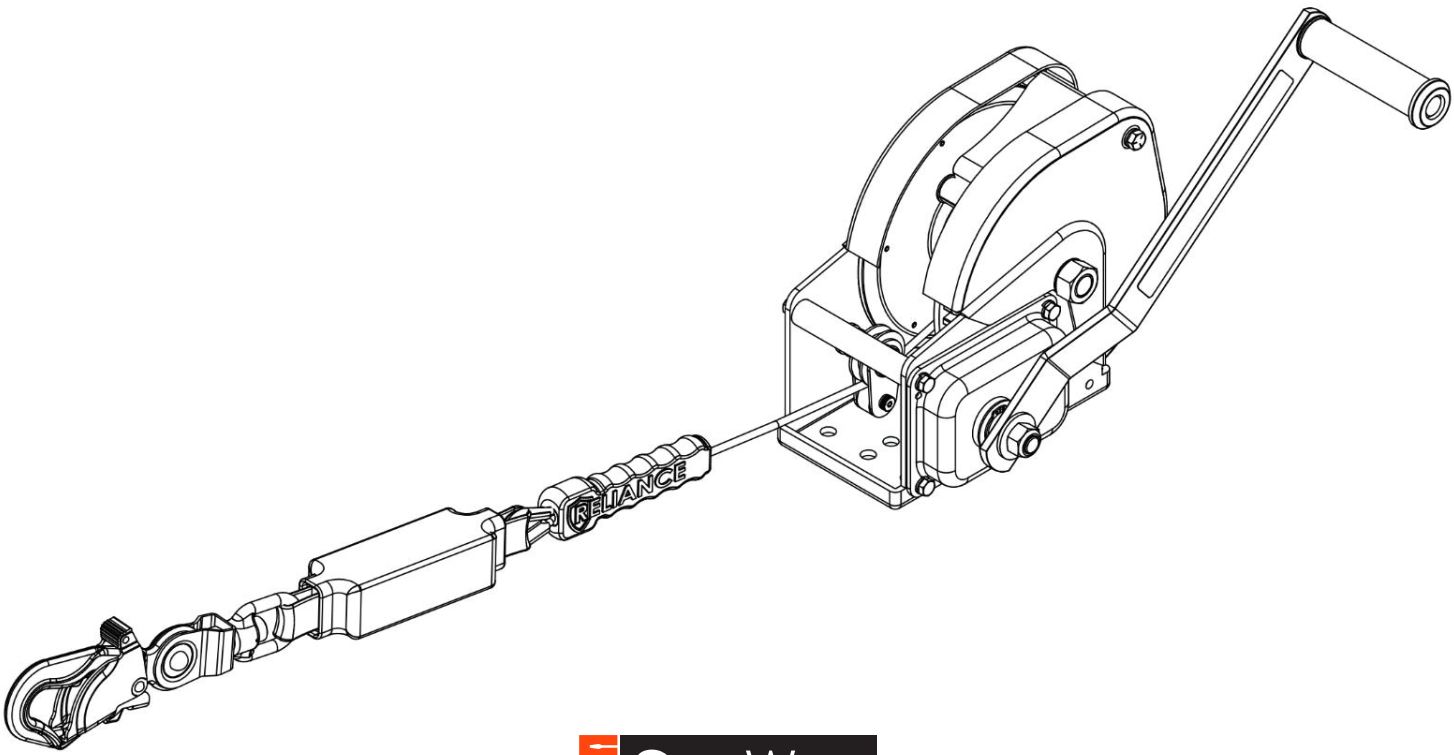
FALL SAFE™

USER INSTRUCTIONS FOR
CONFINED SPACE HOIST

Model # 4502-299



SureWerx®

FALL SAFE™
Ph. 1-800-323-7402

Canada labels
SureWerx, 49 Schooner St.
Coquitlam, BC V3K 0B3

USA labels
SureWerx USA Inc.
Elgin, IL USA 60123

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IMPORTANT INSTRUCTIONS

These instructions must be kept on file and available for the users reference at **all** times. The users must read and fully understand these instructions or have the instructions explained in detail before using this equipment. **Failure to observe these instructions could result in serious injury or death**.

Prior to use, the user must be trained in the proper use of this equipment and the process or system in which it is used.

A review of the instructions and re-training should be repeated at regular intervals or whenever the review shows that additional instruction or training is needed.

A rescue plan must be prepared; the workers must be trained in its use, and rescue equipment must be on hand prior to any use of this or any other Personal Fall Protection Equipment.

Any questions regarding these instructions should be directed to:

Manufacturer's Name and Address

Fall Safe™
Canada labels
SureWerx, 49 Schooner St.
Coquitlam, BC V3K 0B3

USA labels
SureWerx USA Inc.
Elgin, IL USA 60123

SYSTEM DESCRIPTION

The Fall Safe Confined Space Hoist (see Fig. 1) facilitates confined space entry and emergency rescue/ retrieval only in conjunction with an authorized Fall Safe Confined Space Retrieval Unit installed on tanks, boilers, silos, sewer systems or other restricted spaces accessed by an 18" hatch. The Confined Space Hoist provides a method for attaching and securing a worker wearing an authorized fall-protection harness as well as providing shock absorption in the case of a limited fall.

Use of this system requires the use of a full-body harness for the worker and is designed for use with any Fall Safe Confined Space Entry Unit and a self-retracting lanyard (SRL) with 900 lb. maximum arrest force (MAF). The only permissible attachment to the worker's harness for fall arrest is through the dorsal d-ring (back) of the full body harness. Harness side and chest d-rings are not allowable connection points and can be used for work positioning only.

