ANSI Z359.15	OSHA 1910.140 OSHA 1926.502

3M™ LAD-SAF™ Mobile Rope Grab

USER INSTRUCTIONS

5902188 Rev. D

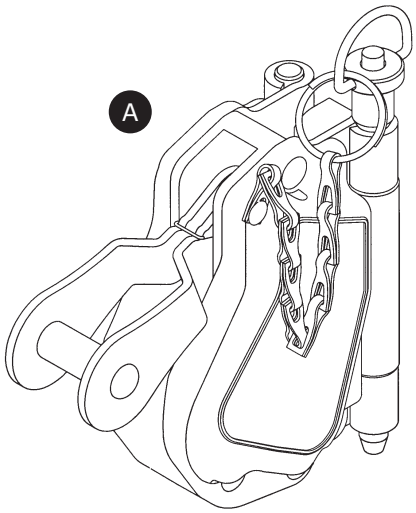
Fall Protection

☑ *For identification of product codes, refer to Table 1. See "Table 1 - Product Specifications" for more product information.*

☑ *See Table 1 for more information about compatible lanyard models.*

Figure 1 - Product Overview

Style	Model	ANSI	OSHA	Product Weight	Lanyard Length	Compatible Lanyard Models
A	5000335	✓	✓	1.7 lb. (0.77 kg)	2.5 ft. (0.76 m)	1246535, 1246090
			✓		3.0 ft. (0.91 m)	1246536, 1246012
	5009079	✓	✓	3.0 lb. (1.36 kg)	See Table 1.	Integral only.
	5009080		✓	3.0 lb. (1.36 kg)	See Table 1.	Integral only.



EN

SAFETY INFORMATION

Please read, understand, and follow all safety information contained in these instructions, prior to the use of this product. FAILURE TO DO SO COULD RESULT IN SERIOUS INJURY OR DEATH.

These instructions must be provided to the user of the equipment. Retain these instructions for future reference.

Intended Use:

This product is used as part of a complete Fall Protection system.

Use in any other application including, but not limited to, material handling, recreational or sports-related activities, or other activities not described in these instructions, is not approved by 3M and could result in serious injury or death.

This product is only to be used by trained users in workplace applications.

⚠ WARNING

This product is used as part of a complete Fall Protection system. All users must be fully trained in the safe installation and operation of their complete Fall Protection system. **Misuse of this product could result in serious injury or death.** For proper selection, operation, installation, maintenance, and service, refer to all instruction manuals and manufacturer recommendations. For more information, see your supervisor or contact 3M Technical Services.

To reduce the risks associated with using a Vertical Lifeline System which, if not avoided, could result in serious injury or death:

- Inspect the product before each use and after any fall event, in accordance with the procedures specified in these instructions.
- If inspection reveals an unsafe or defective condition, remove the product from service immediately and clearly tag it "DO NOT USE". Destroy or repair the product as required by these instructions.
- Any product that has been subject to fall arrest or impact force must be immediately removed from service. Destroy or repair the product as required by these instructions.
- Ensure that Fall Protection systems assembled from components made by different manufacturers are compatible and meet all applicable Fall Protection regulations, standards, or requirements. Always consult a Competent or Qualified Person before using these systems.
- Ensure the product is configured and installed properly for safe operation as described in these instructions.
- Do not exceed the number of allowable users specified in these instructions.
- Do not twist, tie, knot, or allow slack in the lifeline.
- Do not connect to the system while it is being transported or installed.
- Do not use a knot as an anchorage or load-bearing point.
- Do not interfere with the locking action of the connecting device. Only use the connecting device to attach and detach from the system.
- Follow all manufacturer recommendations when connecting a lifeline.
- Use caution when installing, using, or moving the product as moving parts may create pinch points.
- Always maintain three points of contact while climbing.
- Only use the connection points of your harness approved in these instructions to attach an approved connector to the system.
- Use only lifeline and connecting subsystem combinations specified in these instructions.

- **To reduce the risks associated with working at height which, if not avoided, could result in serious injury or death:**
  - Your health and physical condition must allow you to safely work at height and to withstand all forces associated with a fall arrest event. Consult your doctor if you have questions regarding your ability to use this equipment.
  - Never exceed allowable capacity of your Fall Protection equipment.
  - Never exceed the maximum free fall distance specified for your Fall Protection equipment.
  - Do not use any Fall Protection equipment that fails inspection, or if you have concerns about the use or suitability of the equipment. Contact 3M Technical Services with any questions.
  - Some subsystem and component combinations may interfere with the operation of this equipment. Only use compatible connections. Contact 3M Technical Services before using this equipment in combination with components or subsystems other than those described in these instructions.
  - Use extra precautions when working around moving machinery, electrical hazards, extreme temperatures, chemical hazards, explosive or toxic gases, sharp edges, abrasive surfaces, or below overhead materials that could fall onto you or your Fall Protection equipment.
  - Ensure use of your product is rated for the hazards present in your work environment.
  - Ensure there is sufficient fall clearance when working at height.
  - Never modify or alter your Fall Protection equipment. Only 3M, or persons authorized in writing by 3M, may make repairs to 3M equipment.
  - Before using Fall Protection equipment, ensure a written rescue plan is in place to provide prompt rescue if a fall incident occurs.
  - If a fall incident occurs, immediately seek medical attention for the fallen worker.
  - Only use a full body harness for Fall Arrest applications. Do not use a body belt.
  - Minimize swing falls by working as directly below the anchorage point as possible.
  - A secondary Fall Protection system must be used when training with this product. Trainees must not be exposed to an unintended fall hazard.
  - Always wear appropriate Personal Protective Equipment when installing, using, or inspecting the product.
  - Never work below a suspended load or worker.
  - Always maintain 100% tie-off.

