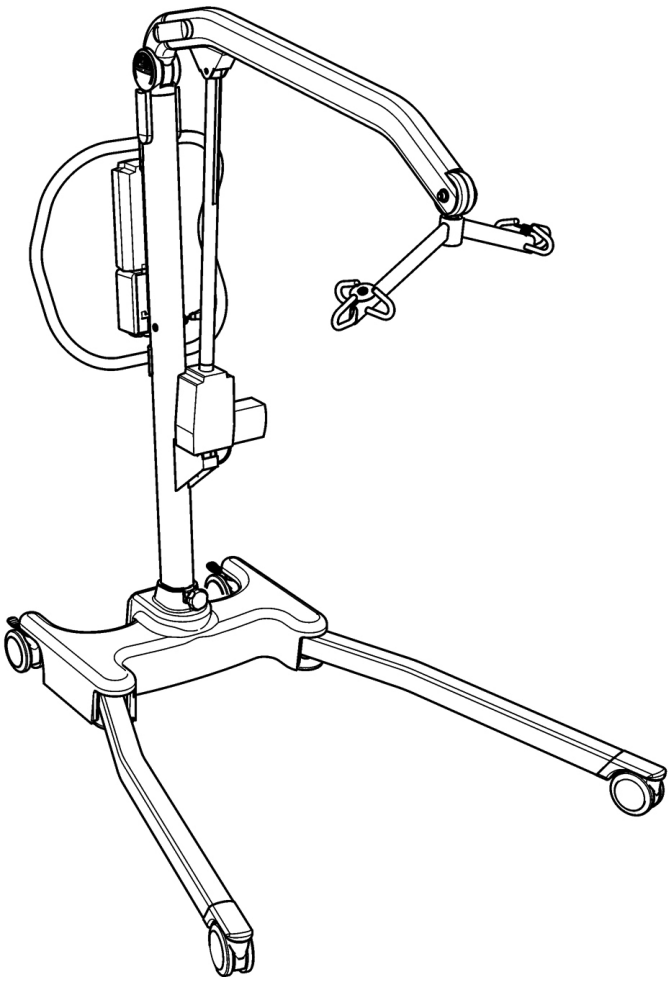
Joerns Oxford®

Service Manual

Oxford® Presence



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Inspection Criteria

Joerns Healthcare Ltd recommends a thorough inspection and test of the Oxford Presence 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 only authorised service dealers should carry out maintenance, inspection and certified testing.

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.
- Check the presence and condition of the wear washer.
- Check for wear on the central pivot. Lubricate with a light mineral based grease or food grade spray lubricant.
- Check for firm attachment to the boom.
- Check the security tab is visible on the security pin.
- Examine sling strap retainers (if present). Check for effective function.
- Check for adequate padding and that the padding is not damaged.
- Inspect for excessive wear on the sling hooks and any side suspenders used in conjunction with the spreader bar.
- Maintenance: Lubricate main suspension point and central pivot as necessary with a light mineral based grease or food grade spray lubricant.

Boom

- Check for wear in the spreader bar fulcrum pin mounting hole.
- 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/boom pivot.
- Check the boom is in alignment with the centre-line of the hoist.
- Check the security and for wear on the actuator unit, mounting pin and mounting bracket on the boom.
- **(Any excessive movement or play of the actuator must be investigated).**

Mast

- Check for secure attachment of the handle bar to the mast.
- Confirm the presence and the proper location of the mast engagement label.
- Check the operation of the mast-locking device.
- Make sure the mast fully engages into the base socket.
- Check for wear on the actuator unit mounting, mounting pin 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 and power pack to the mounting plate.
- Check the function of the Emergency Stop button.
- Check the hand control for correct functioning in both directions, i.e. lift and lower.
- 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.

Electric Leg Adjustment

- Operate the leg opening buttons on the hand control and check the legs open and close correctly.
- Check the legs are locked when the hand control button is released.

