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Instruction & Maintenance Manual for SLIX 100 Stretcher

IMPORTANT
Slix Stretchers should be used by
TRAINED PERSONS ONLY
PLEASE READ THIS MANUAL BEFORE
USING THE SLIX100

It is the duty of the rescue team to ensure that the casualty is secure at all times and that all ropes, karabiners, slings or any other equipment attached to, or used to lift, the Slix Stretcher is of suitable strength and in good order.

All belays must be correctly installed and used by a competent person or persons.

Before using the Slix Stretcher check for wear or damage. Do not use if worn or damaged.

We recommend that no powered device is used to raise or lower a casualty in Slix Stretcher.

When lifting or lowering a Slix Stretcher in the vertical or horizontal mode it is recommended that a separate lifeline of suitable strength and standard-belayed separately- be used.

We recommend that a spinal splint or spine board is always used, whether or not spinal injuries are present.

The rescue team must be able to deal safely with any emergency that may arise during the evacuation of a casualty.

All the Slix range of Stretchers conform to
CE 93/42/EEC CLASS 1

Currently there are no 'EU' Standards for stretchers.

The karabiners, Mallion Rapides, sewn slings and lifting strops supplied are manufactured to the
relevant standards

It is the users duty to ensure that any other item of rigging equipment, for example ropes,
harnesses, karabiners, belaying equipment is equal to - or better than - the relevant standards
when used with SLIX Stretchers.

**The life of the casualty is in the hands of the rescuers and safety
precautions must be taken at all times.**

The decision on which stretcher should be used would be influenced by the following factors.

Size and condition of the casualty – The stretcher should fit the casualty firmly and comfortably.

If the casualty is not bariatric but requires a wide long board or other medical adjuncts the bariatric stretcher may be the better option.

If the casualty is non bariatric' the SLIX100 is the better option.

The Principle is that casualty care and comfort is paramount throughout any extrication journey

This is not a manual of First Aid or Rescue techniques.

Rescuers using SLIX equipment should be trained in vertical and confined rescue and first aid techniques

IMPORTANT, PLEASE READ

HAUL AND SECURITY ROPES MUST ONLY BE CONNECTED
TO THE STRETCHER USING THE RED OR BLUE ATTACHMENT EYELETS.

NO OTHER PART OF THE STRETCHER OR CLOSURE STRAPS SHOULD BE USED
FOR LOAD SUPPORTING.

RED AND BLUE ATTACHMENT POINTS ARE RATED AT
400k SWL

The individual manufacturer's instructions on use, care, maintenance and inspection of slings, ropes, mallion rapide's (screwed quick links) and karabiners must be followed.

Please pay particular attention to the rope and sewn slings, especially when the stretcher has been dragged in harsh or abrasive conditions. If in any doubt, replace.

Use only karabiners of suitable strength and a large enough gate opening, (similar to those provided), to connect ropes and slings to the stretcher belay points, (red and blue eyeleted holes only), as using smaller gate opening karabiners WILL damage the edge of the stretcher.

**Always use Hauling Ropes, Lifelines, Karabiners of a suitable standard for rescue evacuation and only use equipment that is in excellent condition.
An equipment or rigging failure could lead to death.**

The Slix100 Stretcher

The Slix Stretcher may be used to raise or lower a casualty vertically or horizontally.

When correctly applied the Slix is a safe, protective stretcher that may be used in the most adverse conditions.

The adjustable Closure and Foot loops will accommodate casualty insulation and applied first aid equipment such as leg splints and the Spinal Splint

The configuration of the shaft will dictate if the Slix Stretcher can be raised or lowered with the casualty horizontal or vertical but if circumstances allow, for medical considerations, the casualty should always be raised or lowered horizontally.

The Horizontal Haul Slings are colour coded to allow the rescuers to choose to raise or lower the casualty in a Head Up or Head Down attitude, as dictated by any injuries.

By attaching the Red sling leg to the Red Horizontal haul points and the Blue sling legs to the Blue Horizontal haul points a Head Up attitude is achieved. By reversing the slings- Red to Blue and Blue to Red -a Head Down attitude is achieved.

All closure straps must be correctly fastened and any surplus length securely tucked away to prevent snagging.

