

freeway

M205 Mobile Hoist





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1.0 – Introduction

This Manual will explain how to carry out interim servicing and parts replacement on the Freeway M205 Floor 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 Hoist. The aim of the manual is to help and assist you, so that you can provide a successful service for the end user.

2.0 – Safety Precautions

Read and understand this manual in its entirety before servicing the Freeway M205 Hoist.

- Freeway authorised personnel must complete the Full and Interim services of the Freeway M205 Hoist
- The Hoist must not be in use by the user during any form of servicing.
- Ensure that the all 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.

3.0 – Servicing

To be completed by Approved Service Engineer

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.

When Servicing the Hoist, ensure to fill out the Service Log which is located in the back of the User Manual. When doing so, ensure the Serial Number of the Product and the User Manual match up. Each Hoist has its designated User Manual which is supplied to the User during commissioning.

Component	Service/Inspection required
Generic:	Visual inspection of the externals of the Mobile Hoist. Significant damage that may affect the function of the Mobile Hoist along with a clear safety hazard is unacceptable.
	Check the Labelling on the hoist to ensure they are all still legible, this includes the Serial Number and other important markings. If labels are not legible, re-ink on the serial number and date of manufacture onto the label.
	Clean the Hoist at the end of each service. See User Manual for cleaning details.
	Check all main nuts and bolts to see if they are loose, if so tighten accordingly.
	Check all pivot points for wear.
	Ensure all Hand Knobs are functioning as intended and without damaged thread.
	Ensure Handgrips are attached and/or in an acceptable state.
Control Box and Battery:	Inspect the components for damage that may affect the function and safety of the product.
	Check Emergency Stop Function is working.
	Ensure the Hoist is capable of charging.
	Check that the LED and LCD (when applicable) are working correctly.
	View LCD Display functions and ensure they correspond correctly. (LCD Versions only)
Lift and Leg Actuators:	Inspect the components for damage that may affect the function and safety of the product.
	Listen for any unusual sounds when operating the Actuators.
	Fully open and close the Actuators to ensure they are working correctly – this includes ensuring they reach the open and closed limits as well inspecting for damage along the stroke. Both actuators should actuate smoothly at a consistent velocity.
	Ensure the Manual Emergency Lowering Device is performing.
	Ensure the Actuator Cable Retaining Clips are in place. (Leg Actuator only)
Handset and Cables:	Inspect the components for damage that may affect the function and safety of the product.
	Ensure all Cables are fitted to the Control Box correctly.

	Verify all Handset functions are in working order.
	Ensure LED's are working correctly.
Carry Bar:	Check that the Carry Bar is able to swivel 360 degrees with ease. This should be done with and without load.
	Inspect the functionality of the Spring Clips, ensure they return to position once operated, they should be touching the inside of the Carry Bar. (If fitted)
	Inspect the Carry Bar wear washer, if thickness is below 0.5mm, replace the washer.
Legs:	Ensure Legs are perpendicular to the Base when closed.
Brakes:	Ensure the Brakes function when activated
	Ensure the Hoist can move freely when the Brakes are deactivated. (Ensure they aren't rubbing on the Wheels)
Castors and Wheels	Examine the products Wheels and Castors for signs of damage or wear, ensure they run freely and are not cracked.
	Check to see all casters are flat on the floor and hoist is stable.
	Ensure the product is able to rotate freely with ease.

4.0 – Test Procedure

Below is the full testing procedure required to complete an Annual Hoist Service.

The SWL (205Kg) is an essential load for the testing of the Hoist and a mode of transportation to transport the weights to the Hoist is required.

1. Position the Floor Hoist on a flat and level surface and away from any obstacles.
2. Using the handset raise the Carry Bar to the upper limit. Listen for unusual noise.
3. Lower the carry bar to bottom limit and ensure that the actuator lowers smoothly without resistance.
4. Using the handset open the legs to their widest position.
5. Apply the brake to the Rear Castors.
6. Using a calibrated 205Kg weight stack. Position it perpendicularly under that Carry Bar.
7. Attach the weight stack to the Carry Bar using lift straps.
8. Raise the Weight to the Upper Limit. Be aware of any unusual noises while raising the SWL (Safe Working Load).
9. Deactivate the Brakes and close the legs using the handset.
10. Drive the Hoist forward and backwards one metre. Make sure that the Castors rotate and role correctly.
11. Activate the Rear Castors brakes
12. Using the handset begin to lower the weight. Before reaching the Floor press the E-STOP button on the Control Box to check the safety device is working correctly.
13. Begin to twist the Red manual E-lower device positioned at the top of the Actuator until weight has reach the floor.
14. Detach the weight from the Carry Bar.
15. Twist the E-STOP Button in a clockwise motion until it returns to its natural position.
16. Once weight is removed continue lowing the Carry Bar down to the bottom limit.
17. Test Complete.

