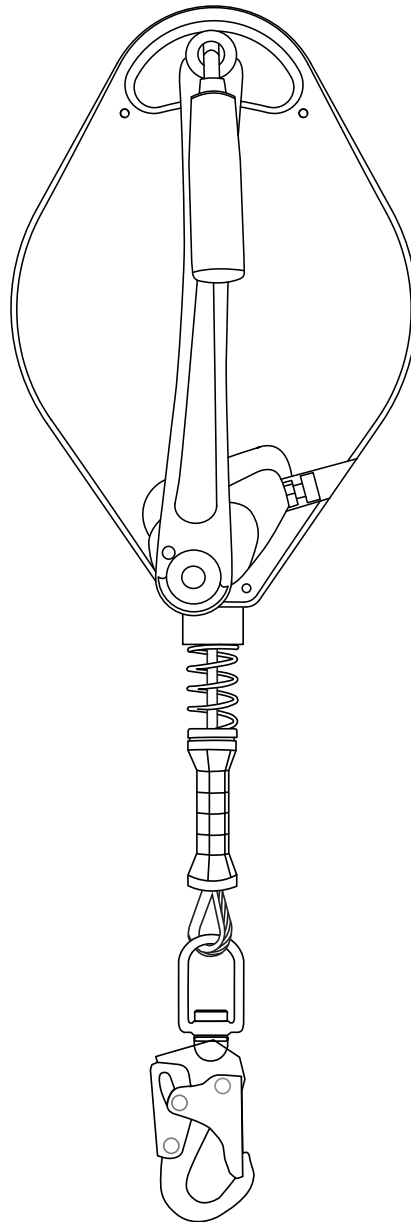


# DuraTech 45'/60' 3-Way Retrieval SRL-R

## User Instruction Manual



This manual is intended to meet the Manufacturer's Instructions as required by the American National Standards Institute (ANSI) Z359 and should be used as part of an employee training program as required by the Occupational Safety and Health Administration (OSHA).

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For purposes of this manual, the FallTech® DuraTech 45'/60' 3-Way Retrieval SRL-Rs in all iterations may be referred to collectively as the FallTech® DuraTech SRL-R, the DuraTech SRL-R, the 3-Way, the SRL-R, the equipment, the device, the product, or the unit.

## 1.0 Warnings and Important Information

### **WARNING**

- Avoid moving machinery, thermal, electrical, and/or chemical hazards as contact may cause serious injury or death.
- Avoid swing falls.
- Follow the weight restrictions and recommendations in this manual.
- Remove from service any equipment subjected to fall arrest forces.
- Remove from service any equipment that fails inspection.
- 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.
- Do not connect rebar hooks, large carabiners, or large snap hooks to the FBH dorsal D-rings as this may cause a roll-out condition and/or unintentional disengagement.
- Avoid sharp and/or abrasive surfaces and edges.
- Use caution when performing arc welding. Arc flash from arc welding operations, including accidental arcs from electrical equipment, can damage equipment and are potentially fatal.
- Examine the work area. Be aware of the surroundings and workplace hazards that may impact safety, security, and the functioning of fall arrest systems and components.
- Hazards may include but not be limited to cable or debris tripping hazards, equipment failures, personnel mistakes, moving equipment such as carts, barrows, fork lifts, cranes, or dollies. Do not allow materials, tools, or equipment in transit to contact any part of the fall arrest system.
- Do not work under suspended loads.

### **IMPORTANT**

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., an Energy Absorbing Lanyard (EAL), or a Self-Retracting Device (SRD), attached to the dorsal D-ring of the FBH.

These instructions must be provided to the worker using this equipment. The worker 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 worker'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 workers. It is the responsibility of the worker 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.

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.

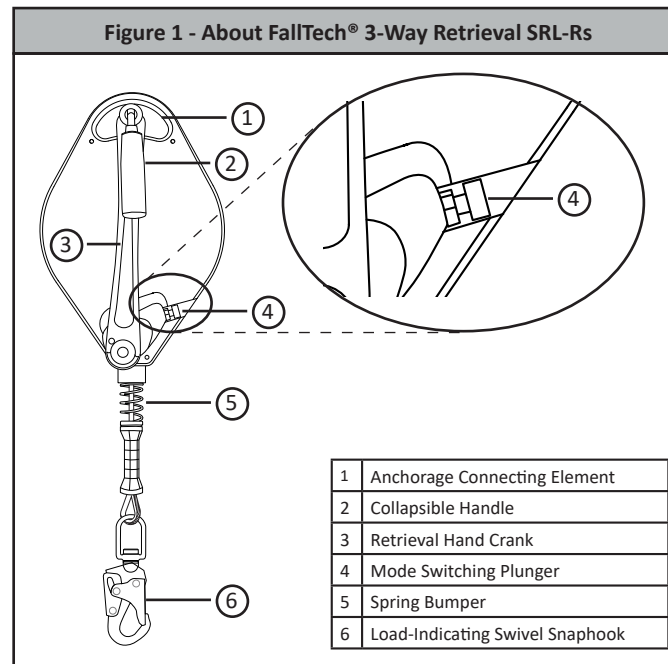
Heavy users experience more risk of serious injury or death due to falls because of increased fall arrest forces placed on the user's body. In addition, the onset of suspension trauma after a fall even may be accelerated for heavy users.

The user of the equipment discussed in this manual must read and understand the entire manual before beginning work.

NOTE: For more information consult the ANSI Z359 body of standards.

## 2.0 Description

The FallTech® DuraTech 45'/60' 3-Way Retrieval SRL-R is a self-retracting lifeline with integral rescue capability. The DuraTech SRL-Rs described in this manual has an integral hand crank to raise or lower a fallen victim to a safe level. The DuraTech SRL-Rs can be attached to an overhead anchorage or attached to a FallTech® Tripod or Davit systems with the included mounting bracket.



**2.1 American National Standards Institute (ANSI) and Occupational Safety and Health Administration (OSHA):** The SRL-R discussed in this manual meets the standards of ANSI Z359.14-2014, ANSI A10.32-2012, and Occupational Safety and Health Administration (OSHA) regulations 1926.502. ANSI requires SRDs be classified according to their tested overhead dynamic performance, and are classified either Class A or Class B, based on those test results. Dynamic performance means that the SRD is installed in a testing drop tower. A test weight is attached to the SRD and then dropped. Test results are recorded.

Parameters recorded are:

- Arrest Distance (AD)
- Average Arrest Force (AAF)
- Maximum Arrest Force (MAF)

The Arrest Distance is the total vertical distance required to arrest a fall. The Arrest Distance includes the deceleration distance and the activation distance. The Average Arrest Force is the average of the forces applied to the body and the anchorage by the fall protection system. The Maximum Arrest Force is the maximum amount of force that may be applied to the body and the anchorage by the fall protection system. In addition to the above tests conducted in ambient conditions, the units must be retested for average and peak forces under certain environmental conditions, where the units are cooled, then tested, heated, then tested, and saturated in water and tested again. Separate units may be used for each test. All test results are recorded.

This test data is then used to establish the basis for fall clearance guidelines published in the user instruction manual.

**SRD Class A and B:** To be declared a Class A device, ANSI requires an SRD to have an Arrest Distance of less than 24", an Average Arrest Force of less than 1,350 lbs, (1,575 lbs conditioned) and a Maximum Arresting Force of 1,800 lbs, for both ambient and conditioned testing. To be declared a Class B device, the SRD must have an Arrest Distance of less than 54", an Average Arrest Force of less than 900 lbs, (1,125 lbs conditioned) and a Maximum Arresting Force of 1,800 lbs, for both ambient and conditioned testing.

