

Transactive Xtra Ceiling Track Hoist



Service Manual

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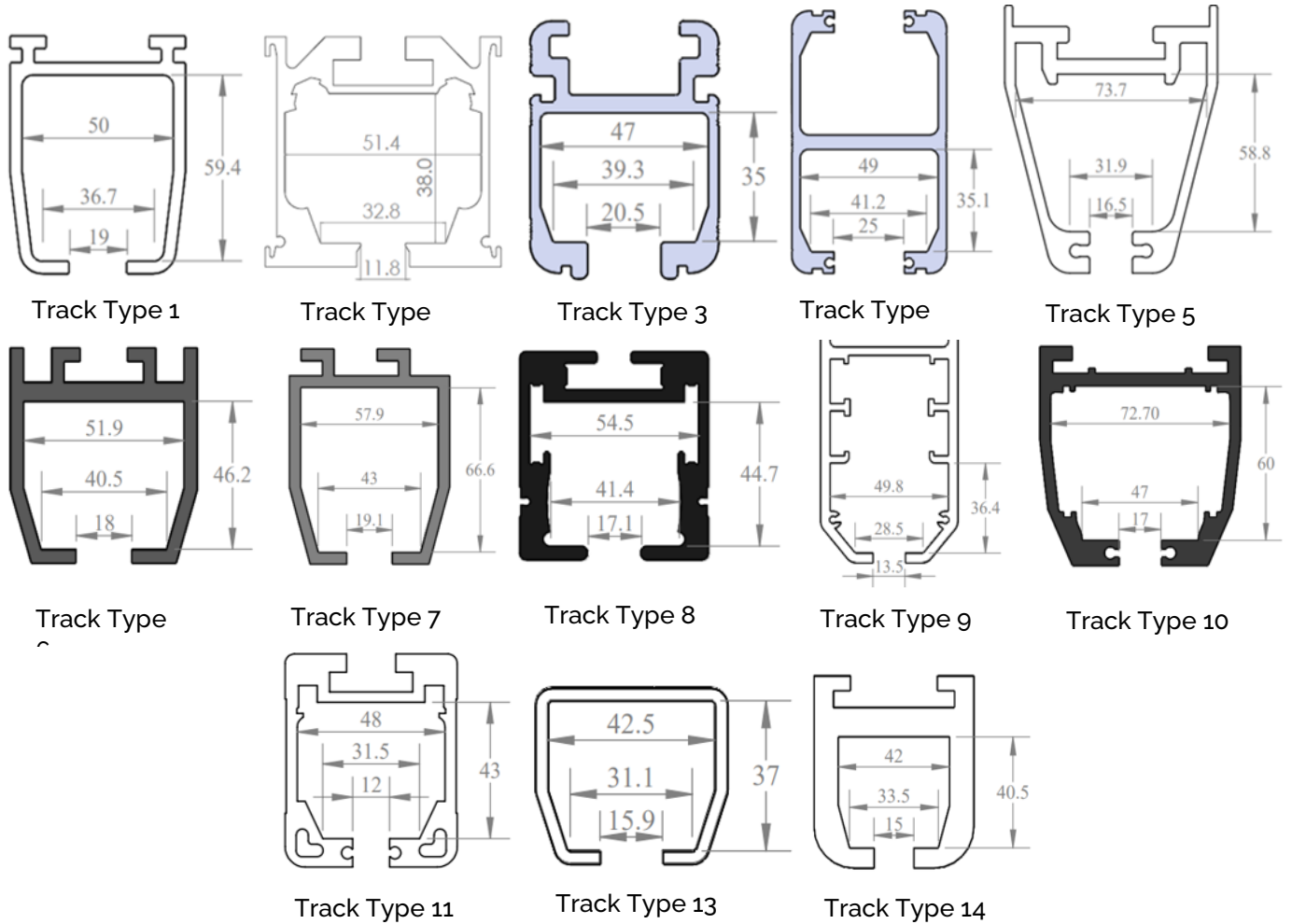
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1 Introduction

This manual will explain how to carry out interim servicing and parts replacement on the Transactive Xtra Ceiling Track Hoist safely and effectively. This document is divided into sections to help a service engineer find the correct information. Each section will show in a step-by-step fashion the correct way to disassemble and assemble the ceiling track hoist. The aim of the manual is to advise and assist you, so that you can provide a successful service for the end user.

The Transactive Xtra Hoist is available in different configurations dependent on track profile. The track profiles are shown below:

When servicing the ceiling hoist, one of the below track profiles should match.



The list below includes all types of TX that are covered by this service manual, and which track type they are suitable for.

Part Code	Description	Trolley Type
134000	Freeway Transactive Xtra - 130kg - 2 Way - Manual	Track Type 1
134001	Freeway Transactive Xtra - 130kg - 2 Way - Manual	Track Type 2
134002	Freeway Transactive Xtra - 130kg - 2 Way - Manual	Track Type 3/4/6
134004	Freeway Transactive Xtra - 130kg - 2 Way - Manual	Track Type 5
134006	Freeway Transactive Xtra - 130kg - 2 Way - Manual	Track Type 7
134007	Freeway Transactive Xtra - 130kg - 2 Way - Manual	Track Type 8
134008	Freeway Transactive Xtra - 130kg - 2 Way - Manual	Track Type 9
134009	Freeway Transactive Xtra - 130kg - 2 Way - Manual	Track Type 10
134010	Freeway Transactive Xtra - 130kg - 2 Way - Manual	Track Type 11
134012	Freeway Transactive Xtra - 130kg - 2 Way - Manual	Track Type 13/14

134014	Freeway Transactive Xtra - 130kg - 2 Way - Manual - QRT	Track Type 1
134015	Freeway Transactive Xtra - 130kg - 2 Way - Manual - QRT	Track Type 5
134017	Freeway Transactive Xtra - 130kg - 2 Way - Manual - QRT	Track Type 13
134018	Freeway Transactive Xtra - 130kg - 2 Way - Manual - QRT	Track Type 14
134020	Freeway Transactive Xtra - 130kg - 4 Way - Driven	Track Type 1
134021	Freeway Transactive Xtra - 130kg - 4 Way - Driven	Track Type 2
134022	Freeway Transactive Xtra - 130kg - 4 Way - Driven	Track Type 3/4/6
134026	Freeway Transactive Xtra - 130kg - 4 Way - Driven	Track Type 7
134027	Freeway Transactive Xtra - 130kg - 4 Way - Driven	Track Type 8
134028	Freeway Transactive Xtra - 130kg - 4 Way - Driven	Track Type 9
134029	Freeway Transactive Xtra - 130kg - 4 Way - Driven	Track Type 10
134030	Freeway Transactive Xtra - 130kg - 4 Way - Driven	Track Type 11
134032	Freeway Transactive Xtra - 130kg - 4 Way - Driven	Track Type 13/14
134038	Freeway Transactive Xtra - 130kg - Powered TT - Manual	Track Type 1
134039	Freeway Transactive Xtra - 130kg - Powered H - Manual	Track Type 1
134040	Freeway Transactive Xtra - 130kg - Powered TT - Driven	Track Type 1
134041	Freeway Transactive Xtra - 130kg - Powered H - Driven	Track Type 1
134100	Freeway Transactive Xtra - 160kg - 2 Way - Manual	Track Type 1
134101	Freeway Transactive Xtra - 160kg - 2 Way - Manual	Track Type 2
134102	Freeway Transactive Xtra - 160kg - 2 Way - Manual	Track Type 3/4/6
134104	Freeway Transactive Xtra - 160kg - 2 Way - Manual	Track Type 5
134106	Freeway Transactive Xtra - 160kg - 2 Way - Manual	Track Type 7
134107	Freeway Transactive Xtra - 160kg - 2 Way - Manual	Track Type 8
134108	Freeway Transactive Xtra - 160kg - 2 Way - Manual	Track Type 9
134109	Freeway Transactive Xtra - 160kg - 2 Way - Manual	Track Type 10
134110	Freeway Transactive Xtra - 160kg - 2 Way - Manual	Track Type 11
134112	Freeway Transactive Xtra - 160kg - 2 Way - Manual	Track Type 13/14
134114	Freeway Transactive Xtra - 160kg - 2 Way - Manual - QRT	Track Type 1
134115	Freeway Transactive Xtra - 160kg - 2 Way - Manual - QRT	Track Type 5
134117	Freeway Transactive Xtra - 160kg - 2 Way - Manual - QRT	Track Type 13
134118	Freeway Transactive Xtra - 160kg - 2 Way - Manual - QRT	Track Type 14
134120	Freeway Transactive Xtra - 160kg - 4 Way - Driven	Track Type 1
134121	Freeway Transactive Xtra - 160kg - 4 Way - Driven	Track Type 2
134122	Freeway Transactive Xtra - 160kg - 4 Way - Driven	Track Type 3/4/6
134126	Freeway Transactive Xtra - 160kg - 4 Way - Driven	Track Type 7
134127	Freeway Transactive Xtra - 160kg - 4 Way - Driven	Track Type 8
134128	Freeway Transactive Xtra - 160kg - 4 Way - Driven	Track Type 9
134129	Freeway Transactive Xtra - 160kg - 4 Way - Driven	Track Type 10
134130	Freeway Transactive Xtra - 160kg - 4 Way - Driven	Track Type 11
134132	Freeway Transactive Xtra - 160kg - 4 Way - Driven	Track Type 13/14
134138	Freeway Transactive Xtra - 160kg - Powered TT - Manual	Track Type 1
134139	Freeway Transactive Xtra - 160kg - Powered H - Manual	Track Type 1
134140	Freeway Transactive Xtra - 160kg - Powered TT - Driven	Track Type 1
134141	Freeway Transactive Xtra - 160kg - Powered H - Driven	Track Type 1
134200	Freeway Transactive Xtra - 200kg - 2 Way - Manual	Track Type 1
134201	Freeway Transactive Xtra - 200kg - 2 Way - Manual	Track Type 2
134202	Freeway Transactive Xtra - 200kg - 2 Way - Manual	Track Type 3/4/6
134204	Freeway Transactive Xtra - 200kg - 2 Way - Manual	Track Type 5

134206	Freeway Transactive Xtra - 200kg - 2 Way - Manual	Track Type 7
134207	Freeway Transactive Xtra - 200kg - 2 Way - Manual	Track Type 8
134208	Freeway Transactive Xtra - 200kg - 2 Way - Manual	Track Type 9
134209	Freeway Transactive Xtra - 200kg - 2 Way - Manual	Track Type 10
134210	Freeway Transactive Xtra - 200kg - 2 Way - Manual	Track Type 11
134212	Freeway Transactive Xtra - 200kg - 2 Way - Manual	Track Type 13/14
134214	Freeway Transactive Xtra - 200kg - 2 Way - Manual - QRT	Track Type 1
134215	Freeway Transactive Xtra - 200kg - 2 Way - Manual - QRT	Track Type 5
134217	Freeway Transactive Xtra - 200kg - 2 Way - Manual - QRT	Track Type 13
134218	Freeway Transactive Xtra - 200kg - 2 Way - Manual - QRT	Track Type 14
134220	Freeway Transactive Xtra - 200kg - 4 Way - Driven	Track Type 1
134221	Freeway Transactive Xtra - 200kg - 4 Way - Driven	Track Type 2
134222	Freeway Transactive Xtra - 200kg - 4 Way - Driven	Track Type 3/4/6
134226	Freeway Transactive Xtra - 200kg - 4 Way - Driven	Track Type 7
134227	Freeway Transactive Xtra - 200kg - 4 Way - Driven	Track Type 8
134228	Freeway Transactive Xtra - 200kg - 4 Way - Driven	Track Type 9
134229	Freeway Transactive Xtra - 200kg - 4 Way - Driven	Track Type 10
134230	Freeway Transactive Xtra - 200kg - 4 Way - Driven	Track Type 11
134232	Freeway Transactive Xtra - 200kg - 4 Way - Driven	Track Type 13/14
134238	Freeway Transactive Xtra - 200kg - Powered TT - Manual	Track Type 1
134239	Freeway Transactive Xtra - 200kg - Powered H - Manual	Track Type 1
134240	Freeway Transactive Xtra - 200kg - Powered TT - Driven	Track Type 1
134241	Freeway Transactive Xtra - 200kg - Powered H - Driven	Track Type 1
134260	Freeway Transactive Xtra - 200kg - 4 Way - Manual - Powered Pivot Carry Bar	Track Type 1
134261	Freeway Transactive Xtra - 200kg - 4 Way - Manual - QRT - Powered Pivot Carry Bar	Track Type 1
134270	Freeway Transactive Xtra - 200kg - 6 Way - Manual - Powered Pivot Carry Bar	Track Type 1
134280	Freeway Transactive Xtra - 200kg - 6 Way - Driven - Powered Pivot Carry Bar	Track Type 1
134300	Freeway Transactive Xtra - 270kg - 2 Way - Manual	Track Type 1
134301	Freeway Transactive Xtra - 270kg - 2 Way - Manual	Track Type 2
134302	Freeway Transactive Xtra - 270kg - 2 Way - Manual	Track Type 3/4/6
134304	Freeway Transactive Xtra - 270kg - 2 Way - Manual	Track Type 5
134306	Freeway Transactive Xtra - 270kg - 2 Way - Manual	Track Type 7
134307	Freeway Transactive Xtra - 270kg - 2 Way - Manual	Track Type 8
134308	Freeway Transactive Xtra - 270kg - 2 Way - Manual	Track Type 9
134309	Freeway Transactive Xtra - 270kg - 2 Way - Manual	Track Type 10
134310	Freeway Transactive Xtra - 270kg - 2 Way - Manual	Track Type 11
134312	Freeway Transactive Xtra - 270kg - 2 Way - Manual	Track Type 13/14
134314	Freeway Transactive Xtra - 270kg - 2 Way - Manual - QRT	Track Type 1
134315	Freeway Transactive Xtra - 270kg - 2 Way - Manual - QRT	Track Type 5
134317	Freeway Transactive Xtra - 270kg - 2 Way - Manual - QRT	Track Type 13
134318	Freeway Transactive Xtra - 270kg - 2 Way - Manual - QRT	Track Type 14
134320	Freeway Transactive Xtra - 270kg - 4 Way - Driven	Track Type 1
134321	Freeway Transactive Xtra - 270kg - 4 Way - Driven	Track Type 2
134322	Freeway Transactive Xtra - 270kg - 4 Way - Driven	Track Type 3/4/6
134326	Freeway Transactive Xtra - 270kg - 4 Way - Driven	Track Type 7
134327	Freeway Transactive Xtra - 270kg - 4 Way - Driven	Track Type 8

