



MSA Corporate Headquarters: P.O. Box 426, Pittsburgh, PA 15230, USA
USA Phone: 1-800-672-2222 Fax: 1-800-967-0398 Canada Phone: 1-888-396-1067
• Web Site: www.msanet.com • e-mail: rose@msanet.com

MSA Sure-Climb™ Extension Davit & Base Assembly

P/N 10036032

Application, Operation, Maintenance & Inspection Instructions Manual

**Please read this manual.
This information is vital to your safety.**

WARNING

*National standards and state, provincial and federal laws require the user to be trained before using this product. Use this manual as part of a user safety training program that is appropriate for the user's occupation. These instructions must be provided to users before use of the product and retained for ready reference by the user. The user must read, understand (or have explained), and heed all instructions, labels, markings, and warnings supplied with this product and with those products intended for use in association with it. **FAILURE TO DO SO MAY RESULT IN SERIOUS INJURY OR DEATH.***

Copyright © 2001 MSA

All rights reserved. No part of this Catalogue covered by the copyrights hereon may be reproduced or copied in any form or by any means - graphics, electronic or mechanical, including photocopying, recording, taping or information storage and retrieval systems -without the written permission of MSA.

Specifications

- For use only with the MSA Sure-Climb Permanent Cable System for ladder climbing fall arrest.
- Attach only to fixed steel ladders meeting OSHA 29CFR 1926.1050 and ANSI A14.3. Ring spacing should be 12 inches (30.5 cm), clear distance between side rails should be at least 7 inches (17.8 cm), and clearance on the climbing side of the ladder should be at least 30 inches (76.2 cm). The maximum intended load on the ladder must be determined by the qualified person responsible for the design, installation, and use of the system. The criteria defining a qualified person are established by OSHA. In Canada, refer to a P.Eng.
- Capacity is one person with a weight of 310 pounds (141 kg), including the weight of clothing, tools, and other user-borne objects.
- The Extension Davit and Base Assembly when used in conjunction with the Sure-Climb cable system, meet the following standards and regulations:
 - ANSI Z359.1-1992 (R1999)
 - CSA Z259.2.1-98
 - OSHA 29CFR 1910 & 1926

These instructions, and the labels on the product, fulfill the requirements of those standards and regulations.

- The Sure-Climb Extension Davit and Base Assembly must be used with the Sure-Climb Permanent Cable System. They are designed for personnel fall protection and may not be used for lifting and lowering materials.
- Material used in construction of the Extension Davit is carbon steel, square tubing, ASTM A-500, Grade B, 2.0 inch (5.0 cm) square with 0.2 inch (0.5 cm) wall. Finish is zinc plate per ASTM B633 Class Fe/Zn 12, Type II yellow chromate.

The Davit Base is constructed of square steel tubing 2.50 inches (6.35 cm) by 0.2 inch (0.5 cm) wall, ASTM A-500 Grade B with zinc finish per ASTM B633 Class Fe/Zn 12, Type II yellow chromate.

Clamps are constructed of AISI 1018 carbon steel with hot-dipped galvanized finish. Hardware is Grade 2 zinc plated steel.

Description

EXTENSION DAVIT:

The extension davit is a square structural steel tube for attachment of the Top Anchor Bracket of the Sure-Climb ladder climbing fall protection system. The davit serves to raise the upper point of attachment for the Sure-Climb cable lifeline. The Extension Davit is attached to the Davit Base included with this system.

DAVIT BASE:

The davit Base is the means by which the Extension Davit is attached to the ladder anchorage. The Base is permanently secured to three (3) ladder rungs using bolt-on clamps (provided), which bolt to the threaded studs on the receptacle. The Davit Base is constructed of plated steel tube which allows clearance for inserting the Extension Davit. A bolt is included as an adjustable stop for positioning the Davit within the Base.

Selection and Application

PURPOSE OF THE EXTENSION DAVIT SYSTEM:

The primary purpose of the Sure-Climb Extension Davit system is to serve as an anchorage connecting means for a ladder-climbing fall arrest system.

The Extension Davit extends the usable length of the cable lifeline of the Sure-Climb system above the level of the uppermost rung on the ladder. The Extension Davit enables the worker to climb above the ladder to a safe working level while remaining tied-off to the fall arrest system. Use of the Extension davit system must comply with these User Instructions and, further, is subject to approval under the user's safety rules and regulations and by the user's safety director, supervisor, or a qualified safety engineer. Be certain the selection of the vertical mount davit system is suited for the intended use and work environment. If there is any conflict between these User Instructions and other directives or procedures of the user's organization, do not use the vertical mounting system until such conflicts are resolved. Consult all local, state, and federal Occupational Health and Safety Administration (OSHA) requirements for personal safety equipment. Also refer to the latest revision of ANSI Z359.1 and ANSI A10.14 standards for more information on anchorage connectors and associated system components. In Canada, refer to CAN/CSA Z 259.2.1, and provincial and federal regulations.

