



Structural Collapse Technician Training Bulletins



Bulletin: 04 Sked Stretcher





TERMINAL OBJECTIVE

- **At the completion of this training bulletin, the student will understand the proper procedures for inspecting, maintenance and operational techniques for using the Skedco Sked Stretcher.**



TRAINING BULLETIN PHASES

- **Application**
- **Equipment Familiarization**
- **Operational Techniques**
- **Questions For Skedco**
- **Inspection and Maintenance**
- **Troubling Shooting Common Problems**
- **Do's and Don'ts**
- **Quiz**

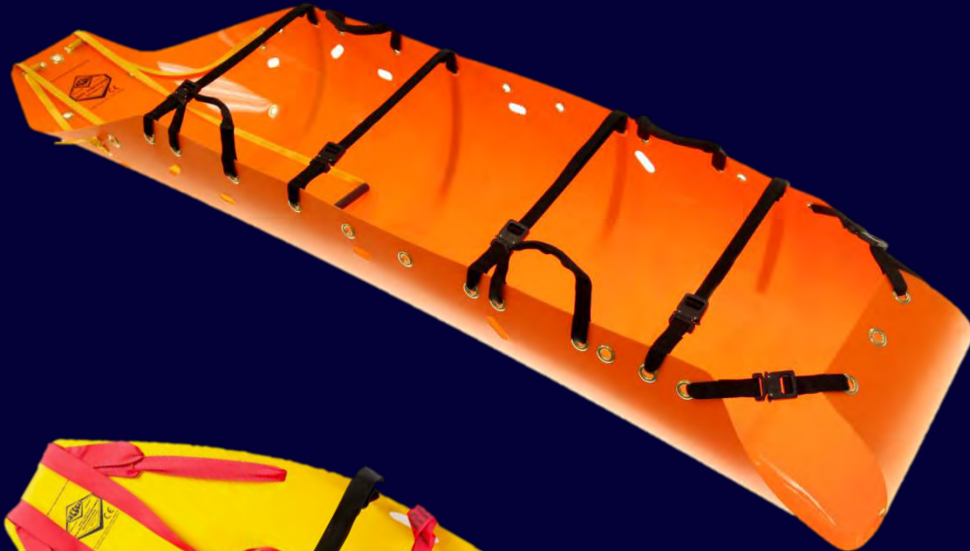
Applications



Patient Packaging



SKED Stretchers



Confined Space (Orange) – High Angle – Technical Rescue

Note: Green & tan color stretchers are also available for High Angle – Technical Rescue



Hazmat/Hospital HMH (Yellow) - Removal of victim(s) from Hot Zone or Mass Destruction Incidents.
(NOT DESIGNED FOR HIGH ANGLE RESCUE)

SKED Water Rescue System



Designed to keep the Sked in a vertical position keeping the patient's head out of the water.

Consist of pre-rigged inflatable floats, ballast and C02 inflators.





