

G U I D A N C E

STRATEGIC FORUM
FOR CONSTRUCTION

PLANT SAFETY
GROUP

Managing the Safe Condition of Mobile Elevating Work Platforms

A Practical Approach to
Inspection, Maintenance and Thorough Examination of
Mobile Elevating Work Platforms (MEWPs)



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Foreword

Mobile Elevating Work Platforms (MEWPs) are widely used across a broad range of industries to aid safe work at height. To ensure that MEWPs are kept in safe working condition they will require suitable maintenance procedures, backed up with appropriate inspection and thorough examination. This guidance sets out how these procedures can be planned and managed and is clear on who has what responsibilities to do so. It also helps demystify who is responsible for what, when a MEWP is on hire.

The Health and Safety Executive (HSE) was involved with the Strategic Forum for Plant Safety in producing this guidance. HSE endorses the guidance, as it follows a sensible and proportionate approach to managing MEWP health and safety.



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Compliance with this guidance does not give automatic assurance of compliance with legislative requirements. It is the duty holders' responsibility to ensure they comply with the legal requirements relevant to safe work equipment.

Contents

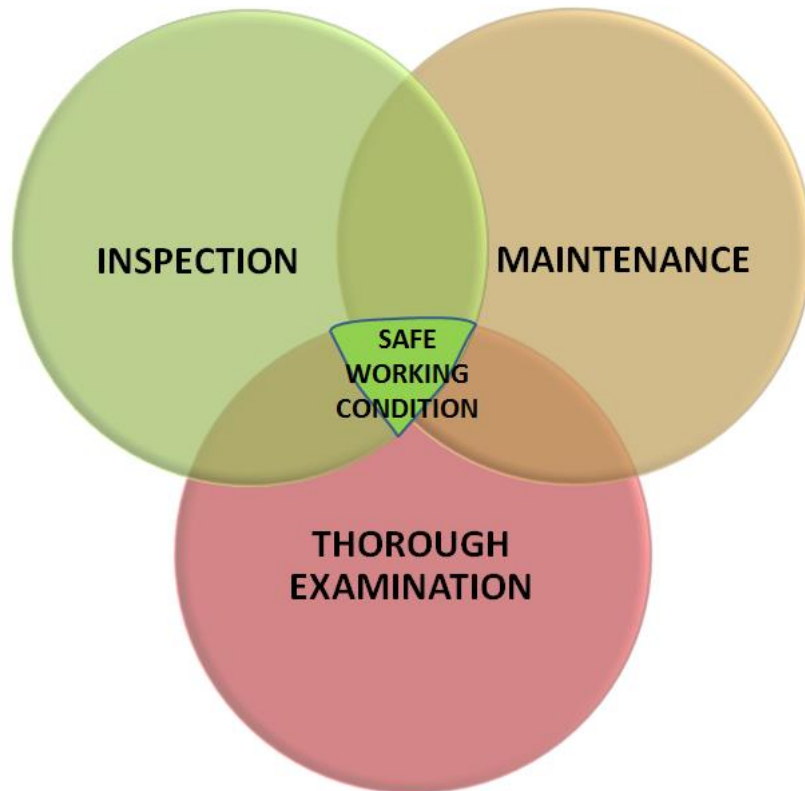
	Page
Foreword	i
Index	ii
1.0 Executive summary	1
2.0 Definitions	3
3.0 Introduction and scope	5
3.1 Responsible parties	5
3.2 Application	6
3.3 Illustrative comparison	6
4.0 A managed approach to MEWP inspection, maintenance and thorough examination	8
5.0 Inspection	9
5.1 Inspection types and responsibilities	9
5.1.1 Pre-delivery inspection – PDI	9
5.1.2 On-delivery inspection	9
5.1.3 Pre-use inspection – also referred to as pre-use check	10
5.1.4 Intermediate/in-service maintenance inspection	10
5.1.5 Post-hire inspection – PHI	10
5.1.6 Inspection due to other circumstances	10
5.2 Documentation used during inspection	11
5.2.1 Use of checklists to assist with inspection	12
5.2.2 Management of defects identified during inspection	12
5.3 Management review of the inspection process	12
6.0 Maintenance	14
6.1 Indications that maintenance may be required	14
6.1.1 Regular pre-use maintenance	14
6.1.2 Response to defects identified during inspections or as a result of a breakdown	14
6.1.3 Regular scheduled maintenance	15
6.1.4 Defects identified on a report of thorough examination	15
6.1.5 Maintenance of the chassis of vehicle mounted MEWPs	15
6.2 Forms of regular scheduled maintenance	15
6.2.1 Planned preventative maintenance - PPM	15
6.2.2 Predictive maintenance	16
6.3 Maintenance management system	16
6.3.1 Defining roles & responsibilities of persons involved in the maintenance activities	16
6.3.2 Maintenance plan/schedule	16
6.3.3 Written maintenance procedures	17
6.3.4 Maintenance records	17
6.3.5 Management review of maintenance records and procedures	17
6.4 Maintenance personnel and competence	18
6.4.1 Training	18
6.4.2 Continuing professional development – CPD	18
6.4.3 Manufacturer technical product training	19
6.4.4 Training records	19
6.5 Maintenance reference documentation	19
6.5.1 Manufacturer’s information	20

6.5.2	Safety alerts and technical updates	20
6.5.3	Telematics data	20
6.5.4	Historical data	20
7.0	Thorough examination	22
7.1	Owner and User responsibility	22
7.1.1	Physical evidence	22
7.2	Thorough examination indicators	22
7.2.1	Initial thorough examination	23
7.2.2	Periodic thorough examination	23
7.2.3	Thorough examination after exceptional circumstances	23
7.2.4	Acquisition of a pre-owned MEWP	24
7.3	Examination schemes	24
7.4	Competent person(s) – selection and assessment	24
7.4.1	Development of competent person(s)	24
7.4.2	Continuing professional development – CPD	25
7.4.3	Selection of a thorough examination provider	25
7.5	Thorough examination bodies	25
7.5.1	Use of external thorough examination bodies	25
7.5.2	In house thorough examinations	25
7.5.3	Thorough examination and maintenance undertaken by the same person	25
7.6	Management of thorough examination	26
7.6.1	Examination of machine records	26
7.6.2	Machine examination	26
7.6.3	Testing the rated load limiting device and overload testing	26
7.7	Report of thorough examination	27
7.7.1	Categorisation of defects	27
7.7.2	Required level of detail	27
7.7.3	Distribution of reports	27
7.7.4	Report completion timescale	28
7.7.5	Inclusion of cleared defects	28
7.7.6	Notification to the enforcing authority	28
7.8	Management review of thorough examination records	28
7.8.1	Review methodology and records	28
Appendix A	Applicable legislation, standards and guidance	I
Appendix B	Relevant machines	III
Appendix C	Example inspection checklists	IV
Appendix D	Schedule 1 to LOLER	VIII
Appendix E	Example MEWP report of thorough examination templates	IX
Appendix F	Working group members	XI

1.0 Executive summary

NOTE: The references shown in brackets refer to the relevant section of the main document, where the individual points are explained in more detail.

This guidance is an essential reference document for all those who have any management or supervisory responsibility for the safe condition of a MEWP. It recognises that it is extremely important for all MEWPs to be kept in safe working condition throughout their working life to ensure continued safe and efficient operation over time (Ref 3.0). There are three elements to ensure they are kept in a safe operating condition: Inspection, Maintenance and Thorough Examination.



All three elements are significantly different, but equally important and interlinked (Ref 3.0). This document lists the triggers for the differing types of inspection, maintenance and thorough examination, summarising each task in a simple tabulated format, identifying what actions are required, by whom, and when.

Thorough examination is important but should not be seen as part of an inspection and maintenance system and not viewed as a substitute for a maintenance programme. It is a check to ensure the inspection and maintenance programmes are suitable and effective (Ref 6.2).

As well as identifying the differing duty holders, each with specific duties (Ref 3.1), the guidance clarifies individual legal responsibilities. It highlights clear duties on the User, even if they do not own the MEWP (Ref 3.1). For the duration of any hire, the User retains a legal responsibility for ensuring that inspection, maintenance and thorough examinations are carried out for any MEWP under their control (Ref 5.1, 6.0 and 7.1).

The guidance explains how MEWP condition and status should be planned, organised, managed, monitored and reviewed in the same way as any other business activity (Ref 4.0). It emphasises the need for proper communication and co-operation, stating that 'an effective management and communication structure is required by the MEWP Owner and User, to ensure that everyone involved in inspection, maintenance and thorough examination is aware of their responsibilities' (Ref 4.0).

The guidance identifies the differing competences that are required to ensure each task is accomplished correctly and effectively. It recognises that the conscious updating of knowledge and the improvement of a person's skill throughout their working life is essential, if they are to maintain competence and an understanding of technical advances (Ref 6.4.2 and 7.4.2).

The document outlines the requirements for selecting and managing providers of thorough examination services, whether they are sourced internally or externally. It identifies a clear requirement that a thorough examination is carried out by competent person (Ref 7.5), who is familiar with the machine to be examined, and sufficiently independent and impartial to allow objective decisions to be made (Ref 7.4). It recognises that the competent person who carries out the thorough examination should not normally be the same person who performs maintenance and repair operations on the equipment, unless appropriate controls are in place (Ref 7.5.3) and that all defects **MUST** be recorded even if they are immediately cleared (Ref 7.7.5). This is to ensure there is sufficient independence between the thorough examination and the maintenance, and accurate machine history records are maintained.

The guidance identifies the reference material which should be available and the essential records to be retained following each inspection, act of maintenance and thorough examination. It details how a regular management review of MEWP inspection, maintenance and thorough examination records and procedures is essential to eliminate possible system failures and ensure the safe condition and safe and efficient operation of the MEWP fleet (Ref 5.3, 6.3.5 and 7.8).

2.0 Definitions

For the purpose of this document, the following terms and definitions apply:

- 2.1 ACoP** – Approved Code of Practice published by the Health and Safety Executive, which gives practical advice on how to comply with relevant sections of the law.
- 2.2 competence** – the combination of training, skills, experience and knowledge that a person has and their ability to apply them to perform a task safely and effectively.
NOTE: The competence required can vary depending on the work or workplace involved. For example, the competence required to undertake a pre-use check of a MEWP can differ significantly from that of the person undertaking repairs and maintenance.
- 2.3 competent individual/personnel** – an individual who is able to recognise the risks in specific operational activities as related to a specific MEWP and then apply the appropriate measures to control and manage those risks, enabling the activity to be performed safely and effectively.
- 2.4 competent person** – reference LOLER Regulation 9 Thorough examination – a person having sufficient professional or technical training, knowledge, actual practical experience of MEWPs, authority, independence and impartiality to enable them to:
- a) carry out their assigned duties at the level of responsibility allocated to them;
 - b) understand any potential hazards related to the work (or equipment) under consideration;
 - c) detect any technical defects or omissions in that work (or equipment), recognise any implications for health and safety caused by those defects or omissions, and be able to specify a remedial action to mitigate those implications;
 - d) make recommendations without fear or favour.
- 2.5 decal** – a picture, transfer or label displaying instructions, safety information or warnings.
- 2.6 EC Declaration of Conformity** – certification, supplied by the manufacturer or agent when first putting machine into service, confirming that the specific machine complies with the Essential Health and Safety Requirements (EHSR) of the Machinery Directive.
- 2.7 defect** – fault, damage or wear, which could lead to a deterioration of the safe condition and integrity of the work equipment.
- 2.8 exceptional circumstances** – situations which are liable to jeopardise the safety and integrity of the work equipment, which may include overload, modifications, major repair, refurbishment, known or suspected serious damage or substantial change in the nature of use of the MEWP.
- 2.9 familiarisation** – the process of a trained operator becoming aware of and understanding the features, functions, devices, limitations, controls and operating characteristics as defined by the manufacturer, in order to safely use and operate a specific model of MEWP.
- 2.10 hire or rental company** - see Owner.
- 2.11 LOLER** – Lifting Operations and Lifting Equipment Regulations 1998.
- 2.12 maximum rated capacity** - maximum load that can be safely lifted by a MEWP at a specified position and under specified conditions.
NOTE: The rated load may also be known as "safe working load (SWL)" or "working load limit".
- 2.13 MEWP** - mobile machine which consists as a minimum of a work platform with controls, an extending structure and a chassis; that is intended for work at height. (Ref appendix B)
- 2.14 modification** - change(s) or addition(s) to a MEWP which might affect the operation, stability, safety factors, rated load, or safety of the MEWP.

