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Project Elevated Work Platform Procedure



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Project Elevated Work Platform Procedure

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Project Elevated Work Platform Procedure

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Project Elevated Work Platform Procedure

1.0 PURPOSE

This Elevated Work Platform Procedure is applicable to Company, Contractor, Subcontractor Personnel and visitors working under the operational control of Mashroat. It provides the minimum guidelines, requirements and responsibilities for the safe operation and use of various types of elevating work platforms, including but not limited to:

- Telescoping work platforms. (Knuckle, Scissor and Boom Type)
- Vehicle-mounted elevating and rotating work platforms.

The aim of this procedure is as follows:

- Assist in the elimination or reduction of workplace illnesses and injuries by defining the requirements for the use of elevating work platforms
- Specify the training requirements for safe elevating work platform use.

2.0 SCOPE

The scope of this procedure applies to all facilities that are controlled by the National Project Management Organization throughout the Kingdom of Saudi Arabia.

3.0 DEFINITIONS

Definitions	Description
Competent	One who can identify existing and predictable hazards in the surroundings or working conditions which are unsanitary, hazardous, or dangerous to employees, and who has authorization to take prompt corrective measures to eliminate them.
HSSE	Health, Safety, Security and Environment
JHA	Job Hazard Analysis
MEWP	Mobile Elevating Work Platform
PPE	Personal Protective Equipment
SWL	Safe Working Load
WMS	Work Method Statement

4.0 REFERENCES

- EPM-KSS-PR-000001 Project General Safe Working Requirements Procedure
- EPM-KSS-PR-000011 Project Portable Ladders Inspection and Control Procedure
- EPM-KSS-PR-000002 Project Housekeeping Procedure
- EPM-KSS-PR-000028 Project Floor and Wall Openings Procedure
- EPM-KSS-PR-000006 Project Barricades and Signs Procedure
- EPM-KSS-PR-000003 Project Personal Protective Equipment Procedure
- EPM-KSS-PR-000005 Project Fall Protection Procedure
- EPM-KSS-PR-000033 Project Scaffolding Control Management Procedure
- EPM-KSS-PR-000031 Project Lockout/Tagout Procedure
- EPM-KSS-PR-000024 Project Hazard Communication Procedure.
- EPM-KSS-PR-000030 Project Safety Watches Procedure

5.0 RESPONSIBILITIES

5.1 Project Manager

Project Manager's responsibilities include the following:



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- Overall responsibility for this procedure and for supporting this process and verifying all Project entities actively participate.
- Providing the personnel, facilities, and other resources necessary to effectively accomplish this procedure.

5.2 Site Construction Manager

The Site Construction Manager is responsible for monitoring that the site is in compliance with applicable Health, Safety, Security and Environment HSSE requirements by:

- Providing the resources to implement the requirements of this procedure.
- Communicating with management concerning Project HSSE expectations concerning elevated work platforms.
- Providing leadership regarding HSSE requirements and expectations for Managers, Project Supervisors, Superintendents and other leadership.

5.3 HSSE Manager

Site HSSE Manager's responsibilities include the following:

- Auditing this procedure.
- Confirming that this procedure meets the government requirements and regulations in the location of the Project facility.
- Ensuring that the operator received adequate training in recognized source for operating MEWP

5.4 Project Personnel

Project personnel's responsibilities include the following:

- Knowing and understanding the Environmental Safety and Health requirements of this Procedure that apply to the work they perform.
- Requesting additional information and further clarification before starting work if personnel receive assignments they do not understand.
- Complying and abiding by this elevated work platform procedure for any work they perform.

6.0 RISK ASSESSMENTS

Before any Project/Work Activity/ commences it is important that Risk Assessments are completed prior to beginning any work.

Risk assessments must be conducted at the Planning Stage:

- Project Risk Assessment.
- Work Method Statements (WMS)
- Job Hazard Analysis (JHA).

It is imperative that prior to beginning of any work activity, a pre-start briefing occurs to discuss the contents of the WMS/JHA which includes mitigations of for other hazards noted by the crew at the jobsite. The discussion shall also include job steps, expected hazards associated with the activity, and the mitigation and protection methods that shall be implemented to prevent incidents.

