



OPERATIONS MANUAL

LEVER CHAIN HOIST

IMPORTANT SAFETY INFORMATION

Please read, understand and follow all safety information contained in these instructions prior to the use of this hoist. Retain these instructions for further use. These instructions are applicable for **Manually Operated Lever Chain Hoists (Pullers)** offered by Premium Tool & Abrasives Co. Ltd.

INTENDED USE

This hoist is designed to be used to lift a load from a stationary position. Only accessories specifically recommended by PTA Canada should be used with this tool. Use in any other manner or with other accessories could lead to unsafe operating conditions.

WARNING

This unit must only be used in compliance with all applicable safety regulations and standards, including ASME B30.21, concerning installation, use, maintenance and inspection of equipment lifting devices.



WARRANTY

Premium Tool & Abrasives warrants its Lever Hoists for a period of 1 year from the purchase date against manufacturing defects and will repair or replace (at its option) without charge any items returned. Repairs or replacements are warranted as described for the remainder of the original warranty period. Providing proof of purchase is strictly the responsibility of the customer. This warranty is void if the item has been damaged by accident or unreasonable use, neglect, improper service, or other causes not arising out of defects in material or workmanship. No other expressed warranty is given or authorized. Premium Tool & Abrasives disclaims any implied warranty of MERCHANTABILITY or FITNESS for any period beyond the expressed warranty and shall not be liable for incidental or consequential damages. To obtain warranty service, please request a returned goods authorization number (RGA) from your nearest Authorized Warranty Repair Centre or from Premium Tool & Abrasives. Warranty claim items must be shipped to Premium Tool & Abrasives prepaid or delivered to 10761 - 181 ST, NW, Edmonton, AB, Canada, T5S 1N3.

IMPORTANT SAFETY INSTRUCTIONS

- Read, understand and follow the safety information contained in these instructions prior to using this tool. Keep these instructions for further reference.
- Do not exceed rated capacity. Hooks and handles are designed to bend or stretch when overloading is detected.
- Never use handle extensions (cheaters).
- During operation always ensure a firm footing. Operate the hoist from a location that will be clear of the load at all times. People must stay clear of load at all times. Never use the hoist to lift, support, or transport people. Never lift loads over or near people.
- Before lifting a load, confirm that the lever hoist is in good condition and functioning properly. Inspect the lever hoist regularly. Never use a lever hoist when malfunction, unusual performance, damage, or extensive wear are found.
- Always keep the load chain well lubricated and protect it from weld spatter and other damaging contaminants. Never allow the load chain or hooks be used as a ground for welding and never touch them with live welding electrodes. Never use the lever hoist with twisted, kinked, damaged or worn load chains. Never attempt to lengthen the load chain.
- Always use proper slings and attachments in the correct manner and confirm that they are seated properly in the hook. Also confirm that the safety latch assembly has closed completely and not supporting any part of the load.
- Slacked load chain must be taken up carefully. While checking the balance of the load, lift and lower the load about 4" to test the brake system before lifting further. Loads must be lifted slowly.
- Never run the load chain out beyond the range of the hoist.
- Never allow your attention to be diverted when operating the lever hoist and never leave a suspended load unattended.
- Do not allow a load to drop, such as over the edge of a platform, while connected to a lever hoist. The sudden drop, even of a small distance, can cause a severe momentary overload, seriously damaging the lever hoist and possibly resulting in the loss of the load. This can occur at loads rated well below the rated capacity.
- Never adjust or repair a lever hoist unless you are qualified to perform hoist maintenance.
- Never modify the lever hoist. Approval from PTA is required for all nonstandard maintenance.
- Use only genuine PTA parts when repairing the lever hoist
- Never remove or obscure the name plate on the lever hoist.

BOX CONTENTS

Upon unpacking your chain lever puller make sure to check for any damage from the shipping process. Compare the contents of your package with the following parts list to make sure all the parts are intact. Do not discard any of the shipping material until the unit is assembled.

- 1 LEVER HOIST
- 1 OWNER'S MANUAL
- 1 TEST CERTIFICATE

PRODUCT SPECIFICATIONS

CAPACITY	STD LIFT	LOAD LIMITER	STANDARD	CHAIN DIA. X FALLS	HOOK OPENING	SHIP WEIGHT
3/4 TON	5'	TM0300	TM0330	6mm X 1	30mm	17 LBS
	10'	TM0301	TM0331			20 LBS
	15'	TM0302	TM0332			22 LBS
1-1/2 TON	5'	TM0305	TM0335	8mm X 1	36mm	26 LBS
	10'	TM0306	TM0336			31 LBS
	15'	TM0307	TM0337			35 LBS
3 TON	5'	TM0310	TM0340	10mm X 1	40mm	47 LBS
	10'	TM0311	TM0341			55 LBS
	15'	TM0312	TM0342			62 LBS
6 TON	5'	TM0315		10mm X 2	50mm	70 LBS
	10'	TM0316				77 LBS
	15'	TM0317				84 LBS

