

OXFORD | HOYER

Oxford®/Hoyer®

Adaptive Power Cradle

**Professional Series
SERVICE MANUAL**



CONTENTS

Pages 3 - 4

Inspection Criteria of the Oxford/Hoyer APC

Page 5

Testing of the Oxford/Hoyer APC

Pages 6 - 11

Service and Maintenance Schedule for the Oxford/Hoyer APC

Pages 12 - 14

Fault Finding

Page 15

Exploded View of the Oxford/Hoyer APC

Page 16

Parts List of the Oxford/Hoyer APC

Page 17

LOLER (UK only): Thorough Examination Report

Page 18 - 23

Appendix A

Page 24

Blank Notes Page

INSPECTION CRITERIA

Joerns Healthcare recommends a thorough inspection and test of the Oxford/Hoyer APC and its associated Lift, 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 recommends that authorized service dealers should carry out maintenance, inspection and certified testing only.

Note: These recommendations are in compliance with the requirements of Statutory Instrument 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.

FRAMEWORK

Check the cradle for freedom of rotation and swing.

Check for wear on the central pivot and wear washer. See **Fig. 1, Appendix A.**

Check the slick pin is correctly fitted and securely locating the fulcrum pin to the boom. See **Fig. 2, Appendix A.**

Check for adequate padding.

Check condition of the handgrip.

Check that the pivot nut is located onto the threaded stud. See **Fig. 3, Appendix A.**

Check wear on pivot joint washer. See **Fig. 4, Appendix A.**

Check Securi3 location pins are securely fitted to the frame. See **Fig. 5, Appendix A.**

Inspect for excessive wear on the Securi3 location pins.

Inspect all welded joints on the cradle frame.

Maintenance: - Lubricate main suspension point, centre pivot, and cradle pivot points as necessary.

ACTUATOR

The actuator should require no maintenance.

Check that the circlips are fitted to the actuator pivot pins and correctly located onto the pivot pins. See **Fig. 6, Appendix A.**

Check that the actuator operates in a smooth manner in both directions.

Confirm power cut-out at both ends of travel.

Check for the free movement of pivot points.

Check for wear on the mounting brackets and upper and lower pivot pins. **Fig. 7 and 8, Appendix A.**

Listen for unusual noise which may indicate future break down.

CONTROL BOX

Check that the control box is securely fitted to the cradle. The control box has a magnetic backing and one securing screw at the back. See **Fig. 9, Appendix A.**

Check that the contacts are clean within the control box area that houses the battery. See **Fig. 10, Appendix A.**

Check that the wire connections into the control box are correct and clipped in place. See **Fig. 12, Appendix A.**

BATTERY

Confirm the control box is not sounding audible low battery alarm when operating.

Check that the contacts are clean. **Fig. 13, Appendix A.**

Check that the casing is undamaged

Check that the battery locates correctly into the control box.

Check that the battery locates correctly into the charging unit.

INSPECTION CRITERIA

HAND SWITCH

Check the switch for correct functioning in both directions.

Check that the membrane switch is undamaged. See **Fig. 14 Appendix A**.

Check that the membrane switch is fully adhered to the handle. See **Fig. 14, Appendix A**.

If the handle plate has been removed, check that the O'ring seal is in good condition and located correctly in the handle plate. See **Fig. 15, Appendix A**.

Note: Silicone seal is required to be applied when replacing the handle plate. Refer to the servicing section.

Check that the Serial Number label is located on the handle plate and the details are clearly printed. See **Fig. 16, Appendix A**.

WIRE HARNESES

Check condition of the exposed wire cables.

Check condition of the cable connectors. Wires are to be securely located into the connectors and the connector covers fitted over the connectors. See **Fig. 17 and 18, Appendix A**.

Check that the grommets are securely fitted to the cradle frame and sealed with silicon. See **Fig. 19 and 20, Appendix A**.

Check that the cables are connected correctly to the control box. See **Fig. 21, Appendix A**.

CHARGING UNIT

Check that the charger, charger lead and charger plug is not damaged.

Confirm the charger unit is charging the battery pack.

Check mains plug is fitted with the correct rated fuse (when fitted).

Check the safety of the input and output lead wiring.

Check light indication function.

Light Colour	Light Mode	Indicates
Green	Blink	Charging battery
Amber	Constant	Defective battery or incorrect location of battery
Green	Constant	Battery charged

SLINGS AND ACCESSORIES

Confirm sling is an Oxford, or Hoyer Sling.

Check the load bearing straps and/or clips for wear or fraying.

Check the straps and/or clips are securely stitched.

Check the body of the sling for wear or cuts in the fabric.

Check any side suspenders for wear on the hooks or central suspension point.

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.

TESTING

LOAD TEST

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

Joerns Healthcare recommends that calibrated weights together with a suitable sling or stillage are utilised to conduct a weight test. Loads applied should be evenly distributed ensuring that the straps/securi3 clips are correctly attached.