134328	Freeway Transactive Xtra - 270kg - 4 Way - Driven	Track Type 9
134329	Freeway Transactive Xtra - 270kg - 4 Way - Driven	Track Type 10
134330	Freeway Transactive Xtra - 270kg - 4 Way - Driven	Track Type 11
134332	Freeway Transactive Xtra - 270kg - 4 Way - Driven	Track Type 13/14
134338	Freeway Transactive Xtra - 270kg - Powered TT - Manual	Track Type 1
134339	Freeway Transactive Xtra - 270kg - Powered H - Manual	Track Type 1
134340	Freeway Transactive Xtra - 270kg - Powered TT - Driven	Track Type 1
134341	Freeway Transactive Xtra - 270kg - Powered H - Driven	Track Type 1

2 Safety Precautions

Read and understand this manual in its entirety before servicing the Freeway Transactive Xtra Hoist.

- An authorised personnel must complete the full and interim services of the Transactive Xtra Ceiling Track Hoist.
- The Hoist must not be in use by the user during any form of servicing.
- The Hoist must be turned OFF during any servicing that requires the external of the ceiling hoist to be removed, or any dismantling of standard parts.
- Always ensure suitable clearance to remove the ceiling hoist from the ceiling track.
- Ensure that all the servicing procedures are followed correctly as instructed in this manual.
- All listed tools and equipment stated in this manual must be used to safely service this Hoist.
- Ensure you have assessed all risks for your environment and any persons within that environment before commencing work.
- Ensure you have all PPE available to carry out the work before commencing.

3 Tools and Equipment List

When carrying out work on the Transactive Xtra Hoist, you will require the following:

Tools Required	Equipment Required	Lubricants and Sundries Required
2mm Allen Key 2.5mm Allen Key 3mm Allen Key 4mm Ball Ended Allen Key 5mm Allen Key 8mm Spanner No. 2 Pozi Drive Screwdriver 2mm Slotted Screwdriver 5.5mm Slotted Screwdriver External Circlip Pliers 3-10mm Long Nose Pliers Side Snips Digital Vernier Calliper Tape Measure Second Cut Hand File Power Drill 8.5mm Drill Piece	Step Ladder Multi-Meter Battery Tester Marker Pen Cloth Lint Free Cloth Service Documentation Product User Manual Product Spare Parts Manual Product Commissioning Manual Test Weights -400lb or 660lb Weight Trolley Lifting Straps x2 (Attach weight to Carry Bar) Cable Ties - 100x2.5mm (Part No. 000106)	Morris Grease - k42EP Multi-Purpose Grease Loctite 222 Loctite 243

4 Preventative Maintenance

Maintenance should be completed by an approved service engineer every 6 months to ensure the products required standard is maintained. The service history of the product should be documented each service. This is documented in the service log, found in the back pages of the user manual.

When recording the service in the service log, ensure that the serial number of the ceiling hoist and user manual align. Each ceiling hoist is provided with its own user manual.

The below sub-sections provide detailed instructions on what must be inspected/tested for each component on the ceiling hoist every service. Follow the guidelines below for a successful ceiling hoist service.

4.1 Covers

- Visual inspection of the cover integrity, including cracks, burns or any impact damage.
- Ensure that the covers are fitted correctly, check that the screws are tight.
- Inspect the label integrity, ensure that they are legible and aren't peeling of the covers
- Ensure the serial number is legible.

4.2 Carry Bar

- Inspect the carry bar for damage such as deformation, cracks and large dents which may affect the function and safety of the component.
- Ensure that the carry bar spring clips remain functional.
- Check that the carry bar hooks and springs remain smooth, as sharp edges may cause damage to the slings.
- Ensure that the carry bar is fitted to the QRS Hook properly. See user manual for correct attachment. (Only applicable to QRS versions of ceiling hoist)

4.3 Handset

- Inspect and test handset buttons are all functional.
- Ensure handset labels remain legible.
- Ensure the handset is connected to the hoist ceiling correctly

4.4 Wheels

- Examine the wheels for damage such as cracking and general wear
- Ensure that the wheels are running smoothly in the track (track may have debris inside)
- Ensure that the ceiling hoist traverses with handset command smoothly. (powered traverse hoists only)

4.5 Toggle Switch and Pull Cord

- Ensure that the three-phase switch is fully operational.
- The ceiling hoist should operate as normal when the switch is pushed into the top position.
- Power to the ceiling hoist should be removed when the toggle switch is in its middle position.
- The ceiling hoist should e-lower when the toggle switch is held in its bottom position
- Inspect the condition of the pull cord, ensure that the cord has not been modified (cut to length)
- Ensure that the pull cord label remains legible.

4.6 Batteries

- Ensure that the battery leads are attached properly between the battery terminals and the PCB
- General examination of batteries for burns at terminals and cuts/exposed wiring along the leads.
- Perform battery test to determine the condition of the batteries.

4.7 Lift Motor

- Visual inspection on the component for any abnormalities.
- Inspect the motor gear shaft for wear. Excess wear should be cleaned and an inspection on the gearing condition should be done after. If the gear shaft is badly worn it must be replaced.
- Ensure that the motor gear shaft is meshing correctly with the hub.
- Re-grease the motor gear shaft.
- Perform lift/lower test to ensure the lift motor is functioning correctly, this should be done with and without load. Ensure to listen for any unusual sounds and rattling coming from the motor.

4.8 Lift Tape Hub (Spool)

- Inspect the hub teeth for wear. Excess wear should be cleaned and an inspection on the gearing condition should be done after. If the hub is badly worn it must be replaced.
- Ensure that the hub teeth are meshing correctly with the lift motor gear shaft.
- Re-grease the hub.
- Test the function of the over-speed cam. Ensure that it returns to position after displacement.

4.9 Lift Tape

- Inspect the full length of the lift tape for any fraying or damage to the materials integrity.
- Ensure that the stitching remains in good condition, there should be no sign of any loose threads or fraying by the bindings, this should be checked at both ends of the lift tape.
- Ensure that the lift tape label remains legible.

4.10 Limit Switches

- Ensure that the limit switches remain functional.
- Test the bottom limit switch activates by fully lowering the lift tape out of the hub during normal use.
- Test that the bottom limit switch activates when the carry bar is removed from the ceiling hoist.
- Test the upper limit switch activates by raising the lift tape all the way up to the top limit.
- Inspect the limit switch wires and solder points for any damage and exposed wire. Make sure to check inside the chassis as the cable runs inside.

4.11 Powered Traverse (Drive Motor)

- Visual inspection on the component for any abnormalities.
- Inspect the motor gearing is functional, between the motor, the motor shaft, the large idle gear, small idle gear and wheel gear pattern. Any worn or damaged part must be replaced.
- Perform left/right traverse test to ensure the drive motor is functioning correctly, this should be done with and without load. Ensure to listen for any unusual sounds and rattling coming from the motor.
- Ensure that the powered traverse function allows the ceiling hoist to dock into the charging dock correctly. (without assistance)
- Ensure that the ceiling hoist traverses in the correct direction. (Directional colours match between the handset and labels on underside of the ceiling hoist).

4.12 PCB (Printed Circuit Board)

- Inspect the PCB for any damage such as cracks and electrical burns.
- Ensure that all the relevant components are plugged into the board correctly.
- Inspect the wiring for each component that plugs into the PCB. Ensure there are no exposed wiring.

4.13 Air Tubes and Grommet

- Ensure that the air grommet is undamaged and remains in the correct orientation where located on the underside of the chassis.
- Inspect the full length of the air tubes and that each colour coded tube is connected to the correct air switch and brass insert on the grommet.

4.14 LED Indicator

- Ensure that the LED casing is not cracked.
- Test LED is functioning correctly, ensure that the LED is indicating the correct light for each scenario (where applicable)

4.15 LCD Indicator

- Ensure that the LCD screen is not cracked
- Ensure that the LCD green backlight is functioning, to allow the messages to be visible.
- Test the LCD is functioning correctly, ensure that the correct messages are displayed for each scenario.

4.16 Charging

- Inspect the condition of the charging unit, ensure that the casing remains intact and there is no cuts or exposed wires.
- Inspect the condition of the charging dock, ensure it is fixed in place at the end of the track system and there is no exposed wiring or damage to the leaf springs.
- Inspect the condition of the charging beak, ensure the beak is intact from any damage and exposed wiring.
- Ensure that the ceiling hoist docks correctly between the beak and dock and that it begins charging. (powered traverse ceiling hoists should dock through handset command without assistance). Docking should be tested with and without load.

4.17 Auxiliary Beak (Powered Turntables)

- Inspect the condition of the auxiliary beak, ensure the beak is intact from any damage or exposed wiring.
- Ensure that the beak docks correctly with the turntable and handset commands function as intended.

4.18 Quick Release Trolley (QRT)

- Ensure that the QRT system functions, that the ceiling hoist is positioned on the trolley hooks and is secure.
- Ensure that the QRT pin is intact and can be used to lock the trolley in place in the track.
- Check that the QRT can traverse along the track smoothly. (There may be debris in the track that needs clearing).

4.19 Return to Charge

- Test the return to charge function is working correctly and that the ceiling hoist raises the carry bar to the set height and traverses the ceiling hoist into the charging dock and begins charging.

4.20 Fixings

- Inspect all the main nuts, bolts, screws and other fixings are secure and tight, if any fixings are loose, make sure to tighten them accordingly.

4.21 Ceiling Track

- Ensure that the track profile matches the profile of the ceiling hoist trolley.
- Inspect the integrity of the track system. Ensure that the track is not damaged and/or deformed.
- Inspect the condition of the track brackets, ensure that the brackets and track are secured in place with the track wedges. The track wedges should be locked in place with the M3 screws on either side.
- Ensure that the alignment between two track sections align, and that there is no gap between two aligning tracks. Test the traversing of the ceiling hoist between the track sections is smooth and allows transfer.
- Ensure that the end stops, safety bolt and end caps are all secured correctly to the track system.
- Clear out the internal of the track profile from any debris.

