Green Pin® Tycan® Synthetic Lashing Chain User Guide



WARNING To Users of Green Pin® TYCAN® Synthetic Lashing Chain.

A 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 lashing and cargo securement, including but not limited to: Lashing Chain, Lashing Chain Assemblies, Ratchet Loadbinders, ropes, shackles, winches, D-rings, Shortening Hooks, Connecting Hooks, Connecting links, Masterlinks, Subassemblies, Lashing protection, tie downs, anchor points, blocking, stake pockets, etc. may also be referred to as Cargo Securement Gear*.

WARNING This guide contains important safety information about the use of GP Tycan® Chain. However, it DOES NOT provide you with all the information you need to know in order to be considered trained and knowledgeable in cargo securement activities. The proper use of GP Tycan® Chain is only one part of the many necessary ingredients for proper and safe use for successful cargo securement activities.

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

Thank you for taking the time to read and understand the information detailed in the GP Tycan® Lashing Chain User Guide that accompanies Lift-It® GP Tycan® Lashing Chain. Cargo Securement Gear* can fail if damaged, misused, or overloaded, resulting in SEVERE INJURY or DEATH. Users must be knowledgeable and trained about the selection, use, and inspection of GP Tycan® Chain. This GP Tycan® Lashing Chain User Guide provides some, but not all, of the information a user needs in order to use GP Tycan® Lashing Chain properly and safely. However, failure to read and follow ALL of the information in this GP Tycan® Lashing Chain User Guide may result in SEVERE INJURY or DEATH.

The proper use of GP Tycan® Lashing Chain is only one of the many necessary ingredients of a complete and successful cargo securement plan. You must be properly trained, and it is your responsibility to consider all risk factors prior to all cargo securement activities. Improper use and/or lack of proper training may result in SEVERE INJURY or DEATH due to Cargo Securement Gear* failure, the unplanned release of tension, loss of load control, and/or deadly recoil and/or impact force during cargo securement activities.

All GP Tycan® 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 cargo securement activity. The user is responsible for proper use as detailed in all applicable standards, regulations and warnings. The improper use of Cargo Securement Gear* by untrained persons is extremely hazardous and may result in SEVERE INJURY or DEATH. It is also important that GP Tycan® Lashing Chain users be thoroughly familiar with the manufacturer's recommendations and safety information that accompanies products.

Read and understand all product and warning information provided in the GP Tycan® Lashing Chain User Guide, available by scanning the QR Code on many of the Lift-It® tags and labels or available at www.lift-it.com and always follow OSHA, ASME, federal, state, provincial, industry, corporate, association, job site specific, insurance, best practice and/or manufacturer warnings and guidelines.

The Web Sling and Tie Down Association in the Recommended Standard Specification for Web Tie Downs, Section 4.2, clearly states, "Before using Cargo Securement Gear*, users must be properly trained".

Lift-It® GP Tycan® Lashing Chain users must follow the same guidelines for training.

Occupational Users who use GP Tycan® Lashing Chain as part of their work must have sufficient training and knowledge of all applicable standards and regulations, as well as employer and/or contractor policies. 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.

If you are a Consumer using Lift-It* GP Tycan® Lashing Chain, you must also be properly trained and informed in the safe and proper use of GP Tycan® Lashing Chain. Gravity always works and falling objects injure, kill, and destroy without regard to location. Uncontrolled loads can wreak havoc in a consumer's garage just as easily as they can in the workplace. An important part of becoming properly informed is to read and fully understand the information in all warning/instruction labels, tags, safety bulletins and user manuals that accompany Lift-It® GP Tycan® Lashing Chain. To increase your level of comprehension, training, and competence, consider completing an accredited course offered by an industry recognized cargo securement training organization, trade/technical school, union, or industry association. Online courses, instructional videos and publications may also provide valuable information for your specific cargo securement activity.

DO NOT use GP Tycan® Lashing Chain until you are ABSOLUTELY sure of what you are doing.

Please contact us if you have any questions at 800.377.5438 or email us at info@lift-it.com and NEVER TAKE CHANCES! The following guidelines cannot possibly cover all the unique variables present in every possible cargo securement scenario and are certainly NOT all that you need to consider for successful cargo securement activities. Only the user can possibly have complete knowledge or insight into the specific details and potential hazards associated with a particular cargo securement activity.

Use the following as guidelines, but remember, you are responsible for your decisions, actions and their consequences.



STAY OUT OF THE DANGER ZONE

WARNING

Even if you consider all of the factors/issues involved in cargo securement, things can still go wrong. Therefore, all personnel must be alert to potential risks associated with the use of Cargo Securement Gear*.

MAKE SURE ALL PERSONNEL ARE CLEAR OF UNSECURED CARGO AND ALERT TO RISKS, ESPECIALLY IN THE "DANGER ZONE".

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

WARNING Cargo Securement Gear* failure may result in SEVERE INJURY or DEATH. Cargo must be securely stabilized before applying tension to and/or releasing tension. Users should have a plan and escape path to get out of the "Danger Zone" in the event that cargo becomes unstable. Personnel must stand clear of cargo as it is lifted and never stand or pass under suspended cargo during loading and/or unloading activities. Be especially careful when releasing Cargo Securement Gear*, as cargo may shift during transport and may fall or shift upon release of tension, which may result in SEVERE INJURY or DEATH.

