

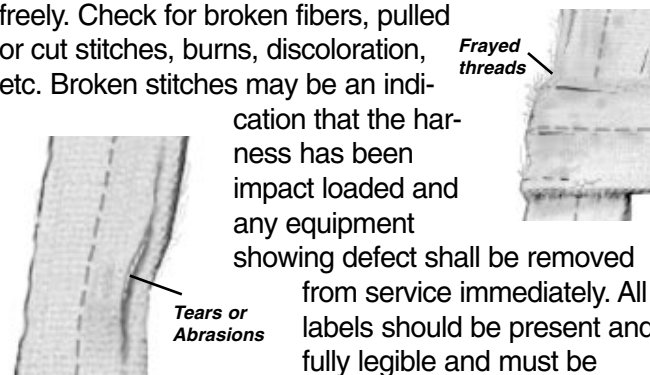
# Important User Instructions

## GENERAL:

EN358, EN361 and ANSI 10.14 require users to be trained by a competent person before this harness is used on the job. Each system shall be inspected every six months according to the manufacturer's recommendation and the date of each inspection shall be recorded on the metal tag attached to the harness. Equipment showing any defect shall be withdrawn from service immediately. All fall protection systems subjected to impacts caused by a free fall or by testing shall be removed from service and should not be used again.

## INSPECTION:

Each unit shall be visually inspected for defects prior to each use and particular attention should be directed to the following potential defects: Cuts, Cracks, Tears or Abrasions, Undue Stretching, Damage Due To Deterioration, Mildew, Operational Defects, Contact With Heat, Acids or Other Corrosives, Damaged or Distorted D-rings, Buckles, or Eyelets, Sharp Edges, Burrs, or Worn Parts. Make sure all buckles work freely. Check for broken fibers, pulled or cut stitches, burns, discoloration, etc. Broken stitches may be an indication that the harness has been impact loaded and any equipment showing defect shall be removed from service immediately. All labels should be present and fully legible and must be replaced if illegible or missing.



replaced if illegible or missing.

All Lewis Manufacturing Company safety equipment is inspected for quality assurance according to ANSI/ANQC Q9003-1991. The FW-1 also meets or exceeds the specifications of ANSI 10.14 (1991). The large metal tag riveted to the harness waist belt shows ANSI compliance. This tag is also used to register a permanent record of belt/tail rope inspection. A qualified person other than the user must inspect this safety device twice a year using the listed potential defects as a reference. The month and the year

of inspection is recorded by marking the correct raised letter or number on the tag using a small hammer and a tool such as a center punch.

The smaller tag denotes the following:

1. The individual serial number of the item.
2. The type as it appears in our catalog (EX. TYPE SC) (EX. TYPE TR-10-D-PC).
3. The work load of that particular item.

The item in this box can be identified by referring to the following information:

Serial No. \_\_\_\_\_

Type: \_\_\_\_\_

Inspected By: \_\_\_\_\_

Date: \_\_\_\_\_

The fabric label attached to the belt indicates the EN358: 2000 and EN361: 2002 numbers which the systems have also been proven to meet or exceed.

Do not alter this belt in any way. Failure to use this belt properly may result in serious bodily harm.