The APC is to be tested in conjunction with the relevant hoist/lifter it is attached to. Refer to the relevant Service Manual for the hoist/lifter. However, since the APC is an accessory it may be fitted to hoists/lifters that have a different inspection schedule/period. In such cases the APC's inspection period/schedule must be adhered to.

The Oxford/Hoyer APC has been designed to the appropriate requirements of:

1. BS EN ISO 10535 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 exceeding the safe working load will affect the actuator's useful life.

2. BS EN ISO 10535 Load Raising Test

This test is a straightforward moving of a load the equivalent to the Safe Working Load, from the upright/sitting position to reclined/recumbent position of the APC.

3. TEST LOADS - OXFORD/HOYER APC

227kgs/500lbs

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.

4. 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 56) in the LOLER L113 publication.

Joerns Healthcare has prepared a Thorough Examination Report that includes all the required information and a copy can be found on page 14. Please feel free to use this as the basis of your own report.

Note: These recommendations are in compliance with the requirements of Statutory Instrument **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.

SERVICE & MAINTENANCE

TOOLS REQUIRED

- Electrician's screwdriver (*to remove slick pin*)
- Circlip pliers (*to remove the actuator*)
- Pozi screwdriver. (*to remove the control box from mounting bracket and switch plate cover*)
- 17mm A/F socket set (*to remove the nyloc nuts*)
- Vernier caliper (*to measure pin and hole diameter*)
- Silicon seal (*to seal re-wired areas*)
- Medium Strength Thread lock (BLUE) type

FRAMEWORK

- 1 The cradle fulcrum pin is held in place with a slic pin that runs through a steel outer sleeve. Remove the slic pin by depressing the security tab on the one end of the pin (an electricians screwdriver or similar type of flat bladed tool can be used), and withdraw it from the other side. See **Fig. 2, Appendix A**.
- 2 Examine the pin for signs of wear and for any deformation of the security tab. The diameter of the 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 cradle while doing this as the cradle may fall) inspect the sleeve for wear as per the pin. See **Fig. 2, Appendix A**.
- 4 Remove the black plastic shroud (2 piece) from the spreader bar pivot and examine for damage. Do not lose the pins located inside the shroud. The shroud is an important guard against finger traps. Make sure it will perform this function. Discard and replace if necessary.
- 5 Take off and retain the "O" ring that holds the main pivot in the cradle's central boss. Remove the main pivot from the cradle. See **Fig. 22 and 23, Appendix A**.
- 6 Examine the main pivot and the central boss for wear.
- 7 Main pivot: On the hoist, check for wear on the cross-hole for the fulcrum pin. The hole is 16mm in diameter; **wear should not exceed 1mm on diameter or 2mm elongation** before replacement. See **Fig. 2, Appendix A**.
- 8 Check the condition of the white/black 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 cradle assembly. If the washer shows any signs of deformation or wear it should be replaced. See **Fig. 2, Appendix A**.
- 9 Cradle sling mounting points: Check for wear. The sling mounting points are made from 7.5mm diameter material. Reduction in diameter by **wear should not be allowed to exceed 1mm before replacement**. See **Fig. 5, Appendix A**.
- 10 Remove the domed black plastic caps that cover the cradle pivot joints. See **Fig. 3 Appendix A**.
- 11 Check the 17mm A/F Nyloc nuts that hold the cradle to the central suspension assembly are tightened to 6NM. A minimum of one thread should be visible on the stud. See **Fig. 3, Appendix A**.
- 12 The cradle when tightened correctly should support a 5kg load or a force of 7N at the handle, and move smoothly on the central suspension assembly. Detachment of the actuator is required to enable this check to be conducted. Refer to the Actuator section.

SERVICE & MAINTENANCE

13 Lubricate the pivot joints with any light mineral-based grease, or silicon spray.

14 Remove the nyloc nut and washer from the stud. See **Fig. 24, Appendix A**

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

15 Separate the two frame pieces so that access to the pivot washer and observation on the stud and mechanical stop can be made. See **Fig. 25 to 28, Appendix A**

WARNING: When separating the two frame pieces care is needed not to trap fingers. See **Fig. 26, Appendix A**

16 Inspect the washer for wear. Check the stud and mechanical stop pin and mating channel. Replace any parts that show damage or significant wear.

17 Refit the washer to the frame and reassemble the two frame pieces.

18 Replace the washer and fit the new nyloc nut.

19 Replace the caps (ensure the cap snaps back into place).

After performing all the required actions and checks listed under "**FRAMEWORK**" (1 to 19) reassemble the cradle as follows:

20 Lubricate the main pivot, fulcrum pin and sleeve with any light mineral-based grease, or silicon spray, paying particular attention to the pivot shoulder, wear washer, and the fulcrum pin cross-hole.

21 Fit the main pivot to the spreader bar central boss. Refit the retaining "O" ring. Check rotation of the pivot in the boss.

