



LEVER CHAIN HOIST

OWNER'S MANUAL



1, 2, 3-TON



6-TON



WARNING: Read carefully and understand all **INSTRUCTIONS** before operating. Failure to follow the safety rules and other basic safety precautions may result in serious personal injury.

**Item#s 21295, #21297, #21299 and
21301**

Thank you very much for choosing a Roughneck™ Product! For future reference, please complete the owner's record below:

Model: _____ Purchase Date: _____

Save the receipt, warranty and these instructions. It is important that you read the entire manual to become familiar with this product before you begin using it.

This machine is designed for certain applications only. The distributor cannot be responsible for issues arising from modification. We strongly recommend this machine is not modified and/or used for any application other than that for which it was designed. If you have any questions relative to a particular application, DO NOT use the machine until you have first contacted distributor to determine if it can or should be performed on the product.

For technical questions, please call **1-800-222-5381**.

APPLICATION

The manual lever chain hoist is a portable lifting device easily operated by lever. It is suitable for use in garages, workshops and warehouses for loading and unloading goods. It is ideal for lifting work in open air grounds and places where no power supply is available.

The chain hoist can be attached to a trolley as a travelling chain hoist. It is also suitable for use with a monorail overhead conveying system, hand travelling crane and jib crane.

TECHNICAL SPECIFICATIONS

Model		21295	21297	21299	21301
Rated Capacity	ton	1	2	3	6
	m	1.5	1.5	1.5	1.5
Lift Height	ft.	5	5	5	5
	in.	13	15 3/4	18 5/16	22 1/4
Load Chain Dia.	in.	1/4	5/16	3/8	3/8
Handle Length	in.	11	16	16	16

GENERAL SAFETY REGULATIONS



WARNING: Read and understand all instructions. Failure to follow all instructions listed below may result in serious bodily injury or death, and/or property damage.



WARNING: The warnings, cautions, and instructions discussed in this instruction manual cannot cover all possible conditions or situations that could occur. It must be understood by the operator that common sense and caution are factors that cannot be built into this product, but must be supplied by the operator.

- **Keep the work area clean and dry.** Damp or wet work areas can result in injury.
- **Keep children away from work area.** Do not allow children to handle this product.

- **Always wear ANSI-approved safety glasses and heavy-duty work gloves during assembly and use.** Do not wear loose clothing or jewelry, which can get caught in moving parts.
- **Store idle equipment.** When not in use, tools and equipment should be stored in a dry location to inhibit rust. Always lock up tools and equipment, and keep out of reach of children.
- **Use the right tool for the job.** Do not attempt to force small equipment to do the work of larger industrial equipment. There are certain applications for which this equipment was designed. It will do the job better and more safely at the capacity for which it was intended. Do not modify this equipment, and do not use this equipment for a purpose for which it was not intended.
- **Check for damaged parts.** Before using this product, carefully check that it will operate properly and perform its intended function. Check for damaged parts and any other conditions that may affect the operation of this product. Replace damaged or worn parts immediately.
- **Do not overreach.** Keep proper footing and balance at all times to prevent tripping, falling, back injury, etc.
- **DO NOT use the equipment when tired or under the influence of drugs, alcohol, or medication.** A moment of inattention while operating this equipment may result in serious personal injury.
- **Industrial applications must follow OSHA requirements.**

SPECIFIC OPERATION WARNINGS



WARNING: NEVER OVERLOAD!! Make sure the operator be familiar with the hoist controls before being authorized to operate the hoist.



WARNING: DO NOT LIFT PERSONNEL. DO NOT LIFT LOADS OVER PEOPLE.



WARNING: DO NOT walk under a suspended load. DO NOT perform any work on a suspended load that requires a worker to be positioned under the suspended load.

- DO NOT use damaged hoist or hoist that is not working properly.
- DO NOT use hoist with a twisted, kinked, damaged, or worn chain.
- Inspect hook latches for proper operation or damage that does not allow proper operation.
- DO NOT operate hoist if any damage or malfunctions exist.
- DO NOT use the hoist load chain as a sling to wrap around the load.
- DO NOT use the hoist in such a way that could result in shock or impact loads being applied to the hoist.
- DO NOT attempt to lengthen the load chain or repair damaged load chain.
- DO NOT use hoist with an extension on lever handle.
- DO NOT operate beyond the limits of the load chain travel.
- Make sure all persons stay clear of the supported load.
- Make sure load slings or other approved single attachments are properly sized, rigged and seated in the hook saddle.

- Take up slack carefully – make sure load is balanced and load-holding action is secure before continuing.

NOTICE: The warning tag illustrated below is supplied with each hoist shipped from the distributor. If the tag is not attached to your hoist’s no-load side of the load chain, order a tag from the distributor and install it. Read and obey all warnings attached to this hoist. Tag is not shown actual size.



OPERATION INSTRUCTIONS

NOTE: Always wear work gloves when working with this tool. The chain is coated with oil.

