



CornerMax® Sleeve Safety Information

⚠ WARNING Warning icons are used to alert users to potentially hazardous conditions and situations, which if not avoided may result in SEVERE INJURY or DEATH.

“Must” denotes a mandatory requirement and is synonymous with the use of the term “shall”. In this guide, all components used for load handling activities, including but not limited to: slings, fittings, rigging hardware, and/or sling protection may also be referred to as rigging*. Slings must always be protected from cutting, abrasion and other types of damage by materials of sufficient strength, thickness and construction. This mandatory requirement is enforced by OSHA, stated in many consensus sling safety standards and is also mentioned multiple times in the Lift-It® Manufacturing Co., Inc. warnings.

- You must ALWAYS protect slings from all POTENTIALLY DAMAGING EDGES and SURFACES.
- There are two basic types of sling protection; protection used specifically for **cut protection** or other devices used for **abrasion protection**.
- Bulked Nylon (Cordura®) may be suitable for abrasion protection but will not prevent damage from cutting.

⚠ WARNING ABRASION PROTECTION WILL NOT PREVENT DAMAGE FROM CUTTING.

- If protection from cutting is necessary, only use sling protection that has been designed, tested, rated and labeled by the sling protection manufacturer.
- “Cut proof” sling protection does not exist, and sling protection MAY NOT prevent cutting or other damage especially if it is not properly used.
- Loads must be rigged properly and a Qualified Person** and/or Properly Informed and Trained Consumer must ensure that the sling protection is the correct type, capacity, shape and size to protect slings from damage.
- Sling protection and all rigging* must be compatible with the sling.
- Sling protection must not interfere with slings closing to the full gripping position for secure handling and load control.

Even if you consider all of the factors/issues involved in load handling activities, things can still go wrong. Therefore, all personnel must be alert to potential risks associated with the use of slings, rigging hardware and sling protection.

⚠ WARNING

MAKE SURE ALL PERSONNEL ARE CLEAR OF LOADS AND ALERT TO RISKS, ESPECIALLY IN THE “DANGER ZONE”.

The “Danger Zone” is any area where the load could fall onto or swing into, or anywhere an unplanned release of tension could strike personnel with deadly recoil and/or impact force.

Slings, rigging hardware and/or sling protection failure may result in SEVERE INJURY or DEATH. Gravity ALWAYS works and when rigging* failure occurs, personnel on, under, near or next to load handling activities are in grave danger from falling objects. OSHA refers to this area as the “fall zone”.

Personnel must never be on, under or near suspended loads. Personnel must stand clear of lifted loads and never stand or pass under a suspended load.

Personnel must not stand in-line with or next to rigging* under tension.

An unplanned release of tension could strike personnel with deadly recoil and/or impact force.

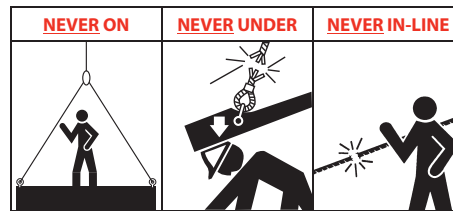
Sling users must know and understand the potential danger from the unplanned release of tension and deadly recoil and/or impact force that may result in SEVERE INJURY or DEATH.

The “Danger Zone” is sometimes referred to as “working in the bite”, “working in the line of fire” or “working in the strike zone”.

Never use slings and/or rigging* for pulling against stuck, snagged or restrained objects IF LOADING CANNOT BE DETERMINED. Load measuring devices and/or methods must be used to ensure that OVERLOADING DOES NOT OCCUR.

Personnel must be alert to the potential for the sling and/or load to become snagged or hung up during load handling activities.

When these conditions occur, the rigging* may be overloaded.



Personnel shall never ride the sling or load.

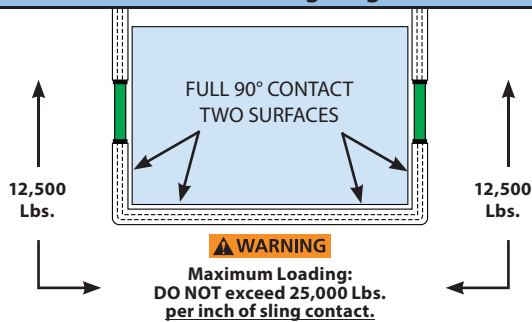
Once load handling activities begin, sling users must never place any part of the body between the sling and the load and/or between slings, shackles, hooks and/or other connection points.