☑ *Always ensure you are using the latest revision of your 3M instruction manual. Visit www.3m.com/userinstructions or contact 3M Technical Services for updated instruction manuals.*

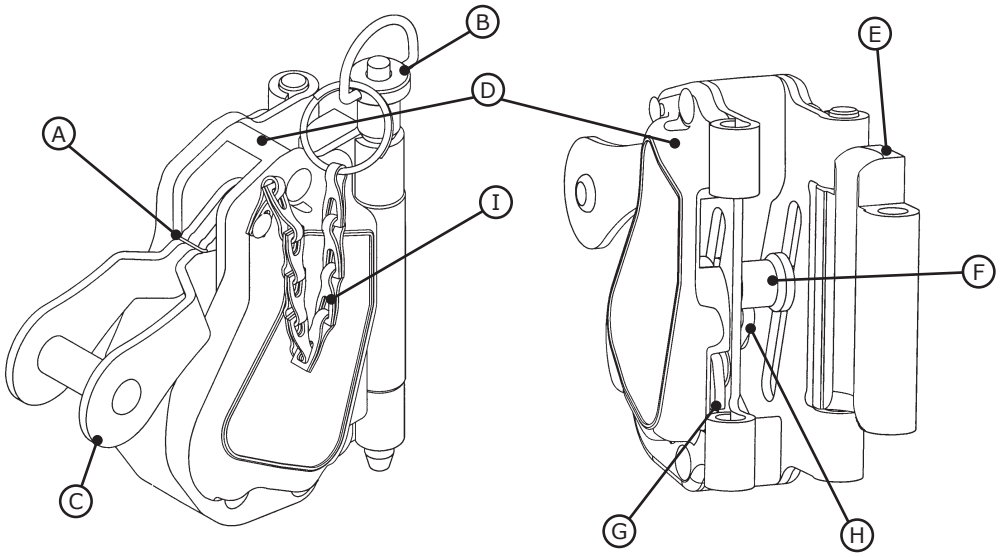
PRODUCT OVERVIEW:

Figure 1 illustrates available product models. Lifeline subsystems secure to a vertical lifeline to provide an adjustable anchorage connection point for the user. The product models covered in these instructions may be used for Fall Arrest or Restraint applications.

The lifeline subsystem is comprised of a Handle Spring (A) that contacts the Lanyard Connection Handle (C). The Enclosure (D) makes up the body of the rope grab. The Hinged Rope Retainer (E) is locked in the closed position around a vertical lifeline using a removable Detent Pin (B). The Locking Roller (F) and Roller Cam (H) are designed to lock on the vertical lifeline in the event of a fall. The Gravity Lock (G) prevents the rope grab from being installed upside-down on the vertical lifeline. The Chain Sash (I) attaches the Detent Pin to the Rope Grab.

See Table 1 for more information on Component Specifications.

Figure 3 - Components



☑ *Before using this equipment, record the product identification information from the ID label in the 'Inspection and Maintenance Log' at the back of this manual.*

Table 1 – Product Specifications

System Specifications:	
Capacity:	One person with a combined weight (including clothing, tools, etc.) between 130 lb. - 310 lb. (59 kg - 140 kg).
Anchorage:	The required Anchorage Strength depends on the application: **Fall Arrest:** Anchorages selected for Fall Arrest systems shall have a strength capable of sustaining static loads applied in the directions permitted by the system of at least: 1. 5,000 lbf (22.2 kN) for non-certified anchorages, or 2. Two times the maximum arresting force for certified anchorages. When more than one Fall Arrest system is attached to an anchorage, the strengths set forth in (1) and (2) above shall be multiplied by the number of systems attached to the anchorage. **Restraint:** Anchorages selected for Restraint systems shall have a strength capable of sustaining static loads applied in the directions permitted by the system of at least: 1. 1,000 lbf (4.5 kN) for non-certified anchorages, or 2. Two times the forseeable force for certified anchorages. When more than one Restraint system is attached to an anchorage, the strengths set forth in (1) and (2) above shall be multiplied by the number of systems attached to the anchorage. ☑ *Certified anchorages must be certified by a Qualified Person as meeting the criteria for a certified anchorage as specified in these instructions.*
Standards:	Each product model is certified to, or conforms with, the applicable standards and regulations listed within Figure 1. If none are specified, then all standards and regulations listed on the cover apply.

Component Specifications:		
Figure 3 Reference	**Component**	**Materials**
Ⓐ	Handle Spring	Stainless steel
Ⓑ	Detent Pin	Stainless steel
Ⓒ	Lanyard Connection Handle	Stainless steel
Ⓓ	Enclosure	Nylon
Ⓔ	Hinged Rope Retainer	Aluminum
Ⓕ	Locking Roller	Stainless steel
Ⓖ	Gravity Lock	Stainless steel
Ⓗ	Roller Cam	Stainless steel
Ⓘ	Chain Sash	Stainless steel

Performance Specifications:	
Free Fall:	For Fall Arrest applications, free fall must be limited to a maximum of 5.0 ft. (1.52 m) for ANSI and 6.0 ft. (1.83 m) for OSHA. For Restraint applications, no free fall is permitted.
Maximum Arresting Force:	8 kN (1,800 lbf)
Maximum Arrest Distance:	44.0 in. (111.76 cm)

Table 1 – Product Specifications

Integral Lanyard Specifications:		
Lifeline Subsystem Model	**Lanyard Specifications**	
5002043	**Material:**	1.0 in. (25.4 mm) polyester webbing
	Length:	2.5 ft. (0.76 m)
	Connector:	Model number 2100045; stainless steel swivel snap hook; gate opening 3/4-in. (19 mm); gate strength 3,600 lbf (16 kN)
	Energy Absorber:	Tear web; polyester webbing and nylon cover
	Maximum Free Fall:	6 ft. (1.83 m)
	Arresting Force:	Average 900 lbf (4 kN); Maximum 1,800 lbf (8 kN)
5002045	**Material:**	1.0 in. (25.4 mm) polyester webbing
	Length:	3 ft. (0.91 m)
	Connector:	Model number 9502116; plated steel snap hook; gate opening 3/4-in. (19 mm); gate strength 3,600 lbf (16 kN)
	Energy Absorber:	Tear web; polyester webbing and nylon cover
	Maximum Free Fall:	6 ft. (1.83 m)
	Arresting Force:	Average 900 lbf (4 kN); Maximum 1,800 lbf (8 kN)

Lanyard Compatibility:	
Lifeline Subsystem Model	**Compatible Lanyards**
5000335	Use an energy-absorbing lanyard that meets ANSI Z359.13 requirements. Do not use a restraint lanyard. For ANSI, lanyard length must be 2.5 ft. (0.76 m) or less. For OSHA, lanyard length must be 3.0 ft. (0.91 m) or less. **Compatible models:** 1246535, 1246090 (ANSI); 1246536, 1246012 (OSHA)

Vertical Lifeline Compatibility:	
Lifeline Subsystem Model	**Compatible Vertical Lifelines**
5000335, 5009079, 5009080	All 5/8-in. (16 mm) polyester or polypropylene rope lifelines listed in IFU 5902127 with a minimum breaking strength of 5,000 lbf (22.2 kN).

