

MODEL D4065/D4057
3/4 & 1 1/2 TON
RATCHET HOISTS



OWNER'S MANUAL

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WARNING!

This manual provides critical safety instructions on the proper setup, operation, maintenance and service of this machine/equipment.

Failure to read, understand and follow the instructions given in this manual may result in serious personal injury, including amputation, electrocution or death.

The owner of this machine/equipment is solely responsible for its safe use. This responsibility includes but is not limited to proper installation in a safe environment, personnel training and usage authorization, proper inspection and maintenance, manual availability and comprehension, application of safety devices, blade/cutter integrity, and the usage of personal protective equipment.

The manufacturer will not be held liable for injury or property damage from negligence, improper training, machine modifications or misuse.



WARNING!

Some dust created by power sanding, sawing, grinding, drilling, and other construction activities contains chemicals known to the State of California to cause cancer, birth defects or other reproductive harm. Some examples of these chemicals are:

- Lead from lead-based paints.
- Crystalline silica from bricks, cement and other masonry products.
- Arsenic and chromium from chemically-treated lumber.

Your risk from these exposures varies, depending on how often you do this type of work. To reduce your exposure to these chemicals: Work in a well ventilated area, and work with approved safety equipment, such as those dust masks that are specially designed to filter out microscopic particles.

SAFETY

WARNING

For Your Own Safety Read Instruction Manual Before Operating This Equipment

The purpose of safety symbols is to attract your attention to possible hazardous conditions. This manual uses a series of symbols and signal words which are intended to convey the level of importance of the safety messages. The progression of symbols is described below. Remember that safety messages by themselves do not eliminate danger and are not a substitute for proper accident prevention measures.



Indicates an imminently hazardous situation which, if not avoided, **WILL** result in death or serious injury.



Indicates a potentially hazardous situation which, if not avoided, **COULD** result in death or serious injury.



Indicates a potentially hazardous situation which, if not avoided, **MAY** result in minor or moderate injury. It may also be used to alert against unsafe practices.

NOTICE

This symbol is used to alert the user to useful information about proper operation of the equipment.

WARNING

Safety Instructions for Ratchet Hoists

1. **KEEP ALL SAFETY DEVICES IN PLACE** and in working order.
2. **KEEP WORK AREA CLEAN.** Cluttered areas and benches invite accidents.
3. **KEEP CHILDREN AND VISITORS AWAY.** All children and visitors should be kept at a safe distance from work area.
4. **DO NOT FORCE TOOL.** It will do the job better and safer at the rate for which it was designed.
5. **USE THE RIGHT TOOL.** Do not force tool or attachment to do a job for which it was not designed.
6. **DO NOT USE UNDER THE INFLUENCE OF DRUGS OR ALCOHOL.**
7. **KEEP ALL SAFETY DEVICES IN PLACE** and in working order.
8. **LIFTING POWER.** This ratchet hoist is designed to be comfortable for one person to lift the load using only hand power. Never use a motor, "cheater pipe", or other mechanical device on the hoist.
9. **HEAD PROTECTION.** Always wear a hard hat or similar head protection when using the hoist.

