FALLTECH Window Door Jamb Anchor Instruction Manual

FALLTECH®
Fall Protection. Precision Engineered.

User Instruction Manual
Window/Door Jamb Anchor

Contents

Window Door Jamb Anchor

This manual is intended to meet the Manufacturer's Instructions and should be used as part of an employee training program as required by OSHA. This manual assumes the user has been trained in the use of this equipment.

WARNING

This product is part of a personal fall arrest, restraint, work positioning, suspension, or rescue system. A Personal Fall Arrest System (PFAS) is typically composed of an anchorage and a Full Body Harness (FBH), with a connecting device, i.e., a Shock Absorbing Lanyard (SAL), or a Self-Retracting Device (SRD), attached to the dorsal D-ring of the FBH.

These instructions must be provided to the user of this equipment. The user must read and understand the manufacturer's instructions for each component or part of the complete system.

Manufacturer's instructions must be followed for proper use, care, and maintenance of this product. These instructions must be retained and be kept available for the user's reference at all times. Alterations or misuse of this product, or failure to follow instructions, may result in serious injury or death.

A Fall Protection Plan must be on file and available for review by all users. It is the responsibility of the user and the purchaser of this equipment to assure that users of this equipment are properly trained in its use, maintenance, and storage.

Training must be repeated at regular intervals. Training must not subject the trainee to fall hazards.

When this equipment is in use the employer must have a rescue plan and the means at hand to implement it and communicate that plan to users, authorized persons, and rescuers.

Consult a doctor if there is reason to doubt your fitness to safely absorb the shock of a fall event. Age and fitness seriously affect a worker's ability to withstand falls. Pregnant women or minors must not use this equipment.

FallTech®
1306 South Alameda Street
Compton, CA 90221, USA
1-800-719-4619
1-323-752-0066
www.falltech.com

DESCRIPTION

The FallTech® Window/Door Jamb Anchor is an easily mounted anchor for persons working at height and subject to fall hazards. The Window/Door Jamb Anchor is built of gusseted welded aluminum square tube, with a stainless steel threaded adjusting clamp, a forged plated steel attachment D-ring, and rubber protective pads. Spaced holes in the main body, secured with a pin, provide preliminary size adjustment. The hand-

operated threaded adjustment clamp is used for final fitment and to secure the Window/Door Jamb Anchor in place within the window or door frame.
See Figure 1 and Table 1 in Appendix A.
This manual contains two appendices, Appendix A and Appendix B. Appendix A contains figures and tables specific to the equipment discussed in this manual. Appendix B contains figures and tables applicable to fall protection equipment in general. All figures in Appendix B may not apply to this manual. For purposes of this manual, the Window/Door Jamb Anchor may be referred to as the anchor, the anchorage conn ector, the equipment, the product, or the unit.

APPLICATION

2.1 Purpose: The anchor discussed in this manual is designed as a PFAS anchorage connector for fall arrest, or restraint, to be temporarily installed in a window or door frame. See Figure 2 in Appendix A.
2.1.1 Personal Fall Arrest: The anchor is used as a component of a PFAS to arrest the user in the event of a fall. A PFAS typically consists of an anchorage, a Full Body Harness (FBH), and a deceleration device such as a Shock Absorbing Lanyard (SAL), a Self-Retracting Device (SRD), or a Fall Arrestor Connecting Subsystem (FACSS). Maximum permissible free fall is six feet.
2.1.2 Restraint: The Window/Door Jamb Anchor may be used as a component of a restraint system to prevent the user from reaching a fall hazard area. Restraint systems typically include a positioning belt or an FBH, and a lanyard or restraint line. No vertical free fall is permited.
2.1.3
Rescue: The responsible party must have a rescue plan in place, and the means and tools to carry it out. Rescue p ractices and procedures are beyond the scope of this manual.
WARNING
Take caution when using the equipment discussed in this manual. Check the labels on the unit to ensure the equipment is being used for the proper application. Use of this equipment for an application that does not meet the anchorage strength requirements of OSHA 1926.502 may result in serious injury or death.
Do not alter or intentionally misuse this equipment. Consult FallTech when using this equipment in combination with components or subsystems other than those described in this manual. Some subsystem and component combinations may interfere with the operation of this equipment.
2.2 Application Limits: Take action to avoid sharp edges, abrasive surfaces, and thermal, electrical, and chemical hazards. The anchor is not designed for nor is it suitable for work positioning, personnel riding, or suspension.
DO NOT use the anchor connector to lift tools or materials.

SYSTEM REQUIREMENTS

3.1 Capacity:
The anchor will support a static load of 3,600 lbs, and has a rated capacity of 425 lbs. (193 kg). No more than one PFAS may be connected to one anchorage at one time. To maintain an ANSI compliant PFAS, limit user weight to 310lbs, including clothing, tools, and equipment.
3.2 Compatibility of Connectors: Connectors are considered to be compatible with connecting elements when they have been designed to work together in such a way that their sizes and shapes do not cause their gate mechanisms to inadvertently open regardless of how they become oriented. Contact FallTech if you have any questions about compatibility. Connectors must be compatible with the anchorage or other system components. Do not use equipment that is not compatible. Non-compatible connectors may unintentionally disengage. Connectors must be compatible in size, shape, and strength. Self-closing, self-locking snap hooks and carabiners are required by ANSI and OSHA.
3.3 Compatibility of Components: Equipment is designed for use with approved components and subsystems only. Substitutions or replacements made with non-pproved components or subsystems may jeopardize compatibility of equipment and may affect the safety and reliability of the complete system.
3.4 Making Connections: Only use self-locking snap hooks and carabiners with this equipment. Only use connectors that are suitable to each application. Ensure all connections are compatible in size, shape, and strength. Do not use equipment that is not compatible. Visually ensure all connectors are fully closed and locked. Connectors (snap hooks and carabiners) are designed to be used only as specified in each product's user's instructions. See Figure 13 in Appendix B.
3.5 Personal Fall Arrest System: PFAS used with this equipment must meet ANSI Z359 requirements and applicable OSHA regulations. A full body harness must be worn when this equipment is used as a component of a

PFAS. As required by OSHA, the personal fall arrest system must be able to arrest the user's fall with a maximum arresting force of 1,800 lbs., and limit the free fall to 6 feet or less. If the maximum free fall distance must be exceeded, he employer must document, based on test data, that the maximum arresting force will not be exceeded, and the personal fall arrest system will function properly.

3.5.1 PFAS Anchorage Strength: An anchorage selected for PFAS must have a strength able to sustain a static load applied in the direction permitted by the PFAS of at least:

a) Two times the maximum arrest force permitted when certification exists, or b) 5,000 lbs. (22.2 kN) in the absence of certification.

