

# WARRANTY AND SERVICE



The HITCH company provides a warranty for each product that is sold. If one of our tools needs a service or repair, please contact the Hitch Technical Service team by calling +1 (512) 823-0202, between 8AM to 5PM CST on Monday through Friday, by e-mail to [service@hitchlifting.com](mailto:service@hitchlifting.com), or you may contact the nearest HITCH dealer in your region.

**Warranty Duration**  
Assuming that there has been normal use of the product, the HITCH company ensures its compliance with published specifications, and that the product is free from defects in its materials and workmanship during the warranty period specified below. The duration of the limited warranty depends on which country the product was purchased in; these are specified in the «Warranty Duration for hoists HITCH» table, unless otherwise provided by law. The duration of the limited warranty starts from the date of purchase of the specified product on your purchase receipt.

See the «Warranty Duration for hoists HITCH» table.

• Accessories carry a limited warranty of one year from the date of receipt.

• Consumable items — are defined as spare parts or accessories, which are expected to fail after a certain level of use, and which are subject to a 90-day limited warranty against manufacturing defects.

### Who is covered?

The warranty covers the initial purchaser of the product from the date of delivery.

### What is covered?

The warranty covers any defects in workmanship or materials that are subject to the limitations stated below. This warranty does not cover product failures that have appeared either directly or indirectly due to misuse, neglect, negligence or accidents, normal wear and tear, improper repairs, delays in service or lack thereof.

### More Information

HITCH is constantly adding new products to their product lines. For up-to-date product information, please check with your local distributor or visit the HITCH website.

### How State Law Applies

This warranty gives you specific legal rights that are subject to applicable state law.

### Getting Support

You can contact the Hitch Technical Service by calling +1 (512) 823-0202 or you may contact the nearest HITCH dealer in your area. Please note that you will be asked to provide proof of your initial purchase when calling. If a product requires further inspection, the technical service representative will assist with any additional action that is required.

### Warranty Limitations

HITCH limits every warranty to the duration of the specific warranty for each product. Except as stated in this document, any other possible warranty for the appearance of the product or its performance is excluded. Some administrative and territorial entities do not allow limitations to a warranty, so the above mentioned limitations may not apply in your case. HITCH will not be liable for death, personal injury, damage to property, or for incidental, special or consequential damages arising from the use of our products. Some administrative and territorial entities do not allow for the exclusion or limitation of incidental or consequential damages, so the above mentioned limitations may not apply in your case. HITCH only sells its products through distributors. HITCH specifications in printed materials and on the official HITCH website are given as a general guide and are not binding. HITCH reserves the right to make changes to spare parts, fittings, and accessories at their discretion at any time without prior notification.

\*. The 5 year HITCH Guarantee. (For markets in North, Central, South America, and the EU only).

For all of the professional HITCH equipment in a black color, the warranty duration is extended to 60 months if the owner registers it within 2 (two) weeks from the date of purchase. Registration can be completed by visiting the following address: [www.hitchlifting.com/warranty](http://www.hitchlifting.com/warranty)  
A registration card provides confirmation, and this should be printed immediately after the registration process has completed, and kept alongside the original purchase receipt that shows the purchase date of the product.

The registration process will only be complete after the purchaser consents to their personal data being kept on file.

# OWNER'S MANUAL AND SAFETY INSTRUCTIONS

## HAND OPERATED LEVER HOIST

### HITCH LH200 HITCH LH201

### Warranty Duration for hoists HITCH

SERIES	MODELS MANUAL HOIST AND TROLLEY HITCH	WARRANTY DURATION	REGION
PROFESSIONAL	HAND CHAIN HOIST HITCH - CH200, CH200-G, CH200-GS, CH200-GSB, CH360, CH202*STORM*, CH203 MC 6, CHM204 MCGMINI, CH205 LARGE-TONNAGE	5* YEARS	NORTH, SOUTH, CENTRAL AMERICA
	LEVER HOIST HITCH - LH200, LH200-G, LH201, LH201G, LH201GS, LH202 MCL6-S, LH203 COMPACT, LH204 MINI PROFF	5* YEARS	EU
	TROLLEY GEARED HITCH TR200, TR201, BC202 WJ	3 YEARS	MIDDLE EAST, AFRICA
		3 YEARS	ASIAN-PACIFIC AREA
REGULAR	HAND CHAIN HOIST HITCH - CH100, CH100-G, CH104 MINI TYPE, CH101, CH102 TD, CH105	2 YEARS	RUSSIA, THE CUSTOMS UNION
	LEVER HOIST HITCH - LH104 MINI TYPE, LH100	2 YEARS	EU
	TROLLEY GEARED HITCH TR100, TR101, BC102	2 YEARS	MIDDLE EAST, AFRICA
		2 YEARS	ASIAN-PACIFIC AREA
		2 YEARS	RUSSIA, THE CUSTOMS UNION
		2 YEARS	RUSSIA, THE CUSTOMS UNION

## HITCH REPAIR / REPLACEMENT PROCESS

All of our products, HITCH Hand hoists and HITCH trolleys, are carefully checked and tested in operational conditions before shipment.

If any of the HITCH products have been serviced in accordance with the rules, but create problems when in operation due to defects in the materials or the process of manufacture, which was confirmed by HITCH or an authorized service station, repair or replacement of the product will be made to the original purchaser without a charge.

This repair and replacement process only applies to HITCH products that have been installed, maintained, and operated as described in this manual, and which do not contain components or spare parts that are worn out, operated inappropriately, improperly installed, improperly or poorly maintained, were subjected to aggressive environmental influences and/or unauthorized repairs or modifications.

We reserve the right to change the materials and design, if, in our opinion, such changes will improve our products.

