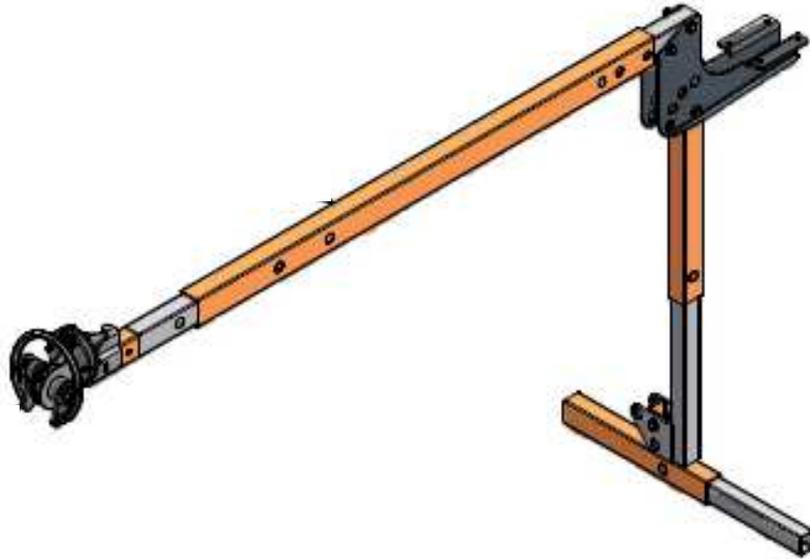


Best Hoist

Pro-Series Series Pole Hoist



OPERATOR'S MANUAL

Man-Rated for:

Work Positioning

Confined Space Entry / Retrieval

Fall Protection

Rescue

Also Rated for Material Handling Applications*

*Where permitted by applicable regulations

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1. INTRODUCTION to POLE HOIST APPLICATIONS

Congratulations on your purchase of a Best Safety Systems Pro-1 Series Davit Arm as part of your Safety-at-Heights equipment. The various parts of a typical Pole Hoist and their relative locations are shown in Figure 1, below.

