



Service life and Retirement

These are merely a guideline to the expectations of equipment manufactured by Robertson Harness. There are many factors that can exponentially extend or shorten a harnesses service life.

It is the position of Robertson Harness to endorse the following.

Lanyards and Lobster Claws carry a maximum three year service life.

Robertson Harness advocates a Seven year max lifecycle on seat and full body style harnesses (GH & CRC Series Harnesses). Use of two or three months during the summer does not constitute a year of service life. See graphs page 2 and 3.

ANSI Fall Protection Harnesses carry a 10 year lifecycle.

* Our guideline only applies to products demonstrating no visual damage and that knowingly has not been exposed to chemicals, abnormal heat, or excessive ultraviolet light.

It is possible that the equipment will last longer depending on its care and use. The most significant contributing factor to the service life of a harness is its history of use.

* These extended projections are absolute maximums that are not intended to be prolonged for any circumstance. Robertson provides this recommendation as a general guideline, and is not to be used in lieu of the inspection and maintenance criteria outlined in the inspection of equipment guideline.

* Documentation is crucial with life safety gear in identifying its service period with continued inspections and a well-conceived operations manual.

Each harness and lanyard shipped by Robertson Harness is accompanied by specific instructions for use. They can also be found on our website.

Robertson requires each harness and lanyard be visually inspected prior to use and regularly inspected by a Competent Person, such as defined by OSHA (Occupational Safety & Health Administration).

Following these instructions may still necessitate removing the harness or lanyard from service prior to the expiration of the life expectancy guideline. Ultimately, it is the responsibility of the end-user to determine when a harness or lanyard is unfit for use and should be removed from service. A common misconception is the assumption that the manufacturer will tell you when it's time to retire, or keep the equipment.

Herein lies the problem; the life expectancy is a general guideline and not intended to be used as an absolute. The minute Robertson ships a harness or lanyard the clock starts and thus depreciation begins. Robertson cannot definitively tell you how many spatters of this or that it takes to dispose of the harness, nor how many traces of chlorine and at what concentration in PPM it would take to degrade the material to a given percentage. We cannot tell you (except generally) how much UV exposure and at what altitude it takes to degrade an item to a point it is worn out or too weak to use. As the manufacturer we cannot tell you the exact effect bodily fluids, sweat components (acid, alkalinity, salts), or of the amount of grit in your air, or the pollution in your work locations. We do know acid rain has acid in it and salt water has salt in it. These elements are intended to be eluded because they exponentially degrade the life of a harness.

The best and most qualified person to tell an employer when to retire equipment is a competent and qualified inspector on site.

When a harness has been involved in a severe fall, but is not obviously damaged, it must be retired immediately. If you have any doubts about the dependability of your harness, retire it and get a new one.

* Products removed from service should be disposed of in a manner that prevents inadvertent further use.

Usage of a harness in relation to Zip Lines/Canopy Tours

Hourly usage does not implicitly transfer into the life of a harness for many zip lines. We prefer the breakdown of usage in terms of cycles. Here is how we look at cycles when it comes to harnesses and lanyards.

* A cycle is a single pass down a line, if a course consists of nine separate zip lines this equates to nine cycles on that piece of equipment.

Below are examples of typical ziplines cycles

Example (1) operating 7 days a week

Cycles per day	200
# of harnesses used daily in those cycles	65
# of times each harness is used daily	3
# of times each harness is used in six months	548
# of times each harness is used annually	1,095
# of times each harness is used over a five years life	5,475
Initial cost of harness	\$52.00
Cost of harness at 5,200 cycles	.01 cents

Example (2) operating 4 days a week

Cycles per day	400
# of harnesses used daily in those cycles	50
# of times each harness is used daily	8
# of times each harness is used in six months	832
# of times each harness is used annually	1,664
# of times each harness is used over a five years life	8,320
Initial cost of harness	\$34.00
Cost of harness at 3,400 cycles	.01 cents

Heavy to Extreme use

Example (3) operating 7 days a week

Cycles per day	1,500
# of harnesses used daily in those cycles	100
# of times each harness is used daily	15
# of times each harness is used in six months	2,730
# of times each harness is used annually	5,460
# of times each harness is used over a five years life	27,300
Initial cost of harness	\$76.00
Cost of harness at 1,900 cycles	.04 cents

Usage of a harness in relation to a ropes course.

Example (4) Full Body Harness used 6 months a year

Activity: Leap of Faith

Cycles per day	3
# of harnesses used daily in those cycles	1
# of times each harness is used daily	3
# of times each harness is used in six months	548
# of times each harness is used over a five years life	2790
# of times each harness is used over a ten years life	5480
Initial cost of harness	\$120.00
Cost of harness at 744 cycles	.16 cents

These graphs should serve as a guideline for the use and retirement of a harness. Because we do not have a standard set of hours or cycles indicating retirement, it is the job of the course, and it's inspector to determine if a harness needs to be retired.

Robertson Harness purposely exceeds minimum qualifications in strength and design. The degradation that is common in a 3-7 year period does not render the device worthless simply because it's exceeded a seven year period. However there must be consideration for that piece of equipment in terms of its life, safety and liability.

As the manufacturer we know that a harness worn every day will likely not make the 5 year mark. For example a construction worker or an iron worker can wear out a harness in less than a year. Likewise a harness used 15 times a day in a zip line environment may only last up to a year. A harness that is used once a week or once a month, may last a lifetime. Not every use for a harness is the same; determining the service life is truly dependent on the specific use of the harness.

Further questions or concerns about the service life of a harness; please call Robertson Harness at (970) 682-4470 or email Sales@RobertsonHarness.com