

University of Portland



POWERED AERIAL LIFT OPERATION PROGRAM



UNIVERSITY OF PORTLAND

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POWERED AERIAL LIFT OPERATION PROGRAM

TABLE OF CONTENTS

1.0 Administrative Duties.....	1
2.0 Training.....	1
3.0 Inspections.....	3
4.0 Aerial Lift Operation.....	3
• Safe Aerial Lift Operating Requirements	
• Minimum Safe Approach Distances (MSAD)	
• Check points for aerial lift operation	
5.0 Pedestrians.....	6
APPENDIX A Aerial lift/Work Platform Inspection.....	6
APPENDIX B Aerial lift Performance Checklist.....	7
APPENDIX C Certification Forms.....	8





POWERED AERIAL LIFT OPERATION PROGRAM

The University of Portland written *Powered Aerial Lift Operations Program* establishes guidelines for its operators, training and record-keeping personnel. The program is recognized as University of Portland standard for operating procedures in order to promote the following:

- Provide a safe aerial lift work environment
- Certify and govern safe operator use of powered industrial aerial lifts
- Ensure proper care and maintenance of powered industrial aerial lifts

These guidelines are designed to ensure that aerial lift safety training, operation, and maintenance practices are clearly communicated, understood and obeyed.

1.0 ADMINISTRATIVE DUTIES

Environmental Health and Safety, in conjunction with Physical Plant, designs, develops, implements and maintains records for the Aerial Lift Operations Program. Copies of the written program and safety training materials are kept on the Environmental Health and Safety website, and on the Physical Plant Pilots UP Page.

2.0 TRAINING

Aerial lift training is scheduled every three years to train new employees and refresh certified operators. Supervisors may designate and work with Environmental Health and Safety to designate new potential operators to get immediately trained during the year for immediate certification if needed. All new operators will receive training regardless of previous experience. Supervisors are responsible for their employees' adherence to the powered man-lift policy.

Initial Training

Initial operator training consists of both classroom and practical training. Classroom training includes trainer presentation, trainee feedback through discussion, and evaluation of course content and learning preferences.

Classroom training:

- General aerial lift operation information
- Inspections and maintenance
- Vehicle capacity
- Vehicle stability
- Standard Operating Procedures
- Recharging
- Personal fall restraint and arrest system inspection, care, use and performance
- Workplace-related topics (determined from open classroom discussions)

Practical training is completed by university supervisors while working with the equipment under supervision of certified operators.

Practical training:

- Inspection
- Vehicle capacity/limitations
- Vehicle stability
- Controls and Instrumentation
- Steering and maneuvering.
- Operation on sloped surfaces
- Workplace-related topics (determined from open classroom discussions).

University of Portland provides training programs for its employees who might be exposed to fall hazards four feet or higher including aerial lift operators. Hazard recognition and protection procedures are included in the training and are established in the University of Portland *Fall Protection Program*.

Fall protection employee training covers the following areas:

1. The kind of fall hazards in the work area
2. The correct procedures for erecting, maintaining, disassembling, and inspecting fall protection systems
3. The use and operation of controlled access zones and guard-rail, personal fall arrest, safety net, warning line, and safety monitoring systems
4. The role of each employee in the safety monitoring system when the system is in use
5. The limitations on the use of mechanical equipment during the performance of elevated operations on low-sloped surfaces
6. The correct procedures for equipment and materials handling and storage, and the erection of overhead protection
7. Employees' roles in the University of Portland *Fall Protection Program*



Additional Fall Protection training details:

1. Only the designated qualified manager conducts ALL fall protection training
2. New employees whose duties include work above the heights standard are oriented to the University of Portland *Fall Protection Program* as part of the new employee orientation program
3. Every employee whose duties include work above the heights standard is trained in the *Fall Protection Program* at least on an annual basis including aerial lift operators
4. Every employee whose duties include work above the heights standard signs-off on all safety training related to fall protection
5. Any employee whose duties include work above the heights standard who has not received appropriate training in the *Fall Protection Program* may not work above height level until the employee has been trained and understands the program
6. The *Fall Protection Program* is based on published standards that govern fall protection. These standards are considered to be a minimum program; the University of Portland *Fall Protection Program* has been designed to *exceed* the minimum requirements

Training Certification

An employee who successfully completes classroom training and demonstrates skill mastery during a site-specific practical test may become a University of Portland certified operator. Records of operator training and certification are on file with Environmental Health and Safety and department supervisors.

Reoccurring Performance Evaluation

Certified University of Portland aerial lift operators are retrained every three years to verify their safe practice of aerial lift knowledge and skill. The Manager conducts site-specific evaluations for every operator in the program. Accidents, deficiency in standard operating procedure, or desires for refreshment, are all reasons for retraining. Otherwise, retraining shall occur every three years.

3.0 INSPECTIONS

Pre-Operational Aerial Lift Inspection Procedures

University of Portland Managers manage aerial lift inspections.

