the motor from winding the lift tape in the wrong direction.

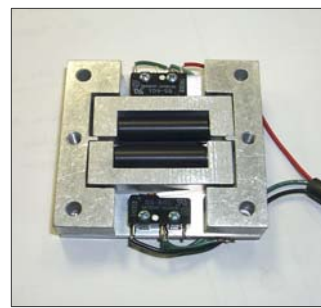
1. Remove the lift cover, per section B1, Getting Inside the C-1000 lift.
2. Remove the strap if required following steps 1 to 5 in section M1.
3. Using a 1/8” Allen Key remove the 4, #10-32 flat head cap screws holding the tape switch assembly to the gearbox and remove the assembly. See picture 1.
4. Using a 1/8” Allen Key remove the 4, #10-32 flat head cap screws from the top of the tape switch assembly. See picture 2. After removing the screws lift off the top plate.
5. At this point make sure that nothing is jammed inside the assembly and that both rollers can rotate. Verify that the roller blocks are activating the micro switches. See picture 3.
6. Using a Phillips screwdriver remove both micro switches and replace the whole micro switch wire harness. Be very careful when handling this part as the micro switch can be easily damaged.
7. Reassemble lift and test.



1. Remove gearbox screws



2. Remove tape switch screws



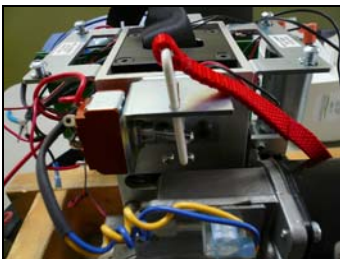
3. Adjust/replace micro switch

E7 – Repair/Replace Emergency Shut-Off with Pull Cord

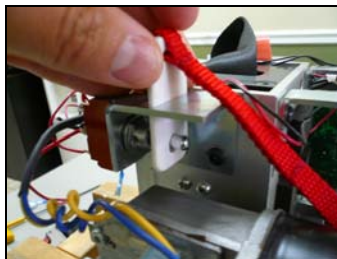
IMPORTANT NOTE: Use extreme caution when performing internal servicing on the lift. Ensure that the battery has been disconnected before starting.

The Emergency Shut-Off/Down with Pull Cord is a safety function that either cuts all power coming from the battery to the rest of the lift or allows the lift lower. When the cord is pulled and released the switch activates and all functions of the lift cease to operate. When the cord is pulled to full extension and held tight, the emergency lower function is activated. Because the Emergency switch is to be used only in the event of a lift malfunction, it can only be reset after a qualified technician has inspected the lift. Once the lift has been verified to work properly, the switch should be pushed in to re-activate all lift functions and restore power from the battery. If there are no problems with the lift and the Emergency Shut-Off with pull cord is either not shutting off the power to the lift and/or restoring power to the lift once pressed in, follow the below procedure to replace the switch.

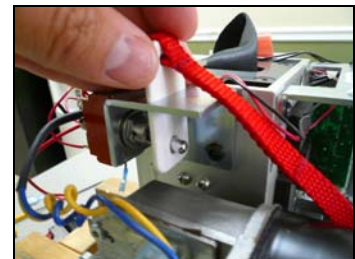
1. Remove the lift cover per section B1, Getting Access to the **C-1000**.
2. Access the Emergency shutoff switch on the side of the gearbox.
3. Verify that the plastic arm with pull cord moves freely and does move the switch lever from the open to closed, to emergency down position. Second, verify that the wires are connected. If the switch still does not operate, it must be replaced.
4. Using an M3 Allen Key remove the angle bracket that secures the switch to the bottom panel.
5. Using your fingers, unscrew the large threaded nut from the switch, to release the switch from the angle bracket.
6. Cut the cable tie of the switch harness; replace switch, re-assemble and test.



Emergency Shut-off assembly



Switch in ON position



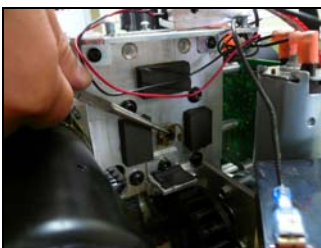
Switch after activation, OFF

MECHANICAL INSTRUCTION SHEETS

M1 - Replace Lifting Strap – Frayed, Stress Streaks, Length

IMPORTANT NOTE: Use extreme caution when performing internal servicing on the lift. Ensure that the battery has been disconnected before starting.

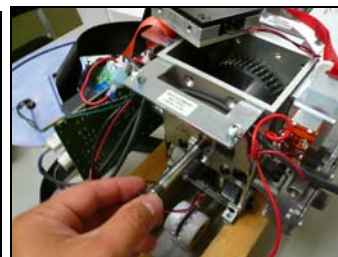
1. Using the DOWN button on the hand control release the entire strap (until the lower limit switch engages and stops the strap).
2. Remove the lift cover per section B1, Getting Access to the C-1000. Also, remove the battery & its brackets (nearest to the strap pin) as per section E5, and remove the PCBs as per section E2.
3. Remove the C-Clip from the motor side of the main drive axle.
4. Using the large vice grips, grab hold of the free end of the shaft. Leave the C-clip attached to prevent accidental damage to the shaft. If damaged, the shaft will not fit back into gearbox. Gently rotate and pull at the same time to release shaft. Pressure may be applied to the gearbox to assist in the shaft removal.
5. Pull out and replace the old strap. It is very important that the end of the strap that is inserted into the shaft is oriented with the overlapped side facing towards the motor side of the lift & away from the gearbox side. Use two fingers to guide the strap.
6. Use a pencil or ballpoint pen to centre the strap through the gearbox.
7. Reinsert the shaft into the gearbox. DO NOT USE FORCE. If the strap has been centered properly, the shaft should move easily into position.
8. Replace the C-clip on the drive axle using needle nose pliers.
9. Operate the lift in the UP direction and the strap should start to wind into the gearbox.
10. Reassemble lift and test.



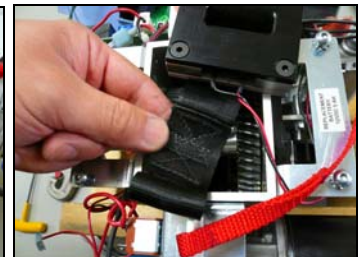
Remove C clip



Push shaft



Remove Shaft



Folded strap facing motor

M2 - Replace Trolley Wheels

IMPORTANT NOTE: Ensure that the lift is fully supported at all times. Take great care in protecting the PCB. There is a tendency to turn the lift over, thus damaging or breaking the aluminum standoffs that support the PCB.