Operation not to destination, repair by unauthorized persons, or the usage of non-original spare parts that are not produced by HITCH, lead to a loss of guarantee and can cause unsafe operation.

## SAFETY INSTRUCTIONS

Observe the rated load indicated on the hoist lever. Exceeding the load can lead to an accident. The lever hoist has been overloaded when the force applied to the lever exceeds the specified standard specifications (see the specifications).

Before starting work, lift and lower the load by about 4 inches (10 centimeters), and check the brake system. Inefficient braking can lead to an accident. Loads must be lifted as slowly as possible. Swinging the load and sudden spurts of movement will lead to stress on the lever hoist, which can produce the effects of more than twice the weight of the load. Extreme temperatures will affect the longevity of the lever hoist's lifespan. In temperatures below zero, loads must be lifted and lowered very slowly and carefully.

When working with the hook, the load must be suspended, so that it is attached directly to the center of the hook, and the hook must not fall out of place during operation. NEVER ATTACH THE HOOK DIRECTLY TO THE LOAD.

The lever must be set to «LOAD» when the lever hoist is under the load during lifting or pulling. Lifting a load with two lever hoists is not recommended. If operation without the use of two hoists is not possible, the load must be within the total rated capacity for each of the lever hoists to avoid overloading one or both of the hoists; lifting should be carried out with extreme care, while maintaining a proper balance, angle, and lift speed.

IMPROPER use of the Hand Operated Lever Hoist could result in death or serious injury. To avoid these hazards:

**Always** read the owner's manual and safety instructions. **Always** keep visitors at a safe distance from the work area. Keep children away.

**Always** check the brake function by applying some force to the lever hoist prior to each lift or pulling operation.

**Always** make sure that supporting structures and any load securing devices used in combination with the lever hoist provide an adequate safety margin to deal with the nominal lifting capacity taking into account the weight of the equipment. If you have any doubts, contact a qualified structural engineer.

**Always** ensure that you eliminate any load chain slack before lifting to avoid a shock load.

**Always** check and make sure that the load chain is well lubricated.

**Always remember that** there is a risk of overheating the braking system during the prolonged lowering of loads. If you are considering of the use of the hoist under such conditions, consult HITCH.

**Always** use HITCH original G80 or G100 load chains. HITCH will not be responsible for any claims or damage arising from the use of other chains.

**Always** make sure that the Chain Stop is securely fastened to the last link of the chain, or to the jack body (for two fall versions).

**Always** Always confirm special use with your dealer in advance in cases of special environments, such as salt water, sea water, acid, alkaline or explosive atmospheres.

**Never** lift more than the rated load.

**Never** lift or transport loads over or near people.

**Never** use a hoist for lifting, supporting or transporting people.

**Never** run the load chain over sharp edges.

**Never** operate a hoist if it is damaged or malfunctioning.

**Never** operate unless the load is centered under the hoist.

**Never** use the chain as a sling.

**Never** lubricate the friction plate of the mechanical brake.

**Never** support a load on the tip of a hook.

**Never** use a twisted, kinked, damaged, or stretched load chain.

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

**Never** touch the chain or hook with working welding equipment.

**Never** step on the lever during operation.

**Never** strike the lever handle with a hammer or any other object.

**Never** exceed the allowable force on the lever.

**Never** operate with any force, other than hand power.

**Never** pull or throw the hoist when carrying.

**Never** remove or obscure the warning tags.

**Never** operate with side-pulling or side-loading of the load to the hoist.

**Never** «reverse» the lever, hold the lever firmly until the action has completed, and then stop the lever.

**Never** leave a load suspended if unattended, unless specific precaution have been taken.

**Never** lengthen a load chain or repair a damaged load chain by welding.

**Never** use a chain as a ground for welding.

**Never** apply a load to the stopper link or the load chain on the link side.

**Never** put your hands between the top hook and the lever while operating the lever.

**Never** apply a load without the load chain is correctly installed in the chain wheel(s) or sprocket(s).

**Never** operate beyond the limits of the load chain's reach.

**Never** operate a hoist that has not been securely attached to an appropriate support.

**Never** try to «free chain» the hoist while the load is attached.

**Never** use a hoist with an overload protection system to measure the weight of a load.

**Never** lift a load up excessively so that the hoist body makes contact with the bottom yoke.

**Never** excessively lower the load until the hoist body makes contact with the Chain Stop.

**Never** pull the side of the chain without a load in lowering mode, as it can lead to a dangerous situation where the grip revolves.

ADVERSE ENVIRONMENTAL CONDITIONS

**Never** use the hoist in areas containing combustible vapors, liquids, gases, or any combustible dust or fibers.

**Never** use the hoist in highly corrosive, abrasive, wet environments, or conditions with exposure to temperatures below -40 F or above +150 F.

**Always** understand and follow all of the procedures set forth in the American National Standard entitled «Performance Standard for Manually Lever Operated Chain Hoists», ANSI/ASME HST-3; and «Manually Lever Operated Hoists», ANSI/ASME B30.21. These standards are available on the website of the American Society of Mechanical Engineers at [www.asme.org](http://www.asme.org).

## FOREWARD

The HITCH company highly respects its customers, and it always strives to provide the best quality of service and support. This manual is presented by the HITCH company and it contains information about the safe procedures for the operation and maintenance of the HITCH Hand Operated Lever Hoists LH200 / LH201 Series.

This manual contains instructions on the installation, safety regulations, general rules of operation, maintenance instructions, and parts breakdown.

The devices have been designed to provide a long lifespan when used in accordance with the instructions in this manual.

The HITCH Hand Operated Lever Hoists LH200 / LH 201 Series are quite universal tools that can be used effectively in any work related operation to pull, lift, drag, or stretch.

The housing, covers, and lever are made from steel stamped parts. The gears are made from heat treated steel, the upper and lower hooks are made with forged

steel, and the chain is subjected to thermal treating, while the links are welded.