All equipment used for raising or lowering the Slix Stretcher must be of suitable strength and in first class condition.

Only the Vertical and Horizontal slings and the connectors provided should be used to attach Haul lines to the stretcher.

Haul ropes and Lifelines must be to a minimum of EN1891A standard.

When raising or lowering the Slix Stretcher there must be separate lifeline protection for security in the event of a main rope failure.

The recommended rope for hauling and lifelines is 11mm diameter Mammut Performance Static Rope.

Using dynamic ropes can give rise to 'bouncing' which is uncomfortable for the casualty.

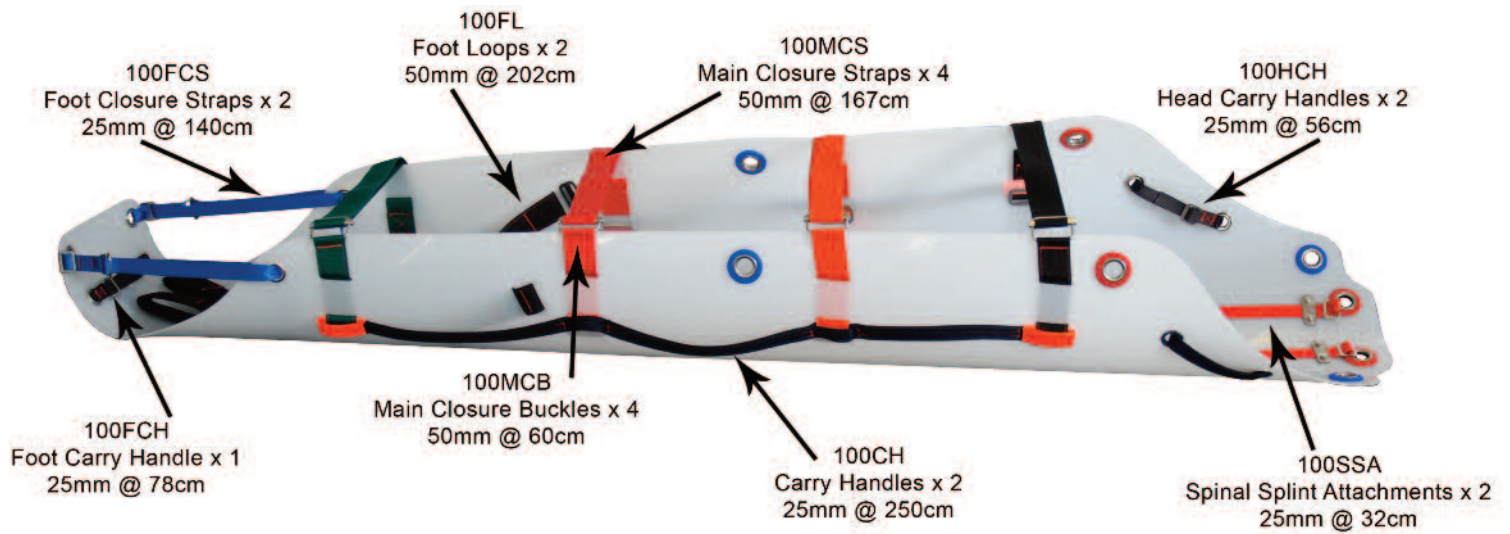
Karabiners must be of screw gate type to a minimum of 26Kn. BS EN362, and correctly attached with the gates tightened.

Screw links (mallion rapide's, Quick Links) must be to a minimum of 26Kn. BS EN362 and correctly attached with the screw link tightened

Belays for the Haul and Lifelines must be sound and capable of withstanding 26Kn. At all times during a raise or lower the haul rope and lifelines must be kept taught. Failure to do so could result in an unacceptable shock load onto the casualty, ropes, slings, belays or connectors and may lead to injury or equipment failure.

SWL – 400KG

Identifying components of the Slix100 Stretcher & Spinal Splint



Loading and Securing a casualty into the Slix100 Stretcher

The Slix Stretcher is stored and transported in a Carry Bag.

Remove the Slix Stretcher from the Carry Bag, undo the securing strap and unroll. It is recommended that the Slix Spinal Splint is used even if no spinal injuries are present or suspected.

