

**LEBUS L-180
WINCHLINE TAIL CHAIN
WARNING AND 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 practice.**

**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 in Table 1.

TABLE 1					
L-180 Stock No.	Frame Wire Rope Diameter (in.)	Nominal Chain Size		Minimum Thickness	
		(in.)	(mm)	(in.)	(mm)
1091473	5/16 - 3/8	3/8	10	0.342	8.69
1091482	1/2 - 5/8	5/8	16	0.546	13.87
1091511	3/4 - 7/8	7/8	22	0.750	19.05
1091516	1--1-1/8	1	26	0.887	22.53
1091525	1--1-1/8	1	26	0.887	22.53

- Chain links and hook that do not hang freely to adjacent links.
- Excessive pitting or corrosion on chain, hook or termination fitting.
- Makeshift fasteners, hooks, or links formed from bolts, rods, etc.
- 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.)	Frame L-180 Stock No.	Working Load Limit 3.1 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

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

3/4 thru 1-1/8 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