



HYDRAULIC QUICK HITCH

(Single-switch operated)

Installation & Operation Manual (English)

**Important: This manual must be kept with the excavator at all times
and referred to as required**



Harford Attachments Ltd

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Serial Number Location	Serial Number
Stamped plate on side of hitch	
Sticker on rear of control box	
Sticker on solenoid manifold	

Serial number table (above) for completion by owner

This manual part number UNILOK/MAN14/REV4

If this Uni-Lok quick hitch is to be used on a jobsite, the operator shall follow the site rules where the machine is to be used.

The units used in this manual are given as: Pipe fittings in inches ("), pressure in bar (PSI follows in brackets), and torque (in Nm)

If at any time in the future, you require additional information on the **HARFORD UNI-LOK** quick hitch or any aspects of its use, please do not hesitate to contact:

Harford Attachments Ltd

Spar Road, Norwich. NR6 6BY. England

Tel +44 (0) 1603 403099

email: info@harfordattachments.com

website: www.harfordattachments.com

Introduction

Harford Uni-Lok hydraulic quick hitch for excavators

Thank you for choosing to purchase the **Harford Uni-Lok** quick hitch for excavators. The information contained in this manual should be thoroughly read and understood by all operators of this product. The operator's manual should be kept with the excavator at all times.

The Uni-Lok is a double-locking, fully hydraulic quick hitch designed to pick up attachments manufactured to the OEM specification. The rear sliding wedge plate provides the primary locking device.

The operator's manual should be replaced immediately if it is lost, damaged or becomes unreadable.

Due to the large number of excavator makes and models available worldwide, it is not possible to provide a rigid set of installation instructions that will cover every situation. It is, therefore, extremely important that the installation be carried out by properly skilled persons, preferably with past quick hitch installation experience.

It is essential that the installation, operation and maintenance instructions are followed carefully to ensure safe and reliable operation of the quick hitch at all times. Failure to do so could result in serious injury or fatal injury, and invalidate warranties.

This manual contains the installation and operation instructions for the Uni-Lok quick hitch. Please follow the instructions to ensure you do not invalidate the product warranty. If the quick hitch you are about to fit or operate is not the Uni-Lok, please refer to the relevant manual.





Safety Features

There are several safety features that are incorporated into this quick hitch. Each feature further removes the possibility of the attachment unintentionally becoming disengaged.


1. Pilot operated check valve.
This is incorporated into the double acting hydraulic cylinder.
The attachment should remain locked in the event of a loss of hydraulic pressure.
2. Sprung loaded rear lock.
This ensures that force is still maintained on the rear locking wedge in the event of a loss of hydraulic pressure.
3. Rear lock indicator bar.
This allows the operator to check that the rear locking wedge is in its correct operating position.
This is visible from the cab.
4. Sprung loaded front lock.
This ensures that the front pin is secure when connecting an attachment and during operation.
This is visible from the cab.
5. 'Locked-off' switch.
The operator switch is a 'locked-off' type to prevent inadvertent activation.
6. Pressure switch fitted in the bucket extend line.
In conjunction with the 'locked-off' switch, the attachment can only be released when the bucket cylinder is fully extended. Failure of the pressure switch will prevent the Uni-Lok quick hitch from operating.
7. Audible warning buzzer.
A warning buzzer will sound when the switch is activated to indicate that the system is live. The buzzer will also sound for 2 seconds when the excavator ignition is switched on to indicate that the buzzer is functioning. If the buzzer does not function, the attachment will not operate.


Introduction


Guide to Safety Symbols


	SAFETY NOTICE: These indicate specific precautions and recommended personal protective equipment (PPE) for use during the given situations.
	IMPORTANT: Specific points to note and situations to be aware of.
	IMPORTANT: Prohibited situations are specified and should be avoided.
	WARNING: Situations of danger in which the operator or installer must pay particular attention to the information provided to minimise the risk of injury to self or others


General Safety Information


 **WARNING:** Hydraulic oil pressure and fluid can cause serious personal injury. When escaping under pressure it can penetrate body tissue, cause severe tissue damage, loss of limb and possible fatal injury. Always check for leaks with the use of a shield and not against any part of your skin. Alternatively shut off the pressure and allow time to de-pressurize. If fluid is injected into your skin, you must seek emergency treatment **immediately and without delay** by medical personnel that have knowledge of this kind of injury. Remember, some hydraulic fluids are also flammable. Refer to relevant COSHH data sheets for substances that you may come into contact with.


 **IMPORTANT:**
Due to the weight of the product, handling of the hitch prior to installation should be done using appropriate lifting aids for the weight, which can be found on the punched information plate affixed to the side of the hitch.

 **IMPORTANT:**
Ensures that the machine to which the Uni-Lok quick hitch is installed does not exceed its safe working load (SWL), taking into account the additional weight of the hitch, which is stated on the punched information plate affixed to the side of the hitch.

 **IMPORTANT:**
Be aware that the addition of the Uni-Lok quick hitch will increase the reach distance of the excavator arm, which may cause it to impact nearby objects and people or to impact the operators cab, leading potentially to property damage, injury, loss of limb or fatal injury.

 **IMPORTANT:**
It is recommended for safety reasons that the machine to which this Uni-Lok quick hitch is installed is operated by an experienced, competent person, trained to ISO 7130:2013 or later.

 **IMPORTANT:**
If hammers are to be used for long periods of time the quick hitch should be removed to prevent unnecessary wear.

