



1. Introduction

- 1.1. It is up to you to make the choice to properly use your personal fall protection. You may not be able to control the force of gravity, but you do not have to fall victim to it. By following established safe work practices and wearing the proper fall protection for your job, you are taking a step in the right direction towards preventing falls in your workplace.

2. Hazard Identification

- 2.1. The first step in a proactive approach to fall protection involves identifying the potential fall hazards in your workplace. Whether from high or low levels, most potential fall hazards are caused by personal or environmental factors.
- 2.2. Personal Factors
 - 2.2.A. Personal factors that can lead to falls include lack of concentration, poor housekeeping, illness, and improper use of tools and equipment.
 - 2.2.B. Know how to properly use fall protection equipment and tools.
 - 2.2.C. Keep your work area free from obstructions that could lead to fall hazards.
 - 2.2.D. Follow good housekeeping practices and safe work procedures.
- 2.3. Environmental Factors
 - 2.3.A. Environmental factors include wet or slippery surfaces, poor lighting, electrical hazards, changes in the weather, moving equipment, moving

- 5.1.A. Personal Fall Arrest System
- 5.1.B. Positioning Device System
- 5.1.C. Personal Fall Protection System for climbing activities

- 5.2. Personal Fall Arrest System
 - 5.2.A.

7.1.C. arresting force

7.2. Free Fall

7.2.A. When a person falls, the fall arrest system does not immediately activate. At this point, the person is in free fall. Free fall is the act of falling before the personal fall arrest system begins to apply force to stop the fall. Free fall distance must not exceed 6 feet with a shock absorbing lanyard, and 2 feet with a retractable lanyard, static line or positioning device.

7.3. Deceleration Distance

7.3.A. After free fall, the personal fall arrest system activates and applies force to stop the fall. This is done through the use of a deceleration device such as a shock absorbing lanyard or self-retracting lifeline. The distance it takes before the worker comes to a stop is called the deceleration distance.

Deceleration distance for a fall arrest system must -2()7(F)-3(r)1o14(m)-20()7

- 8.3.A. Full body harnesses are required for a personal fall arrest system. In a fall arrest, a full body harness distributes the impact throughout the body, putting less stress on the body and permitting better circulation. A full body harness also keeps the body suspended upright while waiting for rescue.
- 8.3.B. A body belt would concentrate the impact of a fall arrest in the midsection. The worker is then suspended from the waist in a bent position which puts more stress on the body and could cut off circulation. There are also documented cases of people falling out of belts while awaiting rescue. Body belts may only be used for positioning devices. They must NOT be used as part of a personal fall arrest system.

8.4. Lanyard

- 8.4.A. A lanyard connects the full body harness to a deceleration device, lifeline or anchorage. Lanyards are short, flexible lines, usually with connectors at each end, made of rope, high-tensile strength webbing, or steel cable. Lanyards and vertical lifelines must have a minimum breaking strength of 5,000 pounds.
- 8.4.B. Do not connect a lanyard between a body harness and a self-retracting deceleration device because this can add more free fall distance to the system. Free fall must be limited to 6 feet or less.

8.5. Snap-hooks

- 8.5.A. A lanyard needs to be attached to the anchorage point in a way that does not reduce its required strength. If using snap-hooks, this must be done with a locking snap-hook. Snap-hooks and U-rings on the body harness must fit together properly.
- 8.5.B. A locking snap-hook has a positive locking mechanism.

deceleration distances are available from the equipment manufacturer.

8.6.D. The anchorage should also be located so that if a free fall occurs, will not collide with it or contact any lower level hazard.

8.7. Tie-Off Procedures

8.7.A. The tie-off point to a lifeline or anchorage is usually at or above the D-ring on the back of the worker's full body harness. This reduces free fall distance.

8.7.B. Tie-off is the act of connecting, directly or indirectly, to an anchorage point.

8.7.C. Some ways of connecting to an anchoring system can reduce the strength of a personal fall arrest system and should be avoided.

8.7.D. A tie-off using a knot in the lanyard or lifeline at any location can reduce the strength of the line by 80 percent or more. The lanyard or lifeline should be replaced by one that has the proper connector to eliminate the need for a knot.

8.7.E. A tie-off line by 70 percent or more. A webbing lanyard or wire core lifeline should be used around the beam to protect the lanyard or lifeline from the sharp beam edges.

8.7.F. Avoid a tie-off around rough or sharp edges.

8.8. Other Components

8.8.A. Other components of a personal fall arrest system include shock absorbing lanyards, vertical and horizontal lifelines, retracting lifelines and rope grabs.

8.9. Shock Absorbing Lanyards

Shock absorbing lanyards should be used to absorb the energy of a fall to 80

