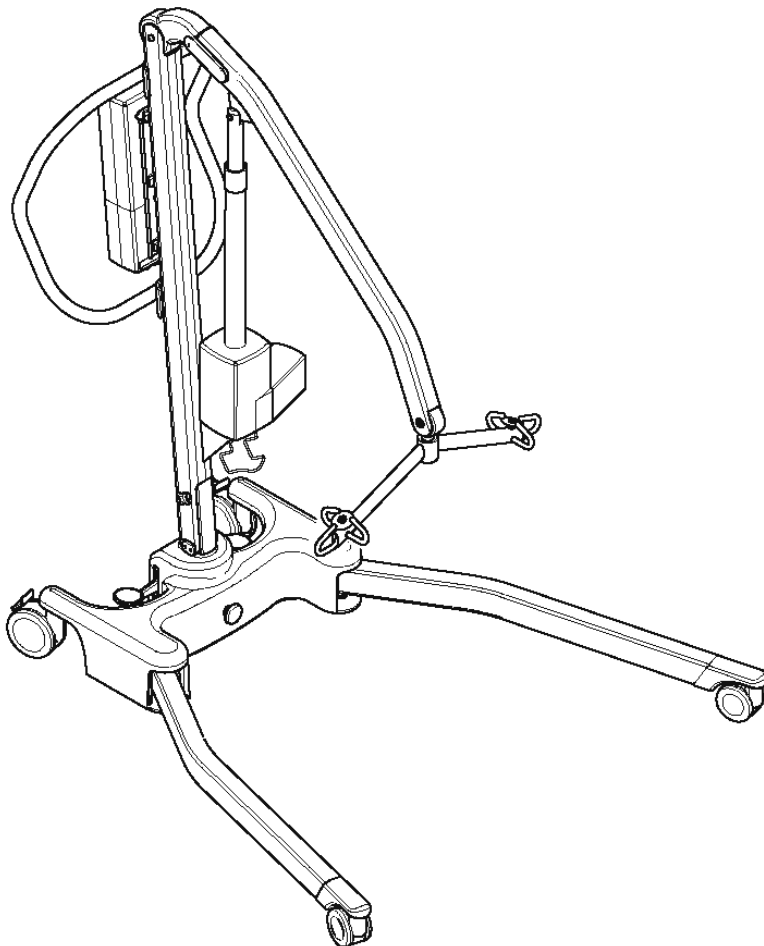


Service Manual

Oxford® Advance



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Inspection Criteria

Joerns Healthcare Ltd recommends a thorough inspection and test of the Oxford Advance and its lifting accessories, slings etc. is carried out every six months. The examination and test should be conducted according to the recommendations and procedures below. Joerns Healthcare Ltd recommends, authorised service dealers should carry out maintenance, inspection and certified testing only.

Note: These recommendations are in compliance with the requirements of 1998 No2307 Health and Safety: The Lifting Operations and Lifting Equipment Regulations 1998. (LOLER) This is a UK regulation. Outside the UK please check your local requirements.

Spreader Bar

- Check the spreader bar for freedom of rotation and swing.
- Check for wear on the spreader bar to boom Fulcrum pin. Lubricate with a light mineral based grease or food grade spray lubricant.
- Check for wear on the central pivot. Lubricate as necessary with a light mineral based grease or food grade spray lubricant.
- Check the presence and condition of the washer wear.
- Check for firm attachment to the boom.
- Examine sling strap retainers. Check for effective function.
- Check for adequate padding and that the padding is not damaged. (Infection control).
- Inspect for excessive wear on the sling hooks and any side suspenders used in conjunction with the spreader bar.

Boom

- Check for secure attachment of the boom to the mast/boom pivot and ensure the boom/mast pivot is fully tightened.
- Make sure there is only minimal side movement of the mast/boom pivot and that it is free to rotate in the mast.
- Check the security and for wear on the actuator unit and mounting bracket on the boom.
- **(Any excessive movement or play of the actuator must be investigated).**

Mast

- Check the operation and condition of the leg retaining cord.
- Check the operation of the mast-locking device.
- Make sure the mast fully engages into the base socket.
- Check for correct operation of the folding function on the hoist.
- Check for wear on the bottom actuator unit and mounting bracket on the mast.
- **(Any excessive movement or play of the actuator must be investigated).**

Power Pack and Control Box

- Check for secure attachment of the power pack mounting plate to the mast.
- Check the function of the Emergency Stop button.
- Check the hand control for correct functioning in both directions
- Check the fit of the hand control plug and socket.
- Inspect the actuator plug for correct fitting.
- Check the operation of the emergency raise and lowering function.

Leg Adjustment

- Operate the foot pedal and check the legs open and close correctly.

⚠ WARNING

If the operation of the foot pedal **DOES NOT** adjust the legs, the position of the leg locking knob should be adjusted as necessary. See 'Cross Member' section, point 3, later in this manual.

- Check the legs are locked when the legs are in the open and closed positions.
- Check the legs are parallel to each other in the closed position.

Leg Pivots

- Check the leg pivots are secure and the legs pivot freely. Any stiffness must be investigated.
- Make sure there is no excessive play in the leg pivots. Any excessive play must be investigated.
- Make sure the leg pivots are retained securely.
- Lubricate the leg pivots as necessary with a light mineral based grease or food grade spray lubricant.

