



Fall Protection

	EN795: 1996 Class B
CE Type Test No. 0086 BSI Product Services P.O. Box 6221, Kitemark Court Davy Avenue Milton Keynes MK1 9EP UK	CE Production Quality Control No. 0086 BSI Product Services P.O. Box 6221, Kitemark Court Davy Avenue Milton Keynes MK1 9EP UK

User Instruction Manual

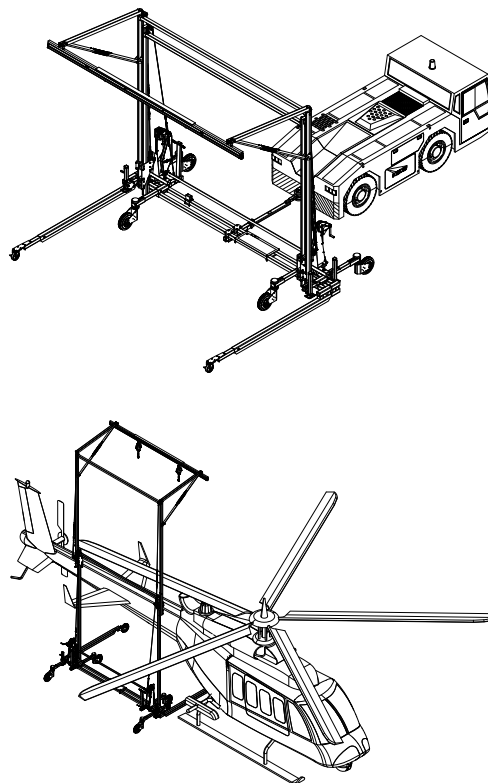
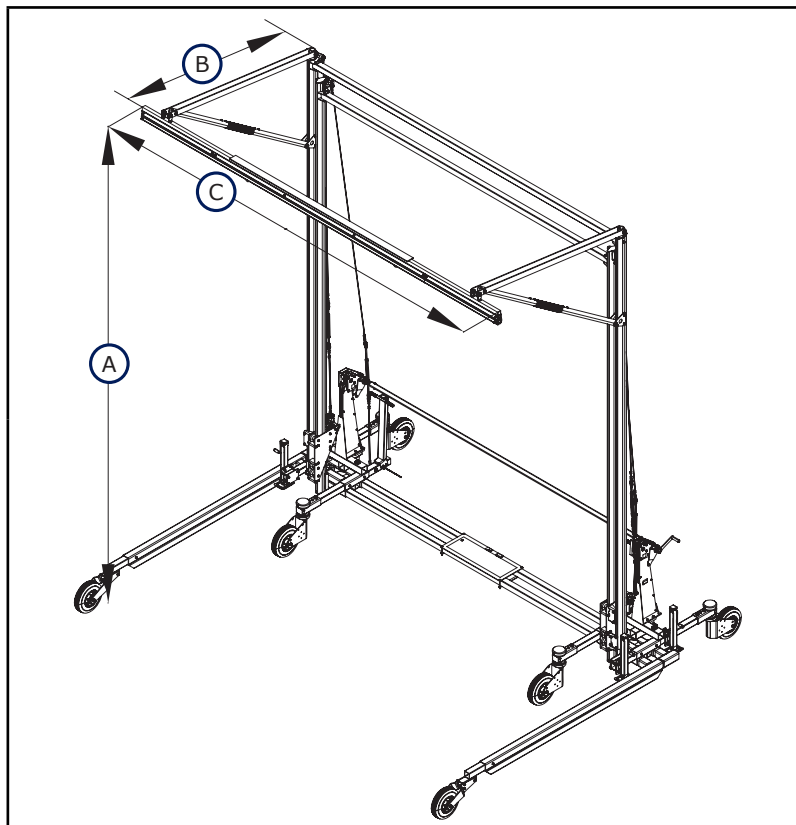
flexiguard®

C-Frame Rail Fall Arrest System

Model Numbers:

8517700	8517708	8530115	8530262	8530505	8560319
8517701	8517709	8530119	8530274	8530530	8567701
8517702	8517710	8530172	8530317	8530577	8567705
8517703	8517711	8530205	8530319	8530605	8567707
8517704	8517712	8530212	8530354	8530623	8567709
8517705	8517713	8530213	8530414	8530672	8567711
8517706	8530035	8530223	8530446	8530681	8567713
8517707	8530111	8530225	8530471	8530719	

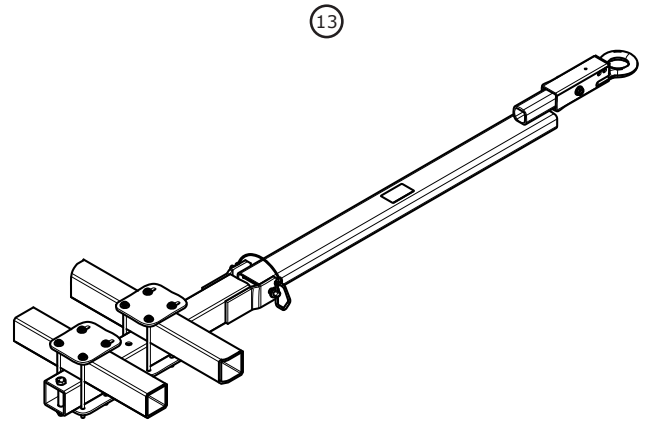
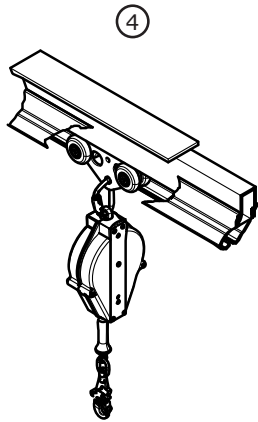
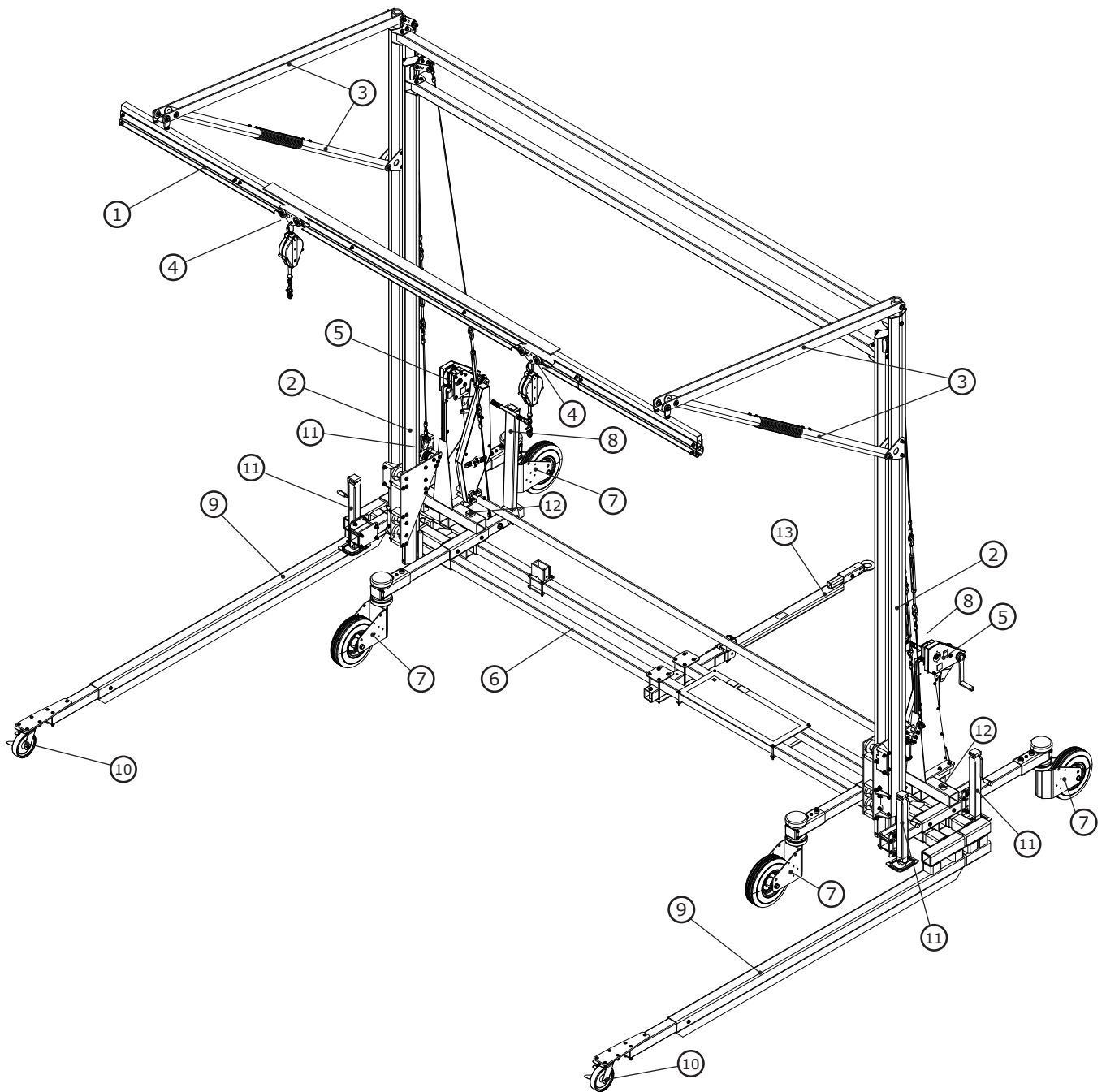
1