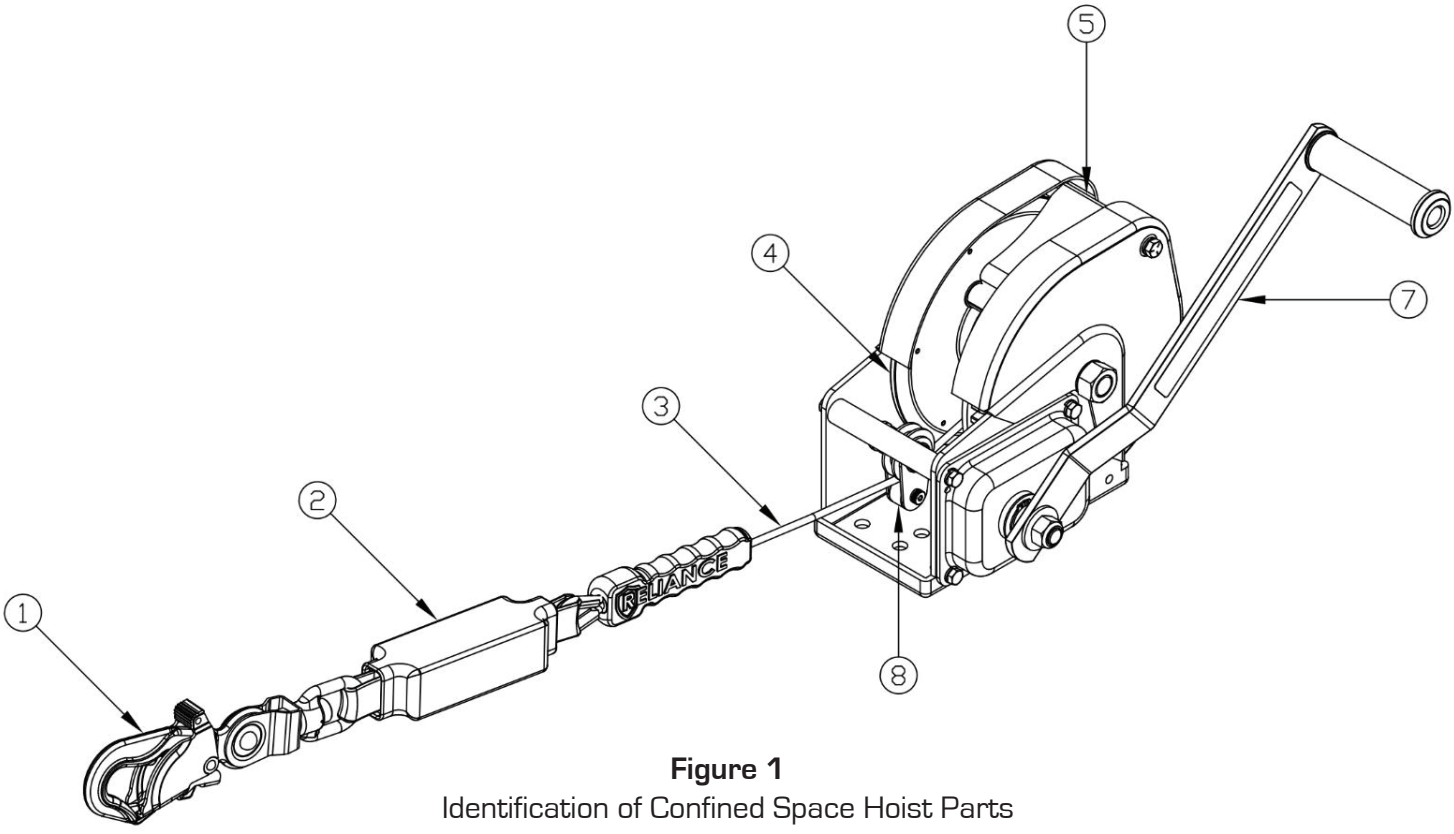


Figure 1
Identification of Confined Space Hoist Parts

1. Snap Hook
2. Shock Absorber
3. Cable
4. Drum
5. Level Winder
6. Crank Handle
7. Cable Guide

PRODUCT SPECIFICATIONS

Part Number	Working Length	Line Type	Capacity	Rescue Capcity
4502-1	60' (18.3m)	3/16" (4.5mm) 7x19 Galvanized	310 lbs (140 kg)	310 lbs (140 kg)

The following specifications apply to all Fall Safe Confined Space Hoists and meet ANSI Z359.4 and all applicable OSHA regulations and requirements.

- **Capacity:** 20-310 lbs (9-140kg) 1 worker, maximum combined tool & body weight or materials.
- **Rescue Capacity:** 20-310 lbs (9-140kg) 1 worker, maximum combined tool & body weight.
- **Cranking Force at Maximum Capacity:** < 30 lbs (14kg)
- **Average Cranking Force:** 19 lbs (8.6kg)

INSTALLATION

Installation of the Confined Space Hoist should be done under the supervision of a Competent Person trained in their function and use. Use only parts that have been supplied by or qualified as compatible components by Fall Safe.

ASSEMBLY PROCEDURES FOR THE CONFINED SPACE HOIST

NOTE: Approved fall protection must be worn during installation at all times if the entry point is in a position not guarded by an approved handrail or the opening places the workers at risk. Do not use the Confined Space Hoist as a personal lifting and lowering device until the system has been completely installed on a Fall Safe Confined Space Entry unit, inspected, and approved for use by a Competent Person.

1. At a safe location near where the Confined Space Hoist is to be installed on a Confined Space System, set out the following items:
    1. Confined Space Hoist
    2. Confined Space System – Side Entry or Top Entry or Top Tank Entry pre-installed
    3. Provided 3/8" or 1/2" fasteners depending on system.

2. The Confined Space Hoist must be inspected prior to attachment to the specific Confined Space Entry Unit in use. See Inspection section on page 15.

3. To wind up or pay out the Cable, the user must turn the Crank Handle in the appropriate direction. See following pages for instructions on winding in and winding out the cable.

To wind cable onto the drum, turn the crank handle clockwise as shown in Fig. 2. Ensure that the line has the minimum weight or hand tension replicating the minimum weight to preventing looping and snagging that could damage cable. Use a gloved hand to apply minimum tension and guide cable if no load in on the hoist. Note: If the anti-backwind feature has been engaged, it can take up to ¾ of a revolution of the crank handle to start the paying of the cable on the drum.

