

Safe use of lifting equipment

Lifting Operations and Lifting Equipment Regulations 1998

Approved Code of Practice and guidance



L113 (Second edition)
Published 2014

This Approved Code of Practice and guidance is for those that work with any lifting equipment provided at work or for the use of people at work, those who employ such people, those that represent them and those who act as a competent person in the examination of lifting equipment.

It sets out what you should do to comply with the Lifting Operations and Lifting Equipment Regulations 1998 (LOLER).

LOLER applies to lifting equipment and builds on the requirements of the Provision and Use of Work Equipment Regulations (PUWER).

This edition brings the document up to date with regulatory and other changes. The guidance clarifies which equipment is subject to the provisions of the Regulations and the role of the competent person.

The context and examples have been expanded to show that LOLER applies across every sector using such lifting equipment. New examples show the impact on the health and social care sector.

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Approved Code of Practice

This Code has been approved by the Health and Safety Executive, with the consent of the Secretary of State. It gives practical advice on how to comply with the law. If you follow the advice you will be doing enough to comply with the law in respect of those specific matters on which the Code gives advice. You may use alternative methods to those set out in the Code in order to comply with the law.

However, the Code has a special legal status. If you are prosecuted for breach of health and safety law, and it is proved that you did not follow the relevant provisions of the Code, you will need to show that you have complied with the law in some other way or a Court will find you at fault.

Guidance

This guidance is issued by the Health and Safety Executive. Following the guidance is not compulsory, unless specifically stated, and you are free to take other action. But if you do follow the guidance you will normally be doing enough to comply with the law. Health and safety inspectors seek to secure compliance with the law and may refer to this guidance.

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Introduction

About this book

1 This Approved Code of Practice (ACOP) and associated guidance provide practical advice on how you can comply with the Lifting Operations and Lifting Equipment Regulations 1998 (LOLER).

Who should read this book?

2 This book is for employers and dutyholders, as well as anyone who has responsibility for controlling lifting equipment. Throughout this book we have referred to the employer and others who have duties as 'you'. Where the guidance is addressed to some other dutyholder, for example a competent person, the text is clear about who it is intended for.

What does LOLER apply to?

3 LOLER applies to the use of lifting equipment provided as work equipment. These Regulations implement the lifting provisions of the Amending Directive to the Use of Work Equipment Directive (AUWED, 95/63/EC) and build on the requirements of the Provision and Use of Work Equipment Regulations 1998 (PUWER) for which HSE has made available separate guidance.¹

Where does LOLER apply?

4 Subject to the provisions of regulation 3, LOLER applies to all workplaces and work situations where the Health and Safety at Work etc Act 1974 (HSW Act) applies and extends beyond the mainland of Great Britain to specified offshore areas and activities.

5 This document contains Approved Code of Practice and guidance on the duties in LOLER and other regulations which are applicable to the use of lifting equipment in all sectors of industry and in all work activities. These other regulations are principally the Management of Health and Safety at Work Regulations 1999 (the Management Regulations) and PUWER.

6 PUWER applies to all work equipment including lifting equipment. For example, PUWER places requirements on dutyholders to provide suitable work equipment for the task (regulation 4), information and instructions (regulation 8) and training (regulation 9) to the people who use it. PUWER also requires measures to be taken concerning dangerous parts of machinery (regulation 11), controls and control systems (regulations 14 to 18), stability (regulation 20) and mobility (regulations 25 to 29).

7 In addition to complying with LOLER, dutyholders who provide lifting equipment should also comply with all relevant aspects of PUWER and any other applicable health and safety law.

8 Like the scope of PUWER, the potential scope of these Regulations is extremely wide. LOLER applies to any item of 'lifting equipment' as defined in regulation 2, but a dutyholder should consider the extent of the risk and the measures needed to eliminate or control it.

9 The Management Regulations require risks to be assessed to identify the nature and level of risks, including those associated with a lifting operation. You should then manage these risks to reduce them as far as reasonably practicable. Action taken should be proportionate to the risk identified. Trivial risks can usually be ignored, unless the work activity adds to those risks.

10 Further guidance on risk assessment can be found in *Risk assessment: A brief guide to controlling risks in the workplace* INDG163.²

11 When deciding how to reduce the risks from using a particular piece of lifting equipment, you need to consider the:

- (a) type of load being lifted, its weight, shape and what it consists of;
- (b) risk of a load falling, moving, breaking up or striking a person or object and the consequences;
- (c) risk of the lifting equipment striking a person or an object and the consequences;
- (d) risk of the lifting equipment failing or falling over while in use and the consequences; and
- (e) risk of damage to the lifting equipment that could result in failure.

12 New lifting equipment must satisfy certain essential health and safety requirements as laid down in Article 100a Product Safety Directive. You are not necessarily required to ensure that existing lifting equipment meets the same level of protection as new equipment but this will depend on the degree of risk. You must assess the risk in each particular case; the nature and extent of the risk will dictate what steps you should take to control it.

13 The risk assessment may well identify significant risks not addressed by LOLER. For example, it could identify the risk of the operator falling from a height. In such circumstances you must consider safeguards under the Work at Height Regulations 2005.³

Changes in this edition

14 Changes in this edition include:

- (a) a simple decision tree has been included which provides the main elements that must apply to a piece of equipment for it to be subject to LOLER (see Figure 1);
- (b) some changes have been made to bring the guidance in line with other advice, for example clarifying that you should not take lifting equipment within 10 m of overhead power cables;
- (c) the context and examples have been expanded to show that LOLER applies across every sector using lifting equipment. New examples show the impact on the health and social care sector.

About ACOPs

15 Approved Codes of Practice are approved by the HSE Board with the consent of the Secretary of State. See the Appendix: Notice of Approval for details.

16 The ACOP describes preferred or recommended methods that can be used (or standards to be met) to comply with the Regulations and the duties imposed by the Health and Safety at Work etc Act (the HSW Act). The accompanying guidance also provides advice on achieving compliance, or it may give information of a general nature, including explanation of the requirements of the law, more specific technical information, or references to further sources of information.

17 The legal status of ACOP and guidance text is given on the copyright page (page 2).

Presentation

18 The ACOP text is set out in **bold** and the accompanying guidance in normal type, the text of the regulations is in *italics*. Coloured borders also indicate each section clearly. Some regulations are preceded by a short summary of the main duties imposed by that regulation. This text is for information only.

Other guidance

19 HSE publishes separate guidance specific to particular industry sectors, which links the requirements of these Regulations to specialised work equipment used in industries such as agriculture and construction. You should also take account of any relevant HSE publications giving guidance on other regulations, industries or equipment. There is a non-exhaustive reference section at the back of this document.

Trade Union Reform and Employment Rights Act 1993

20 This Act implements the employment protection requirements of the EC Health and Safety Framework Directive. It applies to all employees, including those working offshore, and gives rights regardless of their age, hours of work or length of service. The Act entitles employees to take their case to an industrial tribunal if any action is taken against them by their employer if they leave the workplace because of dangerous circumstances or take appropriate steps to protect themselves, or others, from the danger.

Consulting employees

21 If you are an employer you have a legal duty to consult with your employees on matters relating to health and safety in the workplace. For further information see *Consulting employees on health and safety: A brief guide to the law* INDG232.⁴

Management of Health and Safety at Work Regulations 1999

Regulation 19 Protection of young persons

Regulation 19

(1) *Every employer shall ensure that young persons employed by him are protected at work from any risks to their health or safety which are a consequence of their lack of experience, or absence of awareness of existing or potential risks or the fact that young persons have not yet fully matured.*

(2) *Subject to paragraph (3), no employer shall employ a young person for work –*

- (a) *which is beyond his physical or psychological capacity;*
- (b) *involving harmful exposure to agents which are toxic or carcinogenic, cause heritable genetic damage or harm to the unborn child or which in any other way chronically affect human health;*
- (c) *involving harmful exposure to radiation;*
- (d) *involving the risk of accidents which it may reasonably be assumed cannot be recognised or avoided by young persons owing to their insufficient attention to safety or lack of experience or training; or*
- (e) *in which there is a risk to health from –*
 - (i) *extreme cold or heat;*
 - (ii) *noise; or*
 - (iii) *vibration,*

and in determining whether work will involve harm or risk for the purpose of this paragraph, regard shall be had to the results of the assessment.

(3) *Nothing in paragraph (2) shall prevent the employment of a young person who is no longer a child for work –*

- (a) *where it is necessary for his training;*
- (b) *where the young person will be supervised by a competent person; and*
- (c) *where any risk will be reduced to the lowest level that is reasonably practicable.*

Management Regulations

Guidance 19

22 Young people – those who are under 18 years of age – are often exposed to risks to their health and safety when using work equipment due to their immaturity, lack of experience or because they do not recognise existing or potential risks. Therefore you should not allow them to use high-risk lifting machinery (such as cranes, construction site hoists and forklift trucks) unless they have the necessary maturity and competence, which includes having successfully completed appropriate training. However, during training they may use such equipment if they are adequately supervised.

23 Competence and maturity are not simply a matter of the age of the worker. Training in itself will not ensure competence but it is part of what is required. The level of supervision needed will depend on how mature the workers are and whether they can work safely without putting themselves or others at risk. Even

Management Regulations

Guidance 19

**Management
Regulations**

when they have been trained, young people may need more supervision to make sure that they do not act irresponsibly or take short cuts which put themselves and others at risk.

24 You do not have to carry out a separate risk assessment specifically for a young person. If you have not previously employed a young person you should review your existing risk assessment and take into account the specific factors for young people, before they start work with you.

Lifting Operations and Lifting Equipment Regulations 1998

Regulation 1 Citation and commencement

Regulation
LOLER 1

(1) *These Regulations may be cited as the Lifting Operations and Lifting Equipment Regulations 1998 and shall come into force on 5th December 1998.*

Regulation 2 Interpretation

Summary

Regulation 2 clarifies the meaning of terms used in this document.

Regulation
LOLER 2

(1) *In these Regulations, unless the context otherwise requires –*

“the 1974 Act” means the Health and Safety at Work etc Act 1974;

“accessory for lifting” means lifting equipment for attaching loads to machinery for lifting;

“EC declaration of conformity” means a declaration which complies with –

- (a) *section A of part 1 of Part 2 of Schedule 2 to the Supply of Machinery (Safety) Regulations 2008;*
- (b) *Article 12.1 of Council Directive 89/686/EEC on the approximation of the laws of the Member States relating to personal protective equipment; or*
- (c) *regulation 8(2)(d) of the Lifts Regulations 1997.*

“employer” except in regulation 3(2) and (3) includes a person to whom the requirements imposed by these Regulations apply by virtue of regulation 3(3)(a) and (b);

“essential requirements” has the same meaning as in the Provision and Use of Work Equipment Regulations 1998;

“examination scheme” means a suitable scheme drawn up by a competent person for such thorough examinations of lifting equipment at such intervals as may be appropriate for the purpose described in regulation 9(3);

“the Executive” means the Health and Safety Executive;

“lifting equipment” means work equipment for lifting or lowering loads and includes its attachments used for anchoring, fixing or supporting it;

“lifting operation” has the meaning given in regulation 8(2);

“load” includes a person;

LOLER

Regulation 2

“thorough examination” in relation to a thorough examination under paragraph (1), (2) or (3) of regulation 9 –

- (a) means a thorough examination by a competent person;*
- (b) where it is appropriate to carry out testing for the purpose described in the paragraph, includes such testing by a competent person as is appropriate for the purpose,*

and “thoroughly examined” shall be construed accordingly;

“work equipment” means any machinery, appliance, apparatus, tool or installation for use at work (whether exclusively or not).

(2) Unless the context otherwise requires, any reference in these Regulations to –

- (a) a numbered regulation or Schedule is a reference to the regulation or Schedule in these Regulations so numbered; and*
- (b) a numbered paragraph is a reference to the paragraph so numbered in the regulation or Schedule in which the reference appears.*

LOLER

Guidance 2

25 Regulation 2(1) defines ‘lifting equipment’ as ‘work equipment for lifting or lowering loads and includes its attachments used for anchoring, fixing or supporting it’. It includes any lifting accessories that attach the load to the equipment in addition to the equipment which carries out the actual lifting function. The scope of these Regulations is therefore very wide.

26 As stated in regulation 2(1), a ‘load’ includes ‘a person’ as well as the usual material, animals or combination of these that are lifted by the lifting equipment. In some circumstances, such as in the use of a mobile crane, the weight of the lifting accessories (including the hook block) should be considered as part of the load being lifted. In addition, the weight of equipment designed to contain the load (eg skips or stillages, pallets, ladles) should be considered as part of the load.

Equipment and operations covered by LOLER

27 LOLER applies to ALL lifting equipment used for work purposes, even where it was manufactured and put into use before LOLER came into force in 1998.

28 The following examples illustrate the type of equipment which can raise or lower loads and the broad range of lifting operations, which should be assessed for the application of LOLER. These are examples and the Regulations may be relevant to other equipment used for similar activities or where the equipment listed is used for different lifting operations:

- (a) cranes;
- (b) lift trucks and telescopic handlers;
- (c) hand pallet trucks, specifically those that have the ability to raise the forks;
- (d) goods lifts or passenger lifts, for example in an office block, hospital etc which are provided for those at work;
- (e) simple systems such as a rope and pulley used to raise a bucket of cement on a building site, a construction site hoist, a gin wheel, or a dumb waiter in a restaurant or hotel;
- (f) pull-lifts;
- (g) vacuum lifting equipment;
- (h) a vehicle inspection hoist;
- (i) a scissor lift or a mobile elevating work platform (MEWP);

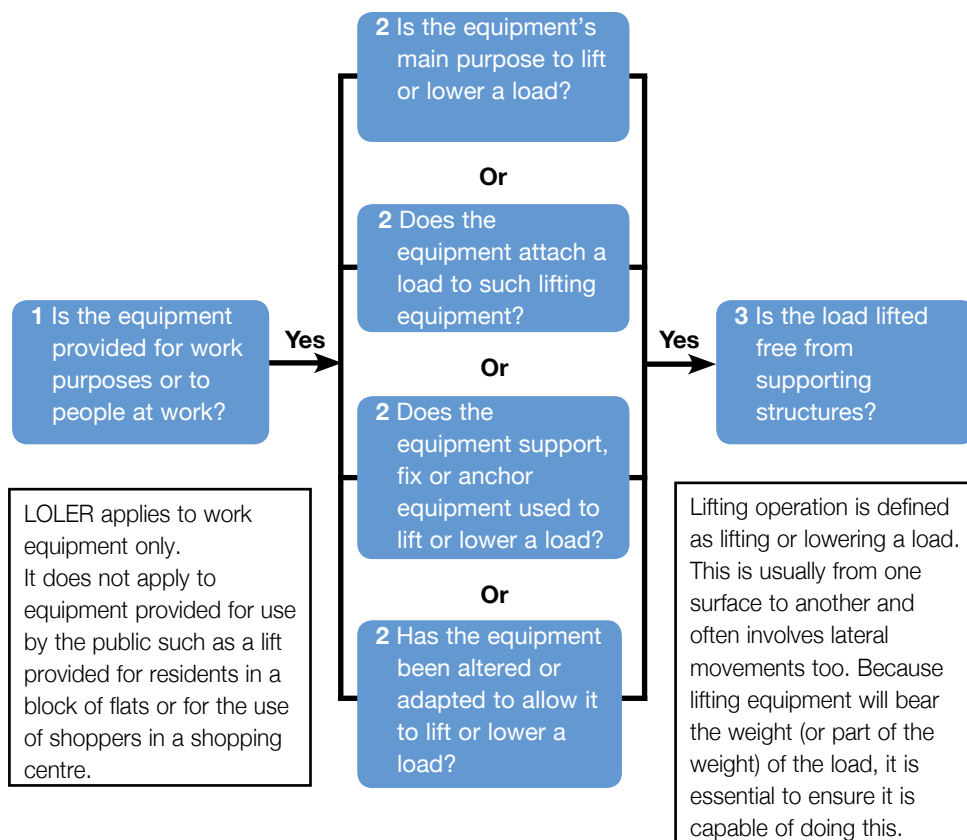
LOLER

Guidance 2

- (j) ropes used for climbing or work positioning during arboriculture, climbing telecommunication towers and structural examination of a rock face or external structure of a building;
- (k) a paper roll hoist on a printing machine;
- (l) an automated storage and retrieval system;
- (m) a front-end loader on a tractor used for raising and lowering loads such as a bale of hay;
- (n) an excavator (or other earth-moving machinery) adapted to be used for lifting using lifting attachments (eg forks, grabs, lifting magnets), but not when used for normal earth-moving operations;
- (o) a hoist or sling used for lifting people from, for example, a bed or a bath;
- (p) a loader crane fitted to a lorry, eg used to raise bins for delivery duties;
- (q) a refuse vehicle loading arm, eg used to raise bins for tipping;
- (r) an air cargo elevating transfer vehicle;
- (s) a car transporter or vehicle recovery equipment;
- (t) a skip collection vehicle; and
- (u) vehicle tail lifts.

29 Lifting accessories would include such items as slings, removable eyebolts, chains, ropes, shackles, grabs, magnets, vacuum lifters, crane forks, lifting beams and spreaders.

Figure 1 Is my equipment subject to LOLER?



If you answer yes to question 1 **and** any of the options in column 2 **and** question 3, the equipment is likely to be subject to LOLER.

If you have answered no to question 1 you may still have duties under section 3 or 4 of the HSW Act to ensure the safety of users.

If you have answered no to all the options in column 2 **and/or** question 3, your equipment may still be subject to the need for inspection and maintenance under the provisions of PUWER.