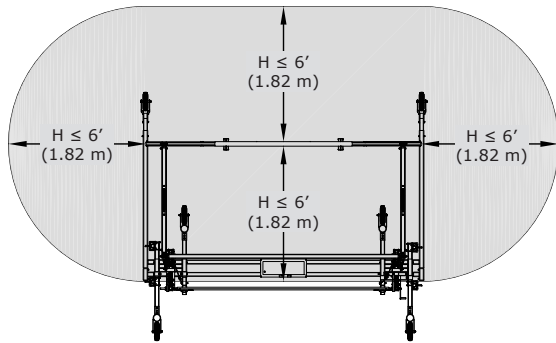
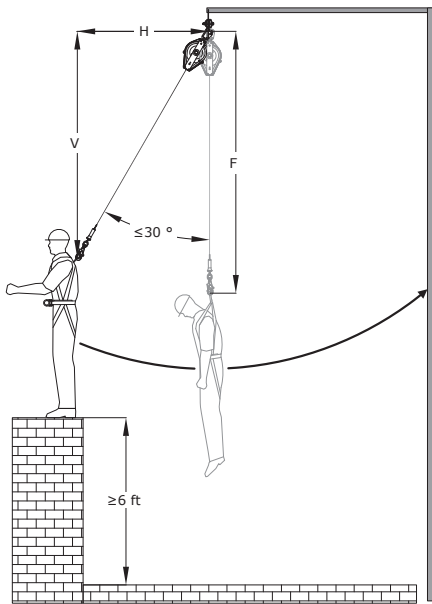


OSHA MODELS	(A)	(B)	(C)	 KG / LBS	
8517700	12-18ft (3.6-5.5m)	8ft (2.4m)	10ft (3m)	310 lbs (140.6 kg)	2
8517701	12-18ft (3.6-5.5m)	8ft (2.4m)	10ft (3m)	310 lbs (140.6 kg)	2
8517702	12-18ft (3.6-5.5m)	8ft (2.4m)	15ft (4.6m)	310 lbs (140.6 kg)	2
8517703	12-18ft (3.6-5.5m)	8ft (2.4m)	15ft (4.6m)	310 lbs (140.6 kg)	2
8517704	12-18ft (3.6-5.5m)	8ft (2.4m)	20ft (6.1m)	310 lbs (140.6 kg)	2
8517705	12-18ft (3.6-5.5m)	8ft (2.4m)	20ft (6.1m)	310 lbs (140.6 kg)	2
8517706	16-26ft (4.9-7.9m)	8ft (2.4m)	15ft (4.6m)	310 lbs (140.6 kg)	2
8517707	16-26ft (4.9-7.9m)	8ft (2.4m)	15ft (4.6m)	310 lbs (140.6 kg)	2
8517708	16-26ft (4.9-7.9m)	8ft (2.4m)	20ft (6.1m)	310 lbs (140.6 kg)	2
8517709	16-26ft (4.9-7.9m)	8ft (2.4m)	20ft (6.1m)	310 lbs (140.6 kg)	2
8517710	20-34ft (6-10.4m)	8ft (2.4m)	15ft (4.6m)	310 lbs (140.6 kg)	2
8517711	20-34ft (6-10.4m)	8ft (2.4m)	15ft (4.6m)	310 lbs (140.6 kg)	2
8517712	20-34ft (6-10.4m)	8ft (2.4m)	20ft (6.1m)	310 lbs (140.6 kg)	2
8517713	20-34ft (6-10.4m)	8ft (2.4m)	20ft (6.1m)	310 lbs (140.6 kg)	2
8530035	26ft (7.9m)	8ft (2.4m)	15ft (4.6m)	310 lbs (140.6 kg)	2

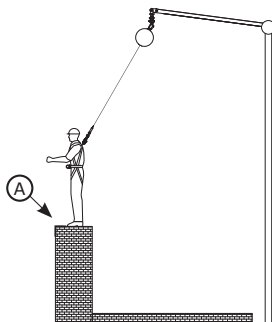
OSHA MODELS	Ⓐ	Ⓑ	Ⓒ		
8530111	21ft (6.4m)	8ft (2.4m)	15ft (4.6m)	310 lbs (140.6 kg)	2
8530115	15ft (4.6m)	8ft (2.4m)	10ft (3m)	310 lbs (140.6 kg)	2
8530119	28ft (8.5m)	8ft (2.4m)	15ft (4.6m)	310 lbs (140.6 kg)	2
8530172	20ft (6.1m)	8ft (2.4m)	20ft (6.1m)	310 lbs (140.6 kg)	2
8530205	22ft (6.7m)	8ft (2.4m)	20ft (6.1m)	310 lbs (140.6 kg)	2
8530212	16-26ft (4.9-7.9m)	8ft (2.4m)	15ft (4.6m)	310 lbs (140.6 kg)	2
8530213	12-18ft (3.6-5.5m)	8ft (2.4m)	15ft (4.6m)	310 lbs (140.6 kg)	2
8530223	18-31.5ft (5.5-9.6m)	8ft (2.4m)	15ft (4.6m)	310 lbs (140.6 kg)	2
8530225	25ft (7.6m)	8ft (2.4m)	20ft (6.1m)	310 lbs (140.6 kg)	2
8530262	25ft (7.6m)	8ft (2.4m)	20ft (6.1m)	310 lbs (140.6 kg)	2
8530274	22ft (6.7m)	8ft (2.4m)	20ft (6.1m)	310 lbs (140.6 kg)	2
8530317	12-18ft (3.6-5.5m)	4.5ft (1.4m)	10ft (3m)	310 lbs (140.6 kg)	2
8530319	13.8ft (4.2m)	8ft (2.4m)	18ft (5.5m)	310 lbs (140.6 kg)	2
8530354	26ft (7.9m)	8ft (2.4m)	15ft (4.6m)	310 lbs (140.6 kg)	2
8530414	20ft (6.1m)	8ft (2.4m)	20ft (6.1m)	310 lbs (140.6 kg)	2
8530446	16-26ft (4.9-7.9m)	8ft (2.4m)	20ft (6.1m)	310 lbs (140.6 kg)	2
8530471	12-18ft (3.6-5.5m)	8ft (2.4m)	10ft (3m)	310 lbs (140.6 kg)	2
8530505	16ft (4.9m)	8ft (2.4m)	20ft (6.1m)	310 lbs (140.6 kg)	2
8530530	20-34ft (6-10.4m)	8ft (2.4m)	15ft (4.6m)	310 lbs (140.6 kg)	2
8530577	12-18ft (3.6-5.5m)	8ft (2.4m)	10ft (3m)	310 lbs (140.6 kg)	2
8530605	16-26ft (4.9-7.9m)	8ft (2.4m)	20ft (6.1m)	310 lbs (140.6 kg)	2
8530623	16-26ft (4.9-7.9m)	8ft (2.4m)	20ft (6.1m)	310 lbs (140.6 kg)	2
8530672	16-26ft (4.9-7.9m)	8ft (2.4m)	20ft (6.1m)	310 lbs (140.6 kg)	2
8530681	20-34ft (6-10.4m)	8ft (2.4m)	20ft (6.1m)	310 lbs (140.6 kg)	2
8530719	19ft (5.8m)	8ft (2.4m)	10ft (3m)	310 lbs (140.6 kg)	2

CE MODELS	Ⓐ	Ⓑ	Ⓒ		
8567701	12-18ft (3.6-5.5m)	8ft (2.4m)	10ft (3m)	310 lbs (140.6 kg)	2
8567705	12-18ft (3.6-5.5m)	8ft (2.4m)	20ft (6.1m)	310 lbs (140.6 kg)	2
8567707	16-26ft (4.9-7.9m)	8ft (2.4m)	15ft (4.6m)	310 lbs (140.6 kg)	2
8567709	16-26ft (4.9-7.9m)	8ft (2.4m)	20ft (6.1m)	310 lbs (140.6 kg)	2
8567711	20-34ft (6-10.4m)	8ft (2.4m)	15ft (4.6m)	310 lbs (140.6 kg)	2
8567713	20-34ft (6-10.4m)	8ft (2.4m)	10ft (3m)	310 lbs (140.6 kg)	2



