



International Window Cleaning Association

SAFETY & TRAINING

INFORMATION PACKAGE

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Man Lifts

DISCLAIMER

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Aerial Platforms **Mobile Man Lifts-Bucket Trucks**



Employees shall be trained in the use and care of an aerial work platform before they shall be permitted to use such equipment. Training shall include but not be limited to understanding the manufacturer's instructions, inspection, site assessment, proper operational procedures, basic electrical understanding, fall protection and a full understanding of safe working conditions considering as a minimum, unlevelled surfaces and wind. In the event the aerial lift is rented, it shall be the responsibility of the rental company to familiarize the operators with its use.

Man-lifts, personnel lifts, bucket trucks and similar equipment are complex pieces of machinery that can be powered by air, electricity or gasoline. They typically consist of an arm and basket or work platform that is mechanically raised or lowered into position. Equipment of this type is often used to gain access to windows that are overhead as shown in the photo. They are also used in place of tower scaffolding in many cases because they are much faster at getting the window cleaner to the position they need to be for safe and effective cleaning.

Because they are complicated pieces of machinery, a significant amount of training is required before one can be used for window cleaning. Often times a man-lift or bucket truck is rented rather than purchased, by a window cleaning company. Firms that rent this equipment will offer training to those who may use it. It is smart to accept this training because as the manufacturer or representative, they will know the most about the operation, care and use of the lift.

There are many different types of man-lifts, but they all operate in the same basic manner. An articulating lift has an arm that can reach outward as well as upward. There are lifts that only go straight up with no outward movement. These types are usually very compact and often used to clean overhead glass. In essence, an aerial platform is a system that is completely assembled to provide a safe and effective means to access windows. Operators do not need to assemble a lift, with the exception of one that uses removable outriggers. When used, an aerial platform system has two components: the lift and the environment where it is used.



With that in mind, care and consideration must be given to the environment to ensure safe operation. Overhead obstructions, level work surfaces and public protection are areas where safety must be addressed.

Most lifts consist of a basket that is the work platform. This platform is generally protected by side rails that are at least 42 inches in height which provides fall protection for the occupant. Workers will also need to wear a full body harness with attachment to the basket to prevent any chance of falling out during operation.

Whether the lift is air, electric or gas powered, the controls for upward and outward movement are usually located in the work platform. Some models feature dual location on the base of the unit in case the elevated worker loses control. This extra set of controls allows a person on the ground to lower the basket in case of an emergency. Often times, man-lifts incorporate a special “controlled descent” feature that will lower the elevated basket even when there is no power available. A common control box consists of an “UP” and “DOWN” button and may include a joystick type control or several of them for articulating the arm outward and in different directions.



Depending on the type and size of the man-lift, there may be outriggers included to help increase the size of the base so that when the lift is fully extended, it is more stable and safe. Some lifts are so heavy in the base that outriggers are not required. Regardless, if you’re using a lift that uses removable outriggers, they must be used at all times to prevent the lift from falling over. On the same note, man-lifts and bucket trucks should be used on level surfaces to further increase safety and stability.

Man-lifts and bucket trucks are rated for how much weight the work platform can carry. This must not be exceeded. Equipment, tools and materials should not be raised or lowered in a man-lift unless it is specifically designed for this purpose.

Following are safety guidelines that need to be followed every time a man-lift or bucket truck is used for window cleaning.

1. Any lift should be of approved design and used for its intended purpose only.
2. The lift should be used according to the manufacturer’s specifications and Federal, State and Local regulations. Prior to using the aerial work platform, the areas to be serviced shall be visually inspected and where necessary, appropriate measures shall be taken to ensure that building features, landscaping or working surfaces are free from obstructions that may impair the safe operation of the aerial platform. These areas should be noted in the plan of service.
3. The aerial work platform shall be inspected by a competent person before each use. All wire ropes, chains and bolts must be secure. All electrical and manual functions shall be working. Smoking shall be prohibited when operating a gas powered lift. Any damage or excessive wear shall be reported immediately. The lift is not to be used if any components do not function properly.
4. Modifications to the aerial platform are strictly prohibited unless performed by the manufacturer.
5. The rated load for the lift should not be exceeded.
6. The lift should not be used unless the appropriate outriggers and intermediate stabilizers are in place.
7. The lift should be leveled before using. If working on a sloped surface the wheels must be turned on a right angle towards the slope.
8. Unless specifically designed for transportation under load, the aerial work platform shall not be moved while occupied; and if moved, the surface it is moved on should be level, stable and continuous.