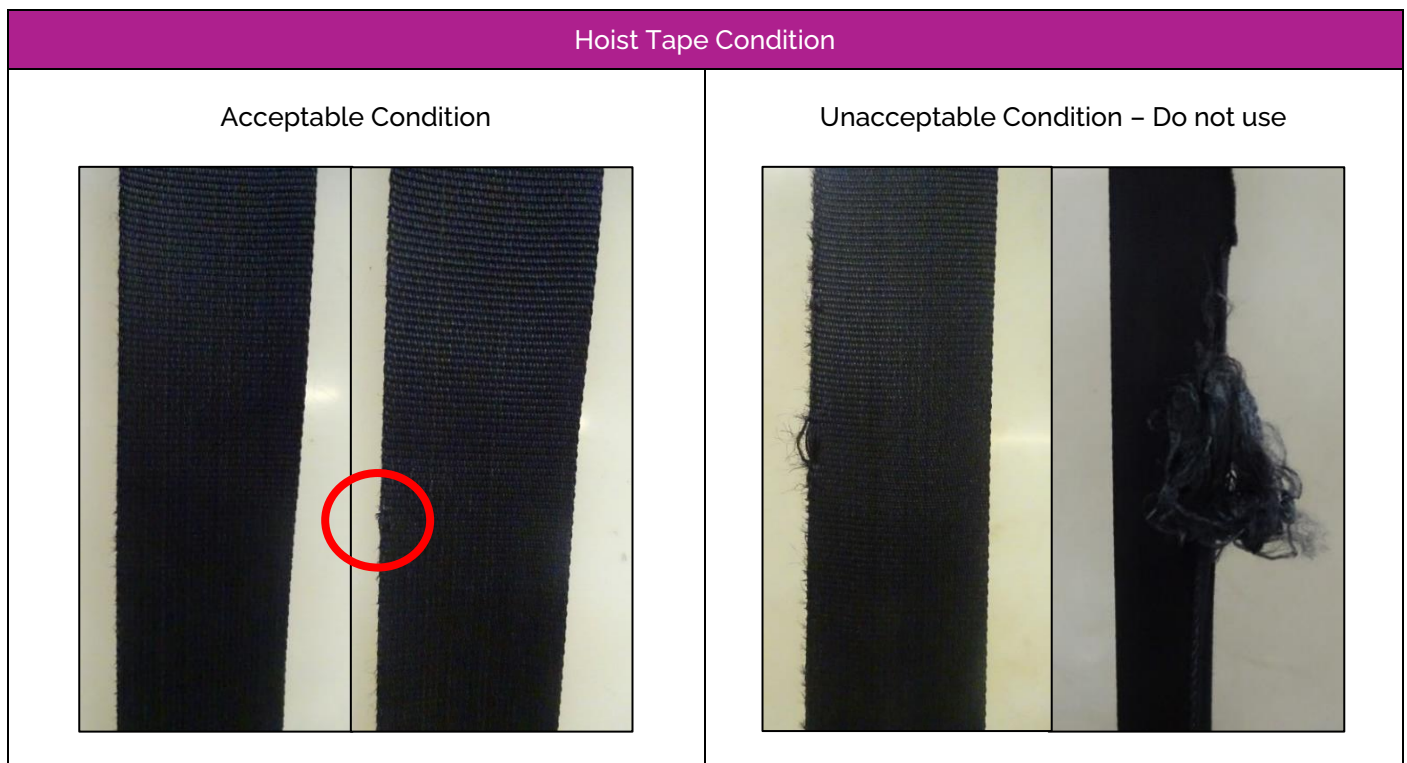
4.22 Slings

- Inspect the sling for cuts, frays, tears and burns along its full profile of the sling and straps.
- Inspect the slings stitching for any tears, stretching and loose threads along the full profile of the sling and straps.
- Ensure that the label remains secure and legible.

If there is a problem discovered with the sling, it should be noted on the service sheet and be brought to the attention of the person(s) who requested the service to be carried out. In addition, notify the customer on-site or the manager if it is a care facility. The serial number, type of sling, and condition should be noted on the service sheet. Mark the date of inspection on the sling service label.

5 Component Condition Guide

The section will assist in determining if the condition of any key components is suitable for use or if they require replacement. See images below as reference.



6 Testing

The section will assist in ensuring that the ceiling hoist has undergone the required function testing and load testing following its service.

6.1 Functional Testing

The guidelines below will ensure that the main functional components of the ceiling hoist are functioning as intended following a service. **Functional testing should be done after each service.**

1. Position the ceiling hoist in a suitable position in the middle of the room (in track), clear of any obstacles.
2. Raise the ceiling hoist to its upper limit. (Confirming the handset button and upper limit switch is functional). Once the upper limit switch has been reached, the ceiling hoist should stop raising and the LCD will display "**Up Lim_Sw**". Ensure to listen to the motor for any unusual noises during hoist.
3. Lower the ceiling hoist till the carry bar reaches the floor. (Confirming that the handset button and lower limit switch is functional). Once the carry bar reaches the floor, the ceiling hoist should stop lowering and the LCD will display "**Down Lim_Sw!**"
4. Repeat step 2 and 3 with the ceiling hoist loaded.
5. Traverse the ceiling hoist left and right using handset commands to ensure powered traverse is functional. (Only applicable for powered traverse ceiling hoists).
6. Traverse the ceiling hoist (manual or powered) into the charging dock, ensure it docks correctly and begins charging.
7. Repeat step 6 with the ceiling hoist loaded.
8. Test the toggle switch is functioning correctly. Pull the pull cord down one step to ensure power is cut from the ceiling hoist. Then pull and hold the pull cord to its lowest position to test the e-lower function. The ceiling hoist should begin to lower while sounding an audible alarm.
9. Traverse the ceiling hoist through the full track system to ensure movement is smooth throughout the tracks and the transition between track sections.
10. Ensure that transition gates (if applicable) are functioning as intended and allow the ceiling hoist to pass through into a h-system.

6.2 Powered Auxiliary Testing (Turntables)

The guidelines below will guide on how to ensure that the powered auxiliary system is functioning correctly.

1. Traverse the ceiling hoist into the centre of the turntable where the auxiliary beak contacts the turntable dock. Ensure that the contact is smooth and doesn't require excessive force to dock.
2. Operate the auxiliary buttons on the handset to ensure that the turntable rotates as intended.

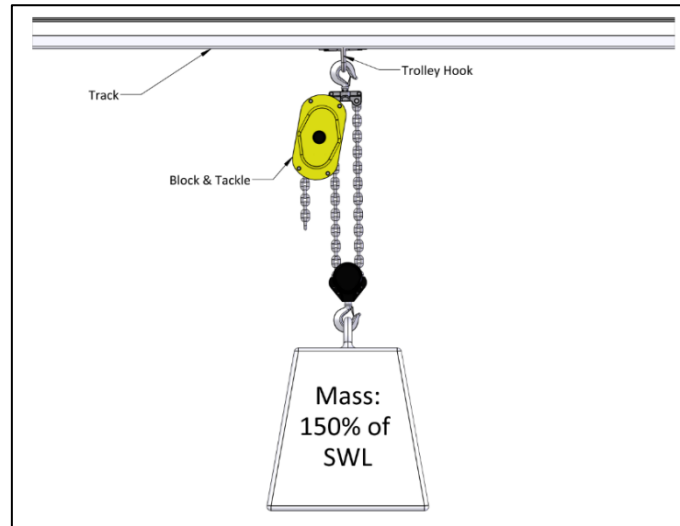
6.3 Powered Auxiliary Testing (H-System)

1. Operate the auxiliary buttons on the handset to ensure that the h-system traverses as intended.

6.4 Track Testing

The guidelines below will ensure that the track system is safe and suitable for use with the ceiling hoist. **Track testing should be done annually.**

1. The full track system must be tested with 1.5x the SWL to ensure that the track fixings remain secure within the ceiling/wall. The test must be done with a pulley block (block and tackle) and not the ceiling hoist. The ceiling hoist is not suitable to hoist more than its SWL.



7 Additional Documentation

See the list of available documents you may or may not need to refer to for a successful service. All documents will be available to view on the Mackworth website: <http://mackworthusa.com>

- Spare Part Manual – 992075
- User Manual -999075
- Commissioning Manual – 997075
- Troubleshooting Guide – 990075
- Battery Testing Guide – 990SD-13
- Program Mode Guide Sheet – 990SD-01
- Ceiling Track Installation Manual – 996080

8 Removal and Replacement

This section will cover the details of how to remove, refit and replace all serviceable parts of the ceiling hoist. Ensure to read and understand each step thoroughly before removing any component from the ceiling hoist.

Ideally, the ceiling hoist should be removed from the track and placed on a work bench before any dismantling. But servicing can be done with the ceiling hoist remaining within the track system. (Depending on the service required).

Unless stated otherwise, all images refer to a Transactive Xtra Hoist with a standard wheel assembly (Track Type 1). Where necessary, additional images for alternative track and ceiling hoist types have been included.

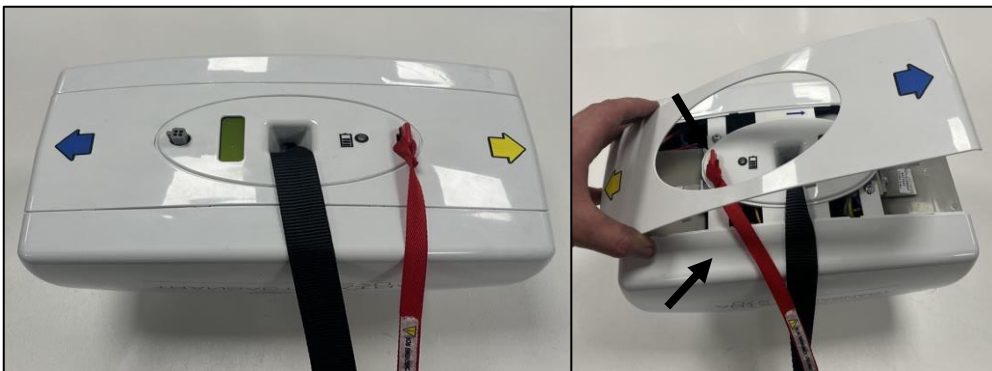
Before carrying out any dismantling of the ceiling hoist, the power should be turned off using the red pull cord.

8.1 External Covers

This section will cover the details of how to remove, refit and replace the ceiling hoist side covers.

Removal

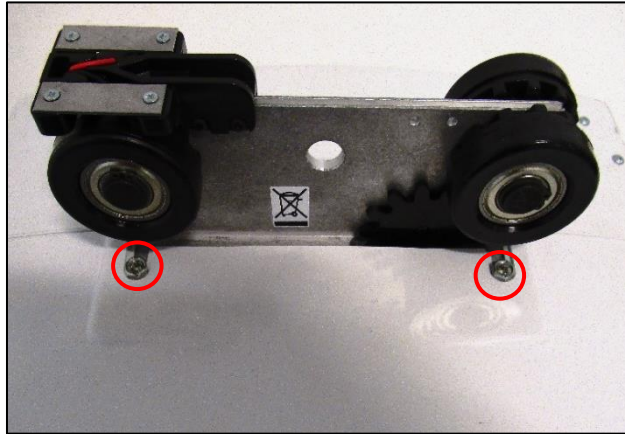
1. Place the hoist upside down to access the bottom external cover. Remove the cover by pulling it off from either side.



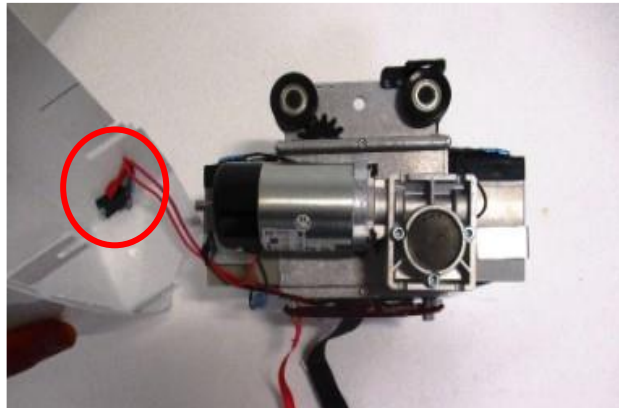
2. Loosen the four screws circled below to release the external covers. The screws do not need to be removed from the chassis.



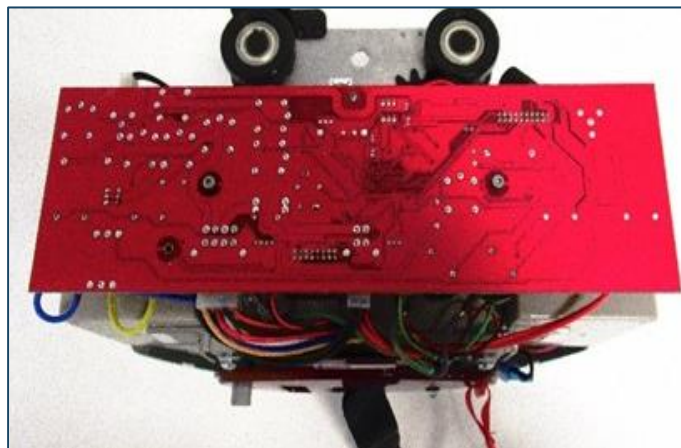
3. Rotate the Hoist and loosen the screws on the top side of the external covers. There are two screws either side of the Top Trolley.



4. Firstly, remove the Motor side cover. Disconnect the motor leads from the switch on the inside of the cover.

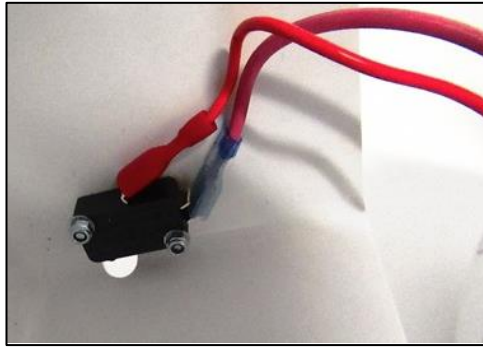


5. Remove the other cover to complete the external covers removal.

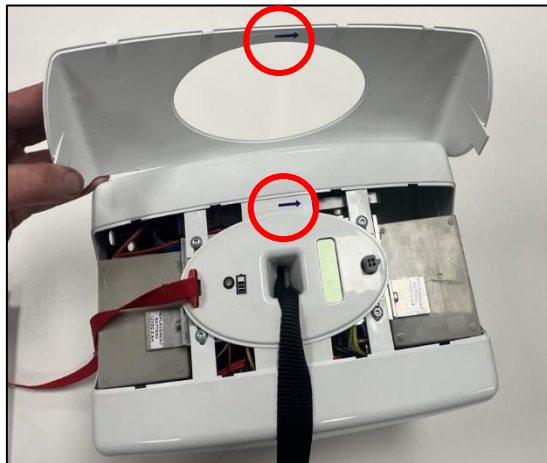


Refitting / Replacement

6. Refitting is a reversal of the removal process noting the following points:
- Ensure to attach the Motor wires to the correct terminal on the cover switch. See image below.



