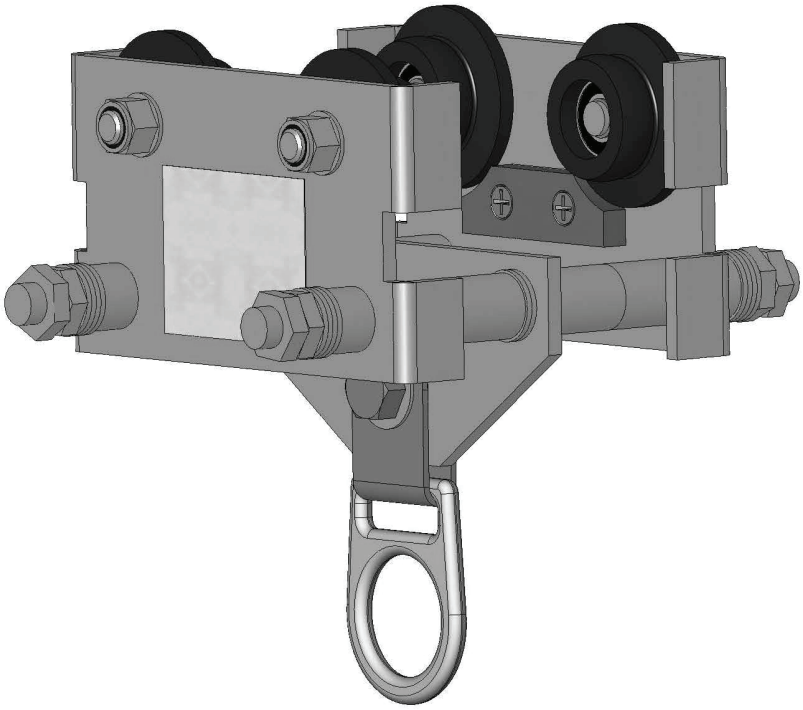
FALL SAFE™

# USER INSTRUCTIONS FOR
# I-BEAM TROLLEY ANCHORAGE CONNECTOR

Model # 4800



SureWerx®

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This instruction manual is to be used for training and assistance to users, competent persons and qualified persons in designing and installing a complete personal fall arrest system (PFAS). This manual also meets the requirements outlined in ANSI Z359.1(07) and is to be used as part of a training program as required by OSHA.

## FTC COMPLIANCE

Our personal fall arrest systems have been produced by Fall Safe in one of our 2 U.S. factories. Unfortunately, we are not able to obtain all materials and components for the devices in the U.S., either because they are not available, or because economic or quality considerations dictate foreign sourcing. The Federal Trade Commission has attempted to determine what it means to say a product is “made in” the U.S. We believe most end users think “Made in the USA” means the real manufacturing jobs were provided to U.S. workers in order to make the product.

Our fall protection products were made by U.S. workers using U.S. and imported materials. Where the domestic value is at least 70%, we have labeled them as “Made in the USA”. Where it falls below 70%, we have qualified the label referencing domestic and imported materials. This determination is based in part on the FTC’s survey of consumers. The FTC’s analysis of the “made in USA” issue can be found at FTC.gov"

**WARNING:** This product is part of a personal fall arrest, restraint, work positioning, personnel riding, or rescue 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 equipment, or failure to follow these 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 Fall Safe

