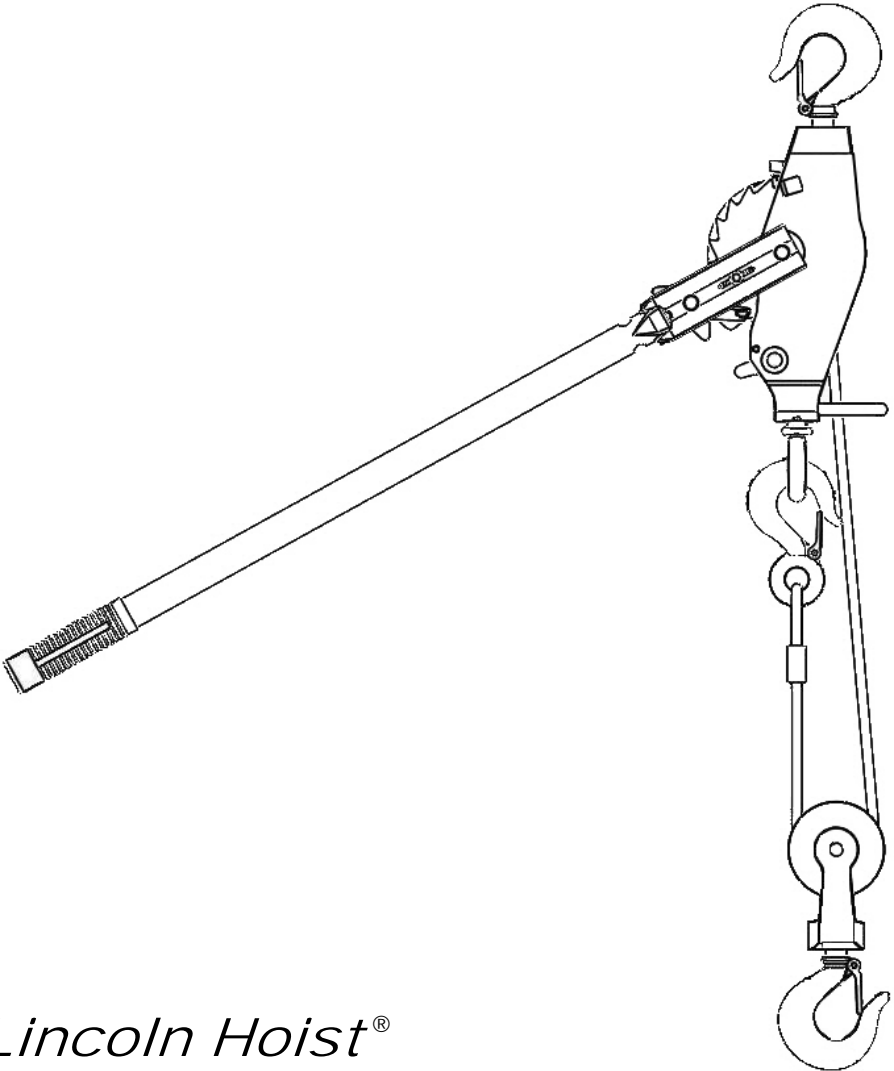


Lincoln Hoist®

Cable Hoist Operating Manual



Lincoln Hoist®

Mfg. by Lincoln Precision Machining Company
121 Creeper Hill Road, P.O. Box 458, North Grafton, MA 01536 USA
Toll Free (888) 306-7222 Phone (774) 551-9000 Fax (508) 839-4729
Email sales@lincolinhoist.com



Warning



Overloading and Improper Use Can Result In Injury.

Handle is intended to bend on overload !

Read and understand operator's manual.

- **Do not exceed rated capacity.**
- **Inspect hoist for damage or malfunction before use.**
- **Do not use if damaged or malfunctioning.**
- **Do not remove or obscure warning label.**
- **Always rig in a straight line. Do not bind.**
- **Do not use as a load binder.**
- **Do not use with handle extension.**
- **Do not use to lift people or loads over people.**
- **Do not leave load unattended.**
- **Do not use for towing.**
- **Do not use damaged, twisted, or kinked cable.**
- **Do not operate hoist when it is restricted from forming a straight line with the direction of loading.**
- **Do not use wire rope for a ground when welding.**
- **Do not let a welding electrode touch wire rope or any other part of the hoist.**
- **Wire rope should be stored on drum to prevent damage or deterioration.**
- **Use only genuine Lincoln Hoist replacement parts.**

Before Operating Hoist

The supporting structure or anchoring means shall have a load capacity at least equal to that of the hoist.

