# 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

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

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 slackened 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.
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.

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.
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 to 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 a 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**

<table>
<thead>
<tr>
<th>CAPACITY (TONS)</th>
<th>DIAMETER (Ø mm)</th>
<th>STANDARD* (Ø mm)</th>
<th>LIMIT* (mm)</th>
</tr>
</thead>
<tbody>
<tr>
<td>3/4</td>
<td>6</td>
<td>89.9</td>
<td>92.6</td>
</tr>
<tr>
<td>1-1/2</td>
<td>8</td>
<td>119.8</td>
<td>123.4</td>
</tr>
<tr>
<td>3</td>
<td>10</td>
<td>149.6</td>
<td>154.1</td>
</tr>
<tr>
<td>6</td>
<td>10</td>
<td>149.6</td>
<td>154.1</td>
</tr>
</tbody>
</table>

*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**

<table>
<thead>
<tr>
<th>CAPACITY (TONS)</th>
<th>STANDARD C SIZE (mm)</th>
<th>LIMIT C SIZE* (mm)</th>
</tr>
</thead>
<tbody>
<tr>
<td>3/4</td>
<td>30</td>
<td>31.5</td>
</tr>
<tr>
<td>1-1/2</td>
<td>36</td>
<td>37.8</td>
</tr>
<tr>
<td>3</td>
<td>40</td>
<td>42</td>
</tr>
<tr>
<td>6</td>
<td>50</td>
<td>52.5</td>
</tr>
</tbody>
</table>

*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.
<table>
<thead>
<tr>
<th>CONDITION</th>
<th>PROBABLE CAUSE</th>
<th>HOW TO REPAIR</th>
</tr>
</thead>
</table>
| Slip caused by ineffective braking | 1. Worn-out friction discs.  
2. Excessive oil on the braking surface.  
3. Incorrect assembly of the braking system. | 1. Replace with new friction discs.  
2. Disassemble and clean.  
3. Assemble correctly. |
| Load dropped while lowering      | 1. Damaged friction discs.  
2. Foreign matters in the braking system. | 1. Replace with new friction discs.  
2. Disassemble and clean. |
| Jammed operating handle         | 1. Over-tightening of the brake.                                                | 1. Operate lever hoist as if lowering a load.                                |
| Noises during hoisting and lowering operation | 1. Wear or deformation of the load chain and load sheave. | 1. Replace with new parts.                                                   |
| Operating handle becomes difficult to operate during lifting or lowering operation | 1. Over-hoisting or over-lowering.  
2. Twist in the load chain causing it to get caught between load sheave and load chain guide. | 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            | 1. The hoist was left under load for extended period.  
2. Over tightened brake.  
3. Shock loaded during operation.  
4. Brake rusted tight. | 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. |
WARNINGS TAGS AND LABELS

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:

**NEVER**
- throw a hoist.
- use the hoist chain as a sling.
- use an extended pipe or bar on handle.
- operate so far that the hook or chain stopper link touches the block.

**NEVER**
- support a load on the tip of the hook.
- use a twisted, kinked, damaged, or stretched load chain.
- use a hoist if the hook latch is missing or broken.
- remove or obscure the warning tags.
# 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.

