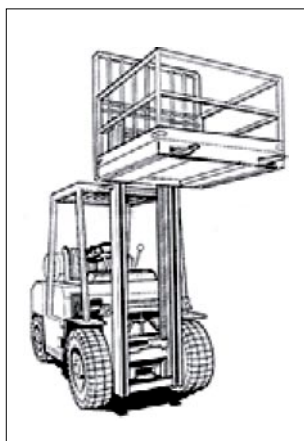


Working platforms (non-integrated) on forklift trucks

Guidance Note PM28 (Fourth edition)



This guidance is for users, suppliers and hirers of non-integrated working platforms.

There are restrictions on the circumstances in which non-integrated working platforms can be used. Also, non-integrated working platforms do not come under the Machinery Directive and should not be CE marked.

There is a variety of equipment available for work at height, including scaffolding, tower scaffolds, mobile elevating work platforms (MEWPs), staircases, platforms and portable ladders. The selection and use of an appropriate and suitable method of access will depend on the nature of the task to be carried out, the frequency of occurrence, the duration of the work and the availability of equipment.

Forklift trucks are primarily intended for lifting materials and not people. However, they can be used with working platforms to allow people to work at height in exceptional circumstances only. This guidance explains when this may be appropriate.

The guidance also provides advice on identifying appropriate working platforms and forklift truck combinations, how they can be used safely together and necessary design characteristics for working platforms for their safe use.

Contents

Introduction 2

Part 1 Guidance 4

Selecting a suitable truck 4

Use 5

Design 7

Permissioning control working platforms 10

Very narrow aisle (VNA) trucks 11

Part 2 The law 11

Health and Safety at Work etc Act 1974 11

Supply of new equipment 11

Provision and Use of Work Equipment Regulations 1998 (as amended) 12

Lifting Operations and Lifting Equipment Regulations 1998 (as amended) 12

Work at Height Regulations (WAHR) 13

References and further reading 14

Further information 15

Introduction

1 There is a variety of equipment available for work at height, including scaffolding, tower scaffolds, mobile elevating working platforms (MEWPs), staircases, platforms and portable ladders. The selection and use of an appropriate and suitable method of access will depend on the nature of the task to be carried out, the frequency of occurrence, the duration of the work and the availability of equipment.

2 In many workplaces people need temporary access to work at height, particularly for maintenance activities. Working at height is a high-risk activity and the planning, selection and use of a safe means of access and working area is important. This guidance helps users and suppliers to meet their legal duties by providing advice on identifying appropriate working platform and forklift truck combinations, how they can be used safely together and necessary design characteristics for working platforms for their safe use.

3 Primarily, forklift trucks are intended for lifting materials and not people. However, they can be used with working platforms to allow people to work at height. It is generally accepted that, in conjunction with a forklift truck, an integrated working platform (paragraph 8) provides a higher level of safety than a non-integrated type (paragraphs 7 and 9). Nevertheless, a non-integrated working platform may be used when it provides a safer means of access than, for example, improvised stairs or platforms or a ladder that would otherwise be used and it is impracticable to use an integrated working platform.

4 Examples of forklift trucks fitted with platforms are given in Figures 1–3.



Figure 1 Counterbalance truck with non-integrated working platform

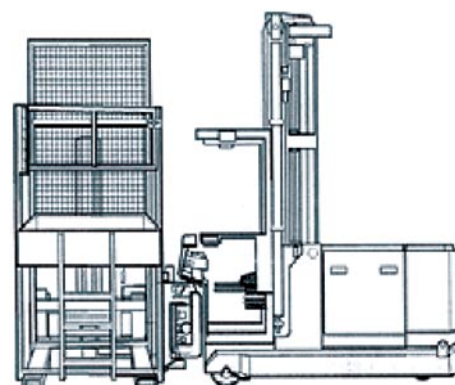


Figure 2 Very narrow aisle (VNA) truck with permissioning control working platform