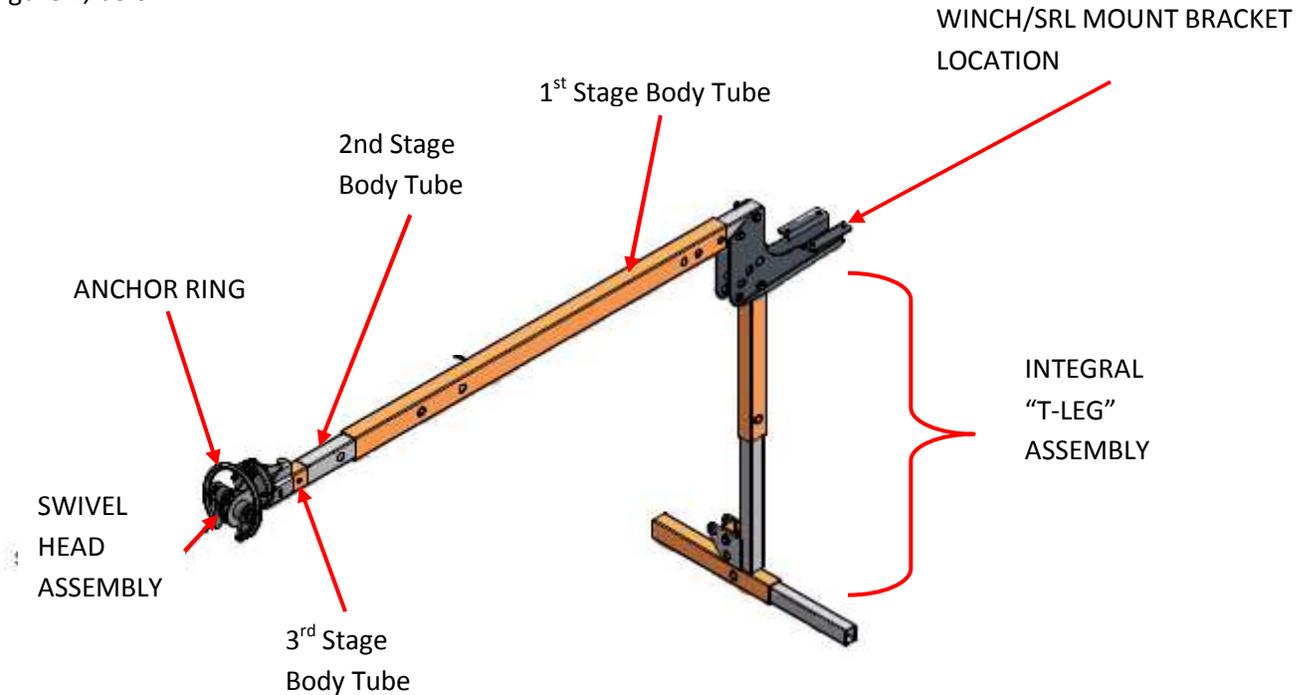


Figure 1, Typical Pro-Series Pole Hoist Parts Location and Identification

The Pole Hoist is designed to be attached with a carabiner to a suitable overhead anchor point in order to place the winch or Self Retracting Lifeline (SRL) cable directly over the work surface while allowing the attendant to remain safely back from the fall hazard and not interfere with the entrant's access / egress.

The Pro-Series Pole Hoist is constructed of high quality aluminum tubing for light weight, and features patented Tuff-Klik pin-less connections for easy of set-up, adjustment, and tear-down.

Pro-Series Pole Hoists may be used with a combination of adaptor brackets, winches, self-retracting lifelines, and other accessories to meet your application's specific needs.

This product has been specifically designed and carefully manufactured to provide reliable operation in many different safety-at-heights applications. These include, but are not limited to:

1.1 FALL PROTECTION

The Pro-Series Pole Hoist is designed to be used with a variety of anchor point options to provide an engineered supporting structure for Personal Fall Arrest Systems (PFAS). With the addition of a winch, the Pole Hoist may be used as a rescue device to assist with the rescue of a worker who has fallen and is being suspended by their PFAS.

1.2 WORK POSITIONING

The Pro-Series Pole Hoist, when combined with a suitable Tuff Built Products winch, may be used for the suspension of a worker at a work position for the performance of a task. When a worker is suspended in a work seat or harness, a secondary personal fall arrest system must be used which meets applicable OSHA or other local requirements.

NOTE: OSHA 29 CFR 1926 Subpart L considers this application to be a single point suspension scaffold, and requires treatment as such.

1.3 RESCUE

The Pro-Series Pole Hoist, when combined with a suitable anchor point and connecting hardware, may be used as part of a system meeting the requirements of ANSI/ASSE Z359.4 for the rescue of a fallen worker.

1.4 CONFINED SPACE ENTRY / RETRIEVAL and RESCUE

The Pro-Series Pole Hoist, when combined with a suitable anchor point, connecting hardware and winch, may be used as part of a system to facilitate access to and egress from a confined space as well as non-entry rescue in the event of an emergency. When used with a Tuff Built Products mounting base and winch, the Pro-I Davit Arm meets the requirements of OSHA 1910.146, and ANSI/ASSE Z117.1 for use as a confined space entry/retrieval and rescue device.

1.5 FALL PROTECTION WHILE CLIMBING

In situations where it is not practical to install and use a temporary or permanently installed personal fall arrest system, the Pro-Series Pole Hoist may be combined with a suitable anchor point, connecting hardware, and winch to guard against falling while climbing a ladder or other structure. The winch line can be used as essentially a travelling anchorage connector that moves up and down with the climber. An energy absorbing lanyard is installed between the winch line and the dorsal D-ring on the climber's full body harness. The winch must be operated so as to continuously eliminate any slack in the winch line as the climber moves up and down. The winch operator must be specifically instructed in such use of this winch. All installations must be designed, installed, and used under the supervision of a qualified person.

1.6 MATERIAL HANDLING

The Pro-Series Pole Hoist, when combined with a suitable Tuff Built Products mounting base and winch, may be used for the raising and lowering of tools, equipment, and other material not exceeding the rated Working Load Limit of any system accessories. Various jurisdictions may not allow the use of the same equipment to move personnel and material. Be aware of and follow the regulations governing your workplace.