Refer to Page 5 for identification.

1)

Lay on a flat surface, with the Carry Handles down, as close to the casualty as possible. The head of the Stretcher should be level with the head of the casualty.

Place the Slix Spinal Splint on the Slix Stretcher and attach it to the Spinal Splint Plate with the two fitted straps provided Item 100SSA p5. Place the casualty on the Stretcher with the head located to the top of the Spinal Splint and centrally positioned.

OR

If the casualty was loaded onto the Spinal Splint away from the Stretcher, move the casualty carefully into the Stretcher and attach the Spinal Splint to the Stretcher

2)

Fit the Foot Loops, Item 100FL p5, to the casualties feet, (do not remove footwear), crossing them over, and adjust buckles. If leg injuries are present it may be necessary to omit one or both Foot Loops

3)

Starting at the foot secure the 4 Closure Straps, Item 100MCS p5, across the Stretcher and tighten securely but be careful not to over tighten. Pay particular attention to the Closure Straps at the chest so respiration is not impaired.

Secure the ends of the Closure Straps so they do not present a snag hazard. Tucking ends in is easiest

It is recommended that the casualties' arms are inside the Stretcher skin, as shown on p7

5)

Repeat for the Foot Closure Straps, Item 100FCS p5, and adjust until the rollover just touches the casualties' feet. Allowance should be made if a leg splint is fitted.

The casualty is now secure and evacuation may begin.



Fig A.
Rolled up using the
Foot Closure
straps to secure.

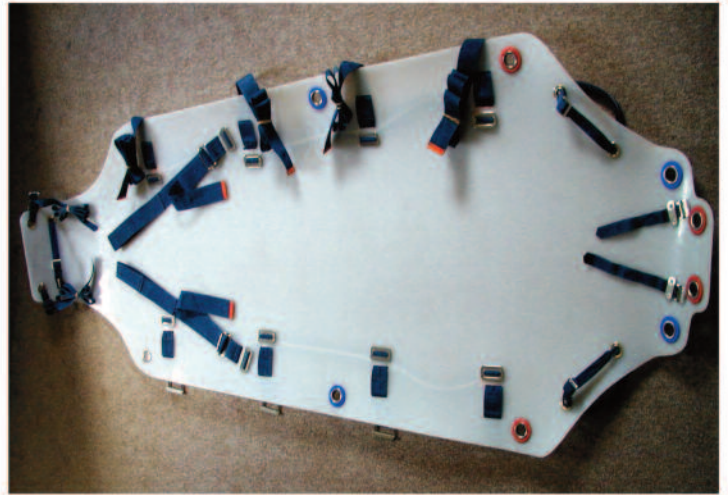


Fig. B
Laid flat ready to fit the
Spinal Splint

Fig. C.
Fitting the Foot
Loops



Fig. D.
Secure the Closure
Straps 4 Places.



Fig. E.
Thread and adjust
Bottom Roll over
straps.



Fig. F.
Casualty 'fully packaged'.

Important Considerations when using Roll Up Stretchers

The Slix range of stretchers are 'Roll Up' stretchers designed to be used in the most extreme conditions.

All Roll Up stretchers they are to a degree flexible which gives the ability to evacuate casualties from situations where rigid stretchers would not be suitable or may not even reach.

Users must be aware that Roll Up stretchers do have limitations and training must take into account the physical properties of Roll Up stretchers.

We recommend that a spinal splint or a spinal backboard is always used - even when spinal injuries are not present or suspected - to increase casualty comfort and to prevent respiratory compromise when in transition from the horizontal to the vertical mode and when dragging the casualty over a surface.

Roll up stretchers should not be carried by lifting 'head & tail' unless good spinal support is provided with a spine board or spinal splint.

Care must be taken when moving from the horizontal to vertical mode. Support around the shoulder area should be provided as the transition takes place. At least one person supporting each side is a very good precaution.

It is possible to provide support by utilising the shoulder level attachment points. By connecting to a haul line via a 'V' hang. This will allow the haulers to lift the stretcher from horizontal to vertical without undue bending of the stretcher, compromising the casualty. Once the stretcher is in the vertical mode, and clear of the floor, the main head haul may be utilised.

