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Scissor Lift Safety

Scissor Lift Safety

- ***Scissor lift*** - A mobile supported scaffold which can be powered or unpowered, is portable and caster or wheel-mounted.

Scissor Lift Safety

Scissor lifts are a common type of aerial working platform. The parts that elevate the platform contain crossing, interlocking members. When pressure is applied to the outside of the lowest set of supports through hydraulic, pneumatic or mechanical means, the crossing supports 'lengthen' to raise the platform.

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Training Requirements

* Understanding the nature of any lift hazard, electrical hazards, fall hazards and falling object hazards in the work area.
* The correct procedures for dealing with hazards and for erecting, maintaining and disassembling the fall protection systems.
* The correct procedures for moving, operating, inspecting and maintaining the type of lift in question.
* Proper use of the lift, and proper handling of materials on the lift.
* The maximum intended load and the load-carrying capacity of the lift used.

Scissor Lift Safety

* Loading and unloading the scissor lift from trucks/trailers.
* Job site awareness, be aware of your surroundings and work area for potential hazards.
* Building entry and exiting procedures.
* Vehicle, trailer and scissor lift checklist.
* Proper securing of the scissor lift for transport.
* Pulling a loaded trailer with a vehicle.
* Ladder use and guidelines.
* Tool use and guidelines.

Selecting The Right Lift

When selecting a lift there are some important issues that must be considered.

* The type of work being performed.

* The terrain in which the lift will be utilized.

* The number of employees and equipment needed.

Selecting The Right Lift

* When choosing the lift be sure to take all aspects of the job at hand into consideration. Example: what is the maximum height you need to reach, load capacity, portability and operation.

* There are various lifts available for various terrain. We will only be using the lifts designed for use in retail flooring with non marking tires.

* When using a scissor lift a spotter should always accompany the operator of the lift. This is to ensure the safety of the team, store personnel and the retailers property.

Inspections

There are four main inspections that must be done when using an scissor lift device and the accompanying equipment.

* A pre-start inspection of the lift must be performed before each use.

* Inspection of the surrounding work site in which the lift will be utilized.

* Trailer hook up and inspection of the connections and functionality of the safety features.

* Truck/Van inspection of all vital functions (brake lights, headlights, brakes, tire pressure and ensuring that the trailer hitch is secure).

Pre-Start Inspection

- **The manufacturer provides a list of items that should be inspected before use in the operator's manual. Some items to inspect include:**

* Operating and Emergency Controls
* The Boom
*Hydraulic System
* Emergency Stop Buttons
* Safety Guards and Sensors
* The Boom
* Guardrails
* Outriggers
* Tires
* Emergency Descent System

Work Site Inspection

It is necessary to inspect the work site also. Items to inspect include:

* The surface on which the lift will be used ensuring that its level and free of obstacles.
* Hazards that might create dangerous driving conditions such as weather, rugs or displays.
* Inspection of the work area for overhead hazards like overhangs, wires and lighting.

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- Employees should always stand firmly on the floor of the lift. They <u>should not sit or climb on the basket or guardrails</u> or use planks, ladders or other items to attain a higher work position.

Fall Protection Device

- A safety harness is required to be worn while operating the lift at an elevated position. These are worn around the torso and have a tether that attaches to the lift at a specified location.

Fall Protection Device

- **STEP 1**
  GETTING STARTED
  Hold harness by back O-ring which is held in place by a O-ring pad, make certain straps are not twisted.
- **STEP 2**
  SHOULDER STRAPS
  Slip harness over arms and onto shoulders. Make certain all straps are not tangled and hang freely. Shoulder straps should be kept vertical, not pulled into center of body.
- **STEP 3**
  LEG STRAPS
  Grab black leg straps and connect to buckles attached to yellow straps on each hip. Pass excess strap through loop keepers. Leg straps should fit snugly.
- **STEP 4**
  CHEST STRAP
  Attach chest strap by passing male buckle through female buckle. Strap should be 6" below top of shoulder. Pass excess strap through loop keeper.
- **STEP 5**
  ADJUST HARNESS TO FIT SNUGLY
  Shoulders. To tighten, pull on free ends of straps as shown. To loosen, push down on parachute adjuster buckle frame. Straps should be adjusted to same length.
  Chest Strap. To tighten, pull free end of strap. To loosen, push on strap from free end through adjuster buckle and take up stack by pulling on adjuster buckle. To position, slide keeper up or down shoulder strap.
  Back D-ring. Center between shoul-der blades, slide D-ring and pad up and down along the webbing to position

Fall Protection Device

Fall Protection Device

- Once the harness has been put on the harness tether will need to be clipped into position to one of the various tether location on the scissor lift cage.

