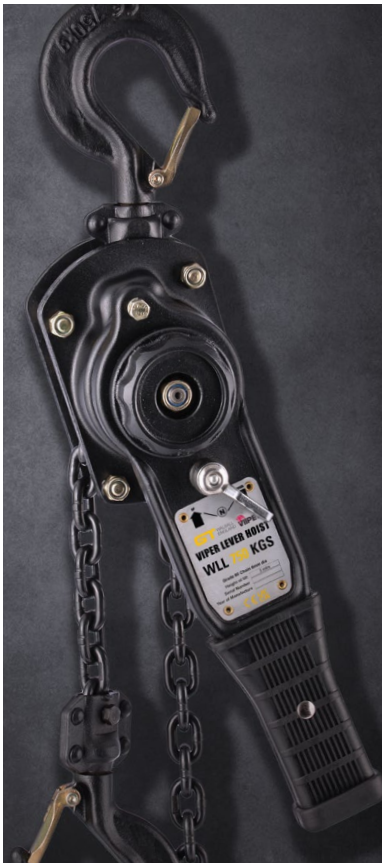
User Instructions & Safety Manual



Lever Hoist

Rated Capacities
0.25 through to 9 tonnes

Note: Operator must read and fully understand the operating instructions before using this product.

Products supplied comply with the essential health & safety requirements of the Machinery Directive 2006/42/EC, the Supply of Machinery (Safety) Regulations 2008 and the Health & Safety at Work etc Act 1974 section 6.

George Taylor & Company maintain a policy of progressive development of products and reserve the right to alter, without notice, the specifications shown within this manual.

Safety Information

CONTENTS

SIGNAL WORDS

Note use of the following signal words **DANGER**, **WARNING** & **CAUTION** with safety messages The appropriate signal word for each has been selected using the following guidelines:

⚠ DANGER

Indicates an imminently hazardous situation that, if not avoided, will result in death or serious injury. The signal word is to be limited to the most extreme situations typically for machine components which, for functional purposes cannot be guarded.

⚠ WARNING

Indicates a potentially hazardous situation that, if not avoided, could result in death or serious injury, and includes hazards that are exposed when guards are removed. It may also be used to alert against unsafe practices.

⚠ CAUTION

Indicates a potentially hazardous situation that, if not avoided, may result in minor or moderate injury. It may also be used to alert against unsafe practices. Every year many accidents occur which could have been avoided by a few seconds of thought and a more careful approach to handling equipment. You, the operator can avoid many accidents by observing the following precautions in this manual. To avoid personal injury, study the following precautions and insist those working with you, or you yourself, follow them.

Replace any Caution, Warning, Danger or Instruction safety label that is not readable or is missing.

Do not attempt to operate this equipment under the influence of alcohol or drugs. Review safety instructions with all users.

Operator should be a competent person.**DO NOT ALLOW PERSONS TO OPERATE OR ASSEMBLE THIS UNIT UNTIL THEY HAVE DEVELOPED A THOROUGH UNDERSTANDING OF SAFETY PRECAUTIONS AND HOW IT WORKS.**

Never exceed the limit of a life. If it's ability to do a job, or to do so safely is in question - **DON'T TRY IT.**

Introduction

This manual contains important Information to help you properly install, operate and maintain your Lever Hoist for maximum performance, economy and safety. Please study its contents thoroughly before putting your Lever Hoist into operation. By practicing correct operating procedures and by carrying out the recommended preventative maintenance suggestions, you will be assured of long, dependable and safe service. After you have completely familiarised yourself with the contents of this manual, we recommend that you carefully file it for future reference. The information herein is directed to the proper use, care and maintenance of the Lever Hoist and does not comprise a handbook on the broad subject of rigging. Rigging can be defined as the process of lifting and moving heavy loads using hoists and other mechanical equipment. Skill acquired through specialised experience and study is essential to safe rigging operations.

Unpacking

After opening the carton, the Lever Hoist should be carefully inspected for damage which may have occurred during shipment or handling. Check the Chain Block frame for dents or cracks and inspect the load chain for nicks and gouges. If shipping damage has occurred, contact your local GT branch.

