



# FEM

European Materials Handling  
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Product Group /  
**MEWP**  
mobile elevating work platforms



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(2nd Issue)

**Guideline /**

Major Inspections of Mobile  
Elevating Work Platforms

**Leitfaden /**

Hauptinspektionen von Fahrbare  
Hubarbeitsbühnen

**Guide /**

Principales inspections des plates-  
formes de travail élévatrices  
mobiles

## 1.0 Introduction and Scope

Mobile Elevating Work Platforms (MEWPs) are frequently used as one of the primary safe means of temporary working at height. It is therefore extremely important that all MEWPs are kept in safe working condition throughout their working life. 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 safely and to identify defects.
- Maintenance – the process and work of ensuring a MEWP is kept in a safe state.
- Major inspection – this 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 for continue use.

Note, generally the information for the above reference for Inspection and maintenance is provided by the MEWP manufacturer, whereas for major inspection this is driven by regulatory or local requirements.

**1.1** This document is restricted to outlining considerations for when conducting a major inspection to validate structural integrity and functionality of critical components of a mobile elevating work platform (MEWP). Such an inspection may be undertaken to determine if a MEWP still meets the safe design requirements of the original design life. Design life is defined as the duration determined by the manufacturer for which a structure or a structural component may be used for its intended purpose with recommended maintenance.

**1.2** MEWPs are designed and constructed according to criteria defined by national or international standards dependent on which country/continent they are intended to be first put into service. As the benefits and efficiencies of using MEWPs are recognised by more industries and countries throughout the world, the number of MEWP's in service is continually increasing. The growing demand for pre-owned and the retention of MEWP's has led to the use of MEWPs beyond the original design life as defined by the original manufacturer. Contacting the original manufacturer is strongly recommended regarding design life criteria.

It is recognised that there are MEWP's in use which may not have reached their original design life with regards to calendar years, however, may have reached their original design life because of excessive cycling and/or severe operating environment

**1.3** Countries including Australia, Canada and Finland have formally documented a requirement for a “major inspection” in specific circumstances including where a MEWP is to be used beyond its original design life. These local requirements can specify period of time, major inspection within 10 years after having been originally put into service and subsequently every 5 years after that (e.g. 10, 15, 20 years old).

**1.4** Other countries have local Regulations/laws specifying inspections requirements for lifting machinery which include MEWP's, these requirements generally are on a basis of a rolling inspections period (3, 6, 12 months) while the MEWP remains in service.

## **2.0 Scope and frequency of major inspection**

**2.1** To fulfil their legal obligations and ensure MEWPs are maintained in good repair and safe working order, owners should implement regular inspection and maintenance programmes in accordance with local, state or federal regulations, legislation, directives, standards and manufacturer's requirements. These may include:

- Pre-use inspection
- Interim, frequent, or periodic inspections
- Six-monthly or annual inspection/examination by a competent person

**2.2** Dependent on the frequency of use and severity of the operating environment, planned inspections should be carried out at a frequency to enable the MEWP to be kept in a safe and satisfactory condition. The harsher the operating environment, the more frequent the inspection should be.

**2.3** A complete and comprehensive record of all information concerning inspections, maintenance and testing that has a direct bearing on the safety of the MEWP should be documented and kept by the owner. When a machine is sold, any such records 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.

**2.4** A major inspection should be undertaken

- If the service history indicates sustained high usage applications, or use in highly corrosive environments, or
- If service records from the last 5 years of the machine are not available, or
- on change of ownership if service records are not provided or
- on importation into the country, if service records do not accompany the MEWP

**2.5** The major inspection is also intended to assist owners in determining if a MEWP is within safe design and use criteria when they:

- a) Acquire a machine with insufficient service, maintenance history and inspection records, or
- b) Suspect a MEWP to have been exposed to exceptional circumstances which may have affected the structural integrity of critical components, thus jeopardising the safe use

**2.6** The intent of a major inspection is to ensure the continued safe use of the MEWP including past the design life of the machine and for intended use until the next recommended major inspection. The introduction of a major inspection does not remove the requirement of the owner to continue with other inspections at the required intervals as detailed in 2.1 and 2.2.

### **3.0 Entities conducting inspections**

**3.1** The inspection should be performed by a competent person or body. Competency should have been acquired through a combination of training, qualification, and experience, the knowledge and skills enabling that person or body to correctly perform the tasks.

**3.2** Persons/body conducting inspection are advised to periodically update their knowledge to ensure they remain competent and aware of any developments relevant to the inspection and maintenance of MEWP being inspected. These may include but are not limited to:

- Amendments to relevant legislation
- Amendments to relevant standards and best practice
- Improvements in inspection regimes and methods
- Developments in machine technology and design
- Updates of manufacturer service and maintenance requirements
- Safety bulletins or service bulletins

**3.3** In order to record such learning events and demonstrate Continual Professional Development (CPD), the competent person/body should maintain a CPD log which will record but not be limited to the following:

- Date of learning event
- Duration of learning event
- Brief description of format and content of the learning event

**3.4** The competent person/body should be able to demonstrate competency with the applicable type of MEWP under consideration and have familiarity with:

- The specific model of MEWP
- Manufacturer instructions
- The inspection processes required

**3.5** The competent person/body should be aware of any limitation in their 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).

### **4.0 Inspection requirements**

**4.1** Prior to a major inspection taking place, a risk assessment of the workplace and intended operations should be conducted. Consideration should be given to the recommendations provided by the manufacturer in the operating and service manuals as part of the risk assessment process. This will help develop a safe system of work which should be communicated to all involved to ensure the whole inspection will be carried out in a safe manner with minimal risk of injury.

