



# SUPER ANCHOR SAFETY®

## SAS-Max-Force™ Energy Absorbers (E/A's) Instruction/Specification Manual 2025

ENGLISH  
VERSION

### !WARNING TO USER!

You are required to read and use the Instruction/ Specification manual supplied at the time this device was shipped. Improper use and installation can result in serious injury or death. Follow inspection requirements before each use.

### Material Specifications

**Tear webbing:** Polyester  
**Cover/Backer:** Polyester  
**Min. Tensile Strength:** 5,000lb  
**Carabiners:** Aluminum twist-lock  
⊗ Inspection Points.  
**SAS** = Super Anchor Safety

### Absorber Compliance:

ANSI-Z359.13 / OSHA 1926.502  
**Connector Compliance:**  
ANSI-Z359.12-2009 CSA-Z259.12-11  
**Gate Strength:** 3,600lb (16kN)  
\*Qualified/Competent Person see  
OSHA definition.

**Energy Absorber (E/A) Function:** When subjected to a fall the E/A's tear webbing shown at Fig.11, will deploy and gradually reduce the fall velocity to a complete stop (fall arrest). The backer webbing acts as a failsafe limiting the deployment length.

**WARNING!** Exceeding the specified user weight or falling more than 6ft may fail to arrest a fall, resulting in serious injury or death.

### Specified Use

Fall arrest, fall restraint or work positioning for one person including tools and equipment. User wt. specified in Table 1.0. E/A's are required to be used with SAS mfg. OSHA and ANSI compliant PPE. Equipment mfg. by others must be ensured for compatibility by a qualified or competent person\*. **Maximum free fall 6ft(1.8m).**

### Absorber A-End Attachment

Attach absorber A-End snaphook, carabiner or Dee-Loop to a full body harness dorsal D-ring only. See Fig.1. **WARNING!** Do not attach E/A's to harness side D-rings or body belts.

### Absorber B-End Attachment

Attach only to fall arresters, integral adjusters or lanyards. **WARNING!** Do not attach to class 1 or class 2 SRL's unless specified by SRL instructions.

**Loop Ends** are fitted with PVC or web wear pads and are compatible with SAS snaphooks or carabiners.

### Carabiners Supplied by User

A/B loop end connectors must comply with current OSHA, ANSI or CSA fall protection standards with 3,600lb gate strengths. **Do not attach 2 connectors together unless compatibility has been ensured by a qualified or competent person\*.**

**Table 1.0 Energy Absorber Specifications**

Standard	Webbing Color	User Wt. Range	Avg. Peak Force	Deployment Length
E/A's	Gray	130-310lb	900lb	Max. 48"
6186-HD	Orange	200-340lb	1,300lb	Max. 69"

**Table 1.1 E/A Specifications**

ANSI	A-End	B-End	Length	wt(oz)
6180	Snaphook	Loop	23"	21
6181		Snaphook	28"	38
6182	Carabiner	D-ring	26"	30
6183/C*		Loop	23"	13
6184/C*	Snaphook	D-ring	26"	19
6186		Loop	18"	8
6185	Loop	Loop	18"	8
6188	△ Dielectric	SH+D-ring	26"	28

\*Captive carabiner factory attached.

Note: Loop ends require user to supply a connector.

△ Dielectric connectors have a min. 9kV dielectric resistance

Note: Service length measured from A-End to B-End

### WARNING HAZARD EXPOSURE!

#### DO NOT CONTACT EQUIPMENT WITH:

- Sharp, abrasive edges or cutting tools.
- Electrical sources or power lines.
- Open flame, high heat or hot asphalt.
- Solvents, caulking, paint or stains.
- DO NOT use for animal tether.