3.5.2 Restraint Anchorage Strength: An anchorage selected for restraint applications must have a strength able to sustain a static load applied in the direction permitted by the PFAS of at least:

a) Two times the maximum arrest force permitted when certification exists, or b) 1,000 lbs. (4.4 kN) in the absence of certification.

3.6 Definitions: The following are definitions of terms.

Authorized Person: A person assigned by the employer to perform duties at a location where the person will be exposed to a fall hazard (otherwise referred to as "user" for the purpose of these instructions).

Certified Anchorage: An anchorage for fall arrest, positioning, restraint, or rescue systems that a qualified person certifies to be capable of supporting the potential fall forces that could be encountered during a fall or that meet the criteria for a certified anchorage prescribed in this standard. Competent Person: One who is capable of identifying existing and predictable hazards in the surroundings or working conditions which are unsanitary,
hazardous, or dangerous to employees, and who has authorization to take prompt corrective measures to eliminate them.

Qualified Person: A person with a recognized degree or professional certificate and with extensive knowledge, training, and experience in the fall protection and rescue field who is capable of designing, analyzing, evaluating and specifying fall protection and rescue systems to the extent required by this standard.

Rescuer: Person or persons other than the rescue subject acting to perform an assisted rescue by operation of a re scue system.

INSTALLATION AND OPERATION

Plan the installation of the anchor considering all facets of fall protection, anchorage location, fall clearance requirements, swing fall, and work zone. Installation of anchorages must be under the supervision of a competent person trained in their design and use.

NOTE: Approved fall protection may be required during installation of all anchorage units discussed in this manual. DO NOT use any anchorage discussed in this manual until the system has been completely installed, inspected, and approved for use by a competent person.

4.1 Anchorage Location: Select a suitable anchorage point that will support the strength requirement and minimize free fall and eliminate swing hazards. The anchor is designed for use in window and door frames 21 inches to 51 inches wide.

4.1.1 Fall Arrest: For fall arrest applications, select an anchorage location that will facilitate maximum safety, minimize risk and be of sufficient strength to meet requirements. See Section 3. Installation of the anchor must be under the supervision of a competent person. Do not work above the anchorage location in any fall arrest application.

4.1.2 Restraint: For restraint applications, exercise caution in selecting an anchorage location. Ensure the anchorage meets strength requirements. See Section 3. Under certain circumstances, it may be necessary to work above the anchorage (a foot-level tie-off) in a restraint application. Be aware of work zone hazards and use caution under these circumstances. A fall with a foot-level tie-off may result in serious injury or death.

4.2 Fall Clearance Distance: When working at heights and using a PFAS, it is important to consider the distance between the walking/working su rface and the next lower level to ensure there is sufficient room for the PFAS to arrest a fall. Fall Clearance Distance is the distance that is required to safely arrest the fall of a user. The Distance may be calculated by adding together the Length of the Lanyard or the SRD, plus the Deceleration Distance, the Height of
the Worker, plus a Safety Factor of 1-1/2 feet. See Figures 1, 2, 3, 4 and 5 in Appendix B.

4.3 Swing Fall: Swing falls occur when the anchorage point is not directly above the point where a fall occurs. Swing falls are more prevalent when using an SRD and a FACSS. In a swing fall, the total vertical fall distance will be greater than if the user had fallen directly below the anchorage point, thus increasing the total free

fall distance and the area required to safely arrest the user. Such swing fall injuries may be much more severe. Minimize swing falls by working as directly below the anchorage point as possible. Move the anchorage as required. Never permit a swing fall if injury could occur. If a swing fall situation exists in your application consult a competent person before proceeding. A minimum of six feet from the working level to the lower level or nearest obstruction is recommended.
See Figure 3 in Appendix A.
DO NOT use the anchor for fall protection applications if the anchor will be installed below the level of the user's FB H D-ring during normal work activities.
4.4 Anchorage Installation: Follow these steps;

1. Inspect the anchor before each use in accordance with the procedures listed in Section 7. Ensure the anchor is in good working order. If inspection reveals damage of any kind or excessive wear, remove the unit from service immediately.
2. Determine a suitable location to install the anchor that will maintain a proper work zone. A proper work zone is limited to a 30 degree angle from the D-ring centerline, and up to 90 degrees below the D-ring. See Figure 4 in Appendix A.
3. Loosen the final adjustment hand clamp as far as it goes. Remove the locking pin and slide the adjustment leg toward the fixed leg enough to fit in the opening.
4. Place the anchor horizontally at the bottom of the opening. Place the fixed leg against one side of the opening. The adjustable leg may be on the left or right. Ensure the anchor rests on the door or window sill. Ensure the D- ring is facing the fall hazard as shown in Figure 5 in Appendix A
5. Slide the adjustable clamping leg as close as possible to the door or window jamb.
6. Insert the locking pin into the holes that provide the best preliminary fit. Secure the locking pin with the hair spring pin. See Figures 6A and 6B in Appendix A.
7. Tighten the final adjustment clamp hand tight against the door or window jamb.
   Ensure the horizontal body is butted securely against the frame of the opening.
   Ensure the fixed leg and the adjustable leg are butted securely against the frame of the opening.
   WARNING
   Ensure the anchor is as low as possible in the opening. Failure to comply with this instruction could lead to an unintentional disengagement if a fall occurs, resulting in injury or death.
8. Attach the PFAS to the anchorage D-ring. Consult the PFAS manufacturer's user instructions for complete details. Make only compatible connections.

NOTE: Do not go back through the opening the anchor is installed in to perform work. A fall event in this area this will cause a reverse load and may unintentionally dislodge the anchor.
DO NOT place the anchor vertically in the opening.
DO NOT over tighten the hand clamp.
DO NOT drop the anchor from roof-tops to the ground.
DO NOT subject the anchor to non-design loads or forces.
DO NOT exceed the proper load direction.
If the anchor has been subjected to fall arrest forces, remove it from service immediately.
IN THE EVENT OF A FALL: The responsible party must have a rescue plan and the ability to implement a rescue. Tolerable suspension time in a full body harness is limited, so a prompt rescue is critical.

SPECIFICATIONS

See Table 1 in Appendix A.

MAINTENANCE AND STORAGE

Clean the anchor with a mild detergent solution. Store indoors. Avoid chemical vapors, moisture, and physical damage. Apply a light coat of silicone spray lubricant to the hand-clamp threads.