WARNING

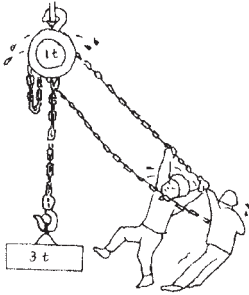
Safety Instructions for Ratchet Hoists

1. **KEEP ALL SAFETY DEVICES IN PLACE** and in good working order.
2. **LIFTING POWER.** This ratchet hoist is designed to be comfortable for one person to lift the load using only hand power. Never use a motor or an additional mechanical device with this ratchet hoist to lift the load.
3. **SAFETY HOOKS.** Before lifting, inspect the safety hooks to make certain they are securely attached, and verify that the safety catches are operating correctly.
4. **METAL FATIGUE.** Before using, inspect the hooks, chains, and hoist housing to verify that the metal parts do not have cracks or other signs of potential failure.
5. **DYNAMIC LOADING.** Swinging or jerking the load will cause dynamic loading that could exceed the capacities of the hoist, which could result in the load falling.
6. **VERTICAL MOVEMENT.** The ratchet hoist is designed to only move the load straight up and straight down. Swinging or dragging the load could cause hoist failure.
7. **CHAIN ENTANGLEMENT.** Always make sure the chains are not twisted around each other before lifting. Keep body parts, long hair, and jewelry away from the chains and hooks to prevent entanglement during lifting.
8. **WARNING LABEL.** Always make sure the warning label on the hoist is legible so that the operator can be aware of the immediate hazards of operating the hoist. If the label becomes damaged, replace it.
7. **CRUSHING HAZARD.** If the load should fall, it could cause death or serious personal injury to anyone underneath the hoist. Always make sure the operator and bystanders never move under the load.
8. **OPERATION SPEED.** Use a slow and steady pace when raising or lowering the load to avoid jerking or tangling the chains and load.
9. **HEAD PROTECTION.** Always wear a hard hat or similar head protection when using the hoist.
10. **OPERATIONAL DIFFICULTY.** If the lifting chain seems to require excessive force to lift the load, check for the following and resolve them before continuing:
 - Is the load heavier than the rated capacity of the hoist?
 - Are the chains or load entangled in any way?
 - Is an obstacle blocking the load or chains?
 - Are the chains and load not directly under the hoist?
 - Have the gears inside the hoist housing jammed?

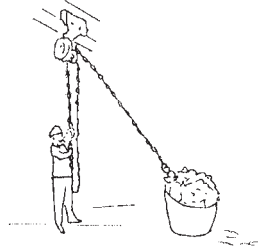
WARNING

READ and understand this entire manual before using this hoist. Serious personal injury may occur if safety and operational information is not understood and followed. DO NOT risk your safety by not reading!

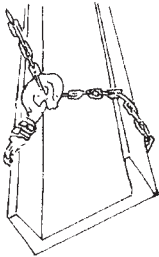
Additional Safety Precautions for Ratchet Hoists



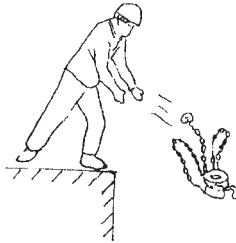
DO NOT attempt to lift a load in excess of the rated load capacity.



DO NOT drag the load or lift it when it is not directly under the ratchet hoist.



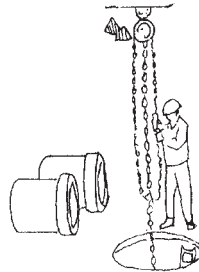
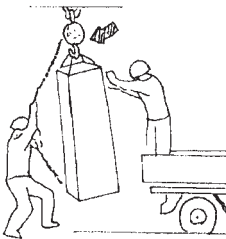
DO NOT wrap the lifting chain around the load to lift it—use a separate chain.



DO NOT mishandle the hoist assembly.



DO NOT allow the hook to become twisted around the chain.



DO NOT exceed the maximum lifting or lowering distance.

CAUTION

USE this and other machinery with caution and respect. Always consider safety first, as it applies to your individual working conditions. No list of safety guidelines can be complete—every shop environment is different. Failure to follow guidelines could result in death, serious personal injury, or damage to equipment.

INTRODUCTION

Woodstock Technical Support

This tool has been specially designed to provide many years of trouble-free service. Close attention to detail, ruggedly built parts and a rigid quality control program assure safe and reliable operation.

Woodstock International, Inc. is committed to customer satisfaction. Our intent with this manual is to include the basic information for safety, setup, operation, maintenance, and service of this product.

We stand behind our tools! In the event that questions arise about your tool, please contact Woodstock International Technical Support at (360) 734-3482 or send e-mail to: tech-support@shopfox.biz. Our knowledgeable staff will help you troubleshoot problems and process warranty claims.

