Training Solutions, Delivered!

SAFE OPERATION OF SCISSOR & BOOM LIFTS

(Concise)

Leader's Guide, Fact Sheet & Quiz

Item Number: 4089

This easy-to-use Leader's Guide is provided to assist in conducting a successful presentation.

PREPARING FOR THE MEETING

Here are a few suggestions for using this program:

a) Review the contents of the Fact Sheet that immediately follows this page to familiarize yourself with the program topic and the training points discussed in the program. The Fact Sheet also includes a list of Program Objectives that details the information that participants should learn from watching the program.

b) If required by your organization, make an attendance record to be signed by each participant to document the training to be conducted.

c) Prepare the area and equipment to be used for the training. Make sure the watching environment is comfortable and free from outside distractions. Also, ensure that participants can see and hear the TV screen or computer monitor without obstructions.

d) Make copies of the Review Quiz included at the end of this Leader's Guide to be completed by participants at the conclusion of the presentation. Be aware that the page containing the answers to the quiz comes *before* the quiz itself, which is on the final page.

CONDUCTING THE PRESENTATION

a) Begin the meeting by welcoming the participants. Introduce yourself and give each person an opportunity to become acquainted if there are new people joining the training session.

b) Introduce the program by its title and explain to participants what they are expected to learn as stated in the Program Objectives of the Fact Sheet.

c) Play the program without interruption. Upon completion, lead discussions about your organization's specific policies regarding the subject matter. Make sure to note any unique hazards associated with the program's topic that participants may encounter while performing their job duties at your facility.

d) Hand out copies of the review quiz to all of the participants and make sure each one completes it before concluding the training session.

4089 SAFE OPERATION OF SCISSOR & BOOM LIFTS *(Concise)*
FACT SHEET

LENGTH: 19 MINUTES

PROGRAM SYNOPSIS:
Elevated work platforms such as scissor and boom lifts allow us to safely perform various tasks and maintenance operations at heights that otherwise may be unreachable. While there are many different styles of lifts designed for various applications and site conditions, they all have one thing in common: the potential for serious injury or death when operated in a careless manner. Electrocution, falls, crushed body parts and tip-overs are just a few examples of incidents that often result from unsafe operation. This video discusses the procedures lift operators must follow to prevent these types of incidents.

Topics include operator training and authorization, factors that affect stability, testing of functions and controls, safe driving procedures and use of harnesses and lanyards.

PROGRAM OBJECTIVES:
After watching the program, the participant will be able to explain the following:
- How leverage, weight capacity and other factors affect elevated work platform stability;
- Why it is important to inspect the path of travel and work area before use;
- How to safely drive the vehicle;
- How to avoid falls from elevated platforms.

INSTRUCTIONAL CONTENT:

BACKGROUND
- Elevated work platforms come in various configurations, such as boom lifts which can maneuver the work platform beyond the base of the vehicle, as well as the commonly used scissor-type lifts, which keep the work platform over the base of the vehicle.
- There are many different styles of lifts available from a wide variety of manufacturers, each type designed for various applications and site conditions.
- While each type of lift platform may look and perform differently, they all have one thing in common: the potential for serious injury and death when operated in an unsafe manner.
- Electrocutions, falls, crushed body parts and tip-overs are just a few examples of the types of incidents that result from the unsafe or careless operation of an elevated work platform.

TRAINING & AUTHORIZATION
- Only trained and authorized employees may operate an aerial work platform. If you have not been trained or have not been properly authorized by your company, then you many not operate an elevated work platform.
- All operators must undergo general operator training. In this training, you will become familiar with the operator's manual, where it is stored and the important information it contains.
- You will learn how to properly perform a pre-operational inspection, the location and purpose of all safety placards and decals, the operation and function of the various directional controls and safety devices, how to perform a route of travel and workplace inspection and why it is important to do so, as well as general safe operating procedures and practices to ensure the safety of both operators and pedestrians.
- Before becoming a certified operator, you will be required to operate the platform in the presence of a qualified person to demonstrate your proficiency using the equipment.

LEVERAGE
- One of the most important things to understand about aerial work platforms are the factors that affect stability. One factor is leverage.
- You may be familiar with how a lever works. A small amount of force placed on one end can generate a large amount of force on the other.

• While generally helpful, this principle works against us when applied to an elevated work platform. Raising a platform over a narrow base of support creates a long lever arm; a small amount of sidewise or horizontal force on the raised platform can place enough force on the base to cause a tip-over.
• When the platform can be extended beyond the base, the leverage is even greater. The maximum amount of horizontal force a fully loaded lift can withstand before tipping is called the horizontal load; this information can be found in the operator's manual or warning labels for each lift.

WEIGHT CAPACITY
• Another factor that affects stability is the weight placed on the platform. Every lift has a maximum platform capacity that it is designed to lift safely; this capacity can be found on the data plate and in the owner's manual.
• Overloading your lift with excess personnel, tools and equipment can lead to a tip-over.