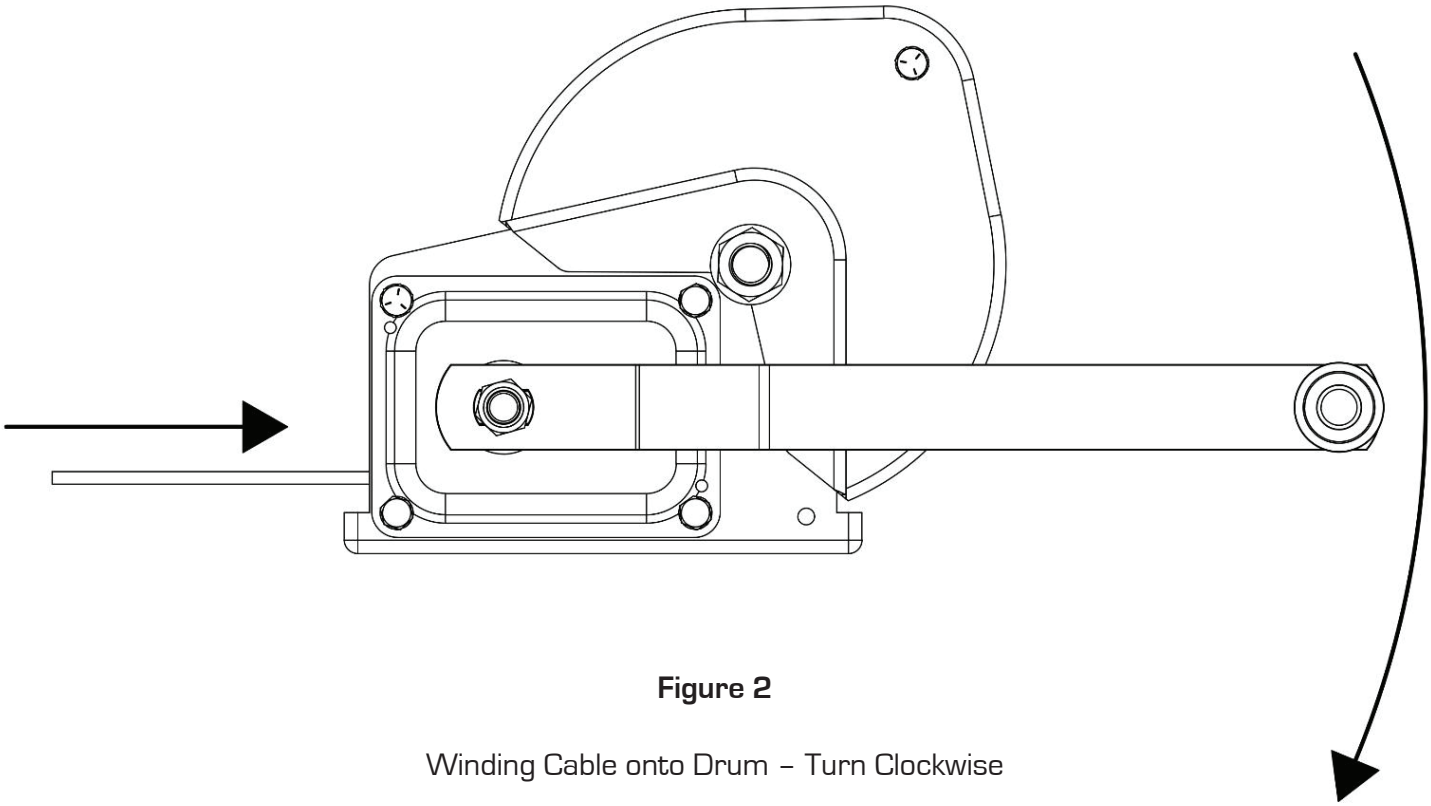


Figure 2

Winding Cable onto Drum – Turn Clockwise

To pay out the cable, turn the crank handle counter-clockwise, with the minimum weight or greater applied to the line, as shown in Fig. 3. Use a gloved hand to apply minimum tension and guide cable if no load is on the hoist. If there is no load on the line, the hoist will not pay out the line. This anti-backwind feature is designed to keep the cable tightly wound on the drum, preventing looping and snagging that could damage cable.

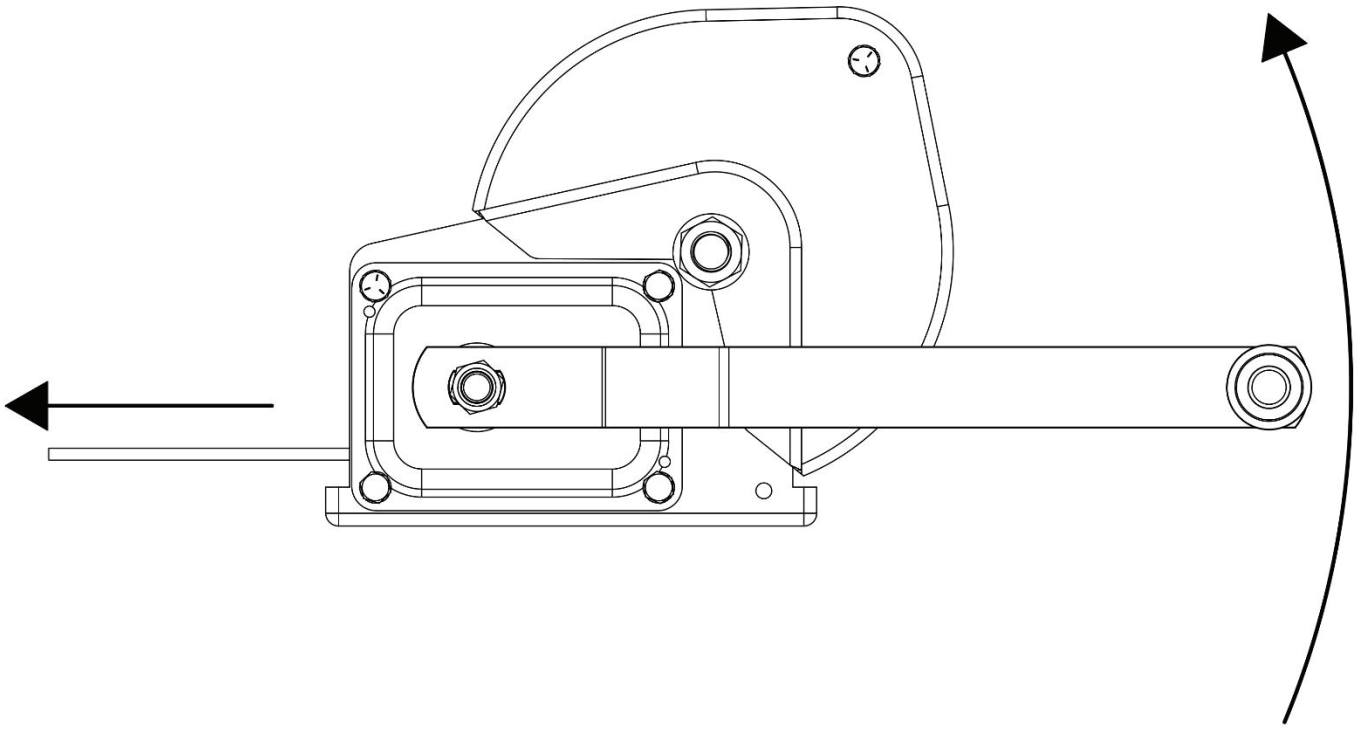


Fig. 3

Winding Cable off of Drum – Turn Counter-Clockwise

4. When using the Confined Space Hoist in conjunction with the Confined Space Side Entry Unit, attach the Hoist as Shown in Fig. 5, with the center holes and slot lined up with the fixed nuts on the underside of the Hoist Mounting Bracket. Install the two 3/8" x 1" button head cap screws and tighten and torque to 18 ft/lbs. No nuts are required, nuts are built into the bottom of the Hoist Bracket.