The Hierarchy of control shall be used to reduce the likelihood of an incident occurring.

- **Elimination** (Remove the Hazard)
- **Substitution/Isolation** (Replacing material, process or hazard with a lower risk one/ separate people from the hazard (such as through guarding, distance, etc.)
- **Engineering Controls** (Redesign or replacement of plant and equipment)



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- **Administration Controls** (Procedures, training, signage)
- **PERSONAL PROTECTIVE EQUIPMENT PPE**

No work is to commence until the above has been implemented and signed by the relevant Supervisor in charge.

7.0 PROCESS

7.1 Equipment Selection

The equipment must be matched to the anticipated work, taking into consideration such things as:

- Boom length
- Method of propulsion
- Terrain
- MEWP must be inspected and have a current 3rd party certification on annual basis, inspection sticker corresponding to the 3rd party inspection, the certificate must be display on MEWP

7.2 Emergency Controls

- Equipment shall have "emergency" controls on the carrier from which all functions can be controlled.
- All machines shall have clearly marked operational instructions and emergency instructions for lowering the basket from the lower control station.
- The controls will be plainly marked as to their function.
- Exclusion zone on MEWP must be in place during operation

7.3 Safe Operational Guideline Requirements

- When operating any Mobile Elevating Work Platform MEWP, whether it be vertical movement or horizontal movement, it is mandatory that personal in the basket be 100% tied off to the designated anchor point in the basket.
- All warning notices on the machines will be mandatory and all operators must become familiar with the operator's manual.
- A malfunctioning MEWP will not be operated until repaired, as per the manufacturer's recommendations. The equipment will be clearly tagged "OUT OF SERVICE"
- The operator shall immediately report any malfunctions or damage to their supervisor.
- Mobile elevating work platforms must have ground controls in addition to the upper controls.
- All controls must be plainly marked as to their function with a ground override option to be used by a trained person (only in cases of emergency).
- A pre-start inspection of the equipment will be performed and documented on the Daily Checklist (see example in Attachment 1). The user will be responsible for ensuring that this has occurred.
- The equipment will be used only on level ground.
- The safe working load (SWL) of the basket shall be posted on the platform, and shall not be exceeded. NOTE that the total weight is the combined weight of the personnel, tools, and materials. Material may not extend beyond the perimeter of the basket.
- All personnel that are required to operate any MEWP shall have access to the appropriate operating manual and have completed an accredited training course and be deemed competent to operate that piece of equipment.
- All operational panels shall be provided with a guard to protect the controls from damage or inadvertent operation whilst persons are working from the platform.
- MEWPs are to be used for lifting personnel and small hand tools. The use of an articulating lift as, or in lieu of, a crane is prohibited.
- Operator of a MEWP must always be sure that there is sufficient clearance and must be aware of the overall dimensions of the equipment before moving under any overhead obstruction and working near electrical lines.



