

FESHM 10180: Aerial Lifts

Revision History

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1.0 INTRODUCTION

Man-lifts, articulating boom lifts, scissor lifts, and other lifts are used throughout Fermilab to perform a variety of functions. Equipment of this type is often grouped together under the title “aerial lifts.” The use of aerial lifts creates a potential for serious injury and property loss. This chapter contains procedures to ensure that the operation, inspection, and maintenance of aerial lifts are conducted in a safe manner and that operators are qualified to operate the lift safely.

2.0 APPLICABILITY

This chapter applies to any aerial lifts used at Fermilab. Examples include:

Extensible boom platforms

Aerial ladders;

Articulating boom platforms;

Elevating work platforms

3.0 DEFINITIONS

Articulating Lift - a lift that has a personnel basket or platform that can be maneuvered up, down, over, and sideways. There are one or more hinged boom sections.

Competent person - a person who has acquired through training, qualification or experience, or a combination of these, the knowledge and skills to carry out a particular task.

Personal Aerial Man-lift – Portable aerial device that lifts vertically, but not horizontally. They are usually lightweight and designed for one person to use indoors.

Powered Platform- a working platform where the hoist used to raise or lower the platform is mounted on the platform.

Scissor lift – An aerial device that lifts straight up and down, but not horizontally. They extend into the air via crisscross supports.

Qualified Operator - An individual deemed competent by management after successfully completing the Training and Qualification requirements of this chapter.

Qualified Person - A person who, by possession of a recognized degree in an applicable field or a certificate of professional standing, or who by extensive knowledge, training, and experience, has successfully demonstrated the ability to solve or resolve problems relating to the subject matter and work.



4.0 POLICY

The operation, inspection, maintenance, and testing of powered lifts shall be in accordance with mandatory standards. For powered lifts these standards are:

- 29 Code of Federal Regulation (CFR) 1910.66(i)(1) Operations (Powered Platforms, Manlifts, and Vehicle-Mounted Work Platforms)
- 29 CFR 1926.452(w) Mobile Scaffolding
- ANSI/SIA A92.2 – 2009 Vehicle Mounted Elevating and Rotating Aerial Devices
- ANSI/SIA A92.3 – 2006 Manually Propelled Elevating Aerial Platforms
- ANSI/SIA A92.5 – 2006 Boom-Supported Elevating Work Platforms
- ANSI/SIA A92.6 – 2006 Self-Propelled Elevating Work Platforms

Requirements applicable to all aerial lifts are highlighted in this procedure. Other requirements may exist that are specific to a certain style, size, or use of a particular piece or type of equipment. The appropriate standards are to be consulted by those assigned responsibility for aerial lift operations to identify specific requirements, recommendations, and guidance for the safe operation and use of this equipment. Assistance with the implementation of these standards can be obtained from division/section ES&H personnel, if requested.

5.0 RESPONSIBILITIES

5.1 Division/Section Heads

- Implement the requirements associated with the use of aerial lifts.
- Ensure that aerial lift operators are trained and qualified to perform their assigned duties.
- Appointing Operator Evaluators.
- Ensure that inspections are performed.

5.2 Facility Engineering Services Section

- Conduct quarterly and annual inspections and inspection records of all aerial lifts owned and operated by Fermilab.
- Distribute inspection, testing and maintenance reports to the division/section head upon request.

5.3 ESH&Q Section

- Coordinate with training providers to obtain qualified trainers.
- Maintain the lesson plan and training materials.
- Maintain documentation of all classroom training, on-the-job training and evaluations.



6.0 TRAINING AND QUALIFICATIONS

6.1 Employee

Operator training and qualification shall include those requirements identified in regulatory standards. In addition, the prospective aerial lift operator may be required to hold a valid driver's license from any of the fifty states.

6.2 Non-employee

Qualification of non-employees requesting to operate aerial lifts owned by Fermilab shall be made by a qualified Operator Evaluator of the division/section responsible for the equipment to be operated. In all cases, where previous training and experience is used as the basis for accepting qualification, such training and experience shall be certified in writing by the employer as meeting the requirements of regulatory standards. When there are special hazards/features associated with a particular piece of equipment, e.g., unfamiliar controls or modifications to the original design, a qualified division/section Operator Evaluator will determine whether the operator(s) shall receive documented job instructional training from Fermilab supervisory personnel. In addition, the prospective aerial lift operator may be required to hold a valid driver's license from any of the fifty states.

In the case of subcontractor personnel follow the procedures under the section "Loaning of Aerial Lifts."

6.3 Qualification Training

Operator training and qualification shall include both a classroom and performance evaluation phase. At a minimum, the training shall meet the learning objectives specified in the training course. Demonstration of the operator's abilities to perform all activities expected or anticipated for the job will be part of the qualification process during the performance phase. Individuals may be qualified for scissor-style lifts, boom-style lifts, or both. A designated division/section Operator Evaluator shall observe the operator's performance and document the performance results on Aerial Lift Evaluation Form.