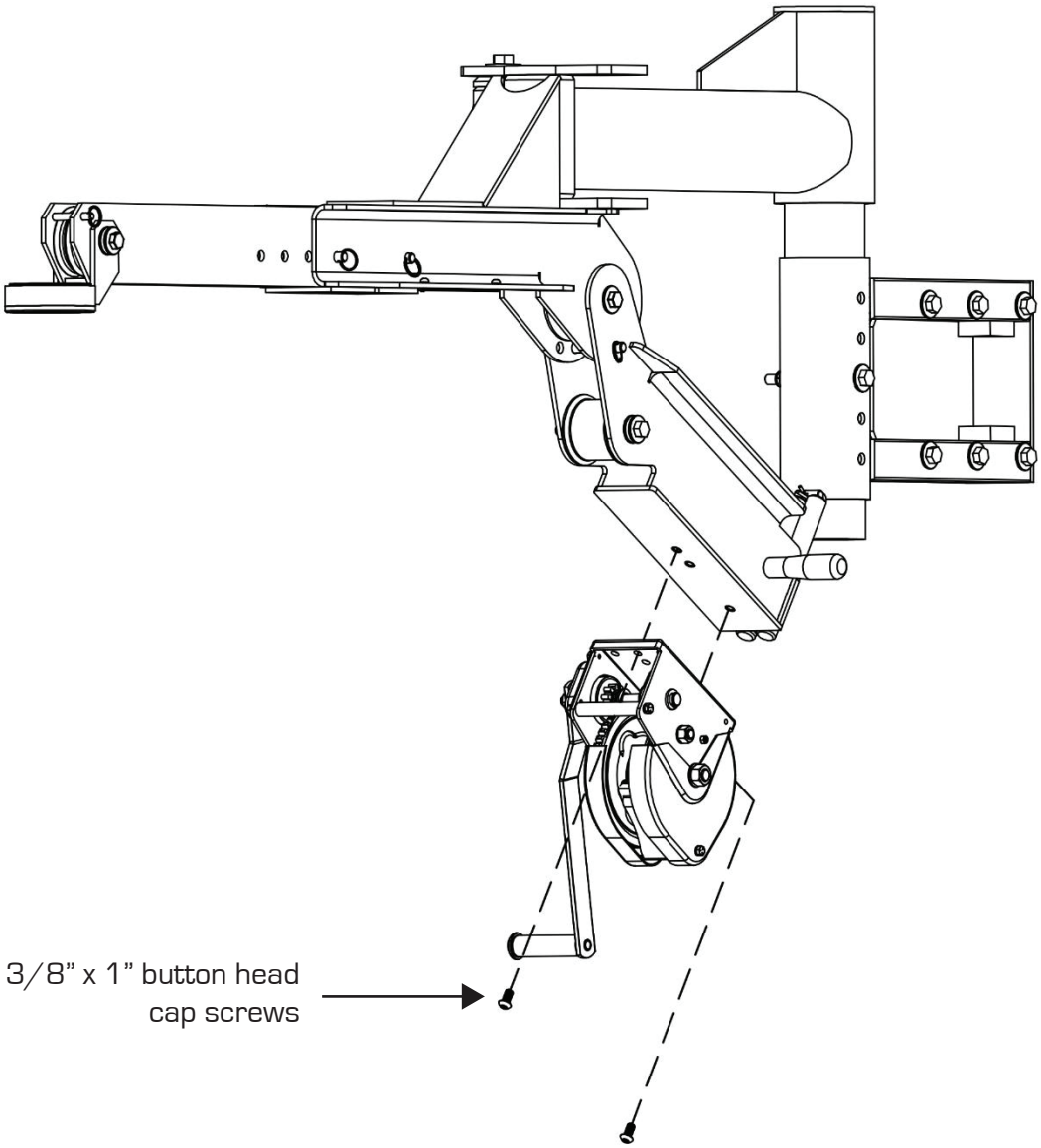


Fig. 5

Attaching Confined Space Hoist to Side Entry Confined Space Unit. No nuts required, nuts are built into the Hoist Bracket

5. If using the Confined Space Hoist in conjunction with the Confined Space Top Entry System or the Confined Space Tank Top Entry System, attach the Hoist and brackets as shown in **Fig. 6a, 6b and 6c.**

- **Fig. 6a** Mount the Hoist Receiver Bracket P/N 4501-20 to any two of the four lower mounting holes. Choose the mounting holes which place the hoist in the most ergonomic position for the operators' physical height. Assemble the Bracket such that the concave side of the "V" shape is towards the front side (entry side of Mast Assembly) of the tube. Insert the two 3/8" x 4" bolts with washers on the front side of the bracket and back side of the tube, and secure with the nuts. Tighten and torque the bolts and nuts to 18 ft/lbs.

