

	AI TAKAMUL COMPANY FOR ENGINEERING TESTS AND PROFESSIONAL SAFETY LIMITED Lifting Inspection	Doc No: QC-LIF-P-024
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Title: Inspection Procedure of Mobile Elevating Work Platforms (MEWP)		Rev: 2
Established By: Ashraf Elsaid	Position: Lifting Supervisor	Date: JULY-2022
Approved By: Ahmed Mohamed	Position: Operation Manager	

Inspection Procedure of Mobile Elevating Work Platforms (MEWP)

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1. YOUR SAFETY IS FIRST:

Your safety wear is mandatory at job sites including in general: suit, shoes, helmet, gloves, ear plugs, glasses, and mask.

2. SCOPE:

This Procedure covers the inspection and testing of power operated and manually operated Mobile Elevating Work Platforms (MEWPs) "Manlifts".

3. PRODUCT/ MANUFACTURE STANDARDS:

BS EN 280-1:2022 - TC	<i>Mobile elevating work platforms – Design calculations – Stability criteria - Construction - Safety – Examinations and tests</i>
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4. DEFINITION:

- Mobile Elevating Work Platform (MEWP):**

Mobile machine that is intended to move persons to working positions where they are carrying out work from the work platform with the intention that persons are getting on and off the work platform only at access positions at ground level or on the chassis and which consists as a minimum of a work platform with controls, an extending structure and a chassis



5. PREPARATION OF EXAMINATION:

- Site Conditions:**

The condition of the examination area shall be checked, and the recommendation provided in the operating instructions / manual for the MEWP (Manlift) relating to its operation within the rated capacity and more stringent requirement shall be applied when loads are being applied for the purpose of testing.

The area where the MEWP (Manlift) is sited shall be capable of withstanding any loads applied to it. Sufficient clearance shall be maintained for the unobstructed movements of the MEWP (Manlift) throughout the test, for example slewing. All non-essential personnel shall be kept out the test area.

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- **Weather Conditions:**

No tests shall be conducted in case of severe weather conditions which represent a risk to the operation(s), e.g. storms, heavy rain, heavy winds, foggy weather, ice, etc.

- **Light Conditions:**

The examination shall be carried out in adequate natural or artificial light.

- **Verification of documents:**

Examiner shall verify relevant documents (Declaration of Conformity, previous reports of thorough examination, maintenance / repair records) related to the manlift to be examined.

- **Lifting team:**

The CERTIFIED Manlift operator shall be responsible for the correct operation of the equipment, and shall only respond to the signals from one pre-identified signaller.

- **Equipment and test weights:**

Any equipment / test weights used for the purpose of examination and testing shall be calibrated and verified within valid intervals.

6. THOROUGH EXAMINATION:

MEWPs are (lifting equipment to lift persons) and shall be thoroughly examined at intervals not exceeding **six months**, these intervals may be reduced in the light of service conditions or when deemed necessary by a competent person.

The following shall be checked during thorough examination:

- Marking as per 9. MARKING: ID Number, Model, SWL, and any conditions or restrictions pertaining to same are correct and clearly marked.
- The examination shall be carried out to cover all components of the MEWP (Manlift) and its systems.
- Manlift shall be free from any defects that preclude it from safely handling the test load.
- Its current configuration and conditions are according to the manufacturer rated load chart.
- The whole structure shall be thoroughly examined for damage / deformation, distortion, cracks, corrosion etc. Entire boom structure, telescopic sections, super structure & structural attachments of the upper works to be thoroughly examined.
- Check for excessive wear in boom / Arms / Jib pivot pins and bushes, referring to manufacturer's specification. Ensure boom pin lubrication systems are working. Ensure any Slew bearings & rollers turn freely.
- Check the hydraulic cylinders, pumps, Valve blocks & hoses for leaks & any other anomalies.
- All the safety switches, for example derricking and overload cut off shall be checked for correct operation (Overload cut off shall be checked during overload test).
- Sheaves & Drums should be checked for wear in the grooves, cracks, assessment of the condition of the bearings & amount of corrosion.
- Check the condition of tyres / track chain.
- Check the Travel steering, braking and locking devices – for malfunction during functional test.
- Check the availability & condition of hooking point of the lanyard inside the platform.