Castors

- Check all castors for firm attachment to the legs.
- Check for free rotation of the wheels and the castors swivel.
- Where possible remove any build up of threads, hair or fluff.
- Lubricate the swivel and axle bearings if necessary with a light mineral based grease or food grade spray lubricant.
- Check all four castors are seated firmly on the ground.
- Check correct operation of the brakes.

Actuator

- The actuator is a sealed unit and should require no maintenance.
- Check for correct operation when raising and lowering.
- Check for correct operation of mechanical emergency lowering device. **NOTE:** The MINIMUM load required to manually lower the hoist using the mechanical emergency down function is 30 kg.
- Confirm anti-crush precautions are operational.
- Confirm power cut-out at the ends of travel, both upper and lower.
- Listening for unusual noise.
- Check for wear on the mounting boss top and bottom.
- Lubricate the upper and lower mounting Fulcrum Pins with a light mineral based grease or food grade spray lubricant.
- Ensure the upper and lower actuator Fulcrum Pin retaining devices are in position and secure.
- **(Any excessive movement or play of the actuator must be investigated)**

Batteries

- The batteries are housed in the battery pack and should not require maintenance, other than regular charging as detailed in the charging instructions.
- Confirm the hoist is not sounding low battery when operating.

Charging Unit

- Confirm the charger unit is charging the battery pack.
- Check mains plug is fitted with the correct rated fuse (5 Amp).
- Check the safety of the input and output lead wiring.

Cleaning

Clean with ordinary soap and water and/or any hard surface disinfectant. Harsh chemical cleaners or abrasives should be avoided as these may damage the surface finish of the lift. Avoid wetting any of the electrical parts. After cleaning, the unit should be thoroughly dried.

⚠ WARNING

OXFORD RECOMMENDS THE USE OF GENUINE OXFORD PARTS. Oxford slings and lifters are not designed to be interchangeable with other manufacturer's products. Using other manufacturer's products on Oxford products is potentially unsafe and could result in serious injury to patient and/or caregiver.

Load Testing

The load test should be carried out in accordance with the manufacturer's test procedures and the directive detailed in EN ISO 10535:2006 - Annex B - Periodic Inspection B1 - see excerpt below. It is strongly recommended that an authorised service dealer carry out the test.

EN ISO 10535:2006

Annex B

(Informative)

Periodic Inspection

B. 1 Periodic inspection of the hoist should be undertaken at the time intervals stated by the manufacturer, but at least once a year. By periodic inspection is meant a visual examination (particularly of the hoist's load bearing structure and lifting mechanism with attachments, brakes, controls, safety devices and person-support devices) and whatever function tests and maintenance measures may be required, e.g. adjustment of brakes, tightening of fasteners.

Every inspection should include a working load test of one (1) lifting cycle with the maximum load.

Oxford Electric hoists have been designed to the requirements of:

1 **BS EN ISO 10535 2006 Hoists for the transfer of disabled persons**

The hoists are designed to lift the Safe Working Load only. The load lifting capability is set electronically and must not be increased as this causes excessive loading when the actuator reaches the limits of travel. This will affect the actuator's useful life.

2 **BS EN ISO 10535 Load Raising Test**

This test is a straightforward lift of a load the equivalent to the Safe Working Load from the lowest position to highest position of the hoist. Check that the hoist is not capable of lifting much more than the Safe Working Load (A small additional lifting capability is allowable but no more than 15% of the SWL).

3 **BS EN ISO 10535 Operator effort Test**

This test is conducted with the Safe Working Load only.

Using a force gauge (0-500N is a suitable range) push the one of the foot pedals down and note the amount of force necessary to open or close the legs. Maximum permissible force is 300N (30 kgf / 67 lbf).

Checking Welds For Fractures

NOTE: During the load testing procedure, while the lift is loaded with the safe working load, check **ALL** welded joints on the lift for signs of fracture. If fractures are evident, the lift should be taken out of service and not used until damaged components of the frame are replaced.

Test Loads - Oxford Advance

SWL 155kgs/342lbs. NOTE: The load for calibrating the service monitor is 126kg.

The load test should be carried out in accordance with the manufacturers test procedures. It is strongly recommended that an authorised service dealer carries out the test.

Certification

An authorised service dealer will issue a test certificate after satisfactory completion of the thorough inspection and test. This certificate will be valid for six months.

Thorough Examination Report

Lifting Operations and Lifting Equipment Regulations 1998 (LOLER UK ONLY)

LOLER requires certain information to be included on the report given to a customer after a thorough examination. The information can be found in Schedule 1 (page 59) in the LOLER L113 publication.

Joerns Healthcare Ltd has prepared a Thorough Examination Report that includes all the required information and a copy can be found later in this manual. Please feel free to use this as the basis of your own report.

