

Fall Protection Guidelines

1.0 PURPOSE

To establish the requirements and procedures to protect employees and other persons conducting work from hazards associated with falling from one surface to another.

2.0 POLICY

The prevention of falls (i.e. fall restraint) through installation and maintenance of permanent barriers is preferred in locations where routine work is conducted. In situations where this is not feasible and during non-routine work, other protective systems described in this document shall be applied to prevent fall injuries.

Fall protection must be provided and used 100% of the time whenever persons are exposed to a fall hazard that could reasonably result in an injury to an employee working at height.

Persons climbing ladders of 20 feet or less may do so without fall protection as long as they maintain three points of contact at all times. Persons working on ladders may work without fall protection as long as their feet are not more than six feet from the ground, the ladder steps are dry and clean, the ladder is placed on a level surface, and the employee has effectively controlled remaining risks. Fall protection shall be used when working from ladders at any height if the employee is required to place himself in an off balanced position, increasing the fall potential. Employees, competent persons, and supervisors must evaluate each situation using consequence thinking to minimize fall hazards and associated risks.

NOTE: All work involving ladders must meet company ladder safety requirements, including ladder positioning and securing of ladders

All work and work locations shall be continually evaluated for fall hazard potential using consequence thinking techniques by those who perform work in these areas. When an unprotected fall hazard that could cause injury to an employee is identified, or if a violation of this procedure is encountered, work in that immediate area will cease until the hazard is controlled or violation corrected. When necessary, temporary guarding and flagging meeting the company procedure for guarding and flagging procedures will be installed to prevent exposure to the adjacent area below where work is being conducted.

3.0 SCOPE

All employees, contractors, and visitors on mine property will comply with all elements of this fall protection procedure. Contractors working on the property may implement their own procedure that meets or exceeds this document's requirements.

4.0 RESPONSIBILITIES

Supervisors will ensure that their employees understand and follow this procedure, including training on the use and care of fall protection equipment. Employees will be provided with the equipment necessary to complete all work in compliance with this procedure. Supervisors' duties include evaluation of the work to be performed, determination of the means of protection that will be used, and adherence to this procedure. The supervisor must ensure daily, or more often if required, that the site conditions are safe for the employees to work at elevation. Supervisors will ensure that their employees' fall protection equipment is inspected in compliance with this procedure.

Employees will follow this procedure and notify their supervisor of any situations that do not comply with this procedure. Employees will be responsible for learning how to use their fall protection equipment properly, conduct a pre-use inspection, and for ensuring proper fit, care and maintenance of fall protection equipment.

Management will provide resources for employees to comply with this procedure. Resources include information, training, time, money and equipment.

Health and Safety Manager will provide or make available annual training for all employees who might reasonably be affected by this procedure. All training shall be documented, including course content. The H&S manager will ensure that there is emergency response capability. Employees, supervisors, and competent persons must work with the Health & Safety Department to evaluate rescue capabilities prior to engaging in activities in areas where rescue could be difficult.

Project Managers will ensure that contractors are informed of the procedure and that contractors understand the requirement for compliance with the procedure, including day-to-day oversight.

Competent Person responsibilities include on-site evaluation to monitor safe work practices and procedures. A competent person is a person who has the training, knowledge, experience and authority to make decisions regarding fall hazards that affect the safety of others.

Qualified Person responsibilities include design and approval of engineered anchorage points and lifeline systems for fall protection. A qualified person is one who, by possession of a recognized degree, certificate, or professional standing, or who, by extensive knowledge, training, and experience, has successfully demonstrated his ability to solve or resolve problems relating to the subject matter, the work, or the project.

5.0 PROCEDURES

Permanent Guarding

Where routine work is conducted permanent guarding will be constructed and maintained. Permanent barriers will be constructed to support 200 pounds of horizontal force, and include a standard railing with standard toe board on all exposed sides. Permanent guarding will not be removed unless the fall hazard is eliminated by other means.

Fall Arrest Systems

Fall arrest systems may consist of: anchorage point, anchor device, shock absorbing lanyard, and body harness. In some cases horizontal or vertical lifelines are also included. These components are discussed below.

Harnesses

Full body harnesses with shoulder and leg straps are required. Employees will wear the size of harness recommended by the manufacturer based upon their physical dimensions. Persons greater than 300 pounds. must be evaluated for appropriate harness size and style.

Harnesses will be adjusted for proper fit each time they are used.

Body belts (a single belt around the waist) are not permitted as part of a fall arrest system.

Lanyards

Lanyards and vertical life lines shall have a minimum breaking strength of 5,000 pounds.

Lanyards will not exceed six feet plus the shock absorber. Employees will wear ANSI approved fall arrest equipment only. Fall arrest equipment must be fitted to the size and weight of the user. Lanyards must be capable of sustaining a minimum tensile load of 3,000 pounds applied to the device with the lifeline or lanyard in the fully extended position.

Self-retracting lifelines and lanyards which do not limit free fall distance to 2 feet or less, shall be capable of sustaining a minimum tensile load of 5,000 pounds.

Persons should attach the lanyard to the anchor point as high as practical to minimize free fall. The shortest lanyard practical should be used. Swing during a fall will be minimized by working directly under the tie off point whenever possible. The fully extended length of the lanyard and deceleration device must be considered when choosing an anchor point.

Synthetic sling lanyards are preferred except for welders who will need wire rope lanyards under most applications.

All snap hooks will require double action to open.