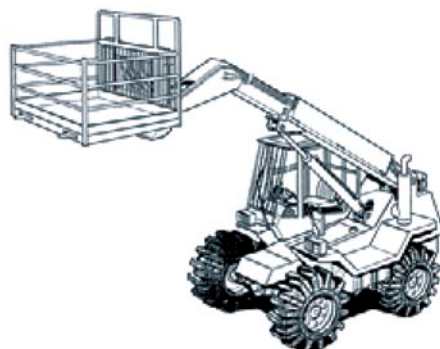


Figure 3 Variable reach truck with non-integrated working platform

5 Integrated working platforms on forklift trucks, MEWPs, working platforms with independent movement (ie variable configurations) and working platforms on tractor front-end loaders are not covered by this guidance.

Definitions

6 **'Purpose-built access equipment'** means equipment that, by design, is intended to be used by people to allow them to work at height.

7 **'Non-integrated working platforms'** are attachments for use in conjunction with forklift trucks to elevate people so they can work at height, but they have no controls in the platform that allow someone in the platform to control the platform lift height or move the truck; ie all truck and working platform movements are controlled by the truck operator.

8 **'Integrated working platforms'** are attachments with controls that are linked to and isolate the truck controls so that only someone in the platform can control the platform lift height and truck movements.

9 **'Permissioning control working platforms'** are non-integrated working platforms with hold-to-run controls that link to and nullify the truck lift/lower and traction controls until the controls in the platform are actuated by someone in the platform; ie adjusting platform height or truck movement can only occur by the truck operator operating the truck controls when the platform controls are held by an operator in the platform.

10 **'Actual capacity (masted trucks)'** – the maximum weight the truck can lift to maximum lift height and specified load centre as marked on the truck's capacity/rating plate.

11 **'Actual capacity (variable reach trucks (telehandlers))'** – the maximum weight, at the specified load centre, that can be lifted to the maximum lift height or to the maximum forward reach, whichever is the lower.

Occasional use

12 Regulation 7(2)(b) of the Work at Height Regulations 2005¹ places a duty on employers to select the most suitable work equipment for the task to be carried out regardless of the duration of the task. Nevertheless, it is foreseeable (but unacceptable) that people will often use unsafe methods of access to work at height for short duration and occasional tasks. For example, a substantial number of serious accidents occur when people are lifted on the forks or buckets, pallets or stillages placed on the forks of forklift trucks. To encourage safer working practices, in these exceptional circumstances, occasional use of non-integrated working platforms with forklift trucks is allowed in the UK in accordance with this guidance. This occasional use is allowed in the UK but may not be allowed in some other EU member states. As such, there is **no** free movement of non-integrated working platforms throughout the EU and they **must not** be CE marked.

13 Examples of occasional use are:

- non-routine maintenance tasks for which it is impractical to hire in purpose-built access equipment;
- the replacement of light fittings in high-rise warehouses if the task is not carried out as part of periodic maintenance operations;

- tasks that would otherwise be carried out using less safe means of access such as ladders, because it is impractical to hire in purpose-designed people-lifting equipment due to the short duration and occasional nature of the task, eg clearing a blocked gutter;
- checking on high-level damage to racking suspected of causing an immediate risk or checking on the condition of damaged roof lights.

14 Routine or planned tasks, particularly those associated with production or pre-planned activities such as periodic maintenance or stocktaking, are not exceptional circumstances and are therefore not examples of occasional use. Generally, non-integrated work platforms do not provide as high a level of safety as purpose-built access equipment. Consequently, forklift trucks fitted with non-integrated working platforms are not suitable for order picking, routine maintenance or the transfer of goods or people from one level to another.

15 The design safety of industrial trucks is covered by European standards² that apply to specific truck types intended for materials handling. The design of MEWPs for lifting people is covered by BS EN 280.³ Consequently, truck/integrated working platform combinations that comply with both industrial truck and MEWP standards or equivalent give a higher level of safety than non-integrated platforms and are not restricted to use in exceptional circumstances.