Make Sure All Personnel are Clear of Unsecured Cargo and Alert to Risks, Especially in the "Danger Zone".

NEVER ON NEVER UNDER NEVER BETWEEN

Overloaded and/or damaged Cargo Securement Gear* may fail, and the unplanned release of tension may:

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

<u>A WARNING</u>
DO NOT throw Cargo Securement Gear*over cargo, or drop from heights. The impact force of Cargo Securement Gear* may result in SEVERE INJURY or DEATH to personnel or passers-by.

Cargo must be blocked and/or stabilized before tension is applied or released. Cargo that is not properly blocked and/or stabilized may shift resulting in SEVERE INJURY or DEATH.

WARNING

DO NOT use Cargo Securement Gear* 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. Cargo Securement Gear* may fail if damaged, abused, misused, overloaded or improperly maintained and may result in SEVERE INJURY or DEATH.

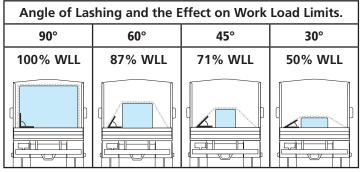
Green Pin® TYCAN® LASHING CHAIN WORK LOAD LIMIT REDUCTIONS***

A Qualified Person** and/or Properly Informed and Trained Consumer (PITC) must determine the proper number, capacity and placement of Cargo Securement Gear* based upon the specific type of cargo, weight, environment and anchor points to prevent overloading. A Qualified Person** or PITC must also determine the reduction in Work Load Limit due to the Angle of Lashing. The effective downward pressure on all Cargo Securement Gear* is reduced when the Angle of Lashing deviates from 90°. See Table 1 for the reduction in Cargo Securement Gear* Work Load Limit (WLL) due to the Angle of Lashing.

- GP Tycan® Lashing Chain may be used in a direct connection
 (Chain goes from an anchor point on the cargo deck to an attachment point
 on the cargo) or in an indirect connection (Chain goes from an anchor point
 on the deck and passes over or through the cargo and is connected to
 another deck anchor point).
- For both direct and indirect connections, a Qualified Person** and/or PITC MUST reduce the WLL when the Angle of Lashing is not 90°

WARNING When GP Tycan® Lashing Chain is passed over and/or particularly when passed through the cargo, extra care must be taken to ensure that the Lashing Chain is always protected from damage that may result from all damaging edges, including all edges which may not be visible.

A Qualified Person** or PITC must ensure that all Components and fittings are the proper capacity, type, shape and/or size to attach to anchor points.



Green Pin® TYCAN® LASHING CHAIN WLL REDUCTIONS FOR ANGLES OF LASHING # 90°

WLL REDUCTION CALCULATION	TAB	LE 1	Angle of Lashing
Multiply the GP Tycan® Lashing Chain WLL by the WLL Reduction Factor from Table 1 for the LESSER of angles (A1 or A2) to determine the Reduced WLL.	Angle of Lashing	WLL Reduction Factor	The acute angle between the Cargo Securement Gear* and the cargo deck. This may be created by a direct connection as depicted, or by indirect connection (lashing going from an anchor point on the deck and passing over and/or through the cargo to another anchor point).
Anala of Lashina	90°	100	Cargo Securement Gear*
Angle of Lashing	85°	.99	
$ A1 = 60^{\circ} $ $A2 = 45^{\circ} $	80°	.98	
The state of the s	75°	.96	
	70°	.94	Angle of
	65°	.91	
A2 A2	60°	.87	Lashing
	55°	.82	90
Example: TLASHC 1525 used as an indirect tie down with two different Angles of Lashing.	50°	.77	
Straight-Line WLL*** 11,021	45°	.71	
Indirect Lashing WLL 90° 22,042	40°	.64	Cargo Deck
45° WLL Reduction Factor X .71	35°	.57	
Reduced WLL*** 15,649	30°	.50	

^{***}Lashing Work Load Limit based on a 3:1 Design Factor when new.



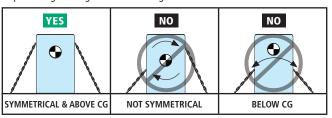
Green Pin® TYCAN® LASHING CHAIN - PROPER USE

WARNING

GP Tycan® Lashing Chain users and inspectors MUST be properly trained. Assembly, use and/or inspection by untrained persons may result in SEVÉRE INJURY or DEATH

NEVER use GP Tycan® Lashing Chain for pulling, lifting and/or load handling!

- Never exceed the designated WLL.
- Always refer to the GP Tycan® Lashing Chain tag for WLL.
- Always consider the Angle of Lashing and its effect on WLL.
- Do not use GP Tycan® Chain at a Angle of Lashing less than (<) 30° unless approved by a Qualified Person** and/or Properly Informed and Trained Consumer (PITC).
- GP Tycan® Lashing Chain must be properly used and tensioned in accordance with all applicable standards and regulations.
- Tighten, check and adjust GP Tycan® Lashing Chain during transit, as needed.
- Always consider the "Weak Link" principle: The maximum WLL for all Cargo Securement Gear* is limited by the weakest component.
- When GP Tycan® Lashing Chain is attached directly to cargo, the attachment points should be symmetrical and above the Center of Gravity to assist in preventing the cargo from overturning.