Leg Pivots (Standard and Low Leg Variants)

- 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 excess 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 (Standard and Low Leg Variants)

- 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.
- Ensure load bearing washer is positioned between front castors and leg of hoist (Standard leg variant only).

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.
- Confirm anti-crush precautions are operational.
- Confirm power cut-out at the ends of travel, both upper and lower.
- Listen for unusual noise which may indicate imminent breakdown.
- Lubricate the upper and lower mounting fulcrum pins with a light mineral based grease or food grade spray lubricant.
- Check for wear on the mounting boss top and bottom.
- 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 in the power pack 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.

Testing

Load Testing

The load test should be carried out in accordance with the manufacturer's test procedures. It is strongly recommended that an authorised service dealer carry out the test.

General

Periodic inspection and any needed maintenance of the hoist and body-support unit shall be performed according to the manufacturer's instructions. In general, an annual inspection is advised on the critical parts.

NOTE: Inspection and maintenance can be carried out simultaneously.

Inspection of Hoists

Inspection of mobile hoists shall include a full lifting cycle with maximum load of the hoist.

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:

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.

The manufacturer recommends the following testing is performed, as a minimum, at 12 monthly intervals.

1 Load Raising Test

This test is a straightforward lift of a load the equivalent to the Safe Working Load (SWL) 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).

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 Presence

SWL: 227kgs/500lbs.

NOTE: The load for calibrating the service monitor is 206kg.

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.

Tools Required

- Calibration handset
- 21mm A/F spanner (for the front and rear castors)
- 19mm or ¾ inch A/F spanner (for the mast and boom fixing bolts)
- 9/16 inch A/F spanner + ¼ hex key (for the mast/boom pivot)
- ½ inch A/F spanner + 3/16 hex key (for the lift and leg actuator bolts)
- 4mm hex key (for other fixings)
- T27 torx driver (to remove and re-assemble the base plate)
- Medium strength threadlock (BLUE) type
- Small flat blade screwdriver
- Number 2 pozi-drive screwdriver (for the front castors on the low leg variant only)
- Calibrated torque wrench (0 - 25 Nm)

Spreader Bar

1 The spreader bar fulcrum pin is held in place with a security pin that runs through a steel outer sleeve. Remove the security pin by depressing the security tab on the one end of the pin using a small flat blade screwdriver and withdraw it from the other side.

2 Examine the pin for signs of wear and for any damage or deformation of the security tab. The diameter of the pin is 9.4mm. Reduction in diameter due to **wear must not exceed 1mm** before replacement.

CAUTION: Support the spreader bar prior to removal of the outer sleeve.

3 Withdraw the outer sleeve bush from the locating hole in the boom. Inspect the outer sleeve for wear.

NOTE: For booms that **are not** fitted with the later nylon wear bushes, the nominal diameter of the outer sleeve is 16.0mm.

For later booms that **are** fitted with the nylon wear bushes, the nominal diameter of the outer sleeve is 14.0mm.

In either example, **reduction in diameter** due to wear **must not exceed 1mm before replacement.**

4 Withdraw the spreader bar from the boom and remove the two black plastic ‘Cam-shell’ shrouds from the spreader bar central pivot and examine for damage. The shrouds are an important guard against finger traps. Ensure they perform this function. Discard and replace if necessary.

WARNING: The hoist must not be used if the shrouds are not present.

5 Examine the cross-hole in the spreader bar central pivot. The nominal diameter of the cross-hole is 16.0mm. **Wear should not exceed 1.0mm in diameter or 2mm elongation before replacement.**

6 Remove the padded rubber moulding from the spreader bar. The moulding is split along the bottom edge and should pull off the spreader bar quite easily.

7 Examine the padded rubber moulding for damage. If any damage is evident, the padded moulding should be renewed (Infection control).

