Care and Maintenance of a PFAS

The Personal Fall Arrest System or PFAS is probably the most common type of fall protection used on a jobsite. There isn't just one type of PFAS; it actually refers to many different combinations of anchors, harnesses and connecting devices.

The anchor point, sometimes referred to as the tie-off point, is where a connecting device is attached. It must be able to support 5,000 lbs of pressure or twice the load it is expected to support. Tie-off points don't include 2x4s, pipes or chimneys. Many PFASs use Horizontal Lifelines as the tie-off point.

The job of the connecting device is to connect the body harness to the anchor point. There are several connecting devices including lanyard, self-retracting lifelines and shock-absorbing lifelines. The self-retracting and shock-absorbing lifelines are also called deceleration devices. They are designed to limit the amount of force that is exerted on the body.

The harness is a combination of straps that help distribute the force from stopping a fall over the chest, thighs, waist, pelvis and shoulders. This is to minimize the possible injury to any one body part or area. There is great variability in harness style, but all will have a system of buckles and adjustable straps for a proper fit. A properly fitting and tightened harness is critical to its correct operation; too tight, it will be restricting, hard to move in and uncomfortable to work in. A too-loose harness can be very dangerous, causing serious and permanent damage to the body.

Since the harness is the part of the system that an employee is responsible for correctly putting on and tightening, getting it right can save a life. This task is made up of 6 important steps:

1. Hold the harness by the D-ring, allowing all straps to fall into place.

2. Check that all straps (chest, leg and waist) are unbuckled; unbuckle any straps that may still be buckled.

3. With straps over the shoulders, make sure that the D-ring is in the middle of the back, between the shoulder blades.

4. Pull the leg straps up between the legs and connect to the opposite ends. The waist strap, if present, is connected after both leg straps are connected.
5. Position chest strap in the middle of the chest and buckle. Tighten to keep the shoulder straps taunt.

6. Once all straps are buckled, tighten all straps so that the harness is snug but allows for free movement. Be sure to pass any excess strap back through the loop keepers.

Paying careful attention to all components of the PFAS can help save lives on your jobsite.

Careful inspection of all PFAS components helps ensure they will work correctly when needed. The easiest way to inspect the whole system is to check each part individually.

Full Body Harness
Before each use, inspect the following:

- Examine all nylon webbing for any burn marks, tears, frayed areas, broken fibers or pulled stitches anywhere on the harness.
- Examine D-ring for excessive wear, pits, cracks or deterioration of any kind.
- Check that all buckles are not deformed, cracked and will operate correctly.
- Be sure any rivets and grommets that are present are secure and not deformed in any way.

An annual inspection of the harness must be completed by a competent person. Harnesses should be hung after each use, ideally in a closed cabinet, to protect them from damage when not in use. Any harness involved in a fall must be destroyed.

Tie-Off Points

- Examine for integrity and attachment to a solid surface
- Inspection of all tie-offs and anchorages by a competent person
- After a fall all tie-offs and anchorage points will be removed, destroyed and replaced.

Lanyards/Shock Absorbing Lanyards
Before each use, inspect the following:

- Material must be checked for any damage; cuts, burns, abrasions, kinks, knots and excessive wear.
- Locking mechanisms must remain locked once locked.
- Shock absorber is visually inspected for any signs of damage especially the attachment to the lanyard.

Annual inspections must be completed by a competent person. Lanyards should be hung, as with the harness in a closed cabinet for protection.

Self Retracting Lanyards/Lifelines
Before each use, inspect the following:

- Inspect the body for any physical damage
- Check that all nuts and rivets are tight
- Entire length of nylon strap/wire rope must be free from any cuts, burns, abrasions, kinks, knots, broken stitches/strands, excessive wear and retracts easily.
- Test the unit by pulling sharply on the lanyard/lifeline to be sure the locking mechanism is working correctly.

There are two differences in the inspection procedure for the self-retracting lanyard/lifeline and the other components of a PFAS; a competent person must inspect them every month. After a fall, they can be reused, but must be inspected and found to be undamaged. These lanyards/lifelines should be serviced according to manufacturer specifications, usually every 1 to 2 years. A thorough examination of a PFAS can help to keep employees safe even if a fall does occur.

For additional help with safety and OSHA compliance, take advantage of the resources available through NCMA. These resources include the NCMA Block Plant Safety Software. The software is available from NCMA at (703) 713-1900 at a cost of $150 for up to 3 plants/year (nonmember $450).