Overloaded and/or damaged slings, rigging hardware and sling protection may fail, and the unplanned release of tension could:

- Strike personnel with deadly recoil and/or impact force.
- Become deadly projectiles resulting in SEVERE INJURY or DEATH.

When properly used, CornerMax® Sleeves protect slings from cutting and are useful when it is not possible to use sling protection designed for 90° applications. CornerMax® Sleeves are made of Dyneema® fiber. Remember that “cut proof” sling protection does not exist.

Protection Rating Diagram



When properly used, 25,000 Lbs. protection capacity per inch of sling contact is achieved ONLY IF FULL 90° contact is made with TWO surfaces.

The maximum assembly capacity is limited by the component with the lowest Work Load Limit, including the sling protection.

Always refer to the Protection Capacity Tag and NEVER overload slings, rigging hardware and/or sling protection.

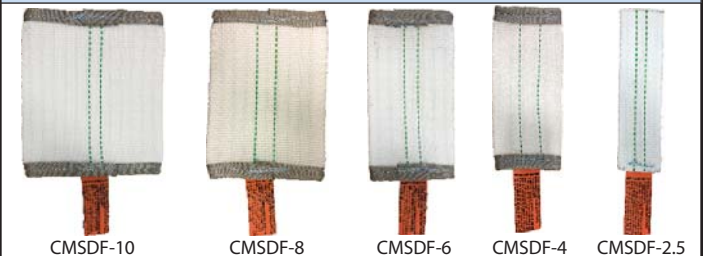
Protection ratings DO NOT apply if the Angle of Loading is not 90° (perpendicular to the load). See page 2 for more information on Angle of Loading.

It may look like CornerMax® Sleeve, but unless it has a Protection Capacity Tag; it's NOT CornerMax® Sleeve!

Fire hose, felt, shop rags, gloves and/or other makeshift devices are not acceptable for use as sling protection.



CORNERMAX® SLEEVE SPECIFICATIONS



.25 Thickness. (Available in 10, 8, 6, 4 and 2.5 inch widths).



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CornerMax® Sleeve Safety Information

USERS NEED TO BE TRAINED AND KNOWLEDGEABLE

⚠ WARNING This guide contains important safety information about the use of Lift-It® CornerMax® Sleeves. However, it DOES NOT provide you with all the information you need to know in order to be considered trained and knowledgeable. The proper use of slings, rigging hardware and sling protection are only some of the many necessary ingredients for proper and safe use in successful load handling activities.

You must be properly trained, and it is your responsibility to consider all risk factors prior to all load handling activities. Improper use and/or lack of proper training may result in SEVERE INJURY or DEATH due to rigging* failure, the unplanned release of tension, deadly recoil and/or impact force and/or the loss of load control.

All Lift-It® products are sold with the express understanding that users are thoroughly familiar with safe and proper product usage. A manufacturer does not (and cannot) have complete knowledge or insight into the specific details and potential hazards associated with your particular load handling activities. The user is responsible for proper use as detailed in all applicable standards, regulations and warnings.

The American Society of Mechanical Engineers in the ASME B30.9 Sling Safety Standard, Section 9-X.1 clearly states the requirement for training. "Sling users shall be trained in the selection, inspection, cautions to personnel, effects of the environment and rigging practices, covered by this chapter."

Rigging* practices include the use of slings, rigging hardware and sling protection. Sling protection is a mandatory requirement for all synthetic rope, web, roundslings and Twin-Path® slings whenever there is a possibility of damage from cutting and/or abrasion.

⚠ WARNING DO NOT use slings, rigging hardware and/or sling protection until you are absolutely sure of what you are doing. Remember, failure to follow proper use, care and inspection criteria and/or lack of skill, knowledge and/or training may result in SEVERE INJURY or DEATH. Slings, rigging hardware and/or sling protection may fail if damaged, abused, misused, overloaded or improperly maintained and may result in SEVERE INJURY or DEATH.

Occupational Users using Lift-It® products as part of their work must have sufficient training and knowledge of all applicable standards and regulations. If you are unsure whether you are properly trained and knowledgeable or if you are unsure of what the standards and regulations require of you, ask your employer for information and/or training. DO NOT use Lift-It® products until you are ABSOLUTELY sure of what you are doing.