When dynamically tested in accordance with requirements of ANSI Z359.14-2014, FallTech Class A Self-Retracting Devices have an AAF of 1,350 lbs and an AD of less than 24".

When dynamically tested in accordance with requirements of ANSI Z359.14-2014, FallTech Class B Self-Retracting Devices standard have an AAF of 900 lbs and an AD of less than 54".

***The arrest distances described by Class A and Class B apply to overhead anchorage applications only. For non-overhead anchorage applications, please see Section 5 of this user instruction manual for how to calculate your Minimum Required Fall Clearance (MRFC).***

Classification information found on product labels is based on test results. Table 1B provides test performance results for the SRD discussed in this manual. NOTE: Arrest distance is one of several parts of the Minimum Required Fall Clearance (MRFC). MRFC is discussed in detail in Section 5.

OSHA requires an SRD limit the free fall to 2 feet or less. If the maximum free fall distance must be exceeded, the 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. The SRD discussed in this manual was successfully tested for horizontal use and falls over a steel edge without burrs, as found on steel shapes and metal sheeting, and may be used in situations where a fall may occur over similar edges, such as found on steel shapes or metal sheeting.



## **WARNING**

**Be sure to read, understand, and follow all instructions and warnings in this manual.  
Any misuse could result in serious injury or death.**

### **3.0 Application**

**3.1 Purpose:** The FallTech® DuraTech 3-Way Retrieval SRL-R is designed to be used as a component in a Personal Fall Arrest System (PFAS), to provide a combination of worker mobility and fall protection as required for inspection work, general construction, maintenance work, oil production, confined space work, etc. The SRL-R described in this manual has rescue capability in the event of a fall. By switching the mode of the unit, the fallen victim can be then raised or lowered to safety.

**3.2 Personal Fall Arrest System:** A PFAS is an assembly of components and subsystems used to arrest a person during a fall event. A PFAS typically consists of an anchorage, a deceleration device such as an Energy Absorbing Lanyard (EAL), a Self-Retracting Device (SRD), or a Fall Arrestor Connecting Subsystem (FACSS), and a properly fitted Full Body Harness (FBH). Maximum permissible free fall in a typical PFAS is 6’.

**3.3 Application Limits:** The FallTech® DuraTech 3-Way Retrieval SRL-R are a dynamic anchorage subsystem that varies in its performance depending upon the length of the system, and the type of PFAS system used. Care should be taken to understand the capacity of the system, anchorage strength requirements, total allowable free fall, and the requirements how the user’s PFAS deploys during a fall event. The longer the freefall, the greater the energy in the system and will result in more significant clearance requirements and impact forces on the body. Take action to avoid sharp edges, abrasive surfaces, and thermal, electrical, and chemical hazards.

**Note:** The FallTech® DuraTech 3-Way Retrieval SRL-R discussed in this manual is not intended for material handling applications.

**3.4 Approved Applications:** Below are applications for which all FallTech® DuraTech 3-Way Retrieval SRL-R are specifically suited. This list is not all-inclusive, but is intended to anticipate the most common applications in which this product may be used.

**3.4.1 Personal Fall Arrest:** The FallTech® DuraTech 3-Way Retrieval SRL-R used as the anchorage component of a PFAS to protect the user in the event of a fall. PFAS typically consists of an anchorage, a Full Body Harness (FBH), and a deceleration device such as a Energy Absorbing Lanyard (EAL) or Self Retracting Device (SRD).

**3.4.2 Restraint:** The FallTech® DuraTech 3-Way Retrieval SRL-R may be used as a component of a restraint system to prevent the user from reaching a fall hazard. Restraint systems typically include a full body harness containing a body belt and a lanyard or restraint line.

**3.4.3 Rescue:** The FallTech® DuraTech 3-Way can be used for rescue after a fall event. Ensure a written rescue plan, method, and system is in place and readily available for rapid response. Rescues may require specialized equipment or measures. Rescue operations are beyond the scope of this manual. See ANSI Z359.4-2013 and Z359.2-2017.

### **4.0 System Requirements**

**4.1 Capacity:** The FallTech® DuraTech 3-Way is designed for use by a single user with a combined weight of user, tools, clothing, etc., of 130 – 310 lbs.

**4.2 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 open inadvertently 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, see Figure 2. Self-closing, self-locking connectors are required by ANSI and OSHA.

**4.3 Making Connections:** Only use self-locking connectors 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, rebar hooks, and carabiners) are designed for use only as specified in this manual.

Figure 2 - Non-Compatible Connections

	<b>A</b>	Never connect two active components (snap hooks or carabiners) to each other.
	<b>B</b>	Never connect two active components (snap hooks or carabiners) to a single D-ring at the same time.
	<b>C</b>	Never connect in a way that would produce a condition of loading on the gate.
	<b>D</b>	Never attach to a object in a manner whereby the gate (of the snap hook or carabiner) would be prevented from fully closing and locking. Always guard against false connections by visually inspecting for closure and lock.
	<b>E</b>	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 and webbing, cable or rope).
	<b>F</b>	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.
	<b>G</b>	Never attach a spreader snap hook to two side/positioning D-rings in a manner whereby the D-rings will engage the gates; the gates on a spreader must always be facing away from the D-rings during work positioning.

**4.4 Personal Fall Arrest System:** PFAS used with this equipment must meet ANSI Z359 requirements. 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 (8 kN), and limit the free fall to 6 ft (1.8 m).

**4.5 Personal Fall Arrest System Anchorage Strength: 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.

Select an anchorage location carefully. Consider structural strength, obstructions in the fall path, and swing fall hazards. In certain situations, the qualified person can determine that a given structure is able to withstand the applied MAF of the PFAS with a safety factor of at least two.

## 5.0 Installation and Use

### WARNING

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. All components or subsystems used with the SRL-R discussed in this manual must be in compliance with ANSI Z359 and OSHA.

Do not use rebar hooks, large carabiners, or large snap hooks to connect to the FBH dorsal D-rings or to any small diameter non-compatible anchor point as this may cause a roll-out condition and/or unintentional disengagement.

Do not insert extra connectors between the SRL-R lifeline connector and the FBH dorsal D-ring, except an approved D-ring extender.

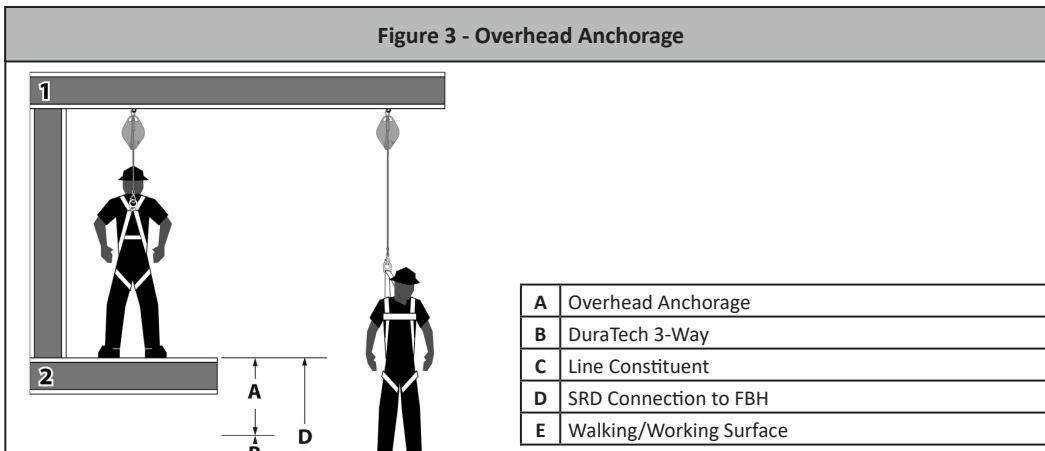
Use caution. Take action to avoid sharp and/or abrasive surfaces and edges when possible.

