

## Chapter 13

### FALL PROTECTION

#### 13.1. General Information.

13.1.1. Worker fall protection requires an in-depth evaluation of risks. Supervisors will:

13.1.1.1. Refer to **Chapter 1**, *Introduction*, paragraph **1.5**, and AFI 91-202, *The US Air Force Mishap Prevention Program*, for further information on the Job Safety Analysis (JSA) and job safety lesson plan. **Note:** A JSA is not required if existing guidance covers all safety requirements of an operation or process, such as TO 00-25-172, *Ground Servicing of Aircraft and Static Grounding/Bonding*.

13.1.1.2. Refer to **Chapter 2**, *Human Factors*, **Chapter 3**, *Physical Hazards*, and **Chapter 14**, *Personal Protective Equipment (PPE)*, for additional guidance on workplace hazards.

13.1.2. Bioenvironmental Engineering (BE) Responsibilities. BE personnel perform occupational and environmental health (OEH) risk assessments of industrial work processes. Supervisors with workplace health hazards questions should contact BE. Refer to paragraph **2.3** for additional information.

13.1.3. Additional Information. Competent person means a person who can identify hazardous or dangerous conditions in personal fall arrest systems (PFAS) or any component thereof, and their applications and uses with related fall protection equipment. Refer to paragraph **1.9** for information on qualified person.

**13.2. Specific Requirements.** Fall protection is required for workers working in elevated locations on open-sided floors and platforms and near floor and wall openings. **Note:** Fall protection is not required when working from portable ladders.

13.2.1. Fall prevention and protection must be considered for maintenance work or storing of equipment at heights. At the planning and design phase of a project, fall hazards shall be considered and eliminated whenever possible. When elimination or prevention of fall hazards is not feasible, the design must include certified and labeled anchorages IAW 29 CFR 1910.66, *Powered Platforms for Building Maintenance*, and ANSI Z359.1, *Safety Requirements for Personal Fall Arrest Systems, Subsystems and Components*. Where fall protection is required near weight handling equipment, care must be taken to prevent potential conflicts between the weight handling equipment and fall protection measures.

13.2.2. General Industry. Passive fall protection shall be provided whenever workers can fall four (4) feet or more. This four (4) foot rule applies to all walking and working surfaces and includes open-sided floors and platforms, wall openings and window wall openings at a stairway landing, floor, platform or balcony with a drop of four (4) feet or more. Refer to paragraph **13.3.1** for types of fall protection.

13.2.3. Aircraft Flight Line Operations. Refer to **Chapter 24**, *Aircraft Flight Line – Ground Operations and Activities*.

13.2.4. Construction Operations. Fall protection shall be provided when workers can fall six (6) feet or more. This six (6) foot rule applies to all walking and working surfaces, including scaffolding, roofs, open-sided floors and platforms, wall openings and window wall openings at a stairway landing, floor, platform or balcony with a drop of six (6) feet or more.

13.2.4.1. Fall protection is not required for inspections, investigations or assessments of workplace conditions prior to the actual start of construction work or after all construction what has been completed.

13.2.4.2. Fall protection is not required on inspections or assessments of flat roofs. However, fall protection is required on inspections or assessments of sloped roofs. Additionally, if an inspection team turns into a working team, i.e., tightening a screw, making an adjustment on a lightning protection system, etc., the team will don fall protection equipment.

13.2.4.3. If the inspection is within six (6) feet of the edge of the roof, fall protection will be required.

13.2.5. Erecting or Dismantling Fall Protection. Workers shall be provided with a safe means for erecting or dismantling fall protection systems and features.

13.2.6. Dangerous Equipment and Machinery. Regardless of the fall distance, fall protection must be provided when working over dangerous equipment and machinery.

**13.3. Protection From Falls.** Workers shall be protected from falls of four (4) feet or more.

13.3.1. Types of Fall Protection.

13.3.1.1. Passive. Passive fall protection, such as guardrails, work stands and platforms (aircraft maintenance stands, i.e., B-1, B-4, B-5, etc.), nets, ladder cages and other devices can prevent a worker from falling, but are not directly connected to the worker. Nets do not prevent a worker from falling, but does prevent a worker from hitting the next level. If passive fall protection is not feasible, active fall protection is the preferred option.

13.3.1.2. Active. Active fall protection, such as positioning and restraint systems, ladder climbing devices and PFAS, require the worker to wear a harness and attach himself/herself to an anchorage or lifeline. Positioning and restraint systems prevent a worker from falling while a PFAS permits a worker to fall, but limits arresting loads to generally safe levels.