8 Remove and retain the ‘O’ ring which retains the spreader bar central pivot in the spreader bar central boss.

9 Check for presence and the condition of the acetyl wear washer which sits on the shoulder of the spreader bar central pivot. The purpose of the wear washer is to prevent metal to metal contact between the shoulder of the central pivot and the spreader bar central boss. If the wear washer shows any signs of damage or wear or is not present at all it should be replaced.

Boom End - Spreader Bar Fulcrum Pin Locating Cross-Hole

Earlier Type - Without the Wear Bushes (Pre Serial Number 1511L1605)

NOTE: The nominal diameter of the cross-hole is 16.0mm.

10 Accurately measure the size of the cross-hole using a vernier calliper.

11 If the size of the cross-hole measures between 16.0mm and 18.0mm, Joerns Healthcare will supply, free of charge, a replacement quick release pin / bush kit (part number 0YJH009400) which should be fitted as soon as possible to the cross-hole in the boom. This will prevent further wear. Installation instructions can be found in Appendix A of this manual.

12 If any elongation/ovality of the cross-hole exceeds 18.0mm and the hoist is less than five years old, Joerns Healthcare will support the free replacement of the boom and quick release pin/bush components.

NOTE: Evidence that elongation/ovality of the cross-hole has exceeded 18.0mm will be required before replacement components can be supplied.

13 If the hoist is more than five years old, and elongation/ovality of the cross-hole exceeds 18.0mm, this would be considered 'fair wear and tear' and it is recommended the boom, quick release pin and bush are replaced at cost.

14 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.**

15 **IMPORTANT:** Side suspenders are often used in conjunction with the lift spreader bar. These may be stored away from the lift. It is important that 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 2mm before replacement.**

16 Examine all welded joints on the spreader bar for hair line cracks. If any welds are suspect, replace the spreader bar.

17 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.

18 If the screws are loose they should be **tightened (after reapplying threadlock) to 5Nm.**

NOTE: If the retainers are missing they should be replaced.

Later Type - Wear Bushes Fitted (Post Serial Number 1511L1604)

10 Examine the left and right wear bushes for damage or wear. If damage or wear is evident the bushes, outer sleeve and security pin must be renewed (part number 0YJH009400).

11 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.**

12 **IMPORTANT:** Side suspenders are often used in conjunction with the lift spreader bar. These may be stored away from the lift. It is important that 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 2mm before replacement.**

13 Examine all welded joints on the spreader bar for hair line cracks. If any welds are suspect, replace the spreader bar.

14 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.

15 If the screws are loose they should be **tightened (after reapplying threadlock) to 5Nm.**

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:

NOTE: Installation instructions can also be found in Appendix A of this manual.

1. Lubricate the spreader bar central pivot and the outer sleeve with a light mineral based grease or food grade spray lubricant, paying particular attention to the central pivot shoulder (on which the wear washer sits), the underside of the spreader bar central boss and the cross-hole in the central pivot.
2. Fit the central pivot to the spreader bar central boss, ensuring the acetyl 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. If the boom is the later type fitted with the wear bushes, insert the nylon bush through the cross-hole in the spreader bar central pivot.
5. Carefully fit the plastic ‘Cam-shell’ shroud mouldings to the spreader bar central pivot.
6. Align the hole in the plastic ‘Cam-shell’ shroud mouldings (and the nylon bush, if fitted) with the boom cross-hole.
7. Insert the outer sleeve through the hole in boom cross-hole, the ‘Cam-shell’ shrouds (and the nylon bush, if fitted).
8. Insert the security pin through the outer sleeve. **Ensure the spring loaded tab locks through the outer sleeve.**

   IMPORTANT: When assembling a spreader bar outer sleeve and security pin to the boom, always ensure the outer sleeve is correctly located through the cross-hole in the spreader bar central pivot and the security pin is securely locked in position in the outer sleeve. Additionally, ensure the acetyl wear washer is correctly fitted to the spreader bar central pivot.