**5.1 Install the SRL-R (Overhead Use):** Examine the work area for possible hazards. Take caution to avoid overhead hazards such as cranes, poles, overhead power cables, and walking/working surface hazards such as power cables, welding leads, air, and fluid hoses, including obstruction hazards such as vertical columns and stacks of materials on the lower level. Eliminate hazards where possible.

Ensure the anchorage provides the Minimum Required Fall Clearance (MRFC) in the fall path below the walking/working surface to prevent striking the lower level or an obstruction during a fall event. Take action to avoid swing falls, which occur when the anchorage is not directly above the point where the fall occurs.

Fall clearance and swing falls are subject to variable conditions. Anchor height, lateral movement, and setback distance all affect anchor location with regard to fall clearance and swing fall.

The SRD may be attached to an overhead anchor, Figure 3, i.e. above the user's FBH dorsal D-ring. The SRL-R discussed in this manual is not designed for Leading Edge applications.



## 5.2 Calculating SRL Minimum Required Fall Clearance (MRFC)

### 5.2.1 Overhead Anchorage Application

The DuraTech SRL-R in an overhead condition has six metrics, labeled A – F, measured from the walking/working surface.

A = SRD Deceleration Distance

B = D-Ring Shift and Harness Stretch

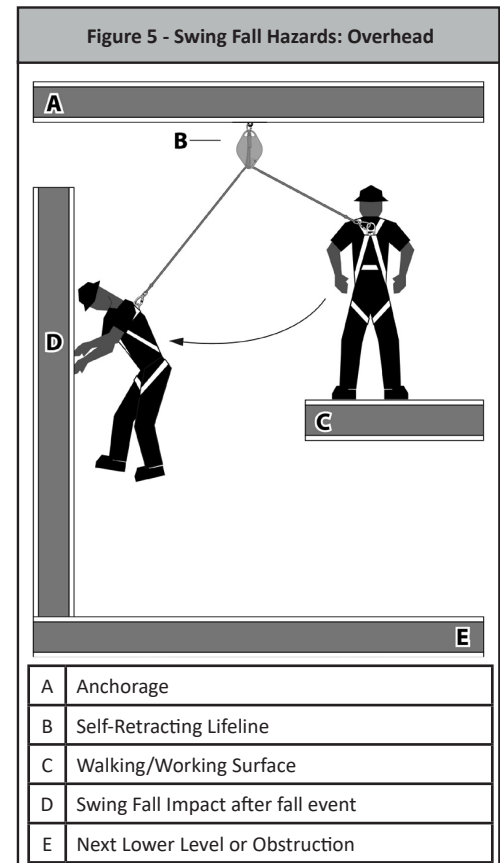
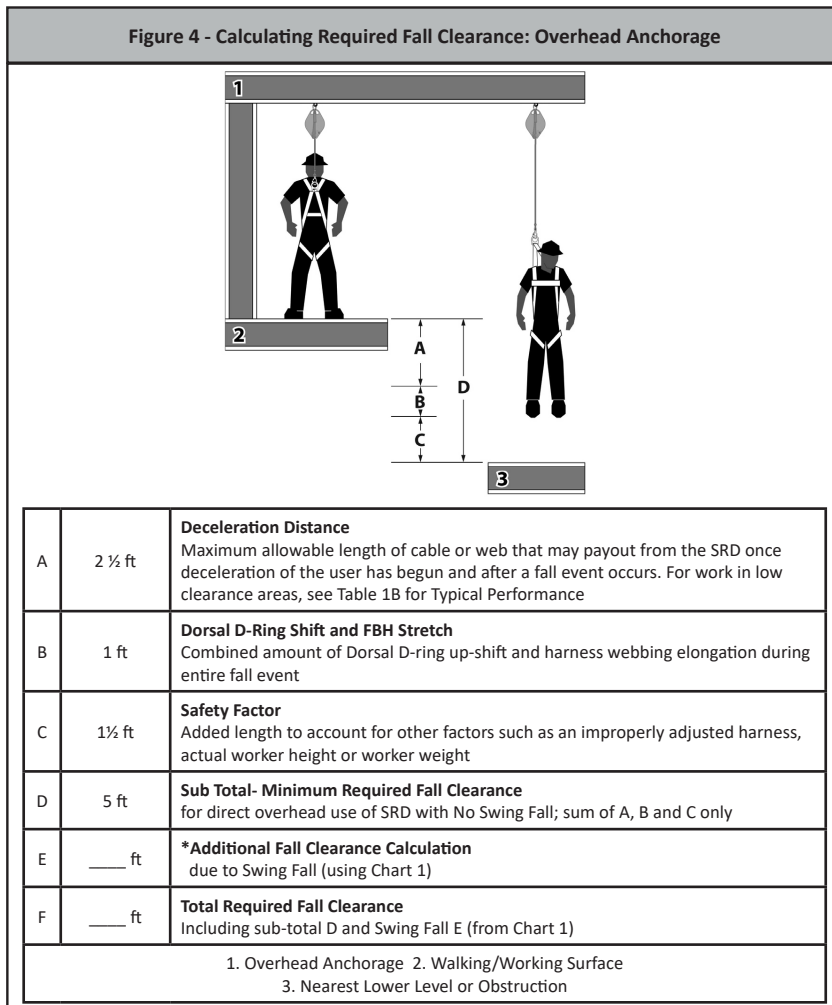
C = Safety Factor

D = Sub Total- Minimum Required Fall Clearance

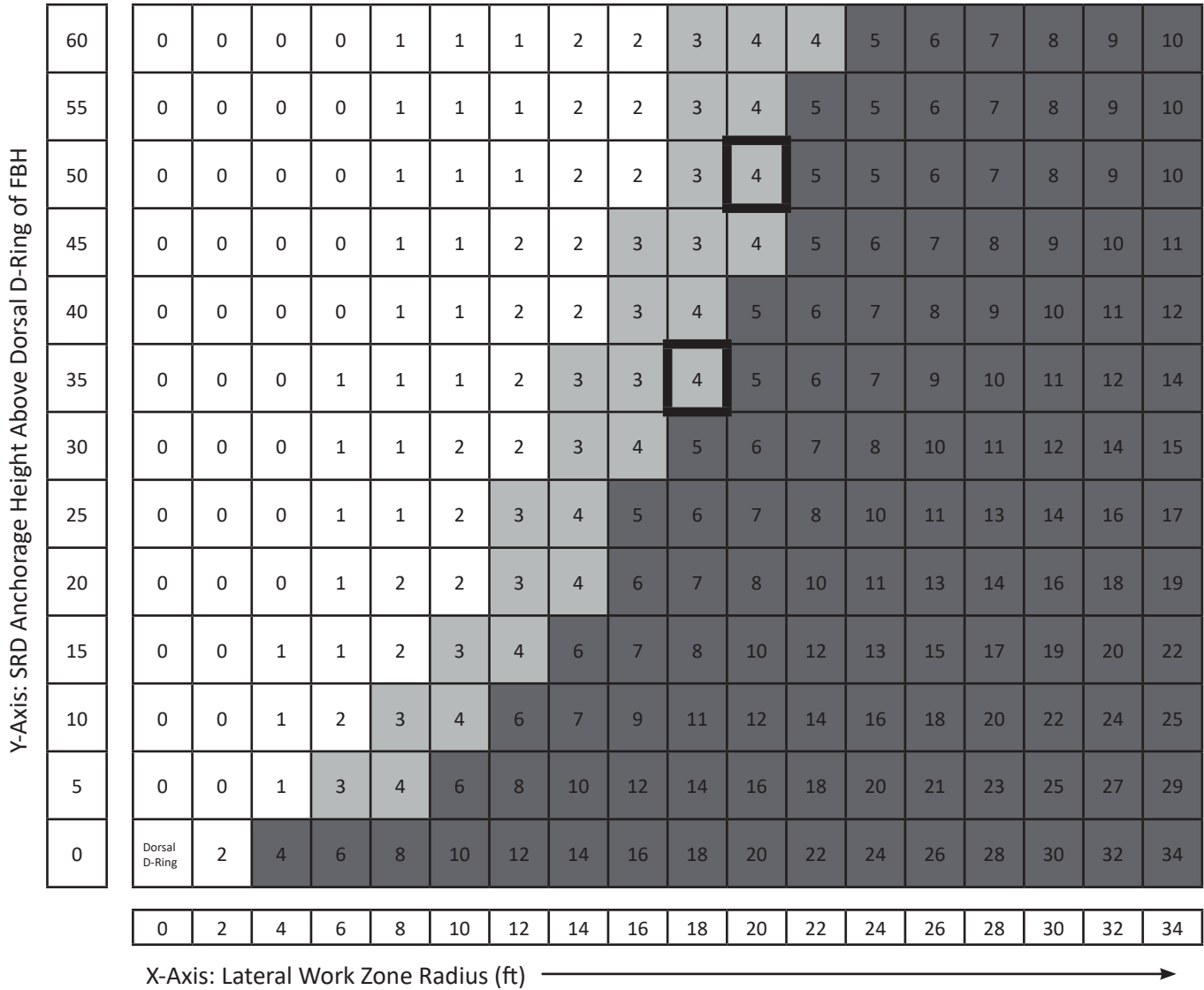
E = \*Additional Fall Clearance Calculation Due To Swing Fall