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* Fall protection is required for all employees that perform work on a lift if they are going to be elevated to a height of 10 feet above a lower level.
* If the lift is used according to manufacturer's guidelines and all safety precautions are being followed, the chance of any fall is minimal.
* The lift should be lowered to a safe resting position and the power removed when not in use.
* The key should be removed to prevent any unauthorized use when an authorized employee is not present.

Scissor Lift Safety

- The operator should know the total load of the lift including tools, supplies and other employees. The weight of the load should be within the manufacturer's suggested maximum safe working load.
- The load capacity and other safety limits are posted on the side of the scissor lift. All operators should review these and ensure we are operating within the specified limits.
- Ensure that the load on the scissor lift platform is balanced.

Load Capacity Warning Labels

Electric Scissor Lift **WARNING!!!!!**

Platform Size 30 in X 73 1/2 inches

Platform height 19 To 20 Fee

Capacity 500 lbs

Max speed 3.0 mph

Weight 2,800 to 3,800 lbs

Tilt Trailer **WARNING!!!!!**

Platform Size 120 in X 72 inches

Max Capacity 3800 lbs

Max speed 55 mph

Weight 2,800 lbs

Center Load And Secure: Chains Only

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* Lifts should never be used as a crane to hoist materials unless the manufacture has designed it to lift loads in such a manner.
* Before moving the lift all employees should be made aware of the move. Alert everyone that you will be moving and ensure verbal acknowledgement is given before proceeding.
* A buzzer or horn should be used while working to alert anyone in the work area of the scissor lift and its movements.
* The operator should always refer to the lift's operator manual for any other safety procedures specific to the lift.

Scissor Lift Safety

* Scissor lifts must have both platform and lower controls.
* Platform controls must be in or beside the platform within easy reach of the operator.
* Lower controls should be able to override the platform controls but should not be used unless permission has been obtained from the employees in the lift or in case of emergency.
* Another employee on the ground should guide the operator when transporting the lift from one area to another on the work site. The operator must make sure that the lift is never over an employee that is working on the ground.

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* Never raise the platform while the lift is on a truck, trailer or other vehicle.

* Employees should never ride on a scissor lift unless the following conditions exist:

  -The surface on which the lift is being moved is within 3 degrees of level and free of pits, holes and obstructions.

  - The lift does not travel more than 1 foot per second; and no employee is on any part of the lift which extends outward beyond the wheels.