If you need the latest edition of this manual, you can download it from <http://www.shopfox.biz>.

If you have comments about this manual, please contact us at:

Woodstock International, Inc.
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Bellingham, WA 98227
Email: manuals@woodstockint.com

Specifications

Refer to the table below to verify the operation specifications of the specific model of ratchet hoist that you purchased. The model number appears on the label attached to the side of the gear block housing. Be sure you understand the capacity and lift requirements for your particular model before using it!

Description	D4065	D4057
Maximum Load Capacity	$\frac{3}{4}$ Ton	$1\frac{1}{2}$ Ton
Maximum Lifting Chain Length	59"	59"
No. of Load Chain Lines	1	1
Lifting Chain Link Thickness	$\frac{15}{64}$ "	$\frac{5}{16}$ "
Lifting Chain Hardness	Grade 80	Grade 80
ISO 9002 Factory	Yes	Yes
Net Weight	15 lbs.	24 lbs.

OPERATION

To operate the ratchet hoist, do these steps:

1. Read and follow the safety precautions included in the front of the manual, wear protective head gear, and clear the area around the lifting operation.
2. Secure the safety hook on top of the hoist housing to a structurally sound overhead beam that is capable of supporting the load weight.

Make sure that the overhead connection point conforms to the required local and state safety and building codes for the hoist and load used.

Note: *The hoist can be mounted a beam trolley if the capacity of the trolley system is at least twice the maximum load capacity of the hoist.*

3. Position the load directly under the ratchet hoist.

WARNING

Always connect the ratchet hoist lifting hook to a separate lifting device attached to the load, such as straps, chains, or eye bolt. **DO NOT** wrap the hoist lifting chain and hook around the load in any way. If you do, the dynamic loads could exceed the capacity of the hoist, causing it to fail and drop the load. A falling load could cause death or serious crushing injuries.

4. Flip the lever on the ratchet handle to the neutral ("N") position. This allows the lifting chain to freely move through the gear block housing by either pulling on the lifting chain or rotating the handwheel.
5. Make sure the chains are not tangled, then attach the lifting hook to the load.
6. Eliminate the slack in the lifting chain between the gear block housing and the load by pulling on the chain.
7. Flip the ratchet lever to the "UP" position, then pull on the ratchet handle until there is slight tension on the lifting chain.
8. Inspect the hoist and load to make sure that the lifting chain will stay vertical and will not twist during the lifting operation, that there is not a possibility of any type of entanglement, and that there are no obstacles in the path of the lift.
9. While keeping to the side of the lifting path, continue to pull on the ratchet handle with a slow and steady pace.

Note: *The ratchet mechanism will suspend the load at the current position when you release the ratchet handle.*
10. To lower the load, flip the ratchet lever to the "DOWN" position, then pull on the ratchet handle with a slow and steady pace.
11. When the tension between the hoist and the load is completely released, detach the hoist hook.

Follow regular maintenance to keep the hoist in good working condition. To avoid serious injury from hoist failure, never attempt to repair a hoist that malfunctions or becomes damaged. Hoist repair or service must be done by a qualified technician only.

The hazard of an improper repair job is that it could cause the hoist to fail and unexpectedly drop the load, which could crush or kill people below, or cause major property damage. For this reason, we strongly recommend replacing the hoist if it malfunctions or becomes damaged.

To avoid contaminating the friction brake during maintenance, you must know the difference between the gear cover and the brake cover (see **Figure 1**).

The **Gear Cover** will be removed during routine maintenance. The **Brake Cover** should only be removed by a qualified technician; it encloses the friction brake and protects it from exposure to contaminants, such as liquids or lubrication, that will cause the brake to fail under load.