F = Total Required Fall Clearance

The MRFC for an overhead anchorage, with no swing fall condition, is calculated as  $A+B+C=D$ . The user must be aware that if a swing fall hazard exists, as shown in Figure 5, additional steps are required. Use Chart 1 on the following page to determine the amount of swing fall, and place that value in E. Add the E value to the D value to determine the total MRFC.



**Chart 1: Additional Fall Clearance Due to Swing Fall (feet) Overhead Anchorage**



**Using Chart 1 to Find Additional Fall Clearance: Overhead Anchorage**

2 foot increments along the X-Axis represent the distance the user is working away from being directly under the SRD

5 foot increments up the Y-Axis represent the SRD Anchorage height above the user's Dorsal D-Ring

To find the additional fall clearance needed to compensate for potential Swing Fall, note the starting location on Chart 1 titled Dorsal D-Ring

**Example:**

If the user needs to work 18 feet away from directly under the SRD, the SRD needs to be anchored at least 35 feet above the user's Dorsal D-Ring. Therefore, 4 feet of additional fall clearance should be added to the sub-total calculation in **Figure 4**.

**Example:**

If the only suitable overhead anchorage for the SRD is 50 feet above the user's Dorsal D-Ring, the maximum allowable work zone is 20 feet away from directly overhead. Therefore, 4 feet of additional fall clearance should be added to the sub-total calculation in **Figure 4**.

**Key to Work Zone Areas:**



= Allowable Use Area



= Cautionary Use Area



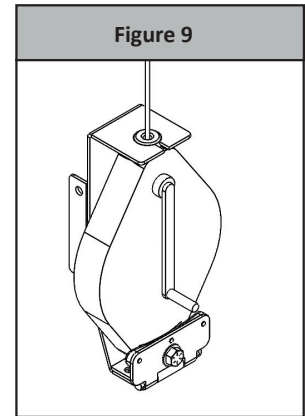
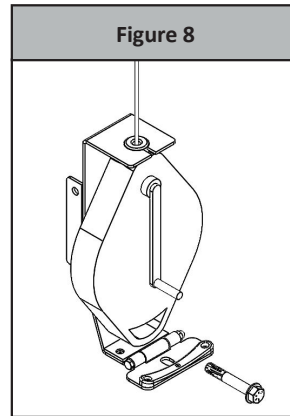
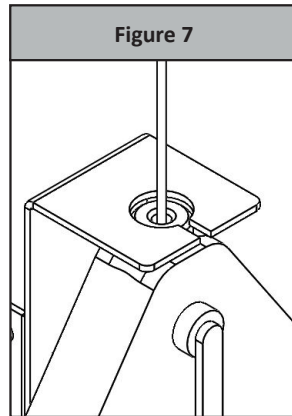
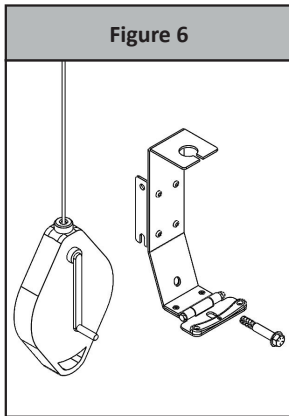
= Not Allowed Use Area



### 5.3 Device Bracket Assembly and Installation

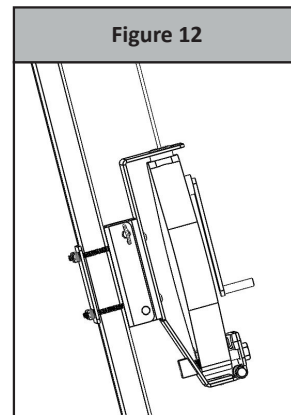
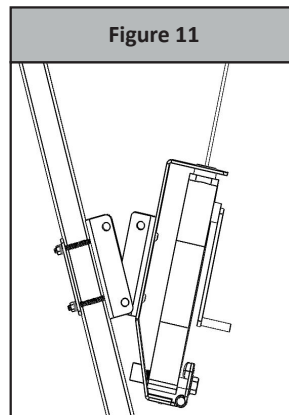
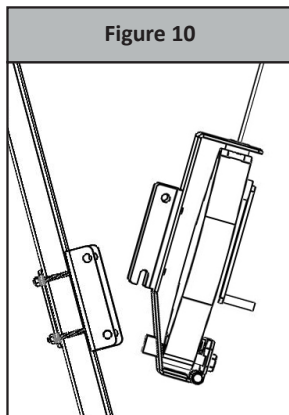
#### 5.3.1 SRL-R Tripod Bracket Assembly

1. Remove the bolt and washer from the bracket and fold down the lower flap as shown in Figure 6.
2. Pass the cable of the SRL-R through the notch at the top of the bracket as shown in Figure 7.
3. Align the SRL-R orifice with the circular opening in the bracket and insert it through the bracket as shown in Figure 8.
4. Fold the lower flap up, insert the bolt with washer ensuring it passes through the bracket flap as well as the handle area of the SRL-R as shown in Figure 9. Tighten the bolt using a 15/16" socket or wrench to 50 ft-lbs.