INSPECTION PROCEDURE

Prior to each use, the user must inspect the system for any physical damage, wear, corrosion, or missing parts. The Window/Door Jamb Anchor must be
formally inspected by a competent person other than the user at least annually.
If the anchor has been subjected to a fall arrest load, remove it from service.
Inspect for:

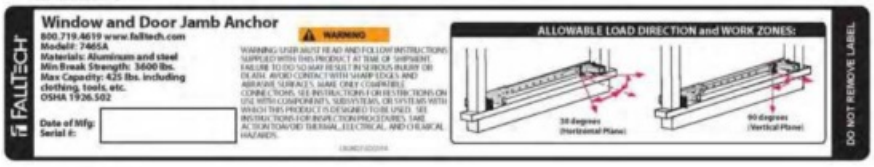
1. Ensure the unit is straight and that the sliding leg does not bind on the main body.
2. Cracks
3. Fractures
4. Bent or broken plate or d-ring
5. Corrosion
6. Inspect the hand clamp for deformities, dirt, grease, paint or other debris.

Record inspection results on the Inspection Record found in Appendix B or on another suitable record.

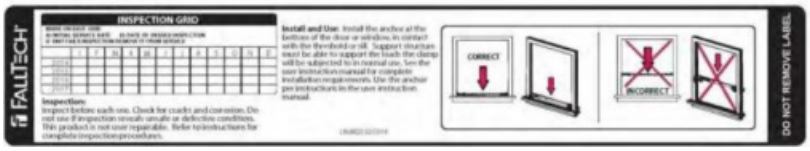
LABELS

The following labels must be present and legible.

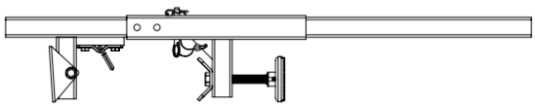
LABEL 1



LABEL 2



APPENDIX A

Table 1: Specifications for Window/Door Jamb Anchor				
FallTech Part #	Dimensions	Minimum Tensile Strength and Material	Maximum User Capacity	Anchor
7465A		3,600 lbs.		
adjusts to openings ranging from 21” to 51” wide	8” wide x 52” long	Extruded Aluminum Frame Stainless Steel Adjustment Hand Clamp	425 lbs to comply with OSHA only	

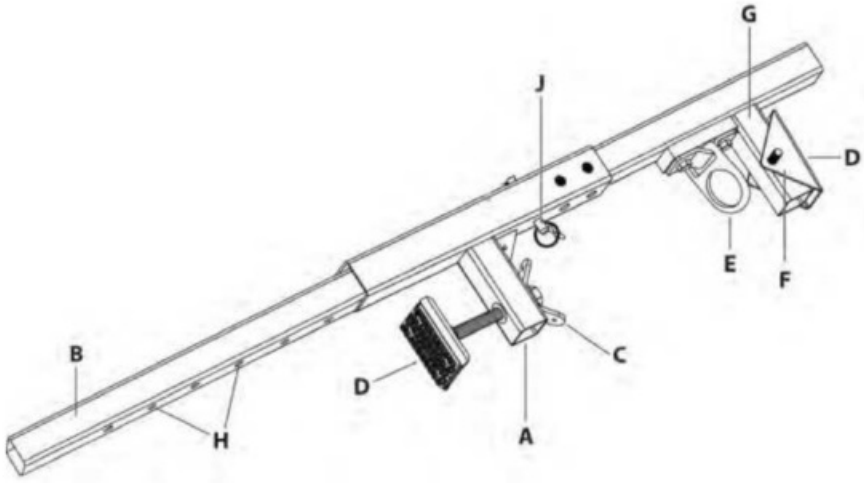


Fig. 1: About Window/Door Jamb Anchor	
A	Adjustable Leg
B	Horizontal Body
C	Final Adjustment Hand Clamp
D	Protective Pads
E	Outward Facing Connection D-ring
F	Pivoting Shoe on Fixed Leg
G	Fixed Leg
H	Preliminary Adjustment Holes
J	Locking Pin

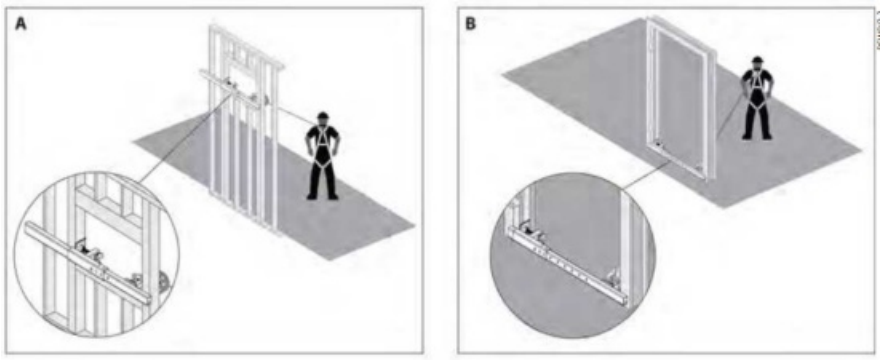


Fig. 2: Use of Window/Door Jamb Anchor in Fall Protection	
A	Window/Door Jamb Anchor Used for Fall Arrest with Self-Retracting Device
B	Window/Door Jamb Anchor Used for Restraint with Restraint Lanyard
Note: Connection D-Ring is always facing the User's Fall Hazard	

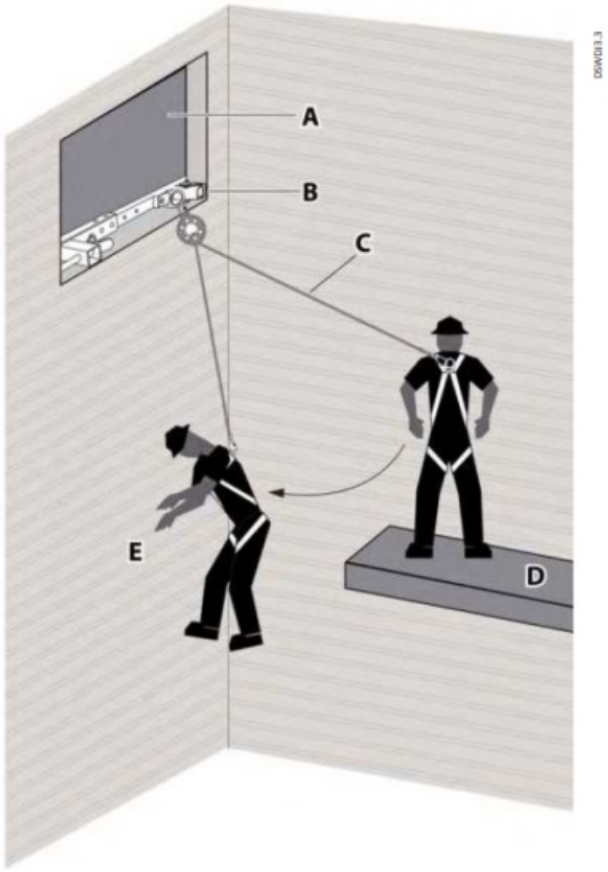


Fig. 3: Swing Fall Hazard	
A	Window Opening
B	Window/Door Jamb Anchor
C	Self-Retracting Device
D	Walking/Working Surface
E	Swing Fall Impact after fall event