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LOLER** 2

Equipment and operations not covered by LOLER

30 A three-point linkage on a tractor is not considered to be lifting equipment.

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31 In most cases LOLER will not apply to work equipment which does not have as its principal function a use for lifting or lowering. The three-point linkage mentioned above raises a tractor attachment, such as a plough, to clear the ground but this type of motion is not lifting for the purposes of these Regulations.

32 Other examples of equipment and operations not covered by LOLER include:

- (a) a conveyor belt;
- (b) winching a load where the load does not leave the ground;
- (c) roller shutter doors;
- (d) tipper trucks;
- (e) eyebolts permanently fixed in the load (these form part of the load);
- (f) dentist chairs; and
- (g) fall arrest equipment, including eyebolts fastened to a structure to secure such fall arrest equipment, which are considered part of the fabric of the building.

33 However, a similar level of safety is required by PUWER in respect of the work equipment being used. Unassisted manual movement of loads that does not involve equipment, such as carrying a parcel, is not covered by LOLER or PUWER but would be covered by the Manual Handling Operations Regulations 1992.⁵

34 LOLER does not apply to escalators. This equipment is covered by more specific legislation, namely regulation 19 of the Workplace (Health, Safety and Welfare) Regulations 1992.⁶

35 LOLER does not apply to lifting equipment which is not provided for use at work. Equipment provided by employers for non-work purposes will be covered by other provisions which require that it must be safe to use, such as section 3 or 4 of the HSW Act.

LOLER

Regulation 3 Application

Summary

Regulation 3(1) explains the geographic extent of the application of the Regulations and (2)–(4) apply the Regulations to equipment provided for use at work, self-employed people and people ‘in control’ of lifting equipment.

Regulation 3(5) onwards explains circumstances where the Regulations are disapplied.

Regulation 3

(1) *These Regulations shall apply –*

- (a) *in Great Britain; and*
- (b) *outside Great Britain as sections 1 to 59 and 80 to 82 of the 1974 Act apply by virtue of the Health and Safety at Work etc Act 1974 (Application outside Great Britain) Order 1995 (“the 1995 Order”).**

(2) *The requirements imposed by these Regulations on an employer in respect of lifting equipment shall apply in relation to lifting equipment provided for use or used by an employee of his at work.*

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* See paragraph 37

Regulation 3

(3) *The requirements imposed by these Regulations on an employer shall also apply –*

- (a) *to a self-employed person, in respect of lifting equipment he uses at work;*
- (b) *subject to paragraph (5), to a person who has control to any extent of –*
 - (i) *lifting equipment;*
 - (ii) *a person at work who uses or supervises or manages the use of lifting equipment; or*
 - (iii) *the way in which lifting equipment is used,*

and to the extent of his control.

(4) *Any reference in paragraph (3)(b) to a person having control is a reference to a person having control in connection with the carrying on by him of a trade, business or other undertaking (whether for profit or not).*

(5) *The requirements imposed by these Regulations on an employer shall not apply to a person in respect of lifting equipment supplied by him by way of sale, agreement for sale or hire-purchase agreement.*

(6) *Subject to paragraphs (7) to (10), these Regulations shall not impose any obligation in relation to a ship's work equipment (whether that equipment is used on or off the ship).*

(7) *Where merchant shipping requirements are applicable to a ship's work equipment, paragraph (6) shall relieve the shore employer of his obligations under these Regulations in respect of that equipment only where he has taken all reasonable steps to satisfy himself that the merchant shipping requirements are being complied with in respect of that equipment.*

(8) *In a case where the merchant shipping requirements are not applicable to the ship's work equipment by reason only that for the time being there is no master, crew or watchman on the ship, those requirements shall nevertheless be treated for the purpose of paragraph (7) as if they were applicable.*

(9) *Where the ship's work equipment is used in a specified operation paragraph (6) shall not apply to regulations 6 and 8 (each as applied by regulation 3).*

(10) *Paragraph (6) does not apply to a ship's work equipment provided for use or used in an activity (whether carried on in or outside Great Britain) specified in the 1995 Order* save that it does apply to –*

- (a) *the loading, unloading, fuelling or provisioning of the ship; or*
- (b) *the construction, reconstruction, finishing, refitting, repair, maintenance, cleaning or breaking up of the ship.*

(11) *In this regulation –*

"master" has the meaning assigned to it by section 313(1) of the Merchant Shipping Act 1995;

"merchant shipping requirements" means the requirements of regulations 3 and 4 of the Merchant Shipping (Guarding of Machinery and Safety of Electrical Equipment) Regulations 1988 and regulations 5 to 10 of the Merchant Shipping (Hatches and Lifting Plant) Regulations 1988;

LOLER

* See paragraph 37

Regulation 3

LOLER

“ship” has the meaning assigned to it by section 313(1) of the Merchant Shipping Act 1995 save that it does not include an offshore installation;

“shore employer” means an employer of persons (other than the master and crew of any ship) who are engaged in a specified operation;

“specified operation” means an operation in which the ship’s work equipment is used –

- (a) by persons other than the master and crew; or*
- (b) where persons other than the master and crew are liable to be exposed to a risk to their health or safety from its use.*

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LOLER

Where LOLER applies

36 LOLER builds on the requirements of PUWER and applies when equipment is provided for those at work or for work purposes:

- (a) to all lifting equipment used where the HSW Act applies, ie to all sectors including factories, offices and shops, schools, universities, hospitals, hotels, places of entertainment, offshore oil and gas installations, agriculture and forestry etc;
- (b) to lifting equipment used on private roads and paths on industrial estates and business parks and temporary work sites, including construction sites;
- (c) throughout Great Britain and has effect wherever work is done, except for domestic work in a private household;
- (d) to equipment used by homeworkers; and
- (e) to nursing homes and similar establishments and to parts of workplaces where ‘domestic’ staff are employed such as the kitchens of hostels or sheltered accommodation.

Application to the offshore industry

37 LOLER applies offshore as the HSW Act applies by virtue of the Health and Safety at Work etc Act 1974 (Application outside Great Britain) Order 2013. This Order applies the HSW Act to offshore installations, wells, pipelines and pipeline works, and to connected activities within the territorial waters of Great Britain or in designated areas of the United Kingdom Continental Shelf, plus certain other activities within territorial waters. Further advice on LOLER and its application offshore can also be found in *Technical guidance on the safe use of lifting equipment offshore* HSG221.⁷

How LOLER applies to marine activities

38 Except for certain ships of the Royal Navy, ships are subject to merchant shipping legislation which is dealt with by the Maritime and Coastguard Agency. Apart from certain regulations and in certain circumstances, LOLER does not apply to lifting equipment which is a part of ships’ equipment, no matter where it is used. However, regulations 6 and 8 of LOLER will apply in what are called ‘specified operations’. Specified operations are where the ship’s lifting equipment is used by people other than the master and crew of the vessel or where only the master and crew are involved in the work but other people are put at risk. There is a Memorandum of Understanding (MOU)⁸ between HSE, the Maritime and Coastguard Agency and the Marine Accident Investigation Branch for health and safety activities etc at the water margin and offshore.

39 Where shore-based workers are to use a ship’s lifting equipment, and their employers wish to take advantage of this disapplication from LOLER, then they are required by the Regulations to take reasonable steps to satisfy themselves that the

Guidance

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appropriate merchant shipping requirements have been met. The ship's records should normally contain sufficient information to satisfy reasonable enquiries.

Examples of how LOLER applies

40 LOLER still applies where there may not be a direct 'employment' relationship between the user and the person who controls the use of the lifting equipment. It will apply, for example, where a subcontractor carries out work on another person's premises with lifting equipment provided by that person or a third party who controls the equipment but not its use, such as a plant hire company.

41 Under the requirements of LOLER:

- (a) employers (whether individuals, partnerships or companies) have a duty to ensure that lifting equipment provided for their employees and others working for them complies with these Regulations;
- (b) others who have some measure of control over lifting equipment must comply with the same duties in respect of lifting equipment they use at work;
- (c) the Regulations also apply to employers who choose to allow their employees to provide their own lifting equipment;
- (d) employers who have control of lifting equipment, its management or the way it is used also have duties as far as their control permits. For instance, those hiring out cranes may, in practice, have some control over the way the crane is used or maintained by their customers. Alternatively, employers may provide their lifting equipment to others working on their premises and they clearly have some control over the equipment provided.

42 If people working under the control and direction of others are treated as self-employed for tax and national insurance purposes, they are nevertheless treated as their employees for health and safety purposes. You should therefore take appropriate action to protect them. If any doubt exists about who is responsible for the health and safety of a worker this should be clarified and included in the terms of the contract. However, a legal duty under the HSW Act cannot be passed on by means of a contract and there will still be duties towards others under section 3 of the HSW Act. If such workers are employed on the basis that they are responsible for their own health and safety, legal advice should be sought before doing so.

43 LOLER only applies to work activities. It does not apply, for example, to people who provide lifting equipment principally for use by members of the public such as lifts provided for use by the public in a shopping centre. In such circumstances employers will have to satisfy the requirements of the HSW Act, principally sections 3 and 4. However, if they use the requirements of LOLER as a guide they will probably satisfy these legal duties. The following paragraphs give examples of how LOLER applies in particular circumstances.

Crane on hire to a third party

44 The crane hire company has a duty under LOLER to ensure that when a mobile crane is hired out, physical evidence that it is safe for use accompanies it (eg a copy of the most recent report of thorough examination) and the user should ensure that this evidence is available. After installation of a tower crane the user should ensure that the crane is thoroughly examined by a competent person before it is put into use to make sure it is safe to operate.

45 The user has the duty to manage the subsequent lifting operations in a safe manner and the duty to ensure that the periodic thorough examinations are undertaken at the frequencies laid down in LOLER or the examination scheme if there is one. The user may well come to an arrangement with the hirer under which the hirer carries out the thorough examinations but that does not alter the user's

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duty to make sure they are done. Further information is available in the British Standard BS 7121 series of standards.⁹

Contract lifting operations

46 Where an organisation enters into a contract with a specialist contractor who will undertake the lifting operation on their behalf (ie the contractor plans the lift, provides the crane and the operator, crane supervisor, slingers and signallers), the contractor has the duty to ensure that the crane is properly maintained, thoroughly examined and safe to use and that the lifting operation is carried out safely. Further advice on contract lifting operations is given in the BS 7121 series of standards.⁹

Passenger lift in an office block

47 People in control of non-domestic premises who provide items of lifting equipment that are used by people at work must comply with their duties under LOLER. This applies where the owner of the office block provides a lift for use by employees of the organisation(s) working in it. The owner of the office block has a duty under LOLER to ensure that the passenger lift is safe to use and that it receives periodic thorough examinations and, where appropriate, inspections.

Passenger lift in a block of flats

48 A passenger lift in a block of flats is not 'work equipment' as it is primarily for the use of members of the public who live in the block of flats. It is not therefore subject to the requirements of LOLER, but should satisfy the requirements of section 4 of the HSW Act instead. If such lifts are subjected to the safety requirements of LOLER and PUWER they will probably satisfy these legal duties.

Refuse collection vehicle

49 The mechanism on the rear of a refuse collection vehicle for raising the bins to empty the rubbish into the compactor is lifting equipment and it is covered by the requirements of LOLER.

Patient hoists – equipment used in health and social care

50 Hoists and slings used to lift patients, eg from beds and baths, in hospitals and care homes are provided for use at work and LOLER applies. The dutyholder, eg the NHS trust running the hospital or the owner of the care home, must satisfy their duties under LOLER.

51 Careful consideration should be given to how LOLER applies to lifting equipment provided for use in the home. LOLER does not apply where a member of the public purchases equipment for use solely by them at their home, or where equipment has been loaned by a health care or community equipment provider for use by the individual or their family, as it is not defined as work equipment. If there is a need to use such equipment then the employer has a duty to ensure the employee's safety even where they have no control over the condition of the equipment. They need to decide whether to provide alternative equipment, or take steps to ensure that the equipment is properly maintained and safe to use. Further guidance is available in *How the Lifting Operations and Lifting Equipment Regulations apply to health and social care* HSIS4.¹⁰

Long-term hire of a forklift truck

52 Users have a duty to ensure that the truck is safe for their employees to use and that it is thoroughly examined at appropriate intervals. Such thorough examinations should be arranged by the user or hire company through agreement. These thorough examinations do not remove the need for the user to ensure that necessary inspections and pre-use checks are carried out and defects reported and remedied as necessary. Further guidance on the maintenance and inspection of lift trucks is given in *Rider-operated lift trucks: Operator training and safe use*.¹¹

Suitability of lifting equipment (where PUWER applies)

Regulation 4 of the Provision and Use of Work Equipment Regulations 1998 (PUWER)

Regulation 4

PUWER

(1) Every employer shall ensure that work equipment is so constructed or adapted as to be suitable for the purpose for which it is used or provided.

(2) In selecting work equipment, every employer shall have regard to the working conditions and to the risks to the health and safety of persons which exist in the premises or undertaking in which that work equipment is to be used and any additional risk posed by the use of that work equipment.

Guidance 4

PUWER

53 PUWER regulation 4(1)–(2) deals with the safety of work equipment from three aspects:

- (a) its initial integrity;
- (b) the place where it will be used; and
- (c) the purpose for which it will be used.

54 The risk assessment carried out under regulation 3(1) of the Management Regulations will help you select lifting equipment and assess its suitability for particular tasks. It is sensible to consult and involve those who will be using the equipment, and those who are responsible for planning the lifting operations.

55 Because of the general risk assessment requirements in the Management Regulations, there is no specific regulation requiring a risk assessment in LOLER. HSE has produced guidance in *Risk assessment: A brief guide to controlling risks in the workplace* INDG163,² and there are examples of risk assessments on the HSE website (www.hse.gov.uk/risk/casestudies) that show the approach HSE expects businesses to take. These examples are specifically aimed at small and medium-sized businesses but they may provide a useful starting point for any business.

56 Most dutyholders will be able to assess the risks themselves using expertise from within their own organisations to identify the measures to be taken regarding their lifting equipment, where risks are simple, routine or straightforward. Where there are complex hazards, equipment or methods of work, you may want to get the help of external advisors with competence in planning lifting operations, appointed under regulation 7 of the Management Regulations.

57 The main factors you need to take into account are the severity of any injury or ill health likely to result from any hazard present, the likelihood of that happening, and who could be exposed and how. This will help you to identify what needs to be done to eliminate or reduce the risks to an acceptable level.

58 The selection of suitable lifting equipment for particular tasks and processes makes it possible to eliminate or reduce many risks to people at the workplace. This applies both to the normal use of the equipment as well as to other operations such as maintenance. For example:

- (a) selection of a MEWP. It should have a platform of sufficient size and capacity to accommodate the number of people who need to be present on it as well as any work equipment or loads that it will need to carry;
- (b) use of a barrel clamp attachment when using a forklift truck to lift barrels onto a pallet; and
- (c) ensuring that dynamo eyebolts and collar eyebolts are used in appropriate circumstances.

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59 When selecting lifting equipment you should take account of ergonomic risks.

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60 Ergonomic design takes account of the size and shape of the human body and should ensure that the design is compatible with human dimensions. Operating positions, working heights, reach distances etc can be adapted to accommodate the intended operator. Operation of the equipment should not place undue strain on the user. Operators should not be expected to exert undue force or stretch or reach beyond their normal strength or physical reach limitations to carry out tasks.

ACOP 3
LOLER

Material of manufacture

61 You should only select lifting equipment if it is made of materials which are suitable for the conditions under which it will be used.

Guidance 3

62 All materials have unique physical properties and will behave in different ways depending on the conditions to which they are exposed. For example:

- (a) some materials are more likely to suffer the effects of exposure to high temperature but can operate safely at low temperatures, for others the reverse is true: nylon slings can be affected by moderate strength acids and can also be less effective when wet; polyester can be more affected by alkalis; polypropylene is damaged by solvents; and
- (b) hydrogen cracking and embrittlement can occur if certain grades of high tensile steels are exposed to acid or alkaline atmospheres. This problem has been shown to affect grade T and grade 8 chains and components but may affect other grades too, including those used in lifting operations. Other components on the crane made from materials with similar properties may also be affected. You should check with the manufacturer or supplier if you are unsure about whether there is a risk. Further guidance on this phenomenon and the precautions that should be taken are contained in *Hydrogen cracking of grade T and grade 8 chain and components* PM39.¹²

63 Some materials may need to be specially treated by the manufacturer to make them suitable for use in particular conditions, for example to prevent chemical attack. These special treatments should be periodically repeated to ensure that the lifting equipment can continue to be used safely. If this is necessary then the supplier should provide this information with the lifting equipment and you should follow their recommendations.

64 The risk assessment should include:

- (a) how often the lifting equipment will be used;
- (b) where the lifting equipment will be used including environmental factors, eg weather;
- (c) the nature and characteristics of the load that the equipment will lift; and
- (d) any limitations on use specified by the manufacturer or supplier.

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Means of access

65 Where access to or egress from any part of the lifting equipment is required you should provide a safe means of doing so. Any means of access or egress which forms part of the lifting equipment should be suitable for the purpose.

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66 Where practicable, you should provide a suitable permanent means of access rather than relying upon temporary means. Where appropriate, this should be a permanent feature fitted to the lifting equipment or some other structure.

67 The need for proper and safe access for the operator to reach the operating position is generally recognised but safe access to other parts of the lifting equipment may also be necessary for the purpose of erecting, dismantling, inspecting, maintenance and repair. You should therefore consider all those parts of the lifting equipment to which access may be required, regularly or irregularly, and the people who need this access.

68 If modifications are considered necessary to provide a permanent means of access to the lifting equipment, then these may affect its strength and stability. You should therefore seek advice from the manufacturer or supplier before any modifications are made.