Care must be taken when landing a Roll Up stretcher at the head of a vertical section, particularly when there is low head room. Adequate support must be given until the casualty is horizontal, and safe!

Horizontal to Vertical Transition.

Shown is a example of rigging to assist in the horizontal - vertical transition.

The RED rope is attached via a Double Fig 8 or Double Bowline 'V' hang to the RED Stretcher Haul point at the shoulder level, using suitable karabiners.

The BLUE Rope is attached in a similar manner to the BLUE head haul points.

The main load is taken on the RED to lift the stretcher from the horizontal into the vertical mode.

The BLUE ROPE is taken in at the same time BUT NO LOAD is applied until the stretcher is fully in the Vertical mode.



Suggested Fitting Of Vertical Haul and Lifelines to the Slix Stretcher

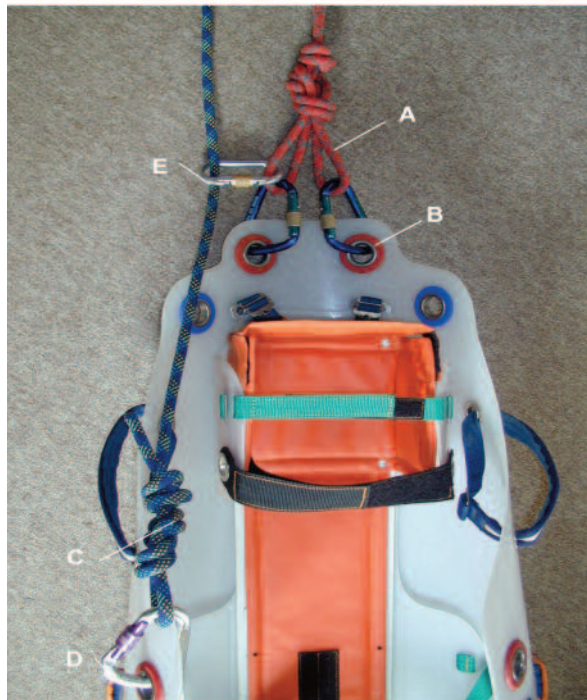


Fig. 1.
Vertical Haul Lifeline

Attach the haul line 'A' to 2 screw gate karabiners with a double fig.'8' knot, (keep bights short), and attach to the Vertical haul points 'S' Tighten the screw gates on the karabiners.

Attach the Lifeline 'C' to a screw gate karabiner with a fig. '8' knot, and attach the karabiner to the Horizontal Haul point 'O'. Tighten the screw gate on the karabiner.

A karabiner 'E' is clipped over the Lifeline 'C' and then into the bight of the haul line. This will prevent the stretcher hanging sideways in the event of a Haul line or main belay failure.

It is important that the bights on the double Fig. 8 knots are even. Do not tie a single loop Fig 8 and then attach to the karabiners as this will cause the head of the stretcher to curl excessively.

SEE PAGE 14 FOR IMPORTANT CONSIDERATIONS



Fig 2
Alternative Vertical Lifeline Attachment
When using this method all of the haul points must be used to ensure that the load is shared.

Fitting Vertical Haul Lines to Slix Stretchers



YES

Screwgate karabiners and double Fig 8



Sewn Slings and karabiners OR Delta Mallion Rapide



NO



Do not use sling or threaded rope as shown as this will cause the head of the stretcher to buckle or fold.

Recommended Fitting of Horizontal Haul and Lifelines to the Slix 100 Stretcher

Fig. 1.

Horizontal Haul Lifeline.

Attach the Security rope A to the Vertical Haul Points 8 using a Double Fig 8 and two screw gate karabiners.

Fit the Horizontal Haul Strops to a screw gate karabiner D and then each leg of the Strop to the Horizontal Haul Points C.

NOTE! Red to Red/Blue to Blue gives a Head Up attitude. Red to Blue/Red to Blue gives a Head Down attitude.

Attach the Haul Rope E to the karabiner D with a Fig 8 knot.

Link the Security rope A to the Haul rope E with a karabiner F. To avoid 3 way load attach the karabiner to the loop of the Haul rope Fig 8 knot NEVER into the Haul karabiner D.