<table>
<thead>
<tr>
<th>DO</th>
<th>DO NOT</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. DO read the operating and maintenance instructions</td>
<td>1. DO NOT lift or pull more than rated load.</td>
</tr>
<tr>
<td>2. DO be familiar with hoist operating controls, procedures, and warnings.</td>
<td>2. DO NOT use the hoist load limiting device to measure the load weight.</td>
</tr>
<tr>
<td>3. DO make sure that the unit is securely attached to a suitable support before applying load.</td>
<td>3. DO NOT use damaged unit or unit that is not working correctly.</td>
</tr>
<tr>
<td>4. DO maintain firm footing or be secured when operating unit.</td>
<td>4. DO NOT apply a load unless chain is properly seated in chain wheel(s) or sprocket(s).</td>
</tr>
<tr>
<td>5. DO make sure that load slings or other approved sling attachments are properly sized and seated in the hook saddle.</td>
<td>5. DO NOT use with twisted, kinked, damaged or worn chain.</td>
</tr>
<tr>
<td>6. DO make sure the hook safety latches are closed and not supporting any part of the load.</td>
<td>6. DO NOT apply a load if any binding prevents equal loading on all load supporting chains.</td>
</tr>
<tr>
<td>7. DO make sure load is free to move and will clear all obstructions.</td>
<td>7. DO NOT use load chain as a sling or wrap chain around a load.</td>
</tr>
<tr>
<td>8. DO take up slack carefully, check load balance, move the load a few inches, and check load holding action before continuing.</td>
<td>8. DO NOT apply the load to the tip of the hook.</td>
</tr>
<tr>
<td>9. DO make sure all persons stay clear of the supported load.</td>
<td>9. DO NOT operate except with hand power.</td>
</tr>
<tr>
<td>10. DO avoid swinging of load or load hook.</td>
<td>10. DO NOT operate unit when it is restricted from adjusting itself to form a straight line with the direction of loading.</td>
</tr>
<tr>
<td>11. DO protect load chain from weld spatter or other damaging contaminants.</td>
<td>11. DO NOT operate with any lever extension or cheater bar.</td>
</tr>
<tr>
<td>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.</td>
<td>12. DO NOT allow your attention to be diverted from operating the unit.</td>
</tr>
<tr>
<td>13. DO promptly report any malfunction, unusual performance, or damage of the unit.</td>
<td>13. DO NOT allow more than one operator to pull on lever at same time.</td>
</tr>
<tr>
<td>14. DO inspect unit regularly, replace damaged or worn parts, and keep appropriate records of maintenance.</td>
<td>14. DO NOT operate unit beyond limits of load chain travel.</td>
</tr>
<tr>
<td>15. DO use the recommended PTA parts when repairing unit.</td>
<td>15. DO NOT attempt to “free-wheel” unit with any load applied.</td>
</tr>
<tr>
<td>16. DO apply lubricant to load chain as recommended by PTA.</td>
<td>16. DO NOT use hoist to lift, support or transport people.</td>
</tr>
<tr>
<td></td>
<td>17. DO NOT lift loads over people.</td>
</tr>
<tr>
<td></td>
<td>18. DO NOT leave a load supported by the unit unattended unless specific precautions have been taken.</td>
</tr>
<tr>
<td></td>
<td>19. DO NOT allow unit to be subjected to sharp contact with other units, structures, or objects through misuse.</td>
</tr>
<tr>
<td></td>
<td>20. DO NOT allow the chain or hook to be used as a ground for welding.</td>
</tr>
<tr>
<td></td>
<td>21. DO NOT allow the chain or hook to be touched by a live welding electrode.</td>
</tr>
<tr>
<td></td>
<td>22. DO NOT remove or obscure the warnings on the unit.</td>
</tr>
<tr>
<td></td>
<td>23. DO NOT adjust or repair a unit unless you are qualified to perform such maintenance.</td>
</tr>
<tr>
<td></td>
<td>24. DO NOT attempt to lengthen the load chain or repair damaged load chain.</td>
</tr>
<tr>
<td></td>
<td>25. DO NOT allow loads to drop suddenly while operating this lift.</td>
</tr>
</tbody>
</table>
PART LIST FOR LEVER HOISTS WITH OVERLOAD PROTECTION

1. Gear case assembly
2. Disk gear assembly
3. Drive shaft
4. Gear side plate assembly
5. Gear side plate assembly
6. Load sheave assembly
7. Guide plate
8. Stripper
9. Roller
10. Wire snap ring
11. Pawl spring
12. Pawl
13. Axle snap ring
14. Lever side plate assembly
15. Lever side plate assembly
16. Disk hub
17. Free spring
18. Friction disk
19. Ratchet disk
20. Female thread grip
21. Brake cover assembly
22. Change over gear assembly
23. Lever handle assembly
24. Change over pawl
25. Spring seat
26. Change over spring
27. Hand wheel
28. Name plate
29. Chain ring
30. Lock nut
31. Load chain
32. Hex nut
33. Lock washer
34. Castle nut
35. Split pin
36. Rivet
37. Screw
38. Lock washer
39. Top hook assembly
40. Hook shaft
41. Axle snap ring
42. Bottom hook assembly
43. Bolt
44. Lock nut
45. Safe clip assembly
46. Screw
47. Lock washer
48. 6t hook
49. Nut
50. Screw
51. 6t pin
52. Nut
53. 8t top hook frame
54. Move wheel pin
55. Move wheel
56. 8t bottom hook frame
57. Nut
58. Screw
59. Nut
60. Screw
61. Safe clip assembly
62. Lock nut
63. Pressure ring
64. Roller
65. Dished-spring
66. Change over gear
67. Friction disc
68. Claw
PART LIST FOR LEVER HOISTS (NO OVERLOAD PROTECTION)

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