



Aerial Lift Safety
Operating Requirements



Aerial Lift Safety

1.0 Purpose

The purpose of this guidance document is to provide standard operating practices and procedures for the safe operation of aerial lifts at the International Paper – Franklin Mill facility.

2.0 Scope

This guidance applies to all International Paper operations that require employees and/or contractors to access elevated work locations using aerial lifts (aerial work platforms).

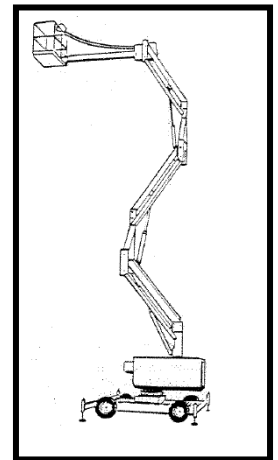
3.0 Responsibilities

- 3.1 Site contractor managers shall ensure contractor adherence to the requirements outlined in this procedure.
- 3.2 Individuals shall not operate aerial lifts unless equipment-specific training has been received and proficiency verified (this includes annual refresher training). Operators shall comply with the requirements of this procedure.
- 3.3 Supervisors shall enforce adherence to this procedure.

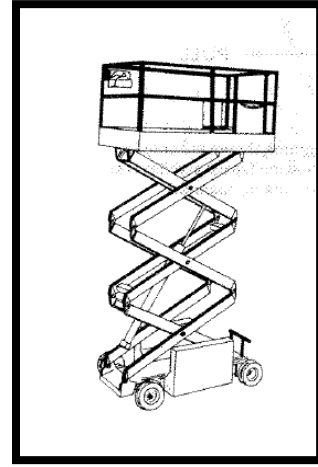
4.0 Definitions

- 4.1 **Aerial Lift** – A mobile device with extendable or telescopic boom and/or articulating arm designed to position personnel, tools and/or material in elevated locations, also referred to as aerial work platforms. Aerial lifts for the purposes of this procedure shall also include scissor and/or other vertical lifts.
- 4.2 **Articulating boom** – An aerial device with two or more hinged boom sections.
- 4.3 **Authorized personnel (person)** – Personnel trained as assigned to operate an aerial lift.
- 4.4 **Boom** – An elevating member, the lower end of which is attached to a rotating or non rotating base that permits elevation.
- 4.5 **Bucket truck** – An aerial lift for the purpose of elevating personnel, that is mounted on a truck
- 4.6 **Chassis** – The integral part of the aerial platform that provides mobility and support for the elevating assembly.
- 4.7 **Cherry picker** – A term used to describe a class of non telescoping aerial boom lifts. Cherry pickers usually have solid walled, single man baskets.
- 4.8 **Directional controls** – Controls that initiate functions that affect movement of the platform or the aerial platform.
- 4.9 **Elevating work platform** – A device designed to elevate a platform in a vertical axis (vertical tower, scissor lift).

- 4.10 **Extendable boom platform** – An aerial device except ladders, with an extendable boom. Telescopic booms with personnel platform attachments shall be considered to be extendable booms.
- 4.11 **Genie Lift™** – a Genie Lift refers to this company’s mobile, extensible boom lift (an aerial lift).
- 4.12 **Ground Man** – A person designated to monitor conditions to ensure the safety of the mobile elevated work platform. See Section 6.2 for additional requirements for the ground man.
- 4.13 **Guardrail system** – A vertical barrier erected to prevent personnel from falling to lower levels.
- 4.14 **Instability** – A condition of an aerial platform in which the sum of the moments that tend to overturn the unit exceeds the sum of the moment tending to resist overturning.
- 4.15 **JLG®** – a JLG lift refers to this company’s mobile aerial work platform (an aerial lift).
- 4.16 **Mobile Elevated Work Platform** – A general term used for scissor lift, aerial platform or an extendable or articulating boom aerial device, either self propelled or vehicle mounted used for the sole purpose of positioning personnel, their tools and necessary material to elevated work locations to complete a specific task. Not included in this definition are ladder stands, scaffolds or industrial trucks.
- 4.17 **Outriggers** – Devices that increase the stability of the aerial platform and are capable of lifting and leveling the aerial platform.
- 4.18 **Operator** – A trained person who controls the movement of the aerial platform.
- 4.19 **Platform** – Any personnel carrying device, such as a bucket, basket, cage, stand or tub that is a component of a mobile elevated work platform.
- 4.20 **Pre-use inspection** – A thorough equipment and area inspection conducted prior to each shift and before putting a mobile elevated work platform into service.
- 4.21 **Qualified mechanic** shall be one who has received training, instruction or a certificate from the aerial lift manufacture or manufacturer’s representative to conduct aerial lift mechanical inspections. Qualified mechanics may include manufacturer or manufacturer’s representative personnel, IP employees or IP contractors.
- 4.22 **Qualified trainer** shall be one who has knowledge, training and experience with aerial lifts proficient enough to train others on the safe use and operation of these devices. Qualified trainers may include the manufacturer or manufacturer’s representative personnel, IP employees, or IP contractors



