Scope of Sling Inspections

The purpose of this statement is to delineate the work performed during a Lift-All sling inspection service, and to define the limits of responsibility Lift-All will assume. Lift-All asks each customer seeking this service to first read and understand the terms of this information.

Scope of the Standard Lift-All Sling Inspection Service

Upon customer request, Lift-All offers a sling equipment inspection service. The purpose of the sling inspection service is simply to assist users in identifying when slings and related lifting products are damaged and need to be removed from service.

The products inspected during this service include products currently manufactured or provided by Lift-All Company, namely:

- Slings
- Sling hardware, such as hooks, shackles, links, and turnbuckles.

This service is intended to be in following with common guidelines as prescribed by 1) Lift-All Instruction sheets, 2) OSHA, MSHA and other appropriate state and federal regulations, and 3) guidelines established by various industry standards including those established by ASME/ANSI, and the Web Sling and Tiedown Association.

Conformance with any additional requirements would need to be specifically requested. For example, products procured for the Department or Defense, Department of Energy or agencies or companies may have specific periodic proof testing or tagging requirements that are not included as part of the standard Lift-All inspection service.

For products that are not covered by common industry guidelines, standards or regulations we will intend to inspect in accordance with the manufacturers guidelines, if known. Such products may include specialized hooks or connection hardware, conveyor attachments, etc. For products with unknown inspection requirements, these items will not be included as part of the inspection process unless the user is able to provide our inspection personnel with clearly written inspection guidelines. It will be the user's responsibility to verify that these guidelines originate from a qualified person or supplier.

Upon conclusion of this service, a written report will be provided, which will identify each item inspected.

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Products **NOT** normally inspected during this service include:

- Wear pads
- Sling Protection Devices
- Cranes and hoists
- Lifting beams
- Plate clamps and specialty mechanical lift devices
- Product requiring disassembly
- Makeshift hardware

Limitations applicable to this service are noted in the following:

Availability of products to be inspected

Lift-All representatives will inspect products that are made available for the inspection. However, they will not be responsible to inspect:

- Products that are hidden, inaccessible, or not otherwise clearly presented to them for inspection.
- Products that are not first adequately cleaned, allowing them to be inspected properly.
- Products located in environments that may be unsafe for inspection personnel.

Users "In House" inspection process

This service shall not be considered a replacement for user's responsibility to perform regular product inspections as required by law including the Occupational Safety and Health Administration (OSHA), and as prescribed by applicable standards, regulations, and as noted within Lift-All warnings and instructions. Also, it is not the intent of this service to assess the effectiveness of inspections being performed by the user.

The designation that a product is suitable for continued service does not suggest the length of service for which the product will remain suitable for continued service. If Lift-All performs inspections at regular intervals, each such inspection does not in any manner suggest that the product can assumed to be suitable for use until the next Lift-All inspection.

It remains the responsibility of users and their supervisors to review and revise their inspection frequency and procedures as necessary to assure that only products of suitable condition remain in service.

Review of product application

The purpose of the sling inspection service is NOT to assess the suitability of products for use in their current or past applications. Slings tied into knots, elongated chain/hardware items from being overloaded, and synthetic slings with cut marks from direct contact with edges are all examples of products that have been misused. Lift-All recommends that all users and their supervisors review each completed inspection form, as a tool to assist them in recognizing possible misuse of the products, particularly when their safe use may be compromised.

Condition of padding or cut protective materials

Sling padding and protective devices are not inspected as part of this service for reasons explained in the following. These items are commonly used for two distinctly different purposes. They are commonly used as both **general padding** material and also as **cut protection** devices.

When used as a **general padding**, the material can assists users by protecting load surfaces from being marred by the sling, or by extending the life of a sling against factors that may gradually degrade a sling such as from abrasive surfaces or materials. Padding materials used in this manner, where sling safety is not compromised, may continue to be used until they are completely worn or degraded.

Padding materials are also used as **cut protection** devices to prevent synthetic slings from being severed by direct contact with edges. Padding used in this manner must be properly inspected and maintained. If not, lifting operation safety may be affected. When damaged during use, these devices can often be repositioned and reused effectively, as long as a portion of the device remaining in good condition is used in each application. These item cannot be properly inspected by Lift-All personnel, as only operators and their supervisors closely overseeing an application are suited to determine if a cut protection device remains in a usable condition.

Chemical damage

Lift-All inspectors will not evaluate the effect of chemicals on slings unless the damage is clearly visible. The damage that results from the exposure of lifting products to incompatible chemicals may or may not be visible. For specific temperature, concentrations, and time factors, please consult Lift-All for a recommendation prior to purchase or use of a sling.

Disposition of products that have been designated to be removed from service

In the course of performing the product inspections, Lift-All personnel may tag or otherwise identify products as not being suitable for continued service in their current condition. It is the responsibility of the user company's personnel to assure that products identified as damaged are either discarded, or properly repaired before being placed back into service.

Product Warranties

The inspection service does not expand or extend any warranties provided with any products beyond those provided at the time of sale.