⚠ DANGER

Operating a unit with obvious external damage may cause load to drop and that may result in personal injury and/or property damage.

⚠ DANGER

To Avoid Injury

Carefully check unit for external damage prior to installation.

Operate the hoist with both minimum load and full load, and check that the operation is smooth at all times.

Check operation of hoist brake, under light load and full load conditions.

Operating Instructions

Instructions

Principle and Operation of Chain Adjusting System.

⚠ WARNING

IMPROPER Lever Hoist use, could result in death or serious injury. To avoid these hazards:

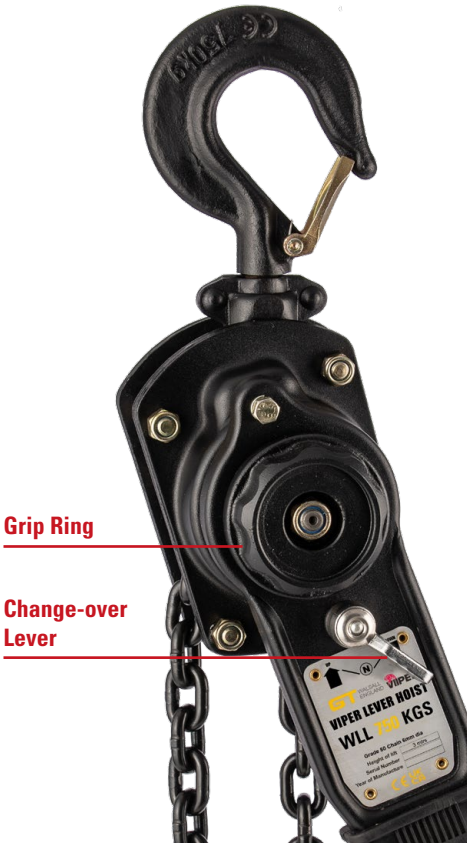
⚠ WARNING

NEVER Operate the chain adjusting device while load is applied to Lever Hoist.

⚠ WARNING

NEVER Touch the grip ring during lifting or lowering of the load.

NOTE:
The brake is engaged automatically during lowering or lifting of the load. In order to activate the brake mechanism, it is necessary to apply the following minimum loads.



250 KGS = 10 KGS
500 KGS = 15 KGS
750 KGS = 22.5 KGS
1,000 KGS = 30 KGS
1,500 KGS = 45 KGS
2,000 KGS = 60 KGS
3,000 KGS = 90 KGS
6,000 KGS = 180 KGS
9,000 KGS = 270 KGS

Method

Principle of Lifting & Lowering Operation - Lifting & Lowering Principle.

By setting the change-over lever to “UP” or “DOWN”, and operating the lever, the female thread and the change-over pawl inside the hoist engage and the female thread rotates in either the lifting or lowering direction. The brake works instantly after the lever operation stops and holds the load.

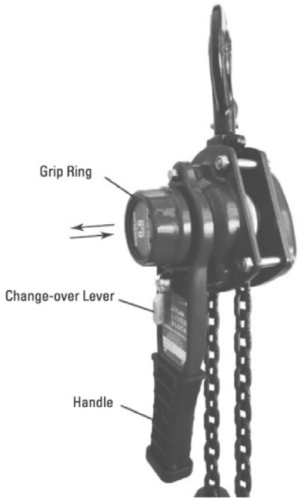
Lifting and Lowering

Select direction of movement and ratchet hand lever back and forth, see below:

Before Lifting a Load

1. Before the lever hoist is used, ensure that the load chain is lightly lubricated.
2. Do not operate the lever hoist unless it is rigged to pull in a straight line from hook to hook.