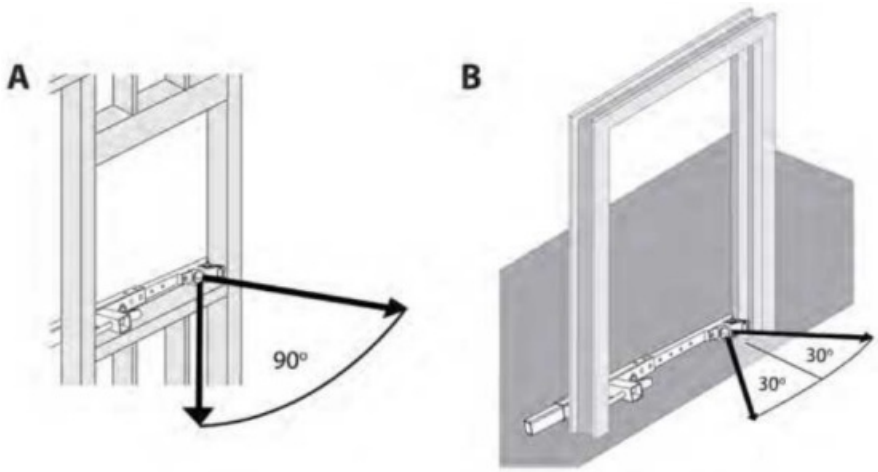


Fig. 4: Load Direction and Working Range	
A	Load Direction on Vertical Plane with Maximum of 90° between straight out and straight down
B	Working Range on Horizontal Plane with Maximum of 30° on each Side of Center
Do Not Load the Anchor Beyond the 90° Specified	

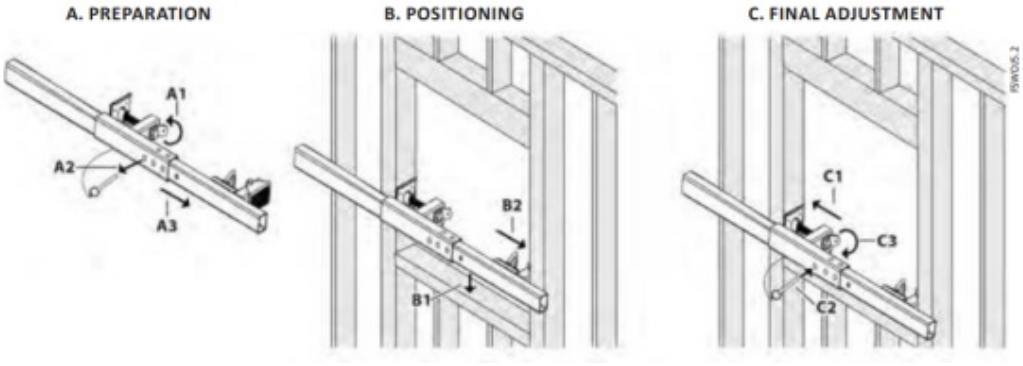
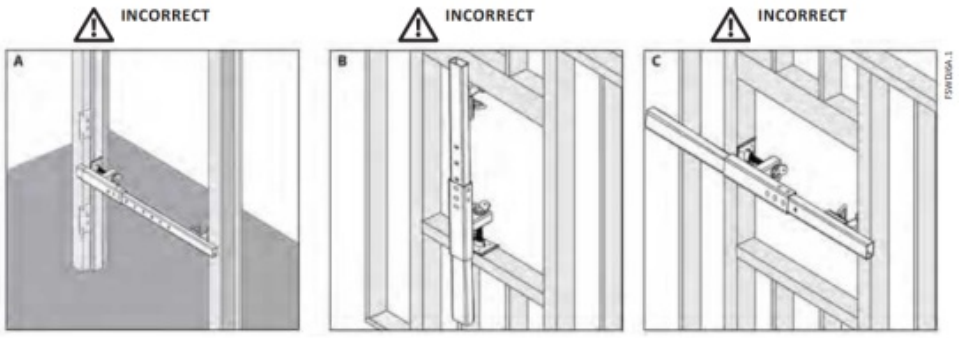


Fig. 5: Installation of Window/Door Jamb Anchor					
A. Preparation		**B. Positioning**		**C. Final Adjustmen**t	
A1	Loosen Hand Clamp	B1	Position Anchor flat on Sill	C1	Slide Adjustable Leg
A2	Remove Locking Pin	B2	Position Fixed Leg against jam b	C2	Re-insert Locking Pin
A3	Slide Adjustable Leg			C3	Tighten Hand Clamp



⚠ Fig. 6A: Incorrect Positioning of Window/Door Anchor	
A	Anchor Not Positioned on Floor
B	Anchor Positioned Vertically in Opening
C	Anchor Not Positioned on Window Sill

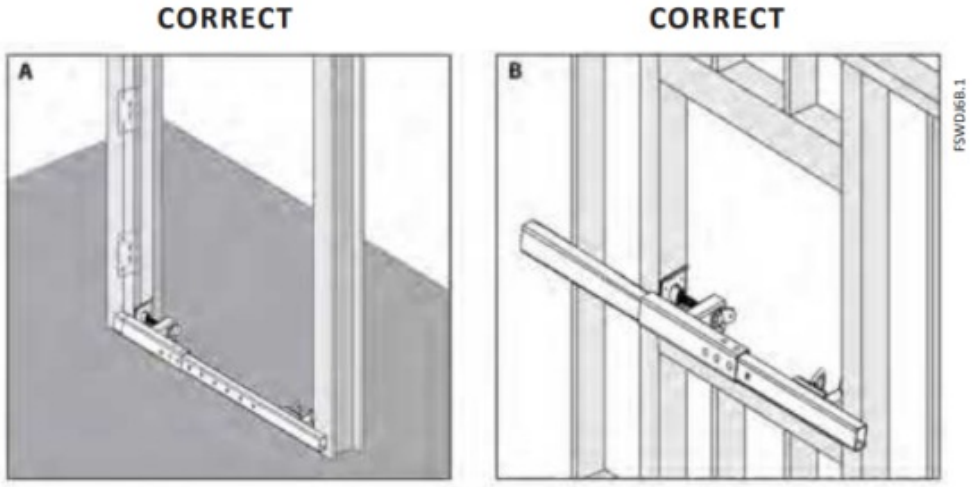


Fig. 6B: Correct Positioning of Window/Door Anchor	
A	Anchor Positioned on Floor in Door Opening
B	Anchor Positioned on Sill in Window Opening

