HIPPLOCK

User's Safety Manual

This temporary roof anchor device is intended to be used in compliance with OSHA's subpart M (1926.500) as part of a personal fall protection system under the oversight of a competent person designated by the employer.

Warnings and cautions

Warnings

This device is intended for temporarily anchoring personal fall protection systems on gable and hip roofs.

All parts must be installed in the proper location according to the manufacturer's instructions prior to use by the trained certified operator. The employer's failure to provide and/or the operator's failure to read, understand and follow the manufacturer's instructions on the use of this device could result in serious personal injury and/or death.

(1926.503) The employer shall provide a fall protection training program assuring that a competent person instructs and certifies each employee in the recognition and avoidance of unsafe conditions and the regulations applicable to his work environment to control or eliminate any hazards. (1926.28(a)) the employer is responsible for requiring the wearing of appropriate personal protective equipment (PPE) in all operations where there is an exposure to hazardous conditions.

(1926.503 (a)(2)(ii) The competent person for fall protection shall be responsible to approve, erect, maintain, disassemble, inspect all PFAS components before each shift and after any event which could affect its strength or dependability. Defective PPE shall be immediately removed-from-service by the competent person and tagged DO NOT USE.

Cautions

This device may conduct electricity. Maintain a safe distance from potentially energized power lines at all times (1926.416(a)(1)). Failure to do so could result in serious personal injury and/or death.

Definitions

Personal Fall arrest system = should include 5 elements referred to as ABCDs of Fall Arrest:

- A Anchorage a fixed structure or structural adaptation, often including an anchorage connector, to which the other components of the PFAS are rigged.
- B Body Wear a full body harness worn by the worker.
- C Connector a subsystem component connecting the harness to the anchorage such as a <u>lanyard</u>.
- D Deceleration Device an essential subsystem component designed to dissipate the forces associated with a fall arrest event. It is good practice and recommended that these are also included in Restraint systems, in case of foreseeable mis-use.
- E Emergency Plan & Equipment a clear and simple approach to rescue of a suspended worker following a fall arrest event. All workers should be familiar with the site specific plan and competent to implement it. If a suspended worker is not recovered in good time, they may suffer the potentially serious effects of "suspension trauma".
 - Personal fall arrest systems are rigged in such a manner that the employee cannot free fall more than 6 feet (1.8 m) or contact a lower level. A free fall may be more than 6 feet (1.8 m) provided 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 5,000 pounds (22.25 kN) is not exceeded.

Personal Fall <u>restraint</u> <u>system</u> = should include 5 elements referred to as ABCDs of Fall Arrest:

- A Anchorage a structural adaptation that provides resistance to provide an anchor point for the PFAS, that is not required to be physically attached, to which the other components of the PFAS are rigged.
- B Body Wear a full body harness worn by the worker.
- C Connector a subsystem component connecting the harness to the anchorage such as
 a <u>lanyard</u>. In this system, requirements are that the lanyard should be constructed and installed
 in such a way that the worker cannot get to the fall hazard.
- D Deceleration Device an essential subsystem component designed to dissipate the forces associated with a fall arrest event. It is good practice and recommended that these are also included in Restraint systems, in case of foreseeable mis-use.
- E Emergency Plan & Equipment a clear and simple approach to rescue of a suspended worker following a fall arrest event. All workers should be familiar with the site specific plan and competent to implement it. If a suspended worker is not recovered in good time, they may suffer the potentially serious effects of "suspension trauma".
 - Personal fall arrest systems are rigged in such a manner that the employee cannot free fall more than 6 feet (1.8 m) or contact a lower level. A free fall may be more than 6 feet (1.8 m) provided 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 3,000 pounds (13.35 kN) is not exceeded.

HIPPLOCK

Operator's Safety Manual

Operator's instructions:

1. The competent Person (user) shall visually inspect "HIPPLOCK" for defects or damages BEFORE any operation requiring its use. If defects are observed or suspected, the device shall be immediately removed from service and tagged DO NOT USE. Contact the manufacturer for further advice and instructions.

- 2. Visually inspect the area of the roof you intend to access. Be sure that there are no obstructions, such as skylights, dormers or/or exhaust vents that would prevent this device from straddling the ridge in its intended position. Always maintain a safe distance from any power lines that may be near your working area.
- 3. Use a pitch gauge, inclinometer, or smart level to determine the slope of the working area/roof deck on which "HIPPLOCK" will be installed. "HIPPLOCK" is pre-set to a 10/12 pitch. The pitch of the device cannot be changed. The device is intended to be used on roof pitches between a 8/12 pitch and a 12/12 pitch.
- 4. Install the extension poles as needed to reach the desired height of the ridge from the top of the ladder. Each pole should be locked into place by the button locks on each side of the pole. Inspect that each locking button is in place and properly secured. If desired, a retaining pin may be used for this function. (Retaining pins not included)
- 5. The user **must** connect a proper safety lifeline to the eye hole on the "HIPPLOCK" frame. (Attaching a rope directly into the eye holes of "HIPPLOCK" will compromise the integrity of the rope due to the sharp edges of the eye holes. A certified lifting or climbing carabiner or shackle is recommended for this purpose). This lifeline shall be of a suitable length for the distance to the ridge. The lifeline **must** be connected to a safety harness that is installed onto the user's body.