 **IMPORTANT:**
During installation, no alterations must be undertaken to any protective structure (e.g., rollover protective structures (ROPS), tip-over protective structures (TOPS), or falling object

Introduction

protective structures (FOPS) are permitted except where authorised by the manufacturer, or according to the manufacturer's specifications.



IMPORTANT:

It is not permitted to transport or lift persons using the Uni-Lok quick hitch.

Safety labels

All safety labels are to be kept clean and legible and should be replaced if missing or unreadable by contacting the manufacturer, Harford Attachments, on +44 (0)1603 403099.

The following three safety labels are supplied in the required quantities with the Uni-Lok fitting kit. Their locations are given in the description, and shown graphically in the following diagram.

- A) One safety label that is to be installed prominently in the operator's cab detailing the basic operation of the Uni-Lok quick hitch:



- B) One yellow warning sticker to be affixed prominently in the cab warning that the attachment increases the overall length of the dipper arm and could therefore impact the cab or boom if care is not taken:

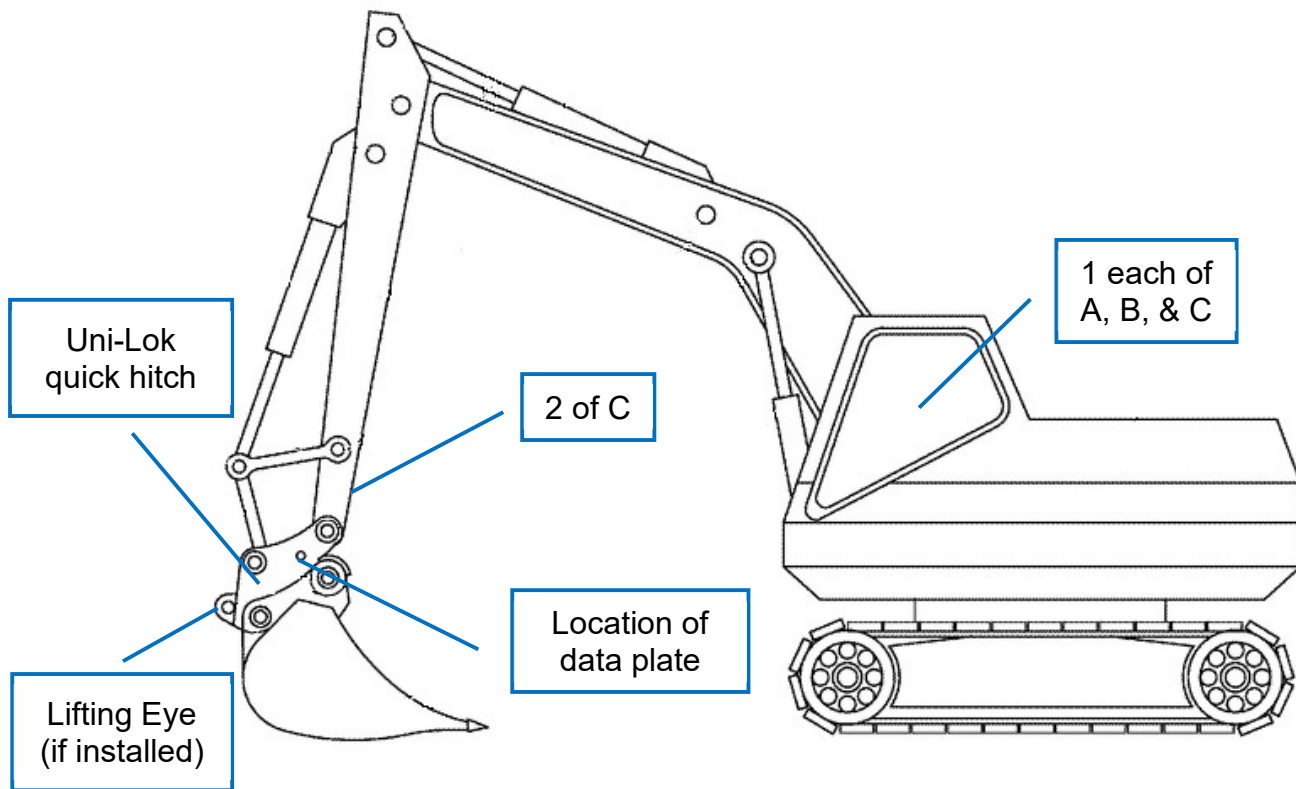


Introduction

- C) Three (3) green “Safety Pin Not Required” sticker reminding that safety pins are not required because the hitch is positively held by hydraulic pressure and retention springs, to be affixed as follows: one (1) prominently in the cab; a further two (2), one either side of the dipper arm near the hitch



Safety Sticker and Data Plate Location Guide



Specified Parameters

Your Harford Uni-Lok quick hitch has been designed to meet the original equipment manufacturer (OEM) specifications of the excavator for which it was ordered. The excavator model for which it was designed and the maximum load category of the hitch can be found on the punched information plate affixed to the side of the quick hitch body.

Introduction

Storage Instructions

If your Uni-Lok Quick hitch is to be removed for an extended period of time, please observe the following instructions:



WARNING: Hydraulic oil pressure and fluid can cause serious personal injury. When escaping under pressure it can penetrate body tissue, cause severe tissue damage, loss of limb and possible fatal injury. Always check for leaks with the use of a shield and not against any part of your skin. Alternatively shut off the pressure and allow time to de-pressurize. If fluid is injected into your skin, you must seek emergency treatment **immediately and without delay** by medical personnel that have knowledge of this kind of injury. Remember, some hydraulic fluids are also flammable. Refer to relevant COSHH data sheets for substances that you may come into contact with.



