



Presented by:
Roco Rescue

Roco Rescue, Inc.
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Alternate Sked Lashing Methods

From Roco Rescue. Approved by Skedco.

Warning: *Proper training is required prior to use of this or any other rescue equipment or technique.*

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Roco Method for Sked Vertical Single-Point Bridle

Note: This method was developed by Roco and has been approved by Skedco. If using the Sked without a long backboard, the Skedco method is preferred.

As an alternative, the Roco method incorporates the backboard in the vertical bridle lashing. This technique of grabbing the backboard reduces patient movement/slippage when the Sked is placed in a vertical position for lift or lower.

Note: When rigging a vertical bridle Roco recommends using two butterfly knots tied close together in the middle of the 30-ft vertical bridle rope. This allows attachment of the main-line and safety-line by grabbing both knots as one. It creates a bridle system that could be cut at any one location without failing.

Procedure:

1. Properly position the fully immobilized patient and loosely fasten all lashing straps including foot straps.
2. Tie an appropriate anchor knot (two butterfly knots, double-loop figure-8, etc.) in the middle of the 30-ft. 3/8-inch bridle rope supplied with the litter.
3. Pass each end of the rope through the grommets at the head-end of the stretcher (from back to front).
4. Center the knot between grommets and remove slack.
5. Continue feeding rope through unused grommets (from outside to inside), keeping slack out of the rope as you go.

Note: If needed, place padding between the patient's shoulders and the ropes.

6. Pass rope over first lashing cross-strap and through the center of the first set of webbing handles, then over the second strap.
7. Pass rope ends through the next set of empty grommets on each side of Sked, and then secure the bridle to the spine board.
8. To secure the spine board:
 - a. Locate a carrying handle on each side of spine board below the level of the mid-body grommets used, attempting to keep bridle rope clear of patient's hands.
 - b. Take a bight of the rope and pass it through and around the selected backboard carrying handles on each side.
 - c. Bring the bight above the level of the Sked side and pass the tail end of the rope through the bight. (This will form a Munter hitch friction knot when tightened.)
 - d. Tighten the chest and waist straps and work out all slack in the bridle starting at the head and working down.

Note: Be sure to keep the bridle knots centered at the top.

- e. With the bridle tight, milk one end of the bight line to take remaining slack from the system. Then pull the tail end of the rope to tighten the bight to the board.

EXTREMELY IMPORTANT

Tighten the top two lashing straps before pulling all slack from the bridle rope through the Munter that is hitched to the spine board handles. This prevents the patient from slipping once the litter goes to a vertical position.

9. Continue to bring the rope through the next set of handles and through the next grommet.
10. Tie the two ends of the rope together with a loose square knot over the patient's lower legs. Avoid placing the knot directly across the patient's knees. If this cannot be avoided, pad the knee area.
11. Before tightening the square knot, fully tighten the remaining lashing straps, and remove all remaining slack in the bridle rope.
12. Tighten the square knot and safety each side with an overhand knot.

Note: *The square knot is generally not used for load-bearing applications. However, it is recommended by Skedco (the manufacturer) for removing slack from the bridle rope. The square knot will not see a load due to the Munter hitch wrapped around the backboard handles.*

Attachment:

1. Attach the main lower/ haul line to the butterfly knots at top of the Sked bridle.
2. Attach the safety-line shock absorber to the butterfly knots, at the top of the Sked bridle.

Tag-line Attachment:

1. Use two tag lines, one on each side of the Sked, to prevent spinning.
2. Each tag line may be secured to one of the lower handles with a carabiner or knot.

Roco Method Vertical Single-Point Bridle Illustrations



(Clockwise from top left)
Overview of bridle strap lashings.
Attachment of square knot to secure the bridle.
Munter Hitch attachment of bridle to board
Close-up of main line and safety line.

Skedco Method

Note: *If using the Sked without a long backboard, the Skedco method is preferred.*

Procedure:

1. Properly position the fully immobilized patient and loosely fasten all lashing straps including foot straps.
2. Tie an appropriate anchor knot (two butterfly knots, double-loop figure-8, etc.) in the middle of the 30-ft. 3/8-inch bridle rope supplied with the litter.

Note: *When rigging a vertical bridle Roco recommends using two butterfly knots tied close together in the middle of the 30-ft vertical bridle rope. This allows attachment of the main-line and safety-line by grabbing both knots as one. It creates a bridle system that could be cut at any one location without failing.*

3. Pass each end of the rope through the grommets at the head-end of the stretcher (from back to front).
4. Center the knot between grommets and remove slack.
5. Continue feeding rope through unused grommets (from outside to inside), keeping slack out of rope as you go.

Note: *If needed, place padding between the patient's shoulders and the ropes.*

6. Pass rope over first lashing cross-strap and through the center of the first set of webbing handles.
7. Pass rope ends through the next empty grommet on each side of Sked.
8. Bring rope ends over the third lashing cross-strap.
9. Continue to bring rope through next set of handles and through the next grommet.
10. Continue downward, passing the ropes under the lowest leg strap, and out through bottom grommets at the foot of the Sked.
11. Tie the two ends of the rope together with a square knot.
12. Before tightening the knot, fully tighten all lashing straps, and remove all remaining slack in the bridle rope.
13. Tighten the square knot.
14. Cross the tail ends and bring them up over the feet and back through a grommet below the lower handles (or through the handles themselves).
15. Tie a second square knot with safeties.
16. Attach the primary rescue system, safety-line belay, and shock absorber to both butterfly knots or the double loop figure 8.

