

# Miller MightEvac® Self-Retracting Lifeline with Emergency Retrieval Hoist

User Instruction Manual Manuel D'utilisation / Manual de Instrucciones para El Usuario

Sector Land

## **Table of Contents**

1.0	Purpose	
2.0	General Requirements	5
3.0	System Compatibility	
4.0	Operation	
5.0 6.0 7.0 8.0	Installation	-13
	8.1 Inspection and Operation Checkpoints / 8.2 Maintenance	
	Product Specifications	

## Table des Matières

1.0	Objet	16
	Exigences, Mises en Garde et Restrictions Générales	
3.0	Compatibilité du Système	18-19
	Fonctionnement	
5.0	Installation	21-24
6.0	Calcul de la Distance de la Zone de Dégagement en cas de Chute	24-26
7.0	Formation	26
8.0	Inspection et Entretien	27-28
	Fiche Technique sur les Produits	42-43
	Étiquettes sur les Produits	
	Registre D'inspection et D'entretien	

## Índice

Propósito	.29
Compatibilidad del Sistema	31-32
Manejo	. 33
Instalación	. 34-37
Cómo Calcular la Distancia del Margen de Caída	. 38-39
Entrenamiento	.39
Inspección y Mantenimiento	40-41
Especificaciones de los Productos	42-43
Etiquetas de los Productos	44-45
	Propósito Requisitos, Advertencias y Limitaciones Generales Compatibilidad del Sistema Manejo Instalación Cómo Calcular la Distancia del Margen de Caída Entrenamiento Inspección y Mantenimiento Especificaciones de los Productos Etiquetas de los Productos Registro de Inspección y Mantenimiento

### Thank You

Thank you for your purchase of Miller fall protection equipment manufactured by Honeywell Safety Products. Miller brand products are produced to meet the highest standards of quality at our ISO 9001 certified facility. Miller equipment will provide you with years of use when cared for properly.

## WARNING

All persons using this equipment must read, understand and follow all instructions. Failure to do so may result in serious injury or death. Do not use this equipment unless you are properly trained.

### **Questions?**

CALL 1.800.873.5242

It is crucial that the authorized person/user of this equipment read and understand these instructions. In addition, federal law requires employers to ensure that all users are trained in the proper installation, use, inspection, and maintenance of fall protection and confined space equipment. Fall protection training should be an integral part of a comprehensive safety program.

Proper use of fall arrest systems can save lives and reduce the potential of serious injuries from a fall. The user must be aware that forces experienced during the arrest of a fall or prolonged suspension may cause bodily injury. Consult a physician if there is any question about the user's ability to use this product. Pregnant women and minor children must not use this product.

## 1.0 Purpose

The Miller MightEvac<sup>®</sup> Self-Retracting Lifeline with Emergency Retrieval Hoist is a retractable device designed to be used by personnel for fall protection in confined space applications with a quick-activating retrieval mechanism for emergency evacuation.

## 2.0 General Requirements, Warnings and Limitations

All warnings and instructions shall be provided to authorized persons/users.

All authorized persons/users must reference the regulations governing occupational safety (including confined space regulations), as well as applicable ANSI or CSA standards. Please refer to product labeling for information on specific OSHA regulations, and ANSI and CSA standards met by product.

All authorized persons/users of this equipment must be trained in proper confined space procedures.

Proper precautions should always be taken to remove any obstructions, debris, material, or other recognized hazards from the work area that could cause injuries or interfere with the operation of the system. All equipment must be inspected before each use according to the manufacturer's instructions.

All equipment should be inspected by a qualified person on a regular basis.

To minimize the potential for accidental disengagement, a competent person must ensure system compatibility.

Equipment must not be altered in any way. Repairs must be performed only by the manufacturer, or persons or entities authorized in writing by the manufacturer.

Any product exhibiting deformities, unusual wear, or deterioration must be immediately discarded.

Any equipment subject to a fall must be 3 removed from service.

The authorized person/user shall have a rescue plan and the means at hand to implement it when using this equipment.

Never use fall protection equipment for purposes other than those for which it was designed. Fall protection equipment should never be used for towing or hoisting.

