OSHA 1926.502(d)(12)
OSHA 1926.502(d)(16)(iv)
OSHA 1926.502(d)(16)(ii)
OSHA 1910.140

COUNTERWEIGHT CLIMB ASSIST

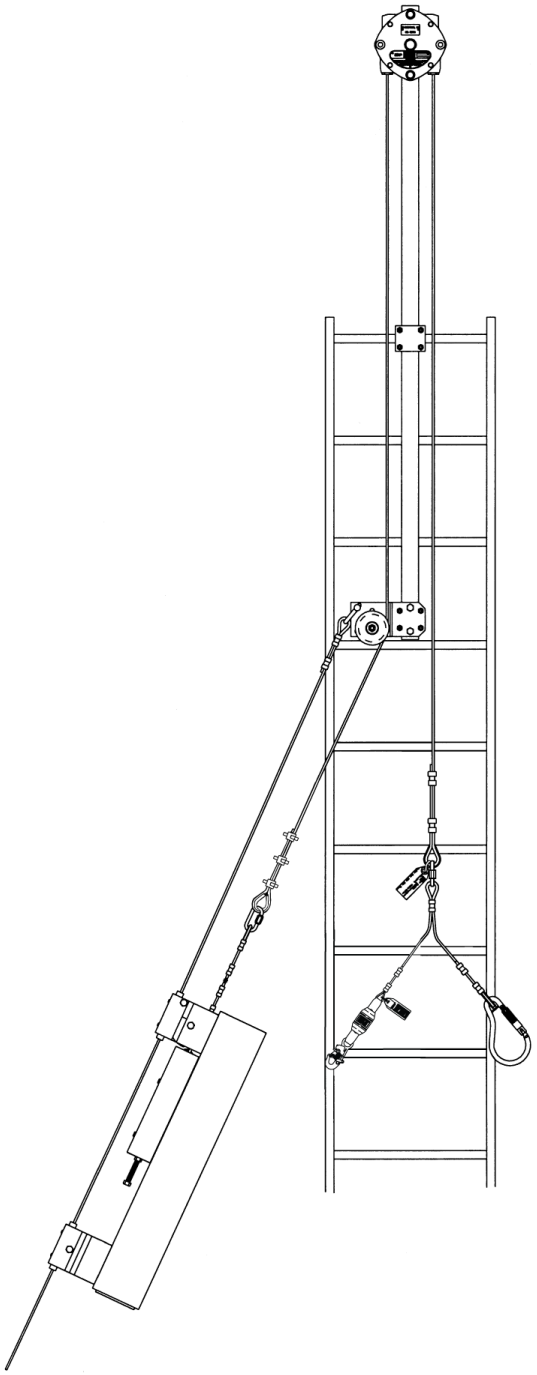
Climb Assist/Fall Arrest System

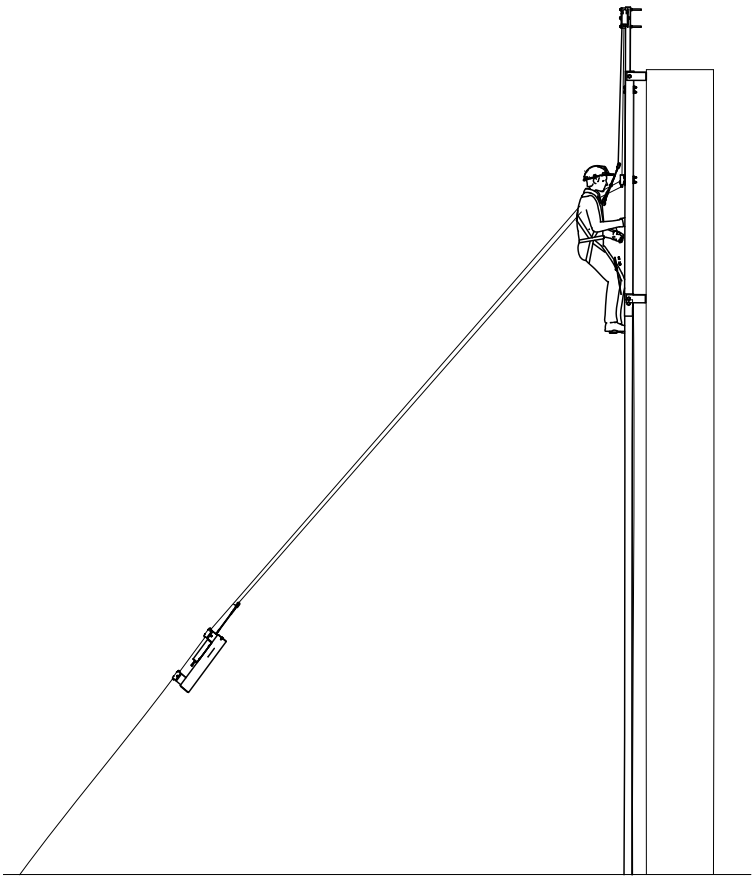
INSTRUCTION MANUAL

5902147 REV. J

Fall Protection

1





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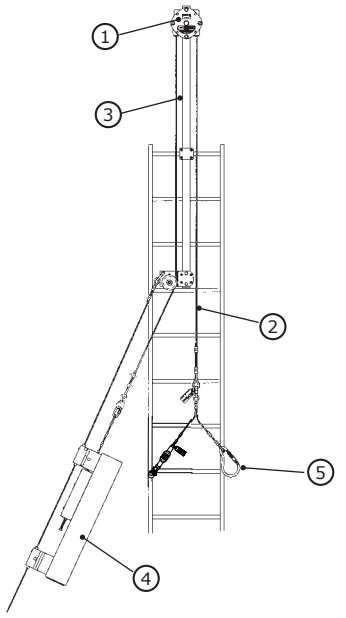
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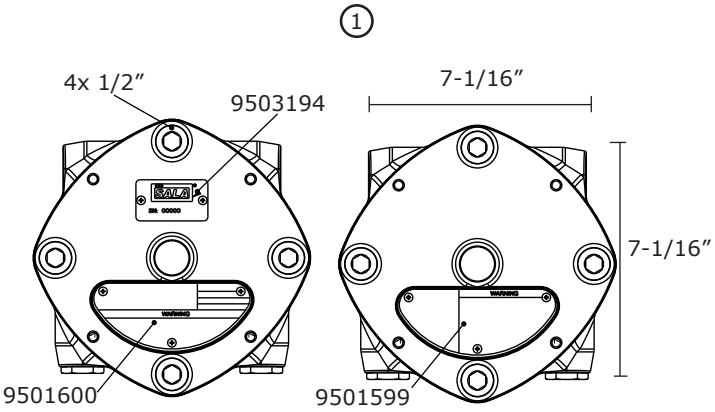
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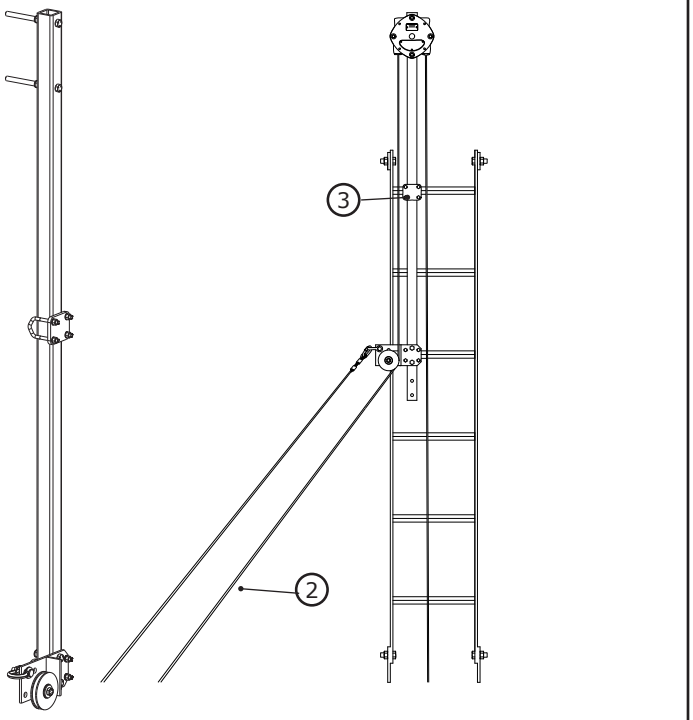
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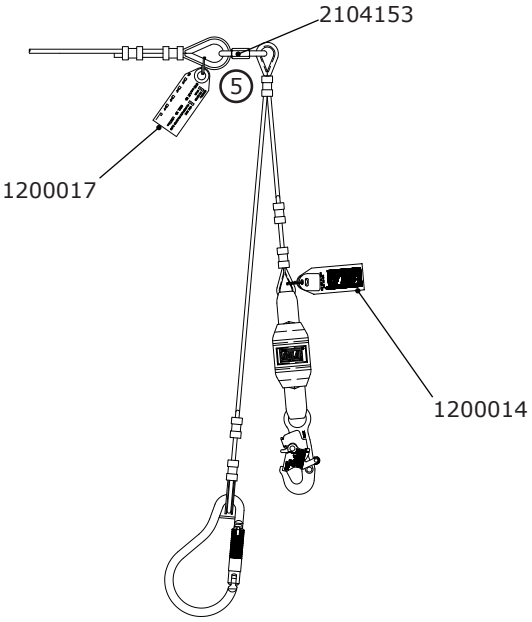
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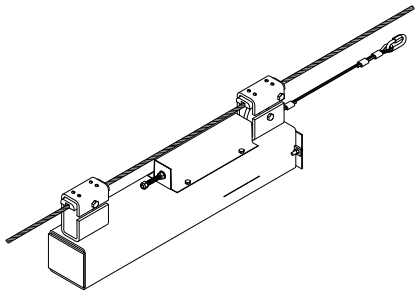