1 PREPARATION FOR USE

- Inspect carefully for any damage that may occur during shipping. Check for loose, missing, or damaged parts.
- Lubricate the load chain along the whole length with machine oil (See Figure 1)
- Examine the load chain to ensure that there are no twists. 6 ton lever hoists have 2 falls of load chain. Twists can arise from the bottom hook being accidentally turned over through the load chains (See Figure 2).
- Confirm that the supporting structure is strong enough to support the full rated capacity of the lever hoist with a generous factor of safety.

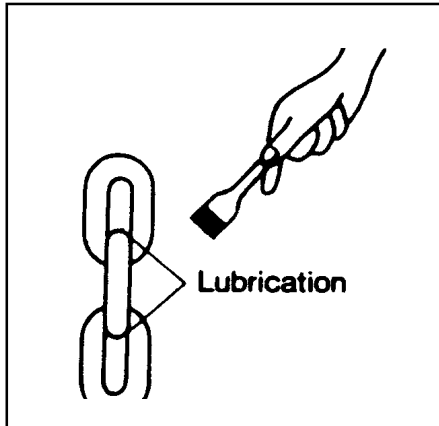


FIGURE 1

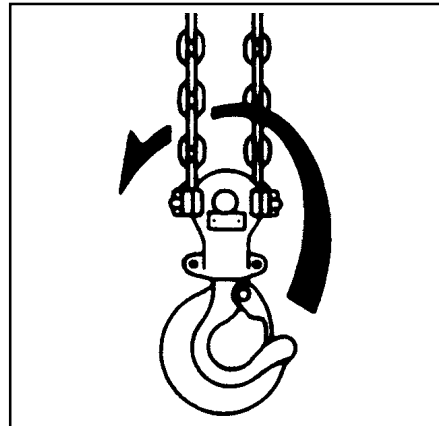


FIGURE 2

2 OPERATING INSTRUCTIONS

Hoisting (Pulling) and Lowering (Releasing)

Hoisting (Pulling)

- Set the selector lever to the “UP” position. Take up the slacked load chain by turning the guide handle clockwise or by free wheeling (instructions below). Next, Manipulate the operating handle clockwise.

Lowering (Releasing)

- Set the selector lever to the “DOWN” position. Manipulate the operating handle counterclockwise. When there is no load on the lever hoist, the load chain can be slackeden by turning the guide handle counterclockwise.

Free-Wheeling

This operation allows for the user to quickly make large adjustments to the load chain length. Set the selector lever to the “N” position and pull the load chain out in the desired direction.

Free-Wheeling will *not be possible* during the following conditions:

- When the lever hoist is under a load.
- When the guide handle is in contact with something and not rotating freely.
- When the brake has locked from a large or abrupt load, turn the guide handle 45 degrees counterclockwise to unlock the brake.
- When the brake is locked.
- The brake can be unlocked by setting the selector lever to the “DOWN” position and manipulating the operating handle counterclockwise.

USAGE INSTRUCTIONS

The lever hoist will automatically change from the free-wheeling condition to the brake locked condition when a load is applied.

Apply the load with one of the following two methods:

- Turn the guide handle clockwise until the brake locks from the force of the load.
- Pull firmly non-load side of the chain until the brake locks from the force of the load (See Figure 3, 4). Turn the selector lever to the "UP" position and hoist or pull by manipulating the operating handle.