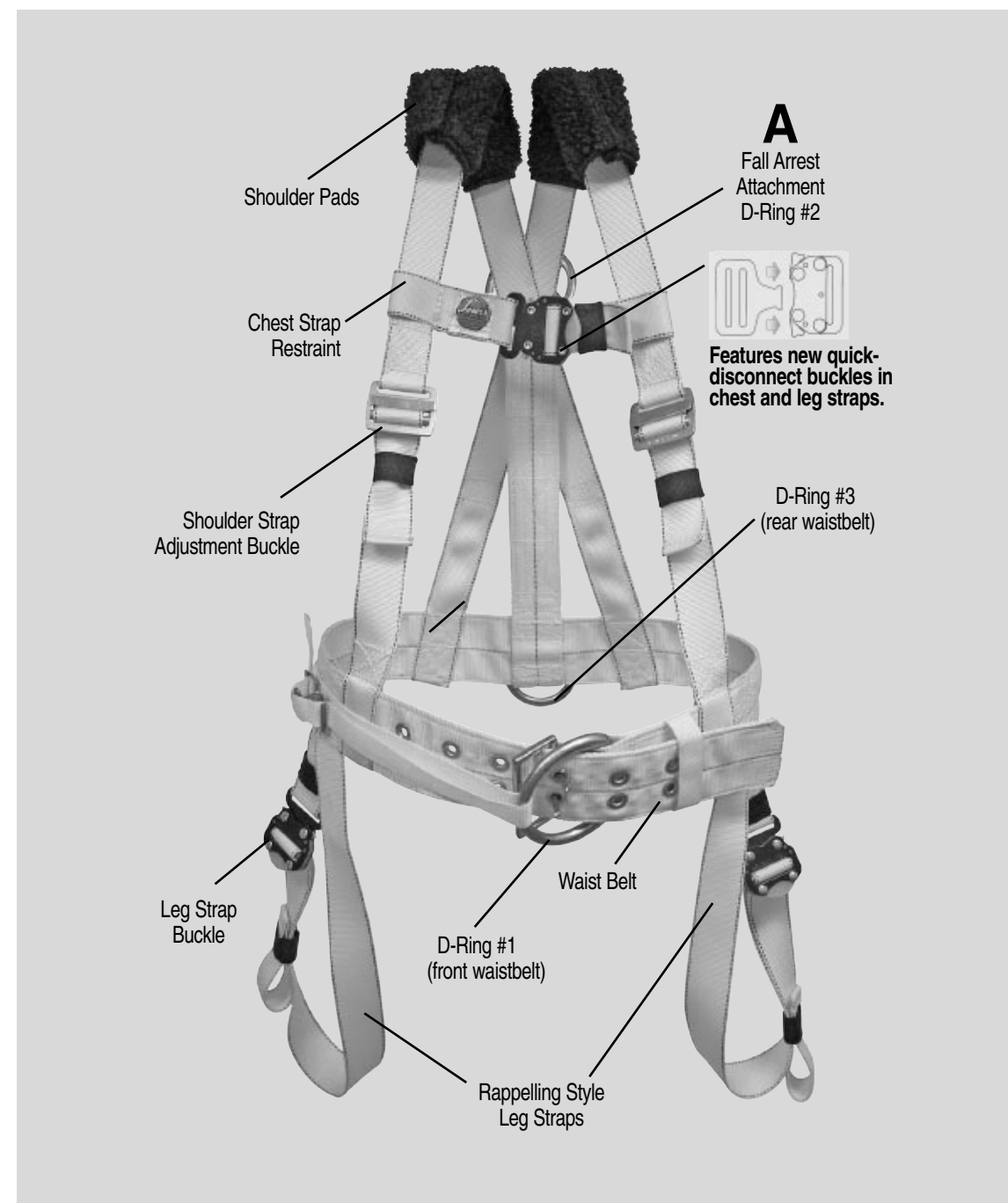
## STORAGE OF EQUIPMENT:

After each use, each unit should be stored in a cool, dry place and not subjected to direct sunlight. Avoid areas where chemical vapors may exist. Thoroughly inspect the FW-1 after any period of extended storage.

## CLEANING INSTRUCTIONS:

1. Belt may be cleaned using warm water and a mild detergent. Wipe off hardware with clean, dry cloth and hang to air dry. Do not force dry with heat.
2. Dry naturally, away from direct source of heat.
3. An excessive buildup of dirt, oil, paint, etc. may prevent the FW-1 from working properly and in severe cases degrade the webbing to a point where it weakens and should be removed from service.

# FW-1 Instruction Manual



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Toll Free: 1-888-398-4719 Fax: (405) 632-8608 • e-mail: lewismfg@aol.com

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# Type FW-1 Fall Arrest Harness



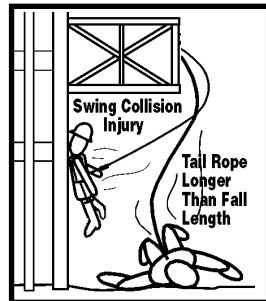
# How To Put On The Fall Arrest Body Harness

The FW-1 is a fall arrest harness for general use applications where fall arrest is required. It features our new safety snaps for customers who prefer a quick-disconnect type of snap over the conventional tongue/buck attachment. The FW-1 has a rear D-ring at waist level that provides a well placed leverage point while working high on a rig. Meeting or exceeding the latest OSHA standards, this harness is a true fall arrest harness equipped with a rear D-Ring positioned between the shoulder blades for attachment of a shock absorption device.