1.0 PRODUCT APPLICATION

1.1 PURPOSE: Lifeline subsystems secure to vertical lifelines to provide a mobile anchorage connection point for the user. The user secures to the lifeline subsystem by means of a connecting subsystem. For more information on system applications, refer to the "Product Overview" and Table 1.

1.2 SUPERVISION: Use of this equipment must be supervised by a Competent Person.

1.3 STANDARDS: Your product conforms to the national or regional standards identified on the front cover of these instructions. If this product is resold outside the original country of destination, the re-seller must provide these instructions in the language of the country in which the product will be used.

> ☑ *For more information on certification or conformance requirements, refer to the applicable standards and regulations listed for your product (e.g. the ANSI/ASSP Z359 Fall Protection codes).*

1.4 TRAINING: This equipment must be installed and used by persons trained in its correct application. These instructions are to be used as part of an employee training program as required by national, regional, or local standards. It is the responsibility of the users and installers of this equipment to ensure they are familiar with these instructions, trained in the correct care and use of this equipment, and are aware of the operating characteristics, application limitations, and consequences of improper use of this equipment.

1.5 RESCUE PLAN: When using this equipment and connecting subsystems, the employer must have a written rescue plan and the means to implement and communicate that plan to users, authorized persons, and rescuers. A trained, on-site rescue team is recommended. Team members should be provided with the equipment and techniques necessary to perform a successful rescue. Training should be provided on a periodic basis to ensure rescuer proficiency. Rescuers should be provided with these instructions. There should be visual contact or means of communication with the person being rescued at all times during the rescue process.

2.0 SYSTEM REQUIREMENTS

2.1 ANCHORAGE: Anchorage requirements vary with the Fall Protection application. The mounting structure on which the equipment is placed must meet the Anchorage specifications defined in Table 1.

2.2 CAPACITY: The user capacity of a complete Fall Protection system is limited by its lowest rated maximum capacity component. For example, if your connecting subsystem has a capacity that is less than your harness, you must comply with the capacity requirements of your connecting subsystem. See the manufacturer instructions for each component of your system for capacity requirements.

2.3 ENVIRONMENTAL HAZARDS: Use of this equipment in areas with environmental hazards may require additional precautions to prevent injury to the user or damage to the equipment. Hazards may include, but are not limited to: high heat, chemicals, corrosive environments, high voltage power lines, explosive or toxic gases, moving machinery, sharp edges, or overhead materials that may fall and contact the user or equipment. Contact 3M Technical Services for further clarification.

2.4 LANYARD HAZARDS: Ensure the lanyard is kept free from all hazards including, but not limited to: entanglement with users, other workers, moving machinery, other surrounding objects, or impact from overhead objects that could fall onto the lanyard or users.

2.5 COMPONENT COMPATIBILITY: 3M equipment is designed for use with 3M equipment. Use with non-3M equipment must be approved by a Competent Person. Substitutions made with non-approved equipment may jeopardize equipment compatibility and may affect the safety and reliability of your Fall Protection system. Read and follow all instructions and warnings for all equipment prior to use.

2.6 CONNECTOR COMPATIBILITY: Connectors are compatible with connecting elements when the size and shape of either component does not cause the connector to inadvertently open, regardless of orientation. Connectors must comply with applicable standards. Connectors must be fully closed and locked during use.

3M Connectors (snap hooks and carabiners) are designed to be used only as specified in each instruction manual. Ensure connectors are compatible with the system components to which they are connected. Do not use equipment that is non-compatible. Use of non-compatible components may cause the connector to unintentionally disengage (see Figure 4). If the connecting element to which a connector attaches is undersized or irregular in shape, a situation could occur where the connecting element applies a force to the gate of the connector (A). This force could then cause the gate to open (B), disengaging the connector from the connecting element (C).

2.7 MAKING CONNECTIONS: All connections must be compatible in size, shape, and strength. See Figure 5 for examples of inappropriate connections. Do not attach snap hooks and carabiners:

A. To a D-ring to which another connector is attached.

B. In a manner that would result in a load on the gate. Large-throat snap hooks should not be connected to standard-size D-Rings or other connecting elements, unless the snap hook has a gate strength of 16 kN (3,600 lbf) or greater.

C. In a false engagement, where size or shape of the connector or connecting element is not compatible and, without visual confirmation, would seem to be fully engaged.

D. To each other.

E. Directly to webbing or rope lanyard or tie-back material, unless the instruction manuals for both the lanyard and connector specifically allow such a connection.

F. To any object whose size or shape does not allow the connector to fully close and lock, or that could cause connector roll-out.

G. In a manner that does not allow the connector to align properly while under load.

Figure 4 - Connector Compatibility

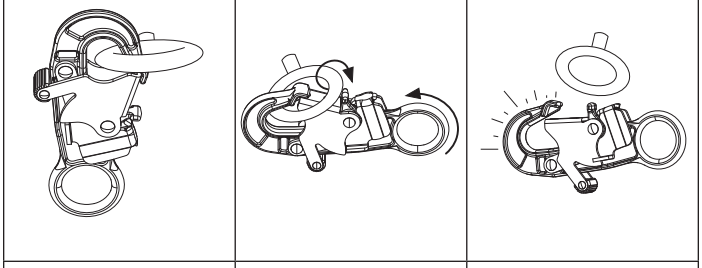
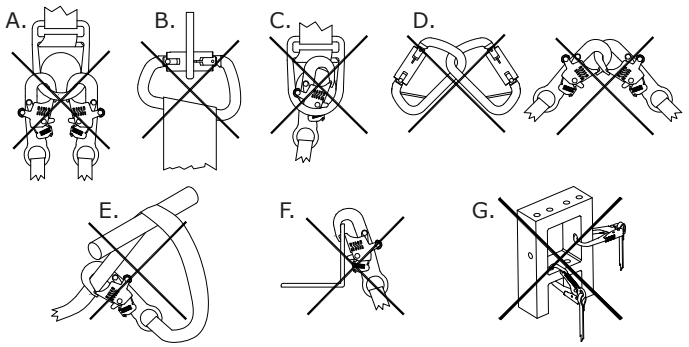


Figure 5 - Making Connections



3.0 INSTALLATION

3.1 OVERVIEW: Installing this product requires effective planning and knowledge of fall clearance requirements. In the event of a fall, there must be enough fall clearance present to safely arrest the user.

3.2 PLANNING: Plan your Fall Protection system before starting your work. Account for all factors that may affect your safety before, during, and after a fall. Consider all requirements and limitations specified in these instructions.

