Boomer and Tail Chains

C-186 Spectrum 4®
High Test Boomer Chain

- Ends fitted with Crosby H-330 Quenched and Tempered carbon steel clevis grab hook.
- Finish – Self Colored.
- Meets or exceeds requirements of US DOT FMCSA Part 393 Subpart I.

C-186 Spectrum 4® High Test Boomer Chains

Chain Size (in.)	C-186 Stock No.	Working Load Limit (lbs.)	Standard Length (ft.)	Weight Each (lbs.)
1/4	278988	2600	20	16
5/16	278997	3900	20	25
3/8	279004	5400	20	34
7/16	279013	7200	20	45
1/2	279022	9200	20	60
5/8	279031	13000	20	90

C-187 Spectrum 7®
Transport Boomer Chain

- Ends fitted with Crosby H-330 Quenched and Tempered carbon steel clevis grab hook.
- Finish – Self Colored.
- Meets or exceeds requirements of US DOT FMCSA Part 393 Subpart I.

C-187 Spectrum 7® Transport Boomer Chains

Chain Size (in.)	C-186 Stock No.	Working Load Limit (lbs.)	Standard Length (ft.)	Weight Each (lbs.)
1/4	279576	3150	20	16
5/16	279585	4700	20	25
3/8	279594	6600	20	34
7/16	279601	8750	20	45
1/2	279610	11300	20	60
5/8	279031	13000	20	90

C-188 Spectrum 8®
Alloy Boomer Chain

- Heat treated alloy steel.
- Ends fitted with Crosby A-330 Quenched and Tempered alloy clevis grab hook.
- Finish – Self Colored.
- Meets or exceeds requirements of US DOT FMCSA Part 393 Subpart I.

C-188 Spectrum 8® Alloy Boomer Chains

Chain Size (in.)	C-188 Stock No.	Working Load Limit (lbs.)	Standard Length (ft)	Weight Each (lbs.)
3/8	279889	7100	20	30.28
1/2	279898	12000	20	54.04

SEE APPLICATION AND WARNING INFORMATION
On Pages 274-275

L-180
Winchline Tail Chain

- Hooks are Forged – Quenched and Tempered.
- Individually Proof Tested.
- Spectrum 4® High Test Carbon Steel from 5/16” through 5/8” (8 - 16mm).
- Spectrum 8® Alloy Steel from 3/4” through 1-1/4” (20 - 32mm).
- Meets or exceeds requirements of US DOT FMCSA Part 393 Subpart I.

L-180 Winchline Tail Chain

Wire Rope Diameter (in.)*	L-180 Stock No.	Working Load Limit (lbs.)†	Length (in.)	No. of Links	Weight Each (lbs.)
5/16 - 3/8	1091473	5400	18	11	3.0
1/2 - 5/8	1091482	13000	18	7	6.2
3/4 - 7/8	1091511	34200	24	8	18.2
1 - 1-1/8	1091516	47700	18	5	21.2
1 - 1-1/8	1091525	47700	24	7	23.3
1-1/4	1091532	72300	24	5	40.0

* Recommended for IPS or XIP (EIP), RRL, FC or IWRC wire rope. † Ultimate Load is 3.5 times the Working Load Limit.

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Lebus® L-180 WINCHLINE TAIL CHAIN

WARNING & APPLICATION INSTRUCTIONS

L-180

⚠ WARNING

- **Loads may disengage from winchline tail chain if proper procedures are not followed.**
- **A falling load or disengaged winchline tail chain may cause serious injury or death.**
- **Inspect winchline tail chain for damage before each use.**
- **Wire rope should not be terminated to tail chain by the use of a knot.**
- **Do not attach slings or other devices in hook for overhead lifting – see operating practices.**

Important Safety Information – Read & Follow

- Only winchline tail chains made from alloy chain, Grade 80 or Grade 100, should be used for overhead lifting applications.
- Working Load Limit (WLL) is the maximum load in pounds which should ever be applied to winchline tail chain.
- The Working Load Limit or Design Factor may be affected by wear, misuse, overloading, corrosion, deformation, intentional alterations, sharp corner cutting action and other use conditions.
- Never repair, alter, rework, or reshape a hook or chain by welding, heating, burning or bending.
- Recommended for IPS or XIP (EIP), RRL, FC or IWRC wire rope.
- Shock loading and extraordinary conditions must be taken into account when selecting winchline tail chains.