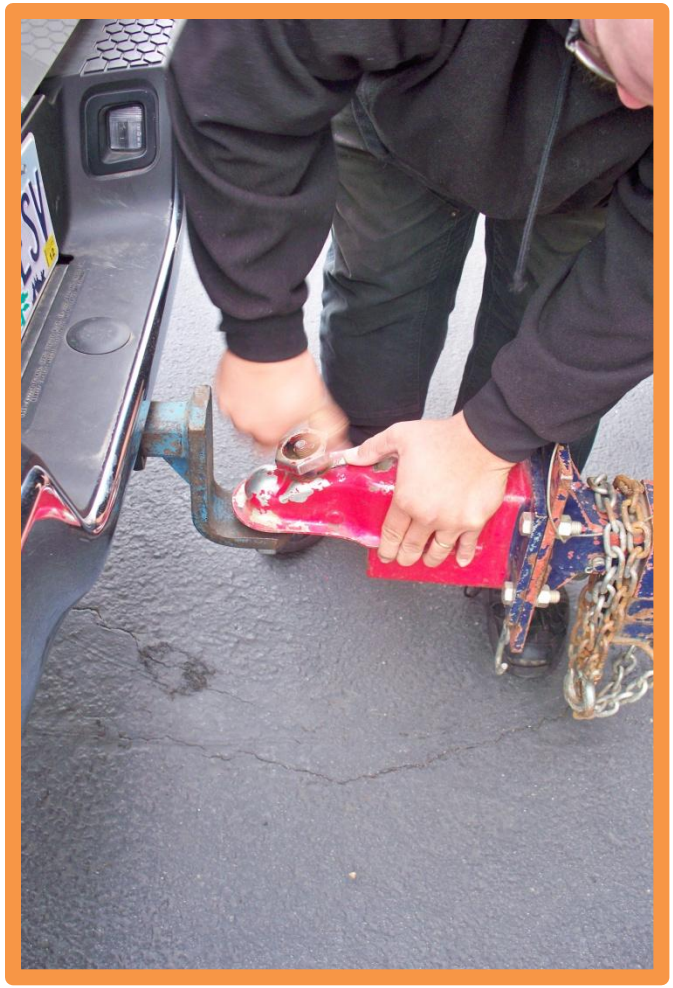
Scissor Lift Safety

* When moving the scissor lift it must be set to the slowest setting. Typically this is called turtle mode and on the control panel it is commonly displayed as a turtle symbol.
* The scissor lifts can be driven while in the cage and allowing to work from elevated positions. It can also be driven by removing the control panel and walking the unit when needed. This is used when entering/exiting the building and loading/unloading the scissor lift.