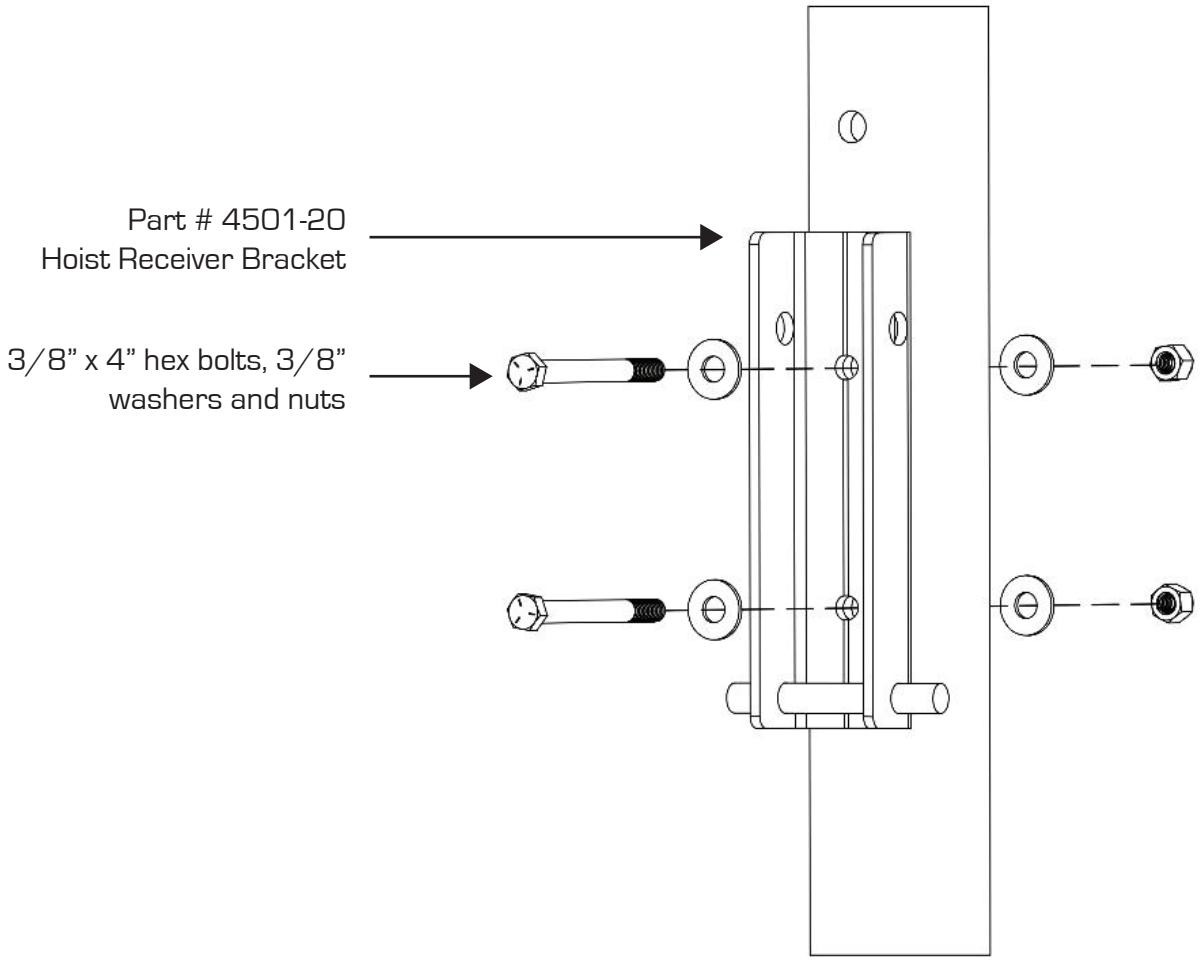


Fig. 6a

Attaching Confined Space Hoist Bracket to the Top Entry Confined Space Mast
or the Tank Top Confined Space Mast

- **Fig. 6b** Mount the Hoist Bracket P/N 4503-23 to the bottom of the Hoist using the mounting hole in the center of the upper Hoist frame and the slot on the bottom of the Hoist Frame. Ensure the notch in the Hoist Bracket is oriented to the slot side of the frame. Install the two 3/8" button head cap screws, nuts and washers. Align the bracket parallel to the side of the Hoist and tighten and torque to 18 ft/lbs.

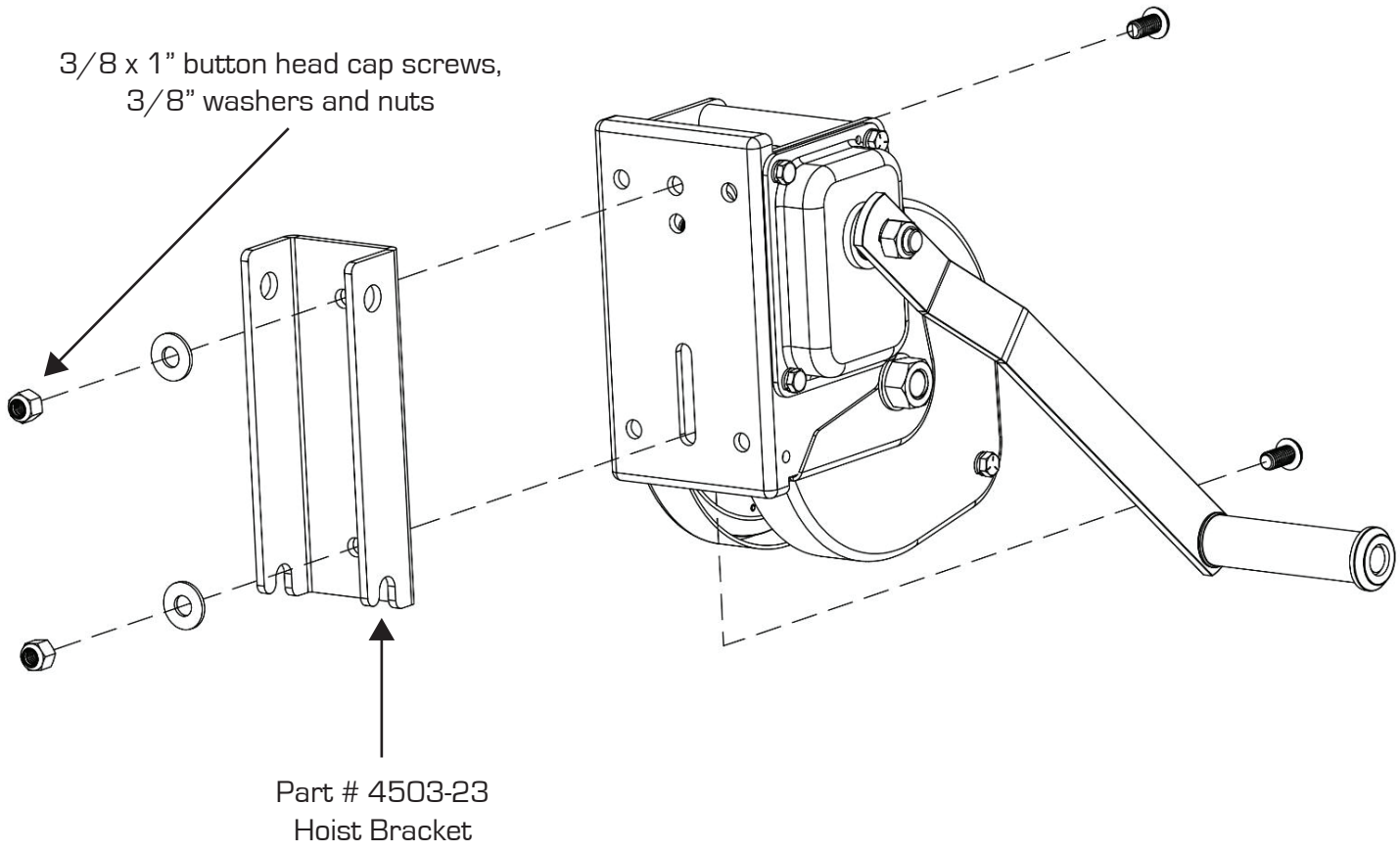


Fig. 6b

Attaching Confined Space Hoist to the Hoist Bracket

- **Fig. 6c** (1) Mount the Hoist with assembled Bracket P/N 4503-23 to the Receiver Bracket P/N 4501-20 aligning the notches in Bracket P/N 4503-23 to pins in Receiver Bracket P/N 4501-20. (2) Rotate to align holes and (3) insert the ½' hex bolt. Assemble nut and tighten and torque to 39 ft/lbs.