2. APPLICATION RESTRICTIONS

There are restrictions and limitations that must be carefully considered in the selection, installation, and operation of this type of equipment. Serious injury or death may result from failure to consider these factors.

2.1 WORKING LOAD LIMIT

The Pro-Series Pole Hoist is designed and rated to a working load limit of 1 person weighing a maximum of 310lbs (141kg) , including all clothing, tools, and equipment.

Ensure that all other system components have a working load limit matching that of the Pole Hoist. System rating is equal to that of the lowest rated system component.

2.2 SITE CHARACTERISTICS, PHYSICAL and ENVIRONMENTAL FACTORS

Work sites have associated with them any of a number of hazards related to the site itself. These may include, but are not limited to poisonous or explosive atmospheric conditions, poisonous or corrosive chemical hazards, hot surfaces, electrical hazards, sharp edges, engulfment hazards, or moving machinery.

All of these factors must be taken into consideration when selecting equipment for a given application.

3. GENERAL SYSTEM REQUIREMENTS

The Pro-Series Pole Hoist is designed for use with a variety of accessories to perform many functions. There are requirements common to all such systems that include, but are not limited to, the following.

3.1 ANCHORAGE STRENGTH

The Pro-Series Pole Hoist is designed to be attached to a supporting structure (anchorage) capable of providing the required anchorage strength. The standards governing different situations specify various anchorage requirements. However, at no time can the anchorage provide any less than the greater of:

- a 2:1 safety factor on the maximum arrest force (MAF) rating of any fall arrest system being used,
- a 4:1 safety factor on personnel working loads applied to the system,
- a 4:1 safety factor on material handling loads applied to the system.

All installations **MUST BE** used under the supervision of a Qualified Person.

3.2 COMPATABILITY OF CONNECTORS

Connectors used to connect components in the system must be compatible with each other to ensure sufficient strength and eliminate the risk of accidental disengagement or rollout during use. Connectors supplied with products designed, manufactured, and/or approved by Tuff Built Products Inc. will meet

all applicable requirements for connectors. Any connectors not supplied by Tuff Built Products Inc. **MUST BE** selected and approved by a Qualified Person.

3.3 FULL BODY HARNESS

Use only a full body harness designed, tested, and approved for fall arrest when connecting a person to this winch. Body belts or straps do not provide adequate support to the body to prevent serious injury or death in the event of a fall.

3.4 FALL PROTECTION

Activities involving working at heights require the use of equipment to protect the worker in the event of a fall. Suitable fall protection must be provided as required by applicable local regulations when using the Pro-Series Pole Hoist.

3.5 CONFINED SPACE SAFETY

When the Pro-Series Pole Hoist is used as part of a system involving work in a confined space, always follow an approved confined space safety plan meeting all local regulations.

3.6 SWING ANGLE

Care must be taken at all times to minimize the potential for swing fall when working at heights. At no time should the angle of a winch or SRL line exceed 5 degrees with respect to the vertical (see Figure 4).

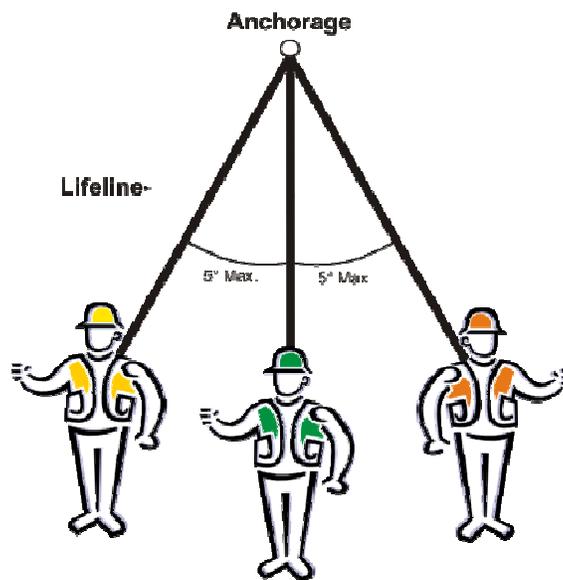


Figure 4, Maximum Swing Angle

4 PRO-SERIES POLE HOIST SETUP and OPERATION

4.0 INTRODUCTION

The Pro-Series Pole Hoist is designed for use in conjunction with various accessories to meet different requirements. These may include winches, self-retracting lifelines (SRL's), energy absorbers, connectors, and full-body harnesses. All installations must be approved by a Qualified Person.

