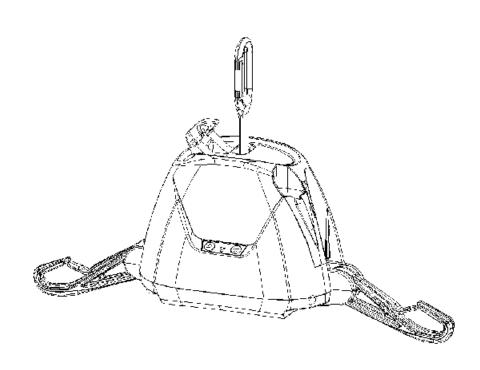
MODELS

TECHNICAL MANUAL

V3 PORTABLE

CEILING LIFT SYSTEM

V3 PORTABLE





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WARNING: this symbol is intended to alert the user to hazards or unsafe practices which could result in serious bodily harm.



NOTE: this symbol offers helpful information concerning certain operating procedures.



CAUTION: this symbol is intended to alert the user of the presence of important operating and maintenance instructions which could prevent product damage or possible personal injury.

UNIT



CONTROL "UP"



CONTROL "DOWN"



The symbol indicates the lift needs "Service".

CHARGER



This symbol indicates the charger power is "ON".



This symbol indicates the charging mode.



DO NOT ATTEMPT TO USE THIS EQUIPMENT WITHOUT UNDERSTANDING THIS MANUAL.

To ensure safe operation, read carefully the entire manual, especially the section on "Safety Instructions and Warnings", before installing, operating or servicing this equipment.

If anything is not completely understood, please contact your supplier for more details. Failure to comply with warnings in this manual may result in injury.

Keep this manual with lift and refer to it as required. Contents of this manual are subjected to change without prior notice to users.

SAFETY INSTRUCTIONS & WARNINGS

GENERAL

- IMPORTANT READ THESE INSTRUCTIONS CAREFULLY OR SERIOUS INJURY MAY RESULT.
- KEEP THESE INSTRUCTIONS AND THE KEY PROVIDED WITH THE LIFT AT ALL TIMES.
- > READ OPERATION AND MAINTENANCE INSTRUCTIONS IN THIS MANUAL BEFORE INSTALLING, OPERATING, OR SERVICING THIS EQUIPMENT.
- > V3 Portable System ceiling lift is installed by an authorized contractor or installer.
- > Your lift is for transferring patients only. Do not use the lift for any other purpose.
- > Always carry out the daily checklist before using the lift.
- V3 Portable ceiling lift is specifically designed for BHM Medical ceiling rail systems, slings and accessories. Slings and accessories designed by any other manufacturer are prohibited and will void warranty. Use only the specified slings and accessories to maintain patient safety and product utility.
- V3 Portable ceiling lift is intended to be used for patients within the specified weight limit indicated for the lift. Do not attempt to lift more than the weight limit indicated.
- > Before attempting to transfer, the patient must be assessed by a qualified professional.
- V3 Portable ceiling lift must be used by a caregiver with proper training to work with the patient to be transferred.
- ONLY trained and qualified caregivers should transfer a patient. DO NOT attempt to use the lift if you have not been properly trained to do so.
- > ALWAYS be prepared before attempting to transfer a patient.
- DO NOT use a sling that is not recommended for the lift.
- > NEVER use a damaged, torn or frayed sling.
- > Always place the sling around the patient according to the instructions enclosed.
- FOLLOW lifting procedures outlined in this manual.
- USE all controls and safety features only according to the rules specified in this manual. Never attempt to force a control or button on the lift.
- > ALWAYS rewind the strap into the lift before transporting in another place.
- > DO NOT store the charger in a shower, bath or other areas with high humidity.
- > DO NOT drop the patient lift. Dropping the lift may cause internal damage that is not easily seen. If the lift is suspected to be damaged, take to an authorized technician for servicing.
- IMPORTANT: Keep all components of the lift clean and dry, and have electrical and mechanical safety checkpoints done as instructed in the Maintenance section of this manual.
- Replace any precautionary or instruction labels that cannot be easily read.
- > Avoid violent shock during transportation.

SAFETY INSTRUCTIONS & WARNINGS

- DO NOT use an electric lift in a shower
- DO NOT use the lift as a swing or twist the strap. The result of these actions can prematurely break the strap (if twisted continually) and endanger the patient.

SHOCK PREVENTION

- AVOID violent shock during transportation.
- DO NOT touch or use a lift with bare conductors or a damaged power cord. Electrically live equipment can electrocute a patient. If the lift or charger has any exposed or damaged wires, contact your local dealer immediately.
- DO NOT splash or expose electric parts of the device to water or moisture.
- READ the battery and charger instructions thoroughly before using or storing them.

FIRE AND EXPLOSION

- Batteries may explode, leak and cause personal injury if not disposed of properly.
- Do not place or store the battery under direct sunlight or near a heat source.
- Do not dispose of in fire.
- Do short the battery terminals.
- Do not incinerate.
- Flush with water if electrolyte (Acid) comes in contact with skin or eyes.
- Batteries must be recycled or disposed of according to local law regulations. When returning batteries, insulate their terminals with adhesive tape, otherwise the residual electricity in use batteries may cause fire or explosion.

EQUIPMENT WARNING LABELS

• Inspect all precautionary labels on the equipment. Order and replace all labels that cannot be easily read.