APPENDIX B

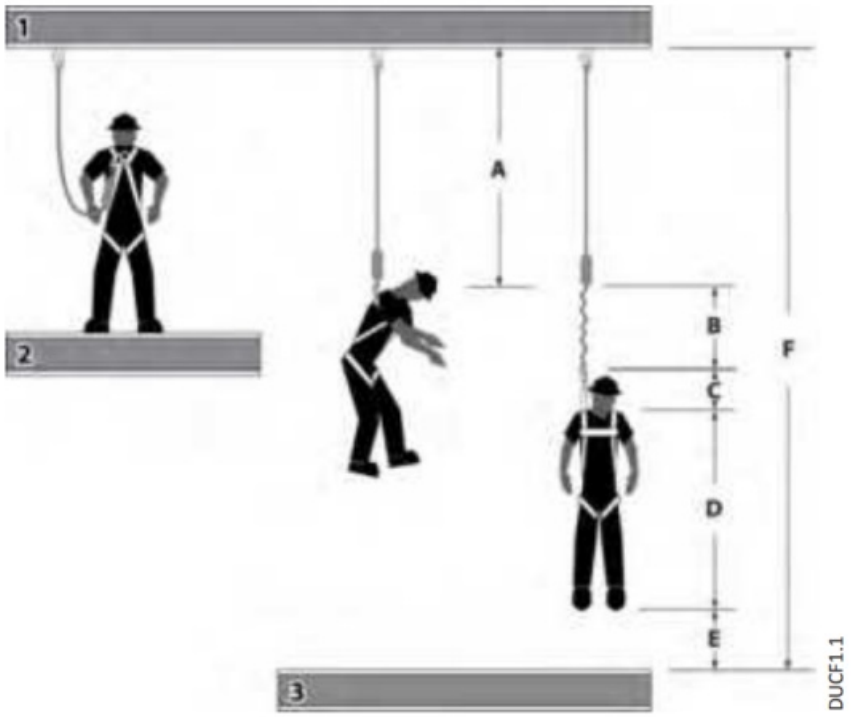


Fig. 1 – Minimum Clear Fall Requirement: 6 ft Shock Absorbing Lanyard Measured from Overhead Anchorage Connector		
A	6 ft	Length of Shock Absorbing Lanyard Original working length before a fall event occurs/before activation of energy absorber
B	4 ft	Elongation/Deceleration Distance Maximum allowable amount of elongation that may payout from the energy absorber upon activation during a fall event
C	1 ft	Harness Stretch and Dorsal D-Ring Shift Combined amount of harness webbing elongation and dorsal back D-ring up-shift duri ng entire fall event
D	5 ft	Height of Dorsal D-ring Typical average height of the dorsal D-Ring on a user's full body harness measured fr om the walking/working surface up
E	1½ ft	Safety Factor Added length to account for other factors such as an improperly adjusted harness, act ual worker height or worker weight
F	17½ ft	Total Minimum Clear Fall Distance Required

1. Overhead Anchorage
2. Walking/Working Surface
3. Nearest Lower Level or Obstruction

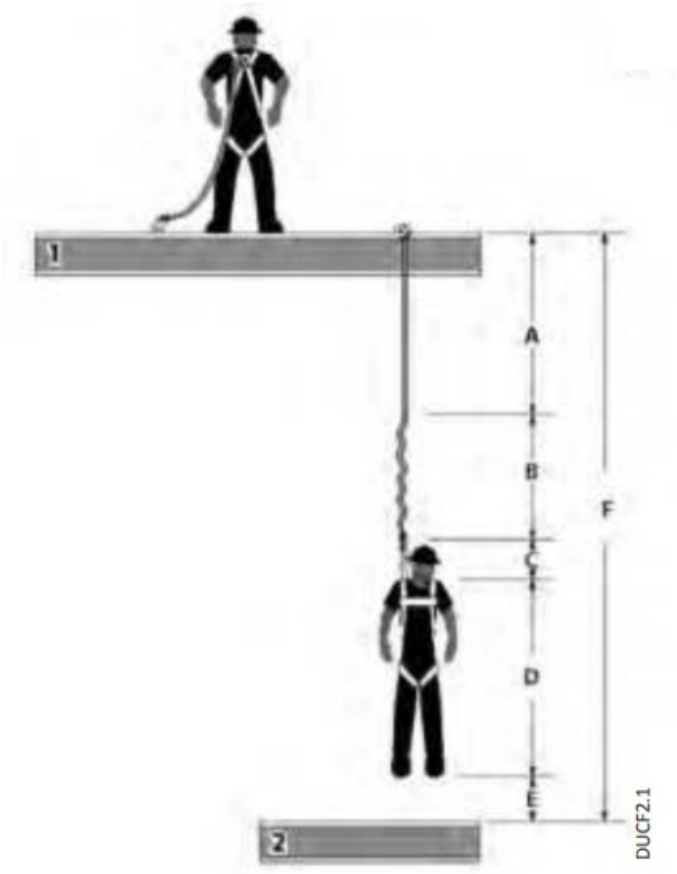


Fig. 2 – Minimum Clear Fall Requirement: 12 ft Free Fall Lanyard Measured from Foot Level Anchorage Connector		
A	6 ft	**Length of Shock Absorbing Lanyard** Original working length before a fall event occurs/before activation of energy absorber
B	5 ft	**Elongation/Deceleration Distance** Maximum allowable amount of elongation that may payout from the energy absorber upon activation during a fall event
C	1 ft	**Harness Stretch and Dorsal D-Ring Shift** Combined amount of harness webbing elongation and dorsal back D-ring up-shift duri ng entire fall event
D	5 ft	**Height of Dorsal D-ring** Typical average height of the dorsal D-Ring on a user's full body harness measured fr om the walking/working surface up
E	1½ ft	**Safety Factor** Added length to account for other factors such as an improperly adjusted harness, act ual worker height or worker weight
F	18½ ft	Total Minimum Clear Fall Distance Required