Boom

1. Remove the grey plastic covers from the top of the boom. The covers are a push on fit. Remove the covers by gently levering with a small flat blade screwdriver between the boom and the covers.
2. Check the two M12 hexagon headed bolts that hold the boom pivot casting are **fully tightened to 15Nm**.
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 the set pin from the actuator bracket.
6. Examine the pin for signs of wear. The diameter of the fulcrum pin is 9.5mm. Reduction in diameter due to **wear must not exceed 1mm** before replacement.
7. Remove the outer sleeve bush from the boom bracket and actuator top while holding the actuator, carefully lower the actuator to the ground. (Take care not to lose the nylon spacers on either side of the actuator on the inside wall of the boom).
8. Examine the outer sleeve bush for wear. **This should not exceed 1mm**.
9. Examine the actuator mounting on the boom for wear on the bore of the bracket. **This should not exceed 2mm**.
10. Examine the actuator top for wear. **This should not exceed 1mm**.
11. Examine the split bushes for wear. **This should not exceed 0.5mm.**
12. Lubricate the fulcrum pin and sleeve with a light mineral based grease or food grade spray lubricant.
13. Reassemble the actuator to the boom bracket by replacing the sleeve, plastic washers, set pin and nut.
14. **Tighten the Nyloc nut to 5Nm**.

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

ALWAYS tighten fasteners to the correct torque setting.

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 Remove the plastic Joerns logo covers from the boom pivot.

3 Check the set pin is **tightened to 12Nm** and replace the plastic Joerns logo covers from the boom pivot.

Removal of the Mast/Boom Pivot

Construction of the mast/boom pivot comprises of 8 components: 1 off 2.125ins x 0.500ins x 3/8BSW set pin, 1 off 3/8BSW Nyloc nut, 2 off 25mm x 13mm x 2mm steel washers, 1 off 20mm O/D outer sleeve, 2 off 80mm x 1.5mm plastic pivot bearing washers and 1 off boom pivot casting.

1 To remove the boom pivot it is advisable to first remove the two M12 bolts from the boom end and then remove the boom. Place on one side for reassembly. This will enable the pivot to be removed and replaced more easily.

2 The boom pivot is held in place with a set pin.

3 Remove the pin.

4 Examine the pin for signs of wear. The diameter of the pin is 12.7mm. Reduction in diameter due to **wear must not exceed 1mm** before replacement.

5 Withdraw the outer sleeve bush from the boom pivot (if you did not remove the two M12 bolts, hold the boom while doing this as it may fall forwards).

6 Inspect the sleeve for wear as per the fulcrum pin.

7 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 because of wear on the washers.

8 Examine the mast/pivot casting, the pivot's internal bore and the holes in the mast for wear or damage. The bore and holes are 20mm in diameter. **Wear should not exceed 1mm on diameter** before replacement.

Re-Assembling the Mast/Boom Pivot

After performing all the actions and checks in section 5 reassemble the mast/boom pivot as follows:

1 Lubricate the set pin and sleeve with any light mineral based grease or food grade spray lubricant, paying particular attention to the bearing washers and the boom pivot's internal bore.

2 Insert one end of the outer sleeve into the hole on one side of the mast.

3 Refit the boom pivot and one bearing washer into the top of the mast.

4 Align the holes in the mast, bearing washer and boom pivot.

5 Insert the sleeve into the holes and ensure it passes into the boom hole on the opposite side.

6 Pull back the sleeve until it is inside the pivot.

7 Insert the remaining bearing washer between the pivot and the inside of the mast.

8 Line up the hole of the washer with the bore of the pivot and push the sleeve through the washer and into the boom.

9 Insert the set pin into the sleeve including the steel washers and fasten the Nyloc nut. **Tighten to 15Nm**.

10 Insert the boom pivot into the boom and refit the 12mm bolts. Refit the M12 Nyloc nuts. (See note below). **Tighten each bolt to 15Nm**.

11 Replace plastic covers.

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

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

ALWAYS tighten fasteners to the correct torque setting.