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- Ensure that all the levers at control station & platform are properly marked.
- Check the lock of the door in the platform.
- Check the SWL / Max. no. of persons marking.
- Check the outriggers & stabiliser jacks for any anomalies.
- Check the emergency lowering mechanism.
- The functionality shall be tested as per 7. *FUNCTIONAL AND PERFORMANCE TESTING*
- All Lifting accessories shall be thoroughly examined before the test and the competent person shall determine whether the sling arrangements are safe.

7. FUNCTIONAL AND PERFORMANCE TESTING:

- Functional testing shall be carried out without a load, to determine whether the equipment performs as the manufacturer intended. This shall include the operation of all controls like Emergency lowering system, Travelling, braking, steering to determine whether the equipment operates correctly, smoothly and free from any other damage.
- Performance testing shall be carried after the functional testing with the rated load (1 X SWL) applied, to determine whether the equipment performs as the manufacturer intended. This shall include the operation of all controls to determine whether the equipment operates correctly, smoothly and free from any other damage.

8. PROOF LOAD TEST:

Proof load testing of MEWPs shall be carried out to supplement thorough examination in the following conditions:

- before the MEWP being put into use for the first time
- after major repairs or modifications.
- after heavy use
- after exceptional circumstance
- As per client's requirements

The proof load test value shall be:

- (1.25 X rated capacity) for power operated MEWPs
- (1.5 X rated capacity) for manually operated MEWPs.

All movements with the test loads shall be carried out at accelerations and decelerations appropriate with safe control of the load. Where several movements with the test load have to be carried out (i.e. lifting, lowering, slewing, travelling), the intended movements shall be carried out separately and with care taking into due account the least favorable positions and when vibrations associated with preceding movements have subsided.

When, due to the various combinations of loads or outreaches of a MEWP, tests with different test loads are necessary, all movements shall be carried out with all test loads except where the least favorable conditions can be sufficiently simulated by one performance test.

During the proof load test the MEWP shall be on level ground and the extending structure put into each position which creates maximum stress in any load carrying part of the MEWP.

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After load testing, a thorough examinations shall be undertaken by to determine whether the MEWP (Manlift) has withstood testing without signs of structural damage that could affect the safety of the MEWP (Manlift) such as: Cracking, Permanent deformation, Paint flaking, Loosening of or damage structural connections

Note:

NDT shall be carried out as per the decision of the examiner on the structure of the MEWP to establish the presence, location and extent of any defects that can affect the integrity of the structure.

9. MARKING:

MEWPs shall be clearly and legibly marked with one or more durable manufacturer's plates(s) giving at least the following indelible information:

- The business name and full address of the manufacturer and, where applicable, his authorized representative
- Model and designation of the machinery
- Serial or fabrication number
- Year of construction, that is the year in which the manufacturing process is completed
- Non-loaded mass in kilograms
- Rated load in kilograms
- Rated load given as the allowable number of persons and mass of equipment in kilograms
- For work platforms that have different specified rated loads, each rated load shall be given as the allowable number of persons and mass of equipment in kilograms
- Maximum allowable manual force in newtons
- Maximum allowable wind speed in meters per second
- Allowable inclination(s) of the chassis
- Hydraulic supply information if an external hydraulic power supply is used
- Electrical supply information if an external electric power supply is used

10.REPORTING AND CERTIFICATION:

A certificate of test and thorough examination will be issued upon the satisfactory completion of the examination, i.e. the lifting equipment is safe to operate

A defect report will be issued if the lifting equipment fails to meet the requirements.