- Ensure the slots on the top and bottom side of the cover align with pozi screws on the Chassis.
- Refit the Bottom external cover to the Hoist in the correct orientation, the blue and yellow arrows on the external cover and bottom cover should match direction.

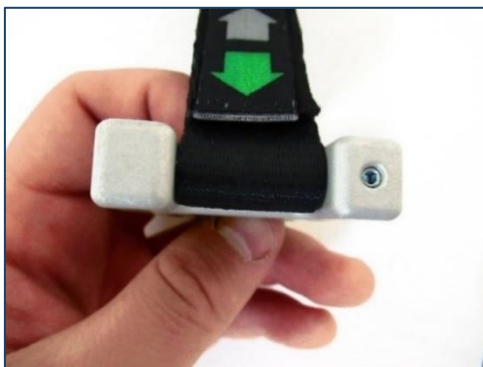


8.2 QRS Hook

This section will cover the details of how to remove, refit and replace the QRS Hook.

Removal

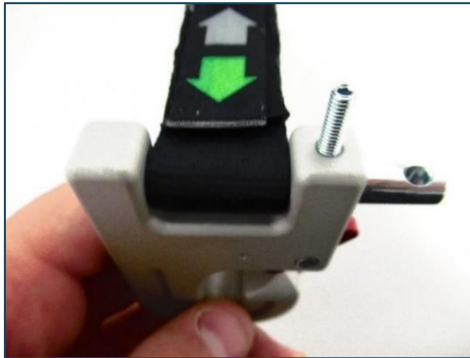
1. Using a 2mm Allen key unscrew the grub screw (arrow) until it releases its hold on the Pin.



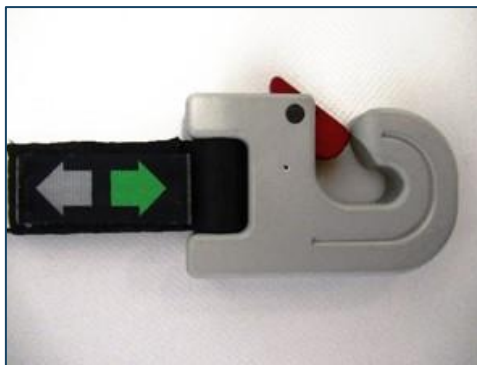
2. Slide the pin out of the hook to release the Lift Tape.

Refitting / Replacement

3. Refitting is a reversal of the removal process noting the following point:
 - Make sure the hole in the QRS pin lines up with the grub screw.



- Ensure the hook is attached to the lift tape in the below orientation



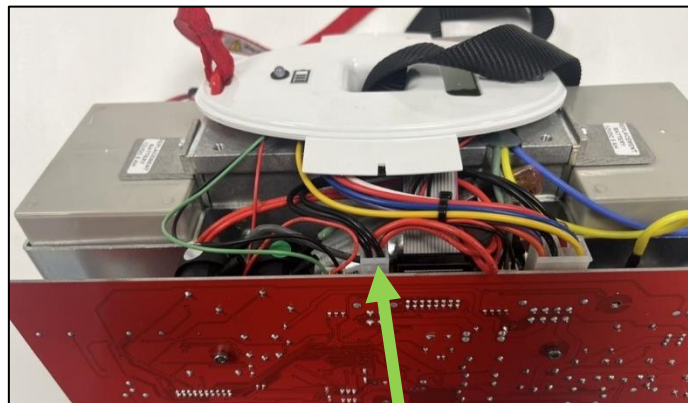
8.3 PCB

This section will cover the details of how to remove, refit and replace the PCB.

8.3.1 Powered Traverse PCB

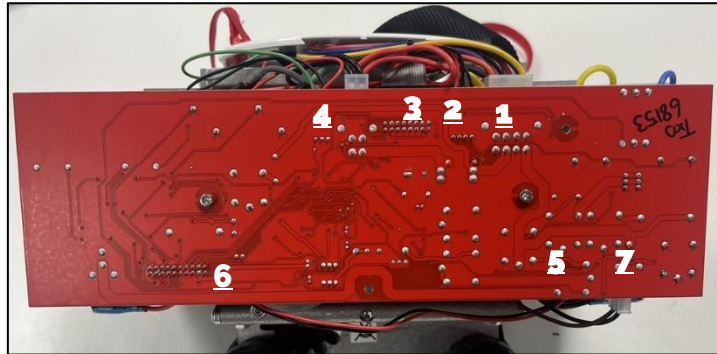
Removal

1. Remove the external covers from the ceiling hoist. (Refer to section 8.1)
2. Remove the power supply cable, by pressing down on the latch and then pull perpendicularly away from the PCB. (Arrowed).

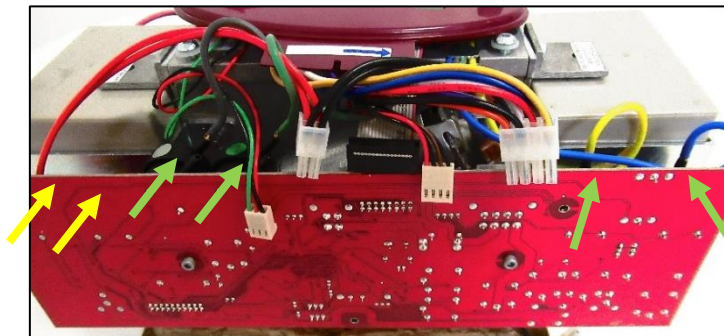


3. Remove the remaining connectors in the numerical order labelled below.

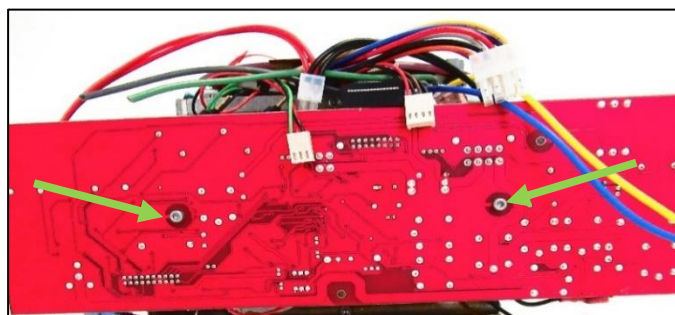
1. Toggle switch
2. Limit switch
3. LCD/Display
4. LED
5. Traverse Motor
6. Charging Beak
7. Powered Auxiliary (If applicable)



4. Remove the coloured air tubes (Grey, Green, Yellow and Blue) by gently pulling on the air tubes individually until they release from their individual air switches on the PCB. Powered Auxiliary board will have an additional two tubes (white and black) – these are labelled with a yellow arrow.



5. Using a 2.5mm Allen key remove the two M3 screws. (arrowed)



6. Remove the PCB from the Hoist.

Refitting / Replacement

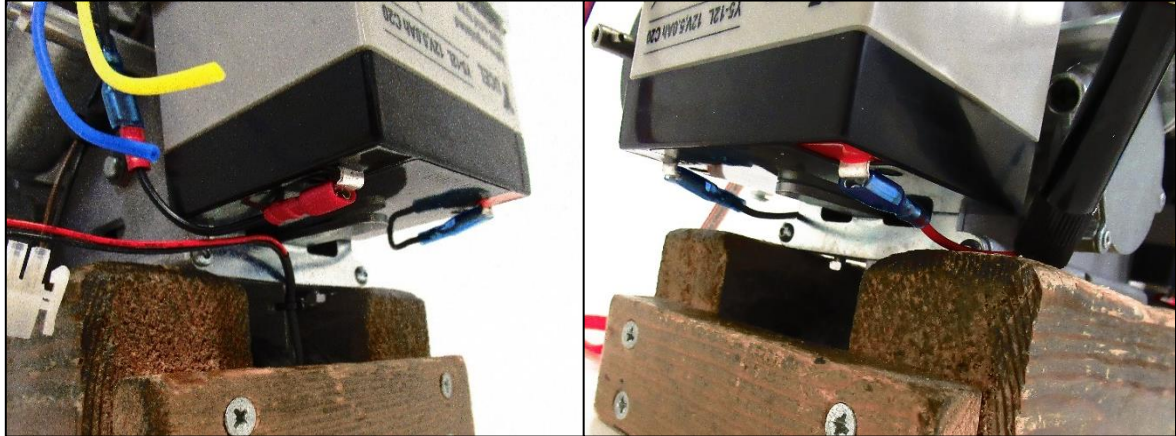
7. Refitting is a reversal of the removal process noting the following points:
- Make sure the power cable is connected last.
 - Air tubes to be fully pushed onto air switches.
 - Check for any holes within the airlines.

8.4 Batteries

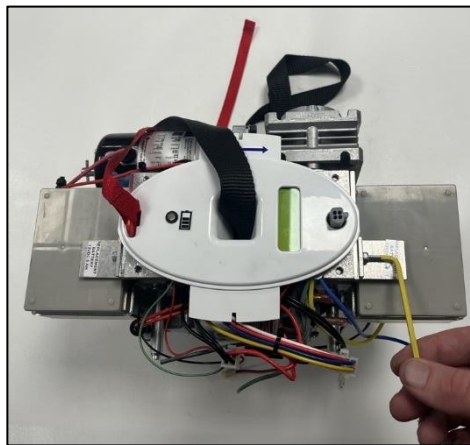
This section will cover the details of how to remove, refit and replace the batteries.

Removal

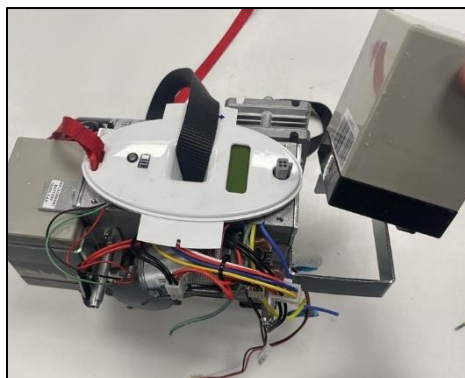
1. Remove external covers of the hoist. (refer to section 8.1).
2. Disconnect the power lead from PCB. (See section 8.3 PCB for reference).
3. Detach the power cables from the battery terminals.



4. Using a 3mm Allen key, release the two retaining brackets from the chassis to access the batteries.



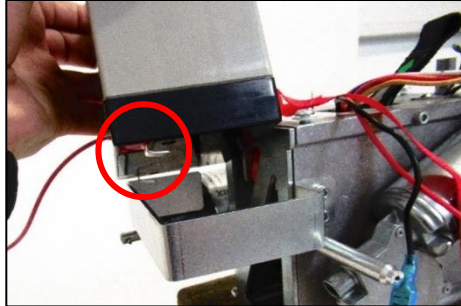
5. Remove both batteries from their brackets.



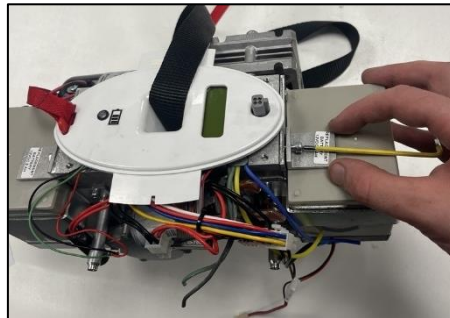
Refitting / Replacement

6. Refitting is a reversal of the removal process noting the following points:

- Make sure the battery terminal is on the outer edge and the terminals are pointing inwards.
- When connecting the main power lead, ensure the positive lead (Red) is fitted to the red terminal, shown in the image above, and the negative lead (Black) is fitted to the black terminal.
- Ensure retaining bracket is fitted in the correct orientation and correct position on the Chassis.



- When connecting the main power lead, ensure the positive lead (Red) is fitted to the red terminal, shown in the image above, and the negative lead (Black) is fitted to the black terminal.
- Ensure retaining bracket is fitted in the correct orientation and correct position on the Chassis.