Using the Inspection Checklists located on each aerial lift for driver convenience, University of Portland requires operators to perform pre-operational inspections daily. When completing the inspection checklist, a check mark (**✓**) is used to denote satisfactory, an **X** mark means discrepancy, and **N/A** means non-applicable.

Operators are to add comments to describe problems they discover during inspection to aid the troubleshooting efforts of maintenance personnel.

Pre-operational inspection includes:

- ✓ Checking for leaks
- ✓ Checking Tires
- ✓ Checking all fluid levels
- ✓ Checking Hoses/Belts/Cables
- ✓ Checking Horns/Alarms
- ✓ Checking Gauges/controls
- ✓ Checking Safety equipment
- ✓ Checking Steering
- ✓ Checking Brakes
- ✓ Checking for Unusual Noise/Odors



Important Note: Aerial lifts used 24-hours-a-day shall be inspected before and after each shift.

Periodic Inspection Procedures

Periodic inspections occur in conjunction with maintenance and service schedules, measured in days and hours of operation. Specialized service technicians provide repair beyond recommended service schedules.

4.0 AERIAL LIFT OPERATION

Aerial lifts include vehicle mounted aerial devices used to elevate personnel to job sites above ground:

- Articulating boom platforms are designed to reach up and over obstacles.
- Extensible or telescoping boom platforms that may extend over one hundred feet.
- Vehicle mounted bucket lifts such as those types used to repair utility lines.
- Scissor lifts extend into the air via a series of crisscross supports.
- Personal man lifts are lightweight and designed for one person to use indoor.

The safe operation of aerial lifts is the only way to prevent certain hazards from occurring.

University of Portland regulates the use of aerial lifts in order to ensure that only qualified personnel use them in safe and responsible manners.

Safe Aerial Lift Operating Requirements

- 1) Aerial ladders must be secured in the lower traveling position before the truck is moved for highway travel; it is not permitted to rails as ladders.
- 2) Lift controls must be tested each day prior to use;
- 3) Only personnel authorized by a fall protection competent person may operate an aerial lift:
- 4) Employees must always stand firmly on the floor of the basket and may not sit or climb on the edge of the basket or use planks, ladders, or other devices for a work position;
- 5) A full-body harness must be worn and a lanyard attached to the boom or basket when working from an aerial lift (exception: a harness is not required in a scissor lift or personal man lift with surrounding guardrail system and closing gate or latch chain);
- 6) Belting off to an adjacent pole structure, or equipment while working from an aerial lift is not be permitted;
- 7) Boom and basket load limits specified by the manufacturer may not be exceeded;
- 8) The brakes shall be set and when outriggers are used, they must be positioned on pads or other solid surface. Wheel chocks must be installed when using an aerial lift on an incline;
- 9) An aerial lift truck may not be moved when the boom is elevated in a working position, except for equipment which is specifically designed for this type of operation;
- 10) Articulating and extensible boom platforms must have both platform and ground controls;
- 11) Before moving an aerial lift for travel, the boom must be inspected to ensure that it is properly cradled and outriggers are in the stowed position.
- 12) Aerial equipment must have a working back-up alarm or use a spotter for when backing



Minimum Safe Approach Distances (M.S.A.D)

The minimum safe approach distances to energized power lines and parts must be maintained.

Voltage Range (phase to phase)	Minimum Safe Approach Distance
0 to 300 V	Avoid Contact Completely
Over 300V to 50 kV	10 feet



CHECK POINTS FOR AERIAL LIFT OPERATION

1) Before an operation starts, the operator must:

- Be qualified and certified for safe operating and use including fall protection standards.
- Read and understand the operating instructions and safety rules of the equipment.
- Understand all decals, warnings and instructions displayed on the work platform.

2) Before each work shift starts, the operator must:

- Inspect for defects to help ensure safe operation: cracked welds or other frame defects, leaks in hydraulics, damaged control cables, loose wires, worn brakes or bad tires.
- Test the controls to make sure they work.
- Check the operating condition of the brakes, lights, horn and other accessories and warning devices.

3) Before each elevation, the operator must:

- Check for overhead obstructions and high-voltage conductors.
- Elevate the work on only a firm, level surface.
- Make sure the load and its distribution on the platform/bucket is according to the manufacturer's rated capacity. Never exceed the rated work load.
- Use the outriggers or stabilizers, if required, according to the manufacturer's instructions.
- Make sure guard rails on platform are installed correctly, and gates or openings are closed.
- Check all occupants' harnesses and lanyards, making sure they are attached correctly. Don't attach lanyards to objects outside the basket.
- Lanyards shall not exceed 6 feet in length. Lanyards used on aerial lift devices should not exceed 4 feet in length to reduce slack. Lanyard is to be secured to attachment point provided by lift manufacturer.
- ANSI approved safety glasses and hearing protection must be worn when conditions require protection.