Part 1 Guidance

Selecting a suitable truck

Truck/platform compatibility

16 It is essential that the working platform is compatible with the truck on which it is used. Before any combination is used for the first time the working platform and truck manufacturer/supplier must be consulted. It is particularly important to ensure that:

- the truck/working platform combination has adequate stability under all circumstances in which it is intended to be used;
- the platform can be securely attached to the truck;
- people on the platform cannot reach hazardous moving parts or controls on the truck.

17 The weight of the platform together with its load of people, tools, materials etc should be not more than half of the actual capacity of the truck (ie actual capacity for materials handling) with which it is intended to be used at the rated load centre distance, maximum lift height and maximum outreach in the case of telehandlers and reach trucks. The actual capacity is the capacity of the truck when equipped with any specified attachments, such as side shift and, when carrying out maintenance work, any items or parts placed in the platform add to the overall weight on it. For very narrow aisle (VNA) trucks with elevated operator position and secondary load elevating mechanism, the maximum lift height should be the maximum lift height of the truck with the auxiliary mast fully raised.

Method of securing

18 The user must ensure that, in accordance with the platform and truck manufacturer's recommendations, the platform is positively locked onto the truck with which it is to be used (paragraphs 44 and 48).

19 If the platform is fork mounted then the fork arms on the truck must preferably extend fully into the fork pockets. If this is not possible, they must extend to a distance of at least 75% of the platform length measured parallel to the axes of the fork arms.

Preventing access to moving parts

20 After fitting the working platform to the truck, the user must ensure that the screens or guards on the platform provide adequate protection for people being carried to prevent the risk of trapping and/or crushing by the mechanisms on the truck. The screens or guards must provide adequate separation distances (see paragraph 41).

Use

Identification

21 The user should attach a sign to the working platform identifying the specific trucks on which it can be used before the platform is used. Take account of any attachments on the truck when identifying the trucks with which the working platform may be used. Working platforms should not be used on trucks that are not identified on the sign.

Securing the platform to the truck

22 Pre-use checks must be carried out by an authorised person to ensure that the working platform is properly located and secured to the truck each time and before it is used.

Tilting mechanism, side shift and variable geometry attachments

23 Attachments and the following functions must not be capable of movement while the working platform is elevated:

- tilt or side shift;
- chassis or mast levelling;
- reach (reach trucks).

Truck operator

24 The truck operator must remain at the controls of the truck while the platform is in an elevated position.

Truck operation

25 The truck/working platform combination should only be used on firm, well-maintained and level surfaces. Gradients and uneven or inconsistent ground conditions can affect truck stability.

26 For all trucks covered by this guidance (except VNA trucks fitted with an elevated operator position and automatic speed limitation and that are operating within VNA aisles):

- the truck should not be moved while the working platform is elevated; however, minor controlled positional adjustments are acceptable if they are necessary to allow the task to be carried out safely;
- the parking brake must be applied whenever the working platform is elevated;
- where applicable, the transmission must be placed in neutral before elevating the platform.

27 If the truck/working platform combination is rated for use with the truck stabilisers and/or axle locking deployed then they must be deployed before the platform is elevated.

Communication

28 There must be adequate communication between the truck operator and people on the platform especially when raising and lowering. Hand-held communication devices or a system of signals should be used where communication is difficult. If a working platform is lifted to a height greater than 4 m above the truck operator or the working platform is used in a noisy environment then it is likely that communication aids will be required. Extra consideration should be given to using a permissioning control platform, integrated working platform or a MEWP in these circumstances.

29 When using hand signals an agreed system should be used and all involved trained in its proper use. An example of commonly used hand signals is given in BS 7121-1:2006.⁴

30 When using hand-held communication devices, take account of any foreseeable hazards due to electromagnetic compatibility.

People on the working platform

31 It is not appropriate for people to stand on the guardrails. In addition, it is advisable not to lean out of the platform when it is raised and, so far as is reasonably practicable, the platform should be positioned to prevent the need for people to lean out when carrying out their work. If people have to lean out of the platform to carry out work at height then they should wear harness and lanyards that are linked to the platform's harness anchorage points to prevent them from overbalancing and falling over the rails.

