

Midland Engineering Co., Inc. Safety Management System			Doc No:	AERIAL
			Initial Issue Date	12/10/15
Chapter 04-Aerial Lifts			Revision Date:	Initial Version
			Revision No.	0
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PURPOSE

To establish guidelines for proper use of equipment and procedure for safe operation of all aerial man-lifts.

SCOPE

This procedure applies to all operations involving Midland Engineering Co., Inc.

DEFINITIONS

Outrigger- extension device for expanding the stabilization base of the platform ground support.

Competent person - A person who, because of training and experience, is capable of identifying hazardous conditions in scissors lifts and of training employees to identify such conditions.

Portable outrigger- outriggers designed to be moved from one work location to another.

SAFE WORK PRACTICE

- Only trained authorized individuals can operate a man lift and all training shall be documented.
- Each scissor lift must have a clearly noted rating chart posted where the operator can see it. **Load limits shall not be exceeded.**
- Equipment must be inspected regularly. **ALL OSHA, OWNER, & COMPANY FALL PROTECTION RULES MUST BE FOLLOWED WHEN OPERATING LIFTS.**
- **An approved fall restraint system shall be worn while working from an aerial lift.** Fall restraint systems to be attached to the boom or basket.
- Employees shall always stand firmly on the floor of the lift. Don't sit or climb on the edge or use the planks of the lift for a ladder.
- An effective two-way voice communication system can be provided between the operators and stationary people on the ground.
- When required a diaper and wheel covers must be used.

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OPERATOR RESPONSIBILITY

- It is your responsibility to read and understand the manufacturer's manual(s) and this safety handout before operating an aerial scissor lift. Written approval from the manufacturer is required to make any modifications to the equipment.
- Remember that YOU are the key to safety. Good safety practices not only protect you but also protect the people around you.
- Ensure the operating manual is stored in a weatherproof storage compartment.
- Ensure a pre-start inspection is accomplished at the beginning of each shift.
- Report any problems or malfunctions and do not operate prior to repair.
- Make sure you have been properly trained.
- Check the area in which the aerial platform is to be used for possible hazards.
- Ensure that the operation of the aerial platform is within the provisions outlined in the operator's manual.
- Ensure all personnel on the aerial platform comply with the provisions outlined in the operator's manual.
- Brakes shall be set to ensure that the lift does not move when the boom is elevated in a working position with an employee in it.
- Outriggers must be used when lift is extended.
- Transportable outriggers can be used as a method of suspension for ground rigging work for scissor lifts where the point of suspension does not exceed 300 feet above the safe surface.
- Before the lift can be moved the boom shall be inspected to insure that it is properly cradled and outriggers are in the properly stowed position.
- When using outriggers make sure they are totally extended and they are located to support the load.
- If outdoors remember to check for sewers and pipes if loads are very heavy.

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TRAINING REQUIREMENTS

- Only a competent person can perform training.
- Prevention of accidents and injuries
- Establishing the criteria for design, manufacture, testing, performance inspection, maintenance, training, and operation.
- Establish understanding of responsibilities.

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INSPECTIONS REQUIREMENTS

According to ANSI and OSHA standards, three inspections are required when using an aerial scissor lift. The inspections include a daily visual inspection, daily lift control inspection, and a monthly detailed documented inspection. These inspections are necessary to minimize or eliminate potential serious injury or death.

Daily Visual Inspection

- Check for missing, damaged, or unreadable safety signs.
- Check for broken, missing, damaged or loose parts.
- Check pivot pins for damaged or missing retaining devices.
- Check the tires for cuts, bulges, and pressure as specified by the manufacturer.
- Perform all maintenance procedures as outlined by the manufacturer of the machine.
- Check for cracked welds and other evidence of structural damage.
- Check hydraulic system for leaks and damage.
- The lift will be placed out of service when items are noted for unsafe operation

Daily Lift Control Inspection

- After starting, recheck all gauges and lights.
- Check all audible and/or visual alarms (if provided) If alarms are broken or not provided, you are required to use a spotter. Make sure everything is functioning correctly.
- Check all control functions, including emergency stop mechanism, from the upper control station and the lower control station (if provided). If the aerial platform does not respond correctly when each control is operated, do not use the machine until it is fixed.
- Move slowly until you are sure everything is operating properly.
- Recheck the steering and platform making sure it works properly.
- The lift will be placed out of service when items are noted for unsafe operation

Monthly Documented Inspection

A competent person shall also inspect all lifts at 30-day intervals using the check sheet that shall be kept on file. If anything is found to be unsafe, operation of the unit will not be allowed until it is repaired. A sample checklist is attached.

