## **HELPING YOU MEET HIGHER STANDARDS**

START PREPARING FOR THE BIG CHANGES FROM ANSI & CSA FOR MOBILE ELEVATING WORK PLATFORMS (MEWPs)

For over 50 years, Genie has provided education, support and solutions that fleet owners, employers and operators depend on to help protect their investments and livelihoods.

For more information (including educational materials and publication schedule updates), please visit www.genielift.com/mewp-standard.



#### **Need-To-Know Lingo**

"Mobile Elevating Work Platforms" (MEWPs) has replaced the term aerial work platforms in all industry guidelines, training materials and qualifications.



**Supervisor Training** (ANSI Only) Supervisors of MEWP operators

must also be fully trained.

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#### Safe Use Planning

A safe use program specific to the use of MEWPs must be developed and documented by the user.



#### **Occupant & Emergency Training**

All platform occupants must have a basic level of knowledge to work safely on the MEWP, including how to operate MEWP controls in an emergency.



#### Maintenance and **Repair Training\***

A qualified person must inspect and maintain MEWPs in accordance with the manufacturer's recommendations, as well as ANSI and CSA standards.



#### Watch Your Weight

If the platform is stationary and the load-sensing system is triggered, it will prevent all further movement of the platform. Only after the overload condition is removed will platform movement be allowed.

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#### **Know Your Limits**

New boom lifts will automatically disable certain functions when the slope limit is exceeded.



#### **Avoid Unplanned Downtime**

Lack of training can cause considerable lost time. Locate a training tool or provider, such as the Genie Lift Pro<sup>™</sup> and Genie Tech Pro<sup>™</sup> programs, that meet the new ANSI and CSA standards.

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#### **Plan Ahead**

The ANSI A92.22/CSA B354.8 (safe use) and ANSI A92.24/CSA B354.9 (training) standards can take time to implement, so it's important to audit your processes when the standards are published to ensure you're compliant before their effective date.





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# NEW ERA WITH NEW OPPORTUNITIES

PREPARING FOR THE UPCOMING STANDARDS CHANGES IN NORTH AMERICA







With Tier 4 emissions standards compliance underway, it's time to turn out attention to the next "big thing" to impact the aerial rental market — ANSI A92 and CSA B354 standards are about to get a facelift. The pending standards changes (which cover all North American aerials) will go into effect soon, and the industry as a whole need to start preparing now for the impact these changes will have on your fleets, your customers and their equipment operators.

The new standards are based on an ISO model, so they are very similar to the current European EN280 standard, as well as the Australian AS 1418.10 standards. As a global manufacturer, Genie can leverage its experiences worldwide to help with the transition, but everyone has to remember that North American aerial operators are very different.

The current ANSI/CSA standards have, for almost four decades, provided best practices for safe, reliable access to work at height. ANSI/CSA standards have used a representative testing scheme while the European standard uses a more prescriptive method where a design is tested

to specific conditions. Both have provided a consistent benchmark for safe machine design.

The primary advantage of the new standards is to move closer towards a global standard that allows easier trade of new and used units between countries.

Standards set a safety level for all participants in the market. Good standards also bring global markets closer together, driving commonality and stronger market competition. The new ANSI/CSA advances the industry in that direction.

### WHAT IS CHANGING?

Some of the key changes in the new A92 standards are:

- Terminology
- How Safe Use and Training are Addressed and Administered
- Platform Load Sense
- Dynamic Terrain Sensing
- Indoor-Only Machines
- And more...Reduced lift and lower speeds, required toeguards on entrances, flexible and chain gates are prohibited, to name a few

## Language and Terminology Changes in the Pending Standards Updates

Most terminology used in training and compliance will change in the new standards. Aerial Work Platforms (AWPs) will now become known as Mobile Elevating Work Platforms, or MEWPs. The word "mobile" is important because it means that the equipment can be driven, either under its own power or by manual effort; it is not stationary. In previous iterations of the standards, AWPs were classified by product types, such as booms, scissors and so on. In the new standards, MEWPs will be classified as Groups A and B with Types 1, 2 or 3.

