



## Guidelines

# SAFed Guidelines on the Lifting Operations and Lifting Equipment Regulations 1998 (LOLER)

# GUIDELINES

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## **INTRODUCTION**

The Lifting Operations and Lifting Equipment Regulations 1998 (LOLER), which came into force on 5<sup>th</sup> December 1998, were made under the Health and Safety at Work etc. Act 1974 (HSW Act). LOLER implements the lifting provisions of the Amending Directive to the Use of Work Equipment Directive (AUWED)<sup>1</sup>.

LOLER applies to all situations and premises covered by the HSW Act and builds on the requirements of the Provision and Use of Work Equipment Regulations 1998 (PUWER 98). It is important to note that in addition to complying with LOLER, persons that provide lifting equipment for use at work also need to comply with all applicable aspects of PUWER 98 and any other relevant health and safety law.

Whilst LOLER only applies to lifting equipment provided for use at work, the safety of similar types of equipment in other non work situations can be provided by following the same requirements of the Regulations (i.e. passenger lifts in shopping malls and in blocks of residential flats). In addition, due to their inherent risks, the Safety Assessment Federation (SAFed) recommends that escalators, which would normally be subject to the provisions of the Workplace (Health, Safety and Welfare) Regulations 1992, should in fact be subject to similar thorough examination provisions to those of LOLER.

LOLER replaces most of the sectoral law relating to the use of lifting equipment. However, unlike the previous sectoral laws which were specific to particular types of lifting equipment, LOLER applies to all items of lifting equipment used at work. The measures needed to meet the provisions of LOLER for individual items of lifting equipment should be identified from the results of risk assessment carried out under The Management of Health and Safety at Work Regulations 1992 (as amended). A proportionate response to identified risks is required, in general trivial risks can usually be ignored. Separate guidance has been produced by SAFed which lists lifting equipment that SAFed recommends should be subject to the provisions of LOLER. Copies of this separate guidance<sup>2</sup>, which also specifies recommended maximum periods between thorough examinations, may be obtained from SAFed.

## **AIMS**

The primary aim of these Guidelines is to assist users/owners of lifting equipment to understand and therefore to be able to comply fully with, the various provisions of LOLER. In addition, the guidance is aimed at identifying and explaining the types of service SAFed Member Inspection Bodies can provide in support of LOLER if contracted to do so.

Whilst the guidance concentrates on the planning, thorough examination, reporting and record keeping requirements ( Regulations 8, 9,10 and 11), brief information on all the other Regulations is also given.

A secondary but no less important aim of the guidance is to advise engineer surveyors employed by Inspection Bodies how to implement LOLER.

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<sup>1</sup> 95/63/EC

<sup>2</sup> MLCCO3

## **REGULATION 8 - ORGANISATION OF LIFTING OPERATIONS**

This Regulation requires that consideration is given to the risks involved with all lifting operations, and that such operations are properly planned in order to ensure safe execution of the operation.

The planning of lifting operations should be undertaken by a person competent in the task. Such a person would have sufficient understanding of the lifting operation and equipment to be used to enable them to formulate a plan and procedure, which would ensure safe execution of the operation. When planning the lifting operation consideration should be given to the following:

- when persons are to be lifted, that the equipment is suitable for such an operation and marked accordingly;
- the nature of the lifting operation, i.e. slung single inert mass, tandem lifting using more than one item of lifting equipment for the given task;
- the nature of the load to be lifted, i.e. stable single mass or unstable assembly of component loads, or part filled liquid container;
- the magnitude of the load and its centre of gravity;
- the suitability of the lifting equipment to be used;
- the possibility of operatives or other personnel working beneath the suspended load;
- visibility of both operators and supervisors, during the operation, and communication between them;
- the methods used for attaching/detaching and securing the loads during the operation;
- the environment in which the operation will be performed, to assess whether any additional risks may be presented;
- the adequacy of the location in which the lifting operation is to be carried out, with regard to available space;
- the risks posed to any individuals or property in the immediate vicinity of the lifting operation;
- the suitability of the lifting equipment location, such that it is stable and would not overturn;
- the potential need for the lifting equipment to be down rated in order to compensate for any specific operational or environmental aspects;
- storage of lifting equipment to minimise deterioration;
- evidence of visual checks on lifting equipment at given intervals, in order to ensure continued integrity;
- documented evidence of training to the appropriate level to ensure that all operatives can undertake their respective tasks safely;
- the level of supervision necessary to execute the lifting operation safely.