A. SHARP EDGES: Avoid working where system components may be in contact with, or scrape against, unprotected sharp edges and abrasive surfaces. All sharp edges and abrasive surfaces should be covered with protective material.

B. STABLE SURFACES: Your lifeline subsystem must be used with a stable working surface or platform. Working on shifting or unstable surfaces (e.g. sand or grain) could cause your equipment to not function properly, resulting in a failed fall arrest.

C. COMPATIBILITY: Lifeline subsystems are compatible with different types of vertical lifelines and lanyards, as determined by their make and model number. When installing your lifeline subsystem, always verify that you are using compatible components. See Figure 1 and Table 1 for more information on compatible components.

D. INTEGRAL LANYARDS: Some lifeline subsystems include an integral lanyard. Integral lanyards are lanyards that are included as part of the lifeline subsystem. Integral lanyards should never be removed from a lifeline subsystem. See Table 1 for product specifications.

3.3 FALL CLEARANCE: It is critical that the user is aware of fall clearance and its requirements before using this product.

A. DEFINITION: Fall clearance is the measure of distance between a user and the next obstruction below them. Before use of this product, the user should determine how much fall clearance is required to prevent them from striking an obstruction should they fall.

A user's **Required Fall Clearance (FC) is the sum of Free Fall (FF), Deceleration Distance (DD), Harness Stretch (HS), and a Safety Factor (SF).** See Figure 6.1 for reference.

- **Free Fall (FF)** is the distance the user travels before deployment of the energy absorber, when the lanyard fully extends.
- **Deceleration Distance (DD)** is the distance the user falls measured from activation of the deceleration device until stopping.
- **Harness Stretch (HS)** is the amount of slack extending from the user's harness when the user is suspended by their harness attachment element.
- **Safety Factor (SF)** is a set amount of distance added to fall clearance to ensure user safety.

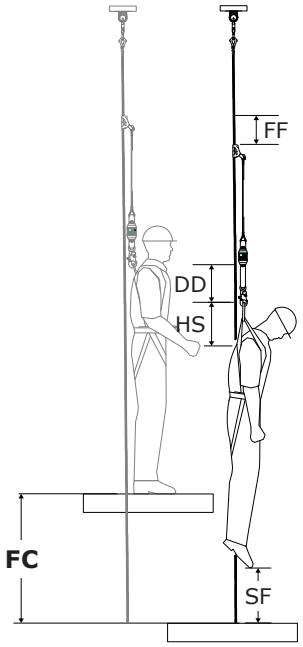
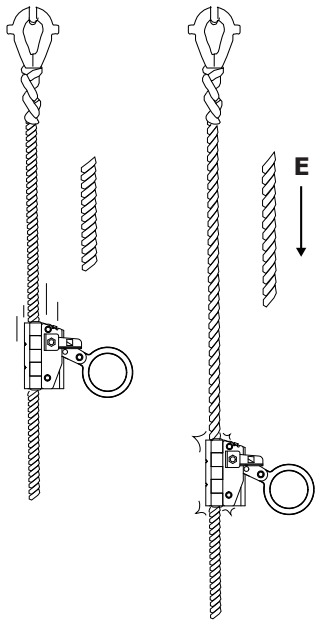
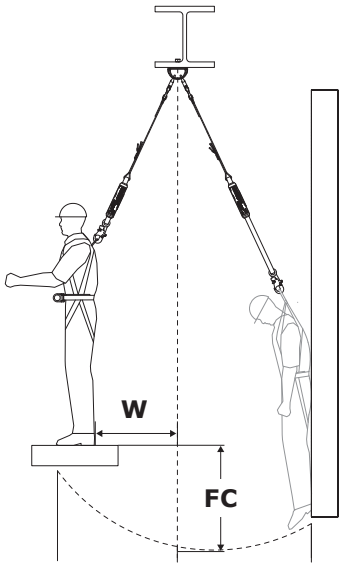
There may be additional factors affecting Required Fall Clearance within your Fall Arrest system, such as D-ring extension length and anchorage deflection. For coverage of these factors, and others not outlined above, refer to the manufacturer instructions for each component of your Fall Arrest system. Additional factors, when provided, should be added to the fall clearance values in this instruction.

B. MINIMIZING REQUIREMENTS: The user should always position their Fall Arrest system to minimize fall potential and potential fall distance. To keep fall clearance requirements to a minimum, it is recommended that the user work as directly below their anchorage point as possible.

- **ANCHORAGE HEIGHT:** The Required Fall Clearance for a user increases as Anchorage Height increases. When a user falls, the vertical lifeline between the anchorage point and the lifeline subsystem stretches. Greater amounts of lifeline will also result in there being more lifeline to stretch, thereby resulting in more Lifeline Elongation (E) and greater fall clearance requirements. See Figure 6.2 for reference.
- **SWING FALLS:** The Required Fall Clearance (FC) for a user increases as User Work Radius (W) increases. Swing falls occur when the anchorage point is not directly above the user when a fall occurs. See Figure 6.3 for reference. The force of striking an object during a swing fall could cause serious injury or death. Do not permit a swing fall if injury could occur.

☑ *See "Fall Clearance Charts" for fall clearance requirements specific to your product.*

Figure 6 - Fall Clearance Overview

6.1	6.2	6.3
 **FC = FF + DD + HS + SF**		

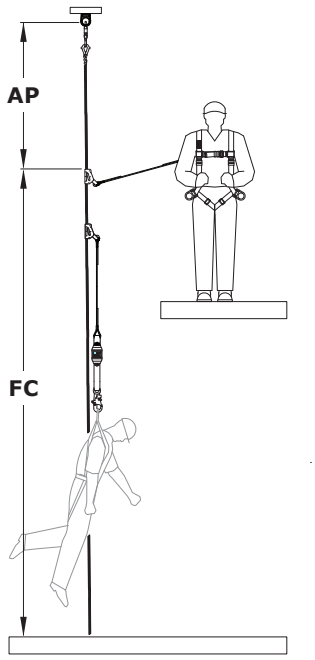
FALL CLEARANCE CHARTS

Find your Required Fall Clearance (FC) by using the following charts. To determine Required Fall Clearance for your situation:

1. **Determine your Anchorage Placement (AP).** Measure the distance between your vertical lifeline's anchorage point and your lifeline subsystem.
2. **Find your Required Fall Clearance (FC).** Enter the value from Step 1 into the fall clearance tables to find your Required Fall Clearance.

