



## Fall Protection Policy

### **Purpose**

To provide guidelines for maximum protection for employees against falls from elevations.

### **Scope**

This program applies to all company employees and subcontractors who engage in activities on all Hagen Decorator job-sites.

### **Definitions**

***Anchorage*** means a secure point of attachment for lifelines, lanyards or deceleration devices.

***Body harness*** means straps which may be secured about the employee in a manner that will distribute the fall arrest forces over at least the thighs, pelvis, waist, chest and shoulders with means for attaching it to other components of a personal fall arrest system.

***Free fall*** means the act of falling before a personal fall arrest system begins to apply force to arrest the fall.

***Guardrail system*** means a barrier erected to prevent employees from falling to lower levels.

***Lifeline*** means a component consisting of a flexible line for connection to an anchorage at one end to hang vertically (vertical lifeline), or for connection to anchorages at both ends to stretch horizontally (horizontal lifeline), and which serves as a means for connecting other components of a personal fall arrest system to the anchorage.

***Opening*** means a gap or void 30 inches (76 cm) or more high and 18 inches (48 cm) or more wide, in a wall or partition, through which employees can fall to a lower level.

***Personal fall arrest system*** means a system used to arrest an employee in a fall from a working level. It consists of an anchorage, connectors, a body belt or body harness and may include a lanyard, deceleration device, lifeline, or suitable combinations of these. As of January 1, 1998, the use of a body belt for fall arrest is prohibited.

***Rope grab*** means a deceleration device, which travels on a lifeline and automatically, by friction, engages the lifeline and locks so as to arrest the fall of an employee. A rope grab usually employs the principle of inertial locking, cam/level locking, or both.

***Self-retracting lifeline/lanyard*** means a deceleration device containing a drum-wound line, which can be slowly extracted from, or retracted onto, the drum under slight tension during normal employee movement, and which, after onset of a fall, automatically locks the drum and arrests the fall.

***Snaphook*** means a connector comprised of a hook-shaped member with a normally closed keeper, or similar arrangement, which may be opened to permit the hook to receive an object and, when released, automatically closes to retain the object. Snaphooks are generally one of two types:

- The locking type with a self-closing, self-locking keeper which remains closed and locked until unlocked and pressed open for connection or disconnection; or
- The non-locking type with a self-closing keeper, which remains closed until, pressed open for connection or disconnection. As of January 1, 1998, the use of a non-locking snaphook as part of personal fall arrest systems and positioning device systems is prohibited.

***Toeboard*** means a low protective barrier that will prevent the fall of materials and equipment to lower levels and provide protection from falls for personnel.

***Unprotected sides and edges*** means any side or edge (except at entrances to points of access) of a walking/working surface, e.g., floor, roof, ramp, or runway where there is no wall or guardrail system at least 39 inches (1.0 m) high.

***Walking/working surface*** means any surface, whether horizontal or vertical on which an employee walks or works, including, but not limited to, floors, roofs, ramps, bridges, runways, formwork and concrete reinforcing steel but not including ladders, vehicles, or trailers, on which employees must be located in order to perform their job duties.

## **Responsibilities**

Management is responsible to develop, maintain, distribute and provide oversight in accordance with all applicable federal and state regulations and best industry practices. Management has the responsibility for assisting departments in developing appropriate fall protection plans, providing technical guidance and assisting with employee training. All Hagen Decorator employees have the responsibility and authority to halt any unsafe practices not in accordance with this policy.

## **Procedures**

All work performed in elevated areas such as aerial lifts, roofs, scissor lifts, booms, buckets, elevated platforms, on top of industrial equipment, building ledges, etc. should be in accordance with this policy.

## **General Requirements**

Fall protection systems should be provided and utilized whenever an employee is exposed to a fall of **six feet** or greater. These areas could include:

- A walking/working surface with an unprotected side or edge, which is 6 feet or more above a lower level, should be protected from falling by the use of guardrail systems or personal fall arrest systems.