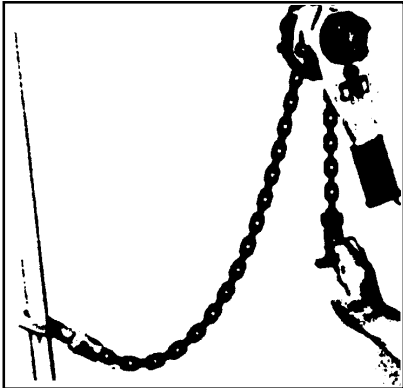


FIGURE 3

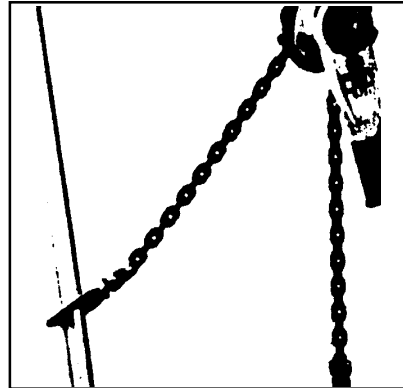


FIGURE 4

3 OPERATING PRECAUTIONS

- Keep the load within the rated capacity marked on the lever hoist. An excess load may lead to an accident.
LOAD LIMITED: The lever hoist is overloaded when pulling the lever arm will not lift the load and instead slips during levering. If the lever hoist is shock loaded, overloading is apparent if you cannot raise or lower the load and if the bottom hook is stretched so far that the clasp has sprung outwards.
NON-LOAD LIMITED: The lever hoist is overloaded when the lever handle is bent or the clasp on the load hook will no longer close.
- Before operating, lift and lower the load about 4" (10cm) and test the braking system. Ineffective braking may lead to an accident.
- Loads must be lifted as slowly as possible. Load swinging and abrupt shocks will impose excessive stress on the lever hoist and could lead to overloading or brake locking.
- Extreme temperatures will affect the durability of the lever hoist. In subzero temperatures, loads must be lifted and lowered very slowly and carefully.
- When hooking, the load must be applied squarely to the centre of the hook and the hook must not come loose during operation. Never use the hook directly on a load (See Figure 5). Lift loads only with applicable clamps or hooks (See Figure 6).
- Mount the top hook for a fixed location. Ensure the fixed suspension point rests on the centre of the hooks saddle and that the hook's safety latch is engaged.

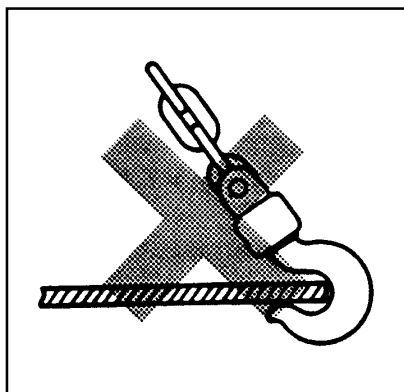


FIGURE 5

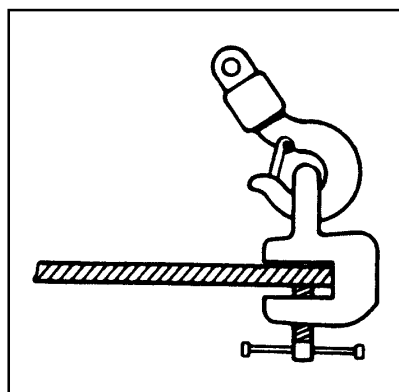
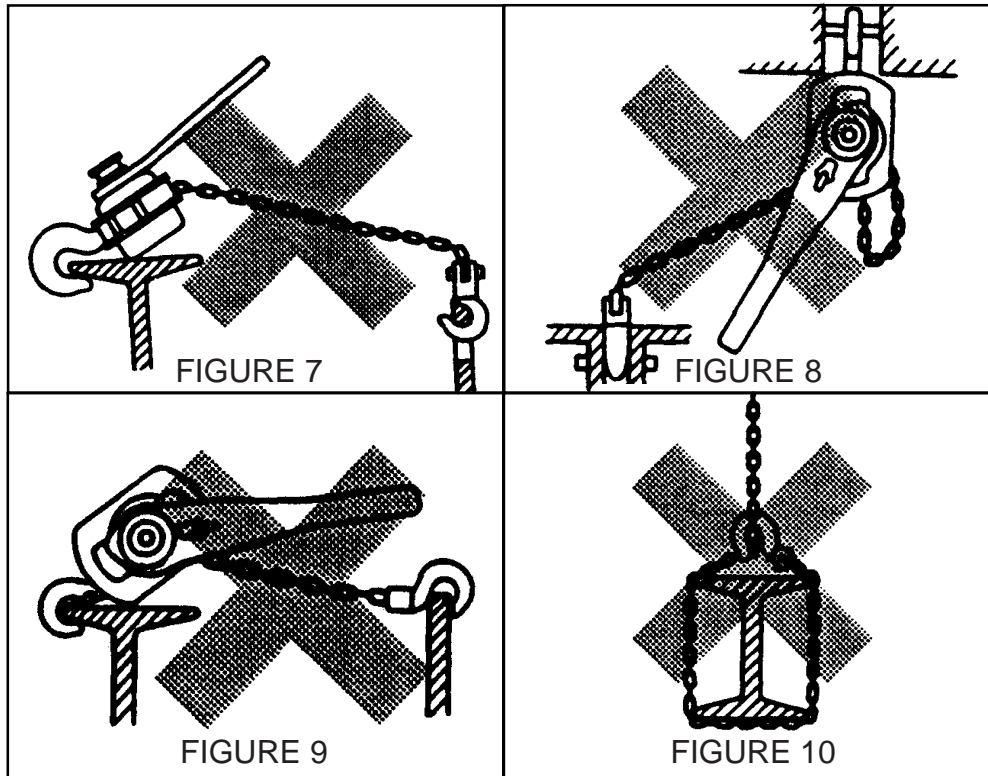


FIGURE 6

Figures 7 through 10 show improper hooking methods, which may cause the hook to elongate or bend. These hooking methods may also obstruct the load chain and prevent the lever hoist from operating properly. In applications similar these, be sure to use the correct slings and attachments to ensure safe operation and long life of the lever hoist.



