SUPER ANCHOR SAFETY

WARNING TO USER:
Use Only **Super Anchor Safety (SAS)** Instruction/ Specification manuals for **SAS** equipment. You must read this manual before you use this device. Improper use can result in serious injury or death. Consult **SAS-07 or 2010** manual for more information about fall protection.

Instruction / Specification Manual 2010
ARS-Series Stainless Steel Anchor
MOVEABLE / I-JOIST/ WALL MOUNT / TILE ROOF / Z-PURLIN

Materials Specifications:
Fabricated from 304 grade stainless steel. Engineered to attach over wood truss top chords, rafters and I-Joists with a single grade 8 bolt. Designed as a permanent or temporary fall protection anchorage device and compatible with all flashing systems supplied by **Super Anchor Safety(SAS)**

Specification of Use:
Fall Arrest or Fall Restraint for one person with a maximum body weight of 340lb (154kg) including tools and equipment. **Horizontal Lines** or **Multiple Users** on a single anchor: use only ARS 2x8/2x12-11 ga. anchors, workers must not be exposed to a free fall, and the system designed by a "Qualified Person"*.

Part No.	Anchor Type	SST Ga.	Fits Chord	Fastener Pack
#2830	2x4	14	2x4	#2006
#2801	2x8	14	2x6-2x8	
#2802	2x12	14	2x10-2x12	
#2805	2x8	11	2x6-2x8	
#2806	2x12	11	2x10-2x12	
Tile Roof				
#2820	2x8	14	2x4-2x12	
I-Joist				
#1003	I-Joist	14	1-3/4"-2-3/4"	#2027
Moveable				
#1014 *	2x8	11	2x4-2x8	Detent Pin #2015
#1015 *	2x10	11	2x10-2x12	
Wall Mount				
#1004	Standard	11	2x4-2x8	#2014 #2014-A
#1004-A	45/o	11	2x4-2x8	
Z-Purlin				
#1016	Standard	14	9-1/2"-2-3/4"	#2019

Flashing Systems:	Roofing	Base
#2001- Santoprene*	All types	8x10"
#2003- 2.5lb Lead	All types	16x16"
#2020- Alum/EPDM	Tile	20x20"
#2018- EPDM/Alum	Metal	8x8"

11 Gauge and 14 Gauge:
14 ga. anchors have a strength test rating of more than 6,000lb (2,721kg). 11 ga. anchors have a strength test rating of more than 7,500lb (3,400kg), to provide greater resistance to static loading. Use for steep roofs or situations when the anchor will be subjected to live loading.

Installation:
Anchors are supplied with **(SAS)** certified grade 8 x 5/16" attachment bolts of sufficient length to allow a lock nut to be installed as shown in **Fig. 3**. Use 6 ea. 1-1/4" teko nails to stabilize the anchor position and prevent movement during use.

Drill Through Method:
2x4/2x8/2x12/ I-Joist and Wall anchors may be installed by drilling through the top chord or rafter as shown in **Fig. 1**. Use a 5/16" (9mm) drill. DO NOT modify anchor by drilling additional bolt holes and do not enlarge factory bolt or teko nail holes.

Connectors:
Connecting hardware must comply with current standards. Attach only through the "Connector Attachment Hole" shown at **Fig. 2**. See **Fig. 10a,b** pg.3 for connector types. **Cutting/Severing Hazard**! Prevent lifelines/lanyards from intersecting anchor stems.

Blocking 2x4 Top Chords:
2x8 anchors installed over 2x4 top chords or rafters require a 24" length of 2x4 blocking. To prevent movement attach blocking to the underside of the top chord as shown in **Fig. 3**. 2x8 anchors will provide greater resistance to force loads than a 2x4 anchor.

Personal Protection Equipment/PPE:
PPE refers to the common types of personal safety equipment typically required for fall protection: Harness, Lanyard, Lifeline, Shock Absorber, and Rope Grab. The use of a shock or energy absorbing device is required anytime there is exposure to a free fall when using **SAS** anchorage devices.

Component Compatibility:
SAS anchorage devices are factory ensured for compatibility with **PPE** manufactured by **SAS**. Users must ensure component compatibility when using equipment supplied by other manufacturers.