SAFETY NOTICE:

It is strongly recommended that the Uni-Lok quick hitch is lowered to the ground, the machine switched off, the key removed and the parking brake engaged, blocks applied to the wheels, the system depressurised and that safety gloves are worn during any maintenance on the quick hitch. A warning label should be affixed prominently in the cab to warn others of ongoing maintenance.

- Wearing appropriate PPE, hydraulic fluid should be drained from the quick hitch and disposed of according to regulations.
- It is imperative that the hydraulic ports are closed off with an appropriate seal to prevent moisture and debris from entering the hydraulic lines.
- Basic maintenance tasks should be carried out on the hitch, including cleaning and greasing (see the Daily Checks list for further information).
- The hitch should be covered and stored in a safe, dry location.

End of Life Considerations

Your Uni-Lok quick hitch is predominantly made of recyclable materials. If your quick hitch should become damaged beyond repair and is to be disposed of, please be aware of the environmentally unfriendly nature of the lubricants and hydraulic fluids used. Please check the cleaning and disposal instructions of the supplier of the contaminants before disposing of the hitch in an environmentally responsible manner.

Introduction

Compatible Attachments

Attachment	Can be used (up to the safe working load)	Can be used, with limitations	Cannot be used
All Harford Attachments	<input checked="" type="checkbox"/>		
Buckets	<input checked="" type="checkbox"/>		
Hammer or breaker		For limited periods. For constant or long-term use, the Uni-Lok hitch should be removed to prevent unnecessary wear	
Pallet forks			Under no circumstances
Lifting Objects with hitch		Only if a factory fitted lifting eye was supplied with the hitch, certified to the SWL.	
Operator cages			Under no circumstances
Thumb	<input checked="" type="checkbox"/>		
Ripper Tooth	<input checked="" type="checkbox"/>		
Rake	<input checked="" type="checkbox"/>		



IMPORTANT:

Attachments should be within the recommended limits of the carrying machine when the quick coupler is attached

Safe Operation

Fitting the quick hitch to the excavator

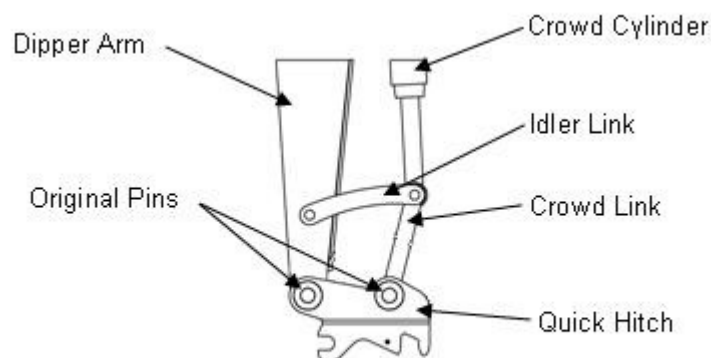


SAFETY NOTICE:

It is recommended that safety gloves are worn during the installation of the quick hitch.

1. Remove any existing attachment from the machine dipper arm and crowd link arm. The two original pins that are removed from these pivot points must be used to attach the quick hitch to the excavator (These pins are usually hardened and have greasing facilities).
2. Carefully align the dipper arm between the two front bosses on the hitch as shown by diagram 1. Replace any 'O' rings that were removed previously and slide one of the original pins through the quick hitch and dipper arm. Securely fix the pin in place by using the original or supplied retention method.
3. Repeat step 2 with the crowd link arm linkage.
4. Grease the two pins and visually check that they are located and secured correctly.
5. Use the excavator hydraulics to carefully rotate the quick hitch to the extremes of the crowd cylinder (e.g., no stroke and full stroke). Check the clearance of the quick hitch with any part of the dipper arm and linkage.
6. Fit the supplied yellow warning stickers in the cab in a prominent position. Also supplied are three 'safety pin not required' stickers – one to be fitted in the cab in a prominent position and one each side of the dipper arm near to the quick hitch.
7. Medium tensile pins (or better) should be used in both pin location holes of the attachment. Visually check to ensure the pins are correctly fitted and are secure before the attachment is used. Ensure any retention bolts are tightened using double nuts to lock against each other.

Diagram 1



Safe Operation

Fitting the hydraulic components.



IMPORTANT:

To install this quick hitch requires a solenoid valve, pressure switch, hoses and fittings. The Harford fitting kit consists of these components. This quick hitch has been designed to operate at the excavator's maximum working pressure. If this is more than the hydraulic cylinders maximum pressure (stamped on top) a pressure reducing valve must be fitted. All components must be the correct specification and be installed by skilled and suitably experienced persons.



WARNING:

Before doing any welding and work on the electrics of the machine, ensure that battery has been disconnected to prevent damage to the machine circuit.