5.0 – Tools, Equipment and Lubricants Required for Servicing

When carrying out work on the Freeway M205 Hoist you will require the following:

Tools Required

3mm Allen Key
5mm Allen Key
6mm Allen Key
10mm Spanner
12mm Spanner
13mm Spanner x2
17mm Spanner x2
19mm Spanner
24mm Spanner
Flat Head Screwdriver
Nylon Hammer

Equipment Required

Marker Pen
Cloth
Lint Free Cloth
Test Weights – 205Kg
Weight Trolley
Lifting Straps x2 (Attach Weight to Carry Bar)
Vernier Calliper

Sundries Required

Loctite 243
Morris Grease – K42EP (or equivalent)
New tech lubes ltd Silicon Grease – FS SILL-Tech (or equivalent)

6.0 – Decommissioning

When the Hoist has completed its life cycle and can no longer perform to its intended use safely the Hoist must be decommissioned by an approved Service Engineer. The following specifies the importance of correct disposal procedure including local laws and being environmentally friendly.

Please observe the local laws on recycling and respect the current laws for disposal within the community the device is being used within. If there is any uncertainty of the below guidelines, contact your local authorities to determine the proper method of disposal of potentially biohazardous parts and accessories.

The relevant components utilised in the manufacture of the device that can be recycled at the end of the device life are:

Fully recyclables:	Consideration when Recycling:
Steel frame (Mast, Boom, Base, Legs)	Carry Bar Cover
Castors	Leg Actuator
Initial packaging of the device (cardboard)	Lift Actuator
Metallic fixing – screws etc.	Handset + Cables
Carry Bar	Control Box
	Battery

7.0 – Spare Parts List

The parts listed below are all the spare parts a service engineer requires to perform a service on a Freeway M205.

Part Code	Description
123007	Leg Rod Assembly
123082	Leg Actuator Lead (1250mm)
123102	4 Way Handset (Battery & Service LED)
123109	4 Way Control Box (LCD & Data Logging)
123905	LH Leg Assembly
123906	RH Leg Assembly
123907	Leg Actuator Kit
123919	Lift Actuator Kit
123909	Mast Fixing Kit
123910	Front Castor Kit (Pair)
123911	Rear Castor Kit (Pair)
123922	Freeway M205 Base Assembly
123920	Freeway M205 Boom Assembly
123917	Freeway Carry Bar Assembly
123921	Freeway M205 Mast Assembly
510005	Battery Pack (2.9 Ah Lead Acid)
510091	Mains Snap Lead
510092	Charger Lead (UK Plug)
520034	Lift Actuator Lead (700mm)
999069	Freeway M205 User Manual
992069	Freeway M205 Spare Parts Manual

8.0 – Troubleshooting

Should a problem arise with the use of the hoist, this section offers guidance to all known faults revolving the product. The list of faults below offers the correct actions in sequence to resolve the issue.

For each step per scenario, if the step does not determine the issue, continue to the following step in sequence until the fault is found. Once the fault is found, refer to the action guide with the corresponding number to resolve the issue. After following the correct action, check that the hoist is now functioning correctly, and perform a simple test. See Section 4.0 for correct test procedure.

For guidance on how to dismantle the hoist to perform troubleshooting actions, see section 9.0 – Servicing.

If the fault is not found and/or the solutions do not correct the problem, contact your local Freeway authorized dealer immediately – contact details are provided on the last page of this manual.

8.1 - Hoist doesn't turn on

Operate the handset to determine if the hoist powers up. If it does not – Follow the Troubleshooting guide below.

Troubleshooting Guide

1. Check the E-Stop button on the control box has not been activated.
2. Check the Handset is correctly connected to the correct control box port.
3. Check the Handset lead is not damaged, e.g. cuts and breaks.
4. Check to see if hoist battery is out of charge and requires charging.
5. Check the Battery is located correctly on top of the control box.
6. Check for any damage to the battery terminals, e.g. burns and breaks.
7. Perform a visual check on the Control box for any damage.
8. Replace current Control Box.

Action Guide

1. Twist the E – Stop button in a clockwise direction to reset.
2. Re-attach the Handset to the correct control box port – See Section 9.2.1 on Handset attachment.
3. Remove the Handset from the Hoist and Replace –See Section 9.2.1 on Handset attachment.
4. Plug the charging lead into a wall socket see if the Hoist begins to Charge. The hoist control box should show a steady orange LED to indicate the hoist is now charging. **If unsuccessful, continue Troubleshooting Guide and refer to the section on “Hoist doesn’t Charge” as this is likely the guide to resolve the issue.** If Hoist turns on, allow the Hoist to charge before testing. If Hoist does show signs of charging but does not turn on, continue this Troubleshooting Guide.
5. Re-attach the Battery in the correct fashion shown in section 9.1.
6. Remove the Battery and Replace as shown in section 9.1
7. Replace the Control Box – See section 9.3
8. See section 9.3 on Control Box replacement.

8.2 - Hoist doesn't charge

Connect the Hoist charging lead from the Hoist to the Wall Socket. (Ensuring that the lead is connected properly) to determine if the Hoist charges. If the control box LED does not illuminate a steady orange, follow the Troubleshooting Guide below.

