



INSTALLATION INSTRUCTIONS ①

5902228 REV. T

LAD-SAF™ Flexible Cable Ladder Safety Systems

②



Fall Protection

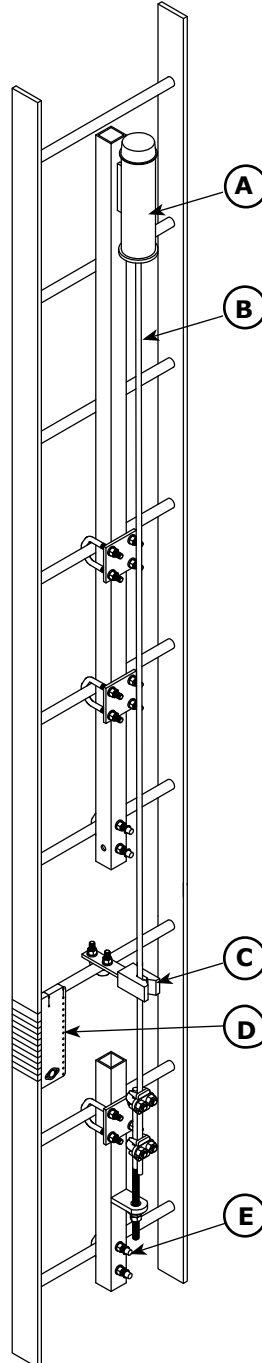
↓ X1	141 kg/ 310 lbs	↑ X4	
↑ X4			

⑥ ⑦

CE TYPE TEST	No. 2777 Satra Technology Europe Ltd Bracetown Business Park Clonee, Dublin D15 YN2P, Ireland ④
CE PRODUCTION QUALITY CONTROL	BSI (0086) Kitemark Court Davy Ave, Knowlhill Milton Keynes MK5 8PP, UK ⑤

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ISO 9001	ANSI A14.3
CE	prEN353-1:2014+A1:2017
	CSA Z259.2.5

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SAFETY INFORMATION

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

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

Intended Use:

This Vertical System is intended for use as part of a complete personal 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 the Product Instructions, is not approved by 3M and could result in serious injury or death.

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

WARNING

This Flexible Cable/Rigid Rail System is part of a personal fall protection system. It is expected that all users be fully trained in the safe installation and operation of their personal fall protection system. **Misuse of this device could result in serious injury or death.** For proper selection, operation, installation, maintenance, and service, refer to these Product Instructions and all manufacturer recommendations, see a supervisor, or contact 3M Technical Service.

- **To reduce the risks associated with working with a Flexible Cable/Rigid Rail System which, if not avoided, could result in serious injury or death:**
 - Inspect all components of the system before each use, at least annually, and after any fall event. Inspect in accordance with the Product Instructions.
 - If inspection reveals an unsafe or defective condition in a component of the system, remove the component from service and destroy it.
 - Any Flexible Cable/Rigid Rail System that has been subject to fall arrest or impact force must be immediately removed from service and all components must be inspected by a Competent Person prior to being used again.
 - Do not connect to the system while it is being installed.
 - Ensure the system is appropriately rated for the number of simultaneous users.
 - When unpacking the cable it may rapidly uncoil. Use proper safety procedures and appropriate personal protective equipment when unpacking cable.
 - Only use approved connectors to attach body harness to the system. Do not use any additional connecting devices.
 - Use only cable specified and approved in the Product Instructions.
 - Do not interfere with the locking action of the shuttle/sleeve device. Only manipulate the device to attach and detach from the system.
 - Always maintain three points of contact while climbing. Refer to the Product Instructions for further information on proper climbing technique.
 - Ensure that fall protection systems/subsystems assembled from components made by different manufacturers are compatible and meet the requirements of applicable standards, including the ANSI Z359 or other applicable fall protection codes, standards, or requirements. Always consult a Competent and/or Qualified Person before using these systems.
- **To reduce the risks associated with working at height which, if not avoided, could result in serious injury or death:**
 - Ensure your health and physical condition allow you to safely withstand all of the forces associated with working at height. Consult with your doctor if you have any questions regarding your ability to use this equipment.
 - Never exceed allowable capacity of your fall protection equipment.
 - Never exceed maximum free fall distance of your fall protection equipment.
 - Do not use any fall protection equipment that fails pre-use or other scheduled inspections, or if you have concerns about the use or suitability of the equipment for your application. Contact 3M Technical Services with any questions.
 - Some subsystem and component combinations may interfere with the operation of this equipment. Only use compatible connections. Consult 3M prior to using this equipment in combination with components or subsystems other than those described in the User Instructions.
 - Use extra precautions when working around moving machinery (e.g. top drive of oil rigs), electrical hazards, extreme temperatures, chemical hazards, explosive or toxic gases, sharp edges, or below overhead materials that could fall onto you or your fall protection equipment.
 - Use Arc Flash or Hot Works devices when working in high heat environments.
 - Avoid surfaces and objects that can damage the user or equipment.
 - Ensure there is adequate fall clearance when working at height.
 - Never modify or alter your fall protection equipment. Only 3M or parties authorized in writing by 3M may make repairs to the equipment.
 - Prior to use of fall protection equipment, ensure a rescue plan is in place which allows for prompt rescue if a fall incident occurs.
 - If a fall event occurs, immediately seek medical attention for the worker who has fallen.
 - Do not use a body belt for fall arrest applications. Use only a Full Body Harness.
 - Minimize swing falls by working as directly below the anchorage point as possible.
 - If training with this device, a secondary fall protection system must be utilized in a manner that does not expose the trainee to an unintended fall hazard.
 - Always wear appropriate personal protective equipment when installing, using, or inspecting the device/system.

EN **FOREWORD**

This instruction manual describes the installation of the Lad-Saf™ Flexible Cable Ladder Safety Systems. It should be used as part of an employee training program as required by OSHA, ANSI, CSA, and CE, and must be kept with the equipment.

- ☑ To avoid serious injury or death follow the safety information in these instructions.
- ☑ Installers must read and follow the manufacturer's instructions for safety equipment used with this system.
- ☑ Proper fall protection must be used while installing this system.
- ☑ If you have questions on the installation or suitability of this equipment for your application, contact DBI-SALA.

GLOSSARY REFERENCES

Numbered *Glossary References* on the front cover of this instruction reference the following items:

- ① Installation Instructions
- ② Lad-Saf™ Flexible Cable Ladder Safety Systems
- ③ Standards
- ④ Number of notified body that performed CE Test.
- ⑤ Number of notified body checking the manufacture of this PPE.
- ⑥ Maximum number of users.
- ⑦ Maximum user weight is 141 kg (310 lbs) including tools, other equipment and clothing.

Lad-Saf™ Flexible Cable Ladder Safety System Components, Figure 1:

- A** Top Bracket
- B** Cable
- C** Cable Guide
- D** i-Safe RFID Tag
- E** Bottom Bracket

Part Lists And Part References

The parts that can comprise a typical Lad-Saf™ Ladder Safety System are listed in the Parts List Table in this manual. Some items may have multiple part options and part numbers. The "Item" column on the left side of each part list is associated with one or more part numbers found in the columns to right (for example: TB-1, BB-5, etc.) that can be used for installation. The installation situation will determine which parts must be used.

1.0 APPLICATIONS

- 1.1 PURPOSE:** When used in combination with the Lad-Saf™ Detachable Cable Sleeve (sold separately), the Lad-Saf™ Flexible Cable Ladder Safety System (Figure 1) is designed to protect a worker in the event of a fall while climbing fixed ladders or similar climbing structures. LAD-SAF™ systems are intended to be installed on fixed ladders or ladder like climbing surfaces that are part of a structure (e.g., water tank ladders, mono poles [wood, steel, or concrete] buildings, manways, antenna structures and towers).
- 1.2 LIMITATIONS:** LAD-SAF™ systems are not intended to be installed on portable ladders. These systems are designed for use on ladders that are generally vertical. The ladder safety system must not exceed a maximum angle of 15° from vertical. The following application limitations must be considered before installing the LAD-SAF™ system.
- A. LADDER STRUCTURE:** The ladder structure to which the system is installed must be capable of withstanding the loads applied by the system in the event of a fall (see Section 2.2).
 - B. SYSTEM CAPACITY:** The number of users allowed on the system at one time varies depending on the type of system and installation. Generally, system capacities range from one to four users. See sections 2.0 and 3.0 for more information on capacity limitations. System capacities are based on a maximum user weight, including tools and clothing, of 310 lbs (140.6 kg).
 - C. ENVIRONMENTAL HAZARDS:** Use of this equipment in areas with environmental hazards may require that additional precautions be taken to reduce the possibility of injury to the user or damage to the equipment. (e.g., high heat caused by welding or metal cutting, caustic chemicals, seawater, high voltage power lines, explosive or toxic gases, moving machinery, sharp edges).
 - D. TRAINING:** This equipment is intended to be installed by persons who have been trained in its correct application.
- 1.3** Refer to applicable local, and national requirements governing this equipment for more information on ladder safety systems and associated components, including OSHA 1910.27.

2.0 SYSTEM REQUIREMENTS

- 2.1 COMPATIBILITY OF COMPONENTS AND SUBSYSTEMS:** This equipment is designed for use with DBI-SALA approved components and subsystems. The use of non-approved components and subsystems (e.g., harnesses, lanyards, sleeves, etc.) may jeopardize compatibility of equipment, and could affect the safety and reliability of the complete system. If you have questions on the installation or suitability of this equipment for your application, contact DBI-SALA.

COMPATIBILITY WITH CLIMB ASSIST SYSTEMS: The DBI-SALA *Lad-Saf™ Ladder Safety Systems, including the DBI-SALA Lad-Saf™ Detachable Cable Sleeves*, are designed for use with DBI-SALA approved climb assist systems. The use of any other type of climb assist system, including a powered climb assist system, may be incompatible with the *Lad-Saf™ Ladder Safety System and Detachable Cable Sleeves*, and could create a serious safety hazard for the user. Do not use non-DBI-SALA climb assist systems without first consulting a competent person and/or a qualified person at your worksite for approval. If you have additional questions about compatibility, please contact 3M Technical Services.

- 2.2 LOAD REQUIREMENTS FOR STRUCTURE AND BRACKET CONNECTIONS:** The climbing structure to which the LAD-SAF™ system is installed must be capable of supporting the loads imposed by the system. For calculation purposes the required bracket load may be assumed to be distributed evenly between the number of rung attachments. For example, the TB-3 top bracket (Figure 2) is supplied with three rung connections. The load required for each rung for a single user system is 1,125 lbs (5.0 kN) per rung (3,375 lbs [15.0 kN]/3).

A. TOP BRACKET: (See Figure 2 and TB Items Part List) The top bracket connection loads include system pretension and forces associated with arresting a fall. Load requirements for the top bracket vary depending on the number of users allowed on the system at one time, top bracket model, and type of connection to the structure.

1. The following top brackets allow up to four users on the system at one time:

Item Numbers; TB-2, TB-3, TB-4, TB-6, TB-7, TB-10 and *Part Numbers;* 6116048, 6116050, 6116051, 6116052, TB-1, 6116055, 6116057, 6116059, TB-5, 6116282, 6116286, 6116290, 6116291, 6116292, 6116293, 6116294, 6116295, 6116296.

Note: Other installation requirements may limit the number of users allowed on a system. See section 3.0.

Top Bracket Connection Loads:

- One user on the system: 3,375 lbs (15.0 kN)
- Two users on the system: 4,350 lbs (19.3 kN)
- Three users on the system: 5,325 lbs (23.7 kN)
- Four users on the system: 6,300 lbs (28.0 kN)

Exception: TB-1 top bracket is designed for use with 6116336 or 6116337 grab bar extension. When the grab bar is used as a connection for a personal fall arrest system the bracket connection must support a minimum of 5,000 lbs (22.2 kN), or 3,600 lbs (16.0 kN) for a certified anchorage. See ANSI Z359.1 and OSHA regulations.

2. These top brackets allow one user only:

Item Numbers; TB-8, TB-9, TB-11 and *Part Numbers* 6116074, 6116325, 6116324 and 6116328.

Exception: TB-9 (6116074) allows two users.

Top Bracket Connection Loads:

- One user on the system: 3,375 lbs (15.0 kN)
- Two users on the system: 4,350 lbs (19.3 kN)

B. BOTTOM BRACKET: The bottom bracket connection must be capable of supporting a system pretension load of 750 lbs (3.3 kN) in the direction of loading.

3.0 SYSTEM INSTALLATION

3.1 LAD-SAF™ systems are designed for easy installation onto a variety of fixed ladder structures. To begin the installation you need to know the model numbers of the top and bottom brackets, cable guides, and type of cable (galvanized or stainless steel). Figures 2, 3, 4 and 5 identify most models. Some brackets are designed to be installed using stand-off supports which go between the bracket and structure. You need to know model numbers of stand-off supports if included with your system. See Figure 5 for model numbers of most stand-off supports. Follow the instructions for the models included in your system.

Generally, the LAD-SAF™ system is installed from the top of the ladder down. The basic procedure is:

- Step 1.** Install the top bracket
- Step 2.** Connect the cable to the top bracket
- Step 3.** Install the cable guides
- Step 4.** Install the bottom bracket
- Step 5.** Tension the cable
- Step 6.** Inspect the installation

Planning the installation can minimize the amount of time on the ladder and improve safety.

<input checked="" type="checkbox"/> Use personal fall arrest or restraint systems when exposed to a fall hazard while installing LAD-SAF™ systems. <input checked="" type="checkbox"/> Do not connect to the LAD-SAF™ system being installed. <input checked="" type="checkbox"/> Do not connect to a partially installed LAD-SAF™ system. <input checked="" type="checkbox"/> Use caution when installing LAD-SAF™ systems near electrical power lines. LAD-SAF™ cables are conductive.

3.2 SYSTEM COMPONENT COMPATIBILITY:

Bracket Type / Cable and Fitting Type	Stainless Cable with Stainless Swage Fitting	Stainless Cable with Carrier Clamp	Galvanized Cable with Stainless Swage Fitting	Galvanized Cable with Carrier Clamp
Stainless	Y	N	N	N
Galvanized	O	N	Y	Y

Y = recommended component combination. O = optional. N = not recommended

Do not use carrier clamps with stainless steel cables.

3.3 WELDING RECOMMENDATIONS: Some installations require welding brackets to the structure. DBI-SALA recommends that welding be completed by a certified professional welder in accordance with applicable national welding codes or standards. Base and filler materials must be compatible with galvanized or stainless steel, depending on the materials of your system. Protect finished welds from corrosion with coating or paint.

3.4 TOP BRACKET INSTALLATION: Before installing the top bracket it is recommended that the ladder or climbing structure be evaluated by a qualified person to determine if the load requirements for the system are satisfied.

A. INSTALLATION OF TB-2, TB-3, TB-10 TOP BRACKETS:

Direct Connection to Ladder:

See Figure 6 for typical installations of the TB-2, TB-3, and TB-10 top brackets onto a round rung ladder. The top bracket should be positioned to allow users safe access when connecting or disconnecting from the system. The top bracket is typically mounted in the center of the climbing surface for ease of climbing, but may be located towards the side of the ladder if required.

TB-3, TB-10:

- **For systems limited to one user,** the top bracket may be installed with up to four feet extending above the top rung connection. This will allow the use of only two ladder rung clamps. Ensure the ladder will withstand the required loads between the two rungs.
- **For systems allowing up to two users simultaneously,** the top bracket may be installed with up to three feet extending above the top rung connection.
- **For systems allowing up to four users simultaneously,** the top bracket may be installed with up to two feet extending above the top rung connection.

TB-2:

- **For systems allowing up to four users simultaneously,** the top bracket may be installed with up to five feet extending above the top bracket connection.

<input checked="" type="checkbox"/> One rung clamp (two for the TB-10 bracket) is designed to bolt through the bracket and onto the rung. This clamp must not be omitted, or the bracket may slip under load.

Install rung clamps using the hardware provided. Do not substitute other fasteners. Torque fasteners to 20-25 ft-lbs (27.1-33.9 N-m).

Stand-off Support Connection:

Figure 7 shows the installation of the TB-3 top bracket using a horizontal stand-off bracket. These installations are limited to one user on the system at a time. Use hex bolts in place of U-bolts to attach the TB-3 top bracket to the horizontal stand-off. Torque fasteners to 20-25 ft-lbs (27.1-33.9 N-m).

Ladder Rung Support:

Ladder rung supports can be used to reinforce hollow ladder rungs to reduce crushing or collapsing of the rung due to tightening of the Ladder Safety System Clamps, and to generally strengthen the rung. The Rung Support must have

sufficient length extending on either side of the Ladder Side Rails to install Rung Support fasteners. Install ladder rung support at each LAD-SAF™ component connection point. The ladder and its connection to the structure must be evaluated by a qualified person to determine if the load requirements for the system are met.

