PEAKWORKS®

DSK3-60 Davit System

OPERATIONS AND MAINTENANCE MANUAL

READ CAREFULLY BEFORE USE

ENGLISH

A SureWerx™ Brand

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DSK3-60DavitSystemEN_Manual2020

Table of Contents

Warning: All persons using this equipment must read, understand and follow all instructions. Failure to do so may result in serious injury or death. Pregnant women and minors must not use this product.

Man-Rated for:

- Work Positioning
- Confined Space Entry / Retrieval
- Rescue
- Fall Protection
- Also Rated for Material Handling Applications

1. INTRODUCTION TO DAVIT ARM APPLICATIONS

Congratulations on your purchase of a DSK3-60 Davit System as part of your Safety-at-Heights equipment. Please see Figure 1 for names and locations of system components.

The DSK3-60 is constructed of high quality aluminum tubing for light weight, and features patented pin-less connections for easy of set-up and tear-down.

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, various combinations of:

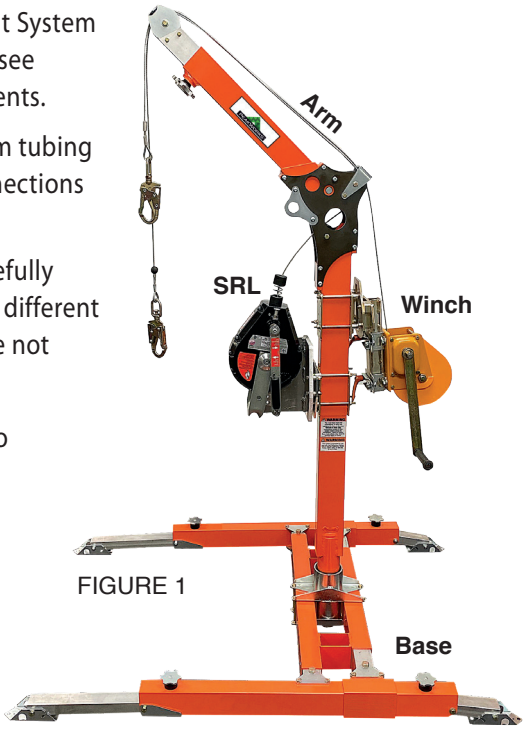


FIGURE 1

1.1 FALL PROTECTION - The DSK3-60 is designed to provide an engineered supporting structure for Personal Fall Arrest Systems (PFAS). The winch is to be used to lower and raise an individual into a confined space and the SRL with rescue handle is used for fall arrest and rescue as needed.

1.2 WORK POSITIONING - The DSK3-60, winch portion, may also be used for the suspension of a worker at an elevated position for the performance of a task. When a worker is suspended in a work seat or harness, the SRL is used as a secondary personal fall arrest system.

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 Davit Arm, base, and winch may be used employed 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 Davit Arm, base, 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. The Davit System 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 DSK3-60 may be used to guard against falling while climbing a ladder or other structure. The SRL can be attached to the dorsal D-Ring of the harness and used as primary fall arrest while climbing. All such installations must be designed, installed, and used under the supervision of a qualified person.

1.6 MATERIAL HANDLING - The Davit Arm may be used for the raising and lowering of tools, equipment, and other material not exceeding the rated Working Load Limit of any system component.

NOTE: Some 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 DSK3-60 is designed and rated for a working load limit of 1 person weighing a maximum of 310lbs (including clothing, tools, and equipment) when used in a 1 Part Reeved System as shown in Figure 2.

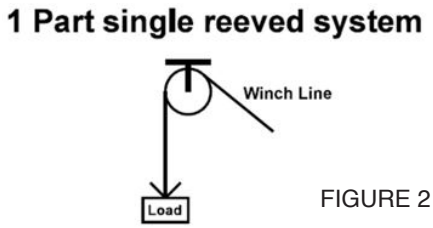


FIGURE 2

2.2 SITE CHARACTERISTICS, PHYSICAL and ENVIRONMENTAL FACTORS - Individual work sites have associated with them any of a number of hazards related to the site itself and the activities being carried out at that site. 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 DSK3-60 is to perform many functions. There are basic requirements common to all such systems that include, but are not limited to, the following.

