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# MSA SURETYMAN® RESCUE UTILITY SYSTEM P/N SRS15

## Application, Operation, Maintenance & Inspection Instructions Manual

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

## ⚠WARNING

**THESE INSTRUCTIONS MUST BE PROVIDED TO THE USER. MANAGEMENT AND USER MUST READ AND UNDERSTAND THESE INSTRUCTIONS; FAILURE TO DO SO COULD RESULT IN SERIOUS INJURY OR DEATH.**



## Application

The MSA Suretyman™ Rescue Utility System is a manually operated man rated raising and lowering system. It has been designed as a rescue system, however it works equally well as a work positioning device and for use as a tool for confined space rescue or work positioning. The MSA Suretyman™ Rescue Utility System can be used by a rescuer or worker to position themself, or to raise and lower another worker/rescuer. The system has been designed to be capable of lifting or lowering a two person load, 600 lb. (272 kg).

## Function

The MSA Suretyman™ Rescue Utility System is available with two different rope configurations. It is available in 7/16 inch (11 mm) rope or can be special ordered with 1/2" (12 mm) rope. The system is pre-rigged and is ready for use straight out of the bag. The MSA Suretyman™ Rescue Utility System is configured into a 4:1 mechanical advantage raising system. This gives the operator the ability to raise the loads easily and efficiently with a minimum of effort. The packaged system remains small enough for easy transport.

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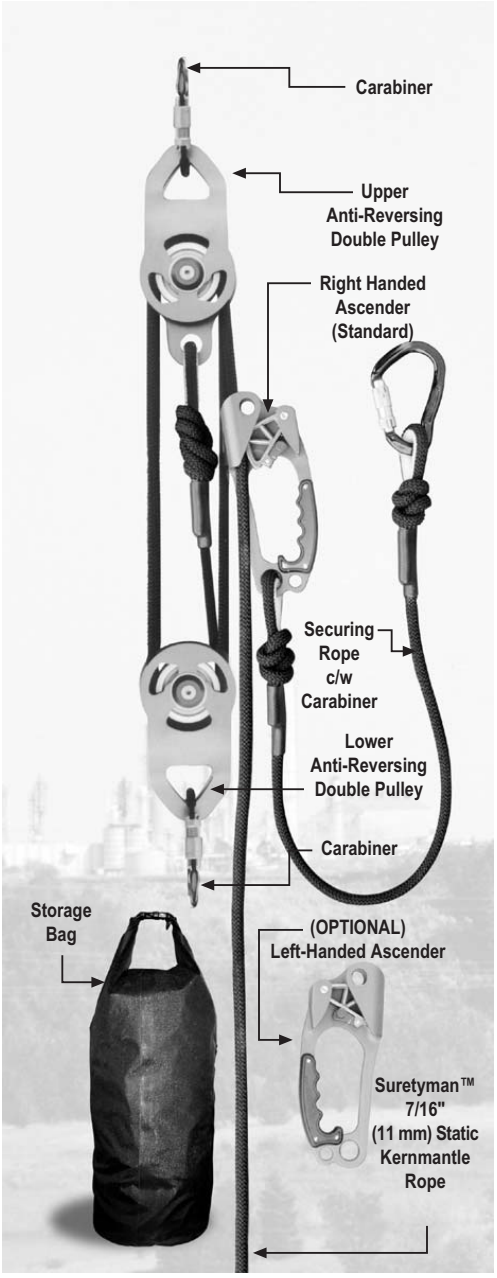


## Function..continued

When a load is lowered the sheaves of the patent pending Anti-Reversing pulleys lock. This friction/braking action allows the operator to hold or lower a load with very little effort. The MSA Suretyman™ Rescue Utility System only requires a force of approximately 10 lb (4.5 kg) to hold a 220 lb (100 kg) load. The friction caused by the braking action of the pulleys sheaves also makes the task of lowering a load in control an easy one.