The LH201 Hoist Series, with a load capacity of 3/4 of a ton to 9 tons, and the LH 200 Hoist Series, with a load capacity of 1/4 of a ton to 9 tons, are presented in this manual.

These hoists are available to order with a standard lifting height of 5, 10, 20, 30 and 40 Ft. The hooks with latches are standard for all of the units.

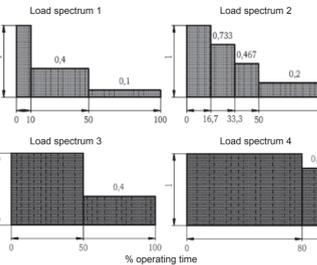
### Standards:

The products comply with the M4 mechanical class (which corresponds with the M4 classification mechanism of ISO 4301/1). They also conform to the OSHA Regulations, both ANSI / ASME B30.21 and HST-3 standards.

•Options:  
«G» - «Galvanic» - Load chain with a galvanic coating  
«B» - «Bearings» - Hoist equipped with friction bearings  
«S» - «SMART» - Overload Protection System  
«TD» - Trolley Directly

## MECHANICAL CLASSIFICATION

The safety and lifespan of the hoisting equipment is guaranteed under the presumption that it works in accordance with the specified classification.



All of the products HITCH designs for class M5-M2 correspond to the classification of the M5-M2 mechanism according to ISO 4301/1. The average daily working time is set by the load spectrum.

**Mechanism Operation Class**  
The Mechanism Operation Class is characterized by the assumed total in-service time in hours and nominal classes, presented in Table 1.

For classification, it was agreed to provide a mean value of the total operation time, during which a mechanism is in motion. The total in-service time values should be considered as theoretical. They cannot be treated as guaranteed values.

**Loading Mode**  
The Loading Mode determines the relative duration during which a mechanism has incurred the impact of a maximum or decreased load. Nominal loading modes are presented in Table 2. Nominal coefficients of a mechanism's load distribution are set in accordance with Table 2 (the nearest larger value is taken).

**Determination of a Mechanism's Classification Group in whole**  
Having determined the Operation Class and the Loading Mode, the Classification Group of the mechanism is determined using Table 3.

Operation Class	Total Duration of Testing Hours	Notes
To	200	
T1	400	Irregular operation
T2	800	
T3	1 600	
T4	3 200	Regular operation in normal conditions
T5	6 300	Regular operation with interruptions
T6	12 500	Regular intensive operation
T7	25 000	
T8	50 000	Intensive operation
T9	100 000	

Table 2. Nominal coefficients of mechanisms load distribution **Km**

Operation Class	Nominal coefficient of load distribution <b>Km</b>	Notes
L1 — light	0,125	Mechanisms regularly affected by light loading and rarely by maximum loading

L2 — moderate	0,25	Mechanisms regularly affected by moderate loading and quite often by maximum loading
L3 — heavy	0,50	Mechanisms regularly affected by heavy loading and often by maximum loading
L4 — severe	1,00	Mechanisms regularly affected by maximum loading

Table 3. Mechanism Classification Group as a Whole

Loading Mode	Nominal coefficient of load distribution <b>Km</b>	Mechanisms Operation Class												
		To	T1	T2	T3	T4	T5	T6	T7	T8	T9			
L1 — light	0,125			M1	M2	M3	M4	M5	M6	M7	M8			
L2 — moderate	0,25			M1	M2	M3	M4	M5	M6	M7	M8			
L3 — heavy	0,50			M1	M2	M3	M4	M5	M6	M7	M8			
L4 — severe	1,00			M2	M3	M4	M5	M6	M7	M8				

## INSTALLATION

Supports for the hoist can be hooks, clevis pins, trolleys, or beam clamps. Whichever method of suspension is chosen, the load-bearing capacity of the supporting components must be equal or exceed the load capacity of the lever hoist. Supporting structures (for example, I-beams, etc.) must be installed by appropriately licensed professional installers.

Before the installation of a hoist, evaluate the weight of the loads that are to be lifted or moved and make sure that they do not exceed the rated load capacity of the hoist. Make sure that the support or sling attached to the upper hook is strong enough to hold the weight of a few times of the hoist's capacity for lifting or moving. Ensure that the hoist is held firmly in the uppermost part of the upper hook, the latch is closed and is not making contact with the support or sling.

The place where the hoist is installed must provide sufficient space for:

- The operator to operate the hoist's lever.
- The operator and other personnel to be able to keep their distance from the load at all times.
- A secure foothold for the operator.

• Clearance between the frame of the hoist and any objects. The frame should be free to swivel on the upper hook.

### ! WARNING

Installing a hoist support that does not meet the requirements may lead to the fall of the hoist and the load causing potential injury and / or property damage. To avoid injury, make sure that the construction has the adequate strength to hold the weight of a few times of the hoist's rated load.

### Unpacking

Open the cardboard box and check for damage that may have occurred during transportation. Report any damage to the distributor and the freight forwarder immediately. Do not dispose of any of the packaging materials until the lever hoist has been properly assembled and it is operating properly. Carefully read this instruction manual for the installation, maintenance and to observe the safety rules.

## PRE-OPERATION INSPECTION

### Inspecting Load Chain

Check the load chain. The chain stopper must be attached to the second, penultimate link on the slack end of the chain.

**! WARNING**  
**Never operate the hoist with a twisted, kinked or damaged chain. Never splice the chain.**

Make sure that the chain is not twisted along its length from the hoist to the hook. If there is a twist on the block, with several falls, the hook must be passed through the chain loop to eliminate all of the twists in the chain.