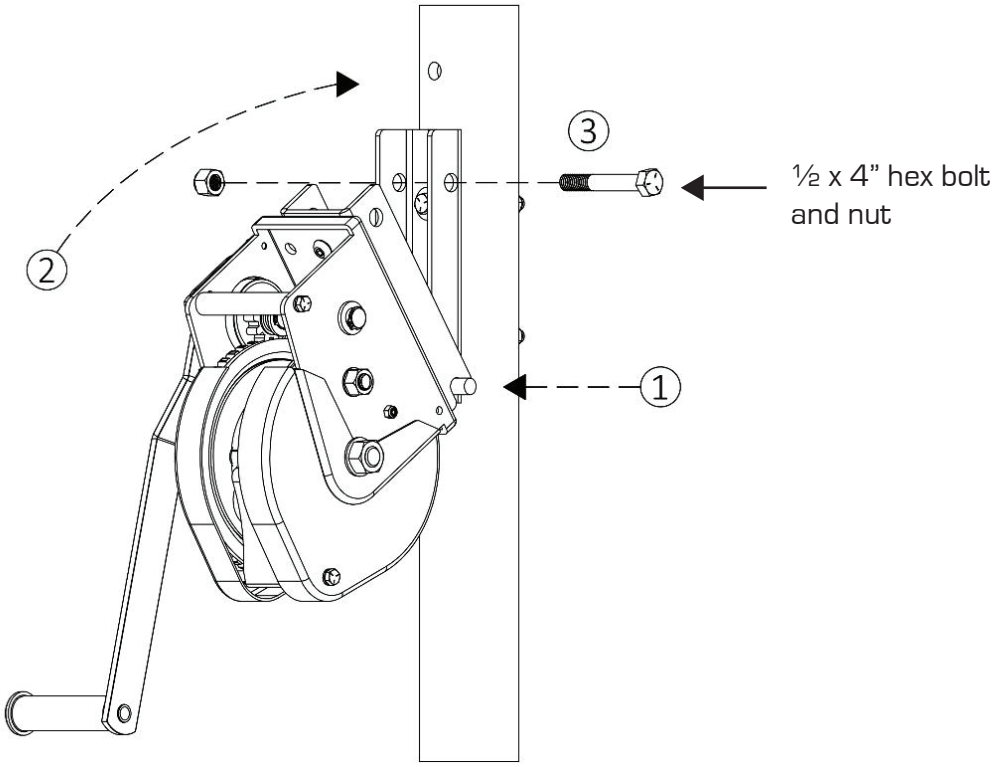


Fig. 6c

Attaching Confined Space Hoist to the Top Entry Confined Space Mast or the Tank Top Confined Space Mast

5. Reeve the Hoist Cable through the appropriate Confined Space System as shown in Figs. 7 and 8.

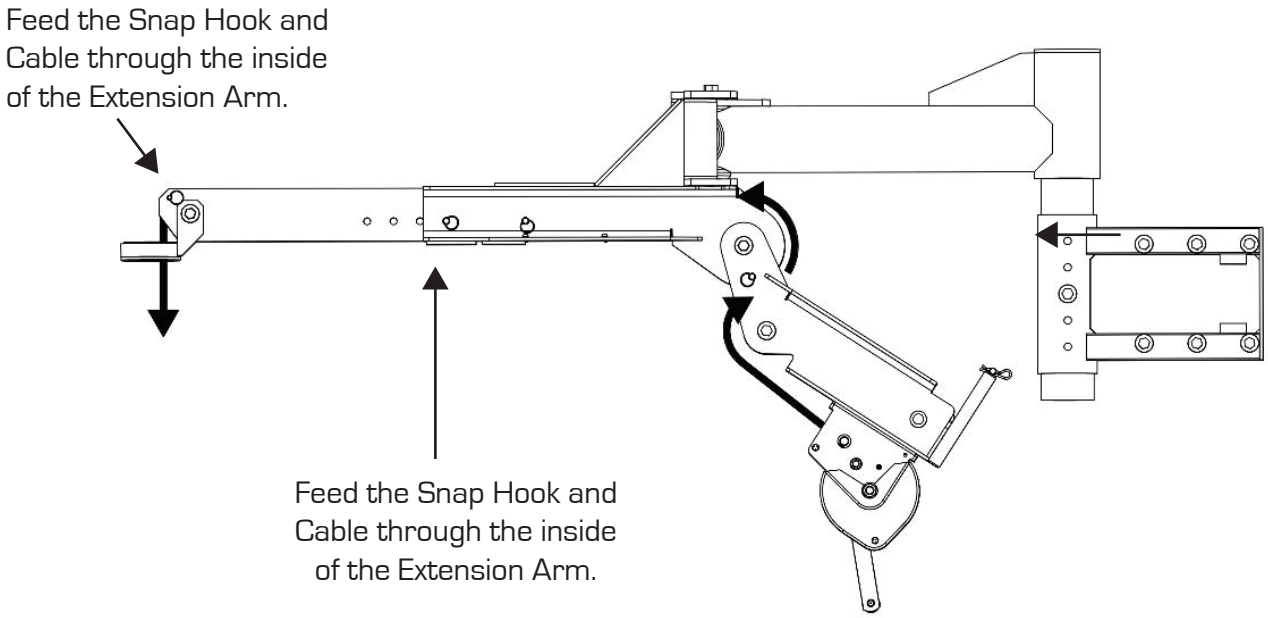


Fig. 7

Installing Hoist Cable on Confined Space Side Entry System

- Reeve hoist line as shown. Removal of snaphook not required. Make sure that the pin over the dual pulleys is been removed and reinserted to allow the cable to roll over the pulley and not on the pin.