Operator qualification is for a period of three (3) years unless withdrawn within that period by the operator's supervisor. Re-qualification training will include both a classroom phase and a performance phase.

6.4 Certification Records

Training records certifying operator qualification shall include the name of the trainee, date of training, and the signature of the trainer or evaluator.



6.5 Remedial Training

Remedial training will be provided to individuals who do not successfully pass the qualification course. The course instructor or Operator Evaluator will determine the level of remedial training required. Remedial training will be provided also to operators involved in an accident, a near-miss incident, or who are observed operating an aerial lift in an unsafe manner. The employee's supervisor in consultation with the Division Safety Officer or ES&H Point of Contact will determine the level of remedial training needed under these circumstances.

7.0 INSPECTIONS

7.1 Daily Pre-use Inspections

A safety inspection shall be completed for each lift prior to the start of each shift, or prior to the first use of the day for equipment not in continuous service. A qualified operator shall conduct the inspection, and preferably one that is familiar with the specific equipment. Documentation of daily pre-use inspections is not required.

Daily inspections are not required for equipment that is not in service.

7.2 Preventative Maintenance Inspection

A documented inspection shall occur at least every four months as part of the Preventative Maintenance and Repair program described in this chapter.

Quarterly inspections are not required for equipment that is not in service. Prior to being placed back into service, the quarterly inspection shall be completed by Facility Engineering Services Section (FESS).

7.3 Annual Inspection

A documented, annual inspection shall occur.

Annual inspections are not required for equipment that is not in service. Prior to being placed back into service, the annual inspection shall be completed by FESS.

8.0 OPERATIONS

Aerial lifts shall only be used in the environment, atmospheres and surfaces for which the manufacturer designates them.



8.1 Use of Fall Protection

Anyone working from a telescoping and or articulating boom lift and bucket trucks must wear a personal fall arrest system attached to the manufacture's designated anchorage point.

The use of a personal fall arrest system is not required on scissor lifts if the guardrail system is intact.

8.2 Repair

A qualified vendor working under the direction of FESS shall complete repairs on all aerial lifts.

8.3 Acceptance Testing

FESS shall arrange for documented inspection and testing of new aerial lifts before placing in service or after extensive repairs to a damaged one are made. The owner shall be provided with copies of acceptance testing documentation.

8.4 Control of Access to Aerial Lifts

Means shall be provided to prevent aerial lift use by unqualified personnel (e.g., restricting access, locking operating controls, removing ignition keys, posting each truck with a sign that states: "Trained Personnel Only" or other appropriate measures). This is the responsibility of the division/section who owns the equipment.

8.5 Damage to Aerial Lifts

When an aerial lift is damaged in an accident, it will be tagged and locked "out of service" by the division/section responsible for the lift. Owners will investigate and document incidents resulting in damage to an aerial lift. Do not return to service until repaired and, if applicable, until acceptance testing has been completed (See Acceptance Testing paragraph above).

9.0 PREVENTATIVE MAINTENANCE AND REPAIR PROGRAM

The FESS will administer a maintenance and repair program for all aerial lifts owned by Fermilab divisions and sections. This program will provide for quarterly preventive inspections and maintenance and an annual inspection for all equipment; and for any unforeseen maintenance and repair work necessary to keep the equipment in safe operating condition.

These services shall be conducted by FESS or, as their agent, a qualified maintenance contractor determined by a "Request for Proposal (RFP) with Qualifications" to assure professional services. The program will be carried out in conjunction with the division/section head responsible for the equipment. The division/section head is responsible for ensuring that all aerial lifts within their areas of responsibility are included in the program and shall establish and inform FESS of times of



availability. All costs for inspection, testing, and maintenance shall be the responsibility of the division/section that owns the equipment.

Note: Maintenance and repair of rental aerial lifts and associated equipment is the responsibility of the vendor as per contract documents unless the division/section administering the contract specifies otherwise.

10.0 LOANING OF AERIAL LIFTS

Loaning of an aerial lift to sub-contractor personnel must follow the requirements found in [FESHM 7020](#). The owner of the aerial lift must fill out the Sub-Contractor Acceptance And Use Of Fermilab Tools/Equipment form #20 found in [FESHM 7020 - F2](#) and verify that the operator meets the training requirements established in this chapter or the training requirements published in the Code of Federal Regulations.

11.0 DRIVING POWERED AERIAL LIFTS ON FERMILAB MAIN ROADS

At times it may be necessary to drive an aerial lift on Fermilab roads. These are slow moving vehicles that may introduce a collision hazard because of their slow speeds. The owner of the lift shall request an escort if necessary. The escort vehicle must have the emergency flashers ON. An aerial lift equipped with rotating/flashing/strobe lights and an operating horn does not need an escort as long as the lights and horn are functional and the lights turned ON. An aerial lift without lights/horn shall require an escort when transiting.

Escort duties are only required when transiting:

- Wilson Road
- Pine Street
- Batavia Road
- Eola Road
- Road A
- Road B
- Road D