Replace the chain if the links have become too stretched or severely worn on their surface, especially at the points where they make contact with each other. See Fig. 4, Fig. 5, Fig. 6 and Table 6, Table 7 for chain elongation measurements. Never use heavily rusted chains or chains that have cracks.

Periodically apply a thin layer of 30-weight oil to the chain; this will facilitate its work and extend its operating lifespan. For optimum results, clean the chain with an acid-free solution before lubricating.

### ! WARNING

**The load chain is supplied with a HITCH manually operated lever hoist. The chain has been designed, manufactured and tested for a proper fit and a long operating lifespan. If the chain needs to be replaced, only replace it with an original HITCH factory chain with a strength class 8 or 10 (G80 / G100). Using other, non-factory, chains can lead to serious injury and / or damage to the lever hoist.**

**Never lengthen the load chain by welding a second chain segment to the original.**

### Inspecting Hooks

It is important to check the upper and bottom hooks for a proper opening and other signs of deformation or damage. Immediately replace the hook if it can be defined by any of the following problems:

- The safety latch is not in contact with the hook anymore when opening.
- The vertical angle at the neck of the hook reaches 10°.
- There is chemical corrosion or there are cracks on the hook.
- There is excessive wear on the inner surface.
- The opening of the hook throat has increased (See Table 5 for the maximum allowable limits for a throat opening).

### ! WARNING

**Never attempt to repair the hook by heat treatment, bending or attaching something by welding. Such procedures result in a weakening of the metal and may cause damage to the hook.**

### Other inspections

Check for the presence of appropriate clicking sounds: when you switch the selector lever to the «LOAD» position, you should hear a characteristic clicking sound. It will be audible when turning the lever in either direction. When the selector lever is in the «UNLOAD» position a click sound will be heard only when the lever moves the ratchet after returning to its starting position, but not heard when the load is lowering. If no clicking sound is heard or an irregular clicking noise develops, do not use the hoist - refer the inspection and repair to an authorized service center or your nearest HITCH dealer.

If the lever hoist has not been used for a long period of time, verify that it operates properly before commissioning it.

The brake mechanism must be kept clean and free of dirt, water and oil.

Never spill oil in the brake mechanism. The brake must not slip during the use of the hoist.

## OPERATION

A HITCH manually operated lever hoist can be used in either a vertical position as a lifting mechanism or an angular or horizontal position as a device for pulling.

**The following is a general procedure for operating the HITCH LH200 hoist:**

1. Lightly lubricate the chain. Slightly move the links and make sure that there are no kinks or twists in the chain.
2. Set the hook and chain in a straight line so that there is no excessive strain.

Normal state when using the hoist

A. Before using the hoist, always make sure that the retaining pawl perfectly meshes with the retaining plate from the outside.

3. Adjust the length of the chain. Begin idling

B1. 1. When you depress the retaining pawl, keep your finger as low as possible.

2. Pull the grip-ring outward.

B 2. Stop pressing the retaining pawl so that it slides between the side plate and the retaining plate, with a tension chain that can be adjusted freely in both directions, up and down.

To stop idling

C1. 1. When you press the retaining pawl as far as you possibly towards the bottom.

2. Push the grip-ring gently inward.

C2. This means that the retaining pawl meshes with the outer edge of the retaining plate.

C3. 1. After that, grip the grip-ring, rotate it slightly clockwise.

**Table 4. Inspection chart**  
In the chart, F – Frequent Inspection, P – Periodic Inspection

Location		Check for	F	P
Braking mechanism		Slipping under load	✓	✓
		Hard to release	✓	✓
		Glazing	✓	✓
Brake parts	Brake Discs	Oil contamination	✓	✓
	Pawl/Ratchet	Excessive wear	✓	✓
	Pawl/Spring	Corrosion/stretch	✓	✓
		Chemical damage	✓	✓
Hook		Operation	✓	✓
		Deformation	✓	✓
		Cracks ( dye penetrant, magnetic particle, or other suitable detection method)	✓	✓
Hook retaining members (pins, bolts, nuts)		Not tight, secure or damaged	✓	✓
Hook latch		Damaged, does not close	✓	✓
Suspension Members (Sheaves, Hand wheels, Chain attachment, Suspension bolts or pins)		Excessive wear	✓	✓
		Cracks	✓	✓
		Distortion	✓	✓
		Broken or worn teeth	✓	✓
Gears		Inadequate lubrication	✓	✓
		Distortion	✓	✓
		Cracks	✓	✓
Load Block: Suspension Hoisting		Possible inability to continue supporting loads or damaged	✓	✓
		Not tight or secure	✓	✓
		WARNING label	✓	✓
Hoist Lever		Bent, cracked	✓	✓
Proper operation		Unusual sounds	✓	✓

**Exception**  
Brakes require more detailed checks than a simple audio-visual inspection. Daily checks on the operation of the equipment with a load and without a load, and with stops in different positions to ensure safe operation. Any fault must be corrected before the hoist is returned into operation. Also, external conditions may show the necessity for a more detailed inspection, which in turn may require the use of a non-destructive test type. Any part found to be unsuitable should be replaced with a new part before resuming the operation of the hoist. It is very important that unusable parts are destroyed, and properly disposed of, to prevent their possible future use as spare parts for repairs. If you intend to use the product in an intensive mode or dusty, sandy, wet, or corrosive atmospheric conditions, inspection intervals should be reduced. Every part must be inspected for abnormal wear,

Furthermore, the hooks that are opened to the extent that the latch does not engage with the tip of the hook must be replaced. Any hook that is twisted or has an excessive throat opening indicates improper use or hoist overloading. Other load supporting parts must be inspected for damage. Make sure that the latch is not damaged or bent and that it is running properly. The latch must have sufficient spring pressure to tightly press against the tip of the hook and spring back to the tip of the hook when released. If the latch does not work properly, replace it.