- 4.23 **Scissor lift** – A mobile elevated work platform that only operates in the up and down position but travels in the direction of forward and reverse.
- 4.24 **Stabilizers** – Devices that increase the stability of the aerial platform but are not capable of lifting or leveling the aerial platform.



5.0 References

- 5.1 International Paper Aerial Lift Safety Guidance Document
- 5.2 International Paper – Franklin Mill “Mobile Equipment Tagout” procedure
- 5.3 International Paper – Franklin Mill “Mobile Equipment Operator Certification” procedure
- 5.4 International Paper – Franklin Mill “Incident Investigation” procedure
- 5.5 OSHA 29 CFR 1926. [452](#), [453](#), [550](#) and 29CFR 1910. [67](#)
- 5.6 [OSHA CPL 02-01-023 – CPL 2-1.23 – Inspection Procedures for Enforcing Subpart L, Scaffolds Used in Construction – 29 CFR 1926.450-454.](#) [Note: this Directive erroneously states that scissor lifts are addressed under 29 CFR 1926.453 (Aerial lifts). OSHA corrected this with an [Interpretation Letter](#) dated 8/01/2000, which states that scissor lifts are addressed as mobile scaffolds under 29 CFR 1926.452 (w) as such an exemption is provided for fall protection PPE if guardrails are in place.]
- 5.7 **ANSI Standards**
- A92.2 (R 2001) – Standard Vehicle-Mounted Elevating and Rotating Aerial Lift Devices
- A92.3 (R 2006) – Manually Propelled Elevating Aerial Platforms
- A92.5 (R 2006) – Boom-Supported Elevating Work Platforms
- A92.6 (R 2006) – Self-propelled Elevating Aerial Platforms
- 5.8 **ISO Standards**
- ISO 18893:2004 – Mobile elevating work platforms – Safety principles, inspections, maintenance and operation
- ISO 18878:2004 – Mobile elevating work platforms – Operator (driver) training

6.0 Procedure

- 6.1 **General Requirements for Aerial Lifts**
- 6.1.1 Aerial lifts shall be operated in accordance with the manufacturer’s recommended procedures. Operators must read and understand the operator’s manual (operating manual(s) must be located on the aerial lift platform), follow all labels, warnings and instructions displayed on the aerial lift platform, follow all safety rules and comply with any safety-related bulletins received from the manufacturer or supplier. In addition, any repairs must meet manufacturer’s specifications and any modifications made to equipment must be certified in writing by the manufacturer as acceptable or approved (including the mounting of attachments to hold tools or material).

- 6.1.2 A pre-job safety hazard assessment shall be conducted prior to each aerial lift use. The pre-job safety hazard assessment must be reviewed with all affected personnel.
- 6.1.3 Three (3) distinct inspections shall be performed and documented for aerial lifts:
- 6.1.3.1 **Pre-delivery inspection** shall be conducted by the manufacturer, lessor or equipment supplier, prior to first use, with a copy of this inspection kept on file by the receiving/owning department. Existing units on the effective date of this procedure are exempt from this requirement.
 - 6.1.3.2 **Pre-use inspection** shall be conducted by the operators or users prior to each use or at the beginning of each shift to include a visual inspection and functional test. Operators shall report any defects found to their supervisor immediately, and the defective equipment removed from service using the site Mobile Equipment Tagout procedure. The equipment operator's supervisor shall ensure the pre-use inspection is complete and any deficiencies identified have been corrected prior to use
 - 6.1.3.3 **Annual equipment inspection** shall be conducted (full mechanical inspection and operational test) shall be conducted by the manufacturer's representative, or by a qualified mechanic in accordance with the manufacturer's specifications. The period between annual inspections is not to exceed 13 months.
- 6.1.4 Training for all individuals who operate aerial lifts shall be conducted by a qualified trainer. Training shall be conducted before initial use and retraining shall be conducted at least annually. More frequent training may be conducted as required, for example, after an incident, near miss, close call or when an operator has been observed to have been operating the lift in an unsafe manner. Training shall be specific for the type, make and model of equipment.
- 6.1.5 Personal protective equipment (PPE) shall be worn by operators of aerial equipment. All personnel shall wear an approved hard hat and a fall restraint system which includes a full body harness with a lanyard attached to the manufacturer's-specified platform anchorage or attachment point when working in the aerial lift. The lanyard must be of an appropriate length (e.g., 3 feet) to restrain or keep the occupant within the basket, bucket or platform. In scissor lifts and aerial lifts that telescope vertically and do not articulate, occupants are protected by standard guardrails, but a fall restraint system may also be used if an anchorage or attachment point is specifically provided by the manufacturer. Under no circumstance is an occupant allowed to tie-off or attach to the guardrail of a scissor lift or other vertical lift. The occupant must never attach their personal fall protection equipment to any part of a building, structure or other piece of equipment unless approved to transfer to that structure. During this transfer maneuver 100% tie-off is required.
- 6.1.6 Aerial lift operators and ground men may wear "high visibility" vests or jackets, however, the vests/jackets are not required.
- 6.1.7 All incidents, including near misses, associated with aerial lifts shall be investigated using the standard mill incident investigation form. The investigation shall include a post-incident mechanical inspection of the device if an equipment malfunction is suspected as a contributing cause to the incident, or if the reason exists to suspect the equipment was damaged during the incident.