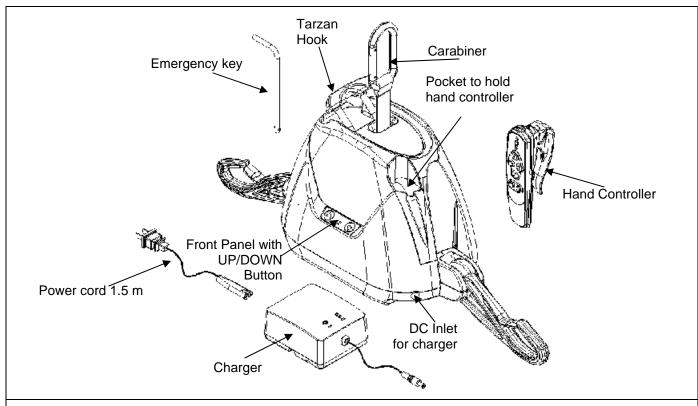
DESCRIPTION OF THE EQUIPMENT

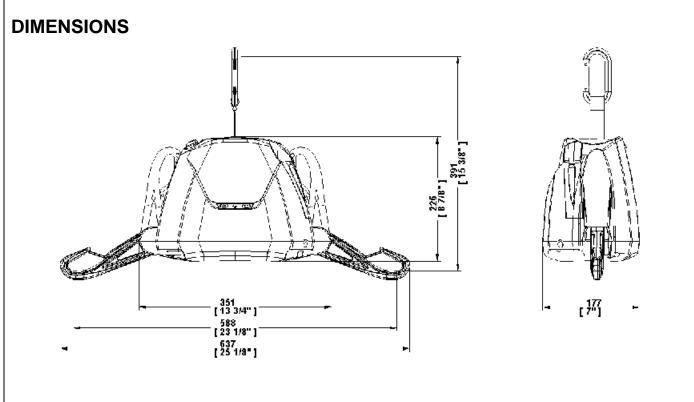
OPERATING FEATURES

- The lift unit is an aluminium frame based system driven by a gear reduced high torque motor.
- Ultra-light, the V3 Portable weights only 6.35 kg (14 lbs) with batteries included.
- The lifting capacity is 200 kg (440 lbs)
- Electronic soft-start and soft-stop motor controls.
- Powered by two (2) 12V, 2.3Ah sealed lead acid batteries.
- Intelligent and fast charging system (average 2 to 4 hrs to a complete charge)
- Capable of 30 transfers at 80 kg (180 lbs)
- Universal charger input of 90-240 VAC, output 27-29 VDC 27VA, 50-60Hz
- Easily accessible controls placed in front of the unit.
- Manual emergency lowering device
- Emergency stop button easily accessible below the unit.
- Emergency brake that operates the same way has a car safety belt.
- Anti-crush feature stops the lift when there is no tension on the strap, avoiding any injury to the patient. This feature also prevents the strap from getting twisted inside the machine.
- Current limiter for circuit protection in case of overload.
- Low battery disconnect system to protect batteries form been drained.
- Service light indicates when inspection is required, electronic supervision by microcontroller.
- Lifting speed: 4.3 cm/sec (1.7 in/sec)
- Strap length up to 2.2 m (88 in) and tested for 1363.6 kg (3000 lbs)
- Folding supports allow the lift to be smaller for transport and wide for patient comfort.
- Folding carriage handle user for transport and for TARZAN HOOK.
- Hand controller holder on the unit
- All plastic parts are made in ABS Fire retardant material.
- CSA No. 601.1, UL No. 2601-1 and CE certifications.
- Respects EMI Standard according to IEC60601.1-2.
- Duty cycle: 6 min/hr.
- Noise level: 60.5 dB
- Non-slip feet that allow stability and protection while put on the table.

DESCRIPTION OF THE EQUIPMENT

PART DESCRIPTION





MAINTENANCE ON THE V3 PORTABLE

DAILY CHECK LIST

Always carry out the daily check list before each lift use as follow:

- Has batteries been charged? Charge the batteries whenever the lift is not in use.
- ➤ Inspect the lift for any damage. If the lift casing does not look properly aligned or notice any cracks or other damages on the lift DO NOT USE IT.
- ➤ If any parts are missing on the lift DO NOT USE IT.
- Attach the lift on the trolley. Inspect the visible strap for any signs of wear, fray or loose threads. If there any evidence of damage DO NOT USE IT
- Inspect the sling for torn or frayed straps or loose stitches. If any of the damage appears
 DO NOT USE IT.
- Inspect the adjustable extension strap (if you have this option) for frayed or loose stitches
- ➤ Inspect if Tarzan hook has any damage (seems loose or notice crack).
- Inspect the foldable supports for any cracks or deformation.
- Inspect the hook at the top of the strap to ensure that it is properly attached.

If any of these problems occurs during your inspection, do not use the lift or the sling. Contact your local representative to have lift serviced or the sling replaced or repaired.

INSPECTION AND CLEANING OF THE V3 PORTABLE AND RAILS

➤ Clean the V3 Portable with a dry soft cloth or slightly moistened cloth with a mild detergent solution. Do not use any type of solvent that may damage the finish



Never put the lift under water.

➤ To ensure a better rolling surface for the trolley wheels, clean inside of the track every four (4) months. To do so, insert a damp cloth in the opening and slide it from end of the track to the other.

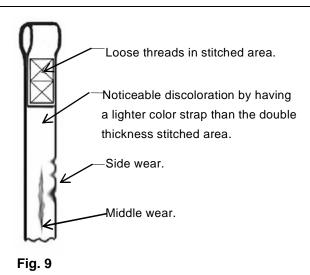
STRAP INSPECTION

If this strap is damaged and shows signs of wear, the acceptable load it before rupture can drop rapidly and can endanger the patient or the caregiver.

BHM Medical recommends thoroughly inspecting the strap every two (2) months as follows:

- 1. Completely unwind the strap.
- 2. Look for any signs of wear like, loose threaded in stitched areas, noticeable discoloration, side and middle wear. (Fig. 9)

MAINTENANCE ON THE V3 PORTABLE



If there are any signs of wear as indicated previously or other visual defects, the strap should be changed immediately. By continuing to use the lift without changing the strap, the caregiver and the patient safety is greatly compromised.

In any case, the manufacturer recommends changing the strap at least every two years. By continuing to use the lift without changing the strap, the caregiver and the patient safety is greatly compromised.

GENERAL PARTS REPLACEMENT

HAND CONTROLLER

Tools needed for this operation

None

1. To replace the defective hand controller, unplug the hand controller plug from under the lift as shown on the photo below:



2. Replace it by a new hand controller and plug it to the lift.

PLASTIC BOTTOM CAB

- Small flat-head screwdriver
- Screwdriver Torx 20
- 1. Unplug the hand controller plug from under the lift as shown on the photo below:



- 2. Put the lift on plane surface. Put the lift on a clean cloth that prevents the cab to scratch the paint.
- 3. Remove the hook from the strap.
- 4. Turn the lift upside down to remove the bottom part.

5. Unscrew the 8 tapping screws (item 12 on the exploded view) with a screwdriver Torx 20.





6. Slightly lift the cab to undercover the pushbutton.

7. With a small flat head screwdriver, release the clip surrounding the pushbutton contact

assembly.

8. Remove both parts of the pushbutton to free the bottom and the main cabins.



9. Unscrew the button part of the pushbutton and remove it.



- 10. Replace the defect bottom cab by a new one.
- 11. Put the button part of the pushbutton back, by inserting it from under the cab then screw
- 12. Put the contact part of the pushbutton and clip it by inserting the clip surrounding the pushbutton assembly. Be sure that the clip is completely inserted.

13. Put the lift upside down to place the bottom cab and put the 8 screws back. Do not overtighten.



14. Put the lift back to its original position.

PLASTIC MAIN CAB

- Small flat-head screwdriver
- Screwdriver Torx 20
- 1. Uunplug the hand controller plug from under the lift as shown on this photo below:



- 2. Put the lift on plane surface. Put the lift on a clean cloth that prevents the cab to scratch the paint.
- 3. Remove the hook from the strap.
- 4. Turn the lift upside down to remove the bottom part.
- 5. Unscrew the 8 tapping screws (item 12 on the exploded view) with a screwdriver Torx 20.





- 6. Slightly lift the cab to undercover the pushbutton.
- 7. With a small flat head screwdriver, release the clip surrounding the pushbutton contact assembly.



8. Remove both parts of the pushbutton to free the bottom and the main cabins.



9. Unscrew the 2 tapping screws (item 2 on the exploded view) with a screwdriver Torx 20 to remove the battery support (item 34 on the exploded view).





10. Remove the batteries and pull contact plugs.



11. Turn the lift and unfold the fordable support.



12. Unclip the main cab from the top, by squeezing each end with both hands until you hear a click sound.



13. Fold completely the Tarzan hook. Make sure that the handle is inserted inside the cab.

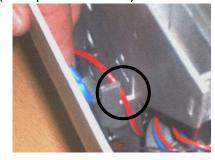


14. Slightly lift the main cab to free the touch pad membrane then unplug it from the main circuit board.



- 15. Remove the defective main and replace it by a new one.
- 16. Pass the new cab over the top on the frame.
- 17. Connect the touch pad membrane to the main circuit board
- 18. Place the cab until its clicks.
- 19. Turn the lift upside down.
- 20. Plug the contacts on the battery. Be sure that the contacts are placed on the cab side. Insert the battery contacts first.
- 21. Be sure to place the wires correctly. (See photos below)





Wrong Good

22. Place the batteries on each side of the frame.

23. Place the battery support on the batteries and fix the 2 tappigs screw with a screwdriver Torx 20.





- 24. Put the button part of the pushbutton back, by inserting it from under the cab then screw it.
- 25. Put the contact part of the pushbutton and clip it by inserting the clip surrounding the pushbutton assembly. Be sure that the clip is completely inserted.
- 26. Put the lift upside down to place the bottom cab and put the 8 screws back. Do not overtighten.



