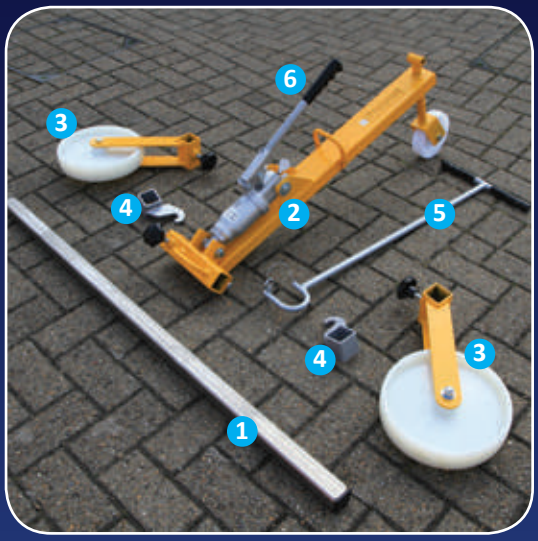
Proteus Equipment

Innovative products for demanding environments



Handylift Hydraulic Cover Lifter

Operational Instructions V1.0



LIST OF PARTS:

1. ONE MAIN STAINLESS STEEL BEAM
2. MAIN YOKE BODY combining Hydraulic pump, jockey wheel, & pivoting centre box with locking screw
3. TWO WHEEL ASSEMBLIES with locking screws
4. TWO HOOK BOXES
5. ONE TOWING HANDLE
6. ONE PUMP HANDLE

MAINTENANCE PROCEDURES

To be carried out by persons suitably qualified.

Lubricate threads on lock screws, wheel spindles and centre box hinge point as necessary. Inspect lifter for signs of damage periodically, and report any mechanical failure immediately.

It may become necessary after prolonged use to check that the oil level in the pump reservoir is correct. To do this, secure the pump in a horizontally level position as viewed from the side. It may be necessary to unbolt the pump from the lifter frame to achieve this. Placing the pump in a soft jawed vice placed under light pressure is an ideal way to secure it.

Ensure that the ram is fully retracted, and that the release screw used to control the lowering action of the lifter at the rear of the pump is closed again. Remove the rubber bung from the top of the reservoir to expose the filler hole. THIS IS NOT A LEVEL HOLE. The level is correct at the point when the oil just covers the inner cylinder sleeve of the ram as viewed inside the reservoir.

This level will be approx. 10mm below the actual filler hole. DO NOT OVERFILL. If the reservoir is accidentally overfilled, simply turn it through 90 degrees and drain a little oil out again through the filler hole, and re check. Recommended oil: Tellus 32

FAULT ADVICE

If you experience any problems with the hydraulic jack not pumping, remove the rubber bung on top of the oil reservoir whilst the pump is horizontal and level to allow any air cavitations within pump to be released. Replace bung.

ADVICE FOR STORAGE

Always retract the pump ram (i.e. lower the lifter) during storage and ensure that the pump plunger pin is down inside the pump housing (i.e. leave the pumping handle in the “down” position). These precautions will ensure that the main pump components are protected from excessive moisture exposure.

If prolonged storage without use is unavoidable, take the additional precaution of lubricating the lifter with a suitable moisture repellent. In the interests of longevity, storage of this equipment outdoors is not advised.

TRANSPORTING THE LIFTER

1/ The hydraulic lifter is easily and quickly split into two sections. Firstly, release one front wheel locking screw and remove wheel assembly from beam, followed by the hook box from the same side.

2/ Release the main beam locking screw and slide the main beam out of the centre box whilst supporting the main yoke section.

3/ Finally, re-fit the hook box and wheel assembly (previously removed) back onto the main beam, locking down the screw. Your lifter is now safely split into two sections for transport and storage.