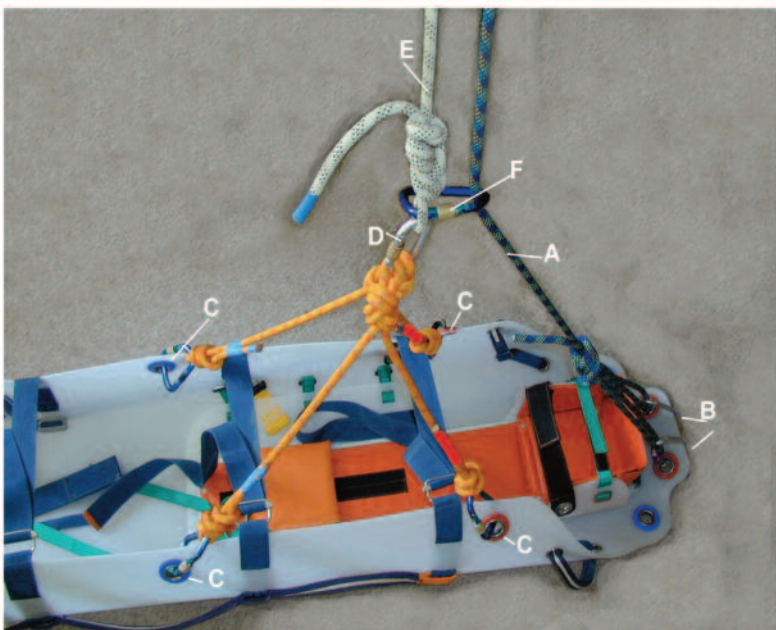
Connecting like this will keep the Stretcher in a more horizontal attitude in the event of a Haul rope or Security rope failure.

See p 9 for Important Strop rigging information

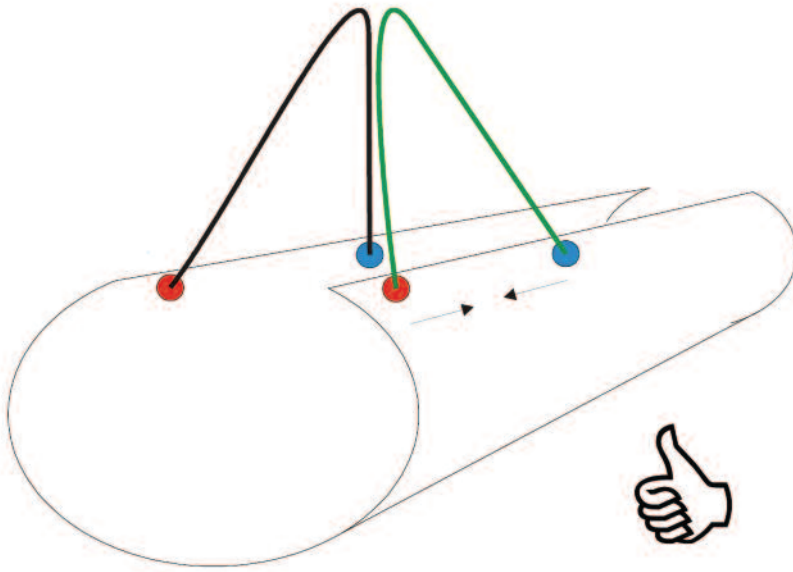
Note that Horizontal and Vertical Haul Strops Are Now Supplied As Sewn Slings to EN795 1998.

Instructions for attachment and use are the same as rope slings.