☑ *Each time your lifeline subsystem is moved to a different anchorage height, you will need to calculate Required Fall Clearance (FC) again.*

☑ *Required Fall Clearance (FC) values account for lifeline elongation, user height, and a Safety Factor. A user height of 6.0 ft. (1.83 m) and a Safety Factor of 1.5 ft. (0.46 m) were used for all values.*



AP	FC
0 ft. (0 m)	16 ft. (4.88 m)
10 ft. (3.0 m)	17 ft. (5.18 m)
25 ft. (7.6 m)	18.5 ft. (5.64 m)
50 ft. (15.2 m)	21 ft. (6.40 m)
75 ft. (22.9 m)	23.5 ft. (7.16 m)
100 ft. (30.5 m)	26 ft. (7.92 m)
150 ft. (45.7 m)	31 ft. (9.45 m)
200 ft. (61.0 m)	36 ft. (10.97 m)
250 ft. (76.2 m)	41 ft. (12.50 m)
300 ft. (91.4 m)	46 ft. (14.02 m)

TIP: FREQUENT ADJUSTMENTS

In some work situations, it may be necessary to frequently adjust your lifeline subsystem. To avoid having to recalculate fall clearance each time you adjust, measure Required Fall Clearance (FC) from your lowest working point.

1. Determine the lowest point your lifeline subsystem will be anchored on the vertical lifeline. This is your lowest working point.
2. Measure Anchorage Placement (AP) from your lowest working point. Use this value to find your Required Fall Clearance.
3. Ensure your work location has enough fall clearance at all times to accommodate the Required Fall Clearance from Step 2. Never place your lifeline subsystem below the point set in Step 1.

3.4 CONNECTING TO ANCHORAGE: Lifeline subsystems must secure to a vertical lifeline for anchoring. See Figure 7 for reference. To connect to a vertical lifeline:

☑ *Your lifeline subsystem may only be used with those vertical lifelines listed as compatible in these instructions.*

☑ *Lifeline subsystems must only be connected to one vertical lifeline during use.*

1. Place the rope grab in the "UP" position as indicated on the product label. The "UP" end of the rope grab must be oriented towards the anchorage point when installed onto the Vertical Lifeline (A).

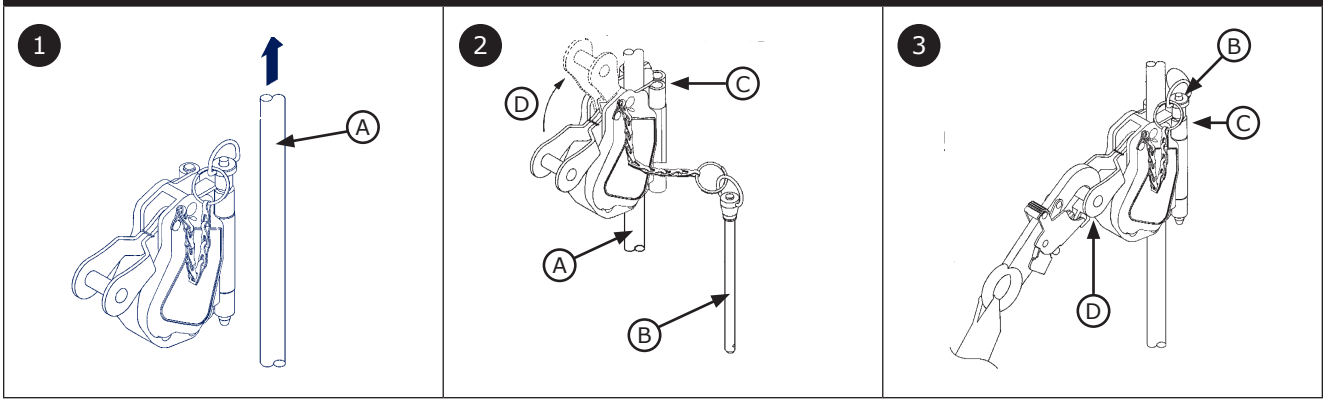
   ☑ *The rope grab incorporates a gravity lock which will prevent closing if the rope grab is not held upright.*

2. Remove the Detent Pin (B) and open the Hinged Rope Retainer (C). Raise the Lanyard Connection Handle (D) to the "UP" position. Insert the Vertical Lifeline (A) into the rope grab.
3. Close the Hinged Rope Retainer (C) and replace the Detent Pin (B). Check the detent pin to verify that it is locked. For rope grab models without an integral lanyard, secure the lanyard to the Lanyard Connection Handle (D).

   ☑ *This product may only be used with lanyards meeting the requirements specified in Figure 1 and Table 1.*

4. Test the operation of the rope grab by pulling down on the attached lanyard. Once the locking roller has fully engaged the lifeline, the rope grab should not be able to move down any further.

Figure 7 - Connecting to Anchorage



3.5 SECURING A CONNECTING SUBSYSTEM: Only energy-absorbing lanyards may be used with lifeline subsystems. See Figure 8 for reference. To secure, connect the Anchoring Connector (A) of your lanyard to the connection eye or connection point (B) on your lifeline subsystem.

☑ *This step does not apply to lifeline subsystems with built-in or integral lanyards. Do not remove integral lanyards.*

3.6 CONNECTING TO A HARNESS: Connection of the lanyard to a harness will vary per the harness and which attachment element is used. See Figure 9 for reference. To secure, connect the Harness Connector (A) of your lanyard to the Attachment Element (B) on your harness. For more information on which attachment elements may be used, see the manufacturer instructions of your harness.

☑ *The "Product Overview" specifies Fall Protection applications available to your product. Ensure use of your harness complies with these requirements. A full body harness is required for Fall Arrest applications.*

Figure 8 - Securing a Connecting Subsystem

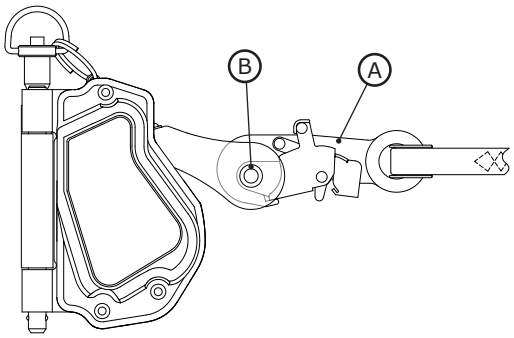
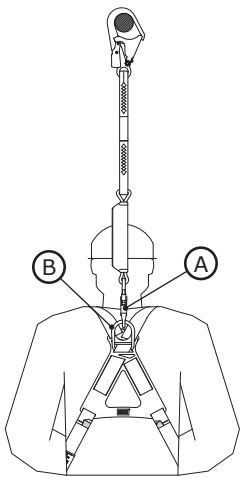


Figure 9 - Connecting to a Harness



4.0 USE

4.1 BEFORE EACH USE: Verify that your work area and Fall Protection system meet all criteria defined in these instructions. Verify that a formal Rescue Plan is in place. Inspect the product per the 'User' inspection points defined in the "Inspection and Maintenance Log". If inspection reveals an unsafe or defective condition, or if there is any doubt about its condition for safe use, remove the product from service immediately. Clearly tag the product "DO NOT USE". See Section 5 for more information.