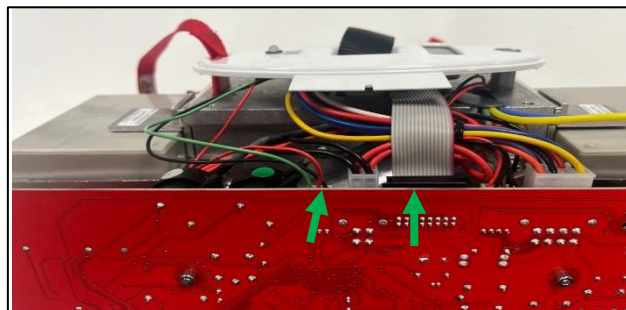


8.5 Bottom Cover

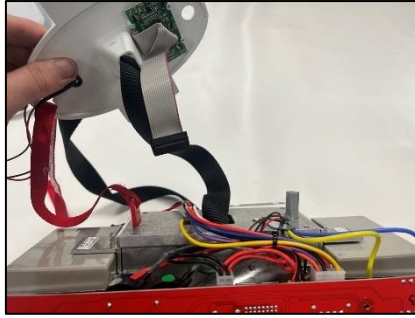
This section will cover the details of how to remove, refit and replace the bottom cover.

Removal

1. Remove external covers of the hoist (refer to section 8.1)
2. Disconnect the Power Lead from the PCB (Refer to section 8.3)
3. Disconnect the LED and LCD Display leads from the PCB.



4. Pull the bottom cover away from the hoist as shown.



Refitting / Replacement

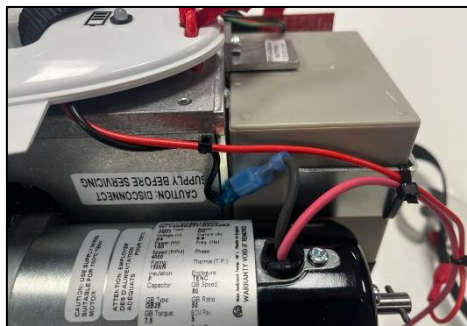
5. Refitting is a reversal of the removal process noting the following point:
 - Ensure that the Lift Tape and E-Lower Cord are pulled through their designated slots on the Bottom Cover.

8.6 Lift Motor

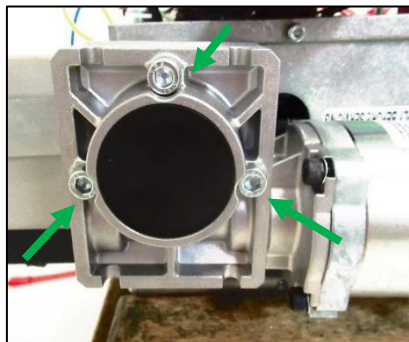
This section will cover the details of how to remove, refit and replace the lift motor.

Removal

1. Remove external covers of the hoist. (refer to section 8.1).
2. Disconnect the power lead from PCB. (further information refer to section 8.3).
3. Disconnect the Black Motor Lead from the toggle switch connector.

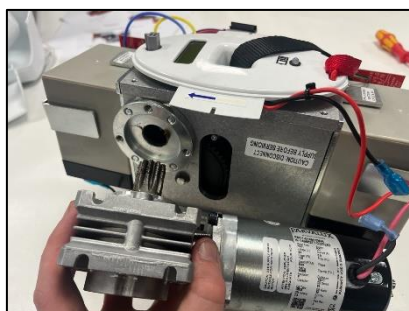


4. Use 5mm Allen key to remove the three bolts. (arrowed).



5. Remove the motor, by pulling away from the chassis.

CAUTION! Motor might be hot.



Refitting / Replacement

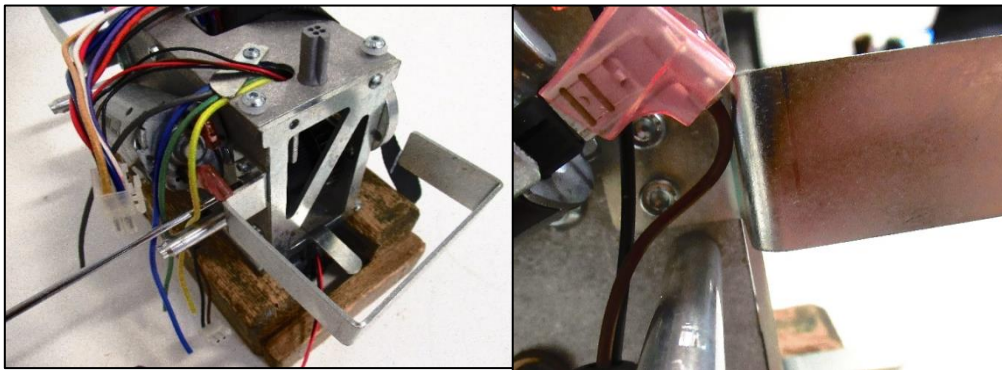
6. Refitting is a reversal of the removal process.

8.7 Battery Bracket

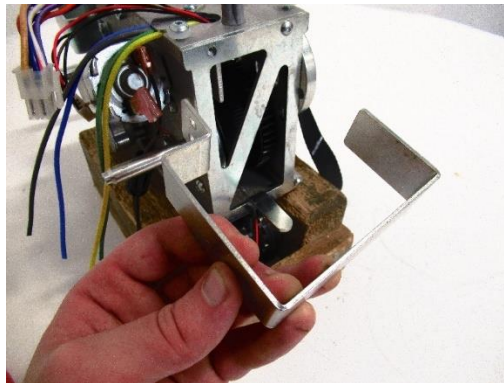
This section will cover the details of how to remove, refit and replace the battery bracket.

Removal

1. Remove external covers off the hoist. (refer to section 8.1).
2. Remove the PCB from the hoist. (refer to section 8.3).
3. Remove the battery from the battery brackets. (refer to section (8.4).
4. Using a 3mm Allen key, remove the two screws securing the bracket to the chassis.



5. Remove the bracket from the hoist, repeat step four to remove the second battery bracket.



Refitting / Replacement

6. Refitting is a reversal of the removal process noting the following point:

- Ensure the bracket is fitted in the correct orientation. Use the image above for reference.

8.8 End Plate

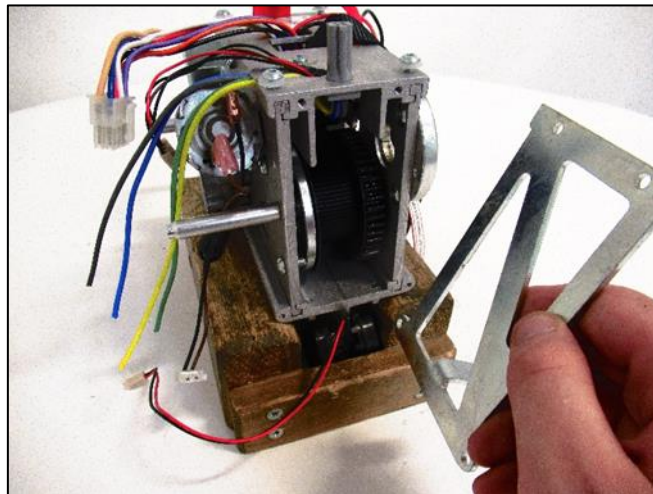
This section will cover the details of how to remove, refit and replace the end plate.

Removal

1. Remove external covers off the hoist. (Refer to section 8.1).
2. Remove the PCB from the hoist. (Refer to section 8.3).
3. Remove the Battery from the battery brackets. (Refer to section 8.4).
4. Remove the Battery Brackets. (Refer to section 8.7).
5. Using a 2.5mm Allen Key, remove the three screws securing the End Plate to the Chassis.



6. Remove the End Plate from the Hoist, repeat step five to remove the second battery bracket.



Refitting / Replacement

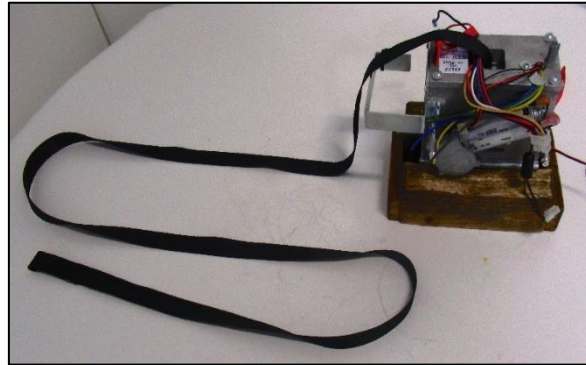
7. Refitting is a reversal of the removal process noting the following point:
 - Ensure the End Plate is fitted in the correct orientation. Use the images above for reference.

8.9 Lift Tape

This section will cover the details of how to remove, refit and replace the lift tape.

Removal

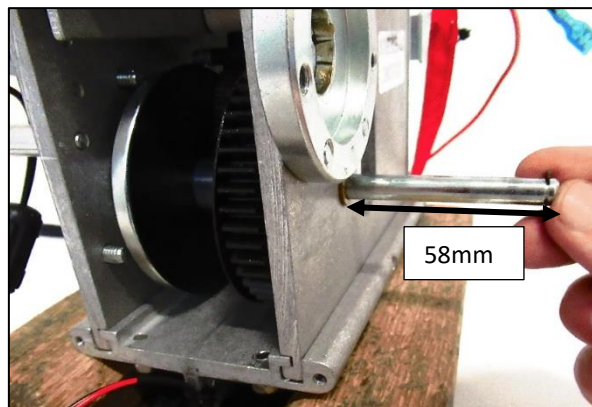
1. Remove external covers from the hoist. (Refer to section 9.1)
2. Remove the PCB from the hoist. (Refer to section 8.3)
3. Remove the battery from the battery brackets. (Refer to section 8.4)
4. Remove the bottom cover from the hoist. (Refer to section 8.5)
5. Remove the lift motor from the hoist. (Refer to section 8.6)
6. Remove the battery bracket from the hoist. (Refer to section 8.7)
7. Remove the end plate from the hoist. (Refer to section 8.8)
8. Pull the lift tape until it has fully unwound from the hub.



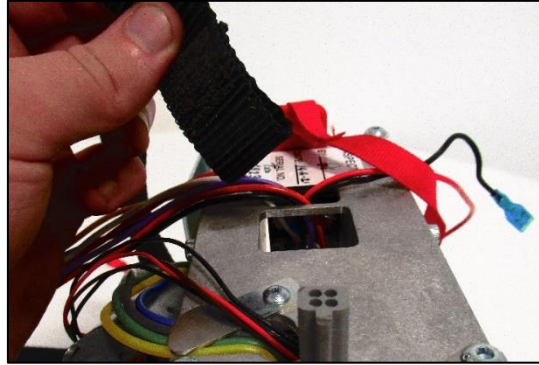
9. Using a small, slotted screwdriver remove the 8mm e-clip from the strap pin.



10. Slide the strap pin from the chassis out until 58mm of pin is showing. This will release the lift tape while securing the hub.



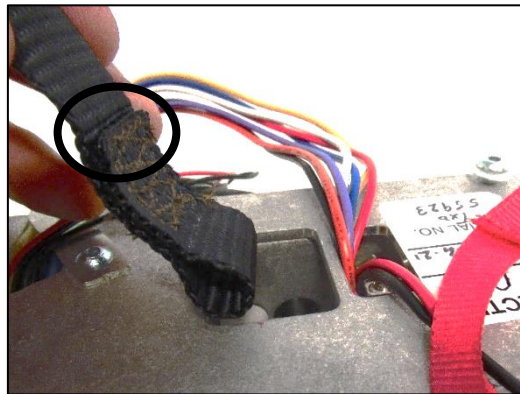
11. Gently pull the lift tape through the limit switches to release from the hoist.



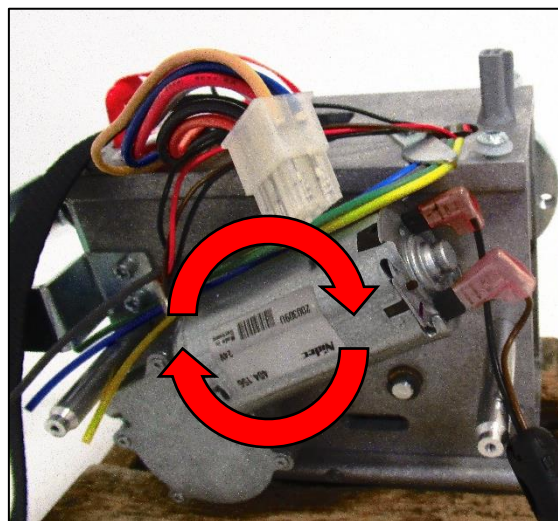
Refitting / Replacement

12. Refitting is a reversal of the removal process noting the following point:

- When reinserting the lift tape through the limit switches, make sure that the fold over lip is facing the red e-lower cord, resulting in the arrow label at the other end also facing the e-lower cord.



- Before inserting the lift tape into the hub, use your thumb to open the loop, this is to help the strap pin slide through once located in the hub.
- When winding the lift tape back around the hub make sure to rotate the hub in a clockwise direction while looking at the hoist in the direction shown in the image below.



- Use long nose pliers to reattach the 8mm e-clip to the end of the strap pin.