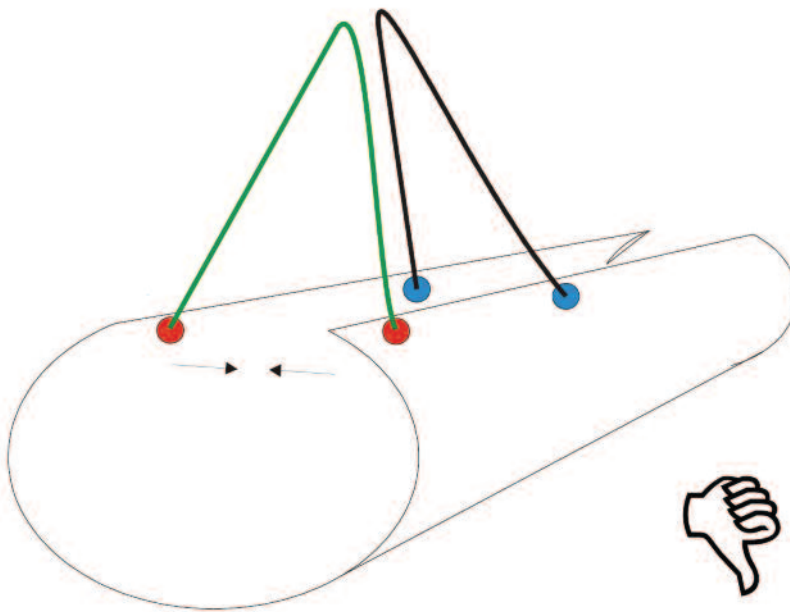
It is essential that the karabiner used to attach the hauling slings/strops are Screw Gate karabiners to a minimum of 25kN and a gate opening of at least 24mm. Damage to the edge of the stretcher WILL occur if smaller gate opening karabiners are used.



Recommended Fitting of Horizontal Haul Strops to the Slix 100 Stretcher



By connecting the legs of the Strop to the same side the load is transferred along the Stretcher, like a shopping bag



If the legs of a Strop are connected across the stretcher then the load will compress the casualty

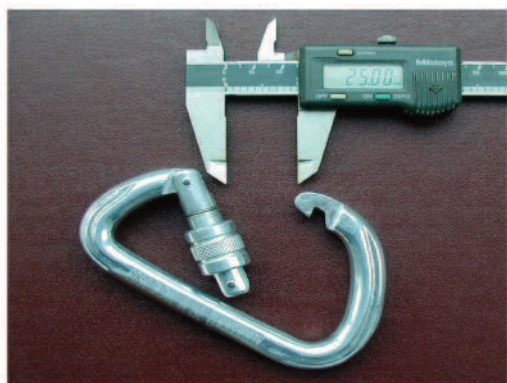
Make sure that all karabiners are correctly fitted and the gates screwed closed before commencing a haul.

Always use independent belay points for the Haul and Security ropes.

Keep the same tension on both ropes to lessen the chance of a shock load in the event of a rope or belay failure.

Karabiners & Hauling Strops

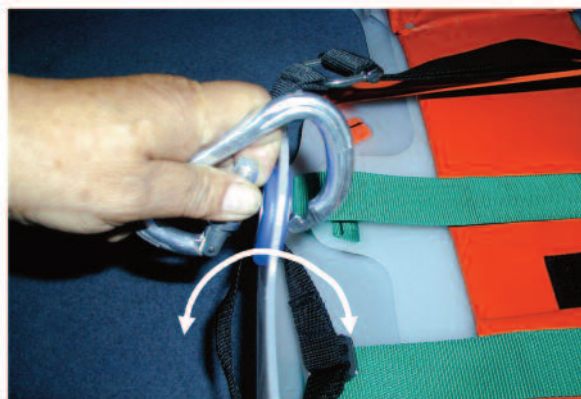
Notes on Karabiners.



Use only karabiners with a gate opening of greater than 20mm.

Using smaller karabiners will result in damage to the edge of the stretcher skin.

Showing the easy way to fit and remove karabiners.



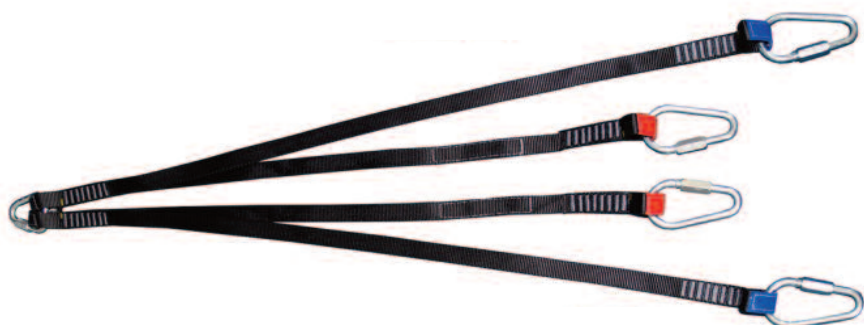
Forcing the karabiner into the eyelet will result in damage to the edge of the stretcher skin.