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- No MEWP with an axle load of greater than two tons shall go within 1m of the edge of any open excavation or trench without providing approved shoring or cover plates over the excavation or trench.
- Personnel will not walk under a boom to gain access to the platform.
- Personnel will always look in the direction the machine is moving.
- Personnel will not rest the boom or basket on a steel structure of any kind (piping, conduit, cable tray or similar structures)
- All access doors/gates onto the platform are to be spring loaded and self-closing. Personnel shall enter and exit the basket only when it is lowered to ground level. Personnel will only use the designated door/gate for entry/exit.
- Personnel operating boom or scissor lifts shall be provided with and instructed on how to wear an approved safety harness that is securely attached to the MEWP attachment point.
- Access or egress from a raised platform is prohibited, except in exceptional circumstances where no other means of access are available or feasible and prior approval is obtained from the HSSE Manager. The Contractor shall provide a comprehensive Job Hazard Analysis (JHA). HSSE Manager shall assess and approve the JHA. The Contractor is advised that the granting of approval will only be considered when there is no practicable alternative method available.
- The transport of compressed gas cylinders in a MEWP is prohibited.
- A 4.5 Kg Dry Chemical fire extinguisher shall be mounted in the platform.
- Barricades, pylons, and flag persons shall be used when operating in vehicle traffic areas and near or on roadways
- When working overhead, barricading and "Danger Men Working Overhead" signs must be posted to form an exclusion zone. The barricade shall prevent access to the swing radius of the counterweight, and the area underneath the elevated boom and basket.
- Personnel in the basket must keep their hands off the handrail when raising or lowering the basket. No items shall be allowed to protrude beyond the basket rails.
- If electrical power tools are used in the platform, tag lines shall be used to lift electrical cords, welding leads and air hoses to the work location after the MEWP basket is in position. Cords, Leads and hoses shall be tied off to and supported by an adjacent structure. The hanging of electrical cables from platform to ground is prohibited
- Electrical hazard signs shall be mounted on both upper and lower control panels outlining the dangers associated with working near electrical wires.
- When more than one person is riding in a basket, they should attempt to face one another (this will enable each to monitor physical obstructions/hazards).
- The equipment will be used only on firm, level ground. Outriggers (if equipped) must be set prior to raising basket.
- The MEWP controls shall be operated in a smooth progressive manner and momentarily returned to the neutral position before proceeding in the opposite direction. The foot pedal switch shall be activated only by the operator handling the MEWP controls
- Operators shall not leave a running articulating boom platform unattended.
- A competent watchman as per EPM-KSS-PR-000030 Project Safety Watches Procedure, must be available on the ground in case of an emergency.
- The basket of the elevating lift shall remain clean and free of unnecessary debris, trash, or materials. Bolts, fittings, and other small items shall not be placed on the control panel or left lying loosely on the floor.
- The guardrail system shall be enclosed from the toe board to the mid-rail to prevent tools, equipment, and materials from falling to lower elevations. Hand-tools and other small items such as bolts; nuts must be contained proper boxes. All tools must be tethered to prevent accidental falling.
- All employees working inside the basket shall keep both feet placed firmly on the floor. Standing or working from the mid-rail or top-rail of the basket is not allowed. Ladders shall not be used inside the basket to access upper elevations and boards shall not be placed across the mid-rails or top-rail for use as a work platform.
- Mobile elevating work platforms must not be used when wind speed is greater than 12.5m/s or 45km/h.
-



7.4 Movement of Equipment

- Baskets shall be lowered prior to transporting or relocating equipment.
- Personnel must always look in the direction the machine is moving.
- Brakes depend upon the engine; in some units an engine failure will result in loss of control. Therefore, equipment shall not be moved up or down steep grades without assistance.
- When moving carriers over roadways, have an escort wearing an orange vest assist in traffic control.
- MEWPs shall be travelled only when the base of the basket is within 2.0m of the ground and the boom is fully retracted.
- A spotter shall be utilized to assist the operator while moving or positioning the machine.
- MEWPs shall not be traveled over drain gratings, hole covers, or other surfaces that are not designed to support the weight of the machine. Additional spotters shall be used to direct the operation of MEWPs near openings or excavations.
- Baskets must never be used to free the carrier from mud or similar stuck positions. MEWPs can be severely damaged if the basket is forced down onto the ground to create leverage for freeing stuck carriers.
- Spotter guiding the MEWP must always have a eye to eye contact with the operator with sufficient gap

7.5 Inspection and Maintenance

- Equipment shall receive daily visual inspections and controls shall be tested by the operator. This test shall include emergency controls. See Attachment 1 for MEWPs Inspection Log, that can be used to document the daily inspection. Defective or inoperable controls shall be repaired prior to use.
- If another operator is assigned to the machine during a shift, the operator shall complete and log a new daily inspection prior to operating the machine.
- Malfunctioning equipment shall be tagged "DEFECTIVE - OUT OF SERVICE" and the equipment immobilized. Any faults must be reported to the supervisor immediately
- A written monthly inspection shall be conducted by a designated Competent Person.
- Inspection records shall be maintained and kept on file at the project and in an equipment specific log book. Copies shall be made available upon request.
- Equipment shall be maintained in accordance with the manufacturer's recommendations.
- All repairs shall be made by qualified personnel in compliance with approved manufactures written procedures.
- Subcontractor shall make available to Contractor upon request all repair and maintenance records for the MEWP.