2.15 Operator - the person using the MEWP controls.

NOTE: this is not necessarily the same as the User. See 2.18.

2.16 Owner - company, firm or person owning the MEWP including those hiring it out to a User.

2.17 PUWER – Provision and Use of Work Equipment Regulations 1998.

2.18 User - person or organisation that has control of the planning, management and use of the MEWP on site and is responsible for ensuring the machine is kept in a safe working condition. This may include the person responsible for the site, location manager, principal contractor or sub-contractor.

NOTE: this is not necessarily the same as the Operator. See 2.15.

2.19 vehicle mounted MEWP - a MEWP which is driven from, and mounted onto, a vehicle chassis (Ref appendix B).

2.20 work platform - guarded platform which can be moved under load to the required working position and from which erection, repair, inspection or similar work may be carried out. **NOTE:** This may also be referred to as a "cage", "bucket", "basket" or "carrier".

3.0 Introduction and Scope

Mobile Elevating Work Platforms (MEWPs) are frequently used as one of the primary safe means of access to the potentially high risk task of work at height. It is therefore extremely important that all MEWPs are kept in safe working condition throughout their working life to ensure continued safe and efficient operation over time. Failure of a MEWP or any part of it has the potential to involve serious injury to persons and or damage to property.

There are three elements to ensure that MEWPs are kept in a safe operating condition:

- **Inspection** – identification using visual and function checks to show that the MEWP can be operated, adjusted and maintained safely and to identify defects and deterioration;
- **Maintenance** – the process and work of ensuring a machine is kept in a safe state, in efficient working order and in good repair;
- **Thorough examination** – examination which may include tests of a MEWP undertaken by a competent person in such depth and detail, as considered necessary to enable them to determine whether the equipment being examined is safe to be taken into or continue in use, until the next scheduled thorough examination is due.

The above descriptions show all three elements are significantly different, but equally important and interlinked to ensure that any MEWP is kept in a safe working condition, as designed and intended by the manufacturer, irrespective of machine type/classification, use and the environment to which it may be exposed.

NOTE:

This document is restricted to guidance on managing the inspection, maintenance and thorough examination of MEWPs, and is written for application in the UK, within the UK legislative jurisdiction. It does not provide guidance on the requirements of MEWP design, safe use and training. It refers to all groups and types of MEWPs as listed in EN280. A list of applicable legislation, standards and guidance can be found in Appendix A, and description and examples of machines in scope of EN280 in Appendix B.

Tables set out the broad requirements in each section of this guidance however, it is important to read the text supporting those Tables for the detail.

3.1 Responsible parties

Within the inspection, maintenance and thorough examination process, there are differing duty holders, each with specific responsibilities, throughout the whole cycle of the working life of a MEWP. At differing times during that cycle, duty holders such as those listed below will have some degree of responsibility and may be required to interact with other duty holders:

- Manufacturer, Distributor and / or Dealer;
- Owner and / or Rental Company;
- User – person or organisation planning and managing the use of the MEWP;
- Operator – the person using the MEWP controls;
- Thorough examination organisation;
- Service, maintenance and or repair organisation;
- Managers, supervisors, planners and other persons responsible for MEWP selection and use.

In cases where a User has hired a MEWP from an Owner, the Lifting Operation and Lifting Equipment Regulations 1998 (LOLER) state:

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

(b) 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.

Therefore the User has clear duties, even if they do not own the MEWP.

3.2 Application

The information contained within this guidance is relevant to person (s) and/or organisations:


- ✓ owning a MEWP;
- ✓ considering purchasing either a new or pre-owned MEWP;
- ✓ hiring in a MEWP;
- ✓ supplying a MEWP to a third party;
- ✓ supervising managing or controlling the use of a MEWP;
- ✓ using or operating a MEWP;
- ✓ tasked with carrying out inspection, maintenance or thorough examination;
- ✓ wishing to implement inspection, maintenance or thorough examination processes.

3.3 Illustrative comparison

The three elements of ensuring the safe operating condition of a MEWP, as outlined above, are in principle very similar to those required to ensure the safe operating condition of a car or other motor vehicle.

By drawing a simple comparison between a car and a MEWP, Diagram 1 is designed to help the reader understand the significance and differences between the three elements of inspection, maintenance and thorough examination.

Diagram 1 – Comparison of the inspection, maintenance and thorough examination requirements of a motor vehicle and MEWP to ensure they are kept in a safe working condition. This diagram is intended to be an illustration of the difference between inspection, maintenance and thorough examination.

How do you make sure your car is safe to drive?	How do you make sure your MEWP is safe to operate?
Pre-use checks ✓	Pre-use inspection ✓
 <p>The driver performs visual and function checks to identify faults before driving off.</p>	 <p>The operator performs visual and function checks to identify faults before use.</p>
Regular inspection and maintenance (servicing) ✓	In-service inspection and maintenance ✓
 <p>Qualified maintenance staff at the garage do regular inspections and maintenance at intervals outlined by the manufacturer to ensure your car is kept in good condition: in a safe state, in efficient working order and in good repair.</p>	 <p>Qualified maintenance staff appointed by the owner to do regular inspections and maintenance at intervals outlined by the manufacturer to ensure your MEWP is kept in good condition: in a safe state, in efficient working order and in good repair.</p>
MOT ✓	Thorough examination - LOLER ✓
 <p>Impartial - Government approved – competent person conducts detailed tests and checks of your car, in such depth and detail as considered necessary to enable them to determine whether the car being examined is safe to be or continue to be driven on the road.</p>	 <p>Impartial - competent person conducts tests and checks of your MEWP in such depth and detail as considered necessary to enable them to determine whether your MEWP is safe to be taken into or continue in use.</p>

NOTE: For the responsibilities of duty holders refer to Tables 2, 3, and 4 in this guidance

4.0 A managed approach to MEWP inspection, maintenance and thorough examination

MEWP condition and status should be planned, organised, managed, monitored and reviewed in the same way as any other business activity. If not carried out efficiently and effectively, it can have severe safety and financial implications for a business.

Owners and others who supply equipment for use at work, have explicit duties under the Health and Safety at Work (etc.) Act 1974 (Sections 3 and 6), to provide equipment which is safe and without risks to health. In addition, equipment when first supplied in UK must meet the requirement of the Supply of Machinery (Safety) Regulations 2008 (as amended).

Adequate information, usually in the form of User instruction manuals and decals on the machine, is required and where applicable, may be supplemented by safety alerts and technical bulletins. Suppliers must meet these requirements for all types of workplace machinery, whether it is new or pre-owned.

Hence, an effective management and communication structure is required by the MEWP Owner and User, to ensure that everyone involved in the inspection, maintenance and thorough examination activities are aware of their responsibilities (including contractual agreements), are properly briefed on their duties, have appropriate information and that systems are in place to enable effective feedback, including the monitoring and review of data.

If not considered carefully, the three essential and distinctly separate elements of inspection, maintenance and thorough examination can become blurred and indistinct, significantly increasing the risk of machine failure.

Reasons for this may include:

- the inappropriate use of the terms, which leads to confusion as to how the elements differ;
- the confusion/ignorance of the separate roles and responsibilities of individuals and organisations within the full cycle of MEWP use;
- a misinterpretation/failure to acknowledge the differing competencies, skill and experience levels, aptitudes and management procedures required for each of the three essential, but distinctly separate elements.

The effective inspection, maintenance and thorough examination of a MEWP, depends on a significant degree of co-operation between all responsible parties listed in 3.1. Frequently, MEWP Users are unaware of the part they have to play alongside the MEWP manufacturer, Supplier or Owner.

5.0 Inspection

Identification using visual and function checks to show that the MEWP can be operated adjusted and maintained safely and to identify defects and deterioration

The ACoP and guidance on LOLER 9.3.b states that: *“(lifting equipment...) 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”*.

The purpose of MEWP inspections are to identify whether the equipment can be operated, and maintained safely and that any deterioration (for example, defect, damage, wear) can be detected and remedied, before it results in unacceptable risks.

5.1 Inspection types and responsibilities

There are differing types of inspection relevant to MEWPs. Each inspection forms a key function in the ongoing process to ensure a MEWP is in good condition and safe to use, as well as identifying where maintenance may be required. Examples of conditions which can be detected by inspection of the MEWP include but are not limited to:

- (a) general wear and tear;
- (b) rapid wear arising from use in a hostile environment;
- (c) failure through repeated or prolonged or excessive operation;
- (d) malfunction;
- (e) tampering/defeating of safety devices;
- (f) damage caused through misuse or incidents;
- (g) inappropriate modification or repair;
- (h) lack of required information – including operator manual and or defaced decals.

5.1.1 Pre-delivery inspection - PDI

The MEWP Owner should ensure that before any hire/use commences, the MEWP is inspected by competent personnel to confirm it is safe to be put into use or go out on hire and has the requisite information. If the inspection identifies any defects, damage or missing information, these should be recorded and rectified prior to the machine being put into use or going out on hire.

Where the MEWP is new equipment that has yet to be used for the first time and is under an EC Declaration of Conformity, then part of the PDI check will involve a decision as to whether it requires thorough examination before it can be used. See 7.2.1 for further details.

5.1.2 On-delivery inspection

It is recommended that the User should ensure a competent individual inspects the condition and functionality of a MEWP, once it had been delivered to site and offloaded from any transport vehicle, before accepting responsibility for the machine. This inspection is primarily carried out for contractual and commercial reasons, but will help confirm the machine is in a safe working condition and has not been damaged during transportation.

Where the User representative will not be available to accept delivery of the machine, suitable alternative arrangements should be put in place.

5.1.3 Pre-use inspection – also referred to as pre-use check

The User should ensure a pre-use inspection is carried out. The pre-use inspection, which includes function checks, is performed by the individual operator at the beginning of their work shift or working day, prior to using the MEWP, or when taking over operating responsibilities from another operator.

The operator, who should be trained and competent, is responsible for carrying out the pre-use inspection to ensure a safe operating condition. Although not a legal requirement it is best practice to document pre-use inspections.

The User should ensure employees have been trained and are competent to carry out this task and factor time into the operator's daily work schedule for pre-use inspections to be performed.

The operator should also be fully aware of the procedure to be followed if they identify a defect with the MEWP, i.e. isolate the controls, tag the machine as out of service and report the defect to their line manager. (Isolate, Tag and Report), who should then inform the Owner.

NOTE: Maintenance personnel and delivery drivers are deemed to be operators when operating the MEWP controls as part of their daily duties.

5.1.4 Intermediate/in-service maintenance inspection

Regulation 9 (3) (b) of LOLER places a duty on the User of the equipment to ensure that inspections are performed at 'suitable' intervals to maintain a safe operating condition. The User should ensure this type of inspection is carried out at suitable pre-determined intervals (for example weekly, monthly, or quarterly), dependent on the frequency of use and the harshness of the operating environment, determined through risk assessment and taking full account of the manufacturer's recommendations.

The User can arrange for the Owner to carry out this inspection by prior agreement or contractual arrangement. The details of such an agreement may be determined as part of a hire agreement. It is also an opportunity for the Owner to monitor deterioration of a frequently failing or suspect component.

It is important that the Owner consults with the User when arranging these inspections to ensure the availability of the machine, provision of a safe work area and sufficient time is allocated for routine inspection and any subsequent repair.