32 Special precautions may be necessary to ensure that people in the platform are not endangered by hazards such as live electrical conductors, overhead travelling cranes etc. If people have to lean out of the platform to carry out work, or there is a risk of falling out of the platform, they should use a personal work restraint system attached to an anchor point on the platform (see paragraph 52). This typically consists of wearing a full body harness, with lanyard (with or without energy absorber) of a length, or adjusted to a length and attached to an anchor point, to prevent the user from getting into a position from which they might fall.

33 Overhead protection is likely to be needed if the platform is being used where there are risks from falling objects or other overhead hazards.

Training

34 People expected to work on platforms and the truck operators must be aware of the restricted uses given in paragraphs 13 and 14. They must be properly trained and given full instructions on safe systems of working with platforms, including what to do in the event of an emergency and the dangers associated with leaning out of the working platform.

Segregation of work

35 The working area below the work at height must be segregated from the normal work activity. People and vehicles must be prevented from approaching the work at height activity. This may be achieved by the use of warning cones, lights, barriers or signs as appropriate. Where necessary other adjacent operations or activities may have to be stopped.

Maintenance

36 The platform must be used and maintained in good working order and repair and in accordance with the instructions provided by the working platform manufacturer.

Exclusions from use

37 Non-integrated working platforms are not suitable for use on:

- trucks that require manual sequencing of the lift/tilt controls to maintain the working platform horizontal while being lifted;
- trucks with masts that can give erratic movement, eg due to sequencing problems during lowering;
- trucks that have an actual capacity (paragraphs 10 and 11) of less than 1000 kg unless their stability has been verified by testing or calculation verified by empirical data (paragraph 38). (Note: Some truck types with an actual capacity of less than 1000 kg may be suitable for use with working platforms but the truck manufacturer must be consulted to ensure the stability of the truck/platform combination);
- variable reach trucks (telehandlers) that can lift to a nominal height greater than 6 m. (Note: The use of non-integrated platforms on rough terrain variable reach trucks requires extra care because of the rough terrain environment in which these machines are normally used and the nature of the pneumatic tyres fitted);
- pallet stackers with wrap-over type forks.

Design

Stability of the truck/working platform combination

38 Adequate stability of trucks not excluded under paragraph 37 can be achieved by meeting paragraphs 17 and 54. If stability is not achieved in accordance with these paragraphs then the stability of the truck/working platform combination should be verified by calculation and/or testing or equivalent means.

Protection from moving parts

39 Screens or guards should be fitted to the working platform to separate people carried from any trapping, crushing or shearing points on the truck lifting mechanism or any other dangerous parts; eg where a chain passes over a pulley or between moving parts of the mast or its actuating mechanism.

40 To cater for people leaning on them, the screens and guards must be capable of withstanding, without permanent deformation, vertical and horizontal forces of 900 N applied individually and concentrated at any point. Greater strength would be required if the screens and guards can be subjected to higher forces in use or if the separation distances referred to in paragraph 41 are compromised when the 900 N forces are applied.

41 The screens and guards must be of sufficient dimensions to prevent people from reaching through, over and around them into hazardous parts on the truck. The adequacy of the screens and guards may be assessed for particular trucks with reference to the separation (reach) distances given in BS EN ISO 13857:2008.⁵ Adequate information should be provided with the working platform to allow users to assess which trucks the working platform may be used with and to provide instructions on how to check that adequate separation distances are provided.

Truck controls

42 The truck controls should **not** be capable of being reached from the non-integrated working platform. Appropriate separation (reach) distances to ensure that controls cannot be reached are given in BS EN ISO 13857:2008.

Fork-mounted platforms

43 Platforms for use on the fork arms of a truck must have fork pockets on their underside that will accommodate the fork arms spaced at the widest practicable distance apart without excessive clearance between the pockets and forks.

44 A positive locking device, eg behind the heels of the fork arms, must be included on the platform to retain it on the truck when in use. Any loose components associated with the locking device should be secured to the platform so that they cannot be mislaid when the platform is not in use.