All synthetic material must be protected from slag, hot sparks, open flames, or other heat sources. The use of heat resistant materials is recommended in these applications.

Environmental hazards should be considered when selecting fall protection equipment. Equipment must not be exposed to environmental hazards and chemicals which may produce a harmful effect. Use in highly corrosive or caustic environments dictates a more frequent inspection and servicing program to ensure the integrity of the device is maintained. Do not allow equipment to come in contact with anything that will damage it including, but not limited to, sharp, abrasive, rough or hightemperature surfaces, welding, heat sources, electrical hazards, or moving machinery.

Do not expose the equipment to any hazard which it is not designed to withstand. Consult the manufacturer in cases of doubt.

Always check for obstructions below the work area to make sure potential fall path is clear.

Allow adequate fall clearance below the work surface.

Never remove product labels, which include important warnings and information for the authorized person/user.

### 2.2 Warnings and Limitations

#### CAPACITY

For use by ONE person only in both fall protection and rescue applications. Maximum capacity is 310 lbs. (140.6kg), including body weight, clothing and tools, unless labeled otherwise. — DO NOT EXCEED THIS WEIGHT.

When used with a Miller 928LS shock absorber, Miller brand self-retracting lifelines are rated to \*400 lbs. (181.4kg) maximum capacity in overhead installation applications. The shock absorber must be attached between the user's harness back D-ring and the self-retracting lifeline. Additional fall clearance is needed for this configuration. Refer to the label on the shock absorber to determine its maximum elongation/ deceleration distance and add this factor to your self-retracting lifeline fall clearance calculation.

\*If the system is used by an employee having a combined tool and body weight between 310 lbs. (140.6 kg) and 400 lbs. (181.4 kg), then the employer must appropriately modify the criteria and protocols to provide proper protection for such heavier weights, or the system will not be deemed to be in compliance with the requirements of OSHA 1926.502(d)(16). [ANSI capacity range is 130 lbs.-310 lbs. (59kg-140,6kg).]

Force required to operate rescue features when device is loaded to capacity is 22 lbs. (98N).

#### LIFELINE RETRACTION & LOCKING Do not use the device if it does not retract. Always maintain tension on the lifeline while retracting.

Device must be tested for locking before each use. Do not use the device if the brakes do not engage.

#### USE

This device is designed for overhead installation applications and applications whereby the unit is used in conjunction with a mounting bracket and installed to Honeywell-approved anchorages, such as a tripod or davit system.

Do not use this device for horizontal use or with horizontal lifeline systems, unless approved by the manufacturer.

Never work above the device.

The device should be installed and used in such a manner as to minimize the potential for a swing fall.

Never allow lifeline to become slack while being used for fall protection or while in rescue mode.

Do not allow lifeline in any application to bend or be subjected to fall arresting forces over structural members or edges.

Never use the device as a restraint or positioning device.

The retrieval mechanism in this device is FOR EMERGENCY USE ONLY. Do not use for routine hoisting of personnel or materials.

MAINTENANCE Do not lubricate this device.

The device must be kept clean and free of contaminants.

This unit must be removed from service if any part of the system appears to be damaged or does not pass inspection, or if the unit has been subjected to the forces of arresting a fall or affecting a rescue.

Do not attempt to service this device. If the device does not operate properly or requires repairs, return the device to the equipment manufacturer, or service center authorized in writing by the manufacturer, for repairs.

## 3.0 System Compatibility

The Miller MightEvac Self-Retracting Lifeline is designed for use with Honeywell-approved components only. Substitution or replacement with non-approved component combinations or subsystems or both may affect or interfere with the safe function of each other and endanger the compatibility within the system. This incompatibility may affect the reliability and safety of the total system.

## **3.1 Personal Fall Arrest System Components**

Three key components of the Personal Fall Arrest System (PFAS) need to be in place and properly used to provide maximum worker protection.

## ANCHORAGE/ANCHORAGE CONNECTOR

The first component is the anchorage/anchorage connector. The anchorage, also referred to as the anchor point or tie-off point, is a secure point of attachment for connecting devices and must be capable of supporting 5,000 lbs. (22.2kN) per worker or meet OSHA requirements for a safety factor of two, such as an I-beam or other support structure. An anchorage connector, such as the cross-arm strap, D-bolt or rebar hook anchor, is sometimes necessary to make a compatible connection between the connecting device and the anchorage.