1. Walking/Working Surface
2. Nearest Lower Level or Obstruction

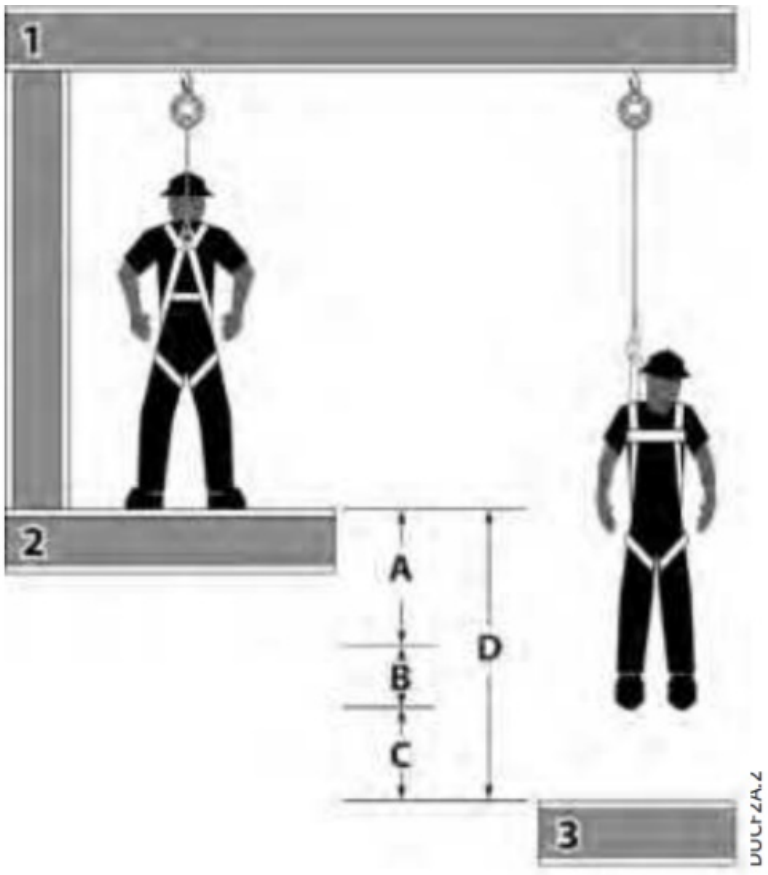


Fig. 3 – Minimum Clear Fall Requirement: ANSI Class A Self-Retracting Device		
A	**2** ft	**Activation/Deceleration Distance** Maximum allowable length of cable or web that may payout from the SRD once decel eration of the user has begun and after a fall event occurs
B	**1** ft	**Harness Stretch and Dorsal D-Ring Shift** Combined amount of harness webbing elongation and dorsal D-ring up- shift during e ntire fall event
C	**1½** ft	**Safety Factor** Added length to account for other factors such as an improperly adjusted harness, act ual worker height or worker weight
D	**4½** ft	**Total Minimum Clear Fall Distance Required**

1. Overhead Anchorage
2. Walking/Working Surface
3. Nearest Lower Level or Obstruction

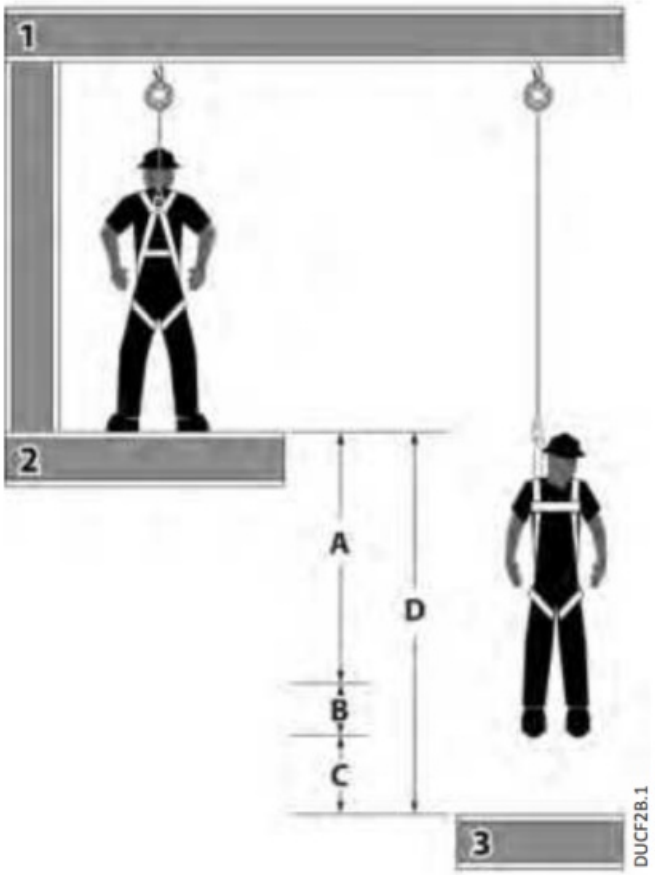


Fig. 4 – Minimum Clear Fall Requirement: ANSI Class B Self-Retracting Device		
A	**4½** ft	**Activation/Deceleration Distance** Maximum allowable length of cable or web that may payout from the SRD once decel eration of the user has begun and after a fall event occurs
B	**1** ft	**Harness Stretch and Dorsal D-Ring Shift** Combined amount of harness webbing elongation and dorsal D-ring up- shift during e ntire fall event
C	**1½** ft	**Safety Factor** Added length to account for other factors such as an improperly adjusted harness, act ual worker height or worker weight
D	**7** ft	**Total Minimum Clear Fall Distance Required**