The operator shall be familiar with all operating controls of the hoist, and shall be instructed as to warnings on the hoist, and the hoisting practices listed here.

If adjustments or repairs are necessary, or any defects are known, the operator shall report this promptly to the appointed person.

Hoist shall be used only in locations that will allow the operator to be free of the load.

The operator shall have access to the handle.

The operator shall not operate a hoist that bears an out of order sign.

The operator shall not adjust or repair a hoist unless qualified to perform maintenance on the hoist.

Hoist shall not be operated by other than the hand power of one operator.

Hoists shall not be operated with an extension on the handle.

Handling The Load

The wire rope shall not be wrapped around the load.

The sling or other device shall be properly seated in the base (bowl) of the hook. The hook latch shall not be allowed to support any part of the load.

Hoist shall not be operated until the load block, wire rope, and hoist body are directly in line with the direction of loading to avoid sidepull.

The operator shall not apply a load to the hoist until the operator and all other personnel are clear of the load.

The operator shall make sure the load clears obstacles before moving.

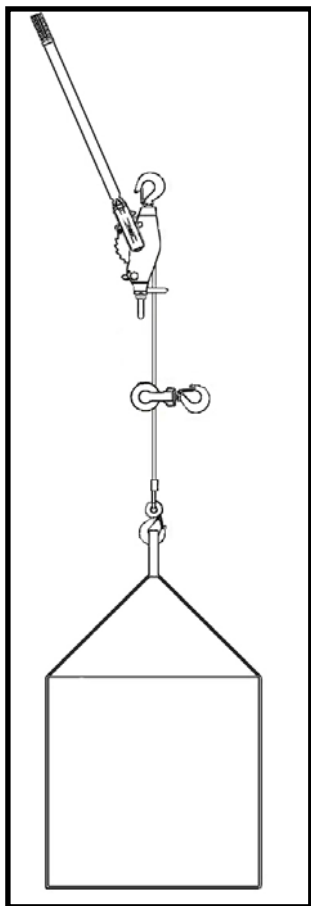
The hoist should not be used to lift, support, or otherwise transport people.

The operator shall avoid carrying loads over people.

When starting to lift or pull, the operator should move the load a few inches and then check the hoist for proper load holding action. The operation shall be continued only after the operator is assured that the hoist is operating properly.

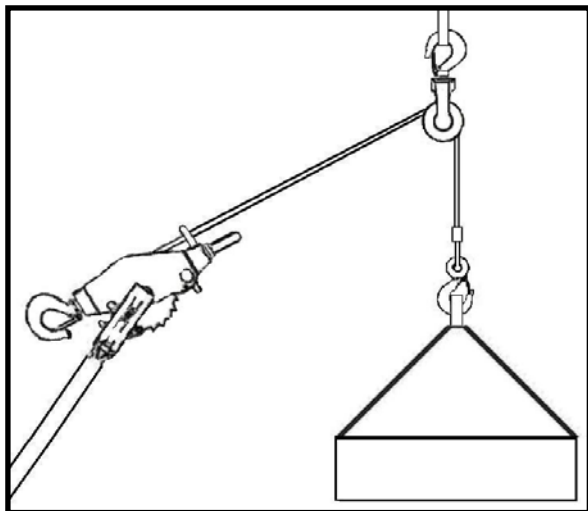
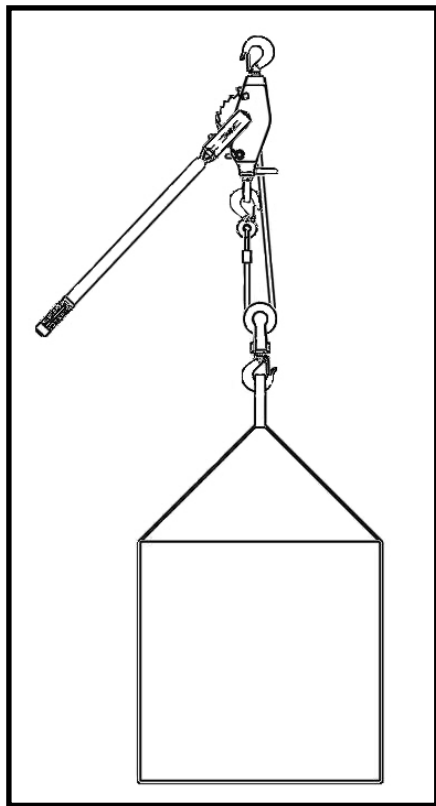
The operator shall not leave a load unattended.