Mast

1. Remove the grey plastic covers from the top of the mast. The covers are a push on fit. Remove the covers by gently levering a small flat blade screwdriver between the mast and the covers.
2. Check the two M12 hexagon headed bolts that hold the boom pivot casting are **fully tightened to 15Nm**.
3. Replace the grey plastic covers to the mast.
4. 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**.
5. Examine the actuator mounting point for damage or wear.
6. Lubricate the fulcrum pin with a light mineral based grease or food grade spray lubricant.
7. Without taking the mounting apart, check for signs of wear on the set pin.
8. 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:
9. Remove the set pin that secures the actuator to the mast bracket.
10. Examine the pin for signs of wear. The diameter of the set pin is 9.5mm. Reduction in diameter due to **wear must not exceed 1mm** before replacement.
11. Remove the outer sleeve bush from the mast bracket and actuator mounting boss while holding the actuator, carefully lower the actuator and boom to the ground.
12. Examine the outer sleeve bush for wear. **This should not exceed 1mm**.
13. Examine the actuator mounting bracket on the mast for wear on the bore of the bracket. **This should not exceed 1mm**.
14. Examine the actuator bottom mounting boss for wear. **This should not exceed 1mm**.

After performing all the actions and checks reassemble the actuator to the mast as follows:

1. Lubricate the set pin and sleeve with any light mineral based grease or food grade spray lubricant, paying particular attention to the bearing washers and the boom pivots internal bore.
2. Replace the pin and sleeve through the actuator and mast bracket.
3. Replace washer and Nyloc nut. **Tighten to 15Nm**.
4. Confirm the presence and the proper location of the engagement label.
5. Check the mast is fully engaged as per the engagement label.
6. Check the engagement of the mast locking knob.
7. Confirm the mast will lift from the mast socket when the locking knob is unscrewed.
8. Check the electric leg opening contact assembly for secure fitment and damage or wear.

NOTE 1: It is most important that the set pin and sleeve assemblies are re-assembled carefully. Check to ensure complete security.

NOTE 2: Joerns Healthcare recommends Nyloc nuts should always be renewed if undone.

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

ALWAYS tighten fasteners to the correct torque setting.

Battery Pack & 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 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 plugs are 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. Press the leg open and close buttons and confirm the legs move in either direction.
7. 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.
8. 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.
9. 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 - Legs/Leg Pivot Pins (Standard and Low Leg Variants)

1. Check the leg pivots are secure and **tightened to 5Nm** and the legs pivot freely. Any stiffness must be investigated.
2. Check that there is no excessive play in the leg pivots.
3. Support the underside of the cross member so the front castors are off the floor and check the up and down movement of the leg. Movement in excess of 5mm is not acceptable and the pivot should be stripped down for closer inspection.
4. Removal of the legs/leg pivots can be done as follows:
5. To perform a service inspection of the cross-member, removal of the mast and boom assembly is required. Remove the mast locking knob. The mast and boom assembly can then be lifted out of the mast socket in the cross-member and set aside.
6. Turn the lift base upside down and unscrew the 24 off M6 CSK head screws that secure the base plate to the cross-member.

7 Remove the base plate.
8 To enable the leg pivot pin to be inspected, it will be necessary to remove the set pin that holds the piston end of the actuator in place on the cross-member. Once the pin is removed the leg and the actuator can be lifted free from the cross-member.
9 Remove the leg and actuator taking care not to lose the bronze bearing washers at each end of the leg pivot pin.

NOTE: Support the actuator to prevent damage to the mounting point still attached to the leg. If any work is to be done on the leg, it is safer to remove the actuator.

10 The leg pivot pin can now be withdrawn and inspected.
11 Clean the pin of any debris or replace the pin if worn.
12 Inspect the leg pivot bush in the leg. Clean the bush in the leg of any debris or replace the leg if it is worn.