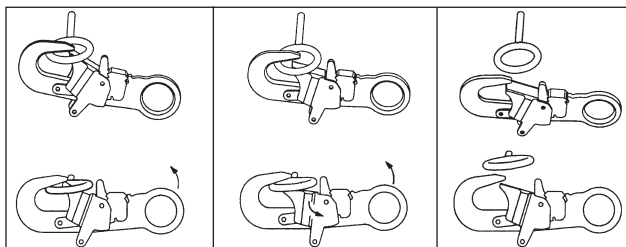


4



F ft (m)	← H - ft (m) →						
	0 (0.0)	1 (0.3)	2 (0.6)	3 (0.9)	4 (1.2)	5 (1.5)	6 (1.8)
0 (0.0)	0.0 (0.0)	1.0 (0.3)	2.0 (0.6)	3.0 (0.9)	4.0 (1.2)	5.0 (1.5)	6.0 (1.8)
1 (0.3)	1.0 (0.3)	1.4 (0.4)	2.2 (0.7)	3.2 (1.0)	4.1 (1.3)	5.1 (1.6)	6.1 (1.9)
2 (0.6)	2.0 (0.6)	2.2 (0.7)	2.8 (0.9)	3.6 (1.1)	4.5 (1.4)	5.4 (1.6)	6.3 (1.9)
3 (0.9)	3.0 (0.9)	3.2 (1.0)	3.6 (1.1)	4.2 (1.3)	5.0 (1.5)	5.8 (1.8)	6.7 (2.0)
4 (1.2)	4.0 (1.2)	4.1 (1.3)	4.5 (1.4)	5.0 (1.5)	5.7 (1.7)	6.4 (2.0)	7.2 (2.2)
5 (1.5)	5.0 (1.5)	5.1 (1.6)	5.4 (1.6)	5.8 (1.8)	6.4 (2.0)	7.1 (2.2)	7.8 (2.4)
6 (1.8)	6.0 (1.8)	6.1 (1.9)	6.3 (1.9)	6.7 (2.0)	7.2 (2.2)	7.8 (2.4)	8.5 (2.6)
7 (2.1)	7.0 (2.1)	7.1 (2.2)	7.3 (2.2)	7.6 (2.3)	8.1 (2.5)	8.6 (2.6)	9.2 (2.8)
8 (2.4)	8.0 (2.4)	8.1 (2.5)	8.2 (2.5)	8.5 (2.6)	8.9 (2.7)	9.4 (2.9)	10.0 (3.0)
9 (2.7)	9.0 (2.7)	9.1 (2.8)	9.2 (2.8)	9.5 (2.9)	9.8 (3.0)	10.3 (3.1)	10.8 (3.3)
10 (3.0)	10.0 (3.0)	10.0 (3.1)	10.2 (3.1)	10.4 (3.2)	10.8 (3.3)	11.2 (3.4)	11.7 (3.6)
11 (3.4)	11.0 (3.4)	11.0 (3.4)	11.2 (3.4)	11.4 (3.5)	11.7 (3.6)	12.1 (3.7)	12.5 (3.8)
12 (3.7)	12.0 (3.7)	12.0 (3.7)	12.2 (3.7)	12.4 (3.8)	12.6 (3.9)	13.0 (4.0)	13.4 (4.1)
13 (4.0)	13.0 (4.0)	13.0 (4.0)	13.2 (4.0)	13.3 (4.1)	13.6 (4.1)	13.9 (4.2)	14.3 (4.4)
14 (4.3)	14.0 (4.3)	14.0 (4.3)	14.1 (4.3)	14.3 (4.4)	14.6 (4.4)	14.9 (4.5)	15.2 (4.6)
15 (4.6)	15.0 (4.6)	15.0 (4.6)	15.1 (4.6)	15.3 (4.7)	15.5 (4.7)	15.8 (4.8)	16.2 (4.9)
16 (4.9)	16.0 (4.9)	16.0 (4.9)	16.1 (4.9)	16.3 (5.0)	16.5 (5.0)	16.8 (5.1)	17.1 (5.2)
17 (5.2)	17.0 (5.2)	17.0 (5.2)	17.1 (5.2)	17.3 (5.3)	17.5 (5.3)	17.7 (5.4)	18.0 (5.5)
18 (5.5)	18.0 (5.5)	18.0 (5.5)	18.1 (5.5)	18.2 (5.6)	18.4 (5.6)	18.7 (5.7)	19.0 (5.8)
19 (5.8)	19.0 (5.8)	19.0 (5.8)	19.1 (5.8)	19.2 (5.9)	19.4 (5.9)	19.6 (6.0)	19.9 (6.1)
20 (6.1)	20.0 (6.1)	20.0 (6.1)	20.1 (6.1)	20.2 (6.2)	20.4 (6.2)	20.6 (6.3)	20.9 (6.4)
21 (6.4)	21.0 (6.4)	21.0 (6.4)	21.1 (6.4)	21.2 (6.5)	21.4 (6.5)	21.6 (6.6)	21.8 (6.7)
22 (6.7)	22.0 (6.7)	22.0 (6.7)	22.1 (6.7)	22.2 (6.8)	22.4 (6.8)	22.6 (6.9)	22.8 (7.0)
23 (7.0)	23.0 (7.0)	23.0 (7.0)	23.1 (7.0)	23.2 (7.1)	23.3 (7.1)	23.5 (7.2)	23.8 (7.2)
24 (7.3)	24.0 (7.3)	24.0 (7.3)	24.1 (7.3)	24.2 (7.4)	24.3 (7.4)	24.5 (7.5)	24.7 (7.5)
25 (7.6)	25.0 (7.6)	25.0 (7.6)	25.1 (7.6)	25.2 (7.7)	25.3 (7.7)	25.5 (7.8)	25.7 (7.8)

5

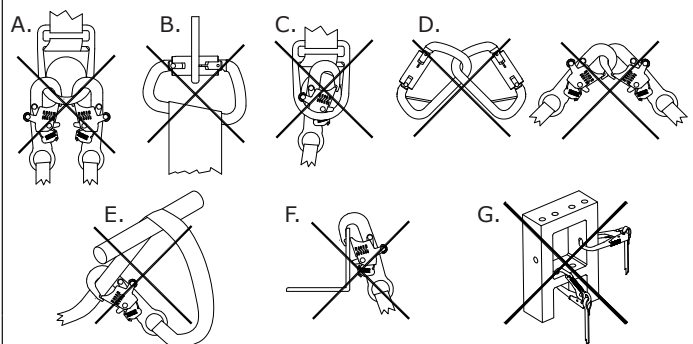


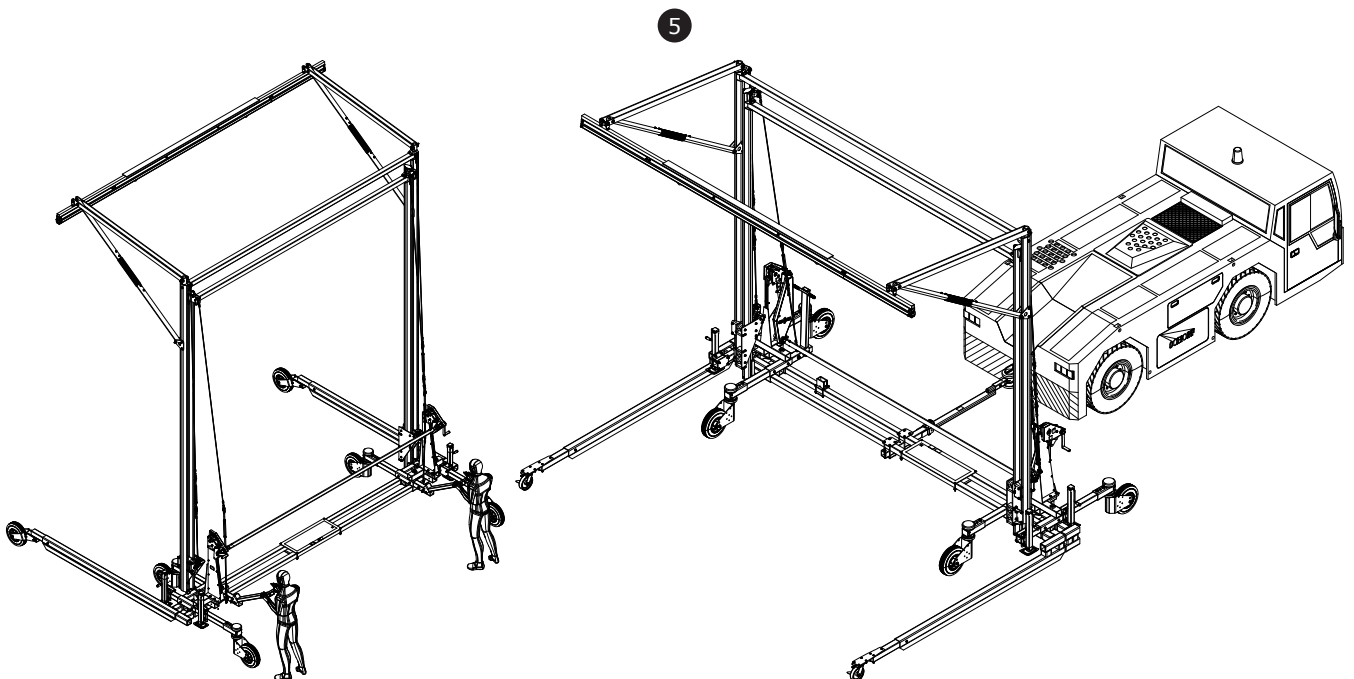
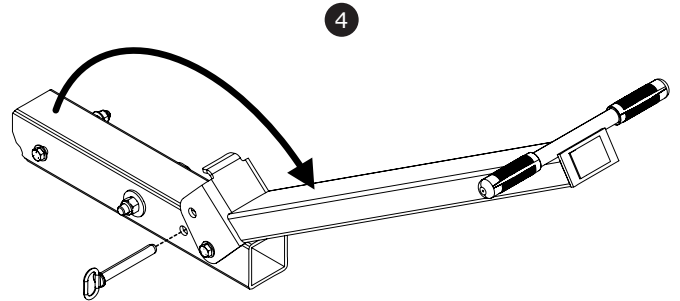
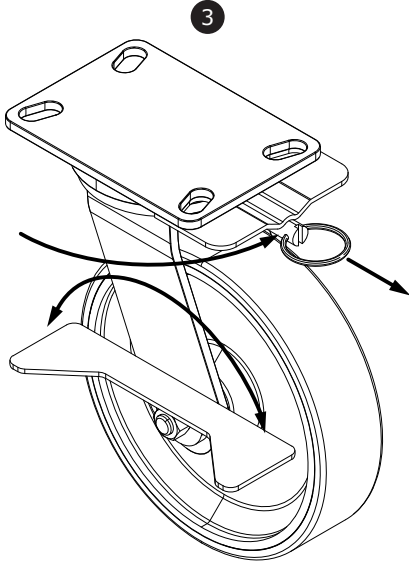
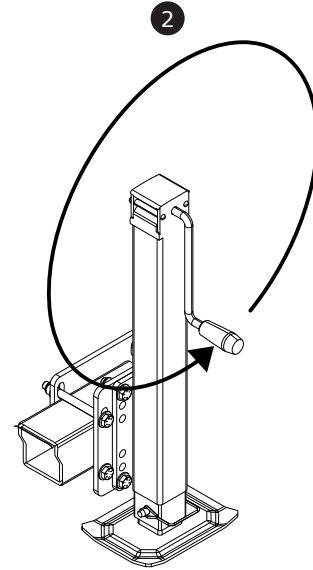
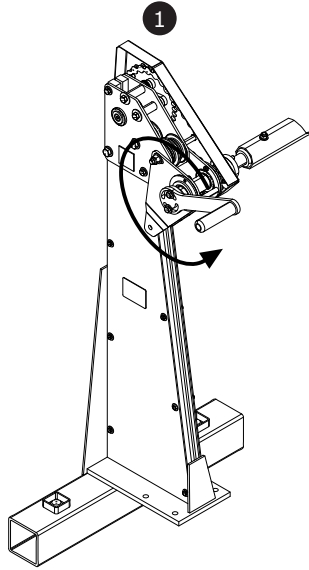
A