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UNPACKING AND ASSEMBLY

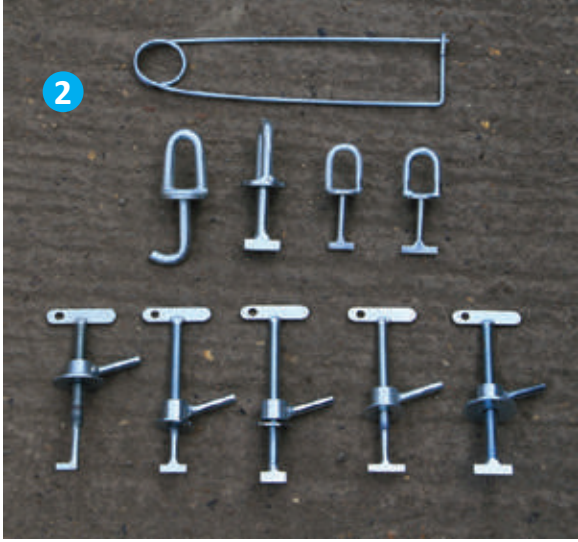
1. Insert the main beam into the centre box and, if needed, secure in place by tightening the locking screws temporarily

2. Slide the hook boxes onto the main beam. It is essential the the hooks face inward TOWARDS the jockey wheel

3. Slide the wheel assemblies onto the main beam. Ensure the wheel forks are angled AWAY from the jockey wheel end. All locking screws should only be tightened while transporting the lifter. THEY MUST BE LOOSENED BEFORE LIFTING

4. Finally, install the towing and pumping handles. ASSEMBLY IS NOW COMPLETE









PREPARATION - COVERS WITH TWO KEYHOLES

1. Clean any debris from the cover's keyholes. A PROTEUS KEYHOLE GOUGER is ideal for this purpose

2. Select the correct size and orientation of key for the cover

3. Ensure the keys are installed correctly in the cover. For single-piece covers with two keyholes, use an appropriate pair of RINGTOP KEYS

4. Wheel the lifter over the cover. Ensure the wheels are positioned as close to the frame of the cover as possible. Slide the hook boxes into line with the keys, and hook them through the loops. Also shown here are a set of U-CHANNEL wheel runners, for covers surrounded by soft or uneven ground









PREPARATION - SPLIT COVERS

1. Clean any debris from the cover's keyholes. A PROTEUS KEYHOLE GOUGER is ideal for this purpose

2. For split covers with a keyhole in each half, use a SWIVEL-RING LOCKER SPREADER

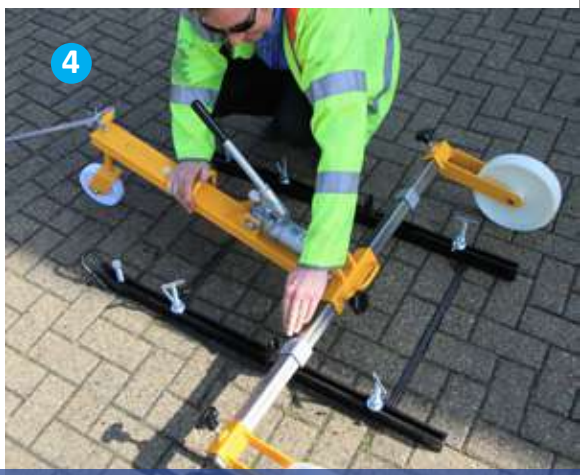
3. Place the keys into the keyholes, rotate the lugs 90 degrees, then lock the wingnuts down tight

4. Position the lifter yoke slightly off-centre along the beam, with one of the hook boxes as close to dead centre as possible. Wheel the lifter over the cover. Ensure the wheels are positioned as close to the frame of the cover as possible. Engage the central hook box with the loop on the Swivel-ring









PREPARATION - COVERS WITH FOUR KEYHOLES

1. Clean any debris from the cover's keyholes. A PROTEUS KEYHOLE GOUGER is ideal for this purpose

2. For covers with four keyholes, use SPREADER BARS or UNIVERSAL SPREADER BARS. Place the bars over the cover so all four keyholes are visible through the channel in the centre of each bar. Slot the keys into this channel