Re-Assembly of the Leg Pivot Pins (Standard and Low Leg Variants)

1 Lubricate the leg pivot pin with any light mineral based grease or food grade spray lubricant.
2 Place one of the bronze washers over the hole in the main base casting of the cross-member.
3 Refit the leg pivot pin into the main base casting, ensuring the deeper shoulder of the pin is inserted into the recess in the cross-member.
4 Position he leg over the leg pivot pin.
5 Place remaining bronze washer over the leg pivot pin so that it rests on the surface of the leg bush.
6 Replace the set pin **(after applying threadlock)** that secures the actuator piston to the centre of the cross-member. **Tighten to 5Nm**.
7 Replace the base plate.
8 Apply thread lock to the M6 CSK screws. **Tighten to 5Nm**.
9 Ensure the leg actuators open and close the legs correctly.

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

Cross-member - Leg Actuators

1 To remove the actuators you will need to remove the base plate and leg assemblies as per the procedure in section **CROSS-MEMBER - LEGS/LEG PIVOT PINS**.
2 The set pins can now be removed from the leg end on the actuators.
3 Disconnect the bullet connectors on the wiring looms to remove the actuators from the hoist.
4 After inspection or replacement, reconnect the bullet connectors.
5 Refit the set pin and Nyloc nut for the actuator on the leg end first. **Tighten to 5Nm**.
6 Replace the set pin **(after applying threadlock)** that secures the actuator piston to the centre of the cross-member. **Tighten to 5Nm**.
7 Replace the base plate.
8 Apply threadlock to the M6 CSK screws. **Tighten to 5Nm**.
9 Ensure the leg actuators open and close the legs correctly.

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

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

Rear Castors (Standard and Low Leg Variants)

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 threadlock to any screw or bolt check it can be screwed into the component without hindrance from old remaining threadlock. This could affect the proper torque setting.

Front Castors (Standard Leg Variants Only)

1. Check the front castors are firmly fixed to the legs. Remove any loose castors with a 21mm A/F spanner (supplied), re-assemble with threadlock. **Tighten to 10Nm**. Ensure load bearing washer is positioned between castor and leg of hoist.
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.

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

Front Castors (Low Leg Variant Only)

1. Check the front castors are firmly fixed to the legs. Remove any loose castors with a number 2 pozi-drive screwdriver, re-assemble with threadlock. **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.

NOTE 1: Before applying threadlock to any screw or bolt check it can be screwed into the component without hindrance from any old remaining threadlock. This could affect the proper torque setting.

NOTE 2: There is no load bearing washer between the castor and the leg on the low leg variant.

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 or anticlockwise (try both) and release.
Flat batteries.	Can be identified by a display panel that will have none of the three 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

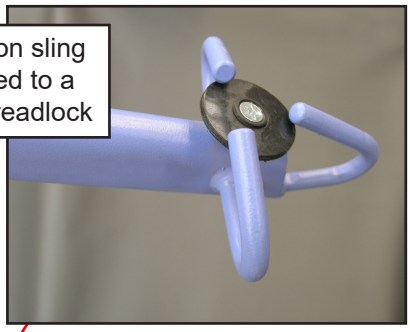
Possible Fault	Remedy
Hand control plug not fully engaged.	Push plug firmly into socket (in an emergency use of the Emergency raise and lower function on the control box will suffice).
Wiring in hand control plug detached.	Replace hand control + as above.
Hand control switches not working.	Replace hand 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.

