

# GUIDE TO NEW DESIGN, SAFE-USE AND TRAINING STANDARDS FOR MEWPS



Canada and the USA, November 2017. Document version 2.0

## CURRENT STANDARDS

In the US and Canada, Mobile Elevating Work Platforms (MEWPs), also known as Aerial Work Platforms (AWPs), must adhere to standards laid out by the American National Standards Institute (ANSI) and Canadian Standards Association Group (CSA).

Currently, ANSI A92 and CSA B354 standards requirements are specified by equipment type: A92.3 or B354.1 for manually propelled platforms; A92.5 or CSA B354.4 for boom supported platforms, A92.6 or B354.2 for scissor type platforms and A92.8 for under bridge inspections devices. Each standard dictates requirement for design, safe-use and training to ensure the safe and effective use of those types of machines.

These standards allow for uniform guidance in the design and manufacturing of equipment, the planning and operation for the safe-use of the equipment and the training requirements to achieve compliance for safe and effective use of the equipment throughout North America. These standards can assign responsibilities for various tasks to entities based on their roles, of which they may hold several – manufacturer, dealer, owner, user, operator, lessor, lessee, broker etc. As an example, a dealer is also a user related to its employees' use of a MEWP and is also acting in the role of an owner of the equipment.

## NEW STANDARDS OVERVIEW

The new ANSI A92 Mobile Elevating Work Platform (MEWP) Design, Safe-use and Training suite of standards are set for publication in early 2018. The CSA standards were published in May of 2017. In both cases the industry will have 12 months from the date of publication to become compliant. The new standards are **ANSI A92.20 & CSA B354.6: Design, Calculations, Safety Requirements and Test Methods for Mobile Elevating Work Platforms (MEWPs)**; **ANSI A92.22 & CSA B354.7: Safe Use of Mobile Elevating Work Platforms (MEWPs)**; and **ANSI A92.24 & CSA B354.8: Training Requirements for Operators of Mobile Elevating Work Platforms (MEWPs)**.

The suite of three new standards starts with the design of MEWPs that specifies design calculations and stability criteria, construction, safety examinations and tests, followed by the safe-use standard that specifies requirements for application, inspection, training, maintenance, repair and safe operation, and then the training standard, which provides methods and guidelines to prepare MEWP training materials, defines administrative criteria, and delivers elements required for proper training. Compliance with all three standards should aid in

ensuring the safe and effective use of this equipment. These standards apply to all MEWPs as specified in the design standard and will ultimately replace the current standards referenced in the opening section of this document on the effective date (i.e. 12 months after publication) and existing standards will be withdrawn. Compliance with the new standards can begin immediately after publication, but no later than the effective date.

- **GENERAL CHANGES** Terminology: Mobile Elevated Work Platform or MEWP [*pronounced mee-ooop*] will be the new universal term for this equipment, replacing Aerial Work Platform (AWP).
- The new standards are written by primary task of design, safe-use and training to replace existing standards written by product type – i.e. manually propelled, self-propelled booms and scissor,
- New ANSI standards are structured by task (maintenance, inspection, risk assessments, etc.) rather than by entities (i.e. dealer, user, operator, etc.) complicating comparison of old and new standards' requirements.
- The CSA standards are an adoption of ISO standards with Canadian deviation, so readers must be careful to read the entire section to determine if language is modified.
- There are many new and changed terms and definitions throughout the new standards, such as the introduction of groups, types, load sensing system, supervisors and occupants.
- The new training classifications are a combination of group and type – i.e. 1a static vertical (see the diagram below for a visual guide to the new categorizations).
- Safe use and training requirements apply to new and existing MEWPs. Design requirements may be implemented within 12 months after the date of publication of this standard. And shall apply to all MEWPs manufactured on or after the effective date.



### DESIGN (MANUFACTURE) CHANGES

- Active load sensing: Most machines will actively monitor load and will not operate with normal functionality if overloaded beyond rated capacity.
- New wind force requirements: Potential for reduced capacities on scissors and vertical platform lifts.
- New stability TEST: Results in foam-filled only (no air-filled) tires on the majority of rough terrain scissors or booms to maintain high gradeability ratings.
- Entrance gates with toe boards shall replace chain entrance systems on scissors and vertical platform lifts. Toe boards will be required at entrances on booms.
- In addition to the existing required audible alarm for tilt sensor, MEWPs will be prevented from certain movement when reaching allowed limits of chassis inclination.
- MEWPs can be designed for indoor use ONLY and must be clearly labels as such.