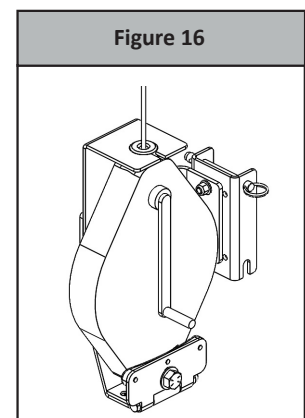
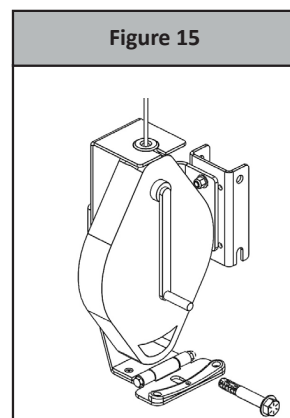
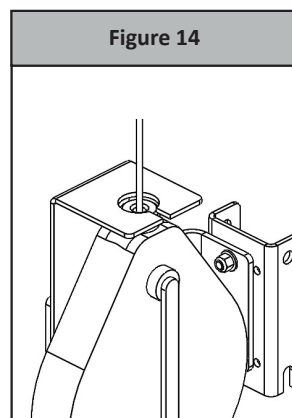
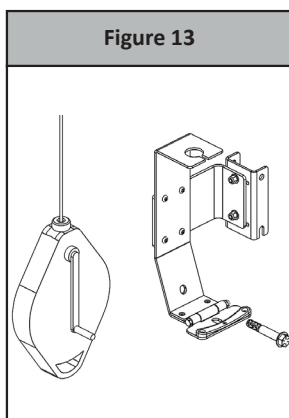
#### 5.3.2 SRL-R Bracket Install onto Tripod Device Receiver Bracket

1. Remove the top detent pin from the FallTech Universal Device Receiver Bracket.
2. Place the notch in the SRL-R bracket over the bottom bar of the FallTech Universal Device Receiver Bracket as shown in Figure 10.
3. Rotate the SRL-R bracket to align the upper holes as shown in Figure 11.
4. Insert the provided detent pin ensuring it goes through both sides of the bracket as shown in Figure 12.



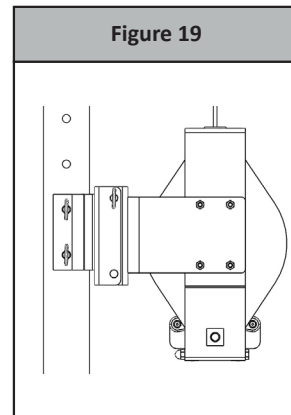
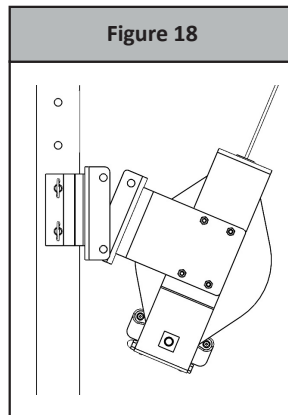
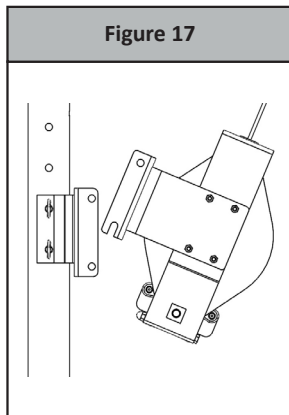
#### 5.3.3 SRL-R Davit Bracket Assembly

1. Remove the bolt and washer from the bracket and fold down the lower flap as shown in Figure 13.
2. Pass the cable of the SRL-R through the notch at the top of the bracket as shown in Figure 14.
3. Align the SRL-R orifice with the circular opening in the bracket and insert it through the bracket as shown in Figure 15.
4. Fold the lower flap up, insert the bolt with washer ensuring it passes through the bracket flap as well as the handle area of the SRL-R as shown in Figure 16. Tighten the bolt using a 15/16" socket or wrench to 50 ft-lbs.



### 5.3.4 SRL-R Bracket Install onto Davit Device Receiver Bracket

1. Remove the top detent pin from the FallTech Universal Device Receiver Bracket.
2. Place the notch in the SRL-R bracket over the bottom bar of the FallTech Universal Device Receiver Bracket as shown in Figure 17.
3. Rotate the SRL-R bracket to align the upper holes as shown in Figure 18.
4. Insert the provided detent pin ensuring it goes through both sides of the bracket as shown in Figure 19.



Please see FallTech user manuals for instructions and requirements; MCS30 for the Davit System, MCS01 for the 11' Tripod, and MCS06 for the 8' Tripod.

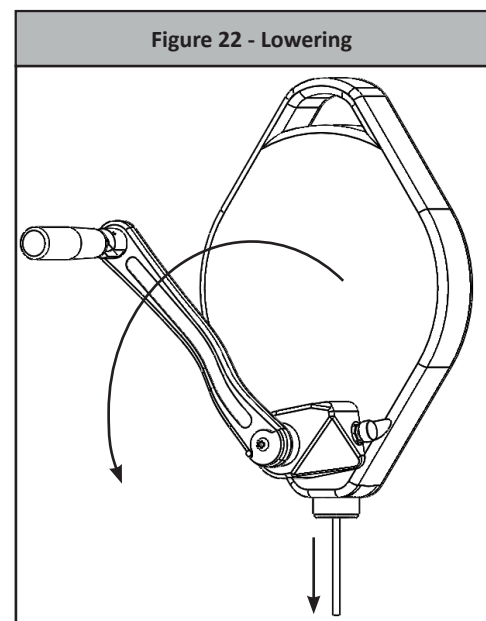
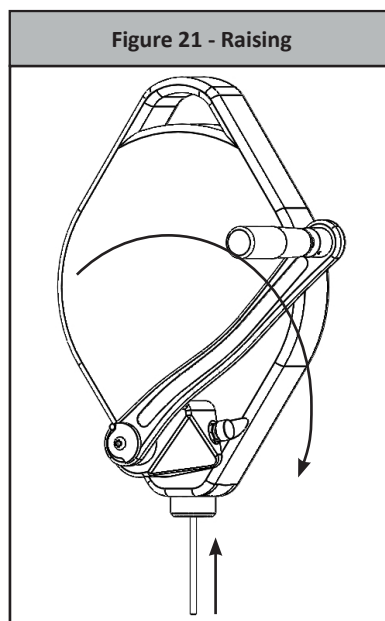
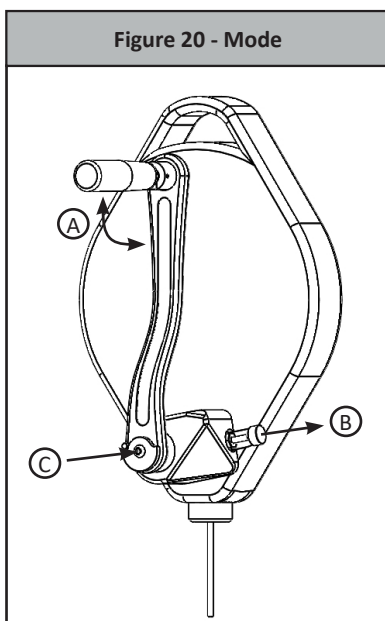
### 5.4 Using the DuraTech 3-Way Retrieval SRL-R

#### **WARNING**

The FallTech® DuraTech 3-Way Retrieval SRL-R discussed in this manual is only to be used in the event of an emergency and is not intended for material handling or routine personnel hoisting applications.