Further guidance is provided in BS7121 which contains recommendations for the planning of crane operations, but can be applied to other lifting equipment. Hand signals should be consistent with the code of signals in Schedule 1 of the Health and Safety (Safety Signs and Signals) Regulations 1996.

Supervision of the lifting operation should be at a level commensurate with the identified risks, and undertaken by persons competent in the task. Such supervision would be considered when lifting a sensitive load or to compensate for the inexperience of operatives.

In order to assist clients to comply with the regulatory requirement, SAFed Member Inspection Body Companies could provide the following:

- \* Formulate a plan on behalf of a client.
- \* Audit a client's own in-house plan.
- \* Audit the implementation of method statements and operational procedures.
- \* Assess the fitness for purpose of the lifting equipment.

## **REGULATION 9 – THOROUGH EXAMINATION AND INSPECTION**

### **Thorough Examination**

LOLER places a responsibility on the duty holder to consider the risks relating to lifting equipment and to put in place some means of controlling that risk. One such control measure is the thorough examination of lifting equipment. SAFed member companies have historically examined the most hazardous equipment which would fall under the definition of lifting equipment under the new regulations. The dutyholder under the law may elect for periodic thorough examination or consider some fundamental principles of risk assessment:

- Identify the hazards for the specific operating environments pertaining to the lifting equipment.
- Consider the frequency of hazard occurrence.
- Consider the utilisation and duty of the lifting equipment.
- Assess the level of control already in place.
- Assess the associated significant risks.
- Identify and recommend measures to control the risks.
- Operator's competence
- Maintenance regime

The primary intention of any assessment of risk is to recommend measures which can eliminate risk, or minimise residual risk to an acceptable level.

As part of the assessment process, the risks associated with any specific item of lifting equipment can be compared with those existing in other similar equipment, provided the following criteria apply:

- The similar equipment is safe.
- The intended use and technologies employed are comparable.
- The hazards and the elements of risk are comparable.

- The technical specifications are comparable.
- The conditions for use are comparable.

The competent person may determine that more frequent examinations than those prescribed are required due to the operating conditions, the utilisation rate or the high consequential risk in the event of failure.

Due to the inherent risks involved, certain items of lifting equipment should be thoroughly examined at an increased frequency to that indicated in LOLER. Specifically, these are fork lift trucks and motor vehicle lifting tables, which SAFed recommends should be thoroughly examined at least every 6 months. The competent person may also require tests or dismantling to enable a proper assessment of the condition of the lifting equipment to be achieved.

Lifting equipment should be subject to an assessment which should consider the environment in which the equipment is used, which components could deteriorate, and the hazards arising if the equipment were to fail in service. Most lifting equipment would pose a significant risk if it failed in service. Use in ordinary environments and at normal utilisation rates would require thorough examinations at the frequencies prescribed in LOLER. Lifting equipment posing trivial risks e.g. lifting equipment contained within parts of a more complex machine or in physical locations where failure could not endanger persons under both operational and maintenance conditions, may not require a thorough examination.

All lifting equipment which could endanger persons under either operational or maintenance conditions deteriorates in use and should be thoroughly examined so that deterioration can be detected in sufficient time to allow remedial action to be taken.