- NEVER allow GP Tycan® Lashing Chain and/or protection to slip or slide over and/or across cargo edges and/or surfaces.
- Slipping and sliding may damage GP Tycan® Lashing Chain and/or protection, even when the protection is properly placed.
- GP Tycan® Lashing Chain and protection that slip and/or slide may become damaged resulting in SEVERE INJURY or DEATH.
- GP Tycan® Lashing Chain must be inspected before each use and if damage is detected, removed from service for evaluation by a
- Qualified Person**or PITC. See pages 4,5 and 6.
 Damaged GP Tycan® Lashing Chain must not be used for any purpose and removed from service immediately for evaluation by a Qualified Person* and/or Properly Informed and Trained Consumer to determine continued use.
- Sharp particles such as but not limited to metal shavings can severely damage GP Tycan® Chain. DO NOT allow contact with sharp and/or damaging particles.
- If sharp particles or foreign materials are present, gently remove them before use and/or storage, and ensure damage has not occurred.
- and/or storage, and ensure damage has not occurred.

 Foreign material, i.e. sand, dirt, pebbles, etc. must be avoided and/or removed if embedded between rope strands/fibers, and ensure damage has not occurred. During use, consider all GP Tycan® Chain, components, rigging hardware and protection conductive, energized or "hot".
- When not in use, GP Tycan® Lashing Chain must be stored in an area that is cool, dry, dark and free of mechanical and environmental damage.
- Storage temperatures:

< = Less Than

Short term: (< 1 week) Not to exceed 158°F (70°C)

Long term: (> 1 week) Not to exceed 86°F (30°C)

Green Pin® TYCAN® CHAIN: PROPER USE - PROTECTION

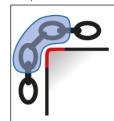
- GP Tycan® Chain must always be protected from cutting and abrasion by materials of sufficient strength, thickness and construction.
- Lashing protection should not be makeshift (i.e., cardboard, work gloves, rags, carpet, fire hose or other items that were not designed to be used as protection). Protection must be determined by a Qualified Person** and/or Properly Informed and Trained Consumer.
- Proper protection MUST be used whenever contact with cargo could cause damage to GP Tycan® Chain.
- Shearing and cutting may occur when GP Tycan® Chain makes contact with edges that are not adequately rounded to a suitable radius.
- GP Tycan® Chain MUST always be protected from damage and appropriate protection MUST always be used when the contact edge radius is less than (<) 7/32".
- To properly use the minimum edge radius recommendation, the following edge criteria must be present at all times: Edge Size: The edge radius must be greater than (>) 7/32".

Edge Shape: The edge must be smoothly rounded.

Edge Type: Edges that are machined, chamfered or flattened at angle may damage GP Tycan® Chain, unless the edges meet the Edge Size, Shape and Type criteria.



No radius or in doubt, Protection required.

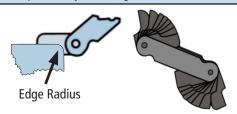


Edge radius < 7/32" Protection required.



Edge radius > 7/32" Protection recommended.

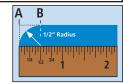
Edges that are in contact with GP Tycan® Lashing Chain must be checked for sufficient radius. A radius gauge is a good way to verify this. If in doubt, appropriate protection must always be used to protect GP Tycan® Lashing Chain.



- To measure the radius of an edge, place the leading edge of the ruler or tape measure along the leading edge of the radius (Point A).
- Measure the distance between the leading edge of the radius (Point A) to the point where the radius ends (Point B).

WARNING To avoid SEVERE INJURY or DEATH from equipment failure:

- Users MUST BE TRAINED on proper use/selection.
- NEVER damage, misuse or overload observe and NEVER EXCEED the Work Load Limit (WLL).
- Properly maintain and inspect before use.



Green Pin® TYCAN® CHAIN - PROPER USE: ENVIRONMENTAL CONSIDERATIONS

- GP Tycan® Lashing Chain shall not be used in contact with objects or at temperatures above158°F (70°C) or below -76°F (-60°C).
- If GP Tycan® Chain has been exposed to temperatures above 230°F (110°C) it must be destroyed and not used for any purpose. Remember, any doubt, DON'T!

Be aware of ALL heat sources:

Ambient heat Reflected heat Frictional heat Open flames Hot surfaces Hot objects Welding Grinding Heat treating

- Chemically active environments can affect GP Tycan® Chain strength from little to total degradation.
- Avoid contact with oxidizing chemicals!
- Suitability evaluation is based on:

Time - Temperature - Concentration - Condition

- Consult a Qualified Person** and/or the manufacturer before use and conduct controlled exposure and testing for suitability.
- If GP Tycan[®] Chain has been exposed to damaging chemicals. DESTROY and do not use for any application.



Green Pin® TYCAN® LASHING CHAIN - PROPER USE

WARNING

NEVER use GP Tycan® Lashing Chain for pulling, lifting and/or load handling!