# BODY WEAR

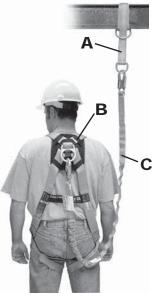
The second system component is the personal protective gear worn by the worker while performing the job. The only form of body wear acceptable for fall arrest is the full-body harness. Full-body harnesses are engineered to aid in the arrest of a free fall and must be worn in all situations where workers are exposed to a potential free fall.

## CONNECTING DEVICE

The third component of the system is the connecting

device, the critical link which joins the body wear to the anchorage/anchorage connector. The most important feature of the connecting device is the built-in shock absorber. Whether the connecting device is a shock-absorbing lanyard or self-retracting lifeline, they are designed to dramatically reduce fall arrest forces. Rope, web or wire rope lanyards being used for fall arrest MUST be used in conjunction with a shock absorber (i.e., Miller SofStop pack).

Individually, none of these components will provide protection from a fall. However, when used properly and in conjunction with each other, they form a Personal Fall Arrest System that becomes vitally important to safety on the job site.



## **3.2 Component Warnings and Limitations**

### ANCHORAGES/ANCHORAGE CONNECTORS

- Anchorages must be capable of supporting 5,000 pounds (22.2kN) per worker or meet OSHA 1926.502 requirements for a safety factor of two.
- Anchorage requirements based on ANSI are as follows:
  - For fall arrest systems, anchorages must withstand a static load of 5,000 lbs. (22.2kN) for non-certified anchorages or two times the maximum arresting force for certified anchorages.
  - For rescue systems only, anchorages must withstand a static load of 3,000 lbs. (13.3kN) for non-certified anchorages or five-times the applied load for certified anchorages. (Note: When an anchorage may be utilized for both fall arrest AND rescue, the fall arrest load requirement applies.)
  - When more than one system is attached to an anchorage, the above anchorage strengths must be multiplied by the number of systems attached to the anchorage.
- Always work directly under the anchor point to avoid a swing-fall injury.
- When selecting an anchorage point, always refer to the fall clearance calculation information
  provided with the connecting device to ensure that the anchorage point is at a height that will
  not allow a user to strike a lower level should a fall occur. Remember that shock absorbers
  will elongate when subjected to fall arrest forces (refer to the labels/instructions provided with
  the shock absorber for additional details).
- Anchorage connector must be compatible with snap hook or carabiner and must not be capable of causing a load to be applied to the gate (keeper).

### **BODY WEAR**

- The only form of body wear acceptable for fall arrest is the full-body harness.
- It is imperative that the harness be worn properly. Visually check all buckles to assure proper and secure connections before each use. All straps must be connected and adjusted to provide a snug fit.
- Fall protection connecting devices should be attached to the back D-ring of the full-body harness. A front D-ring attachment element may be used for fall arrest only in rescue, work positioning, rope access, and other ANSI Z359.1 recognized applications where the personal fall arrest system limits the maximum free fall distance to 2 ft. (0.6m) and limits the maximum arrest force to 900 lbs. (4.0kN).
- Side and front D-rings should be used for positioning only. (Note front D-ring exception above.); shoulder D-rings should be used for retrieval, raising or lowering only.
- Never attach rebar (pelican) hooks to a harness D-ring.
- Body belts should be used for positioning only.

### CONNECTING DEVICES

- Make only compatible connections.
- Use only connecting devices containing locking snap hooks or auto-locking carabiners.
- Connect in a manner that limits free fall to the shortest possible distance. [6ft. (1.8m) maximum]
- Always visually check that each snap hook and carabiner freely engages the harness D-ring or anchor point/anchorage connector, and that its gate (keeper) is completely closed and locked. Never disable or restrict locking keeper or alter connecting device in any way.
- Make sure snap hook/carabiner is positioned so that its gate is never load bearing.
- The use of shock absorbers is required to reduce fall arrest forces. All Miller shock absorbers, shock-absorbing lanyards, and self-retracting lifelines limit maximum fall arrest forces to 1800 lbs. (8kN) or less.
- Never allow a lanyard/lifeline to pass under or entwine around the user's arms, legs, neck or any other obstacle.
- Do not tie knots in lanyards or lifelines, or wrap around sharp, rough edges, or small diameter structural members.
- Do not attach multiple lanyards together, or attach a lanyard back onto itself unless it is specifically designed for that purpose.

