



Hill Engineering Ltd

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EXCAVATOR COUPLERS AND LOLER

Hill Engineering Limited has had many questions from customers concerning the use of a coupler and the LOLER regulations. Many appear to be confused as to the requirements for the examination of the coupler under LOLER. This document outlines the requirements for excavator couplers with regard to the LOLER regulations.

Manufacturers Responsibility.

Hill Engineering Limited as a manufacturer affix a CE mark to the coupler and issue a EC Declaration of Conformity for each coupler, each coupler being individually marked and identified via its own unique serial number. By issuing this EC Declaration of Conformity Hill Engineering Limited is declaring that the coupler is suitable for use and complies with all the relevant standards and legislation. Also issued is a manufacturing certificate which gives details of the load for which that individual coupler is designed to carry in normal use. This load is stamped into the rear of the coupler adjacent to the lifting eye and the total load is stated upon the serial plate for the coupler.

The coupler is manufactured in line with the EEC Directive 2006/42/EC. This covers all aspects of the coupler including the LOLER specification applicable to lifting regulations with the UK and as such is supplied with a "EC Declaration of Conformity"

In addition the following standards are also used

BS EN 474-1:2009 Earth Moving Machinery-Safety requirements for hydraulic excavators.

BS EN 982:1996 Safety requirements for fluid power systems and their components-Hydraulics.

BS 14121-1:2007 Safety of Machinery.

This means the coupler is tested for lifting using the lifting eye - this is the intended purpose of the lifting eye as defined under BS EN 474-1:2009 with FEA loading at 250% for a straight lift and proof loading of 200%. In addition each jaw of the coupler is tested with a proof load of 200%. This proof loading is performed by an external Lloyds accredited body on a random selection of couplers on a regular basis.

As far as Hill Engineering Limited's responsibility as a manufacturer the issue of the EC Declaration of Conformity fulfils the obligations with regard to the LOLER regulations and all other applicable standards.

Fitting to an excavator.

This operation is normally carried out either by a machine dealer or may be carried out by a fitter appointed by the end user.

As the quick coupler does not require assembly NO thorough examination is required under the LOLER regulations at this point. However it is important that the fitting instructions provided by Hill Engineering Limited within the coupler Installation and User manual are followed. For the purposes of LOLER and a lifting inspection certificate, no certificate is required for the first period.

The relevant section within the LOLER regulations is:-

1. The legal requirements for thorough examination of lifting equipment are:

Prior to first use

Before any lifting equipment is used for the first time, a thorough examination must be carried out by a competent person *unless* there is physical evidence available to show that it is safe to use. Such evidence would include if the equipment has not been used before and there is documentation drawn up within the 12 months prior to its first use, an initial test certificate in the form of an "EC Declaration of Conformity"



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End user inspection policy.

The length of the first period depends upon what the end user's policy defines the coupler to be. The coupler may be defined a **lifting attachment** if permanently fitted to the excavator or as a **lifting accessory** if the coupler is removed from the excavator and the excavator used without a coupler being fitted. The inspection required for LOLER is not the responsibility of Hill Engineering Limited; however as a manufacturer we have recommended checks that must be carried out as part of the LOLER inspection and these are found within the LOLER section of the manual.

Permanent fixation – Lifting attachment.

A quick coupler permanently attached to the excavator is classed as a **lifting attachment** and as such only requires testing at **twelve monthly intervals** under current legislation. The coupler is deemed to be **lifting equipment only if permanently attached**. If the coupler is removed from the machine for any reason it will require a full LOLER inspection prior to being put back into service

Coupler removal (dependent upon attachment) – Lifting Accessory.

It states in the Hill Engineering Limited manual that quick couplers must not be used with stiff arm attachments. This means to use a stiff arm attachment the coupler must be removed. Similarly Hill Engineering Limited advises that the coupler is removed with the long term use of a hammer. This recommendation is made by most manufacturers of quick couplers not just by Hill Engineering Limited. Once the excavator is used without a coupler fitted the coupler then becomes classed as a lifting accessory and the inspection period is then reduced to 6 months.

Following consultation with the HSE concerning the requirements for quick couplers under LOLER, Hill Engineering Limited made the decision that the coupler should be treated as an accessory and that the manuals and all paperwork should state that inspection/re-inspection of a coupler should take place after a period of 6 months. The reason for this is that the removal of the quick coupler is easily possible and use of the machine without the quick coupler is possible and is recommended by Hill Engineering Limited with certain attachments. If the coupler is removed from the machine once it then becomes classed under LOLER as an accessory and requires inspection every SIX months.