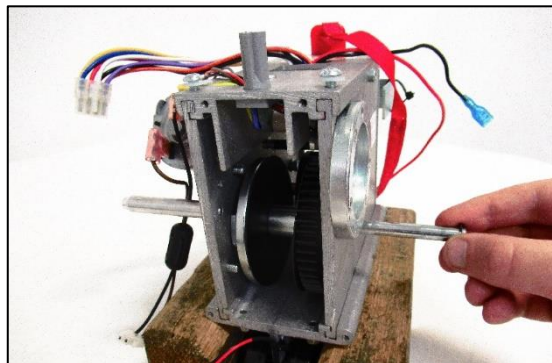


8.10 Hub

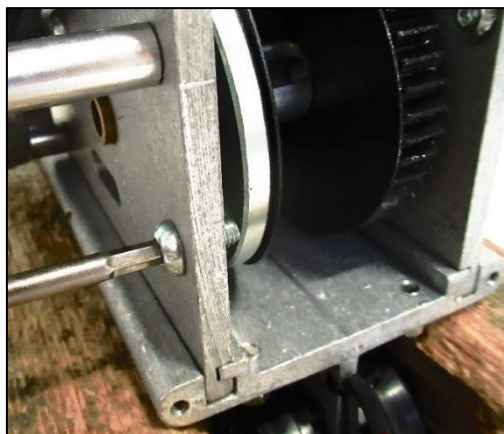
This section will cover the details of how to remove, refit and replace the hub.

Removal

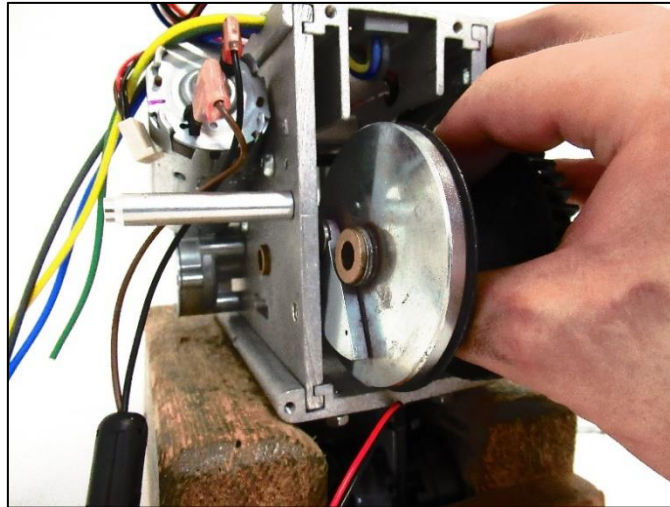
1. Remove external covers from the hoist. (Refer to section 8.1)
2. Remove the PCB from the hoist. (Refer to section 8.3)
3. Remove the battery from the battery brackets. (Refer to section 8.4)
4. Remove the bottom cover from the hoist. (Refer to section 8.5)
5. Remove the lift motor from the hoist. (Refer to section 8.6)
6. Remove the battery bracket from the hoist. (Refer to section 8.7)
7. Remove the end plate from the hoist. (Refer to section 8.8)
8. Remove the lift tape from the hoist. (Refer to section 8.9)
9. Remove the strap pin from the chassis.



10. Using a 4mm Allen key, remove the screw shown from the chassis.



11. Remove the hub from the hoist.



Refitting / Replacement

12. Refitting is a reversal of the removal process noting the following point:

- If replacing hub, grease with Morris Grease – K42EP multi-purpose.
- When inserting the hub back into the chassis make sure the orientation is correct. The Over-Speed Cam must face the PCB side of chassis. See image above.
- Ensure that the two plastic spacers on the hub are either side of the lift tape when inserted.

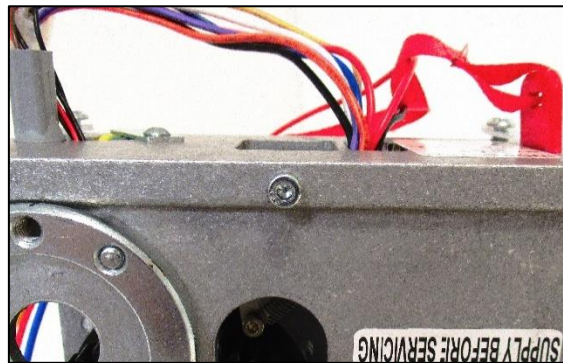


8.11 Bottom Plate

This section will cover the details of how to remove, refit and replace the bottom plate.

Removal

- 1.** Remove external covers from the hoist. (Refer to section 8.1)
- 2.** Remove the PCB from the hoist. (Refer to section 8.3)
- 3.** Remove the battery from the battery brackets. (Refer to section 8.4)
- 4.** Remove the bottom cover from the hoist. (Refer to section 8.5)
- 5.** Remove the lift motor from the hoist. (Refer to section 8.6)
- 6.** Remove the battery bracket from the hoist. (Refer to section 8.7)
- 7.** Remove the end plate from the hoist. (Refer to section 8.8)
- 8.** Remove the lift tape from the hoist. (Refer to section 8.9)
- 9.** Using a 3mm Allen Key, remove the screw retaining the Bottom Plate to the Side Plates, there is one screw either side of the Hoist.

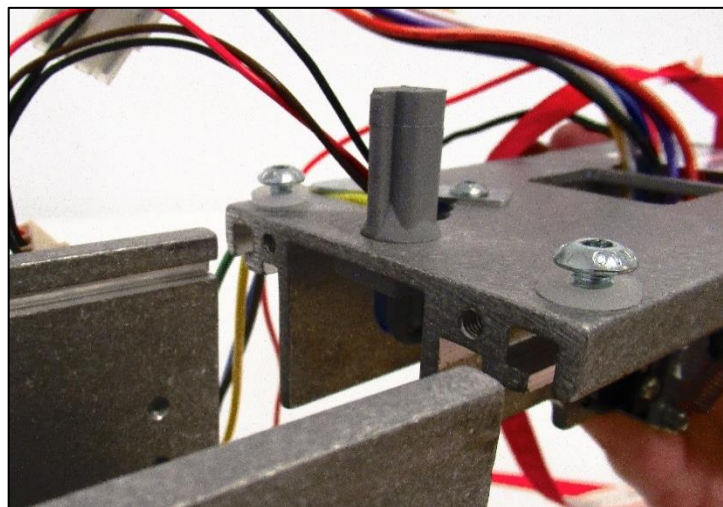


- 10.** The Bottom Plate will slide out of its fixing between the two Side Plates.

Refitting / Replacement

- 11.** Refitting is a reversal of the removal process noting the following point:

- To fit the refit the Bottom Plate, the Plate must align with the profile of the two Side Plates.



- Ensure the Plate is fitted in the correct orientation. Use the image from Step 10 for reference.

8.12 Side Plates

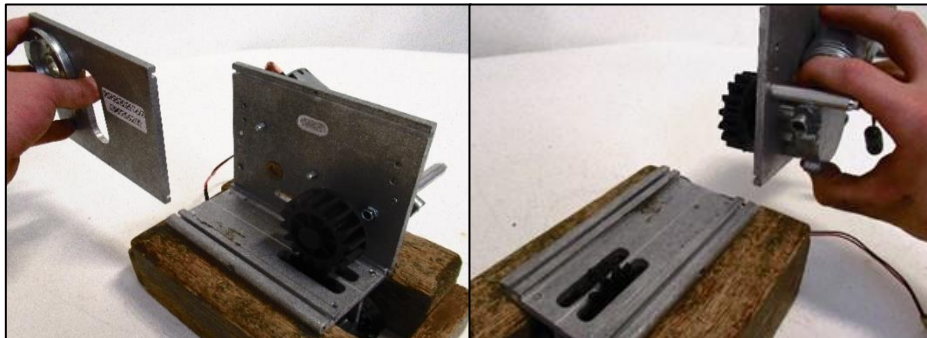
This section will cover the details of how to remove, refit and replace the side plate.

Removal

- 1.** Remove external covers from the hoist. (Refer to section 8.1)
- 2.** Remove the PCB from the hoist. (Refer to section 8.3)
- 3.** Remove the battery from the battery brackets. (Refer to section 8.4)
- 4.** Remove the bottom cover from the hoist. (Refer to section 8.5)
- 5.** Remove the lift motor from the hoist. (Refer to section 8.6)
- 6.** Remove the battery bracket from the hoist. (Refer to section 8.7)
- 7.** Remove the end plate from the hoist. (Refer to section 8.8)
- 8.** Remove the lift tape from the hoist. (Refer to section 8.9)
- 9.** Remove the hub from the hoist. (Refer to section 8.10)
- 10.** Remove the bottom plate from the hoist (Refer to section 8.11)
- 11.** Using a 3mm Allen key, remove the screw retaining the side plates to the top plate, there is one screw either side of the Hoist.



- 12.** The Side Plate will slide out of its fixing with the Top Plate.



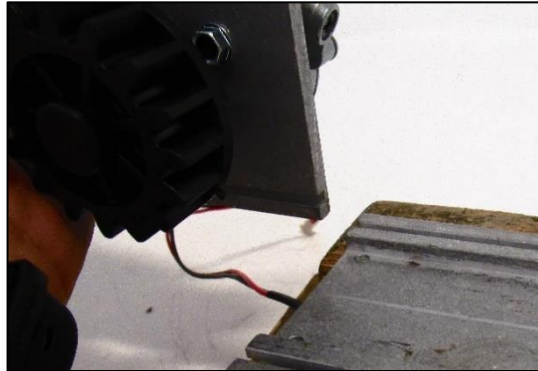
- 13.** (Powered Traverse Only) The Idle Gear can be removed if required by sliding it off the Traverse Shaft.



Refitting / Replacement

14. Refitting is a reversal of the removal process noting the following point:

- To fit the refit the Side Plate, the Plate must align with the profile of the Top Plate.



- Ensure the Plate is fitted in the correct orientation. Use the image from Step 10 for reference.

8.13 Top Plate

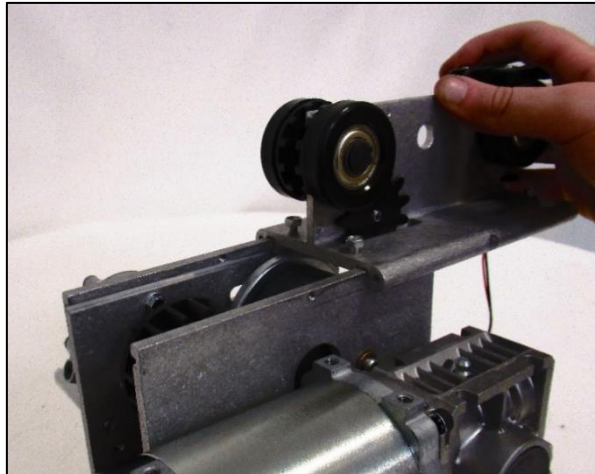
This section will cover the details of how to remove, refit and replace the top plate.

Removal

- 1.** Remove external covers from the hoist. (Refer to section 8.1)
- 2.** Remove the PCB from the Hoist. (Refer to section 8.3)
- 3.** Remove the battery from the battery brackets. (Refer to section 8.4)
- 4.** Remove the battery bracket from the hoist. (Refer to section 8.7)
- 5.** Remove the end plate from the hoist. (Refer to section 8.8)
- 6.** Step 6 - Using a 3mm Allen Key, remove the screw retaining the Top Plate to the Side Plates, there is one screw either side of the Hoist.



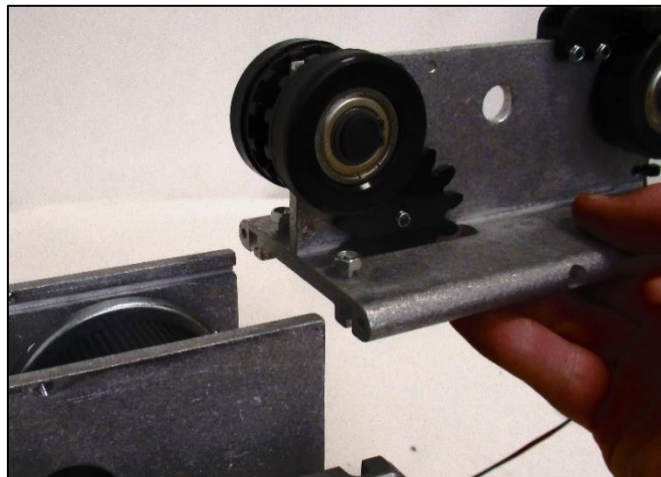
Z. The Top Plate will slide out of its fixing with the Side Plates.



Refitting / Replacement

8. Refitting is a reversal of the removal process noting the following point:

- To fit the refit the Top Plate, the Plate must align with the profile of the Side Plates.



- Ensure the Plate is fitted in the correct orientation. Use the image from Step 6 for reference.

8.14 Wheels

This section will cover the details of how to remove, refit and replace all wheel variants use with the ceiling track hoist.