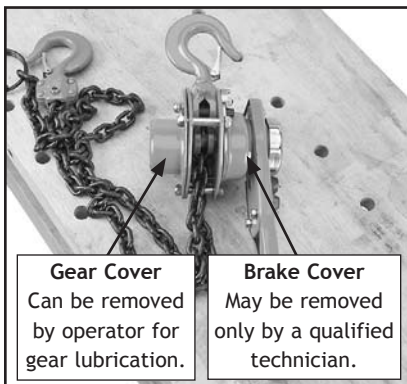


Figure 1. Hoist housing cover identification.

Cleaning

To prevent the chains from jamming, clean away dirt and debris from the outside of the hoist housing and the chains.

NOTICE

DO NOT submerge the hoist housing in liquid of any kind or allow liquid to enter the brake cover during cleaning, or the braking mechanism may fail to work properly.

Chain Lubrication

When the chains are clean and dry, apply a thin coat of light machine oil to the links with an oiled shop rag to ensure smooth movement and prevent corrosion.

Storage

Before storing the hoist, clean and lubricate the chains. Always store the hoist in a clean, dry, and protected area to prevent corrosion or damage.

!WARNING

A malfunctioning or damaged hoist may drop its load and crush or kill people below, or cause major property damage. To reduce this risk, observe all care and maintenance noted in the manual. If hoist malfunctions or becomes damaged, replace it, or have it serviced by a qualified service technician.

Greasing Gears

Clean and grease the hoist gears every 6 months of normal use, or more frequently with heavier use.

Items Needed	Qty
Wrench or Socket 13mm.....	2
Mineral Spirits	As Needed
Stiff-Bristled Brush	1
Shop Rags	As Needed
Multi-Purpose Gear Grease.....	As Needed

To grease the hoist gears:

1. Lay the hoist housing on a flat working surface with the brake cover facing down.
2. Remove the three lock nuts that secure the gear cover, then remove the cover (see **Figure 2**).

