



POLICY: III: 07 – Operation of Aerial Platforms
Procedure Review: Annually

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APPROVED: Executive Director of Facilities and Construction:

I. PURPOSE

To outline safe operating procedures of aerial platforms, aerial ladders, articulating boom platforms, scissor lifts, vertical towers, ladder trucks, or a combination of such devices used to elevate employees to job-sites above ground and to prevent serious accidents from occurring while operating these devices. This procedure applies to the above devices owned or leased by James Madison University, which are operated by Facilities Management (FM) employees.

II. DEFINITIONS

- A. Aerial platform - A manually propelled, self-propelled or vehicle-mounted device that has an adjustable position platform, supported from ground level by a structure or vehicle.
- B. Authorized personnel - Employees certified or trained 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.
- C. Base - The relevant contact points of the aerial platform that form the stability fulcrum (e.g. wheels, casters, outriggers, stabilizers, etc.)
- D. Body harness: A safety device worn by an individual and attached to the boom or bucket by a lanyard when working from an aerial lift.
- E. Chassis - The integral part of the aerial platform that provides mobility and support for the elevating assembly.
- F. Competent person - An employee who, because of training and experience, is capable of identifying hazardous or dangerous conditions in powered platform installations and of training employees to identify such conditions.
- G. Configuration - Positions in which an aerial platform or any part thereof can be placed within its intended operating limits.
- H. Elevating assembly - The mechanisms used to position the platform relative to the aerial platform chassis.
- I. Guardrail System – A vertical barrier intended to prevent employees from falling to lower levels.
- J. Hazardous Location – Any location that contains, or has the potential to contain, an explosive or flammable atmosphere as defined in NFPA 505. A copy of NFPA 505 can be obtained in the FM Life Safety office.

- K. Instability – The quality or state of being unstable, likely to tip over.
- L. Insulated platform – A platform designed and tested to meet the specific electrical insulation ratings consistent with the manufacturer’s identification plate.
- M. Interlock – A control or mechanism that, under specific conditions, automatically allows or prevents the operation of another control or mechanism.
- N. 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.
- O. Modification/Modified – To make a change, 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.
- P. Operator – A qualified person who controls the movement of the aerial platform.
- Q. Outriggers – Devices that increase the stability of the aerial platform and that are capable of lifting and leveling the aerial platform.
- R. Platform – The portion of the aerial platform intended to be occupied by employees with their necessary tools and materials.
- S. Platform height – The vertical distance measured from the floor of the platform to the surface upon which the machine is supported.
- T. Qualified person – An employee who by reason of knowledge, experience, and training is certified and familiar with the operation to be performed and the hazards involved.
- U. Rated workload – The designed carrying capacity of the aerial platform as specified by the manufacturer.
- V. Stability – The quality, state of being stable, firmly anchored, not likely to tip over.
- W. Stabilizers – Devices that increase the stability of the aerial platform but are not capable of lifting or leveling the aerial platform.

III. RESPONSIBILITIES

- A. Executive Director of Facilities and Construction – Responsible for the overall implementation of this procedure.
- B. Directors and Managers – Ensure the necessary training is acquired by employees performing maintenance or inspections, or operating aerial platforms/lifts, extension boom platforms, aerial ladders, articulating boom platforms, vertical towers, ladder trucks, tower trucks, or any combination of such devices.
- C. Supervisors – Ensure employees assigned to this type of work are properly trained and certified to perform the duties assigned.

- D. Employees – Responsible for keeping up with training, knowledge of this procedure and the operating manual(s) of specific model aerial lift(s) they operate.