USAGE LIMITATIONS:

The following application limitations must be considered and planned for before using the vertical mount davit system.

Physical Limitations:

The Extension davit system is designed for use by one person with a combined total weight less than 310 lbs (141 kg), including clothing, tools, and other user-borne objects. Persons with muscular, skeletal, or other physical disorders should consult a physician before using. Pregnant women and minors must never use the vertical mount davit system. Increasing age and lowered 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 physical ability to safely use this product to arrest a fall or suspend.

Environment:

Chemical hazards, heat and corrosion may damage the Extension Davit. More frequent inspections are required in these environments. Do not use in environments with temperatures greater than 185°F (85°C). Use caution when working around electrical hazards, moving machinery and abrasive surfaces.

General Precautions:

- **This system must be installed and used under the supervision of a qualified person.**
- **Use only with a suitable steel structural ladder.**
- **Use only with compatible MSA components.**
- **Do not expose the worker to hazard during installation and removal of the vertical mount davit system.**
- **Connect no more than one (1) personal fall arrest subsystems to the vertical mount davit system at one time.**

Instructions for Use

In addition to these User Instructions, refer to instructions provided with the MSA Sure-Climb ladder cable system. Ref. # SLCS001.

INSTALLATION:

Step 1:

Bolt the upper cable Anchor Bracket, part number SFLS350001, to the top of the Extension Davit arm. Use the four (4) 1/2 inch bolts provided with the Sure-Climb system. See Figure 1.

Notice:

There are two reinforcement plates at the top attachment point, while there is only one reinforcement plate on the back side of the davit arm at the lower attachment point.

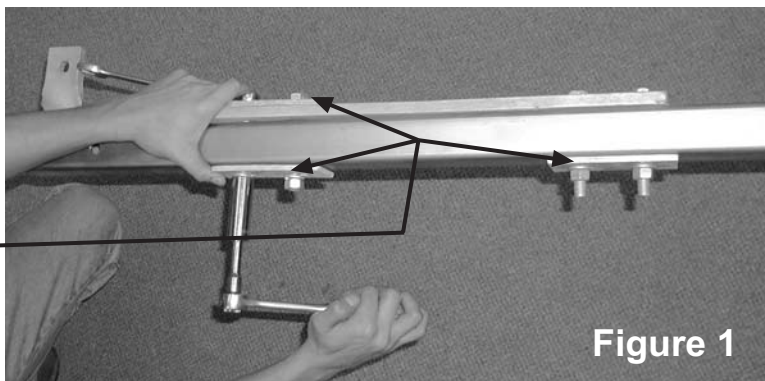


Figure 1

Instruction for Use con't

Step 2:

Mount the Davit Base to the top three (3) rungs of the compatible steel ladder. Assemble the clamps onto the ladder rungs from the back side of the ladder. Clamps are each bolted to two threaded studs protruding from the back of the Davit Base. Mount the Davit Base vertically on the ladder with the Base centered between the ladder hand rails. Tighten the clamps onto their respective rungs, using bolts and washers provided, until the clamps begin to deform around each rung. **See Figure 2.**

Step 3:

Install the bolt provided through the bottom of the Davit Base. Then slide the Extension Davit into the Base so that the bottom of the Davit tests on the through - bolt in the Base. **See Figure 3.**

Step 4:

Install the remaining components of the Sure-Climb cable system according to the instructions provided with the product.

Step 5:

Inspect the completed installation to verify that the Sure-Climb Extension Davit and Base Assembly has been assembled according to the manufacturer's instructions. Verify that all components are present, that all bolts and nuts have been installed correctly and are tightened as specified.

USAGE:

Use the Sure-Climb Extension Davit and Base Assembly as directed in the Sure-Climb ladder cable system. Do not connect more than one person to the ladder cable system at one time. Do not exceed the maximum capacity of 310 lbs (141 kg) of the system.

Figure 2



Figure 3



Finished Installation

REMEMBER!
To put Through Bolt into the Davit Base before sliding Davit Arm into Base.



Care, Maintenance, and Storage

User maintenance consists of cleaning and drying the vertical mount davit system. All other maintenance or repair work must be done at the factory or by persons authorized in writing by MSA.