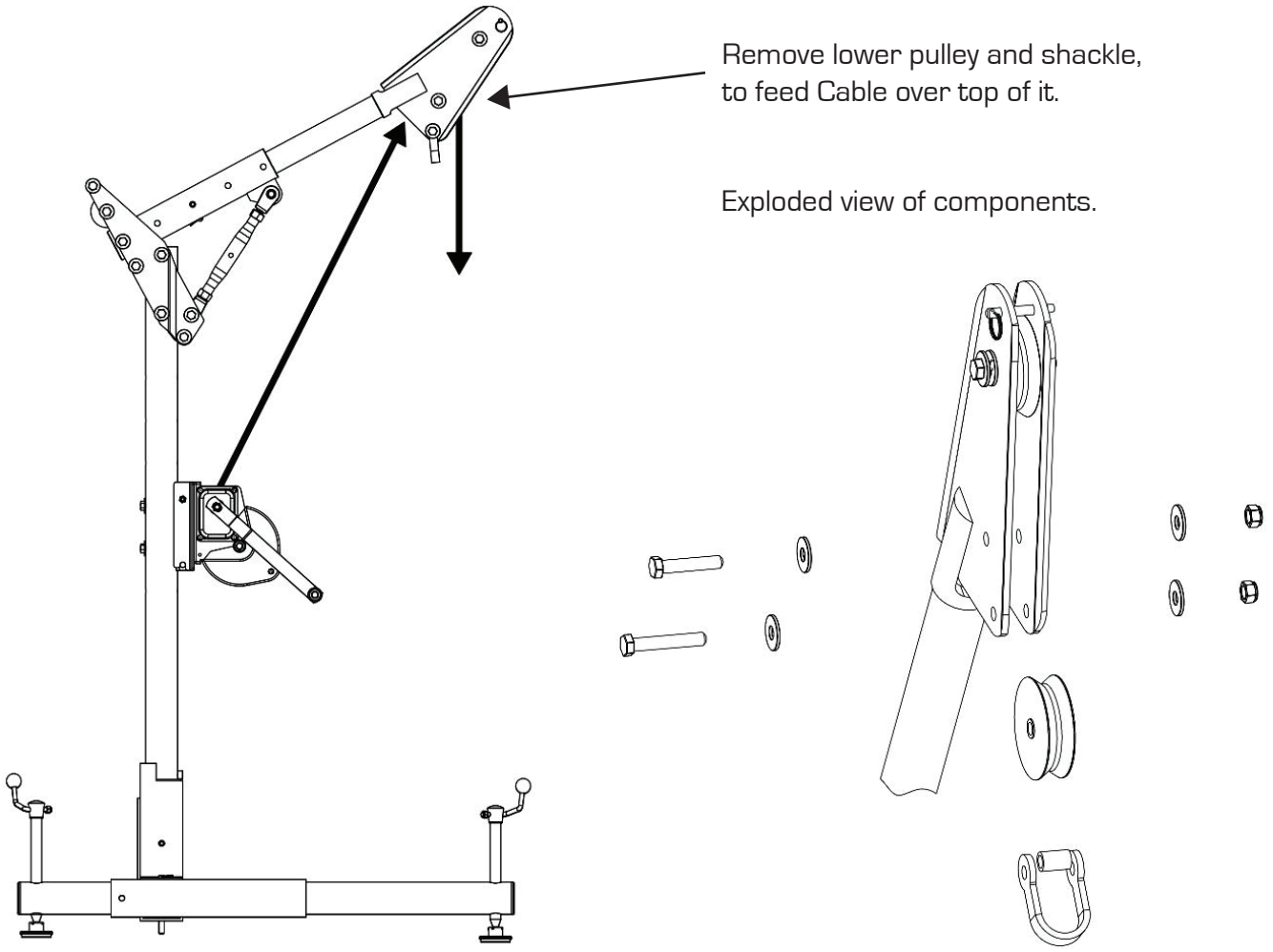


Fig. 8

Installing Hoist Cable on Confined Space Top Entry System and Tank Top Entry System.
Cable Path is the same on both the Top Entry System and Tank Top Entry System.

- Extract 5-6 feet of cable from the hoist. Remove the shackle and lower pulley by loosening the bolts and nuts and removing the bolts. See exploded diagram for shackle and pulley part and assembly orientation. Reeve Hoist line as shown, the cable hardware and the snap must be past the exit of the pulley before reassembling the pulley and shackle. Reassemble the pulley and shackle per the exploded diagram for shackle and pulley part and assembly orientation. Torque bolt and nuts to 18 ft/lbs.

6. Check cables to ensure they are able to freely move over pulleys and do not bind.
7. Re-check all fasteners to verify proper torque. Removal of the system is the reverse of installation.

TRAINING

It is the responsibility of the employer to train all workers prior to using this system (per OSHA 1926.503 (a)(1)). The employer shall provide a training program for each employee who might be exposed to fall hazards. The program shall enable each employee to recognize the hazards of falling and shall train each employee in the procedures to be followed in order to minimize these hazards.

The employer shall ensure that, as necessary, each employee has been trained by a competent person qualified in the following areas:

a. OSHA regulations governing the use of confined space access.
b. Ability to recognize potential fall and workplace hazards.
c. Method of inspection of safety equipment.
d. Rescue procedures.
e. Installation and removal techniques.

PLANNING FOR RESCUE

Prior to system use, a rescue plan must be prepared, the workers must be trained in its use, and the rescue equipment must be on hand to implement it in case of a fall. Manufactures instructions are to be provided to the rescuer.

Typical rescue plans include (but are not limited to) the following items:

1. List of equipment that must be readily accessible in the event of an emergency and the names of those workers certified to use or operate that equipment.
2. Emergency contact phone numbers (ambulance, hospital, fire department...) and a means to contact them (cell phone, emergency radio).
3. List of employees on the site, and the specific tasks they will perform to effect the rescue.
4. Rescue plan must be in accordance to ANSI Z359.1, ANSI Z359.4 and applicable OSHA regulations.

Qualified Persons trained in confined space entry and implementation should only undertake the design and installation of confined space systems. It is of the utmost importance to identify a method of rescue from a confined space BEFORE a fall has occurred, and have the means to effect the rescue on hand. In some situations it may be possible to use the confined space entry system itself as an anchorage capable of use for rescue. However, in some situations, it is possible that the fallen worker will come to rest at a level below the walking/working surface making it impossible for it to be used as a suitable anchorage for rescue. For this reason, always install rescue anchorages to rigid structures for attaching hoists or other retrieval equipment at locations that can be reached by rescue personnel. Note whether rescue must be up or down. If you rescue upward, anchorages must be high enough to raise the fallen worker above the walking/working surface. Individuals who will be using the system must be trained in the rescue plan and have the equipment

have the equipment on hand to implement it in an emergency. In case a worker has been injured or is unconscious, always consider the evacuation method and path to be used after the worker has been retrieved.

Note: This hoist is equipped with a secondary locking mechanism which will stop rotation of the drum in the event of a mechanical failure in any of the primary components. This may include failure of drive gears, drive shaft or the main brake mechanisms. If the secondary locking mechanism is engaged the hoist will stop paying out cable and will prevent the decent of the worker. In the event of failure in any of the primary components it may not be possible to lift the worker with this hoist. It is therefore imperative that a secondary evacuation plan be in place prior to use of this hoist.

Contact Fall Safe for help in identifying possible methods of rescue and rescue planning.

CARE AND INSPECTION

BEFORE EACH USE:

- The worker must inspect the system for any physical damage, wear, corrosion, or malfunctioning parts. Check all parts for signs of bending or distortion that may indicate that the system has seen a fall arrest load or been damaged. If any system has seen a fall arrest load, the entire system must be removed from service until it is inspected by a competent person who can either replace or repair and re-certify the components for use on the system. If an inspection reveals a problem or unsafe condition, remove the entire system from service until it can be re-certified by a competent person. Verify that the load indicating cable is not broken or frayed (Fig. 9). Once the load indicator has been deployed, the Hoist must be returned to a Fall Safe approved repair facility for evaluation and recertification.