1. The same procedure is used to replace any manual or charger trolley wheel assembly.
2. Insert the pin ends of the snap ring removal tool into the trolley wheel snap ring holes.
3. Slowly, firmly squeeze the handles of the snap ring removal tool together to open up the snap ring out of the trolley wheel shaft groove to remove it.
4. Carefully slide the trolley wheel free from the shaft while taking care not to lose the washer.
5. Place the new trolley wheel onto the shaft past the snap ring groove.
6. Place a new snap ring centered against the shaft and slightly pry it apart gently with the snap ring tool until it is open enough to allow it to be slipped into the groove. Ensure that trolley wheels are straight and inline with each other.



Remove snap ring using snap ring tool



Remove and replace wheel from shaft

M3 - Replace Traversing Drive Motor, Traversing Gear and Traverse Idle Gear

IMPORTANT NOTE: Ensure that the lift is fully supported at all times. Take great care in protecting the PCB. There is a tendency to turn the lift over, thus damaging or breaking the aluminum standoffs that support the PCB.

1. The traverse idle gear may be most easily removed by first removing the trolley wheels with which they mesh – follow the instructions of section M2 to remove the trolley wheels.
2. Remove the C-1000 lift covers as per all of section B1.
3. Use a M2.5 Allen key to unfasten and remove the M3 screw & nut with the traverse idle gear.
4. The traverse idle gear can be replaced now & refastened; the trolley wheels should be now placed back into position (ref. section M2).
5. If the traversing drive motor or gear require service, follow steps 1-4 of section M1 NOTING only to remove the shaft only as much as to disengage it from the one wall of the lift motor and ensure BOTH batteries with their brackets are removed.
6. Use a 9/64" Allen key to remove the four screws securing the traversing gear bracket to the gearbox. The bracket and the traversing motor can now be removed.
7. The traversing gear can be removed by pulling it off of the traversing motor shaft by hand.
8. With the traversing gear removed, the traversing motor can be removed by unfastening the 3 #12-24 hex head screws with a ratcheting wrench and extension with a 5/16" socket.
9. Follow the previous steps in reverse to mount the new traverse motor & gear and to slide the gear box plates back into place to fasten them.
10. Reconnect the wire harnesses, airline tubes on the auxiliary board and connect the battery to test the system before re-assembly.



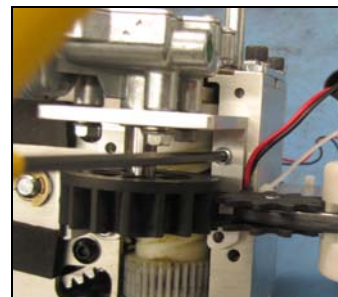
Remove screw



Remove bracket



Replace traversing gear

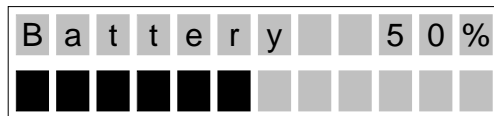


Tighten screws

LCD Display & Programming Functionality

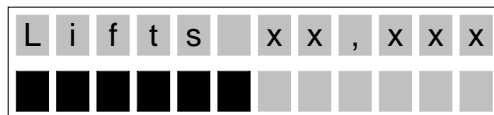
- **Default Display Modes:**

- The user can set either of the following as the 'Default' display mode:
 - 1.– Battery Level (the factory setting for the Default Display Mode); or,
 - 2.– Number of Lifts.
- In Battery Level Mode the lift will:
 1. Display the word, "Battery", with the percentage charged (in 10% increments) in the top row of the display (e.g., "Battery Level 60%").
 2. Display a "Bar Graph" of the battery level in the second row of the display by displaying the appropriate number of fully blackened rectangles as in the following diagram (note: as there are 12 characters, the charge percentage will be divided by 8.333 and rounded DOWN to determine how many rectangle characters are shown):



- Note: As the lift is initially switched on, the level of battery charge displayed may be incorrect. However, as soon as the lift is actually operated, the charge level will update to the correct level.

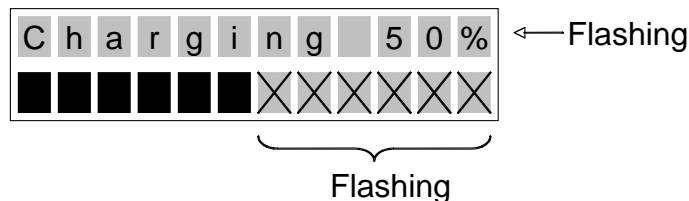
- In Number of Lifts Mode the lift will:
 3. Display the word, "Lifts", with the number of lifts completed in the top row of the display (e.g., "Lifts 500") and a bar graph to indicate the battery level as in Battery Level Mode:



- In any 'Default display mode', if the battery levels fall below 25%, the lift will go into Low Battery Mode. The lift will then:
 4. Make an audible beeping sound every ten (10) seconds.
 5. The display should flash "Low Battery" in the first line.
 6. The bars indicating charge level should flash on and off.

LCD Display & Programming Functionality

- In any ‘Default display mode’, if the unit is in the charger the lift will go into Charging Display Mode regardless what the user has selected as ‘Default Display Mode’. Charging Display Mode should over-ride Low Battery Mode.
- The lift will then:
 7. Display a flashing “Charging” with the percentage charged (in 10% increments) in the top row of the display (e.g., “Charging 60”).
 8. Show the appropriate number of fully blackened out cells, with the remaining cells in the bottom row flashing.



- **To enter programming mode:**

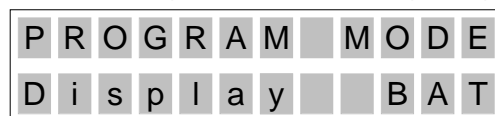
- Hold the ‘Up’ and ‘Down’ buttons simultaneously for three (3) seconds.
- The lift will then:
 9. Beep three (3) times. Display a flashing “Entering Programming Mode” for two (2) seconds.
 10. Go to the first programming option.
- If the user continues to hold the ‘Up’ and ‘Down’ buttons for longer than the display flashes, “Entering Programming Mode”, the unit will exit the programming mode.

- **To exit programming mode:**

- If no buttons are pressed for ten (10) seconds the unit exits the programming mode automatically. The lift should then:
 11. Beep three (3) times. (the beep should be as loud as the existing emergency down alarm)
 12. Display a flashing “Exiting Programming Mode” for two (2) seconds.
 13. Go back to the standard display mode.

- **Programming Mode:**

- Whenever in Programming Mode, the top line of the display should read, “PROGRAM MODE”. Depending on what is being programmed, the second line should then change:



- Using the ‘Up’ and ‘Down’ buttons, the user should then be able to cycle through their choices.

LCD Display & Programming Functionality

- **Change Setting Mode:**

- To change one of the programmable settings, the user should press the 'Up' and 'Down' buttons simultaneously when a particular setting is being displayed.

