PRESENTER'S GUIDE

"SCISSOR LIFTS IN INDUSTRIAL AND CONSTRUCTION ENVIRONMENTS"

Part of the Regulatory Compliance Series

Quality Safety and Health Products, for Today... and Tomorrow

OUTLINE OF MAJOR PROGRAM POINTS

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The following outline summarizes the major points of information presented in the program. The outline can be used to review the program before conducting a classroom session, as well as in preparing to lead a class discussion about the program.

- **When it comes to workplace safety, "OSHA" (the Occupational Safety and Health Administration) is the federal agency that writes the regulations and enforces compliance in the U.S..**
  - But if you use a scissor lift there is another group that you should be familiar with.

- **It's the American National Standards Institute, also known as "ANSI".**
  - Unlike OSHA, ANSI is not a government agency.
  - It's an association that establishes safe work practices for different industries, called American National Standards.

- **In 2020, ANSI made some revisions to their current Standard for mobile work platforms, beginning with how they refer to the equipment.**
  - Changing from "Aerial Work Platforms" (AWPs) to "Mobile Elevating Work Platforms" (MEWPs).

- **There were a number of more significant changes as well, affecting the equipment's:**
  - Design standards.
  - Job site safety procedures.
  - Training requirements.

- **First, ANSI reorganized how they look at MEWPs, dividing them into two groups.**
  - Scissor lifts fall into Group A, equipment that moves vertically but only within its "tipping lines" (the wheels or outriggers).

- **The Standard's "Job Site Safety" requirements focus on three things, all of which apply to scissor lifts:**
  - Creating a "Safe Use Program" for scissor lifts wherever they are used.
  - Doing a "Risk Assessment" for each job a scissor lift is used on.
  - Structuring a "Rescue Plan" for each type of scissor lift that is used on a job site.

- **The Standard's updated "Training Requirement" now includes giving "Occupants" as well as "Operators" training about the safe use and rescue operations of a scissor lift that they are using.**

- **The changes to the ANSI design standards for scissor lifts were significant as well.**
  - First, all new scissor lifts must have a "gated entrance" to their platform.
  - Chains are no longer allowed to be used as "entrance guards".
  - Also, the minimum height for platform railings was increased from 39 to 43½ inches.

- **Next ANSI addressed where scissor lifts are used.**
  - New scissor lifts that are used outdoors on rough terrain must have "foam-filled" or solid tires.
  - Manufacturers can produce scissor lifts that are to only be used indoors, and are certified as such.
  - Some models of the equipment have had their permitted lift and load speeds reduced.

- **Lastly, all new scissor lifts are required to have alarms and safety devices such as…**
  - A "Safety Load Limit" alarm, as well as a sensor that will stops the lift if the limit is exceeded.
  - A "Wind Speed Sensor" on any scissor lift that is designed to be used outdoors, that will direct operators to reduce their load capacity in windy conditions.

- **While all of these design standards will be incorporated into newly manufactured lifts, older models do not need to be retro-fitted to these standards.**

- **In addition to the changes in a scissor lift's design criteria, the ANSI Standard also requires companies that use scissor lifts to create a "Safe Use Program" for all of their lift equipment. This program must have three major components:**
  - Performing a "risk assessment" for all the worksites where scissor lifts will be used, and the tasks that they will perform there.
  - Creating a "rescue plan" in case workers encounter problems when using a lift.
  - Training for both operators and occupants of scissor lifts.

- **Conducting a site's "risk assessment" is pretty straightforward. Employers must ensure that:**
  - Potential hazards are identified.
  - Control measures and safe work procedures are developed to address the hazards.

- **The resulting Safety Plan is communicated to all employees who could be affected by the use of scissor lifts on the job site. This includes:**
  - Site supervisors.
  - Lift operators.
  - Occupants who perform tasks while they are raised on a scissor lift's platform.
  - Other workers who may not be directly involved with the lift equipment but could still be affected by its presence.