Lanyards will not be attached to anchorage points by doubling back and attaching the snap hook to the lanyard unless approved by manufactures recommendations. Beam straps, beam clamps and other connectors designed for the specific purpose will be used when appropriate.

Body belts, harnesses, and components shall be used only for employee protection (as part of a personal fall arrest system or positioning device system) and not to hoist materials.

Personal fall arrest systems and components subjected to impact loading shall be immediately removed from service and shall not be used again for employee protection until inspected and determined by a competent person to be undamaged and suitable for reuse.

The employer shall provide for prompt rescue of employees in the event of a fall or shall assure that employees are able to rescue themselves.

Personal fall arrest systems shall be inspected prior to each use for wear, damage and other deterioration, and defective components shall be removed from service.

Body belts (as a positioning device only) shall be at least one and five-eighths (1 5/8) inches (4.1 cm) wide. Personal fall arrest systems shall not be attached to guardrail systems, nor shall they be attached to hoists except as specified in other subparts of this part.

When a personal fall arrest system is used at hoist areas, it shall be rigged to allow the movement of the employee only as far as the edge of the walking/working surface.

100% fall protection may be provided by using two lanyards or a Y-type lanyard.

Lanyards will be fastened to the back of the harness just below the shoulder blades except for specific applications associated with ladder climbing systems. Knots will not be tied in lanyards.

Shock-absorbing lanyards will not be used in combination with self-retracting lanyards.

Anchorage Points/Tie-off Points

Anchorage points for fall arrest systems will be capable of supporting at least 5,000 pounds per person using the anchor point.

All field fabricated anchorage points will be designed, tested and installed under the supervision of a qualified person. Anchorages used to attach personal fall arrest systems will be independent of any anchorage being used to support or suspend platforms.

Guardrails and handrails will not be used as anchorage points unless they are specifically designed for that purpose.

When persons are unsure of the strength of an anchorage point they are using, they are required to contact their supervisor for assistance before connecting to it.

Horizontal Life Lines (static line)

Horizontal life lines may be installed by a competent person according to the manufacturer's requirements. Site-built systems must be designed and installed under the supervision of a qualified person.

A tag indicating the maximum number of persons permitted on a life line must be affixed to each accessible end of the life line.

Vertical Life Lines

Only one person may be connected to each vertical life line. If rope grabs are used, they must be specifically designed and approved by the manufacturer for attachment to the type and size of life line in use.

Work in Man Baskets and Lifts

Fall protection must be utilized per this procedure when conducting working from aerial platforms such as JLGs, man baskets, approved fork truck-mounted baskets, scissors lift platforms, etc. Employees must never work outside the guardrails. Employees must never climb or stand on a guardrail.

Nets

Nets may be applied only after other fall protection techniques have been attempted and found to be not feasible. Nets will be installed and maintained only by a competent person specifically trained in their use.

6.0 INSPECTION PROCEDURES

Pre- service Inspection

All fall protection equipment will be inspected prior to its use.

Pre-use Inspection and Disposal of Fall Arrest Equipment

Personal fall arrest systems will be inspected prior to each use for wear, damage and other deterioration. Defective or damaged components will be removed from service and made inoperable. Equipment missing the manufacturer's labels will be taken out of service unless the label is replaced by the manufacturer.

The user of fall protection will inspect their equipment immediately prior to use. During inspection the user will handle the equipment, operate its components and make a visual check. Inspection will follow the manufacturer's recommendation and will include inspection of:

- a) Braids and webbing;
- b) Stitching;
- c) Conditions of grommets, buckles, and hardware;
- d) Presence of manufacturer's date tag, and serial number;
- e) Harnesses and lanyards exposed to chemicals should be closely examined for deterioration and flexibility;
- f) Cleanliness, broken strands, burns, excessive wear and dirt; and
- g) Fall indicators (usually on self-retracting lifelines).

Cuts and frays that show red or any other color inside of a piece of webbing indicate that the component must be removed from service. Hardware that is twisted, bent or does not operate properly will be removed from service. Fall arrest components will be removed from service according to manufactures recommendations. Fall arrest components will be removed from service after they have been involved in a fall.

Periodic Inspections

Permanently installed fall arrest systems including horizontal and vertical lifelines, and trolley systems will be placed on formal written preventative maintenance schedules in accordance with manufacturer's recommendations.

Storage of Fall Arrest Equipment

Fall arrest equipment will be stored in a manner that prevents exposure to chemicals, excessive sunlight and weather.

7.0 TRAINING

Awareness Training

All persons working on mine property will be made aware of this procedure before working where fall protection may be needed. All persons who may be required to use fall protection will receive training as noted below. All training will be documented.

Pre-use Training

Persons using personal fall arrest systems should receive specific training by a competent person on the equipment they will be using. Training will include:

- This procedure
- Application of consequence thinking in the recognition, evaluation and control of falls
- The nature of fall hazards in the work area
- Inspection procedures
- Fitting procedures
- Limitations of fall arrest systems
- Tie off procedures and use of lanyards

Refresher Training

Affected employees will receive refresher training on the requirements of this procedure.

More frequent training may be required for any trained employee who demonstrates a lack of understanding of the requirements of this procedure.

Rescue

Each facility will maintain or will contract for the capability to respond to an emergency. Employees, competent persons, and supervisors should use personal rescue equipment in areas where rescue may be difficult (where a person may be suspended for more than six minutes).

In conditions that might result in difficulty rescuing a person who falls (i.e., extreme height or suspension over hazardous conditions), a rescue plan must be developed before beginning work.