Consumers using Lift-It® products must be properly informed and trained to safely use Lift-It® products. An important part of becoming properly informed is to read and fully understand the information in all warning/instructions, tags, labels and guides that accompany Lift-It® products. To increase your level of comprehension, training and competence, consider completing an accredited rigging course offered by an industry recognized sling and rigging training organization, trade/technical school, union or industry association. Online rigging courses, instructional videos and rigging publications may also provide valuable information for your specific load handling activities.

DO NOT use Lift-It® products until you are ABSOLUTELY sure of what you are doing. Please contact us at 800.377.5438, scan the QR Code on the Protection Capacity Tag or email us at info@lift-it.com and NEVER TAKE CHANCES!

READ AND FOLLOW ALL WARNINGS & INSTRUCTIONS

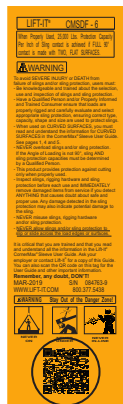
Always Read and understand tags, labels and information that accompany all products.

Lift-It® CornerMax® Sleeves must have a Protection Capacity Tag. If the Protection Capacity Tag is missing or illegible, CornerMax® Sleeves must be **immediately** removed from service.

Always refer to the Protection Capacity Tag to determine protection capacity.

Lift-It® CornerMax® Sleeves are marked with the following information:

- Name or Trademark of the Manufacturer
- Stock Number
- Date of Manufacture
- Unique Serial Number
- Protection Capacity
- Use/Safety Information

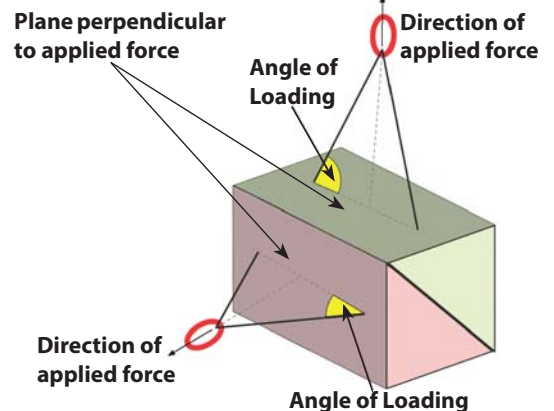


QR CODE

ANGLE OF LOADING

The acute angle between the sling leg and the plane perpendicular to the direction of the applied force, referred to as the horizontal angle when lifting.

[ASME B30.9 Section 9-0.2 Definitions]



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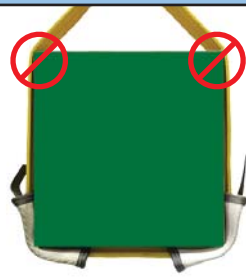
SLING PROTECTION SELECTION & USE INFORMATION

- A Qualified Person** and/or Properly Informed and Trained Consumer must ensure that loads are properly rigged and carefully evaluate and select appropriate sling protection for the application and potential type(s) of damage.
- Sling protection should not be makeshift (i.e., cardboard, work gloves, rags, carpet, fire hose or other items were not designed to be used as sling protection).
- Trial lifts may be extremely valuable in determining and validating sling protection suitability and adequacy. Several trial lifts done by a Qualified Person** and/or Properly Informed and Trained Consumer in a set of no consequence circumstances that WILL NOT RESULT IN INJURY or DEATH may be necessary. See page 4 for additional information on trial lifts.
- A Qualified Person** and/or Properly Informed and Trained Consumer must consider and evaluate many factors that may affect sling protection performance. Factors such as, but not limited to: sling elongation, edge type and condition (rough or case hardened), spatial considerations, angle of loading, sling protection usage angle, protection contact surface (flat or curved), sling protection contact (full or partial), exposure temperature, chemical environment, etc.




⚠ WARNING Slings, rigging hardware and/or sling protection may fail if damaged, misused or overloaded resulting in SEVERE INJURY or DEATH.

SLING PROTECTION MUST BE PROPERLY USED

Always protect slings from ALL POTENTIALLY DAMAGING SURFACES and EDGES (TOP and BOTTOM).
Make sure the protection is the correct type, capacity, shape and size for the specific application.

	
All Edges Protected YES	No Protection on Top NO

Only use sling protection that has legible Protection Capacity Tags.
Do not use CornerMax® Sleeves with chain or wire rope slings.
A Qualified Person** and/or Properly Informed and Trained Consumer should evaluate protection by doing trial lifts (see page 4) at a minimum height in conditions that will not result in INJURY or DEATH to evaluate and ensure proper use and safety.