69 You should consider the consequences of falling from height or into dangerous substances while gaining access to or egress from the lifting equipment. Typical examples where a proper and safe means of access will be necessary include gaining access to a tower crane cab, an overhead travelling crane and the operating position of a MEWP.

70 The Work at Height Regulations 2005 require dutyholders to assess risks from work at height and go on to organise and plan the work so it is carried out safely. Work at height means work where, if there were no precautions in place, a person could fall a distance liable to cause personal injury. Falls from height remain one of the biggest causes of work-related fatalities and major injuries. Further information can be found on the HSE website www.hse.gov.uk/work-at-height and in the leaflet *Working at height: A brief guide* INDG401.³

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Protection against slips, trips and falls

71 Where people are required to be present on any part of the lifting equipment (eg to operate, maintain, inspect and/or carry out repairs) the working place, particularly if a platform, for that activity should be:

- (a) constructed so as to minimise the risks of accidents arising from slips, trips, and falls;
- (b) of adequate size and strength for them and any items that need to be on it.

72 Where there is an opening in the floor area it should be either adequately covered or fenced. Where the cover or any part of the fencing has to be removed it should be replaced as soon as possible.

73 Where there is a risk of:

- (a) a person at that working place falling a distance liable to cause personal injury; or
- (b) an object falling such that it may injure a person below;

you should provide edge protection comprising a guard rail, toe board, and mid-rail, or other suitable means of equivalent protection.

74 Any edge protection should be:

- (a) suitable for the purpose;

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- (b) securely fixed to the lifting equipment;
- (c) sufficiently high and sufficiently filled in to prevent falls (of people or objects) over or through it;
- (d) of adequate strength to withstand any person or object liable to fall against it (this applies to the mounting points as well).

75 Any gate or barrier or other device in the edge protection should open inwards or in another way that is safe.

76 Where removal of edge protection and exposure of an unguarded edge is necessary for people, work equipment or materials to gain access to a working area on any part of the lifting equipment, you should ensure that only the minimum of edge protection necessary is removed and that it is replaced as soon as possible after access has been gained. Where people need to approach the edge, for example to help manoeuvre a load onto the working area, and the edge protection needs to be removed, any person in the working area should use a personal fall protection system.

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Guidance

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77 Any floor area on which people need to walk should be slip resistant. Slip-resistance can be achieved using special surface coatings but these may need to be reapplied periodically to maintain effectiveness. Adequate drainage should be provided where liquids or dust may accumulate and pose a risk of slipping. Routine maintenance measures should be taken to ensure that drainage holes do not become blocked and that dust is safely disposed of.

78 There are other situations where a potential fall can require edge protection, for example:

- (a) where a traffic route passes close to the lifting equipment;
- (b) where large numbers of people are present;
- (c) where a person might fall onto a sharp or dangerous surface, material/ substance or object;
- (d) where a person may fall into a corrosive or dangerous material or fluid; or
- (e) where a person might fall into fast-flowing or deep water.

Operator protection

79 When selecting lifting machinery you should consider whether the environment in which it will be used is likely to have an adverse effect on the operators. Where your risk assessment concludes that this is a possibility you should provide operators with adequate protection, particularly where they need to be positioned at the operating station for long periods.

80 The exact nature of any operator protection will depend upon the nature of the hazards to which they are exposed and the risks these hazards present. Any operator protection must:

- (a) give the operator adequate visibility of the task they have to perform;
- (b) protect them from harmful substances;
- (c) be ventilated and/or heated, as necessary; and
- (d) be ergonomically suited to the individual.

81 Situations where protection would be necessary include where the operator of the lifting machinery is exposed to:

- (a) extremes of temperature, for example in a steel foundry or cold store;
- (b) the weather;

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- (c) air contaminants at high nuisance or discomfort levels, for example at a waste disposal operation; or
- (d) levels of noise that could damage their hearing, for example in a glass factory, saw mill or in demolition work.

82 The Control of Substances Hazardous to Health Regulations 2002 (COSHH) contain requirements where employees are exposed to substances hazardous to health. The Approved Code of Practice and guidance gives further information.¹³

83 The Control of Noise at Work Regulations 2005 contain requirements where employees are exposed to excessive noise levels at work. The guidance to the Regulations gives further information.¹⁴

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Effects of high wind

84 Where lifting equipment and/or its load may be affected by high wind, appropriate devices should be made available and used so as to detect dangerous situations and allow measures to be taken to cease using the equipment.

85 Where appropriate, the maximum wind speed in which the lifting equipment can be used should be included in the instructions on use. Measures therefore should be in place to determine the wind speed and also reduce its effect.

86 Wind effects can be relevant both indoors and outdoors. Equipment use and selection should take account of this.

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Guidance 3

87 When planning the installation of lifting equipment that will remain erected in high winds, the planning process should take into account the out-of-service winds that it could be subjected to (the requirements for tower cranes are given in BS EN 14439,¹⁵ for example). The foreseeable wind speeds will depend on where the crane is to be installed. Information on historical wind speeds in different areas of the UK is available but may need to be supplemented by a local wind study, carried out by a person competent to do so, to assess the effects of the site location, terrain roughness and any tall structures in the vicinity. It may be necessary to restrict the maximum erected height or increase the size of the foundations and/or ballast.

88 The weather forecasting services will provide a general idea of the expected wind conditions on a day-to-day basis for a particular area. However, they cannot provide an accurate indication of the prevailing wind conditions at a particular moment in time for a particular area. Some means of providing a reliable measure of the wind speed, including gusts, may therefore be necessary.

89 The most common way of providing an instantaneous indication of the wind speed is to fix an anemometer to the lifting equipment. If used, it should be fixed in the most exposed position, usually on the top of the lifting equipment. Where this is not possible then other alternatives could be used, for example a hand-held anemometer or, more usually, estimates using the Beaufort Scale. However, these alternative methods may not give an accurate indication of the wind speed in the most exposed position.

90 The shape of the load, and the way it is lifted, could also increase the effects of the wind and consequently may affect the stability and rated capacity of the lifting equipment. The larger the surface area of the load presented to the wind then the greater the effect a gust of wind will have on the load and consequently to the

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strength and stability of the lifting equipment, as well as on the safety of nearby workers. This should also be taken into account when selecting lifting equipment for use. The crane manufacturer will be able to supply information on the maximum permissible in-service wind speeds and any derating for items with a large surface area.

91 To reduce wind effects on the lifting equipment and/or the load it may be necessary to set 'wind action levels', ie the wind speed(s) that require additional measures to be taken to ensure that the lifting equipment remains stable. The manufacturer will be able to provide this information.

92 The measures will vary depending upon the lifting equipment but could include ceasing to use it until the wind dies down, lowering the load to the ground, or dismantling the lifting equipment but ensuring it is left in a safe condition. This could apply to suspended access systems or to rope access work.

LOLER

Regulation 4 Strength and stability

Summary

Regulation 4 requires the employer to ensure that the load they are planning to lift does not exceed the limits for strength or stability of the lifting equipment.

Regulation 4

Every employer shall ensure that –

- (a) *lifting equipment is of adequate strength and stability for each load, having regard in particular to the stress induced at its mounting or fixing point;*
- (b) *every part of a load and anything attached to it and used in lifting it is of adequate strength.*

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ACOP 4

Adequate strength

93 You should assess whether the lifting equipment has adequate lifting capacity for the proposed use. You should take account of the combination of forces to which the lifting equipment will be subjected as well as the weight of any associated accessories used in the lifting operation and how they have been configured together. Foreseeable events such as loads snagging during use, eg on other structures, should also be assessed.

94 The lifting equipment selected should not be unduly susceptible to any of the foreseeable failure modes likely to arise in service, for example fracture, wear or fatigue.

95 The lifting equipment used should provide an appropriate margin of safety against failure under foreseeable failure modes.

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Guidance 4

96 The lifting equipment should have adequate lifting capacity but you should pay particular attention to the mounting or fixing points. The mounting or fixing points include where the lifting equipment is secured to another surface and also where parts of the lifting equipment are fixed together, eg two jib sections of a crane. In addition to the downward force of the weight of the load, consider additional forces, eg any wind loading which may place extra stresses on the lifting equipment.

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Guidance 4

97 Any modifications to lifting equipment may also affect wind loading. Fitting messages or advertising hoardings to a tower crane should only be carried out after a careful consideration of the risks that may arise from changes to the wind loading and the effect on stability. A competent person should advise on the design and attachment of any such additions and ensure that the strength and stability of the lifting equipment continues to be adequate for the tasks that the equipment is intended to be used for.

98 For difficult or unusual lifts you may need to consider the equipment manual or contact the supplier or manufacturer of the lifting equipment to ensure that its lifting capacity is suitable and appropriate for the use you propose.

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ACOP 4

Adequate stability

99 You should ensure the lifting equipment has adequate stability for its proposed use. You should take account of any combination of destabilising forces that may adversely affect its stability.

100 Where appropriate, you should take suitable effective measures to provide sufficient resistance to overturning to ensure adequate stability of the lifting equipment.

101 Where safe use of the lifting equipment depends on the use or positioning of stabilising arrangements, the equipment should not be used unless these are in place and operating effectively.

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102 A number of factors can affect the stability of the lifting equipment. These include:

- (a) the strength of the ground or surface on which it is positioned or located, eg spreader plates may be needed so they can safely support the weight of the equipment and the maximum load to be lifted;
- (b) stability of the surface under load conditions, eg if the lifting equipment is too close to an excavation the ground may slowly subside or collapse suddenly;
- (c) whether the surface on which the lifting equipment operates is on a slope and the angle of any slope – this imposes horizontal as well as vertical forces;
- (d) the size and nature of the load (eg whether the load itself is unstable);
- (e) how the load is intended to be lifted;
- (f) the maximum wind loading that may occur; and
- (g) the effect of the load snagging on other equipment or structures.

103 You can use various methods or combinations of methods to improve the stability of lifting equipment. These include:

- (a) designing a suitable base on which to position the lifting equipment;
- (b) using an anchorage system;
- (c) using counterbalancing weights; and
- (d) using ballast, outriggers, stability arms or stabilisers.

104 Where lifting equipment is anchored to other work equipment or structures you should ensure that this equipment or structure can withstand the forces that the lifting equipment and its use will impose on them.

105 Where you are lifting a load from water you should take account of additional factors. The load will appear to be lighter while it is in the water because of the water's supporting action and the lifting equipment may be subject to additional loading when the load is lifted out of the water.

LOLER

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| <p>Guidance</p> <p>LOLER</p> | <p>4</p> | <p>106 Lifting equipment on a floating vessel will be effectively operating on a variable out-of-level base which will subject it to significantly different loading conditions than if it were on firm, level ground. In addition, the distance between the water level and the deck (and therefore the stability margins) of the floating vessel will vary as the lifting operation is carried out, subjecting the lifting equipment to greater loading than when used on land. For example, due to changes in inclination of the vessel, a crane will be subject to increased side loading on the jib and greater forces in the slewing mechanisms, brakes and clutches. The crane must therefore be reassessed and have its safe working load reduced (derated) from those that apply during normal land-based duties. The extent of such derating should be determined by a competent person based on the manufacturer's recommendations for floating duties. Further guidance on derating can be found in the various parts of BS 7121.⁹</p> |
| <p>ACOP</p> <p>LOLER</p> | <p>4</p> | <p>107 You should ensure that lifting equipment which is mobile or which is dismantled and reassembled at different locations is used in such a way as to ensure stability during use under all foreseeable conditions. Particular account should be taken of the nature of the ground and other surfaces on which the equipment might be used.</p> |
| <p>Guidance</p> <p>LOLER</p> | <p>4</p> | <p>108 Examples of mobile lifting equipment include:</p> <ul style="list-style-type: none"> (a) mobile cranes; (b) forklift trucks; (c) telescopic handlers; (d) forwarders and cable cranes in forestry; (e) patient hoists; and (f) slab/kerb lifters. <p>109 Examples of lifting equipment which can be dismantled and reassembled include:</p> <ul style="list-style-type: none"> (a) tower cranes; (b) construction site hoists; and (c) mast climbing work platforms. <p>110 Fixed equipment, as well as mobile equipment, should be of adequate stability while performing lifting operations.</p> <p>111 The requirement to ensure that the lifting equipment has adequate strength and stability for the task links with your duty under regulation 8(1)(c) of LOLER to ensure that all lifting operations involving lifting equipment are carried out in a safe manner.</p> |
| <p>ACOP</p> <p>LOLER</p> | <p>4</p> | <p>112 Where lifting equipment is used on rails it should be fitted with suitable devices to minimise the risks of the equipment being derailed, for example equipment designed to remove loose material from the rails and end stops or buffers.</p> <p>113 The surface on which rail-mounted lifting equipment runs (with or without its load) should be sufficiently firm to support the rails. The rails should have an even running surface, be properly joined, and laid so that the lifting equipment and its load can move freely and without danger of derailment.</p> |
| <p>Guidance</p> <p>LOLER</p> | <p>4</p> | <p>114 Ground settlement can cause rails to become misaligned and the running surface to become uneven. You should not allow such settlement to develop to the extent that the lifting equipment can become unstable or derailed in use.</p> |

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115 Mobile lifting equipment fitted with pneumatic tyres should not be used to lift loads unless the tyres are inflated to the correct pressure. You should provide suitable means to check this.

Guidance

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116 You should ensure that tyre pressures are checked on a regular basis using an appropriate pressure gauge to confirm that they are at the pressures recommended by the manufacturer. Tyres should also be checked for signs of damage or other defects that could have an adverse effect on their capacity. This is an important part of the maintenance regime for lifting equipment. Guidance on servicing tyres on commercial wheels or divided wheels, which are sometimes encountered on cranes or forklift trucks, is provided in *Health and safety in motor vehicle repair and associated industries*.¹⁶

Preventing overload

117 Where there is a significant risk of overturning and/or overloading arising during the use of any lifting equipment, devices such as rated capacity indicators and rated capacity limiters, which provide audible and/or visual warning when the safe lifting limits are being approached, should be provided. See further guidance under regulation 7(b).

Regulation 4(b)

118 Timber pallets are examples of items which may be part of a load. These must be of adequate strength for the particular load and lifting operation, and should also be checked for signs of damage or defects that could have an adverse effect on their capacity. Further information on the safe use of timber pallets is included in *Pallet safety* PM15.¹⁷

119 You should take steps to ensure that any points provided on the load to assist in lifting it are of adequate strength for the task, based on an assessment of the risks associated with a particular lifting operation. These are part of the load and not part of the lifting equipment, though there are exceptions such as the use of eyebolts which screw into the load. Examples of lifting points include lugs that are welded on to a steel beam before it is lifted and removed afterwards and permanent fittings such as those on a skip which could be lifted frequently.

120 Where the risks justify it, you should test the strength of the lifting points to ensure that they are suitable for a lifting operation. This is particularly important in circumstances where lifting points are produced by welding lugs onto a load to allow a lifting operation to be carried out.

121 When lifting any load ensure the means of securing it to the lifting equipment is strong enough, is of the correct size and is free from defect. If you are unsure, or if there is evidence of wear or damage, do not use them. For example, you should not normally lift loads by banding, straps or wrappings which have been provided primarily to keep the load intact as such items are rarely strong enough to provide lifting points.

122 Where banded or wrapped loads are supported as they are lifted, eg on the forks of a forklift truck or in a net attached to crane hook, you should check that the banding etc will withstand expected stresses arising from hoisting and moving the load. When using eyebolts you should not use them if they are distorted or have damaged threads, and when using flexible bulk containers you should not use them if the suspension loops are damaged.

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Guidance 4

123 Some loads are supplied with the means of securing the load to lifting equipment as an integral part of the packaging, eg the loops on a flexible intermediate bulk container (often referred to as a 'bulk' or 'big' bag). Often this packaging and the integral means of securing the load are manufactured for single-use transportation of only the load supplied – and where indicated should be disposed of after use.

124 The means by which the load is secured to the lifting equipment, such as the flexible bulk carrier, eyebolts, skip etc, will be work equipment and subject to PUWER which includes requirements relating to suitability, maintenance and inspection.

LOLER

Regulation 5 Lifting equipment used for lifting persons

Summary

Regulation 5(1) details the additional safeguards that must be considered when using lifting equipment to lift people.

Regulation 5

- (1) *Every employer shall ensure that lifting equipment for lifting persons –*
- (a) *subject to sub-paragraph (b), is such as to prevent a person using it being crushed, trapped or struck or falling from the carrier;*
 - (b) *is such as to prevent so far as is reasonably practicable a person using it, while carrying out activities from the carrier, being crushed trapped or struck or falling from the carrier;*
 - (c) *subject to paragraph (2), has suitable devices to prevent the risk of a carrier falling;*
 - (d) *is such that a person trapped in any carrier is not thereby exposed to danger and can be freed.*

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Guidance 5

125 Some lifting equipment is specifically designed for the purpose of lifting people, such as a passenger lift, a MEWP, or a hoist used for lifting patients.

126 The term 'carrier' is a generic term used to describe the device which supports people while being lifted or lowered. It includes the following:

- (a) the car of a passenger lift;
- (b) the cage of a construction site hoist;
- (c) a platform on a MEWP;
- (d) a cradle suspended from the hook block of a crane;
- (e) a bosun's chair;
- (f) an offshore personnel transfer capsule;
- (g) the harness used by an arborist; and
- (h) a sling used when lifting patients.

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127 The raising and lowering of people by work equipment which is not specifically designed for the purpose should only be undertaken in exceptional circumstances, when it is not practicable to gain access by less-hazardous means. Where it is necessary to use such work equipment you should ensure that all precautions are taken to ensure safety, including appropriate supervision.