Chain movement	Change-over Lever	Hand lever rotation that produces movement:
Raise	“UP”	Clockwise
Lower	“DOWN”	Counterclockwise



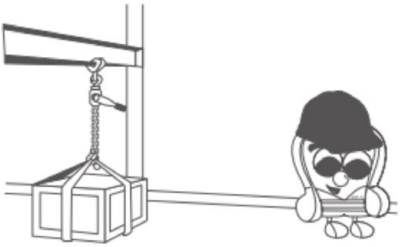
Safety Procedures

The following Safety section should form part of the safety rules for any plant where any hoist or other lifting equipment is being used, serviced or repaired. Any person/s operating the hoist should read and observe the following safety instructions and the instructions in the Operating section, to avoid operating hazards.

DO NOT load beyond the rated capacity.

DO NOT heat treat and **DO NOT** weld any part of the Lever Hoist, especially the load chain.

DO NOT leave a load on the Lever Hoist unattended.



DO NOT shock load Lever Hoist, chain or hook

DO NOT operate the chain lever hoist unless it is rigged to pull in a straight line from hook to hook, and the frame is allowed to freely swivel on the upper hook.

DO NOT hold the load chain in a loaded state while operating the lever hoist as serious injury may occur if the brake did not operate properly.

DO NOT wrap the load chain around the load and hook onto itself as a choker chain or bring the load in contact with the lever hoist.

DO NOT use this lever block for lifting or moving people, or lifting loads over people.

DO NOT take up the load chain to the point where the end ring or lower hook becomes jammed against the frame.

DO NOT use an extension pipe or cheater bar to apply more pressure to the lever handle.

Care In Use

1. Always examine the hoist carefully before use - your life may be at stake. Look for cracks or damage, particularly with hooks and load chain.
2. Keep load chain clean and oiled to prevent undue damage or wear. Avoid dragging the load chain through dirt or mud.
3. When the hoist is used outdoors or in a corrosive environment, ensure that it is regularly and adequately lubricated.
4. Do not operate the hoist if you do not have a clear view of the bottom hook and the load.

⚠ WARNING

If a load hook has been distorted, due to an overload on the hoist, the hoist lifting unit will be damaged. A hoist which has been overloaded must be withdrawn from service immediately.

Maintenance

The maintenance instructions contained in this manual are intended as a guide to the necessary procedures to be carried out by competent and experienced personnel. GT Lifting does not accept responsibility either for the manner in which the instructions in this manual are observed or for any consequence there of. GT Lifting recommends two forms of maintenance to be carried out on your Lever Hoist periodically. The two forms include:

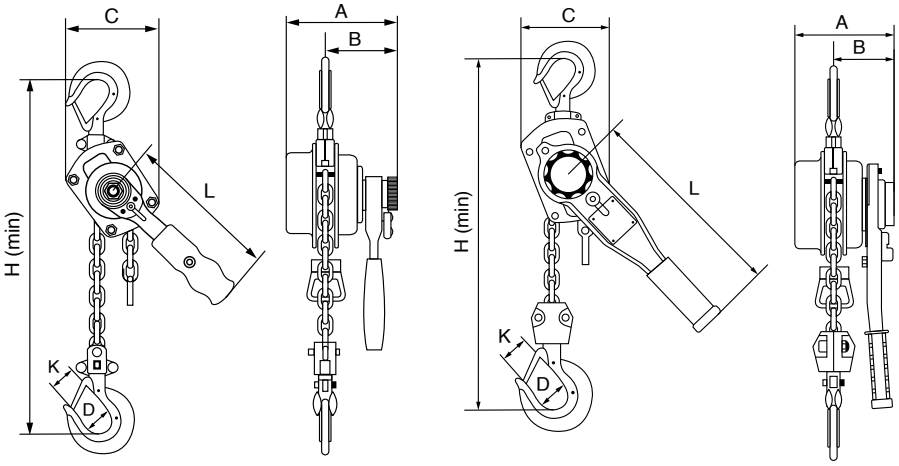
1. A Visual Check (prior to each use); refer to Care In Use information on the left for necessary checks. These checks can be carried out by the operator.
2. A Certified Check (conducted at least every 12 months); this type of inspection is to be carried out by authorised GT Lifting personnel only. The maximum interval between inspections is one year, but frequence may very according to legislation in force in the country in which the products are used. In the case of continuous or particularly heavy use the case frequence of inspections must be increased accordingly.