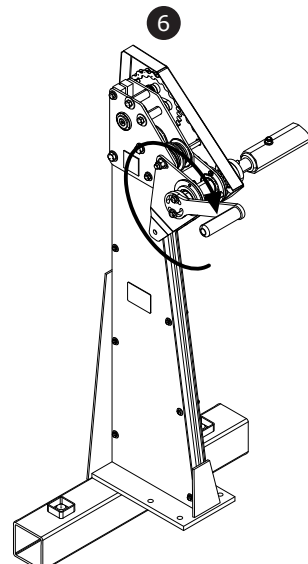
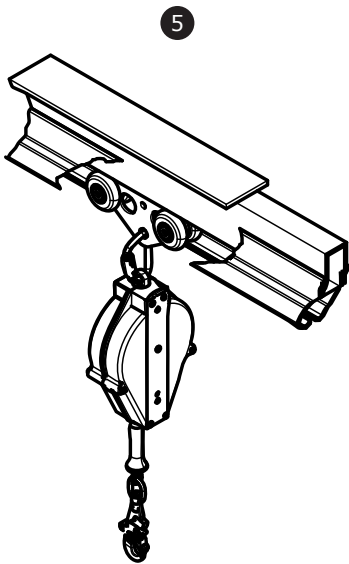
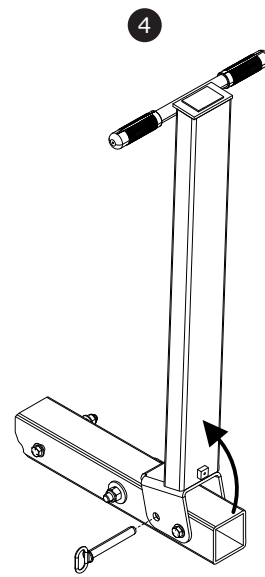
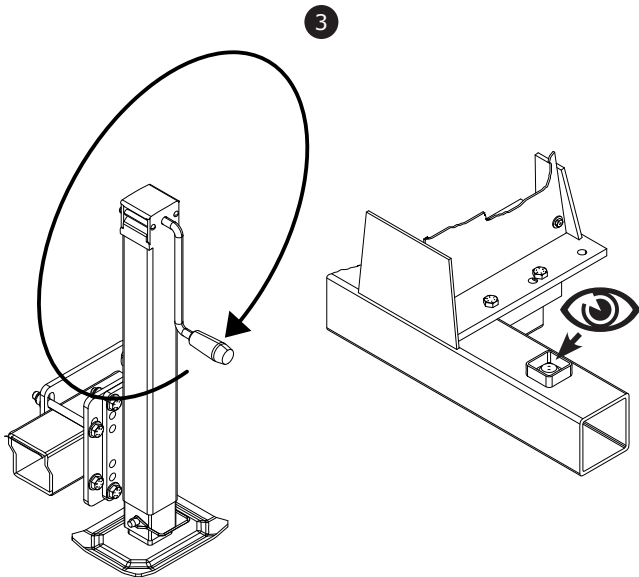
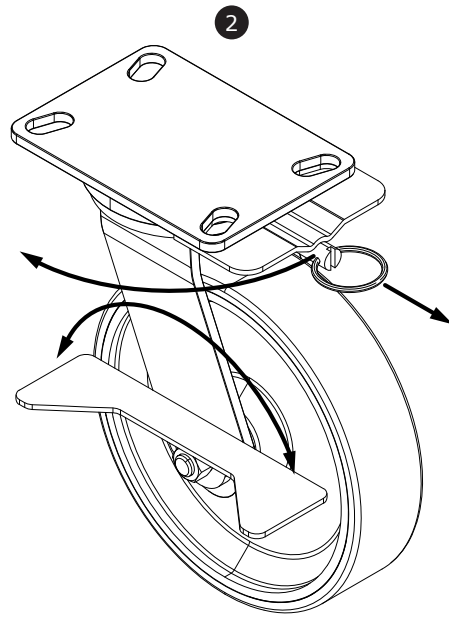
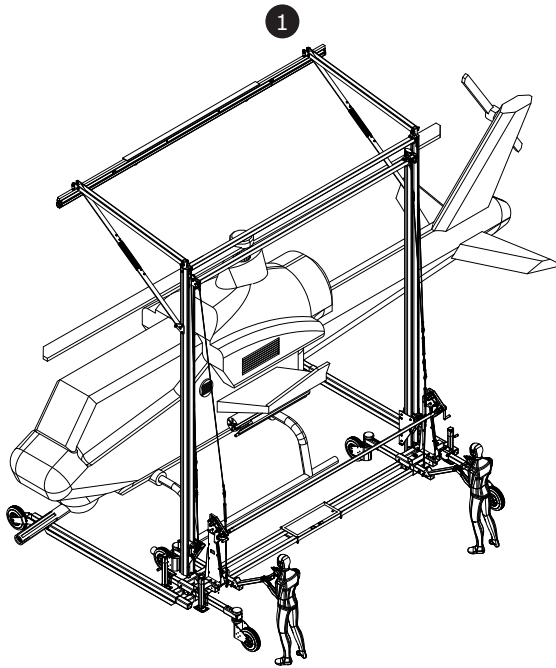
B

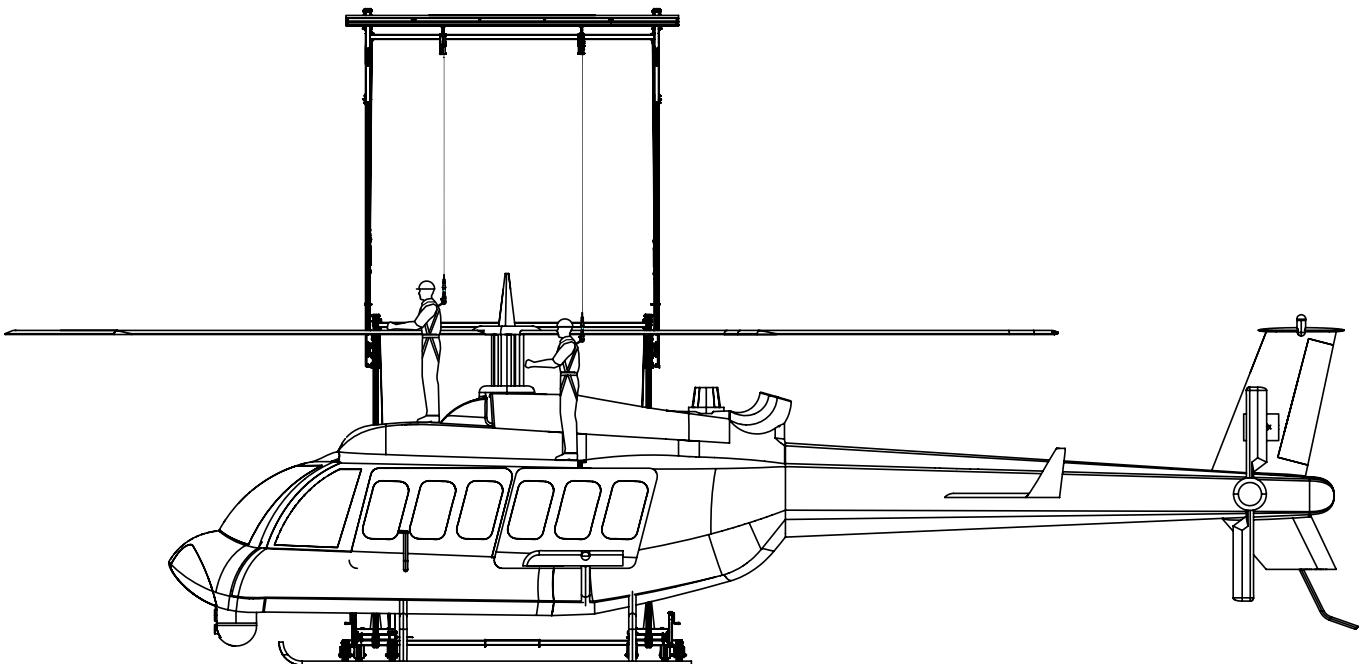
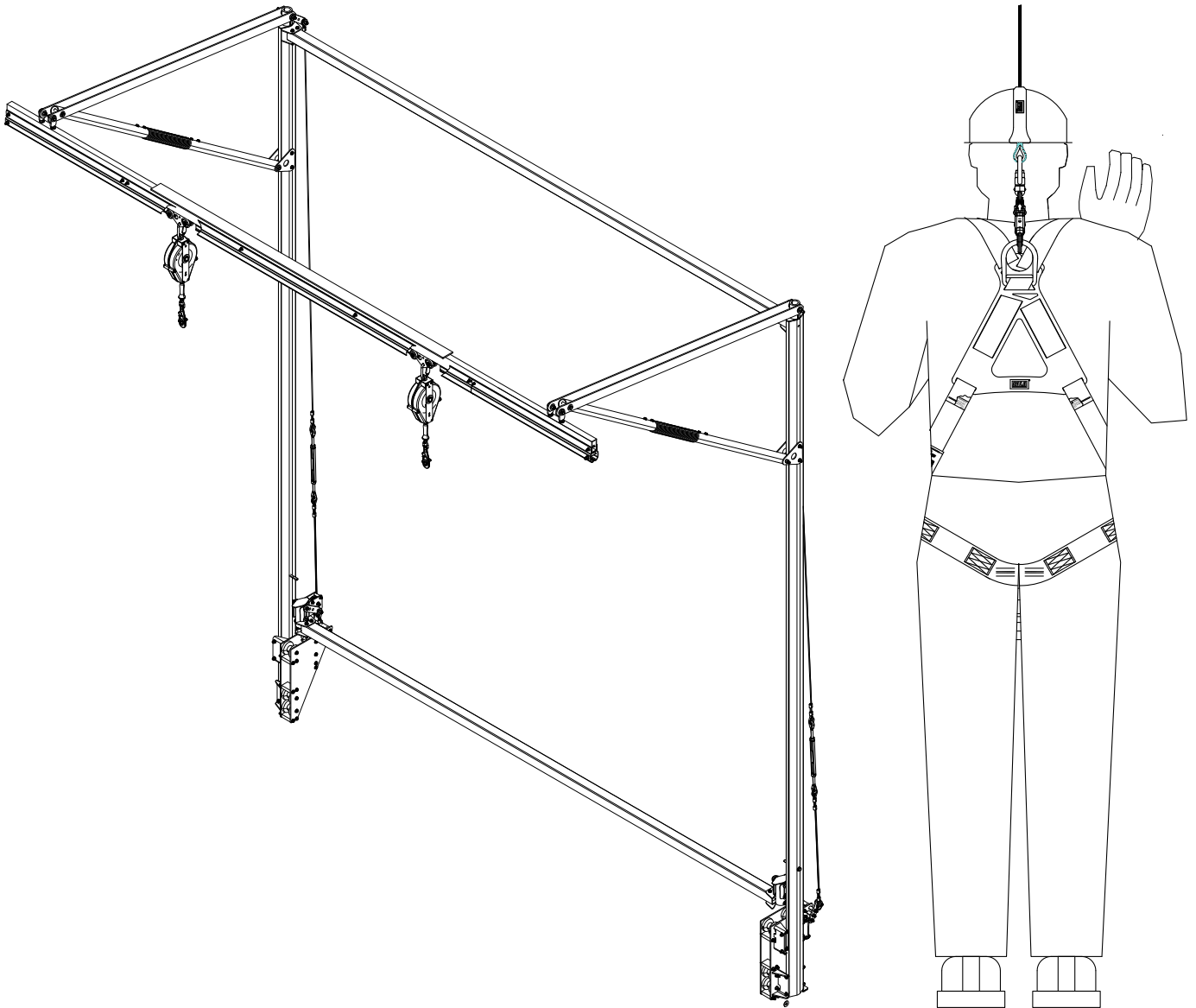
C

6









WARNING: This product is part of a Personal Fall Arrest System. The user must follow the manufacturer's instructions for each component of the system. These instructions must be provided to the user of this equipment. The user must read and understand these instructions before using this equipment. Manufacturer's instructions must be followed for proper use and maintenance of this equipment. Alterations or misuse of this product or failure to follow instructions may result in serious injury or death.