5.1.5 Post-hire inspection - PHI

Performed by a competent individual authorised by the Owner, a PHI is intended to identify any damage/defects that may have occurred during the previous hire period in order that the Owner can notify the previous User and discuss their cause and rectification. This inspection should take place as soon as reasonably practical after the termination of a hire period. The PHI is primarily an inspection carried out for contractual and commercial reasons, but may provide useful information for the overall management of maintaining MEWPs in a safe condition.

Owners may be able to combine post-hire inspection and pre-delivery inspection providing they have appropriate controls in place to ensure the condition of the MEWP does not deteriorate and it is safe when next put into use or sent out on hire.

NOTE: *No machine should transfer from one hire to a second hire without undergoing a pre-delivery inspection.*

5.1.6 Inspection due to other circumstances

Where a MEWP is subjected to exceptional circumstances, liable to jeopardise the safety of the work equipment, the MEWP should be removed from service and subjected to a thorough examination to ensure that it is safe to be returned to service (Ref 7.2.3). Exceptional circumstances may include:

- collision with a structure or another machine;
- use for particularly arduous duties;
- use in severe environmental conditions;
- failure of a structural component;
- overloading;
- overturning;
- modifications not authorised by the Owner.

If the exceptional circumstance involves overturning, or the failure of a load bearing part of a MEWP, then it will be reportable to the relevant enforcing authority under RIDDOR (Reporting of Injuries, Diseases and Dangerous Occurrences Regulations) as a dangerous occurrence. If you are the employer or are in control of premises where this occurs, it is your responsibility to report the incident, see RIDDOR pages on the HSE website for more details www.hse.gov.uk.

In other less serious circumstances, an inspection may be necessary. Circumstances which may result in the need for inspection might include:

- repair work;
- known or suspected damage;
- modification not approved by the original equipment manufacturer;
NOTE: Consideration should be given to re-certification by a notified body. Further guidance can be found in the Strategic Forum Plant Safety Group, Best Practice Guidance for MEWPs - Avoiding Trapping/Crushing Injuries to People in the Platform - Section 6 *Fitting additional devices or equipment on MEWPs*;
- substantial change in the nature of use, e.g. following an extended period of inactivity;
- instruction from the manufacturer.

This type of inspection should be performed by competent individual appointed and approved by the Owner and may identify the need for a thorough examination to be carried out, (Ref 7.2.3).

5.2 Documentation used during inspection

It is important that the findings of all inspections are documented to:

- provide evidence of what type of inspection was conducted, when and by whom;
- record the findings of the inspection, including where no defects are found.

The responsibility for accurately recording an inspection lies with the competent individual conducting it as identified in 5.1.1 to 5.1.6. However, as applicable the Owner or User has a responsibility to confirm the inspection has been completed and appropriate records made (Ref Table 1). Where a defect is found by the User or Operator good practice is that this should be notified to the MEWP Owner.

Table 1 – Responsibility for maintaining records of inspection

Type of inspection	Overall responsibility for records	Where recorded
Pre-delivery	Owner	Owner's machinery file
On delivery	Owner User	Owner's machinery file User records
Pre-use	User	User records
Intermediate - in service maintenance	User	User records

	Owner	Owner's machinery file
Post-hire	Owner	Owner's machinery file
Other circumstances	Owner	Owner's machinery file

When any inspection is carried out it is important that the findings of the inspection are recorded before any rectification is carried out. Failure to do so may mask defects or deterioration and will result in inaccurate machine history records which may mislead identification of any trends.

5.2.1 Use of checklists to assist with inspection

Inspection should be conducted in accordance with a predetermined process, which may include the use of a checklist. The availability of a check list can be extremely useful when carrying out inspections, both as a reminder of the items to be checked, and as a means of recording the findings of the inspection. However, any check list should cross reference the appropriate manufacturer manual(s) to ensure that all necessary items are checked for a specific inspection. Examples of inspection checklists can be found in Appendix C.

Check lists need to add value and should not just be a tick box exercise. They should record meaningful information about the current condition of the MEWP and aid identification of any actions required to ensure its safe operation.

5.2.2 Management of defects identified during inspection

Provision should be made for the person conducting a MEWP inspection to be able to record defects or observations as they are identified.

Such a report should preferably be in a pre-defined and referenced format (either hard copy or electronic), e.g. a company pro-forma or defined inspection sheet, which requests details of defects or observations and supporting information such as type of inspection, date of inspection and machine identification.

All inspection reports, including "no defect" reports, should be forwarded to the MEWP User, or Owner, as identified in Table 1. This person should be sufficiently competent to make an informed decision about any planned response to the report.

Where inspection activities identify excessive, unexpected or unusual wear, defect or failure, of MEWP components or any other circumstance that may affect the safe condition of the machine, this should be reported immediately to a responsible person and the machine taken out of use.

It is important that issues identified during inspections are classified and rectified before they affect the safety of persons. It is helpful to categorise issues as follows:

- issues affecting the safety of persons that are to be remedied before the machine is re-used;
- issues that are to be remedied within a specified period of time;
- issues to be monitored;
- issues which may affect inspection, maintenance regimes (Ref. 5.3).

Once the issue has been responded to and rectified, this should be recorded with supporting information, referenced to the relevant inspection report. These records must be made accessible for management review purposes, as part of the thorough examination process and on demand to authorised bodies.

5.3 Management review of the inspection process

A regular management review of MEWP inspection records and procedures is essential for the safe and efficient operation of a MEWP fleet. It should confirm that differing types of robust inspections are taking

place at regular pre-determined intervals and identify where improvements to the inspection programme can be initiated. The review should:

- determine if inspection regimes and frequencies are appropriate and being performed in accordance with manufacturer requirements;
- confirm that inspections reflect the true condition of the machine at the time and are not just 'tick box' exercises;
- ensure communication with maintenance staff is sufficient to facilitate prompt action where defects and wear have been identified;
- analyse trends to improve maintenance regimes;
- confirm that machines found with safety critical defects were removed from use until these had been rectified and re-inspected.

Table 2– Inspection types and responsibilities

<u>INSPECTION</u> - identification using visual and function checks to show that the MEWP can be operated, adjusted and maintained safely and to identify defects and deterioration.		
<u>This table is a summary and must be read in conjunction with the complete guidance</u>		
Type of inspection	Owner (includes Rental Company)	Users responsibility
Pre-hire/pre-delivery inspection (PDI) Ref 5.1.1	Ensure inspection conducted and findings documented	Verify supplier processes as part of supplier selection
On delivery - acceptance on site Ref 5.1.2	Provide relevant and clear information, including the operator manual and decals. Allow customer to inspect MEWP on delivery	Inspect condition and functionality of MEWP prior to accepting responsibility
Pre-use inspection Ref 5.1.3	Respond to reported defects	User/operator to conduct and record pre-use inspections and report defects
Intermediate/in-service inspection Ref 5.1.4	Respond to contractual requirements with User	Act in accordance with contractual agreements, with Owner, and dependent on changes to frequency of use and environmental conditions in consultation with Owner
Post-hire inspection Ref 5.1.5	Ensure inspection conducted and findings documented. This may be done in conjunction with the next PDI	Report any damage to the Owner
Other circumstances Ref 5.1.6	Upon notification from User, conduct inspection to identify if further examination or repair is required	Report other circumstances affecting the MEWP to the Owner

*** User - person or organisation that has control of the planning, management and use of the MEWP on site and is responsible for ensuring the machine is kept in a safe working condition. This may include the person responsible for the site, principal contractor or sub-contractor. NOTE: this is not necessarily the same as the Operator – see 2.15.**

6.0 Maintenance

The process and work of ensuring a machine is kept in proper condition; in a safe state, in efficient working order and in good repair.

The maintenance of work equipment is a fundamental requirement of the Provision and Use of Work Equipment Regulations 1998 (PUWER) and requires an employer to ensure that MEWPs are maintained in an efficient state, in efficient working order and in good repair.

For the duration of any hire, the User retains a legal responsibility for ensuring that maintenance is carried out, this can be achieved through the management of regular and timely servicing intervals and prompt action to repair wear and damage.

As part of any negotiation prior to agreeing a hire contract, it is essential that the User and Owner identify and agree their individual responsibilities with regards to inspection, maintenance and thorough examination. Any agreement does not relieve the User of their responsibility to ensure that these activities are carried out.

There is a need for Users of MEWPs to allocate sufficient time for routine maintenance, allow for repairs to be carried out in a prompt and timely manner, and at a reasonable time of day.

Unnecessary and avoidable hazards/risks may occur if machinery becomes unreliable and/or develops defects. Effective inspection regimes (Ref 5.1) will allow such defects to be diagnosed early, and enable maintenance (servicing and repairs) to be carried out in a timely manner to manage any risks. However, the act of maintenance needs to be correctly planned and performed safely, as it can be a high-risk activity. Unsafe maintenance can lead to serious or fatal injuries, either during the maintenance process, or to those using incorrectly maintained/repaired equipment.

PUWER not only requires work equipment to be maintained so it remains safe, it also requires the maintenance operation to be carried out safely.

6.1 Indications that maintenance may be required

The requirement for and type of maintenance activity to be performed can be identified from differing sources, at various stages in the cycle of MEWP use. The need to carry out the maintenance activity or informing others that maintenance/repair is required will be dependent on various indications or circumstances.

6.1.1 Regular pre-use maintenance

Regular pre-use maintenance is normally performed by an operator at the beginning or end of an operating shift. Many of the tasks will be required as a result of the pre-use inspection, or be defined in the operator's manual. Tasks may include but not be limited to topping up fluid levels, recharging energy levels, inflating tyres etc.

6.1.2 Response to defects identified during inspections or as a result of a breakdown

Following notification from the relevant person(s), appropriate tasks are normally performed by competent maintenance personnel, authorised by the Owner.

Breakdown or "run-to-failure" maintenance may be perceived as a way of limiting expenditure on maintenance and keeping costs low. However, breakdown maintenance is not an acceptable management approach and will not meet the requirements of PUWER. Any MEWP related failure could present an immediate and unacceptable risk to persons, which can be limited by implementing planned preventative maintenance (Ref 6.2.1).

6.1.3 Regular scheduled maintenance

Regular scheduled maintenance should be performed by competent maintenance personnel authorised by the Owner, or where applicable, a person identified and agreed in conjunction with the User, during hire negotiations. The tasks and frequency of required activities will be identified in the manufacturer's operator and/or service manuals and may also be dependent on frequency of use and operating environment.

6.1.4 Defects identified on a report of thorough examination

Defects identified on a report of thorough examination should be addressed by competent maintenance personnel, authorised by the Owner, who has visibility of the report and is aware of any specified time constraints imposed by the competent person.

6.1.5 Maintenance of the chassis of vehicle mounted MEWPs (Static boom -1b)

Some vehicle mounted MEWPs in excess of 3.5 tonnes GVW are currently exempt from both the commercial vehicle Operators Licensing and Plating & Testing Regulations. However, the Road Vehicles (Construction and Use) Regulations (Reg. 100) require that they should "at all times be in such condition..... that no danger is caused, or is likely to be caused to any person in or on the vehicle or on a road".

All vehicles are subject to the Road Vehicles (Construction and Use) Regulations and also to PUWER and LOLER, thus the general maintenance requirements set out in this section (and the inspection and thorough examination requirements in sections 5 and 7) will still apply.

It is good practice to follow the recommendations set out in the vehicle chassis manufacturer's service manual. These normally set maintenance intervals based on both engine hours run and distance travelled, whereby the first parameter reached determines the need for maintenance.

Failure to maintain the chassis of a vehicle mounted MEWP adequately may put the vehicle driver and other road users at risk.

6.2 Forms of regular scheduled maintenance

It should be noted that a thorough examination is not part of a maintenance system. It should never be viewed as a substitute for a maintenance programme, but as a check to ensure the maintenance programme is suitable and effective.