14. The display will then display the setting name and the setting itself. The setting will then display as reverse-highlighted (as in the following example)

P	R	O	G	R	A	M		M	O	D	E
D	i	s	p	l	a	y			B	A	T

- Once in Change Setting Mode, the user can cycle through the possible settings by using the 'Up' and 'Down' buttons. The setting should remain highlighted as the user cycles through their options.
- To select the setting, the user then presses the 'Up' and 'Down' buttons simultaneously for three (3) seconds. The lift should then:

15. Beep one (1) time.

16. Go back into Programming Mode and allow the user to cycle through the other settings using the 'Up' and 'Down' buttons.

- If the user does not press any buttons for ten (10) seconds while in Change Setting Mode the lift should revert back to Programming Mode.

- **Programming Options:**

- The programming mode will offer the following choices:

1.– Display Mode (see above)

- (i) Battery Level (factory setting)
- (ii) Number of Lifts

2.– Traversing Speed:

- (i) 2
- (ii) 4
- (iii) 8 (factory setting)

3.– Preventative Maintenance Alarm:

- (i) On
- (ii) Off (factory setting)

4.– Maintenance

- (i) Total Number of lifts (display only, not programmable)
- (ii) Lifts since last maintenance (see 'Preventative Maintenance', below)
- (iii) Total number of lift hours (display only, not programmable).
- (iv) Total lift hours since last maintenance (see 'Preventative Maintenance', below)

LCD Display & Programming Functionality

- If the lift has the return-to-charge (“RTC”) feature, the following programming choices will also be available:

1.–RTC Max. Time

- (i) 60 seconds
- (ii) 120 seconds (factory setting)
- (iii) 180 seconds
- (iv) 240 seconds

2.–RTC Drop Time

- (i) 9 seconds
- (ii) 12 seconds
- (iii) 15 seconds
- (iv) 18 seconds
- (v) 21 seconds
- (vi) 24 seconds

3.–RTC Speed

- (i) 2
- (ii) 4 (factory setting)
- (iii) 8

- **Measuring Lifts**

- The lift should add one to the lift counter if the lift has been operated under load (i.e., approx. 60 lbs. with 2’ of travel).

- **Preventative Maintenance**

- Preventative maintenance should be completed every six (6) months. The lift should recommend preventative maintenance if it hasn’t had any preventative maintenance for:

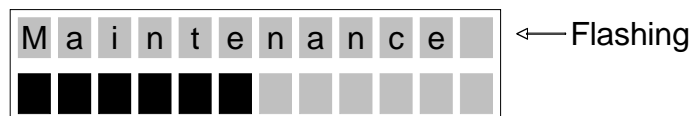
- 1.–1,000 lifts (four or five lifts a day 180 days); or,

- 2.–Five (5) hours.

- To recommend preventative maintenance, the Lift will:

- 17. Beep one (1) time every thirty (30) minutes, this can be silenced or over-ridden by the user by changing a setting, see above.

- 18. Flash “Maintenance” in the first line of the display (regardless of which default display mode the user has selected).



- To reset the counter which notifies the lift when to signal for preventative maintenance, see the following section titled, “*Resetting The Lift Counter*”.

LCD Display & Programming Functionality

- **Resetting The Lift Counter**
 1. The lift must be in power off state.
 2. While pressing both Up/Down buttons on hand control, turn “ON” lift. A minimum of 10 seconds must pass followed by a beep to indicate completion of the reset.
 3. PM lifts count will be “zero”.
 4. Use lift as normal.

Tool List

The lifts have been designed to minimize the tools required for servicing the lifts. Common and swappable components provides for efficient servicing.

The following is a list of tools required for basic repairs and servicing:

- a) 1/8" Allen Key
- b) Phillips Screwdriver - small
- c) Pliers
- d) Cutting Pliers
- e) 9/64" Allen key
- f) 3/32" Allen Key
- g) Circlip Pliers
- h) Ratchet Wrench with 5/16" Socket & Extension

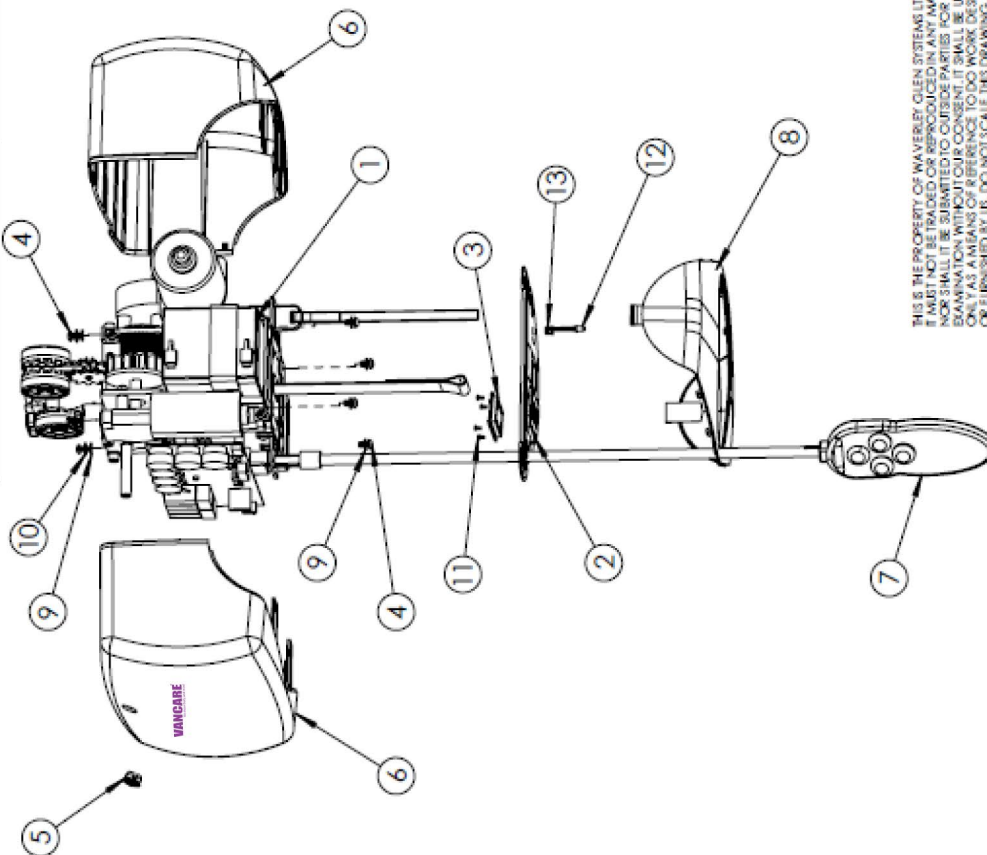


Service Parts List (C-450/C-625)