To provide an added safety feature the MSA Suretyman™ Rescue Utility System also comes with an attached MSA Suretyman™ Ascender. The MSA Suretyman™ Ascender is attached to the operating rope of the system and makes the gripping of the rope more secure. The MSA Suretyman™ Ascender is also secured to the operator with the attached securing rope and carabiner. Should the operating rope be accidentally released, the MSA Suretyman™ Ascender assembly will keep the load from falling out of control and will stop the load.

The MSA Suretyman™ Rescue Utility System is very versatile. It can be used by one person to raise and lower themself or can be used by an operator to raise and lower a two person load 600 lb (272 kg).

## Specifications

The standard MSA Suretyman™ Rescue Utility System consists of:

**Carabiners (3)**

| | |
|---|---|
| Replacement Part: | SRCA455 |
| Description: | Pear shaped autolocking |
| Material: | High strength aluminum |
| Weight: | 4 oz (115 g) |
| Strength: | 6744 lb (30 kN) |

**Optional NFPA 1993-1995 class "G" Carabiners**

| | |
|---|---|
| Replacement Part: | SRCC642 |
| Description: | Pear shaped autolocking |
| Material: | Carbon steel, zinc plated |
| Weight: | 11 oz (311 g) |
| Strength: | 12364 lb (55 kN) |

**Rope**

| | |
|---|---|
| Replacement Part: | SRP544000 |
| Description: | 7/16 " (11 mm) low stretch static rope |
| Material: | Nylon |
| Weight: | 1.8 oz/ft (115 g/m) |
| Strength: | 6000 lbs (27 kN) |

**Optional NFPA 1993 2 person rope**

| | |
|---|---|
| Replacement Part: | TBA |
| Description: | 1/2 " (12.7 mm) low stretch static rope |
| Material: | Nylon |
| Weight: | TBA |
| Strength: | TBA |

**Upper and Lower Anti-Reversing Double Pulley**

| | |
|---|---|
| Description: | 4" (100 mm) double pulley with Patent Pending anti-reversing sheaves |
| Material: | High grade anodized aluminum |
| Weight: | 1.8 lb (840 g) |
| Strength: | 11,200 lb (49 kN) |

**Right handed ascender**

| | |
|---|---|
| Replacement Part: | SRP220 |
| Description: | Rope ascender with large hand grip/handle |
| Material: | High grade aluminum with steel cam assembly |
| Weight: | 24 oz (660 g) with securing rope |
| Strength: | 2500 lb (11 kN) |

**Anchor Sling**

| | |
|---|---|
| Replacement Part: | SFP22674-04 |
| Description: | 4' x 1" (122 cm x 2.54 cm) tube sling with wear sleeve |
| Material: | Tubular nylon |
| Strength: | 6048 lb (27 kN) |

**Carrying and Storage Bag**

| | |
|---|---|
| Replacement Part: | SRB4460 |
| Description: | Waterproof carrying and storage drybag |
| Material: | Rubber coated nylon |
| Capacity: | System with 400 ft (122 m) of 7/16" (11 mm) rope |

**System specifications:**

| | |
|---|---|
| Rated Capacity for Personnel: | 600 lb. (272 kg) |
| Rated Capacity for Materials: | 600 lb. (272 kg) |
| Standard Rope Length: | 200 ft (66 m) |
| Maximum Rope Length: | 600 ft (200 m) |
| Standard Weight: | 17 lb (7.7 kg) |

## Operating Instructions

Prior to use, the user should engage in practical training in a safe environment conducted by a qualified instructor/supervisor. During training and all work positioning, the MSA Suretyman™ Rescue Utility System must be used with an independently anchored fall arrest system in accordance with applicable local work regulations. The only exception to this would be when the MSA Suretyman™ Rescue Utility System is being used by a fully trained user during an actual emergency rescue/evacuation.