Troubleshooting Guide

1. Check the Charger plug is turned on at the power supply.
2. Check that the Charger Lead is connected correctly to the Control Box
3. Check charging lead for damage, e.g. cuts and breaks.
4. Check that the Battery is connected properly with the Control Box.
5. Inspect the Battery terminals for any damage, e.g. burns and breaks.
6. Inspect the Control Box terminals for any damage, e.g. burns and breaks
7. Replace the charging lead.
8. Replace the Battery
9. Replace the Control Box

Action Guide

1. Turn the Plug Switch at the wall on.
2. Reattach the Charger Lead to the Control Box – See section 9.2.4 on Charger Cable Attachment.
3. Replace charging lead – See section 9.2.4 on Charger Cable Attachment.
4. Connect the Battery correctly to the Control Box as shown in section 9.2.4.
5. Replace the Battery. (see section 9.1)
6. Replace the Control Box. (see section 9.3)
7. See section 9.2.4 on Charger Lead replacement.
8. See section 9.1 on Battery replacement
9. See section 9.3 on Control Box replacement

8.3 - Hoist doesn't lift

Attempt to raise/lower hoist with handset, but hoist is not responding. (The LCD displays the “up” “down” function, LCD version only), For Hoists without the LCD, a response noise from the Control Box should be noticeable. Follow the Troubleshooting Guide below.

Troubleshooting Guide

1. Check if the Hoist is plugged into Charge. (Hoist will not raise and lower while on charge)
2. Check that the Lift Actuator to Control Box cable is connected properly between the two ports.
3. Check the Lift Actuator to Control Box cable for damage, e.g. cuts and breaks.
4. Inspect the Lift Actuator for any signs of damage which could affect its function, including the Port. E.g. Large Cracks and breaks, electrical burns.
5. Inspect the Control Box Port for any damage. E.g. electrical burns, breaks.
6. Replace the Lift Actuator to Control Box cable.
7. Replace the Control Box.
8. Replace the Lift Actuator.

Action Guide

1. Remove the Hoist from charge.
2. Connect the Lift Actuator Cable correctly. See section 9.2.2 for guidance.
3. Replace the Cable. See Section 9.2.2 for guidance.
4. Replace the Lift Actuator. See Section 9.5 for guidance.
5. Replace the Control Box. See section 9.3 for guidance
6. See guidance in section 9.2.2 on Cable replacement.
7. See guidance in section 9.3 on Control Box replacement.
8. See guidance in section 9.5 on Lift Actuator replacement.

8.4 - Hoist doesn't Lift Load Correctly – Stop/Start Action

Attempt to raise/lower hoist with handset, the actuator begins to raise the load but cuts out and performs stop/start motion to handset commands. Follow the Troubleshooting Guide below.

Troubleshooting Guide

1. Lift Actuator is broken
2. Control Box is broken

Action Guide

1. See section 9.5 for guidance on Lift Actuator replacement.
2. See section 9.3 for guidance on Control Box replacement.

8.5 - Hoist is functioning but LCD and/or LED is inactive

Attempt to raise/lower hoist with handset, the Hoist does perform commands but the LCD Display does not respond or LED light has no colour. Follow the Troubleshooting Guide below.

Troubleshooting Guide

1. Check LCD Display or LED externally for any impact damage, e.g. cracks or breaks.
2. Control Box/handset is damaged

Action Guide

1. Replace the Control Box/and or Handset depending on which has the LED damage. See Section 9.3 for Control Box Replacement. See Section 9.2.1 for Handset attachment.
2. Replace the Control Box/and or Handset depending on which has the LED damage. See Section 9.3 for Control Box Replacement. See Section 9.2.1 for Handset commissioning.

8.6 - Hoist E-Stop button not working

Attempt to E-Stop the Hoist but function is inactive. Follow troubleshooting guide below:

Troubleshooting Guide

1. Control Box is damaged

Action Guide

1. See section 9.3 for guidance on Control Box replacement.

8.7 - Hoist Leg Actuator is not responding

Using the Handset the Hoist Lifting/Lowering function is working but the Powered Leg does not respond to commands. Follow the Troubleshooting Guide below.

Troubleshooting Guide

1. Check Cable between the Control Box and the Leg Actuator is connected correctly.
2. Check for Cable damage between the Control Box and Leg Actuator cable.
3. Inspect the Leg Actuator for any damage, including the cable port. E.g. large cracks and electrical burns.
4. Inspect the Control Box Leg Actuator Cable Port for any damage. E.g. cracks and electrical burns.
5. If there is no indication of any power while commanding the Powered Legs, Handset buttons could be damaged.
6. Replace the Leg Actuator.
7. Replace the Control Box.