Sling protection ratings DO NOT apply if sling protection and/or slings are:		Sling Protection ratings apply.
		
REDUCED capacity		FULL capacity
Bunched	Angles of Loading Other than 90°	90° Angle of Loading No loss of capacity

Tension and cutting forces increase when slings, rigging hardware and/or sling protection are used at Angles of Loading other than 90°. See page 2 for more information on Angle of Loading.
Do not allow slings and/or sling protection to slip or slide across load edges or surfaces.
Inspect before each use and do not use damaged slings, damaged rigging hardware and/or damaged sling protection for any purpose.



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SLING PROTECTION MUST BE PROPERLY USED

- A Qualified Person** and/or Properly Informed and Trained Consumer must ensure loads are properly rigged and carefully evaluate and select appropriate sling protection for the application and potential type(s) of damage.
- Sling protection must always be evaluated for adequacy and suitability by a Qualified Person** and/or Properly Informed and Trained Consumer.
- As tension is being applied, before load handling activities begin, a Qualified Person** and/or Properly Informed and Trained Consumer must ensure the relationship between the sling and sling protection is correct and sling protection is properly placed to prevent damage to slings and/or sling protection.

• Trial lifts (i.e., lifting a minimum height in conditions that WILL NOT RESULT IN INJURY or DEATH) are a critically important part of an evaluation. Even though trial lifts are “static” tests and do not simulate the “dynamic” nature of actual lifts, they may assist in identifying problems before the actual load handling activity begins. Several trial lifts may be necessary to ensure proper use and safety.

• Trial lifts provide a Qualified Person** and/or Properly Informed and Trained Consumer the opportunity to evaluate and take corrective action. Evaluation must include, but is not limited to: ensuring that the load is secure and balanced, assumes the intended position and that the sling and protection relationship is correct and sling protection is properly placed to prevent sling damage.

• After the trial lift, but before the actual lift, a Qualified Person** and/or Properly Informed and Trained Consumer must inspect slings and sling protection. If possible, the sling protection should be removed and/or repositioned to independently inspect not only slings, but also, the sling protection. A Qualified Person** and/or Properly Informed and Trained Consumer must evaluate and, if necessary, take corrective action.

• Trial lifts are especially important with basket or other “loose” hitches where friction alone between the sling and/or sling protection and the load contributes to load control. Multiple trial lifts, inspections and corrective actions may be necessary to determine the proper combination of factors for successful load handling activities.

- Sling protection ratings DO NOT apply if slings and/or sling protection are used at Angles of Loading other than 90°.



- Tension on all rigging* increases as the Angle of Loading changes from 90° (see page 2 for more information on Angle of Loading).
- A Qualified Person** and/or Properly Informed and Trained Consumer must calculate and plan for tension and all rigging* components must be evaluated for strength adequacy to avoid overloading.

⚠ WARNING DO NOT OVERLOAD SLINGS, RIGGING HARDWARE AND/OR SLING PROTECTION. Slings, rigging hardware and/or sling protection may fail if damaged, misused or overloaded resulting in SEVERE INJURY or DEATH.

- Damage to sling protection and/or slings may occur as tension and compression combine and cutting forces are increased.

- The maximum capacity for all rigging* used for load handling is limited by the component with the lowest work load limit, including but not limited to the sling protection. Remember to apply the “Weak Link” principle.
- Always refer to the Protection Capacity Tag to determine protection ratings and only use sling protection with legible Sling Protection capacity tags.
- CornerMax® Sleeve may be used at an Angle of Loading that is NOT 90°.
- Regardless of the sling protection type, load control is affected by the Angle of Loading. As the Angle of Loading deviates from 90° the greater the likelihood that slings and sling protection will slide against the load causing damage that may result in SEVERE INJURY or DEATH.
- **Slings must be properly rigged for load control.**
- **NO slipping and sliding – Positive sling to load engagement!**
- **NEVER allow slings and/or sling protection to slip or slide over and/or across load edges, load surfaces, suspension points and/or connection points.**
- **Slipping and sliding may damage slings and/or sling protection, even if the sling protection is properly placed.**
- **Slings and/or sling protection that slip and/or slide may become damaged resulting in SEVERE INJURY or DEATH.**
- Read and understand tags, labels and information provided in this guide, included with all products, contained in our catalog and/or available by scanning the QR Code on the Protection Capacity Tag or Sleeve Warning Tag. Important safety and use information can also be found at www.lift-it.com
- Always operate within the limits of all recommended practices for slings, rigging hardware and sling protection from a regulatory, industry, corporate, job site and manufacturer perspective.
- Use by untrained persons is hazardous. Please contact us if you have questions at 800.377.5438 or email us at info@lift-it.com and NEVER TAKE CHANCES!
- Inspect slings, rigging hardware and sling protection before each use and **immediately** remove damaged items from service for evaluation by a Qualified Person** and/or Properly Informed and Trained Consumer.
- Do not use damaged slings, damaged rigging hardware and/or damaged sling protection for any purpose.
- Follow inspection procedures and removal-from-service criteria outlined in this guide. See pages 5 & 6.