1. Overhead Anchorage
2. Walking/Working Surface
3. Nearest Lower Level or Obstruction

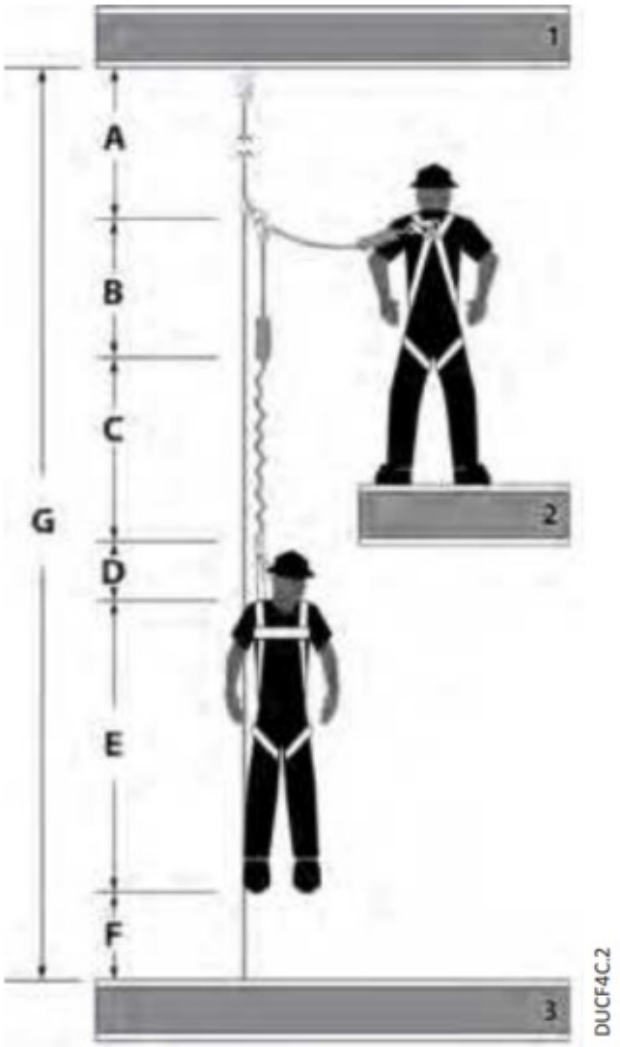


Fig. 5 – Managing Stretch Minimum Clear Fall Requirement: Vertical Lifeline System		
*A	Stretch	**Stretch of Vertical Lifeline** Stretch = length of VLL from Anchorage Connector to Rope Grab position on VLL multi plied by 10%
B	3 ft	**Length of Shock Absorbing Lanyard** Original working length before a fall event occurs/before activation of energy absorber
C	4 ft	**Elongation/Deceleration Distance** Maximum allowable amount of elongation that may payout from the energy absorber up on activation during a fall event
D	1 ft	**Harness Stretch and dorsal D-ring Shift** Combined amount of harness webbing elongation and dorsal D-ring up- shift during ent ire fall event
E	5 ft	**Height of Dorsal D-ring** Average height of the dorsal D-Ring on a user's full body harness measured from the w alking/working surface up
F	1½ ft	**Safety Factor** Added length to account for other factors such as an improperly adjusted harness, actu al worker height or worker weight
*G	Add A thoug h F	**Total Minimum Clear Fall Distance Required** *(must calculate for distance A)

1. Overhead Anchorage
2. Walking/Working Surface
3. Nearest Lower Level or Obstruction

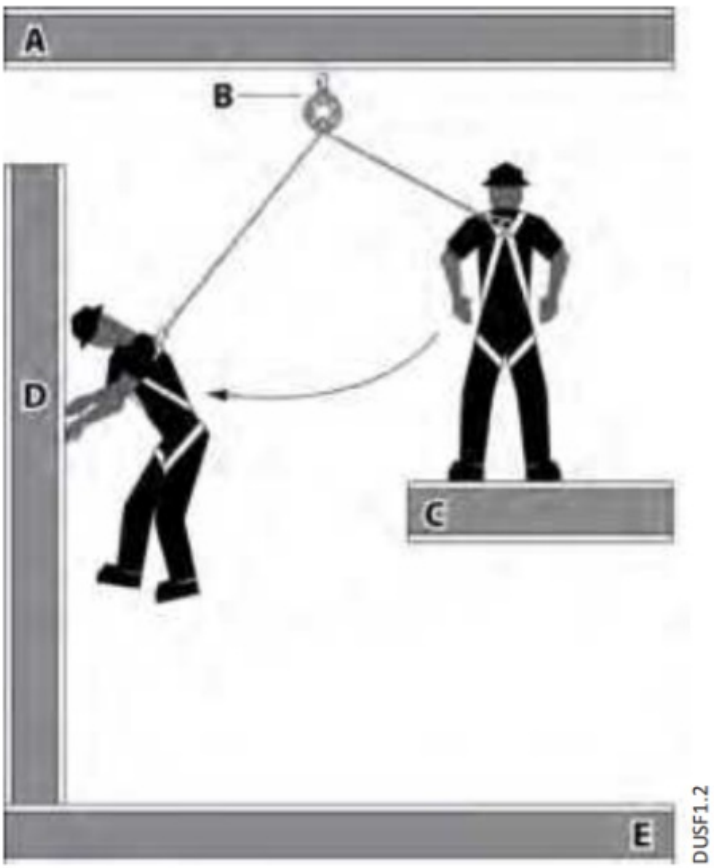


Fig. 6 – Swing Fall Hazard	
A	Anchorage
B	Self-Retracting Device (SRD)
C	Walking/Working Surface
D	Swing Fall Impact after fall event
E	Next Lower Level or Obstruction

Common Fall Protection Applications

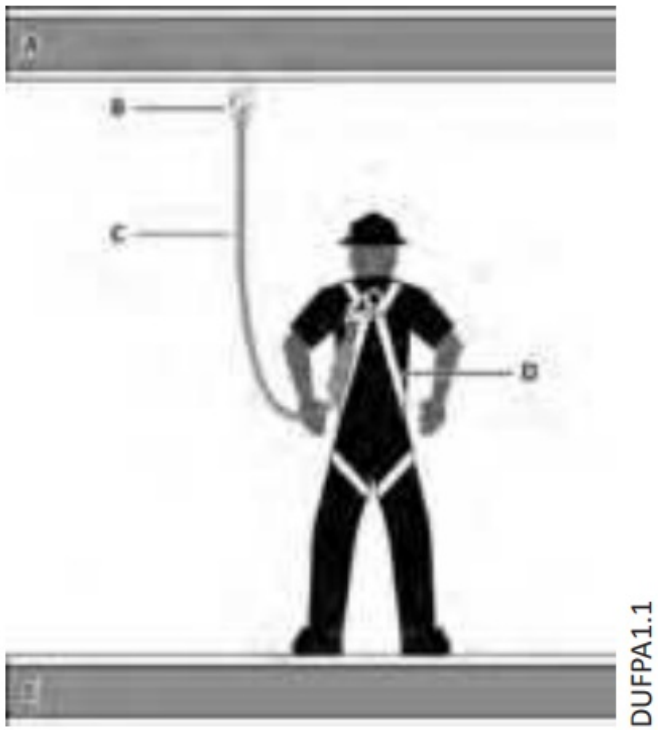


Fig. 7 – Fall Arrest (PFAS)	
A	Anchorage
B	Anchorage Connector
C	Shock Absorbing Lanyard (SAL)
D	Full Body Harness (FBH)
E	Walking/Working Surface

