Product Inspection Guide

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by Honeywell

Ask the Expert ... Ask Miller.

800/873-5242 or 814/432-2118 Fax 800/892-4078 or Fax 814/432-2415

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Harness Inspection Guidelines

Webbing

Grasp the webbing with your hands and bend the webbing, checking both sides. This creates surface tension making damaged fibers or cuts easier to see. Webbing damage may not show up through a sight (visual) inspection only – manual (touch) the harness is equally important.

Visual and Touch Inspection	 ✓ Pass ✗ Fail Criteria
 Cuts, nicks or tears Broken fibers/cracks Overall deterioration Modifications by user Fraying/Abrasions 	
★✓ Discoloration of material	Dependant on cause of discoloration
Hard or shiny spotsWebbing thickness uneven	Indicates heat damage Indicates possible fall
✓ Mildew	Clean harness
 Missing Straps Undue Stretching Burnt, charred or melted fibers Material marked w/permanent marker Excessive hardness or brittleness 	Indicates possible fall Indicates heat damage Check w/manufacturer Indicates heat or uv damage
Stitching Visual and Touch Inspection Pulled stitches Stitching that is missing Hard or shiny spots Cut stitches	Indicates heat damage
★✓ Discoloration of stitching	Dependant on cause of discoloration
Herdware	

Hardware

Visual and Touch Inspection	
Distortion (twists, bends)	Rough or sharp edges
■ Rust or corrosion	Cracks or breaks
Broken/distorted grommets	
✗Modification by users (ie additional h	noles)
Tongue buckle should overlap the built in their socket	uckle frame and move freely back and forth
■ Roller of tongue buckle should turn f	reely on frame
Bars must be straight	-
-	

≭All springs must be in working condition

Harness Inspection – Guidelines

Tagging System

Every harness must have a legible tag identifying the harness, model, date of manufacture, name of manufacturer, limitations and warnings.

- Check tag for date of manufacture and remove from service if past adopted service life policy
- **X**If tagging system is missing or not legible remove harness from service.

Cleaning and Storage

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 mild detergent. Work up a thick lather, with a vigorous back and forth motion. Then wipe dry with a clean cloth.

Hang freely to dry, but away from excessive heat, steam or long periods of sunlight.

Storage areas should be clean, dry and free of exposure to fumes, heat, direct ultra violet light, sunlight and corrosive elements.

Note: Do not store harnesses next to batteries, chemical attack can occur if battery leaks.

Inspection Checklist – Fall Protection Equipment

Description:	Model #:
Serial #:	Date of Manufacture:
Inspector:	Date Inspected:
Inspector Signature:	

*****FAIL: Initial_____ REMOVE FROM SERVICE

✓ PASS: □ Initial____ RETURN TO SERVICE

ITEM #	DESCRIPTION	FAIL X	PASS	COMMENTS
		+		

INSPECTION CHECKLIST - HARNESS

	TEI	MC	DESC	CRIPTION Dee Ring	. 3.
	2	x	1	Dee Pad	
	3.	x	1	Nylon Webbing	
-			1	Spring Loaded Friction Buckles	
ŧ		-	1	Elastic Keepers (2)	
e		x	1	Nyton Webbing	
		x	1	Spring Loaded Friction Buckles	
8		x	1	Elastic Keepers (2)	38
		x	1	Nylon Webbing	
	D.	35	1	Stitching	
1		x		Stitching	P/ 14 14
1:		x	1	Tongue Buckle	$\left \left \left$
	16	S	1	이 가지 않는 것 같은 것은 것은 것 같은 것 같은 것 같은 것 같이 있다.	33 MILLER 34
	э. 4.	X	1	Elastic Keeper (1) Nylon Webbing	8-1-3
		- C			
	5.			Stitching	
	5.		1	Stitching	25-19
	7.	10	1	Tongue Buckle	
	В.	13	•	Elastic Keeper (1)	26-1-20
	9.	76 - I	٠,	Stitching	
	D.		٠.	Nylon Webbing	27
	1		1	Stitching	28 22 21
	2,		1	Stitching	
	3.		1	Nylon Webbing	
	4		1	Grommets	And I I I I I I I I
23	5	x	1	Stitching	12 17 171
26	5	×	1	Nylon Webbing	
27		x	1	Stitching	29
28	3	x	1	Stitching	
29		x	1	Nylon Webbing	30 0 0 24 0 0 24
30) ,	x	1	Grommets	
31	. ,	x	1	Sub-Pelvic Strap	
32	2	x	1	Back Strap	30 0 24
33	3	×	1	Stitching - Back Strap	
34		X	1	Stitching - Back Strap	0000000 000000
35	i. i	x	1	Chest Strap Pad	
36	3. ,	×	1	Nylon Webbing	
37		×	1	Stitching	
38		x	1	Mating Link	
39		x	1	Chest Strap Pad	SEDIAL # DATE OF MANUE
		x	1	Nyion Webbing	SERIAL # DATE OF MANUF
				Stitching	INSPECTOR DATE OF INSPECTION
				3 Bar Mating Buckle	INSPECTOR DATE OF INSPECTION
				Elastic Keeper (1)	
				Tagging/Label System	INSPECTOR SIGNATURE
• ()					★ FAIL: □Initial
C	RIT	TER	RIA	X = FAIL	REMOVE FROM SERVICE RETURN TO SERVICE
				✓= PASS	

•

2



Examples of Some Typical Thread (TH) and Stitch Patterns (SP) in Webbing (W)







Adjuster, webbing (Also a buckle)

Buckle, tongue

Grommet Webbing O 0 O Grommets in webbing

Example of Some Typical Connector (Hardware) Components and Elements

Lanyard Inspection

Shock Absorbing Lanyard (Manyard Style) Inspection – Guidelines

Webbing

Grasp the webbing with your hands and bend the webbing, checking both sides. This creates surface tension making damaged fibers or cuts easier to see. Webbing damage may not show up through a sight (visual) inspection only – manual (touch) the lanyard is equally important. **Pay attention to the wrinkled portion of the lanyard.**

Visual and Touch Inspection	✓ Pass
 Cuts, nicks or tears Broken fibers/cracks Overall deterioration Modifications by user Fraying/Abrasions 	¥Fail Criteria
★✓ Discoloration of material	Dependant on cause of discoloration
₭Hard or shiny spots₭Change in core size	Indicates heat damage Indicates possible fall
✓ Mildew	Clean lanyard
 Missing or popped flag Undue Stretching Burnt, charred or melted fibers 	Indicates possible fall Indicates possible fall Indicates heat damage
★✓ Material marked w/permanent marker	Check w/manufacturer
Excessive hardness or brittlenessKnots in lanyard	Indicates heat or uv damage
Stitching Visual and Touch Inspection Pulled stitches Stitching that is missing Hard or shiny spots Cut stitches	Indicates heat damage
★✓ Discoloration of stitching	Dependant on cause of discoloration

Shock Absorbing Lanyard (Manyard Style) Inspection – Guidelines

Snap Hooks

Snap hooks should be of the self-locking type. Snap hooks are generally proof tested to 3,600 lbs. and have minimum tensile strength of 5,000lbs.

Visual and Manual Inspection

✓ Pass苯Fail Criteria

Snap Hook

- Snap hooks should be of the self-locking type
- XNo hook or eye distortion (twists, bends or elongation)
- ¥Latch/keeper should seat into the nose w/o binding
- *Latch/keeper should not be distorted or obstructed
- ★Overall deterioration/Excessive wear
- ✗Modifications by the user
- **≭**Rust/pitting/corrosion
- KNo cracks

KNO excessive wear

No missing partsNo rough or sharp edges

Snap Hook Locking Mechanism

- ★Disengage locking mechanism and open keeper (keeper should open freely)
- Disengage locking mechanism and release (locking mechanism should return to engaged position.

Snap Hook Keeper

- Check keeper spring action by opening the keeper and releasing. (Keeper should return to closed position without hanging up it should not close slowly.)
- Push on keeper without engaging locking mechanism (keeper should not open)
 Check to see the keeper is seated firmly on the snap hook nose there should
- be no side play. (lateral movement)

Tagging System

Every lanyard must have a legible tag identifying the lanyard, model, date of manufacture, name of manufacturer, limitations and warnings.

Check tag for date of manufacture and remove from service if past adopted service life policy

XIf tagging system is missing remove lanyard from service.

Shock Absorbing Lanyard (Manyard) Inspection – Guidelines

Cleaning and Storage

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 mild detergent. Work up a thick lather, with a vigorous back and forth motion. Then wipe dry with a clean cloth.

Hang freely to dry, but away from excessive heat, steam or long periods of sunlight.

Storage areas should be clean, dry and free of exposure to fumes, heat, direct ultra violet light, sunlight and corrosive elements.

Note: Do not store lanyards next to batteries, chemical attack on the lanyard can occurs if battery leaks.