9. All occupants shall use personal fall restraint equipment in accordance with the manufacturer's instructions.
10. The lift should not be placed on an unstable surface in order to gain more height.
11. Makeshift devices or ladders should not be used to gain more height out of the basket.
12. Extreme caution should be taken when using the lift around electrical lines or devices.
13. The use of a lift should be discontinued when wind speeds or other weather conditions may affect the safety of the worker or public.
14. Before, during and after operations with a lift proper danger signs and barricades should be in place.

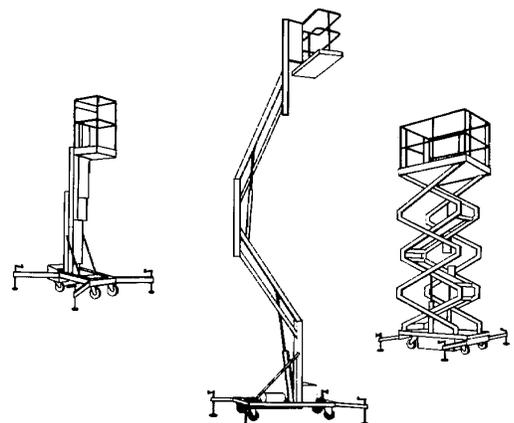
Additional safety procedures for the use of Aerial Platforms, Man-lifts and bucket trucks.

Basic Principles. The information shall be supplemented by good judgement, safety control, and caution in evaluating each situation. Since the operator is in direct control of the aerial platform, conformance with good safety practices in this area is the responsibility of the operator. The operator shall make decisions on the use and operation of the aerial platform with due consideration for the fact that his or her own safety as well as the safety of other personnel on the platform and the general public is dependent on those decisions.

Manuals. The operator shall be aware that the operating and safety manuals, including the manual that defines the responsibilities of dealers, owners, lessors, lessees, users, and operators are stored on the aerial platform and the location where they are stored. The operator shall be familiar with the manuals stored on the aerial platform and consult them when questions arise with respect to the aerial platform.

Prestart Inspection. Before use each day or at the beginning of each shift, the aerial platform shall be given a visual inspection and 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 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



Problems or Malfunctions. Any problems or malfunctions that affect the safety of operations shall be repaired prior to the use of the aerial platform.

Training. The operator shall have been trained 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. The operator trainee shall operate the aerial platform in an area free of obstructions under the direction of the qualified person for a time sufficient to determine that the trainee displays proficiency in knowledge and actual operation of the aerial platform. Only properly trained and authorized personnel shall be permitted to operate the aerial platform.

Before Operation. Before being authorized to operate the aerial platform, the operator shall have:

- (1) Been instructed by a qualified person in the intended purpose and function of each of the controls
- (2) Read and understood the manufacturer's/owner's operating instructions and safety rules, or been trained by a qualified person on the contents of the manufacturer's/owner's operating instructions and safety rules
- (3) Understood by reading or having a qualified person explain all decals, warnings, and instructions displayed on the aerial platform

Workplace Inspection. Before the aerial platform is used and during use, the operator shall check the area in which the aerial platform is to be used for possible hazards such as, but not limited to:

- (1) Drop-offs or holes
- (2) Bumps and floor obstructions
- (3) Debris
- (4) Overhead obstructions and high voltage conductors
- (5) Hazardous locations
- (6) Inadequate surface and support to withstand all load forces imposed by the aerial platform in all operating configurations
- (7) Wind and weather conditions
- (8) Other possible unsafe conditions

During Operation. The operator shall ensure the following before each elevation of the platform:

- (1) That the aerial platform is operated on a surface within the limits specified by the manufacturer
- (2) That the outriggers, stabilizers, extendable axles, or other stability enhancing means are used as required by the manufacturer
- (3) That guardrails are installed and access gates or openings are closed per manufacturer's instructions
- (4) That the load and its distribution on the platform and any platform extension are in accordance with the manufacturer's rated capacity for that specific configuration
- (5) That there is adequate clearance from overhead obstructions
- (6) That the minimum safe approach distances (MSAD) to energized power lines and parts are maintained
- (7) That he or she and all other personnel on the platform are wearing fall protection devices and other safety gear as required at all times.

Determination of Hazardous Locations. It shall be the responsibility of the user to determine the hazard classification of any particular atmosphere or location.