**Fig.1**

**No.6181 E/A**



**Fig.2**

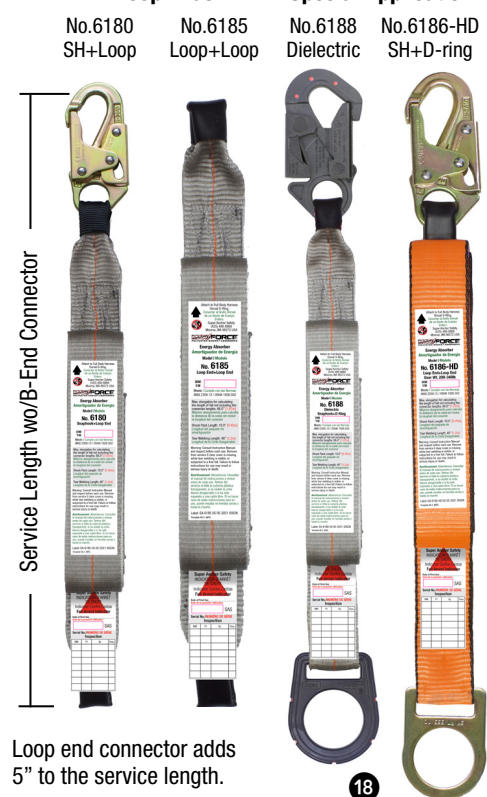
**Factory Attached A/B-End Connectors**



**Fig. 3**

**Loop Ends**

**Special Application**



## Fall Arresters/Integral Adjusters

Fall Arresters (FA) and Integral Adjusters (IA) are rope grab (RG) devices that have a single direction locking function. The stamped arrow ➔ shown at Figs. 4a and 10c, is required to point toward the lifelines anchorage point in order to lock during a fall. See Figs. 7 and 10a. The E/A's service length when attached to the harnesses dorsal D-ring will prevent the RG from contacting the work surface.

**WARNING!** If the RG is attached to the lifeline with the arrow ➔ pointing in the wrong direction it will fail to lock in a fall and may result in serious injury or death.

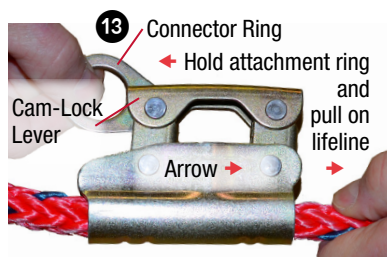
**No.4015-Z** zinc plated FA's are removeable from the lifeline as shown at Figs. 10. FA's have a panic grab function that prevents accidental disengagement that can result when a worker grabs the FA during a fall.

**No.4015-M** Integral Adjusters do not have a panic grab feature, are factory attached to the E/A and not removable.

## No.4015-M Integral Adjuster Function Tests

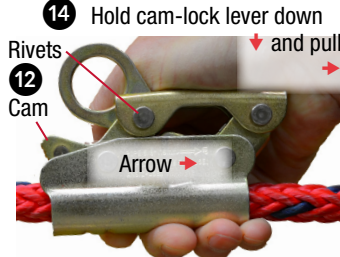
Dual spring loaded cam-locks apply constant pressure on the lifeline that requires manual adjustment to move position. Mobility is achieved by pushing or pulling the IA up or down the lifeline. Hold the cam-lock lever down to release pressure as shown at Fig. 4b. **DO NOT** use on X-Lines.

### Fig.4a Cam-Lock Test



No movement = Pass ✓  
Any movement = Fail ✗

### Fig.4b Mobility Test



Moves easily = Pass ✓  
Release Cam-Lock Lever  
Any Movement = Fail ✗  
Lever Snaps Back Closed = Pass ✓  
Lever Does not Close = Fail ✗

**Table 2.0 Lifeline Specifications/RC's Compatibility**

Model	Type	4015-Z	4015-M	▲Deceleration
Maxima™	3 strand	Yes	Yes	Min. 12" Max. 24"
Value™	3 strand			
Deluxe™	12 strand			
Double Braid	Kernmantle			
X-Line™	12 strand		No	

## Compatible Lifelines

No.4033 Deluxe™



No.4027 Double Braid



No.4020 Value™



No.4064 X-Line™



**Table 1.2 E/A Models w/FA's and IA's**

No.	A-End	B-End	Length	wt(oz)
6195-Z	Snaphook	4015-Z	23"	43
6196-Z	Carabiner			35
6196-ZC	*Carabiner			
6196-M	Carabiner	4015-M		
6196-MC	*Carabiner			

\*Captive carabiner is factory attached.