- Never connect GP Tycan[®] Chain Links DIRECTLY to the bowl of any hook. See Figure 1
- GP Tycan® Chain Components are specifically designed for DIRECT ATTACHMENT to GP Tycan® Chain Links. See Figure 2.
- The specific connection diameter and width at the connection point of GP Tycan® Components assists in preventing damage to Chain Link Bearing Points, i.e., folding, spreading and/or unraveling.
- If other fittings are attached they MUST meet the specifications in Table 2 for minimum connection diameter, and connection point width (minimum and maximum) to prevent folding, spreading and/or unraveling in Chain Link Bearing Points.
- Never connect more than one Chain Link into a GP Tycan® Connecting Link or other fitting.
- An unloaded Chain Link must never be placed between a loaded Chain Link and Shortening Hook. See Figures 3 & 4.
- Ensure that GP Tycan® Lashing Chain is selected and properly used based upon the cargo, the lashing plan, and complies with the guidelines set forth in the GP Tycan® Lashing Chain User Guide, and all recommended standards and regulatory requirements.
- Never use or allow the use of GP Tycan® Chain with less than 5 Chain Links. See Figure 5.
 - ALL GP Tycan® Lashing Chain legs, (including shorter legs used to adjust other legs) must have a minimum of FIVE Chain Links. See Figure 6.
- During use all GP Tycan® Components and other compliant fittings must never have a surface roughness exceeding 5 microns.

WARNING The use of damaged GP Tycan® Chain, Components or other fittings may result in SEVERE INJURY or DEATH.

The DIRECT ATTACHMENT of CHAIN LINKS to hooks, shackles or other connection points that do not conform to the mandatory criteria in Table 2 may result in SEVERE INJURY or DEATH.

A maximum twist of 1/2 turn per yard is acceptable. Additional twisting adversely affects GP Tycan® Chain WLL.

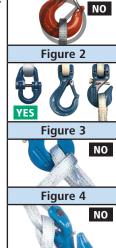


Figure 1

Figure 5	Figure 6
NO	YES
3 links	← 5 links — →

	Table 2 - MANDATORY FITTING CRITERIA							
	Stock	WLL Minimum		Connection Width				
	Number	(Lbs.)			Maximum			
	TLASHC-1525	11,021	.625"	1.031"	1.218"			
ĺ	TLASHC-1330	14,990	.781"	1.218"	1.453"			

Green Pin® TYCAN® LASHING CHAIN INSPECTION

The strength and performance of all Cargo Securement Gear* is affected by wear and damage. It is critically important that GP Tycan® Chain users employ a three-stage, inspection procedure: Initial, Frequent and Periodic, performed by a Qualified Person** and/or Properly Informed and Trained Consumer.

- All inspections shall be performed by a Qualified Person**
- Any deficiency shall be examined, and a determination made by a Qualified Person** as to whether it constitutes a hazard.
- There are three types of inspections: Initial, Frequent and Periodic.
- All three stages MUST be used for an effective cargo securement inspection system to work.
 For detailed inspection information contact Lift-It® sales or visit www.lift-it.com

Initial Inspection

Prior to use all new, altered, modified or repaired GP Tycan® Lashing Chain Assemblies and/or Cargo Securement Gear* must be inspected by a Qualified Person** and/or Properly Informed and Trained Consumer to ensure compliance with the manufacturer's specifications, and the recommended standards and guidelines issued by consensus, industry,

association and/or regulatory authorities. Written records are not required for the Initial Inspection of GP Tycan® Lashing Chain.

The initial inspection must also verify that damage did not occur during transit and that defects in materials and/or workmanship are not present. The identification tag information must also be examined to ensure it matches the manufacturer's published specifications.

Frequent Inspection (PRE-USE)

The Web Sling and Tie Down Association and many manufacturers, including Lift-It® specify that Cargo Securement Gear* must be inspected before each use and used in accordance with all applicable standards and regulations such as, but not limited to DOT Federal Motor Carrier Safety Regulations S392.9, S393.100, S393.102, WSTDA T-6 and the FMCSA Driver's Handbook on Cargo Securement. Users will be held accountable to the highest applicable standard of care and must follow the manufacturer's recommendations. Cargo Securement Gear* found with damage shall be immediately removed from service and shall not be used for any purpose. 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, and/or corrective action by a Qualified Person** and/or Properly Informed and Trained Consumer. Temporary repairs are not permitted. Written inspection records are not required for the Frequent or PRE-USE Inspection.

Periodic Inspections
Periodic Inspections shall be performed by a Qualified Person** and/or Properly Informed and Trained Consumer who has been specifically trained. Periodic Inspections are more meticulous than frequent inspections as the entire GP Tycan® Lashing Chain length, Components and fittings are thoroughly examined. A complete inspection of the GP Tycan® Lashing Chain Assembly shall be performed. Each Chain Link, Component and fitting shall be inspected individually, taking care to expose and examine all surfaces, including the Chain Link Interface and Chain Link Bearing Points. It is recommended that periodic inspections be performed by a Qualified Person** and/or PITC other than the person performing the frequent inspections. An independent, fresh set of eyes is advantageous in this and in many other situations.

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 cargo securement activity. Periodic inspectors also compare and evaluate the service life of Cargo Securement Gear* used in similar conditions.

Periodic inspections are not required for GP Tycan® Lashing Chain Assemblies that are in storage or idle. If GP Tycan® Lashing Chain Assemblies have been idle or in storage for more than one year since the last periodic inspection, before use the GP Tycan® Lashing Chain Assemblies must be thoroughly inspected on a periodic inspection basis by a Qualified Person** and/or Properly Informed and Trained Consumer.