NOTES

Inspection Checklist – Fall Protection Equipment

Description:	Model #:
Serial #:	Date of Manufacture:
Inspector:	Date Inspected:
Increator Signature:	

Inspector Signature:

*****FAIL: **I** Initial

REMOVE FROM SERVICE

✓ PASS: □ Initial____ RETURN TO SERVICE



Hook nose Gate Lock Hinge



Figure 1n Snaphook, Self-locking

Figure 1k Snaphook, Self-locking Style B

Style A

ITEM	DESCRIPTION -	FAIL	PASS	COMMENTS
#	LANYARD	*	✓	
	Flag Indicator			
	Outside Core Webbing			
	Core			
	Stitching			
	Labeling (tags)			
	Wear Pads			
	SNAPHOOK			
	Hook Body			
	Hook Nose			
	Gate (keeper)			
	Lock			
	Eye			
	Hinge			
	Spring (inside gate)			

Rope

Grasp the rope with both hands and rotate the lanyard. Inspect strands from end to end. Remember to check inner strands for signs of damage, deterioration or chemical attack.

Synthetic fiber ropes will show a reduction in strength when used at elevated temperatures. For exposure to excessive temperatures specific for the rope fiber refer to the rope manufacturers specifications and instructions.

Damage and deterioration may not show up through a sight (visual) inspection only – manual (touch) the lanyard is equally important.

Rope Diameter

Weakened areas from extreme loads will appear as a noticeable change in original diameter. The rope diameter should be uniform throughout. If areas appear to be reduced more than *5% from original rope diameter **remove from service** – (ie: 5/8" rope, 5% reduction would be approx. 1/32" – calipers can be used to measure.)

Visual and Touch Inspection	✓ Pass
 Fiber, cuts or nicks Broken fibers Fuzzy or worn fibers Overall deterioration Modifications by user Fraying/Abrasions Hard or shiny spots Fused fibers or strands Change in original diameter Burnt, charred or melted fibers 	★Fail Criteria Indicates heat damage Indicates heat damage Indicates possible fall Indicates heat damage
★✓ Material marked w/permanent marker	Ŭ
Kinks, ● hockling or knots	
✔✓ Discoloration of rope & brittle fibers (such as splinters/slivers)	Dependant on cause of discoloration but may indicate chemical attack or UV degradation
 HOCKLING – unraveling of the lanyard direction or shock loading. 	d due to constant turning in the same

Thimbles and Eyes

Visual and Touch Inspection

✓ Pass★Fail Criteria

Thimbles (steel or plastic) must be seated firmly in the eye. Thimbles must not show any sign of damage. Check around the eye itself for damage, wear or deterioration.

★Missing thimble(s)

- *****Loose thimble(s)
- Damaged thimbles white stress marks, thimble collapsing over itself
- Eye damage due to cuts, nicks, abrasions, fraying, fused areas (look for same indicators as you would for the rope body itself.
- **≭**Eyes with metal thimbles look for rust in or around the eye.

Rope Splices

In the construction of the lanyard the rope is spliced around a plastic or metal thimble. Eye splices in twisted rope having three or more strands shall have a minimum of four tucks (ANSI Z359.1-1992). (CSA-Z259.1-95 requires a minimum of five full tucks.) Both standards require the ends secured to prevent unraveling.

Visual and Touch Inspection

✓ Pass苯Fail Criteria

- Splices not secured properly from unraveling look for tape, shrink wrap tube, stiffening agent. (most common methods used by manufacturers.)
- Splices starting to unravel
- Splices showing damage or deterioration (look for same indicators as you would for the rope itself.

Snap Hooks

Snap hooks should be of the self-locking type. Snap hooks are generally proof tested to 3,600 lbs. and have minimum tensile strength of 5,000lbs.

Visual and Manual Inspection

✓ Pass★ Fail Criteria

Snap Hook

- Snap hooks should be of the self-locking type
- XNo hook or eye distortion (twists, bends or elongation)
- *Latch/keeper should seat into the nose w/o binding
- Latch/keeper should not be distorted or obstructed
- Overall deterioration/Excessive wear
- ★Modifications by the user
- Rust/pitting/corrosion
- KNo cracks
- **≭**No excessive wear

No missing partsNo rough or sharp edges

Snap Hook Locking Mechanism

Disengage locking mechanism and open keeper (keeper should open freely)
 Disengage locking mechanism and release (locking mechanism should return to engaged position.

Snap Hook Keeper

Check keeper spring action by opening the keeper and releasing. (Keeper should return to closed position without hanging up it should not close slowly.)
Push on keeper without engaging locking mechanism (keeper should not open)
Check to see the keeper is seated firmly on the snap hook nose – there should be no side play. (lateral movement)

Tagging System

Every lanyard must have a legible tag identifying the lanyard, model, date of manufacture, name of manufacturer, limitations and warnings.

- Check tag for date of manufacture and remove from service if past adopted service life policy
- *****If tagging system is missing or not legible remove lanyard from service.

Cleaning and Storage

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 mild detergent. Work up a thick lather, with a vigorous back and forth motion. Then wipe dry with a clean cloth.

Hang freely to dry, but away from excessive heat, steam or long periods of sunlight. Lanyards must be dry before storage.

Storage areas should be clean, dry and free of exposure to fumes, heat, direct ultra violet light, sunlight and corrosive elements. Lanyards should be kept off the floor to provide ventilation underneath. Never store directly on a concrete or dirt floor.

Note: Do not store lanyards next to batteries, chemical attack on the lanyard can occurs if battery leaks.

Inspection Checklist – Fall Protection Equipment

Rope Lanyards - Synthetic

Description:	
Serial #:	

Inspector:

Inspector Signature:

*****FAIL: Initial REMOVE FROM SERVICE

✓ PASS: □ Initial____

Date of Manufacture:

Date Inspected:

Model #:

RETURN TO SERVICE



Figure 1n Snaphook, Self-locking

ITEM	DESCRIPTION -	FAIL	PASS	COMMENTS
#		X	1 700	COMMENTS
#	LANTARD	-		
	Rope Fibers			
	Rope Splices			
	Thimbles & Eyes			
	Rope Diameter			
	Labeling (tags)			
	Rope Hockling			
	SNAPHOOK			
	Hook Body			
	Hook Nose			
	Gate (keeper)			
	Lock			
	Eye			
	Hinge			
	Spring (inside gate)			

Web Lanyards Inspection – Guidelines

Webbing Grasp the webbing with your hands and be This creates surface tension making dama Webbing damage may not show up throug manual (touch) inspection of the lanyard is	ged fibers or cuts easier to see. h a sight (visual) inspection only –
Visual and Touch Inspection	✓ Pass✗ Fail Criteria
 Cuts, nicks or tears Broken fibers/cracks Overall deterioration Modifications by user Fraying/Abrasions 	
★✓ Discoloration of material	Dependant on cause of discoloration
₩Hard or shiny spots₩Change in core size	Indicates heat damage Indicates possible fall
✓ Mildew	Clean lanyard
Undue StretchingBurnt, charred or melted fibers	Indicates possible fall Indicates heat damage
★✓ Material marked w/permanent marker	Check w/manufacturer
Excessive hardness or brittlenessKnots in lanyard	Indicates heat or uv damage
Stitching Visual and Touch Inspection Pulled stitches Stitching that is missing Hard or shiny spots Cut stitches	Indicates heat damage
★✓ Discoloration of stitching	Dependant on cause of discoloration

Web Lanyards Inspection – Guidelines

Snap Hooks

Snap hooks should be of the self-locking type. Snap hooks are generally proof tested to 3,600 lbs. and have minimum tensile strength of 5,000lbs.

Visual and Manual Inspection

✓ Pass✗ Fail Criteria

Snap Hook

- Snap hooks should be of the self-locking type
- **≭**No hook or eye distortion (twists, bends or elongation)
- ¥Latch/keeper should seat into the nose w/o binding
- ★Latch/keeper should not be distorted or obstructed
- Overall deterioration/Excessive wear
- ✗Modifications by the user
- **≭**Rust/pitting/corrosion

XNo cracks

XNo excessive wear

6No missing parts 6No rough or sharp edges

Snap Hook Locking Mechanism

*Disengage locking mechanism and open keeper (keeper should open freely)

Disengage locking mechanism and release (locking mechanism should return to engaged position.

Snap Hook Keeper

Check keeper spring action by opening the keeper and releasing. (Keeper should return to closed position without hanging up it should not close slowly.)

Push on keeper without engaging locking mechanism (keeper should not open)
 Check to see the keeper is seated firmly on the snap hook nose – there should be no side play. (lateral movement)

Tagging System

Every lanyard must have a legible tag identifying the lanyard, model, date of manufacture, name of manufacturer, limitations and warnings.

Check tag for date of manufacture and remove from service if past adopted service life policy

XIf tagging system is missing or not legible remove lanyard from service.

Web Lanyards Inspection – Guidelines

Cleaning and Storage

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 mild detergent. Work up a thick lather, with a vigorous back and forth motion. Then wipe dry with a clean cloth.

Hang freely to dry, but away from excessive heat, steam or long periods of sunlight. Lanyards must be dry before storage.

Storage areas should be clean, dry and free of exposure to fumes, heat, direct ultra violet light, sunlight and corrosive elements.

Note: Do not store lanyards next to batteries, chemical attack on the lanyard can occur if battery leaks.