IMPORTANT: If you have questions on the use, care, or suitability of this equipment for your application, contact Capital Safety. For general questions, refer to national standards including the ANSI Z359 family of standards on fall protection, ANSI A10.32, and applicable local, state, and federal (OSHA) requirements governing occupational safety for more information about fall protection systems.

IMPORTANT: Prior to installation and use of this equipment, record the product identification information from the ID label in the Inspection and Maintenance Log (Table 2) at the back of this manual.

PRODUCT DESCRIPTION:

Figure 1 illustrates the Flexiguard® C-Frame (C-Frame FAS). C-Frame are fall protection systems with overhead anchorage connections for up to two people. They are intended for use as anchorages in a Personal Fall Arrest System (PFAS).

Figure 2 illustrates components of the C-Frame Fall Arrest Systems. See Table 1 for component identification and specifications. A Trolley Rail assembly (1) is supported by adjustable & non-adjustable Upright Assemblies (2) and Trolley Rail Supports (3). Four-Wheeled Trolleys (4) travel back and forth in the Trolley Rail Halves. Each Trolley has a connection point for connection of a Self-Retracting Device or Energy Absorbing Lanyard. (Some models are equipped with synchronized Hand Crank Chain Drives (5) that adjust the height of the Trolley Rail.) The C-Frame Bases (6) are equipped with swiveling Pneumatic or caster Wheels (7) and Transport Handles (8) for transporting and positioning the system. Outriggers (9) with locking Caster Wheels (10) or non-swiveling Pneumatic Wheels stabilize the system during transport and use. Leveling Jacks (11) and Bubble Levels (12) are used to level the system and prevent roll during use. Some C-Frame FAS models are equipped with a Tow Bar and Hitch Adaptor (13) for longer transport.

Table 1 – Specifications

Performance Specifications:	
Capacity:	2 Trolleys per Trolley Rail: 1 Person per Trolley with a combined weight (clothing, tools, etc.) less than or equal to 310 lbs (140.6 kg).
Anchorage Connection Points:	Each Anchorage Connection Point has been tested per OSHA to a safety factor of 2:1 (900 lb [408 kg]). Each Anchorage Connection Point has been tested per CE to a safety factor of 2:1 (1,350 lb [612 kg]).
Structure:	Structure supporting the C-Frame Fall Arrest System must be certified by a Qualified Person ¹ as capable of supporting a 5,000 lb (2,268 kg) vertical load.

Component Specifications:			
Figure 2 Reference	Component	Materials	Note:
①	Trolley Rail	Aluminum	2 Trolleys X 1 Person per Trolley, up to 310 lbs (140.6 kg) including clothes, tools, etc. per Trolley.
②	Upright Assembly	Tubes - Aluminum Plates - Aluminum Carriage Housing - Steel Carriage Rollers - Nylatron Chain Roller - Acetal	
③	Trolley Rail Support	Tubes - Aluminum Bars - Aluminum Gussets - Stainless Steel with EPDM cover	
④	4-Wheeled Trolley	Wheels - Nylon Bearings - Steel 5/8" Connection Eye - Stainless Steel	OSHA: 900 lbs (408 kg) Vertical (↓) Load CE: 1,350 lbs (612 kg) Vertical (↓) Load
⑤	Hand Crank Chain Drive (Adjustable systems only.)	Crank - Steel Base - Aluminum Chain Cover - Steel Chain - Steel Gears - Steel	
⑥	C-Frame Base	Tubes - Aluminum Plates - Aluminum	
⑦	Pneumatic and Caster Wheels	Rubber Foam Filled / Urethane	
⑧	Transport Handles	Tube - Steel Handles - Steel	
⑨	Outrigger	Aluminum	
⑩	Pneumatic and Caster Wheels	Wheels - Urethane Mounting Tube - Aluminum.	8 in. Diameter Cassidy Tricker 72PD0820SLW10
⑪	Leveling Jacks	Steel	5,000 lb (2,268 kN) Maximum Lift Capacity
⑫	Bubble Level	Plastic	
⑬	Tow Bar and Hitch Adapter (For systems so equipped.)	Tow Bar - Aluminum Pivot Tube - Steel Hitch Adapter Tube - Steel Pintle Ring - Steel	

¹ **Qualified Person:** A person with a recognized degree of professional certificate and with extensive knowledge, training, and experience in the fall protection and rescue field who is capable of designing, analyzing, evaluating, and specifying fall protections and rescue systems to the extent required by OSHA and other applicable standards.

1.0 PRODUCT APPLICATION

- 1.1 PURPOSE:** Anchorage Systems are designed to provide anchorage connection points for a Personal Fall Arrest System (PFAS).

WARNING: Unless otherwise noted, Capital Safety equipment is designed for use with Capital Safety approved components and subsystems only. Substitution or replacement with non-approved components or subsystems may jeopardize compatibility of equipment and may affect safety and reliability of the complete system. Do not hang, lift, or support tools or equipment from the Anchorage System, or attach guide lines for antennas, phone lines, etc.

- 1.2 SUPERVISION:** Installation of this equipment must be supervised by a Qualified Person¹. Use of this equipment must be supervised by a Competent Person².
- 1.3 TRAINING:** This equipment must be installed and used by persons trained in its correct application. This manual is to be used as part of an employee training program as required by CE. It is the responsibility of the users and installers of this equipment to ensure they are familiar with these instructions, trained in the correct care and use of this equipment, and are aware of the operating characteristics, application limitations, and consequences of improper use of this equipment.

IMPORTANT: Training must be conducted without exposing the user to a fall hazard. Training should be repeated periodically.

- 1.4 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 persons³, and rescuers⁴. 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.
- 1.5 INSPECTION FREQUENCY:** The Anchorage System shall be inspected by the user before each use and, additionally, by a competent person other than the user at intervals of no more than one year.⁵ Inspection procedures are described in the "Inspection and Maintenance Log" (Table 2). Results of each Competent Person inspection should be recorded on copies of the "Inspection and Maintenance Log".
- 1.6 AFTER A FALL:** If the Anchorage System is subjected to the forces of arresting a fall, it must be removed from the field of service immediately and replaced or inspected by an Authorized Capital Safety Representative.
- 1.7 INSTALLATION DOCUMENTATION:** After assembly and installation of the Anchor Post Anchorage System (FAS), "Installation Documentation" meeting the informational requirements of EN795 Annex A must be completed by the installer and handed over to the user's designated representative. The Installation Documentation should be kept at the job site for purposes of subsequent examination of the Anchor Post FAS.

2.0 SYSTEM CONSIDERATIONS

- 2.1 ANCHORAGE:** Structure on which the Anchorage System is placed or mounted must meet the Anchorage specifications defined in Table 1.

FROM OSHA: Anchorages used for attachment of Personal Fall Arrest Systems shall be independent of any anchorage being used to support or suspend platforms, and capable of supporting at least 5,000 lbs (22 kN) per user attached, or be designed, installed, and used as part of a complete Personal Fall Arrest System which maintains a safety factor of a least 2, and is under the supervision of a qualified person.

- 2.2 PERSONAL FALL ARREST SYSTEM:** Figure 1 illustrates the application of this Anchorage System. Personal Fall Arrest Systems (PFAS) used with the system must meet applicable OSHA, ANSI, CE, state, and federal requirements. The PFAS shall incorporate a Full Body Harness and meet the following capabilities:

	Maximum Arresting Force	Maximum Free Fall Distance
PFAS with Shock Absorbing Lanyard	900 lb (4 kN)	6 ft (1.8 m)
	Maximum Arresting Force	Maximum Free Fall Distance
PFAS with Self Retracting Device (SRL)	900 lb (4 kN)	2 ft (0.61 m)

IMPORTANT: Under NO circumstances is a PFAS with a Free Fall distance greater than 6 ft (1.8 m) acceptable for use with the Anchorage System.

- 2.3 FALL PATH AND SRL LOCKING SPEED:** A clear path is required to assure positive locking of an SRL. 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 SRL 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 SRL to lock.

1 Qualified Person: A person with a recognized degree of professional certificate and with extensive knowledge, training, and experience in the fall protection and rescue field who is capable of designing, analyzing, evaluating, and specifying fall protections and rescue systems to the extent required by OSHA and other applicable standards.

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

3 Authorized Person: A person assigned by the employer to perform duties at a location where the person will be exposed to a fall hazard.

4 Rescuer: Person or persons other than the rescue subject acting to perform an assisted rescue by operation of a rescue system.

5 Inspection Frequency: Extreme working conditions (harsh environments, prolonged use, etc.) may require increasing the frequency of competent person inspections.

2.4 HAZARDS: Use of this equipment in areas with environmental hazards may require additional precautions to prevent injury to the user or damage to the equipment. Hazards may include, but are not limited to: heat, chemicals, corrosive environments, high voltage power lines, explosive or toxic gases, moving machinery, sharp edges, or overhead materials that may fall and contact the user or Personal Fall Arrest System.

2.5 FALL CLEARANCE: There must be sufficient clearance below the user to arrest a fall before the user strikes the ground or other obstruction. Fall Clearance is dependent on the following factors:

- Deceleration Distance
- Worker Height
- Elevation of Anchorage Connector
- Free Fall Distance
- Movement of Harness Attachment Element
- Connecting Subsystem Length

See the Personal Fall Arrest System manufacturer's instructions for specifics regarding Fall Clearance calculation.