## DESCRIPTION

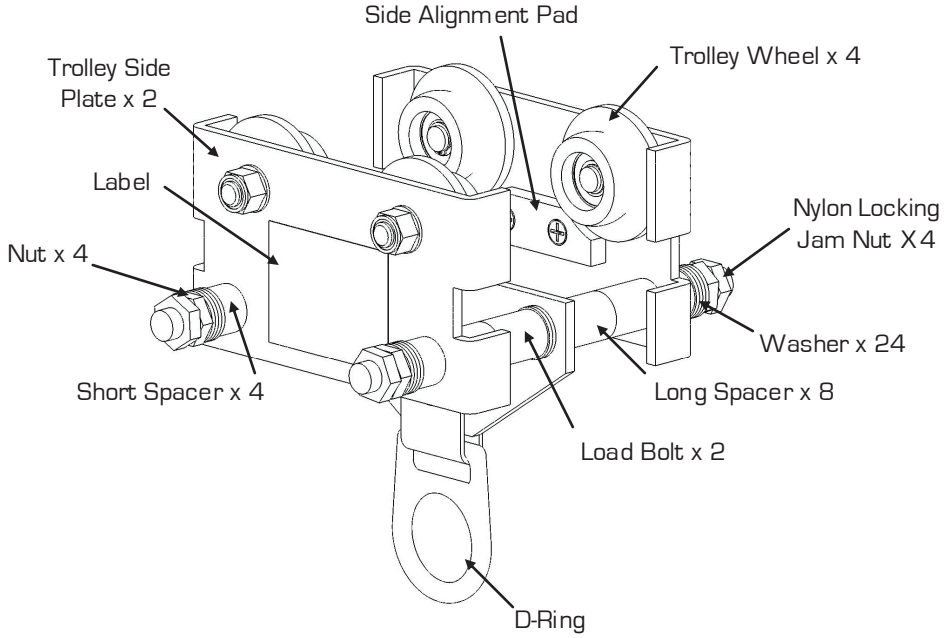



**Figure 1**

## SPECIFICATIONS

**Side Plate's:** Plated Alloy Steel
**Anchor Plate:** Plated Alloy Steel
**Load Bar:** Zinc Plated Alloy Steel
**Wheels:** Cast Alloy Steel with Sealed Ball Bearings
**Bow Shackle:** 316 Stainless Steel (When Supplied)
**D-Ring:** Zinc Plated Alloy Steel
**Capacity:** 1 Person (310 lbs)
**Rated:** 5000 lbs

## PURPOSE

The 4800 Trolley Anchorage Connector is designed to move along horizontal beams with an attached personal fall arrest system. This trolley is to be used only as a component of a personal fall arrest system. Do not hang, lift, or support tools or equipment from the trolley.

**FALL ARREST:** The trolley is used as a component of a personal fall arrest system. Personal fall arrest systems typically include a self retracting lifeline or a vertical lifeline, connector to attach the lifeline to the trolley, and full body harness. A personal fall arrest system is used where a free fall is possible before the fall is arrested.

## LIMITATIONS

Consider the following application limitations before using this equipment:

**A. BEAMS:** The trolley may be used on beam flanges 3 inches to 8.7 inches wide and from 3/16 inch to 3/4 inch thick. The minimum distance between the flanges is 5 inches. The minimum radius the trolley can follow is 48 inches. The beam structure must meet the strength requirements specified in section 2.4. The beam must be horizontal and level and free from deformities and damage. DO NOT USE ON OPEN ENDED BEAMS!
**B. CAPACITY:** The trolley is designed for use by persons with a combined weight (clothing, tools, etc.) of no more than 310 lbs. Only one personal fall arrest system may be connected to a single trolley.
**C. PERSONAL FALL ARREST SYSTEM:** Personal fall arrest systems used with the trolley must meet the system requirements as specified in section 2.5.
**D. FREE FALL:** Personal fall arrest systems used with the trolley must be rigged to limit the free fall to 6 feet. See subsystem manufacturer's instructions for more information.
**E. FALL CLEARANCE:** There must be sufficient clearance below the user to arrest a fall before the user strikes the ground or other obstruction. The clearance required is dependent on the following factors:

- Elevation of Trolley
- Connecting subsystem length
- Deceleration distance
- Movement of harness attachment element
- Worker height
- Free fall distance

See personal fall arrest system manufacturer's instructions for more information.
**F. TROLLEY LOAD ANGLE:** Loads imposed on the trolley by the personal fall arrest system must remain within 30 degrees of the vertical center line of the beam.
**G. ENVIRONMENTAL HAZARDS:** Use of this equipment in hazardous environments may require additional precautions to reduce the possibility of injury to the user or damage to the equipment. Hazards may include, but are not limited to; heat, extreme cold, caustic chemicals, corrosive environments, high voltage power lines, explosive or toxic gases, moving machinery, and sharp edges.
**H. TRAINING:** This equipment is intended to be installed and used by persons trained in its application and use.

## APPLICABLE STANDARDS

Refer to applicable local, state, and federal (OSHA) requirements governing this equipment for more information on anchorage connectors and associated system components, including OSHA 1910.66, appendix C, OSHA1926.502., ANSI Z359.1, ANSI Z359.2, and ANSI Z359.3 - 2007

## SYSTEM REQUIREMENTS

**COMPATIBILITY OF COMPONENTS:** Fall Safe equipment is designed for use with approved components and subsystems only. Substitutions or replacements made with non-approved components or subsystems may jeopardize compatibility of equipment and may affect the safety and reliability of the complete system.