- Never run the chain out too far. When the lever hoist is run out beyond the range of the lift, a dangerous excessive load is imposed on the load chain, chain safety stop, and bearings.
- The selector lever must be set to the “UP” position when the lever hoist is under a load during hoisting or pulling.
- Lifting a load with two lever hoists is **NOT RECOMMENDED**. When lifting a load with more than one hoist, always ensure that both hoists can lift the entire load individually.
- Do not throw or drop the lever hoist from high places. Do not drag the lever hoist during transportation. Doing so may cause damage that may lead to an accident.

4 CARE AFTER USE

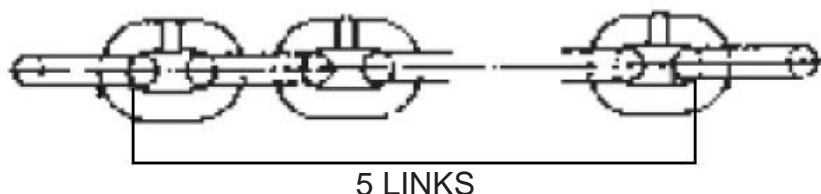
- Never leave or store the lever hoist with the brake system locked. Loosen the brake system by operating the lever hoist as if lowering a load.
- Always service and repair the lever hoist after use. Thoroughly clean the dust or if used in the rain, wipe off the dirt and moisture. Lubricate all moving parts of the hoist after use, especially the load chain, to prevent rust.
- Inspect the hooks and load chain for bends and any other type of defects. Also check to see if the hooks freely rotate. If any defect is found, replace the defective component before using the lever hoist again.

5 INSPECTION AND MAINTENANCE

- The lever hoist is designed and manufactured to withstand heavy duty material handling operations, but wear and damage are unavoidable after an extended use in less than ideal environments.
- Never leave the lever hoist in a damp environment or damp weather such as rain. Always store the lever hoist in a dry, well ventilated area.
- Proper lubrication will help lengthen the life of the lever hoist. Before storing, check to see if the lever hoist is well lubricated. Be especially sure that the moving parts, such as gears and bearings, are well lubricated.
- Load chain and hooks
 Note: The load chains and hooks are precisely heat-treated.
 Never weld or heat-treat the load chain.

Load Chain

Load chains worn-out or elongated beyond the permissible dimensions must be replaced at once. To examine, clean the chain with solvent and, using a caliper style gauge, measure the inside length of 5 links of chain under light tension. Replace the entire load chain immediately if even one link of the load chain is extensively worn-out, elongated or damaged.



LOAD CHAIN DIMENSIONS

CAPACITY (TONS)	DIAMETER (Ø mm)	STANDARD* (Ø mm)	LIMIT* (mm)
3/4	6	89.9	92.6
1-1/2	8	119.8	123.4
3	10	149.6	154.1
6	10	149.6	154.1

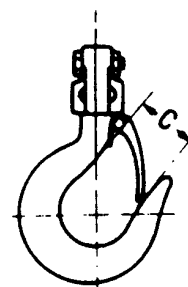
*5 link inner diameter dimensions

Hooks

PTA material handling hooks are designed to bend slightly when overloaded. If the hook opening is elongated beyond the permissible dimension, the hook is dangerously deformed and must be repaired at once. No deformation of the hook will arise when the lever hoist is used and maintained properly.

HOOK DIMENSIONS

CAPACITY (TONS)	STANDARD C SIZE (mm)	LIMIT C SIZE* (mm)
3/4	30	31.5
1-1/2	36	37.8
3	40	42
6	50	52.5



*Limit C size is the maximum permissible dimension of the hook, which is about 5% wider than the standard hook opening. The safety latch will not catch the hook tip once the hook is stretched beyond this point.

