

Ladder Handling

Many injuries are caused by improper handling of ladders. The typical 28 foot fiberglass extension ladder used by the cable industry weighs in the neighborhood of 70-75 pounds. Add levelers, and you can easily have 100 pounds that you are trying to "horse around". It is important that you handle ladders with proper leverage and lifting techniques.

Let's start with unloading the ladder from the vehicle. There are many types of ladder racks used, we will describe two. The type of ladder rack will determine how you remove it from the vehicle.

In all situations, remember to use your legs to handle most of the weight of the ladder.

Unloading the Ladder from a Top Ladder Rack



When removing the ladder from the rear of the rack, pull it only to the point where the ladder's weight will allow it to gravitate to the ground.

Set the feet of the ladder on the ground, then using proper body mechanics, lift the ladder to the shoulder to remove it completely off the vehicle.



Ladder Handling (Continued)

Unloading the Ladder from a Side Ladder Rack

When removing the ladder from the side of the vehicle, grab the lower part of the ladder and rotate it to the ground.



Once the feet are resting on the ground, again use proper body mechanics (keep back straight and bend your knees) to lift the ladder off the vehicle.



Inspecting the Ladder

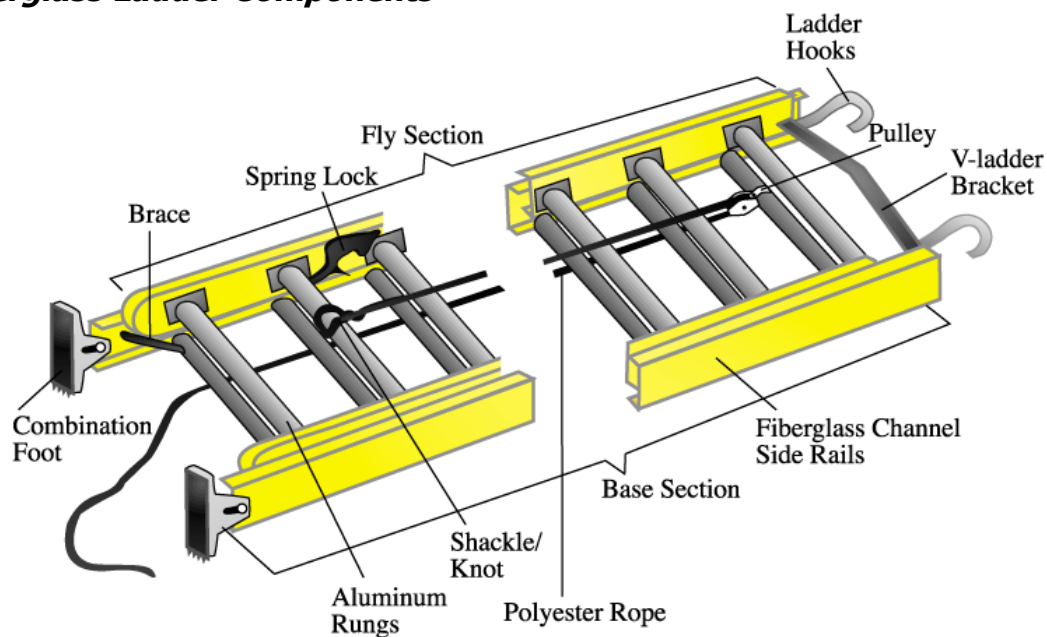
OSHA requires that ladders be inspected before use and periodically thereafter.

After the ladder is off the vehicle, and being used for the first time during the day, place it on the ground and conduct a visual inspection of the ladder.

Periodic inspections are normally done annually and by a competent person.

Periodic ladder inspections should be documented.

Fiberglass Ladder Components



Review the guidelines for Fiberglass Ladder Inspections on the next page and consider the following after inspecting your ladder.

If you find a problem that makes the ladder unsafe to use, **DO NOT USE IT.**

Report the problem to the supervisor and replace, repair or destroy the defective ladder.