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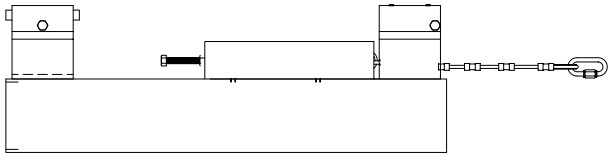

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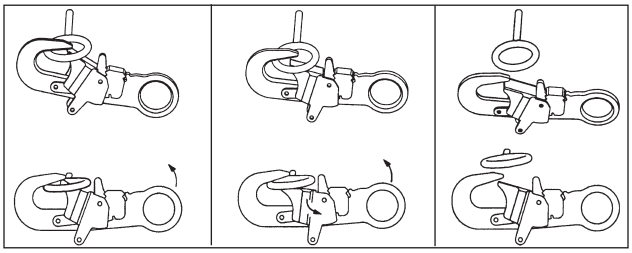

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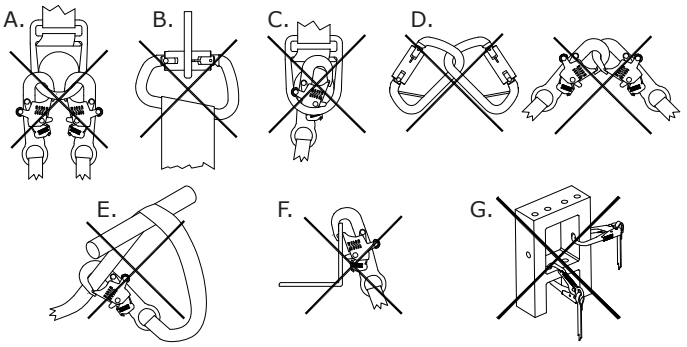

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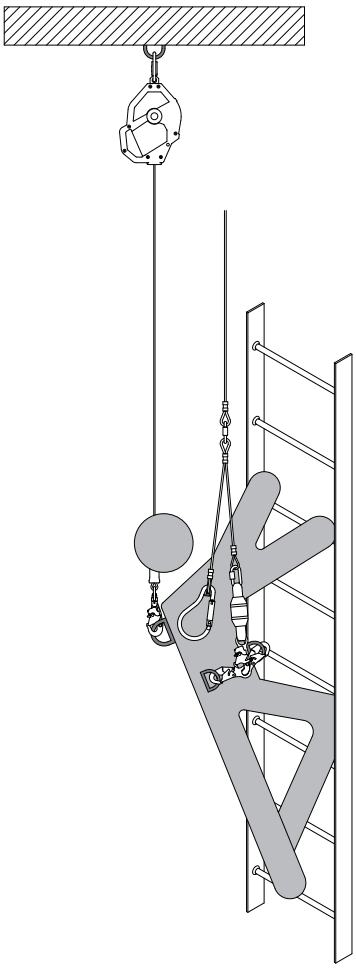

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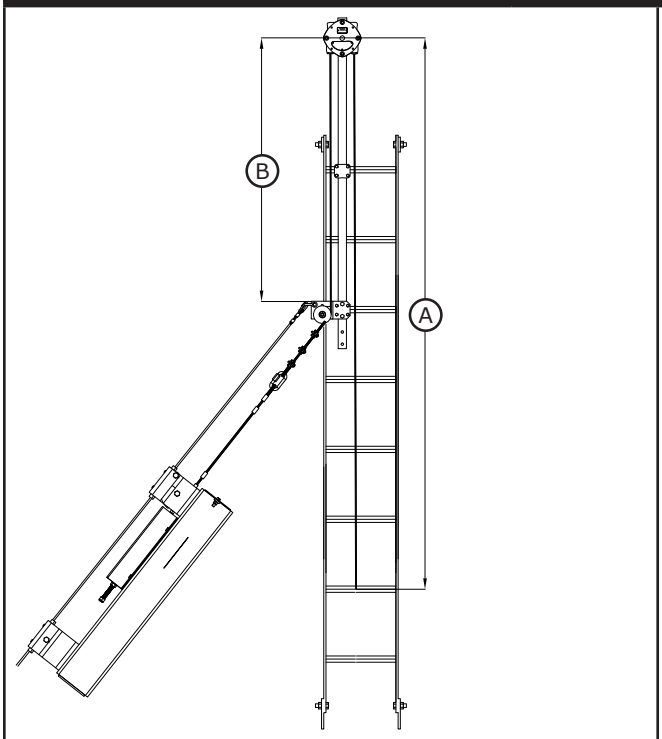