## 4.0 Operation

### **Retrieval Operation**

## -FOR EMERGENCY USE ONLY-

The MightEvac retrieval mechanism is to be used only in the event of an emergency. Do not use for routine hoisting of personnel or materials.

NOTE: It is recommended to pull out several feet of lifeline and hold in position before engaging retrieval mechanism. Always maintain tension on the lifeline while in retrieval mode.

Pull out on the plunger pin until the ratchet handle pops outward. It may be necessary to rotate the handle slightly to fully engage the internal gears. The plunger pin should snap back into its original position when the gears are fully engaged. The unit is now in retrieval mode.

## NOTE: A rescue may be executed either by raising or lowering a person to safety.

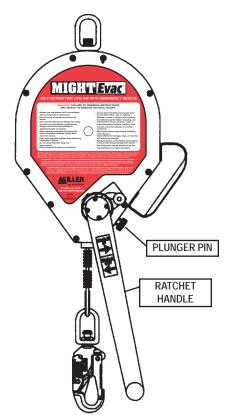
<u>TO RAISE</u>: While maintaining light tension on the lifeline, rotate the ratchet handle counterclockwise (CCW) to crank the lifeline into the housing.

TO LOWER: To extend lifeline from the housing (to lower), rotate ratchet handle in clockwise (CW) direction. [NOTE: If the internal braking mechanism has been activated, such as with a fall arrest, it is necessary to first crank in the upward direction (CCW) for one-half to one rotation, then reverse the direction (CW) to begin lowering. A minimum of 75 lbs. (34kg) is required for lowering.]

WARNING: Always ensure that the plunger pin has returned completely into the locked position when changing the unit from retractable to retrieval mode. Do not use the unit if it will not hold the load while in retrieval mode.

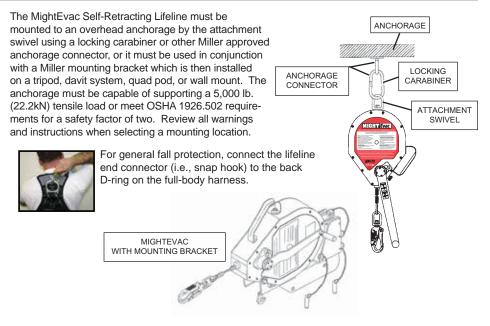
### Self-Retracting Lifeline Operation

To return the unit to the retractable mode, remove the weight from the lifeline and secure the end of the lifeline as it will begin to retract once the internal gears are disengaged. Pull out on the plunger pin and hold. Push inward on the ratchet handle, where it connects to the gear shaft, to disengage the gears and let pin drop into the locked position.



## 5.0 Installation

### **5.1 General Installation and Making Connections**



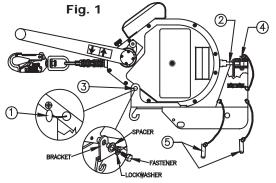
### 5.2 Installation of MightEvac to Mounting Bracket (Ref. Fig. 1)

- Step 1: Remove red, round protective stickers from both sides of the MightEvac unit.
- Step 2: Insert attachment swivel of the unit into bracket as shown.
- Step 3: Slide the unit forward until the threaded holes in the housing (where stickers were removed) are aligned with the holes in the front of the bracket as shown.

NOTE: The carrying handle of the unit must be in the upward position away from the bracket.

Insert the fastener through the lockwasher, spacer and hole in the bracket. Tighten to 8 plus or minus one (1) ft.-lbs. (96 plus or minus 12 in.-lbs.). Repeat for opposite side.