22 Fit the black plastic shrouds to the cradle pivot and insert into the boom end. Ensure pins are fitted inside the plastic shrouds to assist assembly. Line up the holes in the boom, shrouds and pivot and insert the sleeve.

23 Insert the security pin into the outer sleeve ensuring, that the security tab is visible when it passes through the outer sleeve. An audible "click" should be heard as the tab springs into position.

NOTE: It is most important that the cradle assembly is carefully checked to ensure the wear washer is on the pivot, and the cradle is completely secure to the boom before leaving the hoist.

ACTUATOR

1 Examine the actuator mounting point. Without taking the mounting point apart check for signs of wear on the two mounting brackets and pivot pins. Check for excessive 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:

Removal of upper mounting:

2 Remove the circlip that secures the actuator pivot pin to the bracket and extract the pivot pin. See **Fig. 29 and 30, Appendix A**.

3 Examine the pivot pin for signs of wear and for firm attachment of the remaining circlip. The diameter of the pivot pin is 9.9mm. Reduction in diameter due to **wear must not exceed 1mm** before replacement. See **Fig. 31, Appendix A**.

SERVICE & MAINTENANCE

- 4 Examine the actuator mounting bracket on the cradle for wear on the bore of the Bracket. Diameter of the hole is 10mm **wear should not exceed 1mm on diameter or 2mm elongation.** See **Fig. 32, Appendix A.**
- 5 Examine the actuator top for wear. Diameter of the hole is 10mm **wear should not exceed 1mm on diameter or 2mm elongation.** See **Fig. 33, Appendix A.**
- 6 Replace the pivot pin through the actuator and cradle bracket.
- 7 Fix the fulcrum pin in place using a circlip. (Suitable for groove diameter 9.3mm - Spare kit 0Y0465)

Removal of lower mounting:

- 8 Removal of the lower mounting point is the same process as conducted for the upper mounting. See **Fig. 34 to 38, Appendix A.** However it may be required to extract some cable from the frame. If this is required refer to section **Wiring and Connections.**
- 9 Examine the pivot pin for signs of wear and for firm attachment of the remaining circlip. The diameter of the pivot pin is 9.9mm. Reduction in diameter due to **wear must not exceed 1mm** before replacement. See **Fig. 36, Appendix A.**
- 10 Examine the actuator mounting bracket on the cradle for wear on the bore of the Bracket. Diameter of the hole is 10mm **wear should not exceed 1mm on diameter or 2mm elongation.** See **Fig. 37, Appendix A.**
- 11 Examine the actuator bottom for wear. Diameter of the hole is 10mm **wear should not exceed 1mm on diameter or 2mm elongation.** See **Fig. 38, Appendix A.**
- 12 Removal of the actuator can be achieved after completing activities 2 and 8. Then remove the wire harness from the framework following instructions identified in the Wire and Connections section.

NOTE: Joerns Healthcare recommends:

NEVER reuse circlips.

ALWAYS use circlip pliers for fitting.

ENSURE the circlip is properly located in the groove.

CONTROL UNIT

- 1 Check the engagement of the controller with the mounting. The controller has a magnetic back that allows easy location onto the mounting bracket. The use of the screw at the back of the mounting plate ensures that the controller is securely fitted. To remove the control unit unplug the two connectors at the bottom (refer to next note) and remove location screw. See **Fig. 39, Appendix A.**
- 2 Check the connector plugs are inserted fully into the sockets on the base of the control unit. The controller is designed so that it does not matter which connector is fitted into the sockets. Removal of the connectors from the sockets is easily achieved by pressing down on the connector retaining clip and then pulling out the connector from the socket, holding onto the connector as this is done. Do not pull on the cable as this may damage the wire connection into the plug. See **Fig. 40 and 41, Appendix A.**
- 3 Check the contacts for the battery connection are clean and not damaged. See **Fig. 42, Appendix A.**

SERVICE & MAINTENANCE

- 4 Check the functionality of the audible signals. The signals are indicated with a long, short or multiple “beeps”.
- 4.1 **Power On** (Power is on when the battery is inserted): One extended “BEEP”
- 4.2 **Sleep Mode**: Two short “BEEPS”
- 4.3 **Low Battery**: Two short “BEEPS” repeated every 24 seconds. (charge battery)
- 4.4 **Start Operation**: Two “BEEPS” (low voltage, charge battery soon)
- 4.5 **During Operation**: One long BEEP (the battery charge is too low; only downward motion will be possible).

BATTERY

- 1 The battery service checks required can be conducted when servicing the control unit and the charger unit. Refer to relevant sections within this manual.
- 2 Check the contacts on the battery connection are clean and not damaged. See **Fig. 13, Appendix A**.
- 3 Check that the casing of the battery is undamaged. See **Fig. 43, Appendix A**.
- 4 It is recommended that the battery is kept fully charged. Place the battery on charge whenever it is not in use. If it is more convenient to do so, place on charge every night. The charger will not allow the battery to overcharge. Refer to Charger section of this manual for further details to prolong the life of the battery.