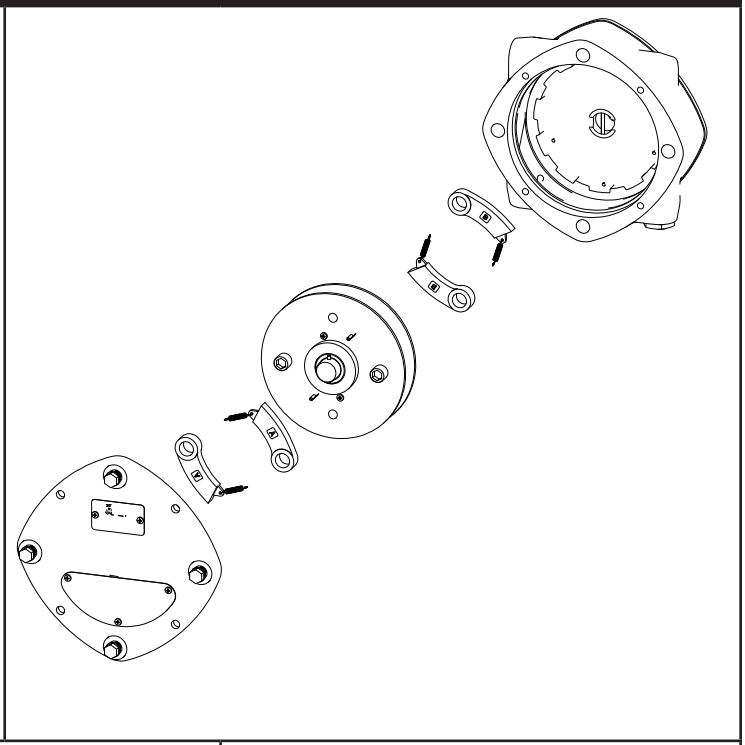

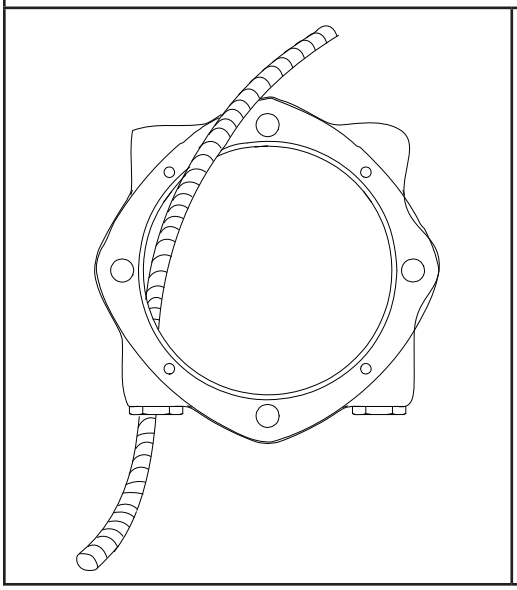

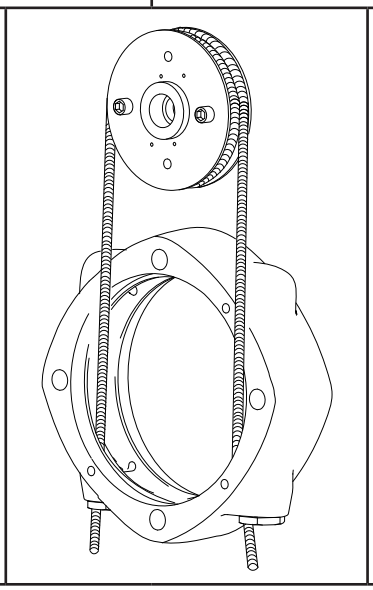

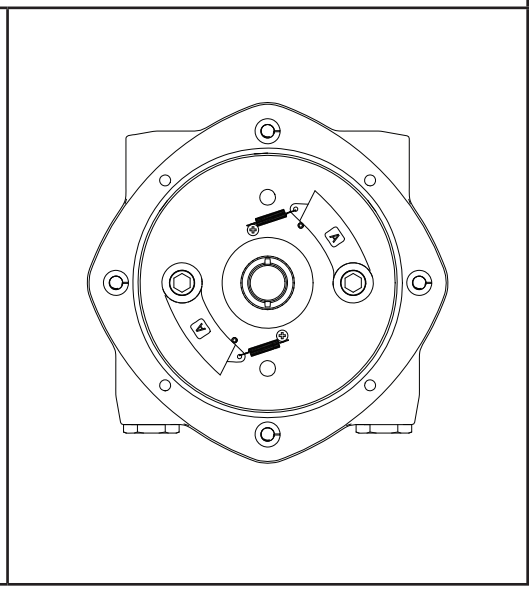

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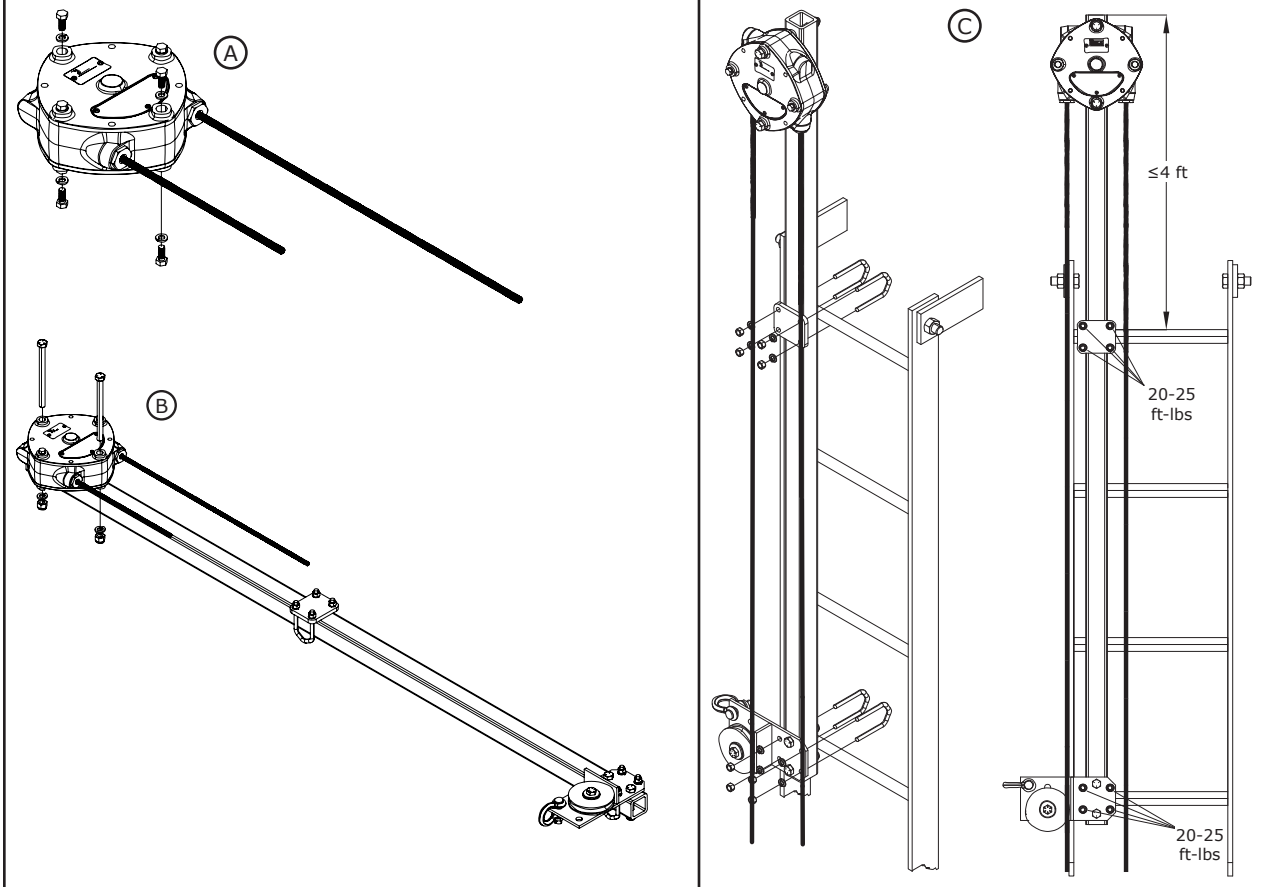
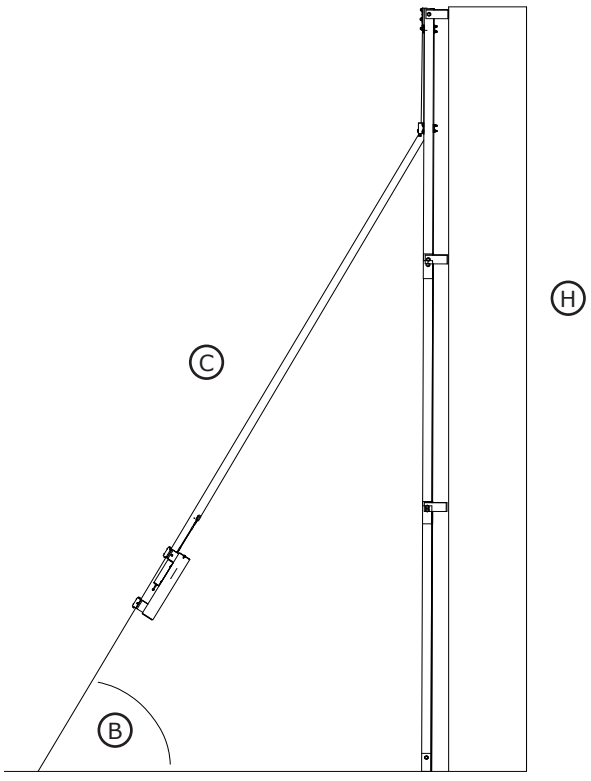


8

	Ⓑ			
Ⓗ	**45°**	**60°**	**75°**	
40 ft. (12.2 m)	57 ft. (17.4 m)	46 ft. (14 m)	41 ft. (12.5 m)	Ⓒ
50 ft. (15.2 m)	71 ft. (21.6 m)	58 ft. (17.7 m)	52 ft. (15.8 m)	
60 ft. (18.3 m)	85 ft. (25.9 m)	69 ft. (21 m)	62 ft. (18.9 m)	
70 ft. (21.3 m)	99 ft. (30.2 m)	81 ft. (24.7 m)	72 ft. (21.9 m)	
80 ft. (24.4 m)	113 ft. (34.4 m)	92 ft. (28 m)	83 ft. (25.3 m)	
90 ft. (27.4 m)	127 ft. (38.7 m)	104 ft. (31.7 m)	93 ft. (28.3 m)	
100 ft. (30.5 m)	141 ft. (43 m)	115 ft. (35.1 m)	103 ft. (31.4 m)	
110 ft. (33.5)	156 ft. (47.5 m)	127 ft. (38.7 m)	114 ft. (34.7 m)	
120 ft. (36.6 m)	170 ft. (51.8 m)	138 ft. (42.1 m)	124 ft. (37.8 m)	



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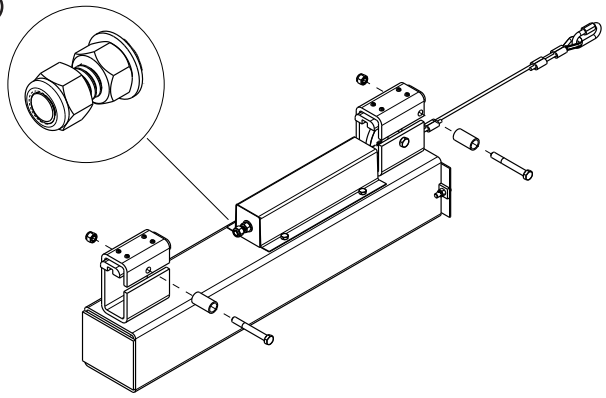

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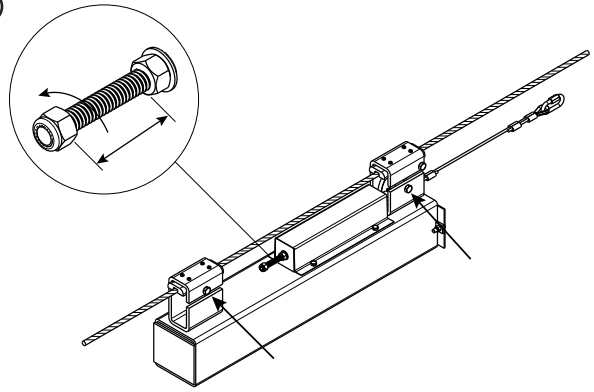