TROUBLE SHOOTING PROCEDURES

CONDITION	PROBABLE CAUSE	HOW TO REPAIR
Slip caused by ineffective braking	<ol style="list-style-type: none"> 1. Worn-out friction discs. 2. Excessive oil on the braking surface. 3. Incorrect assembly of the braking system. 	<ol style="list-style-type: none"> 1. Replace with new friction discs. 2. Disassemble and clean. 3. Assemble correctly.
Load dropped while lowering	<ol style="list-style-type: none"> 1. Damaged friction discs. 2. Foreign matters in the braking system. 	<ol style="list-style-type: none"> 1. Replace with new friction discs. 2. Disassemble and clean.
Jammed operating handle	<ol style="list-style-type: none"> 1. Over-tightening of the brake. 	<ol style="list-style-type: none"> 1. Operate lever hoist as if lowering a load.
Noises during hoisting and lowering operation	<ol style="list-style-type: none"> 1. Wear or deformation of the load chain and load sheave. 	<ol style="list-style-type: none"> 1. Replace with new parts.
Operating handle becomes difficult to operate during lifting or lowering operation	<ol style="list-style-type: none"> 1. Over-hoisting or over-lowering. 2. Twist in the load chain causing it to get caught between load sheave and load chain guide. 	<ol style="list-style-type: none"> 1. Operate the hoist in opposite direction. 2. Operate the hoist in the opposite direction and remove the twist from the load chain.
Load will not go down	<ol style="list-style-type: none"> 1. The hoist was left under load for extended period. 2. Over tightened brake. 3. Shock loaded during operation. 4. Brake rusted tight. 	<ol style="list-style-type: none"> 1. Set the selector lever to the down position and reset the brake by pulling harder on the lever. 2-4. If load cannot be moved, use another lifting device to remove the load from the affected hoist and replace brake components and perform hoist maintenance.

MANUALLY OPERATED LEVER CHAIN HOISTS

The warning tags illustrated below are supplied with each hoist shipped from Premium Tool. If the tag is not attached to your hoist's no-load side of the load chain, order a tag from your dealer or PTA Canada and install it. Read and obey all warnings and guidelines attached to this hoist.

⚠ WARNING
IMPROPER lever hoist use could result in death or serious injury.
To AVOID these hazards:



SEE
OTHER
SIDE



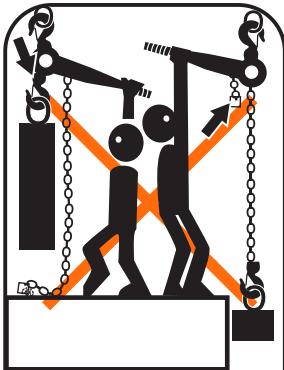
NEVER
throw a hoist.



NEVER
use the hoist
chain as a sling.



NEVER
use an extended
pipe or bar on
handle.



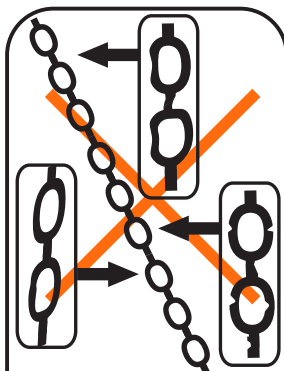
NEVER
operate so far that
the hook or chain
stopper link
touches the block.

⚠ WARNING

IMPROPER lever hoist use could result in death or serious injury.
To AVOID these hazards:



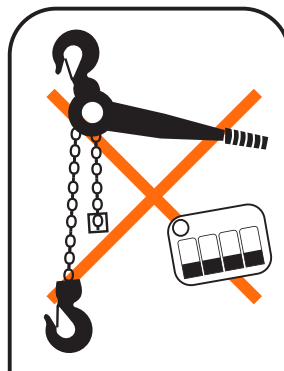
NEVER
support a load
on the tip of the
hook.



NEVER
use a twisted,
kinked, damaged,
or stretched load
chain.



NEVER
use a hoist if the
hook latch is
missing or
broken.



NEVER
remove or
obscure the
warning tags.