Fig. 1

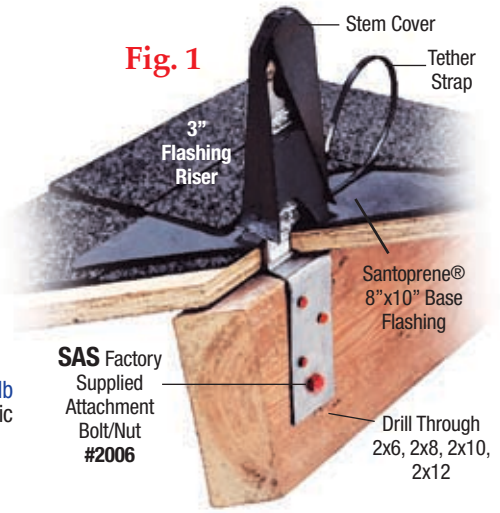


Fig. 2

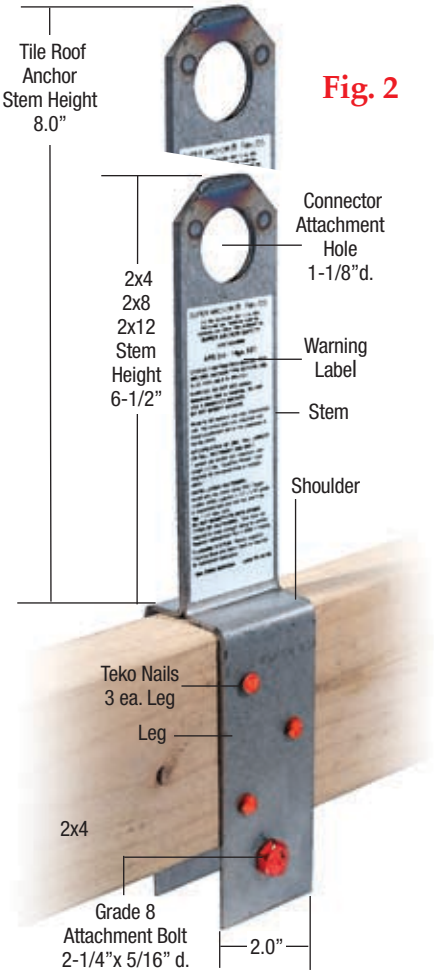
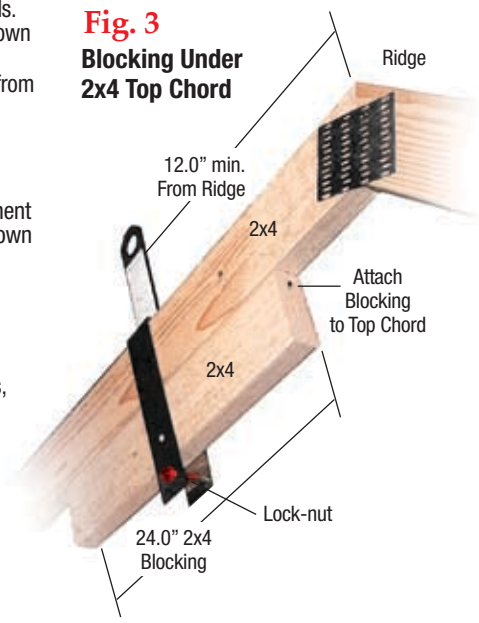


Fig. 3
Blocking Under 2x4 Top Chord



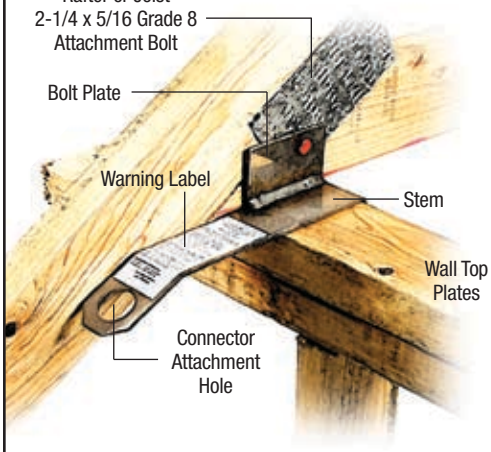
Framing Requirements:
Install onto top chords that are 2x4 or greater dimension. Framing must be capable of supporting a 5,000lb (2,260kg) load or 2 times the intended fall protection load.** Do not install onto framing that is damaged or has spliced top chords.

Sheathing:
Sheathing over top chords must be a minimum of 7/16" OSB or plywood and installed over the anchor shoulders as shown in **Fig. 1** to allow the attachment bolt to be installed under the top chord. If sheathing is already in place or if anchors are to be evacuated after use, cut a 3"x 3" opening through the sheathing centered over the top chord.

* "Qualified Person" as defined by industrial safety standards. **As specified by OSHA 1926:502(d)(15)(i)(ii) or equal industrial standard.