13.3.1.2.1. Positioning and restraint systems. Fall restraint systems, also referred to as work positioning systems, are similar to a PFAS; however, fall restraint systems restrict a worker's range of movement so the individual cannot fall to the surface below.

13.3.1.2.2. See paragraph [13.4.6](#) for detailed guidance on PFAS.

13.3.1.3. Procedural Controls. Procedural controls, such as using TO designated aircraft surfaces, are the least preferred method of fall protection, but may be considered when active and/or passive measures are ineffective, would create a greater hazard or are not feasible. Procedural fall protection requires aggressive risk management and shall be documented in a JSA coordinated with the installation Ground Safety office before

procedural controls are used. **Note:** Consistent with OSHA guidelines, cost shall not be a consideration for selecting procedural controls.

13.3.1.3.1. Job Safety Analysis (JSA). A JSA shall be performed where procedural controls are the only practical means of providing fall protection. The JSA, and any changes, shall be prepared by a qualified person, as defined in [Attachment 1, Terms](#), and developed specifically for the worksite. JSAs shall be kept up to date and maintained at the work center for the work site, i.e., Maintenance Supervisor or Superintendent, Flight Chief, Supervisor office, TODO offices, etc. Implementation of the JSA shall be under the supervision of a competent person, as defined in [Attachment 1, Terms](#). Refer to AFI 91-202 for additional guidance on the JSA. Procedures and equipment identified in the JSA shall be considered the minimum mandatory requirements for operations covered in the JSA, and shall include:

13.3.1.3.1.1. An assessment of the operation and fall hazard.

13.3.1.3.1.2. Why active and passive fall protection systems (i.e., guardrails, PFAS or net systems) are not feasible or would create a greater hazard.

13.3.1.3.1.3. Description of the fall protection measures available and each location where conventional fall protection methods cannot be used (these will become controlled access zones).

13.3.1.3.1.4. A corrective action plan describing planned upgrades (equipment, cost and timetable, prioritized by the shop) and appropriate Risk Assessment Codes (RACs), to partially or totally eliminate need for procedural controls.

13.3.2. Air Force item managers (Depot) shall perform the necessary functions, i.e., describing planned upgrades, costs, timetables and prioritization, for Air Force equipment not meeting fall protection standards.

#### **13.4. Fall Protection Equipment.**

13.4.1. Railings. Refer to [Chapter 7, Walking Surfaces, Guarding Floor and Wall Openings, Fixed Industrial Stairs, and Portable and Fixed Ladders](#), and 29 CFR 1910.23, *Guarding Floor and Wall Opening and Holes*, for information on railings.

13.4.2. Fixed Work Platforms. Refer to [Chapter 17, Scaffolding](#), for additional guidance.

13.4.3. Mobile Work Platforms. Vehicle-mounted elevating and rotating work platforms, manual and self-propelled mobile work platforms or similar equipment may be used to protect workers provided guards, railings, a PFAS or other similar devices are incorporated in the platform design. Refer to [Chapter 16, Mobile Elevating Work Platforms](#), and 29 CFR 1910.29, *Manually Propelled Mobile Ladder Stands and Scaffolds (Towers)*, for additional information.

13.4.4. Safety Nets. Nets may be used when workers are more than 25 feet above ground, water or other surfaces where ladders, catch platforms, temporary floors, fixed or mobile work platforms or PFAS are impractical. Refer to 29 CFR 1926.105, *Safety Nets*, for additional guidance. Safety nets shall:

13.4.4.1. Have a net mesh size not exceeding 6 by 6 inches. New nets shall be certified and labeled by the manufacturer to meet a 17,500 foot-pounds minimum impact resistance test. Edge ropes shall have a minimum breaking strength of 5,000 pounds.

13.4.4.2. Extend at least 8 feet beyond the edge of the work surface where workers are exposed and be installed as close under the work surface as practical, but not more than 25 feet below such work surface. Safety nets shall be installed with sufficient clearance under them to prevent worker's contact with the surface or structures below when subjected to an impact force equal to the drop test. **Note:** The worker fall to net distance determines the actual distance the net shall extend. If the fall is 5 feet or less, the net shall extend outward 8 feet; if over 5 feet and up to 10 feet, the net must extend outward 10 feet; if over 10 feet, the net must extend outward 13 feet (See [Table 13.1](#)).