HAND SWITCH AND HOUSING

- 1 Check that the membrane switch is firmly located to the handle. The adhesive backed switch prevents ingress of dirt and fluids into the switch housing area. See **Fig. 14, Appendix A**.
- 2 Check that the membrane switch is not cracked.
- 3 Check the switch for correct functioning in both directions.
- 4 If the membrane switch requires replacing then peel off the switch from the housing. Gently pull out the attached ribbon cable and disconnect from the wire harness. See **Fig. 44 to 46, Appendix A**.
- 5 To replace with a new membrane switch. Clean the metal housing to remove any grease or dirt. Connect the connector on the membrane switch to the wire harness. Remove the protective backing off the membrane switch to expose the adhesive backing and carefully locate onto the housing. Ensure that no air bubbles occur when fitting and that the edges provide a seal onto the housing. See **Fig. 47 and 48, Appendix A**.
- 6 Remove the sealed plate from the housing by removing the two M3 pozi screws. See **Fig. 49, Appendix A**.
- 7 Examine the grommet seal for any sign of damage or distortion. This grommet seal provides ingress protection against dust and fluids. Replace grommet seal if required. See **Fig. 50, Appendix A**.

NOTE: It is required to use silicon seal around the grommet area.

SERVICE & MAINTENANCE

- 8 Examine the connection points of the membrane switch to the wire harness. Connections should be secure. Carefully remove insulation tape if it has been applied. See **Fig. 51, Appendix A**.
- 9 Examine internal housing for any fluid ingress or signs of accumulated liquids. Clean out any areas of retained liquid.
NOTE: Ensure appropriate personal protection before dealing with any fluid accumulation.
- 10 Refit grommet seal to plate and secure to housing using the two M3 screws.
NOTE: It is required to use silicon seal around the grommet area.

WIRING AND CONNECTIONS

- 1 Examine all exposed wires to ensure that the insulation is intact. See **Fig. 52 to 54, Appendix A**.
- 2 Examine all connectors to ensure that the wires are securely fitted to the connectors. See **Fig. 17, Appendix A**. Removal of the connectors from the sockets is easily achieved by pressing down on the connector retaining clip and then pulling out the connector from the socket, holding onto the connector as this is done. Do not pull on the cable as this may damage the wire connections into the plug. See **Fig. 40 and 41, Appendix A**.
- 3 The wiring is housed within the cradle framework to provide additional protection. If this requires to be removed the following procedure can be followed:
NOTE: The use of draw wires are recommended when requiring to replace any wiring.

Actuator cabling:

- 4.1 Carefully pull out the grommet from the cradle framework. See **Fig. 55, Appendix A**.
- 4.2 Carefully pull out the cable from the cradle framework. There will be some resistance as the two connectors at the end of the cable require to be fed through the hole in the cradle framework. See **Fig. 56, Appendix A**.
- 4.3 Disconnect the two connectors from the attaching wire harness, which is connected to the controller. See **Fig. 57, Appendix A**.
- 4.4 Replacing the actuator cabling is the reverse process to removal. The actuator comes complete with wires, connectors and grommet. Connect the connectors on the actuator wire to the wire harness connected to the control box. Feed through the wires with the connectors into the cradle framework and then fit in the grommet.
- 4.5 Apply silicon seal to the grommet at the cable entry point to provide a seal. See **Fig. 58, Appendix A**.

Control Unit/Switch cabling:

NOTE: The Cable harness that plugs into the Control Unit is one assembly that connects to both the actuator and the membrane switch in the handle. Connection points are identified in the Wire and Connections section for the actuator and in the Hand Switch and Housing section for the membrane switch.

- 5.1 Disconnect the two connectors from the Control Unit. Details identified in Control Unit section.
- 5.2 Disconnect the actuator from the cable harness. Refer to details in the Actuator cabling section.

SERVICE & MAINTENANCE

- 5.3** Remove the housing plate on the handle and disconnect the membrane switch. The membrane switch does not require removing when requiring the wire harness to be disconnected. After removing the housing plate, the wires are exposed to allow the connectors to be disconnected. See **Fig. 59 to 61, Appendix A**.

NOTE: Care must be taken with handling the ribbon cable to prevent damage.

- 5.4** Detach the grommet from the metal clip and carefully pull out the grommet from the cradle framework. See **Fig. 62 and 63, Appendix A**.
- 5.5** Carefully pull out the cable harness. The actuator cable is identified with the two red connectors. The Membrane Switch cable is identified by the 4 Pin connector. See **Fig. 64, Appendix A**.
- 5.6** To replace the cable harness re-insert the cabling into the frame and feed through the connectors to the appropriate holes to allow connection to the actuator and membrane switch.
- 5.7** Reconnect the actuator as previously instructed earlier in this section.
- 5.8** Reconnect the membrane switch and refit the housing plate. Ensure that wires are free from entrapment and that silicon seal has been applied around the grommet seal prior to securing the plate to the housing. Details are further explained in the Hand Switch and Housing section.