610519 - Soneil 24V 1.5 amp Soneil Charger

C1000 – COVERS ASSEMBLY

ITEM NO.		PART NUMBER	DESCRIPTION	QTY.
1	329150 Lift Unit		C1000Lift Unit	1
2	636003		Middle Cover Insert	1
3	610447		LED DISPLAY AND CABLE	1
4	636037		BHSC 10-32-0.375 (McM#91306A354)	8
5	635106		Emergency Stop Plug	1
6	636001		Main Cover (Side Cover)	2
7	635020-2 Way, 635107-4 Way, 635108-6 Way		Hand Control w/ Cord	1
8	636002		Middle Cover	1
9	636048		Exter Tooth Lock Washer #10, 0.02-0.03 Thick (McM# 97775A260)	8
10	636047		Nylon Washer #10 (McM# 90295A122)	4
11	635053		Pan Cross Head Machine Screw #2-56 x 0.188	4
12	636059		1000lbs Bi-colour LED cable Assem	1
13	610441		LED Panel Mount Kit	1

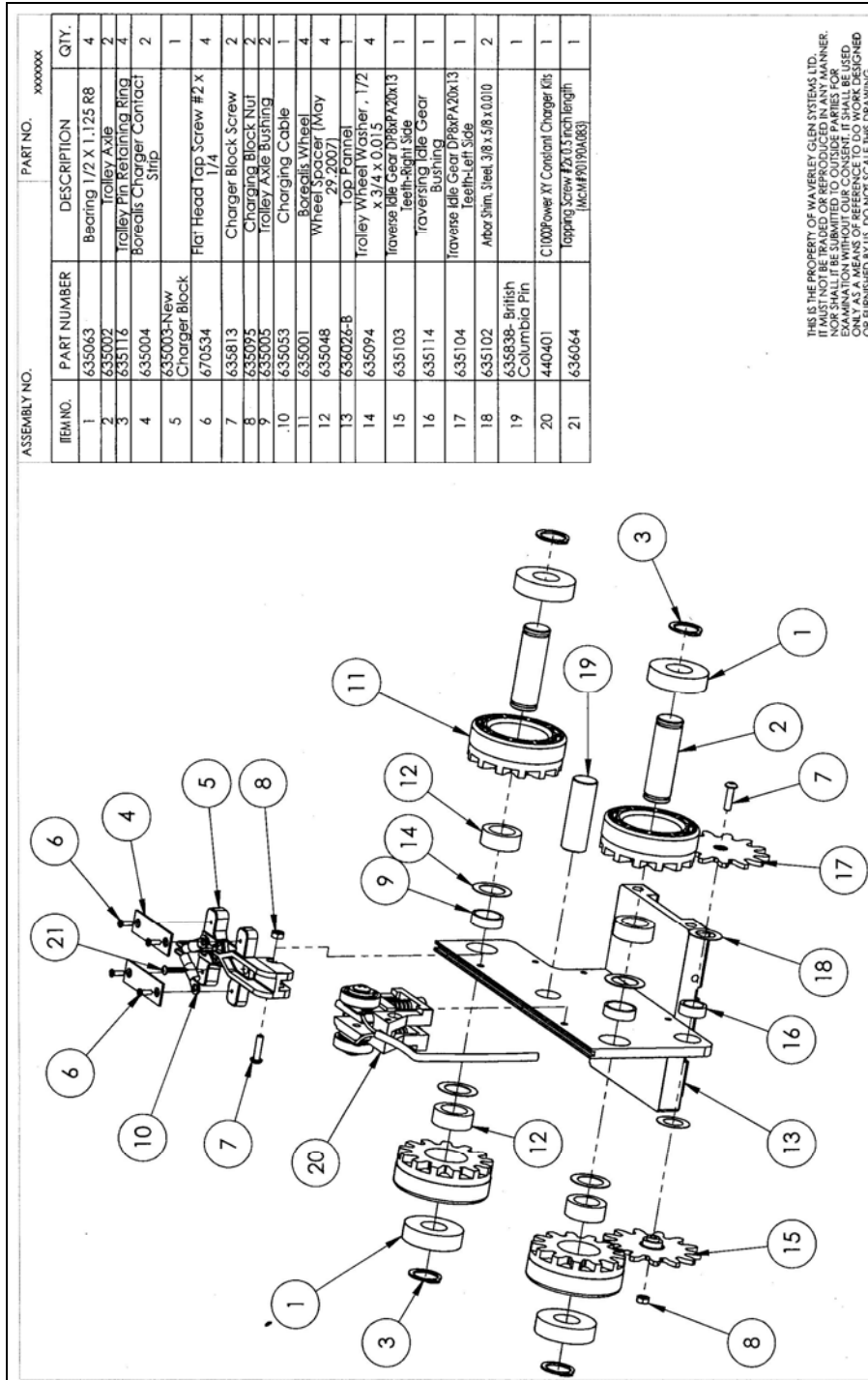


GEARBOX ASSEMBLY

ITEM NO.	PART NUMBER	DESCRIPTION	QTY.
1	Tape Worm Gear Assembly	STRAP ASSEMBLY	1
2	413738	1000 LB LIFT STRAP BLACK NYLON, 1.25in, 7/16in	1
3	636025	Tape Reel Strap Shaft	1
4	636017	BUSHING FLANGED OIL INPR. 0.375 X 0.500 (R) X 0.431731	2
5	430285-A	EXTERNAL RETAINING RING, R1000, 0.375	2
6	Switch Assembly-1000	STRAP SWITCH ASSEMBLY	1
7	636004	Gear Box - Bariatric	1
8	631605-B	STAINLESS STEEL CONE (800LBS)	2
9	631607-B	CLUTCH BEARING -REV B	2
10	631650-A	BEARING, 600 LB WORM	2
11	631627-A	Bowed Washer 7/16 BX 3/4 OD	2
12	650330-A	Bearing 1/2X1.125 R8	2
13	623043	Infer Tooth Washer #8 - Zinc	6
14	636043	Inter Tooth Washer #8/16	6
15	631601-C	600 LB WORM/SPUR REV. C	2
16	631620-A	SPUR SIDE WORM GEAR SHAFT	2
17	631625	TOOTH LOCKWASHER, #10	4
18	636020	Removable Worm Shaft-Left	1
19	636060	SBCSCREW 0.19-24X0.3125-HX-N (McM. 97763A605)	4
20	636021	Removable Worm Shaft-Right	1
21	631602	DRIVE MOTOR, TA PLUS	1
22	631624-B	800 LB MOTOR GEAR	1
23	630406	Lock Washer - 1/4	1
24	430715	Hex Socket & Tor Head Cap Screw (250.2) 1/2-20	1
25	430125	LOCKWASHER, M6	2
26	633522	B18.3.4M - 6 x 1.0 x 16 SBCS-N	2
27	631673	special counterlock head screw B18.3.4M - 6 x 1.0 x 16 SBCS-N	1
28	43410	(Flat Washer 0.25)	1
29	430365-A	SBCSCREW 0.19-32X0.375X0.375-HX-N	4
30	631622-A	600 LB STRAP GUARD	1
31	631697	BHCS, # 8-32 X 0.3125	2
32	636046	3/4 Tor Head Cap Screw (25-20x0.5)	8
33	636042	Hard Tooth Lock Washer (25 - 1/2)	8