Service & Maintenance

Tools Required

- Calibration handset
- Circlip pliers
- 21mm A/F spanner (*for the front and rear castors*)
- 19mm A/F spanner (*for the mast/boom pivot*)
- 5mm hex key (*for the leg opening assembly*)
- 4mm hex key (*for the screws on the base plate and all other fixings*)
- 2mm hex key (*for the leg opening knob*)
- Medium strength threadlock (BLUE) type
- Small flat blade screwdriver
- Calibrated torque wrench (0 - 25 Nm)

Spreader Bar

- 1 The spreader bar fulcrum pin is held in place with two M6 x 20mm counter sunk head screws. Remove one of the screws from the fulcrum pin and, leaving the other in place, withdraw the fulcrum pin.
- 2 Examine the fulcrum pin for signs of wear and for firm attachment of the remaining screw. The diameter of the fulcrum pin is 10mm. Reduction in diameter due to **wear must not exceed 1mm** before replacement.
- 3 Withdraw the outer sleeve bush from the boom end (hold the spreader bar while doing this as the spreader bar may fall) inspect the sleeve for wear as per the fulcrum pin.
- 4 Remove the plastic bush caps (2-off) from the boom end and retain.
- 5 Remove the black plastic shrouds (2-off) from the spreader bar pivot and examine for damage. The shrouds are an important guard against finger traps. Make sure they will perform this function. Discard and replace if necessary.
- 6 Remove the padded rubber moulding from the spreader bar. The moulding is split along the bottom edge and will pull off the spreader bar quite easily.
- 7 Examine the padded rubber moulding for damage. If damage is evident, the padded moulding should be renewed. (Infection control).
- 8 Take off and retain the “O” ring that holds the main spreader bar central pivot in the spreader bar central boss.
- 9 Examine the main pivot and the central boss for wear. If any of the components exhibit wear, they should be renewed.
- 10 Main pivot: Check for wear on the cross-hole for the fulcrum pin. The hole is 10mm in diameter; **wear should not exceed 1mm on diameter or 2mm elongation** before replacement.
- 11 Check for wear on the cross hole in the end of the boom. The hole is 10mm in diameter; wear should not exceed 1mm or 2mm elongating before replacement.
- 12 Check the condition of the acetyl wear washer that sits on the pivot shoulder. The wear washer is there to stop metal to metal contact on the pivot shoulder and the central boss on the spreader bar assembly. If the washer shows any signs of deformation or wear it should be replaced.
- 13 **Spreader bar sling hooks:** Check for wear, particularly if used in conjunction with side suspenders. The sling hooks are made from 9.5mm diameter material. Reduction in diameter by **wear should not be allowed to exceed 2mm before replacement.**
- 14 **IMPORTANT:** Side suspenders are often used in conjunction with the lift spreader bar. These may be stored away from the lift. It is important side suspenders are checked for wear. Side suspenders are made from 9.5mm material. Reduction in diameter by **wear at the suspension point or the hooks should not be allowed to exceed 1mm before replacement.**

- 15 Examine the sling strap retainers. Check that the plastic discs are fitted and move smoothly on the central shafts. Check the screw through the central shafts for tightness.
- 16 Examine all welded joints on the spreader bar for hair ling cracks. If any welds are suspect, replace the spreader bar.

NOTE If the retainers are missing they should be replaced.

Re-Assembly of the Spreader Bar

After performing all the actions and checks in section 1 reassemble the spreader bar as follows:

- 1 Lubricate the main pivot, fulcrum pin and sleeve with any light mineral based grease or food grade spray lubricant, paying particular attention to the pivot shoulder, wear washer and the fulcrum pin cross-hole.
- 2 Fit the main pivot to the spreader bar central boss. Ensure the wear washer is present prior to assembly. Refit the retaining “O” ring. Check rotation of the pivot in the boss.
- 3 Replace the padded rubber moulding.
- 4 Fit the black plastic shrouds to the spreader bar pivot and insert into the boom end. Line up the holes in the boom, shrouds and pivot and insert the sleeve.
- 5 Replace the bush caps and insert the fulcrum pin. Secure with the M6 screw after freshly applying thread lock to the thread. **Tighten each screw to 5Nm.**

NOTE 1: It is most important that the fulcrum pin and pivot assemblies are checked to ensure the wear washer is in place and the assembly is completely secure before leaving the hoist.

NOTE 2: Before applying Loctite to any screw or bolt check it can be screwed into the component without hindrance from old remaining Loctite. As this could affect the proper torque setting.

Boom

- 1 Remove the grey plastic covers from the mast end of the boom and check the two M12 hexagon headed bolts that hold the boom extrusion to the boom pivot casting, are **fully tightened to 15Nm.**
- 2 The covers are clipped into place and can be removed by gentle levering between the boom and the cover with a small flat blade screwdriver.
- 3 Replace the grey plastic covers to the boom.
- 4 Examine the actuator mounting point. Without taking the mounting apart check for signs of wear on the fulcrum pin. Check for excessive vertical and horizontal movement in the mounting. This will give a good indication of wear but if there is any doubt the assembly should be stripped down as follows:
- 5 Remove one of the circlips that secures the actuator fulcrum pin to the bracket. Remove the washer and extract the fulcrum pin.
- 7 Examine the fulcrum pin for signs of wear and for firm attachment of the remaining circlip. The diameter of the fulcrum pin is 8mm. Reduction in diameter due to **wear must not exceed 1mm** before replacement.
- 8 Remove the outer sleeve bush from the boom bracket and actuator top while holding the actuator, carefully lower the actuator to the ground.
- 9 Examine the outer sleeve bush for wear. **This should not exceed 1mm.**
- 10 Examine the actuator mounting on the boom for wear on the bore of the bracket. **This should not exceed 2mm.**
- 11 Examine the actuator top for wear/security. **This should not exceed 1mm.**
- 12 Lubricate the Fulcrum Pin and sleeve with a light mineral based grease or food grade spray lubricant.
- 13 Replace the Fulcrum Pin and sleeve through the actuator and boom bracket.
- 14 Replace washer and fit a new circlip.