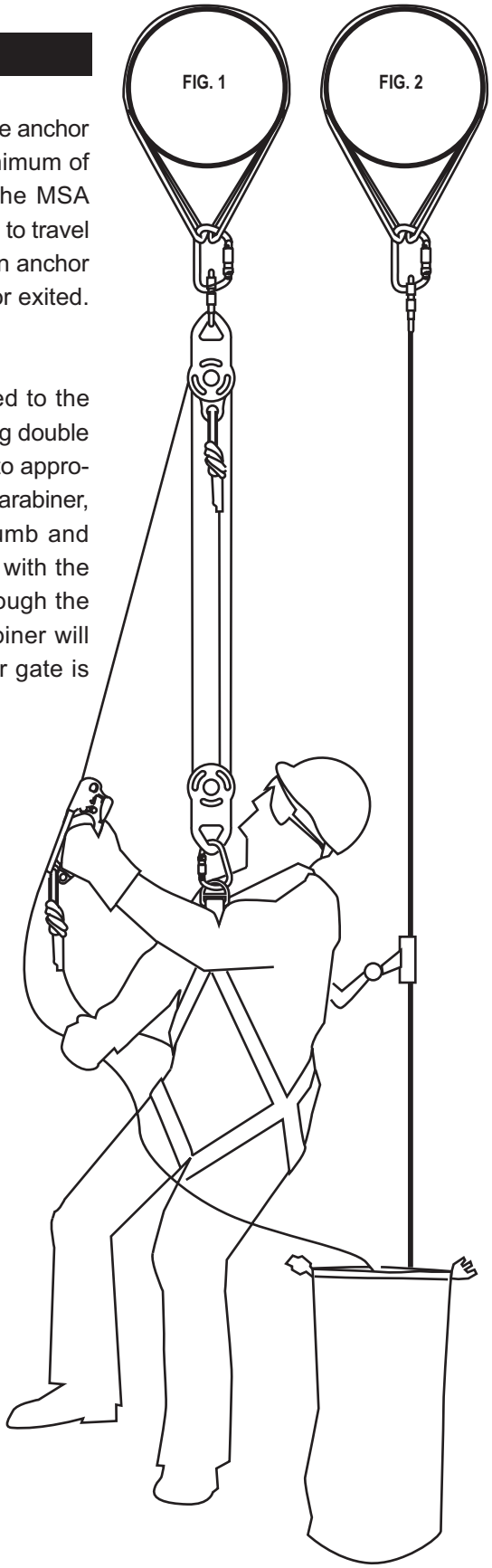
## Anchor Selection

The user is responsible for selecting an appropriate anchor point. The anchor shall be unquestionably strong and shall be able to support a minimum of 5000 lb (22 kN). The anchor should be chosen so that when the MSA Suretyman™ Rescue Utility System is mounted, the rope is allowed to travel and be handled without obstruction. For best work results select an anchor directly over working area or over the opening to be entered and/or exited. (FIG 1.)

The MSA Suretyman™ Rescue Utility System is to be connected to the anchor point using the carabiner attached to the upper anti-reversing double pulley. An optional anchor sling may be used to attach the system to appropriate super structure to create an anchor. To open the autolocking carabiner, hold carabiner with the spine in the palm of the hand, use thumb and forefinger to rotate sleeve 1/4 turn clockwise and pull back gate with the thumb and forefinger. Insert the jaw of the carabiner over or through the anchor or anchorage connector and release the gate, the carabiner will close and lock automatically. Check to ensure that the carabiner gate is closed and locked.

## Fall Protection

Fall protection must be used with the MSA Suretyman™ Rescue Utility System during all work positioning and/or training sessions. This independent back-up fall arrest system must meet all applicable local regulations. One of the most suitable fall protection systems to use with the MSA Suretyman™ Rescue Utility System is a vertical lifeline used with a fall arrestor and integral lanyard (FIG. 2). The user must be familiar with the use of this equipment and it's limitations. Follow all the manufacturers instructions. In the unlikely event that the primary anchor fails, the system fails, or the system is operated incorrectly, the fall protection system must be capable of arresting the suspended person's fall.