Inspection Checklist – Fall Protection Equipment

Web Lanyards

Description:	Model #:
Serial #:	Date of Manufacture:
Inspector:	Date Inspected:

Inspector Signature:

*****FAIL: Initial_____

REMOVE FROM SERVICE

✓ PASS: □ Initial_____ RETURN TO SERVICE



Figure 1n Snaphook, Self-locking

Figure 1k Snaphook, Self-locking Style B

Gate

Style A

			0.9107	<u> </u>
ITEM	DESCRIPTION -	FAIL	PASS	COMMENTS
#	LANYARD	×	1	
	Webbing			
	Stitching			
	Wear Pads			
	Labeling (tags)			
	SNAPHOOK			
	Hook Body			
	Hook Nose			
	Gate (keeper)			
	Lock			
	Eye			
	Hinge			
	Spring (inside gate)			

Wire Rope Lanyards Inspection – Guidelines

Wire Rope

Grasp the steel lanyard with your hands and rotate the lanyard, checking both sides. Watch for unusual wearing patterns on the wire. Broken strands or wires will separate from the body of the lanyard. To avoid hand injury always wear protective gloves when inspecting a wire rope lanyard.

Note: Unlike rigging inspection standards, wire rope used for the purpose of fall protection does not allow any broken wires or strands.

Visual and Touch Inspection

✓ Pass✗ Fail Criteria

- **≭**Cuts, frayed areas
- **≭**Worn or broken strands/wires
- Cverall deterioration/Excessive outside wear
- ★Modifications by the user
- **≭**Rust/pitting/corrosion
- Crushed/jammed or flattened strands
- **≭**Bulges in rope
- **≭**Gaps between strands
- ★Heat damage, torch burns or electric arc strikes
- **≭**Kinks, bird-caging
- Core protrusion
- **≭**Do not use frozen rope

Fittings

- ★Wear or Cracks
- Corrosion or Pitting
- ★Deformation/Bends
- Mismatched Parts or Modifications
- ★Obvious Damage

Splices

- Worn or broken wires
- Crushed/jammed or flattened strands
- *****Corrosion

Snap Hooks

Snap hooks should be of the self-locking type. Snap hooks are generally proof tested to 3,600 lbs. and have minimum tensile strength of 5,000lbs.

Visual and Manual Inspection

✓ Pass

≭Fail Criteria

Snap Hook

- Snap hooks should be of the self-locking type
- XNo hook or eye distortion (twists, bends or elongation)
- Latch/keeper should seat into the nose w/o binding
- Latch/keeper should not be distorted or obstructed
- **≭**Overall deterioration/Excessive wear
- **★**Modifications by the user
- **≭**Rust/pitting/corrosion
- **≭**No cracks

≭No excessive wear

≭No missing parts **≭**No rough or sharp edges

Snap Hook Locking Mechanism

- ★Disengage locking mechanism and open keeper (keeper should open freely)
- ★Disengage locking mechanism and release (locking mechanism should return to engaged position.

Snap Hook Keeper

- Check keeper spring action by opening the keeper and releasing. (Keeper should return to closed position without hanging up it should not close slowly.)
- *Push on keeper without engaging locking mechanism (keeper should not open)
- Check to see the keeper is seated firmly on the snap hook nose there should be no side play. (lateral movement)

Tagging System

Every lanyard must have a legible tag identifying the lanyard, model, date of manufacture, name of manufacturer, limitations and warnings.

- Check tag for date of manufacture and remove from service if past adopted service life policy
- **X**If tagging system is missing or not legible remove lanyard from service.

Cleaning and Storage

Wipe off all surface dirt, dust and extra oils with a dry cloth.

Storage areas should be clean, dry and free of exposure to contaminants or corrosive elements.

Inspection Checklist – Fall Protection Equipment Wire Rope Lanyards Model #:

Description:

Serial #:

Inspector:

Inspector Signature:



Date of Manufacture:

Date Inspected:

Figure 1n Snaphook, Self-locking

ITEM #	DESCRIPTION – LANYARD	FAIL ¥	PASS	COMMENTS
	Broken Wires			
	Rust/Corrosion/Pitting			
	Deformations			
	Heat Damage			
	Fittings/Thimbles			
	Splices			
	Labeling (tags)			
	SNAPHOOK			
	Hook Body			
	Hook Nose			
	Gate (keeper)			
	Lock			
	Eye			
	Hinge			
	Spring (inside gate)			

Shock Absorbers – Pouch Style

Inspection – Guidelines

Shock Absorbers – Pouch Style Examine the outer portion of the pack.	
Visual and Touch Inspection	✓ Pass
	≭ Fail Criteria
≭ Burn holes ≭ Tears/cuts	
Modifications by user	
Chemical attack	
Obvious signs of deterioration	
Stitching	
Visual and Touch Inspection	
¥Pulled stitches	
Stitching that is missingHard or shiny spots	Indicatos hoat damago
Cut stitches	Indicates heat damage
★ ✓ Discoloration of stitching	Dependant on cause of discoloration
Obvious signs of deterioration	
End Loops	
Cuts or frays	
Obvious signs of deterioration	
(There should be no damage to the end loo	ps)

Shock Absorbers – Pouch Style Inspection – Guidelines

Snap Hooks

Snap hooks should be of the self-locking type. Snap hooks are generally proof tested to 3,600 lbs. and have minimum tensile strength of 5,000lbs.

Visual and Manual Inspection

✓ Pass苯Fail Criteria

Snap Hook

Snap hooks should be of the self-locking type

≭No hook or eye distortion (twists, bends or elongation)

Latch/keeper should seat into the nose w/o binding

*Latch/keeper should not be distorted or obstructed

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- Overall deterioration/Excessive wear
 Modifications by the user
 Rust/pitting/corrosion
 No cracks
- KNo excessive wear

No missing partsNo rough or sharp edges

Snap Hook Locking Mechanism

*Disengage locking mechanism and open keeper (keeper should open freely)

Disengage locking mechanism and release (locking mechanism should return to engaged position.

Snap Hook Keeper

Check keeper spring action by opening the keeper and releasing. (Keeper should return to closed position without hanging up it should not close slowly.)
 Push on keeper without engaging locking mechanism (keeper should not open)
 Check to see the keeper is seated firmly on the snap hook nose – there should be no side play. (lateral movement)

Tagging System

Every pouch must have a legible tag identifying the pouch, model, date of manufacture, name of manufacturer, limitations and warnings.

- Check tag for date of manufacture and remove from service if past adopted service life policy
- **X**If tagging system is missing or not legible remove lanyard from service.

Shock Absorbers – Pouch Style Inspection – Guidelines

Cleaning and Storage

Wipe off all surface dirt with a sponge dampened in plain water. Squeeze the sponge dry. Then wipe away any excess moisture with a dry clean cloth.

Dry away from excessive heat, steam or long periods of sunlight. Pouch must be dry before storage.

Storage areas should be clean, dry and free of exposure to fumes, heat, direct ultra violet light, sunlight and corrosive elements.

Note: Do not store pouch next to batteries, chemical attack on the lanyard can occur if battery leaks.

Inspection Checklist – Fall Protection Equipment

Shock Absorbers Pouch Style

Description:

Serial #:

Inspector:

Inspector Signature:

*****FAIL: Initial REMOVE FROM SERVICE

✓ PASS: □ Initial____ RETURN TO SERVICE

Date of Manufacture:

Date Inspected:





Model #:

Figure 1n Snaphook, Self-locking

Style A

Figure 1k

Stvle B

Gate

Figure 1k Snaphook, Self-locking

Lock

ITEM	DESCRIPTION -	FAIL	PASS	COMMENTS
#	LANYARD	*	✓	
	Pouch Damage			
	Stitching			
	End Loops			
	Labeling (tags)			
	SNAPHOOK			
	Hook Body			
	Hook Nose			
	Gate (keeper)			
	Lock			
	Eye			
	Hinge			
	Spring (inside gate)			

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Synthetic Rope – Lifelines-Twisted Ropes Inspection – Guidelines

Twisted Ropes

Grasp the rope with both hands and rotate the lifeline. Inspect strands from end to end. Remember to check inner strands for signs of damage, deterioration or chemical attack.

Synthetic fiber ropes will show a reduction in strength when used at elevated temperatures. For exposure to excessive temperatures specific for the rope fiber refer to the rope manufacturers specifications and instructions.

Damage and deterioration may not show up through a sight (visual) inspection only – manual (touch) the lanyard is equally important.

Rope Diameter

Weakened areas from extreme loads will appear as a noticeable change in original diameter. The rope diameter should be uniform throughout. If areas appear to be reduced more than *5% from original rope diameter **remove from service** – (ie: 5/8" rope, 5% reduction would be approx. 1/32" – calipers can be used to measure.)

Visual and Touch Inspection

✓ Pass★ Fail Criteria

≭Fiber. cuts or nicks **≭**Broken fibers **≭**Fuzzy or worn fibers **≭**Overall deterioration ★Modifications by user **★**Fraying/Abrasions **≭**Hard or shiny spots Indicates heat damage **≭**Fused fibers or strands Indicates heat damage ★Change in original diameter Indicates possible fall Burnt, charred or melted fibers Indicates heat damage **≭**√ Material marked w/permanent marker Check w/manufacturer **≭**Kinks, • hockling or knots Dependant on cause of discoloration **★** ✓ Discoloration of rope & brittle fibers (such as splinters/slivers) but may indicate chemical attack or UV degradation • **HOCKLING** – unraveling of the lanyard due to constant turning in the same

direction or shock loading.