2.6 SWING FALLS: Swing Falls occur when the anchorage point is not directly above the point where the fall occurs (see Figure 3). The force of striking an object while swinging from the pendulum effects of a Swing Fall can cause serious injury. Swing Falls can be minimized by limiting the horizontal distance (H) between the user and the anchorage point. In a Swing Fall, the total vertical fall distance (F) will be greater than if the user had fallen directly below the anchorage point, thus increasing Fall Clearance required to safely arrest the user's fall. See the PFAS manufacturer's instructions for details regarding Swing Falls and Fall Clearance calculation.

2.7 SHARP EDGES: Avoid working where Lifeline or Lanyard components of the Personal Fall Arrest System (PFAS) can contact or abrade against unprotected sharp edges (see Figure 4). Where contact with a sharp edge is unavoidable, cover the edge with protective material (A).

2.8 COMPONENT COMPATIBILITY: Capital Safety equipment is designed for use with Capital Safety 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.

IMPORTANT: *Equipment substitutions require written consent from Capital Safety.*

2.9 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 Capital Safety 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 5). 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

2.10 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.

Capital Safety connectors (snap hooks and carabiners) are designed to be used only as specified in each product's user's instructions. See Figure 6 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 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.

3.0 INSTALLATION

IMPORTANT: The Flexiguard® C-Frame Fall Arrest System must be installed by a Qualified Person¹ and the installation must be certified by a Qualified Person as: meeting the criteria for a Certified Anchorage, or capable of supporting the potential forces that could be encountered during a fall.

IMPORTANT: Do not alter or intentionally misuse this equipment. Consult Capital Safety when installing or using this equipment in combination with components or subsystems other than those described in this manual. Some subsystems and component combinations may interfere with the operation of this equipment.

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

3.2 MOVING THE SYSTEM: Figure 7 illustrates transport of the C-Frame FAS. Prepare and move the system as follows:

1. **Lower the Trolley Rail:** Crank the Hand Crank Chain Drives counterclockwise until the Trolley Rail is fully lowered. The two Hand Crank Chains Drive are synchronized by a Connector Tube so it is not necessary to crank both Chain Drives. (For adjustable C-frame systems only.)

WARNING: Do not raise or lower the Trolley Rail while in use. Vertical movement of the Trolley Rail at the time of a fall may impede proper operation of the attached Fall Arrest system(s), resulting in serious injury or death.

2. **Raise the Leveling Jacks:** Crank the handle on each Leveling Jack until the jack is fully raised.
3. **Unlock the Outrigger Caster Wheels (if present):** For each Caster Wheel: Flip the Brake Pedal parallel to the ground to release the Wheel Brake. Pull out and rotate the Caster Swivel Lock 90° to allow the wheel to caster 360°.
4. **Release the Transport Handles:** For Each Transport Handle: Remove the Detent Pin from Push Bar Mounting Bracket. Pivot the Transport Handle downward. Reinsert the Detent Pin above the tube to prevent pivoting of the Transport Handle while pushing.
5. **Move the System:** Push or pull the C-Frame FAS to the work area with the Transport Handles. If equipped with a Tow Bar, the C-Frame FAS can be transported longer distances with a Tow Vehicle with a Pintle or similar hitch.

WARNING: Never transport the Flexiguard C-Frame Fall Arrest System on slopes greater than 5°. Excessive slopes may cause system tip-overs resulting in serious injury or death.

WARNING: When transporting the Flexiguard C-Frame Fall Arrest System, be aware of overhead obstructions and electrical hazards which may result in serious injury or death.

3.3 PREPARING THE SYSTEM: Figure 8 illustrates preparation of the C-Frame for work. Position and prepare the system as follows:

1. **Position the C-Frame:** Position the C-Frame on a flat surface within the Safe Work Area (see Figure 3). Ideally the Trolley Rail should be centered over the intended work area. Outriggers can extend under the serviced vehicle if sufficient gap is present.
2. **Lock the Outrigger Caster Wheels (if present):** For each Caster Wheel: Push down on either end of the Brake Pedal to lock the Wheel Brake. Pull out and rotate the Caster Swivel Lock 90° to lock the caster and prevent the wheel from swiveling.
3. **Lower the Leveling Jacks:** Crank the handle on each Leveling Jack clockwise until the Jack Pad contacts the ground and then crank the handle an additional 5 revolutions. If surface is uneven adjust each jack accordingly. Bubble Levels are mounted on the C-Frame Base near each jack to assist in leveling the system.
4. **Secure the Transport Handles:** For Each Transport Handle: Pivot the Transport Handle up until the pin holes in the Push Bar Mounting Bracket align with the pin holes in the Corner Tube. Insert the Detent Pin through all holes in the Mounting Bracket and Corner Tube.
5. **Install Fall Arrest Equipment:** A Fall Arrest subsystem is required. Attach a Self-Retracting Device (SRD) to each of the 4-Wheeled Trolleys. Tag Lines lines should be attached to the SRD Lifelines to allow retrieval and connection of the lifeline after the Trolley Rail is raised.
6. **Raise the Trolley Rail:** Crank the Hand Crank on one of the Hand Crank Chain Drives until the Trolley Rail is at sufficient height to ensure a Safe Work Area (see Figure 3). Raise the Trolley Rail high enough to ensure the Working Angle of the lifeline does not exceed 30° when working within the allowable 6 ft. (1.8 m) Work Radius.

¹ **Qualified Person:** A person with a recognized degree of professional certificate and with extensive knowledge, training, and experience in the fall protection and rescue field who is capable of designing, analyzing, evaluating, and specifying fall protections and rescue systems to the extent required by OSHA and other applicable standards

4.0 USE

WARNING: Consult your doctor if there is any reason to doubt your fitness to safely absorb the shock from a fall arrest or suspension. Age and fitness seriously affect a worker's ability to withstand falls. Pregnant women or minors must not use DBI-SALA equipment unless in an emergency situation.

WARNING: Never exceed the Capacity maximums specified in Table 1. Exceeding the stated capacity could collapse or tip the system, resulting in serious injury or death.

- 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 C-Frame Fall Arrest System per the 'User' inspection points defined on the "Inspection and Maintenance Log" (Table 2). If inspection reveals an unsafe or defective condition, do not use the C-Frame Fall Arrest System. Remove the system from service and contact Capital Safety regarding replacement or repair.

SAFE WORK AREA: Figure 3 illustrates the Safe Work Area for the C-Frame Fall Arrest System. The gray shading on the table designates safe working distances where the angle of the Lifeline is less than or equal to 30° from vertical and the Horizontal Distance (H) from the anchorage connection point is less than or equal to 6 ft (1.82 m). NEVER work at a Horizontal Distance (H) and Vertical Distance (V) that results in a calculated Vertical Fall Distance (F) exceeding the gray shaded values on the table in Figure 3.

WARNING: Never use the C-Frame Fall Arrest System for Fall Protection without the Outriggers securely installed. Use of the C-Frame without the Outriggers can tip the system resulting in injury or death.

- 4.2 FALL ARREST CONNECTIONS:** Figure 9 illustrates the C-Frame and its Fall Arrest Connections. Users must wear a Full Body Harness connected to the C-Frame Trolley Rail with a Fall Arrest subsystem (Self-Retracting Device). The Trolley Rail is equipped with two Four-Wheel Trolleys that travel back-and-forth inside the Rail Halves. One Self-Retracting Device (SRD) can be connected to each Four-Wheel Trolley. Connect the lifeline on the SRD to the back Dorsal D-Ring on the Harness. A Tag Line can be attached to the SRD Lifeline and used to retrieve the lifeline for connection to the user's harness.

WARNING: When transferring between SRDs, always maintain 100% tie-off to ensure fall arrest protection in the event of a fall.

IMPORTANT: No more than one person, meeting the Capacity requirements specified in Table 1, shall be attached to the Glide Four-Wheel Trolley.

WARNING: Inappropriate or incompatible connections between components of the Personal Fall Arrest System (PFAS) may result in serious injury or death. See Section 2 for details regarding connector compatibility and safe connections.

5.0 INSPECTION

- 5.1 INSPECTION FREQUENCY:** The Flexiguard System must be inspected at the intervals defined in Section 1. 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.

Record the inspection date on the inspected equipment. Record the inspection date and results on the "Inspection and Maintenance Log" at the back of this manual.

i-Safe™ RFID: Some Flexiguard Systems are equipped with an i-Safe Radio Frequency Identification (RFID) Tag. The RFID Tag can be used in conjunction with the i-Safe Handheld Reading Device to simplify inspection and inventory control and provide records for you fall protection equipment. If you are a first-time i-Safe user, contact Capital Safety or visit www.capitalsafety.com.

- 5.2 DEFECTS:** If inspection reveals an unsafe or defective condition, remove the System from service immediately and contact Capital Safety regarding replacement or repair. Do not attempt to repair the System.

IMPORTANT: Only Capital Safety or parties authorized in writing by Capital Safety may make repairs to this equipment.

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

6.0 MAINTENANCE, SERVICING, STORAGE

- 6.1 CLEANING:** Periodically clean the System's metal components with a soft brush, warm water, and a mild soap solution. Ensure parts are thoroughly rinsed with clean water.

IMPORTANT: Although highly resistant to chemicals and environmental conditions, avoid contaminating the Flexiguard System with acids, bitumen, cement, paint, cleaning fluids, etc. If the equipment contacts acids or other caustic chemicals, remove from service and wash with water and a mild soap solution. Inspect per Table 2 before returning to service.

- 6.2 SERVICE:** Only Capital Safety or parties authorized in writing by Capital Safety may make repairs to this equipment. If the Flexiguard System has been subject to fall force or inspection reveals an unsafe or defective conditions, remove the system from service and contact Capital Safety regarding replacement or repair.

- 6.3 STORAGE AND TRANSPORT:** The Flexiguard system is designed to be stored outdoors during normal weather conditions. If the weather is severe, it is recommended to store the system in an area that protects against damage to the system. Store the Flexiguard 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.

If the system is transported long distances, it should be disassembled and all components secured and protected from severe conditions during transport.