Proper Rigging Techniques



Single

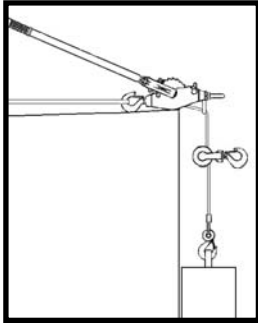
Double



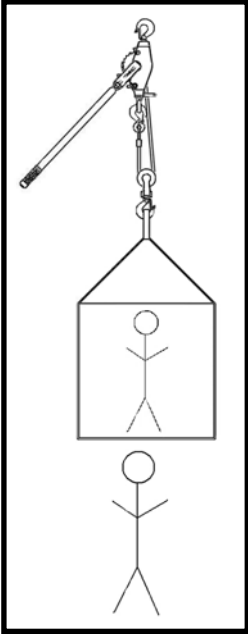
Alternate Single

Unsafe Rigging Techniques

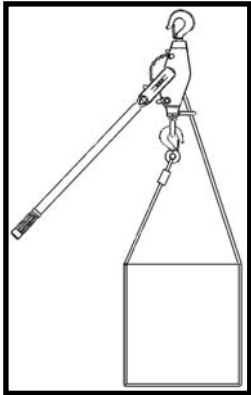
**Do Not Use
Around Corners**



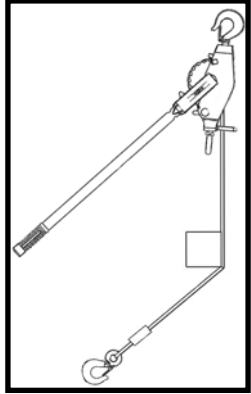
**Do Not Lift People
Or Loads Over People**



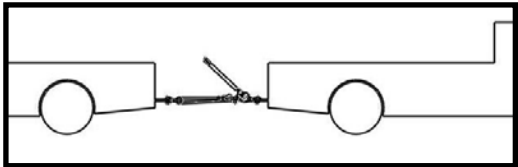
**Do Not Use As
A Choker**



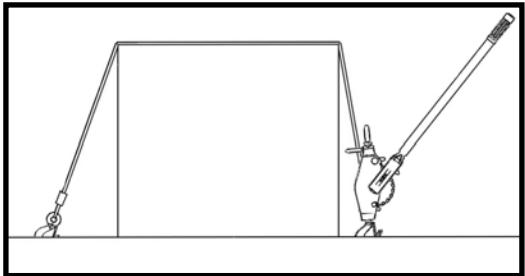
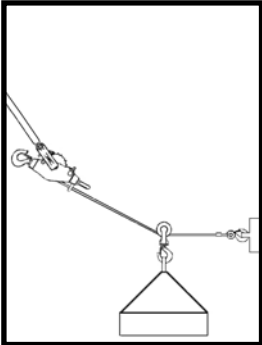
**Do Not Let Cable
Contact Any Surface**



**Do Not Use As
A Tow Line**



**Do Not Use Block
For Single Rigging**

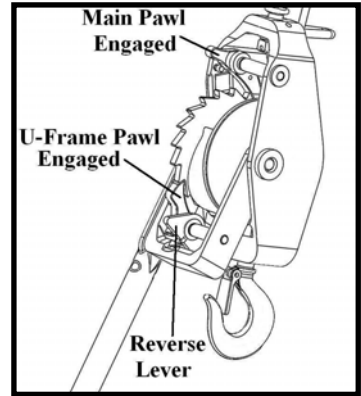


**Do Not Use As A
Load Binder**

Operating Instructions

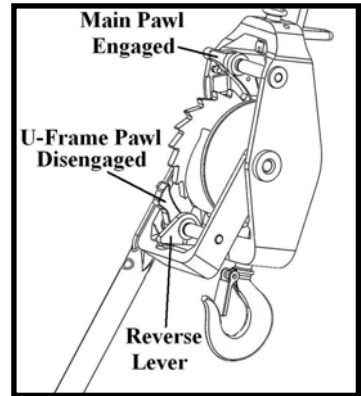
Lifting or Pulling

1. Hang hoist freely from adequate support.
2. Place reverse lever in lift/pull position to engage u-frame pawl in drum teeth.
3. Operate the handle in steady strokes to lift or pull. (DO NOT OVERLOAD HOIST!)