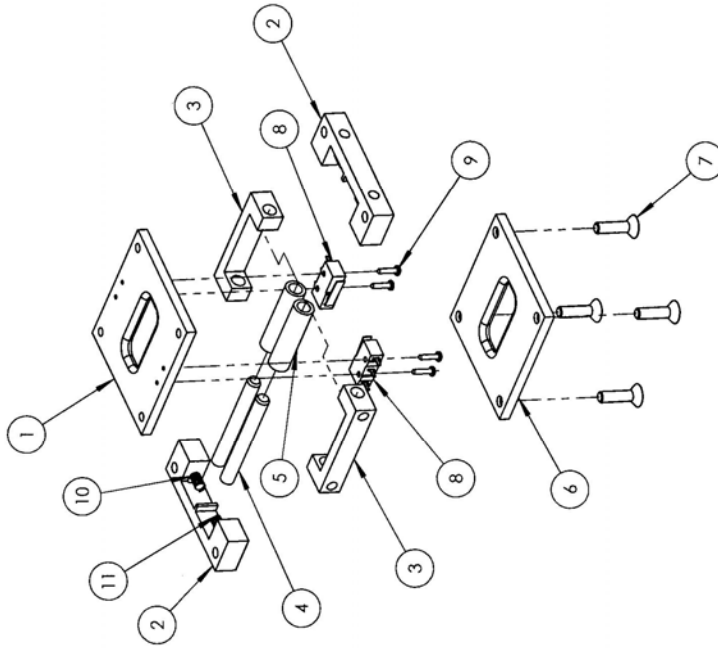
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TOP PANEL ASSEMBLY



LIMIT SWITCH ASSEMBLY

PART NO. xxxxxxxx
 ASSEMBLY NO.



ITEM NO.	PART NUMBER	DESCRIPTION	QTY.
1	636011	Switch Assembly Bottom Plate	1
2	636009	Stop	2
3	636024	Switch Actuator	2
4	636022	Roller Shaft	2
5	636023	Roller O/D .375" I/D .255"	2
6	636012	Switch Assembly Top Plate	1
7	610247	FHCS, # 10-32 X 0.750	4
8	636054	LIMIT SWITCH	2
9	610348	BHCS SELF TAPPING SCREW, # 2-56 X 0.375	4
10	430363	SLACK TAPE SPRING	2
11	430364	UPPER LIMIT COMPRESSION SPRING	2

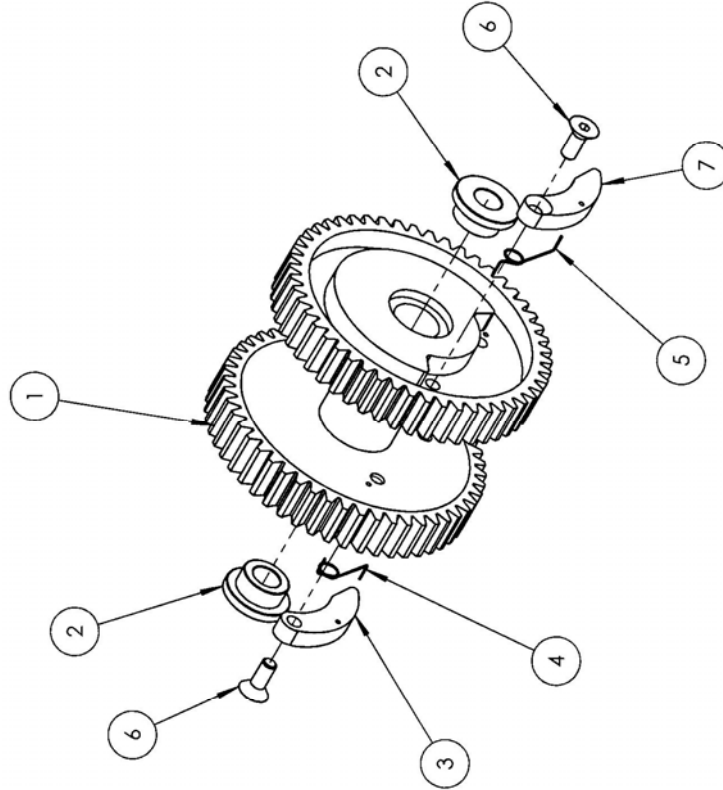
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TAPE GEAR ASSEMBLY

ASSEMBLY NO. XXXXXXXX
PART NO. XXXXXXXX

ITEM NO. 1
PART NO. 636019
DESCRIPTION: TAPE REEL/WORM GEAR-Bariatric
QTY. 1

ITEM NO.	PART NUMBER	DESCRIPTION	QTY.
1	636019	TAPE REEL/WORM GEAR-Bariatric	1
2	430235-A	OIL INPRE BUSHING 3/8X5/8 IN	2
3	631631	OVER SPEED ARM, LEFT	1
4	631630	600 LB TORSION SPRING LH	1
5	631629-A	600 LB TORSION SPRING RH	1
6	636049	SCHCSREW 0.19-32x0.5x0.5-HX-N (McM91266A252)	2
7	631633	OVER SPEED ARM, RIGHT	1



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TRANSCORD ASSEMBLY

PART NO. XXXXXX

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General Inspection and Preventative Maintenance for Ceiling Lift & Track products

Below is a non-inclusive list of services Vancare will provide during their visit(s):

✓ **Visual Inspection 1x yearly (Ceiling Lift & Track products):**

- The lift lifting tape shows no signs of fraying or breaking along its entire length.
- The stitching on the lift lifting tape where it connects to the carry bar shows no signs of fraying, or breaking.
- The sling (s) that will be used shows no signs of unusual wear and tear. The straps of the sling that connect to the hanger bar of the lift show no signs of fraying or breaking. Refer to specific sling instructions.
- The airline tube that connects the hand control to the lift is not kinked, twisted, knotted, cut or damaged.
- All the functions on the hand control work correctly (e.g. UP/DOWN/LEFT/RIGHT, etc.)
- The brackets that hold the track in place on the ceiling are secure and do not move or appear loose.
- There are no cuts, dents or sharp edges on the carry bar that may damage the straps of the sling.
- Ensure the lift makes no unusual sounds when the carry bar is moved UP/DOWN or the lift is moved LEFT/RIGHT.
- Ensure that there are end stops installed at each end of the track.
- Ensure the lift moves freely along the entire length of the track.
- Certify and record of lift inspection for inspector records