45 The fork pockets must fully enclose the fork arm along the full length of the platform and they should be fully enclosed along their underside.

46 The working platform manufacturer/supplier must provide instructions to allow the platform to be fitted and properly secured.

Carriage-mounted platforms

47 Information should be supplied with the platform to adequately identify the types of carriages to which it can be fitted.

48 Where a working platform is designed for direct attachment on a truck carriage conforming to ISO 2328,⁶ ie with the fork arms removed, the attachment points must conform to the requirements of ISO 2328.

49 If quick-release bottom hooks are used they must be designed so they cannot become detached during operation and are retained by the platform to prevent them from becoming mislaid when it is not in use.

50 The working platform manufacturer/supplier must provide instructions to allow the platform to be fitted and properly secured.

Locating points

51 The locating (ie pickup) points on carriage mounted and fork arm mounted working platforms must be symmetrical about the centre line of the working platform.

Safety harness anchorage

52 An anchor point, or points, to attach a personal work restraint system (see paragraph 32) should be included on the working platform. BS 8437⁷ recommends for a single person, that the minimum breaking strength of the anchor should be equivalent to at least three times the users' body mass in the direction load will be applied in use. The anchor point should be marked as a work restraint anchor to deter its use for fall arrest purposes.

Dimensions

53 The platform dimensions should be as small as possible, compatible with the number of people that it is intended to carry and the work they are likely to undertake.

54 The platform dimension parallel to the fork arms, ie forward length of the platform, must not exceed two times the rated load centre distance of the truck. The width of the platform must not exceed the outside width over the truck load wheels by more than 250 mm either side.

Floor

55 The platform floor must be of adequate strength, horizontal when attached to the truck in its elevated position, slip resistant and designed to prevent the accumulation of liquid. Any openings in mesh floors or between the floor and toe-

guards or access gates must be dimensioned so as to prevent a sphere of 15 mm diameter passing through.

56 At any point the floor must be capable of supporting a mass of 125 kg applied over any area of 0.16 m² without permanent deformation and be capable of supporting, without permanent deformation, a uniform pressure of 1500 N/m² over the whole area.

Rails and toe boards

57 All platform edges must be guarded by:

- a top rail, the upper surface being between 1000 mm and 1100 mm from the platform floor;
- a toe-board, having a minimum height of 150 mm;
- at least one intermediate rail, equally spaced between the top of the toe board and the underside of the top rail. Other equally effective means of guarding between the top rail and floor, such as infilling with robust wire mesh, panelling and/or safety glazing may be used.

58 To ensure that the rails have adequate strength, they need to be capable of withstanding, without permanent deformation, horizontal and vertical forces of 900 N concentrated at the points of least resistance. If the platform is intended to carry more than one person at a time the same applies, but the forces must be 500 N multiplied by the number of people that the platform is intended to carry; ie for a platform intended to carry three people the forces would be 1500 N. Any infill also needs to be capable of withstanding, without permanent deformation, horizontal forces of 900 N concentrated at any point on its surface.

Gate

59 Any gate provided must open inwards, upwards or sideways and return automatically to the closed position. It is strongly recommended that a device is provided that locks the gate automatically and ensures it cannot be opened once the platform is raised. If such a device is not fitted then the gate must be self-locking in the closed position.

Handholds

60 Suitably sized and positioned handholds must be fitted within the confines of the working platform. To allow for safe use, eg to allow use with gloved hands, it is recommended that there is a gap of 90 mm between any handhold and the side of the platform.

Visibility

61 It is recommended that the platform is painted in a conspicuous colour.

Warning signs

62 With the exception of working platforms intended for use on VNA trucks, referred to in paragraph 26, a permanent notice must be fitted to the platform in a position where the fork truck operator can read it from their normal operating position when the platform is lowered stating, 'Before elevating the platform apply the parking brake and ensure the transmission is in neutral' or equivalent.

63 A sign must be provided on the working platform, where it can be read, informing the truck operator to stay at the truck controls while the platform is in a raised position.