4.1 SET-UP

Anchor points and supporting structures being used with the Pro-Series Pole Hoist MUST BE capable of providing the required anchorage strength. The standards governing different situations specify various anchorage requirements. However, at no time can the anchorage provide any less than the greater of:

- a 2:1 safety factor on the maximum arrest force (MAF) rating of any fall arrest system being used,
- a 4:1 safety factor on personnel working loads applied to the system,
- a 4:1 safety factor on material handling loads applied to the system.

Anchorage selected must meet applicable local regulatory requirements for anchorage strength.

All installations MUST BE used under the supervision of a Qualified Person.

4.2 PRO-SERIES POLE HOIST INSTALLATION

Using an approved double locking carabiner, connect the anchor ring on the head of the pole hoist to an approved anchor point.

Inspect, maintain, and operate the Pole Hoist as per the Operator's Manual supplied by Tuff Built Products Inc. at the time of purchase.

4.3 WINCH and SRL INSTALLATION

When equipped with a Pro-I Davit Arm, the Pro-Series Pole Hoist may be used to support a variety of winches and self-retracting lifelines (SRL's) for Fall Arrest, Confined Space Entry/Retrieval, Rescue, and Material Handling applications when working in a vertical access confined space.

Please refer to the Operator's Manual provided with all Tuff Built Products Inc. accessories at the time of purchase for detailed information on the installation of the winch onto the system.

For accessories not supplied by Tuff Built Products Inc. the Qualified Person responsible for the design, installation, and use of the system must provide detailed information regarding the installation of the winch onto the system.

4.4 SYSTEM OPERATION

Once the winch or SRL has been properly installed into the system, the operation of the equipment is as outlined below. No person shall use this equipment without receiving proper training as outlined in Section 5. Any user must fully read and understand this manual and any other instruction manual(s) related to the system being used, or have the instructions explained to them, before using this equipment.

4.2.1 INSPECTION

The Pro-Series Pole Hoist must be inspected before each use as outlined in Section 6.1.

Any problems must be reported immediately to your supervisor, and the equipment labeled so as to prevent further use until it has been repaired.

NOTE: Any time a Pro-Series Pole Hoist is returned to a factory authorized service center for repair, please provide photocopies of all previous Inspection Log sheets for that Pole Hoist to assist with diagnosis and processing of any warranty claims.

Please obtain a Returned Goods Authorization number from the service center before sending your Pole Hoist for service.

5. TRAINING

Any worker using this Pro-Series Pole Hoist must receive appropriate training from their employer on all equipment involved prior to operating. Users must fully read and understand this manual and any other instruction manual(s) related to the system being used, or have the instructions explained to them, before using this equipment.

6. INSPECTION

6.1 DAILY INSPECTION

The Pro-Series Pole Hoist must be inspected before each use as described in Sections 6.1.1 and 6.1.2. Report any problems or concerns to your supervisor, and do not use the equipment until they have approved doing so.

6.1.1 Cleaning and Lubrication

If required, clean and lubricate the Pro-Series Pole Hoist and all its parts as outlined in Section 7. Do not use solvents or other chemicals to clean the base.

6.1.2 Physical Damage

Inspect the Pro-Series Pole Hoist and all accessories for physical damage; bent parts, loose or missing hardware or parts, and missing, or illegible labels (see Figure 5). Replacement labels are available from your dealer by ordering the part number shown on each label.

Note: Not all labels shown may be present on your base, as some are related to standards and certifications that may not apply to your jurisdiction.