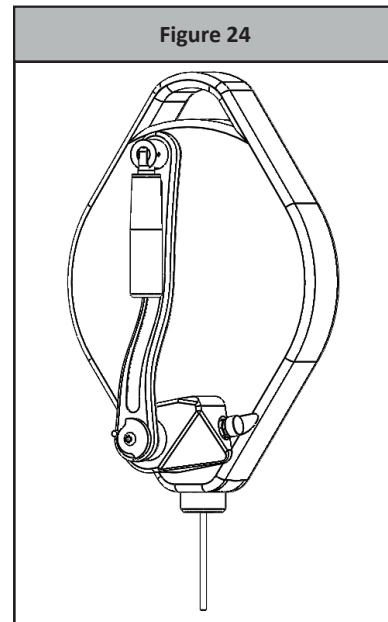
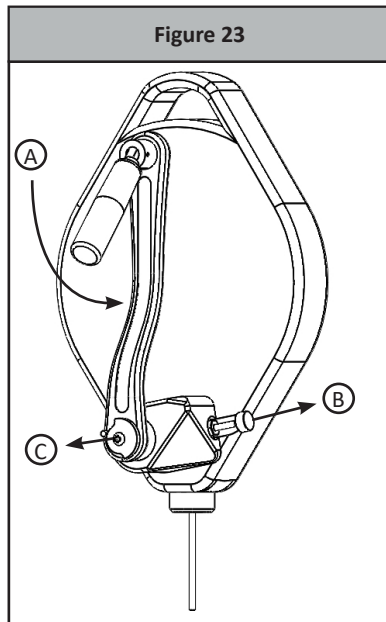
#### 5.4.1 Rescue/Retrieval Mode

1. Unfold the black collapsible handle, see Figure 20A. The red crank handle will rotate freely in both directions while the SRL-R is in the Self-Retracting Lifeline or Fall Arrest Mode.
2. Pull the Crank Engagement Pin; see Figure 20B and simultaneously push the Hand Crank toward the SRL-R housing; see Figure 20C. It may be necessary to slightly rotate the handle to mesh the gears into position.
3. Release the Crank Engagement Pin once the gears are fully meshed to lock the handle in Rescue/Retrieval Mode. The Crank Engagement Pin should be fully retracted into the SRL-R body.
4. To raise, turn the handle in the clockwise direction if the handle is facing you with the anchor handle on top, see Figure 21. When fully loaded, a force of up to 30 lbs. will be required to operate the handle. To lower turn the handle clockwise; see Figure 22. The handle will rotate a half a turn before the load begins to lower or raise. Maintain a minimum of 15 lbs of tension in both directions on the cable at all times to prevent bird nesting of the cable onto the drum.



### 5.4.2 Self-Retracting Lifeline (Fall Arrest) Mode

1. Leave approximately one foot of cable extended out of the SRL-R housing. Fold the black collapsible handle by pulling the black handle out to release the handle lock mechanism; see Figure 23A.
2. Pull the Crank Engagement Pin; see Figure 23B and simultaneously pull the Hand Crank away from the SRL-R housing; see Figure 23C. The cable will retract back into the housing when the gears are disengaged.
3. Release the Crank Engagement Pin once the handle in Fall Arrest Mode. The Crank Engagement Pin should be fully retracted into the SRL-R body.

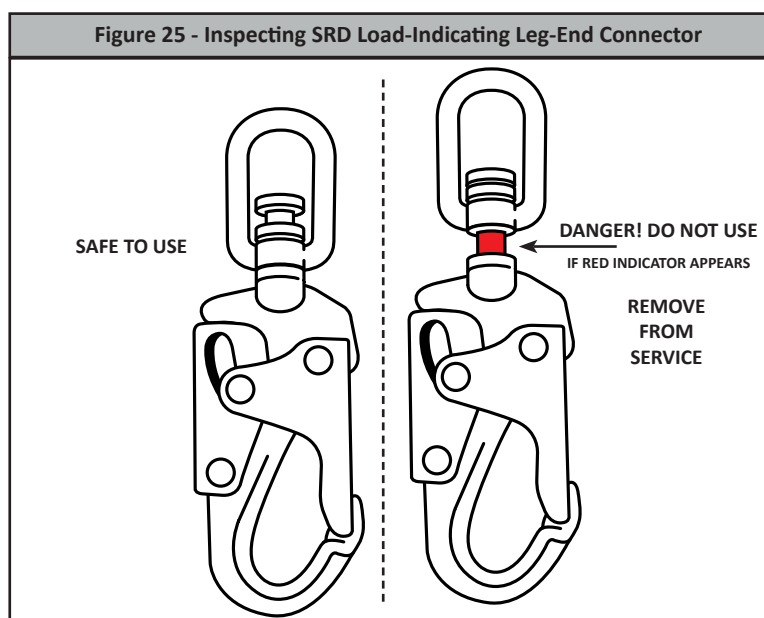


**5.5 Operation of the SRD:** Before each use, inspect the SRL-R. See Section 7 for inspection instructions.

**5.5.1 Locking Mechanism:** The SRD utilizes an acceleration based locking mechanism. The locking function requires a certain payout rate during a fall event to function correctly. Certain situations, confined or cramped spaces, shifting footing such as sand, gravel, grain, or a sloped surface may not allow the lifeline to reach sufficient speed to activate the lock mechanism. A clear path is required to assure positive locking of the SRD. Ensure the lock is functioning properly. Pull the lifeline out a short distance and give it a sharp tug. The lifeline must lock. If it fails to lock, remove it from service immediately. Ensure the work zone remains within stated parameters.

**DO NOT** attach an additional shock absorbing lanyard or similar device between the SRD housing and the anchorage.

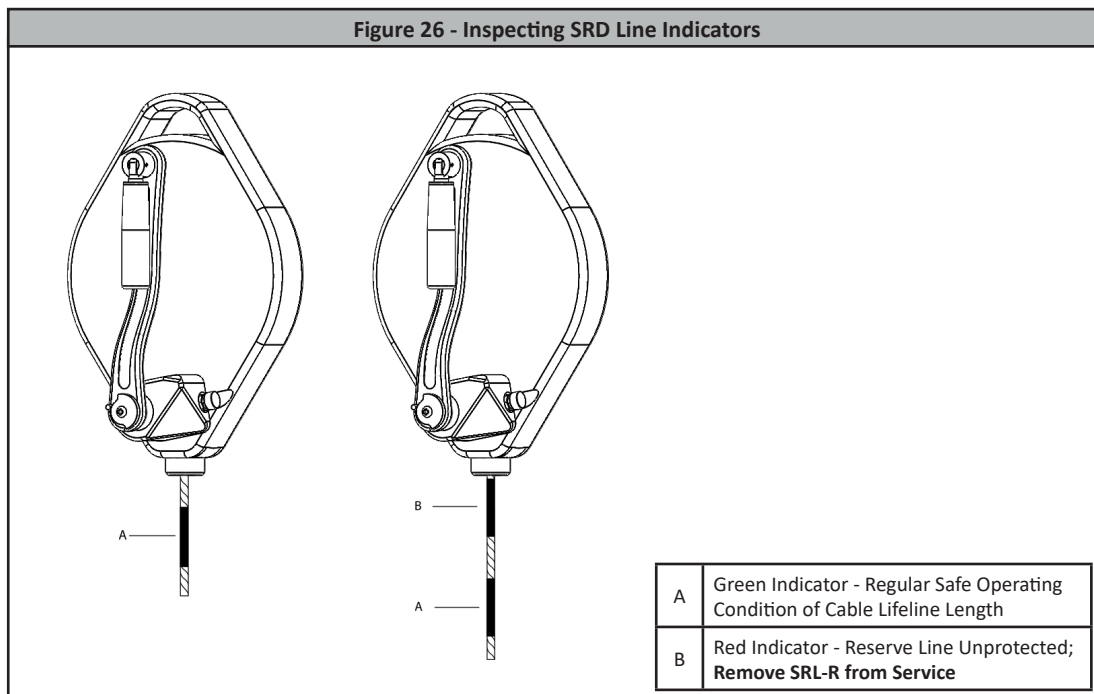
**5.5.2 Fall Arrest Impact Indicator:** The primary fall arrest impact indicator is the load-indicating leg-end connector. The connector will display a red band if it has been subjected to fall arrest, or equal, forces, as shown in Figure 25, if the snap hook shows any sign of damage, remove the unit from service.



