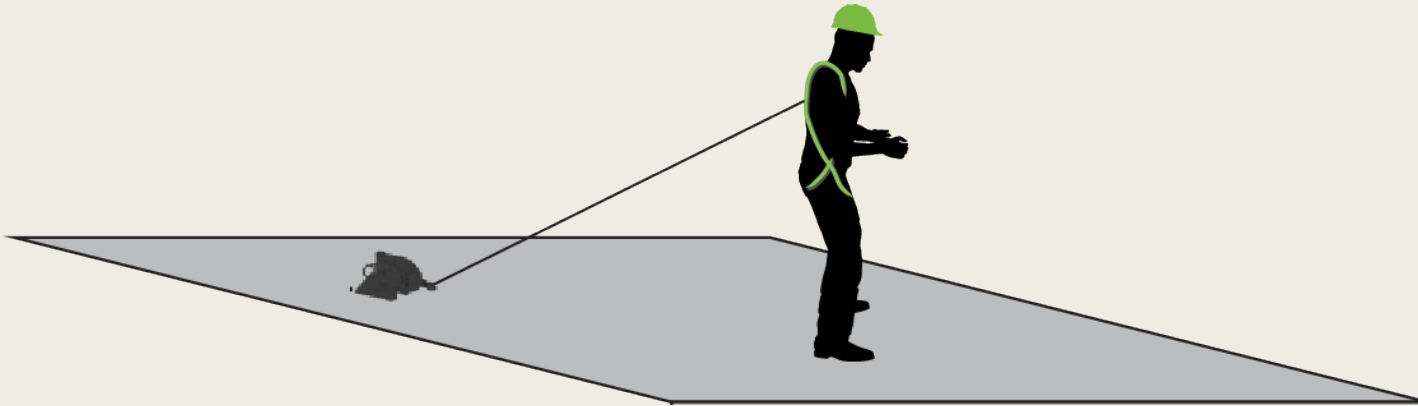


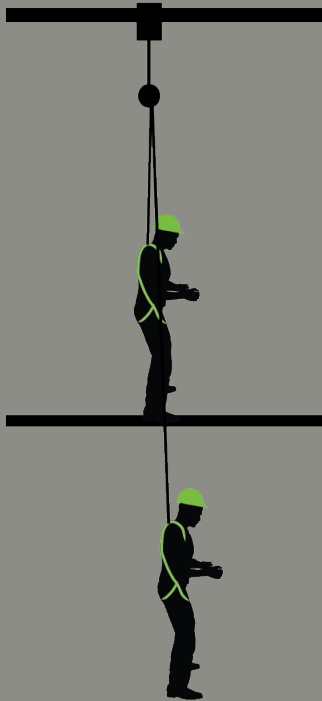
Understanding Foot-Level Tie Off



Using The Right Equipment

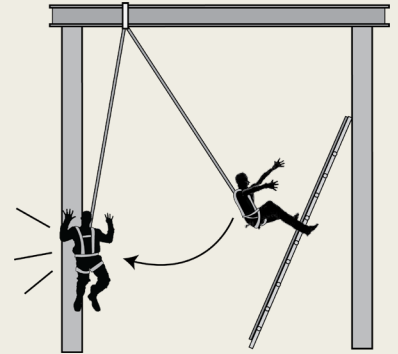
- Ⓐ In the world of Fall Protection, Foot Level Tie Off should be avoided if at all possible. Tie Off at Dorsal D-ring height or higher is always the preferred method, but in instances where this just isn't possible, Foot Level Tie Off is acceptable provided the right equipment and training are provided.
- Ⓐ Given that Falls account for 38.8% of employee deaths in the construction industry, Fall Protection Equipment literally saves lives when utilized properly. Tying of at Foot Level presents added hazards to working at heights and requires specialized equipment developed, tested, and authorized for this type of work

Free Fall Factor



- Ⓢ One of the biggest factors that must be taken into account when tying off at foot level is the increase in Free Fall distance. Workers tied off at foot level can experience free fall distances greater than 6 feet. OSHA states that Personal Fall Arrest Systems (PFAS) be rigged in such a manner that the employee neither free fall more than 6 feet (1.8 m) nor contact any lower level.
- Ⓢ Free Fall may be more than 6 feet (1.8 m) **only** if the employer can demonstrate the manufacturer designed the system to allow a Free Fall of more than 6 feet and tested the system to ensure a maximum arresting force of 1,800 pounds (8 kN) is not exceeded. Hence, if Foot Level Tie Off is the **ONLY** available option, and the employer cannot provide a more suitable anchorage or other form of Fall Protection, Free Fall distances of greater than 6 feet (1.8 m) are allowed if the equipment used is specifically designed for such use.
- Ⓢ With the increase in Free Fall distance also comes an **increase in the Fall Clearance Distance required** in order to safely arrest a fall.