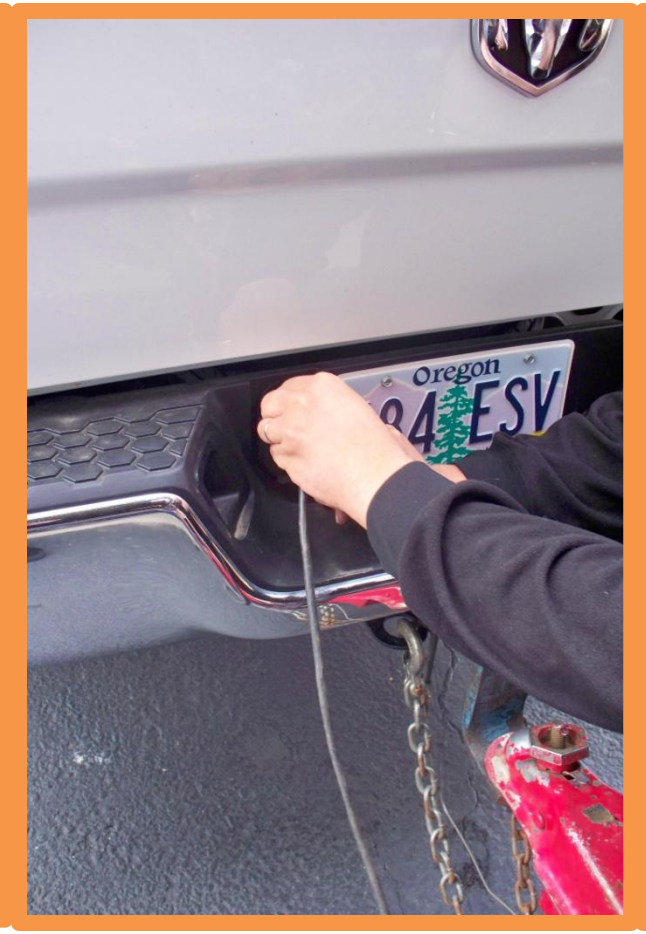
Trailer Hook Up

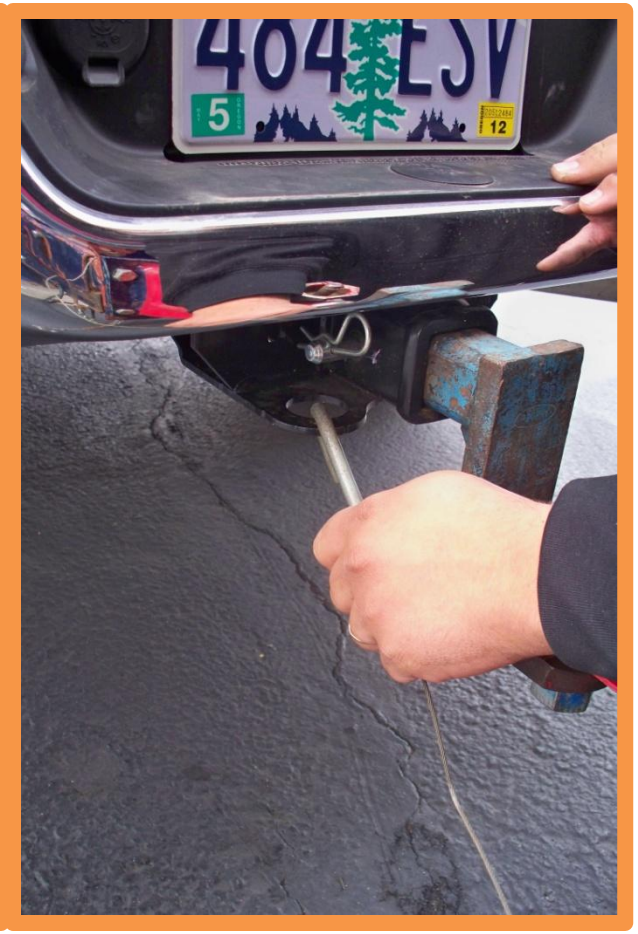
Pull trailer coupler on the trailers tongue to line up with the ball hitch on your vehicle. Once the coupler is in position above the ball of the trailer hitch the trailer can be lowered onto the ball.

Once the ball and coupler are together release any support mechanisms allowing the truck /Van to carry the load. Ensure that all security pins are in place before moving on.



Now firmly tighten the coupler to the ball hitch by turning the couplers knob until it turns no more. This can be hand tightened no tools are required to tighten this item.





Attach all required chains and hook ups from the trailer to the towing vehicle. This would include, the tail light cable, emergency brake line, and security chains used in case of a run away or break away trailer.

Ensure that they are criss-crossed and one clip is attached on each side of the trailer hitch

Check List

* Ensure that all pins and latches are in place and secure.
* Check brakes light functions on both the trailer and the towing vehicle.
* Ensure that any powered equipment is powered down.
* All tools are in working order and present.
* Tire Pressure on the trailer and towing vehicle should be at manufacturers guidelines.

Loading And Unloading The Scissor Lift (Trailer)

Ensure that you have the lift centered and lined up straight for loading/ unloading. DO NOT ride in the unit while loading or unloading the lift when using a trailer. Power down and secure the lift with chains only.

Securing The Lift For Transport

Use only chains to secure the lift to the trailer. The lift must be secured in the front and back. The lift has anchor points built into the body of the unit.

Loading And Unloading The Scissor Lift (Truck)

When using a truck to transport the lift a dock plate must be used to bridge the gap between the store dock and the trucks bed. Use extreme caution and ensure that the plate is in place and secure before you attempt to load the scissor lift. Once in the truck ensure to secure it with heavy duty chains.

Building Entry And Exiting

When entering or exiting a store use extreme caution. Proceed slowly ensuring that you have clearance on all sides before you attempt to enter any doorway.

Tips On Towing A Trailer

Tips on How To Tow a Trailer

The weight capacities of the tow vehicle, the trailer hitch, ball mount, ball, and safety chains must not be exceeded by the gross trailer weight (GTW). The towing system will only be as strong as the weakest piece.

Gross Trailer Weight (GTW) - the weight of the loaded trailer. To determine GTW, weigh the loaded trailer on a vehicle scale.

Tongue Weight (TW) - the downward pressure placed on the ball by the coupler. On smaller trailers the TW can be measured using a bathroom scale and a box. On a level surface, place the coupler of the loaded trailer on the scale at normal towing height (Figure A). For heavier tongue weights, use the method diagrammed below (Figure B) or use a tongue weight scale.

- # Trailer Loading

The way you load the trailer can determine how easy you can tow it. While loading, keep in mind that the tongue weight should be 10% to 15% of the overall trailer weight. One of the main causes of trailer sway is not having a large enough percentage of trailer tongue weight compared to gross trailer weight. To help prevent the trailer from swaying back and forth, a few things can be done. Try placing heavier cargo in the front of the trailer, ahead of the trailer's axle. Also center the cargo left-to-right and use tie-downs to keep the load from sliding.