DOT and WSTDA do not require that inspection records be maintained for individual GP Tycan® Lashing Chain Assemblies. What is required is that a written record of the most recent periodic inspection shall be maintained. In other words, evidence that the inspection event occurred must be documented, not the condition of individual GP Tycan® Lashing Chain Assemblies. Periodic inspections should provide some means of identifying which items have been inspected. Paint, tape or other potentially damaging identification methods must never be used on Cargo Securement Gear*. Contact the Lift-It® sales professionals for details of post-periodic inspection identification options that not only provide a visual verification of the periodic inspection but are non-damaging and cost effective.

Inspection Procedures

NEVER handle or inspect Cargo Securement Gear* with bare hands. Damaged Cargo Securement Gear* and/or embedded materials may result in injury. A hazard assessment must be performed prior to all tactile inspections to ensure that injury will not occur. For synthetic assemblies, the inspector employs tactile (touch) inspection by feeling the entire length of the assembly as some damage may be more felt than seen. For initial and periodic inspections, the entire assembly should be laid out flat on a smooth, clean surface in a well-lit location; these same conditions may not always be a reality for frequent inspections. All inspections must be thorough and when damage is detected, damaged items must be immediately removed from service for further evaluation by a Qualified Person** and/or PITC. Temporary repairs of Cargo Securement Gear* are not permitted. If damaged Cargo Securement Gear* cannot be repaired, tested, and certified by the manufacturer or their agent, they must be destroyed and made unusable for any purpose.

If Cargo Securement Gear* is not safe for use at the job site, it must never be used for any purpose at home, on the farm or ranch, as recovery straps or used as tie backs to secure overhaul balls during mobile crane travel. All inspections must identify damage and areas of concern marked or tagged for further evaluation by a Qualified Person** and/or PITC.

Green Pin® Tycan® Lashing Chain Inspection



Green Pin® TYCAN® CHAIN LINK ANATOMY

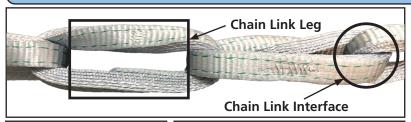
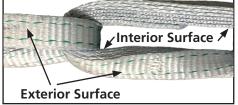


Table 3 - GP Tycan [®] Chain Link Information								
Stock Number	Width (Fractional)	Width (Decimal)	Thickness (Fractional)	Thickness (Decimal)	Number of Layers			
TLASHC-1525	1"	1.000"	19/32"	.594"	8			
TLASHC-1330	1-3/16"	1.188"	1/2"	.500"	7			







Green Pin® TYCAN® LASHING CHAIN REMOVAL FROM SERVICE CRITERIA

GP Tycan® Lashing Chain Assemblies shall be inspected before each use, and be removed from service if conditions such as the following are present and shall not be returned to service until evaluated and approved by a Qualified Person** and/or Properly Informed and Trained Consumer.

- Missing or illegible (Lashing Tag) identification.
- Acid or caustic burns
- Melting or charring of any part of the GP Tycan® Lashing Chain Any type of damage in Chain Link Bearing Points.
- Holes, tears, cuts or snags. See pages 5 & 6 Removal Criteria.
- Broken or worn stitching that allows the Chain Link Layers to fold, spread or unravel. •
- Excessive abrasive wear. See pages 5 & 6 Removal Criteria.
- Knots in any part of the Lashing Chain.
- Discoloration and brittle or stiff areas on any part of the Lashing Chain, which may mean chemical or ultraviolet / sunlight damage.
 Fittings that are pitted, corroded, cracked, bent, twisted, gouged or broken.
- For hooks, removal criteria as stated in ASME B30.10
- Other conditions, including visible damage, that cause doubt as to the continued use of the GP Tycan® Lashing Chain.

GP Tycan® Lashing Chain shall be removed from service if it is known that there has been contact with damaging chemicals or if it is known that there has been exposure to temperatures exceeding 230°F (110°C). Remember, any doubt, DON'T!

Surface Damage: Tears - Cuts - Abrasion Table 4 Table 5 If damage is 50% of the way through in one or

If damage is 100% of the way through in one or more places AND is > 80% of the Chain Link width[†]. Remove immediately and destroy.

Stock Number	Chain Link Width	Maximum Damage Length (80% of the Chain Link Width)
TLASHC-1525	1.000"	.80"
TLASHC-1330	1.188"	.95″



more places AND is > 160% of the Chain Link width [†] . Remove immediately and destroy.						
Stock Number	Chain Link Width	Maximum Damage Length (160% of the Chain Link Width)				
TLASHC-1525	1.000"	1.60"				
TLASHC-1330	1.188" 1.90"					



In one or more places and the length of the cuts (individually or accumulated) is greater than (>) Maximum Damage Length. †

Calculating Damage Length						
Example A		1	2		Scenario: TLASHC-1525 – 1" Wide is cut 100% through: Damage > 80% – Remove immediately and destroy.	
Example B		3	4		Example A: Cut 1 (.28") + Cut 2 (.47") = .75" = 75% Pass Example B: Cut 3 (.36") + Cut 4 (.52") = .88" = 88% Fail!	
The number of cuts does not determine GP Tycan® Chain Link PASS/FAIL, the depth AND total length of the cut(s) does.						

A hole through 1 layer is to be classified as a cut.

If a hole is through 2 or more Chain Link Layers - Remove immediately and destroy.