IV. PROCEDURE

- A. Only authorized FM employees shall operate aerial platform/lifts, extensible boom platforms, scissor lifts, aerial ladders, articulating boom platforms, vertical towers, ladder trucks, tower trucks, or any combination of such devices. Hardhats shall be worn while lifts are in operation.
- B. An employee who is to work as an operator or perform work from any aerial lift shall be trained on this procedure and on the operating manual of the specific device which is to be operated.
- C. Aerial platforms shall not be modified or altered without the modifications or alterations approved and certified in writing by the manufacturer. Records of approved modifications and/or alterations, including written authorization from the manufacturer for the modification or alteration, shall be kept with the aerial platform as part of the operating and maintenance manual. The altering or disabling of interlocks or other safety devices is prohibited.
- D. Manufacturer's safety bulletins shall be complied when received from the manufacturer or dealer and copies kept with the aerial platform as part of the operating and maintenance manuals.
- E. Maintenance - A preventive maintenance program shall be established for each aerial platform in use at the university.
- F. Annual inspections of lifts shall be performed by a qualified mechanic and/or dealer. The Associate Director of Operations will be responsible for inspections. The inspection shall include all items specified by the manufacturer including but not limited to the following:
 - 1. Functions and their control for speed(s), smoothness, and limits of motion.
 - 2. Emergency lowering mechanism.
 - 3. Chain and cable mechanisms for adjustment and worn or damaged parts.
 - 4. Emergency and safety devices.
 - 5. Lubrication of all moving parts, inspection of filter element(s), hydraulic oil, engine oil, and coolant, as specified by the manufacturer.
 - 6. Visual inspection of structural components and other critical components, such as fasteners, pins, shafts, and locking devices.
 - 7. Placards, warnings, and control markings.
 - 8. Correction of all malfunctions and problems identified. Further inspection, if necessary, shall be performed before the aerial platform is returned to service.
 - a. Aerial platforms not in proper operating condition shall be removed from service until repaired. A warning tag stating, "Do Not Use" shall be attached to the control panel of the aerial platform.

- b. Written records of inspections shall include the deficiencies found, corrective action taken, the date of the inspection and the date of the corrective action along with the name of the person(s) performing the inspection. Written records shall be kept with the aerial platform as part of the operating and maintenance manual. A copy will also be attached to the inspection work order.
- G. Annual inspections shall be performed by trained and authorized associates. Documented inspections shall be performed before each use of the lift. A checklist will be kept with the lift and checked before each use. Employees will date and sign that an inspection has been completed
- H. Pre-Start inspection - Before use each, the operator shall visually inspect the aerial platform and conduct a functional test including, but not limited to, the following:
 1. Operating and emergency controls.
 2. Safety devices.
 3. Personal protective devices including fall protection.
 4. Air, hydraulic, and fuel system leaks.
 5. Cables and wiring harness.
 6. Loose and/or missing parts.
 7. Tires and wheels.
 8. Placards, warnings, and control markings.
 9. Outriggers, stabilizers, and other structures.
 10. Guardrail system.
 11. Items specified by the manufacturer.
- I. Before operation - Before authorizing operation of an aerial platform the operator shall:
 1. Check the area in which the aerial platform is to be used for possible hazards such as, but not limited to:
 - a. Drop-offs or holes.
 - b. Bumps or floor obstructions.
 - c. Debris.
 - d. Overhead obstructions and high voltage conductors.
 - e. Hazardous locations.
 - f. Inadequate surface and support to withstand all load forces imposed by the aerial platform in all operating configurations.

- g. Wind and weather conditions.
- h. Presence of unauthorized persons.
- J. During operation – The operator shall comply with OSHA guidelines 1910.67 to ensure the following before each elevation of the platform:
 - 1. The aerial platform is operated on a surface within the limits specified by the manufacturer.
 - 2. The outriggers, stabilizers, extendable axles, or other stabilizing methods are used as required by the manufacturer.
 - 3. Guardrails are installed and access gates or openings are closed per manufacturer's instructions.
 - 4. The load and its distribution on the platform and any platform extension are in accordance with the manufacturers rated capacity for that specific configuration.
 - 5. There is adequate clearance from overhead obstructions.
 - 6. The minimum safe approach distances to energized power lines and parts are maintained.
 - 7. Employees have checked the local weather and verified winds speeds are less than 25 mph. If, at any time, wind speeds exceed 25 mph, the employee must stop work and lower the platform to the resting position. Employees may not continue working until wind speeds are below 25 mph.
 - 8. A firm footing is maintained, with both feet, on the platform floor while working thereon. The use of planks, ladders, or any other device on the aerial platform for achieving additional height or reach is prohibited.
 - 9. Special precautions shall be taken when other moving equipment or vehicles are present to comply with local ordinances or safety standards established for the workplace. Warnings such as, but not limited to, flags, roped off areas, flashing lights, and barricades shall be used.
- K. Reporting problems or malfunctions - The operator shall immediately report any problems or malfunctions that become evident during operation of the aerial platform to the supervisor. Any problems or malfunctions that affect the safety or operation of the aerial platform shall be repaired prior to continued use of the aerial platform.
- L. Entanglement - Care shall be taken to prevent rope, electric cords, hoses, etc., from becoming entangled in the aerial platform.
- M. Capacity limitation - Aerial platform rated capacities shall not be exceeded when loads are transferred to the platform at any height.
- N. Work area - The operator shall ensure the area surrounding the aerial platform is clear of personnel and equipment before lowering the platform.
- O. Fueling - The engine shall be shut down while fuel tanks are being filled. Fueling shall be done in a well-ventilated area free of flame, sparks, or other hazards that may cause fire or explosion.