Trailer Sway can also lead to a loss of vehicle control. When starting out with a new load on a trailer, make sure it will not sway by gradually increasing your speed in intervals until highway speed is reached. If the trailer does begin to sway, try adjusting the cargo and equipment accordingly and then repeat the test. If repositioning the load and equipment did not help reduce the sway, a sway control or a weight distribution system with sway control may be needed.

- **Do's - Good Towing Practice**
- Gradually reduce speed
- Steady the steering wheel - sudden turns can cause more sway
- Apply only the trailer brakes to help reduce trailer sway
- **Don'ts - NOT Good Towing Practice**
- Do Not slam on the brakes - jackknifing could occur
- Do Not attempt to steer out of a sway situation
- Do Not increase speed - Trailer sway increases in faster speeds
- Do Not tow a trailer that continues to sway
  - Look at reloading the trailer or perhaps adding a sway control or a weight distribution system with sway control

- **Driving**

The addition of a trailer adds weight and length to the tow vehicle. More weight means more time to speed up and more importantly, slow down. Overall handling is also affected. When towing, allow for extra time when switching lanes, stopping and passing other vehicles. To assist in slowing down, trailer brakes are a very good option. The extra length can also cause problems on turns. Because the trailer does not follow the exact path as the vehicle on turns, remember to swing out wider when traveling around bends and corners.

To conserve fuel when towing, travel at moderate speeds. Faster speeds increase wind resistance, reduce gas mileage, and place added strain on the vehicle and trailer. When traveling over large hills or down gravel roads, use a lower gear to ease transmission and engine operation. Shifting out of overdrive and into a lower gear may also improve vehicle gas mileage.

Be extra cautious of potholes and other large bumps. Riding over one can damage the tow vehicle, trailer hitch and/or trailer. When pulling a trailer take your time and be careful. If for some reason (a gust of wind, a downgrade, a pass by a larger vehicle, etc.) the trailer does begin to sway, the driver needs to assess the situation to determine the proper course of action. Here is a list of Do's and Don'ts to think about.

- # Trailer Towing Components

  Trailer Hitches

- Trailer Hitches are specific to each vehicle and are rated accordingly. To find out how much your vehicle can tow, see the owner's manual. To find out how much weight the trailer hitch can tow look at the sticker on the hitch. Two ratings will normally appear on the sticker, weight carrying and weight distributing. Weight carrying is towing with a ball mount. Weight distributing is towing with a system that includes spring bars that attach to the trailer. To help distribute the load.
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  Ball Mounts

- Keep in mind the trailer's gross trailer weight and tongue weight when selecting a ball mount for the trailer hitch. Class III ball mounts are selected not only with gross trailer weight in mind, but also trailer height. The more level the trailer, the easier it is to pull. Information is available to aid in selecting the correct ball mount in the trailer guide. Class I and Class II ball mounts are specific for each vehicle and are recommended by the hitch manufacturer. To find to find a ball mount for a Class I or II hitch, use the Hitch Hunter™.

  Hitch Balls

- Always make sure the hitch ball weight rating is greater than the gross trailer weight. As for the hole diameter on the ball mount, it must be less than 1/16" greater than the ball shank diameter. When tightening, always use the lock washer and make sure a portion of the ball shank extends past the bottom the nut.

Trailer Wiring

- Always make sure the turn signals, brake lights, tail lights, electric brakes, and breakaway switches are working on the trailer prior to each use. If the trailer has some wiring problems, a wiring diagram is available which shows the proper way to install trailer wiring in your trailers manual. Replacement trailer connectors are also available. Always be sure to find a good secure ground on the trailer and also on the tow vehicle. If the vehicle still needs to be wired, we is a Plug-N-Tow™ harnesses for most applications.

Trailer Couplers

- The inside of the coupler should be clean and slightly lubricated with grease. This will help prevent binding during turning and help any moving parts inside the coupler move smoother.

Safety Chains

- Always connect the trailer's safety chains securely to the trailer hitch or tow vehicle by crossing them underneath the coupler. The safety chains should only be long enough to allow for tight turns. Anything longer may weaken the safety feature of the chains if other connections fail. Also make sure the chains cannot wiggle or bounce free and do not let them drag on the ground.

Choosing The Correct Ball

- **Information Needed to get the Correct Ball**
- Gross trailer weight (GTW)
- Hole diameter on the ballmount
- Ballmount platform thickness
- Trailer coupler size