27. Put the lift back to its original position and insert the hook on the strap loop.

BATTERIES

- Screwdriver Torx 20
- Small flat head screwdriver
- 1. Unplug the hand controller plug from under the lift as shown on this photo below:



- 2. Put the lift on plane surface. Put the lift on a clean cloth that prevents the cab to scratch the paint.
- 3. Remove the hook from the strap.
- 4. Turn the lift upside down to remove the bottom part.
- 5. Unscrew the 8 tapping screws (item 12 on the exploded view) with a screwdriver Torx 20.





- 6. Slightly lift the cab to undercover the pushbutton.
- 7. With a small flat head screwdriver, release the clip surrounding the pushbutton contact assembly.

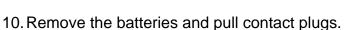


8. Remove both parts of the pushbutton to free the bottom and the main cabins.



9. Unscrew the 2 tapping screws (item 2 on the exploded view) with a screwdriver Torx 20 to remove the battery support (item 34 on the exploded view).



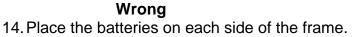






- 11. Replace the defect battery by a new one.
- 12. Plug the contacts on the battery. Be sure that the contacts are placed on the cab side. Insert the battery contacts first.
- 13. Be sure to place the wires correctly. (See photos below)



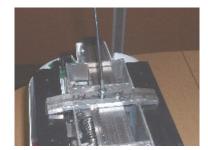




Good

15. Place the battery support on the batteries and fix the 2 tappigs screw with a screwdriver Torx 20.





- 16. Put the button part of the pushbutton back, by inserting it from under the cab then screw it.
- 17. Put the contact part of the pushbutton and clip it by inserting the clip surrounding the pushbutton assembly. Be sure that the clip is completely inserted.
- 18. Put the lift upside down to place the bottom cab and put the 8 screws back. Do not overtight



19. Put the lift back to its original position.

MAIN FUSE

Tools needed for this operation

None

- 1. Repeat steps 1 to 10 from the Batteries section to access the main fuse
- 2. Pull out the main fuse casing and unscrew manually the two parts of the casing to undercover the fuse.



- 3. Remove the fuse and replace it by a new one (part number C8FGMA10).
- 4. Screw the parts to secure the fuse.
- 5. Place the fuse wiring at the bottom of the cab.



6. .Repeat steps 12 to 19 from the Batteries section to close both cabs.

TARZAN HOOK

- Retaining ring pliers
 - 1. Repeat steps 1 to 14 from the Plastic Main Cab section to access the Tarzan Hook.
 - 2. Remove the retaining washers with retaining ring pliers on each side of the handle.



- 3. Remove the handle.
- 4. Insert the new handle into the holes. **Note always insert the longest side first into the hole.



- 5. Insert the rings with the retaining ring pliers on each side of the handle. Be sure that the rings are in place and retain safely the handle.
- 6. Repeat steps 16 to 27 from Plastic Main Cab section to put back the cab.

STRAP INLET

- Screwdriver Torx 20
- Retaining ring pliers
- 1. Repeat steps 1 to 14 of the Plastic Main Cab section.
- 2. Remove the retaining washers with retaining ring pliers on each side of the handle.



- 3. Remove the handle.
- 4. Unscrew the 2 tapping screws (item No 1 on the exploded view) with a screwdriver Torx 20 on the strap inlet.



- 5. Replace with a new strap inlet (Item no 42 on the exploded view)
- 6. Screw the 2 tapping screws on each side of the strap inlet.
- 7. Insert the handle into the holes. **Note always insert the longest side first into the hole.



- 8. Insert the rings with the retaining ring pliers on each side of the handle. Be sure that the rings are in place and retain safely the handle.
- 9. Repeat steps 16 to 27 from Plastic Main Cab Replacement section to reassemble the both cabs.

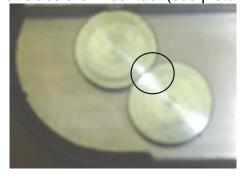
FOLDING SLING SUPPORTS

- Small screwdriver
- Retaining ring pliers
- Long nose pliers
- Plastic hammer
- 1. Repeat steps 1 to 14 from the Plastic Main Cab section to access the folding sling supports.
- 2. Remove with a small screwdriver both retaining washers (20).





- 3. Pull both clevis (36) out from the arm support.
- 4. Replace the arm support form a new one by reinserting it between the frame brackets. Make sure to align holes.
- 5. Reinsert both clevis with a plastic hammer.
- 6. Turn both clevis to place flat sides are in contact (see picture below)



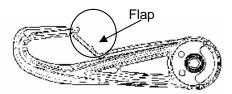
7. Slightly open the retaining washer with a long nose pliers to slide it around the clevis. Use the pliers to tighten the retaining washer. Repeat the same operation for the other retaining washer.



8. Check if the folding support is solid by folding it back and forth.



9. Make sure that the flap is in place



Note: Pivots do not need to be greased.

10. Put both folding supports on a unfolded position

11. Repeat steps 16 to 27 from Plastic Main Cab section to reassemble the both cabs.

ELECTRONICS & CONTROLS REPLACEMENT

HAND CONTROLLER & CHARGER INTERFACE CIRCUIT

Tools needed for this operation

- Screwdriver Torx 20
- 1. Repeat steps 1 to 14 from the Plastic bottom Cab section.
- 2. Unscrew the Tap screw with a screwdriver Torx 20 to remove the hand controller & charger interface circuit (number 49 on the exploded view).
- 3. Unplug the circuit.



- 4. Replace the circuit by a new one.
- 5. Plug the circuit.
- 6. Place the circuit on the receptacle then screw the circuit. Be sure not to tighten too much.
- 7. Repeat steps 16 to 27 from the Plastic Main Cab Replacement to close both cabs

MAIN CIRCUIT BOARD

- 8-mm Socket
- Small flat head screwdriver
- Screwdriver Torx 20
- 1. Unplug the hand controller plug from under the lift as shown on this photo below:



- 2. Put the lift on plane surface. Put the lift on a clean cloth that prevents the cab to scratch the paint.
- 3. Turn the lift upside down to remove the bottom part.
- 4. Unscrew the 8 tapping screws (item 12 on the exploded view) with a screwdriver Torx 20.





- 5. Slightly lift the cab to undercover the pushbutton.
- 6. With a small flat head screwdriver, release the clip surrounding the pushbutton contact assembly.



7. Remove both parts of the pushbutton to free the bottom and the main cabins.



8. Unscrew the 2 tapping screws (item 2 on the exploded view) with a screwdriver Torx 20 to remove the battery support (item 34 on the exploded view).





9. Remove the batteries and pull contact plugs.



10. Turn the lift and unfold the fordable support.



11. Unclip the main cab from the top, by squeezing each end with both hands until you hear a click sound.



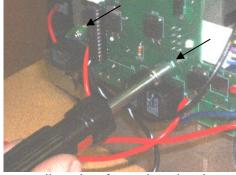
12. Fold completely the Tarzan hook. Make sure that the handle is inserted inside the cab.



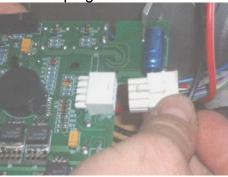
13. Slightly lift the main cab to free the touch pad membrane then unplug it from the main circuit board.



14. Unscrew the 2 locknuts (no 15 on the exploded view) with a socket 8-mm



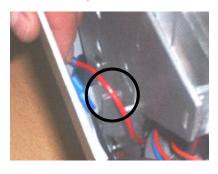
15. Unplug the charger/hand controller plug from the circuit.