The FW-1 is constructed of a new lighter weight "High-Visibility" yellow nylon webbing. This nylon and independent leg straps in a new "rappelling" design improve comfort, safety and fit. In addition, the nylon is treated for UV light resistance and has a wear stripe indicator woven within the mesh. During the pre-donning inspection, this allows the user an additional way to check for wear that may require belt replacement. If you have any questions regarding this belt or any of our products, please call us Toll Free and we will be happy to assist you any way possible. *Invest in Safety with genuine Lewis Equipment.*

The purpose of the FW-1 is to provide fall arrest when the user falls toward the ground in either a feet-first or head-first attitude.

The belts are designed for use with a shock absorption device on the rear shoulder level D-Ring. The rear waist level D-Ring is for a genuine Lewis Tailrope. Tailropes will not prevent injury if the tailrope is longer than the potential fall to the ground or substructure (as illustrated). The tailrope must be attached so maximum free fall is 1.8 feet (0.5 meters). The D-Ring on the front of the belt can be used for climbing up the rig. All D-Rings at waist level are for work positioning only.



The maximum arrest distance for an energy absorber lanyard combination is 5.75m excluding any displacement of the harness. The minimum clearance between the anchorage and the ground/obstruction is the height of the D-Ring on the harness to the ground (plus an allowance for harness stretch during fall) e.g. 2m plus the 3.75m allowed for lanyard plus extended shock absorber. Total of 5.75m (about 19 ft.) to ensure that the wearer does not hit the ground.

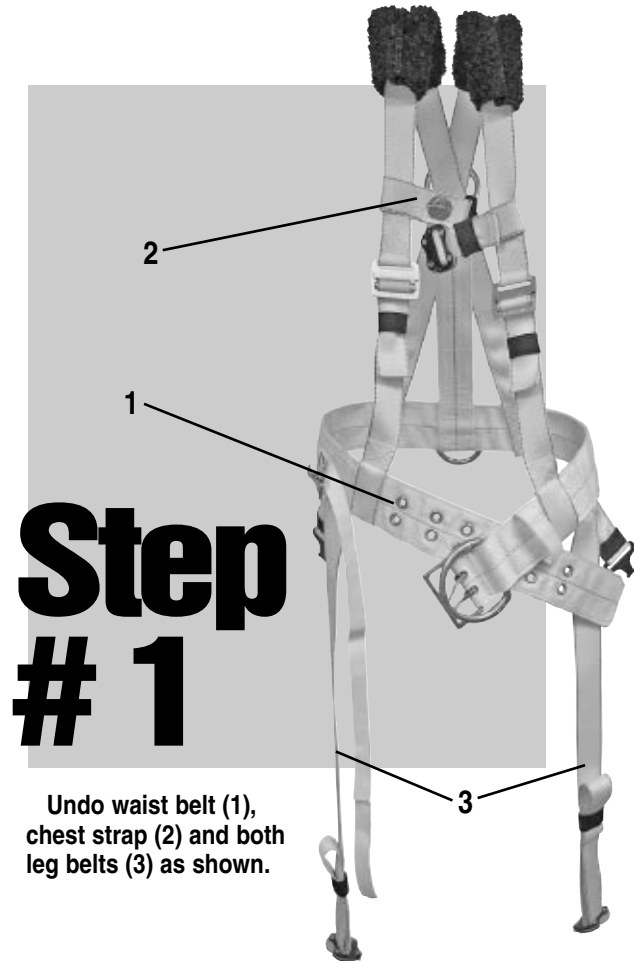
These safety harnesses are manufactured in conformance with the provisions of European standards EN358: 2000 and EN361: 2002 and shall, therefore, be used only as stipulated in those provisions.

It is recommended that the safety harnesses be used as a personal issue according to the size ranges for each model as shown in the chart below. If these harnesses are to be used by several different people, each user should follow manufacturers instructions for use, inspections, etc. in the same way as a personal issue.

This operating instructions manual must always be kept available as long as the safety harness with which it was furnished is in service. The metal inspection tag on the harnesses shall be kept current as per instructions on the reverse side of this manual.