Note: *The square knot is generally not used for load-bearing applications. However, it is recommended by Skedco (the manufacturer) for removing slack from the bridle rope. The square knot will not see a load due to the Munter hitch wrapped around the backboard handles.*

Sked Vertical Single-Point Bridle Illustrations



(From top)
Close-up view of lower section of lashing.
Attachment of square knot to secure the bridle.
Close-up of main line and safety line.

Confined Space Alternative Method for Vertical Sked Bridle

This alternative method for rigging the head portion on the vertical Sked has been approved by Skedco. It can be used in conjunction with the Roco or the Skedco method of vertical bridle lashing for the Sked.

Note: *Since this technique produces a “cone shape” at the top of the Sked versus the typical curl of material at the top, it offers less protection for the patient’s head. Therefore, it should only be used when necessary or warranted to remove a patient from a confined space. It should not be considered as a general replacement for the traditional Skedco or Roco methods.*

Both the Roco and Skedco methods of vertical bridle lashing produce a curled-over shape or “shoulders” at the top of the litter, which could hang up more easily and result in additional pressure on the patient. When using this alternative method, the top of the litter forms more of a cone shape, and the “shoulders” are eliminated. This greatly reduces the chances of the litter hanging up on the edge of a portal.

Another advantage of this method arises when working in an area where the “lifting line” is directly over the head or angled towards the body. The bridle will pivot at the shoulders rather than causing the top of the litter to roll up, which could potentially put pressure on the patient’s head and spine.

Roco recommends using two butterfly knots tied close together in the middle of the 30-ft bridle rope. This allows attachment of the main line and safety line by grabbing both knots as one. It creates a bridle system that could be cut at any one location without failing.

Procedure:

1. Properly position the fully immobilized patient and loosely fasten all lashing straps including foot straps.
2. Tie an appropriate anchor knot (two butterfly knots, double-loop figure-8, etc.) in the middle of the 30-ft. 3/8-inch bridle rope supplied with the litter.

Note: *Roco recommends using two butterfly knots tied close together in the middle of the 30-ft bridle rope. This allows attachment of the main line and safety line by grabbing both knots as one. It creates a bridle system that could be cut at any one location without failing.*

3. Lay the bridle knots on the inside of the Sked above the patient’s head in line with the top two grommet holes.
4. Pass each end of rope through grommets at the shoulder of stretcher (from outside of the grommet to the inside).
5. Remove slack from the line while keeping the knots centered and at the height of the top grommet holes.
6. Pass rope over first lashing cross-strap and through the center of the first set of webbing handles.
7. Continue to lash as normal for either the Skedco or Roco method.

Confined Space Alternative Method for Sked Vertical Bridle Illustrations



(Clockwise from top left)

Overview of top end bridle strap connections to carabiners.

Main line and safety line connection can pivot around patient's head.

Lifting of Sked in a confined space.

Method with Cobra Buckle Replacement Kit

A slight change in the packaging technique is required when replacing the lashing straps on the Sked with the replacement Cobra buckle system. The new Cobra buckle system is attached by girth hitching the components into the grommets. The material in the girth hitch takes up more room in the grommets than the sewn loops that were originally used. This makes it more difficult to pass the vertical bridle rope through those grommet holes.

The following adjustments may be used when using the Cobra buckle replacement system.

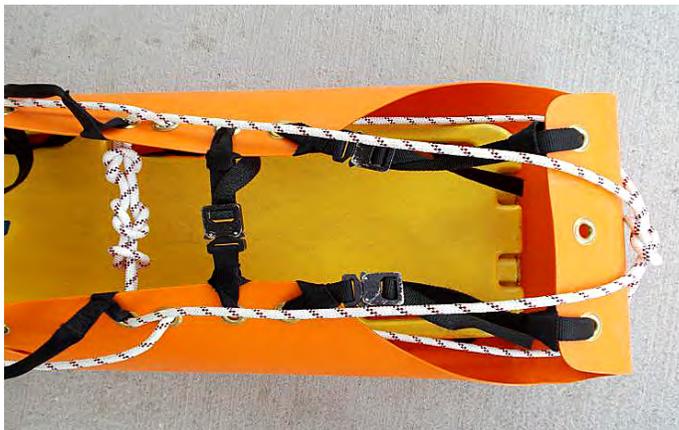
Method 1 *(top photo)*

After tying the square knot at the bottom of the Sked, bring the tail ends of the rope back up and pass them through the bottom grommet hole of the handles before tying the second square knot.

Method 2 *(bottom photo)*

Use just the lower handles and no grommet: After tying the square knot at the bottom of the Sked, bring the tail ends of the rope back up and pass them through the handles before tying the second square knot.

Note: *These two techniques can be used with the old style lashing straps as well.*



Method 1



Method 2