16. Unplug the motor.



- 17. Remove the defective Main circuit board.
- 18. Fix the new Main circuit board on the frame with the 2 locknuts. Do not overtighten.
- 19. Plug the Charger/and control plug on the new circuit.
- 20. Plug the motor.
- 21. Plug the Touch pad membrane to the Main board circuit.
- 22. Plug the contacts on the battery. Be sure that the contacts are placed on the cab side. Insert the battery contacts first.
- 23. Be sure to place the wires correctly. (See photos below)





Wrong Good

24. Place the batteries on each side of the frame.

25. Place the battery support on the batteries and fix the 2 tapping screws with a screwdriver Torx 20.





- 26. Put the button part of the pushbutton back, by inserting it from under the cab then screw it
- 27. Put the contact part of the pushbutton and clip it by inserting the clip surrounding the pushbutton assembly. Be sure that the clip is completely inserted.
- 28. Put the lift upside down to place the bottom cab and put the 8 screws back. Do not overtighten.



29. Put the lift back to its original position. Attach the hook to the strap loop.

WIRING

- 8-mm socket
- 1. Repeat steps 1 to 16 from the Main Circuit Board section.
- 2. Unplug wiring from the limit switch.



- 3. Replace wiring harness by a new one (Part number 402.16000)
- 4. Insert the wiring plugs on the limit switch pins. Never use the centre pin.
- 5. Plug the other end on the main circuit board.
- 6. Repeat steps 22 to 30 from the Main Circuit Board Replacement section to put both cabs back together.

EMERGENCY STOP BUTTON

- Screwdriver Phillips #2
- 1. Unplug the hand controller plug from under the lift as shown on this photo below:



- 2. Put the lift on plane surface. Put the lift on a clean cloth that prevents the cab to scratch the paint.
- 3. Put the lift on plane surface. Place it on a cloth for not scratching the paint on the cab.
- 4. Remove the hook from the strap.
- 5. Turn the lift upside down to remove the bottom part.
- 6. Unscrew the 8 tapping screws (item 12 on the exploded view) with a screwdriver Torx 20.





- 7. Slightly lift the cab to undercover the pushbutton.
- 8. With a small flat head screwdriver, release the clip surrounding the pushbutton contact assembly.





9. Remove both parts of the pushbutton to free the bottom and the main cabins.



- 10.a) <u>To replace the button part</u>, simply unscrew from inside the cab. Remove the defective part and insert new button into the bottom cab. Screw the new button or
 - b) **To <u>replace the contact part</u>**, remove the 2 screws with a screwdriver Phillips #2 from the contact and replace it with a new one. Screw the 2 screws back to fix it.
- 11. Put the contact part of the pushbutton and clip it by inserting the clip surrounding the pushbutton assembly. Be sure that the clip is completely inserted.
- 12. Put the lift upside down to place the bottom cab and put the 8 screws back. Do not overtighten.



13. Put the lift back to its original position. Attach the hook to the strap loop.

TOUCH PAD MEMBRANE

- None
 - 1. Repeat steps 1 to 14 from the Main Circuit Board to free touch pad membrane
 - 2. Remove the membrane place in front of the main cab
 - 3. Clean with Vim and damp cloth the remaining glue residue.
 - 4. Insert carefully the wire of the membrane into the hole then stick the new membrane sticker on the cab. Be sure to align the sticker with the edge.
 - Connect the membrane connector to the main circuit board.
 - 6. Repeat steps 20 to 30 from the Main Circuit Board section to reassemble the lift.

MECHANICAL PARTS REPLACEMENT

LIMIT SWITCH

- 3/16 Socket
 - 1. Unplug the hand controller plug from under the lift as shown on this photo below:



- 2. Put the lift on plane surface. Put the lift on a clean cloth that prevents the cab to scratch the paint.
- 3. Turn the lift upside down to remove the bottom part.
- 4. Unscrew the 8 tapping screws (item 12 on the exploded view) with a screwdriver Torx 20.





- 5. Slightly lift the cab to undercover the pushbutton.
- 6. With a small flat head screwdriver, release the clip surrounding the pushbutton contact assembly.



7. Remove both parts of the pushbutton to free the bottom and the main cabins.



8. Unscrew the 2 tapping screws (item 2 on the exploded view) with a screwdriver Torx 20 to remove the battery support (item 34 on the exploded view).





9. Remove the batteries and pull contact plugs.



10. Turn the lift and unfold the fordable support.



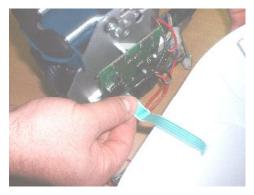
11. Unclip the main cab from the top, by squeezing each end with both hands until you hear a click sound.



12. Fold completely the Tarzan hook. Make sure that the handle is inserted inside the cab.



13. Slightly lift the main cab to free the touch pad membrane then unplug it from the main circuit board.



14. Remove the retaining washers with retaining ring pliers on each side of the handle.



- 15. Remove the handle.
- 16. Unscrew the 2 tapping screws (item No 1 on the exploded view) with a screwdriver Torx 20 on the strap inlet.



- 17. Unplug the 2 wires from the limit switch.
- 18. Unscrew the 2 locknuts (Number 11 on exploded View) with a socket 3/16 from the other side of the frame.





- 19. Replace the limit switch by a new one.
- 20. Fix the new limit switch on the frame and screw the locknuts then tighten with a socket 3/16. Do not overtighten the locknuts. Be sure to place the blade under the upper limit shaft. (As shown on this photo below)



- 21. Plug the 2 wires back on both end of the limit switch. Never use the centre pin.
- 22. Screw the 2 tapping screws on each side of the strap inlet.
- 23. Insert the handle into the holes. **Note always insert the longest side first into the hole.



- 24. Insert the rings with the retaining ring pliers on each side of the handle. Be sure that the rings are in place and retain safely the handle.
- 25. Pass the new cab over the top on the frame.
- 26. Connect the touch pad membrane to the main circuit board

- 27. Place the cab until its clicks.
- 28. Turn the lift upside down.
- 29. Plug the contacts on the battery. Be sure that the contacts are placed on the cab side. Insert the battery contacts first.
- 30. Be sure to place the wires correctly. (See photos below)





Wrong Good

- 31. Place the batteries on each side of the frame.
- 32. Place the battery support on the batteries and fix the 2 tapping screws with a screwdriver Torx 20.





- 33. Put the button part of the pushbutton back, by inserting it from under the cab then screw it.
- 34. Put the contact part of the pushbutton and clip it by inserting the clip surrounding the pushbutton assembly. Be sure that the clip is completely inserted.
- 35. Put the lift upside down to place the bottom cab and put the 8 screws back. Do not overtighten.



36. Put the lift back to its original position and insert the hook on the strap loop.

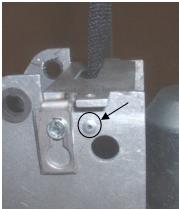
LIMIT SWITCH ROD

Tools needed for this operation

- Drill
- Long nose pliers
 - 1. Repeat steps 1 to 18 from the Limit Switch section.
 - 2. Remove the spring from the upper limit shaft.



3. Drill the rivet out the rivet out from the other side and remove the upper limit shaft.



- 4. Insert the new upper shaft. Fix the rivet to maintain the upper shaft.
- 5. Put the spring back on the upper shaft.
- 6. Repeat steps 23 to 37 from the Limit Switch section to reassemble the lift.

STRAP

Tools needed for this operation

- 4 mm- Allen Key
 - 1. Unplug the hand controller plug from under the lift as shown on this photo below:



- 2. Put the lift on plane surface. Put the lift on a clean cloth that prevents the cab to scratch the paint.
- 3. Turn the lift upside down to remove the bottom part.
- 4. Unscrew the 8 tapping screws (item 12 on the exploded view) with a screwdriver Torx 20.