✓ **Preventative Maintenance 1x yearly (Ceiling Lift & Track products):**

- Complete all steps outlined above under Visual Inspection
- Record then reset the PM lifts counter
- Inspect complete lift operation
 - Inspect all power connections and record all power volts
- Check and load test Batteries
- Lubricate moving parts as needed
- Clean all rails and trolleys within rails
- Check strap limit switches
- Certify and record of lift inspection for inspector records

✓ **Load Testing to EN10535 standards 1x yearly (Ceiling Lift & Track products):**

- Tracks will be load tested at 100% safe working load; each track attachment will be point load tested. The deflection of the track will be measured and determined if it is acceptable to (EN10535) standards.
- Lifts will be load tested per manufactures specifications
- Inspect above ceiling attachments
- Certify and record of lift inspection for inspector records



Final Checklist and Inspection Commissioning Cover Sheet

Client Name: _____

Client Address: _____

Order Number: _____

Number of Pages Including Cover
Sheet: _____

Date: _____

Client Signature: _____

The above signed acknowledges the receipt of the completed
Certified Inspection Information attached herein.



SO# _____

Delivery Ticket

Delivered to: _____

Address: _____

Product Description: _____

Serial #'s: _____

I, the client, or an authorized representative of the above client, acknowledge receipt of the attached equipment, service and/or supplies and am satisfied with work completed by Vancare and/or Vancare representative. I was demonstrated the proper use of the slings, hand controls, and the operations of the lift(s) or products I received, if applicable. I am in receipt of the owner's manual with information. I understand that any system must be periodically inspected for loose fittings, and I will not operate the lift with a frayed or worn sling. Every product sold or rented by our company carries a manufacturer's warranty. Vancare will notify all clients of the warranty coverage, and we will honor all warranties under applicable law. I understand that using the system other than instructed, using unauthorized equipment and/or having repairs or modifications by others not certified to complete the work will void the warranty. The warranty does not cover misuse or unauthorized maintenance or any other events beyond our control. Shipping of parts or any other shipping charges that occur at the responsibility of the owner/client and will be invoiced accordingly, if applicable. I have been instructed and understand the coverage on the product that I have received.

Client Signature: _____

Print Name: _____ Date: _____

Vancare Representative Signature: _____

Print Name: _____ Date: _____

Ceiling Lift System Installation Final Checklist and Inspection

Refer to the bulletin entitled "Initial and Preventative Maintenance Procedure" for further instruction.

Facility: _____

Address: _____

Room Number: _____

SWL of System: _____

Checklist Item	Inspection			Installer initials	Specification
Track Inspection:					
Endstops	Yes	No	N/A		Endstops are in place and tightened to 12-14 ft. lbs.
Set Screws	Yes	No	N/A		Apply Blue Loctite (243). Tighten to 40-45 in. lbs
Ceiling brackets	Yes	No	N/A		Fully tightened
End stop safety pins	Yes	No	N/A		All track ends have a safety pin and split ring behind the endstop
Endcaps	Yes	No	N/A		Installed.
Track joints	Yes	No	N/A		Level and smooth. Lift rolls over gaps smoothly.
Gate assembly	Yes	No	N/A		Ensure that the gate safety system is functioning correctly. Should be bolted securely so that no movement is apparent.
Turntable	Yes	No	N/A		All stops in place, turntable rotates freely.
Track	Yes	No	N/A		Track is level
Track placement	Yes	No	N/A		Track is installed per correct dimensions and placement in the room in accordance with either shop drawing or customer verification
Structure Inspection					
Support Bracing	Yes	No	N/A		Support points shall feel structurally firm and display little perceptible movement laterally or longitudinally when a force of approximately 160N (35 lbs of force) is applied in a horizontal plane by firmly grasping and shaking the rail.
SWL Sticker (8-620720)	Yes	No	N/A		Complete and place SWL stickers (8-620720) on the track system no more than 20ft. apart so they are visible to user. The SWL will determine the parameters for Load, Deflection and Function Test.
Tested Weight: _____ lbs	Yes	No	N/A		Anchors tightened per anchor manufacturers' specifications. Using 150% of system's SWL, test all attachment points by hanging weights below them.
Deflection Measured: _____	Yes	No	N/A		1 mm over every 200mm measured from middle of span. 100% of SWL.
Function test	Yes	No	N/A		100% of system's SWL through entire track system (including accessories such as smoke doors); system should be visually/audibly observed for movement or loud noises
Vertical rods and structural fittings	Yes	No	N/A		As per approved drawing and/orVancare, Inc. Recommendation.
Lift Inspection					
Lift Charging	Yes	No	N/A		LED display on charger and lift indicates charging function is operational.
Trolleys	Yes	No	N/A		Fixed Lifts - All rings & retaining rings in place. Portable Lifts - Cotter/thrust-pin in place. No movement of nut.
Carry Bar	Yes	No	N/A		Install strap pin. Verify swivel function.
Lifts	Yes	No	N/A		Any controls on unit (including emergency lowering) work properly.
Upper Limit Switch	Yes	No	N/A		Ensure that the lifting motion stops when the triple tape thickness meets the rollers.
Lower Limit Switch / Slack Tape Switch	Yes	No	N/A		Ensure that the lowering motion stops when the tape is completely unwound. Also ensure lowering motion stops when there is slack in the lift strap.
Handset Functions	Yes	No	N/A		Test all functions on the hand control to confirm they are functioning properly.
Charging Endstop	Yes	No	N/A		Installed and operating properly. Lift docks and charges properly. Tightened to 12-14 ft. lbs.
Cleaning/Miscellaneous					
Interior Track Cleaning	Yes	No	N/A		Use a dust wand to clear out any dust and debris within the track
Exterior Track Cleaning	Yes	No	N/A		Use a soft scrub bleach to clean any scuff marks on the track