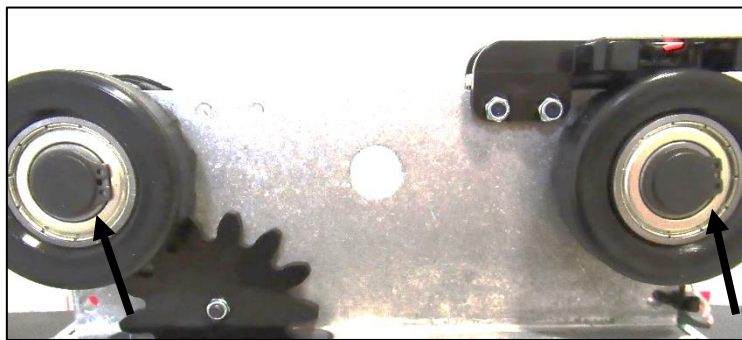
8.14.1 Wheels (excluding QRT Variants)

Within this section it will explain the correct procedure on removing and reinstalling all wheel variants of the hoist (excluding the QRT System Hoist), this section will include track type 1, 2,3,4,5. See Section 1 for guidance on the track type profiles.

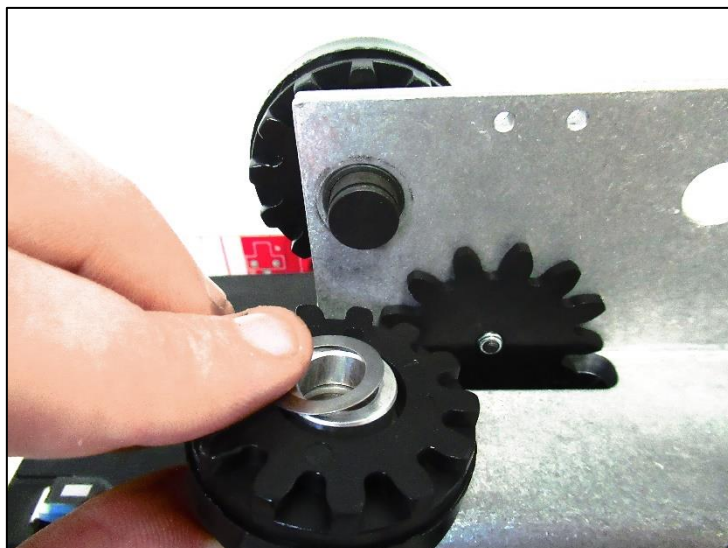
The images below refer to the standard wheel (track type 1), but the same procedure will apply to all the wheel variants.

Removal

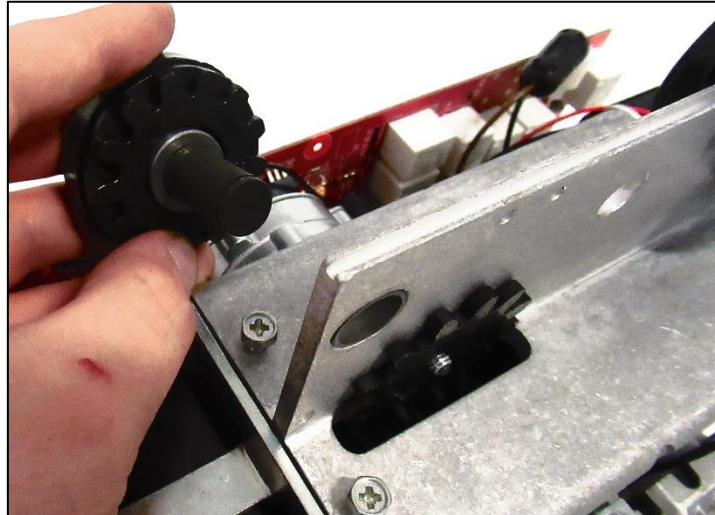
1. Using circlip pliers, remove the circlips from both wheels. (arrowed).



2. Remove the wheel from the hoist as shown – Ensure the spacer and washer is situated within the wheels. Repeat this for the second wheel on the same top plate face.

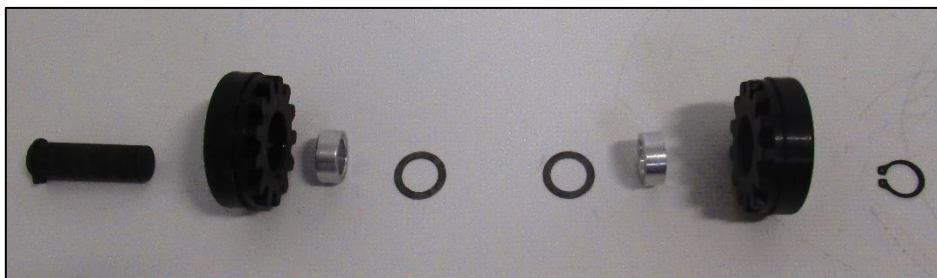


3. From the opposite face of the Top Plate, remove the Axle along with the other Wheels as shown.



Refitting / Replacement

4. Refitting is a reversal of the removal process noting the following points:
 - If replacing with brand new wheels, the below image is an exploded diagram of how the Wheels are fitted together along the axle. The Grey line indicates the Top Plate.

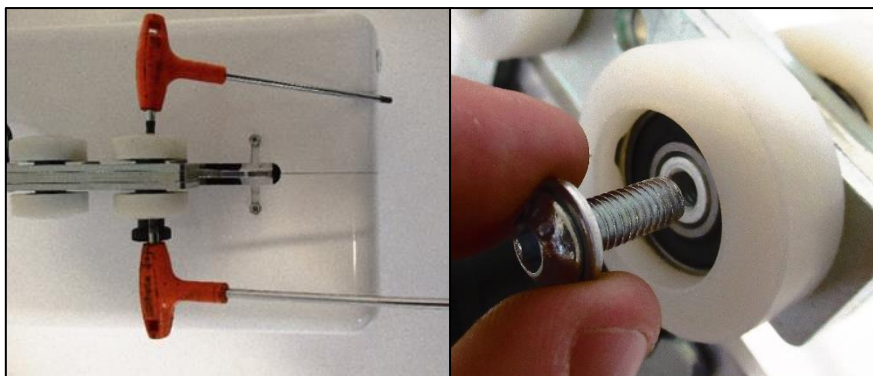


8.14.2 QRT System Wheels.

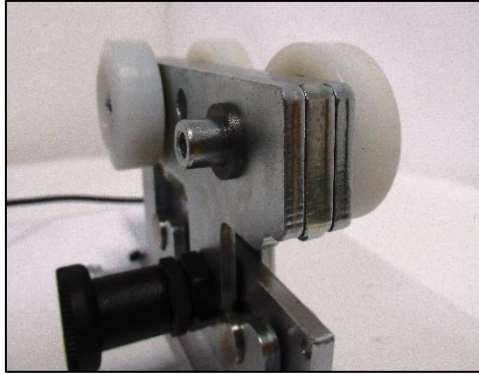
Within this section it will explain the correct procedure on removing and reinstalling all wheel variants of the QRT system hoists, this section will include track type 1, 3, 4 and 5. See Section 1 for guidance on the track type profiles.

Removal

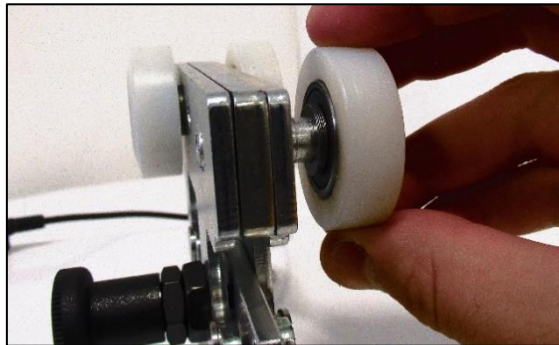
1. Using two 4mm Allen keys, remove the one screw along with its washer from the wheel axle.



2. Remove the wheel and seven washers from the axel.



3. Remove the axel along with the second wheel and seven washers from the trolley.



4. Repeat steps 1-3 for the second pair of wheels to complete wheel removal

Refitting / Replacement

5. Refitting is a reversal of the removal process.

8.15 Charging Beak

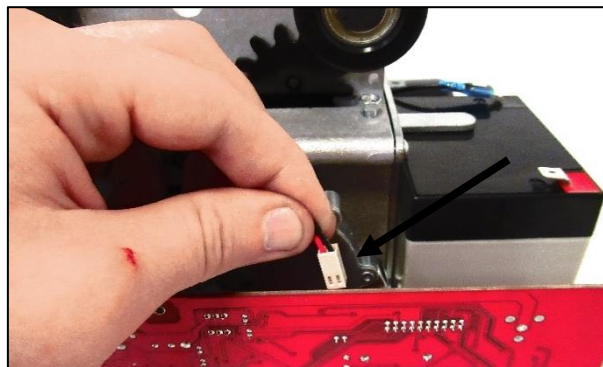
Within this section it will explain the correct procedure on removing and reinstalling all Charging Dock variants, Including Track Type 1, 2,3,4,5. See section 1 for guidance on the track type profiles.

8.15.1 Charging Beak – Standard (Track Type 1)

Within this section it will explain the correct procedure on removing and reinstalling the charging beak for servicing procedures or replacement.

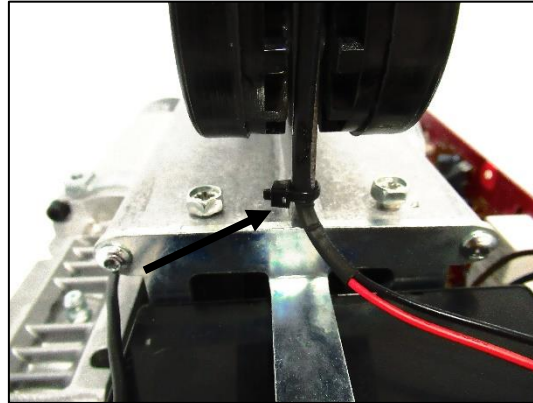
Removal

1. Remove external covers off the Hoist. (refer to section 8.1)
2. Disconnect the Charging Beak from the PCB.



3. Re-route the Wire from under the Battery Bracket.

4. Cut the Cable Tie that secure the wire to the Chassis.



5. Using a 2mm Allen key, remove the M3x12 Screws and M3 nyloc nuts to release the charging beak.

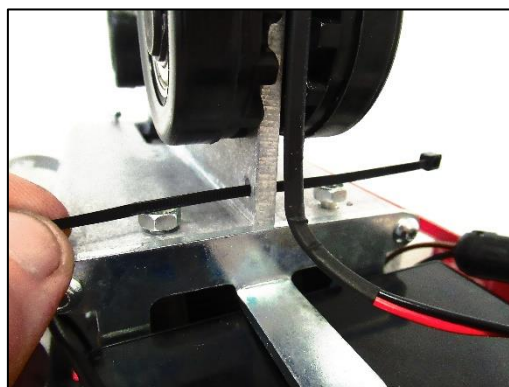


Refitting / Replacement

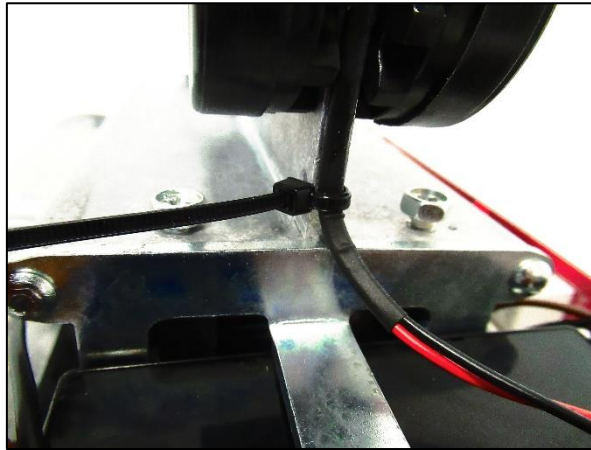
7. Refitting is a reversal of the removal process noting the following point:

One Cable Tie are required! – Re-secure the Wire with cable tie as instructed below:

- Insert the Cable Tie through the hole in the Top Plate.



- Close the Cable tie around the Charging Beak wire to retain the wires position. Snip the surplus cable once secured.

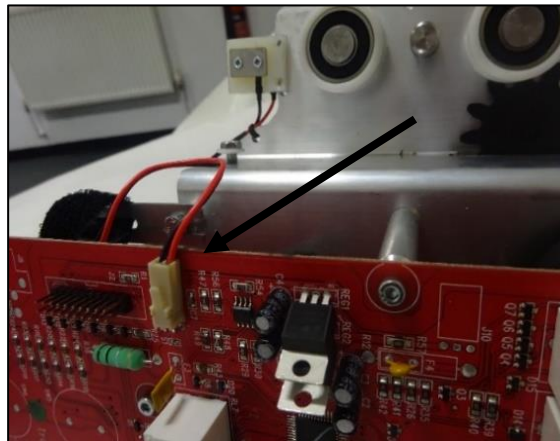


8.15.2 Charging Beak – Track Type 2, 3, 4, 5 and Powered Auxiliary

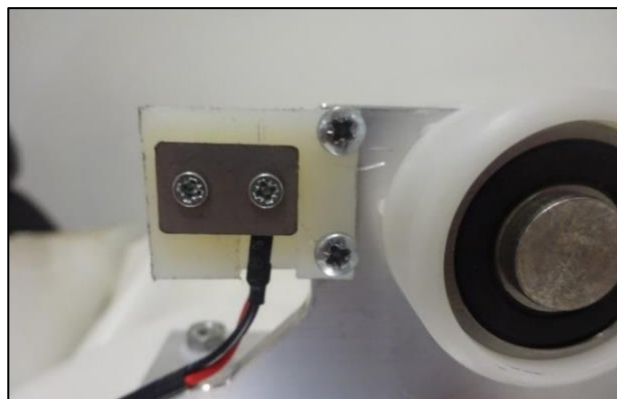
Within this section it will explain the correct procedure on removing and reinstalling the Charging Beak for servicing procedures or replacement.