FAULT FINDING

The following are guidelines in determining the root cause of a problem. Should the fault not be identified then please contact Customer Services/Technical Support for further assistance.

PROBLEM: Actuator does not function in either direction.

Possible Fault	Remedy
Actuator is damaged	<ol style="list-style-type: none"> 1. Check that the battery is engaged into the controller correctly. 2. If actuator does not work then check that battery is charged sufficiently or replace with fully charged battery. 3. If not working disconnect from the controller and connect to new controller and re-check. If actuator works replace the original controller. 4. If actuator does not work then remove the actuator from it's mounting points and check if it works. If actuator works check all pivot points and lubricate/replace parts as required. 5. If actuator does not work then disconnect the actuator from the wire harness in the frame and connect to a new actuator. If actuator works replace the original actuator. 6. If actuator does not work then disconnect the handle switch from the wire harness and reconnect a new switch. If actuator works replace the handle switch. 7. If actuator does not work then connect the original actuator and controller to a new wire harness and test. If the actuator works replace the original wire harness.
Battery not engaged into controller correctly	
Battery is not charged sufficiently	
Controller is damaged	
Connector to the controller is disconnected	
Wire harness is damaged	
Handle switch is disconnected	
Handle switch is damaged	
Pivot Points are seized	

PROBLEM: Actuator making unusual noise.

Possible Fault	Remedy
Actuator is damaged	<ol style="list-style-type: none"> 1. Remove the actuator from the mounting points and check for free movement of the pivot points and the main pivot point for the cradle. Refit the actuator. 2. If the actuator continuous to make a similar noise remove the actuator from it's mounting points. Disconnect the actuator from the wire harness in the frame and connect to a new actuator. Refit to the mounting points and test.
Pivot Points are seized	

FAULT FINDING

PROBLEM: Cradle does not rotate. **DO NOT** continue using the cradle until problem is corrected.

Possible Fault	Remedy
Washer worn	<ol style="list-style-type: none"> 1. Remove the cradle from the hoist. Remove the O’ring from the pivot pin and remove the pin from the frame. Check the pin for damage and the washer for wear. Check the area of the frame where the pivot pin locates. Replace any damaged or worn parts identified. Refit the pivot pin to the cradle, refit the O’ring and locate onto the hoist. 2. If the cradle still fails to rotate then remove the cradle from the frame and contact Customer Services - DO NOT use the cradle.
Pin damaged	
Frame damaged	

PROBLEM: Controller making unusual noise.

First check that the noise is not part of the functionality of the charger - refer to the Control Unit section of the Service Manual for details.

Possible Fault	Remedy
Controller is damaged	<ol style="list-style-type: none"> 1. Remove the battery and disconnect the two connectors from the base of the controller. 2. Remove the securing screw and lift out the controller. The controller is fitted internally with a magnetic backing to assist location to the frame. Replace with a new controller.

PROBLEM: General unusual noise.

First check that the noise is not part of the functionality of the charger - refer to the Control Unit section of the Service Manual for details.

Possible Fault	Remedy
Actuator is damaged	<p>Determine where the noise is originating from. Pivot Pin attached to cradle and hoist - refer to fault finding for “Cradle does not rotate”.</p> <p>Actuator - refer to fault finding for “Actuator making unusual noise”.</p> <p>Controller - refer to fault finding for “Controller making unusual noise”.</p> <p>Other Pivot areas - refer to fault finding for “Actuator making unusual noise”.</p>
Actuator is damaged	
Pivot Points are seized	

FAULT FINDING

PROBLEM: Can't attach the sling to the Cradle.

First check that the correct type is being used for the Cradle. The slings must have Securi3 clips fitted.

Possible Fault	Remedy
Location Pins are damaged	<ol style="list-style-type: none"> 1. Check location pins for damage or wear. If identified as damaged or worn then a replacement frame is required. 2. Check the securi3 clips on the sling for damage or wear. If identified as damaged or worn then a replacement sling is required.
Securi3 clips are damaged	