Rev. 7-09

Inspection Criteria for Webbing Slings Date: 8/12/05

How bad of a webbing sling is considered a "bad" sling. Is there a specific inspection criteria for the nylon webbing slings?

Our recommendations are to follow the inspection criteria that as listed on the Use, Care, and Inspection Requirement (Sling Instruction) Sheet enclosed with each sling:

INSPECTION
Remove Web Slings from service if any of the following are visible:

A. A rated capacity tag is missing or illegible.
B. Exposure of red core warning yarn. (For slings containing red core warning yarn.)
C. Broken or worn threads in the stitch patterns.
D. Knots in any part of the sling.
E. Any evidence of heat or chemical damage, including melting or charring.
F. Metal fittings that are cracked, deformed, pitted, corroded or excessively worn.
G. Hooks with throat openings increased by more than 15 percent or twisted out of plane more than 10 degrees.
H. Any other visible damage which causes doubt as to the sling strength.

Each inspector should attempt to assess the cumulative affects of all damage present on the sling in making his/her determination as to whether or not a webbing sling passes or fails an inspection. Ideally, we would want slings to be taken out of service before the total amount of damage, caused by all degrading factors, results in a total strength loss of not more than approximately 20%, when compared to the strength of a brand new sling.

We encourage users to adopt a conservative policy, especially when consideration is given to the cost of a sling versus the value of the equipment that is being transported during its life. (or the possible ramifications of working a sling beyond its useful life)

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Some additional comments:

Degrading Factor	Comment
Abrasion	Abrasion can occur both internally from dirt or gritty substances, and externally from rubbing against hard surfaces. Examine slings for excess wear particularly in loop or eye ends or concentrated areas of wear in sling body. Any appreciable wear on load bearing yarns is cause for rejection. Webbing slings that are soiled with dirt or any gritty material should be inspected closely. Damage to the yarn structure of the webbing from this grit may not be as readily visible as most other forms of degradation. These slings may tend to develop a very fuzzy appearance.
Cutting	Any visible signs of cutting of sling surfaces is concerning and should prompt an application review, as synthetic slings are not to be directly exposed to any edges that are not well rounded. Web slings with even a small amount of edge cutting should be inspected critically because this damage can create non-uniform loading of the webbing, which can result in tear propagation across the width of the webbing.
Heat or Chemical	Any visible signs of these types of sling damage would prompt an immediate removal from service.
Worn or Broken Stitching	Stitching joining the body plies in multi-ply slings can be damaged without affecting sling strength. However, damage to the lap or load bearing stitch pattern must be in very good condition or the sling must be removed from service.

What is the purpose of the red core warning yarns (For slings containing red core yarn)? When performing sling inspections, if the red core warning yarns are not exposed, does this mean that webbing slings are suitable for further use?

Red core indicator yarn is woven into the center section of some sling webbing. The purpose of the red core feature is to serve as an aiding indicator that the sling is damaged to the extent that it is to be permanently removed from service.

It should be noted that this inspection feature is only one of many possible indications that a sling may need to be removed from service. Again, each inspector needs to assess the cumulative affects of all damage. A list of inspection criteria is noted on the Sling Instruction Sheet that is provided with every new sling. Any sling that may have been weakened, as indicated by visible damage, should be removed from service.

In an effort to prevent users from becoming overly reliant on the red core feature, it is not mentioned on the sling tag. However, the red core removal criterion remains and it is noted in the inspection section of each Sling Instruction Sheet.

If a small number of surface yarns of a webbing sling are cut or damaged, does this mean that according to OSHA regulations that the sling needs to be removed from service, and does Lift-All recommend that it be removed from service?

The Code of Federal Regulations Title 29 for Labor, Part 1910.184 states "Synthetic web slings shall be immediately removed from service if any of the following are present:"
The list that follows include: "(iii) snags, punctures, tears, or cuts."

In the way this is written, it tends to suggest that webbing slings should be removed from service when any amount of the subject damage is present. This statement will likely be interpreted differently amongst OSHA inspectors. We would be surprised if most inspectors would request the removal from service of slings that contained a very small amount of surface damage. If an inspector did issue a penalty for using a sling that contained only a very small amount of surface damage, we would hope that it was issued because of an operational concern rather than from his being perhaps overly discriminating.

At Lift-All, we know that cutting of web slings in particular is a serious matter and that it is the most common cause of safety related accidents involving them. However, if a *very small amount* of surface yarns are cut, we may often allow such slings to be used further. Most importantly, this damage hints of a potential problem and suggests the need to better protect the sling.

We offer a full array of padding devices that can be used to aid in protecting the sling from edges that would possibly cut the sling. If suitable sling protection cannot be found, you may then want to consider using a metallic type sling, such as a wire rope or chain sling, for this application.

All workers should be trained on using and inspecting slings properly. Our territory sales managers will gladly schedule a training session with workers and supervisors. During this session, damaged sling samples can be examined and discussed.

We hope that this information has been helpful to you and that we have satisfactorily addressed your inquiry. Please contact customerservice@lift-all.com if you have any further questions.