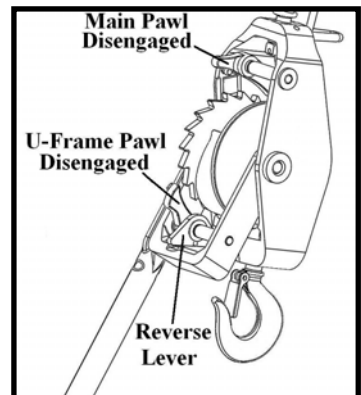
Lowering or Backing Off

1. Place reverse lever in lower/back off position and operate handle to disengage u-frame pawl from drum teeth.
2. Operate handle until u-frame pawl disengages main pawl from drum tooth.
3. Operate handle in reverse direction until main pawl engages drum tooth again.
4. Repeat until load is free.



Free Release

1. Do not release under load
2. Place reverse lever in lower/back off position and operate handle to disengage u-frame pawl from drum teeth.
3. Press and hold main pawl to disengage it from drum teeth.
4. Pull cable out from drum.



Rapid Lowering Instructions

Rapid lowering hoists lift and lower the same way that the other *Lincoln Hoist* models do. The addition of the rapid lowering option also allows these hoists to lower 4 drum teeth at a time.

Lifting or Pulling

When lifting or pulling with a rapid lowering hoist, place the rapid lowering thumb lever in the **“off”** position to operate the hoist normally.

Free Release

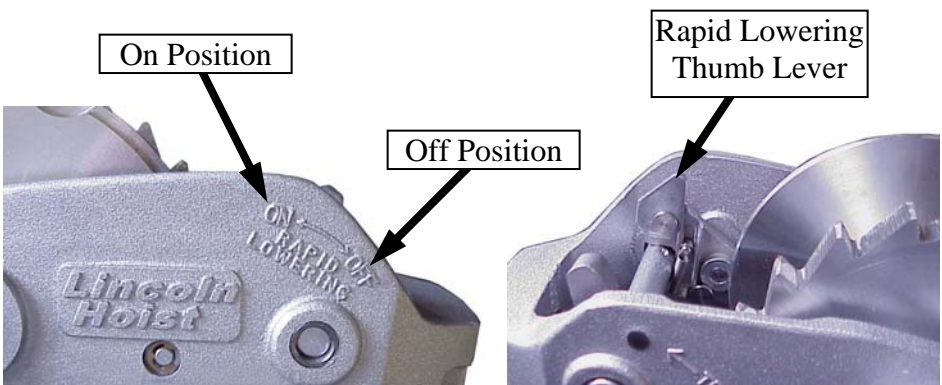
When pulling the cable out without a load, place the rapid lowering thumb lever in the **“off”** position.

Lowering

When operating the hoist in the rapid mode, the operator should be in a position to keep the handle under control throughout the full stroke.

With the rapid lowering thumb lever in the **“off”** position, operate the hoist normally to lower 1 drum tooth at a time.

With the rapid lowering thumb lever in the **“on”** position, the hoist will lower the load 4 drum teeth at a time. The first stroke may lower the load from 1 to 4 drum teeth with the subsequent strokes being 4 drum teeth each.

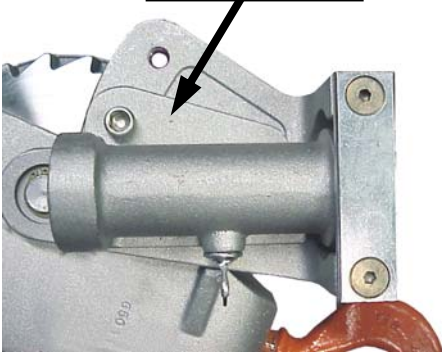


LH 6000-15 Instructions

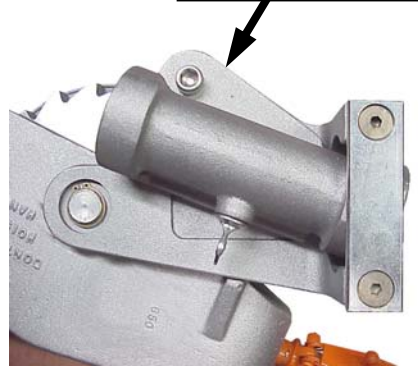
Handle Socket Positioning

By moving the socket cap screw to the other position, extra leverage may be gained to put the operator in a better position to accomplish the task.