NOTE: Joerns Healthcare recommends:

NEVER reuse circlips.

ALWAYS use circlip pliers for fitting.

ENSURE the circlip is properly located in the groove.

Mast/Boom Pivot

- 1 Check the pivot for lateral, vertical and horizontal play that would indicate excessive wear. Signs of excessive wear must be investigated and the pivot stripped down. Lateral play at the pivot point must not exceed 1mm before replacement.
- 2 Construction of the mast/boom pivot, comprises of 11 components, 2-off M6 x 20mm counter sunk head screws, 2-off 22mm counter sunk steel caps, 2-off 20mm x 1mm plastic washers, 1-off 10mm inner fulcrum pin and 1-off 13mm outer sleeve, 2-off 52mm x 2mm plastic pivot bearing washers and 1-off pivot casting.

Removal of the Mast/Boom Pivot

- 1 To remove the Mast/Boom Pivot it is advisable to first remove the two M12 bolts from the boom end. This will enable the pivot to be removed and replaced more easily.
- 2 The Mast/boom pivot fulcrum pin is held in place with two M6 x 20mm counter sunk head screws. Remove one of the screws from the fulcrum pin and, leaving the other in place, withdraw the fulcrum pin.
- 3 Examine the fulcrum pin for signs of wear and for firm attachment of the remaining screw. The diameter of the fulcrum pin is 10mm. Reduction in diameter due to **wear must not exceed 1mm** before replacement.
- 4 Withdraw the outer sleeve bush from the boom end (hold the boom while doing this as it may fall forwards). Inspect the sleeve for wear as per the fulcrum pin.
- 5 Remove the plastic bearing washers (2-off) from the pivot and examine for any wear or damage. Lateral movement at the pivot is most likely to be caused by wear on these washers.
- 6 Examine the Mast/Pivot casting, the pivots internal bore and the holes in the mast, in particular, for wear or damage. The bore and holes are 13mm in diameter; **wear should not exceed 1mm on diameter or 2mm elongation** before replacement.

Re-Assembling the Mast/Boom Pivot

After performing all the actions and checks in section 4 reassemble the Mast/Boom pivot as follows:

- 1 Lubricate the fulcrum pin and sleeve with any light mineral-based grease or food grade spray lubricant paying particular attention to the bearing washers and the mast/boom pivot internal bore.
- 2 Assemble one end of the fulcrum pin so that the sleeve will fit over the pin and rest on the end secured by the M6 screw after freshly applying thread lock to the thread.
- 3 Refit the Mast/Boom pivot and one bearing washer into the top of the mast.
- 4 Align the holes in the mast, bearing washer and Mast/Boom pivot.
- 5 Insert the sleeved fulcrum pin into the holes and ensure it passes into the boom hole on the opposite side.
- 6 Pull back the sleeved pin assembly until it is inside the pivot, insert the remaining bearing washer between the pivot and the inside of the mast. Line up the hole of the washer with the bore of the pivot and push the sleeved pin assembly through the washer and into the boom.

Replace the remaining cap and washer and M6 screw after freshly applying thread lock to the thread.

NOTE: It is most important the fulcrum pin/sleeve assembly is carefully checked to ensure complete security. **Tighten each screw to 5Nm.**

- 7 Refit the boom end of the Mast/Boom pivot into the boom and refit the 12mm bolts. Refit the M12 Nyloc nuts. (See note below) **Tighten each bolt to 15Nm.**
- 8 Replace plastic covers.

NOTE 1: Joerns Healthcare recommends Nyloc nuts should always be replaced if undone.

NEVER fit a new pin or sleeve to a worn or damaged casting.

ALWAYS torque the fulcrum pin to the correct setting.

ALWAYS assemble the M6 screws with thread lock.

CHECK the assembled Mast /Boom pivot for unacceptable movement.

NOTE 2: Before applying thread lock to any screw or bolt check it can be screwed into the component without hindrance from old remaining thread lock as this could affect the proper torque setting.

Replacing the Leg Retaining Cord

- 1 To replace the cord you must first remove the mast/boom pivot from the mast (**see section 5, steps 1 & 2**).
- 2 Remove the mast from the cross member (see section 11, step 1).
- 3 Cut the cord and discard it.
- 4 Take the new cord and thread one end through the right hand hole in the mast.
- 5 Pass the cord through the reel and into the second hole in the mast.
- 6 Take both ends of the cord and wrap the cord around the outside of the mast tie a double knot in the cord tight to the mast.
- 7 Pull the cord over the top of the mast and inside of the mast.
- 8 Replace the mast/boom pivot and boom assembly as per section **6 RE-ASSEMBLING THE MAST/BOOM PIVOT**.

NOTE: Joerns Healthcare recommends Nyloc nuts should always be replaced if undone.

NEVER fit a new pin or sleeve to a worn or damaged casting.

