



# PLANNING ADVISORY NOTICE

## Mobile Elevated Work Platforms *Part II*

**T**his Planning Advisory Notice (PAN) is Part II of best practices that may be considered for the use of Mobile Elevated Work Platforms (MEWP) within the telecommunications industry when working at heights. This PAN focuses on identifying the various types of MEWP's and bucket trucks and reviewing operating and maintenance considerations when utilizing different types of MEWP's and bucket trucks in the field. Additionally, this PAN is intended to raise awareness on the standards that apply to the safe use and operation of MEWP's and bucket trucks.

In the telecommunications industry we are often tasked with working from heights. As a result, the use of MEWP's and Vehicle Mounted Elevating and Rotating Aerial Devices (commonly referred to as "bucket trucks") has increased exponentially over the last few years and has become a necessary tool for completing some of our telecommunications small cell and antenna supporting structure work. Bucket trucks can provide a safe means to access work at heights provided that the equipment has been properly inspected, maintained, and is operated by trained technicians. When properly planned, all telecommunications work can be performed safely by using either climbing techniques that incorporate fall protection or using other forms of equipment such as a MEWP. Nevertheless, operator safety can only be achieved through proper planning and assessment, especially if working in an area that has potential hazards such as uneven terrain, soft soils, or traffic control requirements due to proximity to right of ways/heavily populated areas.

A MEWP, as defined by ANSI/SAIAA 92.22-2018, is a machine or device intended for moving persons, tools, and material to work positions, consisting of at least a work platform with controls, extending structure, and

chassis. These devices may be based on a trailer or have a mobile chassis. Mobile chassis MEWP'S are not designed for highway use. Conversely, a bucket truck is a vehicle mounted elevating and rotating aerial device, as defined by ANSI/SAIA A92-2-2015, that have extensible booms, aerial ladders, articulating boom aerial devices, and vertical towers on a truck, a trailer, or an all-terrain vehicle chassis.

*The two main differences between a MEWP and a bucket truck are that the bucket truck has a rotating and articulating boom, whereas a MEWP has only a rotating and extensible boom.*

ANSI/SAIA standards differentiate between the two devices primarily in the manufacturers testing requirements for each type. Both bucket trucks and MEWPs require the operator to be properly trained and follow the same basic safety procedures.

Bucket trucks can have operating heights from twenty-eight feet (28') on a light duty van or pickup truck chassis to three hundred twenty-five feet (325') on a multiple axle crane chassis. These can be separated into two classification types: Insulated booms and non-insulated booms. Insulated booms are used primarily by the electric industry and can afford the properly trained worker additional protection when working on or near overhead electric energized lines through the utilization of non-conductive boom sections and bas-

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## Planning Advisory Notice *(CONTINUED FROM PAGE 1)*

kets. They are intended for live-line energized electric work but can also be considered as a part of the pre-job planning for telecommunications work. Insulated booms are designed to operate in a fixed location and most have outriggers to stabilize and level the bucket truck.

Insulated boom sections require additional inspections and dielectric testing of the insulated boom sections. The high voltage dielectric testing is a critical testing application that must be performed correctly by trained personnel using the proper equipment and accepted testing methods, like those described in ANSI/ASIA A92.2-2015 Standard. Under OSHA standards, all insulated bucket trucks must have dielectric testing by qualified service technicians at least annually. The dielectric testing may be required more frequently depending upon the usage, work environment, and manufacturer recommendations. Additionally, buckets equipped with additional insulated bucket liner must be dielectrically tested on the same frequency as the boom maintenance schedule. A disadvantage of insulated buckets are access challenges as they do not have doors for ingress/egress.

The second type of bucket truck is non-insulated booms which are predominantly utilized in the telecommunications industry. Non-insulated booms are not designed for live-line electric work. They can be used for any type of properly planned non energized work on antenna supporting structures and small cell structures as long as the use of the truck is in accordance with federal, state, and local requirements.

Non-insulated booms are available in many sizes and operating heights. Many of these smaller bucket trucks are under 26,000 pounds and therefore do not require a CDL per DOT regulations. Smaller bucket trucks are common for small cell work in congested urban areas due to their small footprint and compact size. Some small bucket trucks do not have outriggers or stabilizers and are instead equipped with torsion bars for stability.

While all bucket trucks require documented daily inspections, non-insulated booms also require an annual boom inspection by a competent person. These inspections include, but are not limited to, a check for hydraulic leaks, boom and bucket damage, boom weld cracks, broken center turret bolts, tire pressure, and other requirements as established by the manufacturer. Many bucket trucks without outriggers require proper tire inflation for bucket stability and all of the tires to be attached to the truck as part of the overall weight ballast requirement of the bucket. Two other bucket trucks commonly used in



What not to do? Incorrect fall protection, standing on rails.



Antenna maintenance.

telecommunications are telescopic aerial devices and material handling buckets. Telescopic aerial devices are designed and capable of being moved with the boom extended with a worker in the bucket and are commonly utilized while pulling and lashing telecommunications cable from pole to pole. There are certain restrictions that apply when the vehicle is moving with the boom elevated and a worker in the basket; OSHA requires that the vehicle driver and the worker in the basket be in constant communication and the vehicle must be operated at low speeds. It may also be necessary, based upon the site conditions, to have a dedicated spotter for the operator.

Material handling buckets are outfitted with small jib booms for material and equipment handling while elevated. These buckets require additional inspections of the jib and additional training for the operator to fully understand how to set up and operate the jib within the manufacturers load charts and lifting requirements. Rigging equipment should follow the ASME B30 requirements.

When operating both insulated and non-insulated bucket truck, the operator needs to be trained and familiar with the equipment and follow the manufacturers operating recommendations. There must be a competent person and the operator must, at a minimum, be authorized

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## Planning Advisory Notice *(CONTINUED FROM PAGE 2)*

by the employer to perform work under the supervision of the competent person. It is important that the bucket be used within the designed operating limitations. Many buckets have articulating booms and the operator needs to be aware of the boom swing and boom knuckle location. The boom knuckle swing may require additional work zone set up space.

Whether utilizing a MEWP or bucket truck to complete the scope of work, the contractor must ensure that each occupant wears personal fall protection equipment, has appropriate length fall arrest lanyards or SRL (self-retracting lifeline), and utilizes proper anchor points as designated by the manufacturer. A common misuse of fall arrest lanyards is not understanding proper clearance requirements. Traditional six foot (6') fall arrest lanyards require approximately eighteen feet (18') of clearance; so, when an occupant is required by OSHA or the end user to employ fall protection they are not protected until they have eighteen feet (18') of clearance. When working below eighteen feet (18') the occupant should utilize a positioning lanyard and/or a SRL.



Dueling bucket trucks comparison of boom swing.

In closing, recent revisions to the ANSI/SAIA A92.22-2018 (The Scaffold & Access Industry Association – Safe Use of Mobile Elevating Work Platforms) and ANSI/SAIA A92.24-2018 (Training Requirements for the Use, Operation, Inspection, Testing and Maintenance of MEWP's) consensus standard further defines the role of the operator and training requirements for safe operation of MEWP'S and bucket trucks. Lastly, it is always important to consult the Manufacturers Operators Manual for additional safety and operation guidelines. ●



Proper fall protection is essential.