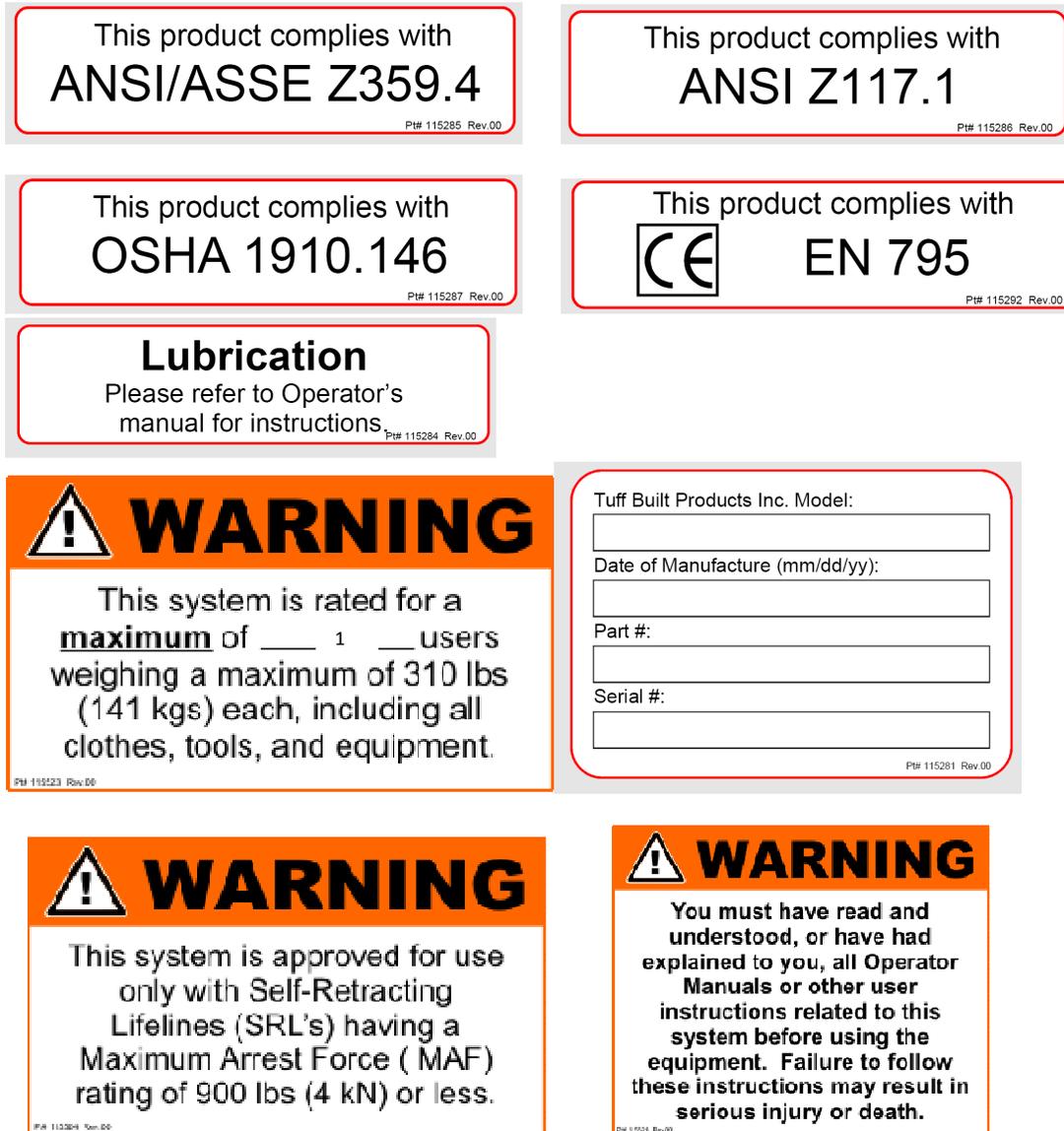


Figure 5, Pro-Series Pole Hoist Labels

While minor cosmetic damage will not affect the structural integrity of the Pole Hoist, seriously damaged equipment MUST BE removed from service and returned to an authorized service center for repair prior to further use.

Additionally, inspect any accessories being used with the Pro-Series Pole Hoist as instructed in the Operators Manual provided by the respective manufacturer at the time of purchase.