Action Guide

1. Connect the Cable between the two components. See section 9.2.3 for Leg Actuator Cable fitting.
2. Replace the Control Box to Leg Actuator cable. See section 9.2.3 for guidance.
3. Replace the Leg Actuator. See section 9.6 for guidance.
4. Replace the Control Box. See section 9.3 for guidance.
5. Replace the Handset. See section 9.2.1 for Handset commissioning.
6. See section 9.6 for guidance on Leg Actuator replacement.
7. See section 9.3 for guidance on Control Box replacement.

8.8 - Hoist has Power but does not respond to Handset commands

Attempt to raise/lower Carry Bar and Open/Close Legs with the handset but hoist does not respond. There is Power as the LED indicates when the Hoist charges.

Troubleshooting Guide

1. Check that the E-Stop button has not been activated.
2. Check the Handset is correctly connected to the Control Box.
3. Check that the Lift Actuator and Leg Actuator Cables are both connected to the Control Box.
4. Check the Handset cable is not damaged, e.g. cuts and breaks.
5. Check the Lift Actuator and Leg Actuator Cables for damage, e.g. cuts and breaks
6. Check the Control Box Handset Port for any damage. E.g. cracks and electrical burns.
7. Replace the Handset

Action Guide

1. Reset the E-Stop button by twisting in a clockwise motion. The Button should release.
2. Re-attach the Handset to the Control Box – See Section 9.2.1 on Handset attachment.
3. Re-attach the Lift Actuator and Leg Actuator Cables to the Control Box. See section 9.2.2 and 9.2.3 for guidance.
4. Remove the Handset from the Hoist and Replace – See Section 9.2.1 on Handset attachment.
5. Remove the Lift Actuator and Leg Actuator from the Hoist and Replace – See section 9.2.2 and 9.2.3 for guidance.

6. Replace the Control Box. See section 9.3 for guidance.
7. See section 9.2.1 for guidance on Handset attachment.

Note: Bear in mind this error could be to a specific button on the handset while the other buttons still function. Follow the same procedure.

8.9 – Hoist doesn't respond to the correct Handset commands

Troubleshooting Guide

1. Check the Lift Actuator and Leg Actuator power cables are connected to the correct port in the Control Box.

Action Guide

1. Re-route the power cables to the correct ports in the Control Box. See section 9.2 for correct Cable Routing.

8.10 – Troubleshooting – Hoist Safety Mechanisms

Hoist doesn't not lower while Hoist is in use

When this occurs the Manual E-Lower can be used to safely lower the patient. The manual E-Lower mechanism is situated at the top end of the Actuator and is coloured red. For use, the mechanism is turned in a clockwise motion manually. This will slowly lower the Actuator. Continue turning the Mechanism until the Patient can be safely removed.

9.0 – Servicing – Removal and Replacement

This section will cover the details of how to remove, refit and replace all serviceable parts to the hoist. The step by step process is to be followed in sequence to perform a successful service on the Hoist. Unless stated otherwise, all images refer to a Freeway M205.

NOTE: Before carrying out any work on a Freeway M205 Hoist, remember to remove the charger lead and remove any external power source.

Prior to any servicing the Emergency Stop Button on the Control Box must be activated to remove any power to the product.

9.1 - Battery

This section will instruct the correct procedure on how to remove and replace the Battery.

Removal

Step 1 – Grab the Battery in the same fashion as shown in the image below.



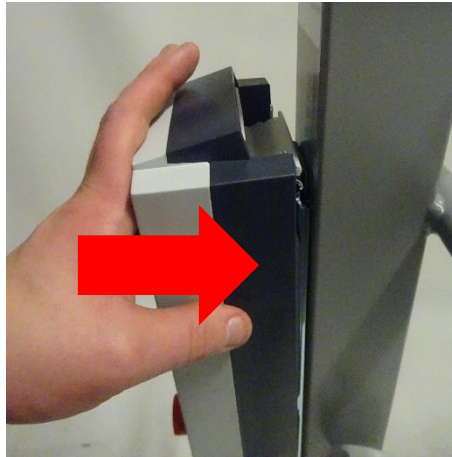
Step 2 – Press the lever on the battery at the top end of the battery and lift away from its location.



Refitting / Replacement

Step 3 – Refitting is a reversal of the removal process noting the following points:

- A) Reposition the Battery above the Control Box – Push the Battery inward and the Battery will “click” into place.



9.2 - Cables

In this section it will explain the correct procedure on removing/ refitting the Cables for servicing procedures or replacement.

9.2.1 - Cables - Handset

Removal

Step 1 – Remove the Handset connector from the Control Box by pulling downward out of the Port.