**5.5.3 Lifeline Operational Limit and Reserve Indicators:** The SRD is equipped with two lifeline length indicators as shown in Figure 26; a green marker to indicate the end of the lifeline's working length, and a red marker, to indicate the reserve cable in the housing has been breached. When the SRD lifeline is extended to its operational limit, the lifeline will stop paying out. A green marker will be visible, as shown in Figure 26A. The green marker, and a small portion of the lifeline past it, may become visible due to manufacturing variables during normal use, but the user will know when the operational end is reached. Do not attempt to pull out more lifeline. Extracting additional lifeline will compromise SRD functionality, and may result in serious injury or death.

If additional lifeline is accidentally pulled from the SRD without a fall event, remove the SRD from service and contact FallTech for options.

A red band is further up the lifeline. The red band, also shown in Figure 26, indicates the reserve portion of the lifeline has been breached. The SRD is no longer safe to use. Remove the SRD from service immediately, tag it as "UNUSABLE", and contact FallTech at info@falltech.com.



**5.5.4 Inspect the Cable:** The SRD lifeline is galvanized wire rope or Technora® rope, and subject to certain hazards. Inspect the lifeline before each use for the conditions as described in Section 7.

**5.6 Using the SRL-R:** Do not use the SRL-R if inspection shows damage or any malfunction. Don the FBH in accordance with the FBH manufacturer's instructions. Follow the instructions contained in this manual and on the labels. Failure to follow instructions may result in serious injury or death. Connect the leg end snap hook to the dorsal D-ring on the FBH. Ensure the carabiner closes and locks. Attach the housing carabiner to the chosen anchorage and ensure the carabiner closes and locks. Ensure all connections are compatible. Normal operation will allow the working length of the lifeline to extend and retract as the worker moves about. A certain amount of tension must remain on the cable at all times to ensure proper operation of the internal brake. Do not allow the lifeline to have slack. If the lifeline does not retract, remove the SRL-R from service for inspection. See Section 7.

Avoid sudden or quick movements during the normal work operation, as this may cause the SRL-R brake to engage and possibly cause loss of balance which may result in injury or death.

If a fall occurs, the brake will engage and lock the lifeline to arrest the fall and limit arrest forces on the user.

- DO NOT extend the lifeline past the operational limit.
- DO NOT allow one SRL lifeline to become tangled or twisted with another SRL lifeline during use.
- DO NOT allow any lifeline to pass under arms or between legs during use.
- DO NOT clamp, knot, or prevent the lifeline from retracting or being taut.
- DO NOT lengthen the SRL-R by connecting a lifeline or similar component.
- DO NOT allow the lifeline to remain outside the housing when not in use.
- DO NOT allow the lifeline to freewheel back into the housing. Use a tag line to maintain tension and rewind the lifeline during periods of inactivity. Use the tag line to retrieve the leg end connector for the next use.
- DO NOT leave the tag line connected to the leg end connector when using the SRD for fall protection.

**5.7 After A Fall:** A fall event may require special rescue equipment and measures. Ensure a written rescue plan, method, and a system is in place and readily available to all users for rapid response. Ensure all users are trained in rescue procedures. If a fall event occurs, remove the SRL-R from service, and store it separately. Remove from service any unit that has been subjected to fall arrest forces or that exhibits damage consistent with such forces. For questions, contact FallTech.

## 6.0 Maintenance, Service and Storage

**6.1 Maintenance:** Ensure the SRL-R is kept free of excess paint, grease, dirt, or other contaminants as this may cause to the lifeline or retracting mechanism to malfunction. Ensure no debris enters the housing through the cable access port. Clean the exterior of the unit as required with a detergent/water solution. Do not allow corrosion causing elements to enter the housing. After cleaning, pull the lifeline all the way out, allow the unit to air dry, then retract the lifeline into the unit. Do not allow the lifeline to freewheel back into the housing. Clean labels as required.

**DO NOT** use heat to dry.

**DO NOT** attempt to disassemble the SRD.

**6.2 Service:** If service is required for any reason; inspection failure, impact loaded, any type of malfunction, tag the unit as “UNUSABLE”, store separately, and contact FallTech at 323-752-0066 to receive a Return Authorization number or to locate the nearest FallTech Service Center. The SRL-R is not user repairable. Only the manufacturer, or a repair facility authorized in writing, may make repairs to the SRD. This SRD is designed to be used installed in an anchor cradle or attached overhead.

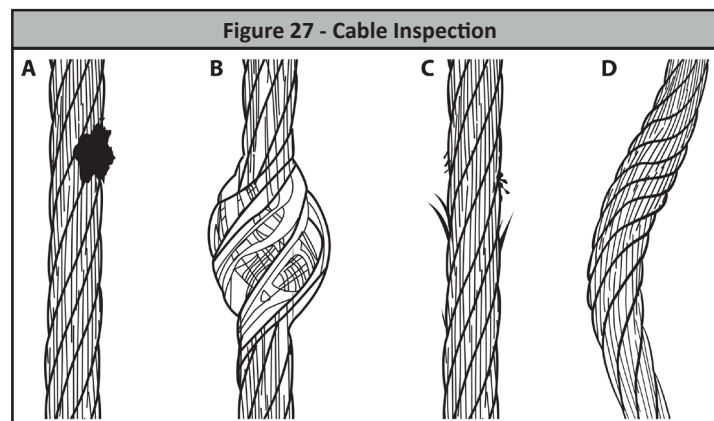
**6.3 Storage:** Hang the SRD in a cool, dry, clean environment out of direct sunlight. Position the SRD so excess water can drain out. Avoid exposure to chemical or caustic vapors. Thoroughly inspect the SRL-R after any period of extended storage.

## 7.0 Inspection

**7.1 Pre-Use User Inspection for Cable Lifelines:** Perform an inspection before each use in accordance with the recommendations in Table 1.

Table 1 - Guidelines for Cable and Rope SRL-R Inspection		
Inspection Procedure	Pass	Fail
The cable lifeline should extract and retract completely and without faltering and should remain taut under tension without sagging.		
Extract the cable lifeline several inches and apply a firm pull to confirm the SRD locks. The locking should be certain and without skidding. Repeat this lockup at additional places along the lifeline length to confirm the SRD is operating correctly.		
Examine the load indicator on the swiveling carabiner to be certain that it has not been loaded, impacted or activated (see Figure 25 if needed).		
Inspect the entire length of the constituent line up to the Green Maximum Working Length Visual Indicator shown in Figure 13. Review the cable lifeline closely for broken strand wires, welding spatter burns, welding slag, bird-caging, kinks and bent strands. Also examine for rust, dirt, paint, grease or oil. Check for damage caused by chemical corruption or excessive heat as evident with discoloration. See Figure 6 for examples. If any of these conditions exist, remove the SRD from service.		
If during your line inspection defined above, you extract the line past the Green Indicator and ultimately expose a secondary Red Indicator on the line, you must remove the SRD from service immediately. This Secondary Red Visual Indicator signals the SRD unit's Reserve Line has been deployed or the SRD has experienced a fall event and is no longer in working order.		
Check the mode changing function by placing the SRL-R into Retrieval/Rescue mode and back to Fall Arrest mode to ensure proper operation.		
Check for any missing or loose screws or nuts and any deformed or damaged components.		
Examine the external housing for cracks, breaks or warping.		
Check the external Connector Eye and the Anchorage Carabiner for damage and deformation. The Anchorage Carabiner Gate should twist open and snap shut easily and smoothly.		
Examine the overall SRD unit for any indications of deterioration or damage.		
All labels must be intact and legible.		

Extract all of the cable and check the entire working length for damage caused by chemical corruption or excessive heat as evident by discoloration (A), bird-caging (B), broken wire strands (C), kinks and bent strands (D); see Figure 27. The cable should retract completely without faltering and should remain taut under tension without sagging.



