



TEXAS TECH UNIVERSITY HEALTH SCIENCES CENTER EL PASO  
Operating Policy and Procedure

Title: <b>Safety Standard Practice, Policy and Procedure: Manual Aerial Platform</b>	Policy Number: <b>75.08</b>
Regulation: OSHA Standard 29 CFR 1929.453 Reference:	Effective Date: <b>September 2006</b> Revised: March 2018

### **Policy Statement:**

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It is the policy of Texas Tech University Health Sciences Center El Paso (TTUHSC El Paso) that staffs who use equipment as part of their job duties are properly trained in the use of that equipment and adhere to all safety policies.

### **Purpose:**

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This standard practice Policy and Procedure outlines the minimum safety operating procedures that will be followed when operating the manual aerial platform.

This Policy will be reviewed every two (2) years by the Sr. Director of Safety Services, with recommendations and revisions forward through the Managing Director of Physical Plant and Support Services to the Chief Operating Officer Vice President for Operations.

### **Scope and Distribution:**

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This standard practice applies to all TTUHSC EL PASO personnel who will use the manual aerial platform. Contractors will be responsible to facilitate their own aerial platforms unless arrangements have been made with TTUHSC EL PASO personnel, if so they shall adhere to this policy.

### **Definitions:**

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**Aerial Platform** - A manually propelled, or vehicle mounted device that has an adjustable position platform, supported from ground level by a structure or vehicle.

**Authorized Personnel** - Staff qualified to operate an aerial platform and assigned to perform a specific type of duty or duties at a specific location or locations at a work site.

**Base** - The relevant contact points of the aerial platform that form the stability fulcrum (e.g., wheels, casters, outriggers, stabilizers, etc.)

**Chassis** - The integral part of the aerial platform that provides mobility and support for the elevating assembly.



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**Competent Person** – Staff member who, because of training and experience, is capable of identifying hazardous or dangerous conditions in powered platform installations.

**Elevating Assembly** - The mechanisms used to position the platform relative to the aerial platform chassis.

**Guardrail System** - A vertical barrier intended to prevent user from falling to lower levels.

**Hazardous Location** - Any location that contains, or has the potential to contain, an unsafe condition with the potential of harming the operator, others or equipment.

**Instability** - the quality or state of being unstable; likely to tip over.

**Interlock** - A control or mechanism that, under specific conditions, automatically allows or prevents the operation of another control or mechanism.

**Lanyard** - a flexible line or rope, wire rope, or strap which is used to secure the body belt or body harness to a deceleration device, lifeline or anchorage.

**Modification/Modified** - to make a change(s), temporary or permanent, to an aerial platform that affects the operation, stability, safety factors, rated load or safety of the aerial platform in any way.

**Operator** - A qualified person who controls the movement of the aerial platform.

**Outriggers** - Devices that increase the stability of the aerial platform and that are capable of lifting and leveling the aerial platform.

**Platform** - the portion of the aerial platform intended to be occupied by user with their necessary tools and materials.

**Platform Height** - The vertical distance measured from the floor of the platform to the surface upon which the machine is supported.

**Qualified Person** - User who by reason of knowledge, experience, and training is certified and familiar with the operation to be performed and the hazards involved.

**Rated Work Load** - The designed carrying capacity of the aerial platform as specified by the manufacturer.

**Shall** - The word "shall" is to be understood as mandatory.



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**Stability** - The quality, state of being stable, firmly anchored, not likely to tip over.

**Procedure:**

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Operator will adhere to the following guidelines to ensure proper use and safe operation.

- a) **ONLY AUTHORIZED** staff (those who have been properly trained and observed safely operating by the Competent Person Identified by Department) shall operate the manual aerial platform/lift.
- b) Do Not Operate this machine until satisfying training requirements. Training needs to be completed and documented by authorized personnel.
- c) Before operating, each operator will conduct a Walk-Around-Inspection. **(See Attachment)**
- d) This machine will be operated utilizing a buddy-system. One person will work as the operator and the other will be the look-out person at the base. The look-out will warn people not to work, stand, or walk under the raised platform.
- e) Barricades, rope-off or cones will be used to secure the area where the manual aerial platform is operating.
- f) Before operating, the operator will check that the work area is free of any hazard or unsafe condition.
- g) This machine will only be set-up on a smooth, firm surface upon which the machine is able to be leveled.
- h) If this machine needs to be serviced, machine will not be operated until the problem is corrected.
- i) The operator will read, understand, and obey all dangers, warnings, cautions and operating instructions on the machine.
- j) This machine will not be operated if warning labels are not legible and in place.
- k) This machine will not be operated during high winds, rain or snow.
- l) Personal Protective Equipment will be used at all times while operating the manual aerial platform; i.e. hard hat, safety glasses, hard toe safety shoes, work gloves, and body harness.
- m) Operator must be familiar with emergency controls.