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128 If lifting equipment is not marked to indicate that it can be used to lift people, it should only be used if a risk assessment has confirmed it can be used safely and adequate precautions are taken. Equipment not designed to be used for lifting people should be derated by 50%, ie have a factor of safety relating to strength of at least twice that required for general lifting operations.

129 Although some types of equipment such as forklift trucks, telescopic handlers and cranes are primarily designed for handling materials, when fitted with a suitably designed carrier or working platform and any necessary precautions have been taken, they can provide a safer alternative to other means of access (such as a ladder). You should recognise, however, that such an arrangement will not provide the same level of safety as purpose-built equipment such as a MEWP. Where it is reasonably practicable to obtain and use purpose-built equipment for lifting people, then you should use such equipment.

Lift truck

130 People should never be lifted on the fork arms or a pallet balanced on the fork arms of a lift truck because they can easily fall off. You should use a properly maintained purpose-built working platform with suitable edge protection and toe boards. This platform should be compatible with the lift truck on which it is fitted to ensure it is secure and stable in use, including when loaded with people, tools and materials – see *Working platforms (non-integrated) on forklift trucks* PM28.¹⁸ It should be effectively secured to the truck's elevating carriage or fork arms to prevent it being displaced or tipping unduly.

131 People carried on a platform should be prevented from reaching any dangerous parts (eg the chains of the truck) by effective screens or guards. They should also be protected against any overhead hazards that might exist (eg from coming into contact with rafters, the ceiling, pipework or overhead plant).

Telescopic handler

132 Telescopic handlers are a specific type of forklift truck. They should never be used to lift people unless a suitable working platform is used. You should use a working platform of safe design, made of sound and suitable material, of adequate strength and ensure that it is properly maintained. It should be effectively secured to the forks – see *Working platforms (non-integrated) on forklift trucks* PM28.¹⁸ To prevent inadvertent operation, the operator should scotch or lock out the tilt mechanism when the equipment is to be used with a working platform. Suitable means of communication between the operator and platform should be provided (manual signals may be sufficient in many circumstances).

Cranes

133 The crane used should be adequate and suitable for the task, have a freefall capability lock-out and should be equipped with appropriate devices such as a hoisting limiter, lowering limiter, rated capacity indicator and rated capacity limiter. The carrier should be adequately attached to the crane (eg by a shackle or a hook with a latch). The crane and carrier should be inspected every day by someone competent to do so (eg trained operator, person in charge of the lift etc) and if it is not regularly used then before it is first used each time it is put into service and every day it is used. The crane and associated equipment should be suitably derated and the crane should be operated in accordance with the recommendations in the BS 7121 series of standards.⁹

Guidance 5

134 Offshore cranes used to transfer personnel should be designed with specific features that will make them suitable for this purpose. BS EN 13852-1 *Offshore cranes*¹⁹ gives guidance on these specific features.

Hoists and slings

135 Where people are lifted using mobile or fixed hoists, the slings used should be of a suitable design to work with the type of hoist available. The sling should also be of the correct size and type for the person and activity being undertaken. For further information see *Getting to grips with hoisting people* HSIS3.²⁰

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Regulation 5(1)(a)

136 Regulation 5(1)(a) applies to carriers such as a lift car.

137 Any person in a carrier such as a lift car should be suitably protected from being injured by something outside of it. To achieve this, the car should normally be fully enclosed when in use.

138 You should take appropriate precautions to prevent someone entering or leaving the car being struck by it. There should be a suitable enclosure around the car and, where necessary, appropriate protective devices to prevent access to the danger zone.

139 Any door or gate which is necessary to gain access or egress to/from the car should open so as to prevent any person falling accidentally from the car.

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140 Any motorised doors fitted to a lift car should be fitted with a suitable device to prevent the user being crushed by them when entering or leaving. Lift cars should be fitted with full-length doors designed and installed so that the car cannot move unless the doors are closed and the car comes to a halt if the doors are opened. The doors of the car must remain closed and interlocked if the lift stops between two levels.

141 The doors of the hoistway should also be of solid construction with smooth interior surfaces. In addition, the doors and the hoistway opposite the open side of a carrier without internal doors should, throughout its height of travel, be smooth and flush with each other.

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Regulation 5(1)(b)

142 Regulation 5(1)(b) applies to people working from carriers which are not fully enclosed.

143 Where a person in such a carrier might fall from the carrier it should be fitted with edge protection suitable for the purposes for which it is to be used and it should be securely fixed to the carrier.

144 The floor area of any carrier on which people need to be present should be slip-resistant.

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Guidance

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145 You should assess the risks arising from other work equipment, structures or objects which the people being lifted may strike. Fully enclosed carriers and falling object protection on carriers can reduce the risks in such circumstances. They should be used wherever there is a need provided that it is reasonably practicable to do so, taking into account the nature of the work involved.

146 Where this is not practicable, eg when working from a MEWP, suitable alternative precautions should be taken. The risk assessment will identify the precautions that are needed, which will vary depending on the type of lifting equipment. Examples include a 2 m-high enclosure around a construction site hoist and hold-to-run controls.

147 The carrier (such as a cage or basket) should be of a safe design, made of sound and suitable material and of adequate strength. If access doors are fitted to the carrier they should not open outwards and should be fitted with a device to prevent inadvertent opening.

148 Some of the measures required to prevent people being crushed or struck by the lifting equipment, eg high fencing, may also help prevent the user falling from the carrier and therefore achieve compliance with this regulation. However, where the risk cannot be adequately controlled by these measures further steps will be necessary, for example you may need to use safety harnesses with lanyards attached to designated anchor points.

Regulation 5(1)(c)

149 Lift cars must have devices to prevent free fall which should be independent of the means of suspension of the car.

150 Where practicable, other carriers should be fitted with suitable devices or other effective measures should be taken to prevent the carrier falling in the event of failure of the primary means of support. For example:

- (a) multiple ropes (with independent anchorages);
- (b) multiple cylinders;
- (c) ropes, chains or hydraulic pipes with a high factor of safety;
- (d) safety gear; and
- (e) check valves (for hydraulically powered systems).

151 In addition to the suitable devices mentioned above, further measures may be necessary to ensure safety with certain equipment such as a cradle lifted by a crane. These include:

- (a) derating the lifting capacity and maximum operational speeds of the equipment;
- (b) daily inspections of the equipment by someone competent to do so, eg operator, person in charge of the lift etc; and
- (c) providing adequate instruction and training for all people involved in the lifting operation (people being lifted, operator of the lifting equipment, supervisor etc).

152 You should position or install the lifting equipment to minimise the effects of a failure of the primary means of lifting (see regulation 6 for more details on position and installation).

LOLER

ACOP 5
LOLER

Regulation 5(1)(d)

153 You should ensure that in the event of malfunction of the lifting equipment that people being lifted are not exposed to danger and a reliable means of rescue is available.

Guidance 5
LOLER

154 If someone becomes trapped in a carrier they should be able to summon assistance. If other people are working nearby then a shout for help may be sufficient. In some circumstances a telephone or radio link within the carrier, or the fitting of an alarm bell or klaxon which can be used to summon help, might be needed. These devices should be regularly inspected by a competent person to ensure they continue to function properly.

155 An emergency means of lowering the carrier to a safe position may be appropriate to deal with a user who has become trapped or, where this is not possible, self-rescue equipment (such as a rope ladder or an inertia reel system) could be provided. You should ensure that the use of such equipment does not make the carrier unstable thereby increasing the risk to the user. The use of emergency lowering and self-rescue equipment may only be appropriate where potential users have received training in its use and are competent to use it.

Regulation 5(2)

Summary

Regulation 5(2) makes further stipulations for the chains and ropes being used in the lift.

Regulation 5
LOLER

(2) *Every employer shall ensure that if the risk described in paragraph (1)(c) cannot be prevented for reasons inherent in the site and height differences –*

- (a) *the carrier has an enhanced safety coefficient suspension rope or chain; and*
- (b) *the rope or chain is inspected by a competent person every working day.*

Guidance 5
LOLER

156 The references to 'site', 'height differences' and 'enhanced coefficient suspension rope' refer solely to winding gear in mines. Further information is available in the Mines (Shafts and Winding) Regulations 1993 and associated Approved Code of Practice.²¹ Compliance with these Regulations should also satisfy the requirements of LOLER.

157 Equipment used for the lifting of people should have a factor of safety relating to its strength of at least twice that required for general lifting operations. This is the arithmetic ratio between the minimum breaking or failure load and the maximum working load marked on the equipment.

Regulation 6 Positioning and installation

Summary

Regulation 6 details the considerations on where lifting equipment, both fixed and mobile equipment, should be sited.

Regulation 6

LOLER

(1) *Every employer shall ensure that lifting equipment is positioned or installed in such a way as to reduce to as low as is reasonably practicable the risk –*

- (a) *of the equipment or a load striking a person; or*
- (b) *from a load –*
 - (i) *drifting;*
 - (ii) *falling freely; or*
 - (iii) *being released unintentionally;*

and it is otherwise safe.

Guidance 6

LOLER

158 Regulation 6 applies to both permanently installed and mobile lifting equipment although different measures should be taken in each case to control the risks. 'Installed' refers only to lifting equipment which is assembled at a particular location and not to mobile lifting equipment which is 'positioned' in a particular location to carry out lifting operations.

ACOP 6

LOLER

Regulation 6(1)(a)

159 Lifting equipment should be positioned or installed to minimise the need to lift loads over people.

160 In particular, lifting equipment should be positioned and installed to prevent crushing when it is in its extreme positions.

161 A load moving along a fixed path, such as a conventional lift or hoist, should be protected by a suitable and substantial enclosure, or some other equally effective measure, to minimise the risk of a person being struck by the equipment or the load.

162 In the case of lifting equipment which follows a fixed path, but whose maximum height of travel above ground or floor level is no more than 2 m, you should provide an enclosure where practicable. Where this is not practicable, you should provide a barrier or gate or other equally effective means, to prevent any person being endangered by the underside of the lifting equipment or by any fitting attached to it.

163 You should position or install lifting equipment with a travelling or slewing motion to prevent trapping points. Where this is not possible, you should take effective measures to prevent people gaining access to such trapping points.

Guidance 6

LOLER

164 As part of the planning required by regulation 8 of LOLER (which deals with the organisation of lifting operations) you should address, among other things, whether the equipment has been (or will be) installed or positioned to ensure that the risks of the equipment or its load injuring people is minimised. The measures that you need to take to control the risks will depend upon the type of equipment and where and how it is used.

Guidance 6

165 It may be necessary to ensure the dimensions of any passageways or paths provided for access are sufficient so that anyone using them will not be put at risk from any lifting operation. Any gap into which people may enter that may be reduced, for example, by a slewing motion, should be at least 0.5 m and preferably never less than 0.6 m.

LOLER

166 You may need to cover such a passageway to help protect people should a load drop unexpectedly.

ACOP 6

Regulation 6(1)(b)(i)

167 Appropriate measures should be taken to prevent a freely suspended load from moving in an uncontrolled manner, so far as reasonably practicable.

168 Runway beams supporting lifting equipment should be level and of sufficient stiffness to prevent equipment drifting or running away.

Regulation 6(1)(b)(ii)

LOLER

169 Where appropriate, lifting equipment should be fitted with suitable devices to minimise any risk of the load falling freely.

Guidance 6

170 This regulation aims to ensure that loads are under control at all times to minimise risks to people in the vicinity of the lifting operation. The aim is to prevent uncontrolled free fall. It is not, however, intended to prohibit gravity discharge of loads (such as grain filling a silo from a feed-pipe) or operations which involve a controlled free fall, for example piling, where risks to people from such operations can be almost eliminated.

171 Various methods can be used to minimise the risk of the load falling out of control. These include:

- (a) multiple ropes/chains;
- (b) lifting mechanisms with a high factor of safety or strength;
- (c) safety gear;
- (d) check valves (for hydraulic systems); and
- (e) safety nets for palletised loads.

LOLER

ACOP 6

Regulation 6(1)(b)(iii)

172 You should ensure that where, in the event of a power failure, the lifting equipment will not be able to maintain its hold on the load, appropriate measures are in place to prevent people being exposed to any consequential risks.

LOLER

Guidance 6

173 The requirement is to prevent a load being released unintentionally. Pneumatic, hydraulic, vacuum or magnetic equipment may need to be adapted or have a back-up power supply to take over in the event of a power failure. You may need to warn people working on the equipment or in its vicinity of the potential danger should a power failure occur. In some circumstances where hardware precautions are not practicable you may need to exclude people from the danger zone.

LOLER

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| ACOP LOLER | 6 | 174 Hooks and other similar devices provided for lifting should be of a type that reduces the risk of the load becoming displaced from the hook or other devices. |
| Guidance | 6 | 175 Wherever possible, you should use hooks that have safety catches fitted or are shaped to prevent the accidental displacement of the sling etc. Where this is not possible, an alternative acceptable method is to secure the throat of the hook by mousing. (Mousing is securing an appropriate binding or metal shackle around the point and shank of a hook to prevent the sling from being displaced.) If vertical plate clamps are used it is important that they do not open if the load strikes a surface. |
| ACOP LOLER | 6 | 176 Where two or more items of lifting machinery are used they should be installed or positioned so as to prevent the loads and/or parts of the equipment coming into contact with one another. |
| Guidance | 6 | 177 The best way to avoid a collision between items of lifting equipment or their loads is to position or install the lifting equipment so that their operating paths do not overlap. Equipment that may be affected by this requirement includes: <ul style="list-style-type: none"> (a) tower cranes; (b) overhead travelling cranes; (c) telescopic reach trucks; and (d) forestry equipment moving and processing trees at the landing area of a cable crane. <p>178 Appropriate precautions should be taken to prevent the lifting equipment or load striking another structure or vehicle during the lifting operation, which could result in risks to people from the loads being displaced, or the equipment or structure being damaged.</p> <p>179 Devices can be fitted onto tower cranes (such as motion limiting and anti-collision devices) that prevent the boom and any counter boom from moving into a potentially dangerous position. Even if such devices are fitted, a safe system of work should always be followed. Crane paths should be planned and clearly defined. Further guidance can be found in the various parts of BS 7121.⁹</p> |
| LOLER | | |

Regulation 6(2)

Summary

Regulation 6(2) requires employers to ensure people cannot fall down shafts or hoistways.

| | | |
|---------------------|---|---|
| Regulation LOLER | 6 | <i>(2) Every employer shall ensure that there are suitable devices to prevent a person from falling down a shaft or hoistway.</i> |
| ACOP | 6 | 180 Suitable and substantial gates, or other equally effective means, should be provided at any access and/or egress points to any hoistway or shaft enclosure. |
| LOLER | | 181 Any such gate, or other equally effective means, should be fitted with efficient interlocking or other devices, such that (a) the gate cannot be opened except when the lifting equipment is at the landing and (b) the lifting equipment cannot be moved away from the landing until the gate is closed. If it is not reasonably practicable to fit such devices, you should provide alternative arrangements to ensure that the gate is kept closed and fastened |

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LOLER** 6

except when the lifting equipment is at rest at the landing. Any gate should be of suitable height to prevent people toppling over or reaching over it and be of adequate strength.

Guidance 6

182 You should adequately fence the shaft or hoistway at places where people could fall down it, eg landings. Identifying such places should form part of your risk assessment. The base of the hoistway should be protected by a cage. Gates or doors should be provided at all landings and kept closed at all times except when loading or unloading. They should be fitted with interlocks which prevent the lift moving until the gates are closed.

183 The type of gate needed will depend on the results of your risk assessment. You should consider who might have access to the shaft or hoistway. For example, a lift in a place where children could have access requires imperforate doors (ie solid and without openings that could become trapping points). However, in older buildings space constraints could mean that lattice doors are still being used, which create trapping and shearing hazards, particularly for the young and elderly. Where practicable, such doors should be replaced by imperforate types. However, if this not possible you should provide suitably located protective plates at the leading edge, to prevent access of fingers, and toe pickets on the lower section of the gate to prevent foot access through the gates. Any enclosure and gate should normally be at least 2 m high.

LOLER

Regulation 7 Marking of lifting equipment

Summary

Regulation 7 details the requirements for clearly labelling or otherwise making available details of the safe working load of each piece of lifting equipment or accessory.

Regulation 7

Every employer shall ensure that –

- (a) *subject to sub-paragraph (b), machinery and accessories for lifting loads are clearly marked to indicate their safe working loads;*
- (b) *where the safe working load of machinery for lifting loads depends on its configuration –*
 - (i) *the machinery is clearly marked to indicate its safe working load for each configuration; or*
 - (ii) *information which clearly indicates its safe working load for each configuration is kept with the machinery;*
- (c) *accessories for lifting are also marked in such a way that it is possible to identify the characteristics necessary for their safe use;*
- (d) *lifting equipment which is designed for lifting persons is appropriately and clearly marked to this effect; and*
- (e) *lifting equipment which is not designed for lifting persons but which might be so used in error is appropriately and clearly marked to the effect that it is not designed for lifting persons.*

LOLER

**Guidance
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184 Regulation 7 of LOLER builds upon the requirements of regulation 23 of PUWER which states: ‘Every employer shall ensure that work equipment is marked in a clearly visible manner with any markings appropriate for reasons of health and safety.’

Guidance 7

Regulation 7(a)

185 A safe working load (SWL) is a value or set of values based on the strength and/or stability of the equipment when lifting. A range of safe working loads can be specified for the same equipment when used in different configurations. The SWL is usually expressed in terms of the maximum load that the equipment can safely lift, for cranes and lifting attachments, or the actual capacity of the equipment in the case of forklift trucks.