- **Risk assessment also plays an important role in the second ANSI Safe Use Program requirement, "rescue planning".**
  - How scissor lifts operate and the locations where they are used can create unique challenges if the workers on a lift get into trouble and need to be rescued.

- **These challenges can include…**
  - Workers falling from a platform and hanging from their lifeline in midair.
  - The platform becoming entangled, leaving workers stranded off the ground.
  - The lift failing in some way.

- **In all these cases plans should be made ahead of time regarding how to assist the workers quickly and safely.**

- **ANSI requires that all Rescue Plans be written down and included in a company's employee training manual.**

- **The third "leg" of a "Safe Use Program" is employee training.**
  - Before employees can be authorized to operate a scissor lift, or work on a lift's platform, their employer must first verify that they are both physically and mentally capable of doing so.

- **There are several types of scissor lifts, each with its own characteristics and capabilities.**
  - They can be powered by electricity, diesel fuel, propane or gasoline, and can raise a work platform up to 60 feet or more off the ground.
  - Some scissor lifts are intended for use indoors… on smooth floors, such as in warehouses.
  - Other lifts are meant to be used outdoors on rough terrain.

- **In order to operate a scissor lift, you must be trained on the specific lift you'll be using. Your training will discuss:**
  - The hazards that can be associated with scissor lifts.
  - The safe work practices you should follow to reduce or eliminate those hazards.
  - How to recognize as well as avoid unsafe conditions in the areas where you'll be using a scissor lift.
  - How to perform a safety inspection on a lift.
  - How to handle any emergencies that occur when your lift is in use.

- **You'll be required to undergo "retraining" if:**
  - Hazards are discovered on your site that affect how scissor lifts should be operated.
  - You need to use a type of lift that you haven't been trained on.
  - You have had an accident while operating a scissor lift, or are seen operating a lift improperly or unsafely.

- **In many cases, the operator of a scissor lift will also be the only person on the platform, called an "occupant".**
    - When other employees will be occupants, ANSI requires an operator to make sure that they also have a basic knowledge of the safe work practices that are required… before beginning to work on the lift.

- **Occupants not only need to understand how their activity on the platform can affect the stability of the equipment… they should also have a general knowledge of the purpose and function of the scissor lift's controls, as well as the lowering and shutdown procedures.**

- **The operator must also inform occupants about the hazards that are associated with the worksite and the tasks that they will be performing, as well as how to avoid them.**

- **At least one platform occupant besides the operator should be trained to use the scissor lift's controls in an emergency, in case the operator is unable to.**
    - However, occupants are not authorized to operate the controls of a scissor lift in other than an emergency situation.

- **Another thing that both operators and occupants need to be trained on is the different types of fall protection that can be used to avoid or mitigate any potential fall hazards, including that:**
    - Guard rails should always be in the proper position and undamaged.
    - All access gates should be closed and latched.
    - Any other openings must be guarded before the platform is raised.

- **In some cases, operators and occupants will need to wear personal fall restraints or fall arrest devices… and should be trained on their use as well.**

- **When you're working with or around a scissor lift, it's important to understand the hazards that are associated with the equipment, so you can avoid them. They include:**
  - Falls and falling objects.
  - Equipment "tipovers".
  - Crushing injuries.
  - Electrocution.

- **One of the most significant hazards for people who are working on a scissor lift is the chance of falling off the platform.**
  - That's why the edges of lift platforms should be guarded by railings.

- **So you need to make sure the lift you are working on is equipped with railings and that they are secure before the platform is raised.**
  - Many companies also require that their employees wear personal fall protection when they're working a scissor lift.

- **But even with railings and toeboards, tools and materials can still fall off and create a serious hazard for people working on the ground below.**
  - To warn coworkers about this potential hazard and keep them a safe distance from the lift, safety cones or warning tape should be used around the area where the lift is working.