CLEANING INSTRUCTIONS:

To clean, periodically use a clean damp (not wet) cloth to remove dirt or contamination which may cause corrosion or hamper readability of labels. Wipe off any moisture before returning the device to service. The frequency of cleaning should be determined by inspection and by severity of the environment. In highly corrosive environments cleaning should be done every two or three days. Never use solvents to clean vertical mount davit system as they may break down the label adhesive. Don't use abrasives to scour the vertical mount davit system as they may damage the plating and the labels. To remove oil or grease, use a mild dishwasher detergent on a damp cloth or sponge and follow by repeated swabbing with a clean damp cloth to remove all soap residue. Never immerse the product in water or other liquid.

STORAGE:

Store the device in a clean, dry place indoors. Store the product away from heat and steam and never allow it to rest for lengthy periods of time on concrete or ash floors as the lime sulfur and ash can cause corrosion.

General

1. The MSA Sure-Climb™ Extension Davit and Base Assembly shall be inspected by the user before each use, and additionally by a competent person other than the user at intervals of not more than one year. Inspections must be recorded in the Inspection Checklist.
2. When inspection reveals defects, damage, or inadequate maintenance of any component in the system, the component affected shall be removed from service and undergo adequate corrective maintenance before return to service. Removal from service may imply that defects or damage will result in retiring and replacing some components.
3. Inspect the Sure-Climb Top Bracket and hardware according to the Inspection Checklist provided with this product.
4. Remove from service if:
 - label is illegible or absent;
 - there is evidence of defects or damage to hardware elements including cracks, sharp edges, deformation, corrosion, chemical attack, excessive heating, alteration or excessive wear;
 - there is evidence of improper function, improper fit, misuse or alteration of any mechanical component;
 - there are parts missing;
 - the system has been subjected to the forces of arresting a fall.
5. MSA or persons or entities authorized in writing by the manufacturer, shall make repairs to equipment. No unauthorized repairs and/or modifications are allowed.

Procedure

1. Inspect the Davit Arm for cracks, breaks, corrosion, and permanent deformation.
2. Inspect the Davit Base. Verify that all mounting hardware is present and that bolts are tightly fastened. Look for evidence of altered, missing, broken, loose or corroded parts.
3. Inspect the MSA Sure-Climb Ladder Cable System according to the User Instructions provided.
4. Complete the Inspection Checklist in this section. Note where inspection reveals an unsafe condition. Immediately remove the Sure-Climb Extension Davit and Base Assembly from service and mark "UNUSABLE" until destroyed or subjected to corrective maintenance.