† It may be difficult to determine a percentage of loss, or the exact depth and/or length of damage to GP Tycan® Lashing Chain. Damage such as abrasion and/or the absorption of fluids and/or foreign materials may boost or exaggerate the Chain Link being examined and/or make it difficult to accurately measure damage, resulting in a false assessment. Always consider the cost of failure and then determine if the use of any item with an "acceptable" level of wear and/or damage is worth the risk, given the potentially catastrophic and/or deadly consequences. No visual inspection can accurately determine the residual strength of lashing chain, rigging hardware and/or protection.

Green Pin® Tycan® Lashing Chain Inspection

Green Pin® TYCAN® LASHING CHAIN: REMOVAL FROM SERVICE CRITERIA

Side Damage: Tears - Cuts - Abrasion

REMOVE IMMEDIATELY and DESTROY IF ANY OF THE FOLLOWING CONDITIONS ARE DETECTED!

- 1) Damage to the side of the Chain Link that is across ALL layers AND the damage is more than .04" deep.
- 2) Damage to the side of the Chain Link that is across TWO or MORE layers AND the damage is more than .16" deep.
- 3) Damage to the side of the Chain Link that is across 75% or MORE layers AND the damage is more than .08" deep. See Chart A
- 4) Damage to the side of the Chain Link that is across 50% or MORE layers AND the damage is more than .16" deep. See Chart B

Chart A ACROSS 75% or More Layers .08" DEEP Edge Damage						
Stock Number	Total Layers	Maximum Number Damaged Layers 75%				
TLASHC-1525	8	6				
TLASHC-1330	7	5				

Chart B {ACROSS 50% or More Layers .16" DEEP Edge Damage						
Stock Number	Total Layers	Maximum Number Damaged Layers 50%				
TLASHC-1525	8	4				
TLASHC-1330	7	3				

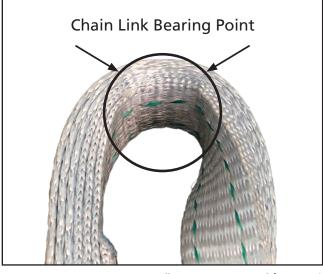






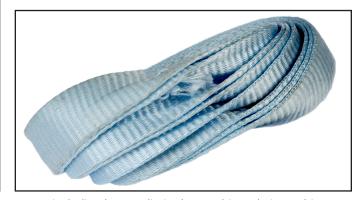
Green Pin® TYCAN® CHAIN LINK BEARING POINT INSPECTION

- Zero tolerance for damage is allowed in the Chain Link Bearing Points.
- No folding, unraveling or spreading out of the Chain Link Layers is allowed in Chain Link Bearing Points.
- Thoroughly inspect all Chain Links, Components and fittings for damage.
- Each Chain Link, Component and fitting shall be thoroughly inspected individually, taking care to expose and examine all surfaces, including the Chain Link Bearing Points.



STITCHING INSPECTION

If stitching is torn/abraded to the extent that the Chain Link Layers can unravel, GP Tycan® Chain must be removed from service immediately and shall be destroyed.



- *Cargo Securement Gear: All components used for securing cargo, including but not limited to: Lashing Chain, Lashing Chain Assemblies, Ratchet Loadbinders, ropes, shackles, winches, D-rings, Shortening Hooks, Connecting Hooks, Connecting links, Masterlinks, Subassemblies, Lashing protection, tie downs, anchor points, blocking, stake pockets, etc.
- **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.

WARNING

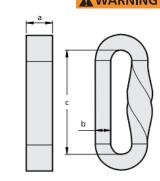
The information in this guide is current through September 10, 2020. It is the user's responsibility to independently verify the accuracy of the information in this guide and all cited information, standards and regulations if this guide is used or referenced after September 10, 2020.

Green Pin® Tycan® Lashing Components



Green Pin® TYCAN® LASHING CHAIN LINKS

WARNING NEVER use GP Tycan[®] Lashing Chain for pulling, lifting and/or load handling!



	Work Load Limits***		imits*** Dimensions - (Inches)				Per Yard (Approximate)	
Stock Number	Lbs.	Metric Tons	Link Width a	Link Thickness b	Inside Length c	Links	(Lbs.)	Layers
TLASHC-1525	11,021	4.99	1	19/32	4	10	1.28	8
TLASHC-1330	14,990	6.79	1-3/16	1/2	4-29/32	8	1.65	7

^{**}Lashing Work Load Limit based on a 3:1 Design Factor when new.

Green Pin® TYCAN® CONNECTING LINKS



GP Tycan® Connecting Links are specifically designed to attach GP Tycan® Lashing Chain Links to Masterlinks, pear links, rings, etc.

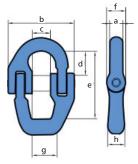
- Specifically designed for use with GP Tycan® Chain.
- Blue painted finish
- Grade 10 Alloy steel



AWARNING NEVER connect two GP Tycan® Chain Links into one GP Tycan® Connecting Link.

> ALWAYS attach Chain Links to the FLAT end of the Connecting Link.





	Work Load	Limits***	Dimensions - (Inches)								
Stock Number	Lbs.	Metric Tons	Top Dia. a	Overall Width b	Inside Width c	Length d	Bearing Length e	Overall Thickness f	Inside Width g	Bottom Dia. h	Weight (Lbs.)
UMJ13	11,021	4.99	5/8	3-9/32	13/16	1-1/4	3-11/32	15/16	1-3/32	5/8	1.49
GPUMJT30	14,990	6.79	5/8	3-9/32	13/16	1-1/4	3-11/32	15/16	1-1/8	25/32	1.72

^{***}Lashing Work Load Limit based on a 3:1 Design Factor when new.

