

HARFORD SAFELOCK MECHANICAL QUICK HITCH

Installation & Operation Manual

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



Harford Attachments Ltd

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Item Checklist

The following items are supplied.

Item	Supplied
Mechanical quick hitch	✓
CE Declaration of Conformity	✓
Installation and operation manual	✓
Lifting eye test certificate	see note

Note

The lifting eye test certificate is only supplied if a lifting eye is fitted to the quick hitch at manufacture.

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

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Introduction

Thank you for choosing to purchase the **Harford Safelock** quick hitch for excavators. The information contained in this manual should be thoroughly read and understood by all operators of this quick hitch.

The **Harford Safelock** quick hitch is designed to work with dedicated Safelock buckets and attachments. The sliding wedge plate provides a locking device which has a spring pressure acting upon it. This results in minimal wear over time.

Due to the large number of excavator makes and models available worldwide, it is not possible to provide 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 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 and invalidate warranties. Several safety features are built into the design which contribute to a very safe and reliable quick hitch.

This manual contains the installation and operation instructions for the mechanical version of the **Harford Safelock** quick hitch. If the quick hitch you are operate is the hydraulic version, please refer to the separate manual.



WARNING:

The quick hitch is designed to accept attachments which are dedicated to a particular Safelock quick hitch (SL★★) and category (★T), which are shown on the data plate. Oversized attachments could be hazardous when used with this quick hitch and could invalidate any warranties.



IMPORTANT:

This quick hitch has undergone CE certification by Harford Attachments. Any modification could invalidate this certification and therefore new certification would be required.

Safety features

There are several important safety features that are an integral part of the **Harford Safelock Mechanical quick hitch**. Each feature further removes the possibility of inadvertently disengaging attachments that are connected to the quick hitch.

1. The status of the safety handle is clearly visible by the operator.
2. Attachments can only be released when the safety handle is fully open.
3. The safety handle is retained with a spring loaded safety lock.
4. The spring pressure acting upon the locking wedge ensures that there is no movement between the quick hitch and dedicated attachment.

Fitting the quick hitch to the excavator



SAFETY NOTICE:

It is recommended that safety gloves are worn during the installation of the quick hitch. It should not be necessary to use excessive force, at any stage of the installation procedure.

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 greasable).
2. Position the Safelock hitch, within easy operating reach of the excavator.
3. With the crowd link positioned above the rear mounting hole, lower the dipper arm to within 50-75 mm of the top of the hitch as shown in diagram 1.
4. Extend the crowd cylinder. Carefully align the crowd link arm between the two rear mounting holes. Replace any 'O' rings that were removed previously and slide one of the original pins through the quick hitch and crowd link arm. Securely fix the pin in place by using the original retention method.
5. Operate crowd and boom cylinders simultaneously, to slowly raise the hitch and align the front mounting holes as shown in diagram 2. Carefully align the dipper arm between the two front mounting holes. Replace any 'O' rings that were removed previously and slide the other original pin through the quick hitch and dipper arm. Securely fix the pin in place by using the original retention method.
6. 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.

Diagram 1

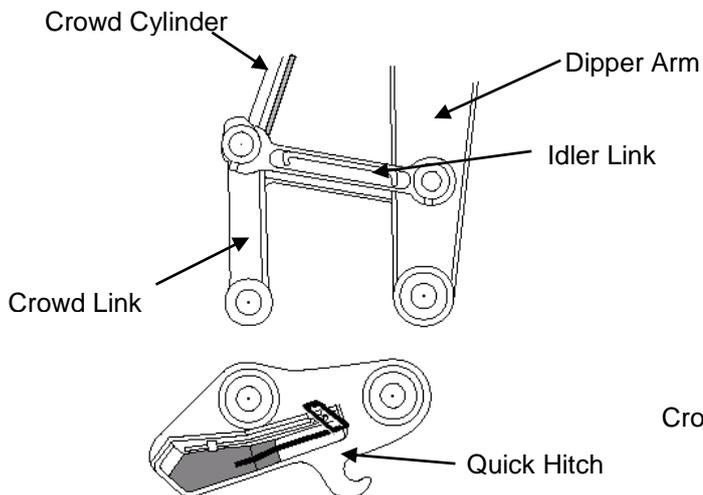
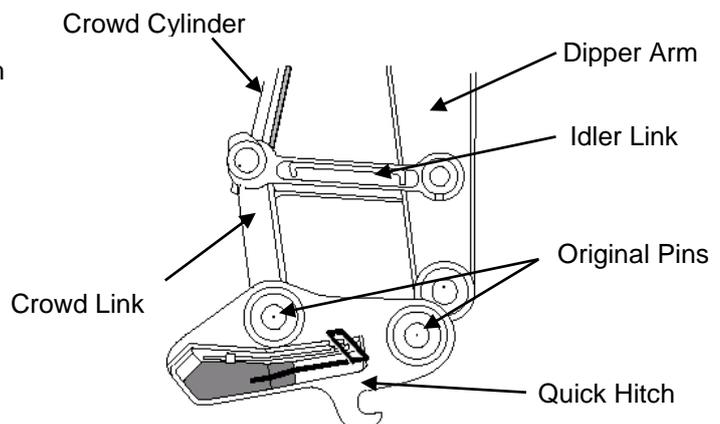


Diagram 2



Connecting an attachment

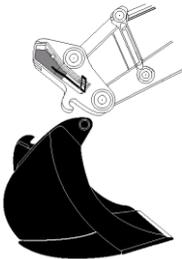


SAFETY NOTICE:

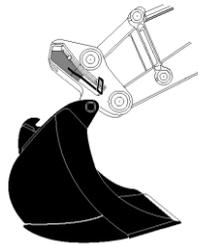
It is recommended that safety gloves are worn during the attachment changeover operation.