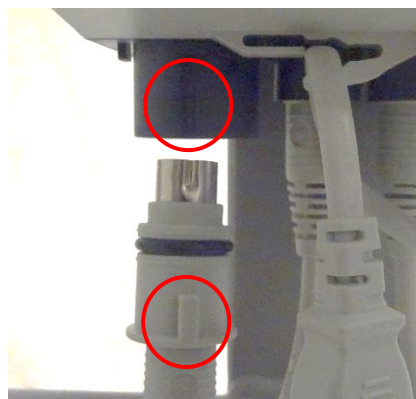


Step 2 – Unhook the Handset from the Hoist

Refitting / Replacement

Step 3 - Refitting is a reversal of the removal process noting the following points:

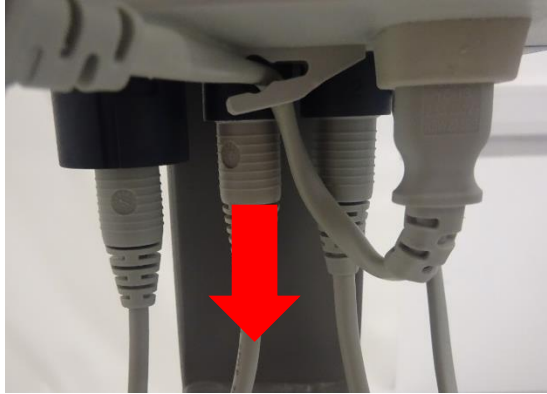
- A) Align the Handset connector as shown in the image, with the locator facing away from the Hoist



9.2.2 – Cable – Lift Actuator

Removal

Step 1 – Remove the Jack End of the Cable which ports the Control Box by pulling downward. (This is the middle Control Box Port as shown in the image)



Step 2 – Release the cable from the Actuator by lifting the locking device upward, it is recommended a flat head screwdriver is used.



Step 3 – Pull the cable outward away from the Actuator to remove.



Step 4 - Remove the cable from any clips that are routing it along the Hoist.

Refitting / Replacement

Step 5 - Refitting is a reversal of the removal process noting the following points:

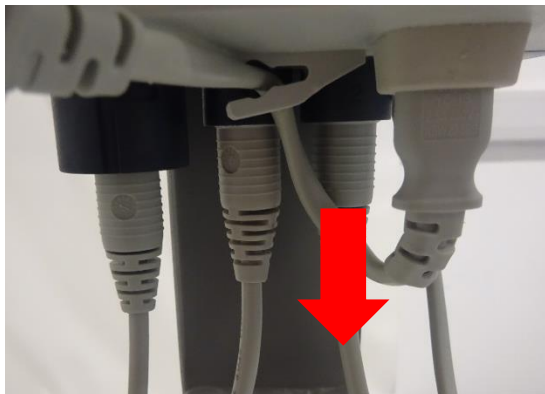
- A) When fitting the Cable into the Actuator port, ensure the locator is facing downward as shown in the image.



9.2.3 - Cable - Leg Actuator

Removal

Step 1 – Remove the Jack End of the Cable which ports the Control Box by pulling downward. (This is the port on the right hand side of the Control Box as shown in the image)



Step 2 – Release the cable from the Actuator by removing the locking device. It is recommended a flat head screwdriver is used. Push the latch outward and push the part downward to remove.



Step 3 – Remove the Cable by pulling it out the port, action may be easier using a flat head screwdriver.



Step 4 – Remove the cable from any clips that are routing it along the Hoist.

Refitting / Replacement

Step 5 - Refitting is a reversal of the removal process noting the following points:

- A) When fitting the Cable into the Actuator port, ensure the locator aligns correctly for correct connection to the Leg Actuator.
- B) Re-route the Cable correctly, route behind the actuator as shown as well as along the actuator as shown in the image.

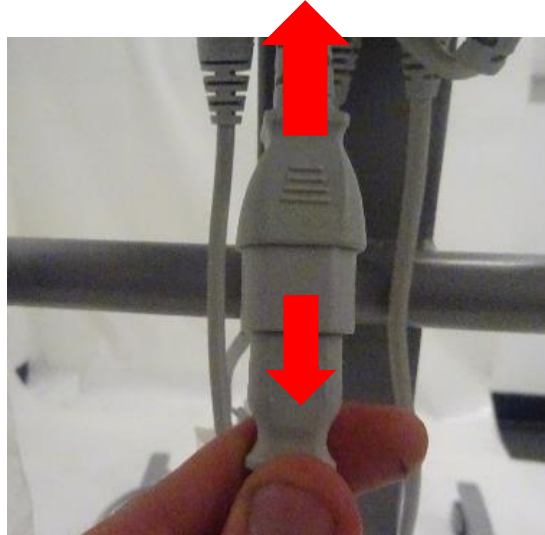


9.2.4 – Cable – Charger

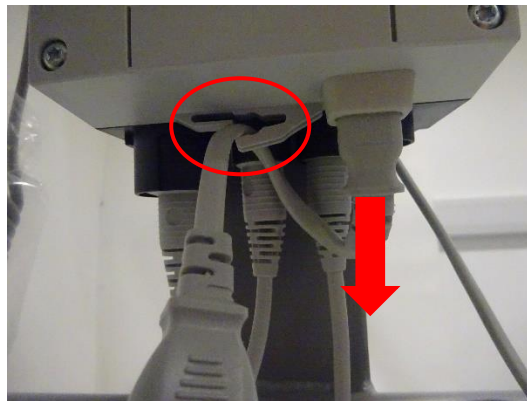
Removal

Step 1 – Where Applicable, turn the charger off at the wall plug and remove.