- A leading edge, which is 6 feet or more above a lower level, should be protected from falling by the use of personal fall arrest systems.
- Hoist areas should be protected from falling 6 feet or more to lower levels by the use of guardrail systems or personal fall arrest systems.
- Walking/working surfaces should be protected from falling through holes, (including skylights) more than 6 feet above a lower level, by personal fall arrest systems, covers or guardrail systems erected around such holes.
- Ramps, runways and other walkways should be protected from falling 6 feet or more to lower levels by the use of guardrail systems.
- On, at, above or near wall openings where the outside bottom edge or the wall opening is 6 feet or more above a lower level and the inside bottom edge of the wall opening is less than 39 inches above the walking/working surface, should be protected from falling by the use of guardrail system or personal fall arrest system.

### **Fall Protection Systems**

One of the following systems must be in place whenever an employee is exposed to a fall of six feet or greater. These include:

#### ***Guardrail systems***

Guardrail systems need to meet the following criteria:

##### Toprail

- Toprail is 39-45 inches above the walking/working level.
- The toprail needs to withstand a force of 200 pounds when applied in any downward or outward direction.
- The ends of the top rail should not overhang the terminal posts, except when such overhang does not present a projection hazard.

##### Midrail

- Midrail is located midway between the top rail and the walking/working level
- The midrail needs to withstand a force of 150 pounds applied in any downward or outward direction

##### Guardrail system

- Both top and midrails should be constructed of materials at least one-quarter inch in thickness or diameter. If wire rope is used for toprails, it needs to be flagged with a high-visibility material at least every 6 feet and can have no more than 3" of deflection
- The system should be smooth to prevent punctures, lacerations or snagging of clothing
- When a hoisting area is needed, a chain, gate or removable guardrail section must be placed across the access opening when hoisting operations are not taking place.

***\* It is important to remember that the working level is that level where the work is being done. Someone working on a stepladder next to an edge may raise his/her working surface well above the walking surface.***

### ***Personal Fall Arrest Systems***

Personnel requiring the use of personal fall protection equipment should employ the "Buddy System" or have an observer to render assistance when possible.

Prior to tying off to perform the work a means of rescue in the event of a fall must be immediately available.

There are three main components to the personal fall arrest system. These include the harness, connecting devices and the anchorage point. The system needs to meet the following criteria for each component:

#### Personal Protective Equipment

- **Full body harnesses are required.** The use of body belts is prohibited.
- The attachment point of the body harness is the center D-ring on the back.
- Load testing should not be performed on fall protection equipment.

#### Connecting devices

- This device can be a rope or web lanyard, rope grab or retractable lifeline.
- Only locking snaphooks may be used.
- Lanyards and vertical lifelines need a minimum breaking strength of 5,000 pounds.
- Lanyards may not be clipped back to itself (e.g. around an anchor point) unless specifically designed to do so.
- Lifelines need to be protected against being cut or abraded
- Horizontal lifelines will be designed by a qualified person and installed in accordance with the design requirements.
- If vertical lifelines are used, each employee will be attached to a separate lifeline.

#### Anchorage

Secure anchor points are the most critical component when employees must use fall arrest equipment. Some buildings may have existing structures (e.g., steel beams that may meet the criteria for a secure anchor point). Other work locations may require the installation of a temporary or permanent anchor. As a minimum, the following criteria must be considered for each type of anchor point:

- Structure must be sound and capable of withstanding a 5000 lb. static load/person attached.
- Structure/anchor must be easily accessible to avoid fall hazards during hook up.
- Direct tying off around sharp edged structures can reduce breaking strength by 70% therefore; chafing pads or abrasion resistant straps must be used around sharp edged structures to prevent cutting action against safety lanyards or lifelines.
- Anchor points should be selected to limit free fall to 6 feet or less and prevent contact with any lower level.
- Choose structures for anchor points that will prevent swing fall hazards.

- Potentially dangerous "pendulum" like swing falls can result when a worker moves horizontally away from a fixed anchor point and falls. The arc of the swing produces as much energy as a vertical free fall and the hazard of swinging into an obstruction becomes a major factor. Raising the height of the anchor point can reduce the angle of the arc and the force of the swing. Horizontal lifelines can help maintain the attachment point overhead and limit the fall vertically. A qualified person must design a horizontal lifeline.