Swing Fall Hazards



- ⚠ In addition to the increase in Fall Clearance, ***tying off at Foot Level presents additional risks*** that should be considered in your Fall Protection Plan.
- ⚠ Swing Fall Hazards can become more applicable when tying off at Foot Level. Workers must be fully aware of their work position in relation to the anchor location in order to minimize possible Swing Fall. Swing Fall Hazards can be just as dangerous as falling to the ground or next lower level.
- ⚠ When tying off at Foot Level with a Self Retracting Lanyard, the SRL can experience a delay in lock up due to the increased Free Fall. SRL's are designed to lock up as the cable extends from the housing at a certain speed. ***SRL's anchored at foot level however, do not reach this required speed until the user's Dorsal D-ring is past the edge and slightly below the level of the anchor.*** At this point the worker could have already theoretically fallen 5 to 7 feet.
- ⚠ Any amount of increase in Free Fall exponentially increases the fall arrest forces that the users body experiences in the event of a fall. This is why, if tying off at foot level, equipment designed specifically for this application must be used in order to minimize the increase in Fall Arrest Forces.

LEADING EDGE HAZARDS

Leading Edge Hazards can become a real and serious issue if tying off at foot level. Leading Edge rated equipment must be utilized if a Leading Edge condition exists.

OSHA defines a Leading Edge as follows:

1926.500(b)

Definitions.

Leading edge means the edge of a floor, roof, or formwork for a floor or other walking/working surface (such as the deck) which changes location as additional floor, roof, decking, or formwork sections are placed, formed, or constructed. A leading edge is considered to be an "unprotected side and edge" during periods when it is not actively and continuously under construction.

..1926.501(b)(2)

"Unprotected sides and edges." Each employee on a walking/working surface (horizontal and vertical surface) with an unprotected side or edge which is 6 feet (1.8 m) or more above a lower level shall be protected from falling by the use of guardrail systems, safety net systems, or personal fall arrest systems.

"Leading edges."

Each employee who is constructing a leading edge 6 feet (1.8 m) or more above lower levels shall be protected from falling by guardrail systems, safety net systems, or personal fall arrest systems. Exception: When the employer can demonstrate that it is infeasible or creates a greater hazard to use these systems, the employer shall develop and implement a fall protection plan which meets the requirements of paragraph (k) of 1926.502.

Note: There is a presumption that it is feasible and will not create a greater hazard to implement at least one of the above-listed fall protection systems. Accordingly, the employer has the burden of establishing that it is appropriate to implement a fall protection plan which complies with 1926.502(k) for a particular workplace situation, in lieu of implementing any of those systems.

Leading Edge SRLs



- Ⓜ Additionally, most Leading Edge rated SRL's feature an integral Energy Absorber (Shock Pack) that will deploy in the event of a fall over a leading edge. This deployment of the Energy absorber reduces the forces generated not only on the user, but also the line constituent of the SRL as it contacts the Leading Edge.
- Ⓜ As the line constituent of an SRL contacts a Leading Edge, not only must it withstand the forces generated at the point it meets the Leading Edge, but it must also be capable of withstanding the additional stress of any Swing Fall forces as the line constituent moves laterally across the Leading Edge. While the Energy Absorber works to reduce these forces, it also adds additional Arrest Distances that must be taken into consideration when calculating overall Fall Clearance.

SafeWaze Leading Edge SRLS



Class B 30' Cable Leading Edge SRL
FS-FSP9030

Class B 50' Cable Leading Edge SRL
FS-FSP9050



Class B 20' Cable Leading Edge SRL
FS-FSP9020

11' Dual Leg Leading Edge Cable Retractable



SW-8008-11LE-DL
SW-8008-11LE-ALU-DL
SW-8008-11LE-RBH-DL
SW-8008-11LE-RBH-ALU-DL

SafeWaze Subdued Edge SRLS



30' Cable Retractable
FS-EX2530-G-SL

50' Cable Retractable
FS-EX2550-G-SL

Following Best Practices

- Ⓢ Overall, ***tying off at foot level should be the last resort***, and only be used if no suitable alternative anchorage point exists. Tying off at Dorsal D-ring height or above is always the best for Fall Protection. Tying off at the Dorsal D-ring height or above allows the overall Personal Fall Arrest System to arrest the fall more quickly, minimizes Free Fall, and reduces the forces on the workers body.
- Ⓢ While OSHA does not prohibit tying off at foot level, best practices dictate that tying off at foot level should be avoided if at all possible. If there is no other option than tying off at foot level, it is imperative that employers ensure their employees are properly trained in the installation and use of equipment rated for such use. It is critical for the employees to understand the risks to their safety and the procedures to be followed to ensure their safety.