**4.2** It is essential to ensure that all structural components are inspected to identify potential issues requiring repair or replacement prior to the machine being put back into service.

**4.3** Before inspecting the specific MEWP, the competent person/body should review the service and maintenance documentation to identify:

- Possible trends in component failure
- Original structural or critical safety related parts that have been replaced

**4.4** The competent person/body may if allowed by local law reduce the intensity of a major inspection under certain conditions accordingly if they are fully satisfied that the service and maintenance records are sufficient to demonstrate that the MEWP has been and is currently part of a thorough and effective inspection/maintenance regime.

**4.5** A major inspection should involve examination of certain components identified by the manufacturer. To access those components, the MEWP may need to be partially disassembled to perform a complete and thorough inspection.

**4.6** A major inspection should consider but not be limited to:

- i) The safety instructions and manuals for operation and maintenance applicable at the time of inspection
- ii) Controls and emergency stop
- iii) Detailed examination of all wire ropes and chains
- iv) Detailed visual inspection of all structural components
- v) Non-destructive testing of structural components as identified by the manufacturer and other suspect areas for evidence of cracking due to fatigue or excessive stress
- vi) Structural, mechanical, electrical, instrumentation, control and operational anomalies
- vii) Components whose maintenance records indicate repeated failures
- viii) Braking systems
- ix) Work platform levelling systems
- x) Work platform, guardrails and access gate
- xi) Manufacturer's safety upgrades and bulletins
- xii) Secondary and emergency retrieval systems
- xiii) Tolerance checking of wearing components
- xiv) Checks for corrosion and environmental degradation
- xv) Inspection of components which may have been replaced previously
- xvi) The specific safety devices of the MEWP

**4.7** It is important to remember that a complete generic major inspection checklist does not exist, nor is it possible for a person/body to provide/use such a list. The competent person/body can determine the extent of the inspections required which will enable them to declare that the MEWP is safe for continued use.

**4.8** In some regions, MEWPs are required to undergo overload testing. In determining whether an overload test is feasible and the nature of any such test, the competent person/body should take into consideration the following:

- 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 overtime
- Any observed structural failures or component compliance issues
- Cracking should be identified 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 Documentation Management.

**4.9** A continuous working record of the service and maintenance history and a record of significant events concerning the safety of the MEWP should be kept and be readily available for inspection. The records should be legible and easily understandable. 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. In addition, records of routine, interim, frequent and/or periodic inspection reports, and completed three, six-monthly/annual inspection reports should be maintained and made available for examination as required. The records listed above should be transferred together with the ownership of the MEWP.

## **5.0 Report and Recommendations**

**5.1** A major inspection report should be written on completion of each inspection. The report should include:

- Date(s) over which the major inspection took place
- Name and address of owner of machine
- Name of competent person/body and entity conducting the inspection
- Description of inspection including areas inspected, methods used and tests conducted

- Any deficiencies found affecting the safe use of the MEWP
- Any necessary instructions including time limits, to correct and eliminate deficiencies found affecting the safe use of the MEWP
- The proposed date of the next periodic and major inspection
- Any specific matters that are to be investigated at stated intervals prior to the next major inspection.

**5.2** Where a major inspection report identifies deficiencies that need addressing prior to the machine going back into service, documented evidence confirming that all such deficiencies identified in the report have been adequately addressed should be made available as part of the on-going machine records of inspection and maintenance.

#### *Local Regulation/Law requirements (1.4)*

- **UK**
  - *Regulation - Lifting Operations of Lifting Equipment Regulation 1998 (LOLER),*
  - *Type of mandatory inspection – Thorough Examination*
  - *Period of Inspection - In the case of lifting equipment for lifting persons or an accessory for the lifting, at least every 6 months*
  
- **Italy**
  - *Regulation – Decreto Legislativo 9 Aprile 2008 n° 81 (Testo Unico sulla salute e sicurezza sul Lavoro) Art. 71 + Decreto 11 Aprile 2011 Ministero del Lavoro (Disciplina delle modalita' di effettuazione delle verifiche periodiche)*
  
  - *Type of mandatory inspection – Periodic Inspection by authorized subjects*
  - *Period of Inspection – every 12 months. For platforms mounted on trucks a supplementary inspection is foreseen every 20 years.*
  
- **France**
  - *Regulation - Decree of March 1, 2004 relating to the checks of lifting devices and accessories*
  - *Type of mandatory inspection - Examination*
  - *Period of Inspection – Six months for lifting platforms for people*
  
- **Germany**
  - *Regulation – DGUV Rules 100-500-old BGR 500*
  - *Type of mandatory inspection - Inspection*
  - *Period of Inspection – every 12 months*
  
- **Spain**
  - *Regulation – UNE58921*
  - *Type of mandatory inspection – periodic examination*
  - *Period of Inspection – every three years starting from the year of manufacture.*
  
- **The Netherlands**
  - *There are no special regulations concerning the inspections of MEWP's. The labour law (Arbo wet) in general terms put's the responsibility as shared between employers and workers. Which means they refer to the instructions provided by the manufacturers.*



The recommendations and advice contained in this Guidance Note are based on specifications, procedures and other information that have been collected by FEM from their members. They represent what is, as far as FEM is aware, the best available data at the time of publication on the instruction and use of the equipment concerned in the general conditions described and are intended to provide guidance for such use.

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