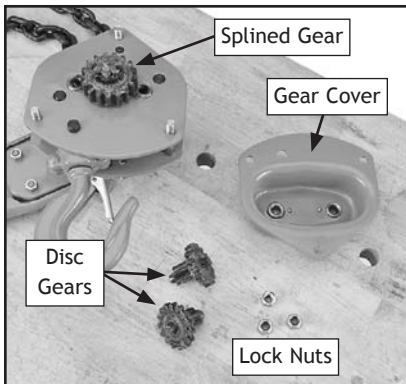


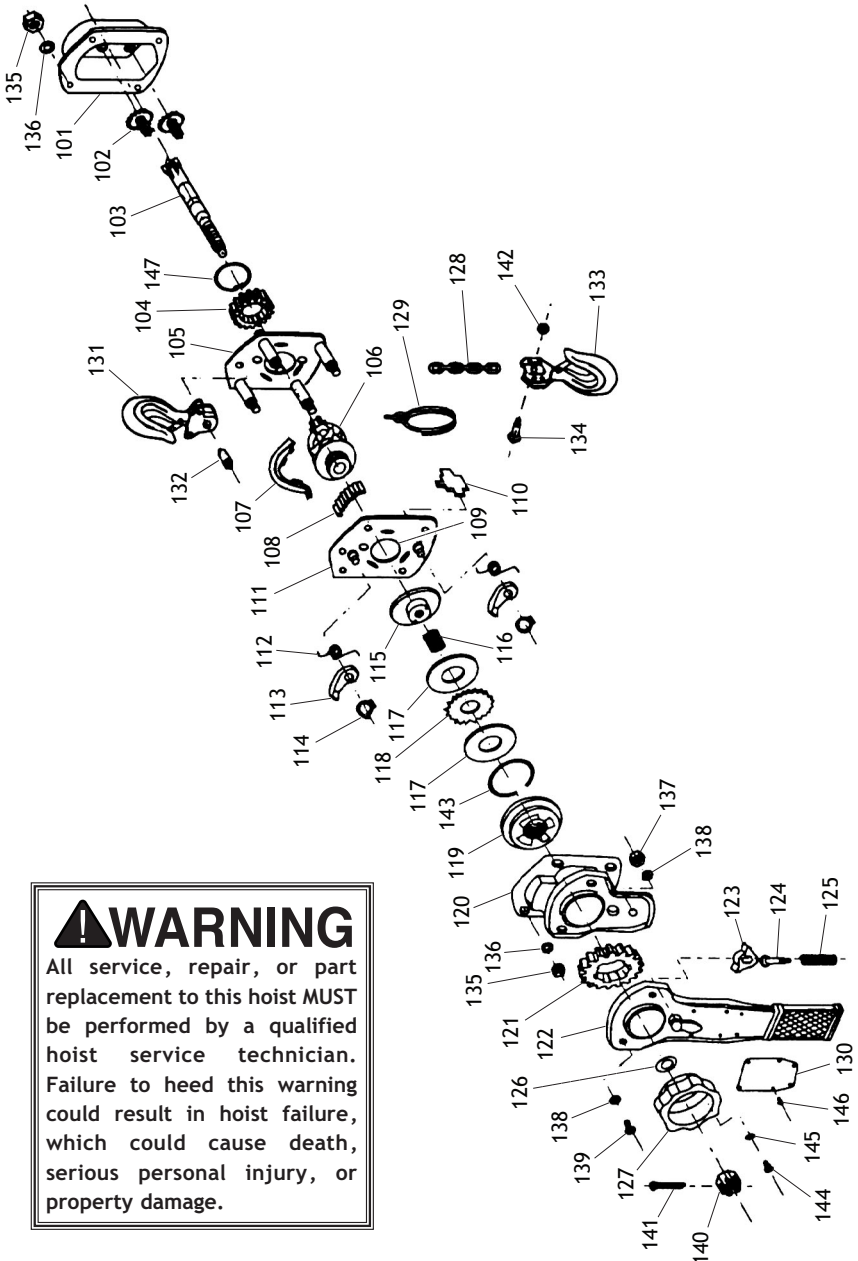
Figure 2. Gears exposed.

3. Remove the two disc gears from the housing.
4. Use mineral spirits, a stiff-bristled brush, and shop rags to clean the old grease and grime from the disc and splined gears.

Take care not allow the mineral spirits or lubricant to drip into the lower ratchet housing and onto the braking mechanism.

5. When the parts are dry, apply a medium coat of multi-purpose gear grease to the gear teeth.
6. Re-assemble the components in the reverse order that you disassembled them.
7. Test the lifting capabilities of the hoist with no load, then, if successful, with the rated maximum load for your hoist.
 - If you suspect any problems with the ratchet or brake mechanisms, immediately lower the load and resolve any issues before using the hoist again.

PARTS DIAGRAM



⚠ WARNING

All service, repair, or part replacement to this hoist **MUST** be performed by a qualified hoist service technician. Failure to heed this warning could result in hoist failure, which could cause death, serious personal injury, or property damage.

PARTS LISTS

D4057 Parts List

REF	PART #	DESCRIPTION
101	XD4057101	GEAR COVER
102	XD4057102	DISC GEAR
103	XD4057103	DRIVE SHAFT
104	XD4057104	SPLINED GEAR
105	XD4057105	GEAR SIDE PLATE
106	XD4057106	LOAD SHEAVE
107	XD4057107	GUIDE PLATE
108	XD4057108	ROLLER
109	XD4057109	BEARING RACE
110	XD4057110	STRIPPER
111	XD4057111	RATCHET SIDE PLATE
112	XD4057112	PAWL TORSION SPRING 1 X 13
113	XD4057113	PAWL
114	XD4057114	EXT RETAINING RING
115	XD4057115	DISC HUB
116	XD4057116	COMPRESSION SPRING 1 X 16
117	XD4057117	FRICITION DISK
118	XD4057118	RATCHET DISK
119	XD4057119	THREADED DISK
120	XD4057120	BRAKE COVER
121	XD4057121	CHANGE-OVER GEAR
122	XD4057122	RATCHET HANDLE ASSEMBLY
123	XD4057123	CHANGE-OVER PAWL
124	XD4057124	SPRING SEAT