## Attaching the Ascender with Securing Rope

**⚠WARNING** **No person or load should be attached or suspended from the MSA Suretyman™ Rescue Utility System until the ascender is attached to the operating rope (free rope) and the securing rope is attached to the operator or secure immovable object.**

Attach securing rope to the harness of the operator or to an immovable object (FIG. 3). Hold MSA Suretyman™ Ascender by the handle, use your thumb to pull down on the safety latch and pull the cam assembly fully open. The safety latch will hold the cam assembly in the fully open position (FIG. 4). Lay the operating rope (free rope) into the channel of the MSA Suretyman™ Ascender (FIG. 5). Release the safety latch with your thumb. This will close the cam assembly onto the rope (FIG. 6).

The MSA Suretyman™ Ascender serves two purposes when used with the system. It provides a convenient method of gripping the rope when pulling/hauling or holding the line. The handle is large enough to accommodate heavy gloves or mitts and can be used with both hands (FIG. 7).

When the MSA Suretyman™ Ascender is attached to the operator or immovable object it acts as a brake or safety stop. Should the operating rope be accidentally released the load will only descend the length of the securing rope. The load will not be "dropped" or allowed to "free fall", because the securing rope and MSA Suretyman™ Ascender will stop the descent (FIG. 8). The MSA Suretyman™ Ascender must be attached to the operating rope and the securing rope attached to the operator or immovable object before operating the MSA Suretyman™ Rescue Utility System.

FIG. 3

FIG. 4

FIG. 5

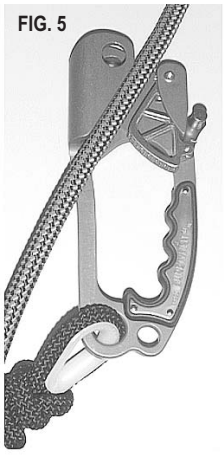


FIG. 6

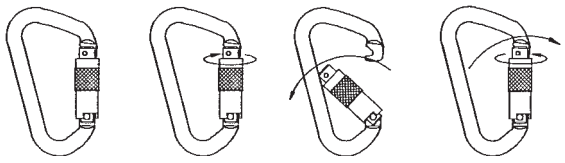
FIG. 7

FIG. 8

## Attaching The Load to the Suretyman™ Rescue Utility System

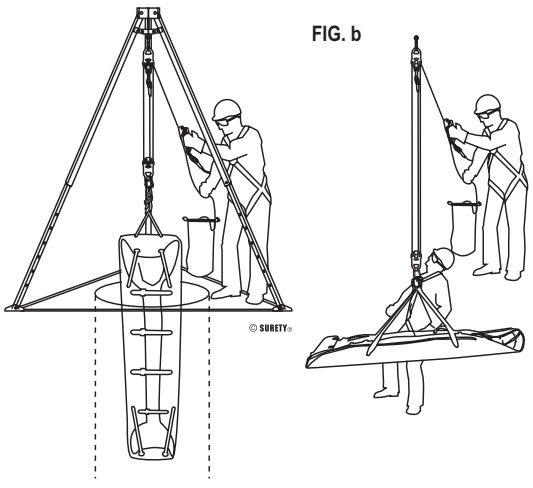
The load (maximum 600 lb/272 kg) can be attached to the system using the carabiner attached to the lower anti-reversing double pulley. To open the autolocking carabiner, hold carabiner with the spine in the palm of the hand, use thumb and forefinger to rotate sleeve 1/4 turn clockwise and pull back gate with the thumb and forefinger. Insert the jaw of the carabiner through the attachment point of the load and release the gate, the carabiner will close and lock automatically. Check to ensure that the carabiner gate is closed and locked (FIG. a).

FIG. a



If a person is to be suspended from the MSA Suretyman™ Rescue Utility System they must be wearing an approved full body harness or be suspended in an appropriate rescue sling or stretcher (FIG. b).