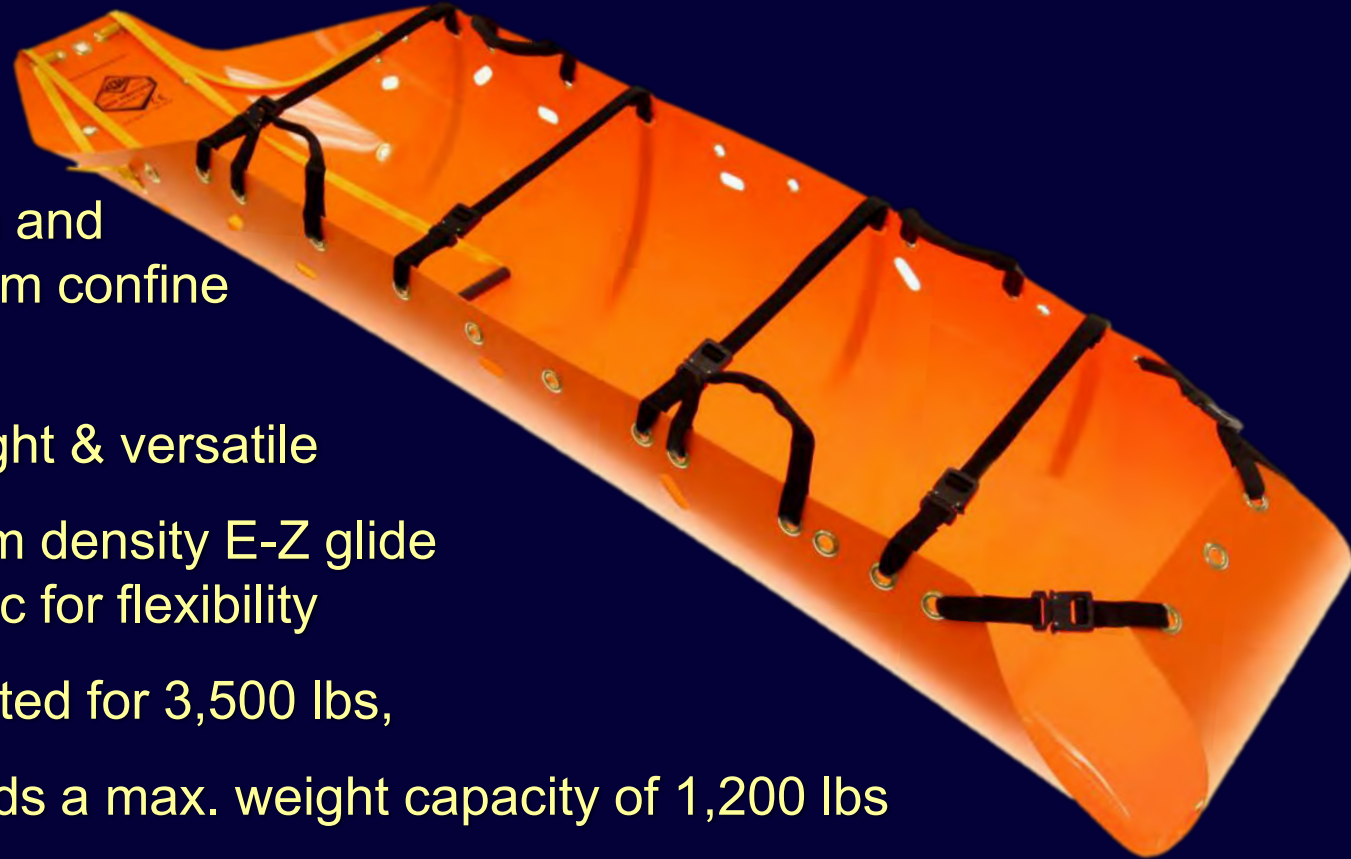
SKED Basic Rescue System – International Orange



Weight: About
18 lbs with
accessories



SKED Basic Rescue System – Stretcher



- Design for patient support , protection and rapid extrication from confine spaces
- Compact, light weight & versatile
- Design with medium density E-Z glide polyethylene plastic for flexibility
- Carry Straps are rated for 3,500 lbs,
- Skedco recommends a max. weight capacity of 1,200 lbs
- Skedco recommends to replace the stretcher after 30 years of service or when severely cut or worn



SKED Basic Rescue System – Stretcher



Sked Stretcher is **not** design as a spinal immobilization device. If spinal injury is suspected, secure the patient to an approved spinal immobilization device prior to placing the patient in the Sked. The Sked Stretcher will accommodate most immobilization products.

Question For Skedco:

Can a Sked Stretcher be used without a backboard or spinal immobilization device?

Answer: If there is no spinal injury or any reason to immobilize the head it is not necessary to use a longboard or shoulder board.

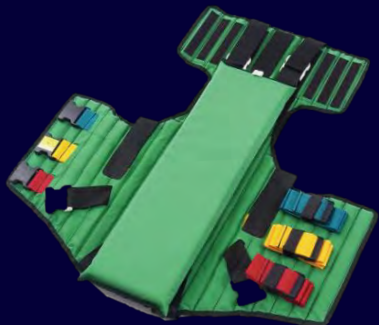


Thailand Cave Rescue – July 12th 2018

Question For Skedco:

Does Skedco approve the use of other spinal immobilization adjuncts with it product such as KED, Spec Pack, Miller LSP?

Answer: Sked Stretcher will accommodate long and short backboards, scoop stretchers, Oregon Spine Splint and most other immobilization equipment. Use what ever you have for immobilization providing it is an approved device by the manufacturer or by your authority having jurisdiction for medical protocols.