- Step 4: Insert the pushpin through the bracket in the holes provided. This securely attaches the unit to the bracket. Ensure the pushpin is securely through both holes and remains in place.
- Step 5: Attach the unit with bracket to an approved Miller anchoring device and secure with the pushpins provided. Refer to installation procedures in sections 5.3, 5.4, 5.6



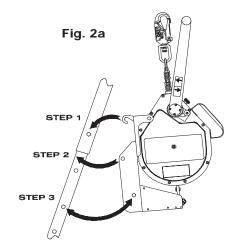
procedures in sections 5.3, 5.4, 5.5, 5.6 and 5.7 of this manual.

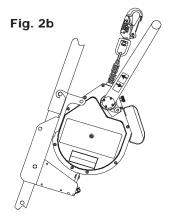
To remove the unit, simply reverse the above procedures.

### 5.3 Installation Procedure to Tripod (Ref. Fig. 2a and 2b)

- Step 1: Place bracket hook over adjustment pin.
- Step 2: Rotate bracket toward Tripod leg until the top holes of the bracket pass the Tripod leg and insert pin completely through both sides of the bracket. (NOTE: This pin will pass behind the Tripod leg, not through it-see Fig. 2b.)
- Step 3: Align the bottom holes in the bracket with holes in the Tripod leg and insert pin through bracket and Tripod leg. Be sure the pin is completely through both the bracket and Tripod leg.

To remove the device, simply reverse the installation procedure. **WARNING:** Be careful not to remove the pin that collapses the Tripod leg, as serious injury may occur.





### 5.4 Installation Procedure to DuraHoist Mast (Ref. Fig. 3a, 3b and 3c) or Davit Arm (Ref. Fig. 4)

### Installation to DuraHoist Mast

- Step 1: Install DuraHoist mounting bracket DH-19-MILLER to mast per DuraHoist Instructions.
- Step 2: On the MightEvac bracket, insert only the top pin.
- Step 3: Holding the MightEvac unit by the handle on the back and making sure the inserted pin is on the top half of the bracket, hang the MightEvac onto the DuraHoist bracket.
- Step 4: Secure by inserting the second pin through the bottom hole sets of both the DuraHoist and the MightEvac brackets.

To remove the device, simply reverse the installation procedure.



Fig. 3a

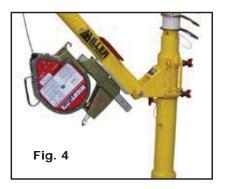
Fig. 3b

Fig. 3c

### Installation to DuraHoist Davit Arm

- Step 1: Install DuraHoist mounting bracket DH-AP-11 to davit arm per DuraHoist Instructions.
- Step 2: Follow steps 2 through 4 above to secure Might-Evac bracket to DuraHoist bracket.

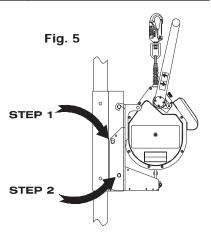
To remove the device, simply reverse the installation procedure.

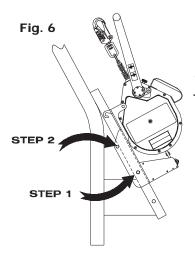


### 5.5 Installation Procedure to Davit System (Ref. Fig. 5)

- Step 1: Place bracket over Davit System, align the top holes of the bracket with the hole of the Davit System and insert pin completely through bracket and Davit System.
- Step 2: Align the bottom holes of the bracket with the holes in the Davit System. Insert the pin completely through the bracket and the Davit System.

To remove the device, simply reverse the installation procedure.





### 5.6 Installation Procedure to Quad Pod (Ref. Fig. 6)

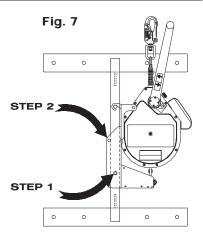
- Step 1: Place bracket over tubing of Quad Pod and align the bottom holes of the bracket with the desired holes in the tubing of the Quad Pod. Insert pin completely through both the bracket and tubing of the Quad Pod.
- Step 2: Push pin through the top holes of the bracket passing behind the tubing of the Quad Pod. Make sure pin goes completely through both sides of the bracket.

To remove the device, simply reverse the installation procedure.