- 5. Slightly lift the cab to undercover the pushbutton.
- 6. With a small flat head screwdriver, release the clip surrounding the pushbutton contact assembly.



7. Remove both parts of the pushbutton to free the bottom and the main cabins.



8. Unscrew the 2 tapping screws (item 2 on the exploded view) with a screwdriver Torx 20 to remove the battery support (item 34 on the exploded view).





9. Remove the batteries and pull contact plugs.



10. Turn the lift and unfold the fordable support.



11. Unclip the main cab from the top, by squeezing each end with both hands until you hear a click sound.



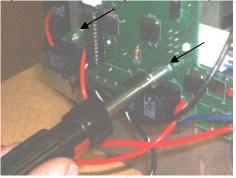
12. Fold completely the Tarzan hook. Make sure that the handle is inserted inside the cab.



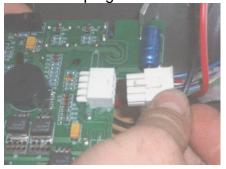
13. Slightly lift the main cab to free the touch pad membrane then unplug it from the main circuit board.



14. Unscrew the 2 locknuts (no 15 on the exploded view) with a socket 8-mm



15. Unplug the charger/hand controller plug from the circuit.



16. Unplug the motor.



17. Remove the retaining washers with retaining ring pliers on each side of the handle.



- 18. Remove the handle.
- 19. Unscrew the 2 tapping screws (item No 1 on the exploded view) with a screwdriver Torx 20 on the strap inlet.



- 20. Unplug the 2 wires from the limit switch.
- 21. With a 4-mm Allen key, remove the 2 button screws which maintain the strap.





- 22. Push on the CBLM Block plate to disengage the transmission.
- 23. Maintain the CBLM Block plate and pull the strap out completely from the drum.
- 24. Insert the new strap into the opening of the strap inlet. Be sure that the strap stitches are facing as shown below.



25. Pass the strap under the strap roll, and pull it as shown below.



26. Align holes and insert manually the two button screws.

27. Screw the lower screw enough to insert the strap loop.



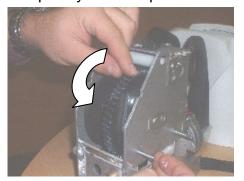
28. Keep the strap tight and screwing completely the lower screw into the loop with Allen key.



29. Press the strap against the drum and screw the second screw.



30. Maintain the CBLM block plate when turning the drum down until the strap is completely wound up around the drum, then release the CBLM block plate.

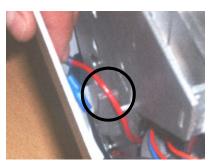




- 31. Plug the 2 wires back on both end of the limit switch. Never use the centre pin.
- 32. Screw the 2 tapping screws on each side of the strap inlet.
- 33. Insert the handle into the holes. **Note always insert the longest side first into the hole.



- 34. Insert the rings with the retaining ring pliers on each side of the handle. Be sure that the rings are in place and retain safely the handle.
- 35. Pass the new cab over the top on the frame.
- 36. Connect the touch pad membrane to the main circuit board
- 37. Place the cab until its clicks.
- 38. Turn the lift upside down.
- 39. Plug the contacts on the battery. Be sure that the contacts are placed on the cab side. Insert the battery contacts first.
- 40. Be sure to place the wires correctly. (See photos below)





Wrong Good

41. Place the batteries on each side of the frame.

42. Place the battery support on the batteries and fix the 2 tapping screws with a screwdriver Torx 20.





- 43. Put the button part of the pushbutton back, by inserting it from under the cab then screw it.
- 44. Put the contact part of the pushbutton and clip it by inserting the clip surrounding the pushbutton assembly. Be sure that the clip is completely inserted.
- 45. Put the lift upside down to place the bottom cab and put the 8 screws back. Do not overtighten.



46. Put the lift back to its original position and insert the hook on the strap loop.

DRUM

Tools needed for this operation

- Retaining ring pliers
- 1. Repeat steps 1 to 23 from the Strap section.
- 2. Remove the snap ring that maintains the drum shaft with the retaining ring pliers. Remove the shaft



3. Remove the snap ring that maintains the strap roll shaft with the retaining ring pliers. Remove the shaft.





4. Remove the drum.



5. Insert the strap into the strap inlet. Insert the new drum into the frame then insert the shaft to maintain it.

6. Put the snap ring with the retaining ring pliers



7. Reinsert the shaft then the strap roll on it. Be sure that the strap is behind the strap roll. Put the snap ring back with the retaining ring pliers.





8. Repeat steps 32 to 47 from the Strap section.

STRAP ROLL

Tools needed for this operation

- Repeat steps 1 to 22 from the Strap section
- 2. Remove the snap ring that maintains the strap roll shaft with the retaining ring pliers. Remove the shaft.





- 3. Remove the shaft from the frame.
- 4. Remove the strap roll and replace it by a new one
- 5. Reinsert the shaft then the strap roll on it. Be sure that the strap is behind the strap roll. Put the snap ring back with the retaining ring pliers.





6. Repeat steps 32 to 47 from the Strap section.

MOTOR & TRANSMISION

Tools needed for this operation

1. Unplug the hand controller plug from under the lift as shown on this photo below:



- 2. Put the lift on plane surface. Put the lift on a clean cloth that prevents the cab to scratch the paint.
- 3. Turn the lift upside down to remove the bottom part.
- 4. Unscrew the 8 tapping screws (item 12 on the exploded view) with a screwdriver Torx 20.





- 5. Slightly lift the cab to undercover the pushbutton.
- 6. With a small flat head screwdriver, release the clip surrounding the pushbutton contact assembly.





7. Remove both parts of the pushbutton to free the bottom and the main cabins.



8. Unscrew the 2 tapping screws (item 2 on the exploded view) with a screwdriver Torx 20 to remove the battery support (item 34 on the exploded view).





9. Remove the batteries and pull contact plugs.



10. Turn the lift and unfold the fordable support.



11. Unclip the main cab from the top, by squeezing each end with both hands until you hear a click sound.



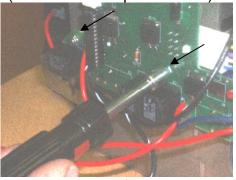
12. Fold completely the Tarzan hook. Make sure that the handle is inserted inside the cab.



13. Slightly lift the main cab to free the touch pad membrane then unplug it from the main circuit board.



14. Unscrew the 2 locknuts (no 15 on the exploded view) with a socket 8-mm



15. Unplug the charger/hand controller plug from the circuit.



16. Unplug the motor.



17. Remove the retaining washers with retaining ring pliers on each side of the handle.



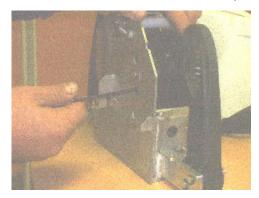
18. Remove the handle.

19. Unscrew the 2 tapping screws (item No 1 on the exploded view) with a screwdriver Torx 20 on the strap inlet.



- 20. Unplug the 2 wires from the limit switch.
- 21. With a 4-mm Allen key, remove the 2 button screws which maintain the strap.





- 22. Push on the CBLM Block plate to disengage the transmission.
- 23. Remove the snap ring that maintains the drum shaft with the retaining ring pliers. Remove the shaft



24. Remove the snap ring that maintains the strap roll shaft with the retaining ring pliers. Remove the shaft.



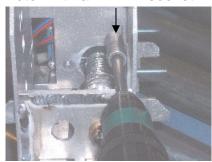


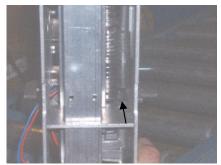
25. Remove the drum from the frame.