Notes on Hauling Strops

Sewn Strops are now supplied as standard.

Colour coded to give:

Head up-RED to RED, BLUE to BLUE



Inspection and Cleaning of The Slix 100 Stretcher

After each use or practice session the Slix 100 stretcher should be cleaned and inspected for damage by a competent person.

It is very important the stretcher and ancillary equipment is stored ready for use in a first class condition.

IF ANY CLOSURE OR LIFTING STRAPS HAVE BEEN IN CONTACT WITH ANY CHEMICAL, SOLVENT, ALKALINE, ACID OR ANY CONTAMINANT WHICH MAY DEGRADE POLYETHYLENE, POLYESTER OR NYLON THE STRETCHER AND/OR LIFTING STRAPS MUST NOT BE USED UNDER ANY CIRCUMSTANCES.

IF THE STRETCHER HAS BEEN SUBJECT TO A HEAVY DROP ONTO THE VERTICAL OR HORIZONTAL HAULING POINTS DURING A PRACTICE OR A INCIDENT THE STRETCHER MUST BE INSPECTED, BY A COMPETENT PERSON IMMEDIATELY AND BEFORE FURTHER USE.

Refer to Page 5 part identification.

Oil, grease, blood, body fluids or non aggressive contaminants may be removed with warm- not hot- water and soap.

If a power washer is available it may be used with care. After cleaning rinse thoroughly with clean water, hang vertically and allow to dry in a warm, dry atmosphere.

DO NOT APPLY HEAT.

Inspect Horizontal and Vertical Lifting Slings for physical or chemical damage. The integrity of the Lifting Straps is essential and particular attention should be given to the stitching and the loop section of the Slings for wear, If any damage is present DO NOT USE. Replace damaged Lifting Slings immediately.

Inspect all Closure Straps, Closure Buckles, Head & Foot Closure Straps, Carry Handles, Adjustable Foot Loops and Buckles and Head & Side Grab Handles for physical or chemical damage. Damaged Straps may be replaced. Contact the manufacture for replacements. DO NOT USE THE STRETCHER before changing damaged Straps.

Pay particular attention to the Buckles securing the Head & Side Grab Handles. Make sure that the Buckles are secured correctly with the end of the tape passed back through the Buckle.

Inspect the Vertical Hauling Plate/Spinal Splint attachment point, for damage and/or distortion. Inspect the area of stretcher around the Vertical Hauling Plate and the Horizontal Hauling Points. If any distortion or splitting is found DO NOT USE. RETURN TO THE MANUFACTURER FOR FULL INSPECTION.

IF IN ANY DOUBT ABOUT THE INTEGRITY OF THE SLIX100 STRETCHER PLEASE CONTACT THE MANUFACTURER.

Storage of the Slix 100 Stretcher and Spinal Splint

Correct storage is vital to ensure that the Stretcher and Spinal Splint are in first class condition at all times. Refer to Pages 9 and 20 for the correct cleaning and inspection of the units before storing.

The Stretcher and Spinal Splint must be stored in the Carry Bag in a dry place that is marked and accessible at all times.

It is good practice to seal the bag after the kit has been inspected and packed. A tear- off, non replaceable, type of closure should be threaded through the top of the Carry Bag.

Sealing the Carry Bag discourages tampering or pilfering and the rescuers are assured that the contents are present in the event of a incident.

To allow storage in a manner that does not ensure that the contents are correctly cleaned, inspected and complete is negligent.

The Stretcher and Spinal Splint are manufactured from nylon, polyethylene, stainless steel and polyester and will not deteriorate if cleaned and stored correctly.

The inspection, cleaning and packing of the Stretcher and Spinal Splint should be undertaken by a competent person and logged.

Abtech recommends that regular inspection, if stored in a dry place, should take place at no more than 6 monthly intervals and the inspection logged by a competent person.