FIG. b



## Raising (Lifting) The Load

To raise the load, grip the MSA Suretyman™ Ascender with both hands and pull down (note: to avoid fatigue, use body weight, don't just rely on upper body strength to pull the rope). Grasp the rope below the ascender and hold the rope. Slide the ascender further up the rope to reset for the next pull.Repeat the process until the load has been raised to the desired height. (FIGs 9, 10, 11)


FIG. 9

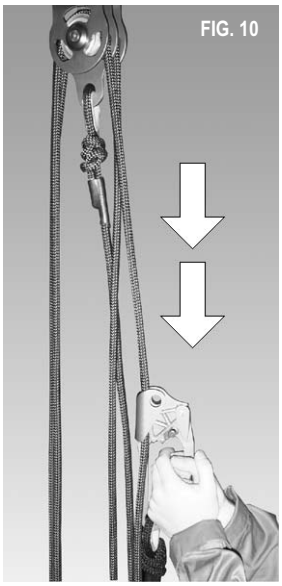


FIG. 10

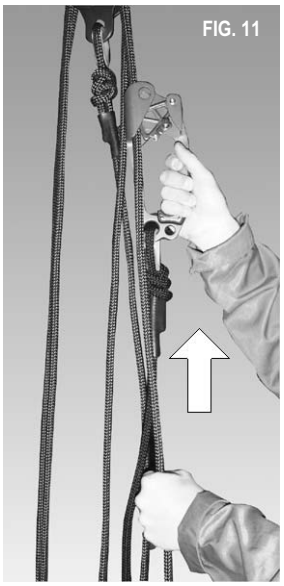


FIG. 11

## Lowering (Controlled Descent) of the Load

To lower the load, grasp the operating rope below the MSA Suretyman™ Ascender. Pull the cam assembly back from the operating rope with your thumb. While holding the cam assembly off the operating rope with your thumb, allow the operating rope to slide through the hand holding the rope below the ascender. The operator can easily control the rate of descent by controlling the speed with which the rope is allowed to slide through the hand holding the operating rope. Releasing the grip on the MSA Suretyman™ Ascender will stop the lowering. (FIGs 12, 13, 14.)


FIG. 12


FIG. 13

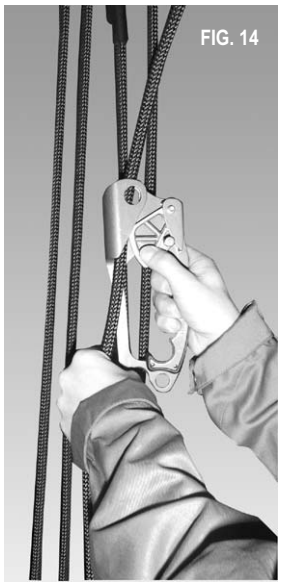
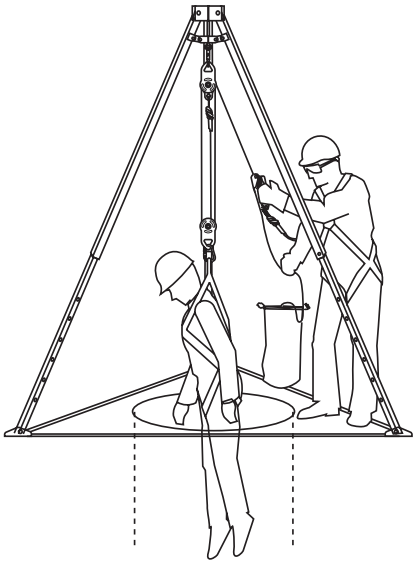
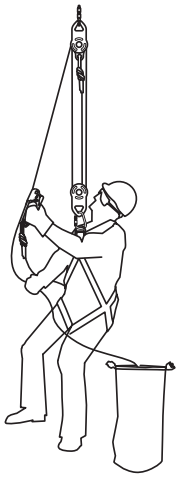


FIG. 14

The MSA Suretyman™ Rescue Utility System can be used by the operator to raise and lower themself for work positioning or rescue. The operator can also use the system to raise or lower an independent load for rescue or work positioning.





## Design Statements

1. Shock loading should be avoided at all costs, however, the system has been designed to have a large strength safety margin. In the event of shock loading, damage to the rope is likely and any rope subjected to shock loading must be removed from service.