Manifold block

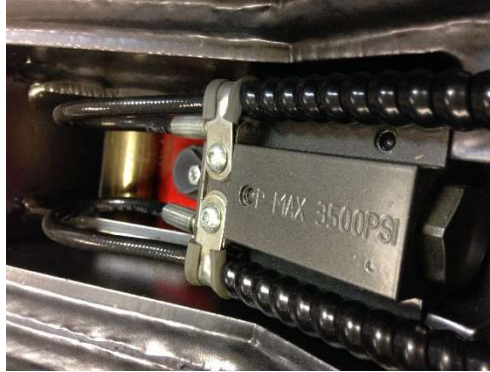
1. The excavator geometry will determine where the manifold block should be placed
2. It should be welded as low down the dipper arm as possible on either the top or sides as shown by the photos below.
3. Ensure it is positioned so that when the hoses are fitted, they are not too long, overstretched or impeded by the quick hitch or links during operation.



Safe Operation

P Clips

1. Fit P-Clips & spiral wrap as shown below.
2. Ensure that the hoses are not overstretched.



Solenoid Valve



WARNING:

Ensure that the solenoid valve is not energised when the quick hitch is in the locked position. This will ensure the coil will not burn out and will also ensure that in the event of an electrical failure, the quick hitch will stay in the locked position.

1. Ensure that you about to fit the correct Solenoid valve. For cylinders rated 3500 and 4000 PSI fit the 'Delta' Solenoid valve and the cylinder rated at 5000 PSI fit the 'Winner' Solenoid valve.
2. Position solenoid valve in a safe, dry area close to the hydraulic pump, or main valve assembly.
3. The solenoid valve must be connected to the main pressure line of the excavator between the pump and main control valve. It is recommended that the main test port is used.
4. Ensure fixing bolts are tightened.

Pressure Switch



IMPORTANT:

This switch has been factory set so that it operates when the pressure reaches 150 bar (2175 PSI) but it can be adjusted between 100-250 bar (1450–3625 PSI).

1. Ensure that the pressure switch is fitted into the bucket extend line.

Safe Operation

Hydraulic hoses



WARNING:

Hydraulic oil pressure and fluid can cause serious personal injury. When escaping under pressure it can penetrate body tissue, cause severe tissue damage, loss of limb and possible fatal injury. Always check for leaks with the use of a shield and not against any part of your skin. Alternatively shut off the pressure and allow time to de-pressurize. If fluid is injected into your skin, you must seek emergency treatment **immediately and without delay** by medical personnel that have knowledge of this kind of injury. Remember some hydraulic fluids are also flammable. Refer to your relevant COSHH data sheets for substances that you may come into contact with.

1. Ensure all hydraulic components are suitable for the working pressure.
2. The hydraulic components must be piped according to the relevant circuit as shown on appendix 1.
3. Weld pipe clamps to the excavator arms to retain hose at appropriate positions, hydraulic hoses should follow the paths of existing hydraulic lines of the excavator. Disconnect the negative/earth lead from the battery prior to any welding operation. Remove paint from the weld area prior to welding and use anti-spatter to protect the arm. Protect hydraulic rams and any existing hoses from weld spatter.
4. Cut and fit hose protector where applicable especially where hoses attach to the hydraulic cylinder on the hitch.
5. Hydraulic hoses should be long enough to accomplish their intended function whilst ensuring that during operation the minimum bend radius stated by the hose manufacturer is adhered to. Allowance should be also made for changing characteristics of the hose under differing operating conditions.
6. Avoid contamination within the hydraulic circuit.
7. If hoses are not pre-assembled ensure any assembly follows hose manufacturers recommendations.
8. Do not re-use old or damaged hose or fittings. If fittings come off during use, do not re-attach but replace the whole hose assembly.
9. Do not mix hydraulic hose and adaptors from different manufacturers and ensure all fittings used are compatible.
10. Ensure all connections are tightened to correct torque e.g., 1/4" BSP = 18Nm, 3/8" BSP = 31Nm.
11. Ensure any spillages are cleaned up.



IMPORTANT:

The Harford hydraulic kit supplied conforms to EN 853-2SN. All hoses must be crimped by competent persons using the correct tooling. Further information can be obtained from Harford Attachments.

Safe Operation

Fitting the electrical components



IMPORTANT:

The Harford Uni-Lok quick hitch must be installed using the Harford fitting kit, supplied with the product. The fitting kit comprises of a solenoid valve, a pressure switch, a relay, a "locked-off" switch, a warning buzzer, appropriate wiring and a fuse. Installation should be carried out by a suitably experienced, competent person



IMPORTANT:

Using a non-Harford fitting solution will invalidate the product warranty.

Electrical wiring/switching

1. Ensure all electrical components are the correct voltage for the excavator.
2. The electrical components must be wired according to the switch circuit as shown on the diagram in Appendix 1, below.
3. The switch should be positioned in the cab within easy reach of the operator, but not in a position where it can be inadvertently operated.
4. Ensure the warning buzzer is placed in a position so that it can be heard.



WARNING:

During operation there should be no movement between the quick hitch and attachment. If any movement is detected, stop operation immediately, lower attachment to the ground and inspect the hitch.



WARNING:

The quick hitch extends the length of the dipper arm and some attachments could hit the cab or boom in certain positions.



WARNING:

The quick hitch is designed to accept attachments which are manufactured to OEM specifications and capacities. Oversized attachments could be hazardous when used with this quick hitch and could invalidate any warranties.



WARNING:

Ensure the Safe Working Load of the excavator is not exceeded by the combined weight of the hitch, attachment and load. Refer to the excavator manufacturer's information.



IMPORTANT:

If hammers are to be used for long periods of time the quick hitch should be removed to prevent unnecessary wear.