Where lifting equipment can suffer deterioration which could lead to an unsafe condition then:

For lifting accessories and lifting equipment used for lifting persons, it should be thoroughly examined at least every six months

All other lifting equipment should be subject to thorough examination at least every twelve months

OR

in accordance with an examination scheme produced by a competent person

It should be noted that these options may be combined so that certain items of lifting equipment can be subject to periodic thorough examination while others, or groups of others, may be subject to an examination scheme approach

Also, whenever exceptional circumstances which could jeopardise the safety of lifting equipment have occurred, e.g. overloading or substantial modification or repair, a thorough examination should take place.

## Testing

Testing of lifting equipment should be undertaken at the discretion of the competent person. A thorough examination may identify a shortfall in the integrity of the lifting equipment. In order to ensure continued safe use and complete the thorough examination, testing may have to be undertaken. There may also be a specific requirement with regard to safety such as calibration of the Rated Capacity Indicator (previously known as the Automatic Safe Load Indicator - ASLI). The competent person may have doubts as to the effectiveness of any part of the system and, in order to verify safety, may require such testing.

Any tests which may be considered, are not restricted to any particular or specific category; they could be:

- \* Functional and operational envelope tests to verify the satisfactory working range of the lifting equipment.
- \* Load testing to confirm the build quality and structural load bearing capability of the lifting equipment.
- \* Structural integrity testing of safety critical components and major load path items (i.e. Non-Destructive Examination).
- \* Electrical integrity testing.

Any tests carried out should be in accordance with relevant design codes and standards pertaining to the item of lifting equipment. These could be in the form of relevant legislation, standards, codes or manufacturer's recommendations.

The necessity for testing may be decided by a competent person's assessment or at the duty-holder's request

### **Initial thorough examination of all lifting equipment**

Regulation 9(1) requires all lifting equipment to be subject to a thorough examination by a competent person prior to being put into service for the first time within a workplace. However, if the lifting equipment is unused and is accompanied by an EC Declaration of Conformity<sup>3</sup> which was issued less than twelve months previously, then the first thorough examination required will be that in accordance with regulation 9(3). i.e. within a maximum of 6 or 12 months or in accordance with an examination scheme.

(Note:- SAFed considers that where the Declaration of Conformity does not cover installation, then a thorough examination should normally be undertaken before the equipment is taken into use.)

If an Inspection Body is requested to thoroughly examine new lifting equipment under LOLER Regulation 9(1) and no Declaration of Conformity/Incorporation is available then it should indicate this within the report of thorough examination. The situation is similar to pre-

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<sup>3</sup> New lifting equipment is required under the Supply of Machinery (Safety) Regulations (SMR) 1992 to be accompanied by an EC Declaration of Conformity or Incorporation. Failure by the supplier to provide either of these 2 documents as appropriate, is a contravention of Regulation 11 of the SMR. Failure by the user to ensure the relevant Declarations are available is a contravention of Regulation 10 of PUWER 1998.

LOLER where a test certificate was required to confirm the correct safe working load had been marked on items of lifting plant. Standard practice in that case was to recommend a test be carried out and the test certificate to be retained.

An Inspection Body may require a test to be carried out prior to acceptance of the item of lifting equipment, any test load applied should be agreed with the manufacturer or his representative to ensure that forces for which the item was not designed are not applied. It should be noted that the manufacturer is not required to state the test loads applied within any Declaration of Conformity or Incorporation.

### **Initial installation or relocation of lifting equipment**

If the way in which lifting equipment is installed or relocated could adversely affect its safety, then a thorough examination in accordance with Regulation 9(2) should be carried out following such installation or relocation to a new site or position. Since this thorough examination is required to ensure that the item is safe to operate, it may be necessary to undertake some testing to confirm stability and other elements of safe working.

Any change to the installation affecting its safety would require a further thorough examination before the item could be taken back into service (e.g. increasing the height of a tower crane, modifying the gantry upon which an overhead travelling crane runs).