The two most common types of maintenance management which may be applied are:

6.2.1 Planned preventative maintenance – PPM

PPM systems are risk driven maintenance tasks carried out at intervals that take into consideration manufacturer's information and are based on actual hours of operation, or an interval of time that equates to an average number of operating hours, or number of operational cycles. PPM should include consideration of adverse environmental factors, experience of breakdowns and/or industry average life data for component parts (e.g. mean time to failure - MTTF).

PPM is intended to lower the probability of failures, and reduce the risk to operators and others rather than correcting them after they occur.

If planned maintenance intervals are too great, the reliability/safety of the machine may be compromised and if they are too short, maintenance costs may be unnecessarily high.

Maintenance actions should be carried out as per a planned, periodic, and specific scheduling to keep individual components functioning correctly, and the MEWP, in a safe condition and efficient working order. PPM requires continual monitoring and interrogation of existing inspection, maintenance and

breakdown records to identify components or structures that may fail/are regularly failing, prior to the expected PPM date. This will enable existing PPM scheduled dates to be revised to further increase reliability and safety.

6.2.2 Predictive maintenance

Predictive maintenance is a condition driven preventive maintenance approach. It uses available maintenance records, measurement and signal processing methods to accurately diagnose individual component or machine condition during operation, e.g. oil analysis, monitoring wear tolerances and data logging statistics etc.

It is machine specific management, which requires monitoring of individual MEWPs, and constantly making allowances for varying rates of wear over time, due to differing operating factors such as environment, frequency of use and load spectrum.

This information is used to determine the actual mean time to failure for the individual MEWP and in so doing, achieve the best balance between low maintenance costs and unplanned failures.

6.3 Maintenance management system

The maintenance of MEWPs should be managed in the same way as any other business activity. Current good practice is “Planned Preventive Maintenance” supported by repairs should breakdowns occur. This involves replacing parts and consumables or making necessary adjustments, at pre-set intervals, so that risks do not occur as a result of the deterioration or failure of the equipment. Some elements of predictive maintenance such as oil sampling and use of data logging records are increasingly under consideration for incorporation into the maintenance regime of modern, technically advanced MEWPs.

6.3.1 Defining roles and responsibilities of persons involved in the maintenance activities

An effective management structure is required to ensure that everyone involved in the maintenance activity is aware of their responsibilities, properly briefed on their duties and that systems are in place to enable effective feedback, including the monitoring of maintenance data.

6.3.2 Maintenance plan/schedule

Each MEWP should be maintained at regular intervals to ensure safety and reliability.

The frequency at which tasks such as periodic lubrication, adjustment or replacement of parts, hydraulic oil change, are carried out, should initially be based on the recommendations contained within the manufacturer’s manual(s) for the MEWP. This should generally be taken as the maximum interval between maintenance activities.

Various factors, including the following, may require maintenance to be more frequent:

- usage – high utilisation, “multi-shifting”, frequent loading at or near the maximum rated capacity, excessive road use (for vehicle mounted MEWPs); any of which may accelerate wear of components;
- environment – harsh, corrosive or abrasive environments such as quarrying, marine or industrial sites may accelerate wear/corrosion;
- feedback – information and recommendations contained in existing inspection records, maintenance records and report of thorough examinations may indicate accelerated rates of wear and deterioration.

Once a PPM interval has been determined, it should be recorded with reasoning in the machine history file. Further variation of the recommended PPM interval should also be recorded and justified, each time a change is made.

NOTE: The manufacturer's recommended service interval may be extended in certain circumstances, where good predictive maintenance techniques are followed and data indicates that this is possible. The justification and reasoning for this decision should be recorded.

Good practice would be to communicate this with the manufacturer.

6.3.3 Written maintenance procedures

Information supplied by the MEWP manufacturer will be the main source of procedural instructions and specifications, when carrying out maintenance (See also 6.5). The primary document will be the maintenance manual for the specific MEWP model, supplemented by service bulletins and safety alerts, provided by the manufacturer.

This information should be reinforced by risk assessments, method statements and work instructions provided by the employer of the person carrying out the maintenance. Much maintenance work on MEWPs is of a routine nature and can be covered by generic risk assessments, method statements and work instructions. However, where complex and/or potentially hazardous tasks have to be undertaken, they should be planned thoroughly and a job specific safe system of work put in place.

Such a system of work should be documented and communicated to all members of the maintenance team, undertaking the task.

6.3.4 Maintenance records

A continuous and comprehensive record of all information concerning inspections, maintenance and records of significant events that may have a direct bearing on the safety of the MEWP should be kept by the Owner. This may be in the form of a machine history file, which contains all relevant information. These records should be legible, easily understood and readily retrievable. Documentation providing evidence of the checks, adjustments, replacement of parts, repairs and inspections performed and irregularities or damage concerning the unit's safe use should be available for inspection and interrogation.

The records should also include:

- the date and time of the maintenance activity;
- machine reference number and serial number;
- person carrying out the maintenance;
- location where the maintenance took place.

When a machine is sold, suitable evidence reflecting the maintenance history should be passed on with the machine and made available to a new Owner. These records should be maintained until the machine is permanently removed from service.

6.3.5 Management review of maintenance records and procedures

A regular management review of MEWP maintenance records and procedures is essential for the safe and efficient operation of a MEWP fleet. It ensures that management can be confident that a robust maintenance system is in place and will rapidly highlight any shortcomings and the need for corrective action. It may also identify where inspection regimes need to be reviewed. The management review should include:

- checks that defects are being corrected and closed out appropriately and the maintenance schedule is being completed to plan;
- checks to determine if the regime and frequencies are appropriate and to analyse trends;

- checks to ensure all manufacturer safety and technical bulletins have been addressed in the appropriate time frame and where required feedback given to the relevant manufacturer.

Apart from identifying where maintenance performance can be improved, regular management reviews of MEWP maintenance records should confirm that there is sufficient evidence to demonstrate appropriate maintenance to the Enforcing Authorities, in the event of an incident.

Reviewing maintenance records over time will:

- identify component failure trends;
- provide reliability, breakdown and common damage trends;
- highlight difficulties with repairs.

This information should be fed back to the manufacturers for consideration to improve MEWP design.

6.4 Maintenance personnel and competence

Different types and models of MEWP require significantly different knowledge and skill sets to maintain them correctly. It is essential that the maintenance of MEWPs is always carried out by personnel who have been assessed by their employer as competent and having adequate knowledge, training, skill, experience with supporting documentary evidence and information to carry out the work required.

Where maintenance activities are performed by a contracted in third party, it is still the responsibility of the employer to make adequate checks that maintenance personnel are competent and the work is performed safely.

When specialist activities such as structural repairs, remounting, identifying and rectifying complex defects are being considered, it is recommended that this is done in conjunction with the MEWP manufacturer, who in many cases may also be the best person to undertake such work.

6.4.1 Training

All MEWP maintenance personnel should be trained in a set of basic skills to enable them to work safely and participate effectively in the maintenance process. They should not be required to undertake tasks for which they have not been assessed as being competent.

It is good practice for a training plan to be drawn up for each person carrying out maintenance on MEWPs. This plan should take into account previous experience, qualifications and underpinning knowledge. Persons undergoing initial training should be more closely supervised, and where appropriate be assessed more frequently.

Progress and achievement of a training plan should be monitored at frequent intervals as part of management review.

6.4.2 Continuing professional development - CPD

The conscious updating of knowledge and the improvement of a maintenance person's skill throughout their working life is essential, if they are to maintain competence and an understanding of technical advances. CPD is a joint responsibility between the maintenance person and their employer and should be documented as part of an individual's personal training/development plan. Such records should include details of how ongoing development is being achieved.

Activities considered for CPD could include, but are not limited to:

- specific training towards enhancements/additions to skills;
- familiarisation, coaching and training;
- notification of changes in legislation and working practices;
- updating of product knowledge, attending manufacturer's product courses;
- attendance at seminars and any refresher training courses.

6.4.3 Manufacturer technical product training

Technical product training from the MEWP manufacturer is essential during both basic training and as part of CPD for maintenance personnel. Due to significant differences in design and functionality between MEWP manufacturers and products, it is essential that those carrying out maintenance on MEWPs receive a suitable level of technical training from the MEWP or component manufacturer or other competent trainer. If direct training by the manufacturer is not reasonably practicable, training may be conducted in-house or by a suitable third party training provider. In this case training should be carried out by a competent trainer, who has received appropriate and specific technical training from the manufacturer. In the situation where the manufacturer no longer exists, a careful selection of alternative competent training providers will be required.

6.4.4 Training records

A comprehensive individual training plan and record should be established for all maintenance personnel. This should be updated as training or CPD is undertaken and as a minimum include:

- when and where the training took place;
- the scope and duration of the training;
- training programme and provider;
- the result of any assessment;
- if and when refresher training is required.

6.5 Maintenance reference documentation

The wide variation of designs and the developments in MEWP technology make it essential that all maintenance information is managed effectively to be of maximum benefit to those involved in the maintenance process and minimise risks to safety.

It is for this reason MEWP Owners are strongly recommended to register their ownership with the relevant MEWP manufacturer. This will ensure they receive relevant safety alerts, technical updates and support, directly and in a timely manner.

Maintenance information comes in various formats (including paper, electronic and digital) and from several sources. MEWP Owners should ensure that a robust system is in place to provide maintenance personnel with the relevant information. This should be easily accessible and current to enable them to carry out their duties safely and effectively to pre-defined standards.

It is essential to ensure that updates to manuals, safety alerts and other information are communicated immediately to maintenance personnel and superseded documents removed from circulation.

6.5.1 Manufacturer's information

Information supplied by the MEWP manufacturer should be the main source of instructions and specifications when carrying out maintenance. The primary document will be the maintenance/service manual for the specific MEWP model and serial number.

This information may be in paper or electronic format, on a disc or downloadable from a manufacturer's website. Care should be taken to ensure that the information is current and relevant to the MEWP (model and serial number) on which maintenance is being carried out.

If the required information is not available in the manual or fully understood, the manufacturer should be contacted for information BEFORE the task is undertaken.

If the MEWP manufacturer is no longer in business, a competent engineer who has an appropriate level of knowledge of that MEWP and its structural elements in order to assess and establish suitable maintenance criteria, should be consulted.

6.5.2 Safety alerts and technical updates

Based on equipment manufacturer/User/Owner information, analysis of use or findings from an incident, equipment manufacturers will sometimes issue safety alerts or technical updates. These may contain important safe condition/use/maintenance instructions, which require action/completion within a given time frame. The manufacturer should pass this information to known owners of the equipment. They should also make it freely available to other interested parties on request.

In order to receive safety alerts and technical updates it is strongly recommended that Owners register ownership with the equipment manufacturer and UK supplier. It is essential that Owners have a system in place to ensure:

- safety alerts and technical updates are communicated speedily to those who need to know;
- actions are completed within the specified time frame;
- notification of completion is recorded and notice given to the manufacturer, when requested.

Safety alerts and technical updates may also be important for inspection and thorough examination (Ref 5.1.6 and 7.6.1).

6.5.3 Telematics data

The growing popularity of computerised self-diagnostic systems and telematics incorporated into machine design has increased the range and availability of operational and functional data, accessible for scrutiny when assessing sources of maintenance reference information.

6.5.4 Historical data

The history of the repairs and maintenance carried out on a MEWP or group of MEWPs is often very helpful when trying to diagnose defects and repeated failures. Maintenance personnel should have access to relevant machine history details or where appropriate, be encouraged to contact their manager or supervisor to request such information.