## Size Chart

Part #	Waist Size Range	Metric
FW-1-XS	28" - 36"	71 - 91 cm
FW-1-S	29" - 38"	74 - 97 cm
FW-1-L	41" - 49"	104 - 124 cm
FW-1-XL	43" - 52"	109 - 132 cm



## Step # 1

Undo waist belt (1), chest strap (2) and both leg belts (3) as shown.



### WARNING

Do not alter any Lewis Manufacturing equipment in any way. This includes the removal of shoulder straps, leg straps, hardware or rivets. Alteration or improper use of this belt can result in severe bodily harm or even death. Lewis Manufacturing does not assume any liability for accident or injuries resulting from a field-repaired or altered belt. Avoid attaching lanyard around sharp edges. Each unit shall be visually inspected for defects prior to each use as per directions described in the inspection section of this pamphlet. Record inspection dates monthly on metal tags attached to safety belts and tail ropes.



**WARNING**  
Don't use this belt if you weigh more than 300 lbs.! (136 kg.)



Front D-Ring

## Step # 2

Place shoulder straps over your head and onto your shoulders and adjust shoulder straps and waist belt as illustrated and then fasten. Belt should feel snug but not too tight as to restrict circulation or excessively inhibit movement.

Waistband should be placed at or slightly above the waist level of regular work pants as shown.

Secure leg straps snugly around legs.



Waistband Level



## Step # 3

During the wear-in period, the harness will become more pliable. Periodic readjustment may be necessary.



FW-1 in use. "A" marking denotes the point for attachment for tailrope and is stamped in indelible red ink in the center of the dorsal D-ring.

Rearview with tail rope secured for fall arrest attachment.



# Important User Instructions

## **WARNING**

A fall can result in serious injury or death. Do not use this equipment without proper training. Read, understand and follow all instructions.

**FOR QUESTIONS, CALL 1-888-398-4719**

All workers using fall protection devices must read and understand all information contained in this brochure. It is the employer's responsibility to ensure that all users are trained in the proper use, inspection and maintenance of fall protection equipment. Fall protection training should be an integral part of a comprehensive safety program.

Proper use of fall arrest systems can save lives and reduce the potential of serious injuries from a fall. The user must be aware that forces experienced during the arrest of a fall or prolonged suspension may cause bodily injury. Consult a physician if there is any question about the user's ability to use this product. Pregnant women and minors must not use this product.

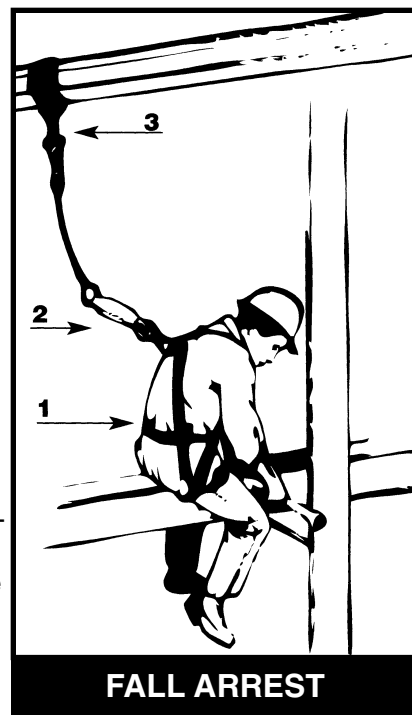
## **GENERAL REQUIREMENTS**

- All warnings and instructions shall be provided to users. Warnings and instructions must be read and understood prior to using the equipment.
- Equipment must be used by trained personnel only.
- All users must understand all OSHA regulations, ANSI standards, and other relevant regulations and standards pertaining to fall protection equipment.
- To ensure that accidental disengagement cannot occur, a competent person must ensure system compatibility.
- All equipment must be visually inspected before each use.
- All equipment should be inspected by a qualified person on a regular basis.
- Equipment must not be altered in any way. Repairs must be performed only by the equipment manufacturer, or persons or entities authorized in writing by the manufacturer.