IMPORTANT:

The use of pallet forks with this quick hitch is not permitted

Safe Operation



IMPORTANT

The operator of the machine should be adequately trained in the quick hitch's safe operation before use.





IMPORTANT

This quick hitch is operated by a "locked-off" type switch. To operate the switch the red safety tab must to be slid upwards to allow the switch to activate.



Connecting an attachment

- 1 Fully extend the bucket cylinder and maintain operation of the control stick to ensure the pump works at full pressure as shown in diagram 2.
- 2 Activate the switch  to retract the rear locking wedge and open the front lock. This will also activate the warning buzzer
- 3 Lower the Quick hitch front 'C' shaped jaw down towards the front attachment pin ensuring the front lock is in the open position.
- 4 Engage the front jaw with the front attachment pin as shown by diagram 3.
- 5 Lift the attachment off the ground and then extend the bucket cylinder as shown in diagram 4.
- 6 De-activate switch  and then extend the bucket ram **Diagram 4 – Lift the attachment and then extend the bucket ram** to extend the rear locking wedge. The warning buzzer will turn off.
- 7 Retract the bucket cylinder slowly to view the indicator bar and front lock to ensure correct operating positions as shown by diagram 5. Conduct rattle test to confirm full engagement of the rear locking wedge.

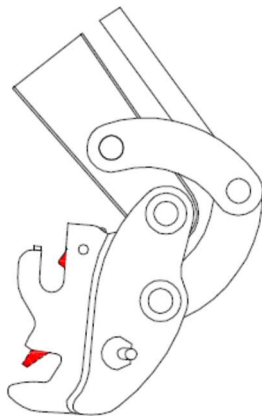


Diagram 2 – Extend the bucket cylinder

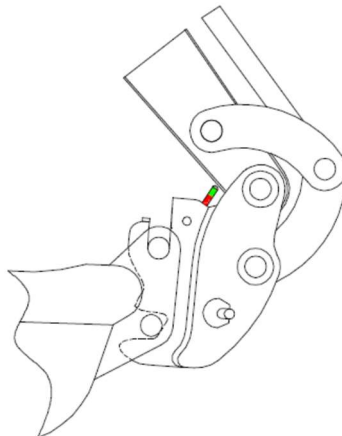


Diagram 4 – Lift the attachment and then extend the bucket ram

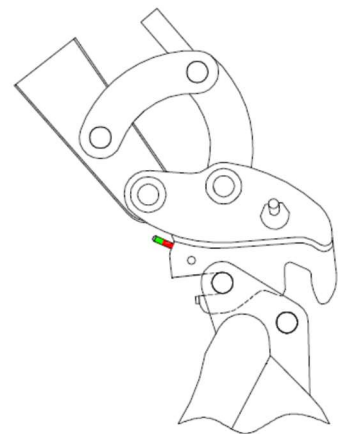
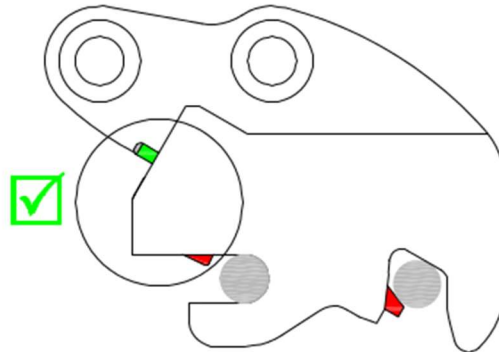


Diagram 3 - Engage the front jaw

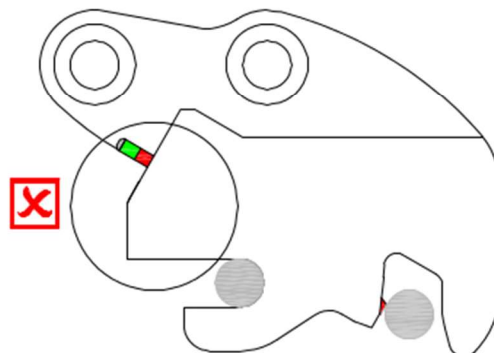
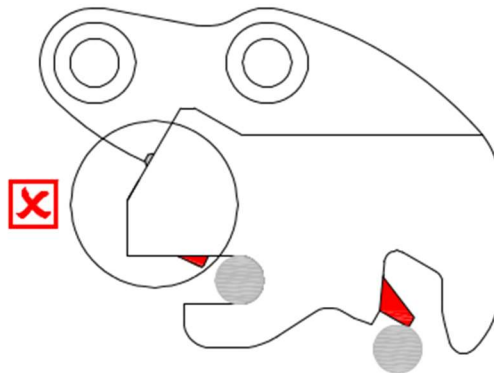
Safe Operation

Diagram 5

Correct operating position



Incorrect operating positions



Safe Operation

Releasing an attachment

- 1 Ensure people and property are well clear of the immediate area.
- 2 Extend the bucket cylinder fully and maintain operation of the control stick to ensure full pressure.
- 3 Activate the switch to open the front lock and retract the rear locking wedge. This will also activate the warning buzzer
- 4 When the front lock is fully open carefully retract the bucket cylinder to disengage the attachment from the Quick hitch. Use the control sticks to position the dipper and boom to ensure the attachment doesn't fall to the ground.
- 5 De-activate the switch to turn off the warning buzzer.
- 6 The Quick hitch is now ready to connect another attachment.

Lifting a load



IMPORTANT:

This section only applies to quick hitches that are supplied with a factory fitted and certified lifting eye.