**COMPATIBILITY OF CONNECTORS:** 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 Fall Safe if you have any questions about compatibility.

Connectors (hooks, carabiners, and D-rings) must be capable of supporting at least 5,000 lbs. (22.2kN). 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. Connectors must be compatible in size, shape, and strength. Self locking snap hooks and carabiners are required by ANSI Z359.1 –2007and OSHA.

**MAKING CONNECTIONS:** Only use self-locking and self closing snap hooks and carabiners with this equipment. Only use connectors that are suitable to each application. 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 prior to each use.

Fall Safe connectors (snap hooks and carabiners) are designed to be used only as specified in each product's user's instructions. The following connections must not be made.

**A.** To a D-ring to which another connector is attached.
**B.** In a manner that would result in a load on the gate.
**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 allow 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.
**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. Large throat snap hooks are designed for use on fixed structural elements such as rebar or cross members that are not shaped in a way that can capture the gate of the hook.

## ANCHORAGE STRUCTURE STRENGTH

The structure to which the trolley is installed must sustain static loads in the directions permitted by the personal fall arrest system of at least 5,000 lbs. (22.2 kN) When more than one trolley is installed on the same anchorage structure, the anchorage structure strength must be multiplied by the number of personal fall arrest systems attached to the structure.

From OSHA 1926.500 and 1910.66: Anchorages used for attachment of a personal fall arrest system shall be independent of any anchorage being used to support or suspend platforms, and must support at least 5,000 lbs. per user attached; or be designed, installed, and used as part of a complete personal fall arrest system which maintains a safety factor of at least two, and is supervised by a qualified person.

## PERSONAL FALL ARREST SYSTEM

Personal fall arrest systems used with this equipment must meet applicable local, state, and federal (OSHA) requirements. A personal fall arrest system incorporating a full body harness must be capable of arresting a user's fall with a maximum arresting force of 1,800 lbs., and limit the free fall distance to 6 feet or less. The deceleration distance must be 42 inches or less.

## INSTALLATION AND USE

**WARNING:** Do not alter or intentionally misuse this equipment. Consult with Fall Safe if using this equipment with components or subsystems other than those described in this manual. Some subsystem and component combinations may interfere with the operation of this equipment.
**BEFORE EACH USE** of this equipment inspect it according to section 5.2
**PLANNI NG YOUR INSTALLATION:** You must plan the proper configuration of your personal fall arrest system before installing and using this equipment. All equipment must be inspected prior to use. Consider all factors affecting your safety during use. The following list gives some important points to consider when planning your system:
**A. ANCHORAGE BEAM:** Select a rigid anchorage beam that is capable of supporting the loads specified in section 2.4. Joints between beam sections must be flush to allow the trolley to pass over smoothly. The beam must have end stops at each end to prevent the trolley from rolling off the beam. The end stops must be sized and positioned to safely stop the trolley. The trolley should not catch or hang-up on the end stop; the trolley must be able to freely return in the opposite direction after contacting the end stop. The trolley must be able to freely travel the full length of the work operation area without obstructions or coming in contact with adjacent structures and components. Trolley should be kept directly overhead at all times and the beam must be level and free from damage and deformation.

**B. FALL CLEARANCE:** There must be sufficient clearance in your fall path to prevent striking an object or lower level in the event of a fall. The amount of clearance required is dependent on the application. See personal fall arrest system manufacturer's instructions for information on calculating fall clearance.
**C. SWING FALLS:** Swing falls occur when the anchorage point is not directly overhead. The force of striking an object in a swing fall may cause serious injury or death. Minimize swing falls by working as directly below the anchorage point as possible. Do not permit a swing fall if injury could occur. Swing falls will significantly increase the clearance required when a self retracting lifeline or other variable length connecting subsystem is used. If a swing fall situation exists in your application contact Fall Safe before proceeding.
**D. SHARP EDGES:** Avoid working where parts of the system will be in contact with, or abrade against, unprotected sharp edges.
**E. AFTER A FALL:** Any equipment which has been subjected to the forces of arresting a fall or exhibits damage consistent with the effect of fall arrest forces as described in section 5, must be removed from service immediately and destroyed by the user, the rescuer, or an authorized person.
**F. RESCUE:** When using this equipment, the employer must have a rescue plan and the means at hand to implement it and communicate that plan to users, authorized persons, and rescuers.