Table 3 - Maintenance tasks and responsibilities

<u>MAINTENANCE</u> - the process and work of ensuring a machine is kept in a safe state, in efficient working order and in good repair.		
<u>This table is a summary and must be read in conjunction with the complete guidance</u>		
Maintenance triggers	Owner (includes Rental Company)	*Users responsibility
Regular pre-use maintenance Ref 6.1.1	Provide information to User on pre-use maintenance tasks – contained in the operator manual	Ensure maintenance is completed in accordance with the operator manual and pre-use inspections
Defects identified during inspections or as a result of a breakdown Ref 6.1.2	Take action in response to reported defects	Take action in response to reported defects, including inform Owner of defects
Regular scheduled maintenance Ref 6.1.3	Respond to contractual requirements to ensure scheduled maintenance is completed in a timely manner	Agree maintenance activities and timings with the Owner, taking into consideration, contractual agreements, frequency of use and operating environment
Defects identified on reports of thorough examination Ref 6.1.4	Rectify defects in required time period	Check for evidence that repairs have been completed within required time period
Telematics Data Ref 6.5.3	Monitor and adjust schedules as necessary based on available data	Monitor and adjust schedules as necessary based on available data and in consultation with Owner
Safety alerts and technical updates Ref 6.5.2	Act in consultation with User, manufacturer or author	Act in consultation with Owner

*** User - person or organisation that has control of the planning, management and use of the MEWP on site and is responsible for ensuring the machine is kept in a safe working condition. This may include the person responsible for the site, principal contractor or sub-contractor. NOTE: this is not necessarily the same as the Operator – see 2.15.**

7.0 Thorough examination

Examination, which may include tests of a MEWP undertaken by a competent person in such depth and detail as considered necessary to enable them to determine whether the equipment being examined is safe to be taken into or continue in use, until the next scheduled thorough examination is due.

Thorough examination is not part of a maintenance regime and should **never** be viewed as a substitute for a maintenance programme. The thorough examination may provide Owners with information, which could be used to determine the effectiveness of the maintenance regime. The evidence of a thorough examination does not diminish the responsibility for any of the inspection/ maintenance requirements.

The legal requirements covering thorough examination are set out in HSE publication L113 - Approved Code of Practice and Guidance to LOLER. It is essential that anyone undertaking thorough examinations of MEWPs, or the management of the thorough examination of MEWPs, obtains and familiarises themselves with L113, which can be downloaded freely from the HSE website www.hse.gov.uk.

7.1 Owner and User responsibility

In the majority of circumstances, the User will be deemed to be the employer operating the MEWP, therefore they carry the legal duty. Hence it is the User's responsibility to ensure that a thorough examination has been carried out for any MEWP under their control (LOLER 9.3.a.i and 9.4.b). This does not diminish the User's responsibility to ensure the MEWP is safe for use.

It is good practice for the Owner to monitor the expiry date of the report of thorough examination and contact the User if it is about to expire to remind them of their legal duties.

The User can arrange by contractual arrangement for the Owner to organise the thorough examination on their behalf, but the User retains the legal responsibility for ensuring that thorough examinations are carried out.

7.1.1 Physical evidence

When equipment is put to use (e.g. at the start of a hire or loan period), the Owner has a responsibility to provide physical evidence of a current thorough examination relevant to the MEWP (LOLER 9.4.a) and the User has a duty to make sure they have received that physical evidence before allowing use (LOLER 9.4.b).

7.2 Thorough examination indicators

Regulation 9 of LOLER states that a thorough examination is required:

- before being put into use for the first time, Ref LOLER Regulation 9.1:
- periodically whilst in service, Ref LOLER Regulation 9.3.a.i and ii:
- after exceptional circumstances have occurred, Ref LOLER Regulation 9.3.a.iv.

When acquiring a MEWP whether new or pre-owned and there is any doubt about:

- the maintenance history;
- previous use;
- exposure to exceptional circumstances;
- the validity of any accompanying paper work;
- any other circumstances that might affect the safe condition of the MEWP.

It is good practice to ensure a thorough examination is undertaken before the machine is put into use.

7.2.1 Initial thorough examination

In the case of new equipment, the initial thorough examination is considered to have been carried out by the manufacturer or supplier and confirmed by the date on the specific EC Declaration of Conformity.

This can last up to 12 months from the date on the EC Declaration of Conformity. However, the important point is the date at which the MEWP is put into service for the first time. The MEWP will require a thorough examination no later than six months from this date, or twelve months after the date on the EC Declaration of Conformity, whichever is the earlier.

For example, if the MEWP is put into service after 3 months then it will require its next thorough examination no later than six months from this date. If, however, it is put into service for the first time at month 10 after the date of the EC Declaration of Conformity then the MEWP will require its next thorough examination after only 2 months.

In cases where purchasers of new MEWPs find that the EC Declaration of Conformity is more than 12 months old prior to it being used for the first time, then an initial thorough examination is required (LOLER 9.1) before the MEWP is put into service. The extent of the thorough examination should reflect the age of the machine, any likely deterioration during storage, the likelihood of failure and the actual risk which could arise from any such failure.

7.2.2 Periodic thorough examination

A MEWP must be thoroughly examined periodically to ensure that it is safe to continue in use. LOLER 9.3.a.i specifies that the maximum statutory interval between thorough examinations for MEWPs is six months.

Thorough examinations may have to be done more frequently than six months, taking into account the intensity of use, environmental factors or any other condition, which could affect the safe condition of the MEWP. The decision to increase the frequency of thorough examinations may be made by the competent person. MEWP Owners and MEWP Users should inform the competent person of the likely conditions of use, as this may influence the frequency of thorough examination.

7.2.3 Thorough examination after exceptional circumstances

Where a MEWP is subjected to exceptional circumstances, liable to jeopardise the safety of the work equipment, the duty for thorough examination in LOLER rests with the User. The MEWP should be removed from service and subjected to a thorough examination to ensure that it is safe to be returned to service.

Where there is a contractual arrangement, the User should notify the Owner when they become aware that a MEWP has been involved or exposed to potentially exceptional circumstances, such as but not limited to:

- collision with a structure or another machine;
- use for particularly arduous duties;
- in severe environmental conditions;
- failure of a structural component;
- overloading;
- overturning;
- modifications not authorised by the Owner.

The User, Owner and competent person should consider the severity of any reported circumstances and determine whether a thorough examination is required before the MEWP is put back into service.

Other potentially exceptional circumstances that may require a thorough examination to be arranged may include, but are not limited to:

- significant modification;
- major repair;
- re-mounting.

NOTE: If the exceptional circumstance involves overturning of a MEWP, or the failure of a load bearing part on a MEWP, then it will be reportable to the relevant enforcing authority under RIDDOR (Reporting of Injuries, Diseases and Dangerous Occurrences Regulations) as a dangerous occurrence. If you are the employer or are in control of the premises where this occurs, it is your responsibility to report the incident – see RIDDOR pages on the HSE website for more details. www.hse.gov.uk.

7.2.4 Acquisition of a pre-owned MEWP

Any company or person selling a MEWP should ensure that:

- it is safe for use;
- it has the appropriate accompanying documentation;
- it has a current report of thorough examination.

Where this is not the case, the seller should make the buyer aware of this before they acquire the machine and the buyer should acknowledge in writing, the responsibility for these duties.

Where a pre-owned MEWP is acquired with a current report of thorough examination in circumstances identified in 7.2 it is good practice, although not an explicit requirement of LOLER, for a new owner to arrange for the MEWP to undergo a thorough examination before being put into use,

7.3 Examination schemes

As an alternative to the maximum interval of six months for periodic thorough examination, LOLER allows a competent person to draw up an examination scheme for an item of lifting equipment such as a MEWP.

Such an examination scheme approach would normally be unsuitable for MEWPs and is outside the scope of this guidance.

7.4 Competent person(s) – selection and assessment

The LOLER ACoP requires all competent persons to have *“such appropriate practical and theoretical knowledge and experience of the lifting equipment to be thoroughly examined as will enable them to detect defects or weaknesses and to assess their importance in relation to the safety and continued use of the lifting equipment”*.

The competent person should have experience on the group and type of MEWP they will be examining, e.g. scissor lift or boom (Ref appendix B) and understand the features and design of the specific MEWP, and where the information can be found.

The competent person should also be aware of any limitation in their own abilities and recognise the need to engage a third party where necessary to provide specialist support or services, e.g. recognising metal fatigue, non-destructive testing (NDT), setting up and operating a particular MEWP, etc.

7.4.1 Development of competent person(s)

Selection of those intended to become competent persons should be done through a formally documented assessment process. The purpose of the assessment, which should include a sufficiently robust technical interview and other elements, is to determine whether or not the interviewee has the general aptitude, professionalism and appropriate level of relevant underpinning knowledge and understanding to perform the intended duties of a competent person undertaking thorough examinations.

Competent persons can also be developed “in-house” by thorough examination bodies. In such cases, the employer should select those candidates with suitable background experience and qualifications, with the appropriate aptitude, professionalism and level of relevant underpinning knowledge and understanding.

The candidate should also undergo a programme of appropriate structured training and development, which will include supervision, mentoring and assessment, prior to being authorised to perform the intended duties of a competent person, undertaking thorough examinations.

7.4.2 Continuing professional development - CPD

The conscious updating of knowledge and the improvement of a competent person’s skill throughout their working life is essential, if they are to maintain competence and an understanding of technical advances. CPD is a joint responsibility between the competent person and their employer and should be documented as part of an individual’s personal training/development plan. Such records should include details of how ongoing development is being achieved. Activities considered for CPD could include, but are not limited to:

- specific training towards enhancements/additions to skills;
- familiarisation and training;
- changes in legislation and working practices;
- updating of product knowledge, attending manufacturer’s product courses;
- attendance at seminars and any refresher training courses.

7.4.3 Selection of a thorough examination provider

Upon request, a thorough examination provider should be able to provide clear and relevant evidence of the competence of those undertaking the examination.

7.5 Thorough Examination bodies

LOLER requires thorough examination to be carried out by competent persons (Ref 7.4.1). It is essential that the competent person is sufficiently independent and impartial to allow objective decisions to be made and is sufficiently familiar with the specific machine to be examined. These factors need to be considered when selecting a body/individual to conduct thorough examinations.

7.5.1 Use of external thorough examination bodies

External bodies are totally independent from Ownership of the equipment to be thoroughly examined. MEWP Owners/Users should select external bodies with respect to the criteria (Ref 7.4). Where identified as necessary, MEWP Owners may be required to provide assistance and familiarisation.

7.5.2 In house thorough examinations

Where thorough examination of MEWPs is being undertaken in-house, it is essential that the competent person should be formally appointed and is 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 be able to demonstrate 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 independently of commercial or other influence which might prejudice safety.

7.5.3 Thorough examination and maintenance undertaken by the same person

The competent person who carries out the thorough examination should not normally be the same person who performs maintenance and repair operations on the equipment, unless appropriate controls are in place. This is to ensure that there is sufficient independence between the thorough examination and the maintenance, and to avoid an individual examining their own work.

In the limited circumstances where the duty holder:

1. has confirmed that there is no viable alternative to thorough examination (such as replacement machine);
2. has considered all the options for conducting a thorough examination;
3. has identified that it is not reasonably practicable to have the thorough examination conducted by an independent competent person;
4. has ensured that the person who is to do this work is suitably qualified and independent to the extent that would be required for another competent person; *and*
5. has recorded how they justified their decision about who should carry out these functions.

Only then, can a thorough examination be undertaken by the same person undertaking the maintenance.

In these circumstances, the thorough examination should be completed and all findings recorded in the report of thorough examination before any maintenance/repair is undertaken (Ref 7.7.5).

7.6 Management of thorough examination

Thorough examination needs to be correctly planned and implemented as it can be a high-risk activity. Thus appropriate precautions must be in place to ensure that it is performed safely. There is a need for Owners and Users of MEWPs to allocate sufficient time for thorough examination to be carried out in a prompt and timely manner, and at a reasonable time of day.