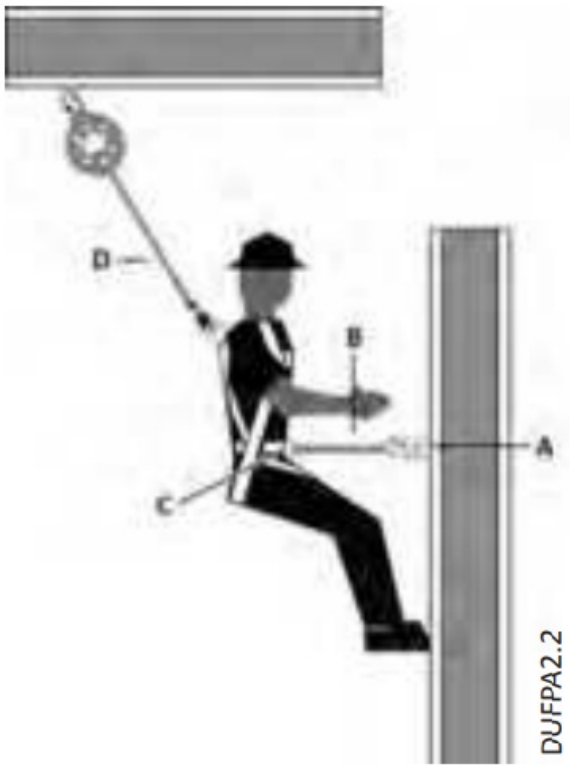


Fig. 8 – Work Positioning	
A	Positioning Anchor
B	Positioning Lanyard
C	Full Body Harness (FBH) with Side D-Rings
D	Back-up Fall Arrest (PFAS)

Fig. 9 – Restraint	
A	Restraint Anchor
B	Restraint Lanyard
C	Full Body Harness (FBH)
D	Walking/Working Surface
E	Fall Hazard Area

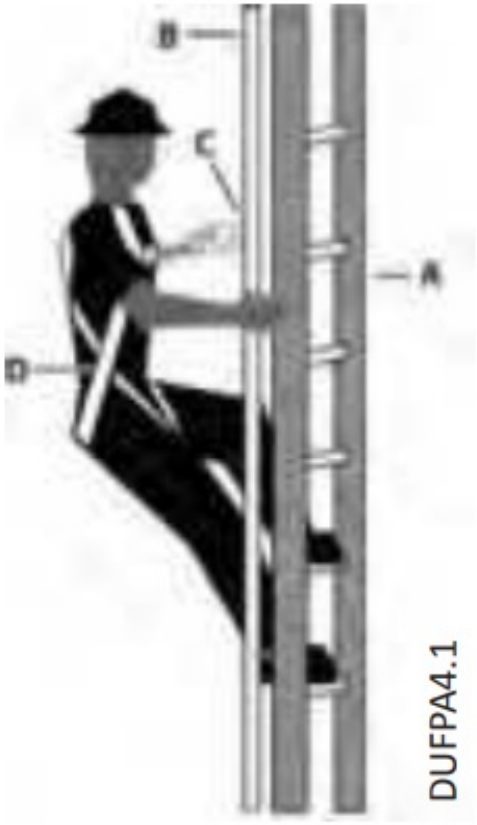


Fig. 10 – Climbing	
A	Fixed Ladder
B	Ladder Safety System
C	Safety Sleeve/Grab/Trolley
D	Full Body Harness (FBH) with Front D-Ring

Fig. 11 – Suspension/Personnel Riding	
A	Suspension Line
B	Suspension Yoke
C	Boatswain's Chair/Work Seat
D	Full Body Harness (FBH)
E	Back-up Fall Arrest (PFAS)

Fig. 12 – Rescue/Retrieval	
A	Retrieval Line
B	Retrieval Yoke
C	FBH Shoulder D-Rings
D	Full Body Harness (FBH)

Incorrect Connections / Acronyms for Fall Protection and Fall Arrest / Inspection Record

Fig. 13 – Incorrect Connections	
A	Never connect two active components (snap hooks or carabiners) to each other.
B	Never connect two active components (snap hooks or carabiners) to a single D-ring at the same ti me.
C	Never connect in a way that would produce a condition of loading on the gate.
D	Never attach to a object in a manner whereby the gate (of the snap hook or carabiner) would be pr evented from fully closing and locking. Always guard against false connections by visually inspecti ng for closure and lock.
E	Never attach explicitly to a constituent subcomponent (webbing, cable or rope) unless specifically provided for by the manufacturer's instructions for both subcomponents (snap hook or carabiner a nd webbing, cable or rope).
F	Never attach in a manner where an element of the connector (gate or release lever) may become caught on the anchor thereby producing additional risk of false engagement.
G	Never attach a spreader snap hook to two side/positioning D-rings in a manner whereby the D-rin gs will engage the gates; the gates on a spreader must always be facing away from the D-rings du ring work positioning.

Acronyms for Fall Protection and Fall Arrest; ANSI Z359.0-2012

ACTD	Activation Distance	HLL	Horizontal Lifeline
AD	Arrest Distance	MAF	Maximum Arrest Force
CSS	Connecting Subsystem	mm	Millimeter
DD	Deceleration Distance	PFAS	Personal Fall Arrest System
DDV	Deceleration Device	PPE	Personal Protective Equipment
FACSS	Fall Arrestor Connecting Subsystem	SRD	Self-retracting Device
FAS	Fall Arrest System	TFD	Total Fall Distance
FBH	Full Body Harness	VLL	Vertical Lifeline
FF	Free Fall	VLLSS	Vertical Lifeline Subsystem
FFD	Free Fall Distance	WPS	Work Positioning System

Other Acronyms for Fall Protection and Fall Arrest

RGLS	Rope Grab Lanyard Set	ANSI	American National Standards Institute
SAL	Shock Absorbing Lanyard	OSHA	Occupational Safety and Health Administration
cm	Centimeters	ASTM	American Society for Testing and Materia ls
kN	kilo-Newton	lbs	pounds (weight)
RPA	Rebar Positioning Assembly	TPA	Tower Positioning Assembly

INSPECTION RECORD

Model # :_____ **Serial # :** **Date of Manufacture :_____**					
Inspection Date	**Inspector**	**Comments**	**Pass/Fail**	**Corrective Action Needed**	**Approved By**

FALLTECH®
Fall Protection. Precision Engineered.

Documents / Resources

	FALLTECH Window Door Jamb Anchor [pdf] Instruction Manual Window Door Jamb Anchor, Door Jamb Anchor, Jamb Anchor, Anchor

References

- User Manual