Ladder Rung Supports are available in various shapes and lengths. For best results, select a Ladder Rung Support size that will fit closely with the inside dimensions of the rung. See Figure 8 for examples of ladder rung supports.

A, Figure 8	Model	Ø	R
	6100187	1 in (2.5 cm)	22 in (56 cm)
	6100188	1 in (2.5 cm)	26 in (66 cm)
	6100189	1 in (2.5 cm)	30 in (76 cm)
Materials	Aluminum Bar, Stainless Steel Fasteners		

Install at each point indicated below:

1. Slide the Rung Support through the open rung.
2. Slide Washers over each end of the Rung Support and secure with Nuts. Tighten Nuts until Washer's are flush against the Ladder Rail.
3. Insert Cotter Pins through the holes in each end of the Rung Support. Cotter Pins should be inserted from the top of the Rung Support to prevent them from dropping out of the holes.
4. Separate and bend the Cotter Pin Legs to ensure Cotter Pins stay in the holes and the Rung Supports can not slide out of the Ladder Rung.

B, Figure 8	Model	Ø	R
	6100151	1 in (2.5 cm)	17 in (43 cm)
Materials	Aluminum Bar, Stainless Steel Fasteners		

Install at each point indicated below:

1. Slide the Rung Support through the open rung.
2. Insert Cotter Pins through the holes in each end of the Rung Support. Cotter Pins should be inserted from the top of the Rung Support to prevent them from dropping out of the holes.
3. Separate and bend the Cotter Pin Legs to ensure Cotter Pins stay in the holes and the Rung Supports can not slide out of the Ladder Rung.

C, Figure 8	Model	H	W	R
	6100186	.59 in (2.5 cm)	1 in (2.5 cm)	19 in (48 cm)
Materials	Aluminum Bar, Stainless Steel Fasteners			

Install at each point indicated below:

1. Slide the Rung Support through the open rung.
2. Insert Cotter Pins through the holes in each end of the Rung Support. Cotter Pins should be inserted from the top of the Rung Support to prevent them from dropping out of the holes.
3. Separate and bend the Cotter Pin Legs to ensure Cotter Pins stay in the holes and the Rung Supports can not slide out of the Ladder Rung.

B. INSTALLATION OF TB-1 TOP BRACKET AND 6116336 GRAB BAR:

See Figure 9 for a typical installation of the TB-1 top bracket onto a round rung ladder. The top bracket should be positioned to allow users safe access when connecting or disconnecting from the system. The top bracket is typically mounted in the center of the climbing surface for ease of climbing, but may be located towards the side of the ladder if required.

- The top rung clamp bolts through a plate that is welded onto the bracket. This rung clamp must not be omitted, or the bracket may slip under load.

Install rung clamps using the hardware provided. Do not substitute other fasteners. Torque fasteners to 20-25 ft.-lbs (27.1-33.9 N-m).

The 6116336 grab bar (A) is installed by sliding the grab bar into the square tube of the TB-1 top bracket and installing the detent pin (C) into the grab bar.

C. INSTALLATION OF TB-4, TB-6, AND TB-7 BOLT-ON TOP BRACKETS:

See Figure 10 for a typical installation of the TB-4, TB-6, and TB-7 top brackets. The top bracket should be positioned to allow users safe access when connecting or disconnecting from the system. The top bracket is typically mounted in the center of the climbing surface, directly above the ladder, for ease of climbing, but may be located towards the side of the ladder, 12 inches (30.5 cm) maximum from center, if required. The top brackets are to be connected to the structure with a DBI-SALA (model SO-2 stand-off in Figure 10) or customer supplied stand-off support. Stand-off supports must support the loads specified in section 2.2, and must be compatible with the LAD-SAF™ system.

Angle Leg and Round Leg Stand-off Installation:

See Figure 11 for the installation of the angle (example: SO-4) and round leg (example: SO-5) stand-off supports. Install stand-off supports using the hardware provided. Do not substitute other fasteners. Torque 3/8-inch fasteners to 20-25 ft.-lbs (27.1-33.9 N-m). Install the top bracket to the stand-off support using the 1/2-inch fasteners provided. Torque 1/2-inch fasteners to 40-45 ft.-lbs (54-61 N-m). Note: For the TB-6 stand-off, fasteners are not supplied. DBI-SALA recommends using lock washers, double nuts, or other methods to ensure fasteners will not loosen.

SO-2 Weld-on Stand-off Installation:

Install the SO-2 stand-off support as shown in Figure 10. See section 3.3 for welding recommendations. The stand-off must be perpendicular to the pole surface and in-line with the carrier cable.

- Installations that use the angle leg or round leg stand-off support brackets are limited to one user on the system at a time.

D. INSTALLATION OF TB-5 WOOD POLE TOP BRACKET:

See Figure 12 for a typical installation of the TB-5 top bracket onto a wooden pole. The top bracket should be positioned to allow users safe access when connecting or disconnecting from the system. The top bracket is typically mounted in the center of the climbing surface for ease of climbing, but may be located towards the side of the ladder if required. Use 1/2-inch fasteners (not provided) to attach the top bracket to the pole. Fasteners should extend through the pole when possible. DBI-SALA recommends using lock washers, double nuts, or other methods to ensure fasteners will not loosen.

E. INSTALLATION OF TB-9, TB-13, AND TB-14 TOP BRACKETS:

See figure 13 for a typical installation of TB-9, TB-13, and TB-14 top brackets onto a ladder. Some brackets utilize rung spacers while others do not (see Figure 2). The top bracket should be positioned to allow users safe access when connecting or disconnecting from the system. The top bracket is typically mounted in the center of the climbing surface for ease of climbing, but may be located towards the side of the ladder if required.

- **For systems limited to one user**, the top bracket may be installed with up to 4 ft. (1.2 m) extending above the top rung connection. This will allow the use of only two ladder rung clamps. Ensure the ladder will withstand the required loads between the two rungs.
- **For systems allowing up to two users simultaneously**, the top bracket may be installed with up to 3 ft. (0.9 m) extending above the top rung connection.
- **For systems allowing up to four users simultaneously**, the top bracket may be installed with up to 2 ft. (0.6 m) extending above the top rung connection.

One rung clamp (lower connection) is designed to bolt through the bracket and onto the rung. This clamp must not be omitted, or the bracket may slip under load.

Install rung clamps using the hardware provided. Do not substitute other fasteners. Torque fasteners to 20-25 ft-lbs (27.1-33.9 N-m).

F. INSTALLATION OF TB-8 TELESCOPING TOP BRACKET:

See Figure 14 for a typical installation of the TB-8 top bracket onto a round rung ladder. The top bracket should be positioned to allow users safe access when connecting or disconnecting from the system. The top bracket is typically mounted in the center of the climbing surface for ease of climbing, but may be located towards the side of the ladder if required. The TB-8 top bracket is designed to mount at or near the top of the ladder and telescope up when in use. Typical installations include access ladders into manholes and under trap doors.

When using TB-8 telescoping top bracket, use only the swaged end fitting in the top bracket.

Installations that use the TB-8 top bracket are limited to one user on the system at a time.

Install rung clamps using the hardware provided. Do not substitute other fasteners. Torque fasteners to 20-25 ft-lbs (27.1-33.9 N-m).

- G. INSTALLATION OF D-RING ANCHORAGE:** See Figure 15. The D-ring Anchorage (6100219) is designed for used with the DBI-SALA Force2™ energy absorbing lanyard and full body harness. The D-ring Anchorage must be attached to a Lad-Saf™ top bracket (A) that is attached to a structure that meets the top bracket load requirements.

APPLICATION: The D-ring anchorage must be used in accordance with local requirements for fall arrest or rescue systems.

INSTALLATION: See Figure 15. Install the D-ring anchorage assembly (B) no more than 6 in. (15.2 cm) above the ladder rung (C) where the top clamp plate (D) of the Lad-Saf™ top bracket is attached. The D-ring must be on the climbing (cable) side of the top bracket. Clamp the D-ring anchorage assembly to the top bracket with the fasteners provided with the assembly. Torque fasteners to 20-25 ft.-lbs (27.1-33.9 N-m).

3.5 INSTALLATION OF CARRIER CABLE TO TOP BRACKET:

Keep the carrier cable and carrier clamp clean during installation. Contamination of the carrier clamp or cable could cause the clamp to malfunction.

A. INSTALLATION OF GALVANIZED CARRIER CABLE:

1. Lay the carrier cable out on the ground in a clean area by rolling the coil. Do not pull cable from center of coil. For some installations it may be easier to lower the carrier cable from the top connection level down to the bottom bracket. If so, carefully lower the cable by unspooling without twisting the cable at the top connection. Do not drop the cable to the lower level.

Carrier cable is very stiff and may spring out of coil unexpectedly. Use proper safety procedures when unrolling cable. Use appropriate safety gear, including gloves and safety glasses, when unrolling cable.

Inspect the cable for shipping damage before proceeding. Do not install damaged cable.

2. See Figure 16 for installation of the galvanized carrier cable into the top bracket. Ensure the end of cable (A) is free of kinks and unraveled strands. Pass the cable up through the top bracket pipe (B) and the urethane shock absorber (C). Install the carrier clamp (D) and washer (E) onto cable with the cone of carrier clamp pointing down. At least 1.0 in. (2.5 cm), but no more than 2 in. (5.1 cm). of cable must protrude through the carrier clamp.

Excess cable protruding through the carrier clamp may prevent installation of the cap. If this occurs, cut off extra cable. Do not remove carrier clamp from cable to avoid damage to the carrier clamp.

Seat the carrier clamp into shock absorber by pulling firmly on carrier clamp below the top bracket pipe. Install cap (F) by seating it firmly onto the pipe.

B. INSTALLATION OF STAINLESS STEEL CARRIER CABLE:

1. Lay the carrier cable out on the ground in a clean area by rolling the coil. Do not pull the cable from the center of the coil.

Carrier cable is very stiff, and may spring out of the coil unexpectedly. Use caution when unrolling cable. Use appropriate safety gear, including gloves and safety glasses, when unrolling cable.

Inspect the cable for shipping damage before proceeding. Do not install damaged cable.

2. See Figure 17 for installation of a stainless steel carrier cable into the top bracket. All stainless steel carrier cables are supplied with a swagged end fitting for connection to the top bracket. To install the carrier cable (A), feed the free end of the cable down through the washer (D), urethane shock absorber (C) and top bracket pipe (B) until the swage fitting (E) is firmly seated into the shock absorber. Install the cap (F) by seating it firmly onto the pipe.

3.6 INSTALLATION OF CABLE GUIDES, ALL MODELS:

Cable guides protect the carrier cable from chafing against the ladder or structure and to prevent the climber from excessively deflecting the cable from side to side. Cable guides should be positioned at approximately 25 ft (7.62 m) intervals along the carrier cable between the top and bottom brackets, and at any point along the system where the cable may abrade against the structure. Cable guides should be staggered along the system to reduce harmonic effects of the wind, such as at 23 (7.01), 25 (7.61), and 27 (8.23) feet (m) intervals. For high wind areas "L" shaped cable guides may be used. The "L" shaped cable guides should be alternated with opening on the left, then right, etc. up the ladder. Latching cable guides are also available.

Direct Connection to Ladder:

See Figure 18 for typical installations of cable guides onto a ladder. (A = CG-15, B = CG-3, C = CG-5) Some cable guides utilize rung spacers and clamp plates while others do not (see Figure 4). Install the cable guide using the hardware provided. Do not substitute other fasteners. Torque fasteners to 20-25 ft-lbs (27.1-33.9 N-m).

SO-7 Weld-on Stand-off Support Installation:

Install the SO-7 stand-off as shown in Figure 19. See section 3.3 for welding recommendations. The stand-off (A [model SO-7 is shown]) must be perpendicular to the pole surface and in-line with the carrier cable. (B = cable guide)

Angle Leg and Round Leg Stand-off Support Installation:

See Figure 20 for typical installations of angle leg (A) and round leg (B) stand-off supports. Install the stand-off support using the hardware provided. Do not substitute other fasteners. Torque fasteners to 20-25 ft-lbs (27.1-33.9 N-m).

Install the cable guide to the stand-off support using the hardware provided. Do not substitute other fasteners. Torque fasteners to 20-25 ft-lbs (27.1-33.9 N-m).

3.7 INSTALLATION OF BOTTOM BRACKET AND CARRIER CABLE TENSION ADJUSTMENT:

Before installing the bottom bracket it is recommended that the ladder and/or climbing structure be evaluated by a qualified engineer to determine if the load requirements for the system specified in section 2.2 are met.

Depending on the length of the system, and the environment in which the system is installed, it may be necessary to periodically re-tension the system. Extreme temperature ranges and very long systems will likely require periodic re-tensioning. The tension indicator can be purchased separately (9504239). Contact DBI-SALA for details.

A. INSTALLATION OF BB-1, BB-2, BB-3, AND BB-9 BOTTOM BRACKETS:

Direct Connection to Ladder:

See Figure 21 for a typical installation of the bottom bracket onto a ladder. Some brackets utilize "U"-bolts while others utilize bolts and clamp plates to attach to the ladder (see Figure 3). The bottom bracket should be positioned to allow users safe access when connecting or disconnecting from the system. The bottom bracket must be mounted in-line (vertically) with the top bracket.

One rung clamp is designed to bolt through the bracket and onto the rung. This clamp must not be omitted, or the bracket may slip under load.

Install the rung clamps using hardware provided. Do not substitute other fasteners. Torque fasteners to 20-25 ft-lbs (27.1-33.9 N-m).

Stand-off Support Connection:

Figure 22 shows the installation of the bottom brackets using a horizontal stand-off bracket. Use U-bolts to attach to support leg (A). Use hex bolts provided in place of U-bolts to attach the bottom bracket to the horizontal stand-off (B). Torque fasteners to 20-25 ft-lbs (27.1-33.9 N-m).

Carrier Cable Tension Adjustment:

Figure 21 shows the assembly of the tension rod to the bottom bracket and carrier cable (A). Loosely clamp the saddle clips (B) around the carrier cable. Slide the tension rod (C) down the carrier cable and through the hole in the bracket until sufficient threads are exposed to allow the installation of the tension indicator (D), washers (E), and nuts (F and G). Remove the slack in the carrier cable by the pulling cable through the saddle clips. Tighten saddle clips to 35 ft.-lbs (47.5 N-m). Tighten the tensioning nut (F) until the ring on the tension indicator is sheared off. A small amount of grease on the tension rod threads will reduce the effort required to tension the carrier cable. If there are insufficient threads exposed to fully tension the carrier cable, pull more carrier cable through the saddle clips on the tension rod and repeat the procedure. When correct carrier cable tension is reached tighten the jam nut (G) against the tensioning nut. Cut off excess cable just below the lower saddle clip.

B. INSTALLATION OF BB-4, BB-5, AND BB-6 BOTTOM BRACKETS:

Bottom Bracket Installation:

See Figure 23 for typical installations of the BB-4 and BB-6 bottom brackets onto a round rung ladder. See Figure 24 for a typical installation of the BB-5 bottom bracket with a weld-on stand-off support. The bottom bracket should be positioned to allow users safe access when connecting or disconnecting from the system. The bottom bracket must be mounted in-line (vertically) with the top bracket.

One rung clamp is designed to bolt through the bracket and onto the rung. This clamp must not be omitted, or the bracket may slip under load.

Install the rung clamps using the hardware provided. Do not substitute other fasteners. Torque fasteners to 20-25 ft.-lbs (27.1-33.9 N-m).

Weld-on Stand-off Installation:

Install the SO-2 stand-off support as shown in Figure 24. See section 3.3 for welding recommendations. The stand-off must be perpendicular to the pole surface and in-line with the carrier cable.

Carrier Cable Tension Adjustment:

Figures 23 and 24 show the assembly of the tension rod to the bottom bracket and carrier cable. Loosely clamp the saddle clips around the carrier cable (A). Slide the tension rod (C) down the carrier cable and through the hole in the bracket until sufficient threads are exposed to allow the installation of the washers (E) and nuts (F and G). Remove slack in the carrier cable by pulling the cable through the saddle clips. Tighten the saddle clips to 35 ft.-lbs (47.5 N-m). Tighten the tensioning nut (F) until the carrier cable is taut. A small amount of grease on the tension rod threads will reduce the effort required to tension the carrier cable. Compress the spring to approximately 5-1/2 in. (14 cm) (H). Do not completely compress the spring. If there are insufficient threads exposed to fully tension the carrier cable, pull more carrier cable through the saddle clips on the tension rod and repeat the procedure. When the correct carrier cable tension is reached, tighten the jam nut against the tensioning nut (G). Cut off excess cable just below the lower saddle clip.