Inspection Checklist

Location _____

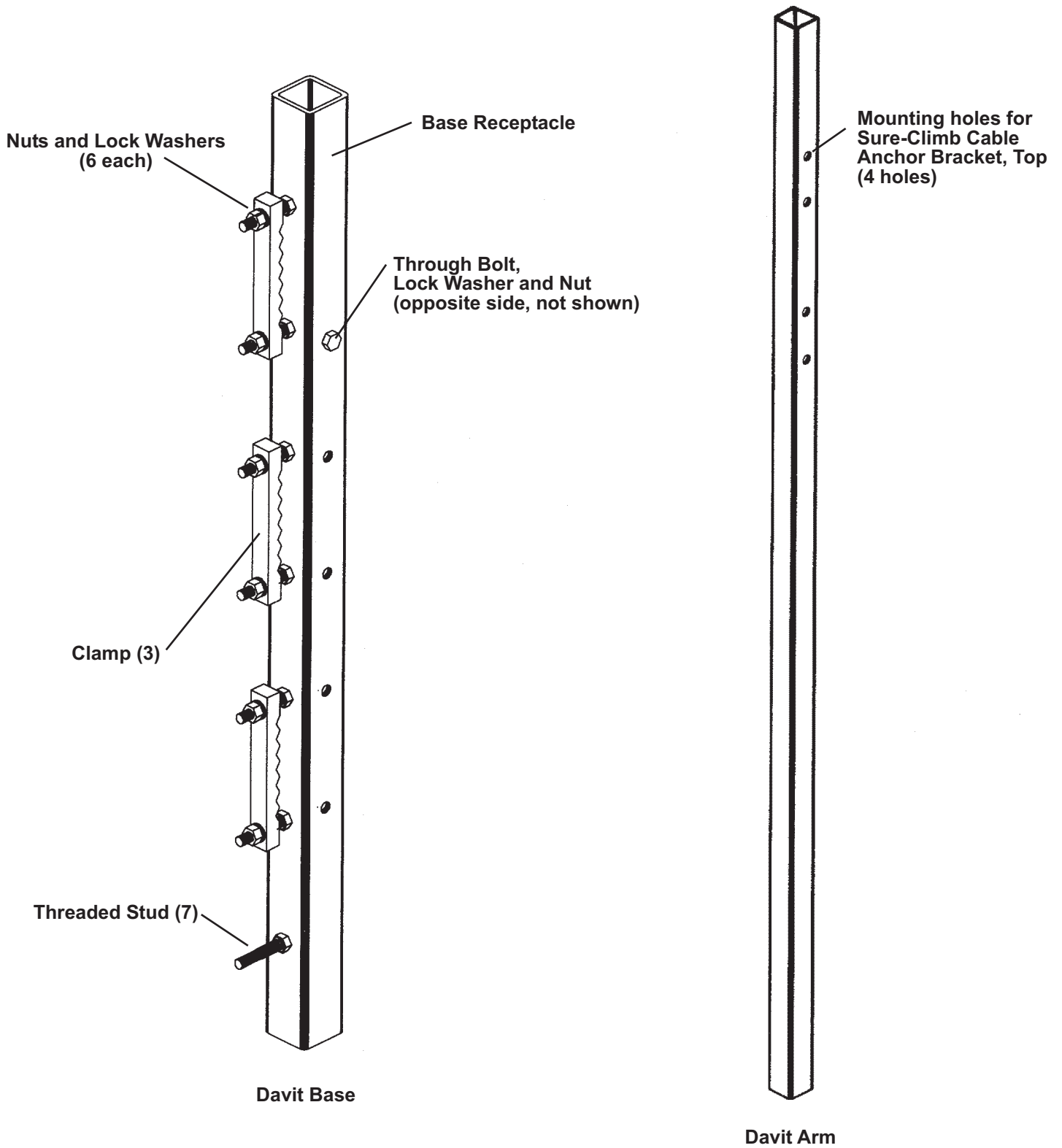
Date _____

Inspected By _____

Quantity	Part Number	Description					Comments
			Good	Damaged, worn, altered	Missing	Remove from service	
1		Davit Arm					
1		Davit Base Receptacle					
7		threaded studs					
6		nuts					
6		lock washers					
3		clamp					
1		Through Bolt					
1		nut (for Through Bolt)					
1		lock washer (for Through Bolt)					
3		backplate*					
4		1/2 in. bolts*					
4		lock washers*					
1	SFPLS350001A	Cable Anchor Bracket, Top*					

* Components of Sure-Climb Ladder Cable System

Drawings not to scale, details not shown.



WARRANTY

Express Warranty – MSA warrants that the product furnished is free from mechanical defects or faulty workmanship for a period of one (1) year from first use or eighteen (18) months from date of shipment, whichever occurs first, provided it is maintained and used in accordance with MSA's instructions and/or recommendations. Replacement parts and repairs are warranted for ninety (90) days from the date of repair of the product or sale of the replacement part, whichever occurs first. MSA shall be released from all obligations under this warranty in the event repairs or modifications are made by persons other than its own authorized service personnel or if the warranty claim results from misuse of the product. No agent, employee or representative of MSA may bind MSA to any affirmation, representation or modification of the warranty concerning the goods sold under this contract. MSA makes no warranty concerning components or accessories not manufactured by MSA, but will pass on to the Purchaser all warranties of manufacturers of such components. THIS WARRANTY IS IN LIEU OF ALL OTHER WARRANTIES, EXPRESS, IMPLIED OR STATUTORY, AND IS STRICTLY LIMITED TO THE TERMS HEREOF. MSA SPECIFICALLY DISCLAIMS ANY WARRANTY OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE.

Exclusive Remedy - It is expressly agreed that the Purchaser's sole and exclusive remedy for breach of the above warranty, for any tortious conduct of MSA, or for any other cause of action, shall be the repair and/or replacement, at MSA's option, of any equipment or parts thereof, that after examination by MSA are proven to be defective. Replacement equipment and/or parts will be provided at no cost to the Purchaser, F.O.B. Purchaser's named place of destination. Failure of MSA to successfully repair any nonconforming product shall not cause the remedy established hereby to fail of its essential purpose.

Exclusion of Consequential Damages - Purchaser specifically understands and agrees that under no circumstances will MSA be liable to Purchaser for economic, special, incidental, or consequential damages or losses of any kind whatsoever, including but not limited to, loss of anticipated profits and any other loss caused by reason of the non-operation of the goods. This exclusion is applicable to claims for breach of warranty, tortious conduct or any other cause of action against MSA.

For additional information, please contact the Customer Service Department at 1-800-MSA-2222 (1-800-672-2222).