- 6.1.8 All outriggers, extendable axles, or oscillating axles (where provided) shall be used. These devices shall be fully extended, locked into place and brakes firmly set before personnel are elevated (even if on level ground). If the task to be performed requires setting up on an incline, chocks shall be installed behind each wheel (provided it is safe to do so).
- 6.1.9 Personnel may leave the elevated platform of aerial man lifts as long as the man lift is shut-down and secured. Double lanyards attached to the harnesses must be utilized while transferring between platform and outside structures. Personnel may **NOT** leave an elevated scissors lift. If personnel need to leave the elevated scissors lift to access the task, then they need an extension ladder, not a scissors lift. The scissors lift is an elevated work platform-not an elevator!
- 6.1.10 Operators shall set up a proper work zone around aerial lifts using barricades, signs, caution tape, cones, flags, or flashing lights, as needed to protect others in the vicinity of the work or to establish a safe path for the aerial lift to travel.

6.2 Ground Man for Aerial Lift Operations

The ground man is an individual who has received sufficient instructions on the “ground control” operations of an aerial man lift or scissors lift to operate the ground controls to bring the elevated platform down safely, and who can also communicate with the operator to insure safe use of the lift. The ground man shall be dedicated to this task, during times of aerial equipment operation when the ground man is needed.

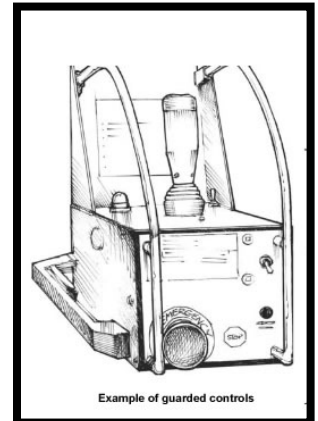
Task involving the use of aerial lifts will require a “Toolbox/Tailgate Meeting” to conduct a pre-job safety hazard assessment. Also during this time, the need for a ground man shall be discussed and agreed upon between the aerial lift operator and his supervisor.

- 6.2.1 No ground man is needed.
- 6.2.2 A ground man is needed but does not need to be a licensed operator. This ground man shall receive sufficient instruction to operate the ground controls to bring the platform down safely in an emergency. Examples include the following:
- Operator has restricted visibility (eg, cannot see the aerial lift wheels, adjacent hazards, or how to navigate area)
 - Aerial Lift is being operated in congested area.
 - Operator cannot observe hazards in travel path (eg, holes, curbs, docks, uneven ground)
 - Aerial lift is being operated in close proximity to facility equipment, systems, structures
- 6.2.3 A licensed ground man is needed. This ground man is a licensed operator on the platform being used. A licensed ground man shall always be used during the following ‘critical’ tasks:
- Opening Dangerous Systems
 - Unplugging equipment or piping containing hazardous substances
 - “Hot Tap” work
 - Working on Energized Electrical Systems requires a “Qualified Electrician” as a licensed ground man.