## **Responsibilities Associated to Aerial Platform Use:**

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**Sr. Director of Facilities Operations and Maintenance** - Responsible for the overall implementation of this procedure.

**Assistant Director of Facilities Operations and Maintenance** – Ensures that the necessary training is acquired by all staff, operating, performing maintenance, and conducting inspections on the aerial platform.

**Maintenance Supervisor /Housekeeping Supervisor/Landscape Supervisor(s)** - Ensure that all Texas Tech Staff assigned to this type of work are properly trained and qualified to perform the duties assigned.

**Safety Managers** - Responsible to: ensure that all provisions of this procedure are kept updated according to the latest OSHA requirements, that training is available for Texas Tech Staff and notifying management if procedures are not being followed.

**Department Qualified Person** - Responsible for scheduling necessary training, conducting training on this procedure, and maintaining training records.

**TTUHSC EL PASO Staff** - Are not to operate any aerial platform without having been properly trained on the details of this procedure and the operating manual of the specific model aerial lift to be operated.

## **Training:**

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TTUHSC EL PASO Staff who are scheduled to perform the functions of operators of aerial platforms or maintenance on aerial platforms shall be trained on these procedures.

Operator and maintenance training shall include, but not be limited to the following before actually operating the aerial platform or performing maintenance on an aerial platform. (In addition to these guidelines you can also use the OSHA FactSheet attached).

1. Know the intended purpose and function of each of the controls.
2. Read or have been instructed on and understand the manufacturer's operating instructions, maintenance manual and safety rules.
3. Read or have been instructed on all decals, warnings, and instructions displayed on the aerial platform.



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4. Read or have been instructed on the performance of the Daily Walk –Around Inspections.
  5. Taken a written test and passed it with a score of 100 %. Failure to achieve a passing grade will result in having to repeat the above four steps until a passing grade is obtained or the trainer, in consultation with the supervisor, agree that this individual is not suited for aerial platform operation.
  6. The operator trainee shall operate the aerial platform in an area free of obstructions under the direction of the department's competent person, for a time sufficient to determine that the trainee displays proficiency in knowledge and operation of the aerial platform.
  7. Only properly trained and authorized TTUHSC EL PASO Staff shall be permitted to operate any aerial platform.
  8. Only properly trained staff shall be permitted to perform inspections and required maintenance of aerial platform.
  9. Written records of aerial platform training for operators shall include the staffs name, date of training, trainer's name and affiliation, topics covered and the original written test or tests taken. These records shall be maintained for 5 years by the Departments Competent Person.
  10. Re-training shall take place every three years; when a new model is acquired, rented or when as staff member demonstrates less than proficiency in the operation or maintenance of aerial platforms
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## **Record Retention:**

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The following records shall be maintained for a minimum of five years by the Facilities Operations Maintenance Department (FOM).

1. Records of competent person training.
2. Records of each staff member trained as operator for the model they will operate.
3. Records of each staff member trained to perform maintenance and inspections.
4. Written records of the Daily Walk-Around Inspections. These records shall include the date of the inspection, model and serial number of the aerial platform, name and affiliation of the person performing the inspection, any deficiencies found, and the corrective action recommended.
5. Written records of all repairs accomplished, including the date of the repair, a description of the work accomplished, the work order number, model and serial number of the aerial platform, and the identification of the person(s) performing the work.
6. Written records of modifications, alterations, and statements of manufacturer's approval for any modifications and alterations shall be maintained for five years after sale or other disposition of the aerial platform.