SKED Basic Rescue System - Straps

3 Basic Types:

Standard Buckles & Straps



Quick Connect/Release Straps



Cobra Aluminum Side Release Buckles



Rated at 3,000 lbs



Cobra buckles
will not release while
under tension of
15 lbs or greater



SKED Basic Rescue System – Stretcher

Do not criss-cross straps on the Sked.
It will cause the Sked to bend in the middle and increase pressure on the patient's upper body area.





SKED Basic Rescue System – Horizontal Lift Slings

Note: Foot
Strap is not
labeled



- 9,000 LBS Min. Breaking Strength (End To End)
- 18,000 Lbs Min. Breaking Strength (Basket Configuration)
- Head Strap 66" In Length
- Foot Strap 72" In Length

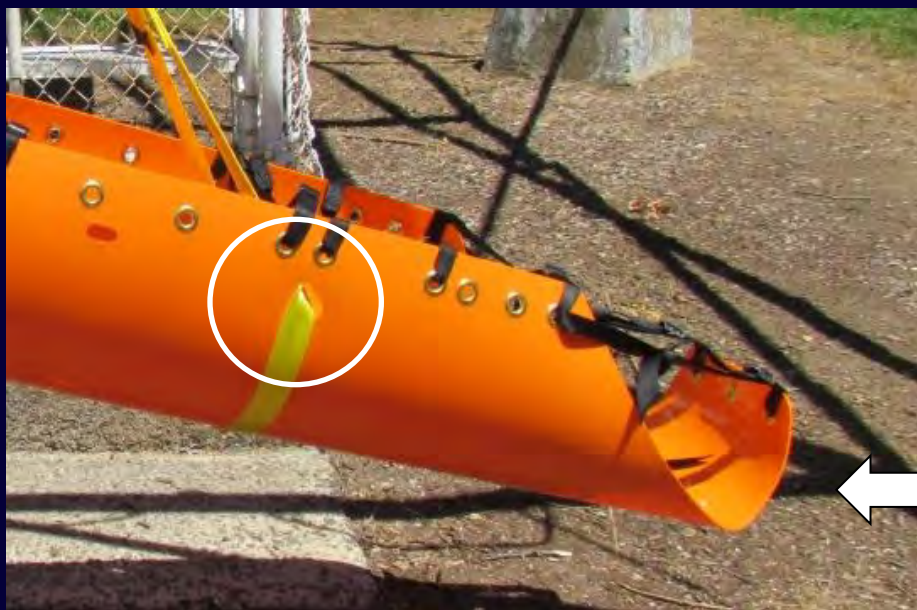
SKED Horizontal Lift Sling Placement

45 deg. angled slots for the head strap at the head end of the Sked.



Remember the head strap is labeled and 6 inches shorter than the foot strap

45 deg. angled slots for the foot strap.



SKED Horizontal Lift Sling Placement

Avoid overloading
the carabiner gate



Separate
the slings
using 2
carabiners

OR

Use an
anchor
plate





SKED Basic Rescue System – Vertical Lift Sling



- 30 Feet of 3/8" Kernmantle Rope
- 6,000 LBS Minimum Breaking Strength
- Design to distribute the weight and forces down the entire length of the stretcher

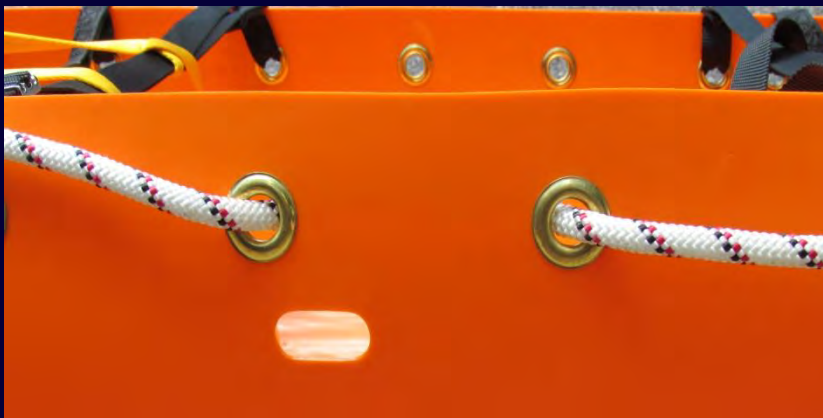




Question For Skedco:

Is it ok to use a larger diameter rope as a vertical lift sling rope?