Certain types of lifting equipment whose safety could be jeopardised by unsafe installation may be installed or relocated on a frequent basis, e.g. scaffold jib crane. In these instances the owner, or his employees as necessary, must have sufficient competence to undertake an appropriate thorough examination required by this regulation. The requirements relating to records would still need to be complied with each time the installation was moved.

### **Examination Scheme**

Where the period between thorough examinations is to be extended, an examination scheme should be drawn up by an appropriate competent person. Should any changes to the operating conditions occur subsequently, then the examination scheme will need to be reviewed for adequacy under the new conditions. An examination scheme does not have to be a physical document but should be capable of being produced in hard copy if required. The examination scheme may specify certain supplementary tests or investigations necessary to identify any potential defects.

### **Competent Persons To Carry Out Thorough Examinations**

Owners of lifting equipment have a duty to ensure that they employ “competent persons” to undertake thorough examinations as detailed in LOLER. In this context a “Competent Person” is:

*A person that 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.*

The competent person carrying out the examinations should also be sufficiently independent and impartial to allow objective decisions to be made.

The term “competent person” refers not only to the individual employee who carries out the duties under the Regulations, but also to the Company employing them.

A way of ensuring the competence and independence of persons to carry out thorough examinations of lifting equipment, is to employ an Inspection Body holding Accreditation to EN45004<sup>4</sup> to undertake such examinations.

However, should employers and others within their own organisations have the necessary competence, then they can carry out the work themselves. If they do, they must ensure that their “in-house” examiners have the genuine authority and independence to ensure that examinations are properly carried out and that the necessary reporting actions arising from them are made without fear or favour.

### **Inspections Between Thorough Examinations**

Regulation 9(3)(b) requires that the Owner/User arranges for inspections to be carried out in the intervals between thorough examinations whenever:

Lifting equipment is exposed to conditions causing deterioration and where the owner/user’s risk assessment has identified that there is a significant risk to the operator or other persons from the use of the lifting equipment, which would be addressed by regular inspection.

Whilst the purpose of a thorough examination is to establish that the equipment has been installed correctly and is safe to operate, the main reasons for an inspection are to ensure that the equipment is kept in a good state of repair, such that the health and safety conditions are maintained, and that any deterioration can be identified and remedied in good time.

The inspection could include, for example: visual checks, functional tests, checks for component security, calibration and may be carried out daily, weekly, or at other intervals depending on the severity of use or deterioration anticipated. Guidance is often provided by the manufacturers of lifting equipment and their instructions should be used and incorporated into appropriate “planned maintenance/inspection” schemes.

The records of these inspections and any remedial work actioned should be made available to the competent person carrying out the thorough examination, who may not be the person involved in these inspections.

Persons authorised to carry out these inspections should have sufficient knowledge and experience to detect damage or faults resulting from deterioration and to carry out any tests needed during the inspection to establish that the equipment is working safely and is structurally sound. They should also be capable of carrying out the appropriate reporting procedures needed to initiate remedial actions.

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<sup>4</sup> BS EN 45004: 1995 – General Criteria for the operation of various types of bodies performing inspection.

The level of competence required will vary according to the type of equipment and the extent of inspection skills needed to determine the condition of that equipment. Where the level of competence is not available ‘in house’, then the assistance of another body with the relevant competence will be necessary.

### **Services that SAFed Member Inspection Bodies can provide**

SAFed Member Inspection Body Companies are able to offer the following services to owners of lifting equipment which, if fully implemented, will ensure that the requirements of Regulation 9 are complied with:

- **Provision of technical advice**  
Identification and specification of lifting equipment which requires a thorough examination:
  - ◆ at installation or at every relocation;
  - ◆ on initial use, where installation affects safety;
  - ◆ periodically throughout its working life;
  - ◆ after an exceptional circumstance.
  