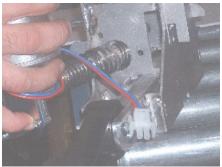
26. Remove the 3 screws that maintain the motor with a 12-mm socket.







27. Remove the motor with the motor shaft from the frame and replace it by a new one.



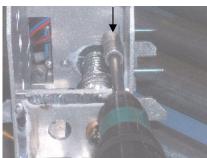
28. Insert the motor shaft into the frame. Couple the CBLM block plate into the slot at the end of the worm as shown below.

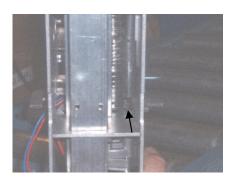


29. Reinsert the bushing into the frame

30. Put the 3 screws back that maintain the motor with a 12-mm socket.







31. Put the drum back into the frame.



- 32. Insert the strap into the strap inlet. Insert the drum into the frame then insert the shaft to maintain it.
- 33. Put the snap ring with the retaining ring pliers



34. Reinsert the shaft then the strap roll on it. Be sure that the strap is behind the strap

roll. Put the snap ring back with the retaining ring pliers.





- 35. Plug the 2 wires back on both end of the limit switch. Never use the centre pin.
- 36. Screw the 2 tapping screws on each side of the strap inlet.
- 37. Insert the handle into the holes. **Note always insert the longest side first into the hole.



- 38. Insert the rings with the retaining ring pliers on each side of the handle. Be sure that the rings are in place and retain safely the handle.
- 39. Pass the new cab over the top on the frame.
- 40. Connect the touch pad membrane to the main circuit board
- 41. Place the cab until its clicks.
- 42. Turn the lift upside down.
- 43. Plug the contacts on the battery. Be sure that the contacts are placed on the cab side. Insert the battery contacts first.
- 44. Be sure to place the wires correctly. (See photos below)





Wrong Good

45. Place the batteries on each side of the frame.

46. Place the battery support on the batteries and fix the 2 tapping screws with a screwdriver Torx 20.





- 47. Put the button part of the pushbutton back, by inserting it from under the cab then screw it.
- 48. Put the contact part of the pushbutton and clip it by inserting the clip surrounding the pushbutton assembly. Be sure that the clip is completely inserted.
- 49. Put the lift upside down to place the bottom cab and put the 8 screws back. Do not overtighten.