- P. Battery charging - Batteries shall be charged in a well-ventilated area free of flame, sparks, or other hazards that may cause fire or explosion.
- Q. Platform positioning - The aerial platform shall not be positioned against another object to steady the platform.
- R. Misuse as a crane - The aerial platform shall not be used as a crane.
- S. Operating area - The aerial platform shall not be operated from a position on trucks, trailers, railway cars, floating vessels, scaffolds, or similar equipment, unless the application is approved in writing by the manufacturer.
- T. Travel conditions - Under all travel conditions, the operator shall limit travel speed according to conditions of ground surface, congestion, visibility, slope, locations of personnel, and other factors causing hazards of collision or injury to personnel.
- U. Unauthorized use - Means shall be used to protect against use by unauthorized person(s).
- V. Shutdown of the aerial platform - The operator shall cease operation of the aerial platform in case of any suspected malfunctions, any hazard, or potentially unsafe conditions that may be encountered. The aerial platform and/or the work area shall then be inspected and any malfunction or problem shall be corrected before further operation of the platform.

V. LADDERS AND TOWER TRUCKS

- A. Only authorized associates (those who have been properly trained and certified) shall operate a ladder or tower truck.
- B. Aerial ladders shall be secured in the lower traveling position by the locking device on top of the truck cab and the manually operated device at the base of the ladder before the truck is moved for highway travel.

VI. ARTICULATING BOOM PLATFORMS

- A. Only authorized associates (those who have been properly trained and certified) shall operate an extensible or articulating boom platform.
- B. Lift controls shall be tested prior to use to determine that they are in safe working condition.
- C. A body harness (fall restraint system) shall be worn and a lanyard attached to the boom or basket when working from an articulating boom platform.

VII. TRAINING

- A. FM employees who are scheduled to perform the functions of operators of aerial platforms shall have training on this procedure and either on the same model of aerial platform or one having operating characteristics and controls consistent with the one to be used during actual work site operation.

- B. Operator training shall include, but not be limited to, the following before operating or performing maintenance on an aerial platform:
1. Knowledge of the intended purpose and function of each of the controls.
 2. Knowledge of the manufacturer's operating instructions, maintenance manual and safety rules.
 3. Knowledge of all decals, warnings, and instructions displayed on the aerial platform.
 4. Passing an on-line course and satisfactorily completing a hands-on skills assessment on the aerial platform in an area free of obstructions under the direction of the competent person for a time sufficient to determine the trainee displays proficiency in knowledge and actual operation of the aerial platform.
- C. Only properly trained and authorized employees shall be permitted to operate any aerial platform.
- D. Written records of aerial platform training for operators shall include the employees' name, date of training, trainer's name and affiliation, topics covered and the original written test or tests taken. These records shall be maintained by Risk Management when provided by FM.
- E. Employees should be retrained if any of the following conditions occur:
1. An incident occurs during aerial lift use,
 2. Workplace hazards involving an aerial lift are discovered, or
 3. A different type of aerial lift is used.
- F. Employers are also required to retrain workers who they observe operating an aerial lift improperly.