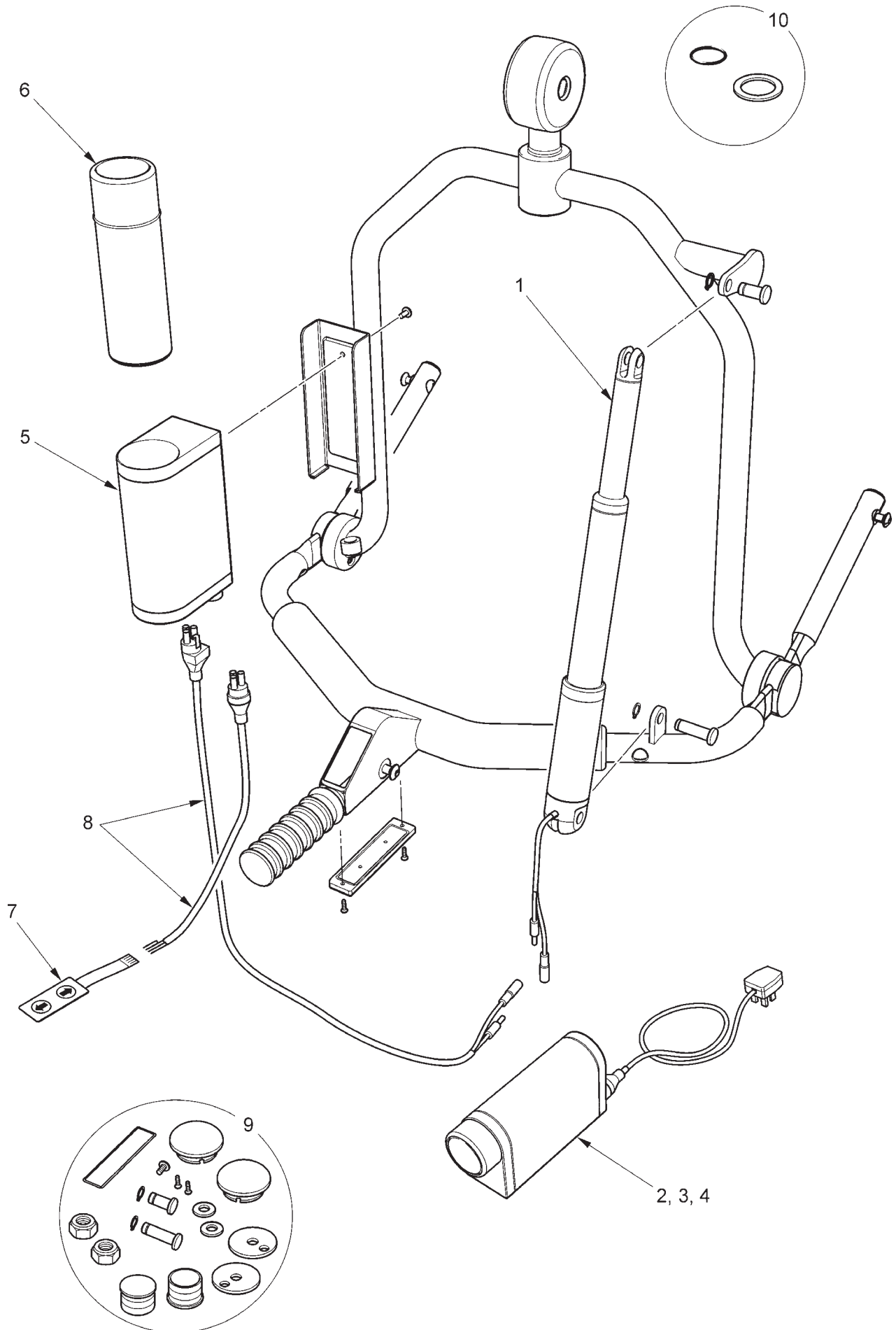
PROBLEM: Black debris identified around the pivot pin locating the cradle to the hoist. **DO NOT** continue using the cradle until problem is corrected.

Possible Fault	Remedy
Washer worn	<ol style="list-style-type: none"> 1. Remove the cradle from the hoist. Remove the O'ring from the pivot pin and remove the pin from the frame. Check the pin for damage and the washer for wear. Check the area of the frame where the pivot pin locates. Replace any damaged or worn parts identified. Refit the pivot pin to the cradle, refit the O'ring and locate onto the hoist.
Pin damaged	
Frame damaged	

PROBLEM: Black debris identified around the actuator and/or actuator mounting points.

Possible Fault	Remedy
Actuator is damaged	<ol style="list-style-type: none"> 1. Refer to Actuator heading in the Service and Maintenance section. 2. Remove the actuator from its mounting points and check for wear on the end location holes. Replace actuator if identified as damaged/worn. 3. Check actuator for smooth running. If identified as faulty then replace the actuator. Check the pivot pins and replace if identified as damaged or worn.
Mounting Points are seized	

EXPLODED VIEW



PARTS LIST

No.	Part No.	Description
1.	0Y0457	Actuator
2.	0Y0459	Battery Charger (UK)
3.	0Y0460	Battery Charger (EU)
4.	0Y0458	Battery Charger (US)
5.	0Y0461	Control Box
6.	0Y0462	Battery
7.	0Y0463	Hand Switch Assembly
8.	0Y0464	Wire Harness between control box, actuator and switch
9.	0Y0465	Hardware (Fixings)
10.	0Y0380	Washer and O-ring kit

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

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 5827 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 _____