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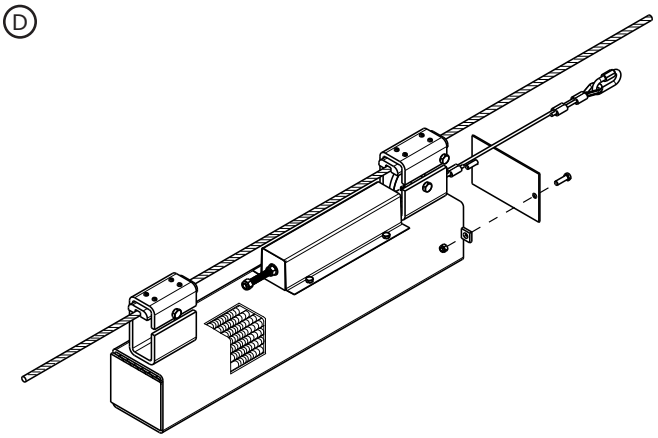
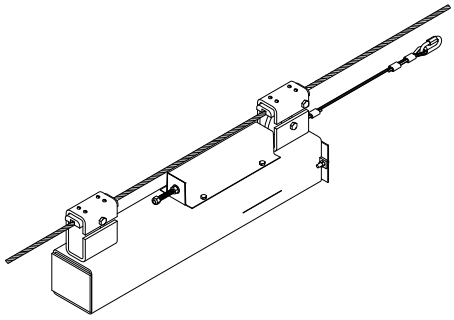
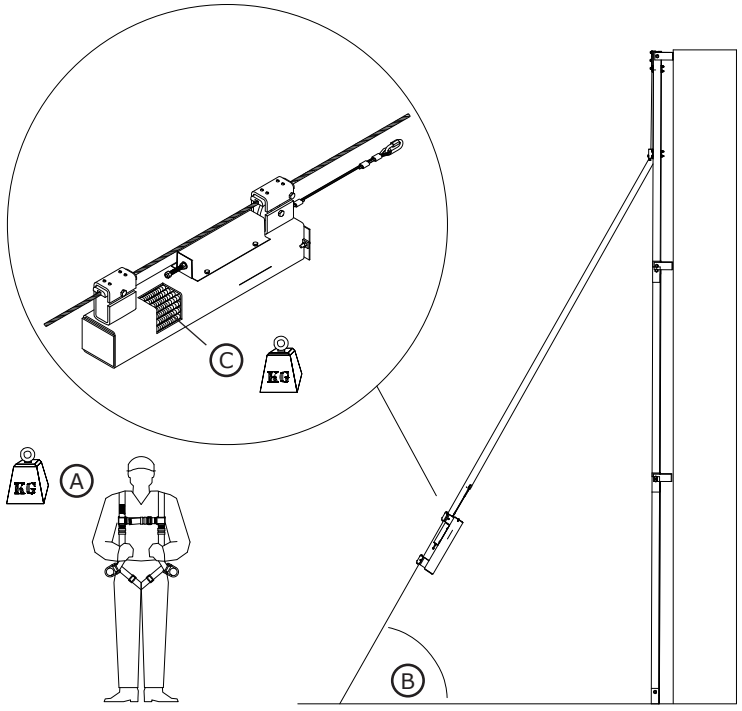


10

Ⓐ	Ⓑ			Ⓒ
	45°	**60°**	**75°**	
130 lbs. (59 kg)	100 lbs. (45.4 kg)	90 lbs. (40.8 kg)	80 lbs. (36.3 kg)	
140 lbs. (63.5 kg)	109 lbs. (49.4 kg)	97 lbs. (44 kg)	87 lbs. (39.5 kg)	
150 lbs. (68 kg)	117 lbs. (53.1 kg)	104 lbs. (47.2 kg)	93 lbs. (42.2 kg)	
160 lbs. (72.6 kg)	126 lbs. (57.2 kg)	111 lbs. (50.3 kg)	99 lbs. (44.9 kg)	
170 lbs. (77.1 kg)	134 lbs. (60.8 kg)	118 lbs. (53.6 kg)	106 lbs. (48.1 kg)	
180 lbs. (81.6 kg)	143 lbs. (64.9 kg)	125 lbs. (56.7 kg)	112 lbs. (50.8 kg)	
190 lbs. (86.2 kg)	151 lbs. (68.5 kg)	132 lbs. (59.9 kg)	118 lbs. (53.5 kg)	
200 lbs. - 310 lbs. (90.7 kg - 140.6 kg)	160 lbs. (72.6 kg)	139 lbs. (63 kg)	124 lbs. (56.2 kg)	





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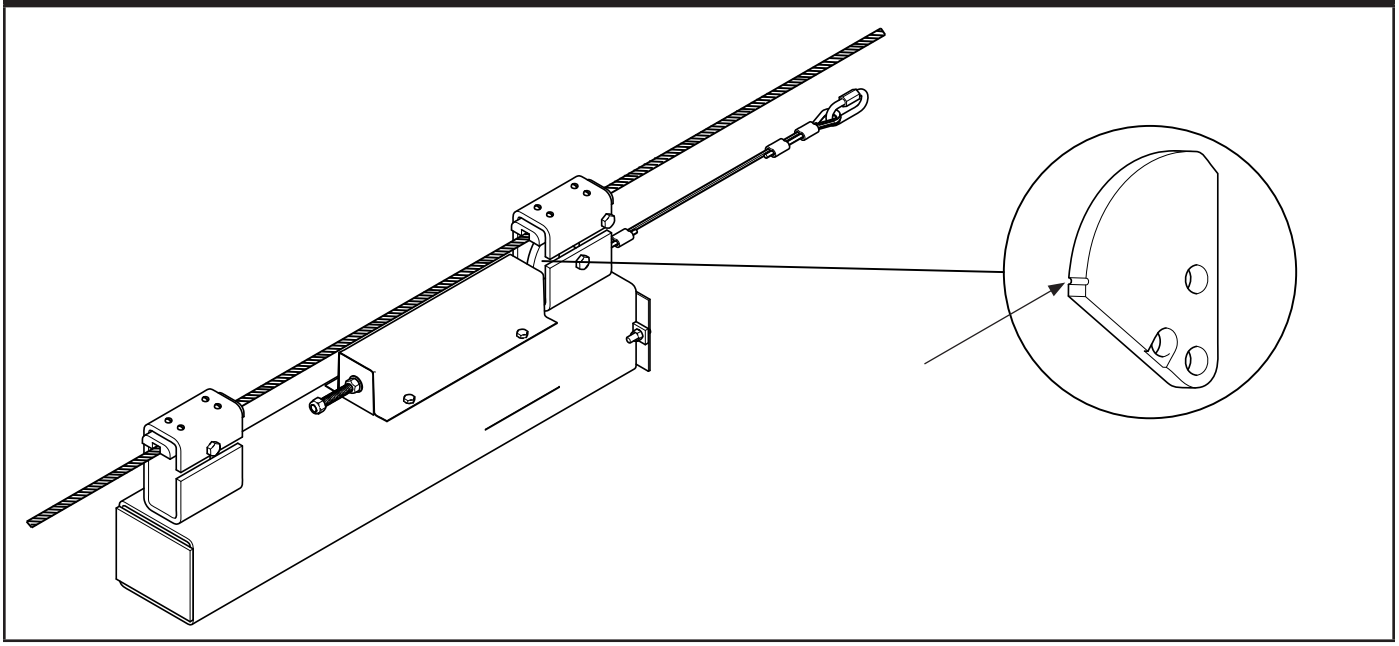
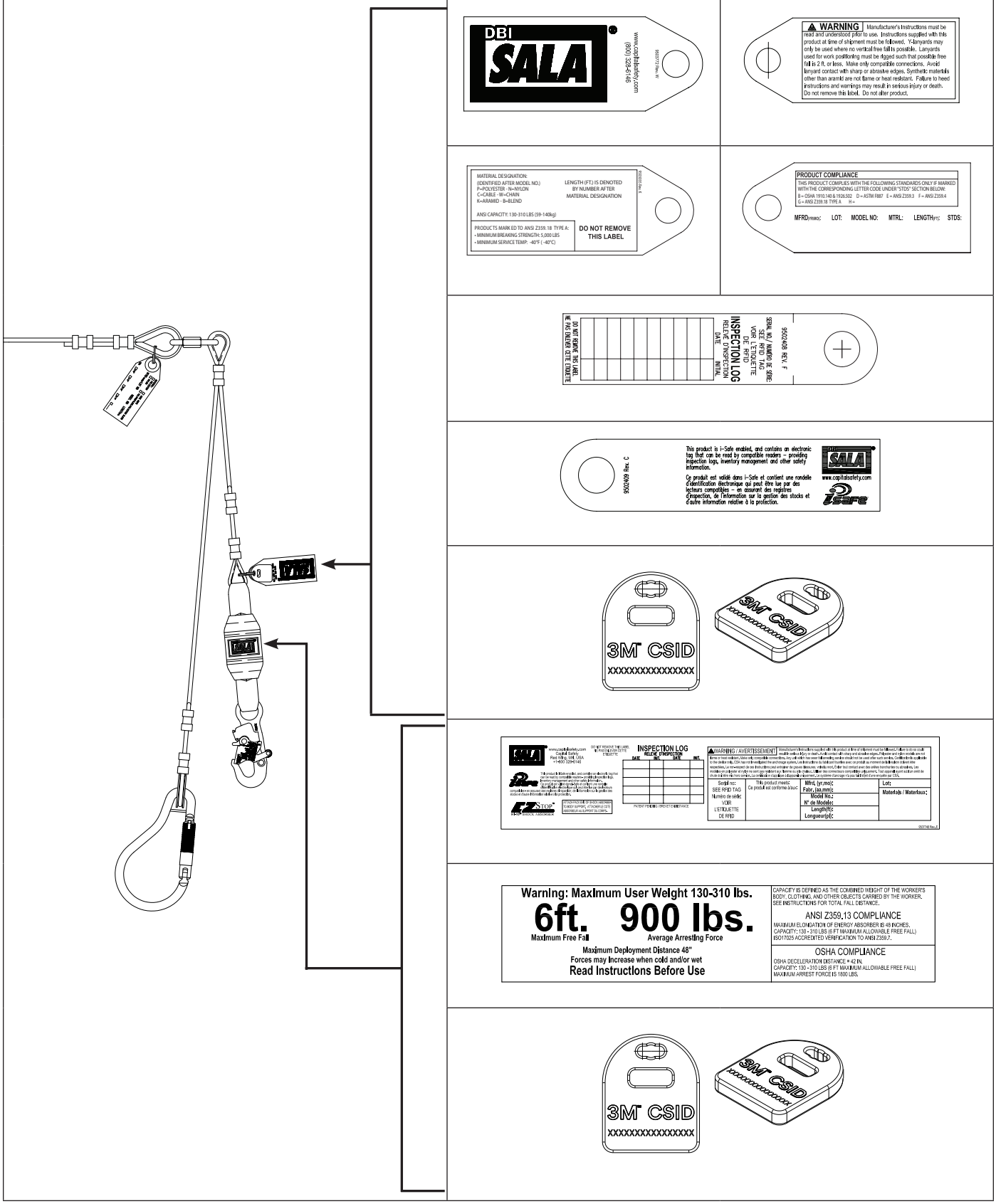
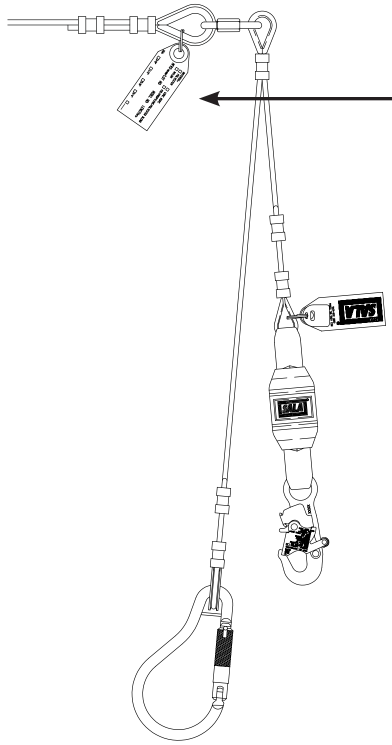