- **Another serious lift-related hazard is a "tipover", which can affect both people on the lift and people on the ground.**
  - Many tipovers occur when a work platform is overloaded.

- **To avoid exceeding a scissor lift's weight limit, calculate the total weight that the platform will be carrying before you raise it.**
    - This should include the people who will be on the lift as well as the tools and materials they will be using.
    - Then compare this figure with the lift's maximum carrying capacity.
    - The total should always be smaller than what they lift is rated for.

- **Tipovers can also result from hazardous conditions that can exist on a work site.**
    - So it's important to be able to recognize potential problems in order to avoid them.

- **On an outdoor worksite you should check the ground for slopes, holes, ditches and other irregularities that could make a lift unstable.**
    - Look for overhead hazards such as trees, light poles and low-hanging cables as well.
    - Running into objects like these can damage a scissor lift, even cause it to tip over.
    - Even worse, workers on the lift platform could be crushed against them.

- **Overhead hazards can exist on indoor worksites, as well.**
    - Check for low ceilings, beams, rafters, HVAC ducts and piping.
    - Use caution when working near them.

- **Indoors or out, electricity is another serious hazard that can be encountered when you are operating a scissor lift.**
    - You should always identify any electrical equipment, power lines or cable raceways in the area before using a lift.
    - The best course is to have them de-energized if possible.
    - Otherwise, you should keep the lift, yourself and any tools that you are carrying a safe distance away from the wires.

- **For lines carrying 50,000 volts, the minimum safe distance is 10 feet.**

- **When you're going to be using a scissor lift outside, be sure to keep your eye on the weather as well.**
  - High winds can blow the equipment over.
  - Rain, snow and ice can make the platform slippery.
  - Lightening can electrocute someone just as effectively as a power line can!
  - Be sure to look at a forecast before starting outdoor work with a lift.

- **There are two inspections that must be performed before you use a scissor lift.**
  - An "equipment" inspection.
  - A "worksite" inspection.

- **To make sure that your lift is in good condition, you should inspect it at the start of every shift.**
  - This will ensure that nothing has happened to the equipment while you've been away, and that the lift is still operating correctly.

- **You'll find a list of things to be inspected in the operator's manual of the lift you're using.**
  - This manual has been compiled by the equipment's manufacturer and should be followed closely.

- **But there are a number of things that should be looked at on every lift. Always check that…**
  - Fluids are the appropriate levels.
  - Wheels and tires are in good condition and properly inflated.
  - The battery and charger are in good working order.
  - All of the controls function properly.

- **Be sure to inspect all of the lift's other components as well, particularly the…**
  - Power system.
  - Guardrails.
  - Other safety devices.

- **Never use a lift that has any defects.**
  - A lift that fails inspection must be removed from service until a qualified person has made repairs.

- **It's also important to inspect the worksite where the lift will be used. You should…**
  - Survey the site thoroughly.
  - Make note of any hazards that exist.
  - Take action to reduce or eliminate them before operating the lift.

- **If you're outside, watch out for hazardous surface conditions as well as power lines and other hazards up high that you'll need to avoid.**

- **OSHA classifies scissor lifts as "movable scaffolds", so the federal standards that apply to lifts can be found in the agency's scaffolding regulations.**

- **Once you've assured yourself that both the lift and the worksite are safe, it's time to set your scissor lift up for use.**
  - Consult the operator's manual for instructions and "tips" on positioning the lift.
  - Then make sure it's on firm ground.

- **If the lift has outriggers or other stabilizers, set them on a level, solid surface.**
  - If you're outdoors, you may need to lay down some "pads" or move some earth to get a proper base.

- **Be sure to set up work zone warnings, using signs, tape or safety cones, to let others know that you are working in the area and that they should keep a safe distance away.**

- **Finally, inspect any protective equipment you'll be using, including hard hats, gloves, safety shoes and fall protection systems.**
  - Never use PPE or fall protection that is damaged or defective.