**7.2 Pre-Use User Inspection Technora® Rope:** Prior to each use, inspect the entire unit, including the leg end connector, for signs of corrosion, cracks, deformities, and broken, or missing parts.

A thorough inspection of the Technora® Rope should be made at least once a month. This is performed by unreeling of all the rope from the winch. Using gloves, extract all of the rope and check the entire working length for damage.

Check for the following:

**Abrasion:** Rupture of fraying of fibers due to wear and or rupture due to motion against other fibers or rope components or a contact surface.

**Glazing:** A fusing or melting of the fibers that gives a hard glassy surface due to overheating or excessive friction over a surface or the rope itself.

**Diameter Integrity:** An increase or decrease in rope diameter due to excessive abrasion, glazing, foreign objects in the core, or reduction in core size due to broken fibers.

**Discoloration:** Fading, streaking, or staining due to chemical, UV, environment, or other outside agents that may cause a reduction of strength of the rope.

**Flexibility:** A loss in the ability to bend for the type and construction of the rope, hard or soft spots.

**Core Fiber Exposure:** The core from the center of the rope may work itself through the cover and may cause a loss of strength and the ability of the rope to function over a sheave.

**Kinking or Hockling:** A short twist, curl, or bend in one or more of the yard or rope strands, will cause a reduction in rope strength. It may be possible to work the kink out, but if the strand is still distorted the strength reduction will occur.

Rewind the rope onto the drum, in accordance with the procedures in this manual. If the cable bird nests or over rides onto itself, unwind the rope out, remedy the cause, and rewind the rope.

Inspect the labels to be sure they are present and legible.

An inspection by a competent person other than the user is required every six months in accordance with the procedures in this manual. If routine inspection reveals an unsafe condition, remove it from service.

Record the results of each inspection on the Inspection Log provided or in another suitable place.

## **WARNING**

**Fiber rope will fail if worn, damaged, abused, overloaded, or not properly maintained. Rope failure can cause serious injury or death if you do not read and understand all manufacturer's instructions before use.**

**7.3 Inspection Frequency:** Inspection by a competent person at regular intervals is required. The competent person will use the information in Table 2: SRD Inspection Recommendations, to determine the inspection frequency. Use Table 2 to determine the inspection frequency. Inspection by a factory authorized inspection entity at regular intervals is also required.

<b>Table 2 - Recommended Inspection Frequency</b>				
<b>Type of Use</b>	<b>Application Examples</b>	<b>Example Conditions of Use</b>	<b>Worker Inspection Frequency</b>	<b>Competent Person Inspection Frequency</b>
<b>Infrequent to Light Use</b>	Rescue and confined space, factory maintenance	Good storage conditions, indoor or infrequent outdoor use, room temperature, clean environments	Before each use	Annually
<b>Moderate to Heavy Use</b>	Transportation, residential construction, utilities, warehouse	Fair storage conditions, indoor and extended outdoor use, all temperatures, clean or dusty environments	Before each use	Semi-annually to annually
<b>Severe to Continuous Use</b>	Commercial construction, oil and gas, mining, foundry	Harsh storage conditions, prolonged or continuous outdoor use, all temperatures, dirty environments	Before each use	Quarterly to semi-annually

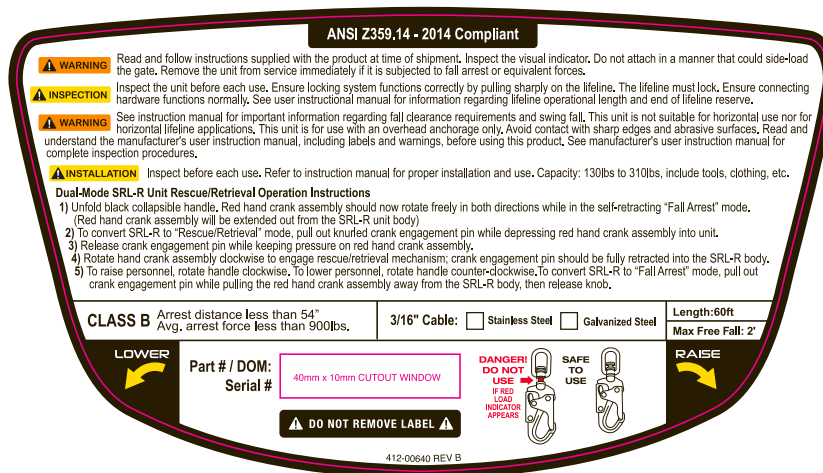
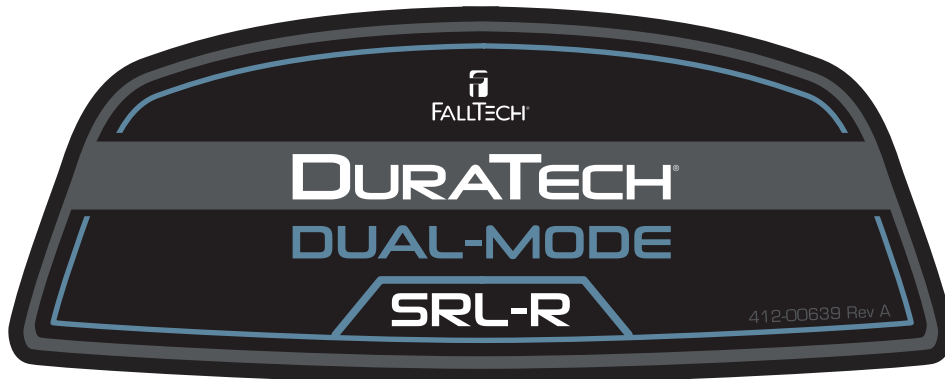
**7.4 Inspection Results:** If an inspection reveals defects in or damage to the equipment, inadequate maintenance or activated fall indicators, remove the equipment from service.





## 8.0 Labels

The labels must be present and legible.



## APPENDIX A

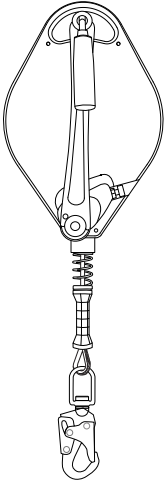
Table 1A: Specifications for DuraTech SRL-R					
Model #	Constituent and Tensile Strength	Working Length, Weight, and Housing Size	Materials and Specifications	Capacity and Standards	SRL-R
7281 7281DG	<b>Wire Cable:</b> Galvanized Steel 3/16" 7 x 19 Construction 3,400 lbs Minimum	60 ft 28 lbs 15" X 10"	Housing: Cast Aluminum Load-Indicating Swivel Snap Hook: Alloy Steel 5,000 lbs with 3,600 lbs Gate Strength	Single User Capacity: 130 to 310 lbs. ANSI Z359.14-2014 OSHA 1926.502	
7281S 7281SS 7281DS	<b>Wire Cable:</b> Stainless Steel Cable 3/16" 7 x 19 Construction 3,400 lbs Minimum				
7281DT 7281TT	<b>Rope:</b> 12-Strand Single Braid Technora® Rope 1/4" Diameter 8,500 lbs Minimum	45 ft 28 lbs 15" X 10"			

Table 1B: FallTech DuraTech SRL Performance Attributes							
Part #s and ANSI Class		Typical FallTech Performance			ANSI Performance Requirements		
Part #	SRD Class	Arrest Distance	Average Arrest Force	Maximum Arrest Force	Maximum Arrest Distance	Average Arrest Force *Conditioned	Maximum Arrest Force
7281 7281S 7281SS 7281DG 7281DS	B	28"	1,228 lbs	1,757 lbs	54"	1,125 lbs	1,800 lbs
7281DT 7281TT		33"	1,073 lbs	1,399 lbs			