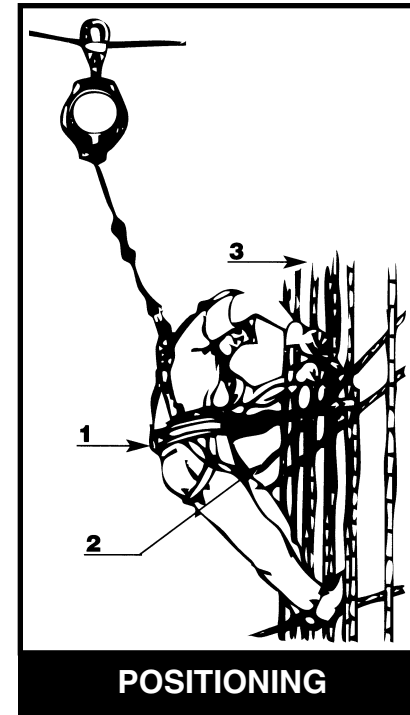
- Any product exhibiting deformities, unusual wear, or deterioration must be immediately discarded.
- Any equipment subjected to a fall must not be used again.
- The user shall have a rescue plan and the means at hand to implement it when using this equipment.
- Never use fall protection equipment for purposes other than those for which it was designed. Fall protection equipment should never be used for towing or hoisting.
- Always check for obstructions below the work area to make sure potential fall path is clear.
- All synthetic material must be protected from slag, hot sparks, open flames, or other heat sources.
- Environmental hazards should be considered when selecting fall protection equipment. Equipment must not be exposed to chemicals which may produce a harmful effect. Polyester should be used in certain chemical or acidic environments. Consult the manufacturer in case of doubt.
- Maximum working load is 310 lbs., unless labeled otherwise.

## **SYSTEM COMPATIBILITY**

Lewis Manufacturing full body harnesses are designed for use with Lewis approved components. Substitution or replacement with non-approved component combinations or sub-system or both may affect or interfere with the safe function of each other and endanger the compatibility within the system. The incompatibility may affect the reliability and safety of the total system.



**FALL ARREST**



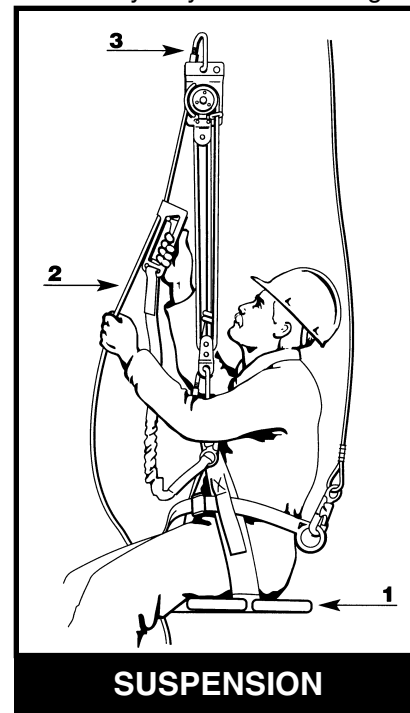
**POSITIONING**

D-rings should be used for positioning only.

- Shoulder D-rings should be used for retrieval only.

## **CONNECTING DEVICES**

- Use only lanyards containing locking snap hooks.



**SUSPENSION**

level will not be struck should a fall occur.

## **WARNINGS**

### **BODY WEAR**

• Visually check all buckles to assure proper and secure connections before each use.

• Fall protection connecting devices should be attached to the back D-ring of a full body harness or body belt.

• Never attach non-locking snaps to a D-ring.

• Side, front and chest

- Do not tie knots in lanyards.

- Never disable locking keeper or alter connecting device in any way.
- Do not attach multiple lanyards together, or attach a lanyard back onto itself.

- Do not wrap lanyards around sharp or rough edges. Use a cross arm strap to wrap around surface and connect to lanyard snap hook. For extremely sharp surfaces, use wear pad to protect strap from damage.

- Do not allow rope or webbing to come in contact with high temperature surfaces, welding, or other heat sources.

- The use of shock absorbers, like the Lewis Slo-Stop, is highly recommended to reduce fall arresting forces.

- Never use natural materials (manila, cotton, etc.) as part of a fall protection system.

- Do not tie-off into an object which is not compatible with lanyard snap hooks.

- Make sure snap hoop is positioned so that its keeper is never loadbearing.