Important Note: Always store unit in a clean and dry area. Ensure that all repair and maintenance work is carried out by qualified personnel, using only the specified genuine parts.

Maintenance Check List

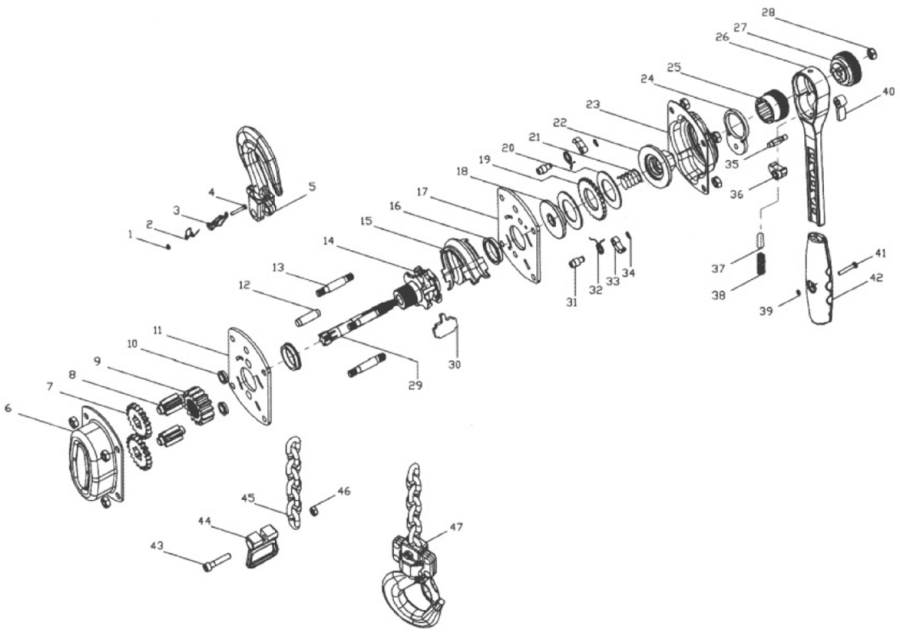
Points of Inspection	Type of Inspections	Outcome
Hook Top/Bottom		
Deformation of hook	visual	There should be no deformation of the hook. Safety catch should close against the tip of the hook securely.
Damage to the hook	visual	There should be no crack or serious damage.
Bend in the neck of hook	visual	Hook should hang square to lifting unit or top hook or to side plates (bottom block)
Suspension pin	visual	Should not be bent, cracked or worn
Side plates and suspension plates	visual	There should be no cracks, damage or wear
Rivets, bolts and nuts	visual	All fasteners should be tight
Safety catch	visual	Should close properly
Chain	visual	Should be properly lubricated and free from bends, nicks or stretch, rust and dust
Chain guide rollers	visual	Should rotate freely and keep chain in the pockets of the chain wheel(s)
Functions		
Lifting and Lowering	Lift and lower a load as per minimum load chart	Hoist should operate smoothly and easily Pawl should click during lifting
Braking	Lift and lower the full rated capacity	Lifting and lowering operations should be smooth and without any of the following defects 1. Load falls if chain is released 2. Load falls while lowering 3. Load slips

Specifications & Dimensions



Rated Capacity (t)		0.25	0.5	0.75	1	1.5	2	3	6	9
Running Test Load (kN)		3.75	7.5	11	15	22.5	30	45	90	135
Standard Lift (m)		1.5								
Effort Req to Lift Rated Load (N)		160	200	180	180	380	380	450	500	550
No. of Load Chain Falls		1	1	1	1	1	1	1	2	3
Load Chain Dia (mm)		4	5	6	6	8	8	10	10	10
Dimensions (mm)	A	119	130	148	148	172	180	200	200	200
	B	79	83	90	90	98	105	115	115	115
	C	90.5	112	136	136	160	160	180	225	235
	D	31	36	40	40	44	46	50	64	85
	H	237	283	320	320	380	380	480	600	740
	K	24	25.5	28	28	38	38	42	50	57
	L	168	178	250	250	300	300	375	375	410
Net Weight (kg)		3.2	4.5	7.4	7.4	11.6	11.6	20	29.4	45
Extra weight per mtr extra lift (kg)		0.41	0.52	0.8	0.8	1.4	1.4	2.2	4.4	6.6