186 Regulation 7(a) refers to lifting equipment with one fixed SWL such as an overhead crane, some forklift trucks or an accessory such as a shackle or sling. Sometimes other phrases are used to mean the SWL, such as 'rated-capacity'. Where possible, the actual value of the SWL should be marked on the equipment but where this is not possible a coding system should be used which easily provides the user with the SWL. Examples of such systems may include colour coding or attaching some form of label. The method used should take into account the users (colour blindness, ability to understand the content of the label etc) and the use to which the equipment will be put to, for example will a label be detached during use or become obscured by dirt etc?

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ACOP 7

Regulation 7(b)

187 You should ensure that where lifting machinery has a SWL which varies with its operating radius or is dependent upon how it is configured, it is either clearly marked or adequate information is provided to indicate to the user the corresponding SWL. Any marking should be clearly visible or the information must be readily available to the operator or user.

188 Where there is a significant hazard arising from the use of the machinery it should be provided with appropriate equipment or devices such as rated capacity indicators and rated capacity limiters.

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Guidance 7

189 Rated capacity indicators were previously known as automatic safe load indicators or moment load indicators.

190 Examples of the types of lifting machinery where the SWL can vary within its operating radius include:

- (a) any crane having a jib which can be raised or lowered;
- (b) a mobile crane or forklift truck with telescopic jib; and
- (c) a MEWP on a cantilevered arm.

191 Where changing the operating radius leads to corresponding variations in the SWL, your risk assessment may indicate the need for a load-limiting device to stop the operation if the SWL is in danger of being exceeded and/or an indicating device which clearly shows the operator the radius and corresponding SWL, and provides visual and/or audible warning if the SWL for any radius is in danger of being exceeded. Such devices are necessary for high-risk activities such as construction and dock work and where people are being lifted.

192 Examples of the type of lifting machinery where its configuration can affect the SWL include:

- (a) a forklift truck fitted with attachment (such as a drum clamp or crane jib);
- (b) fitting a fly jib to a crane;
- (c) using a mobile crane with outriggers in position or 'free on wheels';
- (d) a telescopic reach truck;

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Guidance 7

- (e) an excavator used as a crane;
- (f) a jib of a tower crane that can lift loads at various operating radii; and
- (g) a lifting beam with multiple lifting points.

193 The lifting equipment should be clearly marked with information about how the configuration affects the SWL. This can be in the form of an indicator, plate, chart or certificate which is readily available to the operator. Where held in hard copy, the information should be in a durable format, eg laminated or stored appropriately.

194 If it is not possible to provide a value for the SWL for all configurations, the capacity of the equipment should be reduced to allow for an increased factor of safety (this is known as derating). Derating should only be carried out by a competent person. You should contact the manufacturer or supplier of the equipment for information before any derating is carried out.

ACOP 7
LOLER

195 Any structural element of any lifting equipment which is occasionally dismantled or partially dismantled and which is, or may become, separated from the lifting equipment, should be marked to indicate the equipment it is a part of.

Guidance 7
LOLER

196 You should mark certain accessories with details of the particular piece of lifting equipment with which they should be used.

197 You may consider storing smaller items (nuts, bolts, shackle-pins) together in a marked container that clearly identifies the particular piece of lifting equipment with which they should be used. This can include a list of those items that should be contained therein, to help checking equipment in and out, especially when equipment goes off site.

ACOP 7
LOLER

198 Where a number of lifting accessories are assembled to form one lifting assembly which is not dismantled after use, the assembly should be marked to indicate its safety characteristics to users.

199 Where the weight of an accessory is significant in relation to the safe working load of the machine with which it is intended to be used, the accessory should be clearly marked with its weight.

200 Where there are other characteristics which might make the use of an accessory for lifting unsuitable in a particular application then this information should be marked or otherwise be available to the user.

Guidance 7
LOLER

201 Accessories for lifting include a single item (such as a shackle) or an assembly of items (such as lifting beam and slings) which may be used to secure the load to the piece of lifting equipment. Accessories include:

- (a) slings;
- (b) shackles;
- (c) swivel or eye bolts;
- (d) clamps;
- (e) lifting magnets;
- (f) vacuum lifters; and
- (g) lifting beams.

202 Lifting accessories with one SWL should have it marked on the accessory. Where this is not possible, a coding system should be used which allows the user to determine the SWL. Examples of such systems include colour coding or attaching some form of label.

Guidance 7

203 If the configuration of an accessory can affect the SWL, it should be clearly marked or a chart should be readily available providing the user with information on the SWL for each configuration.

204 You should mark lifting accessories with their own weight and any other characteristics that may be appropriate in particular circumstances, eg whether the accessory should only be used with one identified piece of lifting equipment or where its use can be affected by other factors such as heat or corrosive atmospheres. Furthermore, an accessory such as a plate clamp may need to be marked with the plate thickness range over which it can be safely used.

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ACOP 7

Regulation 7(d)

LOLER

205 Any carrier should clearly display the maximum number of people it can carry.

Guidance 7

206 Lifting equipment which is designed for lifting people must be appropriately and clearly marked that it is for lifting people. In addition, any carrier (eg a suspended personnel basket or car of a passenger lift) should clearly display the maximum number of people to be carried.

207 The SWL should also be clearly indicated on the carrier.

Regulation 7(e)

LOLER

208 Lifting equipment which may be inadvertently used for lifting people but which has not been designed for this purpose should be clearly marked that it should not be used for lifting people.

Regulation 8 Organisation of lifting operations

Summary

Regulation 8(1) clarifies that each lifting operation needs to be planned, supervised and carried out safely.

Regulation 8(2) defines a lifting operation.

Regulation 8

(1) *Every employer shall ensure that every lifting operation involving lifting equipment is –*

- (a) *properly planned by a competent person;*
- (b) *appropriately supervised; and*
- (c) *carried out in a safe manner.*

(2) *In this regulation “lifting operation” means an operation concerned with the lifting or lowering of a load.*

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Regulation 8(1)(a)

209 The person planning the operation should have adequate practical and theoretical knowledge and experience of planning lifting operations.

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210 The plan should address the risks identified by the risk assessment and identify the resources required, the procedures and the responsibilities so that risks are managed and any lifting operation is carried out safely.

211 The plan should ensure that the lifting equipment remains safe for the range of lifting operations for which it might be used.

212 Where two or more items of lifting equipment are used simultaneously to lift a load, a procedure should be in place to ensure safety. Where appropriate this should be a written plan, drawn up and applied to ensure safety.

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213 The lifting equipment referred to in paragraph 212 means, for example, two cranes lifting the same load. It does not mean the use of lifting accessories (eg two slings attached to the hook block of a single crane) used with a lifting machine.

214 Regulation 8(1)(a) lies at the heart of these Regulations. The risk assessment required by regulation 3(1) of the Management Regulations will identify the hazards and corresponding risks. The requirement for proper planning under these Regulations should therefore address how risks identified by this assessment will be eliminated or adequately controlled. Proper planning of lifting operations should ensure that not only is suitable equipment provided by dutyholders but also that it can be used safely.

215 The degree of planning will vary considerably. It will depend upon the type of lifting equipment to be used and the complexity of the lifting operation. A lifting operation should be planned before the lift is started and the plan should cover the whole of the process, including the disassembly of the lifting equipment where this is necessary, and should consider potential difficulties, eg weather changes. Proper planning of lifting operations is a combination of two parts:

- (a) initial planning to ensure that lifting equipment is provided which is suitable for the range of tasks that it will have to carry out; and
- (b) planning individual lifting operations so that they can be carried out safely with the lifting equipment provided.

216 The balance between the two parts of the planning process will vary depending on the lifting equipment and the particular lifting operation.

217 The term 'competent person' required to carry out the planning means the person must have the skills, knowledge, and experience to make the relevant assessment of the requirements of the lifting equipment being used and the type of task being carried out. It does not have the same meaning as, and is unlikely to be, the same competent person referred to in regulation 9 (thorough examination and inspection).

Initial planning

218 Regulation 4 of PUWER requires suitable work equipment to be provided for the task. There is therefore a close link between regulation 4 and this requirement for planning. Factors you should consider when selecting lifting equipment so that it is suitable for the proposed task include:

- (a) the load to be lifted;
- (b) its weight, shape, centre of gravity, availability of lifting points;
- (c) where the load is presently positioned and where it will be positioned after the lifting operation;
- (d) how often the lifting equipment will be used to carry out the task;

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- (e) the environment in which the lifting equipment will be used; and
- (f) the personnel available and their knowledge, training and experience.

219 The person carrying out this part of the planning exercise should have appropriate knowledge and experience.

220 You should use appropriate equipment for lifting particular types of loads, eg spreader beams for unbalanced loads. You may need to use specialist handling equipment in conjunction with forklift trucks, eg reel handling attachments if you are handling paper reels or similar loads.

Planning individual lifting operations

221 For routine lifting operations the planning of each individual lifting operation will usually be a matter for the people using the lifting equipment, such as a slinger, the forklift truck operator etc. The person carrying out this part of the planning exercise should have appropriate knowledge and experience and the organisation should have a simple plan, generic risk assessment and procedures in place to support them.

222 An example of a simple plan for routine use of an overhead travelling crane would be:

- (a) assess the weight and size of the load;
- (b) choose the right accessory for lifting, eg depending upon the nature and weight of the load and the environment in which it is to be used;
- (c) check the anticipated path of the load to make sure that it is not obstructed;
- (d) prepare a suitable place to set down the load;
- (e) fit the sling to the load (using an appropriate method of slinging);
- (f) make the lift (a trial lift may be necessary to confirm the centre of gravity of the load; tag lines may be necessary to stop the load swinging);
- (g) release the slings (boards or similar may be necessary to prevent trapping of the sling); and
- (h) clear up.

223 The same principles could be applied to other routine lifting operations involving other types of lifting equipment, eg forklift truck, use of an electric hoist etc.

224 For routine similar lifting operations you may have a standard plan but you should review it periodically to make sure that nothing has changed and the 'plan' remains valid. Examples of lifting equipment generally provided for routine lifting operations include:

- (a) forklift trucks in a warehouse;
- (b) a construction site hoist;
- (c) a MEWP used for general maintenance;
- (d) a suspended cradle used for window-cleaning;
- (e) a vehicle tail lift; and
- (f) a patient hoist.

225 For complex or non-routine lifting operations you should plan the task each time it is carried out.

226 BS 7121 series of standards⁹ contains recommendations for the safe use of cranes, including planning of lifting operations. In this series of standards the

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competent person for planning lifting operations is referred to as the appointed person. The principles contained in this series of standards can be applied to the use of other types of lifting equipment.

Regulation 8(1)(b)

227 The HSW Act (section 2(2)(c)) places a duty on employers to their employees for ‘... *the provision of such, information, instruction, training and supervision as is necessary to ensure, so far as is reasonably practicable, the health and safety at work of his employees*’. These Regulations extend the duties on employers to other dutyholders listed in regulation 3(3).

228 Both LOLER and the HSW Act require appropriate supervision and as long as you provide this you will comply with both the requirements of the HSW Act and these Regulations.

229 ‘Appropriate supervision’ means that it should be proportionate to the risk and take into account the personnel involved in the particular lifting operation such as those with disabilities and the inexperienced. Levels of supervision are determined by the nature of the work, and the competence of those involved in using the equipment and assisting with the lifting operation. It does not mean, for example, that an experienced forklift truck driver will have to be under direct supervision every time they carry out a routine lift (but they may need to be supervised if they are required to lift an unusual load), or that an occupier of an office block has to provide a person to supervise the operation of a passenger lift.

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Regulation 8(1)(c) – working under suspended loads

230 Where practicable, loads should not be carried or suspended over areas occupied by people.

231 Where this is not practicable you should establish a safe system of work which minimises the risks to people who may need to be below the load.

232 Where it is necessary to leave loads suspended you should ensure that access to the danger zone is prevented and that the load has been secured properly.

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233 Regulation 8(1)(c) places a duty on you to ensure that lifting equipment is used safely. This can only be achieved if you have complied with the other regulations where they are relevant.

234 Where possible, you should organise the layout of the workplace so that no person will have to work under a suspended load. In some cases this is not possible, eg mechanics working under a car on a raised vehicle inspection lift. In such circumstances you should ensure that the workers are aware of the risks and that the equipment is properly maintained and thoroughly examined to ensure that it is safe to use.

235 Where the risks cannot be controlled by organising the layout of the workplace, other measures must be taken to protect people below the load to minimise the consequences if it falls. This may be a combination of reliance on equipment, for example by using lifting equipment with additional safety features (see guidance on regulation 6), ensuring a secondary means to contain the load should it begin to disintegrate or the provision of some form of overhead protection.

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236 Where these measures might not be fully effective then you must provide a safe system of work to exclude people from the danger zone. This may involve provision of barriers to prevent people inadvertently walking below the load and/or warning signs advising people of the danger.

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Visibility

237 If the operator of lifting equipment cannot observe the full path of the load, either directly or by means of auxiliary devices, the employer should ensure that a responsible person has appropriate means of communication to guide the operator. Measures should be taken to prevent the load striking anything or any person.

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238 There are different types of auxiliary devices that can be used to indicate the position of the load to the operator of the lifting equipment. These include closed-circuit television systems and visual markers (either on the lifting equipment or on the ground) indicating the position of the load accurately. The type of device that you choose will depend on the lifting equipment with which it will be used, where it will be used and the particular lifting operation.

239 Where these auxiliary devices will be insufficient you will need a system of work which provides the operator with information on the position of the load. This will usually involve the appointment of a responsible person to give clear instructions to the operator. This responsible person may be referred to as a signaller or a banksman. The responsible person should have a clear view of the path of the load. They should be in a safe position and be in view or able to communicate effectively with the operator of the lifting equipment.

240 If the responsible person is unable to maintain a clear view of the path of the load then they will need assistants. These assistants also should be in a safe position and either be in view of the responsible person or able to communicate effectively with them.

241 The lifting equipment operator, responsible person and, where applicable, any assistants to the responsible person should use the same reliable means of effective communication. This could be by using hand signals, radios or telephones etc.

242 Where hand signals are used they should be consistent with the code of signals in Schedule 1 of the Health and Safety (Safety Signs and Signals) Regulations 1996²² or meet the requirements of BS 6736 *Code of practice for hand signalling for use in agricultural operations*²³ or BS 7121 *Code of practice for safe use of cranes*,⁹ which are referred to in Schedule 2 of the same Regulations.

243 Where the method of communication is by verbal means then the minimum requirements for verbal communication are contained in Schedule 1, Part VIII of the Health and Safety (Safety Signs and Signals) Regulations 1996.²² This should ensure that the message is clear and it is understood who the message is from and directed at; it could include some method for checking understanding of the message either by prior agreement or by verbal check, eg repeating message.

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LOLER

Attaching/detaching and securing loads

244 You should ensure that any lifting accessories used for securing the load are compatible with it, taking into account any attachment points on the load, the environmental conditions in which the accessories will be used and their configuration of use.

ACOP 8

245 You should ensure that appropriate measures are taken to prevent the load, or part of it, disintegrating while being lifted.

246 Rope slings, chain slings or other slings should only be shortened in a safe manner.

247 You should ensure that the lifting operation is organised so that the lifting equipment is not operated unless the person attaching or detaching the load has given their authorisation to do so or it has been given by some other authorised person.

LOLER

Guidance 8

248 In this guidance we have used the term 'load handler' to describe the person with responsibility for attaching/detaching and securing the loads to the lifting equipment. This could be the operator of the lifting equipment or a slinger who would normally attach loads to cranes.

249 The load handler should have the necessary competence to select suitable lifting accessories (see also the guidance for regulation 4). You should ensure that they receive adequate information, instruction and practical experience on the principles of selection, use, care and maintenance of lifting accessories including any limitations on use. This should include, where necessary, the methods of slinging loads, the methods for rating multi-legged slings, interpretation of markings on lifting accessories and derating lifting accessories for particular adverse conditions of use such as when lifting in adverse weather conditions.

250 The lifting operation should not commence until the load handler has indicated that it is safe to do so and they or the person in control of the lifting operation has given the authority to do so. The load handler should normally only obey the instructions of the identified person in charge of the lifting operation. In either case, a system of work should be in place which ensures that the load handler is in a safe position before the lifting operation begins.

251 Where there is a risk of the load breaking up and this could result in injury to people below then you should take additional measures to ensure that the load remains intact and in a safe condition. Examples of when this might be necessary include lifting pallets of bricks which should be secured by metal strapping or plastic sheeting. Guidance is provided in *Pallet safety* PM15.¹⁷

252 You should ensure that suitable precautions are taken, eg using packing material, to prevent the load or lifting equipment from being damaged by sharp edges or due to the loads shifting while they are lifted.

LOLER

ACOP 8

Weather conditions

253 The use of lifting equipment in the open air should be halted where the weather (meteorological condition) deteriorates to the point that it could affect the integrity of the lifting equipment or expose people to risks. You should also ensure that appropriate measures are in place to minimise the risks to exposed people.

LOLER

Guidance 8

254 Various weather conditions could have an effect on the integrity of the equipment or expose people to hazards which may mean that lifting operations have to be stopped, eg excessive wind speed, poor visibility due to mist or fog, lightning, heavy rain, sea state etc. Other factors can produce unsafe conditions after the particular weather condition has finished, eg waterlogged and unstable ground following a period of heavy rain. You therefore need a system of work in place which sets out what measures or actions need to be taken for particular

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weather conditions. Such systems of work should recognise that additional measures may be needed to reinforce the stability of the lifting equipment or to reduce the SWL so that the lifting operations can be continued safely. See paragraphs 218–220 on initial planning of a lifting operation.