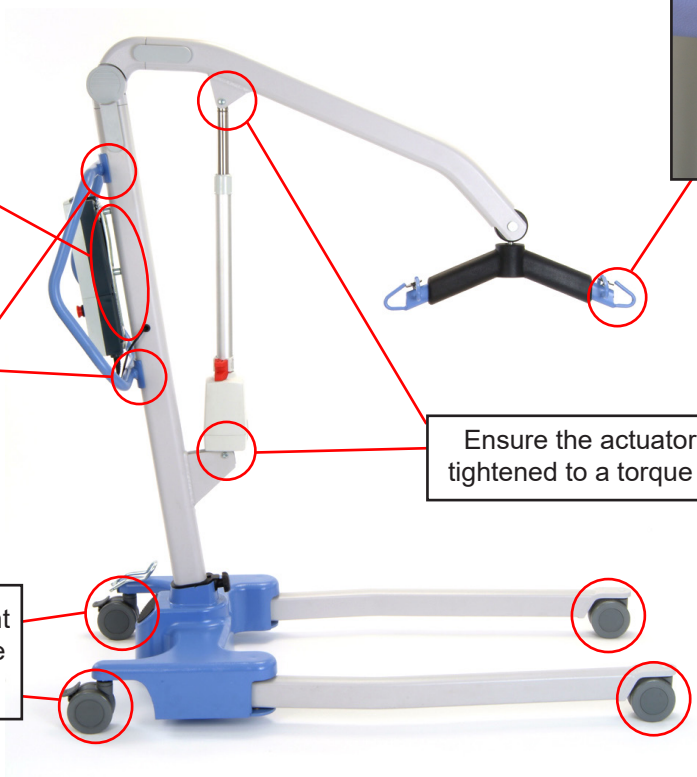
• Problem - Electric Leg Operation not working (one or both legs not moving)

Possible Fault	Remedy
Leg opening plug disconnected.	Re-connect.
Actuator disconnected from leg or centre of mounting.	Re-assemble, replace mounting bolts.
Actuator defective.	Replace actuator.
Power coupling in mast base defective.	Replace coupling.

Ensure all 3 bolts on battery bracket are tightened to a torque of 5Nm with threadlock

Ensure the 2 screws on sling retainers are tightened to a torque of 5Nm with threadlock

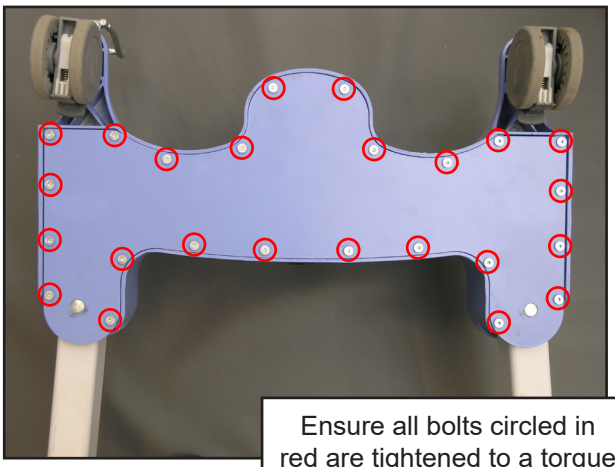




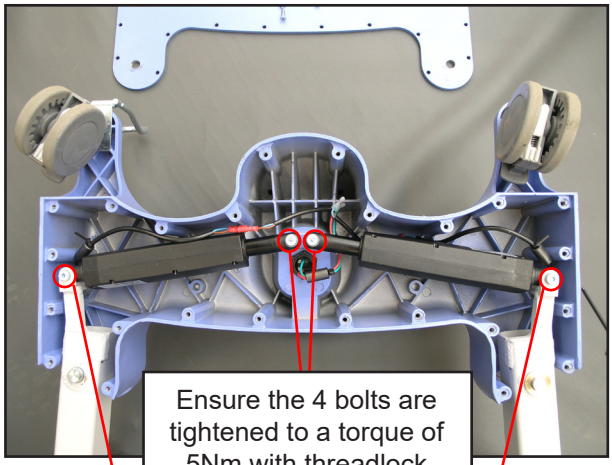
Ensure all 4 bolts on handle frame are tightened to a torque of 5Nm with threadlock

Ensure the actuator fixing bolts and Nyloc nuts are tightened to a torque of 15Nm. Do not use threadlock