50. Put the lift back to its original position and insert the hook on the strap loop

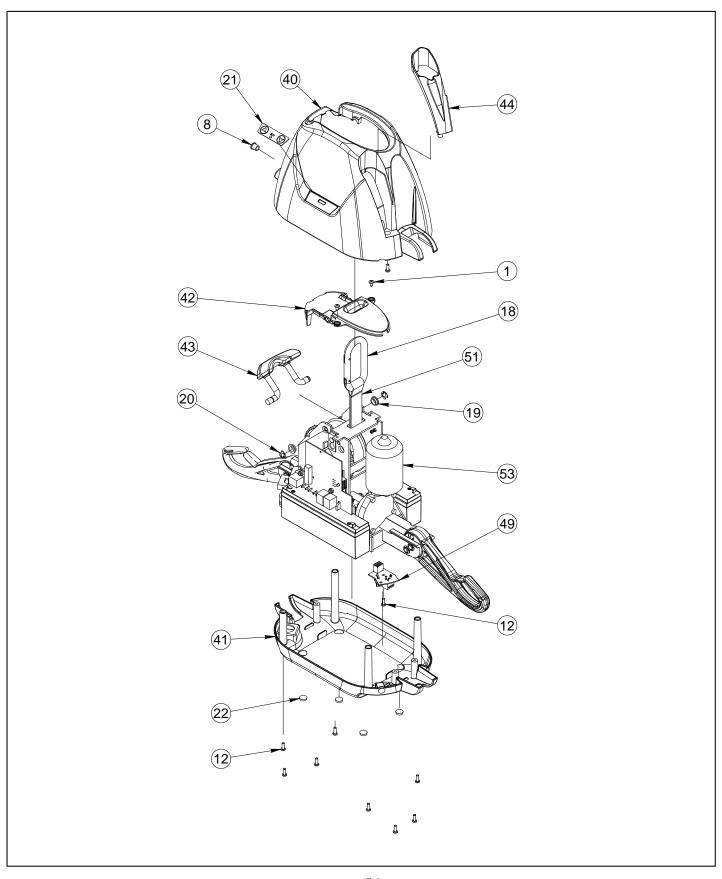
CBLM PLATE REPLACEMENT

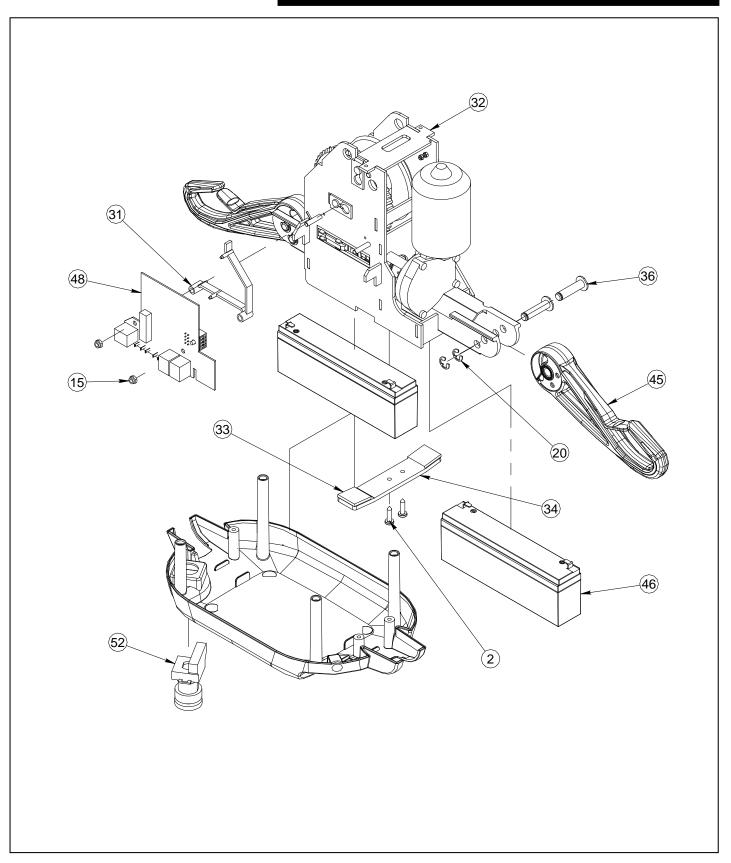
Tools needed for this operation

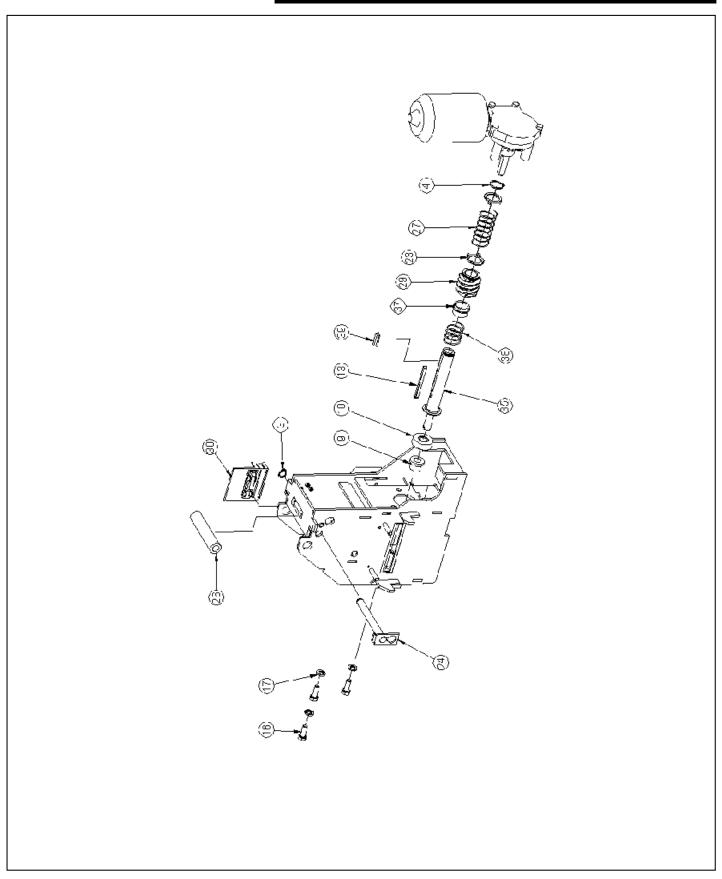
- Repeat section 1 to 28 from the Motor/Transmission section to access the CBLM block plate
- 2. Unclip the CBLM block plate with a long nose pliers by pulling it from the inside
- 3. Clip the new CBLM block plate from the other side of the frame by pushing it with a flat head screwdriver.

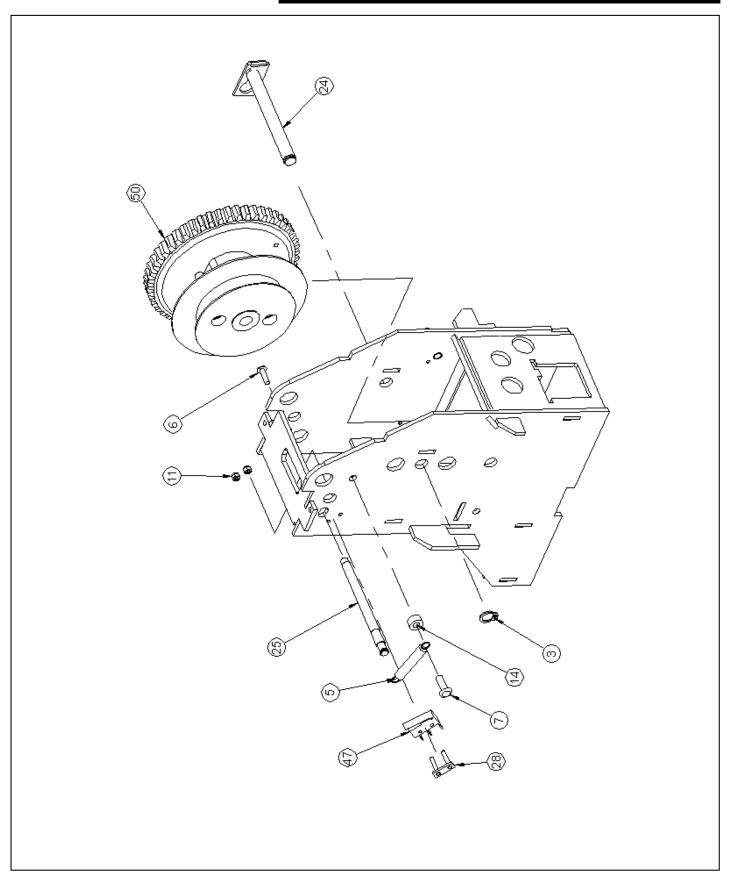


- 4. Slide the CBLM block plate a few times to remove any residue from the slot.
- 5. Repeat section 29 to 51 from the Motor/transmission section to reassemble the lift.









PARTS LIST

Item	Part_Number	Description	Qty
1	000.00635	TAP SCREW ST4.2 X 9.5 TORX	2
2	000.00640	TAP SCREW ST4.8 X 19 TORX	2
3	000.00846	SNAP RING 9MM	2
4	000.00847	SNAP RING 5/8	1
5	000.00873	SPRING 6.5 x 25mm	1
6	000.00887	RIVET 1/8 x 3/8 GRIP	1
7	000.00897	RIVET 3/16 1/4-3/8 ALUM	1
8	000.01034	PLASTIC CAP 0.375 x 0.125	1
9	000.01048	BUSHING 3/8 FLANGE	1
10	000.01083	THRUST BEARING 3/8 FERME	1
11	000.01970	LOCKNUT M2.5	2
12	000.02480	TAP SCREW PLASTITE 4.0 X 12mm	10
13	000.02495	KEY 4 X 4 X 50	1
14	000.02535	SPACER NYLON 5 X 5mm	1
15	000.02800	LOCKNUT M5	2
16	000.03095	VIS M6 X 16 HEX	3
17	000.03420	LOCKWASHER M6 ZINC	3
18	000.08000	CARABINER	1
19	000.16550	BUSHING 3/8 - 1/2 FL PLASTIQUE	2
20	000.16560	RETAINING WASHER 7MM	6
21	001.08070	V3 - TOUCH PAD MEMBRANE	1
22	001.13500	RUBBER PAD	4
23	200.08025	WASHER SPRING SSRS	2
24	200.08065	SHAFT 9 x 85mm	2
25	200.08120	UPPER LIMIT SHAFT	1
26	200.08520	STRAP ROLLER	1
27	200.08540	SPRING 7/8 x 2 x .035	1
28	200.14090	LIMIT SWITCH FIXATION	1
29	200.14130	WORM	1
30	200.14230	CBLM BLOCK PLATE	1
31	200.14240	CIRCUIT SUPPORT	1
32	200.16500	V3 - FRAME ALUMINUM	1
33	200.16505	V3 - BATTERY FOAM 1/8	2
34	200.16510	V3 - BATTERY SUPPORT	1
35	200.16520	V3 - MAIN SHAFT	1
36	200.16530	V3 - ARM CLEVIS	4
37	200.16540	V3 - WORM SPACER	1
38	200.16550	V3 - WEIGHT DET. SPRING	1
39	200.16560	V3 - MOTOR KEY	1
40	200.16800	V3 - MAIN SHELL	1
41	200.16820	V3 - BOTTOM SHELL	1
42	200.16840	V3 - STRAP INLET	1
43	200.16870	V3 - CARRIAGE HANDLE	1
44	200.16880	V3 - HANDSET POCKET	1
45	200.16920	V3 - FOLDING ARM	2

Item	Part_Number	Description	Qty
46	E6585	12V 2.3AH BATTERY WITH TERMINALS	2
47	460.00005	LIMIT SWITCH MINI TERMINAL .110'	1
48-1	492.00047-1	V3 MAIN CIRCUIT BOARD	
48-2	402.16000	V3 WIRING HARNESS	1
49	492.00051	V3 CHARGER INLET CIRCUIT BOARD	1
50	A8051-RMT	DRUM ASSEMBLY WITH BLACK STRAP	1
51	A1360-RMT	BLACK STRAP	1
52	C6P22MM	EMERGENCY STOP PUSHBUTTON	1
53	E0006	GEARMOTOR	1
OTHER F	PARTS		
		BATTERY CHARGER WITHOUT POWER	
	700.13510	CORD	1
	402.00001	CLASS 2 POWER CABLE -UL	1
	402.00002	CLASS 2 POWER CABLE -JAPAN	
	402.00003	CLASS 2 POWER CABLE -CE	
	402.00004	CLASS 2 POWER CABLE -AUSTRALIA	
	402.00005	CLASS 2 POWER CABLE -UK	
	700.13600	2 BUTTON HANDSET	1
	001.16000	V3 USER MANUAL	1
	000.00001	AMP PIN EXTRACTING TOOL	
	000.00002	AMP MINI PIN EXTRACTING TOOL	
	005.16500	V3 - EMERGENCY LOWERING TOOL	1
	C8FGMA10	5 X 20MM FUSE 10A 250V	

V3 SERVICE MODE

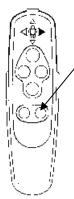
To go into the service mode (service light setting) you most have a handcontroller with 3 buttons. Only technicians have this kind of hand controller.