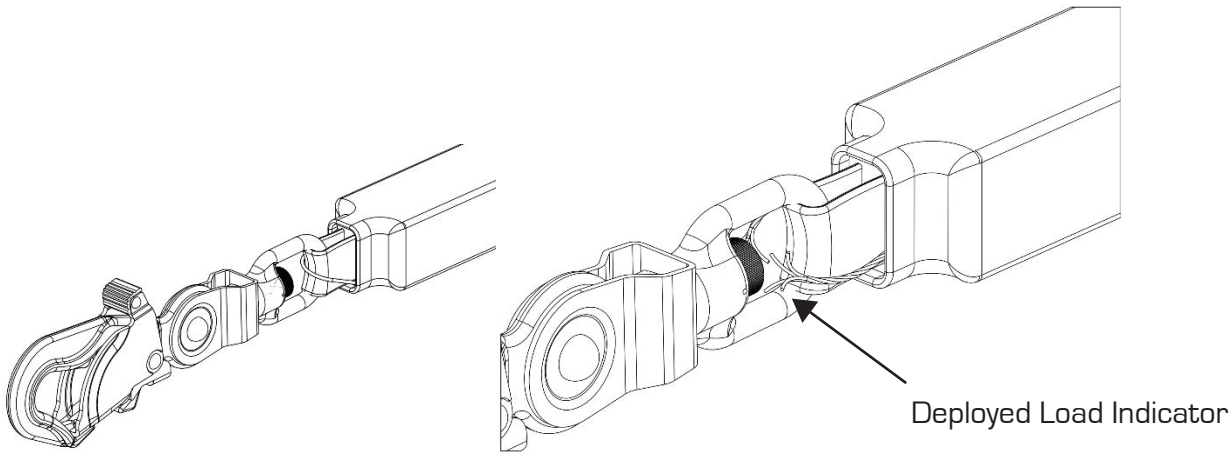


Fig. 9

Load Indicator Deployment

FORMAL INSPECTION:

- A formal inspection, by a competent person, must be carried out a minimum of once each year, and be formally documented and kept on file with the system parameter documents.

CARE AND CLEANING:

- Clean exterior by wiping away excess dirt, grease, or other materials that might interfere with operation of the unit. Dry hardware with a clean, dry cloth, and hang to air dry. Do not attempt to disassemble the unit. A buildup of dirt, solvents, paint, etc. on the line may prevent the hoist from working properly, and in severe cases degrade the cable to a point where it weakens and should be removed from service. More information on cleaning is available from Fall Safe. If you have questions concerning the condition of your hoist, or have any doubt about putting it into service contact Fall Safe.
- Store hoist in a cool, dry, clean environment. Avoid areas where heat, oil, chemicals or their vapors may exist. Thoroughly inspect after extended storage. Good safety practice requires separate storage of unusable product from usable product.

SERVICING

Only Fall Safe, or a person or entity with written approval from Fall Safe, shall make repairs or service the hoist. The company's safety officer should maintain a record log of all servicing and inspection dates. The system and all components must be withdrawn from service if subjected to fall arrest forces, or effecting a rescue. Those components may be returned to service only after being certified by a qualified person. Only original Fall Safe equipment replacement parts are approved for use in this system. Contact Fall Safe with questions and when in need of assistance.

WARNINGS AND LIMITATIONS

- Proper care should always be taken to visually scan the work area prior to use. Remove any obstruction, debris, and other materials from, and beneath the work area that could cause injuries or interfere with the operation of this system.
- Users should be familiar with pertinent regulations governing the use of this system and its components. Only trained and competent personnel should install and supervise the use of this system.
- Fall Safe hoist's are designed to be used with Fall Safe approved components and connecting subsystems. Use of the hoist with products made by other manufacturers should be evaluated by a competent person to ensure compatibility of components and hardware. Connecting subsystems must be suitableforuse in theapplication(e.g. rescue or man riding). Fall Safe manufactures a line of connecting subsystems for most applications. Contact Fall Safe for further information. Refer to the manufacturer's instructions supplied with the component or connecting subsystem to determine suitability. Contact Fall Safe with any questions regarding compatibility of equipment used with the hoist.

- DO NOT alter or modify the hoist.
- DO NOT misuse, overload or use the hoist outside of the intended use as described in these instructions.
- Persons with muscular, skeletal, or other physical disorders should consult a physician before using. Pregnant women and minors must never use this equipment. Increasing age and diminished physical fitness may reduce a person's ability to withstand shock loads during fall arrest or prolonged suspension. Consult a physician if there is any question about a user's physical ability to safely use this product to arrest a fall, affect a rescue or remain suspended.
- CHEMICAL HAZARDS: Acidic, alkaline, or other environments with harsh substances may damage the components and hardware elements of this hoist. When working in the presence of chemicals, more frequent inspection of the hoist is required.
- HEAT: Do not use hoist in environments with temperatures greater than 185°F (85°C). Protect the cable when used near welding, metal cutting, or other heat producing activities. Sparks may damage the line and reduce its strength.
- CORROSION: Do not expose the device to corrosive environments for prolonged periods. Organic substances and salt water are particularly corrosive to metal parts. When working in a corrosive environment more frequent inspection, cleaning, and drying of the hoist is required. See Care and Inspection sections for cleaning and inspection details.
- ELECTRICAL HAZARDS: Use extreme caution when working near energized electrical sources. Metal hardware on the hoist, the line itself, and on other components connected to it will conduct electric current. Maintain a safe working distance [preferably at least 10' (3m)] from electrical hazards.
- MOVING MACHINERY: When working near moving machinery parts (e.g. conveyors, rotating shafts, presses, etc.), make sure that loose equipment is secured. Maintain a safe working distance from machinery that could entangle clothing, the hoist line, the harness, or other components connected to it.
- **SHARP EDGES AND ABRASIVE SURFACES:** Do not expose cable lines to sharp edges or abrasive surfaces that could cut, or abrade and weaken the cable line. If working around sharp edges and abrasive surfaces is unavoidable use heavy padding or other protective barriers to prevent direct contact.
- **WEAR AND DETERIORATION:** Any HOIST which shows signs of excessive wear, deterioration or aging, must be removed from use and marked "UNUSABLE" until repaired or destroyed. See detailed inspection procedures.

If you have any questions regarding the correct installation or use of this product DO NOT USE. Call Fall Safe at Ph. (303) 424-8650 or Fax (303) 424-8670."

PRODUCT LABELS





INSPECTION LOG FOR FALL SAFE CONFINED SPACE HOIST

Company: _____ Location:_____ Date:_____

Job Site: _____ System No.: _____

Describe non-conforming conditions in the boxes below:

Inspection Criteria	Missing Parts	Labels Readable	Corrosion	Deformed Parts	Cracked Parts / Broken Wires	Excessive Loading
Snap Hook						
Shock Absorber						
Cable						
Cable Guide						
Drum						
Level Winder						
Crank Handle						
Hoist Bracket						
Mast Bracket						
Fasteners						
Labels						

Has a Rescue Plan been prepared?_____

Is Rescue Equipment on hand?_____

Have workers been trained in the Rescue Procedures and been given a copy of the Rescue Plan? _____

_____

Coquitlam, BC V3K 0B3 | Elgin, IL USA 60123
Ph. 1-800-323-7402



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

FALL SAFE™
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