ESSENTIAL 29: Ladders Safety



Key Takeaways:

– Recognizing common ladder types used in industry.
– Understanding common hazards associated with ladder use.
– Learning the requirements and best practices for ladder safety.

Course Description

Ladders seem simple, but the injury statistics indicate that it is one of the most abused tools we have. Especially in the domestic setting, accidents are frequently caused by overreaching or overextending from ladders to complete certain tasks, rather than doing the safe thing: climbing down and shifting to a better access point. Studies done by OSHA show that 100% of ladder-related accidents could have been prevented using proper safety.

There are many jobs that involve ladders, including cleaning, painting, changing light bulbs, accessing storage areas, reaching platforms, and more. Climbing up and down a ladder all day can cause fatigue, which is why workers will naturally want to maximize the effort they've spent to climb the ladder. Occasionally, they will stretch themselves or their tools to accomplish little jobs a little faster, which makes an inherently risky situation even more dangerous.

Ladder usage creates safety hazards like slips and falls, tip-overs, electric shocks, failure due to defects and damage, and failure from overloading. These hazards can stem from using a ladder that is too short, using the wrong type of ladder, not using a ladder when one should be used, reaching too far to the side, and not using it as intended.

When ladders are overloaded, they can break or collapse, sending workers and materials tumbling onto floors or other workers. Even when properly used, if the ladder is defective in some way there's always the possibility of a fall injury. It is important to always examine tools for defects before using them.

Ladder Tips and Precautions Stationed Near Electrical Lines Prior to handling a ladder look for electrical hazards such as overhead power lines. Never use a metal ladder near power lines or exposed energized electrical equipment. As well, ladders need to be free of any slippery material on the rungs, steps or feet. Also, ensure no power cords or rope can get tangled in the rungs. – Keep the minimum clearance distances for maximum voltage listed. – Work with the shortest ladder available to reach the target area. – Think about the heights of conductive materials that must be

extended beyond the ladder. Dodging Electric Shock – Work on a ladder made of non-conducting material; the safest ladders are the newer fiberglass reinforced plastic (FRP) types. – Do not use aluminum or metallic ladders. – Do not use wooden ladders around power sources since wood absorbs moisture and can become a conductor. – Never use any kind of ladder that is wet when there is the possibility of an electric exposure. – Always work on non-conducting ladders with power tools. – Only use double insulated and properly grounded tools; avoid any contact between a ladder and power transmission and distribution lines. – Take care when changing ladder locations near any energized conductor equipment and tools. Minimizing Fall Hazards – Acknowledge fall hazards. – Regularly perform safety inspections. – Identify then avoid unsafe ladder conditions and practices. – Always work with protective equipment. – Do not force a worker to climb a ladder. More common hazardous workplace situations involve ladders being used in busy areas such as passageways, doorways, or driveways. It is possible for the ladder and the worker using it can be displaced by workplace activities or traffic. To reduce the amount of falls or other accidents in these situations, install a barricade around the area you're working to keep traffic or activities away and ensure the ladder is secured to prevent movement, or have someone direct traffic away from the area. If feasible to do so, a personal fall arrest system may be additionally employed as a precaution. Preventive Measures Understand the labels: Prior to mounting a ladder, always read and follow all instruction and warning labels. Make sure to check for weight limits. Every ladder is designed to hold a certain amount of weight, the weight of the individual climbing the ladder along with all additional weight from tools, equipment and carry-on weight. Test stability: Make sure the ladder is sturdy with no cracked or damaged parts. If the circumstances allow it, aluminum is a stronger and lighter material than wood. Every bolt and screw needs to be secured and working properly. In the case that the ladder is damaged, remove from service until repaired or discarded. Finally, if possible, choose a ladder with stabilizers on the feet. Check positioning: Take care to position the ladder on firm and level ground such as concrete. If the ladder is positioned against a wall, ensure the angel is no wider than 75 degrees or about 4 feet from the ground to the wall. Learn the 3-point rule: While working, keep three points of body contact with the ladder, either two hands and a foot or two feet and a hand when climbing. Take care to step on the middle of the step and face the ladder. In the circumstance that you need different tools, wear a tool belt to hold them. Dress correctly: Use a hardhat or safety helmet while on a ladder, wear work boots or shoes with tread, and never wear sandals or go barefoot when working on a ladder. Slipping is very easy if you are wearing smooth soled shoes; it's not difficult to wear the correct footwear, and it could save your life. Only wear footwear in good condition, with heels and skid-resistant soles. Be cognizant of your movements: Do not stand on the top few rungs. It is far safer to choose an extension ladder that is long enough. A good sign is when the top of the ladder reaches past your belt when standing near the top. One of the major causes of injuries comes from standing too close to the top. Do not lean out or overreach from either side when working, leaning will throw you and the ladder off balance and you should keep your center of gravity aligned. – Get off before moving a ladder. – Always clear clutter from the top and bottom ladder areas. – Never hold loads that prevent you from using both hands on the ladder. – Place tools in belt or hoist rather than in your hands. – Only take slow and cautious movements.