Synthetic Rope – Lifelines (Twisted Ropes) Inspection – Guidelines

Thimbles and Eyes

Visual and Touch Inspection

✓ Pass苯Fail Criteria

Thimbles (steel or plastic) must be seated firmly in the eye. Thimbles must not show any sign of damage. Check around the eye itself for damage, wear or deterioration.

- ★Missing thimble(s)
- **★**Loose thimble(s)
- **≭**Damaged thimble white stress marks, thimble collapsing over itself
- ★Eye damage due to cuts, nicks, abrasions, fraying, fused areas (look for same indicators as you would for the rope body itself.
- **≭**Eyes with metal thimbles look for rust in or around the eye.

Rope Splices

In the construction of the lifeline the rope is spliced around a plastic or metal thimble. Eye splices in twisted rope having three or more strands shall have a minimum of four tucks (ANSI Z359.1-1992). (CSA-Z259.1-95 requires a minimum of five full tucks.) Both standards require the ends secured to prevent unraveling.

Visual and Touch Inspection

✓ Pass✗ Fail Criteria

- Splices not secured properly from unraveling look for tape, shrink wrap tube, stiffening agent. (most common methods used by manufacturers.)
- Splices starting to unravel
- Splices showing damage or deterioration (look for same indicators as you would for the rope itself.

Synthetic Rope – Lifelines (Twisted Ropes) Inspection – Guidelines

Snap Hooks

Snap hooks should be of the self-locking type. Snap hooks are generally proof tested to 3,600 lbs. and have minimum tensile strength of 5,000lbs.

Visual and Manual Inspection

✓ Pass

¥Fail Criteria

Snap Hook

- Snap hooks should be of the self-locking type
- **≭**No hook or eye distortion (twists, bends or elongation)
- *Latch/keeper should seat into the nose w/o binding
- ★Latch/keeper should not be distorted or obstructed
- Overall deterioration/Excessive wear
- ✗Modifications by the user
- Kust/pitting/corrosion
- KNo cracks
- KNO excessive wear

- KNO missing parts
- KNo rough or sharp edges

Snap Hook Locking Mechanism

- *Disengage locking mechanism and open keeper (keeper should open freely)
- Disengage locking mechanism and release (locking mechanism should return to engaged position.

Snap Hook Keeper

Check keeper spring action by opening the keeper and releasing. (Keeper should return to closed position without hanging up it should not close slowly.)

Push on keeper without engaging locking mechanism (keeper should not open)
 Check to see the keeper is seated firmly on the snap hook nose – there should be no side play. (lateral movement)

Tagging System

Lifelines must have a legible tag identifying the, model, date of manufacture, name of manufacturer, limitations and warnings.

Check tag for date of manufacture and remove from service if past adopted service life policy

*****If tagging system is missing or not legible remove lifeline from service.

Synthetic Rope – Lifelines (Twisted Ropes) Inspection – Guidelines

Cleaning and Storage

Rope can be washed, to remove dirt or abrasive particles. Use a solution of mild detergent and cold water. (Note that washing can remove any coatings that may have been added to enhance the performance of the product)

Hang freely to dry, but away from excessive heat, steam or long periods of sunlight. Lifelines must be dry before storage.

Storage areas should be clean, dry and free of exposure to fumes, heat, direct ultra violet light, sunlight and corrosive elements. Lifelines should be kept off the floor to provide ventilation underneath. Never store directly on a concrete or dirt floor.

Note: Do not store lifelines next to batteries, chemical attack on the lifeline can occurs if battery leaks.

Inspection Checklist – Fall Protection Equipment Rope Lifelines - Synthetic

Description:	Model #:
Serial #:	Date of Manufacture:
Inspector:	Date Inspected:
In an a stan Olan atumat	

Inspector Signature:



✓ PASS: □ Initial____ RETURN TO SERVICE



ITEM #	DESCRIPTION – LANYARD	FAIL ×	PASS	COMMENTS
	Rope Fibers			
	Rope Splices			
	Thimbles & Eyes			
	Rope Diameter			
	Labeling (tags)			
	Rope Hockling			
	SNAPHOOK			
	Hook Body			
	Hook Nose			
	Gate (keeper)			
	Lock			
	Eye			
	Hinge			
	Spring (inside gate)			

Synthetic Rope – Lifelines - Braided Ropes Inspection – Guidelines

Braided Ropes

Grasp the rope with both hands and rotate the lifeline. Run your hands along the entire length of lifeline. Inspect strands from end to end.

Synthetic fiber ropes will show a reduction in strength when used at elevated temperatures. For exposure to excessive temperatures specific for the rope fiber refer to the rope manufacturers specifications and instructions.

Damage and deterioration may not show up through a sight (visual) inspection only – manual (touch) the lanyard is equally important.

Rope Diameter

Weakened areas from extreme loads will appear as a noticeable change in original diameter. The rope diameter should be uniform throughout. If areas appear to be reduced more than *5% from original rope diameter **remove from service** – (ie: 5/8" rope, 5% reduction would be approx. 1/32" – calipers can be used to measure.)

Visual and Touch Inspection

✓ Pass苯Fail Criteria

Check for pulled cover strands	More than 4 consecutive pulled cover strands (which cannot be reincorporated into cover braid) Remove from service
Cover damage-core visible	
Core damage-pulled, cut, abraded, pow	dered or melted strands
Cover-cuts or nicks	
Cover-broken fibers	
Cverall deterioration	
★Modifications by user	
★Fraying/Abrasions	
	dicates heat damage
≭ Fused fibers or strands	Indicates heat damage
Change in original diameter	Indicates possible fall
■Burnt, charred or melted fibers	Indicates heat damage
★✓ Material marked w/permanent marker	Check w/manufacturer
Knots or kinks	
≭ √ Discoloration of rope & brittle fibers	Dependant on cause of discoloration
(such as splinters/slivers)	but may indicate chemical attack or UV degradation

Synthetic Rope – Lifelines (Braided Ropes) Inspection – Guidelines

Thimbles and Eyes

Visual and Touch Inspection

✓ Pass✗ Fail Criteria

Thimbles (steel or plastic) must be seated firmly in the eye. Thimbles must not show any sign of damage. Check around the eye itself for damage, wear or deterioration.

- ★Missing thimble(s)
- *****Loose thimble(s)
- *Damaged thimbles white stress marks, thimble collapsing over itself
- **≭**Damage to female side of eye (side in contact with thimble)
- Eye damage due to cuts, nicks, abrasions, fraying, fused areas (look for same indicators as you would for the rope body itself.
- **≭**Eyes with metal thimbles look for rust in or around the eye.

Fittings

- ★Wear or Cracks
- **Corrosion or Pitting**
- ★Deformation/Bends
- ✗Mismatched Parts or Modifications
- **≭**Obvious Damage

Synthetic Rope – Lifelines (Braided Ropes) Inspection – Guidelines

Snap Hooks

Snap hooks should be of the self-locking type. Snap hooks are generally proof tested to 3,600 lbs. and have minimum tensile strength of 5,000lbs.

Visual and Manual Inspection

🖌 Pass

≭Fail Criteria

Snap Hook

- Snap hooks should be of the self-locking type
- **≭**No hook or eye distortion (twists, bends or elongation)
- Latch/keeper should seat into the nose w/o binding
- Latch/keeper should not be distorted or obstructed
- ★Overall deterioration/Excessive wear
- ✗Modifications by the user
- Rust/pitting/corrosion
- KNo cracks
- **≭**No excessive wear

- KNO missing parts
- KNo rough or sharp edges

Snap Hook Locking Mechanism

- *Disengage locking mechanism and open keeper (keeper should open freely)
- Disengage locking mechanism and release (locking mechanism should return to engaged position.

Snap Hook Keeper

- Check keeper spring action by opening the keeper and releasing. (Keeper should return to closed position without hanging up it should not close slowly.)
- *Push on keeper without engaging locking mechanism (keeper should not open)
- Check to see the keeper is seated firmly on the snap hook nose there should be no side play. (lateral movement)

Tagging System

Date of manufacture and length of lifeline can be found on one of the metal ferrules.

- Check tag for date of manufacture and remove from service if past adopted service life policy
- **X**If tagging system is missing or not legible remove lifeline from service.

Inspection Checklist – Fall Protection Equipment

Braided Rope Lifelines - Synthetic

Description:	Model #:
Serial #:	Date of Manufacture:
Inspector:	Date Inspected:
Inspector Signature:	

*****FAIL: Initial REMOVE FROM SERVICE

✓ PASS: □ Initial____ RETURN TO SERVICE



Figure 14b Solid Braid Rope



Figure 1n Snaphook, Self-locking

ITEM	DESCRIPTION -	FAIL	PASS	COMMENTS
#		×	1	
	Rope Diameter			
	Cover Damage			
	Thimbles & Eyes			
	Fittings			
	Labeling (tags)			
	Discoloration			
	SNAPHOOK			
	Hook Body			
	Hook Nose			
	Gate (keeper)			
	Lock			
	Eye			
	Hinge			
	Spring (inside gate)			

Synthetic Rope – Lifelines - Kernmantle Ropes

Inspection – Guidelines

Kernmantle Ropes

Grasp the rope with both hands and rotate the lifeline. Run your hands along the entire length of the lifeline. Inspect from end to end.

Synthetic fiber ropes will show a reduction in strength when used at elevated temperatures. For exposure to excessive temperatures specific for the rope fiber refer to the rope manufacturers specifications and instructions.