Answer: Yes - Larger diameter rope can be used providing it can be passed through the 5/8-inch grommets (No. 5) freely without damaging the grommet.



Standard 3/8-inch rope



1/2-inch rope



SKED Basic Rescue System – Patient Packaging Videos

Skedco recommends the following reference material when using their product.

Skedco Instruction & User Manual (2014)

<https://skedco.com/wp-content/uploads/2016/10/NEW-SKED-INSTRUCTION-Standard-Size.pdf>

Roco Tech Talk (Dennis O'Connell)

<https://www.youtube.com/watch?v=veXDtunOJE8>

<https://www.youtube.com/watch?v=mA9Bxo0MEmE>



Question For Skedco:

Does it matter if you lace the 3/8" vertical lift sling rope inside-out or outside-in at the patient's shoulder grommets?

Answer: Passing the vertical lift sling rope through the grommets from the inside or outside of the grommet at the shoulder is fine. If you have a really tall patient and the rope contacts their shoulder enough to cause pain. Route the rope through the grommet from the outside-in. The Sked Stretcher material will cushion their shoulder a little bit and make them more comfortable. If the rope is rigged outside-in it will not allow you to wrap the longboard handles unless it is routed over the edge of the Sked Stretcher to make it possible to utilize the two grommets adjacent to the backboard handles.



Question For Skedco:

Does it matter if a Figure 8 Knot or (2) Butterfly Knots are used at the attachment point in the vertical lift sling rope above the patient's head?

Answer: The double Butterfly Knots are used by Roco and approved by Skedco. The Butterfly Knots does spread the two legs of the rope apart more. It may be harder for some people to retain and it takes a few seconds longer to tie but it is ok to use it.

Figure 8
Knot



(2)
Butterfly
Knots



Question For Skedco:

On the newer Sked Stretchers the 3/8" rope cannot go through the new handles parallel? Can it be treaded perpendicular or do we even need to go through the handles at all?

Answer: The rope just goes through the handles. The sewing on the newer stretchers does not allow the rope to pass through the sewn parts anymore. The reason we like to go through the handles is for safety. Even though it would take an extreme shock load to pull the grommets out we think it is prudent to use everything possible in case of such an unlikely event.



Older Sked through the sewn part of the handle



Newer Sked through the handle



Question For Skedco:

Is there a time limit that a patient can be suspended in a vertical position while packaged in a Sked Stretcher?

Answer: No we don't have a time limit because the patient is not suspended in a harness to cut off the circulation. In a Sked stretcher the patient is standing on the foot end of the Sked. Position the patient's feet between the foot end straps and you can use the Sked bag (without accessories) or other types of padding to fill the gap at the patient's heels. Otherwise the forward part of the feet can be forced upward causing stress on the muscles and tendons at the back of their legs which can be painful. If the patient has a severe leg injury or amputation a harness maybe necessary but you can only fasten the leg loop on the uninjured leg. In that event you would limit the time they are in the harness just as if you were using a harness only.

Question For Skedco:

What is the best knot to tie as a safety knot for the square knot at the end of the rope ?

*Answer: When using the square knot an overhand bend is necessary to prevent side loading the square knot making it a **girth hitch**. A **double fisherman's knot** is best but takes time to tie and can be difficult to tie especially during stressful situations. Try to keep it as simple as possible.*

Overhand Bend



Vs

Double Fisherman's Knot





INSPECTION AND MAINTENANCE

Inspect Sked Stretcher and all accessories before and after each use. Check:

- ✓ Plastic Sked for cuts or wear, especially at the edges of the Sked or around grommets.
- ✓ Brass Grommets for damage, badly bent, missing or pulling apart. Grommets can be replaced as needed.
- ✓ Straps and Horizontal Lift Slings for broken stitching, discoloring, fraying or cuts



INSPECTION AND MAINTENANCE

Inspect Sked and all accessories before and after each use. Check:

- ✓ Vertical Lift Sling (3/8" Rope) for discoloring, fraying, cuts and soft spots.
- ✓ Carabiner for proper gate movement & locking, deep scratches or corrosion.

Note: Any piece of equipment that is damaged, severely worn/cut or not working properly. Should be replaced immediately.