ALWAYS torque the fulcrum pin to the correct setting.

ALWAYS assemble the M6 screws with thread lock.

CHECK the assembled Mast /Boom pivot for unacceptable movement

NOTE 2: Before applying thread lock to any screw or bolt, check it can be screwed into the component without hindrance from old remaining thread lock. As this could affect the proper torque setting.

Mast

- 1 Check the socket headed counter sunk screws (4) which hold the push handle to the mast. With a 5mm A/F Allen key confirm the screws are fully tightened to **5Nm**.
- 2 Examine the actuator mounting point and the spreader bar cradle for damage or wear. Without taking the mounting apart check for signs of wear on the fulcrum pin. Check for excessive vertical and horizontal movement in the mounting. This will give a good indication of wear but if there is any doubt the assembly should be stripped down as follows:
- 3 Remove one of the circlips that secures the actuator fulcrum pin to the bracket. Remove the washer and spreader bar cradle and extract the fulcrum pin.
- 4 Examine the fulcrum pin for signs of wear and for firm attachment of the remaining circlip. The diameter of the fulcrum pin is 8mm. Reduction in diameter due to **wear must not exceed 1mm** before replacement.
- 5 Remove the outer sleeve bush from the mast bracket and actuator-mounting boss while holding the actuator. Carefully lower the actuator to the ground.
- 6 Examine the outer sleeve bush for wear. **This should not exceed 1mm.**
- 7 Examine the actuator mounting bracket on the mast for wear on the bore of the bracket. **This should not exceed 2mm.**
- 8 Examine the actuator bottom mounting boss for wear. **This should not exceed 1mm.**

- 9 Lubricate the Fulcrum Pin and sleeve with a light mineral based grease or food grade spray lubricant.
- 10 Replace the fulcrum pin and sleeve through the actuator and mast bracket and the spreader bar cradle.
- 11 Replace washer and fit a new circlip.

NOTE 1: It is most important fulcrum pins are re-assembled carefully. Check to ensure complete security.

NOTE 2: Joerns Healthcare recommends:

NEVER reuse circlips.

ALWAYS use circlip pliers for fitting.

ENSURE the circlip is properly located in the groove.

- 11 Confirm the presence and proper location of the mast engagement label.
- 12 Check the engagement of the mast-locking knob. Confirm the mast will lift from the mast socket when the locking knob is unscrewed.

Battery Pack and Control Unit

- 1 Confirm the mounting bracket is firmly attached to the mast. Three M6 cap head screws secure the mounting bracket. **Confirm the screws are fully tightened to 5Nm.**
- 2 Check the engagement of the battery pack with the mounting. The battery pack should snap into place and be retained by a latch at the top of the pack. Make sure the latch is functioning correctly and holds the battery pack firmly in place.
- 3 Check that the actuator and hand control plugs are inserted fully into the appropriate socket on the base of the control unit. The plugs, particularly the hand control plug, are a tight fit in the sockets and must be pushed fully home. The hand control plug is indexed and can only be fitted in one position. The other plug is not indexed and can be fitted with a straight push.
- 4 Inspect the hand control and coiled lead for any obvious signs of damage. Damage to the hand control and particularly to the lead can cause intermittent faults. The hand control should be replaced if damage is evident. The mounting hook on the rear top of the hand control can be replaced by unscrewing two screws and fitting a new hook.
- 5 Check the operation of the hand control. Press the raise and lower buttons and confirm the boom moves in the correct direction.
- 6 Check the operation of the Emergency stop switch. Push in the red button, this will latch and remain depressed and cut off all power to the lift. Confirm by looking at the display panel, this should now be blank. Confirm the boom does not operate when depressing the raise and lower buttons on the handset. Return power to the lift by twisting the red button clockwise and releasing. The display panel should no longer be blank and battery power should now be displayed instead.

Check the operation of the redundant control raise and descent buttons. These are two raised 'soft push' buttons on the front of the control unit under the Emergency stop switch identified by up and down arrows.

Smart Monitor

Please refer to the following document for service and maintenance guidance:

Oxford Smart Monitor

Engineer's Service & Installation Manual

(Document no.294000.10380)

Contact Joerns Healthcare on **+44 (0)844 811 1156** should you require a copy.

Cross Member

To perform a service inspection of the cross member, removal of the mast and boom assembly is required. Remove one of the mast locking knobs and withdraw the remaining knob complete with locking shaft attached. The mast and boom assembly can then be lifted out of the locating post on the cross member.

- 1 Inspect the mast locating post for damage or wear, especially the slot that the mast locking shaft/knobs fit into.
- 2 The front plate is cosmetic and requires no maintenance.
- 3 Ensure the leg locking knob is secure and the leg locking mechanism fully engages. The knob is secured to an M10 threaded steel shaft by means of an M4 x 5mm grub screw. Ensure the grub screw is fully tightened.

WARNING

If the leg locking mechanism DOES NOT fully engage and operating the foot pedals does not adjust the legs, the position of the leg locking knob should be adjusted as detailed in the instructions on page 17 of this manual.

Following any adjustment, ensure the knob securing grub screw is fully tightened.