**Table 13.1. Minimum Required Horizontal Distance.**

<b>Minimum Required Horizontal Distance</b>	
<b>Vertical distance from working level to horizontal plane of net</b>	<b>Minimum required horizontal distance of outer edge of net from the edge of the working surface</b>
Up to 5 feet	8 feet
More than 5 feet, up to 10 feet	10 feet
More than 10 feet	13 feet

13.4.4.3. Be drop tested and inspected. Operations shall not be started until each net is drop tested and inspected. A 400-pound bag of sand not more than 30 inches ( $\pm 2$  inches) in diameter shall be dropped from the working height above the net into the center of each net after the following: initial installation but before use, whenever relocated, after major repair and at 6-month intervals if left in one place. Additionally, pre-used nets shall be inspected whenever a drop test is accomplished.

13.4.4.4. Be certified prior to use. When drop testing is not feasible, the supervisor, team leader or team designated competent worker shall certify the net and net installation. The certification record shall identify each net/installation, date each net/installation was determined in compliance and signature of person making the determination and certification. The most recent certification record shall be available at the worksite.

13.4.4.5. Be constructed with forged steel safety hooks or shackles, with a 5,000 pound minimum breaking strength. The hooks or shackles shall be used to fasten the net to its supports and connections between net panels, ensuring the full strength of the net.

13.4.4.6. Comply with 29 CFR 1926.502, *Fall Protection Systems Criteria and Practices*.

13.4.5. Ladder Safety Devices. Cages or wells shall be provided on ladders more than 20 feet in length, up to a maximum of 30 feet. Ladders over 30 feet shall be broken into sections with landing platforms spaced no more than 30 feet apart. Ladder safety devices may be used on tower, water tank and chimney ladders in lieu of cages, and no landing platform is required. Ladder safety devices shall: limit worker fall to less than two (2) feet, meet the design requirements of the ladders they serve, permit the worker to ascend or descend without having to continually handle any part of the device and be attached to a frontal

centered D-ring or other specifically designed frontal attachment point on a full body harness.

13.4.6. Personal Fall Arrest Systems (PFAS). PFAS systems require an anchorage point, connecting means, lanyard and shock absorber. Refer to 29 CFR 1926.502, *Fall Protection Systems Criteria and Practices*, and 29 CFR 1910.66, Appendix C, *Personal Fall Arrest System*, for additional information. Refer to 29 CFR 1926.104., *Safety Belts, Lifelines, and Lanyards*, for additional guidance on basic PFAS guidelines (safety harnesses, lanyards, lifelines). **Note:** To prevent worker injury or death, PFASs shall not be used without a rescue plan; refer to paragraph [13.7](#).

13.4.6.1. Selection. PFAS shall be selected by a qualified person, match the particular work situation and minimize free fall distance (not to exceed six [6] feet). PFAS equipment shall meet or exceed requirements in ANSI Standard Z359.1., *Personal Fall Arrest Systems, Subsystems and Components*. Only commercially manufactured fall arrest equipment shall be used.

13.4.6.2. PFAS equipment shall have the manufacturer's name, identification code and date of manufacture stamped on the equipment or permanently attached tag and shall be marked to indicate compliance with ANSI Z359.1.

13.4.6.2.1. The service life of fall protection equipment manufactured of synthetic fiber shall be five (5) years (unless otherwise specified by the manufacturer), or sooner if determined unserviceable per paragraph [13.4.6.10.5](#). The five (5) year service life begins once the equipment is put in service, assuming the new unused equipment is stored in a climate-controlled location, i.e., in a plastic bag not exposed to vapors, and in a cool location out of direct sunlight.

13.4.6.3. Horizontal lifelines (Skylines), commonly used in aircraft hangars, wash racks, corrosion control or other aircraft maintenance areas, shall be designed by a qualified person as defined in 29 CFR 1910.66, Appendix C, *Personal Fall Arrest System*, Section 1. The number of workers attached to the lifeline at any time shall not exceed lifeline/anchorage point design limits.

13.4.6.4. Full body harness.

13.4.6.4.1. Only a full body harness shall be used with a PFAS. It shall provide support across the lower chest, over the shoulders and around the thighs and, when properly fitted and used, shall prevent the worker falling out of the harness should a fall occur. While working on or near exposed energized electrical equipment operating at 50 volts or more the safety harness worn over arc flash rated protective clothing shall be arc flash rated IAW UFC 3-560-01 and ASTM F887-05. **Warning:** Body belts may not be used.