⚠ WARNING Slings, rigging hardware and/or sling protection may fail if damaged, misused or overloaded, resulting in SEVERE INJURY or DEATH.

- When properly used: 25,000 lbs. protection rating per inch of sling contact is achieved if FULL 90° contact is made with TWO surfaces. (See Protection Rating Diagram, page 1).
- BUNCHED Sleeves will not function properly and protection ratings will not be achieved.
- CornerMax® Sleeves may be used with curved surfaces. See page 5 for important safety information for Curved Surface and Contact Point considerations.
- Do not use CornerMax® Sleeves with chain, synthetic rope and/or wire rope slings.
- Do not use at or allow exposure to temperatures above 140° F (60° C) or below -40° F (-40° C).
- If slings, rigging hardware and/or sling protection will be exposed to potentially damaging chemical environments, contact us prior to use to avoid damaging the slings, rigging hardware and/or sling protection from exposure.

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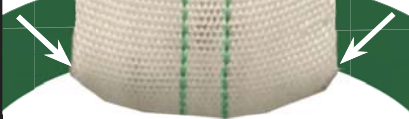
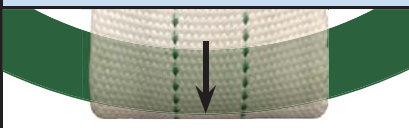


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SLING PROTECTION MUST BE PROPERLY USED

Curved Surface Considerations		Contact Point Considerations	
ROUND	CONCAVE	BLADE LIKE EDGE	BLADE LIKE 90° CONTACT
	 		
<p>CornerMax® Sleeves may be used on curved surfaces. Damage to slings and/or sling protection is difficult to alleviate on curved surfaces. The damage can be amplified by the specific shape type, i.e., concave, convex, etc.</p> <p>When loads are manipulated, rotated, etc. several factors may influence the performance of sling protection, such as but not limited to sling type and sling material, i.e., nylon web slings vs. polyester roundslings. The inherent differences in elongation and sling material construction (rigid web slings vs. pliable roundslings) profoundly affects the contact areas and concentration of cutting forces on slings and/or sling protection.</p> <p>These and other potential hazards may be mitigated by "No Consequence" trial lifts that must be done by a Qualified Person** and/or Properly Informed and Trained Consumer to ensure that slings and sling protection are not damaged from contact with curved surfaces. See page 4 for additional trial lift information.</p>		<p>If CornerMax® Sleeves contact a SINGLE POINT such as a blade like 90° corner, edge or protrusion resulting from load handling, manipulation, rotation, etc., sling protection ratings DO NOT apply and sling protection and/or slings may become damaged resulting in SEVERE INJURY or DEATH.</p> <p>TWO FULL 90° contact points with TWO surfaces must be made to achieve sling protection ratings. (See page 1 - Protection Rating Diagram).</p>	





ALWAYS PROPERLY INSPECT SLINGS, RIGGING HARDWARE & SLING PROTECTION

All slings, rigging hardware and sling protection must be inspected *initially* (upon receipt), *frequently* (before each use), and *periodically* (see page 6 for additional details on inspection frequency). All damaged slings, damaged rigging hardware and damaged sling protection shall be **immediately** removed from service and not used for any purpose until approved by a Qualified Person** and/or Properly Informed and Trained Consumer. Any damage detected in the sling protection may also indicate potential damage to the sling. **Remember, any doubt, DON'T!**

⚠ WARNING The use of damaged slings, damaged rigging hardware and/or damaged sling protection may result in SEVERE INJURY or DEATH.

- Inspect slings, rigging hardware and sling protection before each use and **immediately** remove damaged items from service for evaluation by a Qualified Person** and/or Properly Informed and Trained Consumer. Damaged items shall not be used for any purpose.
- Follow inspection procedures and removal from service criteria featured on page 6 in this guide.