Other Moving Equipment. When other moving equipment or vehicles are present, special precautions shall be taken 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.

Reporting Problems or Malfunctions. The operator shall immediately report to a supervisor any problems or malfunctions that become evident during operation. Any problems or malfunctions that affect the safety of the operation shall be repaired prior to continued use of the aerial platform.

Reporting Potential Hazardous Locations. The operator shall immediately report to a supervisor any potential hazardous locations (environment) that become evident during operation.

Altering Safety Devices. Altering or disabling of interlocks or other safety devices shall be prohibited.

Entanglement. Care shall be taken to prevent rope, electric cords, hoses, etc., from becoming entangled in the aerial platform.

Capacity Limitation. Aerial-platform rated capacities shall not be exceeded when loads are transferred to the platform at any heights.

Work Area. The operator shall ensure that the area surrounding the aerial platform is clear of personnel and equipment before lowering the platform.

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.

Battery Charging. Batteries shall be charged in a well-ventilated area free of flame, sparks, or other hazards that may cause fire or explosion.

Platform Positioning. The aerial platform shall not be positioned against another object to steady the platform.

Operating Areas. 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.

Travel Conditions. Under all travel conditions, the operator shall limit travel speed according to conditions of ground surface, congestion, visibility, slope, location of personnel, and other factors causing hazards of collision or injury to personnel.

Unauthorized Use. Means shall be used to protect against use by unauthorized person(s).

Snagged Platform. If the platform or elevating assembly becomes caught, snagged, or otherwise prevented from normal motion by adjacent structure or other obstacles such that control reversal does not free the platform, all personnel shall be removed from the platform before attempts are made to free the platform using ground controls.

Assistance to Operator. If an operator encounters any suspected malfunction of the aerial platform, or any hazard or potentially unsafe condition relating to capacity, the operator shall cease operation of the aerial platform and request further information as to safe operation from management, or from the owner, dealer, or manufacturer, before further operation of the aerial platform.

Modifications. An operator shall not modify or concur in modification of an aerial platform without the specific written approval of the manufacturer of the aerial platform.

SHORT QUIZ

1. Because man-lifts are self contained with an up and down switch, you don't really need any training on how to use one other than just reading the instructions:
 - a) True
 - b) False

2. Before using a man-lift you should:
 - a) Check the ground and clear any obstacles
 - b) Check overhead for working around obstacles
 - c) Make sure all outriggers are on
 - d) Inspect all the moving parts
 - e) All of the above

3. You don't need a barricade with a man-lift because everyone can see what's going on:
 - a) True
 - b) False

4. Because any type of man lift has a guardrail that's typically 42 inches or higher, you don't need any additional fall protection:
 - a) True
 - b) False

5. Man-lifts operate by using:
 - a) Electricity
 - b) Compressed air
 - c) Gasoline or diesel fuel
 - d) Kerosene
 - e) All the above
 - f) a,b and c

6. If the person operating the man-lift is up in the air and the power goes out, what should be done?
 - a) Call the office
 - b) Jump out of the basket
 - c) Ground person should set ladders up to the basket
 - d) Rappel out of the basket
 - e) Ground person should use the emergency descent

7. When you're using the type of man-lift that only raises straight up and down, you don't need outriggers when:
 - a) The boss says so
 - b) You're in a hurry to get the job done
 - c) The base of the lift is heavy enough to keep it stable
 - d) They won't fit because there's not enough room to move the lift around
 - e) None of the above, you always need outriggers

8. It's okay to modify or make repairs to a man-lift as long as you call the manufacturer:
 - a) True
 - b) False

9. Two window cleaners can work in a man-lift basket that's rated for 250lbs:
 - a) True
 - b) False

10. When using a lift on a sloped surface, you must:
 - a) Turn the wheels in the direction of the slope
 - b) Raise the lower wheels using cinder blocks
 - c) Skin those windows
 - d) Turn the wheels against the direction of the slope

ANSWERS

1. Because man-lifts are self contained with an up and down switch, you don't really need any training on how to use one other than just reading the instructions:
 - c) True
 - d) False
2. Before using a man-lift you should:
 - f) Check the ground and clear any obstacles
 - g) Check overhead for working around obstacles
 - h) Make sure all outriggers are on
 - i) Inspect all the moving parts
 - j) All of the above
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 - e) Turn the wheels in the direction of the slope
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 - g) Skin those windows
 - h) Turn the wheels against the direction of the slope