Green Pin® TYCAN® SHORTENING HOOKS



GP Tycan® Shortening Hooks are specifically designed to connect directly back to GP Tycan® Chain Links for leg length adjustment.

- Specifically designed for use with GP Tycan® Chain.
- Locking pin
- Blue painted finish
- Grade 10 Alloy steel



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	Work Load	d Limits***		Dimensions - (Inches)								
Stock Number	Lbs.	Metric Tons	Bearing Length a	Connection Width b	Clevis Width c	Throat Opening d	Bowl Width e	Bowl Thickness f	Overall Width g	Overall Length h		Weight (Lbs.)
GPUCRCT25	11,021	4.99	4-1/32	15/16	2-11/16	1	5/8	1-1/2	3-29/32	7	25/32	4.40
GPUCRCT30	14,990	6.79	5-1/2	1-1/4	2-29/32	1-3/16	25/32	1-1/2	4-1/32	6-31/32	25/32	4.23

^{***}Lashing Work Load Limit based on a 3:1 Design Factor when new.



YES

NO

Green Pin® Tycan® Lashing Components

Green Pin® TYCAN® CONNECTING HOOKS

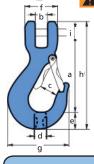
Lashing Chain to shackles, other fittings and/or connection points.

GP Tycan® Connecting Hooks are specifically designed to attach GP Tycan®

- Specifically designed for use with GP Tycan® Chain.
- Robust latch (also available separately for replacement).
- Blue painted finish
- Grade 10 Alloy steel

WARNING Never connect GP Tycan® Chain Links DIRECTLY to the bowl of ANY hook!





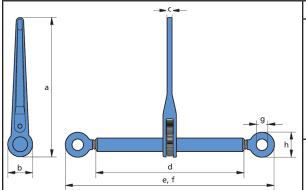
	Work Load Limits***		Dimensions - (Inches)									
Stock Number	Lbs.	Metric Tons	Bearing Length a	Connection Width b	Throat Opening c	Bowl Width d	Bowl Thickness e	Clevis Width f	Overall Width g	Overall Length h	Pin Dia. i	Weight (Lbs.)
GPUCSCT25	11,021	4.99	4-15/16	15/16	1-7/16	1-1/8	1-11/32	2-11/16	4-7/8	8-5/8	13/16	4.74
GPUCSCT30	14,990	6.79	6-9/32	1-1/4	1-15/32	1-1/4	1-17/32	2-29/32	5-1/4	9-1/4	25/32	5.65

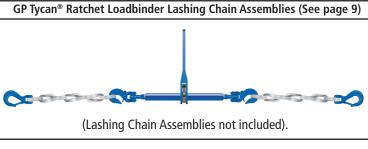
^{***}Lashing Work Load Limit based on a 3:1 Design Factor when new.

Green Pin® TYCAN® RATCHET LOADBINDERS

GP Tycan® Ratchet Loadbinders have a take-up length that is optimized for use with GP Tycan® Lashing Chain. The Ratcheting Mechanism provides precision in lashing length and tension, while the Ratcheting Loadbinder Pawl assists in preventing unintentional release.

- Specifically designed for use with GP Tycan® Lashing Chain.
- May be used with GP Tycan® Shortening and Connecting Hooks.
- Blue painted finish
- Grade 10 Alloy steel







	Work Load Limits***			Dimensions - (Inches)								
Stock	Lbs.	Metric	Take-up	Handle	Diameter	Thickness	Barrel	Overall	Length	Eye Dia	ameter	Weight
Number		Tons	(Inches)	Length a	b	С	Length d	Open e	Closed f	Inside g	Outside h	(Lbs.)
TLARLB1525	11,021	4.99	11-13/16	15-1/4	2-9/16	19/32	16-5/32	33-25/32	21-31/32	1-3/16	2-1/2	11.40
TLARLB1330	14,990	6.79	11-13/16	15-1/4	2-9/16	19/32	16-5/32	34-1/32	22-7/32	1-3/16	2-3/4	11.40

^{***}Lashing Work Load Limit based on a 3:1 Design Factor when new.

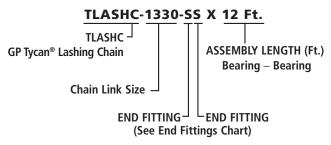
- Ratchet Loadbinders shall not be loaded in excess of their assigned WLL.
- Handle extensions (cheater bars) shall not be used on Ratchet Loadbinders.
- Ratchet Loadbinders MUST be inspected before each use and in accordance with all applicable standards and regulations such as, but not limited to DOT Federal Motor Carrier Safety Regulations S392.9, S393.100, S393.102, WSTDA T-6 and the FMCSA Driver's Handbook on Cargo Securement.
- All Cargo Securement Gear* must always be attached and secured in a manner that prevents it from becoming loose, unfastened, opened, or released during transit.
- Ratchet Loadbinders must always be released using an open hand with all body parts completely out of the path in which the handle can travel or move.
- Before operating any Ratchet Loadbinders the user shall secure their footing to prevent slipping or falling. In some weather conditions, including but not limited to wet surfaces, freezing temperatures, etc. additional caution must be exercised.