- **Once you have identified any potential hazards and have set up your scissor lift properly, you can get to work.**

- **First, you will need to climb onto the platform and secure the gate or guardrails.**
  - If you're using a fall protection system, make sure it's attached to an appropriate point on the lift.
  - Attaching it to an adjacent structure could result in you being pulled off the platform if the lift should move.

- **Make sure that the load you're putting on the lift… including all tools, equipment and other workers… doesn't exceed the rated weight capacity of the lift.**
  - You can find the capacity marked on the lift's information plate, or by looking it up in the operator's manual.

- **Arrange everything so that it is evenly spaced and properly balanced.**
  - Test the controls to make sure that the lift operates smoothly and maneuvers properly.
  - Then slowly raise yourself to the desired height, keeping both feet on the platform at all times.
  - Never lean, sit or climb on the guardrails.

- **Many scissor lifts have extendable platforms to help you get closer to your work.**
    - These can slide out to increase the lift's "reach".

- **You should never try to use ladders, planks, stools or other devices to extend your reach or to bridge gaps between the lift and the area where you need to work.**
    - These can be very unstable, and often lead to a fall.

- **Once you complete your work there are a number of steps you need to take to lower a scissor lift safely.**
    - First, make sure the area below the lift is clear of tools, materials and people, so that the platform won't hit anything on the way down.
    - You may want to enlist the aid of a spotter on the ground to help with this.
    - If you choose to use a spotter, be sure to work out the verbal instructions or hand signals that you'll be using to communicate with them ahead of time.

- **Bring the lift down slowly and carefully until it is fully lowered.**
    - Disconnect your personal fall protection system from its anchor point.
    - Then exit the platform, keeping two hands and one foot or one hand and two feet in contact with the lift at all times.
    - Never jump from the platform.

- **If outriggers or stabilizers were deployed, stow them away properly.**

- **Lastly, remove any warning signs, tape and/or cones from the work area.**

- **Even if you don't operate a scissor lift having one working nearby can expose you to a number of hazards.**
  - These can include "tipovers", falling objects, even electrocution.
  - So be aware of any lift equipment that is working in your area.

- **Look for safety cones or warning tape that the lift operators have set up to cordon off work areas, and stay away whenever possible.**
  - If you have to go into the area, always wear appropriate personal protective equipment, including a hard hat and safety shoes with steel toes.

- **Be sure to stay clear of scissor lifts when they are raising or lowering their platforms.**
  - You also need to use caution when lifts are entering or exiting your work area.
  - A lift on the move will normally give any pedestrians the "right of way".
  - But you shouldn’t assume that the operator can see you.

- **Most lifts can be "driven" from controls that are located on the work platforms.**
  - But the higher up the driver is, the more difficulty they have seeing what's going on at ground level.
  - So take care to stay out of their "blind spots".

*** * * SUMMARY * * ***

- **Scissor lifts can help you reach places the you might not be able to get to otherwise. But they can be dangerous if you don't know how to use or work around them safely.**

- **The current ANSI Mobile Elevating Work Platforms Standard contains revisions that affect a scissor lift's design, job site safety procedures and training requirements.**

- **Companies that use scissor lifts must create a "Safe Use Program" for all of their lift equipment.**

- **Make sure that you've been trained on any scissor lifts that you will be using in your workplace.**

- **Know the hazards that are associated with scissor lifts and how to avoid them.**

- **Always inspect a scissor lift for damage or unsafe conditions before you use it and never work with a damaged lift.**

- **Know how to properly set up and operate your lift, as well as how to break it down and return it to its storage area.**

- **If you are working on the ground, be aware of any scissor lifts that are operating in the area, and use caution around them.**

- **When you need to do work that's "up in the air", scissor lifts can take you there. And with proper training and safety precautions, you can avoid the hazards that are associated with them… and go home safe at the end of every day!**