- 4 Inspect the push pad grip and foot pedal grip pads for wear and replace as necessary.
- 5 Examine for any excessive play or damage on the foot pedal mechanism. If any is found it must be inspected further to establish a cause and any subsequent replacement of parts. To do this the cross member assembly should be dismantled as follows:
- 6 Remove the leg-locking knob.
- 7 Find a suitable surface to enable the base assembly to be turned over without damaging the mast locating post. (packing may be needed to elevate the assembly).
- 8 Remove all the screws that hold the bottom base plates, 22 in all, comprising of 6-off M6x12mm Button head socket screws, 4-off M4x10mm Countersunk cross head screws on the central plate and 12-off M6x20mm Countersunk head socket screws, 6-off each on the left hand and right hand plates that cover the leg link rod assemblies.
- 9 Remove the pivoting tie rod ends from the legs.
- 10 Remove the legs taking care not to lose the bronze bearing washers at each end of the leg pivot pins.
- 11 Loosen the lock nuts to remove the link rods and/or the pivoting tie rod ends attached to the foot pedal mechanism.
- 12 Loosen the grub screw that locks a ball bearing onto the actuating shaft in the front aluminium mounting block.
- 13 Remove the 4-off M5x30mm hex cap head bolts from the front and back aluminium mounting blocks.
- 14 Pull back the front block against the spring on the actuating shaft and push the exposed end of the mechanism as far as possible into the hole in the cross member. At the same time lift up the mechanism from the back and pull the mechanism back and out of the cross member.
- 15 Remove the actuating shaft from the foot pedal assembly and inspect the two parts for wear and replace any required parts as necessary. Lubricate the mechanism with any light mineral-based grease or food grade spray lubricant and re assemble to the cross member.

Re-Assembly of the Leg Opening Mechanism to the Cross Member

- 1 Pull back the front block against the spring on the actuating shaft and push the exposed end of the mechanism as far as possible into the hole in the cross member. At the same time push down on the mechanism at the back until the aluminium mounting blocks are in line and seated on to the threaded holes that will secure the blocks on the cross member.
- 2 Apply thread lock to the 4-off M5x30mm hex cap head bolts. Screw them into the two mounting blocks and **tighten to 5Nm**.
- 3 Tighten the grub screw in the front block.
- 4 Screw in the pivoting tie rod ends into each threaded hole on the leg lever plate and tighten the lock nuts. **Tighten to 5Nm**. (Ensure that the heads of the pins are upward and facing the front of the cross member).

- 5 Screw the link rods into the pivoting rod ends on the leg lever plate.
- 6 Screw into each leg the other two pivoting rod ends (viewed from behind, the hoist in a upright state the pivot on the left leg will be fitted from underneath the leg and the pivot on the right hand leg will be fitted from above the leg) and tighten the lock nuts. **Tighten to 5Nm.**
- 7 Push the left hand foot pedal (viewed from behind the hoist in a upright state) down to open the legs as far as possible. The link rods can now be threaded on to the pivot rod ends on the legs.
- 8 Ensure there is equal thread length at each end of the link rods and then tighten the lock nuts. **Tighten to 5Nm.**
- 9 Replace the base plates and after applying fresh thread lock to all the screws **tighten to 5Nm.**

NOTE: Before applying thread lock to any screw or bolt check it can be screwed into the component without hindrance from old remaining thread lock. This could affect the proper torque setting.

Legs/Leg Pivot Pins

Check the leg pivots are secure and the legs pivot freely. Any stiffness must be investigated. Also check that there is no excessive play in the leg pivots.

To inspect the leg pivot pins, the leg must be removed from the cross member. The legs can be removed as follows:

- 1 You will need to remove the mast and boom assembly from the cross member. Remove one of the mast locking knobs and withdraw the remaining knob complete with locking shaft attached. The mast and boom assembly can then be lifted out of the locating post on the cross member.
- 2 Find a suitable surface to enable the base assembly to be turned over without damaging the mast locating post. (Packing may be needed to elevate the assembly).
- 3 Remove all the screws that hold the bottom base plates, 22 in all, comprising of 6-off M6x12mm Button head socket screws, 4-off M4x10mm Countersunk cross head screws on the central plate, and 12-off M6x20mm Countersunk head socket screws, 6-off each on the left hand and right hand plates that cover the leg link rod assemblies.
- 4 Remove the leg fixing end of the link rod from the legs by removing the M8x35mm button head screws with a 5mm hex key.
- 5 Remove the leg taking care not to loose the bronze bearing washers at each end of the leg pivot pin.
- 6 The leg pivot pin can now be withdrawn and inspected.
- 7 Clean the pin of any debris or replace the pin if worn.
- 8 Inspect the leg pivot bush in the leg.
- 9 Clean the bush in the leg of any debris. Replace the leg if the bush is worn.
- 10 Lubricate the leg pivot pin with any light mineral-based grease, or food grade spray lubricant.

Re-Assembly of the Leg Pivot Pins

- 1 Place one of the bronze washers over the hole in the main base casting of the cross member.
- 2 Refit the pin into the leg with the deeper shoulder of the pin going into the main base casting of the cross member.
- 3 Place the remaining bronze washer over the leg pivot pin so that it rests on the surface of the leg bush.
- 4 Apply thread lock to the M8 screw on the link rod and tighten to **5Nm** on the leg.
- 5 Ensure the leg operating mechanism opens and closes the legs correctly.