C. INSTALLATION OF BB-7 BOLT-ON BOTTOM BRACKETS:

Bottom Bracket Installation:

See Figure 25 for a typical installation of the BB-7 bottom brackets. The bottom bracket should be positioned to allow users safe access when connecting or disconnecting from the system. The bottom bracket must be mounted in-line (vertically) with the top bracket. The 6100035 and 6100040 bottom brackets are designed to be connected to the structure using a DBI-SALA or customer supplied stand-off support. Customer supplied stand-off supports must be capable of withstanding the loads specified in section 2.2 and must be compatible with the LAD-SAF™ system.

Weld-on Stand-off Installation:

Install the SO-2 stand-off support as shown in Figure 25. See section 3.3 for welding recommendations. The stand-off must be perpendicular to the pole surface and in-line with the carrier cable.

Angle Leg and Round Leg Stand-off Installation:

See Figure 26 for the installation of angle (A) and round (B) leg stand-off supports. Install stand-off supports using the hardware provided. Do not substitute other fasteners. Torque 3/8 inch fasteners to 20-25 ft.-lbs (27.1-33.9 N-m). Install bottom bracket to stand-off support using 1/2-inch fasteners provided. Torque 1/2-inch fasteners to 40-45 ft.-lbs (54-61 N-m).

Carrier Cable Tension Adjustment:

Figure 25 shows the assembly of the tension rod to the bottom bracket and carrier cable (A). Loosely clamp the saddle clips (B) around the carrier cable. Slide the tension rod (C) down the carrier cable and through the hole in the bracket until sufficient threads are exposed to allow the installation of the tension indicator (D), washers (E), and nuts (F and G). Remove slack in the carrier cable by pulling the cable through the saddle clips. Tighten saddle clips to 35 ft.-lbs (47.5 N-m). Tighten the tensioning nut (F) until the ring on the tension indicator is sheared off. A small amount of grease on the tension rod threads will reduce the effort required to tension the carrier cable. If there are insufficient threads exposed to fully tension the carrier cable, pull more carrier cable through the saddle clips on the tension rod and repeat the procedure. When the correct carrier cable tension is reached, tighten the jam nut (G) against the tensioning nut. Cut off excess cable just below the lower saddle clip.

D. INSTALLATION OF BB-8 WOOD POLE BOTTOM BRACKET:

Bottom Bracket Installation:

See Figure 27 for a typical installation of the BB-8 bottom bracket. The bottom bracket should be positioned to allow users safe access when connecting or disconnecting from the system. The bottom bracket must be mounted in-line (vertically) with the top bracket. Use 1/2-inch fasteners (not provided) to attach the bottom bracket to the pole. DBI-SALA recommends using lock washers, double nuts, or other methods to ensure fasteners will not loosen.

Carrier Cable Tension Adjustment:

Figure 27 shows the assembly of the tension rod to the bottom bracket and carrier cable. Loosely clamp the saddle clips around the carrier cable. Slide the tension rod down the carrier cable and through the hole in the bracket until sufficient threads are exposed to allow the installation of the tension indicator, washers, and nuts. Remove slack in the carrier cable by pulling the cable through the saddle clips. Tighten saddle clips to 35 ft.-lbs (47.5 N-m). Tighten the tensioning nut until the ring on the tension indicator is sheared off. A small amount of grease on the tension rod threads will reduce the effort required to tension the carrier cable. If there are insufficient threads exposed to fully tension the carrier cable, pull more carrier cable through the saddle clips on the tension rod and repeat the procedure. When the correct carrier cable tension is reached, tighten the jam nut against the tensioning nut. Cut off excess cable just below the lower saddle clip.

E. 5900172 COUNTERWEIGHT:

To install the 5900172 counterweight onto the carrier cable, loosen the saddle clips and pass the carrier cable through the counterweight. Position the counterweight to allow users safe access when connecting or disconnecting from the system. Tighten the saddle clips against the carrier cable.

4.0 IDENTIFICATION AND INSPECTION AFTER SYSTEM INSTALLATION:

- A.** Install the installation and service label onto the ladder or structure in a prominent location. Use the steel wire provided with the label to attach it to the ladder or structure. Before installing the label, mark the installation date and number of users allowed in the appropriate locations on the label. Use a metal letter stamp to mark the label. Record the system identification information in the *Installation Checklist* at the end of this manual.
- B.** After installation conduct a final inspection of the system as follows:
 - Ensure all fasteners are in place and properly tightened.
 - Ensure the carrier cable is properly tensioned. Do not use the Lad-Saf™ system if the bottom of the cable is not secured/tensioned with the bottom bracket assembly.
 - For cables terminated with a carrier clamp, the cable should extend above the carrier clamp 1.0 in. - 2.0 in. (2.5 cm - 5.0 cm).
 - Ensure the carrier cable does not abrade against the structure at any point.
 - Ensure the system information is recorded on the label.

5.0 INSPECTION

5.1 RFID TAG:

The Lad-Saf™ system includes a Radio Frequency Identification (RFID) tag (Figure 28). The RFID tag can be used in conjunction with a handheld reading device and web based portal to simplify inspection and inventory control and provide records for your fall protection equipment. If you are a first-time user, contact a 3M Fall Protection Customer Service representative (see back cover). If you have already registered, go to www.3M.com/FallProtection. Follow the instructions provided with your handheld reader or on the web portal to transfer your data to your web log..

6.0 MAINTENANCE, SERVICING, STORAGE

- 6.1** If the carrier cable becomes heavily soiled with oil, grease, paint, or other substances, clean it with warm soapy water. Wipe off the cable with a clean, dry cloth. Do not force dry with heat. Do not use acid or caustic chemicals that could damage the cable.

7.0 SPECIFICATIONS

- 7.1** All top and bottom brackets, cable guides, carrier cable, and fasteners are made of galvanized or stainless steel. Contact DBI-SALA for material specification details if required. The LAD-SAF™ system, when installed according to the installation instructions, meets OSHA, ANSI (ANSI A14.3), CSA (Z259.2.5) and CE (prEN353-1:2014+2017:A1) requirements.

8.0 LAD-SAF SYSTEM LABELING

<input checked="" type="checkbox"/> Please reference the User Manual supplied with the Lad-Saf™ X2 Detachable Sleeve for proper use and maintenance of this system.

Lad-Saf System:

The Lad-Saf Flexible Cable Ladder Safety System label must be securely attached and fully legible. (See Figure 28) Label Contents:

1. Acceptable cable sleeve part numbers associated with flexible cable size.
2. **WARNING:** Failure to heed warnings may result in serious injury or death. Manufacturer's instructions supplied with this product at time of shipment must be followed for proper installation, use, inspection and maintenance. Unauthorized alteration or substitution of system elements or components is prohibited. Do not use system with incompatible safety sleeves. Before each use inspect system visually for defects. Formally inspect system in accordance with instructions at least annually. Refer to instructions for information on periodic formal inspections. Minimum spacing of users of this system is 20 ft.
3. Serial Number
4. RFID Tag
5. System Installation Date
6. Proof Test Completed
7. Inspected By
8. Date of Inspection
9. Inspections
10. System Capacity

PARTS LIST

ITEM	ANSI, CSA	CE	DESCRIPTION
TB-1	6116054	6116054	Top bracket galvanized
TB-2	6116056	KC36116056	Top bracket galvanized
TB-3	6116280	KC3PL280	Top bracket galvanized
	6116278	6116278	Top bracket galvanized, 8 mm
TB-4	6116210	KC3PL210	Top bracket stainless steel
TB-5	6116224	6116224	Top bracket galvanized
TB-6	6116250	KC36116250	Top bracket galvanized
TB-7	6116261	KC36116261	Top bracket galvanized
TB-8	6116120	6116120	Top bracket, galvanized, telescoping
TB-9	6116005	KC36110020	Top bracket, stainless steel for 1-3/4" rung (2 clamps)
	6116050	6116050	Top bracket, galvanized for 2" x 1-1/2" rung
	6116052	6116052	Top bracket, galvanized for 1-1/2" rung
	6116074	6116074	Top bracket, stainless steel for 1-1/8" rung
	6116325	6116325	Top bracket, stainless steel for 1-1/8" rung
	6116328	6116328	Top bracket, stainless steel for 1-1/8" x 2" rung
TB-10	6116410	6116410	Top bracket, galvanized
TB13	6116048	6116048	Top bracket, galvanized for 1-1/2" x 1-1/2" angle x 30°
	6116051	6116051	Top bracket, galvanized for 1-1/4" angle
	6116055	6116055	Top bracket, galvanized for 1" x 3/4" angle
	6116057	6116057	Top bracket, galvanized for 1-1/2" x 1-1/2" angle
	6116059	6116059	Top bracket, galvanized for 1" angle
	6116282	KC36116282	Top bracket, galvanized for 1-1/2" x 1-1/2" angle (square spacer)
TB14	6116286	6116286	Top bracket, galvanized for 1-1/2" x 1-1/2" rung
	6116290	6116290	Top bracket, galvanized for 1-3/4" round rung
	6116291	6116291	Top bracket, galvanized for 1-3/4" x 2-1/4" rung
	6116292	6116292	Top bracket, galvanized for 2-1/2" x 3/8" rung
	6116293	6116293	Top bracket, galvanized for 2" x 1" rung
	6116294	6116294	Top bracket, galvanized for 2" x 2" rung
	6116295	6116295	Top bracket, galvanized for 4" x 2" rung
	6116296	6116296	Top bracket, galvanized for 2" x 4" rung
6116324	6116324	Top bracket, stainless steel for 2" round rung	
BB-1	6100090	KC3PL90	Bottom Bracket, Galvanized
	6100091	KC36100091	Bottom Bracket, Galvanized, Extra-Long
	6100092	6100092	Bottom Bracket, Galvanized, 37"
	6100093	6100093	Bottom Bracket, Galvanized, 48"
BB-2	6100060	6100060	Bottom Bracket, Galvanized for 2" x 1-1/4" rung
	6100070	6100070	Bottom Bracket, Stainless Steel
	6100073	6100073	Bottom Bracket, Stainless Steel for 1-1/8" x 2" rung
	6100128	6100128	Bottom Bracket, Galvanized for 1-1/2" rung
BB-3	6100072	6100072	Bottom Bracket, Stainless Steel for 2" round rung
	6100100	KC361001W	Bottom Bracket, Galvanized for 1-1/2" x 1-1/2" rung
	6100110	6100110	Bottom Bracket, Galvanized for 1-1/4" x 2-1/4" rung
	6100111	6100111	Bottom Bracket, Galvanized for 4" x 2" rung
	6100112	6100112	Bottom Bracket, Galvanized for 2" x 1" rung
	6100113	6100113	Bottom Bracket, Galvanized for 1-3/4" round rung
	6100114	6100114	Bottom Bracket, Galvanized for 2-1/2" x 3/8" rung
	6100115	6100115	Bottom Bracket, Galvanized for 2" x 2" rung
6100116	6100116	Bottom Bracket, Galvanized for 2" x 4" rung	

PARTS LIST

ITEM	ANSI, CSA	CE	DESCRIPTION
BB-4	6100095	KC3PL95	Bottom Bracket, Stainless Steel
BB-5	6100224	6100224	Bottom Bracket, Stainless Steel
BB-6	6100015	KC3PL822	Bottom Bracket, Galvanized
BB-7	6100035	KC36100035	Bottom Bracket, Galvanized
	6100038	KC36100038	Bottom Bracket - Stainless Steel
BB-8	6100045	6100045	Bottom Bracket, Galvanized
BB-9	6100050	6100050	Bottom Bracket, Galvanized for 1-5/8" x 1-3/8" rung
	6100055	6100055	Bottom Bracket, Galvanized for 1-1/2" x 1-1/2" angle 30°
	6100065	KC36100065	Bottom Bracket, Galvanized for 1-1/2" x 1-1/2" x 3/16" angle (square spacer)
	6100131	6100131	Bottom Bracket, Galvanized for 1-1/4" angle
	6100132	6100132	Bottom Bracket, Galvanized for 1-3/4" angle
	6100133	6100133	Bottom Bracket, Galvanized for 1-1/2" x 1-1/4" rung
	6100134	6100134	Bottom Bracket, Galvanized for 1" rung
CG-1	6100249	6100249	Cable Guide, Stainless Steel, 45° bend
CG-2	6100140	6100140	Cable Guide
CG-3	6100400	KC3PL330	Cable Guide, Galvanized
	6100401	6100401	Cable Guide, Stainless Steel
	6100428	6100402	Cable Guide, Stainless Steel, 1-1/2" center
CG-4	6100430	KCPL379	Cable Guide, Galvanized
	6100431	6100431	Cable Guide, Galvanized
	6100432	6100432	Cable Guide, Stainless Steel
	6100435	6100435	Cable Guide, Stainless Steel, 4" extra length
CG-5	6100420	6100420	Cable Guide, Galvanized, (Stainless Steel hardware), 1-1/4" x 2" rung
	6100421	6100421	Cable Guide, Stainless Steel, 1-1/4" x 2" rung
	6100422	6100422	Cable Guide, Stainless Steel, 1-3/4" x 1-3/4" rung
	6100423	6100423	Cable Guide, Stainless Steel, 1-3/4" x 2-1/4" rung
	6100424	6100424	Cable Guide, Stainless Steel, 1-3/8" x 1-3/4" rung
	6100425	6100425	Cable Guide, Stainless Steel, 2" x 1" rung
	6100426	6100426	Cable Guide, Stainless Steel, 2" x 2" rung
	6100427	6100427	Cable Guide, Stainless Steel, 1-5/8" x 1" rung
	6100428	KC36100428	Cable Guide, Galvanized, 1-1/2" rung
	6100429	6100429	Cable Guide, Stainless Steel, 2-1/4" x 2-1/2" rung
6100457	KC3PL333	Cable Guide, Stainless Steel	
CG-6	6100448	KC36100448	Cable Guide, Stainless Steel, 1-1/15" angle rung
	6100449	6100449	Cable Guide, Stainless Steel, 2-3/8" x 7/8" rung
	6100453	6100453	Cable Guide, Stainless Steel, 1-1/4" angle rung
	6100454	6100454	Cable Guide, Stainless Steel, 1" x 3/4" angle
CG-7	6100525	6100525	Cable Guide, Stainless Steel, 1-1/2" angle rung
CG-8	6100455	6100455	Cable Guide, Stainless Steel, 1-1/4" x 1-1/4" angle
CG-9	6100505	KC3PL190	Cable Guide, Stainless Steel
	6100506	6100506	Cable Guide, Stainless Steel, 1-1/4" x 1-1/4" x 3/16" angle
CG-10	6100460	6100460	Cable Guide, Stainless Steel, w/Twist 39°
	6100461	6100461	Cable Guide, Stainless Steel, w/Twist 27°
	6100462	6100462	Cable Guide, Stainless Steel, w/Twist 45°
CG-11	6100475	6100475	Cable Guide, Stainless Steel, 1-1/2" x 1-1/2" angle 30°
CG-12	6100533	6100533	Cable Guide, Stainless Steel, w/Latch and Clamp Plate
CG-13	6100532	6100532	Cable Guide, Galvanized, w/Latch