4.2 AFTER A FALL: If this equipment is subjected to fall arrest or impact force, remove it from service immediately. Clearly tag it "DO NOT USE". See Section 5 for more information.

4.3 POSITIONING: It may be necessary to move your lifeline subsystem along its vertical lifeline during use. When moving your lifeline subsystem, always tow the lifeline subsystem by its secured lanyard. To move your lifeline subsystem along the vertical lifeline after install:

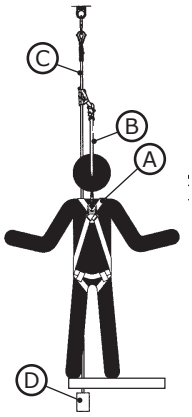
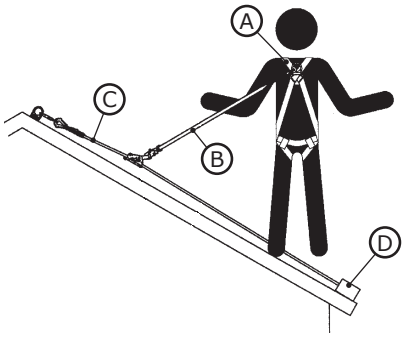
1. Pull up slightly on the rope grab's secured lanyard to release the rope grab from its settled position. If necessary, lift the connection handle as well.

   ☑ *It is recommended that the rope grab be positioned at or above D-ring level to reduce possible free fall.*

2. Tow the rope grab by its secured lifeline into the position you would like to move it.
3. After the rope grab has been moved, lock it into position by pulling the connection handle back into its "DOWN" position. Verify that the rope grab is secure after releasing it by pulling down on the lanyard slightly.

4.4 SYSTEM APPLICATIONS: See Figure 10 for reference. Lifeline subsystems may be used for Fall Arrest (10.1) or Restraint (10.2) applications. Any Fall Protection system with a lifeline subsystem should also include a Full Body Harness (A), an Energy-Absorbing Lanyard (B), a Vertical Lifeline (C), and a Counterweight (D) on the Vertical Lifeline.

Figure 10 - System Applications

10.1	10.2
	

4.5 USE WITH A VERTICAL LIFELINE: There are some additional precautions that must be taken when using this product with a vertical lifeline. When using a vertical lifeline:

- Tension the lifeline to ensure smooth operation of the rope grab along the lifeline.
- Under certain conditions determined by a Qualified Person, such as working on a moving platform, it is allowable to let the vertical lifeline follow the worker as they move. In these situations, the lanyard should be kept as short as possible and never exceed the length requirements specified in Figure 1 and Table 1.
- Always verify that your vertical lifeline is long enough for your application. Never install the system in a manner where the lifeline subsystem could become detached by sliding off the bottom of the lifeline.
- Never tie your vertical lifeline into a knot to limit movement of the lifeline subsystem.

5.0 INSPECTION

☑ *After equipment has been removed from service, it may not be returned to service until a Competent Person confirms in writing that it is acceptable to do so.*

5.1 INSPECTION FREQUENCY: The product shall be inspected before each use by a user and, additionally, by a Competent Person other than the user at intervals of no longer than one year. A higher frequency of equipment use and harsher conditions may require increasing the frequency of Competent Person inspections. The frequency of these inspections should be determined by the Competent Person per the specific conditions of the worksite.

5.2 INSPECTION PROCEDURES: Inspect this product per the procedures listed in the "Inspection and Maintenance Log". Documentation of each inspection should be maintained by the owner of this equipment. An inspection and maintenance log should be placed near the product or be otherwise easily accessible to users. It is recommended that the product is marked with the date of next or last inspection.

5.3 DEFECTS: If the product cannot be returned to service because of an existing defect or unsafe condition, or because the product has been exposed to fall arrest or impact force, then the product must be destroyed.

5.4 PRODUCT LIFE: The functional life of the product is determined by work conditions and maintenance. As long as the product passes inspection criteria, it may remain in service.

6.0 MAINTENANCE, SERVICE, AND STORAGE

☑ *Equipment that is in need of maintenance or scheduled for maintenance should be tagged "DO NOT USE". These equipment tags should not be removed until maintenance is performed.*

6.1 CLEANING: The separate components of this product must be cleaned according to separate procedures.

- **Lifeline Subsystem:** Periodically clean the metal components of the lifeline subsystem with a soft brush, warm water, and a mild soap solution. Ensure parts are thoroughly rinsed with clean water.
- **Lanyard:** Clean the exterior of the lanyard using water and a mild soap solution. Rinse thoroughly and air dry. Position the lanyard so that extra water can drain out. Do not force dry with heat. Clean labels as required.

6.2 SERVICE: This product is not repairable. Do not attempt to repair this product.

6.3 STORAGE AND TRANSPORT: Store and transport the product in a cool, dry, clean environment out of direct sunlight. Avoid areas where chemical vapors may exist. Thoroughly inspect components after extended storage.

7.0 LABELS and MARKINGS

7.1 LABELS: Figure 12 illustrates labels present on the product. Labels must be replaced if they are not present or are not fully legible. Information provided on each label is as follows:

☑ *Label images are intended to be representative. Please refer to your product labels for specific information.*

A	1) "Up" Direction 2) Warning Statement: Read all instructions.
B	1) Model Number 2) Manufactured (Year, Month) 3) Lot Number 4) Capacity 5) Serial Number
C	1) Vertical Lifeline Compatibility 2) Lanyard Compatibility
D	1) Inspection Log

8.0 RFID Tag

8.1 LOCATION: 3M product covered in these user instructions is equipped with a Radio Frequency Identification (RFID) Tag. RFID Tags may be used in coordination with an RFID Tag Scanner for recording product inspection results. See Figure 11 for where your RFID Tag is located.