WARNING

If the leg locking mechanism **DOES NOT** fully engage and operating the foot pedals does not adjust the legs, the position of the leg locking knob should be adjusted as detailed in the instructions on page 17 of this manual.

Following any adjustment, ensure the knob securing grub screw is fully tightened.

- 6 Replace the plates.
- 7 Apply thread lock to the screws and **tighten to 5Nm**.

NOTE: Before applying thread lock to any screw or bolt check it can be screwed into the component without hindrance from old remaining thread lock. This could affect the proper torque setting.

Rear Castors

- 1 Check the rear castors are firmly fixed to the legs. Remove any loose castors with a 21mm A/F Spanner (supplied), re-assemble with thread lock. **Tighten to 10Nm**.
- 2 Make sure the castors swivel and the wheels rotate freely. If the free rotation of any castor is affected by threads, hairs or fibres the castor should be replaced as these are non-serviceable components. Lubricate if necessary with a light mineral based grease or food grade spray lubricant.
- 3 Check all four castors are seated firmly on the ground.
- 4 Check the action of the brakes on the rear castors. A foot-operated pedal activates the brake. Check the brake pedal locks in place and that the castors do not rotate or swivel when the brakes are engaged.

NOTE: Before applying thread lock to any screw or bolt check it can be screwed into the component without hindrance from old remaining thread lock. This could affect the proper torque setting.

Front Castors

- 1 Check the front castors are firmly fixed to the legs.
- 2 Ensure the castors swivel and the wheels rotate freely. If the free rotation of any castor is affected by threads, hairs or fibres the castor should be replaced as these are non-serviceable components.
- 3 To remove a loose or damaged castor, first remove the two M6 button head screws under the leg that secure the front leg insert.
- 4 Pull the insert out of the leg and push the rubber protective jacket (it may require a tap with a soft mallet from the back to loosen it) down the castor housing insert far enough to enable the castor nut to become accessible to a 21mm A/F Spanner (supplied) and remove the castor.
- 5 Re-assemble with thread lock. **Tighten to 10Nm**.
- 6 Check all four castors are seated firmly on the ground.

NOTE: Before applying thread lock to any screw or bolt check, it can be screwed into the component without hindrance from old remaining thread lock. This could affect the proper torque setting.

Fault Finding

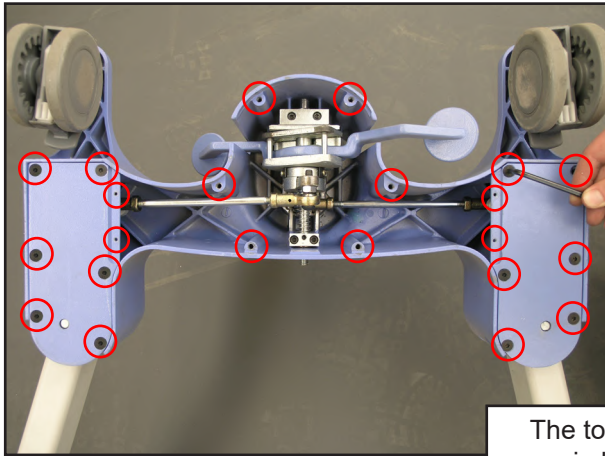
• Problem - Hoist not working

Possible Fault	Remedy
Emergency stop switch activated	Can be identified by a blank display panel. Turn red button clockwise and release.
Flat batteries	Can be identified by a display panel that will have none of the 3 segments illuminated (audible beep should have been heard prior to this).
Power supply disconnected (detachable battery packs)	Push battery into place until a CLICK can be heard and ensure display illuminates.
Completely flat batteries (discharged beyond recovery)	Replace batteries.

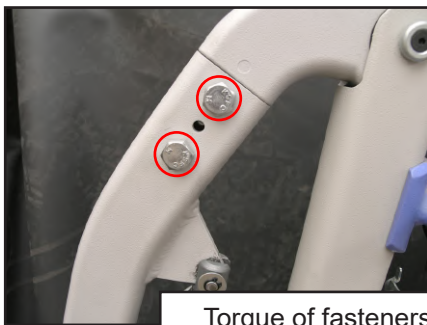
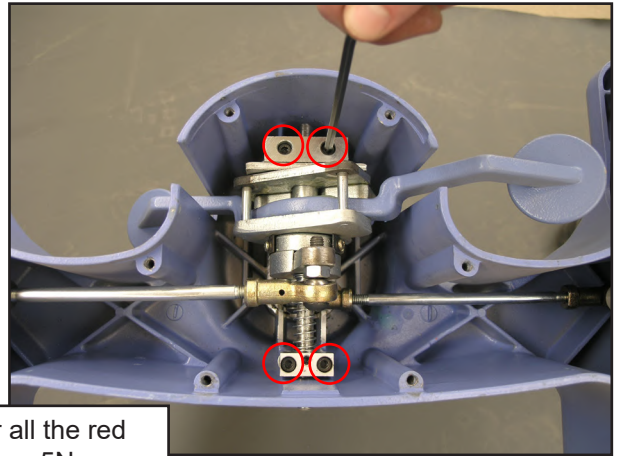
• Problem - Hoist won't go up or won't go down