How to go to service mode?:

- 1. Unplug the handset from the V3.
- 2. Plug the handset with 3 buttons.
- 3. Open the V3 cab.
- 4. Unplug the red/white wire from the battery.
- 5. Push and hold the third button of the hand controller (Prog. button).
- 6. Plug the red/white wire on the battery.
- 7. Keep the third button pushed and push on down button.
- 8. Keep the third button pushed and release down button.
- 9. Keep the third button pushed and push on up button.
- 10. Keep the third button pushed and release up button. You will hear 5 beeps from the V3. Now you must release the third button of the hand controller. Now, you are on the service mode.

How to adjust the current limiter mode?

- 1. Press once on the UP button of the hand controller until your hear 1 beep (this indicates that you are in current limiter mode).
- 2. After the beep, press on the lower right button (Fig. X) on the hand controller to validate your choice. You are going to hear one beep sound that indicates your selection. You are now in the current limiter mode.



3. Press on the UP button to increase the lift capacity or on the DOWN button to decrease it. Each time you press the UP button, you add 5 lbs of lift capacity. Each time you press on the DOWN you reduce approximately 5 lbs of lift capacity. If you increase or reduce the lift capacity and that you hear 3 beeps instead of 1 .you have reached the lift maximum adjustment.

4. Pour valider la nouvelle capacité du levier, appuyer sur le 3e bouton de la manette.

How to set up Step-Up mode:

- 1. Push on up button of the hand controller until you hear 2 beeps. Each time you push on up button, you increase the number of beeps that you will hear.
- 2. After you have heard the 2 beeps, push on the third button of the hand controller to validate your choice (You will hear 1 beep to indicate that you have made a choice).
- 3. Now, you are on Step-Up activation mode. To activate Step-Up mode, push on up button of the hand controller until you hear 3 beeps. Each time you push on up button, you increase the number of beeps that you will hear. To deactivate Step-Up mode, push on up button of the hand controller until you hear 1 beep.
- 4. After you have heard the 3 beeps (activation) or the 1 beep (deactivation), push on the third button of the hand controller to validate your choice (You will hear 1 beep to indicate that you have made a choice).

Now, your set up on Step-Up function is effective.

How to set up Quick Release mode:

- 1. Push on up button of the hand controller until you hear 3 beeps. Each time you push on up button, you increase the number of beeps that you will hear.
- 2. After you have heard the 3 beeps, push on the third button of the hand controller to validate your choice (You will hear 1 beep to indicate that you have made a choice).
- 3. Now, you are on Quick Release activation mode. To activate Quick Release mode, push on up button of the hand controller until you hear 3 beeps. Each time you push on up button, you increase the number of beeps that you will hear. To deactivate Quick Release mode, push on up button of the hand controller until you hear 1 beep.
- 4. After you have heard the 3 beeps (activation) or the 1 beep (deactivation), push on the third button of the hand controller to validate your choice (You will hear 1 beep to indicate that you have made a choice).

Now, your set up on Quick Release function is effective.

How to read the number of cycles made by the V3:

- 1. Push on up button of the hand controller until you hear 4 beeps. Each time you push on up button, you increase the number of beeps that you will hear.
- 2. After you have heard the 3 beeps, push on the third button of the handset to validate your choice. You will hear many beeps that will indicate you the number of cycles that the V3 have made. You must count the number of beep that you hear. (1 beep represent 1 hour of use)

To know how many cycles the control box has made, refer to conversion table.

How to reset service light:

- 1. Push on up button of the hand controller until you hear 5 beeps. Each time you push on up button, you increase the number of beeps that you will hear.
- After you have heard the 5 beeps, push on the third button of the hand controller to validate your choice (You will hear 1 beep to indicate that you have made a choice).

- 3. Now, you are on service light reset mode. To make a reset on service light, push on up button of the hand controller until you hear 3 beeps. Each time you push on up button, you increase the number of beeps that you will hear.
- 4. After you have heard the 3 beeps, push on the third button of the hand controller to validate your choice (You will hear 1 beep to indicate that you have made a choice).
- 5. Now, the service light is reset.

How to return on normal mode:

- 1. Unplug the red/white wire from the battery.
- 2. Plug the red/white wire on the battery.
- 3. You are return on normal mode of the V3.

Conversion table

Number of beeps	Number of cycles
1	257
2	514
3	771
4	1029
5	1286
6	1543
7	1800
8	2057
9	2314
10	2571
11	2829
12	3086
13	3343
14	3600
15	3857
16	4114
17	4371
18	4629
19	4886
20	5143
21	5400
22	5657
23	5914
24	6171
25	6429
26	6686
27	6943
28	7200
29	7457
30	7714



This warranty is extended only to the original purchaser/user of BHM products.

BHM Medical Inc. warrants its products to be free from defects in material under normal use and service, within the periods stated below from the date of purchase. If within such warranty period any such product shall be proven to be defective, such product shall be repaired or replaced at BHM Medical option. This warranty does not include any labour or shipping charges incurred in replacement part installation or repair of any such product. BHM Medical sole obligation and your exclusive remedy under this warranty shall be limited to such repair and/or replacement.

Patient Lifter 1 year

Tracks and installation Life time warranty

Weighing Devices 1 year
Accessories on Lifter 1 year
Slings 1 year
Batteries - Voyager Portable 3 months
Batteries - All other lifts 1 year
Easytrack System 1 year

For warranty service, please contact the dealer from whom you purchased the BHM Medical product. [In the event that you do not receive satisfactory warranty service, please contact BHM Medical (see contact information in Table of Contents).]

Do not return products to our factory without prior authorization. BHM Medical will issue a Return Merchandise Authorization (RMA) Number. C.O.D. shipments will be refused; all shipments to BHM Medical must be prepaid. For this warranty to be valid, the purchaser must present its original proof of purchase at the moment of the claim. The defective unit, assembly or part must be returned to BHM Medical for inspection. The part or components repaired or replaced are guaranteed for the remaining period of the initial warranty.

Limitations and Exclusions:

The warranty above does not apply to serial numbered products if the serial number has been removed or defaced.

No warranty claim shall apply where the product or any other part thereof has been altered, varied, modified, or damaged; either accidentally or through improper or negligent use and storage. Warranty does not apply to products modified without BHM Medical express written consent (including but not limited to products modified with unauthorized parts or attachments), products damaged by reason of repairs made to any component without the specific consent of BHM Medical, or to products damaged by circumstances beyond BHM Medical control. BHM Medical will solely determine evaluation of warranty claim. The warranty does not apply to problems arising from normal wear or failure to adhere to the instructions in this manual. BHM Medical Inc. slings are void of warranty if not laundered as per instructions on the Sling Label.

BHM Medical Inc. shall not be liable for damages losses or inconveniences caused by a carrier.

This warranty replaces any other warranty expressed or implicit and constitutes BHM Medical Inc. only obligation towards the purchaser. BHM Medical shall not be liable for any consequential or incidental damages whatsoever.

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^{*} Valid only if BHM Medical did the original installation. Warranty voids if tracks/installation have been modified.