CAUSE FOR REMOVAL FROM SERVICE

A winchline tail chain shall be removed from service if any of the following are visible on chain or hook:

- Wear, nicks, cracks, breaks, gouges, stretch, bend, weld splatter and discoloration from excessive temperature. Minimum thickness on chain link shall not be below the values listed on Table 1.
- Chain links and hook that do not hinge freely to adjacent links.
- Excessive pitting or corrosion on chain, hook or termination fitting.
- Makeshift fasteners, hooks, or links formed from bolts, rods, etc.

Table 1

L-180 Stock No.	Wire Rope Diameter (in.)	Nominal Chain Size (in.)	Nominal Chain Size (mm)
1091473	5/16 - 3/8	3/8	10
1091482	1/2 - 5/8	5/8	16
1091511	3/4 - 7/8	7/8	22
1091516	1-1-1/8	1	26
1091525	1-1-1/8	1	26
1091532	1-1/4	1-1/4	32

- Mechanical coupling links in the body of the chain.
- Other damage that would cause a doubt as to the strength of the chain.
- Winchline tail chain should not be subjected to galvanizing or any plating process. If it is suspected the chain has been exposed to chemically active environment, remove from service.
- Termination end attachments that are cracked, deformed, or worn.
- For wire rope inspection procedures and removal from service criteria refer to manufacturer's recommendations.

OPERATING PRACTICES

- Know the winch lifting/pulling systems capacity rating.
- Know the applied load on tail chain. In dragging applications, the applied load may be greater or less than its weight due to friction.
- During lifting/dragging with or without the load, personnel should be alert for possible snagging.
- WORKING LOAD LIMIT (WLL) is the maximum load in pounds which should ever be applied to winchline tail chain when the chain is new or in "as-new" condition, and when the load is uniformly applied in direct tension to a straight length of chain.

Wire Rope Diameter (in.)	L-180 Stock No.	Working Load Limit 3.5 to 1 Design Factor (lbs.)
5/16 - 3/8	1091473	5400
1/2 - 5/8	1091482	13000
3/4 - 7/8	1091511	34200
1 - 1-1/8	1091516	47700
1 - 1-1/8	1091525	47700
1-1/4	1091532	73200

5/16 thru 5/8 made from Grade 40 High Test carbon steel.

3/4 thru 1-1/4 made from Grade 80 or Grade 100 alloy steel. Only alloy tail chain should be used for overhead lifting applications.

- Wire rope termination efficiency and tail chain Working Load Limit (WLL) must be considered when selecting termination fitting and tail chain.
- Efficiency of wire rope end termination is based on the catalog breaking strength of wire rope.

Typical Termination Method & Efficiency	
Termination	**Efficiency**
S-409 Swage Button	80%

- The winchline tail chain hook is designed to fit the winchline diameter when hooked or connected back to winchline (See Figure 1).
- When used to pull or drag a load, the winchline tail chain may be wrapped around the load and the hook connected to the winchline. Also, when used to pull or drag a load over the tail board roller, the tail chain hook may be attached directly to the load at a connection point authorized by a competent rigger (See Figure 5). In either case, a visual verification of proper hook engagement is required during the entire operation.
- When used in overhead lifting applications, the winchline tail chain may be wrapped around the load and the hook connected to the winchline (See Figure 1). Used in this manner, this connection provides the same load control advantages and limitations as a single leg wire rope sling basket or choker hitch. The winchline tail chain should

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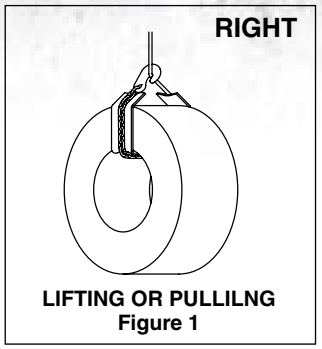
contain and support the load from the sides, above center of gravity, so load remains under control. A visual verification of proper hook engagement is required during the entire operation.