- **Examination Scheme**  
Provide advice on the appropriate examination system required. Provide a lifting equipment “Examination Scheme” after a risk assessment, should this be the preferred route, including revision following lifting equipment changes.
  
- **Thorough Examination**  
As required by the regulations:
  - ◆ during installation
  - ◆ before first use
  - ◆ after relocation
  - ◆ periodically throughout its working life
  - ◆ after an exceptional circumstance
  
- **EC Declaration of Conformity**  
Provide advice on whether an EC Declaration of Conformity is required and check that such documentation is in the owner’s possession.

### **REGULATION 10 – REPORTS AND DEFECTS**

This regulation specifies the thorough examination reporting requirements; they apply equally to lifting equipment and accessories.

In all cases after completing a thorough examination, the competent person should, within a period of 28 days, make an authenticated report to the employer and any person from whom the lifting equipment has been hired or leased.

Additionally, where the thorough examination reveals any defect which *is or could become* a danger to persons, the employer and/or the person in control of the lifting operation is to be notified forthwith. This has been common practice amongst SAFed Member Inspection Body Companies, but has not previously been a legal requirement in all circumstances.

Whereas LOLER does not state that this report be in writing, it is standard practice and will continue.

Where the defect poses an *existing or imminent risk of serious personal injury* a copy of the thorough examination report will be sent to the relevant enforcing authority. These circumstances differ from those above where immediate notification to the employer includes 'specified time' repairs. This will not necessarily apply to all defects traditionally classed as 'immediate', unless an imminent risk of serious personal injury is possible, bearing in mind that the future use may be unknown. Within these limitations, the regulations apply to both the lifting machine and accessories.

These reporting requirements are to be applied even when the lifting equipment or accessory is scrapped, removed from service or repaired immediately.

Schedule 1 of LOLER details the information to be contained in reports of thorough examination. One such item of information to be included for thorough examinations undertaken after installation, where the safety of the lifting equipment depends on the installation, is "that it has been installed correctly and is safe to operate". In order to make such a statement it may, under certain circumstances, be necessary for the competent person undertaking the thorough examination to be present during the installation of the equipment.

## **REGULATION 11 – KEEPING OF INFORMATION**

### **Record Retention**

Where an EC Declaration of Conformity or Declaration of Incorporation is obtained with lifting equipment in accordance with the Supply of Machinery Regulations 1992 then the owner should retain this document for the life of the equipment (Regulation 11(1)).

A copy of the initial thorough examination report, made under Regulation 9(1), should be kept by the owner for the life of lifting equipment. (Regulation 11(2) a(i))

A copy of the first thorough examination report for lifting accessories should be kept for two years after that examination (Regulation 11(2) a(ii)).

It is possible for the owner to request another body to hold these documents on his behalf providing that they can be readily accessed for the information of an enforcing authority or other bodies entitled to ask for them. This may be undertaken by the Inspection Body on behalf of clients, particularly if it can be held electronically.

Following an initial thorough examination, including tests as necessary, carried out to confirm safety of newly installed or relocated lifting equipment, a report will be issued by the competent person carrying out such thorough examination. The report should feature the information detailed in LOLER Schedule 1; particular attention should be made to ensure that the report contains the information specified in section 6 of the Schedule. If the initial thorough examination included any tests, then the test loads applied should be recorded in this section. The owner is required to retain this report until the item is removed from that location at which the examination took place (Regulation 11(2)(a)iii).

At the time of the first thorough examination following installation/relocation, a copy of the initial installation report should be made available to the inspection body to enable it to confirm that such an examination has been carried out.

Any report of thorough examination made under the requirements of Regulation 9(3) should be retained for two years or until the time the next report is received whichever is the longer period. The report may be in electronic form but should be capable of being produced as hard copy and it should contain the prescribed information detailed in Schedule 1 of LOLER.