The user, at his/her discretion, may choose to use a rope grab device that would lock onto the lifeline rope should a fall occur. (The lifeline (rope), climbing or lifting carabiner or shackle, body harness and the rope grab device are not included. The type of lifeline (rope), climbing or lifting carabiner or shackle, body harness and rope grab device to be used is up to the discretion of the user. SVG Enterprises takes no responsibility for these decisions).

6. Hang "HIPPLOCK" from the gutter, roof or the ladder. Ensure that "HIPPLOCK" does not cause damage to the gutters or roof. The extension poles should be in contact with the ground to prevent the full weight of "HIPPLOCK" from hanging from the gutters. If hanging "HIPPLOCK" from the ladder, do so in a manner that it does not affect a safe ascension up the ladder and in a manner that the end user does not need to hold "HIPPLOCK" in place while climbing the ladder. Do not ascend the ladder or roof with "HIPPLOCK" in hand.

- 7. After ascending the ladder and before dismounting, rest the wheels of "HIPPLOCK" on the roof surface. (Note: The top of the ladder shall either extend 3 feet (min.) above the edge of the eave or walk-through ladder extension handles shall be used). Use caution not to stand on or snag the lifeline during extension or use of the device. Using the pole system, push the "HIPPLOCK" up the roof surface to the peak of the roof. Once at the peak, rotate the extension poles so that "HIPPLOCK" straddles the ridge and makes full contact with both slopes of the roof. Pull firmly on the lifeline to be sure "HIPPLOCK" is positioned securely.
- 8. Attach the lifeline to your body harness. While using the lifeline, safely dismount the ladder and begin to ascend to the peak of the roof, directly toward and underneath the "HIPPLOCK" device. DO NOT begin to laterally traverse the working surface roof deck until you have confirmed that "HIPPLOCK" is securely in place. Use caution as you approach "HIPPLOCK", at the ridge, ensure that you do not pull the lifeline in an upward direction as this may unseat "HIPPLOCK" and could cause the user to fall. (There are holes provided in the feet that allow the user to physically install "HIPPLOCK" onto the roof. The fasteners needed for this purpose are a 3/8 inch lag bolt, not included. The purpose for these bolts are to use the "HIPPLOCK" device as part of a fall arrest system. The "HIPPLOCK" does not need to be physically attached to the roof if it is to be used as a fall retention system. The outrigger must be put into place prior to using the "HIPPLOCK" on the hip section of the roof).
- 9. In order to use "HIPPLOCK" on a gable roof, the lifeline **must** be attached to the eye hole on the frame that corresponds to the side of the roof that the user will be walking down. (Front slope, use front eye hole, Back slope, use back eye hole).
- 10. To use "HIPPLOCK" on a hip roof, the user will ensure the outrigger attachment has been installed onto the frame and properly placed over the ridge cap of the roof. The retaining pin should be removed, the outrigger pushed up against the main frame (Blue frame), the retaining pin installed into the center rod above the center tube of the main frame. Rotate the outrigger until the outrigger feet come into contact with the roofing surface. The outrigger adjustment bolt should be tightened in order to create a pressured lock against the main frame of the HippLock to secure the outrigger against the roof slopes. The rope attachment will follow the feet of the outrigger. If the outrigger foot points to the right, the main frame anchor hole closest to that outrigger foot will be used and the rope will be pulled in the direction the outrigger foot is pointing. (There is a limitation to the outrigger. Loose granules on the roof will lessen the effectiveness of the outrigger device. If the granules are loose so that they fall out

of the roofing surface with ease, the outrigger should not be used to inspect the hip. The loose granules will cause the outrigger feet to slip as the granules move out of place. The outrigger is sitting on the roof using pressure to give resistance in order to pull the rope to the side and inspect the hip section of the roof. If the granules are loose, the outrigger feet will slide on the loose granules. This would create an un-safe installation for the outrigger.)

- 11. Once all work is complete, the lag bolt fasteners should be removed and the holes sealed with a roof approved sealant (If using the outrigger, loosen and close the outrigger into its nested position, re-insert the retaining pin). Then the user may descend the roof to the ladder. The lifeline (rope) should be kept below the ridge line and "HIPPLOCK" at all times. Keep the lifeline directly under "HIPPLOCK" during this descent. Caution should be used when dismounting the roof onto the ladder. DO NOT disconnect from "HIPPLOCK" or your body harness before making secure 3-point contact with the ladder.
- 12. Once securely on the ladder, disconnect the safety line from your body harness, rotate the pole system to place "HIPPLOCK" so the wheels are in contact with the roof surface. Carefully allow the "HIPPLOCK" to descend the roof surface. Ensure the pole system is in contact with the ground and the device is securely laying on the roof edge, gutter or ladder prior to releasing control of the "HIPPLOCK".

End User

The maximum number of users for the "HIPPLOCK" should be limited to one user at a time with a weight limit of 300lbs per user.

Four $3/8 \times 1 \frac{1}{2}$ lag bolts (not included) should be used to physically fasten "HIPPLOCK" to the roof.

The roof thickness should be a standard residential roof sheathing consisting of $\frac{1}{2}$ " thick OSB board.

The minimum pitch for "HIPPLOCK" is 6/12 pitch (6 inches of rise over 12 inches run); the maximum pitch should be limited to a 12/12 pitch (12 inches of rise over 12 inches of run).