SEE
OTHER
SIDE

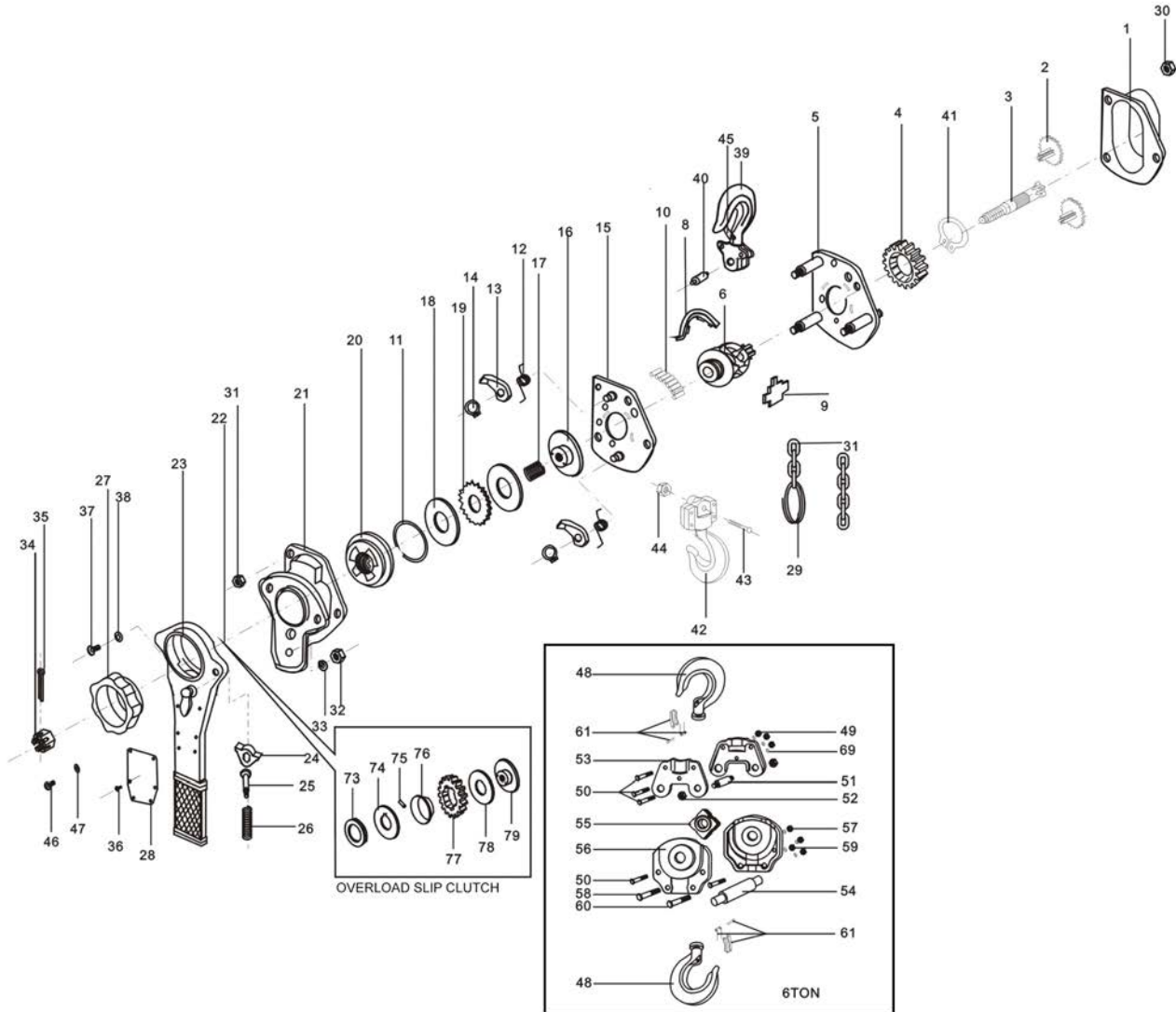
WARNINGS AND PRECAUTIONS

MANUALLY OPERATED LEVER CHAIN HOISTS

The following warnings and operating practices are intended to avoid unsafe hoisting practices which might lead to personal injury or property damage.