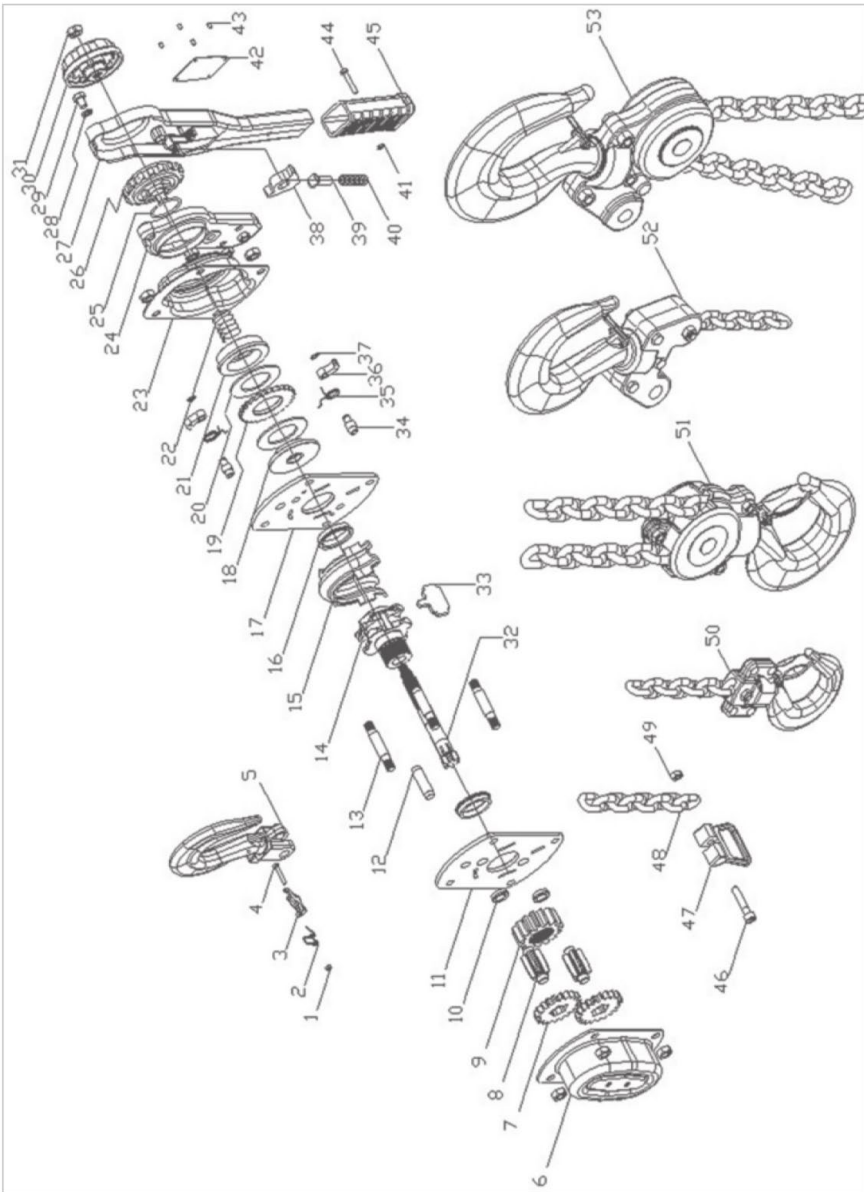
Spare Parts Diagram (0.25-0.5t)