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(Attachment A) Aerial Platform Inspection Checklist

Date Completed: \_\_\_\_\_ Inspected By: \_\_\_\_\_

Model Number: \_\_\_\_\_ Serial Number: \_\_\_\_\_

**TO AVOID POSSIBLE INJURY MAKE SURE MACHINE POWER IS "OFF" DURING INSPECTION.**  
 Place a check mark in box as appropriate to condition found.

Inspection Area		Inspection Results		
		Satisfactory	Unsatisfactory	Comments
Drive and Caster Wheels	Properly secured wheels and casters turn freely and are properly lubricated.			
Base Frame	Components properly secured, no loose wires dangling below base, bubble level in place and functioning properly.			
Battery Charger Box Assembly	Proper battery electrolyte level, no cable corrosion. Battery box moves freely when machine is tilted for transporting.			
Outrigger Interlock Indicator LED's	Ensure LED lights turn "ON" once unit is leveled.			
Outrigger Sockets	Outrigger lock/release pins in place and secure, no visible damage. Outriggers interlock contacts (inside outrigger sockets) secure and clean.			
Outriggers Beams	Outriggers interlock contacts properly installed and clean (on bottom of outrigger assembly). Leveling jacks secure to the outrigger assembly, lubricated and functioning properly.			
Motor/Pump Reservoir Power Unit	No evidence of hydraulic leaks, Check that hydraulic reservoir fluid is filled to the "Fill to Line" mark on the side of the reservoir.			
Ground Controls	Key switch operable, placards secure and legible; emergency stop switch, properly set for operation.			
Mast Assembly	Inspect mast chains, cables and hoses.			
Platform Rail Installation	Entry gate/bar in proper working order.			
Platform Assembly	Secure to mast; Control and power cables properly tensioned and seated in control cable sheaves; control sheaves rotate freely.			



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Platform Controls	Placards secure and legible, emergency shut-off button set for operation. Operator's manual enclosed in manual storage tube.			
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## AERIAL PLATFORM OPERATION SAFETY RULES

- Must be an approved authorized operator.
- Observe and obey all danger, warning, caution and other instructions on machine.
- Provide a walk around inspection before operation of unit utilizing the approved check list.
- All placards, safety decals must be in place and legible.
- Never exceed the maximum platform capacity.
- Red tag unit if not operational and report unsafe condition to supervisor.
- **Operator has the authority to shut down machine if found unsafe.**
- Check the work area for hazards that might cause tip over, above, below and all around.
- Set-up machine only on smooth, firm surface on which machine is able to be leveled.
- Maintain a safe distance around electrical panels and power lines.
- Keep everyone clear of the working platform. Never allow anyone to pass under a raised platform.
- A two person operation (buddy system) will always be utilized while operating the aerial platform.
- Maintain the work area around the platform restricted by means of; safety cones, caution tape.
- Wear appropriate PPE when operating the work platform; hard hat, safety glasses, work gloves, fall protection and hard toe safety shoes.
- Never modify or remove any part of the equipment unless authorized by the manufacturer.
- If machine is unattended, lower platform, shut off, engage parking break and take necessary steps to prevent unauthorized "use".
- Do not wear loose clothing or accessories that can be caught in moving parts.
- Keep a fire extinguisher available at work site.
- Never operate machine in high wind, rain or snow.





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- Always use the (3) point contact system to get on and off from platform. (two hands one foot, two feet one hand ...etc...)