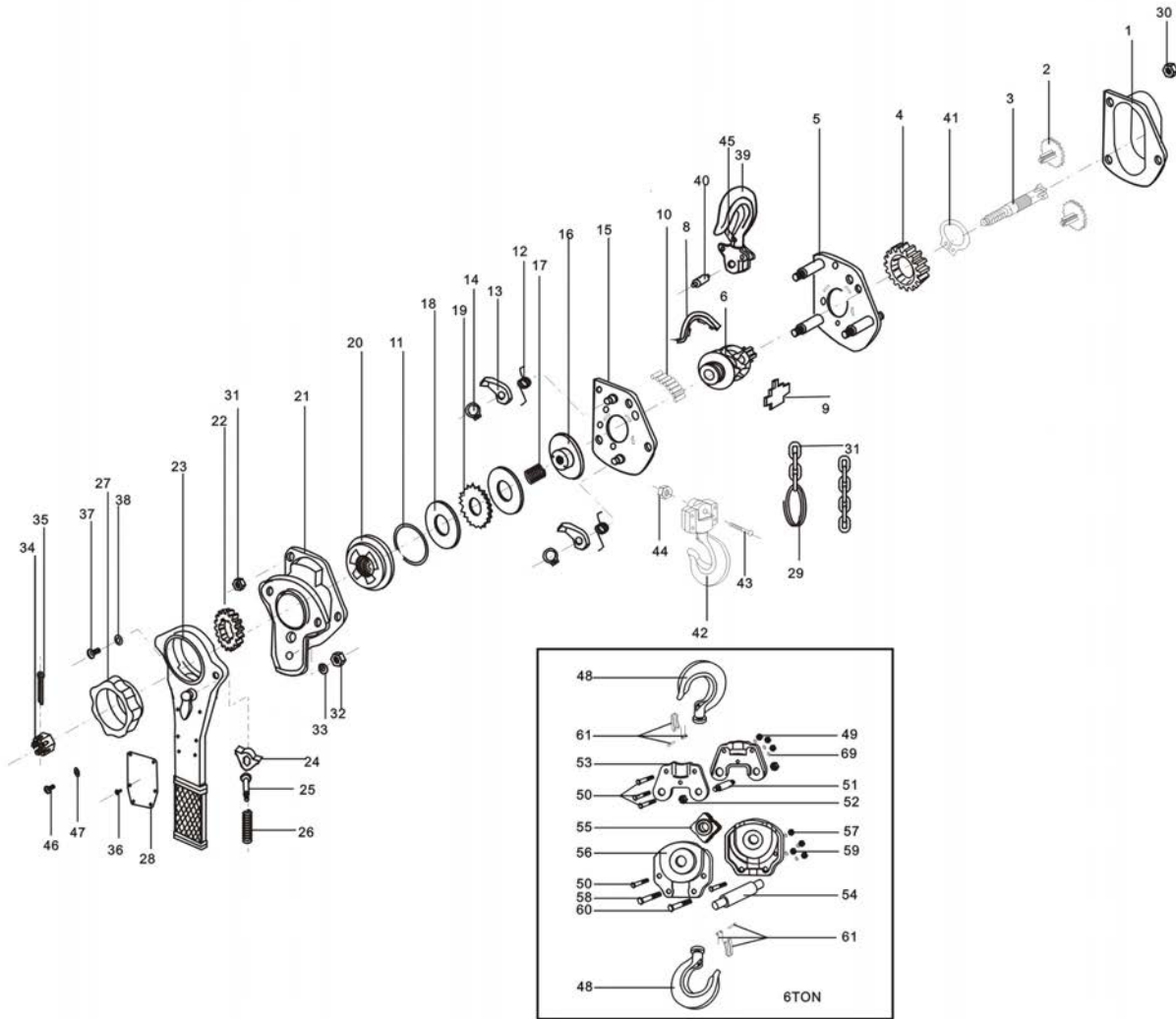
DO	DO NOT
<ol style="list-style-type: none"> 1. DO read the operating and maintenance instructions 2. DO be familiar with hoist operating controls, procedures, and warnings. 3. DO make sure that the unit is securely attached to a suitable support before applying load. 4. DO maintain firm footing or be secured when operating unit. 5. DO make sure that load slings or other approved sling attachments are properly sized and seated in the hook saddle. 6. DO make sure the hook safety latches are closed and not supporting any part of the load. 7. DO make sure load is free to move and will clear all obstructions. 8. DO take up slack carefully, check load balance, move the load a few inches, and check load holding action before continuing. 9. DO make sure all persons stay clear of the supported load. 10. DO avoid swinging of load or load hook. 11. DO protect load chain from weld spatter or other damaging contaminants. 12. DO avoid lever "fly-back" by keeping a firm grip on the lever until operating stroke is complete and the lever is at rest. 13. DO promptly report any malfunction, unusual performance, or damage of the unit. 14. DO inspect unit regularly, replace damaged or worn parts, and keep appropriate records of maintenance. 15. DO use the recommended PTA parts when repairing unit. 16. DO apply lubricant to load chain as recommended by PTA. 	<ol style="list-style-type: none"> 1. DO NOT lift or pull more than rated load. 2. DO NOT use the hoist load limiting device to measure the load weight. 3. DO NOT use damaged unit or unit that is not working correctly. 4. DO NOT apply a load unless chain is properly seated in chain wheel(s) or sprocket(s). 5. DO NOT use with twisted, kinked, damaged or worn chain. 6. DO NOT apply a load if any binding prevents equal loading on all load supporting chains. 7. DO NOT use load chain as a sling or wrap chain around a load. 8. DO NOT apply the load to the tip of the hook. 9. DO NOT operate except with hand power. 10. DO NOT operate unit when it is restricted from adjusting itself to form a straight line with the direction of loading. 11. DO NOT operate with any lever extension or cheater bar. 12. DO NOT allow your attention to be diverted from operating the unit. 13. DO NOT allow more than one operator to pull on lever at same time. 14. DO NOT operate unit beyond limits of load chain travel. 15. DO NOT attempt to "free-wheel" unit with any load applied. 16. DO NOT use hoist to lift, support or transport people. 17. DO NOT lift loads over people. 18. DO NOT leave a load supported by the unit unattended unless specific precautions have been taken. 19. DO NOT allow unit to be subjected to sharp contact with other units, structures, or objects through misuse. 20. DO NOT allow the chain or hook to be used as a ground for welding. 21. DO NOT allow the chain or hook to be touched by a live welding electrode. 22. DO NOT remove or obscure the warnings on the unit. 23. DO NOT adjust or repair a unit unless you are qualified to perform such maintenance. 24. DO NOT attempt to lengthen the load chain or repair damaged load chain. 25. DO NOT allow loads to drop suddenly while operating this lift.