Damage and deterioration may not show up through a sight (visual) inspection only – manual (touch) the lanyard is equally important.

Rope Diameter

Weakened areas from extreme loads will appear as a noticeable change in original diameter. The rope diameter should be uniform throughout. If areas appear to be reduced more than *5% from original rope diameter **remove from service** – (ie: 5/8" rope, 5% reduction would be approx. 1/32" – calipers can be used to measure.)

Visual and Touch Inspection

✓ Pass★ Fail Criteria

 Extremely fuzzy cover Check for bulges/lumps & flat spots Cover damage-core visible Check for indication of inner core damage – rope will have a hourglass shape Core damage-pulled, cut, abraded, powdered or melted strands Cover-cuts or nicks Cover-broken fibers Overall deterioration Modifications by user Fraying/Abrasions Compacted or hard 				
Fused fibers or strands/shiny spotsChange in original diameter	Indicates heat damage Indicates possible fall			
Burnt, charred or melted fibers	Indicates heat damage			
¥√ Material marked w/permanent marker	Check w/manufacturer			
Knots or kinks				
≭ ✓ Discoloration of rope & brittle fibers	Dependant on cause of discoloration			
(such as splinters/slivers)	but may indicate chemical attack or UV degradation			

Synthetic Rope – Lifelines (Kernmantle Ropes) Inspection – Guidelines

Thimbles And Eyes

Visual and Touch Inspection

✓ Pass★ Fail Criteria

Thimbles (steel or plastic) must be seated firmly in the eye. Thimbles must not show any sign of damage. Check around the eye itself for damage, wear or deterioration.

- ★Missing thimble(s)
- *****Loose thimble(s)
- **★**Damaged thimbles
- ★Damage to female side of eye (side in contact with thimble)
- ★Eye damage due to cuts, nicks, abrasions, fraying, fused areas (look for same indicators as you would for the rope body itself.
- **≭**Eyes with metal thimbles look for rust in or around the eye.

Fittings

- ★Wear or Cracks
- **≭**Corrosion or Pitting
- ★Deformation/Bends
- ✗Mismatched Parts or Modifications
- **≭**Obvious Damage
Synthetic Rope – Lifelines (Kernmantle Ropes) Inspection – Guidelines

Snap Hooks

Snap hooks should be of the self-locking type. Snap hooks are generally proof tested to 3,600 lbs. and have minimum tensile strength of 5,000lbs.

Visual and Manual Inspection

✓ Pass★ Fail Criteria

Snap Hook

- Snap hooks should be of the self-locking type
- **≭**No hook or eye distortion (twists, bends or elongation)
- *Latch/keeper should seat into the nose w/o binding
- ★Latch/keeper should not be distorted or obstructed
- ★Overall deterioration/Excessive wear
- ✗Modifications by the user
- Rust/pitting/corrosion

≭No excessive wear

KNo cracks

No missing partsNo rough or sharp edges

Snap Hook Locking Mechanism

- *Disengage locking mechanism and open keeper (keeper should open freely)
- Disengage locking mechanism and release (locking mechanism should return to engaged position.

Snap Hook Keeper

- Check keeper spring action by opening the keeper and releasing. (Keeper should return to closed position without hanging up it should not close slowly.)
- ★Push on keeper without engaging locking mechanism (keeper should not open)
- Check to see the keeper is seated firmly on the snap hook nose there should be no side play. (lateral movement)

Tagging System

Date of manufacturer can be found on one of the metal ferrules.

- Check tag for date of manufacture and remove from service if past adopted service life policy
- *****If tagging system is missing or not legible remove lifeline from service.

Inspection Checklist – Fall Protection Equipment

Kernmantle Rope Lifelines - Synthetic

Description:

Serial #:

Inspector:

Inspector Signature:

*****FAIL: Initial REMOVE FROM SERVICE

✓ PASS: □ Initial____ RETURN TO SERVICE

Date of Manufacture:

Date Inspected:

Model #:





Figure 1n Snaphook, Self-locking

ITEM	DESCRIPTION -	FAIL	PASS	COMMENTS
#		×	1	
	Rope Diameter			
	Cover Damage			
	Thimbles & Eyes			
	Fittings			
	Labeling (tags)			
	Discoloration			
	SNAPHOOK			
	Hook Body			
	Hook Nose			
	Gate (keeper)			
	Lock			
	Eye			
	Hinge			
	Spring (inside gate)			

Synthetic Rope – Lifelines – Polysteel Inspection Guidelines

Polysteel

Grasp the rope with both hands and rotate the lifeline. Inspect strands from end to end. Remember to check inner strands for signs of damage, deterioration or chemical attack.

Synthetic fiber ropes will show a reduction in strength when used at elevated temperatures. For exposure to excessive temperatures specific for the rope fiber refer to the rope manufacturers specifications and instructions.

Damage and deterioration may not show up through a sight (visual) inspection only – manual (touch) the lanyard is equally important.

Rope Diameter

Weakened areas from extreme loads will appear as a noticeable change in original diameter. The rope diameter should be uniform throughout. If areas appear to be reduced more than *5% from original rope diameter **remove from service** – (ie: 5/8" rope, 5% reduction would be approx. 1/32" – calipers can be used to measure.)

Visual and Touch Inspection	✓ Pass
	¥Fail Criteria
✗Fiber, cuts or nicks	
≭ Broken fibers	
≭ Fuzzy or worn fibers	
≭ Overall deterioration	
*Modifications by user	
*Fraying/Abrasions	
*Hard or shiny spots	Indicates heat damage
≭ Fused fibers or strands	Indicates heat damage
Change in original diameter	Indicates possible fall
Burnt, charred or melted fibers	Indicates heat damage
★ ✓ Material marked w/permanent marker	Check w/manufacturer
Kinks, ● hockling or knots	
≭ ✓ Discoloration of rope & brittle fibers	Dependant on cause of discoloration
(such as splinters/slivers)	but may indicate chemical attack or UV degradation
• HOCKLING – unraveling of the lanyard direction or shock loading.	d due to constant turning in the same

Synthetic Rope – Lifelines (Polysteel) Inspection – Guidelines

Thimbles and Eyes

Visual and Touch Inspection

✓ Pass✗ Fail Criteria

Thimbles (steel or plastic) must be seated firmly in the eye. Thimbles must not show any sign of damage. Check around the eye itself for damage, wear or deterioration.

★Missing thimble(s)

- *****Loose thimble(s)
- Damaged thimbles white stress marks, thimble collapsing over itself
- Eye damage due to cuts, nicks, abrasions, fraying, fused areas (look for same indicators as you would for the rope body itself.
- **≭**Eyes with metal thimbles look for rust in or around the eye.

Rope Splices

In the construction of the lifeline the rope is spliced around a plastic or metal thimble. Eye splices in twisted rope having three or more strands shall have a minimum of four tucks (ANSI Z359.1-1992). (CSA-Z259.1-95 requires a minimum of five full tucks.) Both standards require the ends secured to prevent unraveling.

Visual and Touch Inspection

✓ Pass

★Fail Criteria

- Splices not secured properly from unraveling look for tape, shrink wrap tube, stiffening agent. (most common methods used by manufacturers.)
- Splices starting to unravel
- Splices showing damage or deterioration (look for same indicators as you would for the rope itself.

Synthetic Rope – Lifelines (Polysteel) **Inspection – Guidelines**

Snap Hooks Snap hooks should be of the self-lockin tested to 3,600 lbs. and have minimum	ng type. Snap hooks are generally proof a tensile strength of 5,000lbs.					
Visual and Manual Inspection	✓ Pass					
	≭ Fail Criteria					
Snap Hook						
Snap hooks should be of the self-loc	king type					
KNO hook or eye distortion (twists, ber	e ,					
Latch/keeper should seat into the nose w/o binding						
*Latch/keeper should not be distorted or obstructed						
*Overall deterioration/Excessive wear	-					
★Modifications by the user						
*Rust/pitting/corrosion						
*No cracks	*No missing parts					
X No excessive wear	No rough or sharp edges					

*****No excessive wear

Snap Hook Locking Mechanism

- ★Disengage locking mechanism and open keeper (keeper should open freely)
- **≭**Disengage locking mechanism and release (locking mechanism should return to engaged position.

Snap Hook Keeper

Check keeper spring action by opening the keeper and releasing. (Keeper should return to closed position without hanging up it should not close slowly.)

★Push on keeper without engaging locking mechanism (keeper should not open) Check to see the keeper is seated firmly on the snap hook nose – there should

be no side play. (lateral movement)

Tagging System

Lifelines must have a legible tag identifying the, model, date of manufacture, name of manufacturer, limitations and warnings.

- Check tag for date of manufacture and remove from service if past adopted service life policy
- **X**If tagging system is missing or not legible remove lifeline from service.