13.4.6.4.2. The lanyard attachment point shall be located in the center of the wearer's back near shoulder level or above the wearer's head.

13.4.6.4.3. Harness load bearing straps shall have a minimum width of 1-5/8 inch and be finished to prevent fraying.

13.4.6.5. Lanyards. Lanyards of synthetic materials shall have free ends lightly seared to prevent unraveling. Knots weaken a lanyard and shall not be used in lanyard end terminations. Lanyards (and shock absorbers) subjected to impact loading from a falling person or weight test shall be removed from service and replaced. Refer to paragraphs [13.4.6.11.8](#) and [13.5.3.4](#) for additional guidance. **Warning:** Wire rope or rope covered wire lanyards, some plastics (such as nylon) and wet lanyards are conductive and shall not be used near electrical hazards.

13.4.6.6. Energy (shock) absorber components. Each PFAS may include a shock absorber. Shock absorbers shall be designed so activation is obvious, i.e., ripped stitches, telltale strips visible, etc. Shock absorbers with any signs of activation shall be removed from service.

13.4.6.7. Anchorage. Anchorages for lifelines and lanyards shall support at least a 5000 pound load for each person connected to the anchorage. Anchorages not meeting this rating can be used as part of a complete PFAS which maintains a safety factor of at least two (2) and is under the supervision of a qualified person. Only one PFAS shall be connected to an anchorage point unless specifically certified for more.

13.4.6.8. Connectors. PFAS connectors (hardware used to connect a system together such as a carabiner, D-ring, O-ring, oval ring, snaphook, etc.) shall be drop forged, pressed or formed steel or made of equivalent materials and purchased new with a clean finish, free of rust, scale or foreign matter.

13.4.6.8.1. Snaphooks and carabineers shall be self-closing, self-locking, designed to take 2 consecutive and deliberate actions (double locking) to open and load rated for at least 5000 pounds.

13.4.6.8.2. Connectors shall withstand a 5000 pound load multiplied by the maximum number of PFAS attached to the connector and shall not be exposed to sharp edges, abrasive surfaces or physical hazards, such as thermal, electrical or chemical sources.

13.4.6.9. Fall arrester components. Fall arresters, as in self retracting lifelines, shall be automatic in their locking (fall stopping) function. Workers shall follow manufacturer's instructions to test the locking mechanism after connection to their harness/lanyard. Self-retracting lifeline systems will be positioned over the worker as the worker moves. Pulling on the lifeline cable to provide more slack without moving the overhead carrier (trolley) will result in a pendulum swing should the worker fall. Energy shock absorbers will not be used in conjunction with deceleration devices (self-retracting lifelines).

13.4.6.10. PFAS Inspection. (**Note:** Inspections shall be documented IAW TO 00-25-245, *Testing and Inspection Procedures, Personnel Safety and Rescue Equipment*.)

13.4.6.10.1. PFAS users shall comply with TO 00-25-245 and manufacturer's instructions for inspection, maintenance, cleaning and storage. If defects or damage to equipment or inadequate maintenance of equipment is found, the equipment shall be immediately tagged "unserviceable" and removed from service. Unserviceable PFAS will be destroyed to prevent further use.

13.4.6.10.2. Workers shall inspect their PFAS prior to the first use of the day and/or shift for mildew, wear, damage and other deterioration.

13.4.6.10.3. Supervisors shall ensure all PFAS components receive a thorough inspection at least quarterly. This inspection shall be documented and maintained for at least one year.

13.4.6.10.4. Supervisors shall maintain manufacturer's instructions and performance testing information for PFASs used by their workers.

13.4.6.10.5. PFAS components requiring removal from service:

13.4.6.10.5.1. Components with illegible or absent markings.

13.4.6.10.5.2. Absence of any element which affects equipment form, fit or function.

13.4.6.10.5.3. Defective or damaged hardware elements including distorted hooks or faulty hook springs, tongues unfitted to shoulder buckles, loose or damaged mountings, non-functioning parts, cracks, sharp edges, deformation, corrosion, chemical attack, excessive heating, alteration, deterioration, contact with acids or other corrosives and excessive wear.