**Table 1.3 Ultra-Lite Specifications**

No.	B-end	Length	wt(oz)
6190	*Carabiner	29"	23
6191-Z	4015-Z	24"	34
6192	Carabiner	29"	23
6193	D-Ring	27"	18
6194	△D-Ring	27"	19

\*Captive carabiner factory attached.

Note: Z models = zinc plated steel.

△ Dielectric connectors have a min. 9kV dielectric resistance

## Lifeline Specifications

FA's and IA's are specified for use with SAS mfg. 5/8" (16mm) Dia. Lifelines. FA's and IA's factory attached to the E/A are not removeable.

See Table 2.0. When used on lifelines mfg. by others component compatibility must be ensured by a qualified or competent person\*.

**WARNING!** Do not attach SAS mfg. RG's on smaller or larger diameter lifelines.

## Fig.5 Ultra-Lite™ Dee-Loop E/A's

Attach Dee-Loop A-End to the dorsal D-ring of a full body harness as shown at Figs. 5a, 5b and 5c. Dee-Loops are designed for captive installation when removal of the absorber is not required.



## Fig.6 Energy Absorbers w/Rope Grabs

Do not remove factory attached FA's and IA's from the energy absorber.





## Snaphooks/Carabiner Function Tests

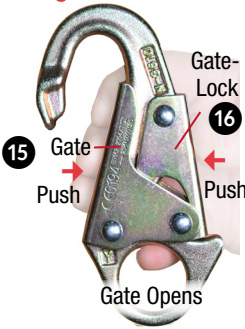
Lock gates are designed to remain closed during use. Perform **Table 3.0** function tests before each use.

**Fig.8a Snaphook**



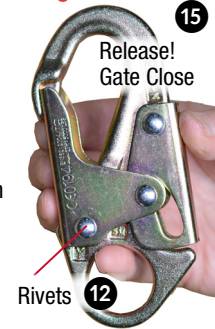
Gate Locked

**Fig.8b**



Unlock Gate

**Fig.8c**



Gate Open



**Fig.9a**



**Fig.9b**



**Fig.9c**

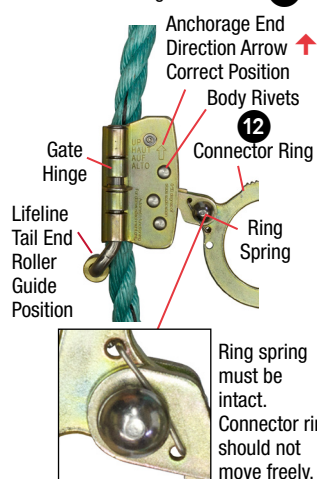
## Fall Arrester Function Tests

The cam foot is activated when force is applied to the connector ring. Move position by pulling or pushing the **FA** up or down on the lifeline.

**Fig.10a**

### FA Orientation on Lifeline

Direction arrow points toward anchorage end.

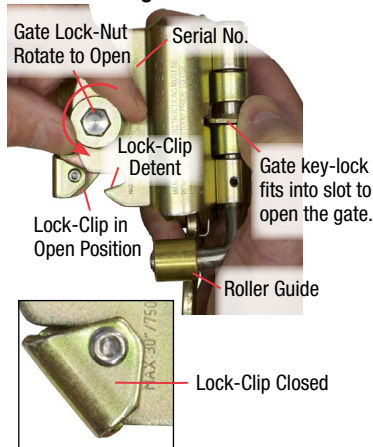


**Fig.10b**

### Removing FA From Lifeline

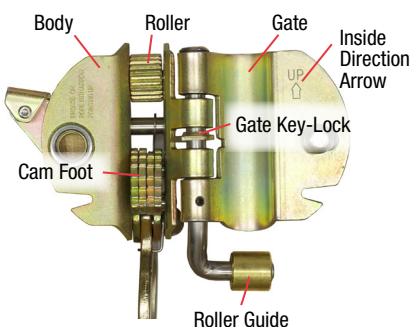
Gate must remain in locked position during use.

