



**BOISE STATE UNIVERSITY**  
ENVIRONMENTAL HEALTH, SAFETY  
AND SUSTAINABILITY

STANDARD OPERATING PROCEDURE


**PERSONAL FALL ARREST**

College/Dept: FO&M and Auxiliaries

Division: Campus Operations

Revision: 1.0

**Approval**

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**Overview**

This SOP is written for the safe use and operation of personal fall arrest systems. The recommendations set forth in this document are to be followed while using this piece of equipment on the Boise State University campus.

**A fall arrest system must be worn when:**

- Working four feet or more above a walking/working surface without a guardrail system.
- Working from mobile lifting equipment. However, a fall arrest system is not required when: 1) working in the basket of a scissor-type manlift only, AND; 2) No part of the worker's body will be extended past the rails of the platform at any time. **Individuals working in boom-type lifts must use a fall arrest system at all times.**

**Potential Hazards**

Mechanical     Radiation     Pneumatic     Fire     Fall     Other

Hazard Specifics: Inspection of harness and lanyard must be performed before each use. The harness must be inspected for shock loading, rips or tears, damaged eyelets, damaged rivets, damaged buckles and a damaged D-ring. Damaged equipment must be removed from service.

**Personal Protective Equipment (PPE)**

PPE Description: Additional PPE is not required when wearing a body harness other than that specific to the task being performed. Attention should be made that the body harness is not constricted, or interfering with additional PPE. If coveralls or Tyvek are necessary they should be worn beneath the body harness.

**Additional Safety Information**

- A combination of lanyards and connectors may be needed to attach the worker's harness to the actual anchorage point. Anchorage used for attachment of personal fall arrest equipment must be under the supervision of a qualified person and rigged such that an employee can neither free fall more than six feet or contact any lower level.
- D-rings, snap-hooks and other types of connectors must be compatible to prevent accidental disengagement.
- The anchor point needs to be able to support 3000 pounds per person.
- Maximum combined body and tool weight for each person using a fall arrest system is limited to 310 lbs. or less.
- Using a marker on the webbing of a harness can degrade harness fibers and the harness will have to be removed from service.

## PERSONAL FALL ARREST

### Procedure

#### Harness inspection:



**Webbing Straps:** Grasp the webbing with your hands 6 to 8 inches apart. Bend the webbing in an inverted "U" as shown above. The resulting surface tension makes damaged fibers or cuts easier to see. Follow this procedure the entire length of the webbing, inspecting both sides of each strap. Watch for frayed edges, broken fibers, pulled stitches, cuts, burns, and chemical damage.

**D – Rings:** Check D-rings for distortion, cracks, breaks, and rough or sharp edges. The D-ring should pivot freely. Also check the attachment point of the D-ring to make sure it is secure.

**Buckles:** These should be given special attention. Note any unusual wear, damage, or distortion.

**Stitching:** Check all stitching for ripped or pulled stitches and make sure the webbing joints are not loose.

**If damage is discovered, do not use the harness, and notify your supervisor.**

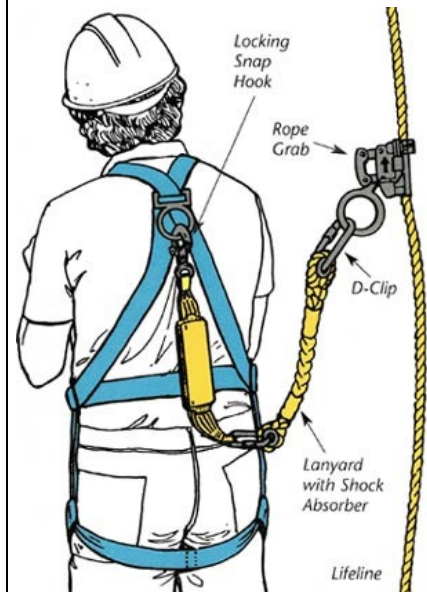
### STEPS

1. Following a full harness inspection, it is now time to don the harness.
  - a) Lift the harness by the back D-ring. This should allow all straps to fall in place with a good shake.
  - b) If chest, leg and/or waist straps are buckled, release straps and unbuckle them.
  - c) Slip the straps over shoulders so the D-ring is located in the middle of back between the shoulder blades.
  - d) Pull the leg strap between the legs and connect to opposite end. Repeat for both sides. If using a belted harness, connect the waist strap after the leg straps.
  - e) Connect the chest strap and position at mid-chest.
  - f) After all straps have been buckled, tighten the harness for a snug fit that allows for full range of motion. Pass excess strap through loop keepers.
2. Finding a safe anchorage point:
  - a) Anchorage point must support a minimum of 3000 pounds.
  - b) When choosing an anchor point, strongest first is a good rule of thumb. Equipment such as eyebolts, turnbuckles, imbeds, beam clamps etc. may also be used and should be carefully inspected and evaluated for load bearing capacity.

**Not suitable for anchorage:**

    - Standard Guardrails
    - Standard Railings
    - Ladders/Rungs
    - Scaffolding
    - Rebar
    - Any structural member that will reduce the capacity of the tie off material through shear or roll.

#### Improper harness orientation.



## PERSONAL FALL ARREST

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| <p>3. Storage and harness care:</p> <ul style="list-style-type: none"><li>a) Harnesses should be hung up or placed loosely (in a container) in a clean, dry area free from exposure to harmful fumes, corrosive agents or light (artificial or sunlight).</li><li>b) Harnesses can be washed with a mild soap detergent using a brisk back and forth motion. Then, they must be thoroughly rinsed with clear water and hung up to dry in a cool place out of the sun and away from exposure to high heat and steam.</li><li>c) Do not mark on harness webbing with markers. The solvent present in many markers can degrade the harness fibers. If necessary the harness can be labeled on the inspection tag using an ink pen.</li></ul> <p>4. If harness is damaged or discolored</p> <ul style="list-style-type: none"><li>a) Harnesses that display visible wear or damage must be discarded and replaced. After a harness has arrested a fall it should also be discarded.</li><li>b) Full body harnesses do not have a life expectancy because the lifespan is dependent upon the usage and storage environment.</li></ul> |  |
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