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WORKING ON OR AROUND ELECTRICAL EQUIPMENT

- Electrical conductor parts of the power supply system shall be protected against accidental contact.
- Electrical grounding shall be provided.
- General building electrical installations shall comply with all standards and electric codes.
- Safe operating procedures can be reached by using the minimum safe approach distance (M.S.A.D.).
- Maintain M.S.A.D. of at least 10 feet from all other energized lines and parts.
- Assume all electrical parts are energized.
- Do not maneuver machine or personnel inside prohibited zone.
- Where flammable vapors or combustible dusts may be present, electrical installations shall be in accordance with all standards that may apply.
- Watch out for electrical lines and cables-they result in fatalities.
- To use the M.S.A.D. system refer to the chart that follows:

VOLTAGE RANGE (PHASE TO PHASE)	MINIMUM SAFE APPROACH DISTANCE (FEET) (METERS)	
0 TO 3	AVOID CONTACT	
Over 300V to 50V	10	3.05
Over 50KV to 200KV	15	4.60
Over 200KV to 350KV	20	6.10
Over 350KV to 500KV	25	7.62
Over 500KV to 705KV	35	10.67
Over 750KV to 1000KV	45	13.72

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AERIAL LIFT CHECKLIST

Inspector Name: _____

Date: _____ Name of equipment inspected: _____

Instructions: Complete the following checklist on a daily basis. The condition column should be marked with an S for Satisfactory or a U for Unsatisfactory.

Item	Condition	Corrective Action
Oscillating axle	_____	_____
Steer cylinder	_____	_____
Leveling jack/stabilizer	_____	_____
Steer wheel & tire assembly	_____	_____
Hydraulic filter	_____	_____
Ground controls	_____	_____
Battery installation	_____	_____
Ladders or steps	_____	_____
Hydraulic reservoir	_____	_____
Fuel tank assembly	_____	_____
Safety props	_____	_____
Drive brake	_____	_____
Wheel & tire assembly	_____	_____
Drive hub	_____	_____
Drive motor & brake	_____	_____
Battery charger	_____	_____
Leveling jack/stabilizer	_____	_____
Wheel & tire assembly	_____	_____
Motor/pump unit	_____	_____

This equipment should be placed out of service: YES NO If yes, attach this form to the operator controls.

Inspector Signature: _____

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AERIAL LIFT QUIZ & ACKNOWLEDGMENT OF TRAINING

Name: _____ Date: _____

- | | | | |
|-----|---|---|---|
| 1. | Inspect the travel surface area before operating a lift. | T | F |
| 2. | You should only check lift controls on a yearly basis. | T | F |
| 3. | Personal fall arrest system is used to arrest an employee from a fall from a working level. | T | F |
| 4. | Before the boom is elevated the brake system must be set. | T | F |
| 5. | When using outriggers they have to be totally extended. | T | F |
| 6. | You can exceed twice the maximum rated load capacity listed on the lift. | T | F |
| 7. | It is ok to sit or climb on the edge or use the planks of the lift for a ladder. | T | F |
| 8. | If an employee can fall 4 feet or more he/she needs fall protection. | T | F |
| 9. | The surface level can be sloped when raising the lift. | T | F |
| 10. | Before you operate a lift, read and understand the manufacturer's manual. | T | F |

I acknowledge that I have received information and training on the safe operation and use of vehicle mounted elevating and rotating platforms as per the requirements of 29 CFR 1910.67 and 1926.453. I understand the importance of this information and will follow all rules, policies and procedures set forth by the company. If I do not understand any information or instructions presented to me, I will ask questions.

Participant's Signature

Instructor