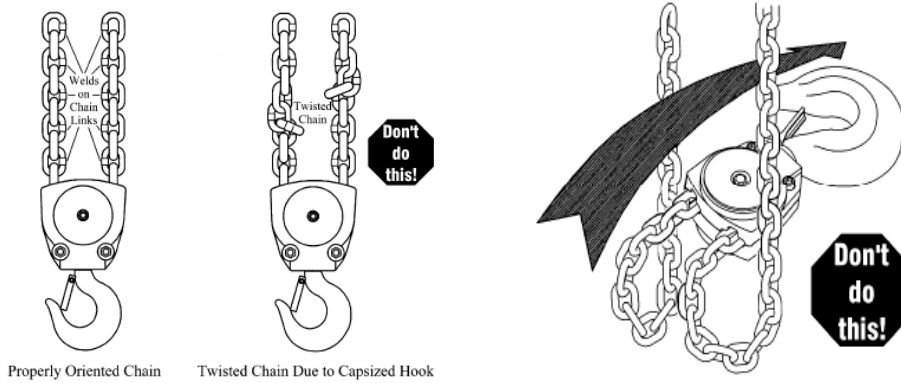


WARNING: DO NOT touch or operate the hoist Free Knob (1) while a load is applied to the hoist.



WARNING: Before operating, make sure that the hoist is not in the free chain mode and always check that the selector is placed in the proper position.

1. Select a location or machine (such as a gantry crane) with a suitable connection point that is capable of supporting the combined weight of the Hoist and load.
2. Attach the hoist to the connection point by sliding the top Hook (Part# 27) onto it. The top Hook must fit the connection point securely, with the safety latch fully engaged. Before lifting, inspect the hooks to see whether they are securely attached. Obliquity of the hooks and load suspension at hook tip are not permissible. For perfect performance of the hoist, the load chain should be kept vertically straight without twist so as to prevent it from tangling.



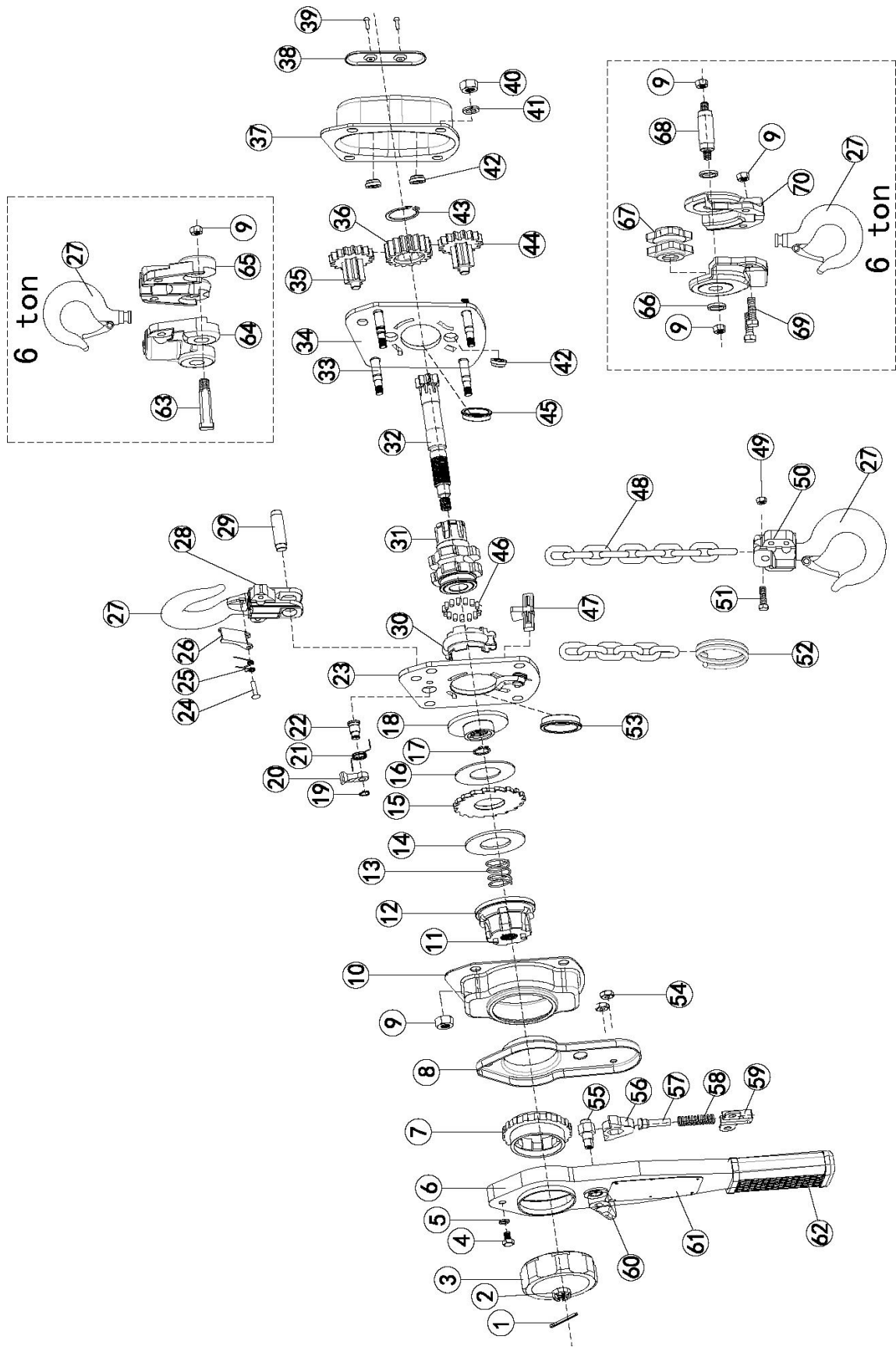
WARNING: Attach the hoist's top hook to the fixed suspension point. Ensure that the fixed suspension point is on the center of the hook's saddle and that the hook's latch is engaged.