HOW TO ORDER

ALWAYS SPECIFY:

1. COMPLETE STOCK NUMBER



- 2. CHAIN LINK SIZE: 1525 or 1330
- 3. END FITTINGS: See End Fittings Chart and Lashing Chain Configurations, below.

4. OVERALL LENGTH:

All GP Tycan® Lashing Chain Assembly lengths are measured (Bearing – Bearing). The specified length is not always possible due to fixed link lengths. The Bearing – Bearing Length will always exceed the specified length by one Chain Link unless otherwise specified when ordering.

5. PROTECTION:

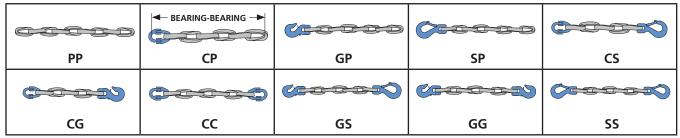
Description, location and quantity of sleeves. See page 3, Proper Use - GP Tycan® Chain Protection.

END FITTINGS CHART								
CODE C	CODE P	CODE G	CODE S					
Ф								

Green Pin® TYCAN® Lashing Chain Assemblies

WARNING NEVER use GP Tycan® Lashing Chain for pulling, lifting or load handling!

GP Tycan® Lashing Chain must always have a minimum of FIVE Chain Links between fittings. See page 4, figure 6.

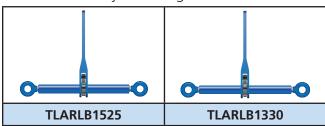


GP Tycan® Lashing Chain Assemblies with a Plain End (code P) must ONLY be attached to fittings that meet Mandatory Fitting Criteria for GP Tycan® Chain. See page 4, Table 2.

GP Tycan® Ratchet Load Binders

GP Tycan® Load Binders are available in two Work Load Limits and must be used with the appropriate strength GP Tycan® Lashing Chain. Remember the "Weak Link" principle.

A "chain" is only as strong as its weakest link.



Stock	Use with	Work Load	Limits***	
Number	Chain Link	Lbs.	Metric Tons	
TLARLB1525	TLASHC-1525	11,021	4.99	
TLARLB1330	TLASHC-1330	14,990	6.79	

^{***}Lashing Work Load Limit based on a 3:1 Design Factor when new.

Bulk GP Tycan® Lashing Chain

Bulk boxes of GP Tycan® Chain are available in 100 meter lengths only. The assembly of GP Tycan® Lashing Chains must be done by a Qualified Person** or Properly Informed and Trained Consumer.



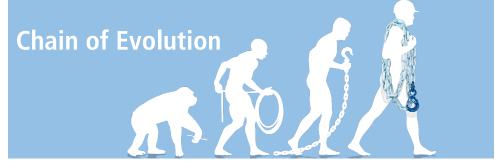


Stock	Chain Link	Work Load	l Limits***		
Number	Stock Number	Lbs.	Metric Tons		
TLASHB1525	TLASHC-1525	11,021	4.99		
TLASHB1330	TLASHC-1330	14,990	6.79		

^{***}Lashing Work Load Limit based on a 3:1 Design Factor when new.







GPTycan® Lashing Chain is made from DSM Dyneema® DM20 Fiber, the preferred synthetic fiber for demanding industrial applications which makes GP Tycan® Lashing Chain significantly lighter than an equivalent strength alloy steel lashing chain. Users now have a synthetic lashing chain that offers many of the benefits of traditional alloy steel tie down chain, but at a fraction of the weight.

Dyneema®

DSM Dyneema® DM20 Fiber

Weight - Weight: 8X stronger than steel

Rugged: 4X more abrasion resistant than nylon & polyester.

Green: Non-Corrosive & Eco-Friendly

Chain Links float in water

Multi-layered redundancy

Temperature Exposure Range: -76°F (-60°C) to 158°F (70°C)

Avoid oxidizing environments!





GP Tycan® Lashing Chain Advantages Versatile – Quick & easy adjustment

Efficient: More done – less time – less people

Light – Less Injury – Improved Safety

60 Ft. of GP Tycan® Chain - 1 person - no problem!

Less personnel fatigue!

Soft – Reduces damage to cargo & people.

Inspection - Less time than steel chain.

Low elongation at Work Load Limit.



GP Tycan® Chain was also awarded: 2016 LEEA Innovation of the Year



2019 OTC New Technology Winner





An Undisputable Value Proposition: GP Tycan® Chain Makes Dollars & "Sense" by Saving Time, Energy & Money.

- Don't be short sighted or fooled by the initial, low price of steel lashing chain.
- The total costs of low price, heavy steel lashing chain quickly "outweigh" the incredible savings realized through the efficiency of GP Tycan® Chain.
- Tremendous sums of money are saved by NOT paying for damage claims, medical treatment, rehabilitation, and sky rocketing insurance premiums.
- Even if cargo damage and the costs of accidents and injuries were not potentially substantial expenses, one cannot refute the amazing savings realized every time GP Tycan® Lashing Chain is used.
- Repetitive, two person operations done with metal chain lashing requiring several minutes are now done by a single person in a fraction of the time. A single person can easily carry 60 Ft. of GP Tycan® Lashing Chain. Try doing that with steel chain!

GP Tycan® Chain puts you on the right end of the Chain of Evolution, the "UPRIGHT" END!