Use Table 5 to determine when the hook must be replaced. Hook replacement is required if any of the problems listed above are detected, or if it has reached the maximum dimensions specified in Table 6.

**Chain Inspection**  
The chain should feed smoothly in and out of the hoist. If the chain binds, jumps, or makes noise, first of all clean and lubricate the chain (see the maintenance section). If problems persist, inspect the chain and the connecting link for wear, deformation, or other damage.

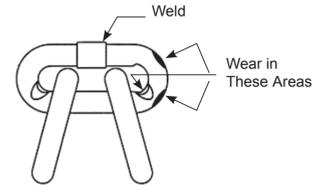


Figure 4. Chain Inspection

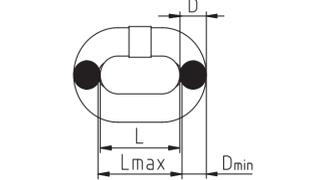


Figure 5. Load Chain - Diameter of one link length

**Table 7**

Dia	Standard L (mm)	Max L (mm)	Standard D (mm)	Min D (mm)
4 mm	12	12,8	4	3,8
5 mm	15	15,8	5	4,5
6 mm	18	18,9	6	5,4
8 mm	24	25,2	8	7,2
10 mm	30	31,5	10	9

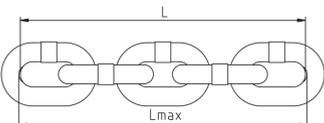


Figure 6. Load Chain - Five link length

**Table 8.**

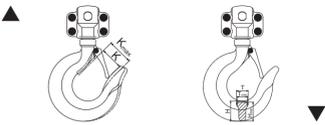
Dia	Standard L (mm)	Max L (mm)
4 mm	60	61,8
5 mm	75	77,5
6 mm	90	92,7
8 mm	120	123,6
10 mm	150	154,5

**Table 5.1 (HITCH LH200 / 200-G\*)**

Size	Standard K (In.)	Max K (In.)
0.25 ton	1	1-1/16
0.5 ton	1	1-1/16
0.75 ton	1-1/16	1-3/16
1 ton	1-1/16	1-3/16
1.5 ton	1-7/16	1-9/16
2 ton	1-7/16	1-9/16
3 ton	1-1/2	1-5/8
6 ton	1-3/4	1-15/16
9 ton	2-1/8	2-3/8

**Table 5.2 (HITCH LH201 / 201-G / 201-B / 201-S / 201-GB / 201-GS / 201-BS / 201-GSB\*)**

Size	Standard K (In.)	Max K (In.)
0.75 ton	15/16	1-1/16
1 ton	15/16	1-1/16
1.5 ton	1-3/16	1-5/16
2 ton	1-3/16	1-5/16
3 ton	1-5/16	1-7/16
6 ton	1-7/8	2-1/16
9 ton	2-1/8	2-3/8



**Table 6.**

Size	Standard H (mm)	Min H (mm)	Standard T (mm)	Min T (mm)
0.75 ton	21,5	19,3	13	11,7
1.5 ton	28,8	25,9	17	15,3
3 ton	43,9	39,5	25	22,5
6 ton	52,5	47	32	28,8
9 ton	60,5	54,5	40	36

First clean the chain with a non-caustic / non-acid type solvent, and perform a link by link inspection of the chain for the presence of nicks, gouges, twisted links, weld spatter on the welded joints, corrosion pits, striations (small parallel lines), cracks in the weld areas, wear and stretching. Chains that have any of these defects must be replaced.

Use Table 7 to determine when the chain should be replaced.

The replacement of the whole chain is necessary if any of the problems listed above are found, or the maximum dimensions indicated in Table 8 have been reached.

Only use a «knife edge» caliper to exclude the possibility of an erroneous reading by not measuring the full pitch length.

**! WARNING**  
Using anything other than a HITCH supplied load chain may jam the chain into the hoist and / or rupture the chain and drop the load.  
**To avoid injury: only use an original load chain supplied by HITCH for HITCH manually operated lever hoists, because of their size and physical property requirements.**

Check for signs of wear on the chain as this can be a sign of worn out parts on the hoist. For this reason, the frame of the hoist, stripper, and lift wheel should be checked for wear and replaced if necessary during the replacement of a worn chain. In addition, the load chain is subjected to special heat treatment and hardened, so it should never be repaired.

**! IMPORTANT**  
**Never use the replaced chain for other purposes such as lifting or pulling. The load chain may break suddenly without any visible signs of deformation. For this reason, cut the replaced chain into short lengths to avoid its reuse after its removal.**

## MAINTENANCE

**Chain / Hoist Lubrication**  
A small amount of lubricant will increase the service lifespan of the load chain.  
**Never allow a load chain to be operated when dry. Keep the chain clean and lubricate it at regular intervals with grease Lubriplate® Bar and Chain oil 10-R (Fiske Bros. Refining Co.), or an analogous lubricant. As a rule, weekly lubrication and cleaning is sufficient, but in hot and dirty working conditions, it may be necessary to clean the chain at least once a day and lubricate it several times between cleanings.**

**! WARNING**  
The motor oil used contains known carcinogens. To avoid injury: never use waste oil as a lubricant for the chain. Only use grease and oil Lubriplate® Bar and Chain oil 10-R for the lubrication of the load chain.

When lubricating the chain, apply a sufficient amount of the lubricant to obtain a natural run-off, fully cover the chain, especially at the connection points of the links. The hoist doesn't normally require any additional lubrication except when it is disassembled for cleaning or repair.

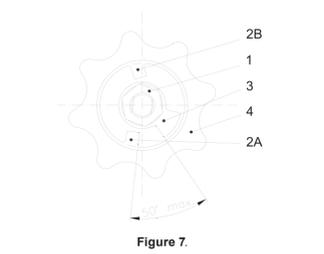


Figure 7.