4) Before and while operating a lift with its platform elevated, the operator must:

- Look in the direction of and keep a clear view of path of travel. Make sure it is firm and level.
- Maintain a safe distance from obstacles (ahead and above), debris, holes, depressions, ramps, and other hazards.
- Extend boom only on level surfaces. If boom lift is to be operated where there is an edge that could cause tipping hazard, a warning curb must be installed (minimum 6' to edge).
- Boom lift may travel with boom extended for short distances to complete repetitive tasks.

5) While operating an aerial lift, the operator must not:

- Use ladders or makeshift devices on the platform so workers can reach higher.
- Climb up or down extendable arms.
- Sit on or climb on the edge of the basket.
- Delay reporting any defects or malfunctions to the supervisor.
- Engage in stunt driving or horseplay.

5.0 PEDESTRIANS

Each aerial lift at University of Portland was purchased or leased for a specific purpose and will function in a specific area most of the time. Occasionally, these machines are operated in locations shared with pedestrians.

University of Portland powered industrial aerial lift operator must keep a lookout for ALL pedestrians at ALL times and operates these machines defensively.

➔ ***Pedestrians have the right-of-way at ALL TIMES.***



APPENDIX A

Aerial Lift Operating Checklist Date: _____ Initials _____

1. Before an operation starts, the operator must:
<input type="checkbox"/> Be qualified and certified for safe operating and use including fall protection standards.
<input type="checkbox"/> Read and understand the operating instructions and safety rules for the equipment being used.
<input type="checkbox"/> Understand all decals, warnings and instructions displayed on the work platform.
2. Before each work shift starts, the operator must:
<input type="checkbox"/> Inspect for defects that would affect a lift's safe operation. Be alert for cracked welds or other structural defects, leaks in hydraulics, damaged control cables, loose wires, or bad tires.
<input type="checkbox"/> Test the controls to make sure they work.
<input type="checkbox"/> Check the operating condition of the brakes, lights and other automotive-operating accessories, such as horns and warning devices.
3. Before each elevation, the operator must:
<input type="checkbox"/> Check for overhead obstructions and high-voltage conductors.
<input type="checkbox"/> Elevate the work on only a firm, level surface.
<input type="checkbox"/> Make sure the load and its distribution on the platform is according to the manufacturer's rated capacity. Never exceed the rated work load.
<input type="checkbox"/> Use the outriggers or stabilizers, if required, according to the manufacturer's instructions.
<input type="checkbox"/> Make sure guard rails on the platform are installed correctly, and the gates or openings are closed.
<input type="checkbox"/> Check all occupants' harnesses and lanyards, making sure they are attached correctly. Don't attach lanyards to objects outside the basket.
4. Before and while operating a lift with its platform elevated, the operator must:
<input type="checkbox"/> Look in the direction of and keep a clear view of the path of travel. Make sure the path is firm and level.
<input type="checkbox"/> Maintain a safe distance from obstacles (ahead and above), debris, holes, depressions, ramps, and other hazards.
5. While operating a lift, the operator must not:
<input type="checkbox"/> Use ladders or makeshift devices on the platform so workers can reach higher.
<input type="checkbox"/> Climb up or down extendable arms.
<input type="checkbox"/> Sit on or climb on the edge of the basket.
<input type="checkbox"/> Delay reporting any defects or malfunctions to the supervisor.
<input type="checkbox"/> Engage in stunt driving or horseplay.

APPENDIX B




AERIAL LIFT/WORK PLATFORM INSPECTION CHECKLIST

Date		Inspector	
Location		Serial #	
Item	Rating: Adequate (A) or Inadequate (IA)	Comments/Follow Up Instructions	
1. Steps			
2. Step Fastenings			
3. Rails			
4. Rail Supports and Fastenings			
5. Rollers and Slides			
6. Belt and Belt Tension			
7. Handholds and Fastenings			
8. Floor Landings			
9. Guardrails			
10. Lubrication			
11. Limit Switches			
12. Warning Signs and Lights			
13. Illumination			
14. Drive Pulley			
15. Bottom (boot) Pulley and Clearance			
16. Pulley Supports			
17. Motor			
18. Driving Mechanism			
19. Brake			
20. Electrical Switches			
21. Vibration and Misalignment			
22. Skip on up or down run when mounting step			

Inspector

Date

APPENDIX C

<p style="text-align: center;">University of Portland </p> <p>The bearer of this card has completed:</p> <p style="text-align: center;">Powered Aerial Lift Operator Training</p> <p>and agrees to uphold the standards and practices of safe machine operation at all times.</p> <p>_____.</p> <p style="text-align: center;">is certified to operate powered aerial lifts at</p> <p style="text-align: center;">University of Portland </p> <p>Issue date: _____.</p> <p>Trainer <i>Signature</i>: _____.</p>	<p style="text-align: center;">Back</p> <p>University of Portland reserves the right, in its sole discretion, to revoke this card and its privileges if the bearer is operating in a negligent or unsafe manner.</p> <p style="text-align: center;"><i>This card expires 3 years from the issue date.</i></p> <p style="text-align: center;">University of Portland </p>
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