2. Use only equipment included with the MSA Suretyman™ Rescue Utility System or MSA approved accessories. If this warning is ignored by the end user, the user and the users management accepts all liability.

3. Reduction of the rope strength can result from sharp edges, overloading, shock loading and/or incorrect storage. Care of the rope is critical to avoid damage to the rope which could greatly reduce system strength.

4. The system should be used as supplied by the manufacturer. Only qualified individuals are to re-rig or re-rope the MSA Suretyman™ Rescue Utility System.

5. A small force of approximately 7 % is all that is required to hold or lower a load using the MSA Suretyman™ Rescue Utility System. Should the rope become heavily soiled this friction could increase. A slightly soiled or wet rope should not effect the systems function, however if the rope becomes extremely soiled the MSA Suretyman™ Rescue Utility System may become inoperable. Always try to keep the rope clean and dry to avoid any unwanted increases in friction.

## Inspection

1. The MSA Rescue Utility System shall be inspected by the user prior to each installation, and additionally by a competent person other than the user at intervals of not more than one year. Inspections of the rope 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. Remove a unit from service if any of the components fall into a catagory below:

   - markings (labels) are illegible or absent;
   - there is evidence of excessive wear or damage to the rope;
   - 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 or alteration of any mechanical component;
   - there are parts missing.

4. 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 system prior to use and each time the system is moved to a new anchor location. Look for evidence of cuts, wear, fraying, grease, oil, glue, tar, or any other conditions which could affect the performance of the controller or strength of the pulleys. Inspect shrink seal and thimble on both ends of rope for damage. If shrink seal is missing, knot may have been tampered with.

## Maintenance and Storage

1. Maintenance and storage of equipment shall be conducted by the user's organization in accordance with MSA instructions. Unique issues, which may arise due to conditions of use, shall be addressed with MSA.

2. Equipment which is in need of or scheduled for maintenance shall be tagged as "do not use" and removed from service.

3. Store in a clean dry area free from excessive heat, steam, sunlight, harmful fumes, corrosive agents and rodents.

4. Periodically lubricate carabiner gate with a light oil. Remove excess oil to avoid contamination.

**Do not make any modification to the device. Consult Surety Manufacturing and Testing Ltd. for special applications and uses.**

## Warnings

**THESE INSTRUCTIONS MUST BE PROVIDED TO THE USER. MANAGEMENT AND USER MUST READ AND UNDERSTAND THESE INSTRUCTIONS; FAILURE TO DO SO COULD RESULT IN SERIOUS INJURY OR DEATH.**

⚠ Do not use knots unless tied and sealed by manufacturer. Knots will decrease the strength of the rope and may inadvertently release if not tied correctly.

⚠ The entire length of rope must be free of tar, glue, tape, knotting, pilling, twists or anything which may prevent it from moving through the pulleys.

⚠ Ensure carabiner gates are closed and locked before use. Clothing or webbing may get caught in the gate and prevent it from closing completely. A carabiner loaded with the gate partially or fully open can fail at values well below the rated strength.

⚠ Use only approved rope with the system.

⚠ Protect the rope from sharp or abrupt edges. Rope strength will be seriously reduced or rope may fail.

⚠ Use approved anchor points which meet local government regulations.

⚠ Do not make any modifications to the device.

## Inspection Checklist

Location _____

Date _____

Inspected By _____

| Quantity | Description | Good | Damaged, worn, altered | Missing | Remove from service | Comments |
|---|---|---|---|---|---|---|
| length | Rope | | | | | |
| 1 | Shrink Seal | | | | | |
| 1 | Thimble | | | | | |
| 2 | Carabiners | | | | | |
| 1 | Lower Pulley | | | | | |
| 1 | Upper Pulley | | | | | |
| 1 | Ascender | | | | | |
| 2 | Ascender Rope Thimble | | | | | |
| 1 | Ascender Rope | | | | | |
| 1 | Ascender Carabiner | | | | | |
| 2 | Ascender Shrink Seal | | | | | |

**NOTES:** _____