Lift Serial Numbers: _____

Facility Representative: _____

Print Name
Signature

Vancare Representative: _____

Print Name
Signature

C-1000 Technical Manual

Date / Time: _____

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Ceiling Lift - Preventative Maintenance							
Facility:			Contract Dates:		To:		
Address:			Scheduled:		Actual:		
Room Number:			Next PM Check:				
Lift Model:			Number of Lifts Since Last PM:				
Lift Serial Number:			Additional Service Needed?		<input type="checkbox"/> PASS		<input type="checkbox"/> FAIL
Lift Functions:	Description:	Pass Inspection:			Problems:		Fixed:
UP, DOWN, EMRG. DOWN, TRAVERSE, ON/OFF, EMRG. ON/OFF	Check functions using the buttons on the lift.	<input type="checkbox"/> PASS	<input type="checkbox"/> FAIL	<input type="checkbox"/> N/A			<input type="checkbox"/> PASS <input type="checkbox"/> FAIL
Mechanical Functions:	Description:	Pass Inspection:			Problems:		Fixed:
Load Test Per CSA Z10535.2-17	Lift 100% of the load capacity of the Motor 20" off of the ground	<input type="checkbox"/> PASS	<input type="checkbox"/> FAIL	<input type="checkbox"/> N/A			<input type="checkbox"/> PASS <input type="checkbox"/> FAIL
Trolley Wheels	Inspect wheels for flat spots, and excessive wear and tear	<input type="checkbox"/> PASS	<input type="checkbox"/> FAIL	<input type="checkbox"/> N/A			<input type="checkbox"/> PASS <input type="checkbox"/> FAIL
Portable Trolley	Ensure nut and pin are intact and tight	<input type="checkbox"/> PASS	<input type="checkbox"/> FAIL	<input type="checkbox"/> N/A			<input type="checkbox"/> PASS <input type="checkbox"/> FAIL
Motor, Gears, and Traversing Drive	Inspect for damage and excessive noise	<input type="checkbox"/> PASS	<input type="checkbox"/> FAIL	<input type="checkbox"/> N/A			<input type="checkbox"/> PASS <input type="checkbox"/> FAIL
Carry Bar	Inspect for damage; verify insert and hooks and strap pass through hole.	<input type="checkbox"/> PASS	<input type="checkbox"/> FAIL	<input type="checkbox"/> N/A			<input type="checkbox"/> PASS <input type="checkbox"/> FAIL
Fraying of Strap Edges	Lower the strap down to the ground and inspect the full length of the edges. Remove the plug from the carry bar; inspect the strap integrity around the pin.	<input type="checkbox"/> PASS	<input type="checkbox"/> FAIL	<input type="checkbox"/> N/A			<input type="checkbox"/> PASS <input type="checkbox"/> FAIL
Pneumatic Hand Control:	Description:	Pass Inspection:			Problems:		Fixed:
UP, DOWN, EMRG. DOWN, TRAVERSE, ON/OFF	Press each button on hand control for 10 seconds, make sure button function works continuously.	<input type="checkbox"/> PASS	<input type="checkbox"/> FAIL	<input type="checkbox"/> N/A			<input type="checkbox"/> PASS <input type="checkbox"/> FAIL
Airline Tubing	Inspect for damage/leaks	<input type="checkbox"/> PASS	<input type="checkbox"/> FAIL	<input type="checkbox"/> N/A			<input type="checkbox"/> PASS <input type="checkbox"/> FAIL
Grommet Connectors	Check that they are tight	<input type="checkbox"/> PASS	<input type="checkbox"/> FAIL	<input type="checkbox"/> N/A			<input type="checkbox"/> PASS <input type="checkbox"/> FAIL
Limit Switches:	Description:	Pass Inspection:			Problems:		Fixed:
Upper Limit Switch and Angle Detection	Hold UP until the carry bar is at the top. Motor should stop automatically.	<input type="checkbox"/> PASS	<input type="checkbox"/> FAIL	<input type="checkbox"/> N/A			<input type="checkbox"/> PASS <input type="checkbox"/> FAIL
	Let the strap out all the way to the ground. Motor should stop before strap winds backwards.	<input type="checkbox"/> PASS	<input type="checkbox"/> FAIL	<input type="checkbox"/> N/A			<input type="checkbox"/> PASS <input type="checkbox"/> FAIL
	While using either UP or Down , angle the strap more than 15 degrees. Motor should stop automatically.	<input type="checkbox"/> PASS	<input type="checkbox"/> FAIL	<input type="checkbox"/> N/A			<input type="checkbox"/> PASS <input type="checkbox"/> FAIL
Slack Tape Switch	Hold DOWN and lift up on the carry bar. Motor should stop automatically.	<input type="checkbox"/> PASS	<input type="checkbox"/> FAIL	<input type="checkbox"/> N/A			<input type="checkbox"/> PASS <input type="checkbox"/> FAIL
Electrical Functions:	Description:	Pass Inspection:			Problems:		Fixed:
Battery Voltage:	Check batteries with multimeter and confirm 12V reading while engaging the motor during load test. Be sure to fully tighten brackets after removal.	<input type="checkbox"/> PASS	<input type="checkbox"/> FAIL	<input type="checkbox"/> N/A			<input type="checkbox"/> PASS <input type="checkbox"/> FAIL
Battery Inspection	Check physical condition and ensure battery has install date on it.	<input type="checkbox"/> PASS	<input type="checkbox"/> FAIL	<input type="checkbox"/> N/A			<input type="checkbox"/> PASS <input type="checkbox"/> FAIL
Charing End Stop	Confirm that lift enters charging end stop without resistance; lift docks and charges properly.	<input type="checkbox"/> PASS	<input type="checkbox"/> FAIL	<input type="checkbox"/> N/A			<input type="checkbox"/> PASS <input type="checkbox"/> FAIL
Miscellaneous	Description:	Pass Inspection:			Problems:		Fixed:
LCD Screen:	Check that LCD works properly	<input type="checkbox"/> PASS	<input type="checkbox"/> FAIL	<input type="checkbox"/> N/A			<input type="checkbox"/> PASS <input type="checkbox"/> FAIL
LED Light:	Check that light turns green when on, dark when off, and amber when charging.	<input type="checkbox"/> PASS	<input type="checkbox"/> FAIL	<input type="checkbox"/> N/A			<input type="checkbox"/> PASS <input type="checkbox"/> FAIL
Casing	Check for cracks or wear in case	<input type="checkbox"/> PASS	<input type="checkbox"/> FAIL	<input type="checkbox"/> N/A			<input type="checkbox"/> PASS <input type="checkbox"/> FAIL
PM Reset	Use hand control to end program mode. Log # of lifts in upper right corner on this sheet. Reset the PM Counter.	<input type="checkbox"/> PASS	<input type="checkbox"/> FAIL	<input type="checkbox"/> N/A			<input type="checkbox"/> PASS <input type="checkbox"/> FAIL
PM Sticker (8-620710)	Complete and place a PM Sticker on the track.	<input type="checkbox"/> PASS	<input type="checkbox"/> FAIL	<input type="checkbox"/> N/A			<input type="checkbox"/> PASS <input type="checkbox"/> FAIL
SWL Sticker (8-620720)	Ensure SWL information is still accurate and readable	<input type="checkbox"/> PASS	<input type="checkbox"/> FAIL	<input type="checkbox"/> N/A			<input type="checkbox"/> PASS <input type="checkbox"/> FAIL