### Gate Locking Parts



**Fig.10c**

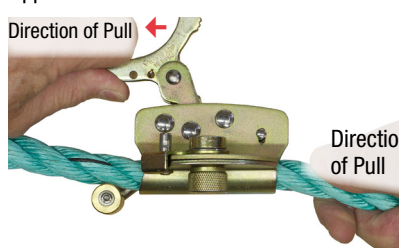
FA interior must be free and clean of any debris or contamination.



**Fig.10d**

### Cam Foot Lock Function Test

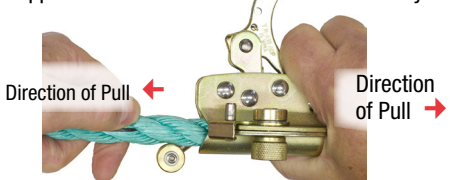
Hold connector ring and pull lifeline from opposite end. Lifeline should not move.



**Fig.10e**

### Mobility Test

Hold connector ring down. Pull lifeline in opposite direction. Lifeline should move freely.



**Table 3.0** Remove from service if any test fails.

Fig.	Test Type	Function	Pass <input checked="" type="checkbox"/>	Fail <input checked="" type="checkbox"/>
8a-9a	Gate-lock	Push against gate only	Won't open	Opens
8b	Gate-open	Push gate-lock and gate at the same time	Opens	Won't open
8c	Gate-close	Release gate and gate-lock at same time	Snaps shut	Won't close and lock
9b-9-c*	Unlock gate	Rotate twist-lock	Gate opens	Won't open
9a*	Gate close	Release twist-lock	Snaps shut	Won't close

\* Test for all model twist-lock carabiners.

## Absorber Storage/Maintenance/Service Life

Store in a clean dry area. DO NOT expose to cleaning agents or chemicals **DO NOT** repair or modify absorbers in any way. **WARNING! Synthetic fibers are damaged by mildew, extreme temperatures, extended exposure to UV, water submergence and vermin.** **Service Life:** Determined by frequency of use, environmental conditions and normal wear. It is recommended to replace equipment after 3-5 years of service. **Disposal of Equipment:** PPE removed from service must be disposed of in a way that will prevent further use.

## Inspect Components Before Each Use!

Inspect and perform function tests for all components prior to each use. Inspection points, black circles **X** are intended as guidelines only. Employers/PPE equipment owners are required to draft their own inspection outline. SAS requires  $\Delta$  annual inspections by a competent person with the date entered on the absorber inspection label. See Fig.12.

$\Delta$  Greater frequency of inspections may be specified by the equipment owner.

**Remove equipment from service if any of the following conditions are present:**

**X** = Inspection points **ACTION REQUIRED:** ☒=Remove ☒=Repair

- 1 Subjected to a free fall or other force.
- 2 Obvious damage to any component.
- 3 Warning labels missing or not legible.
- 4 No annual inspection.
- 5 Fails inspection/function tests.
- 6 Webbing/stitches cut or abraded.

## Energy Absorber

- 7 Fall indicator label is visible or missing. ☒
- 8 Tear webbing is deployed. ☒
- 9 Absorber clear cover is missing or damaged. ☒
- 10 Wear pads are missing or worn thru to backer webbing. ☒

## Fall Arresters/Integral Adjusters

- 11 Arrow position is upside down. ☒
- 12 Body or cam foot is bent, twisted or missing rivets. ☒
- 13 Won't hold static position on lifeline. ☒
- 14 FA is locked onto lifeline or won't move position easily. **Clean lifeline and retest. If no change:** ☒

## Snaphook/Carabiner/D-ring

- 15 Gate is bent or won't close. ☒
- 16 Gate locking device is damaged. ☒
- 17 Carabiner won't lock or close. ☒
- 18 D-ring is bent, cut, gouged or cracked. ☒

Zinc plated connectors corrode easily when exposed to salt air and do not require removal from service provided they pass inspections. Severe corrosion should be inspected by a competent person to determine if removal from service is required.