Ensure all 4 castor stems (front and rear) tightened to a torque of 10Nm with threadlock



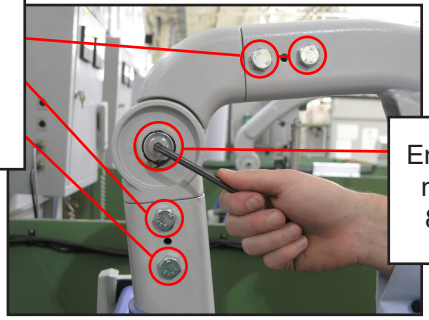
Ensure all bolts circled in red are tightened to a torque of 5Nm with threadlock



Ensure the 4 bolts are tightened to a torque of 5Nm with threadlock

Ensure these 2 bolts are tightened to a torque of 8Nm without threadlock.

Ensure these 4 fixing bolts and Nyloc nuts are tightened to a torque of 15Nm. Do not use threadlock.



Ensure the fixing bolt and Nyloc nut is tightened to a torque of 8Nm. Do not use threadlock.

LOLER: Thorough Examination Report

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 ……..……

……..……..

……..……

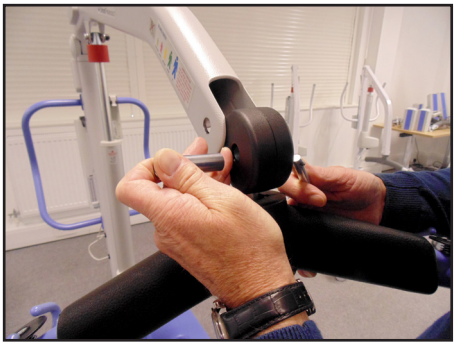
Signed……..…… **Signed on behalf** ……..……..

Name & Address ……..……..

……..……..

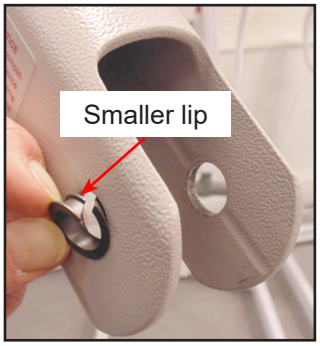
Date of Report……..…… ……..……..

Appendix A -
Quick Release Pin / Bush Kit Fitting Instructions



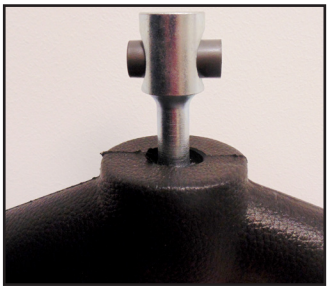
Withdraw the security pin and the outer sleeve bush, then remove the spreader bar.

NOTE: The spreader bar should be supported during this procedure.

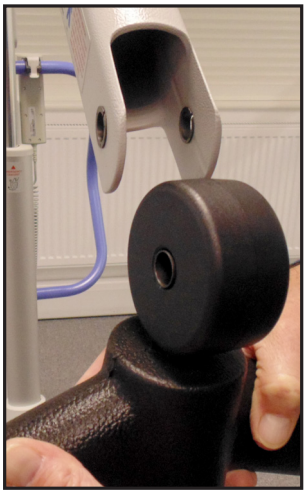


Insert the left hand bush using a spiral motion. Ensure the smaller lip is on the inside. Repeat for the right hand bush.

Bush shown inserted correctly.



Insert the nylon bush through the spreader bar central pivot.



Carefully fit the 'Cam-shell' mouldings around the nylon bush.

Align the nylon bush / 'Cam-shell' mouldings with the boom cross-hole and insert the outer sleeve supplied with the kit (0YJH0090).

NOTE: Do not use the original outer sleeve.

Insert the security pin supplied with the kit, through the outer sleeve **ensuring the spring loaded tab locks securely through the outer sleeve.**

NOTE: Discard the original security pin as it will be too short.

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