Date of Report _____

Name & address _____

APPENDIX A

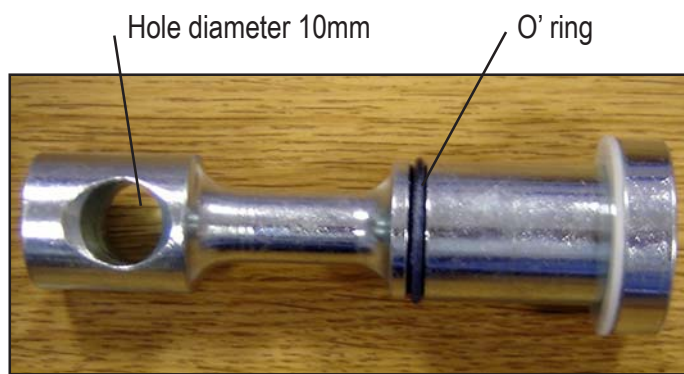


FIG. 1A
Fulcrum Pin

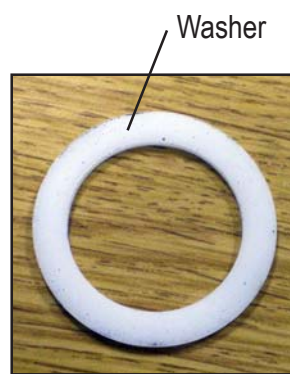


FIG. 1B



FIG. 1C

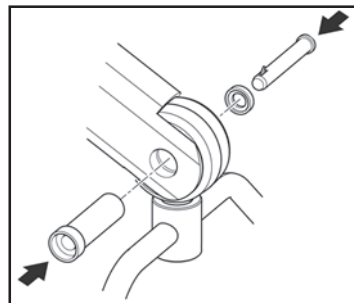


FIG. 2A
Slic Pin

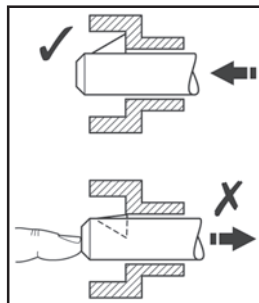


FIG. 2B



FIG. 3
Frame Pivot Area



FIG. 4



FIG. 5A
Securi3 Location Pins



FIG. 5B



FIG. 6A



FIG. 6B



FIG. 7A
Mounting Brackets



FIG. 7B

APPENDIX A



FIG. 8A
Upper Pin



FIG. 8B
Lower Pin



FIG. 9

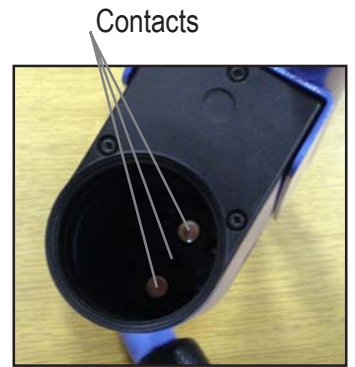


FIG. 10

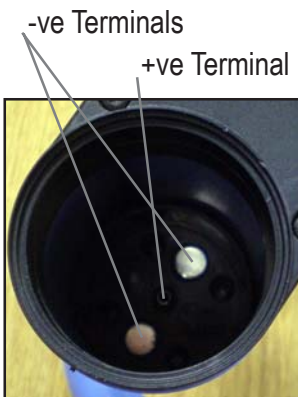


FIG. 11



FIG. 12

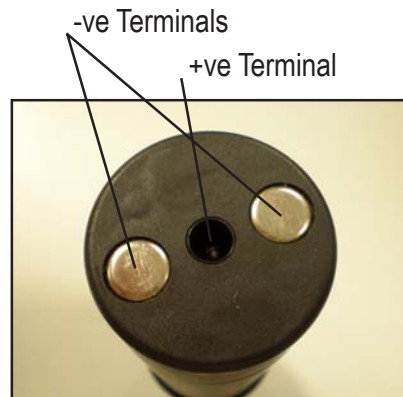


FIG. 13



FIG. 14



FIG. 15



FIG. 16



FIG. 17



FIG. 18



FIG. 19

APPENDIX A

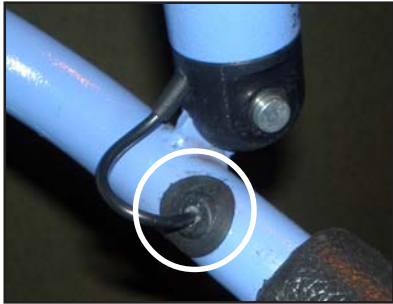


FIG. 20



FIG. 21



FIG. 22



FIG. 23

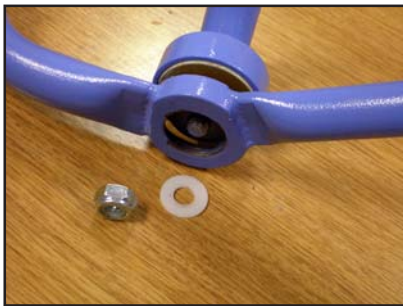


FIG. 24



FIG. 25

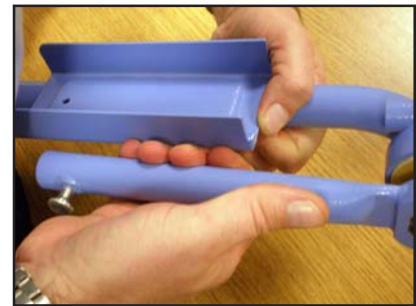


FIG. 26

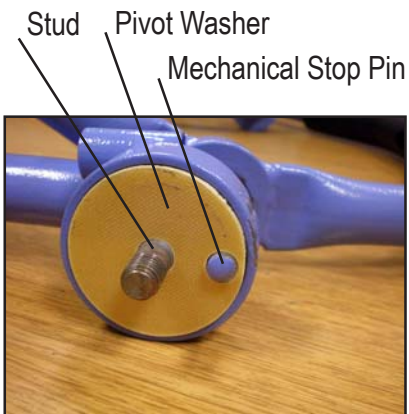