Every MEWP has a Group and a Type. Group A will refer to work platforms that are always directly over the equipment's chassis, which means they go up and down and are limited to vertical motion. Examples of these types of products are Genie<sup>®</sup> GS, AWP, DPL and IWP machines.

Group B will refer to work platforms that do not always stay over the chassis during operation. Examples of these types of products are Genie Z- and S-boom models.

The Type is determined by how MEWPs are driven to, from and around jobsites. Type 1 MEWPs are only driven when in the stowed position.

Type 2 MEWPs can be driven while elevated, but the machine's drive controls are on the chassis.

Type 3 MEWPs can be driven while elevated, and the drive controls are on the platform.

### Most of the Genie product line falls into Type 1 and Type 3 MEWPs.

Another significant change in the new standards is that they are now written in a topic-specific format, rather than by product type. Topics include design, safe use and training. These topics will encompass all Groups and Types of equipment, both currently in use and in development. Users and operators need to be aware of this change as it will affect their certifications. After the new standards are implemented, certifications will reference the Group and Type of MEWPs the operator has been trained on.



Aerial Work Platforms (AWPs) will now become known as Mobile Elevating Work Platforms or MEWPs.

These language and terminology changes in the new standards reflect what will work best in a global industry, which will allow for easier trade of new and used equipment worldwide. This gives Genie and its customers the ability to grow and leverage opportunities wherever they decide to do business.

#### MORE CHANGES TO THE ANSI AND CSA STANDARDS YOU NEED TO KNOW ABOUT

The current ANSI and CSA standards for safe use and training have not been updated for many years (the current ANSI boom, scissor lift and manually propelled standards were last updated in 2006, and CSA standards go back even further). Now in an effort to align more with an international standard (ISO 16368), ANSI and CSA standards will share more similarities, although there will still be some slight differences. For example, the current ANSI and CSA standards are product specific (i.e. there is a standard for each type of MEWPs), but the new revisions will be subject matter based standards (i.e. safe use, training and design).

To prepare for these standards changes, it is important for users (defined as employers) to understand the more significant changes, especially because some of them are specific to ANSI or CSA only, while others are shared between the two standards.

Major standards changes to be aware of include:

- Safe Use Planning
- Supervisor Training
- Occupant Training
- Maintenance and Repair Personnel Training

#### Safe use planning (ANSI and CSA)

A safe use program specific to MEWPs must be developed by the user and must include, but not be limited to, the following:

- Performing a site risk assessment to identify hazards, evaluate risk, develop control measures and communicate with affected persons
- b) Selection, provision and use of a suitable MEWPs and work equipment associated with it;
- c) Access, preparation and maintenance of the site, as required, to include an assessment that the support surface is adequate to support the weight of the MEWPs;
- MEWPs maintenance including inspection(s) and repairs as required by the standard and recommended by the manufacturer;
- e) Only trained and authorized personnel is allowed to operate and/or occupy the MEWPs;
- f) Familiarization of authorized MEWPs operator(s) with the specific MEWPs to be used;
- g) Inform the operator of local site requirements, warn and provide the means to protect against identified hazards in the areas where the MEWPs will be operated;
- h) Have a trained and qualified supervisor to monitor the performance of the work of the operator to ensure compliance with provisions of this standard;
- i) Prevention of unauthorized use of the MEWPs;
- j) Safety of persons not involved in the operation of the MEWPs.



A Safe Use Program must be developed by the user.

#### Supervisor Training (ANSI Only)

A major addition to the ANSI Standard is the requirement that the user must ensure that all personnel that directly supervise MEWPs operators are trained in the following areas:

- a) proper selection of the correct MEWPs for the work to be performed;
- b) the rules, regulations and standards that apply to MEWPs, including the provisions for safe use as defined in ANSI A92.22, training and familiarization, and the work being performed;
- c) potential hazards associated with use of MEWPs and the means to protect against identified hazards;
- knowledge that the manufacturer's operating manual(s) are an integral part of the equipment and need to be stored properly in the weather-resistant compartment on the MEWPs.