PARTS LIST

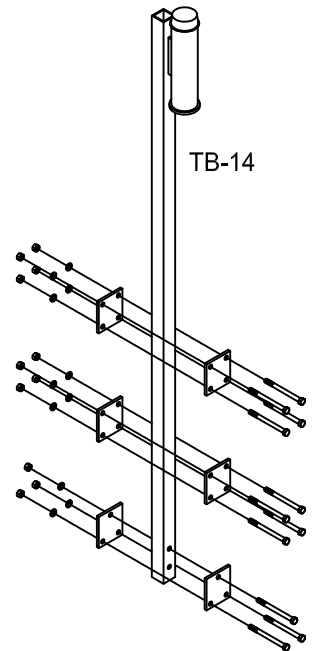
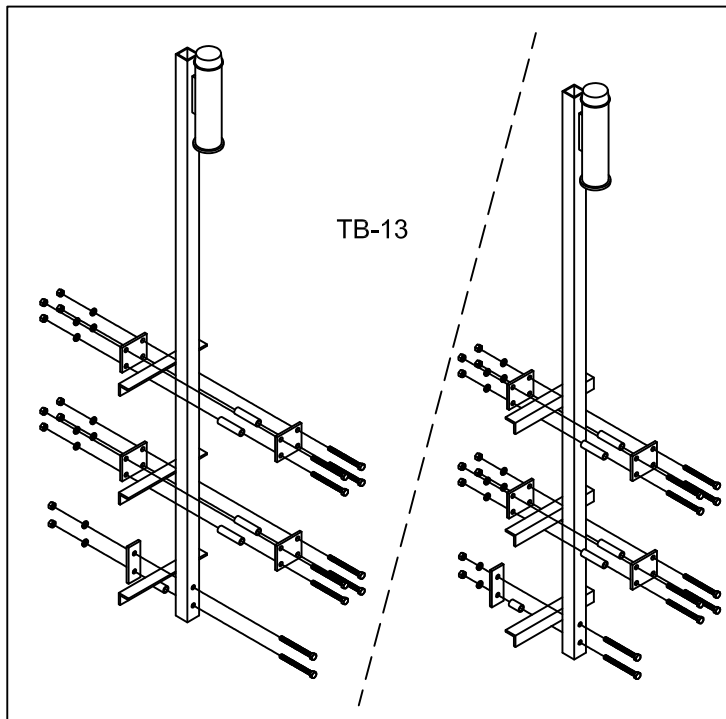
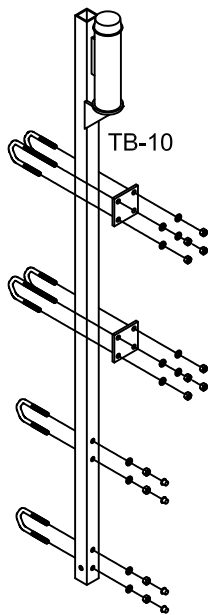
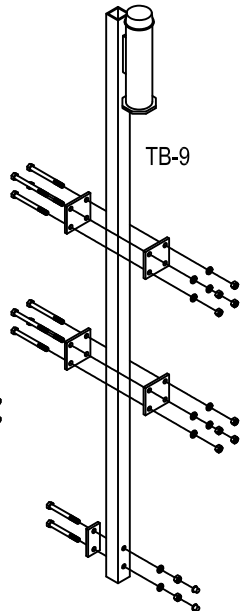
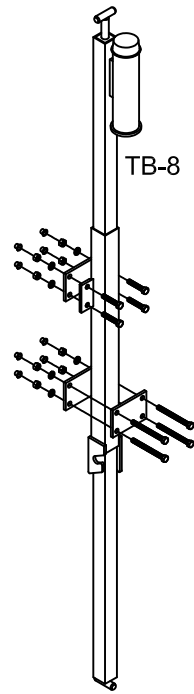
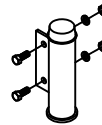
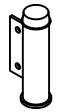
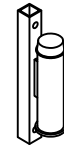
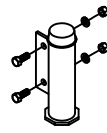
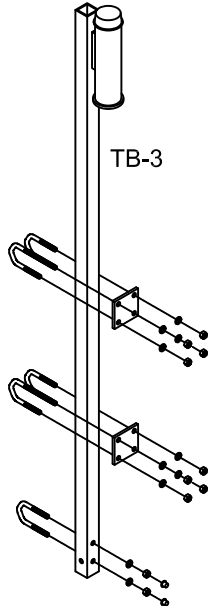
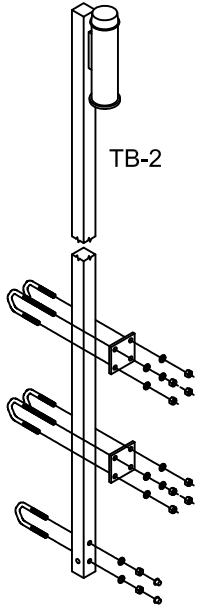
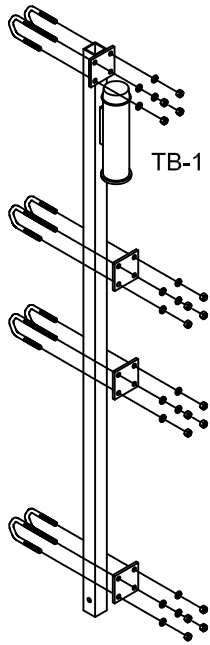
ITEM	ANSI, CSA	CE	DESCRIPTION
CG-14	6100530	KC36100530	Cable Guide
	6100531	6100531	Cable Guide, no U-Bolt
CG-15	6100515	KC3PL105	Cable Guide, Galvanized
	6100516	KC36100516	Cable Guide, Galvanized, w/Caps
	6100517	6100517	Cable Guide, Stainless Steel
CG-16	6100470	6100470	Cable Guide
CG-17	6100520	6100520	Cable Guide, Stainless Steel, 4.313" long
	6100521	6100521	Cable Guide, Galvanized, w/Caps
	6100522	6100522	Cable Guide, Galvanized
	6100523	KC3PL310	Cable Guide, Stainless Steel, 4.125" long
SO-1	6100700 - 6100720		Top/Bottom Bracket Horizontal Stand-Off
SO-2	6100710	KC36100710	Top/Bottom Bracket Weld-On Stand-Off
SO-3	6100670 - 6100697		Cable Guide Round Leg Stand-Off Support
SO-4	6100600	6100600	Top/Bottom Bracket Angle Stand-Off, 60° angle, 2" - 2-1/2" angle size, Stainless Steel
	6100601	6100601	Top/Bottom Bracket Angle Stand-Off, 60° angle, 3" - 3-1/2" angle size, Galvanized
	6100602	6100602	Top/Bottom Bracket Angle Stand-Off, 60° angle, 3" - 3-1/2" angle size, Stainless Steel
	6100603	6100603	Top/Bottom Bracket Angle Stand-Off, 60° angle, 4" - 4-1/2" angle size, Galvanized
	6100604	6100604	Top/Bottom Bracket Angle Stand-Off, 60° angle, 4" - 4-1/2" angle size, Stainless Steel
	6100606	6100606	Top/Bottom Bracket Angle Stand-Off, 60° angle, 6" - 6-1/2" angle size, Stainless Steel
	6100607	6100607	Top/Bottom Bracket Angle Stand-Off, 60° angle, 5" - 5-1/2" angle size, Galvanized
	6100635	6100635	Top/Bottom Bracket Angle Stand-Off, 90° angle, 2" - 2-1/2" angle size, Stainless Steel
	6100636	6100636	Top/Bottom Bracket Angle Stand-Off, 90° angle, 3" - 3-1/2" angle size, Galvanized
	6100637	6100637	Top/Bottom Bracket Angle Stand-Off, 90° angle, 3" - 3-1/2" angle size, Stainless Steel
	6100638	6100638	Top/Bottom Bracket Angle Stand-Off, 90° angle, 4" - 4-1/2" angle size, Stainless Steel
	6100639	6100639	Top/Bottom Bracket Angle Stand-Off, 90° angle, 4" - 4-1/2" angle size, Galvanized
	6100640	6100640	Top/Bottom Bracket Angle Stand-Off, 90° angle, 5" - 5-1/2" angle size, Stainless Steel
	6100641	6100641	Top/Bottom Bracket Angle Stand-Off, 90° angle, 6" - 6-1/2" angle size, Stainless Steel
	6100642	6100642	Top/Bottom Bracket Angle Stand-Off, 90° angle, 8" - 8-1/2" angle size, Galvanized
	6100643	6100643	Top/Bottom Bracket Angle Stand-Off, 90° angle, 9" - 9-1/2" angle size, Stainless Steel
	6100644	6100644	Top/Bottom Bracket Angle Stand-Off, 90° angle, 3-1/2" - 4" angle size, Stainless Steel
SO-5	6100645 - 6100669		Top/Bottom Bracket Round Leg Stand-Off
SO-6	6100610	6100610	Cable Guide Angle Leg Stand-Off Support, 60° angle, 2" - 2-1/2" angle size, Galvanized
	6100611	6100611	Cable Guide Angle Leg Stand-Off Support, 60° angle, 3" - 3-1/2" angle size, Galvanized
	6100612	6100612	Cable Guide Angle Leg Stand-Off Support, 60° angle, 3" - 3-1/2" angle size, Stainless Steel

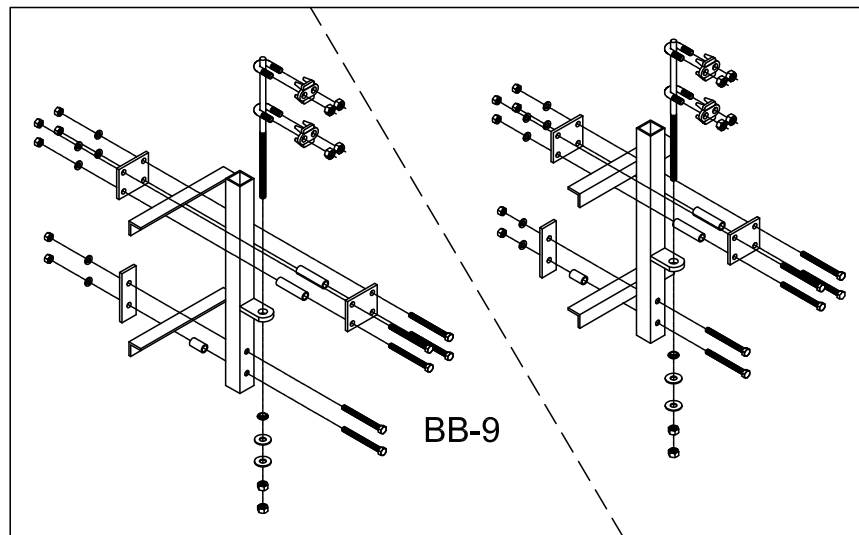
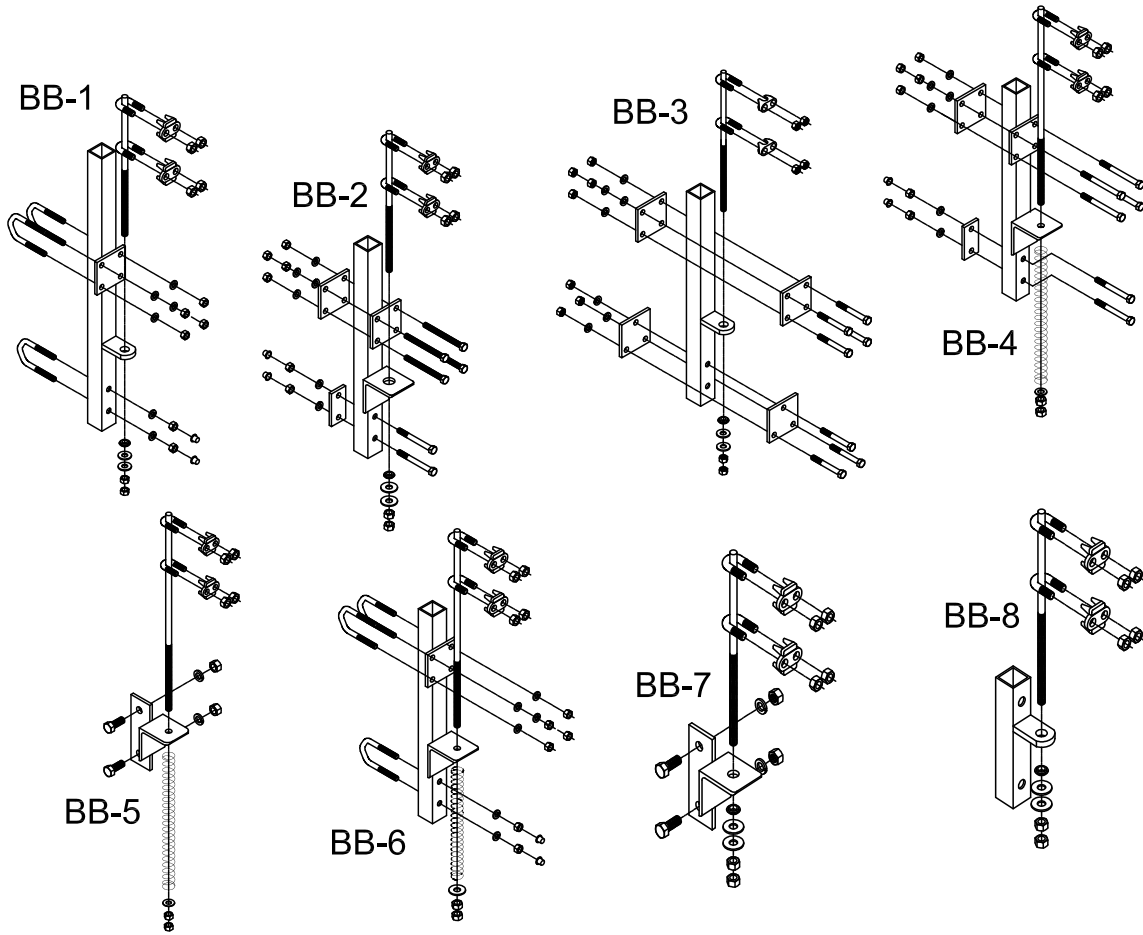
PARTS LIST			
ITEM	ANSI, CSA	CE	DESCRIPTION
SO-6	6100613	6100613	Cable Guide Angle Leg Stand-Off Support, 60° angle, 4" - 4-1/2" angle size, Galvanized
	6100614	6100614	Cable Guide Angle Leg Stand-Off Support, 60° angle, 4" - 4-1/2" angle size, Stainless Steel
	6100620	6100620	Cable Guide Angle Leg Stand-Off Support, 90° angle, 2" - 2-1/2" angle size, Stainless Steel
	6100621	6100621	Cable Guide Angle Leg Stand-Off Support, 90° angle, 3" - 3-1/2" angle size, Galvanized
	6100622	6100622	Cable Guide Angle Leg Stand-Off Support, 90° angle, 3" - 3-1/2" angle size, Stainless Steel
	6100623	6100623	Cable Guide Angle Leg Stand-Off Support, 90° angle, 4" - 4-1/2" angle size, Galvanized
	6100624	6100624	Cable Guide Angle Leg Stand-Off Support, 90° angle, 4" - 4-1/2" angle size, Stainless Steel
	6100625	6100625	Cable Guide Angle Leg Stand-Off Support, 90° angle, 5" - 5-1/2" angle size, Stainless Steel
	6100626	6100626	Cable Guide Angle Leg Stand-Off Support, 90° angle, 5" - 5-1/2" angle size, Galvanized
	6100627	6100627	Cable Guide Angle Leg Stand-Off Support, 90° angle, 6" - 6-1/2" angle size, Galvanized
	6100628	6100628	Cable Guide Angle Leg Stand-Off Support, 90° angle, 6" - 6-1/2" angle size, Stainless Steel
	6100629	6100629	Cable Guide Angle Leg Stand-Off Support, 90° angle, 8" - 8-1/2" angle size, Galvanized
	6100630	6100630	Cable Guide Angle Leg Stand-Off Support, 90° angle, 8" - 8-1/2" angle size, Stainless Steel
6100631	6100631	Cable Guide Angle Leg Stand-Off Support, 90° angle, 3-1/2" - 4" angle size, Stainless Steel	
SO-7	6100135	6100135	Cable Guide Stand-Off Support, Galvanized
	6100136	KC36100136	Cable Guide Stand-Off Support, Stainless Steel
Cable	9500098	9500098	Cable, 3/8, 7 x 19, Galvanized
	9500099	9500099	Cable, 3/8, 7 x 19, 304 Stainless Steel
	9500396	9500396	Cable, 3/8, 1 x 7, Galvanized
	9500397	9500397	Cable, 3/8, 1x 7, 304 Stainless Steel
	9501591	9501591	Cable, 5/16, 7 x 19, Galvanized
		7240212	Cable, 8mm, 1 x 19,316 Stainless Steel

INSTALLATION CHECKLIST

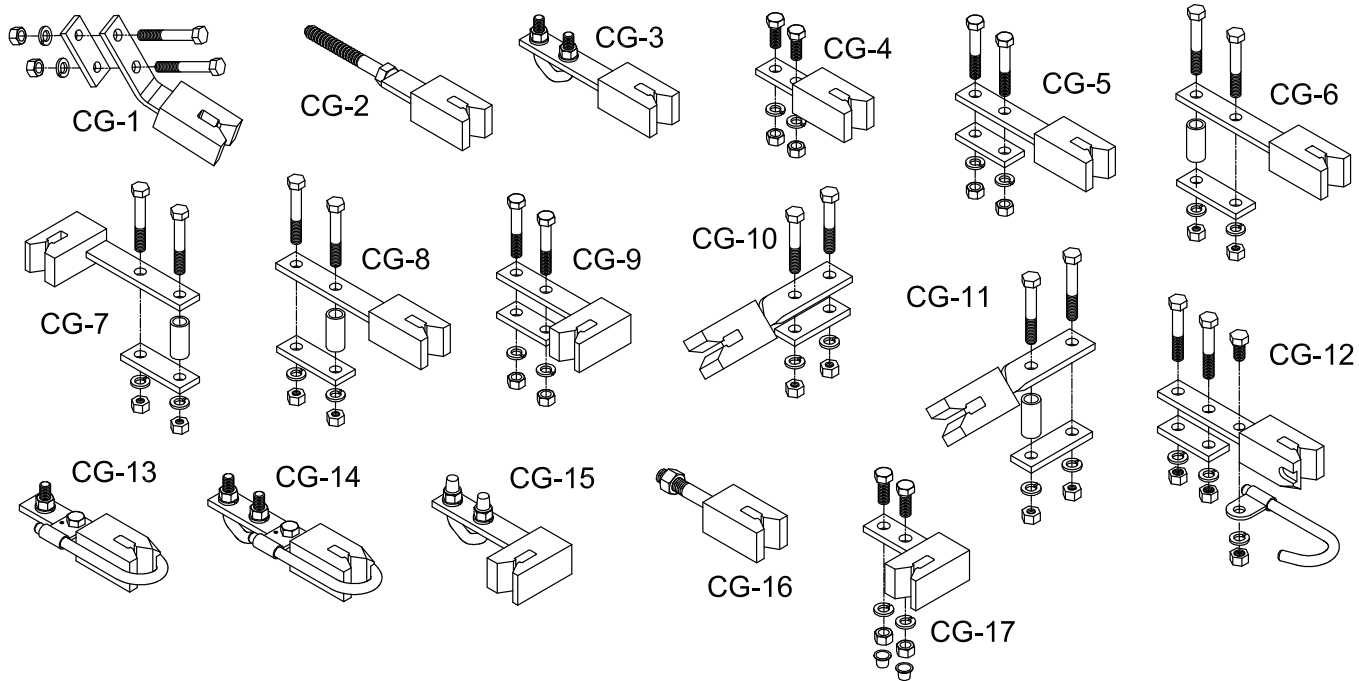
Serial Number(s):	
Date Purchased:	Date Of First Use:

Install Date:	<input type="checkbox"/> Ensure all fasteners are in place and properly tightened. <input type="checkbox"/> Ensure the Carrier Cable is properly tensioned <input type="checkbox"/> Ensure the Carrier Cable does not abrade against the structure at any point. <input type="checkbox"/> Ensure system information is recorded on the system label and Inspection and Maintenance Log: Components of the LAD-SAF system include a Radio Frequency (RFID) tag. The RFID tag can be used in conjunction with a handheld reading device and web based portal to simplify inspection and inventory control and provide records for your fall protection equipment.
Approved By:	
Corrective Action/Maintenance	

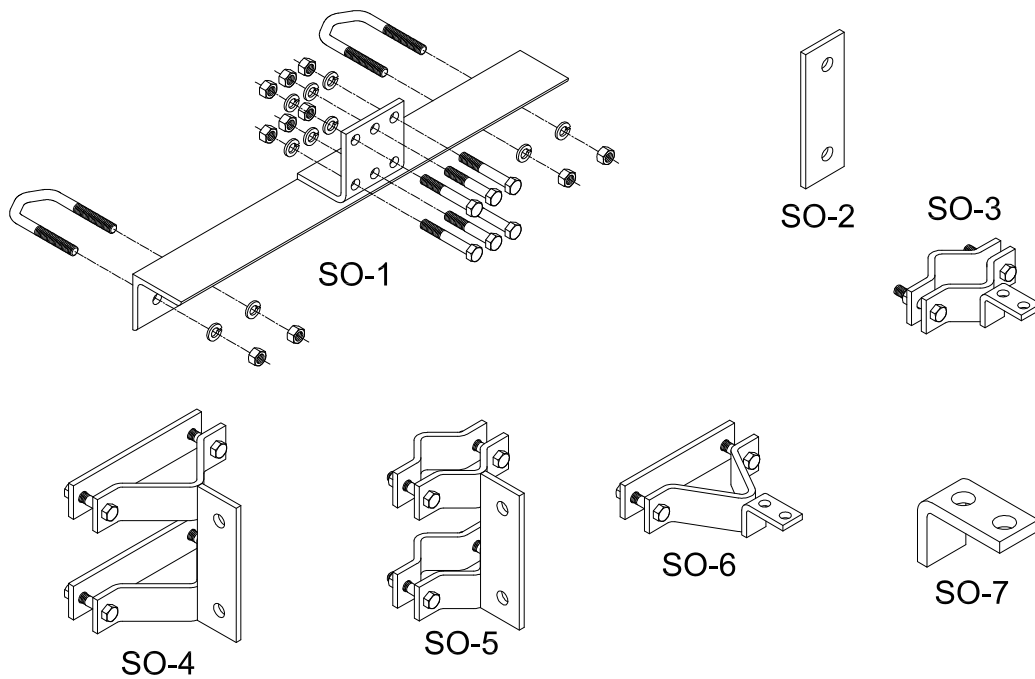




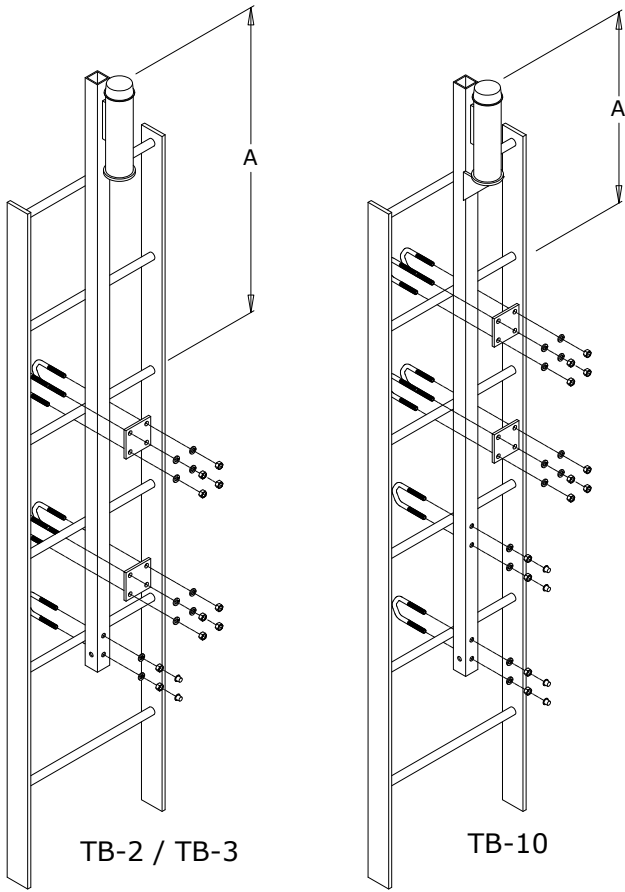
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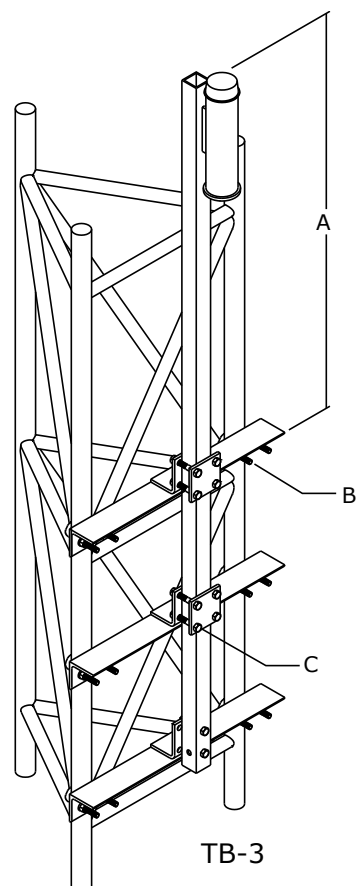
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TB-2 / TB-3

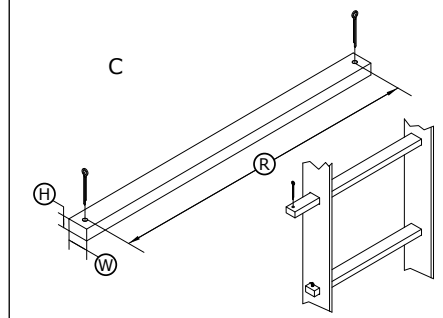
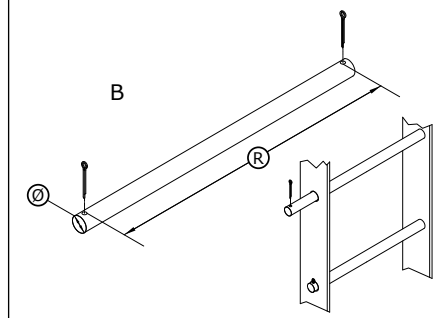
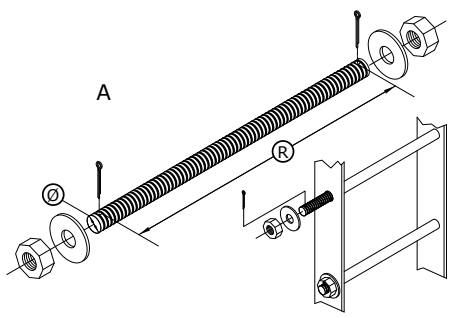
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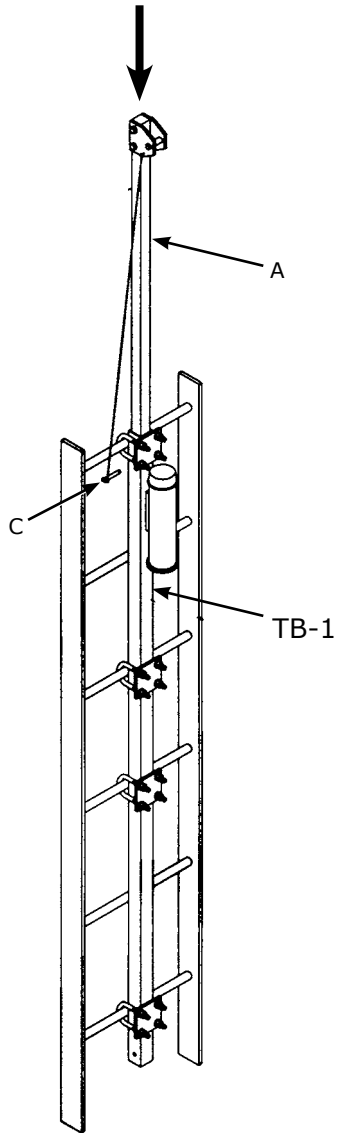