LOLER

255 You may need to have the lifting equipment thoroughly examined (see regulation 9(3)) where the weather conditions may have jeopardised its safety.

ACOP 8

Location

LOLER

256 Lifting equipment should only be used where there is sufficient headroom.

Guidance 8

257 You should ensure that you have adequate site access and egress for the lifting equipment. You should also consider whether there will be sufficient space to safely position and install the equipment, for example to put out any outriggers. Access routes should be of sufficient strength to take loads imposed by mobile lifting equipment.

LOLER

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Overturning

258 Lifting equipment should not be used in a manner likely to cause it to overturn.

259 You should ensure that appropriate measures are in place to prevent lifting equipment from tilting, overturning and, where appropriate, moving or slipping. The employer should ensure that suitable checks are made to achieve this.

LOLER

260 Lifting equipment should not be used to drag loads if such operations are liable to cause damage or overload the lifting equipment.

Guidance 8

261 Regulation 4 requires you not to use lifting equipment unless it is of adequate strength and stability for the load. This means that you must ensure that those people who use the lifting equipment have sufficient knowledge to judge whether or not the equipment is likely to be over-stressed or made unstable while they are using it. This could arise, for example:

- (a) when turning a lift truck with a raised load;
- (b) during excessive and uneven loading of a mast climbing work platform;
- (c) when using a crane to lift an unknown (and excessive) load; and
- (d) when using a MEWP in excessively high winds or in locations where traffic could collide with it.

262 You should ensure that operators of lifting equipment know or can judge the weight of the load they are required to lift. This does not mean that the operator needs to calculate the exact weight of each and every load. For routine lifting operations the weight will usually be known. In other instances it will be possible for the weight of the load to be estimated. There will, however, be some situations where you will need to make calculations to find out the weight of the load if you are to avoid overloading the equipment.

263 Unless specified/allowed by the manufacturer, you should not use lifting equipment to drag loads as this can result in uneven loading on the lifting equipment. Where lifting equipment is used to drag loads there is a risk that the load could become snagged on an obstacle which could destabilise the lifting

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Guidance 8

equipment, exceed its SWL, or place an excessive load on particular elements or components. If loads have to be dragged this should be done where there are no snagging hazards and the load's movement can be closely observed or by limiting the pulling capacity of the lifting equipment to safe limits through the use of appropriate devices such as pressure-limiting valves on hydraulic equipment.

LOLER

264 For lifting equipment which travels with the load raised, you should consider the layout and ground conditions of the workplace to minimise the possibility of it overturning.

ACOP 8

Proximity hazards

265 You should take suitable measures to minimise the risks from lifting equipment due to its proximity to other objects.

LOLER

266 Where anyone is working near the wheel tracks of an overhead crane, the crane should not be allowed to approach within 6 m of them if they would be liable to be struck by it.

Guidance 8

267 You should have measures in place which address the risks arising from proximity hazards. These measures should take into account the lifting equipment in use and the particular proximity hazard.

268 Proximity hazards that you should consider include:

- (a) coming into contact with overhead power lines;
- (b) coming into contact with other work equipment or structures;
- (c) trench work and excavations;
- (d) other lifting operations in the vicinity;
- (e) low bridges, transport or traffic routes;
- (f) public highways, railways or chemical plant;
- (g) speed retarders;
- (h) warehouse racking; and
- (i) underground services such as drains or sewers.

269 The measures you take will depend upon the particular kind of lifting equipment and proximity hazards.

270 As a general rule, lifting equipment should not be brought closer than 10 m to any overhead power lines. In cases where closer approach is likely you should consider how the work can be done safely. Further guidance is contained in *Avoiding danger from overhead power lines* GS6.²⁴

271 The best way to prevent items of mobile equipment from falling into excavations is to keep them out of the area. Not only can they be inadvertently driven into the excavations but if they drive too close they can cause the sides to collapse, tipping the equipment over. Where necessary, use baulks or barriers to separate mobile lifting equipment from excavated edges. Baulks or barriers need to be painted or marked to make sure that they are visible to drivers. They should be positioned at a suitable distance which reflects the weight of the lifting equipment, likely loads, the space available for operations, the nature of the ground and the depth of excavations etc.

272 Some proximity hazards may be addressed by having an appropriate traffic management system in place which identifies the hazards and keeps the lifting equipment out of the danger zone.

LOLER

Guidance 8

LOLER

273 Lifting equipment colliding with other objects may damage the lifting equipment or the other object. Both have the potential to put people's safety at risk. In a warehouse, for example, damaged racking may collapse. Barriers may be required to prevent mobile lifting equipment contacting other work equipment or structures which might then collapse. General precautions for mobile work equipment are described in the guidance supporting PUWER.¹

ACOP 8

LOLER

Derating

274 Where appropriate, the SWL of the lifting equipment should be reduced to take into account the environment and mode in which it is being used.

Guidance 8

LOLER

275 Although a SWL may be marked on a piece of lifting equipment, it may be necessary to reduce this value to take into account where and how the equipment is being used. This is referred to as 'derating'. You therefore should ensure that those involved in lifting operations know when this is necessary and that those undertaking the derating have sufficient competence. Examples include:

- (a) using a carpet boom on a forklift truck with a SWL determined for 'normal' lift truck use;
- (b) the way a sling is attached to a load, eg the angle of its legs;
- (c) using a multi-leg sling with less than the full number of legs in use;
- (d) lifting people;
- (e) where the surface area of the load is large and it may be affected by the wind; and
- (f) using a tower crane or mobile crane adjacent to an operational railway or other site containing exceptional hazards.

ACOP 8

LOLER

Lifting people

276 You should ensure that where people are lifted by lifting equipment primarily designed for lifting loads other than people, the control position of the lifting equipment is manned at all times.

277 You should ensure that people being lifted on such equipment have a reliable means of communication with the equipment operator or some other responsible person.

Guidance 8

LOLER

278 Ideally, you should provide lifting equipment designed specifically to lift people. If this is not possible then adequate precautions should be taken. The SWL for the equipment and accessories should be reduced (derated) by 50% to provide an appropriate factor of safety. Your competent person should be able to provide advice. The guidance to regulation 5 contains advice on the precautions to take when using lifting equipment such as lift trucks, telescopic handlers or cranes to lift people.

279 You must ensure that the person in control of the lifting operation and the person being lifted are able to communicate effectively with each other. Where the distances between them are short, and noise levels permit, verbal communication may be adequate. However, where the distances involved mean that they cannot hear each other then you should provide the person being lifted with control of the lifting operation or some reliable means of communication with the person controlling the lift. This could be based on a system of hand signals but more usually a two-way radio would be used. There should also be some method for checking understanding of the message either by prior agreement or by verbal check, eg repeating message.

Guidance 8
LOLER

280 There are certain circumstances where communication between the person in control of the lifting operation and the person being lifted is not so easy, for example where the person being lifted has impaired capacity to communicate. This should be taken into account when planning and organising the lifting operation and appropriate measures agreed and implemented to ensure it is carried out safely.

ACOP 8
LOLER

281 You should ensure that in the event of failure of the lifting equipment that the people being lifted are not exposed to danger and a reliable means of rescue is available.

Overload

282 A load greater than the SWL or rated capacity should not be lifted except where, for the purposes of thorough examination or testing, the competent person requires it.

Guidance 8
LOLER

283 Where the SWL or rated capacity of a piece of lifting equipment is not known then you should ensure that it is not used until this value is determined. This may mean that you need to contact the manufacturer or supplier or alternatively arrange for the equipment to be thoroughly examined by a competent person.

284 Where the weight of the load is not known and it is believed that it may be approaching the maximum weight that the equipment can safely lift, you should ensure that it is not lifted until steps are taken to determine its weight. Only if it is clear that the weight is equal to or less than the SWL or rated capacity should it be lifted.

285 If, for the purpose of a test, a competent person requires the lifting equipment to be loaded beyond its SWL or rated capacity then this should only be done with certain precautions in place. These include:

- (a) ensuring that the area around the lifting equipment is cleared;
- (b) making sure that only essential workers are retained to lift the load;
- (c) completing the test as efficiently as possible; and
- (d) ensuring that the test is carried out in an area where the consequences of failure are minimised, eg make sure that mobile lifting equipment is positioned well away from buildings.

286 Further information on the overload testing of cranes is contained in the BS 7121 series of standards.⁹

ACOP 8
LOLER

Pre-use check

287 Users of any lifting equipment should have appropriate training and instructions so that they are able to ensure that the lifting equipment is safe to use.

Guidance 8
LOLER

288 You should ensure that people who use lifting equipment have received appropriate training, information and instruction so that they can carry out pre-use checks on the lifting equipment. The user or operator is best placed to identify faults or damage to equipment. These pre-use checks are not the same as maintenance or thorough examination but where defects are found they should be reported to the maintenance team so they can maintain a full record of identified faults for each piece of equipment.

289 The purpose of these pre-use checks is to identify faulty equipment. The operator of the equipment should act as the first line of defence in identifying any faults or damage. Such checks should be carried out before the lifting equipment is

Guidance 8

used during each working day or at the beginning of each shift. The aim of such checks is to pick up faults due to day-to-day wear and tear and malfunction of safety-related equipment. If any defects are found the operator should report and record the defect and not use the equipment unless authorised to do so or, if competent to do so, take appropriate action to record the fault and rectify it.

290 A trained operator or other person carrying out the checks should be able to identify damage to lifting ropes and accessories, distortions to shackles, and other obvious faults which could affect the safe operation of the lifting equipment or accessories.

LOLER

ACOP 5

Continuing integrity: regulation 5 of PUWER

PUWER

291 You should ensure that lifting accessories are stored in conditions that do not lead to damage or deterioration.

Guidance 5

292 Regulation 5 of PUWER requires you to maintain work equipment in an efficient state, in efficient working order and in good repair. Further advice on maintenance is provided in the guidance supporting PUWER.¹

293 You should ensure that lifting accessories are suitably stored away after use so that they are not damaged. This requires the provision of suitable storage facilities such as a storage rack or container.

294 Lifting accessories should also be stored in a suitable environment to prevent rusting, rotting or deterioration. The particular environment will depend on the type of lifting accessory such as:

- (a) the need for a dry atmosphere to prevent rusting;
- (b) the separation from chemicals that could have a corrosive effect on them;
- (c) storage of artificial fibre lifting slings out of direct sunlight and away from heat sources; and
- (d) protection from attack by rodents.

295 The manufacturer or supplier of the accessory should be able to provide further information.

PUWER

Regulation 9 Thorough examination and inspection

Summary

Regulation 9 puts in place requirements for all lifting equipment to be subject to 'thorough examination' at various points.

Regulation 9(3) requires periodic thorough examination where equipment is subject to deterioration due to use and where this deterioration could lead to a dangerous situation. The frequency depends on the type of equipment and the purposes for which it is used, eg equipment used for lifting people requires more frequent examination. The periods stated are the maximum periods between each examination unless there is an examination scheme produced by a competent person in place, which can specify longer or shorter periods depending on the risk of defects arising.

Regulation 9(4) requires that no lifting equipment leaves a business and/or is used, including when received from a third party, unless there is physical evidence that the required thorough examination has been completed.

Regulation 9

(1) Every employer shall ensure that before lifting equipment is put into service for the first time by him it is thoroughly examined for any defect unless either –

- (a) the lifting equipment has not been used before; and
- (b) in the case of lifting equipment for which an EC declaration of conformity could or (in the case of a declaration under the Lifts Regulations 1997) should have been drawn up, the employer has received such declaration made not more than 12 months before the lifting equipment is put into service;

or if obtained from the undertaking of another person, it is accompanied by physical evidence referred to in paragraph (4).

(2) Every employer shall ensure that, where the safety of lifting equipment depends on the installation conditions, it is thoroughly examined –

- (a) after installation and before being put into service for the first time; and
- (b) after assembly and before being put into service at a new site or in a new location, to ensure that it has been installed correctly and is safe to operate.

(3) Subject to paragraph (6), every employer shall ensure that lifting equipment which is exposed to conditions causing deterioration which is liable to result in dangerous situations is –

- (a) thoroughly examined –
 - (i) in the case of lifting equipment for lifting persons or an accessory for lifting, at least every 6 months;
 - (ii) in the case of other lifting equipment, at least every 12 months; or
 - (iii) in either case, in accordance with an examination scheme; and
 - (iv) each time that exceptional circumstances which are liable to jeopardise the safety of the lifting equipment have occurred; and,
- (b) if appropriate for the purpose, is inspected by a competent person at suitable intervals between thorough examinations,

to ensure that health and safety conditions are maintained and that any deterioration can be detected and remedied in good time.

(4) Every employer shall ensure that no lifting equipment –

- (a) leaves his undertaking; or
- (b) if obtained from the undertaking of another person, is used in his undertaking,

unless it is accompanied by physical evidence that the last thorough examination required to be carried out under this regulation has been carried out.

(5) This regulation does not apply to winding apparatus to which the Mines (Shafts and Winding) Regulations 1993 apply.

(6) Where lifting equipment was before the coming into force of these Regulations required to be thoroughly examined by a provision specified in paragraph (7), the first thorough examination under paragraph (3) shall be made before the date by which a thorough examination would have been required by that provision had it remained in force.

LOLER

Regulation 9

LOLER

- (7) *The provisions referred to in paragraph (6) are –*
- (a) *section 22(2), 25(2), 26(1)(d) and 27(2) of the Factories Act 1961;*
 - (b) *[Revoked by SI 2013/448.]*
 - (c) *regulations 28(3), 40 and 46(1) of the Construction (Lifting Operations) Regulations 1961;*
 - (d) *regulations 3(1) and (2) and 6(1) of the Offices, Shops and Railway Premises (Hoists and Lifts) Regulations 1968;*
 - (e) *regulation 6(1)(c) of and Part III of Schedule 1 to the Offshore Installations (Operational Safety, Health and Welfare) Regulations 1976;*
 - (f) *[Revoked by SI 2013/1512.]*

ACOP 9

LOLER

Competent person

296 You should ensure that the person carrying out a thorough examination 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.

Guidance 9

LOLER

297 The competent person must be sufficiently independent and impartial to allow objective decisions to be made. This does not mean that competent persons must necessarily be employed from an external company. If employers and others within their own organisations have the necessary competence then they can use it. However, 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 recommendations arising from them are made without fear or favour.

298 It is the employer's duty to ensure that they employ a suitably qualified competent person to carry out the thorough examination. LOLER does not expressly preclude the person carrying out the maintenance from also conducting the thorough examination. However, the competent person who carries out the thorough examination should not normally be the same person who performs routine maintenance operations on the equipment except where the risk of injury to others is low. This is to ensure that there is independence between the thorough examination and the maintenance and to avoid an individual examining their own work. When these functions are carried out by different people, the additional safety aspect of having a second person checking the equipment makes it more likely that defects will be identified and rectified.

299 Where the thorough examination is undertaken by the same person who has maintained the equipment, your risk assessment should show you have considered all the options, how you reached your decision about who should carry out these functions, and also show that the person is suitably qualified and independent to the extent that would be required for another competent person. In these circumstances any maintenance should be carried out after the thorough examination has been undertaken (see paragraph 362 on reporting defects where repairs are carried out immediately).

300 Similar considerations are required when identifying the competent person to carry out the thorough examination where it is required under regulation 9(2) after installation if the person assembling the equipment may also be the person assessing whether it is safe for use.

ACOP

9

Thorough examination

LOLER

301 You should identify equipment which requires a thorough examination and ensure that it is thoroughly examined. The risks which could arise from the failure of the lifting equipment will determine how thorough the examination should be.

Guidance

9

302 Thorough examination is needed at several points during the life of lifting equipment:

- (a) on initial use or following installation;
- (b) periodically during its life to ensure it remains fit for use; and
- (c) following certain exceptional circumstances, eg if it is damaged.

303 Where a piece of lifting equipment's safety depends on the installation conditions, it must be thoroughly examined before it is put into service for the first time to ensure that it is installed correctly and safe to operate. If lifting equipment (such as a tower crane) is subsequently moved to a new site, it should be thoroughly examined again at the new site after it has been installed but before it is put into service.

304 Before you use any item of lifting equipment for the first time, unless:

- (a) it has not been used before and has an EC declaration of conformity made not more than 12 months before being put into service; or
- (b) you have received physical evidence that the last required thorough examination has been carried out which shows that it is safe to use; then

it should be thoroughly examined by a competent person. The extent of the thorough examination will depend on an assessment of the risks based on the type of lifting equipment, where it is installed and how it is to be used.

305 All lifting equipment deteriorates in use and, where this is liable to result in dangerous situations, it should be thoroughly examined so that deterioration can be detected in sufficient time to allow remedial action to be taken. Deterioration can occur more quickly in certain conditions such as wet, abrasive or corrosive environments and this equipment will need to be thoroughly examined more frequently. The competent person will determine the level of thorough examination required based on an assessment of the risks.

306 No definition of 'dangerous situation' is provided but PUWER has a similar provision at regulation 6 which states that '*Where work equipment is of a type where the safe operation is critically dependent on its condition in use and deterioration would lead to a significant risk to the operator or other worker, you should arrange for suitable inspections to be carried out.*' Lifting equipment failure may also impact on others, eg when loads are lifted over occupied areas or where the load collapse can cause damage to other equipment or property, or where the load being moved can cause additional damage, eg explosive, chemicals etc.

307 A thorough examination is also required following any significant change which may affect the safe operation of the lifting equipment. These include:

- (a) its involvement in an accident or dangerous occurrence such as overloading, component failure etc;
- (b) after a significant change in conditions of use such as increase in use, change in loading (eg from inert loads to chemicals) or work environment (eg moving from indoor to outdoor use); and
- (c) long periods out of use.