13.4.6.10.5.4. Defects or damage to straps or ropes including fraying, unsplicing, unlaying, kinking, knotting, roping, broken or pulled stitches, excessive elongation, chemical attack, excessive soiling, cuts, tears, abrasion, mold, undue stretching, alteration, needed or excessive lubrication, excessive aging, contact with heat, fire or corrosives, internal or external deterioration and excessive wear.

13.4.6.10.5.5. Lanyards after an impact load and shock absorbers with any signs of activation.

13.4.6.11. PFAS Use, Maintenance and Storage Requirements.

13.4.6.11.1. Equipment shall be stored and maintained IAW the manufacturer's instructions. Unique issues, due to local conditions, shall be addressed with the manufacturer.

13.4.6.11.2. Equipment shall be stored to preclude damage from environmental factors such as heat, light, excessive moisture, dirt, oil, chemicals and their vapors or other degrading elements.

13.4.6.11.3. Rope, synthetic materials and rope-covered lanyards shall not be used while welding, cutting, or in areas with sharp edges, open flames or excessive heat.

13.4.6.11.4. Lanyards, connectors and lifelines subject to damage by work operations such as welding, chemical cleaning and sandblasting, shall be protected or other securing systems used.

13.4.6.11.5. Lanyards shall be kept as short as practical to minimize free fall distance, shall not permit a vertical fall of more than six (6) feet as specified in paragraph [13.2](#), nor allow the worker to contact any lower level or obstruction.

Lanyards shall not be attached to a dropline, lifeline or fixed anchorage point in a manner that reduces lanyard strength.

13.4.6.11.6. It is common practice to interchange lanyards, connectors, lifelines, deceleration devices and body harnesses; however, components from different manufacturers may not be safely interchangeable. Always check with the manufacturer(s) before mixing components.

13.4.6.11.7. Only use PFAS components for their designed purposes.

13.4.6.11.8. PFAS components subjected to impact loading shall be immediately removed from service and replaced.

13.4.6.11.9. Supervisors shall ensure workers using a PFAS can be properly rescued or can rescue themselves should a fall occur. Availability of rescue personnel, ladders or other rescue equipment shall be determined prior to using a fall arrest system. **Warning:** Hanging in a harness for an extended period of time can be fatal. IAW ANSI Z359.4, *Safety Requirements for Assisted-Rescue and Self-Rescue Systems, Subsystems and Components*, prompt rescue means getting to the subject within six (6) minutes after an accidental fall.

13.4.6.12. Electricians. Fall protection equipment for electricians shall be Arc Thermal Performance Value (ATPV) rated IAW UFC 3-560-01.

13.4.7. Equipment For Un-stepped Communications Poles. All Communications-Electronic (C-E) field technicians required to climb un-stepped communications poles will use the squeeze pole fall protector (pole choker) arrest system. Users of the pole chokers will comply with TO 00-25-245 and manufacturer's instructions regarding inspection, maintenance, cleaning and storage of PFAS equipment. Refer to **Chapter 30** for additional guidance.

**13.5. Supervisor, Qualified Person and Competent Person Fall Protection Duties and Responsibilities.** A supervisor, who is designated in writing, shall be responsible for procurement of fall protection/fall arrest systems required by the organization or shop. The supervisor shall be familiar with the shop's typical work assignments and fall protection/fall arrest systems required for each operation. The supervisor shall ensure each worker/qualified person/competent person using a fall protection/fall arrest system is trained and evaluated on proper use, application and inspection of fall protection/fall arrest systems.

13.5.1. The supervisor shall:

13.5.1.1. Conduct JSA, as required.

13.5.1.2. Prepare, review, approve and modify plans for fall protection and prevention, rescue and evacuation and training lessons.

13.5.1.3. Ensure initial and recurring training and training evaluations are provided to shop personnel on fall protection/fall arrest systems prior to initial use. Refer to paragraph **13.6** for additional guidance.

13.5.1.4. Ensure appropriate design, selection, certification, evaluation and analysis of fall protection/fall arrest systems and equipment.

13.5.1.5. Prepare and accomplish self-inspection checklist annually IAW TO 00-25-245. Checklist shall include all relevant information on fall protection/fall arrest systems, i.e.,

proper care, maintaining and inspection of fall protection/fall arrest systems equipment, training program, etc. The self-inspection shall be documented and maintained until the next self-inspection is performed.

13.5.1.6. Conduct fall protection/fall arrest system inspections and support accident investigations.

13.5.2. A qualified person, typically an engineer, shall: identify and certify anchorage points on facilities and structures. Help develop and evaluate fall protection plans. Assist supervisors and competent persons in selecting fall protection systems.