Standard Socket
Position.



Optional Socket
Position.



Handle Extension

The handle can be extended for extra leverage. By loosening the handle locking nut the inner tube can be pulled out. If the handle is tight, give the handle a sharp rap with a solid object to loosen it. Tighten the handle locking nut before use.

Shear Pin Replacement

It may be necessary to loosen the 5/16" socket cap screw in order to remove and replace the shear pin.

To replace a broken shear pin, you must first remove the remains of the old pin. You can use a punch, nail or small allen wrench to push it out from inside of the u-frame.

To install the new pin, put it in the socket with the o-ring side up. Push it in until it is fully seated in the bushings.

Remember to tighten the socket cap screw when finished.



Push in with
o-ring this side up.

Maintenance

Never perform maintenance when there is a load on the hoist!

Inspect hoist before each use. Check for wear, damage, distortion, and cleanliness.

Keep hoist clean from dirt and debris, clean out immediately.

Replace worn or damaged parts before any further use.

When in use, care should be taken to avoid dragging the wire rope in dirt or around objects that will scrape, nick, crush, or induce sharp bends.

Replace wire rope if any kinking, crushing, birdcaging, or any other damage resulting in distortion of the wire rope structure is present.

Cable Shield Replacement

Pull cable fully out of drum. Pull up on both ends of shield to force pin up from hole in frame. Remove E-ring from end of pin. Remove shield and pin from drum. Place pin in new shield. Install a new E-ring on lower groove of pin. Put shield on drum. Pull up on both ends of shield to put pin in hole in frame. Install new E-ring on top groove of pin.

Cable Replacement

Remove cable shield as per above instruction. Pull new cable through hole in drum and through cable guide. Make sure to stay above main pawl shaft. Feed cable through eye of hook and around thimble. Turn back amount of wire rope specified on fist grip clamp package. Apply first fist grip clamp one base width from dead end of wire rope. Tighten nuts evenly, alternating from one nut to the other until reaching the recommended torque on the fist grip clamp package. Apply the second fist grip clamp as near the thimble as possible. Replace cable shield as per above instruction.

Apply the first load to test the assembly. This load should be equal or greater weight than loads expected in use. Next check and retighten nuts to recommended torque.

In accordance with good rigging and maintenance practices, the wire rope end termination should be inspected periodically for wear, abuse, and general adequacy.

Cable Inspection

Inspect your cable daily for damage. If you find any of the following conditions, discontinue use and replace cable immediately.