**Gear Timing**  
If the gears of a manually operated HITCH lever hoist require replacement or removal for any reason, make sure that they are re-installed correctly. Figure 8 shows the correct orientation of the gear timing marks when engaging the gears.

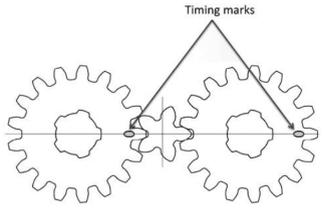


Figure 8.

**Replacing the Load Chain**  
Replacement of the chain should be carried out when it is suspended with the upper hook of the lever hoist. To replace the load chain, remove the lower hook block and remove the stopper of the chain. Move the directional lever to the neutral «N» position and remove the old chain from the hoist. Slide a piece of soft wire through one side of the chain guide and over the lift wheel until it comes out

## TROUBLESHOOTING

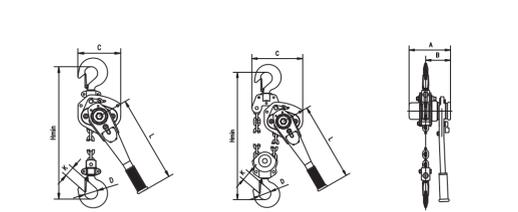
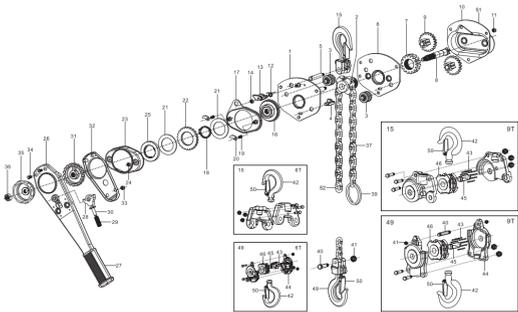
in an intensive mode or dusty, sandy, wet, or corrosive The numbers in parentheses refer to the parts breakdown in the Assembly Diagram (LH200 / 200-G\*)

PROBLEM	CAUSE MAY BE	REMEDY
1. Hoist does not lift (There aren't any clicking sounds).	a. Brake Pawl (20/12) is not engaging the Ratchet Gear (22/17): possible dirt or foreign material. b. Brake spring (19/11) is damaged. c. Pushing up Spring (29/25) is loose or damaged.	a. Clean and lubricate pawl/ratchet gear assemblies. b. Replace the Brake spring. c. Tighten or replace the Pushing up Spring.
2. Hoist does not lift (Lever does not switch)	Incorrect installation of the gear wheels. Marks «0» on wheels are not installed properly.	Disassemble and check for smoothing before operation. Set marks «0» on gear wheels in accordance with the image on Figure 8. See the Gear Maintenance section.
3. Load the slips or drifts while being lowered.	a. Dirt/corrosion/foreign material in the hoist's components. b. Brake is slipping. The Friction Hub (16/14) is worn from long-term use, or it is damaged from overloading or misuse.	a. Check and correct the problem. Keep the hoist clean and lubricated. b. Replace the Friction Hub. Never overload the hoist.
4. Hoist does not lower the load.	a. Brake has caught (The hoist was left in a load condition for an extended period, or has been shock-loaded while operating). b. Brake components are corroded or damaged.	a. Set the selector lever to the UNLOAD position and pull hard on the lever handle to reset the brake and resume operation. b. Replace the components as needed; keep the hoist clean and lubricated.
5. Handwheel does not move in and out.	Friction Hub (16/14) is damaged.	Replace the Friction Hub.
6. Hoist does not freewheel.	Brake has caught because the load chain has been pulled too hard.	Re-set by rotating the handwheel clockwise while pulling down on the load chain. Return the hoist to freewheel mode and continue. Pull the load chain less forcibly.
7. Hoist is hard to operate in either direction.	a. Load chain is worn along the gauge, thus binding the liftwheel and the chain guide. b. Load chain is rusty, corroded or clogged with foreign matter, such as cement or mud. c. Bushings are clogged with matter, such as cement or dust. d. Lever is binding. e. Brake parts are corroded or clogged with foreign matter. f. Liftwheel pockets are clogged with foreign matter or worn excessively causing the chain to bind between the liftwheel and the chain guide. g. Liftwheel is twisted or bent – the gear teeth are bent.	a. Check the chain, (see the Chain Inspection section) and replace it if it is worn excessively. b. Clean the chain by tumble polishing or using a non-acid or non-caustic type solvent. Check the chain for gouges, damaged or deformed links. Lubricate with Lubriplate® Bar and Chain Oil 10-R (Fiske Bros. Refining Co.) or equal lubricant see the Chain Lubrication Maintenance section. c. Disassemble and clean the liftwheel bushings and bushings in the gear cover and the side plate (gear side). Any parts that are worn excessively should be replaced. d. Clean by removing any foreign matter that may be between the lever and the brake cover. e. Disassemble the brake and clean it thoroughly (by wiping with a cleaning cloth - not by washing it in a solvent). Replace the ratchet assembly if it is too gummy, worn or scored. Keep the brake surfaces clean and dry. f. Clean out the pockets and use them if there are not worn excessively. Replace the liftwheel if the pockets are worn. g. Excessive overload has been applied. Replace the damaged parts.