Vancare Distributor:

Customer:



Ceiling Track - Preventative Maintenance									
Facility:					Contract Dates:		To:		
Address:					Scheduled:		Actual:		
Room Number:					Next PM Check:				
SWL of System:					Additional Service Needed?		<input type="checkbox"/> YES		<input type="checkbox"/> NO
Track Inspection:		Description:		Pass Inspection:		Problems:		Fixed:	
Endstops		Check that endstops are in place and tightened to 12-14 ft. lbs.		<input type="checkbox"/> YES <input type="checkbox"/> NO <input type="checkbox"/> N/A				<input type="checkbox"/> YES <input type="checkbox"/> NO	
Set Screws		Visually inspect; reapply Blue Loctite (243) and tighten to 40-45 in-lbs. of torque if required		<input type="checkbox"/> YES <input type="checkbox"/> NO <input type="checkbox"/> N/A				<input type="checkbox"/> YES <input type="checkbox"/> NO	
End Stop Safety Pins		Confirm that all track ends have a safety pin and split ring behind the endstop		<input type="checkbox"/> YES <input type="checkbox"/> NO <input type="checkbox"/> N/A				<input type="checkbox"/> YES <input type="checkbox"/> NO	
Endcaps		Confirm that all track ends have endcaps installed		<input type="checkbox"/> YES <input type="checkbox"/> NO <input type="checkbox"/> N/A				<input type="checkbox"/> YES <input type="checkbox"/> NO	
Gantry Trolleys		Check for flat spots on wheels and any excessive wear and tear; Safety pins in place and functional; Set screws tightened; Loctite used on set screws.		<input type="checkbox"/> YES <input type="checkbox"/> NO <input type="checkbox"/> N/A				<input type="checkbox"/> YES <input type="checkbox"/> NO	
Track Joints		Run a lift or trolley through a track joint and confirm that the transition is smooth		<input type="checkbox"/> YES <input type="checkbox"/> NO <input type="checkbox"/> N/A				<input type="checkbox"/> YES <input type="checkbox"/> NO	
Transition Gate		Inspect track joints into the transition gate, confirm that it is functioning properly and the pin falls down easily, roller bearing in place; pin and connection are working properly.		<input type="checkbox"/> YES <input type="checkbox"/> NO <input type="checkbox"/> N/A				<input type="checkbox"/> YES <input type="checkbox"/> NO	
Turn Table		Inspect track joints into the turntable, confirm that it is functioning properly		<input type="checkbox"/> YES <input type="checkbox"/> NO <input type="checkbox"/> N/A				<input type="checkbox"/> YES <input type="checkbox"/> NO	
Smoke Barrier Assembly		Doors spring back and forth without hindrance; no visual damage to any of the gaskets; all screws are tight; no signs of wear/ deformation on any components including the hinge doors		<input type="checkbox"/> YES <input type="checkbox"/> NO <input type="checkbox"/> N/A				<input type="checkbox"/> YES <input type="checkbox"/> NO	
Track		Track is level		<input type="checkbox"/> YES <input type="checkbox"/> NO <input type="checkbox"/> N/A				<input type="checkbox"/> YES <input type="checkbox"/> NO	
Structure Inspection:		Description:		Pass Inspection:		Problems:		Fixed:	
Bracing		Wiggle the ends of the track to confirm minimal movement		<input type="checkbox"/> YES <input type="checkbox"/> NO <input type="checkbox"/> N/A				<input type="checkbox"/> YES <input type="checkbox"/> NO	
Anchor Testing		Using 100% of system's SWL, test all attachment points by hanging weights below them		<input type="checkbox"/> YES <input type="checkbox"/> NO <input type="checkbox"/> N/A				<input type="checkbox"/> YES <input type="checkbox"/> NO	
Deflection Test		1 mm over every 200 mm measured from middle of span. 100% of system's SWL		<input type="checkbox"/> YES <input type="checkbox"/> NO <input type="checkbox"/> N/A				<input type="checkbox"/> YES <input type="checkbox"/> NO	
Function Test		100% of system's SWL through entire track system (including accessories such as smoke doors); system should be visually/ audibly observed for movement or loud noises		<input type="checkbox"/> YES <input type="checkbox"/> NO <input type="checkbox"/> N/A				<input type="checkbox"/> YES <input type="checkbox"/> NO	
Charging System:		Description:		Pass Inspection:		Problems:		Fixed:	
Charger and connections		Visually check all contact points and connections		<input type="checkbox"/> YES <input type="checkbox"/> NO <input type="checkbox"/> N/A				<input type="checkbox"/> YES <input type="checkbox"/> NO	
Voltage		Use a voltmeter to check output (24-28V)		<input type="checkbox"/> YES <input type="checkbox"/> NO <input type="checkbox"/> N/A				<input type="checkbox"/> YES <input type="checkbox"/> NO	
Charging End Stop		Confirm that lift enters charging endstop without resistance; end stop has power and motor charges.		<input type="checkbox"/> YES <input type="checkbox"/> NO <input type="checkbox"/> N/A				<input type="checkbox"/> YES <input type="checkbox"/> NO	
Cleaning/Miscellaneous:		Description:		Pass Inspection:		Problems:		Fixed:	
Interior Track Cleaning		Use a dust wand to clear out any dust and debris within the track		<input type="checkbox"/> YES <input type="checkbox"/> NO <input type="checkbox"/> N/A				<input type="checkbox"/> YES <input type="checkbox"/> NO	
Exterior Track Cleaning		Use a soft scrub bleach to clean any scuff marks on the track		<input type="checkbox"/> YES <input type="checkbox"/> NO <input type="checkbox"/> N/A				<input type="checkbox"/> YES <input type="checkbox"/> NO	
PM Sticker (8-620710)		Complete and place a PM sticker (8-620710) on the track.		<input type="checkbox"/> YES <input type="checkbox"/> NO <input type="checkbox"/> N/A				<input type="checkbox"/> YES <input type="checkbox"/> NO	
SWL Sticker (8-620720)		Ensure SWL information is still accurate and readable		<input type="checkbox"/> YES <input type="checkbox"/> NO <input type="checkbox"/> N/A				<input type="checkbox"/> YES <input type="checkbox"/> NO	

Vancare Distributor:			
Customer:			
	Print	Sign	Date

If you have any questions about the manufacture or operation of this equipment, please contact Xceptg.™ or your local authorized dealer.



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