Identification plate

64 An identification plate must be attached to the platform giving the following information:

- name and address of the platform manufacturer or authorised representative;
- serial number and year of manufacture;
- unladen weight of the platform and the position of the centre of gravity;
- lost load centre (if the platform is carriage mounted);
- maximum allowable load in kg;
- maximum number of people that the platform is intended to carry.

***Additional information to be provided by the platform manufacturer/
supplier***

65 Information must be supplied with the platform to allow the user to identify appropriate trucks that can be safely used with it.

66 Information must be supplied with the working platform to inform users that when a side shift attachment or tilt mechanism is provided on the truck, to which the working platform is attached, the side shift must be locked in mid-position and the tilt mechanism locked so that the floor of the platform is horizontal when in use. This may be achieved, for example, by fitting a device that disables the controls to the mechanism or by mechanically locking the controls so that they cannot be inadvertently operated. Additional information must be provided stating that the working platform must not be used on trucks with other moveable attachments unless the attachment is locked by a mechanical device or other means that will fail to safety when the working platform is elevated.

67 Maintenance information should be supplied with the platform to provide for its ongoing safety in use.

Permissioning control working platforms

68 Permissioning control working platform/truck combinations (paragraph 9) provide increased safety compared with non-integrated working platforms. There is no standard means of integrating the operating systems of a working platform with a forklift truck. Consequently, providing permissioning controls requires modifications to a designated truck taking account of the truck manufacturer's advice.

69 The control device must be:

- positioned for safe operation without hesitation and loss of time, and without ambiguity;
- located outside the danger zones and positioned so that its operation cannot cause additional risk;
- made to withstand foreseeable strain;
- designed so that constraints caused by personal protective equipment such as gloves are taken into account.

70 The function of the permissioning control must be clearly and durably marked with graphic symbols in accordance with BS ISO 3287⁸ and each symbol must be fixed on or close to the control to which it applies.

71 The instructions for use supplied with the working platform must include a description of the function and location of all controls as fitted to the platform.

72 A prominent warning sign must be attached to the platform to indicate that the permissioning control must be connected and tested for function before the platform is used.

Very narrow aisle (VNA) trucks

73 Only permissioning control working platforms (paragraph 9) must be used on VNA trucks.

74 VNA trucks with elevated operator position may only travel with the platform in the elevated position within the VNA aisles in which they normally work (see paragraph 26). Any auxiliary mast must be in the fully lowered position when travelling.

75 The dimensions of the platform must not reduce the working clearances of the truck within the aisle.

76 Any rotation and mast traverse systems must be locked in the retracted position when travelling within the aisles in which the truck normally works.

Part 2 The law

Health and Safety at Work etc Act 1974

77 The Health and Safety at Work etc Act 1974 (the HSW Act)⁹ places duties on employers and people who have control of premises to ensure the safety of their employees and others who may be affected by their work activities. A risk assessment of any work at height must be carried out under the Management of Health and Safety at Work Regulations 1999.¹⁰ The assessment must identify the measures needed to comply with all relevant legislation applicable to the intended work at height.

Supply of new equipment

78 Following discussions with the Working Group to the Standing Committee of the Machinery Directive (2006/42/EC) it was agreed by all the Member States that working platforms without controls do not meet the requirements of the Machinery Directive. The Working Group agreed that non-integrated working platforms could only be used under the exception in the Use of Work Equipment Directive (AUWED 89/655/EC amended by 95/63/EC) that allows the use of materials handling equipment not designed to lift people in exceptional circumstances. This means that non-integrated working platforms do not meet the Supply of Machinery (Safety) Regulations 2008,¹¹ that there is no free trade in Europe for non-integrated working platforms and that non-integrated working platforms must not carry a CE mark. Non-integrated working platforms may be supplied in the UK provided that they are for use only in exceptional circumstances and they meet the requirements of section 6 of the HSW Act.

79 Paragraph 78 indicates that non-integrated working platforms must **not** carry a CE mark. Previous versions of this guidance note indicated that a CE mark was required but this is no longer appropriate due to the above decision. Users should be aware, therefore, that there are non-integrated working platforms in existence that carry the CE mark. This mark should be disregarded and should not be taken to mean that the equipment complies with a given standard. Such CE-marked equipment may, or may not, meet the requirements of this fourth edition of PM28.