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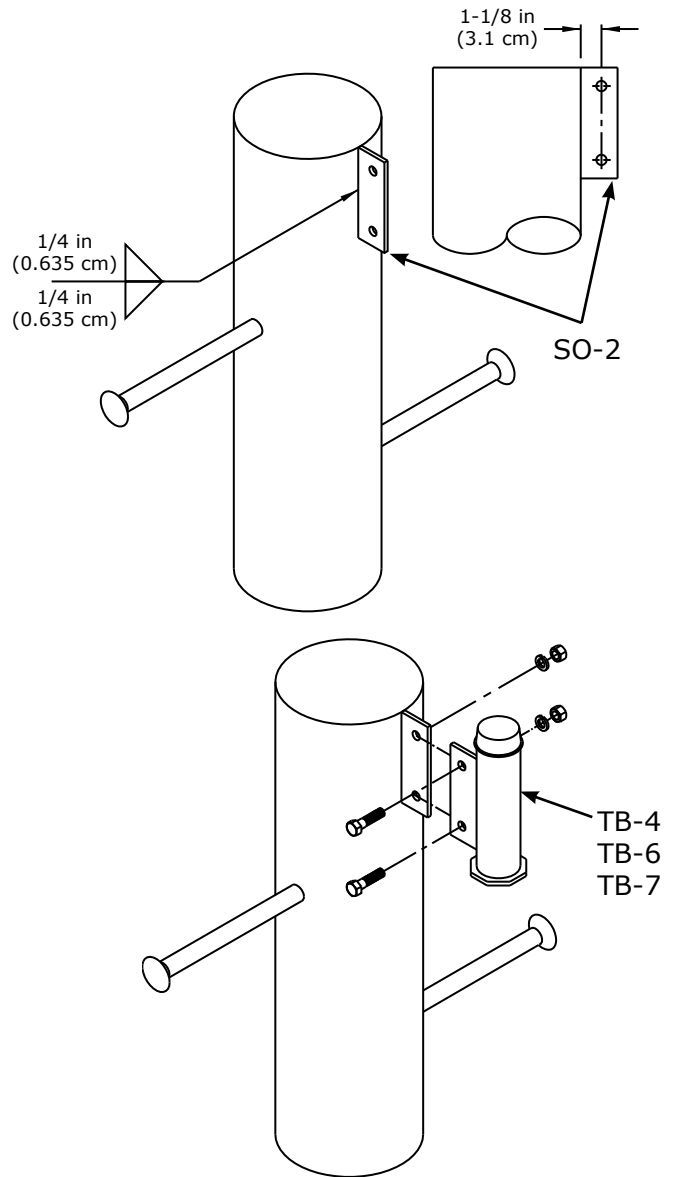
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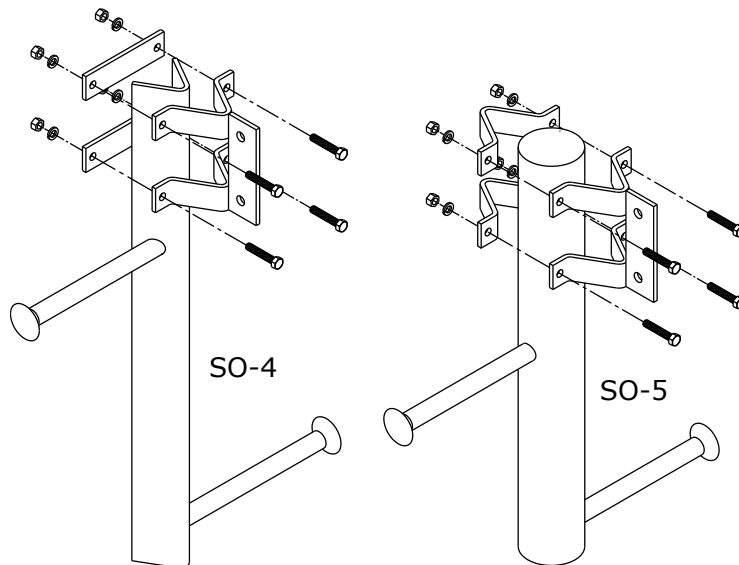
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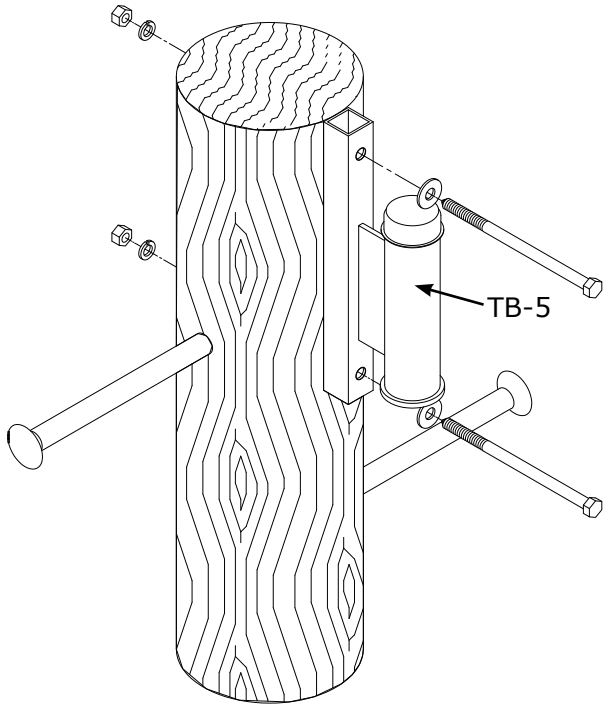
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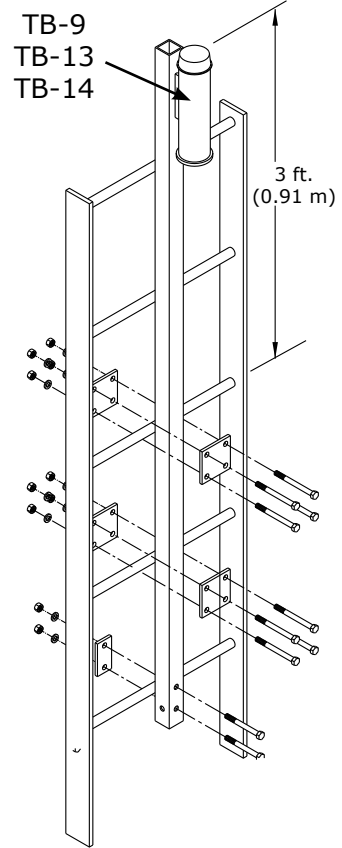
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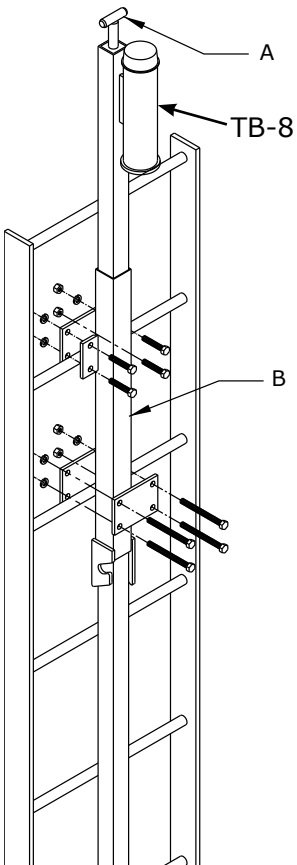
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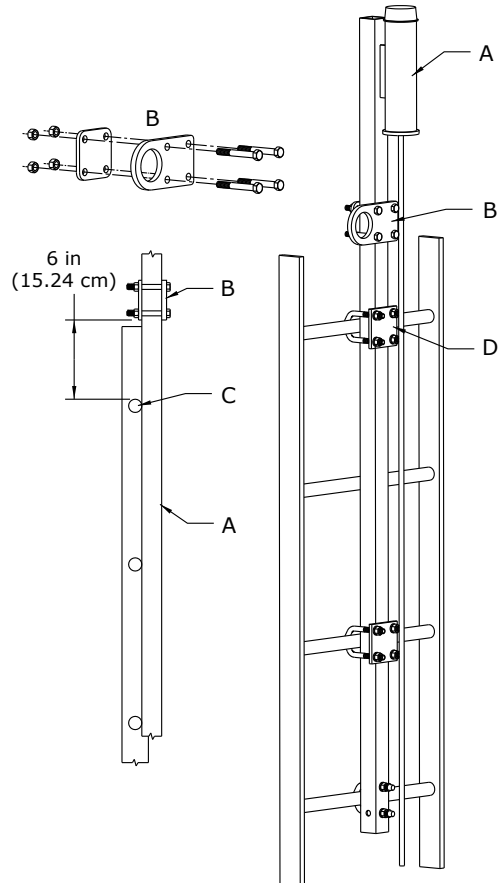
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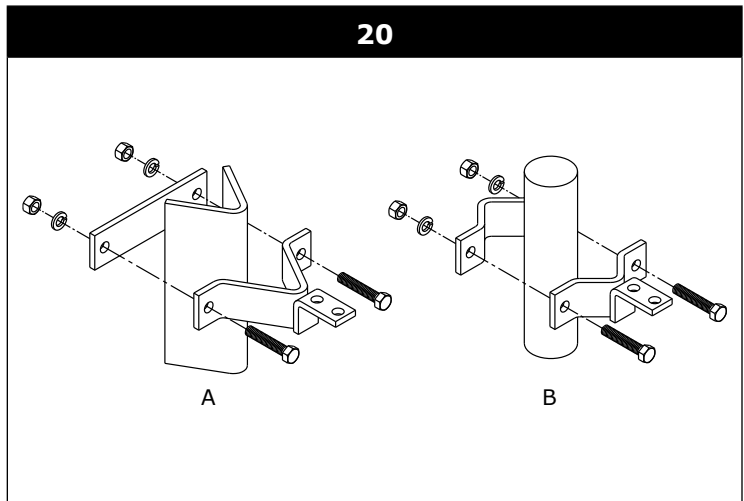
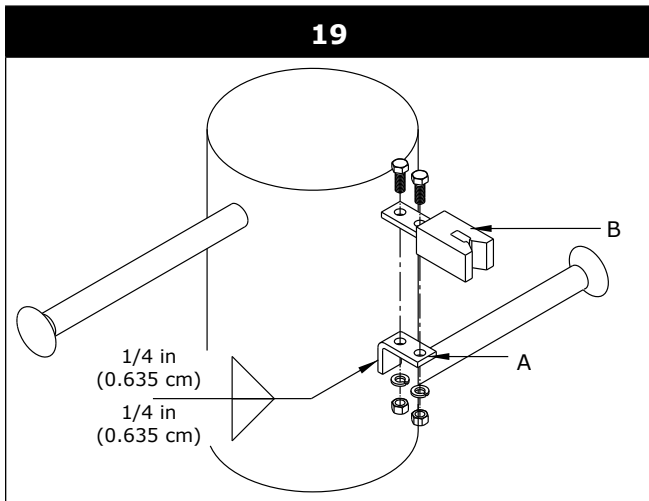
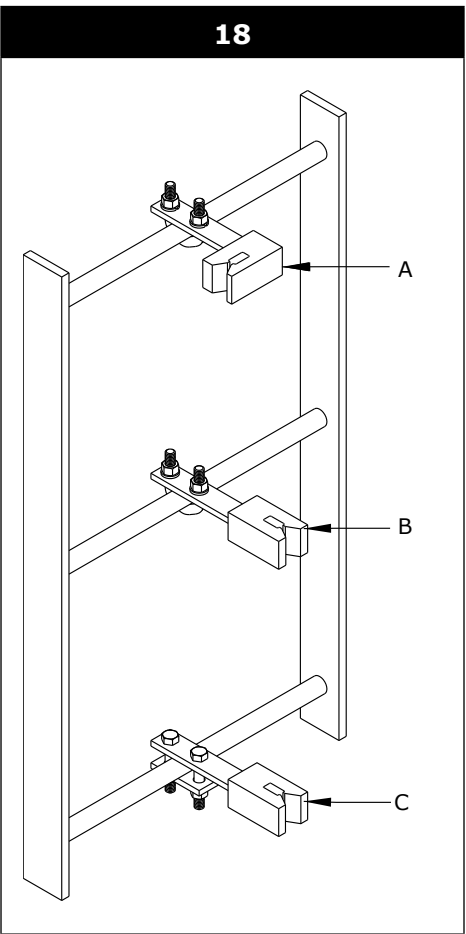
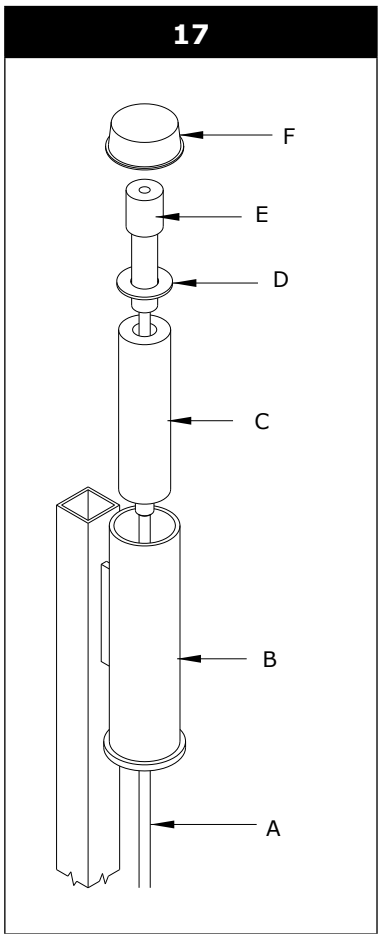
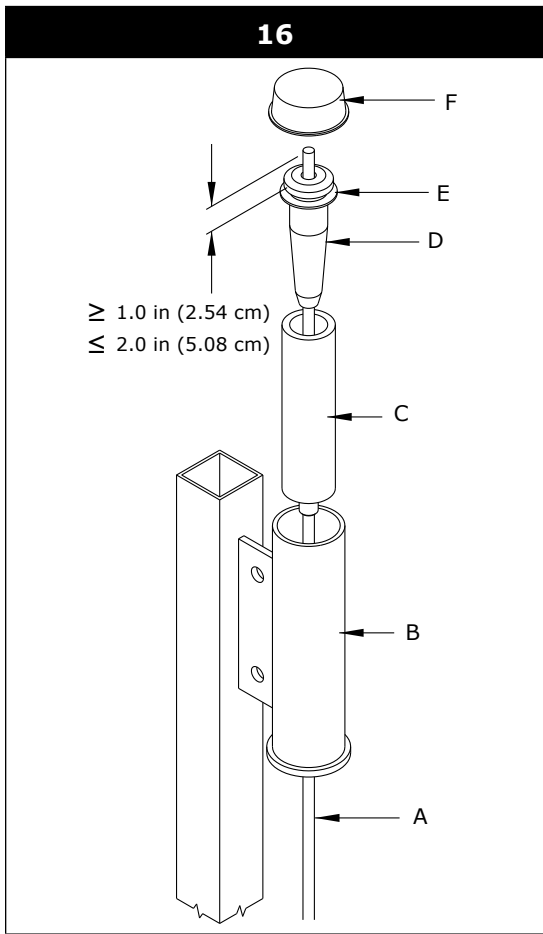


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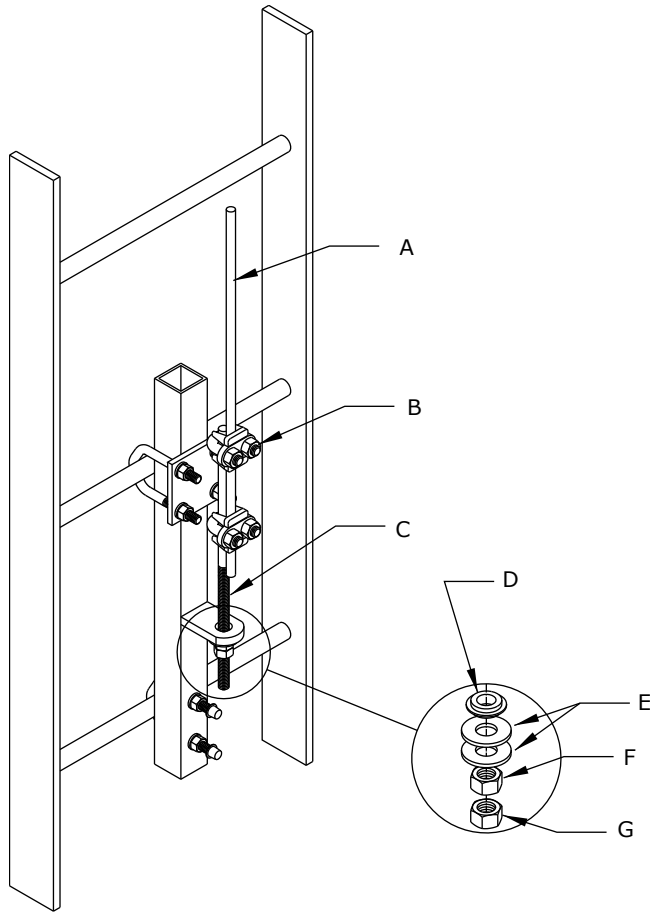


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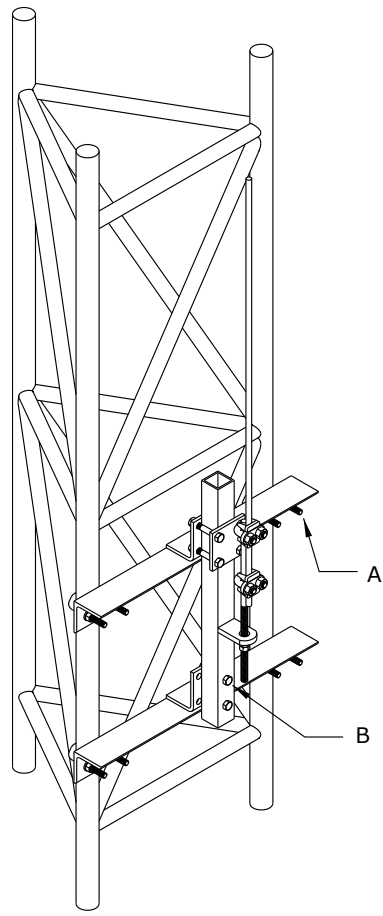




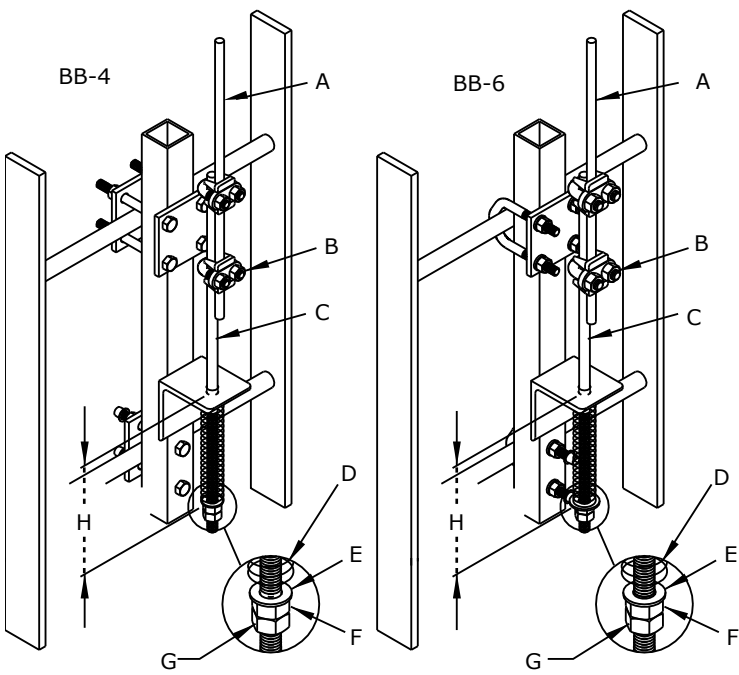
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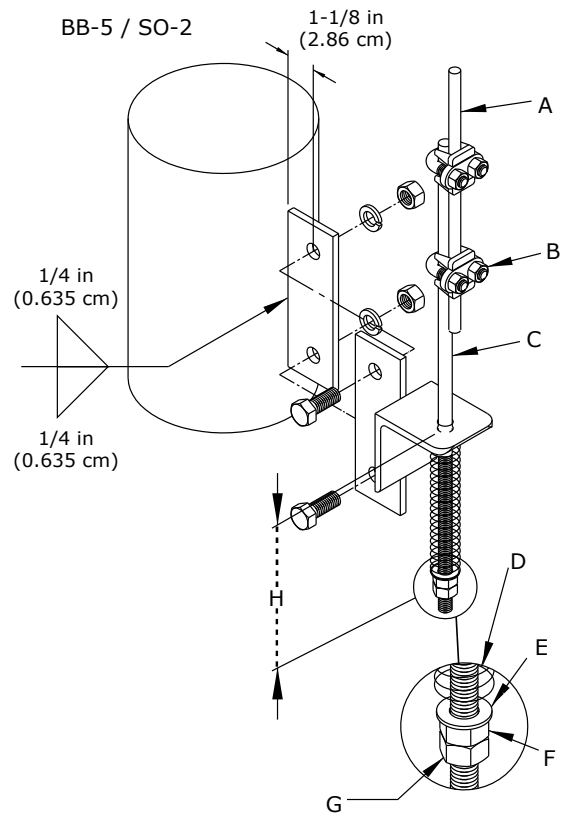
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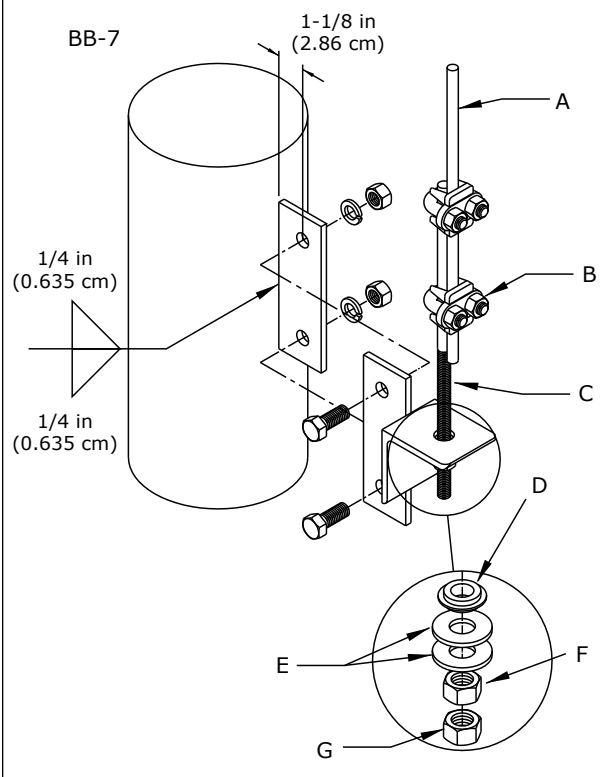
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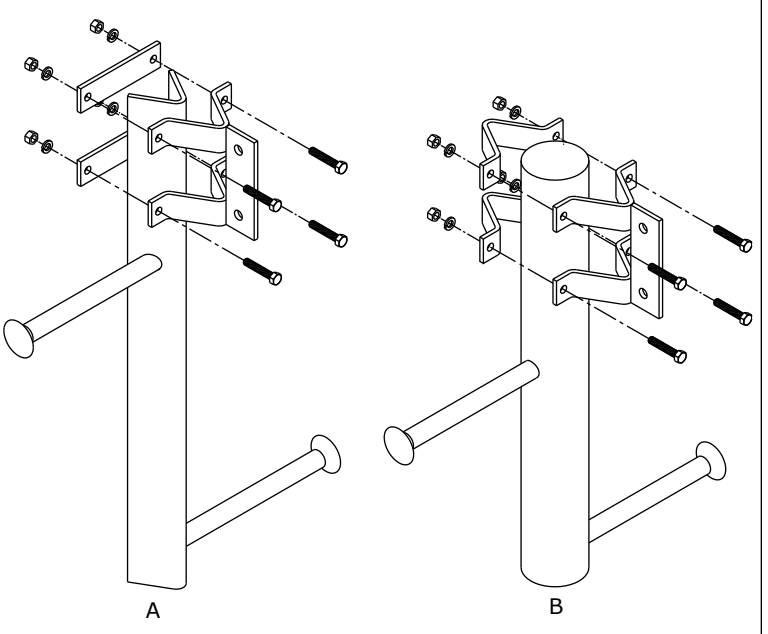
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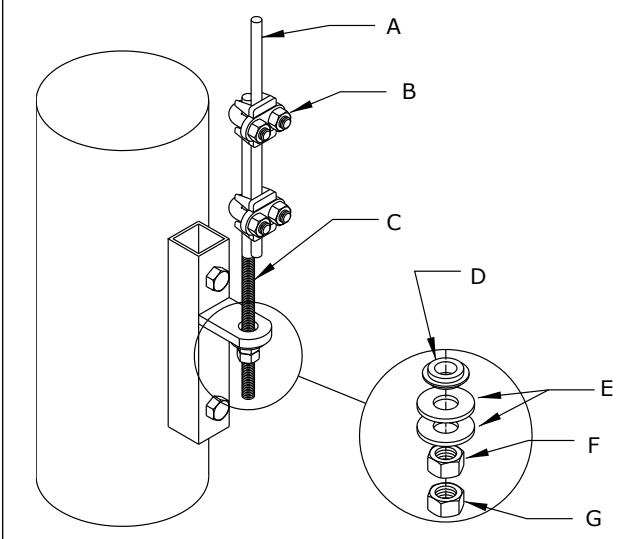
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3M | LAD SAF[®] LAD-SAF[®]
 3M.com/FallProtection
 ANSI 114.1-2008
 US PATENT 5,265,696
 CSA Z259.2.5
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 CE 0086
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SYSTEM CAPACITY	
1	MAXI
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3	
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INSPECTION	
DATE	BY

