

Warehouse .pdf



Using a Vertical Lifeline and Rope Grab

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Division -- Seattle

Start Date -- 2025-07-15

Expiration Date -- Does not expire

Job Name -- Warehouse

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Comments:

Working at heights requires reliable fall protection. One key component is the rope grab system: a device designed to arrest a fall by locking onto a vertical lifeline in the event of a sudden descent. But like any fall protection gear, it only works if it's used and set up correctly. Improper use can result in serious injury or even death.

Key Components of a Vertical Lifeline and Rope Grab System

Rope Grab Device

A mechanical device that automatically locks onto the lifeline during a fall.

Must match the diameter and material of the rope (commonly 5/8" polyester or nylon).

Always inspect for free movement and locking function before use.

Vertical Lifeline (VLL)

Typically, a 5/8: synthetic rope; may include a shock absorber.

Should have a factory-sewn loop or steel thimble eye at the end.

Inspect for cuts, burns, frays, or chemical damage every time before use.

Full Body Harness

Must meet ANSI Z359.11 and OSHA 1926.502 requirements.

Only the dorsal (back) D-ring is approved for fall arrest attachment.

Lanyard or Shock Absorbing Lanyard

Connects the rope grab to the dorsal D-ring.

Use a shock-absorbing lanyard, unless one is built into the rope grab itself.

Anchor Point

Must support at least 5,000 lbs. per user.

Should be above the worker to reduce fall distance and swing fall risk.

Proper Setup Steps

Inspect All Equipment

Check rope, rope grab, lanyard, harness, and connectors.

Look for signs of damage, rust, deformities, or missing labels.

Ensure all components meet current standards and manufacturer specs.

Install the Rope Grab

Open the rope grab per manufacturer instructions.

Install in the correct orientation: look for arrows or "up" markings.

Verify it moves freely and locks with a sharp tug.

Attach the Lanyard

Use only a compatible shock-absorbing lanyard.

Secure it to the rope grab's D-ring or eye using a locking carabiner or snap hook.

Connect to the Harness

Clip the lanyard to your dorsal D-ring.

Confirm all clips are locked and secure.

Secure the Lifeline to the Anchor

Use a locking carabiner or snap hook to connect the rope's sewn loop or thimble eye to a certified anchor point, such as:

A structural beam with a beam strap/clamp or an engineered roof or tie-off anchor.

Ensure the anchor is overhead whenever possible.

Final System Check

Walk a few feet and make sure the rope grab travels smoothly and locks under force.

Make sure your system isn't twisted or tangled.

Critical Safety Reminders

NEVER tie knots in the lifeline or attach more than one rope grab to a lifeline.

DO NOT use rope grabs on **horizontal lifelines** unless rated for that application.

Always follow the **manufacturer's instructions** for setup and inspection.

If you are uncertain about how to use the equipment: **STOP and ASK** for assistance.

For those of us who are visual learners, please check out these short video walkthroughs.

[How to Inspect and Use a Rope Grab](#)

[Vertical Lifeline Assembly with Rope Grab](#)

Remember This!

Stay connected, stay safe. If your rope grab doesn't lock properly: neither will your future plans.

Always double-check your gear before every climb.