AERIAL PLATFORM OPERATION TEST

Operator Name: \_\_\_\_\_

Date: \_\_\_\_\_

- |                          |                          |  |
|--------------------------|--------------------------|--|
| <input type="checkbox"/> | <input type="checkbox"/> | 1. Anyone can operate the aerial platform machine?   |
| <input type="checkbox"/> | <input type="checkbox"/> | 2. Walk-Around Inspections are required to be conducted before the start of the operation of the aerial platform.  |
| <input type="checkbox"/> | <input type="checkbox"/> | 3. The Operator has the authority to shut down the machine if it is unsafe to use?   |
| <input type="checkbox"/> | <input type="checkbox"/> | 4. The aerial platform cannot be operated without the placards in place?   |
| <input type="checkbox"/> | <input type="checkbox"/> | 5. The aerial platform needs to be placed on a smooth surface where it can be leveled properly?  |
| <input type="checkbox"/> | <input type="checkbox"/> | 6. Three persons can occupy the platform cage?   |
| <input type="checkbox"/> | <input type="checkbox"/> | 7. It is O.K. to modify or remove parts from the machine without the authorization of the manufacturer?  |
| <input type="checkbox"/> | <input type="checkbox"/> | 8. The look-out person needs to warn people from walking and getting too close to the platform?  |
| <input type="checkbox"/> | <input type="checkbox"/> | 9. The work area needs to be roped-off and restricted from people?   |
| <input type="checkbox"/> | <input type="checkbox"/> | 10. The machine can be operated in any type of weather, rain, hail, and snow?  |
| <input type="checkbox"/> | <input type="checkbox"/> | 11. It is O.K. to jump off the Platform when getting off?  |
| <input type="checkbox"/> | <input type="checkbox"/> | 12. In addition to the Walk-Around Inspection the operator needs to check the work area for any hazards and unsafe conditions prior to starting your task? |
| <input type="checkbox"/> | <input type="checkbox"/> | 13. Staging the aerial platform next to electrical wires is recommended?   |
| <input type="checkbox"/> | <input type="checkbox"/> | 14. Safety shoe's, working gloves and hard hat are the only required PPE to use while operating the aerial platform?                                       |
| <input type="checkbox"/> | <input type="checkbox"/> | 15. It is safe to leave the machine unattended without taking any precautions?   |
| <input type="checkbox"/> | <input type="checkbox"/> | 16. A copy of the machine's safety and operating manual needs to remain in the storage container at all times?   |
| <input type="checkbox"/> | <input type="checkbox"/> | 17. It only takes one person to safely operate the aerial platform machine?  |
| <input type="checkbox"/> | <input type="checkbox"/> | 18. The aerial platform can be safely moved up an incline by one person?   |



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19. Walk-Around Inspections do not have to be documented?

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20. The aerial platform authorization training is good for as long as I work for Texas Tech?

## Aerial Lifts

An aerial lift is any vehicle-mounted device used to elevate personnel, including:

- Extendable boom platforms,
- Aerial ladders,
- Articulating (jointed) boom platforms,
- Vertical towers, and
- Any combination of the above.

Aerial lifts have replaced ladders and scaffolding on many job sites due to their mobility and flexibility. They may be made of metal, fiberglass-reinforced plastic, or other materials. They may be powered or manually operated, and are considered to be aerial lifts whether or not they can rotate around a primarily vertical axis.

Many workers are injured or killed on aerial lifts each year.

OSHA provides the following information to help employers and workers recognize and avoid safety hazards they may encounter when they use aerial lifts.

### Hazards Associated with Aerial Lifts

The following hazards, among others, can lead to personal injury or death:

- Fall from elevated level,
- Objects falling from lifts,
- Tip-overs,
- Ejections from the lift platform,
- Structural failures (collapses),
- Electric shock (electrocutions),
- Entanglement hazards,
- Contact with objects, and
- Contact with ceilings and other overhead objects.

### Training

Only trained and authorized persons are allowed to operate an aerial lift. Training should include:

- Explanations of electrical, fall, and falling object hazards;
- Procedures for dealing with hazards;
- Recognizing and avoiding unsafe conditions in the work setting;
- Instructions for correct operation of the lift (including maximum intended load and load capacity);
- Demonstrations of the skills and knowledge needed to operate an aerial lift before operating it on the job;
- When and how to perform inspections; and
- Manufacturer's requirements.

### Retraining

Workers should be retrained if any of the following conditions occur:

- An accident occurs during aerial lift use,
- Workplace hazards involving an aerial lift are discovered, or
- A different type of aerial lift is used.

Employers are also required to retrain workers who they observe operating an aerial lift improperly.

### What to Do Before Operating an Aerial Lift

#### Pre-start Inspection

Prior to each work shift, conduct a pre-start inspection to verify that the equipment and all its components are in safe operating condition. Follow the manufacturer's recommendations and include a check of:

#### Vehicle components

- Proper fluid levels (oil, hydraulic, fuel and coolant);
- Leaks of fluids;
- Wheels and tires;
- Battery and charger;
- Lower-level controls;
- Horn, gauges, lights and backup alarms;
- Steering and brakes.