## HAND OPERATED LEVER HOIST HITCH LH200 / 200-G\*

### SPARE PARTS

1. BRAKE SIDE PLATE ASSEMBLY
2. LIFT WHEEL
3. CHAIN GUIDE
4. CHAIN STRIPPER
5. UPPER HOOK PIN
6. GEAR SIDE PLATE ASSEMBLY
7. LIFT WHEEL SHAFT
8. PINION SHAFT
9. DTR SIZE
10. GEAR COVER SIZE
11. NUT FOR GEAR COVER
12. RETAINING SPRING
13. RETAINING PAWL
14. U-NUT FOR PAWL
15. UPPER HOOK ASSEMBLY
16. FRICTION GUB
17. RETAINING PLATE SET
18. SNAP LINK FOR FRICTION HUB
19. BRAKE SPRING
20. BRAKE PAWL
21. BRAKE DISC
22. RATCHET GEAR
23. BRAKE COVER
24. U-NUT FOR BRAKE COVER
25. BREAK RING
26. LEVER BODY
27. GRIP
28. CHANGE OVER PAWL
29. PUSHING UP SPRING
30. PUSHING UP PIN
31. CHANGE OVER GEAR
32. LEVER COVER
33. U-NEM FOR LEVER COVER
34. HEXAGON BOLT
35. GRIP RIG
36. PINION NUT
37. LOAD CHAIN
39. CHAIN STOP
40. BOLT FOR LEAD CHAIN
41. NUT FOR LEAD CHAIN
42. LOCK SCREW

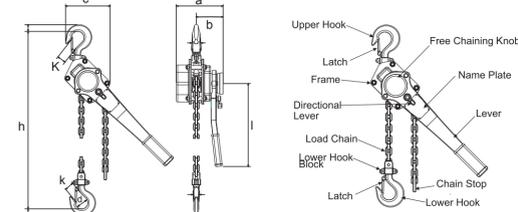
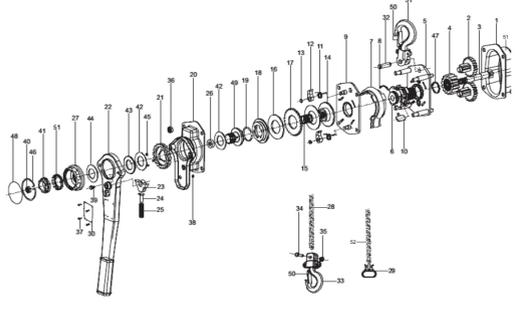


43. NEEDLE
44. IDLE SHEAVE HOLDER
45. IDLE SHAVE AXIE
46. IDLE SHAVE
47. BOLT
48. NUT
49. BOTTOM HOOK ASSEMBLY
50. LATCH KITS
51. WARNING LABEL [NOT SHOWN]
52. PENDANT WARNING TAG [NOT SHOWN]

## HAND OPERATED LEVER HOIST HITCH LH201 / 201-G / 201-B / 201-S / 201-GB / 201-GS / 201-BS / 201-GSB\*

### SPARE PARTS

1. GEAR COVER
2. GEAR SET
3. PINION SHAFT
4. LIFTING WHEEL GEAR
5. GEAR SIDE PLATE ASSEMBLY
6. LIFT WHEEL
7. CHAIN GUIDE
8. ROLLER
9. BRAKE SIDE PLATE
10. STRIPPER
11. PAWL SPRING
12. PAWL
13. RETAINER RING
14. FRICTION HUB
15. SPRING
16. BRAKE DISC
17. RATCHET
18. FRICTION HUB
19. RETAINER RING
20. BRAKE COVER ASSEMBLY
21. LAVER RATCHET
22. LEVER ASSEMBLY
23. DIRECTIONAL PAWL
24. SHAFT
25. SPRING
26. SPACER WASHER
27. FREE CHAINING KNOB
28. LOAD CHAIN
29. CHAIN PIN
30. NAMEPLATE
31. UPPER HOOK ASSEMBLY
32. UPPER HOOK PIN
33. LOWER HOOK ASSEMBLY
34. CHAIN BOLT
35. CHAIN NUT
36. NUT
37. RIVET
38. LEVER HARDWARE KIT
39. LOCKNUT
40. OVERLOAD LIMIT NUT
41. FRICTION DISC
42. CHECK WASHER



43. BUTTERFLY SPRING
44. RETAINER RING
45. STOP PIN
46. SNAP RING
47. FREE CHAINING TAG
48. LOCK WASHER
49. OVERLOAD LIMIT HUB
50. LATCH KIT
51. WARNING LABEL [NOT SHOWN]
52. PENDANT WARNING TAG [NOT SHOWN]

### MAIN SPECIFICATIONS

STOCK NUMBER **	1212510	121051	121751	121011	121151	121021	121031	121061	121091
<b>RATED CAPACITY [TONS]</b>	1/4 Ton	1/2 Ton	3/4 Ton	1 Ton	1-1/2 Ton	2 Ton	3 Ton	6 Ton	9 Ton
<b>TEST LOAD [TONS]</b>	3/8	3/4	1-1/8	1-1/2	2-1/4	3	4-1/2	7-1/2	11-1/4
<b>STANDARD LIFT [FT.] ***</b>	3	5	5	5	5	5	5	5	5
<b>PULL TO RATED LOAD [LBS.]</b>	56	76	31	42	52	58	64	87	88
<b>NUMBER OF LOAD CHAIN FALLS</b>	1	1	1	1	1	1	1	2	3
<b>LOAD CHAIN DIA. STRENGTH CLASS 680 [MM]</b>	4	5	6	6	7,1	8	10	10	10
<b>MECHANICAL CLASS</b>	M4								
<b>OPERATION TEMPERATURE [F] ****</b>	-40 F Up to +150 F								
<b>DIMENSIONS [IN.]</b>	<b>A</b>	3-5/8	4-1/8	6	6	6-9/16	6-7/8	7-11/16	7-11/16
	<b>B</b>	2-13/16	3	3-3/8	3-3/4	4	4-1/8	4-7/16	4-7/16
	<b>C</b>	3-3/8	3-1/8	5-1/8	5-1/8	5-7/8	6-5/16	8	9-1/2
	<b>D</b>	1-3/16	1-3/8	1-1/2	1-1/2	1-7/8	1-7/8	2	2-9/16
	<b>H [HEADROOM]</b>	9	10-1/4	11-5/8	13-3/16	15-3/16	17-11/16	21-5/8	26
	<b>L</b>	6-5/16	11-13/16	12-3/8	12-3/8	14-3/8	14-3/8	14-3/8	14-3/8
	<b>K</b>	1	1	1-1/16	1-1/16	1-7/16	1-7/16	1-1/2	1-3/4
<b>NET WEIGHT [LBS]</b>		3-15/16	8-13/16	16-9/16	16-9/16	21	34-3/16	36-3/8	59-1/2
<b>WEIGHT FOR ADDITIONAL 3,3 FT OF LIFT [LBS]</b>		7/8	1-1/8	1-3/4	1-3/4	2-7/16	3	4	8