3.1 ANCHORAGE STRENGTH - The DSK3-60 is designed to be set up or installed, and used on a supporting surface (anchorage) capable of providing sufficient anchorage strength to support all applied loads with an acceptable margin of safety. The standards governing different situations specify various minimum requirements depending on the application, the work being performed, and other factors.

However, at no time shall 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 COMPATIBILITY 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 PeakWorks will meet applicable compatibility requirements for connectors. Any connectors not supplied by PeakWorks MUST BE approved by a Qualified Person, and installed, inspected, and used according to the respective manufacturer's instructions.

3.3 FULL BODY HARNESS - Use only a full body harness designed, tested, and approved for fall arrest when connecting a person to this Davit system. 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 Davit System and related equipment.

3.5 CONFINED SPACE SAFETY - When the DSK3-60 is part of a system involving work in a confined space, follow an approved confined space safety plan meeting 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 5).

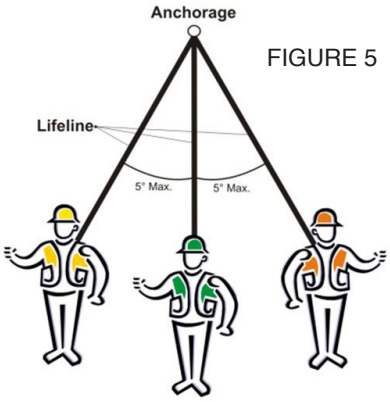


FIGURE 5

4. DAVIT SYSTEM SETUP AND OPERATION

The DSK3-60 is designed for use in a variety of situations. These may include situations that require the use of the winch, SRL or a combination of both. All situations must be approved by a qualified person.

4.1 SET-UP/INSTALLATION OF MOUNTING BASES - The DSK3-60 is designed for use in many types of bases depending on the given application, including service vehicle tow hitch mounted bases, barrel mount bases, counterweighted bases, and various styles of clamp-on and permanent mount bases.

Mounting bases must be set up or installed and used on an anchorage meeting the strength requirements as specified in Section 3.1. Bases other than the Tuff Built Products Series Portable Base shown in Figure 6 must be set up or installed following the Manufacturer's setup or installation instructions provided with each base.

4.2 SERIES PORTABLE BASE - The DSK3-60 is designed for use in many types of bases depending on the given application, including service vehicle tow hitch

Assemble the base as shown in Figure 6.

FIGURE 6

By angling the base legs, position the base around the opening being entered so as to achieve the best access to the opening for the entrant, and the best working position for the attendant.

Level the Base Assembly using the 4 Base Leg Leveling Screws, adjusting the base such that the legs angle slightly upwards as the go from back to front.

4.3 DAVIT INSTALLATION & ADJUSTMENT - Install the davit into the sleeve on the base as shown in Figure 10, and check that the davit rotates freely in the sleeve.

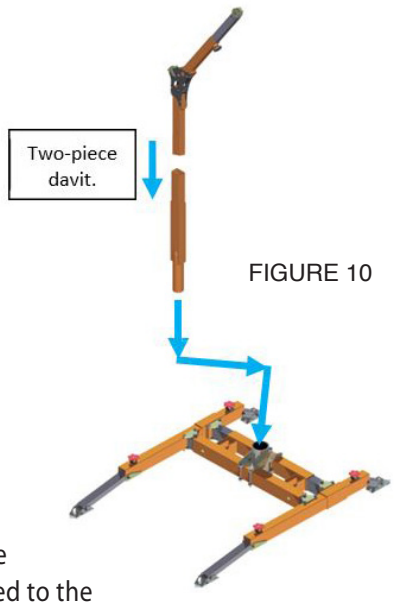
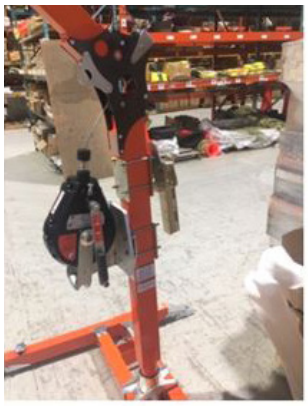