DBI SALA
www.capitalsafety.com
(800) 328-4945
WARNING
Manufacturer's Instructions must be read and understood prior to use. Instructions supplied with this product at time of shipment must be followed. Y-lanyards may only be used where no vertical free fall is possible. Lanyards used for work positioning must be rigged such that possible free fall is 2 ft. or less. Make only compatible connections. Avoid lanyard contact with sharp or abrasive edges. Synthetic materials other than aramid are not flame or heat resistant. Failure to heed instructions and warnings may result in serious injury or death. Do not remove this label. Do not alter product.
MATERIAL DESIGNATION:
(IDENTIFIED AFTER MODEL NO.)
P=POLYESTER - N=NYLON
C=CABLE - W=CHAIN
K=ARAMID - B=BLEND
LENGTH (FT.) IS DENOTED BY NUMBER AFTER MATERIAL DESIGNATION
ANSI CAPACITY: 130-310 LBS (59-140kg)
PRODUCT'S MARKED TO ANSI Z359.18 TYPE A:
• MINIMUM BREAKING STRENGTH: 5,000 LBS
• MINIMUM SERVICE TEMP: -40°F (-40°C)
DO NOT REMOVE THIS LABEL
PRODUCT COMPLIANCE
THIS PRODUCT COMPLIES WITH THE FOLLOWING STANDARDS ONLY IF MARKED WITH THE CORRESPONDING LETTER CODE UNDER "STDS" SECTION BELOW:
B = OSHA 1910.140 & 1926.502 D = ASTM F887 E = ANSI Z359.3 F = ANSI Z359.4
G = ANSI Z359.18 TYPE A H =
MFRD(YR/MO): LOT: MODEL NO: MTRL: LENGTH(FT): STDS:
INSPECTION LOG
DO NOT REMOVE THIS LABEL
SERIAL NO. / NUMÉRO DE SÉRIE:
SEE RFID TAG
VOIR L'ÉTIQUETTE DE RFID
DATE
INITIAL
This product is i-Safe enabled, and contains an electronic tag that can be read by compatible readers – providing inspection logs, inventory management and other safety information.
Ce produit est validé dans i-Safe et contient une rondelle d'identification électronique qui peut être lue par des lecteurs compatibles – en assurant des registres d'inspection, de l'information sur la gestion des stocks et d'autre information relative à la protection.
www.capitalsafety.com
3M CSID
XXXXXXXXXXXXXXX
INSPECTION LOG
RELEVÉ D'INSPECTION
WARNING / AVERTISSEMENT
Serial no:
SEE RFID TAG
Numéro de série:
VOIR L'ÉTIQUETTE DE RFID
This product meets:
Ce produit est conforme à/aux:
Mfrd. (yr./mo.):
Fabr. (aa./mm):
Model No.:
N° de Modèle:
Length(ft):
Longueur(pi):
Lot:
Materials / Matériaux:
Warning: Maximum User Weight 130-310 lbs.
6ft.
Maximum Free Fall
900 lbs.
Average Arresting Force
Maximum Deployment Distance 48"
Forces may increase when cold and/or wet
Read Instructions Before Use
CAPACITY IS DEFINED AS THE COMBINED WEIGHT OF THE WORKER'S BODY, CLOTHING, AND OTHER OBJECTS CARRIED BY THE WORKER. SEE INSTRUCTIONS FOR TOTAL FALL DISTANCE.
ANSI Z359.13 COMPLIANCE
MAXIMUM ELONGATION OF ENERGY ABSORBER IS 48 INCHES.
CAPACITY: 130 - 310 LBS (6 FT MAXIMUM ALLOWABLE FREE FALL)
ISO17025 ACCREDITED VERIFICATION TO ANSI Z359.7.
OSHA COMPLIANCE
OSHA DECELERATION DISTANCE = 42 IN.
CAPACITY: 130 - 310 LBS (6 FT MAXIMUM ALLOWABLE FREE FALL)
MAXIMUM ARREST FORCE IS 1800 LBS.



DBI SALA®

www.capitalsafety.com
(800) 328-6146

9503925 REV G

⚠ WARNING

MANUFACTURER'S INSTRUCTIONS MUST BE READ AND UNDERSTOOD PRIOR TO USE. INSTRUCTIONS SUPPLIED WITH THIS PRODUCT AT TIME OF SHIPMENT MUST BE FOLLOWED. FAILURE TO DO SO COULD RESULT IN SERIOUS INJURY OR DEATH. MAKE ONLY COMPATIBLE CONNECTIONS. AVOID LIFELINE CONTACT WITH SHARP OR ABRASIVE EDGES. SYNTHETIC MATERIALS NOT FLAME OR HEAT RESISTANT. INSPECT LIFELINE BEFORE EACH USE. DO NOT USE IF AN UNSAFE CONDITION IS FOUND. DO NOT REMOVE THIS LABEL.

MATERIAL IS DENOTED BY LETTER AFTER MODEL NUMBER
B = POLYPROPYLENE/POLYESTER BLEND N = NYLON
P = POLYESTER W = WIRE ROPE

LENGTH (FT.) IS DENOTED BY NUMBER AFTER MATERIAL DESIGNATION
DIAMETER (IN.) IS DENOTED BY NUMBER AFTER LENGTH DESIGNATION
CAPACITY: 310 LBS. MAXIMUM

DO NOT REMOVE THIS LABEL

9503127 Rev. D

PRODUCT COMPLIANCE

THIS PRODUCT COMPLIES WITH THE FOLLOWING STANDARDS ONLY IF MARKED WITH THE CORRESPONDING LETTER CODE UNDER "STDS" SECTION:
B = OSHA 1910.140 & 1926.502
D = ASTM F887 E = ANSI Z359.3
F = ANSI Z359.4 H = ANSI Z359.15
J =

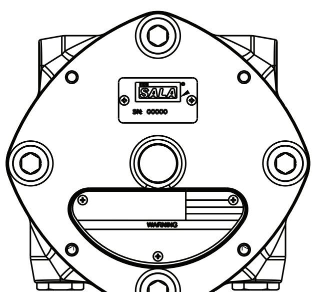
STDS:
DIAMETER (in)
LENGTH (ft)
MFRD (YR/MO): LOT: MODEL NO: MTRL:

SERIAL NO. / N° DE SÉRIE
XXXXXX
INSPECTION LOG /
RELEVÉ D'INSPECTION

DATE										
INITIAL / INITALES										

DO NOT REMOVE THIS LABEL
NE PAS ENLEVER CETTE ÉTIQUETTE

9504395 Rev H



3M | DBI SALA® Fall Protection

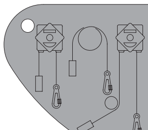
3M.com/FallProtection

INSPECTION DATE

⚠ WARNING

MANUFACTURER'S INSTRUCTIONS SUPPLIED WITH THIS PRODUCT AT TIME OF SHIPMENT MUST BE FOLLOWED. FAILURE TO DO SO COULD RESULT IN SERIOUS INJURY OR DEATH. CONTACT 3M FALL PROTECTION GROUP IF INSTRUCTION SHEET IS NEEDED. INSPECT BEFORE EACH USE. DO NOT USE IF WEAR OR DAMAGE IS PRESENT.

COUNTER WEIGHT REQUIRED FOR THIS SYSTEM IS DEPENDENT UPON GUY WIRE ANGLE AND USER'S BODY WEIGHT, SEE USER MANUAL.



⚠ WARNING

* THIS SYSTEM IS DESIGNED TO BE USED WITH 1/4 INCH DIA. 7 X 19 WIRE ROPE. INSTALLATION REQUIRES 1 1/2 WRAPS OF CABLE ON THE DRUM.
* CABLE MUST BE REAVED OR OTHERWISE RIGGED SUCH THAT CABLE IS IN LINE WITH BLOCK ENTRY/EXIT PORTS. DO NOT ALLOW CABLE TO RUB AGAINST MEMBERS ON RIG.
* BLOCK MUST BE FIXED RIGID TO THE RIG USING MOUNTING HOLES PROVIDED.