## 5.7 Installation Procedure to Wall Mount (Ref. Fig. 7)

- Step 1: Place bracket over tubing of Wall Mount, align the bottom holes of the bracket with the desired hole in the Wall Mount and insert pin completely through the bracket and tubing of the Wall Mount.
- Step 2: Push pin through the top holes of the bracket passing behind the tubing of the Wall Mount. Make sure pin goes completely through both sides of the bracket.

To remove the device, simply reverse the installation procedure.



## 6.0 Calculating Fall Clearance Distance

It is essential to understand how to calculate the fall clearance distance for each work application to avoid contact with a lower level. Use the following calculation to determine Required Fall Clearance.

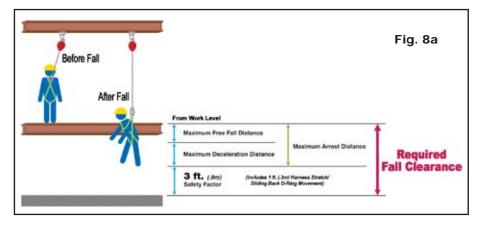
### Self-Retracting Lifeline Fall Clearance Calculation

[Calculation taken from work level]

Maximum Arrest Distance

- + (Non-Standing Work Position Factor)
- + (Swing Fall Factor)
- + 3 ft. (.9m) Safety Factor
- = Required Fall Clearance

CAUTION: Read all notes and refer to all self-retracting lifeline fall clearance diagrams and labels to determine exact required fall clearance for your application.



#### (See Fig. 8a, 8b, 8c & 8d.)

#### IMPORTANT NOTES:

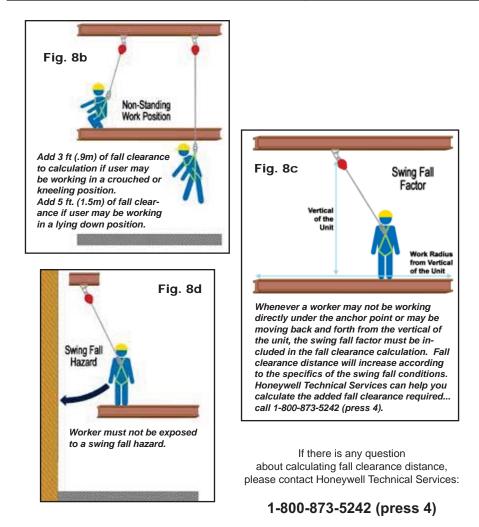
The self-retracting lifeine must be anchored overhead to ensure the accuracy of the fall clearance calculation and related information.

It is important to understand that other factors, such as whether the user is performing work in a standing, crouched or lying down position and/or whether the user is working directly below the anchor point or at an angle, can affect fall distance when using a retractable device.

The self-retracting lifeline fall clearance calculation assumes the user is standing. If the user will be performing work in a crouched or kneeling position, an additional 3 ft. (.9m) of fall clearance is required. If the user will be performing work in a lying down position, an additional 5 ft. (1.5m) of fall clearance is required.

The self-retracting lifeline fall clearance calculation also assumes the user is working directly below the anchor point, minimizing any possibility for a swing fall. In a swing fall situation, the total fall distance will be greater than if the user were working directly below the anchor point. In some applications, it may not be possible to work directly below the anchor point. In such a case, the worker must increase the fall clearance distance to account for the swing fall factor. In any case, the worker must not be exposed to a potential swing fall where contact with another object may occur.

The maximum arrest distance (free fall + deceleration) varies by retractable. Always refer to the labels on the specific unit to determine the maximum arrest distance.



## 7.0 Training

The purchaser of this equipment must ensure that all personnel using this equipment are familiar with these instructions and are properly trained in the operation, limitations, installation, inspection and maintenance of this product. Training should be conducted periodically and without exposing the trainee to a fall hazard.

NOTE: Excessive training on this device will cause the gears in the unit to wear, thus reducing its life expectancy and will consequently require more frequent servicing. The retrieval mechanism in this device is for emergency use only. Do not use for routine hoisting of personnel or materials.

Miller Training can provide the knowledge and skills necessary to achieve a safe, more productive work environment. For more information, contact a representative today at 800-873-5242.