FIGURE 10

Adjust the offset of the davit as required for the job at hand by loosening the Clamp Knob, sliding the Extension Tube to the required position, and tightening Clamp Knob to lock the Extension Tube in place. Tighten Clamp Knob until you hear and feel the internal ratchet least twice to ensure proper engagement of the Overload

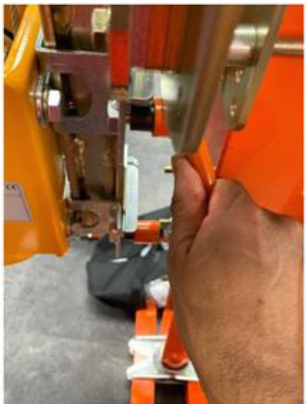
Under all normal working loads, the Boom Extension Tube is locked in place when the Clamp Knob is tightened. If system mis-use applies excessive load to the system, the Extension Tube slides back inside the Receiver Tube to effectively shorten the arm and reduce loading to protect other parts of the system. Movement of the Extension Tube under loading indicates that excessive force is being applied to the system, and the activity causing the movement MUST BE stopped immediately.

4.4 WINCH, SRL, & ACCESSORY INSTALLATION - Please refer to the Operator's Manual provided with all PeakWorks Products at the time of purchase for detailed information on the installation of Winches or SRL's onto the Davit System.



SRL Installed

Winch Installed



Tighten Winch using Ratchet

4.5 SYSTEM OPERATION - Once all accessories have been properly installed onto the system, accessory operation is as outlined in the applicable Operator's Manual. Manuals for winches, SRL's, or other accessories provided by PeakWorks are provided with the equipment at time of purchase. Replacement manuals are available from PeakWorks or your local dealer. No person shall use this winch or SRL 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.

4.6 INSPECTION - The DSK3-60 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 to prevent further use until it has been repaired.

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

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

5. TRAINING

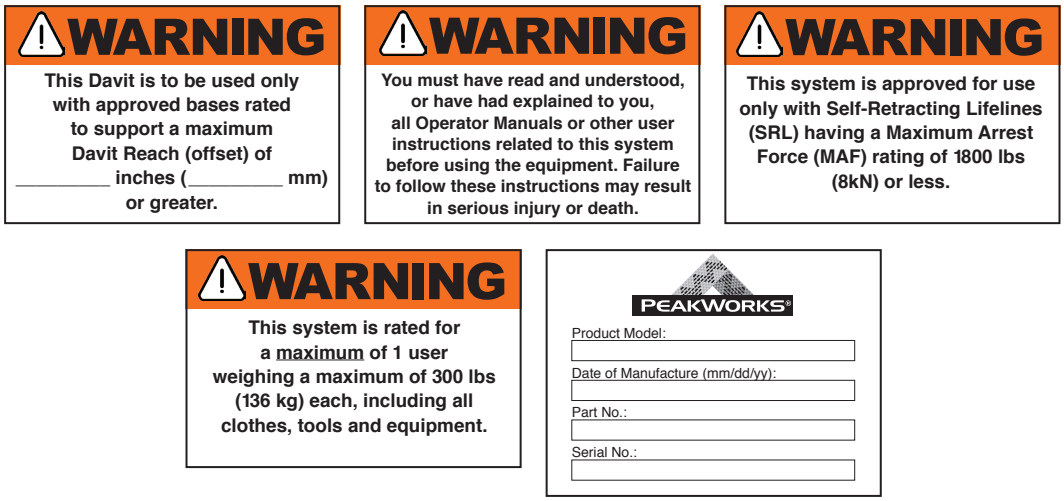
Any worker using this DSK3-60 must receive appropriate training from their employer on all equipment involved prior to operating. Users must fully read and understand this manual and any other instruction manual(s) related to the system being used, or have the instructions explained to them, before using this equipment.