Step 2 – Detach the Charger lead from the Snap Lead by pulling them apart as shown.



Step 3 – Detach the Snap Lead from its latch circled in the image below and pull the lead connector from the Control Box as arrowed.



Step 4 – If the Plug has not already been removed from the wall socket, detach the plug from its fixing to the Hoist.

Refitting / Replacement

Step 5 - Refitting is a reversal of the removal process noting the following points:

- A) Ensure that the Snap Lead is refitted in the correct orientation in the Control Box port, and that the Snap Lead is securely fastened to its latch and will not easily displace.

9.3 – Control Box

In this section it will explain the correct procedure on removing and reinstalling the Control Box for servicing procedures or replacement.

Removal

Step 1 – Remove Battery from the Hoist. (Refer to section 9.1)

Step 2 – Remove all the Cabling/leads from the Control Box. (Refer to section 9.2)

Step 3 – Use a 3mm Allen Key to remove the Screw fixing the Control Box to the Bracket.



Step 4 – Lift the Control Box from its positioning on the Bracket to remove.



Refitting / Replacement

Step 5 - Refitting is a reversal of the removal process noting the following points:

- A) Ensure that the Control Box slides into position correctly and vertically straight onto the Bracket for correct fitting.

9.4 – Attachment Bracket

In this section it will explain the correct procedure on removing and reinstalling the Attachment Bracket for servicing procedures or replacement.

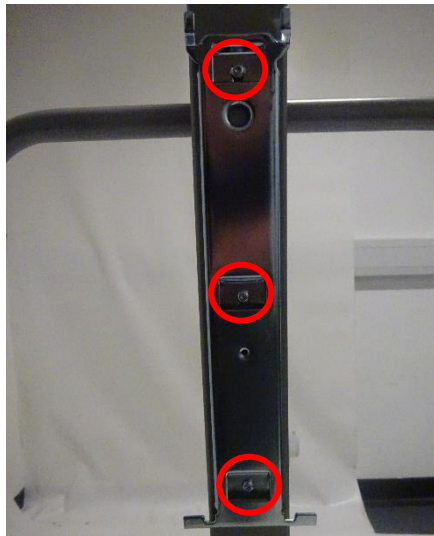
Removal

Step 1 – Remove the Battery (refer to section 9.1)

Step 2 – Remove the Cables/Leads from the Control Box (refer to section 9.2)

Step 3 – Remove the Control Box (refer to section 9.3)

Step 4 – Using a 3mm Allen Key, remove the three circled screws to release the Attachment Bracket.



Refitting / Replacement

Step 5 - Refitting is a reversal of the removal process.

9.5 – Lift Actuator

In this section it will explain the correct procedure on removing and reinstalling the Lift Actuator for servicing procedures or replacement.

Removal

Step 1 – Remove the Lift Actuator Cable. (See section 9.2.2)

Step 2 - Remove the four Black Caps from the Actuator fixing points.



Step 3 – Using two 13mm Spanners, remove a nut and washer from both Actuator fixing points (Top and Bottom) as shown. (Image refers to top fixing point but same applies to bottom fixing point)



Step 4 – Pull the Pin out from the top fixing to release the top end of the Actuator. Once this pin has been removed, the boom will need manual support to disallow it from falling.



Step 5 – Pull the Pin out from the bottom fixing to release the Actuator, the Actuator can now be removed from the Hoist. Slowly lower the Boom until it rests against the Mast.



Refitting / Replacement

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

- A) Ensure the Actuator is fitted in the correct orientation. With the LIANK Specification label facing towards the rear castors of the Hoist.
- B) Ensure the Nuts are tight and secure the Actuator, do not over tighten as this will bend the framework and will affect the functioning of the Actuator.
- C) Apply Loctite 243 to the thread of the Pin where the nut will be secured.

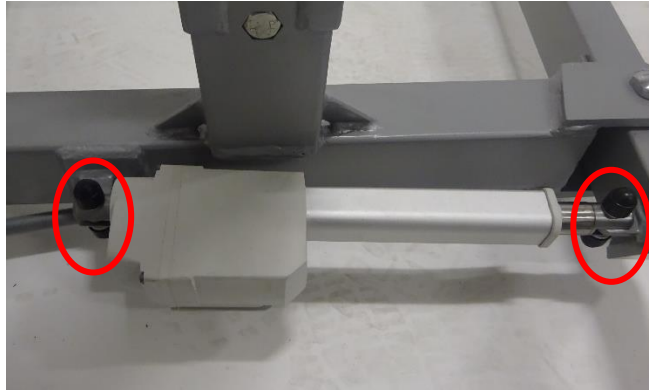
9.6 – Leg Actuator

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

Removal

Step 1 – Remove the Leg Actuator Cable. (Refer to section 9.2.3)

Step 2 – Remove the four Black Caps from the Actuator fixing points.