7.6.1 Examination of machine records

All maintenance reference documentation as outlined in 6.5, including previous report of thorough examinations, should be made available for interrogation by the competent person, prior to and during the thorough examination of a specific MEWP. This will assist with the identification of:

- possible trends in component failure, damage etc;
- where and when original structural or safety critical parts have been repaired or replaced.

7.6.2 Machine examination

The scope of the thorough examination will be determined by the competent person, taking into account the manufacturer's recommendations and an examination of all parts and components, which could through deterioration, lead to an unsafe condition.

The MEWP may need to be dis-assembled with paint, grease and corrosion removed from components to perform a complete and thorough examination. It is essential to ensure that all structural components are inspected to identify all issues that require repair or replacement, prior to the machine being put back into service.

It is important to remember that a complete generic thorough examination checklist does not exist; nor is it possible for a person to provide/use such a list. Each thorough examination will be different dependent on machine type, model, frequency and environment of use. The competent person/body will determine the extent and scope of the examination required to enable them to declare that the MEWP is safe for continued use.

7.6.3 Testing the rated load limiting device and overload testing

A functional test of the rated load limiting device should form part of a thorough examination.

Overload testing is different from verifying the function of the rated load limiting device. An overload test would not normally be part of a thorough examination but may on occasions be required by the competent person.

In determining whether an overload test is required or appropriate and the nature of any such test, the competent person/body should take into consideration the following:

- manufacturer's recommendations;
- some manufacturers do not recommend overload tests, except in "exceptional" circumstances, and severely limit the magnitude of the test load that may be applied;
- repeated overloads may have a deteriorating effect on the MEWP structure over time;
- any observed structural failures or component compliance issues;
- cracking should be identified and assessed during thorough examination prior to the overload test;
- inspection bodies such as the engineering insurers do not recommend it, as there is no defined structural or mechanical benefit;
- some insurance companies may not provide coverage for MEWPs that are known to have been significantly overloaded, including overload testing;
- structural failures can be the result of fatigue and such defects may not be highlighted by an overload test.

7.7 Report of thorough examination

LOLER and the ACoP requires that on completion of each examination, the competent person carrying out a thorough examination of a MEWP makes a report of the thorough examination in writing, within 28 days to the employer (User) for whom the thorough examination is being carried out and to the person from whom the MEWP has been hired. The report shall be authenticated by the competent person, or on their behalf, and must contain the information specified in Schedule 1 to LOLER (Ref Appendix D).

On completion, the competent person should make a report of their findings at the time of the thorough examination. This is particularly important where a defect is discovered, which is or could become a danger to persons.

7.7.1 Categorisation of defects

Where defects are found during the thorough examination of a MEWP, the competent person will make a judgement on the severity of the defect and its potential to affect the safety of persons. To assist this process consideration should be given to dividing defects into three categories:

- defects that are or could become an imminent risk of serious personal injury - A defects;
- defects which could affect the safety of persons, that are to be remedied within a specified period of time - B defects;
- observations/recommendations which may require planning for resolution and may be outside the strict scope of the thorough examination - C defects.

7.7.2 Required level of detail

Defects should be reported in a sufficient level of detail to enable the MEWP Owner/User to identify the exact location and nature of the defects, and decide on a course of appropriate action to rectify them. Reports should be clear and readily understood by MEWP Owner/Users. The use of abbreviations should be avoided.

7.7.3 Distribution of reports

LOLER 10.1.b requires that the report of thorough examination shall be made (sent) to the User of the MEWP and also to the Owner. In practice, the person who arranges for the MEWP to be thoroughly examined is the person likely to receive the report. If that is the Owner, then it is necessary for them to

forward a copy to the User. If the User has arranged the thorough examination, then they should forward a copy to the Owner. In certain circumstances (see section 7.7.6), the competent person must also send a copy of the report to the local office of the relevant enforcing authority.

7.7.4 Report completion timescale

Where defects are found during a thorough examination, which are or could become a danger to persons, the competent person must inform both the User and the Owner, so that the MEWP can either be prevented from being put into service, or is taken out of service until the defects have been satisfactorily rectified. This is often accomplished by leaving interim evidence, e.g. hand written or electronic report, warning tag, etc. on site and making contact with the MEWP Owner/User. In the case of an in-house competent person, they should have the authority to take the MEWP out of service immediately. Where the competent person identifies defects which need to be made good within a specified time scale and could become a danger to persons, they should submit the report promptly to allow the MEWP Owner to take the necessary action within the required period. In normal circumstances, the competent person should complete the report of thorough examination and forward it, within a maximum of 28 days.

7.7.5 Inclusion of cleared defects

On occasions the competent person carrying out the thorough examination will be accompanied by the MEWP Owner's maintenance personnel and as defects are discovered, they may be immediately rectified. In this case, all defects **MUST** be recorded even if they are immediately cleared. Failure to record defects is contrary to the requirements of LOLER (Regulation 10).

It will also:

- give a false picture of the condition of the MEWP;
- invalidate both the machine history and the review process;
- potentially mask inadequacies in management systems.

Where the report of thorough examination identifies deficiencies, documented evidence confirming that all such deficiencies have been adequately addressed within the required timescales, should be made available as part of the on-going machine records of inspection and maintenance. Confirmation of completion should also be added to or accompany the relevant report of thorough examination.

7.7.6 Notification to the enforcing authority

Where, in the opinion of the competent person, the thorough examination identifies a defect in the MEWP, which involves an existing or imminent (may happen at any moment or within a reasonably short time of the MEWP being used again) risk of serious personal injury, should anyone attempt to use it, the competent person must send a copy of the report to the local office of the relevant enforcing authority (LOLER 10.1.c).

7.8 Management review of thorough examination records

A regular management review of MEWP thorough examination records is essential for the safe and efficient operation of a MEWP fleet. It ensures that management can be confident that robust inspection, maintenance and thorough examination systems are in place and the MEWP is safe to use. It may also highlight any shortcomings and the need for corrective action. It may be beneficial to include competent persons or the employer of third party competent persons in this process.

7.8.1 Review methodology and records

The review should aim to identify exceptional events such as occurrences of heavy expenditure and reoccurring defects. It should also measure achievement of maintenance activities against target.

It is good practice for records of the management review to be documented, both as evidence that the reviews have been undertaken and to evaluate long term trends.

Table 4 - Thorough examination tasks and responsibilities

THOROUGH EXAMINATION – examination which may include tests of a MEWP undertaken by a competent person in such depth and detail as considered necessary to enable them to determine whether the equipment being examined is safe to be taken into or continue in use until the next scheduled thorough examination is due		
This table is a summary and must be read in conjunction with the complete guidance		
Thorough examination action points	Owner (includes Rental Company)	*User's responsibility
Making available for use, prior to equipment going into service for first time Ref 7.2.1	Obtain a copy of the Manufacturer Declaration of Conformity - check individual machine reference and validity of date	N/A
When MEWP is put in to use – at start of hire or loan period Ref 7.2.2	Provide evidence of valid report of thorough examination with MEWP	Check for evidence of in date report of thorough examination prior to use
During use Ref 7.2.2	Liaise with User – as to whether more frequent thorough examinations may be required due to operational or environmental conditions Liaise with User and take appropriate actions to ensure report of thorough examination does not expire	Liaise with Owner as to frequency of thorough examination dependent on operational or environmental conditions Notify the Owner when a thorough examination is required and make MEWP available for examination Ensure that periodic, thorough examination is carried out
Thorough examination after exceptional circumstances Ref 7.2.3	Remove from service, conduct thorough examination – act on findings	Inform Owner if exceptional circumstances occur and make MEWP available for examination Ensure that thorough examination is carried out
Acquisition of a pre-owned MEWP Ref 7.2.4	Check for evidence of current thorough examination. Where none exists or there is doubt about machine maintenance history or previous use, undertake a thorough examination	Check for evidence of in-date report of thorough examination prior to use

*** User - person or organisation that has control of the planning, management and use of the MEWP on site and is responsible for ensuring the machine is kept in a safe working condition. This may include the person responsible for the site, principal contractor or sub-contractor. NOTE: this is not necessarily the same as the Operator – see 2.15**

Appendix A – Applicable legislation, standards and guidance

Legislation

- i. Health & Safety at Work etc. Act 1974 (HSWA)
www.legislation.gov.uk/ukpga/1974/37
- ii. The Supply of Machinery (Safety) Regulations 2008 (as amended)
www.legislation.gov.uk/uksi/2008/1597/contents/made
- iii. Management of Health and Safety at Work Regulations 1999 SI 1999/3242
www.legislation.gov.uk/uksi/1999/3242/contents/made
- iv. 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
- v. 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
- vi. Reporting of Injuries Diseases and Dangerous Occurrence Regulations 2013
<http://www.legislation.gov.uk/uksi/1995/3163/contents/made>
- vii. Road Vehicles (Construction and Use) Regulations 1986
<http://www.legislation.gov.uk/uksi/1986/1078/contents/made>

Standards

- viii. BS 8460: Safe use of MEWPs. Code of Practice - British Standards Institution
<http://shop.bsigroup.com>
- ix. EN280: 2013 Mobile elevating work platforms - Design calculations - Stability criteria - Construction - Safety - Examinations and tests <http://shop.bsigroup.com>
- x. BS EN ISO IEC 17020: Conformity assessment - Requirements for the operation of various types of bodies performing inspection <http://shop.bsigroup.com>

Guidance

- xi. The selection, management and use of mobile elevating work platforms – GEIS6 - HSE
www.hse.gov.uk/pubns/geis6.htm
- xii. Thorough examination and inspection of particular items of lifting equipment - CRR429 HSE Books 2002 ISBN 978 0 7176 2349 5 www.hse.gov.uk/research/crr.htm/2002/CRR02429.htm
- xiii. Thorough examination of lifting equipment – HSE www.hse.gov.uk/pubns/indg422.pdf
- xiv. Best Practice Guidance for MEWPs: Avoiding Trapping/Crushing Injuries to People in the Platform Construction Plant-hire Association www.cpa.uk.net
- xv. Guidance for major inspections of mobile elevating work platforms – IPAF –

www.ipaf.org/inspections

- xvi. IPAF Guidance for Second Party Inspection Bodies – IPAF – www.ipaf.org/inspections
- xvii. All you need to know about ‘Competent Persons’ and thorough examinations – IPAF www.ipaf.org/cap
- xviii. Familiarisation of MEWPs Technical Guidance Note F1 2007 - IPAF www.ipaf.org

Appendix B - Relevant machines

The harmonised European design standard for MEWPs is EN280. This guidance is relevant to those machines that are in scope of EN280 machine groups and types:

Group A: MEWPs where the vertical projection of the centre of the area of the platform in all platform configurations at the maximum chassis inclination specified by the manufacturer is always inside the tipping lines.

Group B: All other MEWPs.

Relating to travelling, MEWPs are divided into three types:





Type 1: Travelling is only allowed with the MEWP in its transport configuration

Type 2: Travelling with raised work platform is controlled from a point of control at the chassis

Type 3: Travelling with raised work platform is controlled from a point of control at the work platform

The MEWP groups and types above may also be referred to locally by differing names, as shown but not limited to those in the table below:


Table 5 - Identification of MEWP groups and types

 Static vertical	 Static boom	 Mobile vertical	 Mobile boom
Vertical personal platform (VPP)	Van mounted machine	Scissor lift	Telescopic boom
Push around vertical (PAV)	Vehicle mounted machine	Drivable mast platform	Articulated boom
Static mast platform	Trailer towable	Sigma lift	Super boom
	Atrium/spider lifts		Boom lift
Other common names include but are not limited to, cherry picker and powered access platform			

Appendix C – Example inspection checklists

NOTE: Each of the checklists shown should only be taken as a general guide and may need additional items included for specific models of MEWP, which can be found in the relevant manufacturer manuals (Ref 5.2.1).