80 Supply of non-integrated working platforms to other European countries is at the discretion of the other country. Some European countries do not allow the

use of non-integrated working platforms. Further information is available from the relevant enforcing authorities within Europe.

81 Integrated working platforms fall within the remit of the Machinery Directive (2006/42/EC). This means that both integrated working platforms and the trucks must meet the requirements of the Supply of Machinery (Safety) Regulations 2008 and must carry the CE mark. Any integrated working platform and truck combination intended to lift people higher than 3 m will fall within Annex IV of the Directive and must undergo an appropriate conformity assessment procedure involving an independent third-party approved body.

Provision and Use of Work Equipment Regulations 1998 (as amended)

82 The Provision and Use of Work Equipment Regulations 1998 (PUWER)¹² cover the selection, maintenance, general use and training aspects of all work equipment.

83 When deciding to use a non-integrated working platform or an integrated working platform, employers must follow all the relevant requirements of PUWER. The employer must ensure that the following requirements are met:

- the platforms must be suitable for the purpose (integrated working platforms must be CE marked);
- the employer must take notice of the working conditions in which the platforms are to be used and which may have an effect on the use of the platforms;
- the employer must assess any additional risks to their workforce arising from the use of a platform;
- the employer must make sure that the platforms are only used for operations for which they are suitable;
- the platforms and the trucks on which they are to be used must be properly maintained;
- the platforms must only be used by people who have received adequate training.

Lifting Operations and Lifting Equipment Regulations 1998 (as amended)

84 The Lifting Operations and Lifting Equipment Regulations 1998 (LOLER)¹³ deal with the actual lifting operation being carried out as opposed to the selection etc of the equipment.

85 LOLER (regulation 8) requires that lifting operations are properly planned and that work is carried out in a safe manner. For example, there must be a pre-use check of the platform when fitted to the truck and consideration given to factors such as overturning risks.

86 LOLER (regulation 9) requires lifting equipment for lifting people, which includes trucks and working platforms used to lift people, to be thoroughly examined by a competent person at least once every six months or in accordance with an examination scheme. The competent person must be familiar with the proper fitting of platforms to trucks, taking account of the platform manufacturer's recommendations, and be capable of making judgements on the integrity of the platform. They must also know how to identify defects or weaknesses which could affect the safe use of the platform on the truck and must follow an appropriate reporting procedure complying with LOLER (regulation 10). They may be an

in-house employee but must be sufficiently independent and impartial to allow objective decisions and recommendations to be made.

87 When using either a non-integrated working platform or an integrated working platform, employers must follow all the relevant requirements of LOLER. The employer must ensure that the following requirements are met:

- the working platform must be of adequate strength for its intended load. Particular attention must be paid to the mounting or fixing points of the working platform to the truck;
- people using the working platform or carrying out any activity from the platform must not be at risk of being crushed, trapped or struck by the structure of the building or by the forklift truck itself. Extra care must be taken where there are overhead electrical cables or overhead travelling cranes. People must not be at risk from falling from the platform;
- the forklift truck must be equipped with devices to prevent uncontrolled descent of the platform as a result of any hydraulic system failure;
- people stranded at height on any platform must not be exposed to danger and must be able to be freed;
- the operator must be able to position the truck and the platform so that the platform and its occupants can be lifted safely without striking any other person and without the platform falling or being released unintentionally;
- the working platform must have its safe working load clearly marked. The forklift truck must have its 'actual minimum load capacity' clearly marked;
- any operation involving the use of the working platform must be properly planned, properly supervised and carried out in a safe manner;
- the control position of the lift truck must be manned at all times during the lifting operation. This may not be necessary where an integrated working platform is being used.

Work at Height Regulations (WAHR)

88 These Regulations came into force in April 2005. They require all work at height to be properly planned and organised and the risks controlled. This includes the selection and use of appropriate work equipment for work at height. The Regulations maintain existing standards with regard to the control of work at height and reiterate the provisions of PUWER and LOLER.