Inspection Checklist – Fall Protection Equipment

Polysteel Rope Lifelines - Synthetic

Description:	Model #:
Serial #:	Date of Manufacture:
Inspector:	Date Inspected:
Inspector Signature:	

*****FAIL: Initial REMOVE FROM SERVICE

✓ PASS: □ Initial____ RETURN TO SERVICE



Figure 14a Synthetic Rope Composition (Three-Strand Laid Rope)







Figure 1n Snaphook, Self-locking

ITEM	DESCRIPTION -	FAIL	PASS	COMMENTS
#		*	1	
	Rope Fibers			
	Rope Splices			
	Thimbles & Eyes			
	Rope Diameter			
	Labeling (tags)			
	Rope Hockling			
	SNAPHOOK			
	Hook Body			
	Hook Nose			
	Gate (keeper)			
	Lock			
	Eye			
	Hinge			
	Spring (inside gate)			

Wire Rope Lifelines Inspection – Guidelines

Wire Rope

Grasp the lifeline with your hands and rotate the lanyard, checking both sides. Watch for unusual wearing patterns on the wire. Broken strands or wires will separate from the body of the lanyard. **To avoid hand injury always wear protective gloves when inspecting a wire rope lanyard.**

Note: Unlike rigging inspection standards, wire rope used for the purpose of fall protection is not allowed any broken wires or strands.

Visual and Touch Inspection

✓ Pass★ Fail Criteria

- **≭**Cuts, frayed areas
- ★Worn or broken strands/wires
- ★Overall deterioration/Excessive outside wear
- ✗Modifications by the user
- **≭**Rust/pitting/corrosion
- Crushed/jammed or flattened strands
- **≭**Bulges in rope
- **X**Gaps between strands
- ★Heat damage, torch burns or electric arc strikes
- **≭**Kinks, bird-caging
- **≭**Core protrusion
- **≭**Do not use frozen rope

Fittings

- ★Wear or Cracks
- **≭**Corrosion or Pitting
- ★Deformation/Bends
- ✗Mismatched Parts or Modifications
- **≭**Obvious Damage

Splices

- ₩Worn or broken wires
- Crushed/jammed or flattened strands
- *Corrosion

Wire Rope Lifelines Inspection – Guidelines

Snap Hooks

Snap hooks should be of the self-locking type. Snap hooks are generally proof tested to 3,600 lbs. and have minimum tensile strength of 5,000lbs.

Visual and Manual Inspection

✓ Pass✗ Fail Criteria

Snap Hook

- Snap hooks should be of the self-locking type
- XNo hook or eye distortion (twists, bends or elongation)
- *Latch/keeper should seat into the nose w/o binding
- *Latch/keeper should not be distorted or obstructed
- ★Overall deterioration/Excessive wear
- Modifications by the user
- **≭**Rust/pitting/corrosion
- KNo cracks
- KNO excessive wear

No missing partsNo rough or sharp edges

Snap Hook Locking Mechanism

- *Disengage locking mechanism and open keeper (keeper should open freely)
- Disengage locking mechanism and release (locking mechanism should return to engaged position.

Snap Hook Keeper

Check keeper spring action by opening the keeper and releasing. (Keeper should return to closed position without hanging up it should not close slowly.)
 Push on keeper without engaging locking mechanism (keeper should not open)

Check to see the keeper is seated firmly on the snap hook nose – there should be no side play. (lateral movement)

Inspection Checklist – Fall Protection Equipment Wire Rope Model #:

Description:

Serial #:

Inspector:

Inspector Signature:

*****FAIL: **I** Initial **REMOVE FROM SERVICE**



Figure 6a

Return Eye

✓ PASS: □ Initial **RETURN TO SERVICE**

Core

Strand

Figure 14e Wire Rope Composition

Wire

Date of Manufacture:

Date Inspected:



Snaphook, Self-locking

ITEM	DESCRIPTION -	FAIL	PASS	COMMENTS
#	WIRE ROPE	*	1	
	Broken Wires			
	Rust/Corrosion/Pitting			
	Deformations			
	Heat Damage			
	Fittings/Thimbles			
	Splices			
	Labeling (tags)			
	SNAPHOOK			
	Hook Body			
	Hook Nose			
	Gate (keeper)			
	Lock			
	Eye			
	Hinge			
	Spring (inside gate)			

Fall Limiters - Inspection

Retractable Lanyard (Housing/Cover Field Removable) Inspection – Guidelines

Self Retracting Lanyard - Co	omplete w/ Webbing Lifeline
This type of SRL is usually 8' to 10' in le affixed to the unit.	ngth and the housing/cover is not permanently
When inspecting a self retracting lanyar Lifeline material must be inspected end	d be sure to pull out all the lifeline material. to end.
Test methods employed will be: 1.) Lanyard Retraction & Tension Test: retract	tests the lifelines tension & ability to
2.) Braking Test: tests the braking mech	nanism is working and engaging.
Visual and Touch Inspection	✓ Pass
	¥Fail Criteria
 Check load impact indicator* for activa Loose fasteners Physical damage or missing parts Cracks or wear 	ation (if retractable is equipped with one)
Check all connecting areas-no deformCorrosion	ations allowed
Overall deteriorationModifications by user	
 Bent, cracked, distorted, worn or malfill Inspect lifeline for cuts, burns, corrosid Inspect lifeline sewing for loose, broke Inspect lifeline for discoloration, brittle Inspect housing inside and out for definition 	on, kinks, frays or worn areas en or damaged stitches ness, melted fibers, shiny/hard spots
★✓ Check for paint, dirt, grease or other	
contaminants as per manufacturer	s instructions.
	a fold sewn into the webbing lifeline above the nd will be exposed should the lifeline be

1.)Anchor point (ie: tripod or similar device)

2.)Self Retracting Lifeline

Lanyard Retraction & Tension Test:

The purpose of the lanyard retraction & tension test is to ensure the lifeline is retracting smoothly into and out of the housing.

<u>STEPS</u>

- 1.) Mount self retracting lanyard on anchorage point
- 2.) Pull out 50% of the lifeline length
- 3.) Maintain a light tension on the lifeline
- 4.) Allow lifeline to retract back into housing. (Always maintain light tension when lifeline is retracting.)

Note: If lifeline does not pull out smoothly or sticks when retracting, pull all of the lifeline out of the housing and allow it to retract slowly under tension. Then repeat the above test.

Result – The lifeline should pull out freely and retract all the way back into the unit. Remove from service if device does not pass this test.

Braking Test

The purpose of the braking test is to ensure that the retractable's braking mechanism is working and engaging.

<u>STEPS</u>

- 1.) Mount self retracting lifeline on anchorage point
- 2.) Grasp lifeline and apply a sharp steady pull downward until brakes engage
- 3.) Keep tension on lifeline until brakes are fully engaged
- 4.) Release tension
- 5.) Allow lifeline to retract into housing under light tension

Result – Brakes should engage. There should be no slippage of the lifeline while the brakes are engaged. Once tension is released, the brakes should disengage and the unit should return to retractable mode. Remove from service if device does not pass this test.

Snap Hooks

Snap hooks should be of the self-locking type. Snap hooks are generally proof tested to 3,600 lbs. and have minimum tensile strength of 5,000lbs.

Visual and Manual Inspection

Pass

≭Fail Criteria

Snap Hook

- Snap hooks should be of the self-locking type
- XNo hook or eye distortion (twists, bends or elongation)
- *Latch/keeper should seat into the nose w/o binding
- *Latch/keeper should not be distorted or obstructed
- **≭**Overall deterioration/Excessive wear
- ★Modifications by the user
- Rust/pitting/corrosion
- **≭**No cracks
- **≭**No excessive wear

No missing partsNo rough or sharp odge

KNo rough or sharp edges

Snap Hook Locking Mechanism

- *Disengage locking mechanism and open keeper (keeper should open freely)
- Disengage locking mechanism and release (locking mechanism should return to engaged position.

Snap Hook Keeper

- Check keeper spring action by opening the keeper and releasing. (Keeper should return to closed position without hanging up it should not close slowly.)
- **≭**Push on keeper without engaging locking mechanism (keeper should not open)
- Check to see the keeper is seated firmly on the snap hook nose there should be no side play. (lateral movement)

Swivel Connectors

- Swivel connections must not be loose and be allowed to swivel freely as designed
- XNo physical damage, cracks, bends, deformations

Tagging System

Every retractable should have a identification system, with details such as model, date of manufacture, name of manufacturer, limitations and warnings.

Check tag for date of manufacture and remove from service if past adopted service life policy

*****If tagging system is missing or not legible remove retractable from service.

Cleaning and Storage

Periodically clean the exterior of the device and wipe the lifeline using a damp cloth and mild detergent. Towel dry.

Store in a clean dry location, free of exposure to fumes, heat, direct ultra violet light, sunlight and corrosive elements.

The lifeline should be fully retracted into the unit when not in use. Failure to do so on some models may cause premature weakening of the mainspring resulting in a loss of lifeline retraction.