DBI SALA®

SN: 00000

SAFETY INFORMATION

Please read, understand, and follow all safety information contained in these instructions prior to the use of this Climb Assist/Fall Arrest 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 Climb Assist/Fall Arrest 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 User Instructions, is not approved by 3M and could result in serious injury or death.

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

⚠ WARNING

This Climb Assist/Fall Arrest 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 system could result in serious injury or death.** For proper selection, operation, installation, maintenance, and service, refer to these User Instructions and all manufacturer recommendations, see your supervisor, or contact 3M Technical Service.

- **To reduce the risks associated with working with a Climb Assist/Fall Arrest System which, if not avoided, could result in serious injury or death:**
  - Inspect the system before each use and after any fall event. Inspect and service in accordance with the User Instructions.
  - If inspection reveals an unsafe or defective condition in a component of the system, remove the system from service and repair or replace according to the User Instructions.
  - Any 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.
  - Never allow more than one user to attach to the system at a time. This system is rated for a single user (75-310 lbs, including all user clothing and equipment).
  - Use proper safety procedures and proper lifting technique when handling heavy system components (e.g., counterweight alone can weigh 80-170 lbs).
  - Follow all manufacturer recommendations when rigging and terminating the wire rope/lifeline and guy-wire.
  - Use only wire rope/lifeline and guy-wire specified and approved in the User Instructions.
  - Only use connectors supplied with the system to attach an approved body harness to the system. Do not use any additional connecting devices.
  - Ensure that systems assembled from components and subsystems made by different manufacturers are compatible and comply with applicable standards. Always consult a Competent or Qualified Person before using these systems.
  - Do not connect to the system while it is being installed.
  - Always maintain three points of contact while climbing. Refer to the User Instructions for further information on proper operation technique.

- **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 the 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 incident occurs, immediately seek medical attention for the fallen worker 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.

☑ *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.*

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

PRODUCT DESCRIPTION:

Figure 2 illustrates the 3M™ DBI-SALA Climb Assist/Fall Arrest System. The Climb Assist/Fall Arrest System is a component used in a personal fall arrest system (PFAS). This equipment is to be used where worker mobility and fall protection is needed (inspection work, general construction, maintenance work, oil production, confined space work, climbing fixed ladders, etc.). See Table 1 for Component Specifications.

Table 1 – Specifications

System Specifications:	
Capacity:	1 Person with a combined weight (clothing, tools, etc.) of 130 lbs (59 kg) minimum and 310 lbs (140 kg) maximum.
Anchorage:	**Fall Arrest:** The structure to which the Climb Assist / Fall Arrest is attached must sustain static loads applied in the directions permitted by the Fall Arrest System of at least: 3,600 lbs (16 kN) with certification of a Qualified Person[1]; or 5,000 lbs (22 kN) without certification. When more than one Personal Fall Arrest System (PFAS) is attached to an anchorage, these static loads must be multiplied by the number of PFAS attached to the anchorage. ☑ **OSHA 1926.502 and OSHA 1910.140:** *Anchorages used for attachment to a Personal Fall Arrest System (PFAS) must be independent of any anchorage used to suspend or support platforms and must support 5,000 lbs (22 kN) per user attached, or be designed, installed, and used as part of a complete PFAS which maintains a Safety Factor of at least 2 and is supervised by a Qualified Person[1].*

Servicable Part See Section 6.3	**Repair Kit**
3511645	3520092
3514072	3520093

1 Qualified Person: *An individual with a recognized degree or professional certificate, and extensive experience in Fall Protection. This individual must be capable of design, analysis, evaluation, and specification in Fall Protection.*

Table 1 – Specifications

Component Specifications:

Parent Number	Figure 2 Reference	Component	Materials	Application Notes:
3511063	①	Safety Block	**Housing:** Aluminum, Alloy **Cover:** Aluminum, alloy **Pawl:** Stainless Steel **Drum:** Steel, Plated **Shaft:** Steel, Plated **Bearing:** Bronze	
3512XXX 3530XXX	②	Cable Assembly	1/4 inch, 7x19 Galvanized Aircraft, 7000 lbs. 1/4 inch, 7x19 Stainless Steel Aircraft, 7000 lbs.	The last three digits indicate the length of the assembly. Do not substitute other cable contruction or material.
3511783	③	Mounting Bracket Mast Assembly	**Clamp Plate**: Galvanized **Tube Mast:** Galvanized	Round rung ladders up to 3/4 inch diameter, or square rungs ladders up to 9/16 inch diameter.
3511785	③	Mounting Bracket Mast Assembly	**Sheave Mounting:** Galvanized **Shackle:** 7/16 inch, Galvanized **Sheave:** 3/8 inch, Power Metal	Square rung ladders over 9/16 inch diameter up to 1 3/4 inch, and round rung ladders over 3/4 inch up to 1 3/8 inch diameter.
3511598	④	Counterweight	**Cable:** 1/4 inch, 7x19 Galvanized, 3 ft long **Ferrule:** 1/4 inch, Aluminum Duplex **Thimble:** 1/4 inch, TD, Galvanized **Quick Link:** 3/8 inch, ZP, 7/16-inch throat **Brake Lever:** Brass **Cable Clip:** 1/4 inch, Galvanized **Cable Guide:** Plastic **Tensionsing Spring Cover:** Galvanized	Adjust the amount of counterweight.
3511645	⑤	Rung/Belt Hook Assembly	**Carabiner:** 2 3/16 inch throat, High Tensile Alloy Steel **Snap Hook:** 3/4 inch throat, Swiveling, Self locking, Alloy Steel **Cable:** 1/4 inch, 7/19, Galvanized **Ferrules:** 1/4 inch, Aluminum Duplex **Thimble:** 1/4 inch, TD, Galvanized **Quick Link:** 7/16 inch throat, Alloy Steel	
3514072	⑤	Rung/Belt Hook Assembly	**Carabiner:** 2 3/16 in. throat, High Tensile Alloy Steel **Snap Hook:** 3/4 inch throat, Self Locking, Alloy Steel **Cable:** 1/4 inch, 7/19, Stainless Steel Aircraft **Ferrules:** 1/4 inch, Copper Duplex **Thimble:** 1/4 inch, TD, Galvanized **Quick Link:** 7/16 inch throat, Alloy Steel	

1.0 PRODUCT APPLICATION

1.1 PURPOSE: The DBI-SALA Climb Assist/Fall Arrest System is a component used in a personal fall arrest system (PFAS). This equipment is to be used in situations where worker mobility and fall protection is needed (inspection work, general construction, maintenance work, oil production, confined space work, etc.). The DBI-SALA Climb Assist/Fall Arrest System can also provide assistance in climbing fixed ladders.

Normal operation will allow the full length of the lifeline to extend and retract as the worker moves. If a fall occurs, the locking pawls will engage into the grooves (or teeth), stopping the fall. The cable will slide on the drum a limited distance to absorb much of the energy created in the fall. If a fall has been arrested, the Climb Assist/Fall Arrest System must be taken out of service and inspected. See Section 5.

1.2 STANDARDS: Your DBI-SALA Climb Assist/Fall Arrest System conforms to the national or regional standard(s) identified on the front cover or Table 1 of these instructions. If this product is resold outside of the original country of destination, the re-seller must provide these instructions in the language of the country where the product will be used.

1.3 SUPERVISION: Use of this equipment must be supervised by a Competent Person[1].

1.4 LIMITATIONS: Always consider the following limitations when using the DBI-SALA Climb Assist/Fall Arrest System:

- **Anchorage:** Structure on which the DBI-SALA Climb Assist/Fall Arrest System is mounted must meet the Anchorage specifications defined in Table 1.
- **Fall Path and Locking Speed:** A clear path is required to assure positive locking of a Climb Assist/Fall Arrest System. Situations which do not allow for an unobstructed fall path should be avoided. Working in confined or cramped spaces may not allow the body to reach sufficient speed to cause the Climb Assist/Fall Arrest System to lock if a fall occurs. Working on slowly shifting material, such as sand or grain, may not allow enough speed buildup to cause the Climb Assist/Fall Arrest System to lock.
- **Fall Clearance:** Ensure adequate clearance exists in your fall path to prevent stricking an object. A minimum of 6 feet from the working level to the lower level or nearest obstruction is recommended.
- **Swing Falls:** Swing falls occur when the anchorage point is not directly above the point where a fall occurs. The force of striking an object in a swing fall may cause serious injury. In a swing fall, the total vertical fall distance will be greater than if the user had fallen directly below the anchorage point, thus increasing the total free fall distance and the area required to safely arrest the user. In order to minimize wear and friction between the lifeline and the cable bushing on the housing and to decrease swing fall hazards, DBI-SALA recommends your work zone be within 5° of the anchorage point. Minimize swing falls by working as directly below the anchorage point as possible. Never permit a swing fall if injury could occur. If a swing fall situation exists in your application contact DBI-SALA before proceeding.
- **Sharp Edges:** The DBI-SALA Climb Assist/Fall Arrest System must be installed so deflection of the anchor line in a fall arrest does not bring the anchor line into contact with a sharp edge or any other article that may damage the anchor line.

  Avoid working where Lifeline or Lanyard components of the attached Personal Fall Arrest System (PFAS) can contact or abrade against unprotected sharp edges. Where contact with a sharp edge is unavoidable, cover the edge with protective material.

2.0 SYSTEM CONSIDERATIONS

2.1 RESCUE PLAN: When using this equipment and connecting subsystem(s), the employer must have a rescue plan and the means at hand to implement and communicate that plan to users, authorized persons[2], and rescuers[3]. A trained, on-site rescue team is recommended. Team members should be provided with the equipment and techniques to perform a successful rescue. Training should be provided on a periodic basis to ensure rescuer proficiency.