#### Occupant Training (ANSI and CSA)

Another addition, the MEWPs operator must now provide instruction or otherwise ensure that all occupants in the platform have a basic level of knowledge to work safely on the MEWPs. This instruction must provide the occupants with the knowledge to complete the work activity in a safe manner on the MEWPs. It should also provide at least one of the occupants with the knowledge to operate the controls in an emergency where the operator cannot. It is important to note that this instruction does not give the occupant authorization to operate the controls at any time except in an emergency.

The knowledge that every occupant must have includes the following:

- a) the requirement to use fall protection and the location of fall protection anchors;
- b) factors including how their actions could affect stability;
- c) safe use of MEWPs accessories they are assigned to use;
- d) site-specific work procedures the occupants must follow related to the operation of the MEWP;
- e) hazards related to the task at hand and their avoidance, to include any applicable site risk assessment;
- f) general knowledge of the intended purpose and function of MEWPs controls and safety-related items specified by the manufacturer, including emergency shut-down and lowering procedures, to the extent required to lower the MEWPs safely to the ground/ stowed position (this requirement need only to be conveyed to at least one other occupant); and

#### Maintenance and Repair Personnel Training (CSA)

While ANSI has required maintenance personnel to be trained in the current standards, this will now also be a requirement in Canada. Users must ensure that maintenance and repair personnel are trained by a qualified person to inspect and maintain the MEWPs in accordance with the manufacturer's recommendations and ANSI and CSA standards.

In the case where an MEWPs is being rented, arrangements must be made by the owner to identify the entity that will be responsible for the inspections and maintenance activities described in this clause.

#### **BIG CHANGES, LITTLE CHANGES ARE COMING**

In addition to the terminology and language changes in the new ANSI A92 and CSA B354 standards, the standards also include several big changes to the equipment itself.

New features, such as Platform Load Sense and Dynamic Terrain Sensing, will be incorporated into the design of many mobile elevating work platforms (MEWPs), as well as new provisions for machines rated "Indoor Only."

g) manufacturer's warnings and instructions.

#### Platform Load Sense

Following in the footsteps of EN280, a European standard in effect since 2001, many MEWPs in North America will be equipped with Platform Load Sense. Also known as an overload system or load sense system (LSS), platform load sense assesses the weight of operators and equipment in the work platform and will only allow machine operation if the total load is within the rated capacity of the MEWP. Equipment with a load sensing system will monitor the weight in the work platform and disable functionality if the rated capacity is exceeded.

This new feature will require additional systems on the machine, as well as service and training.

#### Dynamic Terrain Sensing

In the new standards, MEWPs in North America will also be required to be equipped with a Chassis Angle Sensor, which measures the angle, or tilt, of the machine's chassis during operation.

With this sensor, if the machine is working on a grade, a warning will alert the operator when the angle of the chassis has reached an operational limit. At this point, the machine will automatically restrict certain drive and boom functions, requiring that the operator safely return the machine to terrain that is within its operating range.

This functionality is similar to features currently on most scissor lifts available in the North American market.

#### Indoor-Only Machines

The new standards will also spell out requirements for MEWPs that are to be used indoors only. These provisions may allow for the development of smaller, lighter-weight MEWPs bearing an "indoor only" rating; such MEWPs would not be subjected to the typical wind speed limitations imposed on MEWPs used outdoors.

#### **Other Changes**

Many changes are coming in the updated North American standards. In addition to the big changes highlighted above, there will be many seemingly smaller, but just



Platform load sense assesses the weight of operators and equipment in the work platform.



In the new standards, our MEWPs will be equipped with a Chassis Angle Sensor.

as important, alterations to pay attention to, including toeguards on work platform entrances, prohibiting the use of flexible and chain gates, as well as adjustments to the labeling and marking of machines.

These big and little changes in the new standards are intended to support aerial equipment manufacturers' efforts to provide the latest advancements in safe work at height solutions for owners and operators of MEWPs worldwide. Solutions that get people safely to aerial workspaces keep them safe while they complete the aerial work and safely get them back down.