WARNING:

If your Uni-Lok hitch was not supplied with a factory fitted and certified lifting eye you must not attempt to lift loads that are not wholly contained within a bucket-type attachment, it is unsafe, may lead to damage and will invalidate the warranty.



IMPORTANT:

Ensure the safe lifting capacity of the excavator is not exceeded. Refer to excavator manufacturer's information.

1. Ensure that the load to be lifted does not exceed the safe working load of the lifting eye.
2. The lifting eye is designed to be used with a lifting shackle with the same safe working load rating.
3. Release the attachment from the quick hitch prior to using it to lift load.

Maintenance

WARNING:



Hydraulic oil pressure and fluid can cause serious personal injury. When escaping under pressure can penetrate body tissue, cause severe tissue damage, loss of limb and possible fatal injury. Always check for leaks with the use of a shield and not against any part of your skin. If fluid is injected into your skin, you must seek emergency treatment **immediately and without delay** by medical personnel that have knowledge of this kind of injury. Remember some hydraulic fluids are also flammable. Refer to relevant COSHH data sheets for substances that you may come into contact with.



SAFETY NOTICE:

It is strongly recommended that the Uni-Lok quick hitch is lowered to the ground, the machine switched off and the ignition key removed, the parking brake engaged and blocks applied to the wheels, that the system depressurised and safety gloves are worn during any maintenance on the quick hitch. A warning label should be affixed prominently in the cab to warn others of ongoing maintenance.

Daily Checks:

Daily checks are to be carried out before the use of the Uni-Lok quick coupler; the operator shall have sufficient competence and training to perform the maintenance. During these checks, should any faults that could compromise safety be identified they should be remedied immediately.

1. Clean away any material build up around the front lock, cylinder, springs and wedge.
2. Grease wedge slide housing points
3. Check all pin retainers, bolts & nuts for tightness on quick hitch and attachments
4. Check hydraulic hoses for damage, leakage or weeping, stiffness (as hose ages it can become stiff causing it to crack when flexed), blistering and general wear. Replace as required.
5. Check hose fittings at connection points for leaks, poor interfacing with hose or other connectors. Tighten and replace as required
6. Check quick hitch operation by connecting an attachment.
7. Check operation of warning buzzer (buzzer should sound on machine start-up).
8. Check quick hitch for evidence of wear, fatigue or weld failure.

In the event that spares are required, please contact Harford Attachments on +44 (0)1603 403099.

IMPORTANT:



Due to the self-tightening and infinite wear feature accommodated with the hydraulic cylinder, if any attachment is fitted to the hitch for long periods of time it should be released daily. If the daily maintenance tasks are adhered to, this will happen automatically.

WARNING:



If the quick hitch is damaged in any way and/or there is any doubt as to the continued safety, cease operation immediately and contact Harford Attachments Ltd, Technical Department on Europe: +44 (0)1603 403099, USA: 727 477 3044

WARNING:



If the warning buzzer does not sound on machine start-up, please refer to the troubleshooting guide.

IMPORTANT:



Any unauthorised modification of the quick hitch and/or associated control systems may compromise the safety of the operator and those nearby, and will invalidate the product warranty.

IMPORTANT:



Opening the control box is strongly discouraged as doing so could make the product unsafe and will pass full liability to the end user and invalidate the warranty.

Maintenance

PROBLEM	DIAGNOSTICS	CAUSE	SOLUTION
REAR LOCKING WEDGE NOT RELEASING	Switch not illuminated, buzzer not sounding.	Electrical short-circuit	Check wiring and if necessary, rewire. The control box contains a fuse that will self-reset on power cycle once any issue has been resolved.
		Faulty switch	Check switch and if necessary, replace.
		Faulty ground wire	Check ground wire
		Faulty control box	Replace control box
	Switch illuminated when pressed, buzzer sounding.	Bucket extend line not pressurized	Ensure bucket cylinder is fully extended and maintain pressure while pressing switch.
		Faulty pressure switch	Check pressure switch and if necessary, replace.
		Faulty control box	Replace control box.
	Switch illuminated when pressed, buzzer sounds, hitch hoses are not pressurizing.	Faulty solenoid	Check solenoid coil for loose wiring, replace if necessary.
		Faulty control box	Replace control box.
	Switch illuminated when pressed, buzzer sounds, coupler hoses are pressurizing.	Low pressure in hitch line	Increase engine revs to raise hydraulic pressure.
Rear lock jammed		Check hitch for any debris that may be blocking the rear lock.	
Faulty check valve		Check hitch cylinder 'check valve' and if necessary, replace.	
REAR LOCKING WEDGE NOT STAYING OPEN WHEN CHANGING ATTACHMENT	Rear lock closes immediately after releasing switch	Faulty control box	Replace control box.
	Rear lock closes slowly after releasing switch	Faulty check valve	Check hitch cylinder 'check valve' and if necessary, replace.
		Faulty cylinder seal	Check seals and if necessary, replace.
FRONT LOCK NOT OPENING	Front lock not releasing once rear lock is released	Faulty front lock	Check front lock and if necessary, replace.
FRONT LOCK NOT CLOSING	Front lock not closing once rear lock is engaged	Front lock jammed	Check for any debris that may be blocking the front lock.
		Faulty front lock spring	Check spring and if necessary, replace.