#### Complete system

- If a fall occurs, the employee should not be able to free fall more than 6 feet nor contact a lower level.
  - To ensure this, add the height of the worker, the lanyard length and an elongation length of 3.5 feet. Using this formula, a six-foot worker with a six-foot lanyard would require a tie-off point at least 15.5 feet above the next lower level.
- A personal fall arrest system that was subjected to an impact needs to be removed from service immediately and should not be reused.
- Personal fall arrest systems need to be inspected prior to each use and damaged or deteriorated components removed from service.
- Personal fall arrest systems should not be attached to guardrails or hoists.

#### **Work from Aerial Lifts & Self Powered Work Platforms (i.e. Booms, Buckets)**

Body harnesses must be worn with a shock-absorbing lanyard and must be worn when working from an elevated work platform. The point of attachment must be the lift's boom or work platform. Personnel should not attach lanyards to adjacent poles, structures or equipment while they are working from the aerial lift.

Personnel should not move an aerial lift while the boom is in an elevated working position and the operator is inside of the lift platform.

#### **Scissor Lifts**

Personal fall arrest systems are not required if:

- Guardrails are in place
- Door or chain is closed
- You stay on the floor and do not exit the lift

Common safety guidelines when utilizing scissor lifts:

- Never stand on the guardrails
- Always use on a stable level surface
- Have a clear path of travel. Check for debris, holes, electrical equipment, workers, etc.
- Move lift slowly
- Know the equipment and its limitations
- Remove key when not in use, so unauthorized employees cannot use it

## **Ladders**

Improper use and care of ladders may result in accidents and serious injury. Frequent causes of ladder accidents include unsafe climbing and descending; ladder not secured; using a broken ladder; and over-reaching from the ladder.

- 1) When setting up a straight or extension ladder, use the following procedures to avoid injury:
  - a) Brace the base of the ladder against a stationary object so it cannot slip. Get help if you need it;
  - b) Grasp the top rung with both hands;
  - c) Raise the top end over your head and walk toward the base of the ladder, moving hands to grasp the rungs in the center to maintain stability;
  - d) When the ladder is erect, move it to the desired location and lean it forward against the resting point;
  - e) Footing should be firm and level. Precautions should be taken to secure the ladder if slippery conditions exist;
  - f) Extension or straight ladders used to reach an elevation platform or roof should extend at least 36 inches above the landing;
  - g) A straight ladder should be placed so there is one foot at the base for every four feet of length to the top support (i.e. 4 feet out for 16 feet elevation)
  - h) When adjusting an extension ladder, be sure the locking device is fully secured and hooked over the rungs before using the ladder.
- 2) All ladders should be tied, blocked, or otherwise secured to prevent movement. They should not be located in front of doors unless the door is blocked open, locked, or guarded.
- 3) Keep rungs and steps of ladders free from grease, oil, paint, snow, ice, mud or other slippery surfaces.
- 4) For a stepladder, be sure it is fully open and spreaders locked before using. Never climb higher than the step below the top of the stepladder. Never “walk” a stepladder while standing on it.
- 5) Both hands must be free when climbing or descending. Material should be hoisted to the work level.
- 6) Face ladders when going up or down.
- 7) Do not over-reach when on a straight or extension ladder. Move the ladder if the work is too far.
- 8) Never stand on the top three rungs of a straight ladder.
- 9) Two or more persons should not work on a ladder unless the ladder is specifically designed for this use.
- 10) Ladders should never be used for braces, skids or gangways.
- 11) Wood ladders should not be painted except the top step of stepladders may be painted to indicate that it is not to be stepped on. Wood ladders should be treated regularly a clear wood preservative.
- 12) Aluminum or wet wood ladders should not be used near open wiring since they are excellent conductors of electricity.

## **Training**

Each employee who may be exposed to fall hazards will be trained to recognize the hazards and the procedures to follow to minimize the hazards. A competent person should provide the training.

The competent person will train employees in the following areas:

- Fall hazards in the work area
- Correct procedures for erecting, maintaining, disassembling and inspecting the fall protection systems used
- Use and operation of the fall protection systems used
- What rescue procedures to follow in case of a fall
- Overview of the OSHA fall protection standards

A training record will be maintained for each employee. The record will contain the name of the employee trained, date of training and the signature of the person who conducted the training. Retraining should be done if there is a change in the fall protection system being used or if an employee's actions demonstrate that the employee has not retained the understanding or skills important to fall protection.