6.3 Safety Precautions for Pre-Job Safety Hazard Assessments and/or Operator Training Programs

- NEVER operate an aerial lift unless all decals, labels, instructions, symbols (e.g., up or down arrows) are in clearly visible and understandable.
- No more than two (2) persons shall occupy the platform at any one time, unless the manufacturer approves the additional person(s).
- Under all moving conditions, the operator shall limit speed according to the conditions of the ground surface, congestion, visibility, slope, location of other personnel, equipment and other factors that may cause hazards of collision or injury to personnel.
- NEVER travel (speed other than SLOW or CRAWL) with the boom in the elevated position (it must be in the horizontal position when traveling) or with a scissor lift fully extended.
- Any positioning while the platform is elevated shall be conducted in the SLOW or CRAWL mode.
- No more than one (1) person shall occupy the platform when traveling at a speed other than in the SLOW or CRAWL mode.
- NEVER travel (speed other than SLOW or CRAWL) near drop-offs, docks, curbs or holes.
- NEVER crawl or move in the slow mode near drop-offs, docks, curbs or holes without a safety spotter present.
- NEVER let workers position themselves between the rails of a basket or scissor lift and overhead hazards, such as joists, beams, or pipes.
- NEVER climb up to or down from an extended platform.
- Aerial lift upper controls must be protected to prevent inadvertent activation (e.g., properly guarded).
- Avoid excessive horizontal forces when working on elevated aerial lifts.
- Ensure the load and its distribution on the platform and any platform extension is in accordance with the manufacture's rated capacity.
- Ensure that any guardrails are in place and access gates, chains or openings are closed per the manufacturer's instructions.
- NEVER operate an aerial lift in wind over 25 mph or when thunder can be heard or lightning seen.
- NEVER operate an aerial lift in any manner on grades, slopes or ramps exceeding what it is rated for by the manufacturer.
- NEVER operate the aerial lift in an unsafe or reckless manner. Stunt driving and horseplay are prohibited.
- NEVER try to force an aerial lift that becomes snagged or caught on an object. If reversing the device does not free the unit all personnel should be safely removed before attempting to free the device using the lower controls.
- NEVER use step ladders or similar aides on the platform to provide additional reach or height.



- NEVER stand on railings or planks, lean over railings or climb out of the basket or platform onto another surface or structure (unless 100% tied off). Two feet on the platform floor at all times.
- NEVER override hydraulic, mechanical or electrical safety devices.
- NEVER lift equipment or material with the aerial lift (never use as a crane or hoist). Aerial lifts are designed only to lift personnel and their tools.
- Except in a case of an emergency, ground controls shall not be operated on an occupied lift (lift occupant shall be in full control of the lift at all times).
- When maintenance is performed on aerial lifts they shall be properly locked-out and properly blocked up prior to working underneath it to prevent the platform from falling.
- NEVER operate aerial lifts near electrical power lines or energized equipment unless the lines have been de-energized or adequate clearance is maintained in accordance with the table below [taken from 29 CFR 1926.550 (Cranes and Derricks) and the ANSI A92 series]. Non-electrical workers must stay at least 10 feet (3.05 meters) from all energized lines; electrical workers must de-energize/insulate energized lines or use proper PPE/tools

Voltage Range (phase to phase)	Minimum Separation Distance	
	Feet	Meters
Less than 50 kV	10	3.05
50 kV to 200 kV	15	4.60
200 kV to 350 kV	20	6.40
350 kV to 500 kV	25	7.62
500 kV to 750 kV	35	10.67
750 kV to 1000 kV	45	13.72

[Note: insulated aerial lift buckets (used near power lines) have special electrical test requirements (see ANSI A92.2)]

- Fueling and battery charging of aerial lifts shall be done in well-ventilated areas free of flame, sparks or other hazards that may cause a fire or explosion.
- All aerial lifts must be secured (e.g., key locked safely away) when not in use to prevent unauthorized use.
- Only tools, parts or any other materials which can be evenly distributed and that can be safely handled by a person(s) should be brought into the bucket or onto the working platform. Tools, parts or material shall not be dropped or thrown from the bucket or platform. When using welding or heating equipment from the bucket or platform, the vehicle shall be protected from sparks and slag. Care shall be taken to prevent rope, electric cords, and hoses from becoming entangled in the aerial lift device. Keep flammable liquids away from aerial lifts.
- When using an aerial lift above or near an overhead hoist or crane, the overhead hoist or crane must be properly locked out.
- Ensure the platform has been fully lowered at the end of the completed task and de-energized.
- Only devices approved for lifting personnel shall be used as aerial lifts. Loaders, forklifts or other material lift devices shall NOT be used to transport employees to elevated locations nor used as work platforms. Forklifts and cranes may ONLY be used with approved personnel baskets.
- Know what to do in the case of an emergency when operating aerial lifts (e.g., how to summon for help).