Possible Fault	Remedy
Hand control plug not fully engaged	Push plug firmly into socket (in an emergency use of the Emergency raise and lower function on the control box will suffice)
Wiring in hand control plug detached	Replace hand control + as above
Hand control switches not working	Replace hand control + as above
Wires detached inside handset	Replace hand control + as above
Hand control socket damaged	Replace control box
Relay on control board inoperative	Replace control box
Defective actuator	Replace actuator
Anti-crush micro switch activated (safety device)	Check for correct function of micro switch or remove any obstacle that may have come between the boom as it was lowering
Actuator jack plug disconnected	Checkout plug and re-connect
Actuator socket damaged	Replace control box

Torque Settings

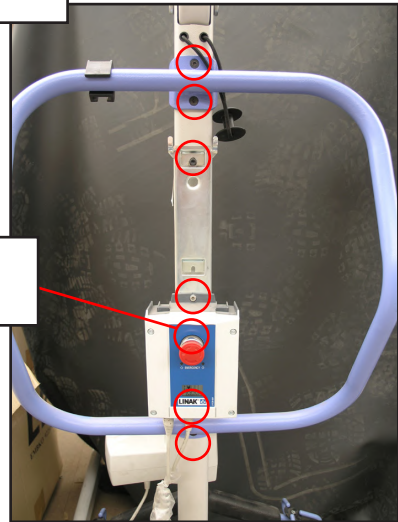


The torque value for all the red circled fasteners are 5Nm



Torque of fasteners in picture are 15Nm

There is 1 screw beneath the controller

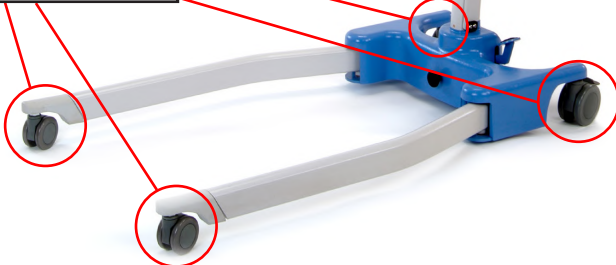


The torque here is 5Nm



The torque here is 5Nm

Torque for all the front and rear castors are 10Nm



All these screws are thread locked except the boom bolts as they have Nyloc nuts

Leg Locking Mechanism - Inspection and Re-Assembly

When inspecting or re-assembling either the leg locking knob or leg locking mechanism, see Fig 1 & 2, on the Oxford Advance lift, it is imperative to ensure the legs open and close correctly when the foot pedals are operated.



Fig. 1



Fig. 2

When re-assembling the leg locking knob to the M10 threaded steel shaft, ensure it is **ONLY** tightened to the position where the rear of the knob moulding just contacts the adjacent base casting of the lift, see Fig 3.

Once the correct positioning of the knob is achieved, securely tighten the M4 x 5mm grub screw, see Fig 4.

⚠ WARNING

If the leg locking knob is continually tightened after contacting the base casting, it could compromise the engagement of the leg locking mechanism, See Fig 5 & 6, and in extreme circumstances, the legs may close without warning and jeopardise the safety of the patient/care giver.



Fig. 3



Fig. 4

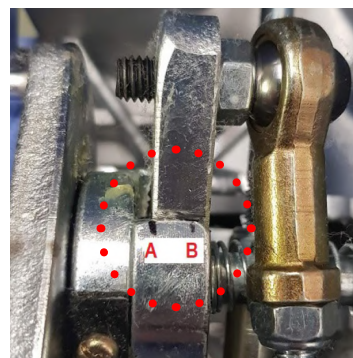


Fig. 5

Position shown when locking knob is correctly tightened

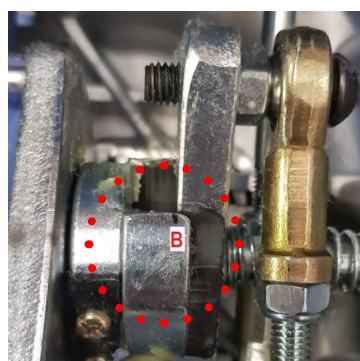


Fig. 6

Position shown when locking knob is over tightened

LOLER: Thorough Examination Report

Lifting Operations and Lifting Equipment Regulations 1998 Schedule 1

Client Name & Address: _____
_____ Tel: _____

Address of Examination: _____

Model: _____ Serial No. _____ Date of Manu. _____

Date of Last Examination: _____ Safe Working Load: _____

Commissioning Examination Yes No Safe to Operate? Yes No N/A

Periodic Examination Yes No

Interval of Examination 6 Months 12 Months Examination Scheme Exceptional

Number of Lift Cycles _____ Number of Lift Overloads _____

Safe to Operate? Yes No N/A

Defective Parts (Immediate Attention)

Part Number	Description	Defect	Action taken

Defects requiring rectification at a later date

Part Number	Description	Defect	Action taken	Latest Date

Next Examination due date:

Load Test conducted according to BS EN ISO 10535 Other (state)

Thorough Examination carried out Date

Name of Examiner Job Title

On Behalf of (Company/Organisation)

Address

.....

.....

Signed..... Signed on behalf

Name & Address

.....

Date of Report.....

Notes:

Distributor

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