If you identify any of the following types of damage, **IMMEDIATELY REMOVE CORNERMAX® SLEEVES FROM SERVICE**, even if the damage you see is not as extensive as shown in the following pictures. These are extreme examples provided only for illustration purposes.

Damaged, Missing or Illegible Tag		Cuts, Holes, Tears or Punctures	
Temperature or Chemical Damage		Abrasive Damage	

Always immediately remove slings, rigging hardware and/or sling protection from service if damaged or if you detect ANYTHING that causes doubt about proper and safe use.



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INSPECTION AND REMOVAL FROM SERVICE CRITERIA

The strength and performance of all slings, rigging hardware and/or sling protection is affected by wear and damage. It is critically important that sling users employ a three stage, inspection procedure: Initial, Frequent and Periodic, performed by a Qualified Person and/or Properly Informed and Trained Consumer.**

INITIAL INSPECTION

CornerMax® Sleeves must be inspected upon receipt by a Qualified Person** and/or Properly Informed and Trained Consumer to ensure:

- Damage did not occur during transit.
- Defective materials or inferior workmanship are not present.
- Verification that Protection Capacity Tag information matches the manufacturer's published specifications.

FREQUENT INSPECTION (PRE-USE)

The user must inspect slings, rigging hardware and sling protection BEFORE EACH USE to determine if damage is present.

Damaged items must be **immediately** removed from service and not used for any purpose.

- Do not use slings, rigging hardware or sling protection if damage is present.
- Damage and wear reduce the strength and performance of all items (i.e., slings, rigging hardware, sling protection, etc.)
- Slings, rigging hardware and sling protection found with damage must be **immediately** removed from service. Items removed from service must not be returned to service until approved by a Qualified Person** and/or Properly Informed and Trained Consumer.
- Any hazardous condition detected during inspection shall require further investigation, possible replacement and/or corrective action by a Qualified Person** and/or Properly Informed and Trained Consumer. Temporary repairs of slings, rigging hardware and/or sling protection are not permitted. The manufacturer may replace tags and edge binding.

DAMAGE MAY INCLUDE, BUT IS NOT LIMITED TO:

- Illegible or missing Protection Capacity Tag.
- Heat or chemical damage.
- Cuts, tears, holes or punctures.
- Crushing and/or distortion.
- Unravelling and/or decomposition of the sleeve.
- Unauthorized modifications.
- Other conditions (including visible damage) that cause doubt as to the continued use of slings, rigging hardware and/or sling protection.

Remember, any doubt, DON'T!

WARNING

These materials are current through March 28, 2020. It is the user's responsibility to independently verify the accuracy of these materials and all cited standards and regulations if these materials are used or referenced after March 28, 2020.

PERIODIC INSPECTION

Periodic Inspections should be conducted by a Qualified Person** and/or Properly Informed and Trained Consumer other than the person performing the frequent inspection.

The interval for periodic inspections must never exceed one year and is also based upon: frequency of use, severity of the service conditions and the nature of the load handling activity.

OSHA and ASME have specific definitions and guidelines for service conditions which dictate the intervals for periodic inspections.

Normal Service:

Annual periodic inspections must be performed for items used in Normal Service.

Severe Service:

Monthly or quarterly periodic inspections must be performed for items used in Severe Service conditions (i.e., abnormal conditions, extended exposure to extreme temperature limits, grit, etc.).

Special Service:

As recommended by a Qualified Person** and/or Properly Informed and Trained Consumer.

A record of the most recent periodic inspection should be maintained documenting that the event occurred. It is not required that the condition of individual sling protection devices be recorded during periodic inspections.

If a sling protection device has been idle or in storage for more than one year since the last periodic inspection, before use the sling protection device must be thoroughly inspected on a periodic inspection level by a Qualified Person** and/or Properly Informed and Trained Consumer.

***Qualified Person: A person, who by possession of a recognized degree or certificate of professional standing in an applicable field, or who, by extensive knowledge, training and experience, has successfully demonstrated the ability to solve or resolve problems relating to the subject matter and work.*

Lift-It® professionals have provided training for decades and have always promoted the proper and safe use of sling protection.

Why wouldn't everyone do the same?

Many dedicated Lift-It® professionals contributed enormous amounts of time, effort, knowledge, experience and financial resources to produce this guide. It demonstrates our commitment to you, your co-workers and your loved ones.

We've done our part, now you MUST do yours!