## **ANCHOR POINTS**

- Anchor point must be capable of supporting 5,000 pounds per worker.

- Always work directly under the anchor point to avoid a swing-fall injury.

- Never wrap lanyards around sharp or rough anchor points. Use a lanyard anchor for wrapping around surface and connect lanyard snap hook to lanyard anchor D-ring.

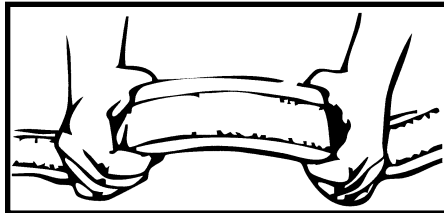
- Ensure that anchor point is at a height that limits free-fall distance to six feet or less.

- Anchor point must be compatible with snap hook and must not be capable of causing a load to be applied to snap hook keeper.

- Ensure that anchor point is at a level that will not allow a lower level to be struck should a fall occur.

- When selecting an anchorage point, always remember that shock absorbers may elongate up to 3 1/2 feet.

- Never use an anchor point which will not allow snap hook keeper to close.



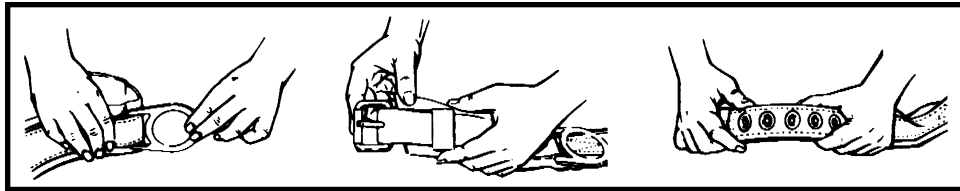
**Fig. 1 INSPECTION**

## INSPECTION AND MAINTENANCE

Lewis Manufacturing body belts and harnesses are designed for today's rugged work environments. To maintain their service life and high performance, all belts and harnesses should be inspected frequently. Visual inspection before each use is just common sense. Regular inspection by a competent person for wear, damage or corrosion should be a part of your safety program. Inspect your equipment daily and replace it if any of the defective conditions explained in this manual are found.

### BODY BELT/HARNESS INSPECTION

(For harness inspection, perform the following procedures for all harness straps.)



**Fig. 2 INSPECTION**



**Fig. 3 INSPECTION**

### 1. BELTS AND RINGS

Beginning at one end, holding the body side of the belt toward you, grasp the belt with your hands 6 to 8 inches apart. Bend the belt in an inverted "U" as shown (Fig. 1). The surface tension resulting makes damaged fibers or cuts easier to see. Follow this procedure the entire length of the belt or harness. Watch for frayed edges, broken fibers, pulled stitches, cuts or chemical damage.

**a. Check D-rings** and D-ring metal wear pad (if any) for distortion, cracks, breaks, and rough or sharp edges

(Fig. 2) The D-ring bar should be at a 90° angle with the long axis of the belt and should pivot freely.

**b. Attachments of buckles** and D-rings should be given special attention. Note any unusual wear, frayed or cut fibers, or distortion of the buckles or dees.

**c. Inspect for frayed or broken strands.** Broken webbing strands generally appear as tufts on the webbing surface. Any broken, cut or burned stitches will be readily seen.

**d. The tongue, or billet** of the belts receives heavy wear from repeated buckling and unbuckling. Inspect for loose, distorted or broken grommets. Belts should not have additional, punched holes.

### 2. TONGUE BUCKLE

Buckle tongues should be free of distortion in shape and motion. They should overlap the buckle frame and move freely back and forth in their socket. Roller should turn freely on frame. Check for distortion or sharp edges (Fig. 3).

### 3. FRICTION AND MATING BUCKLES

Inspect the buckle for distortion. The outer bars and center bars must be straight. Pay special attention to corners and attachment points of the center bar.