Birdcaging



Broken/Crushed Wires

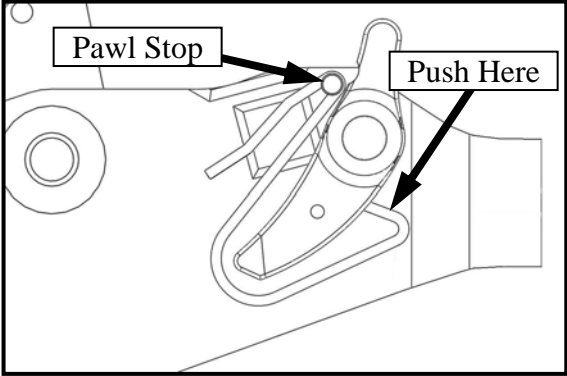


Kinking

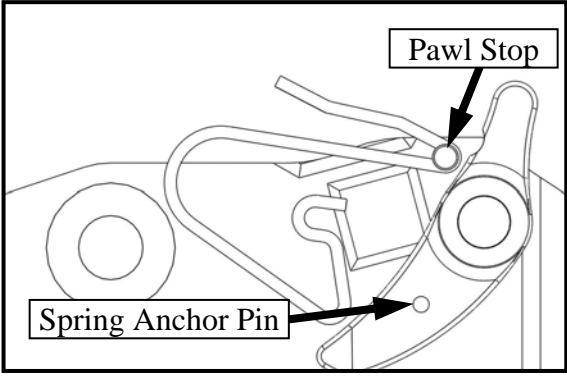


200 Main Pawl Spring Replacement

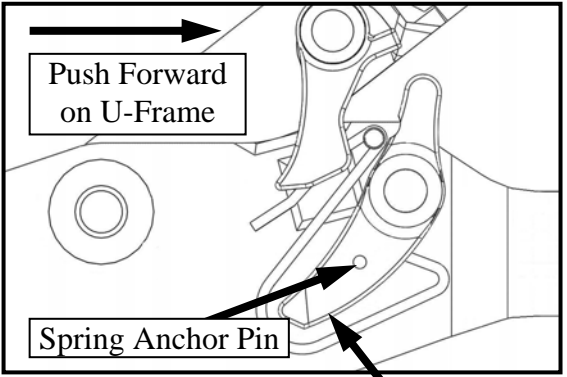
To remove the old spring, use a screw driver or punch to push down on the spring as shown. After the spring releases from the main pawl, rotate it around until it can be slid off of the pawl stop on the main frame.



To install the new spring, slide the long end under the pawl stop. Rotate around the pawl stop until the spring rests against the spring anchor pin.



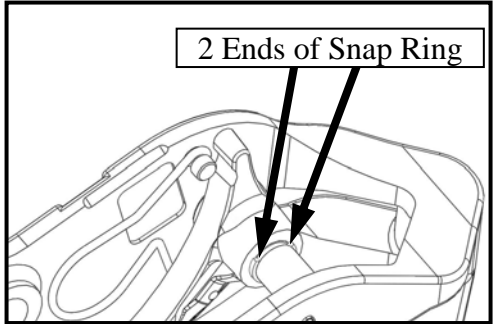
First, keep main pawl engaged in drum teeth. With the spring resting on the pawl stop and main pawl, push the u-frame forward until the spring re-engages the spring anchor pin on the main pawl.



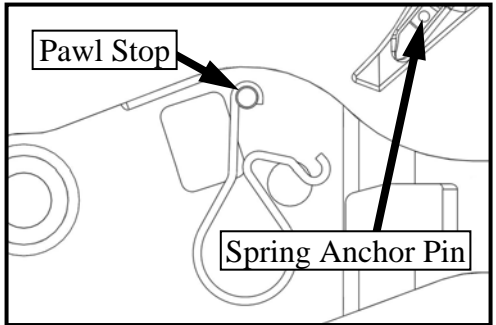
Keep Pressure on Pawl in This Direction

131 Main Pawl Spring Replacement

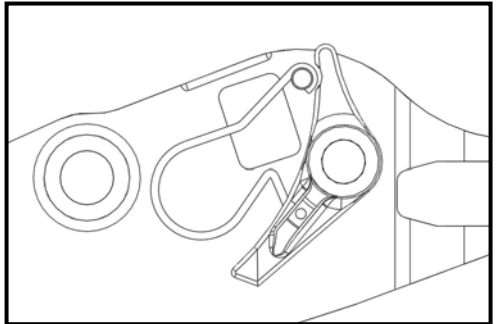
To remove the old spring, remove the snap ring on the main pawl shaft (use a hammer and 2 nails or small punches to tap ring equally from both sides). Slide the shaft out of the main frame and remove the pawl and spring.



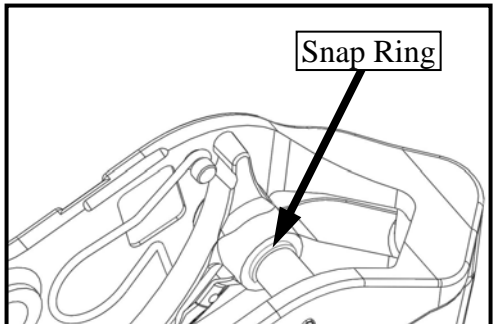
To install the new spring, hang spring on pawl stop. Next slide spring anchor pin on pawl into the other end of the spring.



Next push the main pawl to line up the holes in the main pawl and main frame. Slide the main pawl shaft through the main frame and main pawl.



Use a hammer and punch to install a new snap ring in the groove on the main pawl shaft.