PROOF TEST (OPTIONAL)	

SYSTEM INSTALLATION DATE	

WARNING
 FAILURE TO HEED WARNINGS MAY RESULT IN SERIOUS INJURY OR DEATH. MANUFACTURER'S INSTRUCTIONS SUPPLIED WITH THIS PRODUCT AT TIME OF SHIPMENT MUST BE FOLLOWED FOR PROPER INSTALLATION, USE, INSPECTION AND MAINTENANCE. UNAUTHORIZED ALTERATION OR SUBSTITUTION OF SYSTEM ELEMENTS OR COMPONENTS IS PROHIBITED. DO NOT USE SYSTEM WITH INCOMPATIBLE SAFETY SHEETS. BEFORE EACH USE INSPECT SYSTEM VISUALLY FOR DEFECTS. FORMALLY INSPECT SYSTEM IN ACCORDANCE WITH INSTRUCTIONS AT LEAST ANNUALLY. REFER TO INSTRUCTIONS FOR INFORMATION ON PERIODIC FORMAL INSPECTIONS, MINIMUM SPOKING OF USERS OF THIS SYSTEM IS 20%.

WARNING
 FAILURE TO HEED WARNINGS MAY RESULT IN SERIOUS INJURY OR DEATH. MANUFACTURER'S INSTRUCTIONS SUPPLIED WITH THIS PRODUCT AT TIME OF SHIPMENT MUST BE FOLLOWED FOR PROPER INSTALLATION, USE, INSPECTION AND MAINTENANCE. UNAUTHORIZED ALTERATION OR SUBSTITUTION OF SYSTEM ELEMENTS OR COMPONENTS IS PROHIBITED. DO NOT USE SYSTEM WITH INCOMPATIBLE SAFETY SHEETS. BEFORE EACH USE INSPECT SYSTEM VISUALLY FOR DEFECTS. FORMALLY INSPECT SYSTEM IN ACCORDANCE WITH INSTRUCTIONS AT LEAST ANNUALLY. REFER TO INSTRUCTIONS FOR INFORMATION ON PERIODIC FORMAL INSPECTIONS, MINIMUM SPOKING OF USERS OF THIS SYSTEM IS 20%.

9504671 Rev. C

<p align="center">GLOBAL PRODUCT WARRANTY, LIMITED REMEDY AND LIMITATION OF LIABILITY</p> <p>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.</p> <p>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.</p> <p>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. 3M 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.</p> <p>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.</p> <p>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.</p>	<p align="center">GLOBALAALI TUOTETAKUUS, RAJATTU KORVAUS JA VASTUUNRAJOITUS</p> <p>TAKUU: SEURAAVA ON LAADITTU KAIKKIEN SUORIEN TAI EPÄSUORIEN TAKUIDEN TAI EHTOJEN SIJAAN, MUKAAN LUKIEN EPÄSUORAT TAKUUT MYNTIKELPOISUUDESTA TAI SOPIVUUDESTA TIETTYYN TARKOITUKSEEN.</p> <p>Ellei muutoin paikallisissa laeissa säädetä, 3M-putoamisenestotuotteilla on yhden vuoden takuu valmistusvirheitä ja materiaali- tai valmistusvirheitä koskien asennuspäivästä tai alkuperäisen käyttäjän ensimmäisestä käyttöpäivästä alkaen.</p> <p>RAJATTU KORVAUS: Kirjallisella 3M:lle lähetetyllä ilmoituksella 3M korjaa tai vaihtaa kaikki tuotteet, joissa on 3M:n määrittelämä valmistus- tai materiaali- tai valmistusvirhe. 3M pidättää oikeuden vaatia tuotetta palautettavaksi tehtäville takuuvaatimusten arvioimiseksi. Tämä takuu ei kata kulumisesta, tuotteen väärinkäytöstä, kuljetusvahingoista tai tuotteen epäonnistuneesta huollosta aiheutunutta vauriota tai muuta vauriota, johon 3M ei pysty vaikuttamaan. Tuotteen kunnoista ja takuuvaihtoehtoista päätökseen tekee ainoastaan 3M.</p> <p>Tämä takuu koskee vain alkuperäistä ostajaa, ja sitä sovelletaan ainoastaan 3M:n putoamisenestotuotteisiin. Ota yhteyttä paikalliseen 3M:n asiakaspalveluun saadaksesi apua.</p> <p>VASTUUNRAJOITUS: PAIKALLISTEN LAKIEN SALLIMISSA MÄÄRIN 3M EI OLE VASTUUSSA MISTÄÄN EPÄSUORASTA, SATTUMANVARAISESTA, ERITYISESTÄ TAI AIHEUTUNEESTA VAHINGOSTA, MUKAAN LUKIEN, MUTTA SIIHEN KUITENKAAAN RAJOITTUMATTA, TUOTTOJEN MENETTÄMINEN, MILLÄÄN TAVALLA TUOTTEISIIN LIITTYEN OIKEUSTEORIASTA HUOLIMATTA.</p>
<p align="center">GARANZIA GLOBALE SUL PRODOTTO, RIMEDIO LIMITATO E LIMITAZIONE DI RESPONSABILITÀ</p> <p>GARANZIA: LA SEGUENTE GARANZIA SOSTITUISCE TUTTE LE GARANZIE O CONDIZIONI, ESPRESSE O IMPLICITE, COMPRESSE LE GARANZIE O CONDIZIONI IMPLICITE DI COMMERCIALITÀ O IDONEITÀ PER UN PARTICOLARE SCOPO.</p> <p>Salvo ove diversamente specificato dalle leggi locali, i prodotti di protezione anticaduta 3M sono garantiti da difetti di fabbricazione e dei materiali per un periodo di un anno dalla data di installazione o di primo utilizzo da parte del proprietario originale.</p> <p>RIMEDIO LIMITATO: previa comunicazione scritta a 3M, 3M riparerà o sostituirà qualsiasi prodotto in cui 3M avrà individuato un difetto di fabbricazione o dei materiali. 3M si riserva il diritto di richiedere la restituzione del prodotto all'impianto per la valutazione della richiesta di risarcimento in garanzia. La presente garanzia non copre i danni al prodotto causati da usura, abuso, utilizzo errato, trasporto o mancata manutenzione del prodotto o altri danni avvenuti fuori dal controllo di 3M. 3M è la sola che potrà giudicare le condizioni del prodotto e le opzioni di garanzia.</p> <p>La presente garanzia è valida solo per l'acquirente originale ed è l'unica applicabile ai prodotti di protezione anticaduta 3M. Per assistenza, contattare il Servizio Clienti di 3M della propria area.</p> <p>LIMITAZIONE DI RESPONSABILITÀ: NELLA MISURA CONSENTITA DALLE LEGGI LOCALI, 3M NON RISPONDE DI EVENTUALI DANNI INDIRETTI, INCIDENTALI, SPECIALI O CONSEGUENZIALI COMPRESI, SENZA LIMITAZIONE, DANNI PER PERDITA DI PROFITTO, IN QUALSIASI MODO COLLEGATI AI PRODOTTI INDIPENDENTEMENTE DALLA TEORIA LEGALE ASSERTITA.</p>	<p align="center">GLOBALE PRODUKTGARANTIE, BESCHRÄNKTES RECHTSMITTEL UND HAFTUNGSBESCHRÄNKUNG</p> <p>GARANTIE: FOLGENDES GILT STELLVERTRETEND FÜR ALLE GARANTIEEN ODER BEDINGUNGEN, EINSCHLIESSLICH STILLSCHWEIGEND ANGENOMMENER GARANTIEEN ODER BEDINGUNGEN HINSICHTLICH DER TAUGLICHKEIT ODER EIGNUNG FÜR EINEN BESTIMMTEN ZWECK.</p> <p>Soweit gesetzlich nicht anders vorgeschrieben, werden bei 3M-Produkten für die Absturzsicherung werksseitige Mängel bei Verarbeitung und Material für einen Zeitraum von einem Jahr ab dem Datum der Installation oder der erstmaligen Benutzung durch den ursprünglichen Eigentümer garantiert.</p> <p>BESCHRÄNKTES RECHTSMITTEL: Nach schriftlicher Mitteilung an 3M wird 3M jedes Produkt ersetzen oder austauschen, bei dem durch 3M ein werksseitiger Material- oder Verarbeitungsfehler festgestellt wird. 3M behält sich das Recht vor, die Rücksendung des Produkts an das Werk zur Beurteilung der Garantieansprüche zu verlangen. Unter dieser Garantie sind keine Schäden am Produkt gedeckt, die auf Verschleiß, Missbrauch, Transportschäden, Versäumnis der Instandhaltung des Produkts oder sonstige außerhalb der Kontrolle von 3M liegende Schäden zurückzuführen sind. 3M trifft allein die Entscheidung über Produktzustand und Garantioptionen.</p> <p>Diese Garantie gilt ausschließlich für den ursprünglichen Käufer und ist die einzige, die für Absturzsicherungsprodukte von 3M maßgeblich ist. Kontaktieren Sie bitte die Kunden-Service-Abteilung, um Unterstützung zu erhalten.</p> <p>HAFTUNGSBESCHRÄNKUNG: SOWEIT NACH GELTENDEM RECHT ZULÄSSIG, IST 3M NICHT HAFTBAR FÜR UNMITTELBARE, MITTELBARE, BESONDERE SCHÄDEN ODER FOLGESCHÄDEN JEDER ART, EINSCHLIESSLICH VON VERLUST VON GEWINN, DER IM ZUSAMMENHANG MIT DEN PRODUKTEN ENTSTEHT, UNGEACHTET DER ANGEFÜHRTEN RECHTSTHEORIE.</p>
<p align="center">GARANTÍA GLOBAL DEL PRODUCTO, REPARACIONES LIMITADAS Y LIMITACIÓN DE RESPONSABILIDAD</p> <p>GARANTÍA: EL SIGUIENTE TEXTO SIRVE A MODO DE GARANTÍA O CONDICIÓN, EXPLÍCITA O IMPLÍCITA, E INCLUYE LAS GARANTÍAS O CONDICIONES IMPLÍCITAS DE COMERCIABILIDAD O APTITUD PARA UN PROPOSITO ESPECÍFICO.</p> <p>A menos que las leyes locales indiquen lo contrario, los productos de protección contra caídas 3M tienen garantía por defectos de fábrica en la mano de obra y en los materiales durante un periodo de un año desde la fecha de instalación o desde el primer uso del propietario original.</p> <p>REPARACIONES LIMITADAS: 3M reparará o reemplazará un producto si determina que tiene un defecto de fábrica en la mano de obra o en los materiales y tras haber recibido una notificación por escrito sobre el presunto defecto. 3M se reserva el derecho de exigir la devolución del producto a sus instalaciones para evaluar los reclamos sobre la calidad. Esta garantía no cubre los daños ocasionados por el desgaste, el abuso, el mal mantenimiento, o como consecuencia del traslado del producto, u otros daños ajenos al control de 3M. 3M será el único capaz de determinar la condición del producto y las opciones de la garantía.</p> <p>Esta garantía solo se aplica al comprador original y es la única garantía válida para los productos de protección contra caídas 3M. Comuníquese con el departamento de servicio al cliente de 3M de su región para obtener ayuda.</p> <p>LIMITACIÓN DE RESPONSABILIDAD: EN LA MEDIDA PERMITIDA POR LAS LEYES LOCALES, 3M NO SERÁ RESPONSABLE DE LOS DAÑOS INDIRECTOS, IMPREVISTOS, ESPECIALES O CONSECUENTES; ENTRE ELLOS, LA PÉRDIDA DE INGRESOS RELACIONADOS DE CUALQUIER MANERA CON LOS PRODUCTOS, INDEPENDIENTEMENTE DE LA TEORÍA JURÍDICA QUE SE PUDIERA INVOCAR.</p>	<p align="center">GLOBAL PRODUKTGARANTI, BEGRÄNSAD KOMPENSATION OCH BEGRÄNSAD ANSVARSSKYLDIGHET</p> <p>GARANTI: FÖLJANDE GÄLLER SOM ERSÄTTNING FÖR ALLA GARANTIER ELLER VILLKOR, UTTRYCKLIGA ELLER UNDERFÖRSTÄDDA, INKLUSIVE UNDERFÖRSTÄDDA GARANTIER ELLER VILLKOR FÖR SÄLJBARHET ELLER LÄMPLIGHET FÖR ETT VISST ÄNDAMÅL.</p> <p>Såvida inte annat stipuleras i lokala lagar, garanteras 3M:s fallskyddsprodukter mot fabriktionsfel avseende tillverkning och material under en period av ett år från datum för ursprunglig ägares installation eller första användning.</p> <p>BEGRÄNSAD KOMPENSATION: Efter skriftlig avisering till 3M, kommer 3M att reparera eller byta ut varje produkt, som av 3M fastställts vara behäftad med fabriktionsfel vad gäller tillverkning eller material. 3M förbehåller sig rätten att kräva att produkt returneras till företagens anläggning för utvärdering av garantianspråk. Denna garanti omfattar inte produktskada till följd av slitage, felaktig användning, missbruk, skada under transport, underlåtenhet att sköta produkten eller annan skada utom 3M:s kontroll. 3M är ensam bedömare av produktets skade och garantialternativ.</p> <p>Denna garanti avser enbart den ursprungliga köparen och är den enda garanti som gäller för 3M:s fallskyddsprodukter. Kontakta 3M:s kundtjänstavdelning i din region för assistans.</p> <p>BEGRÄNSNING AV ANSVARSSKYLDIGHET: I DEN OMFATTNING SOM TILLÅTS AV LOKALA LAGAR, ANSVARAR 3M INTE FÖR NÅGRA INDIREKTA, OFÖRUTSEDDA, SPECIELLA ELLER FÖLJDSKADOR, INKLUSIVE MEN INTE BEGRÄNSAT TILL FÖRLUST AV VINSTER, VILKA PÅ NÅGOT SÄTT HÄNFÖRTS TILL PRODUKTERNA, OAVSETT HÄVDAD RÄTTSLIG GRUND.</p>
<p align="center">GLOBAL PRODUKTGARANTI, BEGRENSET AVHJELP OG BEGRENSET AV ERSTATNINGSANSVAR</p> <p>GARANTI: DET FØLGENDE KOMMER I STEDET FOR ALLE GARANTIER ELLER VILKÅR, UTTRYKKELIGE ELLER UNDERFORSTÅTTE, INKLUDERT DE UNDERFORSTÅTTE GARANTIERNE ELLER VILKÅRENE OM SALGBARHET ELLER EGNETHET FOR ET BESTEMT FORMÅL.</p> <p>Med mindre annet er bestemt av lokale lover, er 3Ms fallsikringsprodukter garantert mot fabriksjonsfeil i håndverksmessig utførelse og materialer for en periode på ett år fra installasjonsdatoen eller første bruk av den opprinnelige eteren.</p> <p>BEGRENSET AVHJELP: Ved skriftlig melding til 3M, vil 3M reparere eller erstatte ethvert produkt som av 3M fastslås å ha en fabriksjonsfeil i håndverksmessig utførelse eller materialer. 3M forbeholder seg retten til å kreve at produktet blir levert tilbake til fabrikk for evaluering av garantikrav. Denne garantien dekker ikke produktskade grunnet slitasje, misbruk, skade i transit, unnlattelse av å vedlikeholde produktet eller annen skade utenfor 3Ms kontroll. 3M vil være den eneste til å bedømme produktvilkår og garantialternativer.</p> <p>Denne garantien gjelder kun den opprinnelige kjøperen og er den eneste garantien som er anvendelig for 3Ms fallsikringsprodukter. Vennligst kontakt 3Ms kundeserviceavdeling i ditt område for hjelp.</p> <p>BEGRENSET AV ERSTATNINGSANSVAR: I DEN UTSTREKNING DET ER TILLATT AV LOKALE LOVER, ER IKKE 3M ERSTATNINGSANSVARLIG FOR NOEN SOM HELST INDIREKTE, HENDELIGE, SPEIELLE ELLER FØLJEMESSIGE SKADER INKLUDERT, MEN IKKE BEGRENSET TIL TAP AV FORTJENESTE, PÅ NOEN SOM HELST MÅTE FORBUNDNET MED PRODUKTENE, UAVHENGIG AV HVILKEN JURIDISK TEORI SOM PÅBEROPES.</p>	<p align="center">GLOBAL PRODUKTGARANTI, BEGRÆNSEDE RETSMIDLER OG BEGRÆNSNING AF GARANTIFORPLIGTELSE</p> <p>GARANTI: FØLGENDE ERSTATTER ALLE GARANTIER ELLER BETINGELSER, UDTRYKKELIGE ELLER UNDERFORSTÅEDE, HERUNDER DE UNDERFORSTÅEDE GARANTIER ELLER BETINGELSER FOR SALGBARHED ELLER EGNETHED TIL ET SPECIFIKT FORMÅL.</p> <p>Bortset fra hvad der sikres ved gældende love, er 3M's produkter til faldsikring omfattet af en garanti mod fabriksdefekter i den håndværksmæssige udførelse og materialer i en periode på et år fra installationsdatoen eller den første ejers ibrugtagningsdato.</p> <p>BEGRÆNSEDE RETSMIDLER: Ved skriftlig henvendelse til 3M vil 3M reparere eller erstatte ethvert produkt, der af 3M vurderes at have en fabriksdefekt i den håndværksmæssige udførelse eller materialer. 3M forbeholder sig ret til at kræve produktet returneret til dets anlæg for at vurdere krav om garanti. Denne garanti dækker ikke skade på produktet slid, misbrug, forkert brug, transportskade, manglende vedligeholdelse af produktet eller anden skade uden for 3M's kontrol. 3M vil alene fastslå produktets tilstand og mulighederne for garanti.</p> <p>Denne garanti gælder kun for den oprindelige køber og er den eneste garanti gældende for 3M's produkter til faldsikring. Kontakt venligst 3M's kundeserviceafdeling i dit område for at få hjælp.</p> <p>BEGRÆNSNING AF GARANTIFORPLIGTELSE: I DEN UDSTREKNING DET TILLADES AF LOKALE LOVE ER 3M IKKE ANSVARLIG FOR NOGEN INDIREKTE, TILFÆLDIGE, SPECIELLE ELLER FØLJEGENDE SKADER, HERUNDER MEN IKKE BEGRÆNSET TIL TAB AF FORTJENESTE, DER PÅ NOGEN MÅDE ER RELATERET TIL PRODUKTERNE UANSET DEN UDLAGTE JURIDISKE TEORI.</p>