7.6 Vehicle-Mounted Elevating and Rotating Work Platforms

7.6.1 Types of Vehicle-Mounted Equipment

MEWPs include the following types of vehicle-mounted equipment that is used to elevate personnel on the project above ground:

- Extendible boom platforms
- Articulating boom platforms
- Scissor lifts
- A combination of any of the above

Some examples can be seen in Attachment 2.

7.6.2 Extendible and Articulating Boom Platforms

- Tying off to an adjacent pole, structure, or equipment while working from a boom is prohibited.



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- Lift controls must be tested each day by the operator prior to use to determine that such controls are in safe working condition.
- The brakes must be set and outriggers, when provided as part of the machine, must be positioned on pads or a solid surface.
- A MEWP truck may not be mobilized when the boom is elevated in a working position with personnel in the basket.
- Articulating boom and extendible boom platforms, primarily designed as personnel carriers, will have both platform (upper) and lower controls. Upper controls will be inside the platform within easy reach of the operator. Lower controls will provide for overriding the upper controls. Controls will be plainly marked as to their function. Lower level controls will not be operated unless permission has been obtained from the employee in the lift, except in case of emergency.
- The insulated portion of a MEWP will not be altered in any manner that might reduce its insulating value.
- Before moving a MEWP for travel, the boom(s) will be inspected to see that it is properly cradled and outriggers are in stowed position.

8.0 TRAINING

8.1 General

- All personnel who will use a MEWP must be trained and demonstrate competency in its safe operation, operators must be able to present a valid competency card issued by an approved and internationally recognized certifying body.
- All personnel travelling in a MEWP must have valid work at height training provided and or be authorized by the project/business entity.
- All training records must be available with the concerned Environmental, Safety, and Health Department.
- All project personnel who operate MEWPs must be trained in the safe use, inspection and maintenance of the equipment. Only authorized operators shall use the equipment.

8.2 Competency

Contractors shall conduct a competency verification test of MEWP operation prior to issuing an authority to operate. The assessment shall consist of verbal, written and practical assessments consistent with national competency assessment criteria. A copy of the assessment criteria and competency assessment shall be made available to Contractor upon request.

9.0 MONITORING AND EVALUATION

Both Contractor and Subcontractor shall continuously monitor and assess compliance with this procedure. The Contractor HSSE Manager and/or delegated members of the HSSE Department shall conduct quarterly formal assessments of the Project's compliance with this procedure.

10.0 ATTACHMENTS

1. EPM-KSS-TP-000002 - Daily Checklist
2. Types of Elevated Work Platforms



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Attachment 1 - EPM-KSS-TP-000002 - Daily Checklist

MEWP # _____ Week of _____		/	/	/	/	/	/	/
#	Description	Sun	Mon	Tue	Wed	Thu	Fri	Sat
1	Drive Motor and Brake Shield - Properly secured, no missing							
2	Body, Platform, Boom – no visible damage							
3	Platforms and grab rails are free of rough or sharp edges							
4	Tire & Wheel Assembly - Properly secured, no loose or missing							
5	Lug nuts; no visible damage (no cut tires). Tires properly inflated							
6	Drive Hub - No visible damage; evidence of leakage							
7	Power Track - No loose, damaged or missing parts							
8	Electrical lines - no visible damage							
9	Control Valves and Engine Compartment - No damage, no leaks							
10	Hose and Wire Supports – no unsupported wires or hoses							
11	Engine Oil Supply - Full mark on dipstick; filler cap secure							
12	Exhaust System - Properly secured; no evidence of Leaks							
13	Hydraulic Lines – no visible damage or leaks							
14	Ground Control Panel - Switches operable; no visible damage							
15	Placards secure and legible							
16	Counterweight - Properly secured							
Operator Initials								
Defects Observed		Maintenance or Repair Actions			Date Repaired			



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Attachment 2 - Types of Elevated Work Platforms



Truck Mounted EWP



Knuckle Boom Type EWP



Scissor Lift Type EWP



Boom Lift Type EWP