\* Options:  
«G» - «Galvanic» - Load chain with a galvanic coating  
«B» - «Bearings» - Hoist equipped with friction bearings  
«S» - «SMART» - Overload Protection System  
«TD» - Trolley Directly  
\*\* Stock Number is indicated for standard design and standart lift. For more detail see www.hitchlifting.com.  
\*\*\* Maximum standard lift height of 40 Ft. Specify your required lifting height in your order.  
\*\*\*\* Necessary to check the brake at a temperature below 32 F in case of freezing.  
Operation humidity - 100%

**! IMPORTANT**  
The brake has been designed to work in a dry state. **Never apply grease or lubricant to braking surfaces.**

For lubricating the parts adjacent to the brake, do not use an excessive amount of lubricant that could leak onto the braking surface.  
**! WARNING**  
Contact of any grease or lubricant with the working surface of the brakes will cause brake slippage and the loss of control of the load, which can lead to injury and / or property damage.

**! IMPORTANT**  
To ensure a long lifespan and the maximum performance, be sure to lubricate the various parts of the hoist and use the lubricants mentioned above.

**Table 9.**

Part Numbers for packaged lubricants used in HITCH Hand and Trolley Hoists	
Hand Wheel Threads	Type of Lubricant
Gears	Grease
Lubricant Usage	Spray
Chain	Oil
Track Wheel Bearings	Grease
Track Wheel Gears	Heavy Cup Grease
Hand Wheel Shaft	Light Machine Oil

**Brake Adjustment**  
The stop (3) and the pawl on the hand wheel (2A or 2B) limit the axial clearance of the brake. The angle between the stop and the pawl is set by the manufacturer to 50°- see Figure 7. If the angle exceeds 50° during the usage of the brake device, the brake must be adjusted again. Brake adjustment should be made when it is suspended on the upper hook of the lever hoist. Adjustment must be carried out as follows: unscrew the nut (1), remove and turn the stop (3) in such a way to make the required angle with one of the pawls (2A or 2B). If this cannot be reached, dismantle the hand wheel (4) and turn it in such a way so that after putting the stop back on (3) it produces the required angle with one of the pawls (2A or 2B). Check the brake operation with a suitable load.

8. Hoist is hard to operate in the down direction.	a. Brake parts are corroded or clogged with foreign matter. b. Chain binding.	a. Disassemble the brake and clean it thoroughly (by wiping with a cleaning cloth - not by washing it in a solvent). Replace the ratchet assembly if it is too gummy, worn or scored. Keep the brake surfaces clean and dry. b. Check the chain, (see the Chain Inspection section) and replace it if it is worn excessively. Clean the chain by tumble polishing or using a non-acid or non-caustic type solvent. Check the chain for gouges, damaged or deformed links. Lubricate with Lubriplate® Bar and Chain Oil 10-R (Fiske Bros. Refining Co.) or an equal lubricant (see the Chain Lubrication Maintenance section).
9. Load falls in the beginning of lowering.	a. Foreign object caught between the friction surfaces. b. Brake locked up due to the presence of corrosion. c. Incorrect installation of the friction plates, i.e. two friction plates are on one side of the ratchet disc. d. Friction plate has broken when it was overloaded.	a. Remove objects and clean the surfaces. If the surfaces are damaged replace them. b. Replace rusted parts and carry out periodical technical inspections (see the Inspection section). c. Assemble properly as shown in the assembly diagram of the corresponding hoist model. Before operating test the brakes. d. Replace the plate. Do not exceed the hoist's rated lifting capacity.
10. Hoist is hard to operate in the up direction.	a. Chain is binding. b. Overload.	a. Check the chain, (see the Chain Inspection section) and replace it if it is worn excessively. Clean the chain by tumble polishing or using a non-acid or non-caustic type solvent. Check the chain for gouges, damaged or deformed links. Lubricate it with Lubriplate® Bar and Chain Oil 10-R (Fiske Bros. Refining Co.) or an equal lubricant (see the Chain Lubrication Maintenance section). b. Reduce the load or use the correct capacity unit.
11. Load drifts when hoist operating in standby mode.	a. Poor contact of the traction sheave and the chain due to improper mounting. Chain is not in contact with the two chain guides, but only one. b. Deformation or damage of the friction plate.	a. Assemble this unit properly and ensure the correct lift implementation. b. To avoid hook damage, it's necessary install a load in the middle of the hook's throat.
12. Bent base or neck of hook.	Bent base or Installation of load on a hook tip or the neck of a hook.	To avoid hook damage, it's necessary to install a load in the middle of the hook's throat.
13. Twisted of hook.	Winding of the load with the load chain. The chain has been used as a sling.	Perform the fastening of the load properly. Never use the load chain as a sling.

## STORAGE

**Never** store the hoist under a load. Store the hoist in a dry and clean place. When not