## **OTHER REGULATIONS - SUMMARY**

Whilst the foregoing information is concerned with the interpretation and implementation of Regulations 8, 9, 10 and 11, the following is a brief summary of the remaining Regulations:

- **Regulation 1**

This Regulation gives the implementation date as 5<sup>th</sup> December 1998

- **Regulation 2**

This Regulation details the interpretation of LOLER and includes a number of important definitions, they are as follows:

*An "accessory for lifting " is defined as "work equipment for attaching loads to machinery for lifting"*

(Note: This includes all items commonly referred to as "lifting tackle" (chain slings, rope slings, shackles, eyebolts, etc.) along with items such as lifting beams, magnets and grabs.)

*"Lifting equipment " is defined as "work equipment for lifting or lowering loads and includes its attachments used for anchoring, fixing or supporting it"*

(Note: All the types of equipment which were covered by the previous sectoral legislation (lifts, cranes, pulley blocks, etc) are included in this definition, but items such as fork lift trucks, motor vehicle lifting tables, mobile elevating work platforms, suspended access equipment and vehicle tail lifts, now also need to be considered under LOLER)

*A "lifting operation" is defined as "an operation concerned with the lifting or lowering of a load" and a "load" includes a person.*

- **Regulation 3**

This Regulation covers the LOLER application, and details where they apply and on whom the requirements are imposed.

The Regulations apply throughout Great Britain and wherever the HSW Act applies. i.e. wherever work is done by the employed or self-employed, except for domestic work in a private household. They apply to all employers (including those who choose to allow their employees to provide their own lifting equipment), the self-employed and employers who have some control of lifting equipment or its management or the way it is used. (e.g., crane

hirers, and employers who provide lifting equipment for use by others working on their premises)

- **Regulation 4**

This Regulation states that the strength and stability of lifting equipment should be adequate for the task for which the equipment is intended.

The load itself or any points provided on the load to assist in lifting it (e.g. lifting lugs temporarily welded to a steel beam or lifting lugs on a skip) should be of adequate strength for the task.

- **Regulation 5**

The purpose of this Regulation is to consider lifting equipment for lifting persons. It requires that carriers such as lift cars be fitted with interlocked doors and be protected by an enclosure. Lifts complying with previous legislation will meet the requirements of this Regulation.

Carriers which are not fully enclosed, for example mobile elevating work platforms, should be such that the risks to persons from being crushed, trapped or struck, or falling from the carrier, are prevented so far as is reasonably practicable.

Devices, such as safety gear on lifts, check valves on hydraulic equipment or suspension ropes / chains with a high factor of safety, should be provided to prevent the risk of a carrier failing in the event of failure of the primary means of support.

In the event of malfunction of the lifting equipment, persons being lifted should not be exposed to danger and should be able to summon help and be rescued safely.

Regulation 5 also deals with mine winding gear which, for reasons inherent in the site and height differences, cannot be fitted with suitable devices to prevent the risk of a carrier falling. In such cases the carrier suspension rope or chain should have an enhanced safety coefficient and should be inspected by a person competent to do so, every working day. Compliance with the Mines (Shafts and Windings) Regulations 1993 should satisfy the requirements of LOLER.

- **Regulation 7**

This Regulation considers the marking of lifting equipment and requires that machinery and accessories for lifting loads are clearly marked to indicate their safe working loads.

There is a requirement that equipment designed for lifting persons be appropriately marked.

There is also a requirement that lifting equipment which has not been designed for lifting persons, but which may be inadvertently used for this purpose, be clearly marked to indicate that it should not be used for this purpose.

- **Regulation 12**

Regulation 12 states the exemptions for the armed forces and allows the Secretary of State for Defence to exempt any home forces, visiting forces or any headquarters from the

requirements of the Regulations, where this would be necessary in the interests of national security.

- **Regulations 13, 14, 15, 16 and 17**

These Regulations note amendments, repeals and revocations of the requirements of earlier sectoral legislation (such as the Factories Act 1961) relating to lifting equipment replaced by LOLER.