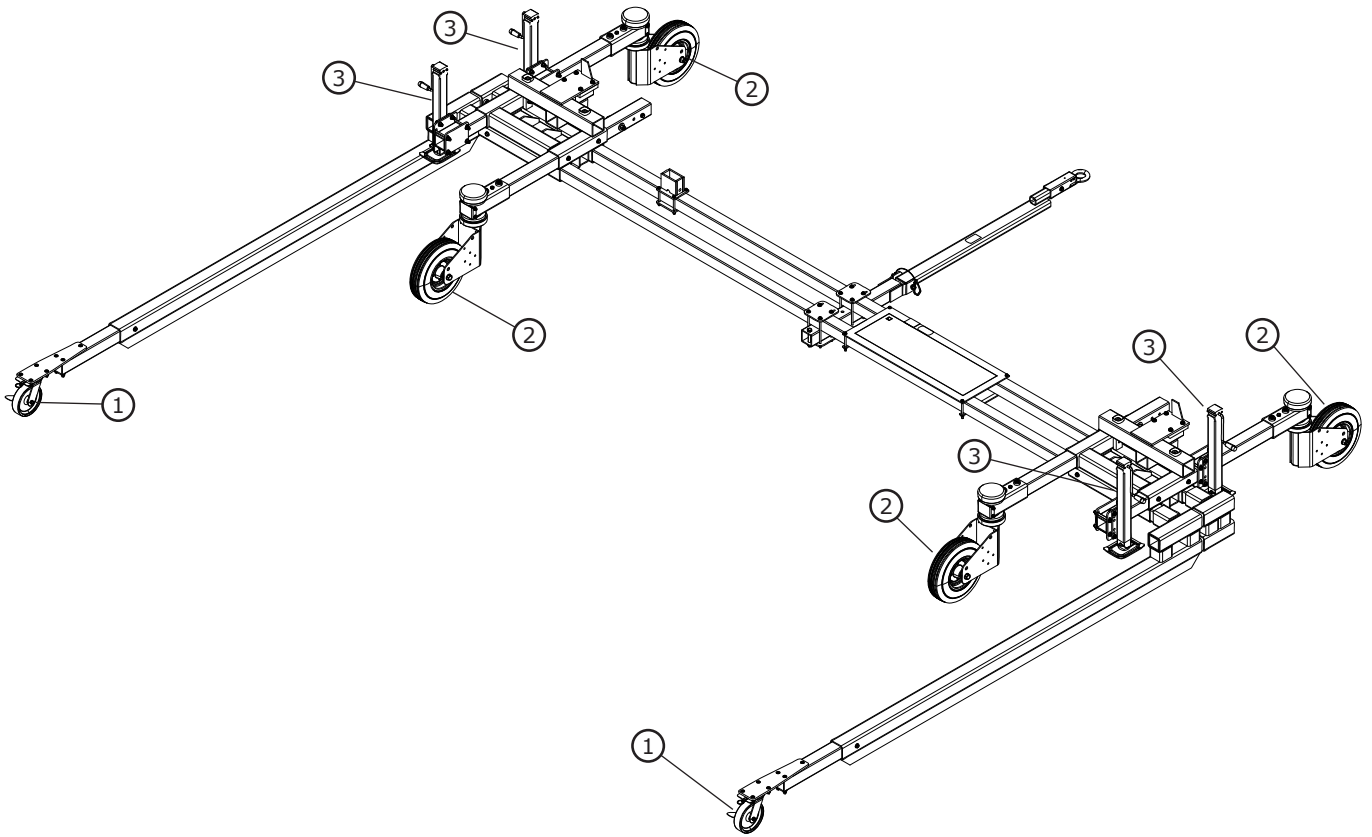
Table 2 – Inspection and Maintenance Log

Inspection Date:		Inspected By:	
Components:	Inspection: (See Section 1 for <i>Inspection Frequency</i>)	User	Competent Person
Tie-Back Cable and Turnbuckle Assemblies (Diagram 1)	Inspect Turnbuckles for damage and proper adjustment.	☐ PASS ☐ FAIL	☐ PASS ☐ FAIL
	Check Tie-Back Cables for slack. Cables must be tight enough to apply slight pressure on the system structure, DO NOT OVERTIGHTEN. Inspect cables, for kinks (1), cut or broken wires (2), bird-caging (3), welding splatter (4), corrosion, chemical contact areas, or severely abraded areas. (see Diagram 1).	☐ PASS ☐ FAIL	☐ PASS ☐ FAIL
Rail Support Assemblies (Diagram 2)	Check Rails Supports (1) for structural defects or damage including bends, corrosion, etc.	☐ PASS ☐ FAIL	☐ PASS ☐ FAIL
	Inspect fasteners (2) on Rail Supports to ensure they are tight.	☐ PASS ☐ FAIL	☐ PASS ☐ FAIL
	Visually inspect the Gussets (3) for straightness. Ensure there is no visible deformation or bend, indicating previous exposure to fall arrest forces.	☐ PASS ☐ FAIL	☐ PASS ☐ FAIL
Trolley Rail Assembly (Diagram 3)	Visually inspect fasteners (1) on the Trolley Rail to ensure they are tight.	☐ PASS ☐ FAIL	☐ PASS ☐ FAIL
	Inspect the Rail Track (2) for structural defects. Rail Track must be straight without any bends or dents.	☐ PASS ☐ FAIL	☐ PASS ☐ FAIL
	Visually inspect the Trolley Four-Wheel Trolleys (3) for damage to the trolley and excessive wheel wear. Ensure the Trolleys roll freely in Trolley Rail and the wheels are securely attached.	☐ PASS ☐ FAIL	☐ PASS ☐ FAIL
Upright Assemblies and Carriages (Diagram 4)	Inspect the Vertical Uprights (1) and Carriages (2) for defects or structural damage including bends, corrosion, etc.	☐ PASS ☐ FAIL	☐ PASS ☐ FAIL
	Inspect Carriage Rollers (3) for cracks, chips, or excessive wear.	☐ PASS ☐ FAIL	☐ PASS ☐ FAIL
	ROLLER GREASE ZERKS: Roller Grease Zerks (5) should be greased monthly, or more frequently under extreme environmental conditions or heavy use.		
	Inspect fasteners on Uprights and Carriages to ensure they are tight.	☐ PASS ☐ FAIL	☐ PASS ☐ FAIL
	IMPORTANT: Do not adjust Threaded Rods (4). They are preset by the manufacturer.		
Vertical Drive Mechanisms (Diagram 5)	Inspect the Brake Wear Indicators (1) while lowering the Work Platform. If the Brake Wear Indicator is in the Red zone (2), remove the Drive Mechanism from service and contact the manufacturer.	☐ PASS ☐ FAIL	☐ PASS ☐ FAIL
	Inspect fasteners on the Drive Mechanism to ensure they are tight.	☐ PASS ☐ FAIL	☐ PASS ☐ FAIL
	Visually inspect the Drive Connector Bar (3). The bar should be straight and the connectors on each end should be tight.	☐ PASS ☐ FAIL	☐ PASS ☐ FAIL
	Inspect the Drive Chain (4) for slack. Deflection of the chain should not be more than 1/2 in (13 mm).	☐ PASS ☐ FAIL	☐ PASS ☐ FAIL
	Lubricate the Drive Chain with light oil (5) and grease Bearings.		☐ PASS ☐ FAIL
Base and Outriggers (Diagram 6)	Inspect Base, Outriggers, and Tow Bar (if present) for structural damage including bends, dents, cracks, corrosion, etc.	☐ PASS ☐ FAIL	☐ PASS ☐ FAIL
	Inspect Caster Wheels (1) and Pneumatic Wheels (2) for damage or deformities. Make sure wheels roll freely and Brakes and Swivel Locks operate correctly.	☐ PASS ☐ FAIL	☐ PASS ☐ FAIL
	Inspect Leveling Jacks (3) for damage or deformities. Make sure Crank Handles crank smoothly and raise and lower the Jacks properly.	☐ PASS ☐ FAIL	☐ PASS ☐ FAIL
Labels	Verify that all labels are securely attached and are legible (see 'Labels')	☐ PASS ☐ FAIL	☐ PASS ☐ FAIL
PFAS and Other Equipment	Additional Personal Fall Arrest System (PFAS) equipment (harness, Self-Retracting Device, etc) that are used with the Flexiguard System should be installed and inspected per the manufacturer's instructions.	☐ PASS ☐ FAIL	☐ PASS ☐ FAIL
... Log Corrective Action/Maintenance on Next Page.			