Fig.11

A-End  
E/A Back SidePVC or  
Webbing  
Wear Pad  
10Box Stitches  
6White  
Tear  
Webbing  
Deployed.Tear  
Webbing  
CenterSurplus tear  
webbing  
length varies  
depending  
on the  
force of the  
free fall.Backer  
Webbing  
6

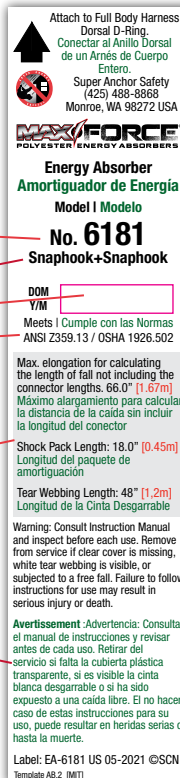
B-End

Fig.12

Serviceable Condition.  
Backer webbing covers  
the fall indicator**WARNING.**Red warning  
arrow is  
visible.User enters  
date of  
first use.  
MM-YYYY  
Serial No.Record annual  
inspections.Fig.13  
Fall Indicator**WARNING is visible.  
Absorber is deployed.  
DO NOT USE!  
REMOVE FROM  
SERVICE!**

8

## Factory Attached E/A Warning and Instruction Labels

Primary Labels  
Standard E/AModel No.  
A/B-End Fittings  
Date of mfg.  
ComplianceDeployment  
LengthsANSI  
Z359.13  
Label  
3

Instructions

Box  
Stitches  
6Wear Pad  
10

Rope Grab Model

Rope Grab  
Instructions

## Absorber Deployment

When subjected to a fall, the absorber tear webbing will rip in half and gradually come to a full stop (Fall Arrest). The length of the deployment will vary depending on the free fall distance and the user's weight. As show at Fig.11 an E/A subjected to a free fall will partially deploy as evidenced by surplus tear webbing.

**Warning!** In the event that a free fall exceeds the E/A's performance specifications, the backer webbing will engage fully arresting the fall and limiting the tear webbing maximum deployment to approx. 48". If the maximum fall arrest force (MAF) is greater than 5,000lb, the backer webbing or stitching may fail resulting in serious injury or death. For that reason it is critical that a workers PPE, which includes the lifeline and rope grab, are adjusted to limit free falls to 6ft or less.

## Fall Indicator

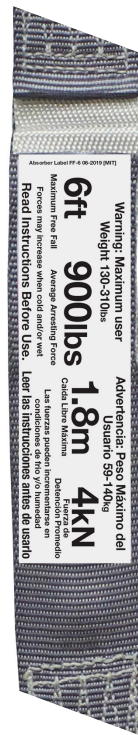
When subjected to a fall or other force, the fall indicator "Warning" label shown at Fig.13 will be visible, requiring that the absorber be removed from service. In the normal service condition the "Warning" is covered by the backer webbing held in place by the PVC cover.

**Inspection:** The visible section of the label displays the serial number and a space to enter the date of **First Use** (MM-YYYY) which is required prior to use.

## Product ID Labels (PID)

Primary labels placed on the front of the E/A shock pack, specify the absorber model No., A/B-End fittings, date of mfg., performance specifications and a warning to consult instructions prior to use. E/A's mfg. with Fall Arresters or Integral Adjusters, have an additional warning at the lower half of the label. The E/A back side will display the ANSI Z359.13 label.

**DO NOT USE** absorbers if any labels are missing.

ANSI Z359.13  
Label

Accessory cover attaches with hook and loop and is removable for inspection. Use in work areas where the E/A is exposed to abrasive surfaces. Fits all standard and Ultra-Lite E/A's

Fig.14  
No.6179 E/A Cover