Inspection Check List

Model# _____ Tool ID _____ Date In Service _____

Inspection Chart						
Item	Normal Service		Heavy Service		Severe Service	
	Visual Monthly	Record Yearly	Visual Weekly to Monthly	Record Semiannually	Visual Daily to Weekly	Record Quarterly
Frequent Inspection						
All functional mechanisms for proper operation.	*		*		*	
Hooks and latches for deformation, chemical damage, cracks, and wear.	*		*		*	
Hook latch operation.	*		*		*	
Wire rope for distortion such as kinking, crushing, unstranding, birdcaging, main strand displacement, or core protrusion. Also broken or cut strands.	*		*		*	
Handle for bends, cracks, or other damage.	*		*		*	
Periodic Inspection						
All requirements of Frequent Inspection.		**		***		***
Evidence of loose pins, bolts, nuts, or rivets.		**		***		***
Evidence of worn, corroded, cracked, or distorted parts such as load blocks, suspension housing, levers, wire rope attachments, yokes, shafts, bearings, pins, rollers, and locking and clamping devices.		**		***		***
Evidence of damage to hook retaining nuts and pins used to secure the retaining members.		**		***		***
Evidence of damage or excessive wear of drum teeth.		**		***		***
Evidence of worn pawls or ratchets; corroded, stretched, worn or broken pawl springs.		**		***		***
Labels and tags must be legible and securely fastened to the hoist.		**		***		***
End connections and termination of wire rope.		**		***		***

Notes: * Visual inspection by operators or other designated personnel.
 ** Visual inspection by a designated person of conditions.
 *** Same as ** unless conditions indicate that disassembly should be done to permit detailed inspection.

NORMAL SERVICE: Weekly usage

HEAVY SERVICE: Daily usage

SEVERE SERVICE: Daily usage and/or in severe loading or weather conditions.

Notes

Troubleshooting

Hoist Does Not Lower/Back Off Under Tension	
Cause	Remedy
U-pawl engaged	Move reverse lever to disengage u-pawl.
Broken main pawl spring.	Replace main pawl spring.
Main pawl spring has lost tension.	Replace main pawl spring.
U-pawl button slips by main spring.	Inspect u-pawl for bending or excess button wear. Replace if needed. Straighten or replace u-frame if needed.
U-pawl hits main frame.	Straighten or replace u-frame.
Distorted or broken main pawl.	Replace main pawl.
Broken tooth on drum.	Replace drum.

Hoist Does Not Lift/Pull	
Cause	Remedy
U-pawl not engaged	Move reverse lever to engage u-pawl
Main pawl spring doesn't hold pawl engaged.	Replace main spring. Check frame for loose spring anchor.
Distorted or broken main pawl.	Replace main pawl.
Broken tooth on drum.	Replace drum.

Warranty

Every hoist is thoroughly inspected and tested prior to shipping from the Lincoln Hoist factory. If any properly installed, maintained, and operated hoist as outlined in this manual develops a performance problem due to defective workmanship or materials as verified by Lincoln Hoist, repair or replacement of the hoist will be made to the original purchaser without charge and the hoist will be returned via prepaid shipping, for **ONE YEAR FROM ORIGINAL PURCHASE DATE**. This warranty does not apply where deterioration is caused by normal wear, abuse, improper or inadequate maintenance, eccentric or side loading, overloading, chemical or abrasive actions, excessive heat, unauthorized modifications or repairs, or use of non Lincoln Hoist repair parts.

Except as stated herein, Lincoln Hoist makes no other warranties, expressed or implied, including warranties of merchantability and fitness for a particular purpose.

To make a claim under this warranty, the consumer must return the hoist and all ancillary parts thereto to:

Lincoln Hoist
121 Creeper Hill Road,
P.O. Box 458,
North Grafton, MA 01536

Proof of purchase, such as sales receipt or other documentation is required when requesting warranty service.







Warning



Overloading and Improper Use Can Result In Injury.

To Avoid Injury:

-  **Read and understand operators manual.**
-  **Do not exceed working load limit, load rating, or capacity.**
-  **Do not use to lift people or loads over people.**
-  **Use only Lincoln Hoist replacement parts.**

Lincoln Hoist®

Mfg. by Lincoln Precision Machining Company

121 Creeper Hill Road, P.O. Box 458, North Grafton, MA 01536 USA

Toll Free (888) 306-7222 Phone (774) 551-9000 Fax (508) 839-4729

Email sales@lincolinhoist.com