Step 3 – Using two 13mm Spanners, remove a nut from the fixing pin. Repeat for the second fixing point.



Step 4 – Slide the pin out to release the Actuator. Repeat for the second fixing point.



Refitting / Replacement

Step 5 - Refitting is a reversal of the removal process noting the following point:

- A) Ensure the Actuator is fitted in the correct orientation, with the label facing the floor and the Piston end fixture attached to the Leg, as shown in the image in step 2.

9.7 - Carry Bar

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

Removal

Step 1 – Remove the two Black Caps from the Carry Bar Pivot.



Step 2 – Using two 17mm Spanners, remove a nut and washer from the Carry Bar Pin as shown.



Step 3 – Pull the Pin out from the Boom to release the Carry Bar.

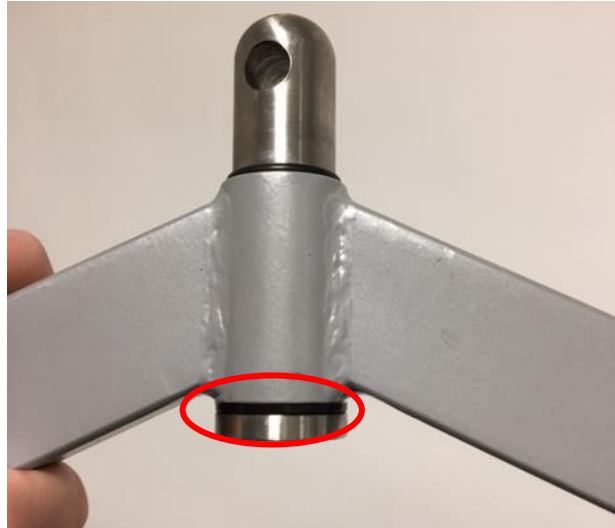


Refitting / Replacement

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

- A) Ensure the Nuts are tight and secure the Carry Bar, do not over tighten as this will bend the framework and will affect the pivoting function of the Carry Bar.
- B) Apply Loctite 243 to the thread of the Pin.

Step 5 – Inspect the Wear washer circled, replacement is necessary if thickness is measured to be 0.5mm or under.



9.8 – Leg Rod Assembly

Within this section it will explain the correct procedure on removing and reinstalling the Leg Rod Assembly for servicing procedures or replacement.

Removal

Step 1 – Place the Hoist in its side for easier service – Gently rest the Hoist on its side to avoid damage such as paint scratching. Circled is the Leg Rod Assembly.



Step 2 – Using a flat head screwdriver, unhook the spring clip from the ball point of the Leg Rod Assembly as shown.



Step 3 – Pull out the spring clip from its positioning within the Leg Rod as shown.



Step 4 – Detach the Leg Rod from the Base of the Hoist as shown.



Step 5 – Repeat Step two to four to detach the other fixing point of the Leg Rod Assembly to fully detach the Leg Rod.

Refitting / Replacement

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

- A) When attaching a new base or Leg Rod, Re-grease adequately with Silicon Grease.
- B) To hook the Spring Clip around the Leg Rod to fasten, use a Nylon Hammer and tap the Clip on softly for easier fitting.

9.9 – Front Castor

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

Removal

Step 1 - Place the Hoist in its side for easier service – Gently rest the Hoist on its side to avoid damage such as paint scratching.

Step 2 –

(Rev A) To release the Front Castor, place a 5mm Allen Key into the countersunk bolt and use a 10mm Spanner on the underside of the Castor as shown and loosen.

(Rev B) To release the Front Castor, place a 6mm Allen Key into the countersunk bolt and use a 17mm Socket on the underside of the Castor as shown and loosen



Rev A

Rev B

Step 3 – Remove the Castor from the securing bolt as shown.



Rev A

Rev B

Refitting / Replacement

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

- A) Ensure that the Castor is secured tightly, there should be no play after fastening.
- B) Ensure the Castor rotates freely.
- C) (Rev A) Apply Loctite 243 to the bolt thread.

9.10 - Rear Castor

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

Removal

Step 1 - Place the Hoist in its side for easier service – Gently rest the Hoist on its side to avoid damage such as paint scratching.

Step 2 –

(Rev A) To release the Rear Castor, place a 6mm Allen Key into the countersunk bolt and use a 12mm Spanner on the underside of the Castor as shown and loosen.

(Rev B) To release the Rear Castor, place a 6mm Allen Key into the countersunk bolt and use a 17mm Socket on the underside of the Castor as shown and loosen.



Rev A

Rev B

Step 3 – Remove the Castor from the securing bolt as shown.



Rev A

Rev B

Refitting / Replacement

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

- A) Ensure that the Castor is secured tightly, there should be no play after fastening.
- B) Ensure the Castor rotates freely.
- C) Apply Loctite 243 to the bolt thread.

9.1.1 - Leg - (LH Leg and RH Leg)

Within this section it will explain the correct procedure on removing and reinstalling the legs of the hoist, images refer to one leg only but same applies to both.