6.2 ANNUAL INSPECTION

At least annually, and more frequently if subjected to harsh conditions or excessive use, the Pro-Series Pole Hoist MUST BE given a detailed inspection by a competent person as described below, and the results recorded in an Inspection Log. A sample Inspection Log is provided on Page 12 of this manual, please make photocopies of this sample to record all inspection results.

NOTE: Any time equipment is returned to a factory authorized service center for repair, please provide photocopies of all previous Inspection Log sheets for that product to assist with diagnosis and processing of any warranty claims.

Please obtain a Returned Goods Authorization number from the service center before sending your equipment for service.

6.2.1 Cleaning

Prior to this inspection, clean the exterior surfaces of the Pro-Series Pole Hoist with a mild soap solution on a soft cloth. Do not use solvents or other chemicals to clean the pole hoist.

6.2.2 Inspection Procedure

Following the instructions contained in Section 6.1.2, inspect the Pro-Series Pole Hoist for physical damage. Record the results in the Inspection Log.

IMPORTANT: Be sure to review any previous inspection records to be aware of existing concerns and to allow for re-inspection of any potential problem areas. Cumulative findings may lead to the need for repair or replacement when looked at together.

7. MAINTENANCE, LUBRICATION and STORAGE

The Pro-Series Pole Hoist has been designed to provide many years of trouble free service, and requires little in the way of routine maintenance.

Any loose fasteners should be tightened, with the base being sent to a factory authorized service center for structural repair if necessary.

Basic cleaning should be performed at least annually (as outlined in Section 6.2.1) as part of the annual inspection, or more frequently as required when used is under harsh conditions.

7.1 Cleaning the Pro-Series Pole Hoist

Use a solution of warm water and a mild detergent to clean the Pro-Series Pole Hoist and its labels. Do not use solvents or other cleaners to clean the base, as this may result in damage to the powder coat finish.

7.2 Lubrication

7.2.1 Tuff-Klik Lubrication

After cleaning and inspection as instructed in Section 6.2.1, lubricate with WD-40 or similar moisture displacing penetrant as required, and wipe away any excess with a clean cloth. Do not apply oil, grease, or other lubricants that may attract and trap contaminants.

7.2.1 Roller and Sliding Parts Lubrication

After cleaning and inspection as instructed in Section 6.2.1, lubricate with WD-40 or similar moisture displacing penetrant as required, and wipe away any excess with a clean cloth. Do not apply oil, grease, or other lubricants that may attract and trap contaminants.

7.3 Storage

Store the base and other related safety equipment out of direct sunlight in a cool, dry area away from dust, chemicals or other harmful material. Always inspect before using equipment that has been stored for any extended period of time.

7.4 Parts Considered Normal Wear and Tear for Warranty Purposes

Pulleys, rollers, Cable Retainer spring bar, labels, wheels on trolley, and Tuff-Klik connectors used on the Pro-Series Pole Hoist are considered subject to normal wear and tear during use and are not covered under warranty except in cases of material or manufacturing defects.

8. SPECIFICATIONS

The Pro-Series Pole Hoist is principally constructed of high quality extruded aluminum, with zinc plated or powder coated steel hardware and connecting brackets.

The Pro-1 Series Pole Hoist (Part# 30041) weighs 28 lbs (12.7 kg).

The Pro-2 Series Pole Hoist (Part# 30040) weighs 35 lbs (15.9 kg).

PRO-SERIES POLE HOIST INSPECTION LOG

Pro-Series Pole Hoist Model Number: _____

Pro-Series Pole Hoist Serial Number: _____

Date of Manufacture (dd/mm/yy): _____

Purchase Date (dd/mm/yy): _____

INSPECTION ITEM	PASS	FAIL	DETAILS / LOCATION of DAMAGE	DISPOSITION (REPAIRED / SCRAPPED)	APPROVED FOR USE BY
Physical Damage to Railing Panels					
Damaged, loose, corroded or Missing Hardware or Conectors					
Missing or Illegible Labels					
Sticking or corroded Tuff-Klik connectors or Sliding Tubes					

Date of Inspection: _____

Inspected By: _____