Inspection Checklist – Fall Protection Equipment Retractable Lanyard (Housing/Cover Field Removable)

Description:	Model #:
Serial #:	Date of Manufacture:
Inspector:	Date Inspected:
Incractor Signatura:	•

Inspector Signature:

*****FAIL: Initial____

REMOVE FROM SERVICE

✓ PASS: □ Initial____ RETURN TO SERVICE





Figure 1n Snaphook, Self-locking

ITEM	DESCRIPTION -	FAIL	PASS	COMMENTS
#	DESCRIPTION -	X		COMMENTS
π		••	✓	
	Load Impact Indicator			
	Webbing			
	Stitching			
	Labeling (tags)			
	Deformation			
	Housing			
	SNAPHOOK			If applicable see
				carabiners
	Swivel Connectors			
	Hook Body			
	Hook Nose			
	Gate (keeper)			
	Lock			
	Eye			
	Hinge			
	Spring (inside gate)			
	Tests			
	Retraction & Tension			
	Braking Test			



Carabiner, Self-locking



Figure 1r Carabiner Manual-locking

Retractable Lanyard (Housing/Cover Field Removable)

ITEM #	DESCRIPTION	FAIL	PASS	COMMENTS
	Carabiner	*	1	
	Carabiner Body			
	Carabiner Nose			
	Gate (hinged open)			
	Lock			
	Gate			
	Hinge			
	Spring (inside gate)			
	Manual Lock			

Retractable Lanyard (Housing/Cover Non Field Removable)

Inspection – Guidelines

Self Retracting Lanyard – Webbing or Wire Rope Lifeline This type of SRL is usually 20' in length or greater. The housing/cover will be non field removable and will require special tools to open. Do not open unit unless you have been authorized and trained by the manufacturer.

Note: Manufacturers may require that the unit be sent in for an annual inspection – check owners manual for details.

When inspecting a self retracting lanyard be sure to pull out **all** the lifeline material. Lifeline material must be inspected end to end.

Test methods employed will be:

- 1.) Lanyard Retraction & Tension Test: tests the lifelines tension & ability to retract
- 2.) Braking Test: tests the braking mechanism is working and engaging.

Visual and Touch Inspection

✓ Pass★ Fail Criteria

Housing/Cover – Inspect For

- **≭**Ensure casing bolts are tight
- **≭**Loose fasteners
- ★Missing parts
- Cracks or wear
- Check all connecting areas-no deformations allowed
- *Corrosion

Overall deterioration
Modifications by user
Physical damage
Bent, cracked, distorted, worn or malfunctioning parts

Load Impact Indicator

Check load impact indicator* for activation (if retractable is equipped with one)

Note: The load impact indicator* may be located in the lanyard above the snap hook. A label will be exposed when subjected to fall arresting forces. The load impact indicator may also be located on the snaphook or the unit itself. Check manufacturers operation and installation instructions for exact location.

Retractable Lanyard (Housing/Cover Non Field Removable) Inspection – Guidelines

Inspection of Webbing for Retractable Lanyard

Webbing

Grasp the webbing with your hands and bend the webbing, checking both sides. This creates surface tension making damaged fibers or cuts easier to see. Webbing damage may not show up through a sight (visual) inspection only – manual (touch) the lanyard is equally important.

Indicates possible fall

Indicates heat damage

Check w/manufacturer

Indicates heat or uv damage

Visual and Touch Inspection Pass ¥Fail Criteria Cuts, nicks or tears **≭**Broken fibers/cracks **≭**Overall deterioration **★**Modifications by user **≭**Fraying/Abrasions **★** ✓ Discoloration of material Dependant on cause of discoloration **≭**Hard or shiny spots Indicates heat damage *Change in core size Indicates possible fall Mildew Clean lanyard

✓ Mildew
 ★Undue Stretching

- **#**Burnt, charred or melted fibers
- **≭**√ Material marked w/permanent marker
- *Excessive hardness or brittleness
- Knots in lanyard

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Wire Rope

Grasp the steel lanyard with your hands and rotate the lanyard, checking both sides. Watch for unusual wearing patterns on the wire. Broken strands or wires will separate from the body of the lanyard. To avoid hand injury always wear protective gloves when inspecting a wire rope lanyard.

Note: Unlike rigging inspection standards, wire rope used for the purpose of fall protection is not allowed any broken wires or strands.

Visual and Touch Inspection

✓ Pass★ Fail Criteria

- **≭**Cuts, frayed areas
- **≭**Worn or broken strands/wires
- Cverall deterioration/Excessive outside wear
- ✗Modifications by the user
- **≭**Rust/pitting/corrosion
- Crushed/jammed or flattened strands
- **≭**Bulges in rope
- **≭**Gaps between strands
- **≭**Heat damage, torch burns or electric arc strikes
- **≭**Kinks, bird-caging
- **≭**Core protrusion
- ✗Do not use frozen rope

Fittings

- ★Wear or Cracks
- **≭**Corrosion or Pitting
- ★Deformation/Bends
- ✗Mismatched Parts or Modifications
- Obvious Damage

Splices

- ¥Worn or broken wires
- Crushed/jammed or flattened strands
- *****Corrosion

Material required to conduct tests.

Anchor point (ie: tripod or similar device)
 Retractable Lifeline

Lanyard Retraction & Tension Test:

Do not pull lifeline out of the housing or let it retract while the unit is laying flat. Always inspect and operate the unit in a mounted position.

The purpose of the lanyard retraction & tension test is to ensure the lifeline is retracting smoothly into and out of the housing.

<u>STEPS</u>

- 1.) Mount retractable on anchorage point
- 2.) Pull out 50% of the lifeline length
- 3.) Maintain a light tension on the lifeline (approx. 1 lb. (0.45kg)
- 4.) Allow lifeline to retract back into housing. (Always maintain light tension when lifeline is retracting.)
- 5.) Repeat Steps 2 to 4 this time pulling out 100% of lifeline length

Do Not allow lifeline to retract into housing uncontrolled – this could result in injury and damage to the unit.

Note: If lifeline does not pull out smoothly or sticks when retracting, pull the entire lifeline out of the housing and allow it to retract slowly under tension. Then repeat the above test.

Result – The lifeline should pull out freely and retract all the way back into the unit. Remove from service if device does not pass this test.

Braking Test

The purpose of the braking test is to ensure that the retractable's braking mechanism is working and engaging.

<u>STEPS</u>

- 1.) Mount retractable on anchorage point
- 2.) Grasp lifeline and apply a sharp steady pull downward until brakes engage
- 3.) Keep tension on lifeline until brakes are fully engaged
- 4.) Release tension
- 5.) Allow lifeline to retract into housing under light tension

Result – Brakes should engage. There should be no slippage of the lifeline while the brakes are engaged. Once tension is released, the brakes should disengage and the unit should return to retractable mode. Remove from service if device does not pass this test.

Snap Hooks

Snap hooks should be of the self-locking type. Snap hooks are generally proof tested to 3,600 lbs. and have minimum tensile strength of 5,000lbs.

Visual and Manual Inspection

✓ Pass

≭Fail Criteria

Snap Hook

- Snap hooks should be of the self-locking type
- **≭**No hook or eye distortion (twists, bends or elongation)
- ■Latch/keeper should seat into the nose w/o binding
- Latch/keeper should not be distorted or obstructed
- Overall deterioration/Excessive wear
- Modifications by the user
- Kust/pitting/corrosion
- KNo cracks
- KNO excessive wear

- KNo missing parts
- **≭**No rough or sharp edges

Snap Hook Locking Mechanism

- ★Disengage locking mechanism and open keeper (keeper should open freely)
- Disengage locking mechanism and release (locking mechanism should return to engaged position.

Snap Hook Keeper

- Check keeper spring action by opening the keeper and releasing. (Keeper should return to closed position without hanging up it should not close slowly.)
- ★Push on keeper without engaging locking mechanism (keeper should not open)
- Check to see the keeper is seated firmly on the snap hook nose there should be no side play. (lateral movement)

Swivel Connectors

- Swivel connections must not be loose and be allowed to swivel freely as designed
- XNo physical damage, cracks, bends, deformations

Tagging System

Every retractable should have a identification system, with details such as model, date of manufacture, name of manufacturer, limitations and warnings.

Check tag for date of manufacture and remove from service if past adopted service life policy

XIf tagging system is missing or not legible remove retractable from service.

Cleaning And Storage

Periodically clean the exterior of the device and wipe the lifeline using a damp cloth and mild detergent. Towel dry.

Store in a clean dry location, free of exposure to fumes, heat, direct ultra violet light, sunlight and corrosive elements.

The lifeline should be fully retracted into the unit when not in use. Failure to do so on some models may cause premature weakening of the mainspring resulting in a loss of lifeline retraction.

Inspection Checklist – Fall Protection Equipment

Retractable Lanyard (Housing/Cover Non Field Removable)

Description:	Model #:
Serial #:	Date of Manufacture:
Inspector:	Date Inspected:
Inspector Signature:	

*****FAIL: Initial REMOVE FROM SERVICE REPAIR

✓ PASS: □ Initial_____ RETURN TO SERVICE





Figure 1n Snaphook, Self-locking

ITEM	DESCRIPTION -	FAIL	PASS	COMMENTS
#	GENERAL	*	1	
	Load Impact Indicator			
	Housing cover			
	Deformation			
	Labeling (tags)			
	SNAPHOOK			If applicable see carabiners
	Swivel Connectors			
	Hook Body			
	Hook Nose			
	Gate (keeper)			
	Lock			
	Eye			
	Hinge			
	Spring (inside gate)			
	Lifeline – Web			
	Webbing			
	Stitching			

Retractable Lanyard (Housing/Cover Non	Field Removable)
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ITEM	DESCRIPTION -	FAIL	PASS	COMMENTS
#	LIFELINE – WIRE ROPE	×	1	
	Broken Wires			
	Rust/Corrosion/Pitting			
	Deformations			
	Heat Damage			
	Fittings/Thimbles			
	Splices			
	Tests			
	Retraction & Tension			
	Braking Test			



Figure 1q Carabiner, Self-locking



Figure 1r Carabiner Manual-locking

Retractable Lanyard (Housing/Cover Non Field Removable)

	Retractable Langard (neusing/oover Non Field Removable)				
ITEM #	DESCRIPTION	FAIL	PASS	COMMENTS	
	Carabiner	*	✓		
	Carabiner Body				
	Carabiner Nose				
	Gate (hinged open)				
	Lock				
	Gate				
	Hinge				
	Spring (inside gate)				
	Manual Lock				

Self Retracting Lifeline Complete w/ Recovery.