PART LIST FOR LEVER HOISTS WITH OVERLOAD PROTECTION



- | | | | |
|-------------------------------|-------------------------------|--------------------------|--------------------------|
| 1. Gear case assembly | 20. Female thread grip | 38. Lock washer | 55. Move wheel |
| 2. Disk gear assembly | 21. Brake cover assembly | 39. Top hook assembly | 56. 6t bottom hook frame |
| 3. Drive shaft | 22. Change over gear assembly | 40. Hook shaft | 57. Nut |
| 4. Gear side plate assembly | 23. Lever handle assembly | 41. Axle snap ring | 58. Screw |
| 5. Gear side plate assembly | 24. Change over pawl | 42. Bottom hook assembly | 59. Nut |
| 6. Load sheave assembly | 25. Spring seat | 43. Bolt | 60. Screw |
| 8. Guide plate | 26. Change over spring | 44. Lock nut | 61. Safe clip assembly |
| 9. Stripper | 27. Hand wheel | 45. Safe clip assembly | 73. Lock nut |
| 10. Roller | 28. Name plate | 46. Screw | 74. Pressure ring |
| 11. Wire snap ring | 29. Chain ring | 47. Lock washer | 75. Roller |
| 12. Pawl spring | 30. Lock nut | 48. 6t hook | 76. Dished-spring |
| 13. Pawl | 31. Load chain | 49. Nut | 77. Change over gear |
| 14. Axle snap ring | 32. Hex nut | 50. Screw | 78. Friction disc |
| 15. Lever side plate assembly | 33. Lock washer | 51. 6t pin | 79. Claw |
| 16. Disk hub | 34. Castle nut | 52. Nut | |
| 17. Free spring | 35. Split pin | 53. 6t top hook frame | |
| 18. Friction disk | 36. Rivet | 54. Move wheel pin | |
| 19. Ratchet disk | 37. Screw | | |

PART LIST FOR LEVER HOISTS (NO OVERLOAD PROTECTION)



- | | | | |
|-------------------------------|---------------------------|--------------------------|--------------------------|
| 1. Gear case assembly | 20. Female thread grip | 38. Lock washer | 55. Move wheel |
| 2. Disk gear assembly | 21. Brake cover assembly | 39. Top hook assembly | 56. 6t bottom hook frame |
| 3. Drive shaft | 22. Change over gear | 40. Hook shaft | 57. Nut |
| 4. Gear side plate assembly | 23. Lever handle assembly | 41. Axle snap ring | 58. Screw |
| 5. Gear side plate assembly | 24. Change over pawl | 42. Bottom hook assembly | 59. Nut |
| 6. Load sheave assembly | 25. Spring seat | 43. Bolt | 60. Screw |
| 8. Guide plate | 26. Change over spring | 44. Lock nut | 61. Safe clip assembly |
| 9. Stripper | 27. Hand wheel | 45. Safe clip assembly | |
| 10. Roller | 28. Name plate | 46. Screw | |
| 11. Wire snap ring | 29. Chain ring | 47. Lock washer | |
| 12. Pawl spring | 30. Lock nut | 48. 6t hook | |
| 13. Pawl | 31. Load chain | 49. Nut | |
| 14. Axle snap ring | 32. Hex nut | 50. Screw | |
| 15. Lever side plate assembly | 33. Lock washer | 51. 6t pin | |
| 16. Disk hub | 34. Castle nut | 52. Nut | |
| 17. Free spring | 35. Split pin | 53. 6t top hook frame | |
| 18. Friction disk | 36. Rivet | 54. Move wheel pin | |
| 19. Ratchet disk | 37. Screw | | |



OPERATIONS MANUAL

LEVER CHAIN HOIST

PRODUCT INFORMATION

Part Number: _____

Serial Number: _____

Date of Purchase: _____

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e-mail: pta@premiumtool.com

**FOR OTHER PRODUCT CATALOGUES,
ASSISTANCE OR A DISTRIBUTOR IN YOUR AREA,
PLEASE CALL:**

1 800 661 6576

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