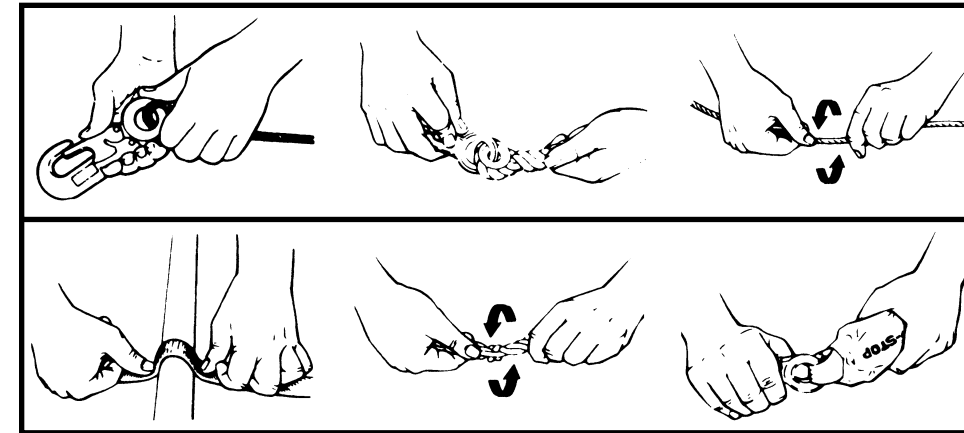
### LANYARD INSPECTION

When inspecting lanyards, begin at one end and work to the opposite end. Slowly rotate the lanyard so that the entire circumference is checked. Spliced ends require particular attention. Hardware should be examined under procedures also detailed below, i.e., snaps, D-ring and thimbles.

### 1. HARDWARE

**a. Snaps:** Inspect closely for hook and eye distortions, cracks, corrosion, or pitted surfaces. The keeper (latch) should seat into the nose without binding and should not be distorted or obstructed. The keeper spring should exert sufficient force to firmly close the keeper. Keeper locks must prevent the keeper from opening when the keeper closes.

**b. Eyelet:** The eyelet must be firmly seated in the eye of the splice, and the splice should have no loose or cut strands. The edges of the eyelet must be free of sharp edges, distortion, or cracks (Fig. 4).



**Fig. 4 LANYARD INSPECTION**

### 2. STEEL LANYARD

While rotating the steel lanyard, watch for cuts, frayed areas, or unusual wearing patterns on the wire (Fig. 9). Broken strands will separate from the body of the lanyard.

### 3. WEB LANYARD

While bending webbing over a pipe or mandrel, observe each side of the webbed lanyard. This will reveal any cuts or breaks. Swelling, discoloration, cracks, charring are obvious signs of chemical or heat damage. Observe closely for any breaks in the stitching.

### 4. ROPE LANYARD

Rotation of the rope lanyard while inspecting from end-to-end will bring to light any fuzzy, worn, broken or cut fibers. Weakened areas from extreme loads will appear as a noticeable change in original diameter. The rope diameter should be uniform throughout, following a short break-in period.

### 5. LEWIS SLO-STOP

The outer portion of the pack should be examined for burn holes and tears. Stitching on areas where the pack is sewn to D-rings, belts, or lanyards should be examined for loose strands, rips and deterioration.



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## CLEANING

Basic care of all Lewis safety equipment will prolong the curable life of the unit and will contribute toward the performance of its vital safety function. Proper storage and maintenance after use are as important as cleansing the equipment of dirt, corrosives, or contaminants. Storage areas should be clean, dry and free of exposure to fumes or corrosive elements.

### 1. NYLON AND POLYESTER

Wipe off all surface dirt with a sponge dampened in plain water. Squeeze the sponge dry. Dip the sponge in a mild solution of water and commercial soap or detergent. Work up a thick lather, with a vigorous back and forth motion. Then wipe the belt dry with a clean cloth. Hang freely to dry, but away from excessive heat.

### 2. DRYING

Belts and other equipment should dry thoroughly without close exposure to heat, steam, or long periods of sunlight.



**WARNING**

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Lewis  
Manufacturing  
equipment in*

*any way. This includes the removal of shoulder straps, leg straps, hardware or rivets. Alteration or improper use of this belt can result in severe bodily harm or even death. Lewis Manufacturing does not assume any liability for accident or injuries resulting from a field-repaired or altered belt. Avoid attaching lanyard around sharp edges.*

*Each unit shall be visually inspected for defects prior to each use as per directions described in the inspection section of this pamphlet. Record inspection dates monthly on metal tags attached to safety belts and tail ropes.*