This type of SRL will have the ability of retrieval via a winching mechanism. The housing/cover will be non-field removable and require special tools to open. **Do not open unit unless you have been authorized and trained by the manufacturer.**

Note: Manufacturers may require that the unit be sent in for an annual inspection – check owners manual for details.

When inspecting a self retracting lanyard be sure to pull out **all** the lifeline material. Lifeline material must be inspected end to end.

Test methods employed will be:

- 1.) Lanyard Retraction & Tension Test: tests the lifelines tension & ability to retract
- 2.) Braking Test: tests the braking mechanism is working and engaging.
- 1.) Retrieval Mode: tests the units retrieval mechanism

Visual and Touch Inspection

✓ Pass★ Fail Criteria

Housing/Cover – Inspect For

- **≭**Ensure casing bolts are tight
- **≭**Loose fasteners
- ★Missing parts
- Cracks or wear
- Check all connecting areas-no deformations allowed
- *****Corrosion
- **≭**Overall deterioration
- ★Modifications by user
- *Physical damage
- Bent, cracked, distorted, worn or malfunctioning parts

Load Impact Indicator

Check load impact indicator* for activation (if retractable is equipped with one)

Note: The load impact indicator* may be located in the lanyard above the snap hook. A label will be exposed when subjected to fall arresting forces. The load impact indicator may also be located on the snaphook or the unit itself. Check manufacturers operation and installation instructions for exact location.

Wire Rope

Grasp the steel lanyard with your hands and rotate the lanyard, checking both sides. Watch for unusual wearing patterns on the wire. Broken strands or wires will separate from the body of the lanyard. To avoid hand injury always wear protective gloves when inspecting a wire rope lanyard.

Note: Unlike rigging inspection standards, wire rope used for the purpose of fall protection is not allowed any broken wires or strands.

Visual and Touch Inspection

✓ Pass✗ Fail Criteria

- **≭**Cuts, frayed areas
- **≭**Worn or broken strands/wires
- Cverall deterioration/Excessive outside wear
- **≭**Modifications by the user
- **≭**Rust/pitting/corrosion
- Crushed/jammed or flattened strands
- **≭**Bulges in rope
- **≭**Gaps between strands
- ★Heat damage, torch burns or electric arc strikes
- **≭**Kinks, bird-caging
- Core protrusion
- ✗Do not use frozen rope

Fittings

- ₩Wear or Cracks
- **≭**Corrosion or Pitting
- **≭**Deformation/Bends
- Mismatched Parts or Modifications
- **≭**Obvious Damage

Splices

- Worn or broken wires
- Crushed/jammed or flattened strands
- *****Corrosion

Material required to conduct tests.

- 1.)Anchor point (ie: tripod or similar device)
- 2.)Retractable Lifeline

Lanyard Retraction & Tension Test:

Do not pull lifeline out of the housing or let it retract while the unit is laying flat. Always inspect and operate the unit in a mounted position.

The purpose of the lanyard retraction & tension test is to ensure the lifeline is retracting smoothly into and out of the housing.

<u>STEPS</u>

- 1.) Mount retractable on anchorage point
- 2.) Pull out 50% of the lifeline length
- 3.) Maintain a light tension on the lifeline (approx. 1 lb. (0.45kg)
- 4.) Allow lifeline to retract back into housing. (Always maintain light tension when lifeline is retracting.)
- 5.) Repeat Steps 2 to 4 this time pulling out 100% of lifeline length

Do Not allow lifeline to retract into housing uncontrolled – this could result in injury and damage to the unit.

Note: If lifeline does not pull out smoothly or sticks when retracting, pull all of the lifeline out of the housing and allow it to retract slowly under tension. Then repeat the above test.

Result – The lifeline should pull out freely and retract all the way back into the unit. Remove from service if device does not pass this test.

Braking Test

The purpose of the braking test is to ensure that the retractable's braking mechanism is working and engaging.

<u>STEPS</u>

- 1.) Mount retractable on anchorage point
- 2.) Grasp lifeline and apply a sharp steady pull downward until brakes engage
- 3.) Keep tension on lifeline until brakes are fully engaged
- 4.) Release tension
- 5.) Allow lifeline to retract into housing under light tension

Result – Brakes should engage. There should be no slippage of the lifeline while the brakes are engaged. Once tension is released, the brakes should disengage and the unit should return to retractable mode. Remove from service if device does not pass this test.

Retrieval Mode Test:

The purpose of the retrieval mode test is to ensure that the retractable's retrieval mechanism is working and engaging.

Note: some units when in the lowering position will require a minimum of 75lbs.

<u>STEPS</u>

- 1.) Mount retractable on anchorage point
- 2.) Grasp lifeline & pull out several feet of lifeline
- 3.) Hold line in position, maintaining light tension on the line
- 4.) Without engaging retrieval mode attempt to retrieve line Result –line should not retrieve unless unit has been activated.
- 5.) Now engage retrieval mode
- 6.) Keeping light tension on the line use the winch handle to retrieve the line into the device.

Result – Brakes should engage. There should be no slippage of the lifeline while the brakes are engaged. Once tension is released, the brakes should disengage and the unit should return to retractable mode. Remove from service if device does not pass this test.

Snap Hooks

Snap hooks should be of the self-locking type. Snap hooks are generally proof tested to 3,600 lbs. and have minimum tensile strength of 5,000lbs.

Visual and Manual Inspection

✓ Pass苯Fail Criteria

Snap Hook

- Snap hooks should be of the self-locking type
- **≭**No hook or eye distortion (twists, bends or elongation)
- Latch/keeper should seat into the nose w/o binding
- Latch/keeper should not be distorted or obstructed
- ★Overall deterioration/Excessive wear
- **≭**Modifications by the user
- **≭**Rust/pitting/corrosion
- XNo cracks
- ★No excessive wear

No missing partsNo rough or sharp edges

Snap Hook Locking Mechanism

★Disengage locking mechanism and open keeper (keeper should open freely)

Disengage locking mechanism and release (locking mechanism should return to engaged position.

Snap Hook Keeper

Check keeper spring action by opening the keeper and releasing. (Keeper should return to closed position without hanging up it should not close slowly.)

≭Push on keeper without engaging locking mechanism (keeper should not open)

Check to see the keeper is seated firmly on the snap hook nose – there should be no side play. (lateral movement)

Swivel Connectors

Swivel connections must not be loose and be allowed to swivel freely as designed

XNo physical damage, cracks, bends, deformations

Tagging System

Every retractable should have a identification system, with details such as model, date of manufacture, name of manufacturer, limitations and warnings.

Check tag for date of manufacture and remove from service if past adopted service life policy

XIf tagging system is missing or not legible remove retractable from service.

Cleaning and Storage

Periodically clean the exterior of the device and wipe the lifeline using a damp cloth and mild detergent. Towel dry.

Store in a clean dry location, free of exposure to fumes, heat, direct ultra violet light, sunlight and corrosive elements.

The lifeline should be fully retracted into the unit when not in use. Failure to do so on some models may cause premature weakening of the mainspring resulting in a loss of lifeline retraction.

Inspection Checklist – Fall Protection Equipment Self Retracting Lifeline Complete w/ Recovery

J	
Description:	Model #:
Serial #:	Date of Manufacture:
Inspector:	Date Inspected:
Increator Signature:	

Inspector Signature:

*****FAIL: **I** Initial___

REMOVE FROM SERVICE REPAIR

✓ PASS: □ Initial____ RETURN TO SERVICE



	-	
Load Impact Indicator		
Housing cover		
Deformation		
Labeling (tags)		
SNAPHOOK		(if applicable see Carabiners
Swivel Connectors		
Hook Body		
Hook Nose		
Gate (keeper)		
Lock		
Eye		
Hinge		
Spring (inside gate)		
Lifeline – Web		
Webbing		
Stitching		

Self Retracting Lifeline c/w Recovery

ir				
ITEM	DESCRIPTION -	FAIL	PASS	COMMENTS
#	LIFELINE – WIRE ROPE	×	1	
	Broken Wires			
	Rust/Corrosion/Pitting			
	Deformations			
	Heat Damage			
	Fittings/Thimbles			
	Splices			
	Tests			
	Retraction & Tension			
	Test			
	Braking Test			
	Retrieval Mode Test			



Figure 1q Carabiner, Self-locking



Figure 1r Carabiner Manual-locking

Self Retracting Lifeline Complete w/ Recovery

ITEM #	DESCRIPTION	FAIL	PASS	COMMENTS
	CARABINER	*	✓	
	Carabiner Body			
	Carabiner Nose			
	Gate (hinged open)			
	Lock			
	Gate			
	Hinge			
	Spring (inside gate)			
	Manual Lock			