SLOPES & SURFACE CONDITIONS
• The surface condition and the slope of the work area also affect stability. Work platforms are designed to safely elevate on a flat, level surface, but is not designed to be elevated or travel on a slope while elevated.
• Adding a sloped surface to other stability characteristics increases the effect of both leverage and platform load, making the lift unstable.
• Similarly, when a wheel drops into even a small pothole, trench, floor drain or similar item, an elevated lift may also become unstable and tip over.

INSPECTING THE TRAVEL PATH & WORK AREA
• You should inspect your path of travel before using the lift, especially if it will be elevated while moving. Even if you are familiar with the area, inspect it for holes, drop-offs, curbs, slopes or similar items that can lead to a tip-over.
• While inspecting the intended travel path and work area, be sure to check for overhead obstructions.
• When moving from the work area to the next, lower your platform before traveling to maximize stability. When it is necessary to move small distances or maneuver with the platform raised, proceed slowly and cautiously while maintaining a clear view of the travel surface.
• In all cases, keep a safe distance from drop-offs, holes, ramps and other obstacles that may overturn the vehicle.

OTHER TIPS FOR MAINTAINING STABILITY
• When using ropes, cords, hoses or similar items, moving the lift while caught or entangled can pull the lift over.
• Be careful not to allow the platform to be caught on anything solid while going up or down.
• Do not hoist or lower tools and supplies from an elevated lift.
• Never use the lift as a crane or for any other lifting function other than lifting personnel as intended.

PRE-OPERATIONAL INSPECTION & TESTING FUNCTIONS/CONTROLS
• Whether you are a new operator or one with years of experience, you must perform a pre-operational inspection prior to using the lift. This inspection should be done before use each day or at the start of each shift.
• After completing all visual inspections, a functional test of the operating and emergency controls must be performed.
• Aerial work platforms have operating controls on the body of the lift as well as in the work platform. A switch is used to select which controls are in operation.
• As part of your training, you will learn how to operate the specific controls for the lift you will be operating.

MOUNTING THE VEHICLE
• Once you are confident that your vehicle is in good working order and that your path of travel and intended work area are safe, it is time to mount the vehicle.
• Inform any affected co-workers that you intend to move the vehicle and make sure no one is under or around the lift. Squarely face the machine and maintain three-point contact while climbing up and into the platform.
• Be sure not to use any operational levers as hand holds when climbing on or off and stay clear of the foot controls.

SAFE OPERATING PROCEDURES
• When driving the platform to and from the work area, maintain a safe travel speed. You will need to adjust your speed based on changing conditions such as congestion, visibility, inclines, and other factors.

- After arriving at your destination mark your immediate work area with cones to alert other vehicles and pedestrians of your presence. When using a boom lift, be sure your barricaded area is sufficient to include the intended swing radius of the boom.
- When raising or lowering the platform, keep hands and arms inside the rails. Passing near a solid object creates a pinch point that can cause major injury. Also, keep an eye out for overhead obstacles to avoid hitting your head while elevating.

USE OF HARNESSES & LANYARDS

- On an articulating boom lift, the platform can move away from the base of the vehicle and move in three dimensions. Because of these various directions of movement and platform extension, a harness and lanyard is legally required to prevent the operator from being ejected from the platform during a sudden unexpected movement.
- In this application the harness and lanyard are not being used as fall protection; instead, they are being used as a restraint device to prevent the operator from going over the rail.
- A scissor lift works differently from a boom lift. The platform only goes straight up or straight down and does not extend beyond the base. There is minimal risk of occupant ejection from normal movement of this type of platform and a restraint device is not legally required.
- Even so, many companies, but not all, require a harness and lanyard be used while operating a scissor lift as a matter of internal policy. Always follow your company's specific policies and procedures.
- In all cases, when a lanyard and harness are used, inspect the components to be sure they are in good working condition and only connect to the lift manufacturer's supplied anchor point.

TYING OFF OUTSIDE THE PLATFORM

- Another common fall protection mistake is tying off to something outside the platform.
- There is no reason to tie off outside the basket; remaining inside the guardrails and keeping both feet on the floor assures that you will not fall.

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ANSWERS TO THE REVIEW QUIZ

1. a
2. b
3. b
4. a
5. b

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REVIEW QUIZ

The following questions are provided to determine how well you understand the information presented in this program.

Name_____Date_____

1. Work platforms are designed to be elevated on flat, level surfaces only.

a. True
b. False

2. If you are already familiar with your intended path of travel, you aren't required to inspect it before proceeding through on your work platform.

a. True
b. False

3. A harness and lanyard for an operator on an articulating boom lift are used _____.

a. To protect the operator in the event of a fall
b. As a restraint device to keep the operator from going over the rail

4. There is no reason you should ever tie-off your lanyard to something outside the platform.

a. True
b. False

5. Supplies should only be hoisted up to an elevated lift when their weight won't overload the maximum capacity of the platform.

a. True
b. False