2.2 INSPECTION FREQUENCY: The DBI-SALA Climb Assist/Fall Arrest System shall be inspected by the user before each use. Additionally, a Periodic Examination should be performed by a Competent Person or Certified Installer[5] at intervals of no more than one year[4]. Inspection procedures are described in the *"Inspection and Maintenance Log"* included in these instructions. Results of each Competent Person or Certified Installer Inspection should be recorded on copies of the *Inspection and Maintenance Log*.

2.3 AFTER A FALL: If the Climb Assist/Fall Arrest is subjected to the forces of arresting a fall, it must be removed from the field of service immediately and inspected per Section 5.

2.4 PERSONAL FALL ARREST SYSTEM: Figure 1 illustrates typical Fall Arrest applications of this DBI-SALA Climb Assist/Fall Arrest System. Personal Fall Arrest Systems (PFAS) used with the system must meet applicable Fall Protection standards, codes, and requirements. The PFAS shall incorporate a Full Body Harness and limit Maximum Arresting Force (MAF) to 1,800 lbs (8 kN) and Total Arrest Distance to 42 inches (1.06 m).

2.5 COMPONENT COMPATIBILITY: 3M FALL Protection equipment is designed for use with 3M approved components and subsystems only. Substitutions or replacements made with non-approved components or subsystems may jeopardize compatibility of equipment and may effect the safety and reliability of the complete system.

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*1 **Competent Person:** One who is capable of identifying existing and predictable hazards in the surroundings or working conditions which is unsanitary, hazardous, or dangerous to employees, and who has authorization to take prompt corrective measures to eliminate them.*

*2 **Authorized Person:** A person assigned by the employer to perform duties at a location where the person will be exposed to a fall hazard.*
*3 **Rescuer:** Person or persons other than the rescue subect acting to perform an assisted rescue by operation of a rescue system.*
*4 **Inspection Frequency:** Extreme working conditions (harsh environments, prolonged use, etc.) may require increasing the frequency of Periodic Examinations.*

*5 **Certified Installer:** A person certified by 3M with extensive knowledge, training, and experience in the fall protection and rescue field who is capable of designing, analyzing, evaluating, and specifying fall protection and rescue systems to the extent required by applicable regional and national standards.*

2.6 CONNECTOR COMPATIBILITY: Connectors are considered to be compatible with connecting elements when they have been designed to work together in such a way that their sizes and shapes do not cause their gate mechanisms to inadvertently open regardless of how they become oriented. Contact 3M if you have any questions about compatibility.

Connectors (hooks, carabiners, and D-rings) must be capable of supporting at least 5,000 lbs. (22.2 kN). Connectors must be compatible with the anchorage or other system components. Do not use equipment that is not compatible. Non-compatible connectors may unintentionally disengage (see Figure 3). Connectors must be compatible in size, shape, and strength. If the connecting element to which a snap hook or carabiner attaches is undersized or irregular in shape, a situation could occur where the connecting element applies a force to the gate of the snap hook or carabiner (A). This force may cause the gate to open (B), allowing the snap hook or carabiner to disengage from the connecting point (C).

Self-locking snap hooks and carabiners are required by OSHA.

2.7 MAKING CONNECTIONS: Snap hooks and carabiners used with this equipment must be self-locking. Ensure all connections are compatible in size, shape and strength. Do not use equipment that is not compatible. Ensure all connectors are fully closed and locked.

3M connectors (snap hooks and carabiners) are designed to be used only as specified in each product's user's instructions. See Figure 4 for examples of inappropriate connections. Do not connect 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.

> ☑ ***NOTE:*** *Large throat snap hooks should not be connected to standard size D-rings or similar objects which will result in a load on the gate if the hook or D-ring twists or rotates, unless the snap hook complies is equipped with a 3,600 lb (16 kN) gate. Check the marking on your snap hook to verify that it is appropriate for your application.*

C. In a false engagement, where features that protrude from the snap hook or carabiner catch on the anchor, and when without visual confirmation seems to be fully engaged to the anchor point.

D. To each other.

E. Directly to webbing or rope lanyard or tie-back (unless the manufacturer's instructions for both the lanyard and connector specifically allows such a connection).

F. To any object which is shaped or dimensioned such that the snap hook or carabiner will not close and lock, or that roll-out could occur.

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

2.8 BELOW CONNECTION METHOD: To ensure proper use, safety, and compatibility, 3M recommends the following connection method. If the harness has an integral seat sling, a spreader bar (2108403) should be used to connect the side D-rings together. The snap hook from the rung/belt assembly can then be attached to the spreader bar. The carabiner end of the rung/belt assembly should be secured to the user's harness while ascending and descending so it does not interfere with the climber. Do not use a seat sling unless it is integrally connected to the harness. See Figure 5.

3.0 INSTALLATION

☑ *Installation of the DBI-SALA Climb Assist/Fall Arrest System must be supervised by a Qualified Person[1]. The installation must be certified by a Competent Person[2] as meeting the criteria for a Certified Anchorage, or that it is capable of supporting the potential forces that could be encountered during a fall.*

3.1 PLANNING: Plan your fall protection system prior to installation of the Climb Assist/Fall Arrest System. Account for all factors that may affect your safety before, during and after a fall. Consider all requirements, limitations and specifications defined in Table 1 and Section 2.

3.2 INSTALLING THE WIRE ROPE: Figure 6 illustrates installation of the wire rope cable in the safety block. The length of the cable will depend on the location of the safety block, its height off the ground, and the location of the guy cable. A general rule is to take the distance from where the climb starts to the location of the safety block (A), plus the distance from the safety block to the top of the guy line and counterweight position (B).

1. Lay the safety block on a clean work surface and remove the four cover bolts, then pry the cover off. Using caution not to damage the springs, lift the ratchet pawls off of the drum. Carefully remove the spring from the screw head and set aside. Lift the drum from the housing and remove the pawls and springs from the opposite side. Feed approximately 3 feet of wire rope through the left hand port.

   ☑ ***Remove Pawls First:*** *Remove the pawl first to ensure the spring is not over extended while removing it from the screw head.*

2. Wrap the wire rope clockwise around the drum 1-1/2 times, in a manner that does not allow the cable to cross over the existing wrap. Coil the rope upward on the drum. Feed the end of the wire rope through the right port keeping the rope snug on the drum. See Figure 6.
3. Replace the drum and rotate the shaft until it seats in the cover. Attach the spring around the screw head and replace the ratchet pawls. The pawls are stamped with "A" on one side and "B" on the other. Make sure the pawls are replaced with the "A" showing. Pawls should move freely. Replace the cover and torque bolts to 50 ft-lbs. See Figure 6.
4. Turn the block over and remove the cover. Attach the spring around the screw head and replace the ratchet pawls making sure the "A" is showing. Pawls should move freely. Replace the cover and torque bolts to 50 ft-lbs. See Figure 6.
5. Put a clamp on the end of the cable to prevent it from pulling out of the block. Mount the block vertically and check the locking action of the block in both directions by applying tension on both ends of the cable and jerking quickly on one side and vice versa. Repeat steps 1-5 if locking action is not satisfactory. See Figure 6.
6. Connect the harness and Rung Hook Assembly to the end of the wire rope that will be run down the climbing surface. Attach the harness and Rung Hook Assembly to the wire rope assembly using the provided quick link. See Figure 2.

3.3 INSTALLING THE SAFETY BLOCK: Figure 7 illustrates installation of the safety block on the climbing structure. The safety block must mount vertically with the wire rope aligned with the ports on the safety block to eliminate abrasion where the wire rope enters and exits the safety block. Available mounting bracket masts have a sheave to properly align the wire rope where it passes through the safety block ports. Mounting the safety block directly to climbing structure without a mounting bracket mast will require additional sheaves to ensure proper alignment of the wire rope and safety block ports:

1. Use at least two attachment holes to mount the safety block vertically on the climbing structure or mounting bracket mast. The block must be mounted rigid and not allowed to pivot or swing. Remove the front cover and back cover screws from the desired mounting holes (Figure 7A) and replace with the fasteners provided with the mounting bracket mast (Figure 7B) or comparable fasteners for direct mounting on the structure.
2. The use of a mounting bracket mast is recommended for ease of mounting and operation. The mounting bracket mast must not extend above the last ladder connection by more than 4 feet (Figure 7C). Select the correct mast based on the shape and size of the rungs to which the mounting bracket mast will attach (see Table 1).
3. Secure the mast to the ladder using the attachment hardware provided with the mounting bracket mast (Figure 7C). The mast must be secured to the ladder structure with at least two rung clamp assemblies. Position the mast on the ladder as directly above the climbing area as possible. Consider the guy cable angle and length when positioning the mounting bracket mast (see Figure 7). Torque the fasteners to 20-25 ft-lbs. The bottom plate and sheave on the mounting bracket mast can be reversed to allow the counterweight to operate on either side.
4. If the safety block is mounted directly to the climbing structure without a mounting bracket mast, install sheaves as needed to ensure the wire rope passes through the safety block without abrading on the ports or internal sheave.

3.4 INSTALLING THE COUNTERWEIGHT: The counterweight weighs 80 lbs empty. Additional weight can be placed inside the weight tube up to 160 lbs. See Figure 10. Do not hang weights outside the tube. Do not exceed the maximum allowable counterweight. The counterweight cover plate must be secured.