<p>WERELDWIJDE PRODUCTGARANTIE, BEPERKTE VERHAALSMOGELIJKHEID EN BEPERKING VAN AANSPRAKELIJKHEID</p> <p>GARANTIE: DE VOLGENDE BEPALING VERVANGT ALLE GARANTIES OF VOORWAARDEN, EXPLICIET OF IMPLICIET, INCLUSIEF DE IMPLICIETE GARANTIES OF VOORWAARDEN VAN VERKOOPBAARHEID OF GESCHIKTHEID VOOR EEN BEPAALD DOEL.</p> <p>Tenzij anders is bepaald door lokale wetgeving, zijn valbeschermingsproducten van 3M voorzien van een garantie op fabrieksfouten door fabricage- en materiaalgebreken gedurende een periode van één jaar na de datum van installatie of het eerste gebruik door de oorspronkelijke eigenaar.</p> <p>BEPERKTE VERHAALSMOGELIJKHEID: Na schriftelijke kennisgeving aan 3M zal 3M eender welk product repareren of vervangen waarvan 3M heeft vastgesteld dat het een fabrieksfout heeft door een fabricage- of materiaalgebrek. 3M behoudt zich het recht voor om te eisen dat het product naar zijn vestiging wordt geretourneerd om garantieaanspraken te beoordelen. Deze garantie is niet van toepassing op productschade door slijtage, oneigenlijk gebruik, misbruik, transportschade, nalatigheid bij onderhoud van het product of andere schade waarover 3M geen controle heeft. 3M zal als enige oordelen over de toestand van het product en garantieopties.</p> <p>Deze garantie is alleen van toepassing op de oorspronkelijke koper en is de enige garantie die van toepassing is op valbeschermingsproducten van 3M. Neem contact op met de klantendienst van 3M voor uw regio als u assistentie wenst.</p> <p>BEPERKING VAN AANSPRAKELIJKHEID: VOOR ZOVER TOEGESTAAN DOOR LOKALE WETGEVING, IS 3M NIET AANSPRAKELIJK VOOR ENIGE INDIRECTE, INCIDENTELE, SPECIALE OF GEVOLGSCHADE, INCLUSIEF, MAAR NIET BEPERKT TOT, WINSTVERLIES, DIE OP ENIGE WIJZE VERBAND HOUDT MET DE PRODUCTEN, ONGEACHT DE RECHTSLEER DIE WORDT AANGEHAALD.</p>	<p>GLOBALNA GWARANCJA NA PRODUKTY, OGRANICZONE ROZWIĄZANIE I OGRANICZENIE ODPOWIEDZIALNOŚCI</p> <p>GWARANCJA: PONIŻSZE POSTANOWIENIA ZASTĘPUJĄ WSZYSTKIE GWARANCJE LUB WARUNKI, WYRAŻONE LUB DOMNIEMANE, W TYM DOMNIEMANE GWARANCJE LUB WARUNKI SPRZEDAŻY LUB PRZYDATNOŚCI DO OKREŚLONEGO CELU.</p> <p>O ile lokalne prawo nie przewiduje inaczej, produkty 3M służące do ochrony przed upadkiem są objęte gwarancją na wady fabryczne, w tym wady materiałowe i wykonawcze przez okres jednego roku od daty ich montażu lub pierwszego użycia przez pierwotnego właściciela.</p> <p>OGRANICZONE ROZWIĄZANIE: Po pisemnym powiadomieniu 3M, 3M naprawi lub wymieni produkt uznany przez 3M za wadliwy w zakresie wykonawstwa lub zastosowanych materiałów. 3M zastrzega sobie prawo do zażądania zwrotu produktu do swojego obiektu w celu oceny roszczenia gwarancyjnego. Niniejsza gwarancja nie obejmuje uszkodzeń produktu wynikających ze zużycia, niewłaściwego użytkowania, uszkodzenia w transporcie, braku właściwej konserwacji produktu lub innych uszkodzeń będących poza kontrolą firmy 3M. 3M będzie jedyną stroną oceniającą stan produktu oraz możliwe opcje gwarancyjne.</p> <p>Niniejsza gwarancja obejmuje wyłącznie pierwszego nabywcę i jest to jedyna gwarancja na produkty 3M służące do ochrony przed upadkiem. W celu uzyskania pomocy prosimy o kontakt z działem obsługi klienta firmy 3M w Państwa regionie.</p> <p>OGRANICZENIE ODPOWIEDZIALNOŚCI: W ZAKRESIE DOZWOLONYM PRZEZ LOKALNE PRAWO, 3M NIE PONOSI ODPOWIEDZIALNOŚCI ZA JAKIEKOLWIEK POŚREDNIE, PRZYPADKOWE, NADZWYCZAJNE LUB WYNIKOWE SZKODY, W TYM, LECZ NIE WYŁĄCZNIE, UTRATY ZYSKÓW, W JAKIKOLWIEK SPOŚÓB ZWIĄZANE Z PRODUKTEM, NIEZALEŻNIE OD PRZEDSTAWIONEJ PODSTAWY PRAWNEJ.</p>
<p>GARANȚIA GLOBALĂ APLICABILĂ PRODUSELOR, MĂSURI REPARATORII LIMITATE ȘI LIMITAREA RĂSPUNDERII</p> <p>GARANTIE: URMĂTOAREA GARANȚIE ÎNLOCUIEȘTE TOATE GARANȚIILE ȘI CONDIȚIILE, EXPRESE SAU IMPLICITE, INCLUSIV GARANȚIILE IMPLICITE SAU CONDIȚIILE DE VANDABILITATE SAU DE ADECVARE PENTRU UN ANUMIT SCOP.</p> <p>Nu mai decât nu se prevede altfel prin legislația aplicabilă, produsele 3M de protecție împotriva căderii sunt garantate în caz de defecte de fabricație, cauzate de manoperă sau de materiale, pe o perioadă de timp de un an de la data instalării sau a primei utilizări de către proprietarul original.</p> <p>MĂSURI REPARATORII LIMITATE: La notificarea scrisă transmisă către 3M, 3M va repara sau va înlocui orice produs despre care 3M stabilește că prezintă un defect de fabricație, cauzat de manoperă sau de materiale. 3M își rezervă dreptul de a solicita ca produsul să fie returnat la unitatea sa, în vederea evaluării cererii de aplicare a garanției. Această garanție nu acoperă deteriorarea produselor cauzată de uzură, de utilizare abuzivă sau inadecvată, de avariere în tranzit, de faptul că produsul nu a fost supus operațiilor de mentenanță sau alte deteriorări ce ies din sfera de control a 3M. 3M va fi singurul care va aprecia starea produsului și opțiunile de garanție.</p> <p>Această garanție i se aplică numai cumpărătorului original și este singura garanție aplicabilă produselor 3M de protecție împotriva căderii. Pentru asistență, vă rugăm să apelați departamentul 3M de Asistență clienți din regiunea dvs.</p> <p>LIMITAREA RĂSPUNDERII: ÎN MĂSURA PERMISĂ PRIN LEGISLAȚIA LOCALĂ, 3M NU RĂSPUNDE PENTRU NICIUN FEL DE DAUNE INDIRECTE, INCIDENTALE, SPECIALE SAU APĂRUTE PE CALE DE CONSECINȚĂ, CEEA CE INCLUDE, FĂRĂ ÎNSĂ A SE LIMITA LA PIERDEREA PROFITULUI, LEGATE ÎN ORICE MOD DE PRODUSE, INDIFFERENT DE LEGISLAȚIA APLICABILĂ.</p>	<p>МЕЖДУНАРОДНЫЕ ГАРАНТИЙНЫЕ ОБЯЗАТЕЛЬСТВА НА ИЗДЕЛИЕ, ЧАСТИЧНОЕ ВОЗМЕЩЕНИЕ УЩЕРБА И ОГРАНИЧЕНИЕ ОТВЕТСТВЕННОСТИ</p> <p>ГАРАНТИЯ: НАСТОЯЩАЯ ГАРАНТИЯ ЗАМЕНЯЕТ ВСЕ ДРУГИЕ ГАРАНТИИ, ЯВНЫЕ ИЛИ ПОДРАЗУМЕВАЕМЫЕ, ВКЛЮЧАЯ ГАРАНТИИ КОММЕРЧЕСКОГО УСПЕХА ИЛИ ПРИГОДНОСТИ ДЛЯ КАКОЙ-ЛИБО КОНКРЕТНОЙ ЦЕЛИ.</p> <p>Если иное не предусмотрено местным законодательством, на системы для защиты от падения компании 3M распространяется гарантия на отсутствие заводских дефектов изготовления и материалов сроком на один год с момента установки или первого использования первоначальным владельцем.</p> <p>ЧАСТИЧНОЕ ВОЗМЕЩЕНИЕ УЩЕРБА: После получения письменного уведомления компания 3M обязуется осуществить ремонт или замену любого изделия, которое, по определению компании 3M, имеет заводской дефект изготовления или материалов. Компания 3M оставляет за собой право потребовать, чтобы изделие было возвращено на предприятие для оценки обоснованности претензий по гарантии. Данная гарантия не распространяется на дефекты, возникшие в результате износа, неправильного обращения, неправильного использования, повреждения при транспортировке, на дефекты, вызванные техническим обслуживанием, или другие дефекты, не подлежащие контролю компании 3M. Только компания 3M будет принимать решение в отношении состояния изделия и вариантов гарантийного обслуживания.</p> <p>Данная гарантия распространяется только на первоначального покупателя и является единственной гарантией, применяемой к системам для защиты от падения компании 3M. Пожалуйста, свяжитесь с отделом обслуживания клиентов компании 3M в вашем регионе для получения помощи.</p> <p>ОГРАНИЧЕНИЕ ОТВЕТСТВЕННОСТИ: В ПРЕДЕЛАХ, ДОПУСКАЕМЫХ МЕСТНЫМИ ЗАКОНАМИ, КОМПАНИЯ 3M НЕ НЕСЕТ ОТВЕТСТВЕННОСТИ ЗА КАКОЙ-ЛИБО КОСВЕННЫЙ, СЛУЧАЙНЫЙ, ОСОБЫЙ ИЛИ ПОСЛЕДУЮЩИЙ УЩЕРБ, ВКЛЮЧАЯ, ПОМИМО ПРОЧЕГО, ПОТЕРЮ ПРИБЫЛИ, КАКИМ-ЛИБО ОБРАЗОМ ОТНОСЯЩУЮСЯ К ПРОДУКЦИИ НЕЗАВИСИМО ОТ ПРАВОВОЙ ТЕОРИИ.</p>
<p>GARANTIE INTERNATIONALE DU PRODUIT, RECOURS LIMITÉ ET LIMITATION DE RESPONSABILITÉ</p> <p>GARANTIE : CE QUI SUIT REMPLACE TOUTES LES GARANTIES OU CONDITIONS, EXPRESSES OU IMPLICITES, Y COMPRIS LES GARANTIES OU LES CONDITIONS IMPLICITES RELATIVES À LA QUALITÉ MARCHANDE ET À L'ADAPTATION À UN USAGE PARTICULIER.</p> <p>Sauf disposition contraire de la loi, les produits de protection antichute 3M sont garantis contre tout défaut de fabrication en usine et de matériaux pour une période d'un (1) an à compter de la date d'installation ou de la première utilisation par le propriétaire initial.</p> <p>RECOURS LIMITÉ : Moyennant un avis écrit à 3M, 3M réparera ou remplacera tout produit présentant un défaut de fabrication en usine ou de matériaux, tel que déterminé par 3M. 3M se réserve le droit d'exiger le retour du produit dans ses installations afin d'évaluer la réclamation de garantie. Cette garantie ne couvre pas les dommages au produit résultant de l'usure, d'un abus ou d'une mauvaise utilisation, les dommages subis pendant l'expédition, le manque d'entretien du produit ou d'autres dommages en dehors du contrôle de 3M. 3M jugera seul de l'état du produit et des options de garantie.</p> <p>Cette garantie s'applique uniquement à l'acheteur initial et est la seule garantie applicable aux produits de protection antichute de 3M. Veuillez communiquer avec le service à la clientèle de 3M de votre région pour obtenir de l'aide.</p> <p>LIMITATION DE RESPONSABILITÉ : DANS LES LIMITES PRÉVUES PAR LES LOIS LOCALES, 3M NE SERA TENU POUR RESPONSABLE DE TOUT DOMMAGE INDIRECT, ACCESSOIRE, SPÉCIFIQUE OU CONSÉCUTIF INCLUANT, SANS S'Y LIMITER, LA PERTE DE PROFIT, LIÉS DE QUELQUE MANIÈRE AUX PRODUITS, QUELLE QUE SOIT LA THÉORIE LÉGALE INVOCUÉE.</p>	



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