# Systemic Safety Alert
# Mobile Elevating Work Platforms Safety

## Major systemic safety problems

Mobile elevating work platforms ("MEWPs") are widely used to carry workers for working at height, such as repairing or cleaning external facilities of buildings, repairing of ceilings, tree pruning and repairing of street lights, etc. Unsafe transport, operation or use of MEWPs can lead to serious injuries or even fatalities. The following are the major systemic safety problems attributed to the occurrence of the relevant accidents:

- failure to conduct task-specific risk assessments;
- failure to formulate detailed safe work methods in accordance with the results of the risk assessments;
- failure to ensure that MEWPs are operated by competent workers;
- improper repairing and maintenance of MEWPs; and
- failure to provide adequate safety information, instruction, training and supervision to all personnel concerned.

## Accident prevention measures

Registered Safety Officers (RSOs) should advise their employers/ clients to:

(i) appoint a competent person to conduct task-specific and thorough risk assessments regarding the use of MEWP, including the nature of work to be carried out, the working environment, the presence of any fixtures or structures in the vicinity, the ground levelness and load-bearing capacity, the limitations of the type of MEWP and the operation of MEWP, etc., to identify all potential hazards;

(ii) devise safe work methods with detailed appropriate safety precautions to be

taken to eliminate or mitigate the hazards identified in accordance with the results of the risk assessments. Safety precautions should include but not limited to the following:

- selecting a suitable MEWP to ensure that its safe working capacity, height and specifications are appropriate for the required work;
- using suitable mechanical aids to transport the MEWP to minimize manual handling operations as far as practicable;
- ensuring that the MEWP should not be operated on grades, slopes, ramps or uneven surfaces with gradient exceeding the maximum limit recommended in the manufacturer's manual;
- after considering the working conditions of individual workplaces, restricting the elevating height of the MEWP appropriately to ensure that workers can work safely on the work platform;
- ensuring that the worker working on the work platform is wearing a suitable full body harness with its lanyard as short as practicable anchoring to a specified anchorage point of the MEWP;
- setting up barricades and warning signs to ensure that the MEWP would not be hit by nearby vehicles, and clearly segregating pedestrian walkways from the operating areas of the MEWP to prevent unauthorised persons from passing beneath or near the MEWP;
- closely monitoring the weather conditions of the workplace and any changes, and stopping the work when conditions are likely to endanger the MEWP's operation;
- testing and verifying the communication system to ensure that it is in good working order, so that operators or workers on the work platform can maintain effective communication with ground personnel at all times;
- parking the MEWP in a level and designated area with its boom lowered or retracted, switching off the engine, applying the parking brake, removing the ignition key and handing it back to relevant personnel for safe custody after work;

- ensuring that the MEWP is only operated by persons who have received suitable training and are competent to operate the particular type of MEWP. The training should include elements of theory as well as practice in the operation of MEWP. The operators should duly undergo and pass appropriate assessments after the completion of the training in order to ensure that they are familiar with safe operation of the MEWP assigned for use; and
- formulating appropriate emergency rescue plan.

(iii) strictly implement the safe work methods;

(iv) ensure that every MEWP is of good construction, adequate strength, free from patent defect and provided with suitable guard-rails and toe-boards;

(v) the MEWP should be fitted with a clearly marked overriding lowering control to enable a worker at ground level to lower the work platform in an emergency;

(vi) every control of the MEWP should have a "function enable control", i.e. when the control (such as a trigger with a joystick or foot switch) is released, it automatically stops or returns to neutral. The controls should be positioned or protected against accidental operation or damage;

(vii) the function and movement direction of each control device should be clearly indicated and marked on or beside the device;

(viii) the MEWP should be equipped with out-of-level safety interlocks and/or alarms to warn the operator when the machine's base is out of level, and also equipped with warning devices that can be used by the operator to give warnings to nearby persons when moving the MEWP ;

(ix) the MEWP should be fitted with an effective lock-on brake or other means to hold the MEWP on the maximum slope it is designed for while loaded with its safe working load;

(x) a readily accessible emergency stop should be provided to the MEWP to cut off power to all systems in case of emergency;

(xi) so far as is reasonably practicable, install effective and suitable secondary guarding devices such as physical barriers, sensing devices or proximity sensing devices on the MEWP to reduce the risk of workers being trapped;

(xii) provide all workers/ employees concerned with the necessary safety information, instruction and training, and ensure that they are familiar with the safe system of work and procedures, use of full body harnesses and emergency rescue plan;

(xiii) establish and implement an effective monitoring system to ensure all safety measures are strictly implemented, compiled with and maintained;

(xiv) regularly inspect, test and properly maintain the MEWP in accordance with the manufacturer's instructions. The MEWP should be tested and thoroughly examined by a competent examiner before use, after major changes or after undergoing substantial repairs. In addition, it should be further examined thoroughly by a competent examiner on a regular basis as recommended by the manufacturer but not less than once per year to ensure that the MEWP is in safe working condition; and

(xv) formulate and stipulate a suitable maintenance and repair plan in the following to ensure load-bearing structures and supporting structures of the MEWP are of good construction:

- considering engaging a registered professional engineer to conduct non-destructive tests ("NDT") on critical load bearing components of the MEWP that have been put into use for 5 to under 10 years; and
- engaging a registered professional engineer to conduct NDT on critical load-bearing components of the MEWP that have been put into use for 10 years and subsequent every 5 years thereafter.

Registered Safety Auditors (RSAs) should take into account these systemic safety problems and accident prevention measures in executing safety audit functions.

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