1. Disengage the safety lock and release the safety handle.
2. Fully open the safety handle.
3. Lower the quick hitch front 'C' shaped jaw down towards the front attachment pin as shown in diagram 3, step 1.
4. Engage 'C' shaped jaws with the front attachment pin as shown in diagram 3, step 2.
5. Extend the crowd cylinder down towards the rear locking plate and lift the attachment at the same time as shown in diagram 3, step 3.
6. Keep extending the crowd cylinder so that the front attachment pin is firmly seated in the 'C' shaped jaw and the quick hitch is seated onto the rear locking plate.
7. Close the safety handle against the safety lock. Ensure the attachment is clear of the ground (failure to do so could cause undue stress on the front hooks and cause distortion).
8. Engage the safety lock and lock the safety handle.
9. Visually check that the attachment is connected and locked correctly.

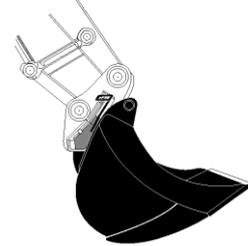
Diagram 3



Step 1 – Lower hitch towards front attachment pin



Step 2 – Engage 'C' shaped jaw with front attachment pin.



Step 3 – Crowd and lift attachment until there is contact with rear locking surface



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 is designed to accept attachments which are dedicated to a particular Safelock quick hitch (SL★★) and category (★T), which are shown on data plate. Oversized attachments could be hazardous when used with this quick hitch and could invalidate any warranties.



WARNING:

Ensure that the Safe Working Load of the excavator is not exceeded. Refer to the 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.

Releasing an attachment

1. Place the attachment on level ground or in a position so that once released the attachment cannot roll away from the hitch. Ensure people and property are well clear of the immediate area.
2. Disengage the safety lock and release the safety handle.
3. Fully open the safety handle.
4. Using the crowd cylinder of the excavator, rotate the quick hitch away from the rear locking plate the attachment and then lift away from the front attachment pin.

Lifting a load



IMPORTANT:

This section only applies to quick hitches that are manufactured with a lifting eye as shown in diagram 4.

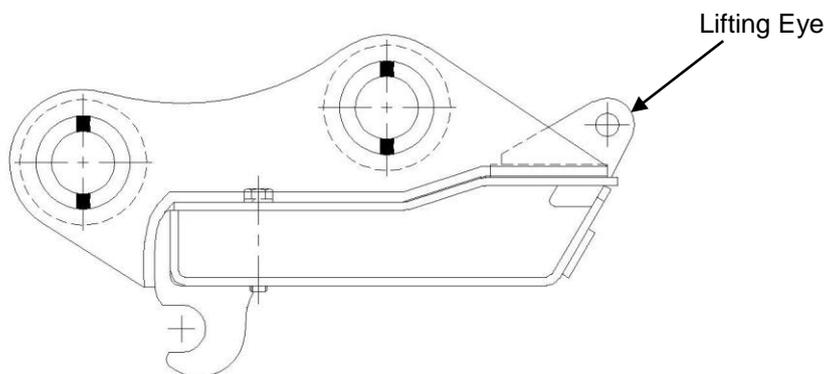
1. Ensure that the load to be lifted does not exceed the safe working load of the lifting eye.
2. The lifting eye is designed to be used with a lifting shackle with the same safe working load rating.
3. Release the attachment from the quick hitch prior to using it to lift load.



WARNING:

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

Diagram 4



Maintenance



SAFETY NOTICE:

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

Daily:

1. Remove dirt and debris from all moving parts. It is necessary to remove attachment to gain access to the underside of the hitch.
2. Check all retaining bolts and nuts for tightness on quick hitch.
3. Grease the wedge slide housing.
4. Check quick hitch for correct operation by connecting an attachment. Ensure there is spring resistance acting upon the wedge when locating the safety handle.

Weekly:

1. Check quick hitch for evidence of fatigue, weld failure or stress.
2. Lubricate pivot points and other moving parts.



WARNING:

If the hitch should be damaged in any way and there is any doubt as to the continued safety of the product please contact Harford Attachments Ltd, Technical Department on +44 (0)1603 403099.

Warranty

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 if the seller is responsible for 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. All expenses incurred by the seller in connection with the repair or replacement of the defective goods, including all costs of transportation, shall be paid by the seller.
3. If the seller shall fail to so repair or replace the defective goods within reasonable time of having been notified by the buyer, then the buyer shall be entitled to have the work of repair or replacement carried out by others, and the seller shall pay to the buyer the costs reasonably incurred to the buyer in so doing.
4. 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.