3. Before hitching the Hoist to the load, turn the Selector Lever (Part# 60) to the middle "N" (neutral) position. Turn the Free Knob (Part# 3) counterclockwise until it stops. In this position the gear is disengaged and the load chain can be pulled by hand to lock the hook in the position desired. To re-engage the gear turn the Free Knob clockwise until it stops.
4. Attach the bottom Hook (Part# 27) to the load. The safety latch should be fully engaged. Do not suspend a load on just the end of the hook.
5. To lift the load, move the Selector Lever to the "U" (up) position, grip the handle of the Hoist and ratchet to lift the load.
6. If the load is to be moved, lower it close to the ground prior to attempting to relocate the load. Do not touch the Selector Lever until the load is ready to be lowered.
7. To lower the load, turn the Selector Lever to the "D" (down) position and ratchet until the load is resting fully on the ground.

MAINTENANCE

1. BEFORE EACH USE, inspect the general condition of the hoist. Check for loose screws, misalignment or binding of moving parts, cracked or broken parts, and any other condition that may affect its safe operation. If abnormal noise occurs, have the problem corrected before further use. Do not use damaged equipment.
2. Keep all moving parts lubricated at all times. Use common gear oil. For best results, the load chain should be cleaned with an acid free cleaning solution prior to lubrication.
3. Ensure that the oil is applied to the bearing surfaces of the load chain links.
4. The hoist should be clean and dry, and the load chain and all other exposed metal should be well lubricated when storage.
5. The storage location should be clean and dry.
6. The possibility of corrosion on components of the hoist increases for installations where salt air and high humidity are present. Make frequent and regular inspections of the hoist's condition and operation when using it outdoors.
7. The hoist should be covered or brought inside after using outdoor.

DIAGRAM & PARTS LIST



No.	Description	Q'TY
1	Split Pin	1
2	Slotted Nut	1
3	Free Knob	1
4	Screw	1
5	Washer	1
6	Lever Assembly	1
7	Ratchet Wheel	1
8	Interior Lever Assembly	1
9	Self-locking Nut	4
10	Wheel Cover	1
11	Straight Pin	2
12	Brake Nut	1
13	Brake Spring	1
14	Thick Friction Plate	1
15	Ratchet Disc	1
16	Thin Friction Plate	1
17	Circlip	1
18	Brake Disc	1
19	Circlip	2
20	Pawl	2
21	Pawl Spring	2
22	Pin	2
23	Frame A	1
24	Nut	2
25	Spring	2
26	Safety Latch	2
27	Hook	2
28	Top Hook Frame	1
29	Top Shaft	1
30	Chain Guide	1
31	Chain Sprocket	1
32	Long Axis	1
33	Stay	4
34	Frame B	1
35	Short Axis	2

No.	Description	Q'TY
36	Gear	1
37	Gear Case Assembly	1
38	Cover Plate	1
39	Rivet	2
40	Nut	4
41	Washer	4
42	Bushing	4
43	Circlip	1
44	Pinion	2
45	Bearing Outer Ring A	1
46	Cylindrical Roller	30
47	Stripper	1
48	Load Chain	1
49	Self-locking Nut	1
50	Bottom Hook Frame	1
51	Bottom Hook Pin	1
52	Chain Stopper Link	1
53	Bearing Outer Ring B	1
54	Self-locking Nut	2
55	Lever Axis	1
56	Pawl	1
57	Spring Pin	1
58	Spring	1
59	Spring Holder	1
60	Selector Lever	1
61	Nameplate	1
62	Handle Grip	1
63	Top Hook Pin (6 Ton)	1
64	Top Hook Frame I (6 Ton)	1
65	Top Hook Frame II (6 Ton)	1
66	Washer (6 Ton)	2
67	Loose Pulley (6 Ton)	1
68	Shaft (6 Ton)	1
69	Screw (6 Ton)	2
70	Bottom Hook Frame (6 Ton)	2

For replacement parts and technical questions, please call **1-800-222-5381**.

WARRANTY

One-Year Limited Warranty



Distributed by
Northern Tool + Equipment Co., Inc.
Burnsville, MN 55306
NorthernTool.com
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