INSPECTION AND MAINTENANCE

Maintenance:

- ✓ Wash Sked and accessories with mild soapy water. Rinse with water.
- ✓ Use proper DeCon Techniques to clean Sked when needed. Can use a mild medical bleach solution, but thoroughly rinse with water.
- ✓ Air dry Sked System in a well vented area. Do not dry Sked and Slings in direct UV sun light - It will damage the plastic and nylon slings.



INSPECTION AND MAINTENANCE

Maintenance:

- ✓ Store the Sked properly in its Carry Pack to protect the plastic and nylon slings/straps.
- ✓ Do not store Sked System in wet, damp, humid areas or compartments that are exposed to exhaust fume or gasoline.
- ✓ Store the Sked System in an area with normal temperature changes. Extreme heat (+200 Deg's) and cold (-120 Deg's) temperatures can damage the plastic or nylon slings/straps.

TROUBLE SHOOTING PROBLEMS

Brass Grommets that are badly bent or coming apart should be changed. Grommets can be replaced by most awning shops using No. 3 and No. 5 grommets. Make sure the grommet tool does not damage the inside of the grommet causing sharp edges that can cut webbing or rope.

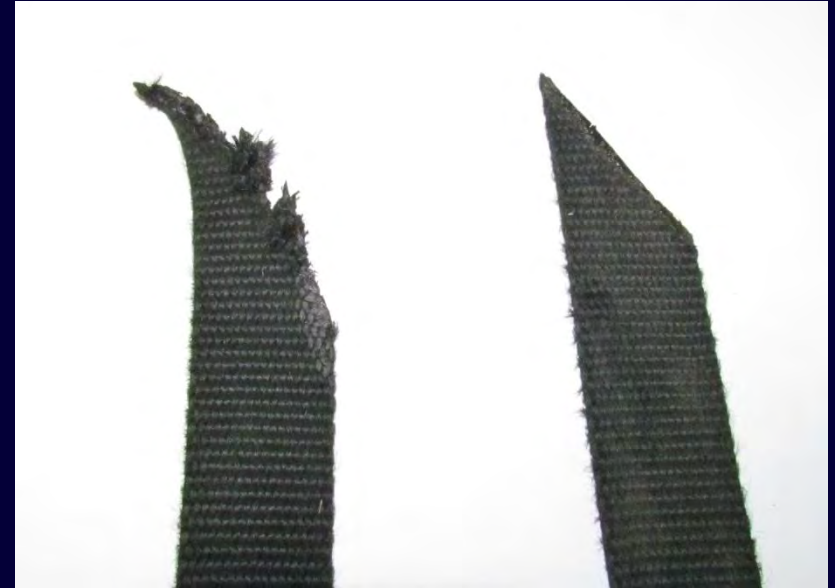


Grommets can be pulled out between 450 -500 lbs of straight pull pressure.



TROUBLE SHOOTING PROBLEMS

After prolonged use it is not uncommon for the black nylon straps to become frayed at the ends. Straps can be repaired with a Hot Cutter by cutting, sealing and re-shape the end of the strap.



Hot Cutter for polyester and nylon rope and webbing



Key Points To Remember:

DO:

- Store your Sked Stretcher and accessories in the Carry Pack for protection when not being used.
- Inspect your Sked Stretcher and accessories before and after use.
- Use the horizontal lift straps and vertical lift rope in the manner for which they are designed. If you have any questions you can contact the manufacturer at skedco.com.
- Use one or two tag line(s) to prevent the stretcher from spinning. Extremely important during helicopter operations.

Key Points To Remember:

DON'T:

- **Do not** use the SKED as a spinal immobilization device. Immobilization equipment must be used in conjunction with the SKED.
- **Do not** store or dry your Sked Stretcher to prolong sunlight. UV light rays can cause damage to the plastic and nylon components.
- **Do not** suspend the Sked Stretcher by the grommets or by adding an overhand knot at the head/shoulder area. This will damage or pull out the grommets when applying forces up to 450 to 500 lbs.
- **Do not** use the carry handles as lifting points. The straps and grommets are not rated for horizontal or vertical lifts.





Summary

- ✓ The Sked Stretcher is designed to provide patient support and protection during confine space, rough terrain, haz-mat and high angle incidents.
- ✓ It is not designed as a spinal immobilization, but will accommodate most immobilization equipment.
- ✓ It is compact, flexible, strong and with proper training easy to use.
- ✓ Any questions see their website SKEDCO.COM