Aerial Lifts
Aerial Lifts

- Training Objectives
  - Types of Aerial Lifts
  - Safety information
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  - Set-up
  - Standard Features
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  - Two Major Safety Hazards
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Types of Aerial Lifts and locations

– Scissor Lifts
  Platform heights 15’ – 53’

– Telescopic Boom Lifts
  Platform heights 45’ – 125’
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- **Safety Information:**
  - Work platform is to be used by trained and authorized operators only.
Operations:

- Only Authorized persons can operate lifts (Classroom, Hands-on competency is required).
- Aerial Lifts are checked out or reserved by authorized persons only.
- Ground personnel must be properly trained and authorized for lift operation.
- Inspection of the lift must be performed before use.
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- **Pre-Operation Inspection**
  - Be sure that the manuals are legible and in the storage container located on the platform
  - Be sure that all decals are legible and in place
  - Check the hydraulic power unit oil level
  - Platform and Ground Control Panel must be tested prior to use to determine that such controls Panel are in safe working condition.
Work Place Inspection

- Do a visual inspection of the work area prior to beginning work
  - Hazardous locations
    - Drop-offs or holes
    - Bumps, floor obstruction or debris
    - Inadequate surface support to withstand all load forces imposed by the machine
  - Clearance
  - Overhead obstructions
    - High voltage conductors
  - The presence of unauthorized personnel
  - Other possible unsafe conditions
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Set up

- Position machine below desired work area
- Insert key and turn to the ground control position
- Pull out the red Emergency Stop buttons at the ground and platform controls
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Safe Work Practices

- Ground controls shall not be operated during use, unless instructed to do so by person in the platform or in an emergency.

- Never elevate platform unless all four (4) outriggers are properly installed, leveling jacks contact floor and base is level.

- Never adjust leveling jacks while platform is occupied.
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Safe Work Practices Cont.

- Employees shall always stand firmly on the floor of the basket.
  - Do not stand, sit or climb on edge of the basket or guard rails.
  - Do not use planks, ladders, or other devices for a work position.
- Keep the platform floor clear of debris.
- Do not override safety devices.
- Learn and practice the principles of safe machine operation contained in the operator’s manual.
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- **Two Major Safety Hazards:**
  - **Electrocution Hazards** - Caused by operating close to power lines.
    - It is easy to accidentally contact energized power lines.
    - This machine is not electrically insulated and will not provide protection from contact with electrical current.
    - If lift comes in contact with energized lines, personnel on the ground or in the platform must not touch or operate the machine until energized power lines are shut off.
    - Do not operate the machine during lighting or storms.
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- Two Major Safety Hazards Cont.
  - Fall Hazards - Caused by improper operation and/or improper set up.
    - Fall hazard due to the potential for being bounced out of lift or from climbing out of the basket.
    - Over reaching
    - Swinging under over hanging limbs, structures or lines.
    - Stumbling over tools inside the basket.
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- **Personal Protective Equipment**
  - Hard hats and Safety glasses are required whenever working from an aerial lift.
  - A full body harness and lanyard shall be worn.
  - Lanyard needs to be attached to anchor provided in platform when working from an aerial lift.
  - All Aerial Lift operators must visual inspect the body harness & lanyard before each use.
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Hazards / Precautions

- Tip-Over Hazards
  - Do not drive or position lifts near the edge of loading docks drop-offs or holes.
  - Do not raise platform on uneven or soft surfaces
  - Do not drive onto uneven or soft surfaces when elevated
  - Do not raise platform in windy or gusty conditions
  - Do not use the platform as a crane (the TMZ-34/19 has a cargo hook that can be used in place of the platform to lift 500 pound loads).
  - Do not place or attach overhanging loads to any part of the platform.
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- **Hazards / Precautions Cont.**

  - **Tip over Hazards Cont.**
    - Do not place ladders or scaffolds in platform or against any part of this machine.
    - Be sure all tires are in good condition and lug nuts are properly tightened.
    - Do not push the machine or other objects with the boom.
    - Do not contact adjacent structures with the boom.
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Hazards / Precaution Cont.

– Collision Hazards

• Be aware of boom position when rotating.
• Do not lower the boom unless the area below is clear of personnel and obstructions.
• Check work area for overhead obstructions or other possible hazards.
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**Hazards/Precaution Cont.**

– Component Damage Hazards
  
  • Do not fully lower the booms unless the booms are aligned with the tongue. The booms must be lowered onto the boom rests.
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Hazards / Precaution Cont.

- Lifting Hazards
  - Use proper lifting techniques to move, load or unload the machine.
  - Use proper lifting techniques when installing or removing the platform.

- Damaged Machine Hazards
  - Do not use a damaged or malfunctioning machine.
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Hazards / Precaution Cont.

- Battery Safety
  - Burn Hazards
    - Batteries contain acid. Always wear protective clothing and eyewear when working with batteries.
  - Explosion Hazards
    - Do not contact the battery terminals or the cable clamps with tools that may cause sparks.
  - Electrocution Hazards
    - Inspect daily for damage cord, cables and wires. Replace damaged items before operating
  - Lifting Hazard
    - Use the appropriate number of people and proper lifting techniques when lifting batteries.
1 – Secondary boom raise/lower buttons
2 – Horn
3 – Jib boom raise/lower buttons
4 – Stop indicator light
5 – Emergency Stop Button
6 – Outrigger interlock display lights
7 – Key Switch for ground/off/platform selection
8 – Battery charge indicator
9 – Speed select buttons
10 – Power indicator lights
11 – Turntable rotate left/right buttons
12 – Primary boom raise/lower buttons