89 Work equipment will continue to be subject to the requirements of LOLER where relevant, for example duties to carry out a thorough examination or to mark equipment with the safe working load etc will still apply. Schedule 2 and 3 of WAHR will apply specifically to non-integrated and integrated working platforms.

90 For more information, see *The Work at Height Regulations 2005: A brief guide*.¹⁴

References and further reading

References

- 1 *The Work at Height Regulations 2005* SI 735/2005 The Stationery Office 2005 www.legislation.co.uk
- 2 Harmonised Standards: http://ec.europa.eu/enterprise/policies/european-standards/harmonised-standards/index_en.htm
- 3 BS EN 280:2001 *Mobile elevating working platforms. Design calculations. Stability criteria. Construction. Safety. Examinations and tests* British Standards Institution
- 4 BS 7121-1:2006 *Code of practice for the safe use of cranes. General*
- 5 BS EN ISO 13857:2008 *Safety of machinery. Safety distances to prevent hazard zones being reached by upper and lower limbs* British Standards Institution
- 6 ISO 2328:2011; *Fork-lift trucks. Hook-on type fork arms and fork arm carriages. Mounting dimensions*
- 7 BS 8437:2005 + A1:2012 *Code of practice for selection, use and maintainance of personal fall protection systems and equipment for use in the workplace* British Standards Institution
- 8 BS ISO 3287:1999 *Powered industrial trucks. Symbols for operator controls and other displays* British Standards Institution
- 9 *Health and Safety at Work etc Act 1974* (c.37) The Stationery Office 1974 www.legislation.gov.uk
- 10 *The Management of Health and Safety at Work Regulations 1999* SI 3242/1999 The Stationery Office 1999 www.legislation.gov.uk
- 11 *The Supply of Machinery (Safety) Regulations 2008* SI 1597/2008 The Stationery Office 2008 www.legislation.co.uk
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- 13 *Safe use of lifting equipment. Lifting Operations and Lifting Equipment Regulations 1998. Approved Code of Practice and guidance L113* HSE Books 1998 ISBN 978 0 7176 1628 2 www.hse.gov.uk/pubns/books/l113.htm
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Further reading

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Safe use of work equipment. Provision and Use of Work Equipment Regulations 1998. Approved Code of Practice and guidance L22 (Third edition) HSE Books 2008 ISBN 978 0 7176 6295 1 www.hse.gov.uk/pubns/books/l22.htm

Safe use of lifting equipment. Lifting Operations and Lifting Equipment Regulations 1998. Approved Code of Practice and guidance L113 HSE Books 1998 ISBN 978 0 7176 1628 2 www.hse.gov.uk/pubns/books/l113.htm

Rider-operated lift trucks: Operator training and safe use. Approved Code of Practice and guidance L117 HSE Books 2013 ISBN 978 0 7176 6441 2 www.hse.gov.uk/pubns/books/l117.htm

Other publications

BS EN 1726-1:1999 *Safety of industrial trucks. Self-propelled trucks up to and including 10 000 kg capacity and industrial tractors with a drawbar pull up to and including 20 000 N. General requirements* British Standards Institution

BS EN 1726-2:2000 *Safety of industrial trucks. Self-propelled trucks up to and including 10 000 kg capacity and industrial tractors with a drawbar pull up to and including 20 000 N. Additional requirements for trucks with elevating operator positions and trucks specifically designed to travel with elevated loads* British Standards Institution

BS EN 1551:1999 *Safety of industrial trucks. Self-propelled trucks over 10 000 kg capacity* British Standards Institution

BS EN 1459:1998 *Safety of industrial trucks. Self-propelled variable reach trucks* British Standards Institution

BS EN 349:1993 *Safety of machinery. Minimum gaps to avoid crushing of parts of the human body* British Standards Institution

BS EN 795:1997 *Protection against falls from a height. Anchor devices, requirements and testing* British Standards Institution

Further information

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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: 020 8996 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/.

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