As a manufacturer we have no control over how the end user uses the coupler and whether it is removed from the machine or not during a twelve month period. If the machine is used once without the coupler then the inspection period is reduced to six monthly. The recommendation from the HSE was that Hill Engineering Limited treats it as worst case within our documentation which puts the inspection period down to six months. **However the period between inspections can be raised to twelve by the action and policies of the end user.**

Test certificates under LOLER.

Test certificates under LOLER are NOT supplied by Hill Engineering Limited. The only certificate we can supply is the EC Declaration of Conformity, which is coupler specific and machine specific. It is the responsibility of the end user to ensure that their couplers are inspected at the prescribed intervals by a suitably qualified/competent person – See below for the definition of who is deemed a competent person.

Additional Information.

The compliance with the EEC Directive 2006/42/EC means that the coupler must meet **all** relevant standards and as compliance is stated within the EEC certificate of compliance supplied with each coupler this is the legal statement by Hill Engineering Limited that the complete coupler, not just the lifting eye complies with the relevant standards.



VAT Registration No. 575647595

Company Registration No. NI37223

Registered Office. As above



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The basic requirements of examination, inspecting and testing for LOLER compliance are listed below and are an extract from the LOLER regulations:-

Thorough examination and inspection

The legal requirements for thorough examination of lifting equipment are:

i. **Prior to first use**

Before any lifting equipment is used for the first time, a thorough examination must be carried out by a competent person *unless* there is physical evidence available to show that it is safe to use. Such evidence would include if the equipment

(a) has not been used before and there is documentation drawn up within the 12 months prior to its first use, an initial test certificate in the form of an "EC Declaration of Conformity"

or (b) has been obtained from another organisation (e.g. hired or borrowed) and is accompanied by evidence that the necessary thorough examination has been carried out, e.g. a copy of the last test certificate is available.

This evidence or the competent person's examination report must be kept until the lifting equipment is no longer used, or in the case of accessories, 2 years.

ii. **Prior to first use where installation conditions are critical**

Lifting equipment to be used for the first time where safety is dependent on the installation conditions must be thoroughly examined after installation but prior to being put into service. The report must be kept until the equipment is no longer used in that location.

iii. **Periodic examinations once equipment is in service**

- Lifting equipment in use must be thoroughly examined at least every 12 months.
- Accessories (chains, slings, ropes, etc.) must be thoroughly examined at least every 6 months.
- Equipment used for lifting people must be thoroughly examined at least every 6 months.
- For the above, the examination is in accordance with an examination scheme and is to identify any remedial action in good time before deterioration affects safety.

iv. **After adverse incidents**

Lifting equipment should also be inspected by a competent person after any incident or circumstances which may have adversely affected the safety or integrity of the equipment, e.g. involvement in an accident or dangerous occurrence or after long periods out of use.

- v. All examinations must be carried out by a competent person (defined as a person "who has such appropriate practical and theoretical knowledge and experience of the lifting equipment to be thoroughly examined as will enable them to detect defects or weaknesses and to assess their importance in relation to the safety and continued use of the lifting equipment"). A competent person will normally be from an outside independent organisation who has sufficient training and experience in examination and inspection of lifting equipment.



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2. Following all examinations or inspections of lifting equipment, a report should be received in writing from the competent person. This should be kept on record for two years.
3. Any defects will be made known in writing and the equipment should not be used until such defects have been rectified, unless the competent person indicates a timescale for the action to be taken; the latter is for defects that do not immediately endanger people but might do so in the near future.
4. The competent person has a duty to inform the relevant enforcing authority where there is an existing or imminent risk of serious personal injury. Reports of defects should be kept on record until another such report is received.
5. All records may be kept in hard copy form, stored electronically or on computer disk, as long as they are readily retrievable.

Further Information.

Further information on LOLER and compliance with all other statutory requirements for the use of quick couplers may be obtained by contacting a local HSE office directly.

Alternatively the HSE can be found online at www.hse.gov.uk/.

For your convenience there is a direct link to the HSE site from the **Safety** page at the Hill Engineering Limited website which may be found at www.hillattach.com/