SUPER ANCHOR SAFETY

Fig. 4a



Wall Mount™Anchors:

11ga. 2.0" wide SST Wall Mount anchors are designed to attach to the juncture of the top plate and truss or rafter as shown in **Fig. 4a** or similar floor joist intersection. Drill a 5/16" hole through the framing and secure factory lock nut and grade 8 attachment bolt. Attach back of anchor with 4ea. 16d sinkers. Do not use galvanized nails. Notch top plates for flush interior. Space anchors along top plate at intervals that will prevent swing fall hazards. **Rafter Slope**: Under 30° use model 1004. Use 1004-A for slopes greater than 30°.

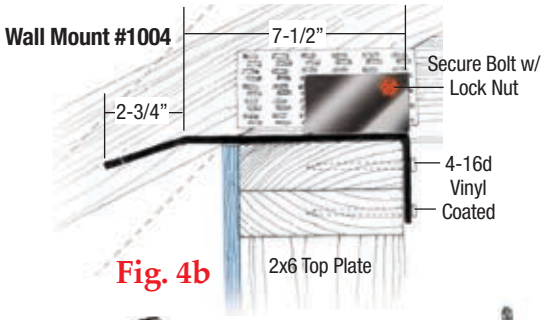


Fig. 4b

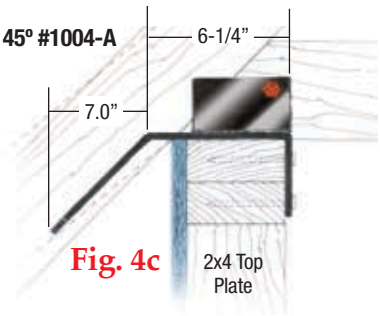


Fig. 4c

Z-Purlin™ Anchors #1016:

14ga. SST fits most standard Z metal purlins. 8"x 2-1/2" up to 9-1/2 x 2-3/4" Available in custom sizes. Attaches with two factory supplied grade 8 bolts shown at **Fig. 5a-5b**. Designed as a permanent anchor for use during and after construction. Use Gray EPDM flashing pkg. #2810 aluminum rim base. Install flashing shown at **Fig. 5c**. Anchor package includes gray stem cover and tether. Does not include flashing fasteners. Z anchor positioning guide on request.

Fig. 5a

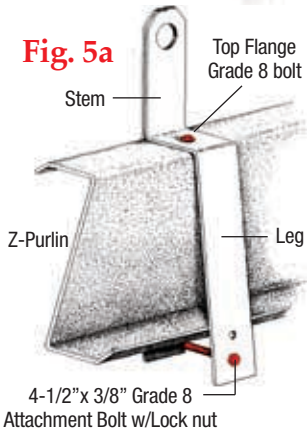


Fig. 5b

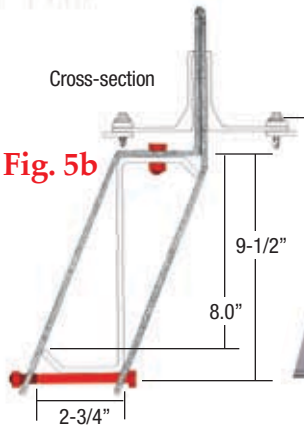
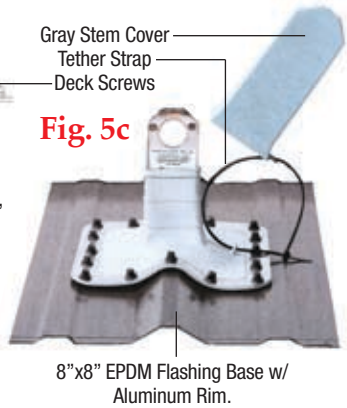


Fig. 5c



Visual Inspection:

Anchors and the supporting structure should be inspected before each use. **Underside:** The attachment bolt and lock nut must be installed as shown at **Figs. 3,4,5 & 6**. for each anchor type. For ARS series, 3 teko nails must be installed through each anchor leg. If the anchor has shifted position as shown at **Fig. 7c**, inspect to determine the cause. Anchors subjected to a free fall or other force, must be removed from service. **Topside**: Inspect the anchor stem and connector hole. If evidence of damage as shown at **Fig. 7a, or 7b**, or subjected to a fall impact, remove from service.