☑ *For this product, the RFID tag is located on the lanyard.*

8.2 DISPOSAL: Prior to disposing of this product, remove the RFID Tag and dispose/recycle in accordance with local regulations. For more information, please visit our website: *http://www.3M.com/FallProtection/RFID*

9.0 GLOSSARY OF TERMS

9.1 DEFINITIONS: The following terms and definitions are used in these instructions.

☑ *For a comprehensive list of terms and definitions, please visit our website: www.3m.com/FallProtection/ifu-glossary*

- **AUTHORIZED PERSON:** A person assigned by the employer to perform duties at a location where the person will be exposed to a fall hazard.
- **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.
- **FALL ARREST SYSTEM:** A collection of Fall Protection equipment configured to protect the user in the event of a fall.
- **QUALIFIED PERSON:** A person with a recognized degree, certificate, or professional standing, or who by extensive knowledge, training, and experience has successfully demonstrated their ability to solve or resolve problems relating to Fall Protection and Rescue systems to the extent required by applicable national, regional, and local regulations.
- **RESCUER:** A person using the Rescue system to perform an assisted rescue.
- **RESTRAINT SYSTEM:** A collection of Fall Protection equipment configured to prevent the user from reaching a fall hazard. No free fall is permitted.
- **USER:** A person who performs activities while protected by a Fall Protection system.
- **WORK POSITIONING SYSTEM:** A collection of Fall Protection equipment configured to support a user at a work position. Maximum permissible free fall is 2 ft (61 cm).

Figure 11 - RFID Tag Location

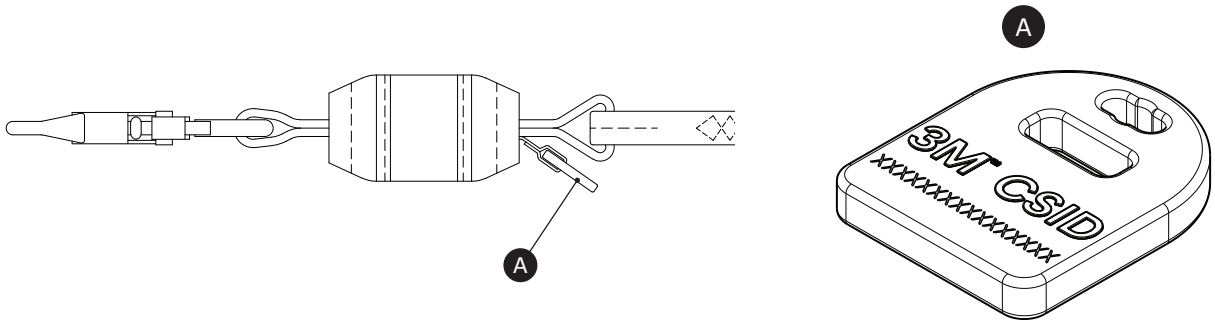
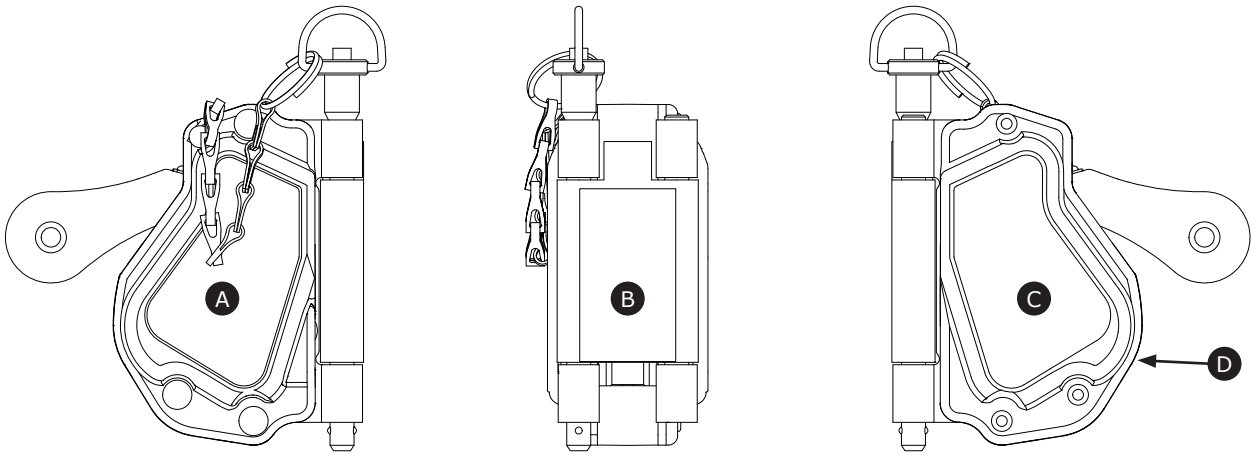


Figure 12 - Product Labels



A

UP
1 AUF ALTO
HAUT

3M | DBI SALA Fall Protection

2 3M.com/FallProtection

⚠ WARNING / MISE EN GARDE

System must be inspected before each use by the user and at least annually by a competent person. Parts must be free and in working order. Remove from service if subject to fall arrest. Failure to read and follow all markings and instructions supplied with this product may result in serious injury or death. Do not remove this label.

Le système doit être inspecter avant chaque utilisation par l'utilisateur et au moins une fois par an par une personne compétente. Les pièces doivent être libres et en bonnes conditions de travail. Retirer du service si utilisé pour l'arrêt d'une chute. Suivez toutes les directives fournies avec ce dispositif ar le manufacturer. Ne pas enlever cette etiquette.

9500823
Rev. F

B

Model No: N° de Modele:	1	This product meets: Ce produit est conforme à/aux:
MFrd. (yr, mo): Fabr. (aa, mm):	2	
Lot:	3	
Capacity: Capacite':	4	Diameter / Diamètre 5/8 in. (16mm)
Serial No: Dumëro de série:	5	Full Scale/ Pleine Dimension

9512834 Rev. C

C

UP/HAUT

1 WARNING
MISE EN GARDE

For use on approved 5/8 in. (16mm) dia. lifelines only, see user manual. Use only manufacturer approved shock lanyards per instruction. Maintain lifeline as close to vertical as possible. Do not use over sharp edges. Lifeline must be independent of platform lift or support lines.

Pour une utilisation sur ligne de vie 5/8 po. (16mm) approuve seulement , voir le mode d'emploi. Utiliser uniquement les cordons amortisseurs approuvés par le fabricant par instruction. Maintenir la ligne de vie aussi proche de l'vertical que possible. Ne pas utiliser au dessus d'une arête vive. La ligne de vie doit être indépendante de la plateforme de levage ou des lignes de support.