Removal

Step 1 – Remove the Leg Actuator Cable. (Refer to section 9.2.3)

Step 2 – Remove the Leg Actuator. (Refer to section 9.6)

Step 3 - Place the Hoist in its side for easier service – Gently rest the Hoist on its side to avoid damage such as paint scratching.

Step 4 – Remove the Leg Rod Assembly. (Refer to section 9.8)

Step 5 – Remove the Front Castors. (Refer to section 9.9)

Step 6 – Remove the Rear Castors. (Refer to section 9.10)

Step 7 – Using a 24mm Spanner and a 19mm Spanner, loosen the bolt and remove the nut and washer from the underside.



Step 8 – Push the Bolt through the Leg to remove.



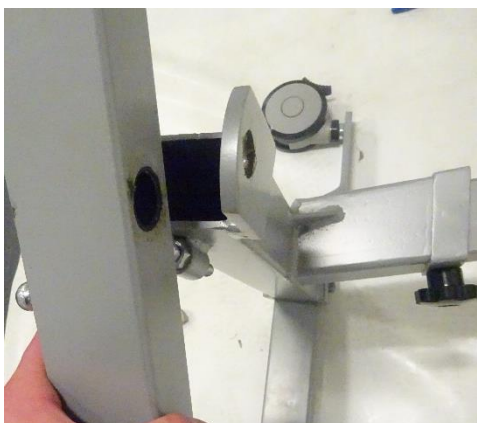
Step 9 – While pushing the bolt through, remove the TWO washer from the underside of the leg assembly.



Step 10 – While pushing the bolt through, remove the THREE washers at the upper face of the Leg assembly.



Step 11 – Remove the bolt from the Leg and the leg can be removed.



Refitting / Replacement

Step 12 - Refitting is a reversal of the removal process noting the following points:

- A) Ensure the washers are re-inserted into the assembly, with THREE washers on the upper face and TWO washers on the underside of the Leg.
- B) Grease/Re-Grease the washers that are fitted between the Leg Assembly.

- C) Once the Bolt is secured, ensure that the Leg is able to move freely, without any play between the Leg and Base.
- D) Apply Loctite 243 to the thread on the Bolt.

9.12 - Base

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

Removal

Step 1 - Remove the Leg Actuator Cable. (Refer to section 9.2.3)

Step 2 - Remove the Leg Actuator. (Refer to section 9.6)

Step 3 - Remove the Mast/Base connector Bolt by twisting the Star-Knob anti-clockwise until the bolt detaches.



Step 4 - Remove the Bolt from the back of the Base.



Step 5 - Raise the Mast of from the Base by lifting it vertically upward.



Step 6 - Place the Base Assembly on its side for easier service – Gently rest the Base Assembly on its side to avoid damage such as paint scratching.

Step 7 - Remove the Leg Rod Assembly. (Refer to section 9.8)

Step 8 – Remove the LH Leg and the RH Leg from the Base. (Refer to section 9.11)

Refitting / Replacement

Step 9 - Refitting is a reversal of the removal process noting the following point:

- A) Ensure the Star Knob is fully tightened to disallow any play between the Mast and Base of the Hoist.

9.13 – Boom

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

Removal

Step 1 – Remove the Lift Actuator Cable. (See section 9.2.2)

Step 2 – Remove the Lift Actuator. (See section 9.5)

Step 3 – Remove the Carry Bar. (See section 9.7)

Step 4 - Remove the two Black Caps from the Boom fixing points.



Step 5 – Using two 17mm Spanners, remove a nut and washer from the Boom Pin as shown.



Step 6 – Pull the Pin out of the Boom to release.



Step 7 – The Boom can be removed from the Mast.



Refitting / Replacement

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

- A) Ensure when tightening the Boom to the Mast the Boom is able to move freely along with no to little play between the two mating parts.
- B) Apply Loctite 243 to the thread of the Pivoting Pin.

9.14 – Mast

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

Removal

Step 1 – Remove Battery from the Hoist. (Refer to section 9.1)

Step 2 – Remove all the Cabling/leads from the Control Box. (Refer to section 9.2)

Step 3 – Remove the Control Box from the Hoist. (Refer to section 9.3)

Step 4 – Remove the Lift Actuator from the Hoist. (Refer to section 9.5)

Step 5 - Remove the Boom from the Hoist. (Refer to section 9.13) – The Carry Bar will not need to be removed when following section 9.13.

Step 5 – Remove the Base Assembly from the Hoist (Refer to section 9.12) – The Leg Actuator, Leg Rod and Legs do not need to be removed while following section 9.12.

Refitting / Replacement

Step 6 - Refitting is a reversal of the removal process.

Disclaimer

While every effort has been made to ensure the accuracy of information contained in this assembly and installation manual, no liability can be accepted by Freeway for any errors or omissions. Freeway operates a policy of continuous improvement. Specifications and other data are subject to change without notice.



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