Table 2 – Inspection and Maintenance Log

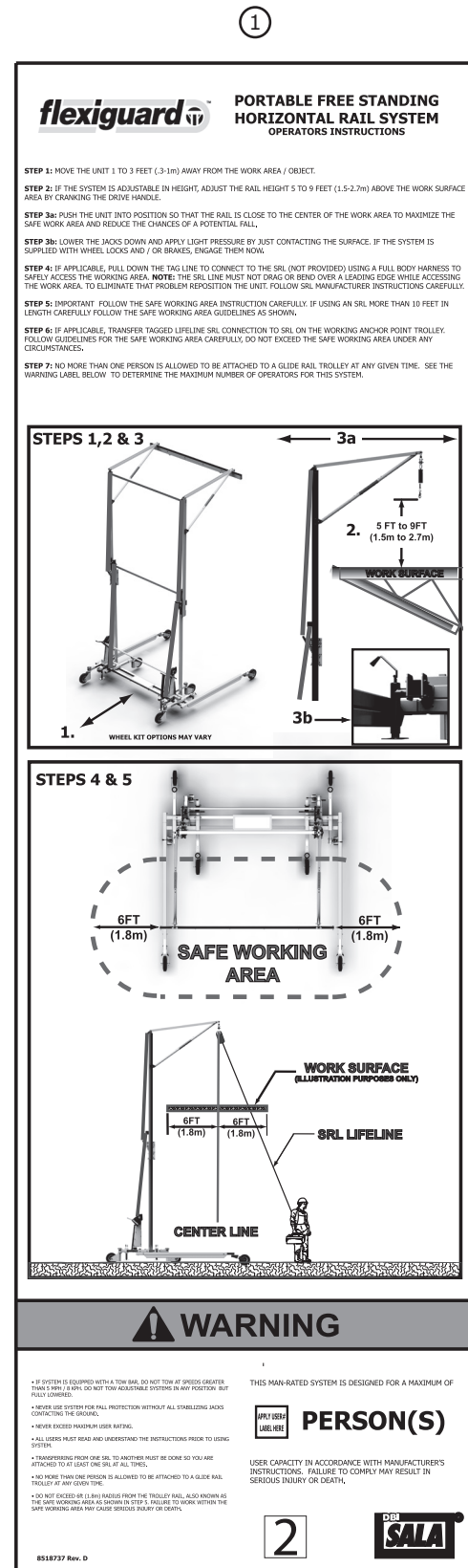
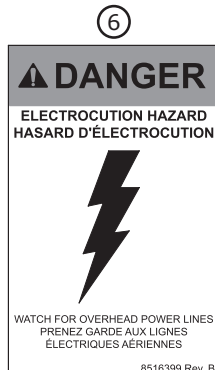
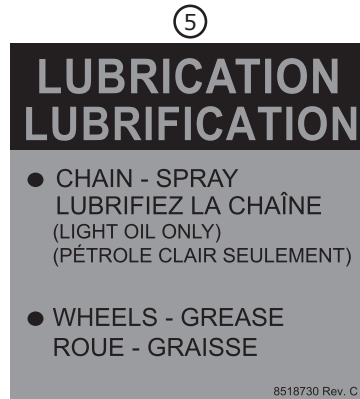
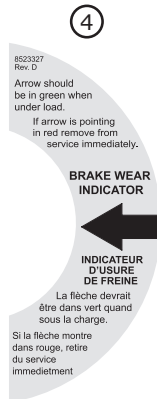
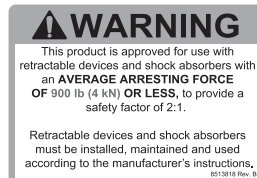
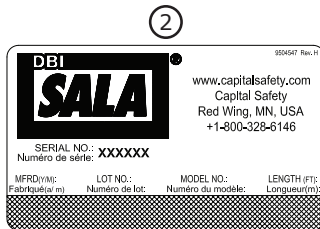
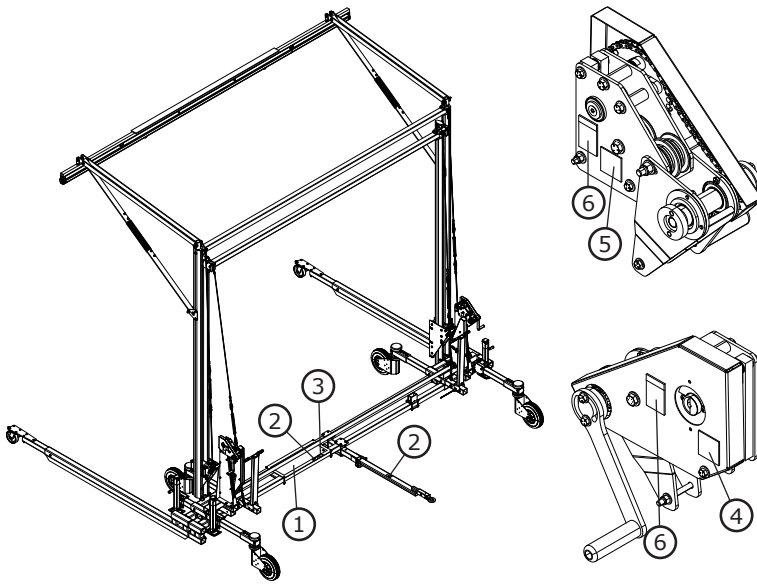
[illegible]

Diagram 6



5.0 LABELS

The following labels must be present on Flexiguard C-Frame Fall Arrest Systems. Labels must be replaced if they are not fully legible. Contact Capital Safety for replacement labels.



LIMITED LIFETIME WARRANTY Warranty to End User: CAPITAL SAFETY warrants to the original end user ("End User") that its products are free from defects in materials and workmanship under normal use and service. This warranty extends for the lifetime of the product from the date the product is purchased by the End User, in new and unused condition, from a CAPITAL SAFETY authorised distributor. CAPITAL SAFETY'S entire liability to End User and End User's exclusive remedy under this warranty is limited to the repair or replacement in kind of any defective product within its lifetime (as CAPITAL SAFETY in its sole discretion determines and deems appropriate). No oral or written information or advice given by CAPITAL SAFETY, its distributors, directors, officers, agents or employees shall create any different or additional warranties or in any way increase the scope of this warranty. CAPITAL SAFETY will not accept liability for defects that are the result of product abuse, misuse, alteration or modification, or for defects that are due to a failure to install, maintain, or use the product in accordance with the manufacturer's instructions. THIS WARRANTY IS THE ONLY WARRANTY APPLICABLE TO OUR PRODUCTS AND IS IN LIEU OF ALL OTHER WARRANTIES AND LIABILITIES, EXPRESSED OR IMPLIED.	Garantie limitée à vie Garantie de l'utilisateur final : CAPITAL SAFETY garantit à l'utilisateur final d'origine (« Utilisateur final ») que ses produits sont exempts de défauts de matériaux et de fabrication dans des conditions d'utilisation et d'entretien normales. Cette garantie s'étend pendant toute la durée de vie du produit à compter de la date d'achat du produit par l'Utilisateur final, comme produit neuf et inutilisé, auprès d'un distributeur agréé. L'entière responsabilité de CAPITAL SAFETY envers l'Utilisateur final et le recours exclusif de l'Utilisateur final dans le cadre de cette garantie se limite à la réparation ou au remplacement en nature de tout produit défectueux pendant sa durée de vie (si CAPITAL SAFETY, à sa seule discrétion, le juge nécessaire). Aucune information ni aucun conseil, qu'ils soient oraux ou écrits, donnés par CAPITAL SAFETY, ses distributeurs, directeurs, responsables, agents ou employés ne créera de garanties différentes ou supplémentaires ni n'augmentera l'étendue de cette garantie. CAPITAL SAFETY n'assumera en aucun cas la responsabilité de défauts résultant d'une utilisation abusive du produit, de sa mauvaise utilisation, de son altération ou de sa modification, ou de défauts découlant du non-respect
Lebenslange Garantie mit Einschränkung Endbenutzer-Garantie: CAPITAL SAFETY garantiert dem ursprünglichen Endbenutzer („Endbenutzer“), dass seine Produkte unter normalem Gebrauch und Betrieb frei von Material- und Herstellungsfehlern sind. Diese Garantie erstreckt sich auf die Lebensdauer des Produkts ab dem Datum, an dem der Endbenutzer das Produkt neu und ungebraucht von einem durch CAPITAL SAFETY autorisierten Händler gekauft hat. Die gesamte Haftung von CAPITAL SAFETY dem Endbenutzer gegenüber und der einzige Anspruch des Endbenutzers ist gemäß dieser Garantie beschränkt auf die Reparatur oder den Ersatz von defekten Produkten innerhalb ihrer Lebensdauer (eine Einschätzung diesbezüglich wird von CAPITAL SAFETY nach eigenem Ermessen durchgeführt). Keine von CAPITAL SAFETY schriftlich oder mündlich an Händler, Vorstandsmitglieder, Führungskräfte, Agenten oder Angestellte übergebenen Informationen oder Hinweise ergeben jegliche andere oder zusätzliche Gewährleistungen, noch erhöhen sie den Umfang dieser Garantie. CAPITAL SAFETY schließt eine Haftung für Defekte aufgrund von unsachgemäßem Gebrauch, Änderungen oder Modifikationen am Produkt sowie für Defekte, die darauf zurückzuführen sind, dass das Produkt nicht gemäß der Anweisungen des Herstellers montiert, gewartet und verwendet wurde, aus. DIESE GARANTIE IST DIE EINZIG GÜLTIGE GARANTIE FÜR UNSERE PRODUKTE UND GILT ANSTELLE VON ALLEN ANDEREN GARANTIEN UND HAFTUNGSBEDINGUNGEN, SEI ES AUSDRÜCKLICH ODER STILLSCHWEIGEND.	



Fall Protection

USA

3833 SALA Way
Red Wing, MN 55066-5005
Toll Free: 800.328.6146
Phone: 651.388.8282
Fax: 651.388.5065
solutions@capitalsafety.com

Brazil

Rua Anne Frank, 2621
Boqueirão Curitiba PR
81650-020
Brazil
Phone: 0800-942-2300
brasil@capitalsafety.com

Mexico

Calle Norte 35, 895-E
Col. Industrial Vallejo
C.P. 02300 Azcapotzalco
Mexico D.F.
Phone: (55) 57194820
mexico@capitalsafety.com

Colombia

Compañía Latinoamericana de Seguridad S.A.S.
Carrera 106 #15-25 Interior 105 Manzana 15
Zona Franca - Bogotá, Colombia
Phone: 57 1 6014777
servicioalcliente@capitalsafety.com

Canada

260 Export Boulevard
Mississauga, ON L5S 1Y9
Phone: 905.795.9333
Toll-Free: 800.387.7484
Fax: 888.387.7484
info.ca@capitalsafety.com

EMEA (Europe, Middle East, Africa)

EMEA Headquarters:
5a Merse Road
North Moons Moat
Redditch, Worcestershire
B98 9HL UK
Phone: + 44 (0)1527 548 000
Fax: + 44 (0)1527 591 000
csgne@capitalsafety.com

France:

Le Broc Center
Z.I. 1re Avenue - BP15
06511 Carros Le Broc Cedex
France
Phone: + 33 04 97 10 00 10
Fax: + 33 04 93 08 79 70
information@capitalsafety.com

Australia & New Zealand

95 Derby Street
Silverwater
Sydney NSW 2128
Australia
Phone: +(61) 2 8753 7600
Toll-Free : 1800 245 002 (AUS)
Toll-Free : 0800 212 505 (NZ)
Fax: +(61) 2 8753 7603
sales@capitalsafety.com.au

Asia

Singapore:

69, Ubi Road 1, #05-20
Oxley Bizhub
Singapore 408731
Phone: +65 - 65587758
Fax: +65 - 65587058
inquiry@capitalsafety.com

Shanghai:

Rm 1406, China Venturetech Plaza
819 Nan Jing Xi Rd,
Shanghai 200041, P R China
Phone: +86 21 62539050
Fax: +86 21 62539060
inquiry@capitalsafety.cn

www.capitalsafety.com