LOLER

Guidance 9

308 For certain types of thorough examination, access to inner workings of the equipment may be required. This may require it to be stripped down or covers to be removed.

309 Where a thorough examination may require entry into a confined space, within the meaning of the Confined Spaces Regulations 1997, every effort should be taken to conduct the examination without entering the confined space. Where this is not possible, you must comply with the requirements of those Regulations. Advice can be found in *Safe work in confined spaces* L101.²⁵

LOLER

ACOP 9

Load testing

LOLER

310 The competent person should decide whether or not a load test is necessary, and the nature of the test, as part of the thorough examination.

Guidance 9

311 The design of certain lifting equipment is such that damage may be caused by conventional overload tests. The competent person carrying out the thorough examination or testing should take account of the instructions and other relevant information, eg regularity of such testing, provided by the manufacturer.

312 Other testing may be carried out as part of the thorough examination where the competent person considers they are required to properly assess the safety of the equipment, eg non-destructive tests.

Regulation 9(1)

313 This applies to accessories for lifting as well as to lifting equipment. The extent of the initial thorough examination may depend upon the extent of the information available to the competent person on which to base a judgement.

314 In the case of new equipment the 'thorough examination' is considered to have been carried out by the manufacturer or supplier and confirmed in the Declaration of Conformity. In such a case no further thorough examination is required until the next periodic thorough examination under regulation 9 or until the next thorough examination required by the scheme of examination.

315 Used equipment which is supplied with a current report of thorough examination that found the equipment to be safe to use does not require a further thorough examination before first use at the new premises. However, if equipment has to be 'installed' then the requirements of regulation 9(2) should be considered.

LOLER

ACOP 9

316 A thorough examination is required after substantial or significant modification or repair.

Regulation 9(2) – installation and reconfiguration

LOLER

317 You should ensure that where lifting equipment is installed in a new location or reconfigured, it is thoroughly examined by a competent person to ensure that it has the adequate strength and stability for its intended use.

Guidance 9

318 When the integrity of the lifting equipment is dependent on its installation, it should normally be thoroughly examined each time it is reinstalled. The complexity of the installation requirements will largely determine the extent of the thorough examination required and should be based on the findings of a risk assessment.

LOLER

Guidance

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319 Installation is not defined but is considered to apply to lifting equipment erected or built on site, such as tower cranes, construction site hoists or gantry cranes, ie lifting equipment which is intended to be there for a period of time and is normally fixed in position. It would not apply to portable or mobile lifting equipment which could move from one location to another to carry out a lifting operation within the scope of the current report of thorough examination.

320 The safety of lifting equipment often depends on the way it is assembled, positioned or secured before use, eg rope access equipment. This is not 'installation' as covered by this regulation.

321 If the configuration of the lifting equipment is changed while it is still at its new location, eg a tower crane being increased in height, the equipment may need to be thoroughly examined further before it is put back into use. This will be decided by a person suitably knowledgeable and trained for the purpose, based on an assessment of the risks. Such thorough examinations will not be required if the existing report of thorough examination for the lifting equipment covers the new configuration.

322 The expression 'put into service' means when the lifting equipment is put into normal use for the first time. Any 'trying out' of the equipment or components is part of the installation examination and should be carried out by the competent person examining the equipment before it is handed over to production personnel for in-service operation.

LOLER

ACOP

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Regulation 9(3)(a) – in-service thorough examinations

323 You should make necessary arrangements for a competent person to thoroughly examine the lifting equipment.

324 You should either have the lifting equipment thoroughly examined at intervals no longer than those specified in regulation 9(3) or shorter intervals if the competent person considers this appropriate, or in accordance with the intervals specified in the examination scheme for the equipment.

325 The competent person should thoroughly examine those items and parts of the lifting equipment specified in the examination scheme or those items and parts of the lifting equipment which could through deterioration lead to dangerous situations.

LOLER

Guidance

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326 Lifting equipment deteriorates through normal wear and tear when used within its design limits and in the ways specified by the manufacturer/supplier. Equipment may deteriorate to an unacceptable state, ie to the extent that safety is compromised or could be compromised before the next thorough examination takes place.

327 Exceptional circumstances can affect the safe use of the equipment by causing damage or premature deterioration. For example, exceptionally high winds may cause overload, failed safe load indicators may allow overload to go undetected and environmental influences may cause equipment to deteriorate when it is not in use.

328 PUWER regulation 6(2) requires an inspection '*each time that exceptional circumstances which are liable to jeopardise the safety of the work equipment have occurred*'. Lifting equipment is work equipment and subject to these provisions.

LOLER

Guidance

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329 You have a choice. You can follow a specified period approach to the thorough examination of lifting equipment (ie make arrangements to have the equipment examined at the intervals specified in this regulation). Alternatively, you can have an examination scheme drawn up for the lifting equipment in use and have it thoroughly examined in accordance with this scheme. Certain pieces of equipment can be subject to periodic thorough examination while others, or groups of others, may be subject to an examination scheme approach.

Examination scheme

330 An examination scheme may specify periods of time between in-service thorough examinations different (longer or shorter) to the periodic examination intervals stated in the Regulations, but a longer period must be based on a rigorous assessment of the risks, based on how and where the equipment will be used. This should be included in the information provided to the competent person where the thorough examination is conducted by someone other than the competent person who agreed the longer/shorter examination periods. The examination scheme should be regularly reviewed, especially where circumstances change.

331 If you, as the user or owner of the equipment, are unable to produce a written examination scheme when requested by an inspector from the relevant enforcing authority it will be assumed that you are following the periods specified in these Regulations and that the equipment is being thoroughly examined at those prescribed intervals. You should then ensure that you can produce a current examination report when requested by an enforcing officer.

LOLER

ACOP

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332 The examination scheme can be drawn up by the user, owner, manufacturer or some other independent party provided they have the necessary competence.

333 The examination scheme drawn up by the competent person should identify and specify those parts of the lifting equipment that should be thoroughly examined.

334 The examination scheme should specify the intervals at which the lifting equipment (or individual parts thereof) should be thoroughly examined and, where appropriate, those parts that should be tested.

335 Any examination scheme for lifting equipment should take account of:

- (a) its condition;
- (b) the environment in which it is to be used; and
- (c) the number of lifting operations and the loads lifted.

336 The examination scheme need not necessarily be preserved in the form of a document. It should, however, be capable of being reproduced as a written copy when required. It should be secure from loss or unauthorised modification and it should be authenticated by the competent person preparing the scheme.

337 You should inform the competent person of any changes in use of the lifting equipment which may affect the examination scheme either:

- (a) where these changes have occurred since the last thorough examination was carried out; or
- (b) where they are expected to occur before the next thorough examination is due.

LOLER

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338 The competent person should decide what changes should be made to the examination scheme.

LOLER

339 Different items or parts of the lifting equipment may be thoroughly examined at different intervals, taking into account the degree of risk associated with each item or part.

Guidance

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340 Some parts of the equipment may need inspection to meet the requirements of PUWER, for example a forklift truck must be thoroughly examined under LOLER and must be inspected under PUWER. Where the person doing the work is a competent person under both sets of Regulations, these examinations and inspections can be conducted together. Some mobile equipment designed to travel on roads will also be subject to MOT examination requirements (such as lorry loaders); LOLER and/or PUWER examinations serve a different purpose and do not replace the MOT requirement.

341 You should identify all equipment to which LOLER applies and will need the assistance of a competent person to devise an examination scheme in terms of scope and frequency of examination for each item of equipment.

342 The examination scheme could refer to one particular piece of lifting equipment or alternatively it could apply to many similar items of equipment. For example, lifting equipment that is similar in age and subjected to similar amounts of use in the same environment may be suitable for thorough examination at the same frequency. This decision must be made by the competent person drawing up the examination scheme and should be reviewed regularly.

343 The competent person who draws up the examination scheme for a dutyholder could also carry out the thorough examinations of the lifting equipment. However, the thorough examinations could be carried out by another competent person provided they have the appropriate practical and theoretical knowledge and experience.

344 The competent person should periodically review the time between thorough examinations, taking into account the information provided by the employer (eg significant changes in the environment or type of lifting operation performed) as well as information arising from the results of the thorough examinations. Periods between examinations may need to be shortened in some circumstances.

345 In certain circumstances, the competent person may decide to extend the periods between thorough examinations that are specified in the examination scheme. This could happen where a history of thorough examinations at the original frequency specified in the scheme has revealed that defects or potential problems are highly unlikely to occur. Provided that the equipment continues to be used in the same way, the low level of risk may justify a longer period between thorough examinations. The examination scheme then needs to be revised accordingly.

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Regulation 9(3)(b)

346 Where your risk assessment has identified a significant risk to the operator or other workers from the use of the lifting equipment, a suitable inspection should be carried out.

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347 The frequency and extent of the inspections required will depend on the potential risk from the lifting equipment. The inspection should include, where appropriate, visual checks and functional tests.

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348 You should ensure that the people who determine the nature of the inspections required and who carry out the inspections are competent to do so.

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349 You should carry out an inspection of lifting equipment where your risk assessment has identified risks to the operator or other workers which would be addressed by regularly inspecting it.

350 You should arrange for suitable inspections to be carried out where the lifting equipment is of a type where its safe operation is dependent on its condition in use and deterioration would lead to significant risks to the operator or other people. In determining the suitability and scope of the inspection you should refer to available information such as the manufacturer's instructions. Examples of conditions which can be detected by inspection of the lifting equipment include:

- (a) rapid wear arising from use in an arduous environment, eg construction;
- (b) failure through repeated operation, eg of a hoist interlock;
- (c) malfunction, eg of a rated capacity indicator; and
- (d) tampering with safety devices, eg defeating an interlock.

351 Potential faults in many items are often easy to detect by inspection, particularly defects which can commonly occur during use of the equipment. An operator will often be able to identify faults and they should be recorded and reported so that a decision can be taken on the safe continued use and when repairs can be carried out.

352 The extent of an inspection of lifting machinery will depend on the equipment and where and how it is used but could include, for a crane as an example, the correct operation of limiters and indicators, checking tyre pressures (if mobile equipment), checking that no components are missing (eg bolts) and that the controls work properly. Further recommendations on inspections for cranes are given in the BS 7121 series of standards.⁹ Other examples of lifting machinery which may require regular inspection are forklift trucks, hoists and automated stacking equipment. Lifting accessories such as slings will not normally require an inspection as long as they receive a thorough examination at the appropriate interval and a proper pre-use check.

Regulation 9(4)

353 Anyone using lifting equipment should be able to ascertain that it has been thoroughly examined and whether it is likely to be safe to use. When used outside its normal place of work the equipment must be accompanied by appropriate evidence that this thorough examination has been carried out.

354 An 'undertaking' is the employer's business. If you transfer lifting equipment, either temporarily or permanently, to another employer then you should ensure adequate evidence is transferred with it to show when the last thorough examination was carried out and clarify whether the equipment is safe to be used. This would normally be a paper copy of the last examination report but could be a copy in electronic format.

355 If you receive lifting equipment from another organisation, you should obtain evidence of the last thorough examination carried out. Such evidence is not required by these Regulations if you transfer equipment between different parts of your business, eg from site A to site B, provided that the evidence is held centrally and available on request.

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Guidance

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356 If you take your lifting equipment with you for use in another person's business, eg if you are a contractor carrying a sling in your van, then you should have evidence with you that shows it has been thoroughly examined as required by LOLER.

357 The information accompanying the equipment should include:

- (a) the name and address of the dutyholder for whom the thorough examination was made;
- (b) the address of the premises at which the thorough examination was made;
- (c) sufficient information to identify the equipment;
- (d) the date of the last thorough examination;
- (e) evidence that the defects identified in that thorough examination have either been rectified or remain outstanding;
- (f) the date when the next thorough examination is due; and
- (g) the equipment SWL or (where its SWL depends on the configuration of the equipment) its SWL for each configuration.

LOLER

Regulation 10 Reports and defects

Summary

Regulation 10 places responsibilities on the competent person carrying out thorough examinations to produce a report containing, as a minimum, the information specified in Schedule 1 to these Regulations.

Regulation 10(1)(c) requires, where a defect presents immediate or imminent risk of serious personal injury, a copy of the report be sent to the relevant enforcement authority defined in 10(4).

Regulation 10(3) stipulates that the employer should not use a piece of equipment where a defect has been identified for immediate rectification, until that defect has been rectified. Where other defects are identified a date for their rectification should be identified in the report and the equipment should not be used after that date unless the defects have been rectified.

Regulation

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(1) *A person making a thorough examination for an employer under regulation 9 shall –*

- (a) *notify the employer forthwith of any defect in the lifting equipment which in his opinion is or could become a danger to persons;*
- (b) *as soon as is practicable make a report of the thorough examination in writing authenticated by him or on his behalf by signature or equally secure means and containing the information specified in Schedule 1 to –*
 - (i) *the employer; and*
 - (ii) *any person from whom the lifting equipment has been hired or leased;*
- (c) *where there is in his opinion a defect in the lifting equipment involving an existing or imminent risk of serious personal injury, send a copy of the report as soon as is practicable to the relevant enforcing authority.*

(2) *A person making an inspection for an employer under regulation 9 shall –*

- (a) *notify the employer forthwith of any defect in the lifting equipment which in his opinion is or could become a danger to persons;*
- (b) *as soon as is practicable make a record of the inspection in writing.*

LOLER

Regulation 10

(3) Every employer who has been notified under paragraph (1) shall ensure that the lifting equipment is not used –

- (a) before the defect is rectified; or
- (b) in a case to which sub-paragraph (c) of paragraph 8 of Schedule 1 applies, after a time specified under that sub-paragraph and before the defect is rectified.

(4) In this regulation “relevant enforcing authority” means –

- (a) where the defective equipment has been hired or leased by the employer, the Executive; and
- (b) otherwise, the enforcing authority for the premises in which the defective equipment was thoroughly examined.

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358 Where the competent person identifies defects which must be made good within a specified timescale, they should submit the report promptly to allow the employer to take the necessary action within the required period.

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359 In normal circumstances the competent person should complete the report and forward it within 28 days of the thorough examination.

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360 Defects which are commonly noted as being potentially hazardous include cracks and permanent deformation, corrosion of vital parts, excessive wear or failure of moving parts (eg interlocks) and significant misalignment. Example of defects which should be identified in common items of lifting accessories include:

- (a) textile slings – damaged, cut, abraded or stretched;
- (b) chain slings – deformed or stretched links, cracks; and
- (c) wire rope slings – broken wires, kinks.

361 The competent person should make a report of the state of the equipment at the time of the thorough examination. Defects should be notified even if there is no intention to use the equipment again (such as when it is immediately scrapped) or not immediately to do so (eg equipment taken out of use until repairs can be carried out). The duty applies even where repairs are carried out immediately. In all cases the competent person should make a report on the condition of the equipment which necessitates the repairs.

362 Competent persons’ reports are a vital diagnostic aid in the safe management of lifting equipment. If defects are habitually not detected or rectified until the competent person’s thorough examination this indicates inadequacies in management systems. Where a competent person repairs a defect on the spot, or immediately prior to thorough examination, it should be included in their report. Failing to report such a defect is disguising a potentially dangerous situation.

363 The employer should be notified as soon as possible of those serious and significant defects which the competent person considers are, or could soon become, dangerous to anyone using the equipment or working in the vicinity of it. The word ‘forthwith’ is intended to ensure that the competent person notifies the employer and/or the person in control of the lifting operation immediately so that appropriate action can be taken to repair or replace the equipment or otherwise ensure that potentially dangerous equipment is withdrawn from use as soon as possible.

364 In certain situations the competent person is required to send a report of the examination to the relevant enforcing authority. This applies where there is in their

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Guidance 10

opinion a defect in the lifting equipment involving an existing or imminent risk of serious personal injury. This requirement is limited to those cases where there would be a risk of serious personal injury arising from failure of the equipment should anyone attempt to use it. Furthermore, such a failure is likely to be imminent, meaning that it could happen at any moment within a reasonably short time of the equipment being used again. An example of such a defect would be a structurally damaged jib on a crane.

365 The competent person should report a defect of this sort by sending a copy of the report to the relevant enforcing authority, ie HSE or the environmental health department of the local authority. Such reports would normally be restricted to the actual lifting machine. However, a severely damaged lifting accessory which is close to failure and is still being used should also be reported. Lesser defects in lifting accessories should be reported to the employer controlling their use. This report must provide all the information required by Schedule 1 to these Regulations (which describes the minimum requirements for such a report), particularly to allow the location of the equipment and the relevant dutyholder or person responsible for it to be clearly identified.

366 After completing the thorough examination the competent person should formally report their findings in writing to the person controlling the use of the equipment and also, where appropriate, the person from whom the equipment has been hired or leased.

367 The words 'as soon as practicable' are intended to ensure that there is no unnecessary delay between the thorough examination being carried out and the employer receiving the report. It would not be reasonable to expect all reports to be completed within the same time period; this depends on the complexity of the lifting equipment being thoroughly examined.

368 The report should contain at least the information detailed in Schedule 1 of LOLER and can be provided in writing or electronically but it must be in a form which is usable to the employer in fulfilling their duties to act on the information it contains.

369 If you are responsible for contracting the competent person to carry out a thorough examination under regulation 9 you should ensure that there are clear lines of communication between yourself, the competent person and the person in control of the equipment where this is not you. You should ensure the competent person knows who they should provide the regulation 10 report to. You should provide all the information that the competent person will need to be able to properly carry out the thorough examination.

370 You should agree with the competent person what, if any, additional data (not included in Schedule 1) needs to be included in the report (for example to make identification of the equipment easier), whether the report should be copied to others, or whether there should be specific methods of communication where defects present an imminent risk of injury etc.