- Group A MEWPs are allowed to be designed with a fall restraint anchorage that must use fall restraint fall protection system or alternately a standard fall arrest anchorage used with fall arrest protection system.
- A means shall be provided on the MEWP to mark the date the last annual inspection was performed and the interval at which future inspections are required as a requirement for all owners of MEWPS.
- The operator's manual shall include a listing of MEWP functions, features, operating characteristics, limitations and devices to be included in familiarization, making it clear what must be included.
- The new minimum rated load of a MEWP shall be 120kg (264.5lbs) allowing more flexibility in designs.
- Railing heights increased from 1m (39.5 in) to 1.1m (43.5 in) which may require folding rails for movement through standard doorways.

### DEALER/RENTAL COMPANY CHANGES

- Dealers/rental companies must update training programs to support new requirements and must ensure training is provided to affected personnel to be aware of and compliant with the requirements of the new standards.
- Dealers/rental companies must offer familiarization to those who request it, which is a change to the previous requirement to provide familiarization at each delivery. Educate employees about reference to manufacturers' NEW operator's manuals for detailed familiarization instructions.
- When requested by the user, the dealer/rental company shall offer or advise where training can be obtained.
- Dealers/rental companies must train technicians to address load-sensing maintenance and servicing and educate their customers on the change to avoid overloading the work platform resulting in equipment movement cessation.
- A new "operation manuals" term and definition is introduced that includes all manuals provided by the manufacturer that must be maintained on the MEWP. This includes at a minimum, the manufacturer's operator's manual and ANSI Manual of Responsibilities, but could include other manuals such as the Association of Equipment Manufacturers (AEM) MEWP safety manual.
- ANSI requires the new Manual of Responsibilities to be placed on all existing MEWPs in use by dealers and owners, as the standards applies to both new units and units already in use.

### TRAINING CHANGES

- Training shall be in compliance with A92.22 Safe-use Standard which includes completing a risk assessment.
- Operator training is specific to MEWP classification.
- Training must be offered in a manner and language that the trainee can understand.
- Content of theory and practical training is now clearly defined.
- Occupant knowledge (to be provided by the operator or ensured in some way by the user) is required and includes information such as emergency descent instructions.
- Supervisor training is required and outlined in the ANSI standards. The CSA standards do not have this requirement, but do require users to have a qualified person to perform tasks that may be performed by a supervisor, making this training an effective tool for use in assisting users to become qualified.
- Administration of training is also defined in the standard to include training content, trainer qualification, training environment, testing, and documentation.
- Training evaluation sheets and certificate of completion must be offered to the user.

## IMPACT FOR END USERS

- Detailed requirements for operator training include providing occupants instructions to work safely on the MEWP.
- ANSI standards include a requirement for all personnel who supervise MEWP operators to undergo training specific to supervisor responsibilities and to monitor operators for conformance to the standard. While CSA does not specifically require supervisor training, users are required to monitor the performance of operators and supervise their work and that must be completed by qualified person. This will likely result in training to comply.
- Users shall ensure training is offered in a manner trainee can understand (ie language & comprehension).
- Users must evaluate operators on a regular basis and ANSI requires documentation of the evaluations.
- A NEW requirement to complete a site risk assessment, including a rescue plan, is included for all MEWP operations.
- Users must be aware of the impact of design changes (load-sensing, indoor-use-only MEWPs etc.) for effective and compliant equipment selection, operation and safe use purposes.
- ANSI requires users to allow operators sufficient time after familiarization to achieve operational proficiency.

## BECOMING COMPLIANT THROUGH IPAF TRAINING

The best way to ensure compliance is for operators to hold a PAL Card and supervisors to complete IPAF's MEWPs for Managers course. Utilizing the latest generation of online learning tools, IPAF offers operator trainees the option of completing the theory requirement of their training via interactive eLearning. The benefits of eLearning include:

- Trainees complete the module online – anytime, anywhere, on any device and at their own pace;
- Trainees can then complete the supervised hands-on practical test and evaluation at an approved training center to complete operator training;
- Operators don't have to take so much time away from the job to complete training;
- In most cases necessary a hands-on practical test can be concluded comfortably inside a few hours;
- Trainees opting for an instructor-led theory course also benefit from sessions enhanced by the interactive material in the online module;
- Available in English or Spanish.

In addition, IPAF's MEWPs for Managers course fulfils the requirement for MEWP supervisor training.

## FURTHER INFORMATION AND SUPPORT

This document is intended to raise awareness of the key changes only in the new standards; IPAF strongly recommends you read the full version of the new standards on publication.

For further information about the new North American MEWP standards, advice about how to become compliant and membership or training support enquiries, email [info@ipaf.com](mailto:info@ipaf.com) or visit [www.ipaf.com](http://www.ipaf.com)