3. Slide the keys into the keyholes, rotate the lugs 90 degrees, then lock the wingnuts down tight onto the top of the bars

4. Wheel the lifter over the cover. Ensure the wheels are positioned as close to the frame of the cover as possible. Slide the hook boxes into line with the bars, and hook them through the loops in the centre of each Spreader Bar









PREPARATION - GATIC COVERS

1. Clean any debris from the cover's keyholes. A PROTEUS KEYHOLE GOUGER is ideal for this purpose. The cover may have an arrow indicating the angle of removal

2. For Elkington Gatic-type covers, use UNIVERSAL SPREADER BARS. The 'front' edge of the cover should have two keyholes along it; position the bars so that the end loops are at this end of the cover (large Gatic covers may in fact have four keyholes on the front edge; if so, the inner two can be ignored). Ensure that the central lifting loops are halfway along the cover, or slightly forward of halfway. The keyhole layout on a Gatic cover normally means the bars will be at a slight angle when covering all four lifting holes

3. Slot the keys into the channel on each bar, slide them into the keyholes, rotate the lugs 90 degrees, then lock the wingnuts down tight onto the top of the bars

4. Wheel the lifter over the cover. Ensure the wheels are positioned as close to the frame of the cover as possible. Slide the hook boxes into line with the loops on the END of each bar, NOT the loops in the centre. Engage the hook boxes with the end loops









LIFTING

1. Ensure that the release screw on the pump is closed, and all locking screws have been loosened. Proceed to lift by operating the handle

2. Whilst pumping ensure that the keys are pulling square to the cover. If they are not, stop and re-position the keys and hooks, to ensure even lift

3. The cover should start to lift as soon as the keys are under tension. If it appears reluctant to move, DO NOT apply more and more force, as this can damage the keys; instead tap around the edges with a PROTEUS COPPER HAMMER to break the seal

4. Continue pumping until the cover is clear of the aperture. Wheel the cover aside from the aperture. Lower the cover onto a firm surface by opening the pump's release screw. Close the screw when the cover is parked









LIFTING - GATIC COVERS

1. Ensure that the release screw on the pump is closed, and all locking screws have been loosened. Lift by operating the pump handle. This will break the seal and tilt the cover

2. The cover should start to lift as soon as the keys are under tension. If it appears reluctant to move, DO NOT apply more and more force, as this can damage the keys; instead tap around the edges with a PROTEUS COPPER HAMMER to break the seal. If this still does not work, wind down the 'jack bolts' located at the end of the bars with a spanner (ensuring the bolt is pushing down onto the frame or surrounding ground, and not the cover itself)

3. Disengage the hook boxes from the end loops, and reposition the lifter so it can be hooked onto the central loops. Try not to let the cover slide fully back into its frame as you switch; ideally it will sit slightly ajar. Continue pumping until the cover is clear of the aperture

4. Wheel the cover aside from the aperture. Lower the cover onto a firm surface by opening the pump's release screw. Close the screw when the cover is parked









REPLACING THE COVER

1. Ensure that the release screw on the pump is closed, then raise the cover by pumping
2. Wheel the cover back to its frame using the towing handle. Lower slowly, using the release screw to control the drop rate
3. Continue lowering until the hook boxes can be disconnected from the Spreader Bars/keys
4. Tap around the edges of the cover with a COPPER HAMMER if needed, to fully re-seal

SAFE WORKING LOAD - 1500kg

Need Replacement parts?
Contact Proteus for details and pricing on a wide range of Handylift spares

Need additional key types or accessories?
Contact Proteus for a price list

Unsure which keys you need?
Try our Cover Selector form:
http://www.proteusequipment.com/man-hole-cover-selector
Or try the iOS app, available free of charge. Search iTunes for 'Proteus Cover Lifters'

PE
cover lifters

Available on the App Store