- The tail chain hook has no provision for a latch; therefore, The Crosby Group, LLC. specifically recommends AGAINST placing the load, slings or other devices directly into the tail chain hook for the purpose of overhead lifting. A latch may be mandatory by regulations or safety codes: e.g. OSHA, MSHA, ANSI/ASME B30, insurance, etc. (See Figure 2).
-

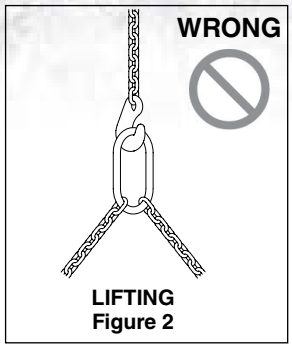
If the above Crosby recommendation is disregarded and slings or other devices are placed directly into the tail chain hook, as a minimum ensure:

  - Personnel shall stand clear of the suspended load.
  - Visual verification of proper hook engagement is required in all cases.
  - The sling or device should be centered in the base (bowl/ saddle) of the hook.
  - The user must assure connection to the hook is secure throughout the movement of the load.
  - A designated competent rigger must verify that all appropriate rigging practices are followed for attachment and control of load.

- The winchline and tail chain links should always be protected from being damaged by sharp corners (See Figure 3).
- Chain links should not be twisted or kinked.
- Winchline or tail chain should not be pulled from under loads if the load is resting on winchline or tail chain.
- Winchline or tail chain that appears to be damaged should not be used unless inspected and accepted by a designated person.
- Never side load, back load, or tip load hook (See Figure 4).
- All portions of the human body should be kept from between the winchline / tail chain and load.
- Personnel shall stand clear of the suspended load.
- Shock loading should be avoided.
- Extreme temperature will reduce the performance of winchline tailchain.
- Normal operating temperature is -40°F to 400°F (-40°C to 204°C).



LIFTING OR PULLILNG
Figure 1



LIFTING
Figure 2

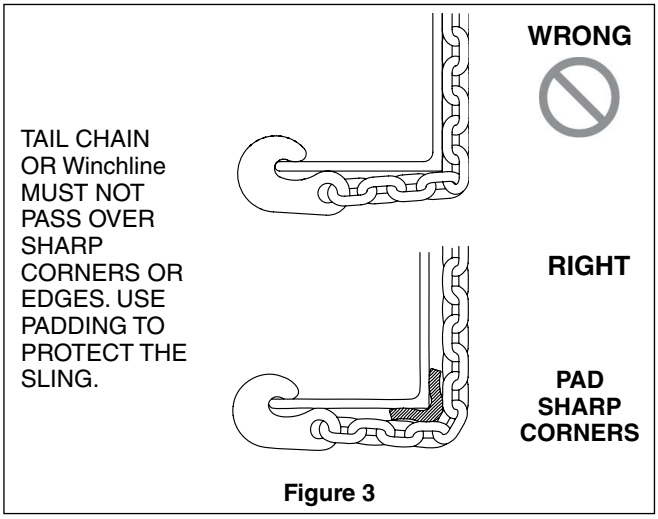


Figure 3

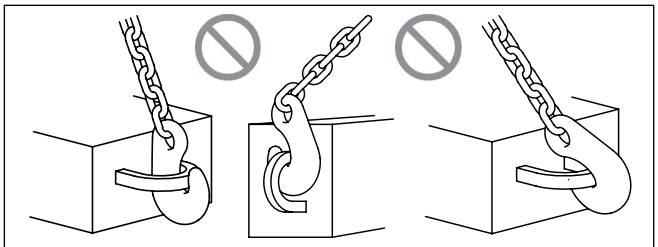
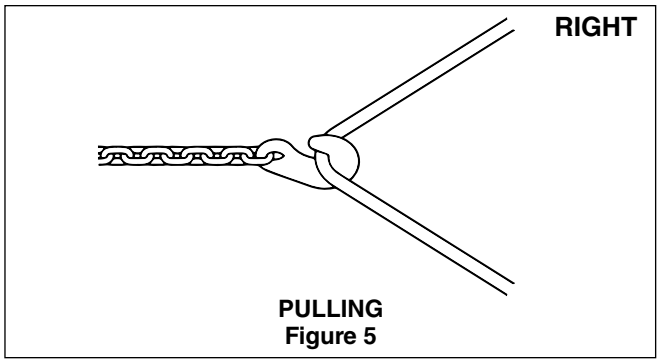


Figure 4



PULLING
Figure 5

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