## INSTALLATION

**ATTACHING TROLLEY TO BEAM:**
**Step 1.** Measure the beam flange width to determine the distance needed between the trolley side plates and it meets the requirements of section 1.3A.

**Step 2.** Install 1 of the trolley side plates on the lower flange of the I-Beam. Insert both load bolt's through the side plate from the outside in.

**Step 3.** Slide center anchor plate over both load bolts. Continue by installing the second side plate over the load bolts.

**Step 4.** Center the anchor plate on the I-Beam (should be in-line with the center web of the I-Beam).

**Step 5.** Using the supplied washers and spacers, configure the load bolts so that the spacing between the center anchor plate and the inside of the trolley side plates is fully stacked and there is no "play" between the spacers and the center anchor plate. The distance between the edge of the beam flange and the chamfer of the trolley wheel **MUST NOT EXCEED 1/16 INCH!** Adjust spacers and washers until you have 1/16 inch between the beam flange and wheel chamfer.

**Step 6.** On the outside of the trolley side plates Install the needed configuration of spacers and washers to allow the installation of the nut on the threaded end of the load bolt. Repeat on all 4 ends of the load bolt's. Torque all nuts to 35ft/lbs. Note: The load bolt's should also be centered to the side plates.

**Step 7.** Verify the anchor plate is centered on the I-Beam and ensure that the trolley is properly installed on

the beam and that there is no "play" between the side plates and spacers installed on the load bolt's.

**Step 8.** Install the nylon lock nuts on the end of each load bolt. Tighten lock nuts up to the torque nuts. Move trolley along beam to ensure proper tracking and can travel freely along the beam flange.

**Note:** If you need assistance in determining the configuration of the spacers and washer, please contact Fall Safe.

## ATTACHING PERSONAL FALL ARREST SYSTEM TO TROLLEY

Attach your personal fall arrest system to the anchorage point on the center anchor plate via the supplied bow shackle or D-Ring. When using a hook or carabiner to connect to the anchorage plate, ensure roll-out cannot occur. Roll-out occurs when interference between the hook and mating connector causes the hook gate to unintentionally open and release. Self locking snap hooks and carabiners should be used to reduce the possibility of roll-out. Do not use hooks or connectors that will not completely close over the attachment object. Do not connect snap hooks or carabiners to each other. See personal fall arrest system manufacturer's instructions for connecting subsystems used with the trolley.

## TRAINING

The user and purchaser of this equipment must be familiar with the instructions, operating characteristics, application limits, and the consequences of improper use of this equipment. Users and purchasers must be trained in the correct care and use of this equipment.

## INSPECTION

**FREQUENCY:**
• Before Each Use: Inspect trolley according to sections 5.2
• Annually: The trolley must be inspected by a competent person other than the user. See section 5.2 for inspection guidelines.

**INSPECTION STEPS:**
**Step 1.** Inspect trolley for damage. Look for cracks or deformities. Look for ecessive wear or damage to the anchorage point. All fasteners must be secure.
**Step 2.** Inspect trolley wheels. All wheels should turn freely and be undamaged.
**Step 3.** Inspect that the distance between the wheel chamfer and the I–Beam flange does not exceed 1/16".
**Step 4.** Inspect entire unit for corrosion.
**Step 5.** The warning label must be present and fully legible.
**Step 6.** Record inspection results in section 6.0.

## INSPECTION LOG

Product Model #: _____ Date Of MFG: _____

Date First Used: _____ Serial Number: _____

| INSPECTION DATE | INSPECTION ITEMS NOTED | CORRECTIVE ACTION | MAINTENANCE PERMORMED |
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WARRANTY: • Warranty policy is that of an implied manufacturer warranty and covers manufacturer's defects and workmanship. This warranty is valid for one year from date of purchase unless otherwise stated • Warranties are limited to the replacement of defective parts. Parts damaged from misuse will not be replaced under the warranty program. SureWerx USA shall be the sole judge of part condition • Warranty does not apply to: (i) cosmetic damage, such as scratches, nicks and dents; (ii) consumable parts, such as batteries, unless product damage has occurred due to a defect in materials or workmanship; (iii) damage caused by accident, abuse, misuse, water, flood, fire, or other acts of nature or external causes; (iv) anticipated wear or damage due to use of the product in the application for which it is marketed; (v) damage to a product that has been modified or altered without the written permission of SureWerx. • Warranty varies by brand and product category. Please contact customer service for specific warranty policies

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