Automatic/Automatique Dorsal

MAX LANYARD LENGTH (LONGEUR MAX):
2 USI: 30" (.75m)
CHA: 36" (.91m)

9512817
Rev. C

D

INSPECTION LOG
RELEVÉ D'INSPECTION

DATE	INIT
1	

DO NOT REMOVE THIS LABEL
NE PAS ENLEVER CETTE ÉTIQUTTE
9503135 REV C

Table 2 – Inspection and Maintenance Log

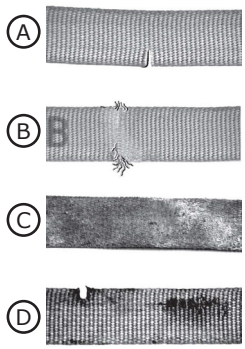
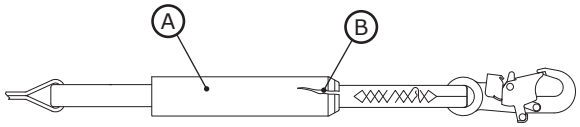
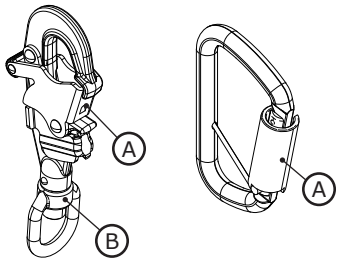
Model Number (Serial Number):	
Date Purchased:	**Date of First Use:**
...	
☑ *This product must be inspected by the user before each use. Additionally, a Competent Person other than the user must inspect this equipment at least once each year.*	
...	

Component	**Inspection Procedure**	**Inspection Result**	
		Pass	**Fail**
Lifeline Subsystem (Figure 3)	Inspect the entire lifeline subsystem for deformation, cracks, and other signs of damage.	☐	☐
	Inspect the entire unit for signs of corrosion.	☐	☐
	Ensure the Detent Pin (B) can be inserted through the holes in the Hinged Rope Retainer (E) and Locking Roller (F) and that it locks in place. Only use the provided Detent Pin with this rope grab. Never use another Detent Pin or any other components in its place.	☐	☐
	Inspect the action of the Locking Roller (F), ensuring that it is able to travel the full length of the guide slots freely.	☐	☐
	Inspect the action of the Roller Cam (H). With the Lanyard Connection Handle (C) and the Locking Roller (F) lifted up to their topmost positions, push down on the Roller Cam and verify that the Roller Cam returns to its upwards position.	☐	☐
	Inspect the Lanyard Connection Handle (C) and Hinged Rope Retainer (E) for freedom of motion. Both must be able to have full range of motion without any sticking or binding. When the rope grab is in the vertical position, the handle spring must always bias the Lanyard Connection Handle to its downward position.	☐	☐
	Inspect the rope grab for ice, snow, frost, or other contaminants that may prevent the function of internal components. If present, the rope grab must be cleaned to remove these contaminants.	☐	☐
	Verify that the Gravity Lock (G) functions and prevents the Hinged Rope Retainer (E) from closing when the rope grab is upside down.	☐	☐
	Inspect the auto-locking function of the rope grab by installing the rope grab on the vertical lifeline. With the Lanyard Connection Handle in the up position, release the Connection Handle and the rope grab and allow the rope grab to free fall on the lifeline. The Locking Roller (F) should quickly lock and stop the rope grab.	☐	☐
Lanyard Webbing (Figure 13)	Inspect the webbing for Cuts (A), Frays (B), broken fibers, tears, abrasion, Heavy Soiling (C), mold, Burns (D), and discoloration. Inspect the lanyard stitching for pulled or cut stitches, since broken stitches may indicate that the product has been impact-loaded and must be removed from service.	☐	☐
Energy Absorber (Figure 14)	Verify that the integral energy absorber has not been activated. There should be no webbing pulled out of the Cover (A). The cover should be secure and free of Tears (B) or other damage.	☐	☐
Connectors (Figure 15)	Inspect all connectors for signs of damage and corrosion. Verify that all connectors are working properly. Where present: Gates (A) should open, close, lock, and unlock properly; Swivel Eyes (B) should rotate without interference; and locking buttons and pins should function correctly.	☐	☐
Labels (Figure 12)	All labels are present and fully legible.	☐	☐
Fall Protection Equipment	Additional Fall Protection equipment that is used with the product is installed and inspected per the manufacturer instructions.	☐	☐

...
☑ *If the product fails an inspection procedure, then the product fails overall inspection. If the product fails inspection, or if there is any doubt about its condition for safe use, remove it from service immediately. Clearly tag the product "DO NOT USE". See Section 5 for more information.*
...

Inspection Type:	☐ User	☐ Competent Person	**Overall Inspection Result:**	☐ Pass	☐ Fail
Inspected By:			**Date of Inspection:**		
Signature:			**Next Inspection Due:**		

...
Additional Notes:

Figure 13 - Webbing	Figure 14 - Energy Absorber	Figure 15 - Connectors
		

GLOBAL PRODUCT WARRANTY, LIMITED REMEDY AND LIMITATION OF LIABILITY

WARRANTY: THE FOLLOWING IS MADE IN LIEU OF ALL WARRANTIES OR CONDITIONS, EXPRESS OR IMPLIED, INCLUDING THE IMPLIED WARRANTIES OR CONDITIONS OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE.

Unless otherwise provided by local laws, 3M fall protection products are warranted against factory defects in workmanship and materials for a period of one year from the date of installation or first use by the original owner.

LIMITED REMEDY: Upon written notice to 3M, 3M will repair or replace any product determined by 3M to have a factory defect in workmanship or materials. 3M reserves the right to require product be returned to its facility for evaluation of warranty claims. This warranty does not cover product damage due to wear, abuse, misuse, damage in transit, failure to maintain the product or other damage beyond 3M's control. 3M will be the sole judge of product condition and warranty options.

This warranty applies only to the original purchaser and is the only warranty applicable to 3M's fall protection products. Please contact 3M's customer service department in your region for assistance.

LIMITATION OF LIABILITY: TO THE EXTENT PERMITTED BY LOCAL LAWS, 3M IS NOT LIABLE FOR ANY INDIRECT, INCIDENTAL, SPECIAL OR CONSEQUENTIAL DAMAGES INCLUDING, BUT NOT LIMITED TO LOSS OF PROFITS, IN ANY WAY RELATED TO THE PRODUCTS REGARDLESS OF THE LEGAL THEORY ASSERTED.

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