1.	Selflock Nut
2.	Latch Spring
3.	Safety Latch
4.	Hex Bolt
5.	Top Hook Assembly
6.	Hoist Cover Assembly
7.	Disc Gear
8.	Load Shaft
9.	Spline Gear
10.	Steel Bushing
11.	Right Side Plate
12.	Hook Shaft
13.	Suspension Bar
14.	Load Chain Sprocket
15.	Guide Plate
16.	Solid Bearing

17.	Left Side Plate
18.	Brake Base
19.	Ratchet Disc
20.	Brake Disc
21.	Free Spring
22.	Brake Nut
23.	Ratchet Gear Cover
24.	Inner Handle Lever
25.	Change Over Gear
26.	Hand Lever
27.	Hand Wheel
28.	Pinion Nut
29.	Pinion Shaft
30.	Chain Stripper
31.	Pawl Pin
32.	Pawl Spring

33.	Left Side Plate
34.	Brake Base
35.	Ratchet Disc
36.	Brake Disc
37.	Free Spring
38.	Brake Nut
39.	Ratchet Gear Cover
40.	Inner Handle Lever
41.	Change Over Gear
42.	Hand Lever
43.	Hand Wheel
44.	Pinion Nut
45.	Pinion Shaft
46.	Chain Stripper
47.	Pawl Pin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Spare Parts List (0.75-9t)

Fig. No.	Description
1.	Self Locking Nut
2.	Latch Spring
3.	Safety Latch
4.	Hex Bolt
5.	500-3,000kgs Top Hook Assembly
6.	Hoist Cover Assembly
7.	Disc Gear
8.	Load Shaft
9.	Spline Gear
10.	Steel Bushing
11.	Right Side Plate
12.	Hook Shaft
13.	Suspension Bar
14.	Load Chain Sprocket
15.	Guide Roller
16.	Solid Bearing
17.	Left Side Plate
18.	Brake Base
19.	Ratchet Gear
20.	Friction Disc
21.	Brake Disc
22.	Free Spring
23.	Ratchet Gear Cover
24.	Self Locking Nut
25.	Latch Spring
26.	Safety Latch
27.	Hex Bolt
28.	500-3,000kgs Top Hook Assembly

Fig. No.	Description
29.	Hoist Cover Assembly
30.	Disc Gear
31.	Load Shaft
32.	Spline Gear
33.	Steel Bushing
34.	Right Side Plate
35.	Hook Shaft
36.	Suspension Bar
37.	Load Chain Sprocket
38.	Guide Roller
39.	Solid Bearing
40.	Left Side Plate
41.	Brake Base
42.	Ratchet Gear
43.	Friction Disc
44.	Brake Disc
45.	Free Spring
46.	Ratchet Gear Cover
47.	End Ring
48.	Load Chain
49.	Self Locking Nut
50.	500-3,000kgs Bottom Hook Assembly
51.	6-9t Bottom Hook Assembly
52.	6t Top Hook Assembly
53.	9t Top Hook Assembly

Troubleshooting

Problem	Cause	Solution
1. Chain is jammed	Load is not being pulled in a vertical direction	Line load to be positioned vertically
	Pull is at an angle greater than 60°	Reduce angle of pull
	Swivel Hook has ceased operating	1. Unload and de-swivel 2. Replace hook assembly
	Block is dirty, or hampered with foreign matter	Refer to maintenance and repair section of this manual
	Fall of chain is tangled	Unravel and straighten chain
	Block is overloaded	Load block to recommended capacity only
	Brake mechanism has jammed	Return to supplier for repair
2. Load is Spinning	Swivel has ceased spinning	1. Unload and de-swivel 2. Replace hook assembly
	Over-spinning	Ensure that bolts and hook are properly secured
3. Block Seized	Wear and tear	Replace block
	Poor maintenance and inspection	Refer to manual for maintenance and inspection details
	Poor storage and handling	Always store unit in a dry and clean area
	Block is overloaded	Load block to recommended capacity only
4. Slippage of load	Brake mechanism worn	Return to supplier for repair and testing
5. Block not braking	Brake mechanism worn	Return to supplier for repair and testing