## 8.0 Inspection and Maintenance

### 8.1 Inspection and Operation Checkpoints

# WARNING: The user must perform the following operation checkpoints and inspections prior to each use. In addition, a competent person must inspect equipment at regular intervals, at least annually.\*

[\*ANSI Z359.14 provides additional inspection requirements based on type of use and conditions of use. Refer to 6.1 Inspection and Appendix A: Inspection Requirements for compliance with the standard.]

## CAUTION: Always wear gloves when inspecting wire rope/cable units; broken strands can cause injury!

1. Device Housing and Parts/Mounting Bracket: Inspect the unit for loose fasteners and bent, cracked, distorted, worn, malfunctioning or damaged parts.

#### 2. Lifeline:

a. With the device in the mounted position, test the lifeline retraction and tension by pulling out several feet of the cable and allow to retract back into the unit. Always maintain a light tension on the cable as it retracts. The lifeline should pull out freely and retract all the way back into the unit.

If the lifeline does not pull out smoothly or sticks when retracting, pull all the cable out of the housing and allow it to retract slowly under tension. Do not use the unit if the lifelines does not retract properly.

- b. The lifeline should be checked regularly for signs of damage. Inspect entire length for cuts, burns, corrosion, kinks, frays, worn areas, broken strands or chemical damage.
- **3. Braking Mechanism:** The braking mechanism can be tested by grasping the lifeline ABOVE the load indicator and applying a sharp steady pull downward which will engage the brakes. There should be no slippage of the lifeline while the brakes are engaged. Once tension is released, the brakes will disengage and the unit will return to the retractable mode.
- 4. Snap Hook: Inspect the snap hook closely for damage, distortion, cracks, corrosion, or pitted surfaces. The snap hook gate (keeper) should seat into the nose without binding and should not be bent, distorted or obstructed. The gate spring should exert sufficient force to firmly close the gate. The gate locking mechanism must prevent the gate from opening when closed. The snap hook swivel should operate smoothly.
- 5. Load Indicator: Inspect the load indicator for signs of activation. The load indicator is located in the swivel of the snap hook. The swivel eye will elongate and expose a red area at the location illustrated when subjected to fall arresting forces.



- 6. Retrieval Mechanism: Ensure that the retrieval mechanism and associated components are working properly according to the operation instructions (see section 4.0 of this manual).
- 7. Labels/Markings: Make sure that all labels and markings are present and legible.

#### UNITS THAT DO NOT PASS INSPECTION OR HAVE BEEN SUBJECTED TO THE FORCES OF ARRESTING A FALL OR AFFECTING A RESCUE MUST BE REMOVED FROM SERVICE.

### 8.2 Maintenance

Basic care of all fall protection equipment will prolong the durable life of the unit and will contribute toward the performance of its vital safety function.

#### Servicing

Servicing of the Miller MightEvac Self-Retracting Lifeline must only be carried out by Honeywell Safety Products or persons or entities authorized in writing by Honeywell. A record log of all servicing and inspection dates for this device must be maintained. Only original Miller replacement parts are approved for use in this device. Repairable devices must be returned to our facilities or an approved service center whenever subjected to fall arresting forces for physical inspection and recertification. Non-repairable devices that do not pass inspection must be disposed of in a manner to prevent inadvertent further use. Contact your Honeywell distributor or call Honeywell Technical Services at 1-800-873-5242 (press 4) for a return authorization number.

Miller self-retracting lifelines require no annual factory recertification.\*

- \*[Note for CSA Approved Products: CSA Z259.2.2-98 requires Type 2 and Type 3 devices to be returned to the manufacturer or an approved service agent no more than 2 years after the date of manufacturer for inspection and maintenance and annually thereafter.]
- \*[Note for ANSI Approved Products: ANSI Z359.14 requires factory authorized inspection of devices. Frequency is based on the type of use and conditions of use. Refer to Appendix A: Inspection Requirements in ANSI Z359.14.]

#### **Cleaning and Storage**

Periodically clean the exterior of the device and wipe the lifeline using a damp cloth and mild detergent. Towel dry. When not in use, store in a clean, dry location, free of exposure to heat, light, excessive moisture, oil, chemicals, vapors, or other degrading elements. <u>The lifeline</u> should be fully retracted into the device when not in use.