



## **Harness System Inspection Procedures**

### **General**

1. Check for wear and deterioration.

Before each use, carefully inspect your harness for signs of wear, deterioration, or evidence of impact loading. Visually inspect for loose threads, pulled rivets, burns, cuts, distortions, abrasions, or any other evidence of chemical or physical deterioration that may have weakened the material or assembly.

2. Inspect hardware for malfunctions and cracks.

Check all snap hooks, buckles and D-Rings.

3. Remove from service and replace all worn or damaged equipment.

If any part does not pass inspection, immediately remove the harness from service and destroy.

### **Specific**

1. **Stitching and webbing.**

Check stitching for broken, burned, cut or pulled stitches. Broken strands appear as tufts on the surface. To inspect, hold the webbing with your hands six to eight inches apart. Bend the webbing in an inverted U to cause surface tension, exposing problem areas. Inspect all web areas. Damage from cuts, abrasion, corrosives, heat or chemicals should be apparent.

2. **Buckle and belt ends.**

Inspect the ends of all straps. They are subject to wear as a result of repeated opening and closing. Enlargement or distortion of holes may indicate excessive wear or possible damage through impact loading. Harnesses with unusually enlarged or distorted holes should fail inspection.

### **3. D-Rings.**

All D-Rings should be checked for distortion. D-ring attachment points should be checked for unusual wear or damaged fibers. Badly pitted D-rings indicate chemical corrosion, and the equipment should fail inspection.

### **4. Stitching or rivets at hardware attachment points.**

For stitched attachment points, check that stitching is not broken, burned, cut or pulled. Check all riveted attachment points for tightness. Badly pitted rivets indicate chemical corrosion, and the equipment should fail inspection.

### **5. Tongue buckles.**

All tongue buckles should be checked for distortion, sharp edges and cracks. The tongue should move freely and overlap the frame. Rollers should not be distorted and should roll freely.

### **6. Friction slide adjusters.**

Friction slide adjusters should be checked for sharp edges, distortion. Make sure that the outer bars and center bars are straight. Also check corners and attachment points for wear and cracks.

### **7. Easy-connect buckle.**

Easy-connect buckle (square rings) should be checked for distortion, sharp edges and cracks. For stitched attachment points, check that stitching is not broken, burned, cut or pulled.

### **8. Friction style buckle.**

Friction style buckles should be checked for sharp edges, cracks and distortion. Make sure outer bars and center bar are straight. Also check corners and attachment points for wear.

### **9. Leather.**

Leather should be soft and supple. Visually check leather for cracks tears, burns, brittleness or other signs of damage age or abuse. While the leather components of the system are not load bearing, damage to the leather is a sign that the entire harness MAY NOT be in acceptable condition. Re-inspect entire system. Leather should both look and feel good

## **10. Destroy or replace worn or damaged Harnesses.**

**If evidence of excessive wear, deterioration or mechanical malfunction is observed; the harness should be destroyed. Never work with worn or damaged equipment. Using damaged or worn equipment can cause serious injury or death.**

## **11. The inspector is the most important part of any inspection procedure.**

**Check all equipment thoroughly and follow all safety procedures and guidelines. Don't take any shortcuts.**

**Important Note: OSHA specifies that all employers covered by the Occupational Safety and Health Act are responsible for inspection and maintenance of all tools and equipment used by employees, whether owned by the employees or by the company. All Ultra-Safe equipment should be inspected before each use, and immediately removed from service if equipment does not pass inspection.**

### **General**

#### **1. Check for wear deterioration.**

**Before each use, carefully inspect your complete Ultra-Safe system for signs of wear or deterioration, or evidence of impact loading. Visually inspect for loose threads, pulled rivets, burns, cuts, distortions, abrasions, or other evidence of chemical or physical deterioration that may have weakened the material or assembly.**

#### **2. Inspect hardware for malfunctions and cracks.**

**Check all snap hooks, buckles and D-Rings.**

#### **3. Destroy and replace all worn or damaged equipment.**

**Immediately destroy and replace any component which does not pass inspection.**

### **Specific**

#### **1. Stitching and webbing.**

**Check stitching for broken, burned, cut or pulled stitches. Broken strands of**

webbing appear as tufts on the webbing surface. To visually check for damage caused by corrosives, heat, chemicals and other conditions, hold the connecting device with your hands six to eight inches apart. Bent the webbing in an inverted "U" to cause surface tension and expose problem areas. Inspect entire length. For deceleration units, check the stitching for broken, burned, cut or pulled stitches, and the breakaway jacket for cuts, tears, broken stitches, stretch marks or other evidence of impact load. For aircraft-cable lanyards, check the full length for breaks, burns or cuts in the vinyl covering and the aircraft cable.

## **2. Check for broken strands.**

Inspect rope lanyards for broken strands by twisting the rope slightly to undo the braiding. Inspect the entire lanyard in this manner. Lanyards with broken strands must be discarded.

**NOTE:** Twisted rope, such as the nylon filament and polyplus rope used in Ultra-Safe lanyards, is subject to a condition known as "hockling", which is similar to the twisting we often see in a telephone handset cord. This can be caused by a repetitive twisting movement such as normal hand rotation in hooking and unhooking, a lanyard dangling freely, or by using the lanyard to suspend equipment. Preventive measures include: 1) Never using a lanyard for towing or hoisting, 2) Inspection and smoothing out after each use, and 3) Storing neatly. Some hockling is normal, and in itself is not cause to discard the lanyard.

## **3. Inspect all snap hooks, D-Rings and other metal parts.**

Hardware must be checked for sharp edges and cracks. Rollers should not be distorted in shape and should roll freely. Check all parts, especially corners and attachments points, for wear and cracks.

## **4. Destroy and replace all worn or damaged Ultra-Safe equipment.**

If evidence of excessive wear, deterioration or mechanical malfunction is observed, replace the equipment immediately. Never work with worn or damaged Ultra-Safe equipment. Using damaged or worn equipment can cause injury or death.

## **5. The inspector is the most important part of any inspection procedure.**

Check all equipment thoroughly and follow all safety procedures and guidelines. Do not take any shortcuts', they could result in injury or death.