### **RESPONDING TO THE NEW NORMAL**

The changes to North American standards will create a new "normal" for MEWPs worldwide. To prepare for these standards changes, Genie has been proactively working on a response to implementing the new requirements across its entire product range to offer effective, robust and reliable solutions worldwide.

Because Genie<sup>®</sup> machines will be manufactured in compliance with these new standards, it is time for you and your customers to know how we are responding to these changes, as well as customer demand worldwide for higher capacity machines.

#### Responding to Market Demand

To adapt to today's widespread need to enable people to work at height safely with increasingly heavy loads using a single machine, we have engineered a new generation of Genie booms to work in more applications that require higher capacities. And, we've done it with a focus on user interface and simplicity to make the machines easy to use while delivering a high rental return on invested capital (rROIC) that your business can rely on.

Easy to spot on your rental yards and your customers' jobsites, this new generation of Genie booms has an "XC<sup>™</sup>" designation in their nomenclature. The XC nomenclature also lets you know that this new boom complies with the overload restriction guidelines in the proposed ANSI A92 and CSA B354 industry standards, as well as the current European EN280 and Australian AS 1418.10 standards. This means our new XC machines are truly global machines with the ability to work in applications worldwide.



The XC nomenclature lets you know the new boom complies with overload restriction guidelines.

#### "XC" Means Xtra Capacity™

Industry-wide, there is a mix of high- and dual-capacity machines. This can be challenging, particularly when spec'ing a project that requires lifting heavy loads. The Genie solution: All "XC" booms combine the benefits of a dual-envelope design to provide an unrestricted platform capacity of 660 lb (300 kg) and a restricted capacity of 1,000 lb (454 kg).

The benefit to your rental store — Genie Xtra Capacity<sup>™</sup> booms respond to a growing market trend, creating high demand for the Genie XC<sup>™</sup> family of booms which will increase your rROIC and boost your profitability quickly.

The benefit to your customers — Genie Xtra Capacity booms reduce the number of lift cycles, as well as the amount of equipment/operators need to get tools and materials to work areas at height. Doing more with a single unit saves time and increases productivity. These machines are a perfect fit for your customers' heavy work with heavy tools applications, such as construction, bridge inspections and maintenance, stadium and sports arena, gas and oil refineries, industrial, telecommunications and large utility work.

#### New Technology Enhances Safe Work Practices

Our number one priority is to provide safe, productive aerial work platforms to you. Thanks to new technology incorporated into the design, Genie XC booms will carry more load than ever before, giving the machines the unparalleled ability to complete higher capacity jobs in a wider range of applications.

To increase performance, decrease set-up time and improve the overall productivity, all Genie XC models boast the ability to do zero-load field calibration. These new Genie booms are equipped with a load sense cell that continuously checks the weight in the platform and adjusts to match the load chart. A tilt sensor also gives users access to different ranges of motion based on the machine's rated slope limit, even on certain sloped surfaces, improving the ability to access even the most hard-to-reach work areas.

With the implementation of these changes in 2017-2018, we will continue to evaluate and manufacture our products to meet the most current industry standards worldwide. This is our commitment to our customers that we will continue to provide them with the best safe work at height solutions possible.



Genie Xtra Capacity booms reduce the number of lift cycles helping you save time and increase productivity.

an advancement in machine design. Learning from that change, all of us — aerial manufacturers, rental companies and operators — can realize the new opportunities in this change by starting early to work together. Our advice: Do not to underestimate the impact the introduction of the ANSI/CSA suite of standards will have and start preparing now for a smoother transition.

This article only scratches the surface of the changes that the industry will be facing. We continue to develop educational material to assist you in understanding the new requirements and provide ongoing suggestions and support to help you navigate the changes.

We encourage you to purchase a copy of the standards in order for you to achieve a full understanding of the requirements.

#### **FINAL COMMENTS**

The last big change, which introduced pothole protection in the late-90's was disruptive, but looking back, represents



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