For additional guidance outside of the troubleshooting guide, please call Harford Technical department on +44 (0)1603 403099

ALL WORK TO BE CARRIED OUT BY A COMPETENT PERSON.



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Warranty and Delivery Checklist

Earthmoving Attachment

Harford Attachments Ltd (the seller) warrants their quick hitches as follows:

1. The seller shall repair or replace at the seller's option any of the goods which are, or which become, defective within 12 months from delivery due to faulty workmanship, materials or faulty design, provided that the buyer shall have notified the seller in writing of such defect and have given the seller a reasonable opportunity to inspect the defective goods.
2. If, in the opinion of the seller, the goods have not been operated or maintained in accordance with the instructions in this manual, or have been subject to unauthorised repair or modification, the warranty will be invalidated.
3. The seller's liability in respect of defects in the goods shall be limited to those stated in this clause and subject to Clause 2(1) of the **Unfair Contract Terms Act 1997**, the seller shall not be liable whether in contract or in tort, including but not limited to negligence, or by reason of breach of statutory duty or otherwise, for any damage or loss whatsoever suffered by the buyer arising out of or attributable to such defects.

Delivery Checklist

The following items are supplied.

<u>Item</u>	<u>Supplied</u>
Hydraulic quick hitch	✓
This installation and operation manual	✓
Warning label	✓
3 "Safety pin not required" stickers	✓
Safe operation sticker	✓
Electrical fitting kit	✓
Hydraulic fitting kit	✓