REF	PART #	DESCRIPTION
125	XD4057125	CHANGE-OVER SPRING 1.2 X 8.6
126	XD4057126	BUSHING
127	XD4057127	HANDWHEEL
128	XD4057128	LIFTING CHAIN G80
129	XD4057129	CHAIN RING
130	XD4057130	NAME PLATE
131	XD4057131	TOP HOOK ASSEMBLY
132	XD4057132	TOP HOOK SHAFT
133	XD4057133	BOTTOM HOOK ASSEMBLY
134	XD4057134	CHAIN PIN
135	XPNO1M	HEX NUT M6-1
136	XPLW03M	LOCK WASHER 6MM
137	XPNO1M	HEX NUT M6-1
138	XPLW03M	LOCK WASHER 6MM
139	XPB04M	HEX BOLT M6-1 X 10
140	XD4057140	SLOTTED HEX NUT M10-1.5
141	XD4057141	COTTER PIN
142	XPLN03M	LOCK NUT M6-1
143	XD4057143	WIRE SNAP RING
144	XD4057144	GEAR SCREW M5-.8 X 10
145	XPLW01M	LOCK WASHER 5MM
146	XD4057146	RIVET
147	XD4057147	INT RETAINING RING

D4065 Parts List

REF	PART #	DESCRIPTION
101	XD4065101	GEAR COVER
102	XD4065102	DISC GEAR
103	XD4065103	DRIVE SHAFT
104	XD4065104	SPLINED GEAR
105	XD4065105	GEAR SIDE PLATE
106	XD4065106	LOAD SHEAVE
107	XD4065107	GUIDE PLATE
108	XD4065108	ROLLER
109	XD4065109	BEARING RACE
110	XD4065110	STRIPPER
111	XD4065111	RATCHET SIDE PLATE
112	XD4065112	PAWL TORSION SPRING 1 X 13
113	XD4065113	PAWL
114	XD4065114	EXT RETAINING RING
115	XD4065115	DISC HUB
116	XD4065116	COMPRESSION SPRING 1 X 16
117	XD4065117	FRICITION DISK
118	XD4065118	RATCHET DISK
119	XD4065119	THREADED DISK
120	XD4065120	BRAKE COVER
121	XD4065121	CHANGE-OVER GEAR
122	XD4065122	RATCHET HANDLE ASSEMBLY
123	XD4065123	CHANGE-OVER PAWL
124	XD4065124	SPRING SEAT

REF	PART #	DESCRIPTION
125	XD4065125	CHANGE-OVER SPRING 1.2 X 8.6
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127	XD4065127	HANDWHEEL
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132	XD4065132	TOP HOOK SHAFT
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141	XD4065141	COTTER PIN
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144	XD4065144	GEAR SCREW M5-.8 X 10
145	XPLW01M	LOCK WASHER 5MM
146	XD4065146	RIVET
147	XD4065147	INT RETAINING RING

WARRANTY AND RETURNS

Woodstock International, Inc. warrants this equipment to be free of defects from workmanship and materials for a period of 1 year from the date of original purchase. The liability under this warranty shall not exceed the purchase price paid for the products and is limited to credit for, or replacement of the defective part.

We do not warrant or represent that the merchandise complies with the provision of any law or acts, and buyer assumes all risk and liability resulting from the use of the goods, whether using singly or in combination with other products.

This warranty does not apply to defects or damages due directly or indirectly from misuse, abuse, negligence, accidents, repairs or alterations, or lack of maintenance of our products. We shall in no event be liable for death or injuries to persons or property or for incidental, contingent, special or consequential damages arising from the use of our products. This disclaimer applies to both during and after the term of this warranty. Any legal actions brought against Woodstock International, Inc. shall be tried in the State of Washington, County of Whatcom.

Woodstock International, Inc. reserves the right to implement any changes in specifications or discontinue any products without notice.

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