13.5.3. The competent person, typically an experienced worker, shall:

13.5.3.1. Assist supervisors and qualified persons in determining feasibility and safety of fall protection for workers and selecting appropriate fall protection systems.

13.5.3.2. Perform on site observations of job work conditions, use of fall protection systems and correct application of the fall protection plan.

13.5.3.3. Identify hazardous conditions and suspend work tasks until hazards are corrected. 13.5.3.4. Inspect PFAS equipment to determine if components subjected to impact loading are undamaged. If damaged, remove and replace.

**13.6. Training.** Workers/competent persons shall be trained and evaluated prior to using any PFAS. Training shall include: methods of use, application, inspection and storage, as well as any manufacturer's recommendations; application limits, proper anchoring and tie-off techniques, estimation of free fall, deceleration and total fall distance to prevent striking a lower level; applicable fall protection, fall prevention, rescue and evacuation plans. Recurring training shall be conducted annually, when work conditions change or new fall arrest systems are used, and documented on AF Form 623, Individual Training Record Folder, AF IMT 55, Employee Safety and Health Record, or civilian equivalent, IAW AFI 91-202.

**13.7. Rescue Plan.** Each fall protection plan shall include a rescue plan. PFAS use shall be suspended if a means to rescue a fallen worker is not available.

13.7.1. Self rescue by a fallen worker may be possible, depending on location and work conditions. However, the supervisor shall ensure a rescue plan is in place to rescue workers should they be injured or unable to self rescue.

13.7.2. Workers suspended in a full body harness often lose consciousness after a fall. This is caused by restrictions in blood flow to the extremities caused by the harness. The rescue plan must ensure a rescue can be affected very quickly to prevent permanent injury or death.

13.7.3. When potential for serious injury exists due to a fall and no threat requires immediate movement of the fallen worker, the worker should remain in place and encouraged to remain still while emergency services personnel are called to assist.

**13.8. Where non-Air Force professional rescue agencies cannot promptly rescue a fallen AF worker, the installation Ground Safety office and Fire Emergency Services (FES) Flight may establish training for fire protection workers and adequate installation personnel as authorized or competent rescuers.** Training shall be documented IAW AFI 91-202.

Coordination with the installation Fire Chief is required to determine if the FES Flight is able to support a fall rescue operation.

**13.9. Fall Protection Checklist.** This is not an all inclusive checklist. It, like all checklists in this instruction, highlights some critical items contained within this chapter. Other requirements exist that are not included in the checklist. Where appropriate, MAJCOMs, FOAs, DRUs, local safety staffs and supervisors shall add to this checklist to include Command or individual location or shop-unique requirements and/or situations.

13.9.1. Are workers provided fall protection when exposed to falls of four (4) feet or more? Reference [13.2.2](#)

13.9.2. Are active and passive means of fall protection considered before using procedural controls? Reference [13.3.1.3](#)

13.9.3. Has a JSA been performed and coordinated with the installation safety office prior to the use of procedural controls for protecting workers from falls? Reference [13.3.1.3](#)

13.9.4. Are all PFAS components marked to indicate compliance with ANSI Z359.1.? Reference [13.4.6.2](#)

13.9.5. Are wire rope, rope covered wire lanyards, plastics (such as nylon) and wet lanyards prohibited where an electrical hazard may be present? Reference [13.4.6.5](#)

13.9.6. Can anchorage connectors withstand a 5000 pound load for each PFAS connected? Reference [13.4.6.7](#)

13.9.7. Do workers inspect their PFAS prior to each use for mildew, wear, damage and other deterioration? Reference [13.4.6.10.2](#)

13.9.8. Does the supervisor ensure all PFAS components receive a thorough inspection at least quarterly and keep the record of inspection for at least one year? Reference [13.4.6.10.3](#)

13.9.9. Are PFAS components subjected to impact loading immediately removed from service and not be used again until inspected and determined by a competent person to be undamaged and suitable for reuse? Reference [13.4.6.11.8](#)

13.9.10. Are workers/competent persons trained and evaluated on the fall protection/fall arrest system prior to use? Reference [13.6](#)

13.9.11. Is recurring fall protection training conducted annually, when work conditions change or when new fall protection/fall arrest systems are procured? Reference [13.6](#)

13.9.12. Is a rescue plan included in each fall protection plan to assure prompt rescue of fallen workers? Reference [13.7](#)