Harford Attachments Ltd

Spar Road, Norwich. NR6 6BY. England

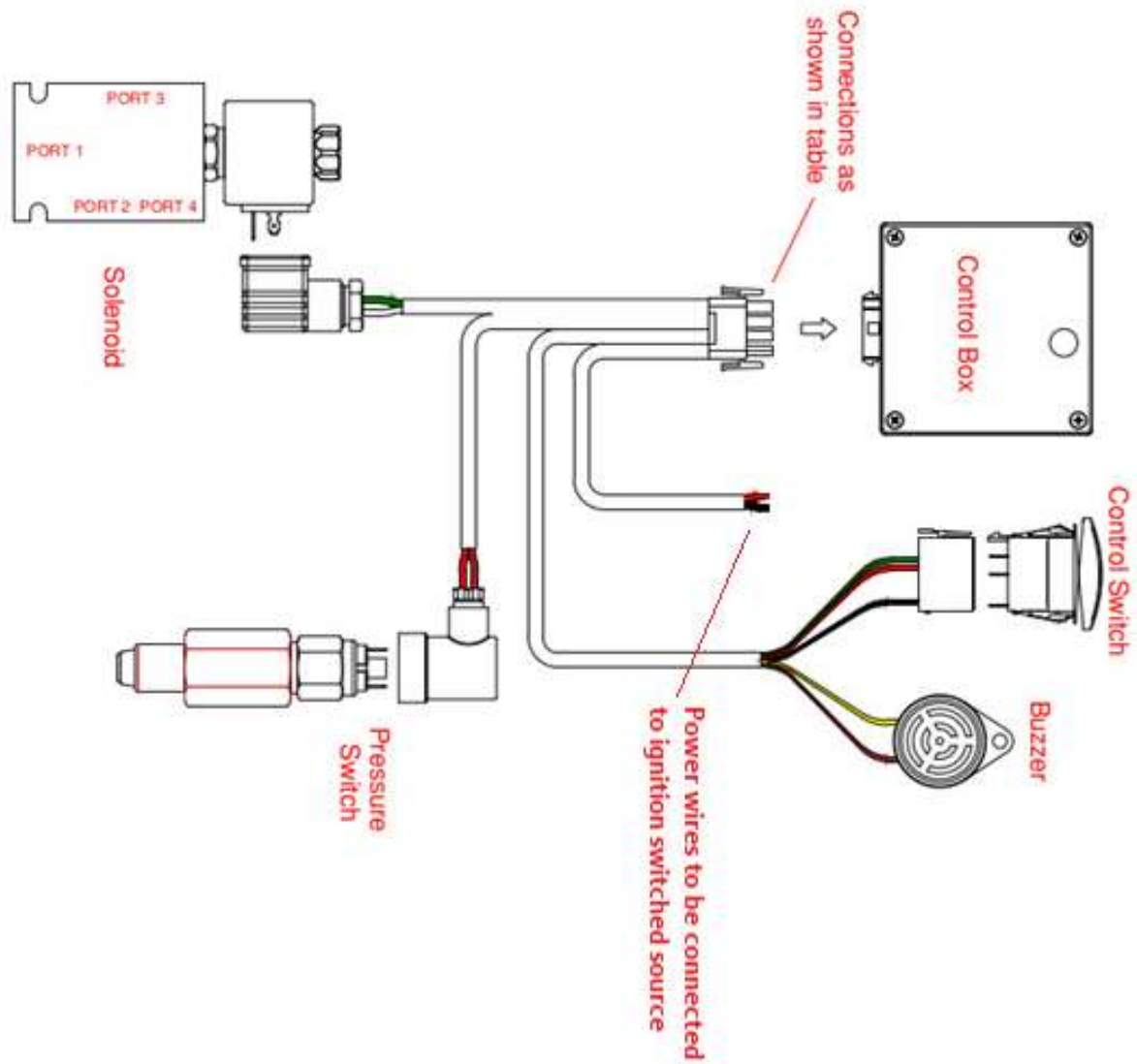
Tel +44 (0) 1603 403099

email: info@harfordattachments.com

website: www.harfordattachments.com

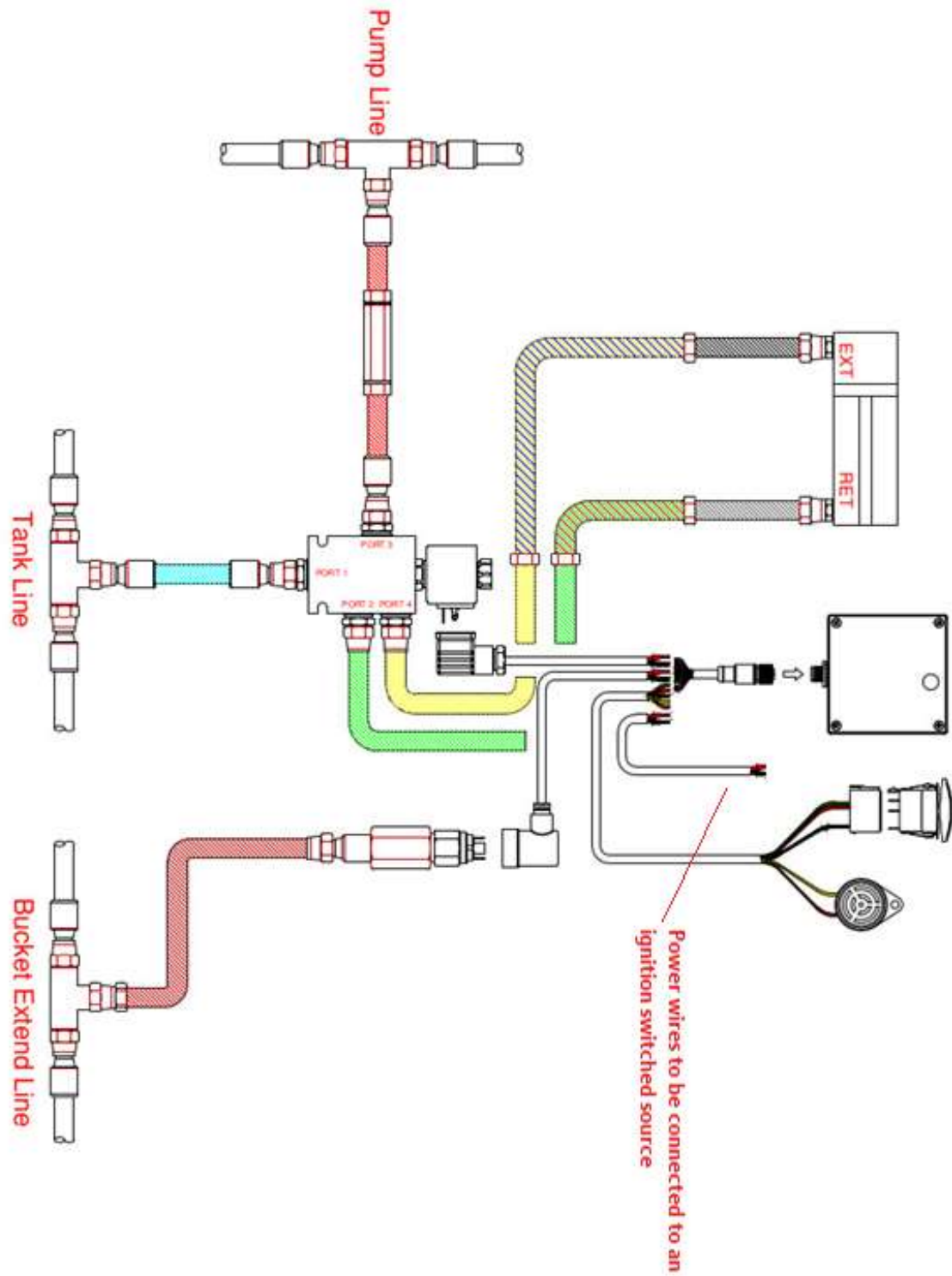
Appendix 1

Electrical Schematic



Appendix 1

Hydraulic Schematic



Appendix 2

Example of declaration that will accompany your Uni-Lok quick hitch

UKCA & EC DECLARATION OF CONFORMITY

Serial Number	D
Description	Excavator Quick Coupler
Name	Uni-Lok
Denomination	UL
Type	Pin on
Model	Hydraulic
Function	Automatic

We hereby declare that the above Machinery complies with the essential health and safety requirements of the Machinery Directive 2006/42/EC enacted in the United Kingdom by The Supply of Machinery (Safety) Regulations 2008, (SI 2008/1597).

This machinery has been designed and manufactured in accordance with the following harmonised European standards.

BS EN 12100:2010	Safety of machinery-General Principles for Design – Risk Assessment and Risk Reduction Supersedes: EN ISO 12100-1:2003, EN ISO 12100-2:2003 & EN ISO 14121-1:2007
BSEN 474-1:2006 +A6:2019	Earth-Moving Machinery – Safety Pt 1 General Requirements Pt 5 Requirements for hydraulic excavators.
BSEN 14121:2007	Safety of machinery. Risk Assessment. Pt 1 Principles.
ISO 13031	Earth Moving Machinery – Quick Couplers – Safety
BS ISO 6750-1:2019	Earth-Moving Machinery – Operator's Manual Pt 1 Principles.

Signed	_____	Date	_____
Name	_____	Position	_____