C.1 Example of a Pre-use check list– source www.ipaf.org/en/publications/inspections/



MEWP PRE-USE INSPECTION CHECKLIST

All checks should be conducted in accordance with the manufacturer's manual

MACHINE: _____

WEEK COMMENCING: _____

		WEEK COMMENCING:							
		MONDAY	TUESDAY	WEDNESDAY	THURSDAY	FRIDAY	SATURDAY	SUNDAY	
FUNCTION CHECKS	1. Current thorough operator manual	✓	✓	✓	✓	✓	✓	✓	
	2. Manufacturer's operator manual	✓	✓	✓	✓	✓	✓	✓	
	3. Rescue plan	✓	✓	✓	✓	✓	✓	✓	
	4. Visual security lights, indicators, signs, damaged, missing	✓	✓	✓	✓	✓	✓	✓	
	5. Tyre pressure (pneumatic, beam fixed or solid)	✓	✓	✓	✓	✓	✓	✓	
	6. Cuts, with, exposed trailing, damaged wire	✓	✓	✓	✓	✓	✓	✓	
	7. Fluid levels (engine oil, coolant, fuel)	✓	✓	✓	✓	✓	✓	✓	
	8. Fluid leakage on ground and around engine	✓	✓	✓	✓	✓	✓	✓	
	9. Battery (electrolyte, security and charging plug condition)	✓	✓	✓	✓	✓	✓	✓	
	10. Hydraulic fluid level	✓	✓	✓	✓	✓	✓	✓	
	11. Leaks (hoses, pipe connections, wires, cylinders)	✓	✓	✓	✓	✓	✓	✓	
	12. Security and condition (locks, chaffing, bulging)	✓	✓	✓	✓	✓	✓	✓	
	13. Power track cable signs (free from damage and debris)	✓	✓	✓	✓	✓	✓	✓	
	14. General condition, attachments, brackets	✓	✓	✓	✓	✓	✓	✓	
	15. Forward motion (general, condition, secure for travel)	✓	✓	✓	✓	✓	✓	✓	
	16. Reverse (backing, engaged)	✓	✓	✓	✓	✓	✓	✓	
	17. General condition (damage, misalignment, corrosion)	✓	✓	✓	✓	✓	✓	✓	
	18. Checks in use	✓	✓	✓	✓	✓	✓	✓	
	VISUAL CHECKS	19. Pins, wires and chains (security, signs of wear)	✓	✓	✓	✓	✓	✓	✓
		20. Catches, guards, engine covers (security and condition)	✓	✓	✓	✓	✓	✓	✓
21. Steps for ascending/descending (secure, undamaged, clear)		✓	✓	✓	✓	✓	✓	✓	
22. Entrances (safe, guard rails and locking pins)		✓	✓	✓	✓	✓	✓	✓	
23. Harness anchor points		✓	✓	✓	✓	✓	✓	✓	
24. Clear of rubbish, debris and obstructions		✓	✓	✓	✓	✓	✓	✓	
25. Oil leaks, safety warning and information (check legend)		✓	✓	✓	✓	✓	✓	✓	
26. Condition (identification tags, directional arrows)		✓	✓	✓	✓	✓	✓	✓	
27. Platform level (PVC, new, wire mesh, new, number of persons)		✓	✓	✓	✓	✓	✓	✓	
28. Security device (power, indicator, locked, secure, clear)		✓	✓	✓	✓	✓	✓	✓	
FUNCTION CHECKS	29. Function inside (direction key, foot switch, hold to run device)	✓	✓	✓	✓	✓	✓	✓	
	30. Emergency stop and emergency lowering system	✓	✓	✓	✓	✓	✓	✓	
	31. All switches, function controls (power, lower, stop, hold to run)	✓	✓	✓	✓	✓	✓	✓	
	32. Lifting function (power, lower, stop, hold to run)	✓	✓	✓	✓	✓	✓	✓	
	33. Travel function (forward, reverse, stop, hold to run)	✓	✓	✓	✓	✓	✓	✓	
	34. Elevated drive speed (indicated or approved)	✓	✓	✓	✓	✓	✓	✓	
	35. Lifting, lowering, working device	✓	✓	✓	✓	✓	✓	✓	
	36. Alarm (oil, thermostat and time)	✓	✓	✓	✓	✓	✓	✓	
	37. Lift function (is a descent, hold, lock, hold to run)	✓	✓	✓	✓	✓	✓	✓	
	38. Platform protection device (fully deployed and locked)	✓	✓	✓	✓	✓	✓	✓	
FUNCTION CHECKS	39. Check safety device (fully deployed and locked)	✓	✓	✓	✓	✓	✓	✓	
	40. Accurate power to platform, entering device	✓	✓	✓	✓	✓	✓	✓	
	41. Locking, switching, outgassing, levelling device	✓	✓	✓	✓	✓	✓	✓	

ALL FAULTS OR DEFECTS (X) TO BE REPORTED IMMEDIATELY TO YOUR SUPERVISOR

Only persons who are trained and authorised by their employer should operate this equipment.

OPERATOR NAME(S) AND PAL CARD NUMBER(S): _____

SUPERVISOR: _____

NOTE: The checklist above should only be taken as a general guide and may need additional items included for specific models of MEWP, which can be found in the relevant manufacturer manuals (Ref 5.2.1).

C.2 Example of an Inspection/Service/Pre-hire check list

INSPECTION/SERVICE/PRE-HIRE CHECK LIST

MACHINE SERIAL NO _____

ADMINISTRATION	PASS	FAIL	
Daily, Weekly, Monthly checks carried out as outlined in the manufacturer's Operating and Safety Manual?			
Machine has valid LOLER Certificate?			
TOWING	PASS	FAIL	N/A
Check brakes are released or...			
Check wheel gearboxes disengage when required			
STABILISERS			
Micro switches secure			
Footpads secure			
Operation of each micro-switch and Maxon			
Operation of stabiliser control valve and buttons			
Operation of each hydraulic stabiliser			
Operation of boom rest micro-switch			
Hydraulic cylinders do not drift when machine is switched off			
Pivot pins and swing bolts secure			
AXLES, WHEELS AND BRAKES			
Axles are secure			
Wheels are secure, tyre condition acceptable			
Wheel alignment and tracking correct			
Tyre pressure correct			
Wheel nut torque correct			
Operation of front and rear steer functions			
Operation of suspension dampers			
Pivot pins and swing bolts secure			
BASE			
Operation of Emergency Stop button			
Operation of Base control valve and buttons			
Operation of all booms over full range			
Platform maintains level over full range			
Hoses not tight, kinked or fouled			
Operation of manual hand pump			
Operation of tilt sensor when driven on slope >10°			
Pivot pins and swing bolts secure			

BOOMS/LINKS	PASS	FAIL	N/A
Inspect for damaged, distorted or loose components			
Wear pads present and secure			
Cylinders are silent and not fouling during operation			
Cylinders do not drift when machine is switched off			
Operation of micro-switches (j) Links (k) Lifting (l) Telescope (m) Flyboom			
Chain inspection - Correctly tensioned, damage etc.			
Energy chain correct and secure over telefunction range			
Bushes (Condition check)			
Pivot pins and swing bolts secure			
PLATFORM			
Operation of Emergency Stop button			
Operation of SLOPS (Refer to Section 4.4.2)			
Operation of control valve and control panel buttons/switches			
Operation of all booms over full range			
Operation of Footswitch			
Platform levelling over full range			
Slewing smooth over full range			
Condition of harness points			
Condition and operation of entry/exit drop gate			
POWER SYSTEM			
Engine - Refer to Pre-Operation and Maintenance sections in engine manufacturers Operating Manual as supplied			
All cables and terminals secure			
All hose connections secure			
Charger/control box secure			
Battery secure			
Electrolyte level and specific gravity			
Hydraulic oil level			
SLEWING			
Slew gearbox and motor are secure			
Slew wheel bolts secured			
Slew guards secure			

FINISH	PASS	FAIL	N/A
Serial plate as per inst documentation			
Check all decals in place and legible			
Canopies in place and secure			
Check all guards are in place and in good condition			
Grease nipples (Tow coupling, Slew ring)			
LEAK CHECK			
Cylinders (Lift, Stabilisers, Telescope, Levelling)			
Control valves			
Check valves			
Power system pump			
Filters			
Hand pump			
Slew motor			
Hydraulic Hose connections and fittings			

Note: Environmental factors and usage amount will affect the type of checks and also the frequency of inspection intervals.

Comments, remedial work required etc:

INSPECTED BY: _____ **DATE:** ____ / ____ / ____

NOTE: The checklist above should only be taken as a general guide and may need additional items included for specific models of MEWP, which can be found in the relevant manufacturer manuals (Ref 5.2.1).