I-Joist™ Anchors:

I-Joist widths 1-1/2" use #2801. For 2-1/2" width use #1003. Order custom sizes for wider widths. Installation requires plywood or OSB web filler shown at **Fig. 6a,b,c**. Leave a 1/2" margin between the web filler and truss flange. Secure filler to truss web to prevent movement. Position anchor and drill a 5/16" d. hole through the truss web and filler. Secure **SAS** supplied grade 8 bolt and lock nut. Engineering from truss mfg. may be required for anchor installation or drilling.

Fig. 6a

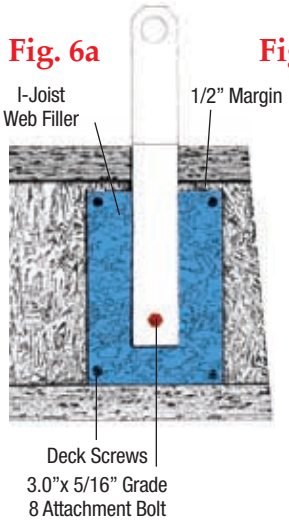


Fig. 6b

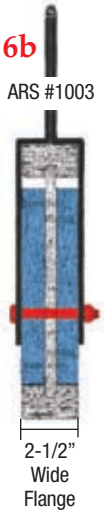
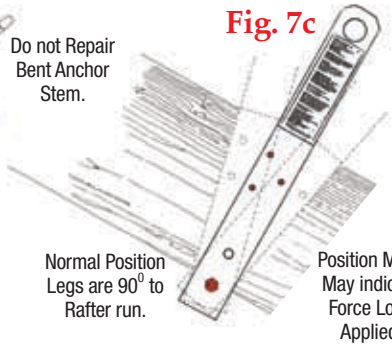


Fig. 6c

Fig. 7a

Fig. 7b

Fig. 7c



Modification/Non-Specified Use/Replacement:

Do not re-form, cut, bend, weld, drill, modify or repair anchors. Do not use to secure scaffolding, guy lines warning lines, materials, hoisting or tether for large animals. **Remove From Service**: anchors subjected to non specified use, damage, alteration or in service loading (free fall). **Inspection**: Ensure by inspection that the anchor point framing subjected to a free fall or other force load, has not been damaged.

Inspect Before Each Use. Do Not Use Damaged Anchors

ARS Moveable/Temporary Anchor:

11 ga. sst, powder coated red. Fitted with a sst ball lock detent pin. May be used on open framing that is partially sheathed and capable of supporting the intended fall protection load. For 2x4 top chords cut an 18.0" 2x6 trimmed to allow 1/8" gap between the detent pin and top chord. **(Fig. 8d)**. Fix anchor to blocking w/ deck screws. Cross bracing or sheathing is required on the down-slope side, **(Fig. 8c)** to prevent the blocking from movement. Perform detent pin function test before each use. Inspect Pin to ensure that both ball locks are intact. **(Fig. 8e)** Do not use if test fails, pin is bent, handle is broken, or evidence of other damage. Do not substitute pin with other types. Make sure the detent pin is in the locked position through both anchor leg attachment holes.