Removal

1. Remove external covers off the hoist. (Refer to section 8.1)
2. Remove the battery from the battery brackets. (Refer to section 8.4)
3. Disconnect the charging beak from the PCB.



4. Reroute the Wire from under the battery bracket.
5. Cut the cable tie that secure the wire to the chassis.
6. Using a pozi screwdriver, remove the screws to release the charging beak.



Refitting / Replacement

8. Refitting is a reversal of the removal process noting the following point:

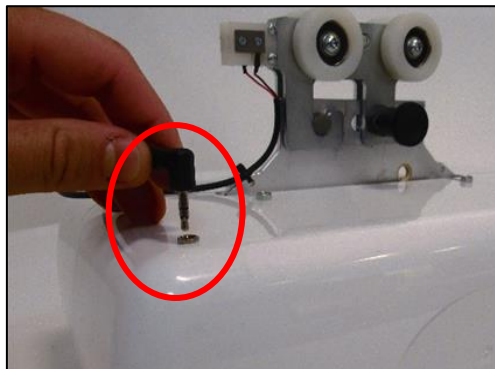
- **One cable tie is required!** – Re-secure the Wire with cable tie as instructed below:
- Pass through the cable tie (100x2.5mm) through the hole and tie to secure the wire to the chassis. Snip the surplus cable once secured.
-

8.15.3 QRT System Charging Beak

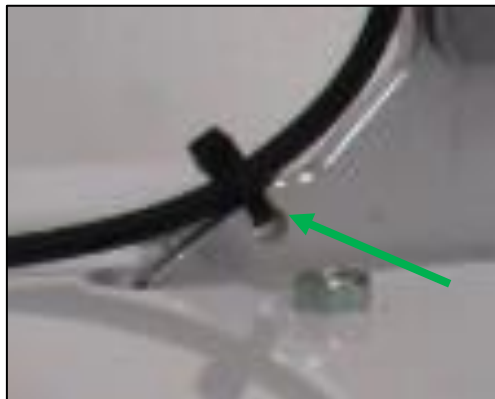
Within this section it will explain the correct procedure on removing and reinstalling the QRT Systems Charging Beak for servicing procedures or replacement.

Removal

1. Disconnect the charging beak from the external cover plug in.



2. Cut the cable tie that secure the wire to the chassis.



3. Using a pozi screwdriver, remove the screws to release the charging beak.

Refitting / Replacement

4. Refitting is a reversal of the removal process noting the following point:

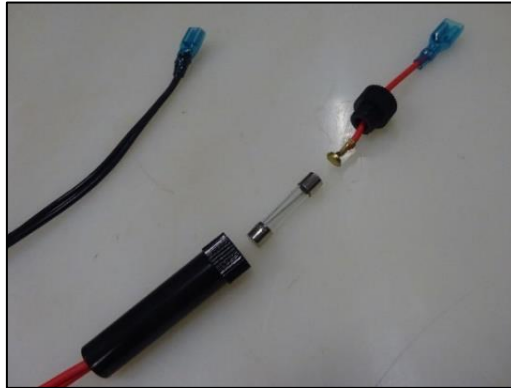
- **One cable tie is required!** – Re-secure the Wire with cable tie as instructed below:
Pass through the cable tie (100x2.5mm) through the hole and tie to secure the wire to the chassis. Snip the surplus cable once secured.

8.16 5A Battery Lead Fuse

This section will instruct the correct procedure on how to remove and replace the 5A Battery Lead Fuse.

Removal

1. Remove external covers off the hoist (refer to section 8.1)
2. Disconnect the power lead from PCB.
3. Disconnect the power lead from the batteries. (See section 8.4 for assistance)
4. Unscrew the fuse holder to access and remove the Fuse from the power lead.



Refitting / Replacement

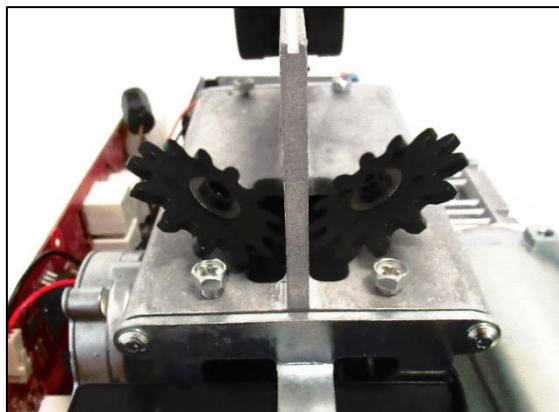
5. process Refitting is a reversal of the removal.

8.17 Traverse Idle Gear

Within this section it will explain the correct procedure on removing and reinstalling the Traverse Idle Gear for servicing procedures or replacement.

Removal

1. Remove external covers off the hoist (Refer to section 8.1)
2. Remove the wheels from the hoist (Refer to section 8.14)
3. Using a 2mm Allen key, Remove the M3x12 screw and M3 nyloc nut to release the traverse idle gear.
4. Split the male and female parts of the traverse idle gear as shown and remove. Ensure to grab the washers placed between each piece of the traverse idle gears.



Refitting / Replacement

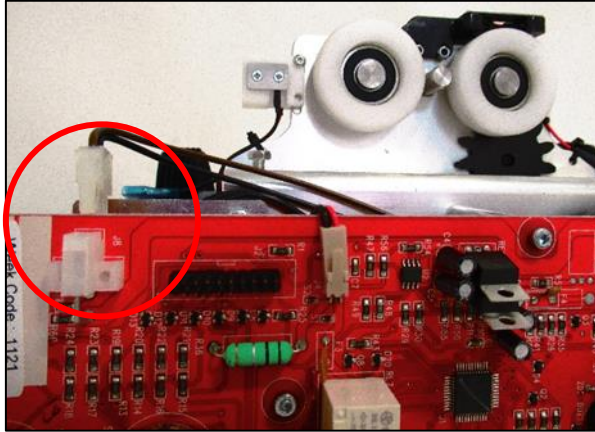
5. Refitting is a reversal of the removal process noting the following point:
 - Ensure when fitting the male and female parts together that the shim washers are still in place.
 - The Female part of the Traverse Idle Gear must be on the same face as the PCB
 - When securing the two gears together, **do not overtighten**. Once tight, loosen the screw by half a turn to allow the gear ability to rotate freely.

8.18 Communications Port

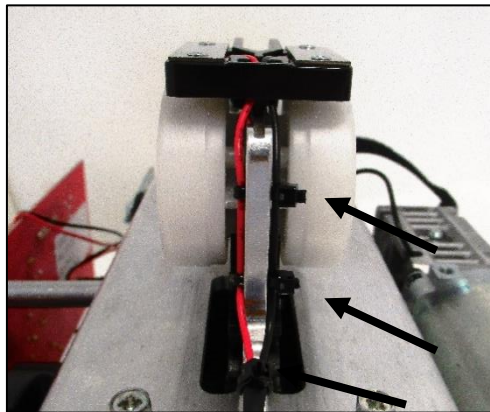
Within this section it will explain the correct procedure on removing and reinstalling the Communications Port for servicing procedures or replacement.

Removal

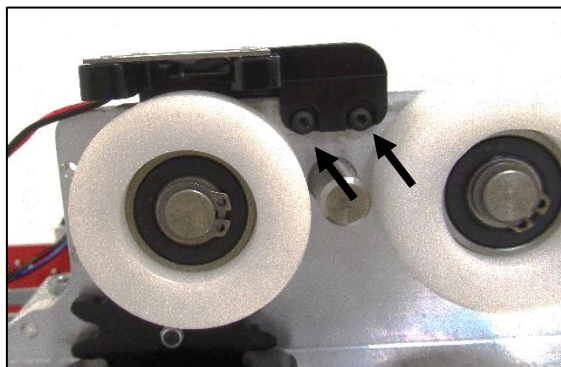
1. Remove external covers off the hoist. (Refer to section 8.1)
2. Remove the battery from the battery brackets. (Refer to section 8.4)
3. Disconnect the communications port from the PCB.



4. Re-route the wire from behind the PCB and from under the opposite sides' battery bracket.
5. Cut the three cable ties that secure the wire to the chassis.



6. Using a 2mm Allen key, Remove the M3x12 screws and M3 nyloc nuts to release the charging beak.

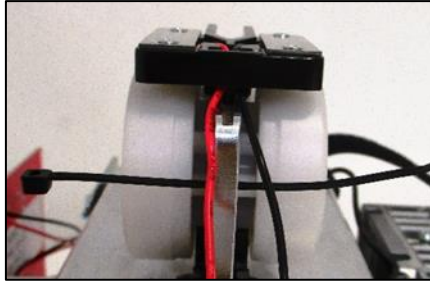


Refitting / Replacement

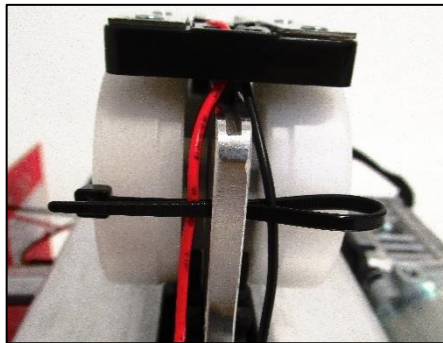
Z. Refitting is a reversal of the removal process noting the following point:

Three cable ties are required! – Re-secure the wire with cable ties as instructed below:

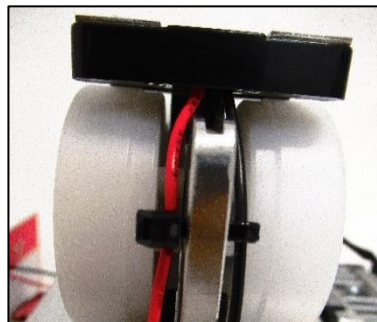
- A1) Insert the cable tie (100mm x 2.5mm) through the top hole in the chassis plate and along the back of the red and black wires.



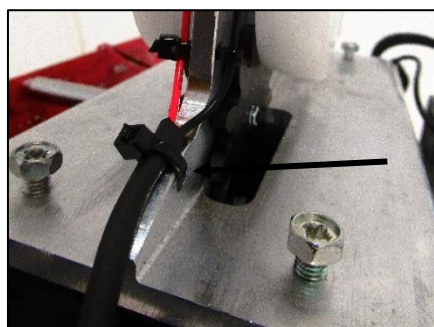
- Fold the cable tie around the Black wire and pass the cable tie back through the hole and over the red wire.



- Tie the cable tie retaining the black wire and red wire.



- Repeat this process for the second cable tie. For the bottom hole a cable tie 100mm x 2.5mm can be passed through the hole then around the Black and Red wires and tied off. Finally, snip of the surplus cable once secured.



8.19 Carry Bar

Within this section it will explain the correct procedure on removing and reinstalling the carry bar for servicing procedures or replacement.

Removal

1. Remove the bung from the base of the carry bar.



2. Remove the pin from the lift tape loop.

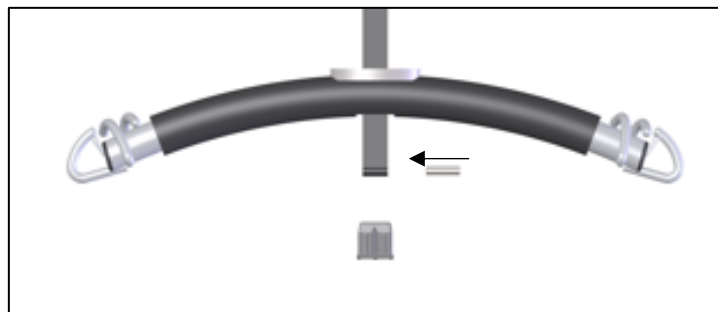


3. Remove the carry bar from the lift tape.

Refitting / Replacement

4. Refitting is a reversal of the removal process noting the following point:

- Ensure to fit the pin back into the carry bar when refitting.



Dealer/service contact details:

Contact details:

Prism Medical UK
Unit 1 Tir Llwyd Industrial Estate
St Asaph Avenue
Kinmel Bay
LL18 5JZ
Tel: 01924 840100

Disclaimer

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