FIBERGLASS LADDER INSPECTION GUIDELINE

ITEM	INSPECT FOR	LIMIT OF DEFECTS (NOTES 1&2)
Side rails	Cracks Dents Fractures Gouges Splits (note 3)	Surface crack - 6 inches long Fracture (web) - 3 inches long Fracture (flange) - 2 1/2 inches long Gouge (web) - 5/8 inch square by 1/8 inch deep Gouge (flange) - 3/8 inch long by 1/8 inch deep See through gouge (web) 1/2 inch square See through gouge (flange) - 1/4 inch square Crack (web) - 1 1/2 inches long Crack (flange) - 3/4 inches long Open crack (web) - 3/8 inches long Open crack (flange) - 1/4 inches long
Rungs	Cracks (note 4)	<u>All of the following are unacceptable:</u> - cracked - severely bent - loose - excessively worn
Rung Braces/ Rivets	Cracks Missing parts	<u>All of the following are unacceptable:</u> - missing - cracked - defective
Hooks/Locks/ Flippers/Pulley	Cracks Security Freedom of operation (notes 5 & 6) Distortions Bends	<u>All of the following are unacceptable:</u> - cracked - broken - bent - defective - distorted
Rope	Fraying Rotting (especially at pulley)	<u>All of the following are unacceptable:</u> - excessively frayed or worn - rotted
Leveler	Cracks Looseness Dents Missing parts Freedom of operation Bends	<u>All of the following are unacceptable:</u> - cracked - loose - dents, gouges - missing - defective - severely bent
Foot Pads	Missing parts Pad wear	<u>All of the following are unacceptable:</u> - missing - badly worn

Note #1: A ladder having a condition exceeding these limitations shall be removed from service.

Note #2: Defective hardware exceeding these limitations may be repaired or replaced. If not corrected, the ladder must be removed from service.

Note #3: Cracks, splits and fracture defects can be identified by stressing with the hands.

Note #4: Rungs may have longitudinal cracks along ribbing, or they may have cracks around the crimping joining the end plates.

Note #5: Lock springs shall function to keep the hook in position to engage the rung.

Note #6: The pulley sheave shall revolve freely.

FIBERGLASS LADDER TERMS AND DEFINITIONS

TERMS	LADDER TYPE	DEFINITION
Chip	Fiberglass	Small piece of resin broken off an edge or surface.
Crack	Fiberglass	A separation of the laminate, visible on opposite surfaces, and extending through the thickness.
Open Crack	Fiberglass	See-through separation of material.
Surface Crack	Fiberglass	A line-type crack in the resin not penetrating the subsurface glass layer.
Crazing	Fiberglass	A pattern of fine hairline-type cracks on the surface or just below the resin surface with the appearance of a random spider web.
Delamination	Fiberglass	Separation of layers or strands of material exposing loose "white" glass fibers - when internal it could resemble a blister.
Flange	Fiberglass	Part of channel shaped fiberglass rail.
Fracture	Fiberglass	Rupture of the laminate surface without complete penetration to opposite side.
Gouge	Fiberglass	Deep groove penetrating the laminate and visible from the opposite side.
Open Gouge	Fiberglass	A see-through gouge.
Scratch	Fiberglass	A shallow groove in the resin surface not penetrating the subsurface glass layer.
Scuff	Fiberglass	A mark in the surface resin caused by rubbing or scraping.
Toe	Fiberglass	Narrow area at ends of channel adjacent to flange.
Weathering	Fiberglass	Erosion of the surface resin due to environmental exposure.
Web	Fiberglass	Wide section of channel between flanges.

Carrying Ladders

After the inspection has been completed, the ladder must then be carried to the location where the work is to be done.

Make sure you scan the route to the work location. This will ensure you identify "Unforeseen Hazards" along the route of travel that might include:

Unforeseen Hazards

- Uneven surfaces in the ground (holes, rocks).
- Slippery surfaces (dew, snow, water, leaves).
- Low hanging tree limbs that could catch in the ladder.
- Dogs and other animals that could create a problem.
- Obstacles that could make it difficult to move or place the ladder.

Ladder Carrying Techniques

There are three generally accepted methods of carrying a ladder. How you carry the ladder will depend on the circumstances; how far to the site, obstacles encountered in route.

It is best to carry the ladder long distances using the **Shoulder or D-ring carry**. This puts less stress on the body.

The Shoulder Carry; the ladder is balanced on the shoulder and carried in a horizontal position to the work site.



The D-ring Carry; the ladder is placed on the D-ring of the work belt and carried in a horizontal position.

The Vertical Carry should be used for ***short distances only***.
The Vertical Carry; the ladder is carried vertically.