Fig. 8a

#1014 2x4-2x8
#1015 2x10-2x12

Fig. 8b

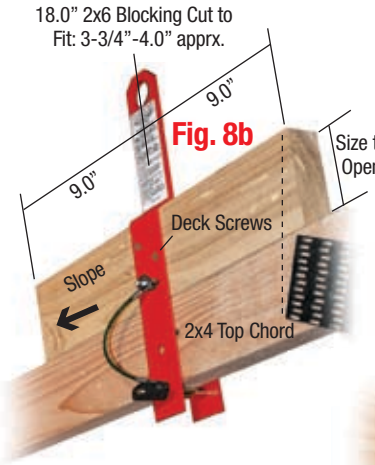


Fig. 8c

Fig. 8d

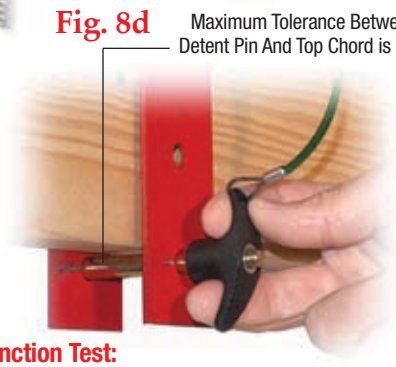


Fig. 8e

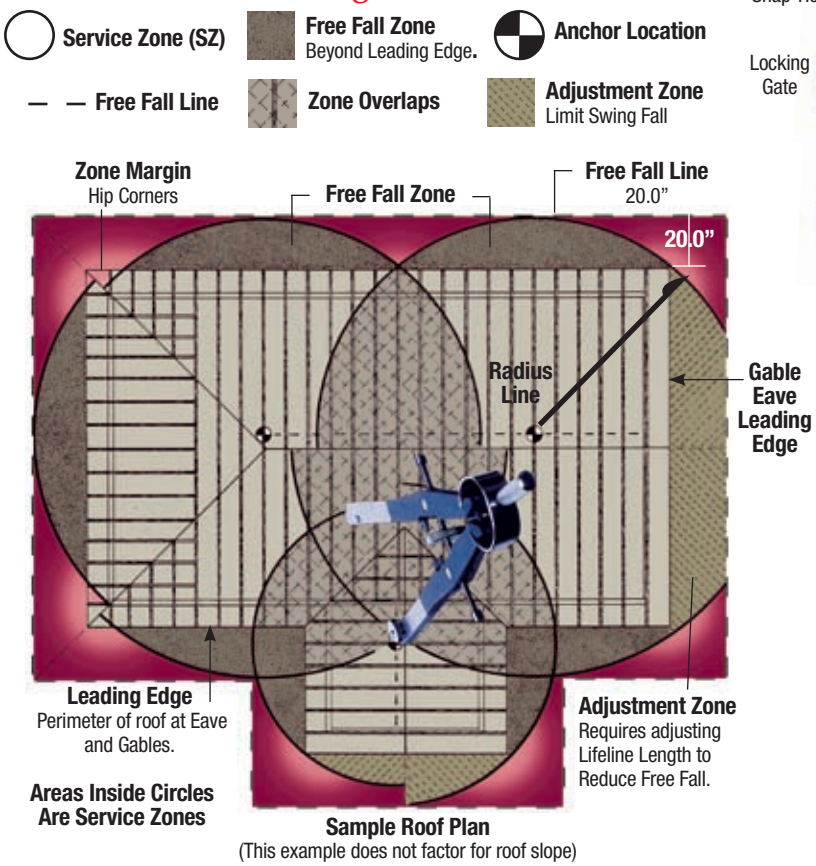
Detent Locking Pin Function Test:

Locked Position, Pull on Handle. Pin should not pull out. Remove from service if test fails, if handle is damaged, pin shaft is bent, one or both ball locks are missing.

Anchor Service Zones:

Circular Service Zones are plotted using a compass between the ridge and Free Fall Line. At **Fig. 11** a worker standing at the leading edge is allowed to free fall 72" (1.8m) before his **PPE** begins to arrest the fall. Note the D-Ring is 52" above the leading edge, allowing an additional 20" of length in the lifeline, lanyard or SRL. The Free Fall Line used for plotting service zones is located 20" from the leading edge. **Adjustment Zones:** Leading edges at roof gables create a swing fall hazard. Slack in the Lifeline must be adjusted as the worker moves up-slope in order to limit the free fall to 6ft. **Zone Margins:** Areas outside the **(SZ)** radius line, such as hip corners, may require additional anchors.

Fig. 9



Sample Roof Plan
(This example does not factor for roof slope)

Connectors:

Snap-Hooks and Carabiners must comply with industrial safety standards.

Fig. 10a

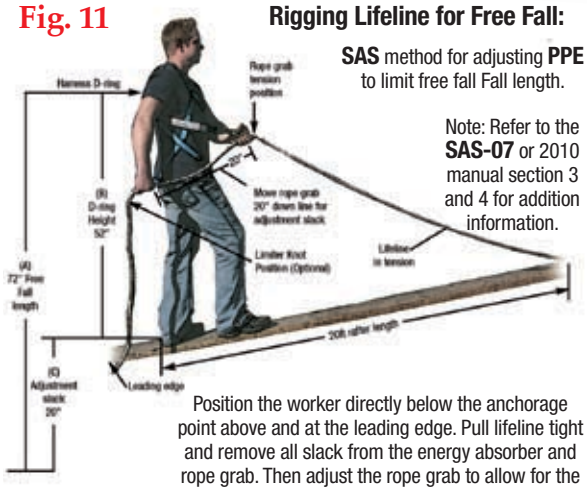
Fig. 10b

Fig. 11

Rigging Lifeline for Free Fall:

SAS method for adjusting **PPE** to limit free fall Fall length.

Note: Refer to the **SAS-07** or 2010 manual section 3 and 4 for addition information.



Position the worker directly below the anchorage point above and at the leading edge. Pull lifeline tight and remove all slack from the energy absorber and rope grab. Then adjust the rope grab to allow for the additional free fall. In this example, 20".