371 Similar provisions for data sharing and reporting may be helpful between dutyholders, people in charge of equipment and maintenance or service companies.

Regulation 11 Keeping of information

Summary

Regulation 11 describes the need to retain documentation relating to thorough examinations, and declarations of conformity, and the periods of such retention.

Regulation 11

- (1) *Where, after the coming into force of these Regulations, an employer obtaining lifting equipment to which these Regulations apply receives an EC declaration of conformity relating to it, he shall keep the declaration for so long as he operates the lifting equipment.*
- (2) *The employer shall ensure that the information contained in –*
- (a) *every report made to him under regulation 10(1)(b) is kept available for inspection –*
- (i) *in the case of a thorough examination under paragraph (1) of regulation 9 of lifting equipment other than an accessory for lifting, until he ceases to use the lifting equipment;*
 - (ii) *in the case of a thorough examination under paragraph (1) of regulation 9 of an accessory for lifting, for two years after the report is made;*
 - (iii) *in the case of a thorough examination under paragraph (2) of regulation 9, until he ceases to use the lifting equipment at the place it was installed or assembled;*
 - (iv) *in the case of a thorough examination under paragraph (3) of regulation 9, until the next report is made under that paragraph or the expiration of two years, whichever is later;*
- (b) *every record made under regulation 10(2) is kept available until the next such record is made.*

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Guidance 11

372 Reports of thorough examinations and other documents (such as a Declaration of Conformity and the current record of inspection) should be readily available to inspectors from the relevant enforcing authority should they request to see them.

373 This information should be kept in hard copy form or stored electronically. If a computer system is used to keep this information then it should be protected from unauthorised alteration. The system should be able to provide a written copy when necessary.

374 The information, or copies, should normally be stored at the premises where the lifting equipment is being used. However, in circumstances where this not possible, due to space constraints or for security reasons, then it can be stored elsewhere provided that it is readily accessible and its location is known to the person in control of the equipment.

375 Reports and records can be kept for longer periods if the information they contain assists in identifying repeated defects or indicating trends, eg of wear or damage. Periodic review of this information should be part of the management arrangements for controlling the lifting equipment.

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Regulation 12 Exemptions for the armed forces

Summary

Regulation 12 allows for an exemption from these Regulations for the armed forces where it is in the 'interests of national security'.

Regulation 12

LOLER

(1) *The Secretary of State for Defence may, in the interests of national security, by a certificate in writing exempt any of the home forces, any visiting force or any headquarters from any of the requirements of these Regulations and any such exemption may be granted subject to conditions and to a limit of time and may be revoked by the said Secretary of State by a certificate in writing at any time.*

(2) *In this regulation –*

- (a) *“the home forces” has the same meaning as in section 12(1) of the Visiting Forces Act 1952;*
- (b) *“headquarters” has the same meaning as in article 3(2) of the Visiting Forces and International Headquarters (Application of Law) Order 1965;*
- (c) *“visiting force” has the same meaning as it does for the purposes of any provision of Part I of the Visiting Forces Act 1952.*

Regulation 13

[Regulation 13 revoked by SI 2013/448.]

Summary

Regulations 14–17 detail the effects these Regulations have on other legislation.

Regulation 14 Amendment of the Docks Regulations 1988

Regulation 14 LOLER

[The Docks Regulations were revoked by SI 2013/1512.]

Regulation 15 Repeal of Provisions of the Factories Act 1961

Regulation 15 LOLER

Sections 22, 23 and 25 to 27 of the Factories Act 1961 are repealed.

Regulation 16 Repeal of Section 85 of the Mines and Quarries Act 1954

Regulation 16 LOLER

Section 85 of the Mines and Quarries Act 1954 is repealed.

Regulation 17 Revocations of instruments

Regulation 17 LOLER

The instruments specified in column 1 of Schedule 2 are hereby revoked to the extent specified in column 3 of that Schedule.

Schedule 1 Information to be contained in a report of a thorough examination

Summary

Schedule 1 details the minimum amount of information that must appear in a thorough examination report, produced by a competent person.

Schedule

1

Regulation 10(1)

(1) *The name and address of the employer for whom the thorough examination was made.*

(2) *The address of the premises at which the thorough examination was made.*

(3) *Particulars sufficient to identify the equipment including where known its date of manufacture.*

(4) *The date of the last thorough examination.*

(5) *The safe working load of the lifting equipment or (where its safe working load depends on the configuration of the lifting equipment) its safe working load for the last configuration in which it was thoroughly examined.*

(6) *In relation to the first thorough examination of lifting equipment after installation or after assembly at a new site or in a new location –*

(a) *that it is such thorough examination;*

(b) *(if such be the case) that it has been installed correctly and would be safe to operate.*

(7) *In relation to a thorough examination of lifting equipment other than a thorough examination to which paragraph 6 relates –*

(a) *whether it is a thorough examination –*

(i) *within an interval of 6 months under regulation 9(3)(a)(i);*

(ii) *within an interval of 12 months under regulation 9(3)(a)(ii);*

(iii) *in accordance with an examination scheme under regulation 9(3)(a)(iii); or*

(iv) *after the occurrence of exceptional circumstances under regulation 9(3)(a)(iv);*

(b) *(if such be the case) that the lifting equipment would be safe to operate.*

LOLER

Schedule 1

LOLER

- (8) *In relation to every thorough examination of lifting equipment –*
- (a) *identification of any part found to have a defect which is or could become a danger to persons, and a description of the defect;*
 - (b) *particulars of any repair, renewal or alteration required to remedy a defect found to be a danger to persons;*
 - (c) *in the case of a defect which is not yet but could become a danger to persons –*
 - (i) *the time by which it could become such a danger;*
 - (ii) *particulars of any repair, renewal or alteration required to remedy it;*
 - (d) *the latest date by which the next thorough examination must be carried out;*
 - (e) *where the thorough examination included testing, particulars of any test;*
 - (f) *the date of the thorough examination.*
- (9) *The name, address and qualifications of the person making the report; that he is self-employed or, if employed, the name and address of his employer.*
- (10) *The name and address of a person signing or authenticating the report on behalf of its author.*
- (11) *The date of the report.*

Schedule 2 Revocation of instruments

Schedule

2

Regulation 17

| (1) | (2) | (3) |
|--|--------------|------------------------|
| Title | Reference | Extent of revocation |
| The Quarries (General) Regulations 1956 | SI 1956/1780 | Regulations 13 and 14. |
| The Quarries (Ropeways and Vehicles) Regulations 1958 | SI 1958/2110 | The whole Regulations. |
| The Shipbuilding (Particulars of Annealing) Order 1961 | SI 1961/117 | The whole order. |
| The Shipbuilding (Lifting Appliances, etc, Forms) Order 1961 | SI 1961/431 | The whole order. |
| The Construction (Lifting Operations) Regulations 1961 | SI 1961/1581 | The whole Regulations. |
| The Construction (Lifting Operations) Reports Order 1962 | SI 1962/225 | The whole order. |
| The Construction (Lifting Operations) Prescribed Particulars Order 1962 | SI 1962/226 | The whole order. |
| The Hoists Exemption Order 1962 | SI 1962/715 | The whole order. |
| The Hoists Exemption (Amendment) Order 1967 | SI 1967/759 | The whole order. |
| The Offices, Shops and Railway Premises (Hoists and Lifts) Regulations 1968 | SI 1968/849 | The whole Regulations. |
| The Offshore Installations (Operational Safety, Health and Welfare) Regulations 1976 | SI 1976/1019 | The whole Regulations. |

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Schedule 2

LOLER

| (1) | (2) | (3) |
|--|--------------|------------------------|
| Title | Reference | Extent of revocation |
| The Hoists and Lifts (Metrication) Regulations 1983 | SI 1983/1579 | The whole Regulations. |
| The Construction (Metrication) Regulations 1984 | SI 1984/1593 | The whole Regulations. |
| The Health and Safety (Miscellaneous Modifications) Regulations 1989 | SI 1989/1141 | The whole Regulations. |
| The Lifting Plant and Equipment (Records of Test and Examination etc) Regulations 1992 | SI 1992/195 | The whole Regulations. |

Appendix: Notice of Approval

By virtue of section 16(4) of the Health and Safety at Work Act 1974, and with the consent of the Secretary of State for Work and Pensions, the Health and Safety Executive has on 3 December 2014 approved the revised Code of Practice entitled *Safe use of lifting equipment* (Second edition, 2014 L113).

The revised Code of Practice gives practical guidance with respect to the requirements of the Lifting Operations and Lifting Equipment Regulations 1998, the Management of Health and Safety at Work Regulations 1999 and the Provision and Use of Work Equipment Regulations 1998. The Code of Practice comes into effect on 19 December 2014.

This revised edition replaces the previous edition entitled *Safe use of lifting equipment* (First edition) which came into effect on 4 December 1998.

Signed

TERESA QUINN
Secretary to the Board of the Health and Safety Executive

17 December 2014

Glossary

Many of the terms used in the ACOP are defined within regulation 2 of the Regulations.

accessory any piece of lifting equipment which is used to attach a load to lifting machinery, eg slings and chains.

ACOP Approved Code of Practice.

AUWED Amending Directive to the Use of Work Equipment Directive (AUWED 95/63/EC).

competent person a person with appropriate practical and theoretical knowledge and experience of:

- **regulation 9** – the lifting equipment to enable them to carry out a thorough examination to identify defects or weaknesses and how these are likely to impact on the equipment to ensure the safe operation and continued use of the lifting equipment; or
- **regulation 8** – the lifting operations that will allow them to plan the lifting operation and where necessary conduct the lifting operation in a safe way.

Further guidance on competence and competent person can be found at www.hse.gov.uk/competence/what-is-competence.htm.

(EC) Declaration of Conformity a declaration that complies with relevant parts of the Supply of Machinery (Safety) Regulations 2008, Council Directive 89/686/EEC relating to personal protective equipment or the Lifts Regulations 1997.

derating adjusting the safe working load to take account of the circumstances or conditions in which lifting equipment is used, eg when lifting a large surface load in windy conditions.

dutyholder the person responsible for the lifting equipment. Usually this is the employer or self-employed person. It is not necessarily always the employer; it may be a building owner, person in charge of the equipment or a hire company.

HSW Act the Health and Safety at Work Act etc 1974.

hydrogen embrittlement the action of hydrogen on some classes of steel that can weaken it, making it more likely to fail.

imperforate without holes so that things cannot become trapped, eg fingers, equipment etc.

installed equipment lifting equipment that is fixed either permanently or which needs to be assembled at a site for use.

LOLER the Lifting Operations and Lifting Equipment Regulations 1998.

MEWP mobile elevating work platform.

mobile equipment lifting equipment that can be moved either under its own power (forklift trucks) or by the operator (patient hoists).

owner the person who owns the equipment who has a duty to ensure it is safe for use and is likely to have responsibilities for its maintenance and thorough examination.

operator the person who uses the equipment in the lifting operation, eg driver of a forklift truck, nurse raising a patient in a hoist.

PUWER the Provision and Use of Work Equipment Regulations 1998.

risk assessment to manage the health and safety risks in your workplace you need to think about what, in your business, might cause harm to people and decide whether you are doing enough to prevent that harm. This is known as a risk assessment. Once you have identified the risks, you need to decide how to control them and put the appropriate measures in place.

SWL (safe working load) the maximum weight that can be lifted. It can be affected by the type of the load, the conditions of the lift (eg windy weather may mean the SWL would need to be reduced) or the configuration of the equipment where it can be set up in different ways.

thorough examination a formal examination required under the provisions of regulation 9, carried out in specific circumstances and periodically depending on the equipment and the type of load.

thorough examination report a report required under regulation 10 detailing the findings of the thorough examination. This must contain at least the information identified in Schedule 1 to the Regulations.

undertaking the employer's business.

work equipment equipment provided for work purposes or for people while at work.

young person a person under 18. Young people may be subject to increased risk due to age, lack of experience and lack of knowledge/training.

References and further reading

References

- 1 *Safe use of work equipment. Provision and Use of Work Equipment Regulations 1998. Approved Code of Practice and guidance L22* (Fourth edition) HSE Books 2014 ISBN 978 0 7176 6619 5 www.hse.gov.uk/pubns/books/l22.htm
- 2 *Risk assessment: A brief guide to controlling risks in the workplace* Leaflet INDG163(rev4) HSE Books 2014 www.hse.gov.uk/pubns/indg163.htm
- 3 *Working at height: A brief guide* Leaflet INDG401(rev2) HSE Books 2014 www.hse.gov.uk/pubns/indg401.htm
- 4 *Consulting employees on health and safety: A brief guide to the law* Leaflet INDG232(rev2) HSE Books 2013 www.hse.gov.uk/pubns/indg232.htm
- 5 *Manual handling. Manual Handling Operations Regulations 1992 (as amended). Guidance on Regulations L23* (Third edition) HSE Books 2004 ISBN 978 0 7176 2823 0 www.hse.gov.uk/pubns/books/l23.htm
- 6 *Workplace health, safety and welfare. Workplace (Health, Safety and Welfare) Regulations 1992. Approved Code of Practice and guidance L24* (Second edition) HSE Books 2013 ISBN 978 0 7176 6583 9 www.hse.gov.uk/pubns/books/l24.htm
- 7 *Technical guidance on the safe use of lifting equipment offshore* HSG221 (Second edition) HSE Books 2007 ISBN 978 0 7176 6229 6 www.hse.gov.uk/pubns/books/hsg221.htm
- 8 Memorandum of Understanding (MOU) between the Health and Safety Executive, the Maritime and Coastguard Agency and the Marine Accident Investigation Branch for health and safety activities etc at the water margin and offshore www.hse.gov.uk/aboutus/howwework/framework/mou/mcamou.pdf
- 9 BS 7121 Series *Code of practice for safe use of cranes* (there are several within the series tackling various types and standards of crane) British Standards Institution
- 10 *How the Lifting Operations and Lifting Equipment Regulations apply to health and social care* Health Services Information Sheet HSIS4(rev1) HSE Books 2012 www.hse.gov.uk/pubns/hsis4.htm
- 11 *Rider-operated lift trucks: Operator training and safe use. Approved Code of Practice and guidance L117* (Third edition) HSE Books 2013 ISBN 978 0 7176 6441 2 www.hse.gov.uk/pubns/books/l117.htm
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- 13 *Control of substances hazardous to health (COSHH). The Control of Substances Hazardous to Health Regulations 2002 (as amended). Approved Code of Practice and guidance L5* (Sixth edition) HSE Books 2013
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- 15 BS EN 14439:2006+A2:2009 *Cranes. Safety. Tower cranes* British Standards Institution
- 16 *Health and safety in motor vehicle repair and associated industries* HSG261
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- 17 *Pallet safety* Plant and Machinery Guidance Note PM15 HSE Books 2014
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Guidance Note PM28 HSE Books 2013 www.hse.gov.uk/pubns/pm28.htm
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- 20 *Getting to grips with hoisting people* Health Services Information Sheet HSIS3
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- 21 *Shafts and winding in mines. Mines (Shafts and Winding) Regulations 1993. Approved Code of Practice L42* HSE Books 1993 ISBN 978 0 1188 2164 3
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- 23 BS 6736:1986 *Code of practice for hand signalling for use in agricultural operations* British Standards Institution
- 24 *Avoiding danger from overhead power lines* General Guidance Note GS6
(Fourth edition) HSE 2013 www.hse.gov.uk/pubns/g6.htm
- 25 *Safe work in confined spaces. Confined Spaces Regulations 1997. Approved Code of Practice, Regulations and guidance L101* (Third edition) HSE Books 2014
ISBN 978 0 7176 6622 5 www.hse.gov.uk/pubns/books/l101.htm

Further reading

Lifting equipment at work: A brief guide Leaflet INDG290(rev1) HSE Books 2013
www.hse.gov.uk/pubns/indg290.htm

Thorough examination and testing of lifts: Simple guidance for lift owners Leaflet
INDG339(rev1) HSE Books 2008 www.hse.gov.uk/pubns/indg339.htm

Thorough examination of lifting equipment: A simple guide for employers Leaflet
INDG422 HSE Books 2008 www.hse.gov.uk/pubns/indg422.htm

A step by step guide to COSHH assessment HSG97 (Second edition) HSE Books
2004 ISBN 978 0 7176 2785 1 www.hse.gov.uk/pubns/books/hsg97.htm

A guide to workplace transport safety HSG136 (Third edition) HSE 2014
www.hse.gov.uk/pubns/books/hsg136.htm

Managing for health and safety HSG65 (Third edition) HSE Books 2013
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The Merchant Shipping and Fishing Vessels (Lifting Operations and Lifting Equipment) Regulations 2006 Marine Guidance Note MGN 332 (M+F)
www.gov.uk/government/uploads/system/uploads/attachment_data/file/282220/mgn332a.pdf

Further information

For information about health and safety, or to report inconsistencies or inaccuracies in this guidance, visit www.hse.gov.uk/. You can view HSE guidance online and order priced publications from the website. HSE priced publications are also available from bookshops.

This ACOP is available online at www.hse.gov.uk/pubns/books/l113.htm

British Standards can be obtained in PDF or hard copy formats from BSI: <http://shop.bsigroup.com> or by contacting BSI Customer Services for hard copies only Tel: 0845 086 9001 email: cservices@bsigroup.com.

The Stationery Office publications are available from The Stationery Office, PO Box 29, Norwich NR3 1GN Tel: 0870 600 5522 Fax: 0870 600 5533 email: customer.services@tso.co.uk Website: www.tsoshop.co.uk. (They are also available from bookshops.) Statutory Instruments can be viewed free of charge at www.legislation.gov.uk where you can also search for changes to legislation.