#### Lift components

- Operating and emergency controls;
- Personal protective devices;
- Hydraulic, air, pneumatic, fuel and electrical systems;
- Fiberglass and other insulating components;
- Missing or unreadable placards, warnings, or operational, instructional and control markings;
- Mechanical fasteners and locking pins;
- Cable and wiring harnesses;
- Outriggers, stabilizers and other structures;
- Loose or missing parts;
- Guardrail systems.

Do not operate any aerial lift if any of these components are defective until it is repaired by a qualified person. Remove defective aerial lifts from service (tag out) until repairs are made.

#### Work Zone Inspections

Employers must assure that work zones are inspected for hazards and take corrective actions to eliminate such hazards before and during operation of an aerial lift. Items to look for include:

- Drop-offs, holes, or unstable surfaces such as loose dirt;
- Inadequate ceiling heights;
- Slopes, ditches, or bumps;
- Debris and floor obstructions;
- Overhead electric power lines and communication cables;
- Other overhead obstructions;
- Other hazardous locations and atmospheres;
- High wind and other severe weather conditions, such as ice; and
- The presence of others in close proximity to the work.

## What to Do While Operating an Aerial Lift

### Fall Protection:

- Ensure that access gates or openings are closed.
- Stand firmly on the floor of the bucket or lift platform.
- Do not climb on or lean over guardrails or handrails.
- Do not use planks, ladders, or other devices as a working position.
- Use a body harness or a restraining belt with a lanyard attached to the boom or bucket.
- Do not belt-off to adjacent structures or poles while in the bucket.

### Operation/Traveling/Loading:

- Do not exceed the load-capacity limits. Take the combined weight of the worker(s), tools and materials into account when calculating the load.
- Do not use the aerial lift as a crane.
- Do not carry objects larger than the platform.
- Do not drive with the lift platform raised (unless the manufacturer's instructions allow this).
- Do not operate lower level controls unless permission is obtained from the worker(s) in the lift (except in emergencies).
- Do not exceed vertical or horizontal reach limits.
- Do not operate an aerial lift in high winds above those recommended by the manufacturer.
- Do not override hydraulic, mechanical, or electrical safety devices.

### Overhead Protection:

- Be aware of overhead clearance and overhead objects, including ceilings.

- Do not position aerial lifts between overhead hazards if possible.
- Treat all overhead power lines and communication cables as energized, and stay at least 10 feet (3 meters) away.
- Ensure that the power utility or power line workers de-energize power lines in the vicinity of the work.

### Stability in the Work Zone:

- Set outriggers on pads or on a level, solid surface.
- Set brakes when outriggers are used.
- Use wheel chocks on sloped surfaces when it is safe to do so.
- Set up work zone warnings, such as cones and signs, when necessary to warn others.

Insulated aerial lifts offer protection from electric shock and electrocution by isolating you from electrical ground. However, an insulated aerial lift does not protect you if there is another path to ground (for instance, if you touch another wire). To maintain the effectiveness of the insulating device, do not drill holes in the bucket.

## Standards that Apply

### OSHA Standards:

29 CFR 1910.67, 29 CFR 1910.269(p), 29 CFR 1926.21, 29 CFR 1926.453, 29 CFR 1926.502.

### American National Standards Institutes standards:

ANSI/SIA A92.2-1969, ANSI/SIA A92.3, ANSI/SIA A92.5, ANSI/SIA A92.6.

## Additional Information

OSHA has a variety of publications, standards, technical assistance and compliance tools to help you. OSHA also offers extensive assistance through workplace consultations, grants, strategic partnerships, state plans, training and education. OSHA's Safety and Health Program Management Guidelines (54 Federal Register 3904-3916, January 26, 1989) detail elements critical to the development of a successful safety and health program.

To file a complaint by phone, report an emergency, or get OSHA advice, assistance, or products, contact your nearest OSHA office or call us toll-free at 1-800-321-OSHA (6742).

This is one in a series of informational fact sheets highlighting OSHA programs, policies or standards. It does not impose any new compliance requirements. For a comprehensive list of compliance requirements of OSHA standards or regulations, refer to Title 29 of the Code of Federal Regulations. This information will be made available to sensory-impaired individuals upon request. The voice phone is (202) 693-1999; the teletypewriter (TTY) number is (877) 889-5627.

For assistance, contact us. We can help. It's confidential.



**Occupational Safety  
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**www.osha.gov 1-800-321-6742**