FIG. 27



FIG. 28



FIG. 29



FIG. 30



FIG. 31



FIG. 32

APPENDIX A



FIG. 33



FIG. 34



FIG. 35



FIG. 36



FIG. 37



FIG. 38

Mechanical Stop Pin



FIG. 39



FIG. 40



FIG. 41

-ve Terminals
+ve Terminal

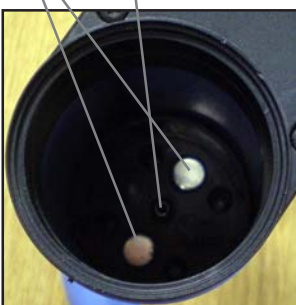


FIG. 42



FIG. 43

APPENDIX A

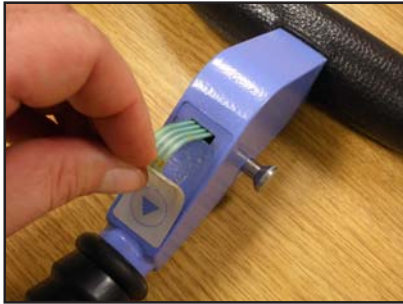


FIG. 44



FIG. 45



FIG. 46A



FIG. 46B

Remove backing to expose adhesive

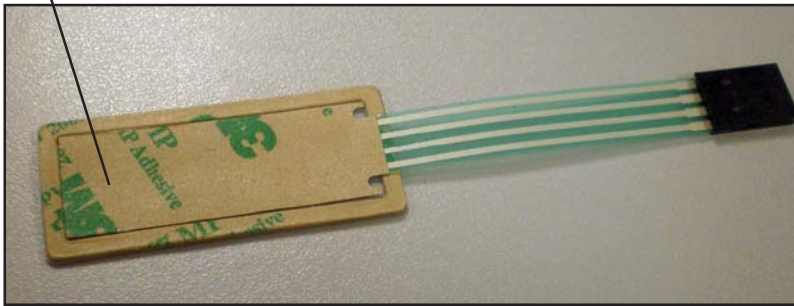


FIG. 47

Membrane switch with adhesive exposed

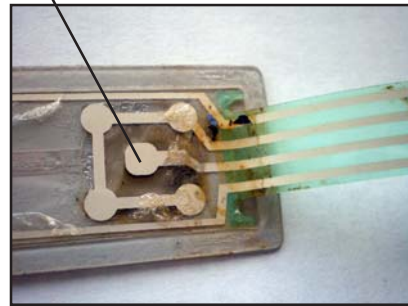


FIG. 48



FIG. 49

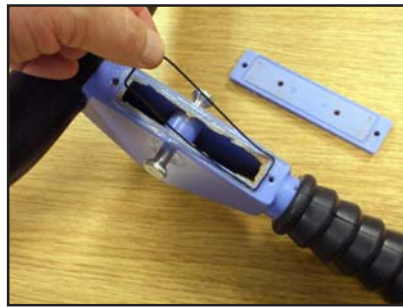


FIG. 50



FIG. 51



FIG. 52



FIG. 53



FIG. 54

APPENDIX A



FIG. 55



FIG. 56

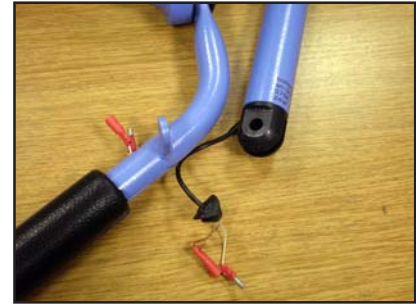


FIG. 57

Apply Silicon Seal



FIG. 58



FIG. 59

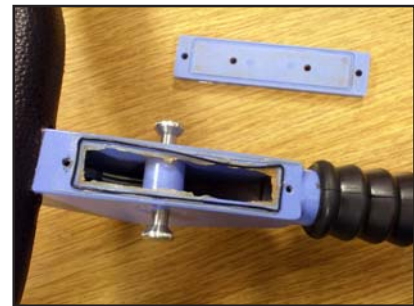


FIG. 60



FIG. 61



FIG. 62



FIG. 63



FIG. 64

NOTES



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