C.3 Example of a Programmed maintenance inspection report

Programmed Maintenance Inspection Report - Booms																																																																																																																																																										
Model	Hour meter	Date																																																																																																																																																								
Serial number	Inspector company	Machine owner																																																																																																																																																								
Inspected by (print)	Inspector signature																																																																																																																																																									
Programmed maintenance will be completed based on machine hours. This program includes the onetime or commissioning procedures for new products. The onetime procedures will be completed at 50 or 150 hours.		Legend Y = yes, acceptable N = no, remove from service R = repaired ☐ = not applicable	Make copies of this report to use for each inspection. Select the appropriate procedures for the type of inspection(s) to perform.																																																																																																																																																							
If any inspection receives an "N," tag and remove the machine from service, repair and re-inspect it. After repair, place a "R" in the box.																																																																																																																																																										
Commissioning	50	150																																																																																																																																																								
50 Hour Service - all models	C-1	☐																																																																																																																																																								
Engines - Ford/Kubota Models	C-2	☐																																																																																																																																																								
150 Hour Service	C-3	☐																																																																																																																																																								
Programmed Maintenance - Under 1000 HRS	Status	Enter Hours																																																																																																																																																								
Check the Track Tension and Fastener Torque - S-60, S-65 and Z-62 Models	P0-1	50																																																																																																																																																								
Check the Track Tension and Fastener Torque - S-40 and S-45 Models	P0-2	50																																																																																																																																																								
Grease the Extendable Axles - (if equipped)	P0-3	50																																																																																																																																																								
Engines - Continental Under 1000 HRS	P0-4																																																																																																																																																									
Engines - Cummins Under 1000 HRS	P0-5																																																																																																																																																									
Engines - Deutz Under 1000 HRS	P0-6																																																																																																																																																									
Engines - Ford Under 1000 HRS	P0-7																																																																																																																																																									
Engines - Kubota Under 1000 HRS	P0-8																																																																																																																																																									
Engines - Perkins Under 1000 HRS	P0-9																																																																																																																																																									
Engines - GM .998L Under 1000 HRS	P0-10																																																																																																																																																									
Engines - GM 3.0L Under 1000 HRS	P0-11																																																																																																																																																									
Programmed Maintenance <table border="1"> <thead> <tr> <th rowspan="2">All models</th> <th rowspan="2">Perform every:</th> <th colspan="7">Hours are in thousands</th> </tr> <tr> <th>1</th> <th>2</th> <th>4</th> <th>6</th> <th>8</th> <th>12</th> </tr> </thead> <tbody> <tr> <td>Engines - all models, 1000 Hours</td> <td>P1-1</td> <td>☐</td> <td>☐</td> <td>☐</td> <td>☐</td> <td>☐</td> <td>☐</td> </tr> <tr> <td>Replace the Drive Hub Oil</td> <td>P1-2</td> <td>☐</td> <td>☐</td> <td>☐</td> <td>☐</td> <td>☐</td> <td>☐</td> </tr> <tr> <td>Engines - all models, 2000 Hours</td> <td>P2-1</td> <td>☐</td> <td>☐</td> <td>☐</td> <td>☐</td> <td>☐</td> <td>☐</td> </tr> <tr> <td>Test or Replace the Hydraulic Oil</td> <td>P2-2</td> <td>☐</td> <td>☐</td> <td>☐</td> <td>☐</td> <td>☐</td> <td>☐</td> </tr> <tr> <td>Replace the Hydraulic Filters</td> <td>P2-3</td> <td>☐</td> <td>☐</td> <td>☐</td> <td>☐</td> <td>☐</td> <td>☐</td> </tr> <tr> <td>Check the Free-wheel Configuration</td> <td>P2-4</td> <td>☐</td> <td>☐</td> <td>☐</td> <td>☐</td> <td>☐</td> <td>☐</td> </tr> <tr> <td>Check the Boom Wear Pads</td> <td>P2-5</td> <td>☐</td> <td>☐</td> <td>☐</td> <td>☐</td> <td>☐</td> <td>☐</td> </tr> <tr> <td>Check the Extendable Axle Wear Pads</td> <td>P2-6</td> <td>☐</td> <td>☐</td> <td>☐</td> <td>☐</td> <td>☐</td> <td>☐</td> </tr> <tr> <td>Check Turntable Gear Backlash - ALC1000 Models</td> <td>P2-7</td> <td>☐</td> <td>☐</td> <td>☐</td> <td>☐</td> <td>☐</td> <td>☐</td> </tr> <tr> <td>Grease Steer Axle Wheel Bearings 2WD Models (except Z-62/S-60/S-65)</td> <td>P2-8</td> <td>☐</td> <td>☐</td> <td>☐</td> <td>☐</td> <td>☐</td> <td>☐</td> </tr> <tr> <td>Grease Steer Axle Wheel Bearings, 2WD Models - Z-62 / S-60 / S-65</td> <td>P2-9</td> <td>☐</td> <td>☐</td> <td>☐</td> <td>☐</td> <td>☐</td> <td>☐</td> </tr> <tr> <td>Engines - all models, 3000 Hours</td> <td>P3-1</td> <td>☐</td> <td>☐</td> <td>☐</td> <td>☐</td> <td>☐</td> <td>☐</td> </tr> <tr> <td>Engines - all models, 4000 Hours</td> <td>P4-1</td> <td>☐</td> <td>☐</td> <td>☐</td> <td>☐</td> <td>☐</td> <td>☐</td> </tr> <tr> <td>Engines - all models, 6000 Hours</td> <td>P6-1</td> <td>☐</td> <td>☐</td> <td>☐</td> <td>☐</td> <td>☐</td> <td>☐</td> </tr> <tr> <td>Engines - all models, 12000 Hours</td> <td>P12-1</td> <td>☐</td> <td>☐</td> <td>☐</td> <td>☐</td> <td>☐</td> <td>☐</td> </tr> <tr> <td>Replace Boom cables - S-100HD and S-120HD</td> <td>P12-2</td> <td>Replace every 7 years</td> <td></td> <td></td> <td></td> <td></td> <td></td> </tr> <tr> <td>Replace Boom cables - S-60 Models, S-60 Models, S-100, S-105, S-120, S-125, SX-150, SX-180</td> <td>P12-3</td> <td>Replace every 10 years</td> <td></td> <td></td> <td></td> <td></td> <td></td> </tr> </tbody> </table>				All models	Perform every:	Hours are in thousands							1	2	4	6	8	12	Engines - all models, 1000 Hours	P1-1	☐	☐	☐	☐	☐	☐	Replace the Drive Hub Oil	P1-2	☐	☐	☐	☐	☐	☐	Engines - all models, 2000 Hours	P2-1	☐	☐	☐	☐	☐	☐	Test or Replace the Hydraulic Oil	P2-2	☐	☐	☐	☐	☐	☐	Replace the Hydraulic Filters	P2-3	☐	☐	☐	☐	☐	☐	Check the Free-wheel Configuration	P2-4	☐	☐	☐	☐	☐	☐	Check the Boom Wear Pads	P2-5	☐	☐	☐	☐	☐	☐	Check the Extendable Axle Wear Pads	P2-6	☐	☐	☐	☐	☐	☐	Check Turntable Gear Backlash - ALC1000 Models	P2-7	☐	☐	☐	☐	☐	☐	Grease Steer Axle Wheel Bearings 2WD Models (except Z-62/S-60/S-65)	P2-8	☐	☐	☐	☐	☐	☐	Grease Steer Axle Wheel Bearings, 2WD Models - Z-62 / S-60 / S-65	P2-9	☐	☐	☐	☐	☐	☐	Engines - all models, 3000 Hours	P3-1	☐	☐	☐	☐	☐	☐	Engines - all models, 4000 Hours	P4-1	☐	☐	☐	☐	☐	☐	Engines - all models, 6000 Hours	P6-1	☐	☐	☐	☐	☐	☐	Engines - all models, 12000 Hours	P12-1	☐	☐	☐	☐	☐	☐	Replace Boom cables - S-100HD and S-120HD	P12-2	Replace every 7 years						Replace Boom cables - S-60 Models, S-60 Models, S-100, S-105, S-120, S-125, SX-150, SX-180	P12-3	Replace every 10 years					
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Scheduled Maintenance Inspection Report - booms			
Model	Hour meter	Date	
Serial number	Inspector company	Machine owner	
Inspected by (print)	Inspector signature		
Inspection Type Q = quarterly or frequent inspections A = annual inspections	Legend Y = yes, acceptable N = no, remove from service R = repaired ☐ = not applicable	Make copies of this report to use for each inspection. Select the appropriate procedures for the type of inspection(s) to perform.	
If any inspection receives an "N," tag and remove the machine from service, repair and re-inspect it. After repair, place a "R" in the box.			
Drive Chassis	Intervals	Q	A
Inspect the Tires, Wheels and Lug Nut Torque	Q-6		
Check the Oscillate Valve Linkage (if equipped)	Q-8		
Confirm the Proper Brake Configuration	Q-20		
Extendable Axle Wear Pads (if equipped)	A-4	☐	
Check Drive Hub Oil Level and Fastener Torque	A-14	☐	
Turntable Mechanicals and Hydraulics	Intervals	Q	A
Visual Inspection of the Hydraulic Oil	Q-9		
Inspect the Hydraulic Filters	Q-10		
Grease the Turntable Rotation Bearing	A-1	☐	
Check Turntable Bearing Bolts	A-2	☐	
Inspect for Turntable Bearing Wear	A-3	☐	
Electrical	Intervals	Q	A
Inspect Electrical Contactors - DC / Bi-Energy Models	Q-4		
Battery Inspection	Q-2		
Inspect the Electrical Wiring	Q-3		
Engine	Intervals	Q	A
Check the Exhaust System	Q-5		
Check Generator Belts/Pulleys - Bi-Energy Models	Q-7		
Check and Adjust Engine RPM	Q-11		
Boom(s) and Platform	Intervals	Q	A
Jib Rotate Bearing (if equipped)	A-5	☐	
Grease the Platform Overload Mechanism	A-7	☐	
Test Platform Overload - All Models, Except ALC1000 and S-60HC Models	A-8	☐	
Test Platform Overload - (ALC1000 models)	A-9	☐	
Test Platform Overload - (S-60 HC models)	A-10	☐	
Inspect Boom Cables - All S-60, S-80 Models	A-11	☐	
Inspect Boom Cables - S-100 to S-125 Models	A-12	☐	
Inspect Boom Cables - SX-150 and SX-180	A-13	☐	
Functions and Controls	Intervals	Q	A
Check for Open Bulletins and Owner Registration	Q-1		
Test the Ground Control Override	Q-12		
Test Alarm Package (If Equipped)	Q-13		
Test the Emergency Power System	Q-14		
Test the Engine Idle Select Operation	Q-15		
Test Fuel Select Operation - Gas/LPG Models	Q-16		
Inspect the Calibration Decal - ALC1000 Models	Q-17		
Test the Recovery System - ALC-1000 Models	Q-18		
Test the Platform Self-leveling	Q-19		
Test the Drive Brakes	Q-21		
Test Drive Speed - Stowed Position	Q-22		
Test Drive Speed - Raised or Extended Position	Q-23		
Test the Drive Speed - Raised and Extended Position - ALC1000 Models	Q-24		
Test the Turntable Level Sensor - Z-135/70, ZX135/70, SX-150 and SX-180	Q-25		
Test the Turntable Boom Angle Sensor - Z-135/70 and ZX135/70	Q-26		
Test the Primary Boom Angle Sensor - Z-135/70 and ZX135/70	Q-27		
Test the Primary Boom Angle Sensor - SX-150 and SX-180	Q-28		
Test the Safety Envelope Limit Switches - Z-135/70, ZX135/70, SX-150 and SX-180	Q-29		
Test the Primary Boom Angle Sensor - Z-80/60	Q-30		
Test the Safety Envelope and Circuits - Z-80/60	Q-31		
Check the Safety Envelope Limit Switches and Angle Sensor - S-60X, S-60XC and S-60	Q-32		
Test the Safety Envelope and Circuits - S-100, S-105, S-120 and S-125	Q-33		
Test the Aircraft Protection System (if equipped)	Q-34		
Test the Operator Protection Alarm (if equipped)	Q-35		
Test the Bypass/Recovery Key Switch	A-6	☐	

NOTE: The checklist above should only be taken as a general guide and may need additional items included for specific models of MEWP, which can be found in the relevant manufacturer manuals (Ref 5.2.1).

Appendix D - Schedule 1 to LOLER.

The Lifting Operations and Lifting Equipment Regulations 1998, Approved Code of Practice and guidance L113 - Schedule 1, details the minimum amount of information that must appear in a report of thorough examination:

- (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.
- (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.

Appendix E - Example MEWP report of thorough examination templates

E.1 Example template for a MEWP report of thorough examination

Mobile Elevating Work Platform

Report of Thorough Examination

(As required by Lifting Operations and Lifting Equipment Regulations 1998 - schedule 1)

Date of thorough examination:	Date of report:	Report No:	Date of last thorough examination:
Name and address of User or person requesting the thorough examination:		Name and address of owner:	
Manufacturer:		MEWP Model type and No:	
Location of equipment:			
Date of manufacture:	Owners No:	Serial No:	
SWL/Rated capacity:			
Periodic examination 6 Monthly: Yes/No		State if any parts were inaccessible:	
Examination following alteration/repair Or exceptional circumstances: Yes/No		Particulars of other tests carried out during this thorough examination:	
Is the equipment safe to operate: Yes/No			
Particulars of any defects, repair, renewal or alteration required which is or could become a danger to persons:		Date (time) by which the defect has to be rectified:	

I hereby declare that the equipment described in this record was thoroughly examined in accordance with the appropriate provisions and was found free from any defect likely to affect safety, (unless otherwise stated above) and that the particulars are correct.

Name of competent person:	signature:	Job title/qualification:
Name of authenticating person:	signature:	Job title:
Address of competent person or his employer:		
The next thorough examination will be due on or before:		

E.2 E.1 Example template for a MEWP report of thorough examination

Report No.

Report Of Thorough Examination

Name & Address of Owner

Location of Examination

Equipment Details

Machine Type

Model

Serial Number

Date of
Manufacture

Safe Working Load

Examination Details

Date of Last Examination

Current Examination Date

Next Examination
Due

Examination Type

Date of Report

Results of Examination

A. Defects that are or could become a danger to persons involving an existing or imminent risk of serious personal injury

B. Defects that are or could become a danger to persons and require rectification before :

C. Comments

Competent Person

Signature

**I hereby confirm that the equipment subject to this report IS/NOT
safe to operate, at the time of completion of this
examination.**

This report is compiled in relation to the Lifting Operations and Lifting Equipment Regulations 1998 - Regulations 9 (4) and 10 (1)

Business Details XXXXXXXXXXXXXXXX

Appendix F – Working Group Members

The Strategic Forum Plant Safety Group (SFPSG) – MEWP Safety Group members who took part in the drafting of this guidance included, in alphabetical order:

Company	Name
AFI	Brian Parker
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Nationwide Platforms	Jonathan Snead
Genie	Lee Vickers
Winvic Construction	Ian Goodhead

IPAF Reference No. IPAFUK-IM&TE1

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