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1 ***Qualified Person:*** *An individual with a recognized degree or professional certificate, and extensive experience in Fall Protection. This individual must be capable of design, analysis, evaluation, and specification in Fall Protection.*

2 ***Competent Person:*** *One who is capable of identifying existing and predictable hazards in the surroundings or working conditions which is unsanitary, hazardous, or dangerous to employees, and who has authorization to take prompt corrective measures to eliminate them.*

The counterweight includes a locking cam designed to arrest the counterweight if it falls. The counterweight locking cam is designed to operate on 1/2-inch diameter guy cable. The angle the guy cable makes with the ground must be between 45° and 75°. See Figure 10. The recommended angle for the guy cable is 60°. The guy cable should be anchored to the ground structure. The anchor point should support 1,000 lbs. minimum. When the climb assist mast is used, the guy cable should be attached to the shackle located above the sheave on the bottom of the mast. Use cable clips or similar items to attach the guy cable to the shackle. See Figure 8 for approximate guy cable length based on the angle of installation.

1. Loosen the spring tensions by threading the tension adjusting nut up to the anchor nut. Remove the cable retaining bolts from the ends of the counterweights. See Figure 9A.
2. Lift the counterweight up to the 1/2-inch guy cable and slide the guy cable through the grooves at each end of the counterweight. Ensure the guy cable rests in the slots of the plastic cable guide wear strip. Replace the cable retaining bolts. Tighten the tension adjusting nut until there are 3 inches of exposed thread between the two (2) nuts. See Figure 9B.
3. Run the 1/4-inch cable from the Climb Assist/Fall Arrest System through the guide sheave to the counterweight quick link. Use a 1/4-inch thimble and three (3) twin base clamps. Space between the clamps must be 3 3/4-inch. At least 1/2-inch of cable must extend past the last clamp. Torque the clamps to 30 ft-lbs. See Figure 9C.
4. Remove the counterweight cover plate. Add any additional weight to the Climb Assist/Fall Arrest System. Replace the cover. See Figure 9D. The recommended weights are 6 lbs., 7/8-inch diameter, 36 inches long round steel bars.

☑ *The tension in the spring may be too tight to allow the counterweight to go down if the guy wire is not steep enough, and or little additional weight is added to the empty counterweight. If occurs, make the following adjustments:*

With the counterweight loaded to the weight you anticipate using, loosen the tension adjusting nut two (2) complete turns and try the climb assist device to see if the counterweight slides down the guy wire as the climber climbs the ladder. The adjustment procedure can be continued until the counterweight moves freely down the guy wire. Do not loosen the tension adjusting nut further than two (2) turns past the point at which the counterweight can move freely down the guy wire. If the guy wire angle changes, the tension adjusting nut must be reset as described previously.

4.0 USE

4.1 BEFORE EACH USE: Verify that your work area and Personal Fall Arrest System (PFAS) meet all criteria defined in Section 2 and a formal Rescue Plan is in place. Inspect the Climb Assist/Fall Arrest System per the '*User*' inspection points defined in the "*Inspection and Maintenance Log*" (*Table 2*). If inspection reveals an unsafe or defective condition, do not use the system. Remove the system from service and destroy, or contact 3M regarding replacement or repair.

5.0 INSPECTION

5.1 INSPECTION FREQUENCY: The Climb Assist/Fall Arrest System must be inspected at the intervals defined in Section 2. Inspection procedures are described in the *"Inspection and Maintenance Log" (Table 2)*. Inspect all other components of the Fall Protection System per the frequencies and procedures defined in the manufacturer's instructions. If a fall occurs with the Climb Assist/Fall Arrest System, a formal inspection of the entire system must be performed by a Competent Person[1] other than the user. A separate fall protection system must be used while inspecting the Climb Assist/Fall Arrest System. Inspect per the 'Competent Person' inspection points defined in the *Inspection and Maintenance Log*.

☑ *Climb Assist/Fall Arrest* Systems *are equipped with a Radio Frequency Identification (RFID) Tag. The RFID Tag can be used in conjunction with a Handheld Reading Device to simplify inspection and inventory control and provide records for your fall protection equipment.*

5.2 DEFECTS: If inspection reveals an unsafe or defective condition, remove the Climb Assist/Fall Arrest System from service immediately and contact 3M regarding replacement or repair. Do not attempt to repair the Fall Arrest System.

☑ ***Authorized Repairs Only:*** *Only 3M or parties authorized in writing my make repairs to this equipment.*

5.3 PRODUCT LIFE: The functional life of the Climb Assist/Fall Arrest System is determined by work conditions and maintenance. As long as the product passes inspection criteria, it may remain in service.

1 ***Competent Person:*** *One who is capable of identifying existing and predictable hazards in the surroundings or working conditions which is unsanitary, hazardous, or dangerous to employees, and who has authorization to take prompt corrective measures to eliminate them.*

6.0 MAINTENANCE, SERVICING, STORAGE

6.1 **CLEANING:** Periodically clean the Climb Assist/Fall Arrest System's metal components with a soft brush, warm water, and a mild soap solution. Ensure parts are thoroughly rinsed with clean water. Lubricate the pawl pivot points and the counterweight locking cam with a good quality, low temperture silicone grease.

6.2 **SERVICE:** Only 3M or parties authorized in writing by 3M may make repairs to this equipment. If the Climb Assist/Fall Arrest System has been subject to fall force or inspection reveals an unsafe or defective conditions, remove the system from service and contact 3M regarding replacement or repair.

6.3 **REPAIR INFORMATION:** If repair is needed, remove pin from quick link so shock pack and hook can be removed from the system, or remove the quick link. Apply a thread locking compound to the threads of the new quick link and stake the pin after assembly. See Table 1 for servicable parts and corresponding repair kits.

6.4 **STORAGE AND TRANSPORT:** When not in use, store and transport the Climb Assist/Fall Arrest System and associated fall protection equipment in a cool, dry, clean environment out of direct sunlight. Avoid areas where chemical vapors may exist. Thoroughly inspect components after extended storage.

6.5 **DISPOSAL:** Dispose of the Climb Assist/Fall Arrest if it has been subjected to fall arrest forces or inspection reveals an unsafe or defective condition.

☑ *Remove all attached RFID Tags before disposing of this product. RFID Tags must be disposed of according to the restrictions specified in Section 7.*

7.0 RFID TAG

7.1 **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 12 for where your RFID Tag is located.

7.2 **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*

8.0 LABELS

Figure 12 illustrates labels on the Climb Assist/Fall Arrest System. Labels must be replaced if they are not fully legible.

Table 2 – Inspection and Maintenance Log

Inspection Date:	**Inspected By:**

Components:	**Inspection:**	**User**	**Competent Person or Certified Installer**
ClimbAssist/FallArrest (Figure 2)	Inspect the Climb Assist/Fall Arrest system for damage: Look for cracks, dents, or deformities. Look for bending or wear on the hooks, carabiners, wire rope clips, mast, counterweight, guy wire, and safety block.	☐	☐
	Inspect the lifeline for cuts, kinks, burns, broken wires or strands, chemical damage, and severe abrasion. Replace the lifeline if there are six or more randomly distributed broken wires in one lay, or three or more broken wires in one strand in one lay. A "lay" of wire rope is the length of wire rope it takes for a strand (larger group of wires) to complete one revolution or twist along the rope.	☐	☐
	Inspect the entire unit for corrosion.	☐	☐
	Inspect the wire rope clips for tightness.	☐	☐
	Inspect the energy absorber for activation, tearing, or damage.	☐	☐
Safety Block	Remove the four cover bolts and washers. Lift the drum from the housing and inspect the pawls and springs. Pawls should move freely. The springs should be tight.	☐	☐
	Inspect the drum face of the safety block. Heavy grooves indicate a need for replacement. Inspect the drum bushings. Excessice play indicate a need for replacement.	☐	☐
	Clean and reassemble the safety block. Lubricate pawl pivot holes with a good quality, low temperature silicone grease.	☐	☐
	Inspect the bolts for tightness.	☐	☐
	Ensure the safety block locks up when the lifeline is jerked sharply. Lockup should be positive with no slipping.	☐	☐
Mast	Inspect the mast for corrosion damage, bolt tightness, and operational pulleys.	☐	☐
Counterweight Brake Lever (Figure 11)	Inspect the counterweight brake lever for wear. Replace if wear is over the wear mark. Replace the plastic cable guide when replacing the brake lever.	☐	☐
Labels (Figure 12)	Verify that all labels are securely attached and are legible.	☐	☐
PFAS and Other Equipment	Additional Personal Fall Arrest System (PFAS) equipment (harness, etc) that are used with the Climb Assist/Fall Arrest System should be installed and inspected per the manufacturer's instructions.	☐	☐

Serial Number(s):	**Date Purchased:**
Model Number:	**Date of First Use:**

Corrective Action/Maintenance:	Approved By:
	Date:
Corrective Action/Maintenance:	Approved By:
	Date:
Corrective Action/Maintenance:	Approved By:
	Date:
Corrective Action/Maintenance:	Approved By:
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Corrective Action/Maintenance:	Approved By:
	Date:
Corrective Action/Maintenance:	Approved By:
	Date:

U.S. 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 applicable law, 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 at 800-328-6146 or via email at 3MFallProtection@mmm.com for assistance.

LIMITATION OF LIABILITY: TO THE EXTENT PERMITTED BY APPLICABLE LAW, 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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ISO 9001
bsi. ISO 9001 Quality Management FM534873

EU DECLARATION OF CONFORMITY:
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