6. INSPECTION

6.1 DAILY INSPECTION - The DSK3-60 must be inspected before each use as described in Sections 6.1.1 to 6.1.3. 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 DSK3-60 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 Davit System and all accessories for physical damage; bent parts, loose or missing hardware or parts, and missing, or illegible labels (see Figure 13). 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 equipment, as some are related to standards and certifications that may not apply to your jurisdiction.

While minor cosmetic damage will not affect the structural integrity of the Davit System, 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 Davit System as instructed in the Operators Manual provided by the respective manufacturer at the time of purchase.

6.1.3 DAVIT OVERLOAD INDICATOR OPERATION - The DSK3-60 is equipped with a unique overload protection feature that guards against damage to system components and provides a visual indicator of the structure having been subjected to greater than allowed loading.

Note: Do not test Overload Indicator over an opening or where there is a chance of falling to inspect the Overload Indicator for proper engagement:

• Fully extend and lock the Boom Extension Tube as described in Section 4.3,

• Install a winch or SRL on the structure as per the applicable instructions, and,

- Pull with your full body weight on the lifeline and make sure there is no movement of the Extension Tube. If using an SRL, apply a sharp, steady pull on the lifeline to engage the SRL brakes, then pull on the lifeline to test the Overload Indicator.

Note: When conducting this test with an SRL, the test should be applied to the lifeline above the snap hook to eliminate any damage over time to any integral overload indicator in the snap itself.

6.2 ANNUAL INSPECTION - At least annually, and more frequently if subjected to harsh conditions or excessive use, the Davit System 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 16 of this manual. Please make photocopies of this sample to record all inspection results.

Following the instructions for Daily Inspection contained in Section 6.1.1 to 6.1.3, inspect the equipment for physical damage and 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.

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 or service issues.

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

7. MAINTENANCE, CLEANING, LUBRICATION AND STORAGE

The Davit System has been designed to provide many years of trouble free service, and requires little in the way of routine maintenance.

Any loose fasteners must be tightened, and the equipment returned 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 DAVIT ARM - Use a solution of warm water and a mild detergent to clean the Davit System and its labels. Do not use solvents or other cleaners to clean the equipment, as this may result in damage to the powder coat finish.

7.2.1 LUBRICATION - After cleaning and inspection as instructed in Section 6.2.3, lubricate connectors with WD-40 or a 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.

7.2.2 SLIDING ASSEMBLIES LUBRICATION - After cleaning and inspection as instructed in Section 6.2.3, wipe all sliding surfaces with a clean rag dampened with WD-40 or a similar moisture displacing penetrant.

7.3 STORAGE - Store the Davit Arm 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, Labels, Adjuster Screws, Rubber Foot Pads (where applicable), and Connectors 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. DAVIT SYSTEM GENERAL SPECIFICATIONS

8.1 MATERIALS OF CONSTRUCTION - The Hoist System components are principally constructed of 6061-T6 aluminum, and have either plain aluminum finish or a Powder Coated finish.

All hardware is s dichromate zinc plate Grad 8 specifications.

8.2 COMPONENT WEIGHTS - DSK3-60 (without SRL & Winch); 89 lbs (40.5 kgs)

DAVIT SYSTEM INSPECTION LOG

Davit System Model Number:

Davit System 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 the structure					
Damaged, loose, corroded or missing hardware or connectors					
Missing or illegible labels					
Sticking or corroded connectors or sliding tubes					

Date of Inspection:

Inspected By: