

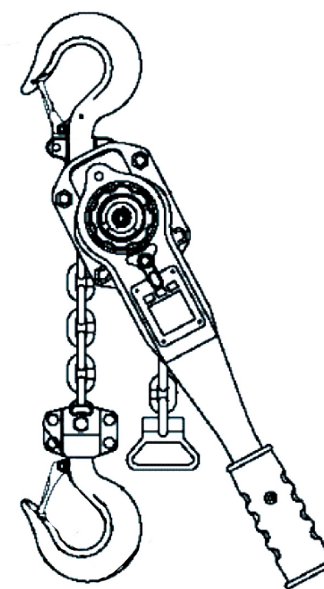


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07/19 (PLH080WO/PLH100WO/PLH160WO/PLH320WO/PLH630WO/PLH900WO)



**OPERATING INSTRUCTIONS AND
PARTS MANUAL
PREMIUM LEVER OPERATED
CHAIN HOIST SERIES W/ OVERLOAD
(PLH080WO/PLH100WO/PLH160WO/
PLH320WO/PLH630WO/PLH900WO)**



PLH080WO

(models shown are representative of the series)



**READ AND UNDERSTAND ALL THE
INSTRUCTIONS AND SAFETY INFORMATION IN
THIS MANUAL BEFORE OPERATING OR
SERVICING THIS TOOL**



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SAFETY FIRST

Safety is essential in the use and maintenance of Sumner Equipment. This instruction manual and any markings on the tool provide information for avoiding hazards and unsafe practices related to the use of this tool. Observe all the safety information provided.

SAFETY ALERT SYMBOLS

These symbols are used to call attention to hazards or unsafe practices related that could result in injury or property damage. The three safety words defined below indicate the severity of the hazard. The message after the signal word provides information for preventing or avoiding the hazard.



DANGER - Immediate hazards that if not avoided **WILL** result in severe injury or death



WARNING - Hazards that if not avoided **COULD** result in severe injury or death



CAUTION - Hazards or unsafe practices that, if not avoided **MAY** result in severe injury or death

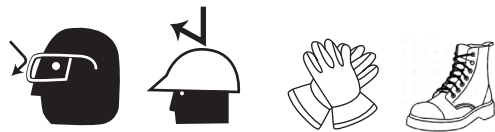
IMPORTANT SAFETY INFORMATION



⚠ WARNING

- Read and understand all instructions and safety information in this manual before operating or servicing this tool.

FAILURE TO OBSERVE THESE WARNINGS COULD RESULT IN SEVERE INJURY OR DEATH



⚠ WARNING - Personal Safety Hazards

- Only qualified persons should use the Sumner Premium Lever Hoist w/ Overload Protection.
- Wear eye protection, hard hat, cut resistant gloves and safety toe shoes when using this tool.
- Do not use tool while tired or under the influence of drugs, alcohol, or medication.
- Keep body parts and loose clothing away from moving parts.
- Always follow operating procedures.

FAILURE TO OBSERVE THESE WARNINGS COULD RESULT IN SEVERE INJURY OR DEATH.

⚠ DANGER: Electrical Shock Hazards



- This is not an insulated tool, contact with live circuits could result in severe injury or death.

FAILURE TO OBSERVE THESE WARNINGS CAN RESULT IN SEVERE INJURY OR DEATH

IMPORTANT SAFETY INFORMATION

⚠ WARNING: Entanglement Hazard



- Do not operate this tool while wearing loose fitting clothing. Retain long hair.

FAILURE TO OBSERVE THESE WARNINGS CAN RESULT IN SEVERE INJURY OR DEATH

⚠ WARNING: Tool Use Hazards

- Use this tool for the manufacturers intended purpose only. Use other than that described in this manual can result in injury or property damage.
- Only qualified personnel should configure and use the Sumner Lever Hoist.
- This lever hoist is designed and intended for use by properly trained and experienced personnel only. If you are not familiar with the proper and safe operation of a lever hoist, do not use until proper training and knowledge have been obtained.
- Do not use lever hoist to lift, support or transport people; or to lift or support loads over people.
- Do not exceed the rated capacity of the hoist.
- Do not attempt to extend the lever handle using a “cheater pipe” or any other such device.
- Do not strike the lever handle with a hammer or any other object.
- Do not use the chain as a sling. This may cause damage to the chain.
- Always inspect the lever hoist for damage prior to use. If hoist is damaged, do not use until it has been repaired or replaced.
- Do not use more than one lever hoist to lift or move a load. If this is unavoidable, each hoist must have the same capacity as the load to be moved.
- Never allow chain to “set” over sharp edges. All pulls or lifts must be made with straight chain that is free of obstacles.

IMPORTANT SAFETY INFORMATION

- If the lever handle is difficult to operate, then the load exceeds the capacity of the hoist. Reduce load or select a hoist of larger capacity.
- Do not use hoist if the chain is twisted, kinked or damaged.
- Do not operate hoist unless load is centered between top and bottom hooks.
- On hoists with the overload warning lever, do not use this device to measure load weight.
- Always take time to study the job to be performed and choose the safest method. Do not place yourself or other people in an unsafe position.
- Always maintain your balance and firm footing when operating the lever hoist.
- Leave all internal maintenance and inspections to a qualified Sumner Service Center.
- Do not attempt to lengthen or repair load chain. Replace chain with factory replacement chain only. Do not use any other type of chain.
- If welding near the hoist, do not allow the chain or hook to be touched by a live electrode. Prevent weld splatter upon the chain.
- Never use the hoist if either hook is stretched, deformed, or has a broken or missing safety latch. Always replace the safety latch and/or the hook before placing the hoist back in service.
- Be sure supporting structures and load-attaching devices used in conjunction with this lever hoist provide an adequate safety factor to handle the rated load plus the weight of the equipment. If in doubt, consult a qualified structural engineer.
- Keep visitors a safe distance from the work area. Keep children away.
- Understand and follow all procedures as set forth in American National Standards titled "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 through the American Society of Mechanical Engineers at www.asme.org.


FAILURE TO OBSERVE THESE WARNINGS CAN RESULT IN SEVERE INJURY OR DEATH

Description of Operation

CAUTION

- Do not use if any parts are damaged as this can cause an unsafe condition and lead to tool malfunction or failure.
- If tool is in disrepair, **DO NOT USE**. Have tool inspected and repaired or replaced prior to use.

FAILURE TO OBSERVE THESE CAUTIONS CAN RESULT IN INJURY OR PROPERTY DAMAGE

 **WARNING:** This product can expose you to chemicals including lead, which is known to the State of California to cause cancer and birth defects or other reproductive harm. For more information go to <http://www.p65warnings.ca.gov>.

Purpose of this Manual

This manual is intended to familiarize all personnel with the safe installation and operation of the following: PREMIUM LEVER OPERATED CHAIN HOIST WITH OVERLOAD PROTECTION. Keep this manual available to all personnel. Replacement manuals are available upon request at no charge at www.sumner.com.

Description of Operation

This manual is provided by Sumner covering the safe operation and maintenance procedures for the Sumner Premium PLH Series Lever Hoists/Pullers. This manual contains instructions on installation, safety precautions, general operating procedures, maintenance instructions and parts breakdown. This tool has been designed and constructed to provide consistent, long-term operation if used in accordance with instructions set forth in this manual.

The PLH Series hoists are all steel construction with a powder coat finish and have a completely enclosed Weston-type automatic brake system.

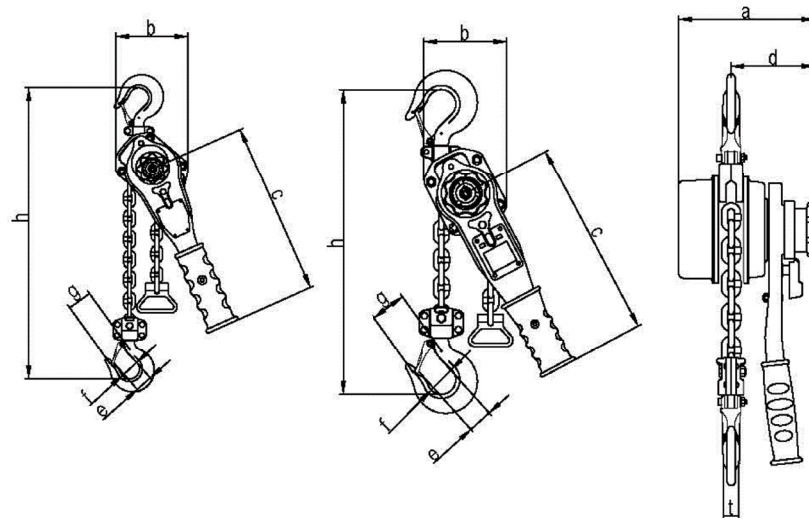
The PLH series hoists are proof-tested and comply with OSHA, ANSI/ASME B30.21 and HST-3 standards.

Description of Operation

If there are any questions or comments, please contact either your local supplier or Sumner Manufacturing. Sumner can also be reached at our web site: www.sumner.com.

The specifications in this manual were current at time of publication, but because of our policy of continuous improvement, Sumner reserves the right to change specifications at any time and without prior notice, without incurring obligations.

SPECIFICATIONS

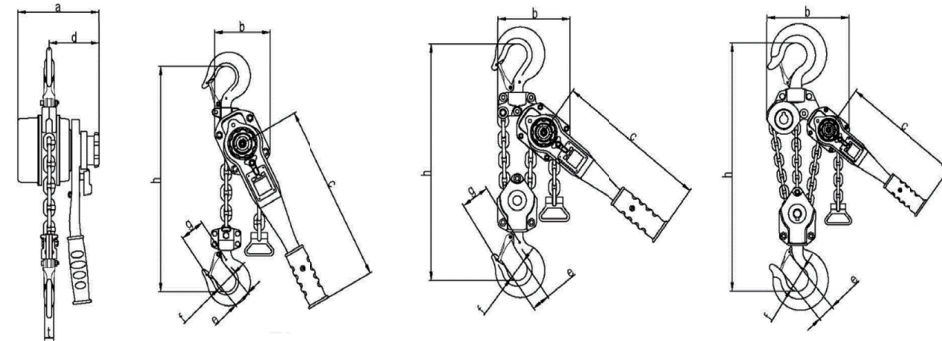


PLH080WO/
PLH100WO

PLH160WO

Stock Number	Model Number	Rated Capacity (Ton)	Std. Lift (ft.)	Min. Distance between hooks (in.) "h"	No. of falls	Load Chain (mm)	Lift per full turn of lever (in.)	Pull to Rated Load (lb)	Dimension "a" (in.)	Dimension "b" (in.)	Dimension "c" (in.)	Dimension "d" (in.)	Dimension "e" (in.)	Dimension "f" (in.)	Net Weight (lbs)
787508	PLH080C05WO	0.8	5	11.02	1	5.6 x 15.7	1.37	54.63	5.74	4.68	9.65	3.77	1.04	1.39	12.76
787509	PLH080C10WO	0.8	10	11.02	1	5.6 x 15.7	1.37	54.63	5.74	4.68	9.65	3.77	1.04	1.39	15.32
787510	PLH080C15WO	0.8	15	11.02	1	5.6 x 15.7	1.37	54.63	5.74	4.68	9.65	3.77	1.04	1.39	17.89
787511	PLH080C20WO	0.8	20	11.02	1	5.6 x 15.7	1.37	54.63	5.74	4.68	9.65	3.77	1.04	1.39	20.45
787512	PLH100C05WO	1	5	11.81	1	5.6 x 15.7	1.37	67.67	5.74	4.68	9.65	3.77	1.24	1.67	13.2
787513	PLH100C10WO	1	10	11.81	1	5.6 x 15.7	1.37	67.67	5.74	4.68	9.65	3.77	1.24	1.67	15.76
787514	PLH100C15WO	1	15	11.81	1	5.6 x 15.7	1.37	67.67	5.74	4.68	9.65	3.77	1.24	1.67	18.32
787515	PLH100C20WO	1	20	11.81	1	5.6 x 15.7	1.37	67.67	5.74	4.68	9.65	3.77	1.24	1.67	20.88
787516	PLH160C05WO	1.6	5	13.18	1	7.1 x 19.9	0.89	76.21	6.45	4.96	10.43	3.93	1.39	1.67	17.82
787517	PLH160C10WO	1.6	10	13.18	1	7.1 x 19.9	0.89	76.21	6.45	4.96	10.43	3.93	1.39	1.67	21.85
787518	PLH160C15WO	1.6	15	13.18	1	7.1 x 19.9	0.89	76.21	6.45	4.96	10.43	3.93	1.39	1.67	25.86
787519	PLH160C20WO	1.6	20	13.18	1	7.1 x 19.9	0.89	76.21	6.45	4.96	10.43	3.93	1.39	1.67	29.41

SETUP AND OPERATION



PLH320WO

PLH630WO

PLH900WO

Stock Number	Model Number	Rated Capacity (Ton)	Std. Lift (ft.)	Min. Distance between hooks (in.) "h"	No. of falls	Load Chain (mm)	Lift per full turn of lever (in.)	Pull to Rated Load (lb)	Dimension "a" (in.)	Dimension "b" (in.)	Dimension "c" (in.)	Dimension "d" (in.)	Dimension "e" (in.)	Dimension "f" (in.)	Net Weight (lbs)
787524	PLH320C05WO	3.2	5	15.55	1	10 x 28	0.79	87.23	7.71	6.22	16.33	4.48	1.69	1.96	29.26
787525	PLH320C10WO	3.2	10	15.55	1	10 x 28	0.79	87.23	7.71	6.22	16.33	4.48	1.69	1.96	37.69
787526	PLH320C15WO	3.2	15	15.55	1	10 x 28	0.79	87.23	7.71	6.22	16.33	4.48	1.69	1.96	46.12
787527	PLH320C20WO	3.2	20	15.55	1	10 x 28	0.79	87.23	7.71	6.22	16.33	4.48	1.69	1.96	52.58
787528	PLH630C05WO	6.3	5	21.25	2	10 x 28	0.4	89.47	7.71	8.58	16.33	4.48	2.08	2.36	56.10
787529	PLH630C10WO	6.3	10	21.25	2	10 x 28	0.4	89.47	7.71	8.58	16.33	4.48	2.08	2.36	73.30
787530	PLH630C15WO	6.3	15	21.25	2	10 x 28	0.4	89.47	7.71	8.58	16.33	4.48	2.08	2.36	90.50
787531	PLH630C20WO	6.3	20	21.25	2	10 x 28	0.4	89.47	7.71	8.58	16.33	4.48	2.08	2.36	107.70
787532	PLH900C05WO	9	5	26.77	3	10 x 28	0.26	88.13	7.71	13.38	16.33	4.48	2.51	3.34	90.20
787533	PLH900C10WO	9	10	26.77	3	10 x 28	0.26	88.13	7.71	13.38	16.33	4.48	2.51	3.34	115.96
787534	PLH900C15WO	9	15	26.77	3	10 x 28	0.26	88.13	7.71	13.38	16.33	4.48	2.51	3.34	141.52
787535	PLH900C20WO	9	20	26.77	3	10 x 28	0.26	88.13	7.71	13.38	16.33	4.48	2.51	3.34	167.18

IDENTIFICATION

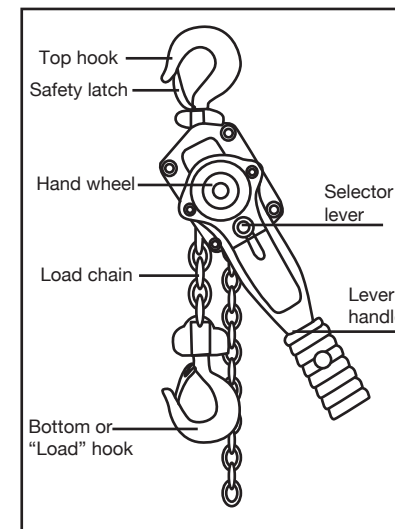


FIG 1

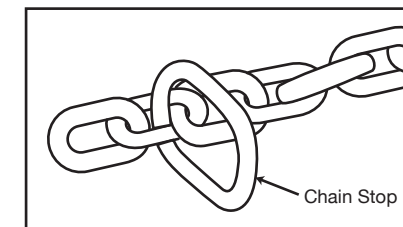


FIG 2

INSTALLATION

Support for the hoist may be hook, clevis pin, trolley, or beam clamp. Whatever method of suspension is chosen, the support components must be rated equal to, or greater than the capacity of the lever hoist. Supporting structures (such as I-Beams, etc.) should be installed by properly licensed professional installers.

INSPECTING THE LOAD CHAIN

⚠WARNING: Do not operate the hoist with a twisted, kinked or damaged chain. Do not splice the chain.

- Check that the chain does not twist along its length from hoist to hook. If twist is present on units with multiple falls, the hook must be passed back through the chain loop to remove all twist in the chain.
- Replace the chain if links are stretched too long or seriously worn on the surface, especially at the points where links contact each other. See “Allowable Limits” on page 15 for measuring chain elongation.
- Do not use a chain that is seriously rusted or cracked.
- Periodically apply a light coat of 30-weight oil to the chain. This will create easier operation and prolong the chain’s life. For optimum results, clean the chain with an acid-free solution before oiling.
- Never extend load chain by welding a second piece to the original.

⚠WARNING: The load chain supplied with your Sumner lever hoist is designed, manufactured, and tested for proper fit and durability. If chain should ever need replacing, for your own safety use factory replacement chain only. Use of other than factory replacement chain may cause serious injury and/or damage to the lever hoists.

INSPECTING THE HOOK

It is important to check top and bottom hooks for proper opening and other signs of deformation or damage. Replace a hook immediately if any of the following problems are identified:

- The safety latch no longer contacts the hook opening.
- The vertical angle at the neck of the hook reaches 10° , see (FIG 3).
- Chemical corrosion or cracks on the hook.
- Excessive wear on the inside surface.
- The throat opening has enlarged. See (FIG 13) for the maximum allowable limits for the throat opening.

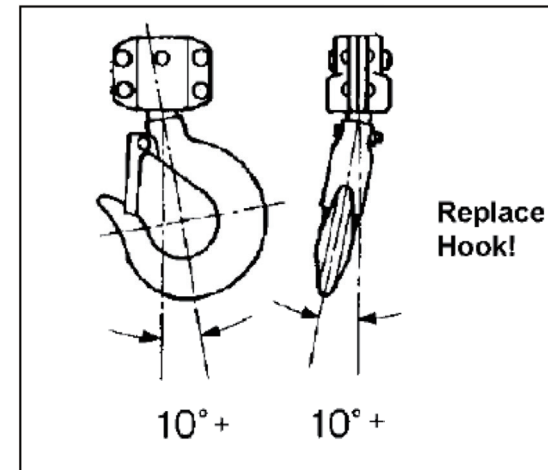


FIG 3

⚠WARNING: Do not attempt repair of the hook by heat treating, bending or attaching anything by welding. Doing so will weaken and may cause failure of the hook.

FURTHER INSPECTIONS

- With the lever in the up position, while pulling down on the chain or with a load connected, check for a clicking sound when the handle is rotated in a clockwise direction. If these sounds are not present, or if irregular clicking noises develop, do not use the hoist – have it inspected and repaired by an authorized service center.
- With the lever in the up position, check free play in handle rotation. Free play is measured by the distance the handle travels before resistance or gearing is felt. If free play has reached 3/4 of a turn, brake discs are worn and should be replaced by a Sumner authorized service center.
- The brake mechanism must be kept clean and free from dirt, water, and oil. Never allow oil to penetrate the braking mechanism. The brake should not slip while the hoist is in use.
- If the lever hoist has not been used for an extended period, check for proper operation before putting into service.

OPERATION

The PLH Lever Hoist may be used either in vertical position as a hoist; or in angled or horizontal position as a puller. Below is the general procedure for operating the hoist:

1. Set the top hook securely.
2. Place the selector switch on the handle in the center neutral position, and pull out on the hand wheel (A, FIG 4). This will allow “freewheel” mode. Pull the load chain by hand to position the bottom hook.
3. Correctly center the load on the bottom hook (FIG 5). Incorrect loading is dangerous to the operator, the lever hoist, and the load.
 - Never load the hook in front of the safety latch (A, FIG 6).
 - Never load the hook tip (B, FIG 6).
 - Never load the hook off the centerline (C, FIG 6).
 - Never load the hook sideways (D, FIG 6).
4. Rotate the hand wheel clockwise while simultaneously pulling down on the load chain, (B, FIG 4). The hand wheel will snap back into place, re-engaging the gear.
5. Move selector switch to the UP position. Ratchet the lever to raise or pull the load. Do not overload the lever hoist.

INSPECTING THE HOOK

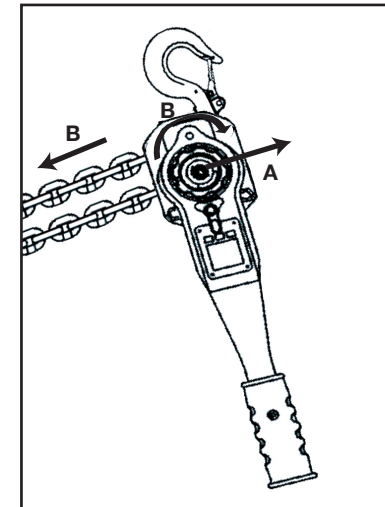


FIG 4

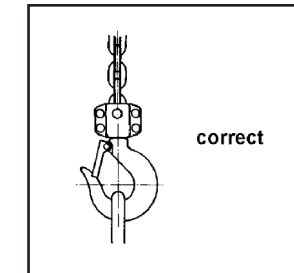


FIG 5

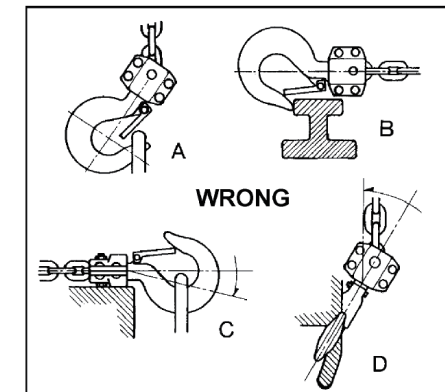


FIG 6

⚠ WARNING: Do not touch the handwheel while lifting or lowering. Do not operate freewheel mode while there is a load on the hoist.

6. To release or lower the load, turn selector switch on the handle to the DOWN position and ratchet the handle.

NOTE: If the chain is pulled too suddenly in freewheel mode, the brake may set preventing further pulling. Re-set the hoist by repeating step number 4 above, and then set the hoist back into freewheel mode to continue the operation.

7. Move selector switch to the UP position. Ratchet the lever to raise or pull the load. Do not overload the lever hoist.
8. To release or lower the load, turn selector switch on the handle to the DOWN position and ratchet the handle.

⚠ CAUTION: Avoid lifting one load with two hoists. If this is unavoidable, apply equal weight to both hoists and use hoists with the proper lift capacity. Capacity of each hoist must be equal to the total load to be lifted.

PRECAUTIONS

- During pulling operations, the operator should stand near the side of the top hook on the opposite side from the lever. If the hand should slip off the lever, the lever will spring back away from the operator.
- During lifting operations, do not stand under the load.
- Do not use an extension on the lever (FIG 7).
- Do not use a foot to apply pressure to the lever (FIG 8).
- When using a wire rope sling, the puller must be applied along a straight line parallel to the surface on which it is resting (FIG 9).
- When lifting loads, hook the load with slings. Do not use the lever hoist chain as a sling (FIG 10).
- Both ends of a sling or rope must be completely on the inside of the safety latch before pulling or lifting the load. Do not put one end on the inside of the latch and leave the other end on the hook end outside the latch.

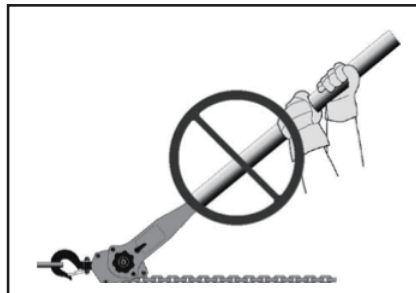


FIG 7

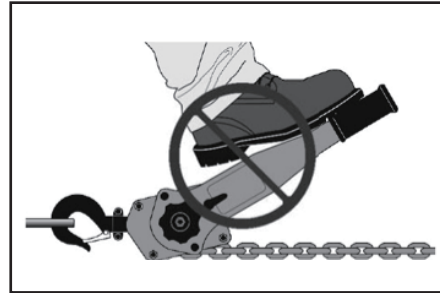


FIG 8

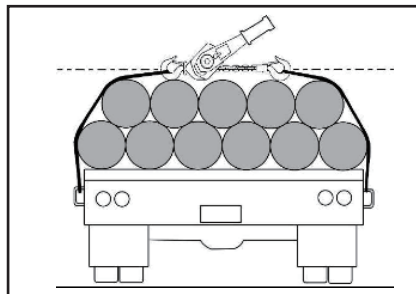


FIG 9

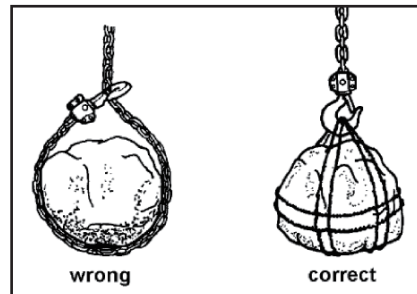


FIG 10

OVERLOAD PROTECTION

All models of the Premium PLH Lever Hoist w/ Overload Protection come with a slip clutch, which will allow the handle to rotate without lifting an excessive load. The slip clutch is effective at 160% +/-20% of rated hoist capacity.

If an overload occurs (handle rotation fails to raise load), immediately move selector lever to DOWN position, lower and remove the load. Select a load within the hoist's capacity to continue operation.

⚠ WARNING: Make sure loads are within rated capacity of hoist. Excessive activation of overload limiter will result in undue wear to the unit and may cause erratic performance such as lifting capacities falling outside normal ratings.

The overload slip clutch has been pre-adjusted at the factory and should not require any adjustment by the user. It should not be lubricated. If future adjustment or repair to the slip clutch should ever be needed, this must be done by qualified service personnel.

INSPECTION AND MAINTENANCE

Read and follow ANSI Inspection and Maintenance Instructions. Know the meaning of Frequent Inspection, Periodic Inspection, Normal Service, Heavy Service, and Severe Service. It is the customer's responsibility to understand and follow all ANSI and Sumner inspection and maintenance instructions.

The lever hoist should be stored in a clean, dry environment. Clean and oil the hoist before storage. Hoists that are installed outdoors should be covered or brought inside when not in use.

Periodically apply a light coat of 30 weight oil to the load chain. Also lubricate the safety latches and the bearings in the hooks.

Annually, the hoist should be disassembled, inspected, and cleaned by trained and experienced personnel only. Contact a Sumner authorized service center by calling your dealer or visiting our web site at www.sumner.com.

PRECAUTIONS

WEAR LIMITS

LOAD CHAIN WEAR LIMITS

- Carefully inspect the entire load chain. As illustrated in (FIG 11), measure five consecutive links with calipers to find the length. Compare the results with the table in (FIG 12). Check every three feet and especially where excessive wear is indicated. Any load chain that shows noticeable deformation or heat influence must be replaced with a new one.

⚠ WARNING: WARNING: Never extend load chain by welding a second piece to the original.

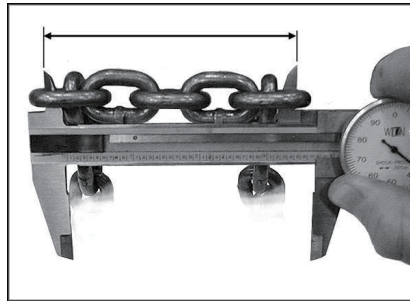


FIG 11

Capacity	5 Links Normal (in)	5 Links Limit (in)
0.8 ton	3.10"	3.19"
1 ton	3.10"	3.19"
1.6 ton	3.92"	4.04"
3.2 ton	5.51"	5.68"
6.3 ton	5.51"	5.68"
9 ton	5.51"	5.68"

FIG 12

HOOK WEAR LIMITS (TOP and BOTTOM)

- Replace the hook when "A" in (FIG 13) is wider than the Limit Dimensions shown in the accompanying table.

⚠ WARNING: Never heat treat the hook or attach anything to the hook by welding.

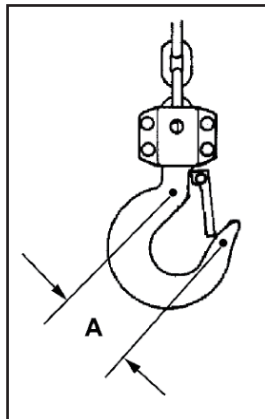


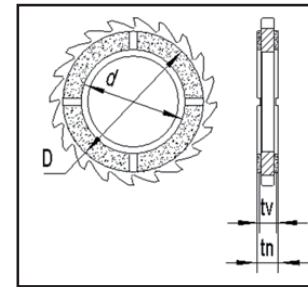
FIG13

Capacity	"A" Norm	"A" Limit
0.8 ton	1.63"	1.79"
1 ton	1.95"	2.15"
1.6 ton	2.05"	2.26"
3.2 ton	2.44"	2.68"
6.3 ton	3.32"	3.65"
9 ton	3.54"	3.89"

OVERLOAD PROTECTION

BRAKE DISK WEAR LIMITS

- Annual inspection of the brake disk should be performed to ensure brake disk is within the allowable standards as shown in (FIG 14).



d= inner diameter
D= outer diameter
tn= normal measurement
tv= replacement limit

FIG14

Capacity	D (in)	d (in)	tn (in)	tv (in)
0.8 ton	2.13"	1.57"	0.32"	0.28"
1 ton	2.13"	1.57"	0.32"	0.28"
1.6 ton	2.13"	1.57"	0.32"	0.28"
3.2 ton	2.52"	1.79"	0.32"	0.28"
6.3 ton	2.52"	1.79"	0.32"	0.28"
9 ton	2.52"	1.79"	0.32"	0.28"

TIMING MARKS FOR GEAR REPLACEMENT

- If the gears on the Premium PLH Lever Hoist need replacement or removal for any reason, make sure they are re-installed correctly. (FIG 15) shows the proper orientation of the timing marks when meshing the gears.

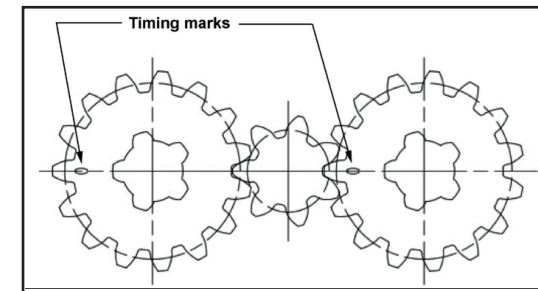


FIG15

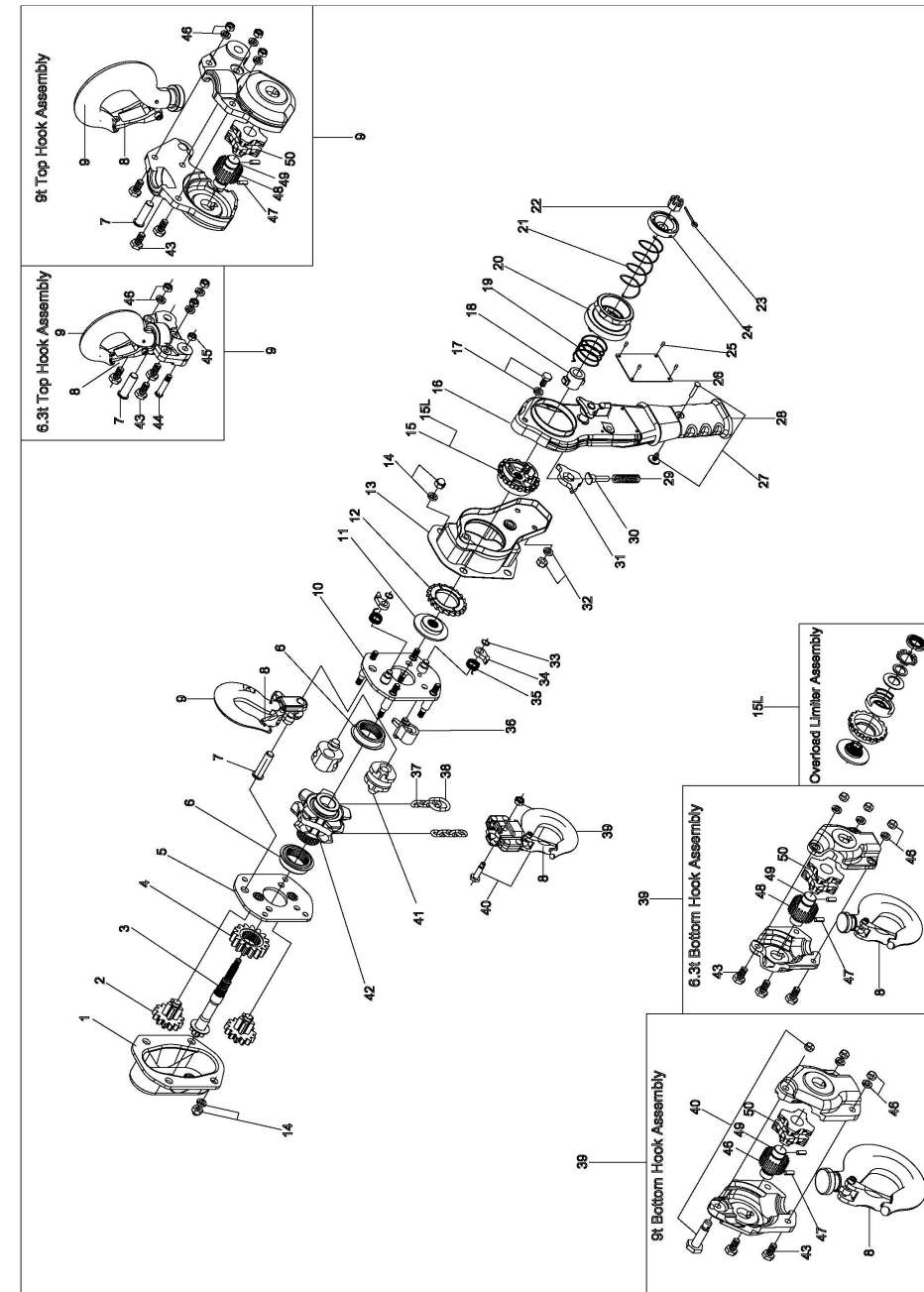
REPLACEMENT PARTS

REPLACEMENT PARTS

Replacement parts are listed on the following pages. To order parts or reach our service department, call 1-281-999-6900 Monday through Friday, 8:00 a.m. to 5:00 p.m. CST. Having the Model Number and Serial Number of your machine available when you call will allow us to serve you quickly and accurately. Non-proprietary parts, such as fasteners, can be found at local hardware stores. McMaster- Carr reference numbers are provided for hardware specifications. Some parts are shown for reference only and may not be available individually.

EXPLODED DIAGRAM

PLH080WO through PLH900WO – EXPLODED VIEW



REPLACEMENT PARTS

PLH080WO	Qty	Stock #	Reference	MODEL	DESCRIPTION	UPC
1	1	788400		KV010-1	Gear Cover Assembly	661165884005
2	2	788401		KV010-2	Spur Gear Assembly	661165884012
3	1	788402		KV010-3	Drive Shaft	661165884029
4	1	788403		KV010-4	Load Gear	661165884036
5	1	788404		KV010-5	Gear Side Plate Assembly	661165884043
6	2	788405		Φ25xΦ35x10	Caged Roller Bearings	661165884050
7	1	788406		KV010-39	Top Hook Shaft	661165884067
8	2	788407		KV008-8	Casting Safety Latch Assembly	661165884074
9	1	788408		KV008-9	Top Hook Assembly	661165884081
10	1	788409		KV010-10	Lever Side Plate Assembly	661165884098
11	1	788410		KV016-11	Disc Hub	661165884104
12	1	788411		KV016-12	Ratchet Disc	661165884111
13	1	788412		KV010-13	Brake Cover Assembly	661165884128
14	8	788413	McMaster 93279A200	K300-3B	Lock Washer =Blue-Dyed Steel Split Lock Washer for M8 Screw Size, 8.2 mm ID, 15.2 mm OD	661165884135
	8	788414	McMaster 99164A102	K300-3A	Acorn Nut = High-Strength Steel Cap Nut, Class 10, Zinc-Plated, M8 x 1.25 mm Thread	661165884142
15	0	788415		KV016-15	Change Over Gear	
15L	1	788416		KV010-15L	Overload Limiter Assembly	661165884166
16	1	788417		KV010-16	Lever Handle Assembly	661165884173
17	1	788418	McMaster 91280A324	KV016-17	Hex Head Cap Screw = Medium-Strength Class 8.8 Steel Hex Head Screw, Zinc-Plated, M6 x 1 mm Thread, 12 mm Long	661165884180
	1	788419	McMaster 93279A100	K025-3B	Lock Washer = Blue-Dyed Steel Split Lock Washer for M6 Screw Size, 6.2 mm ID, 12.1 mm OD	661165884197
18	1	788420		KV016-18	Cam	661165884203
19	1	788421		KV016-19	Twisting Spring I	661165884210
20	1	788422		KV016-20	Hand Wheel	661165884227
21	1	788423		KV016-21	Twisting Spring II	661165884234
22	1	788424	McMaster 993760A222	KV016-22	Castle Nut = Steel Locknut for Use with Cotter Pins, Medium-Strength, Zinc lated, Class 8, M8 x 1.25 mm Thread	661165884241
23	1	788425	McMaster 98350A316	K300-32B	Split Pin = Split Pin = Cotter Pin, 18-8 Stainless Steel, 2mm Diameter, 16mm Long	661165884258
24	1	788426		KV016-24	Twisting Spring, Housing	661165884265
25	4	788310	McMaster 97358A101	K500-1	Rivet = Low-Profile Flat Head Solid Rivets, 0.119" Diameter, for 0.16" Maximum Material Thickness	661165883107
26	1	788427		KV008-16	Name Plate	661165884272
27	1	788235		KV016-27A	Bolt For Handle	661165882353
	1	788428		KV010-27B	Nut For Handle	661165884289
28	1	788429		KV010-28	Rubber Grip	661165884296
29	1	788430		KV025-29	Spring	661165884302
30	1	788431		KV016-30	Spring Shaft	661165884319
31	1	788432		KV016-31	Change Over Pawl	661165884326
32	2	788433	McMaster 90592A016	KV016-32	Hex Nut = Steel Hex Nut, Medium-Strength, Class 8, M6 x 1 mm Thread	661165884333
	2	788419	McMaster 93279A100	K025-3B	Lock Washer = Blue-Dyed Steel Split Lock Washer for M6 Screw Size, 6.2 mm ID, 12.1 mm OD	661165884197
33	2	788434	McMaster 90967A155	KV016-33	Snap Ring = External Retaining Ring for 9 mm OD, DIN 1.4122 Stainless Steel	661165884340
34	2	788435		KV016-34	Pawl	661165884357
35	2	788436		KV016-35	Pawl Spring	661165884364
36	1	788437		KV010-36	Stripper	661165884371
37	As Req'd Per Foot	788438		Φ5.6x15.7	Load Chain	661165884388
38	1	788439		KV010-38	Chain Stop	661165884395
39	1	788440		KV008-39	Bottom Hook Assembly	661165884401
	1	788441		KV010-40	Load Pin	661165884418
40	1	788442	McMaster 90576A115	KV016-40B	Lock Nut = Medium-Strength Steel Nylon-Insert Locknut, Class 8, Zinc-Plated, M6 x 1 mm Thread	661165884425
41	2	788443		KV010-41	Guide Roller	661165884432
42	1	788444		KV010-42	Load Sheave	661165884449
43	0				Socket Cap Screw	
44	0				Load Pin	
45	0				Lock Nut	
	0				Lock Nut	
46	0				Lock Washer	
	0				Lock Washer	
47	0				Cylinder Pin	
	0				Cylinder Pin	
48	0				Needle Bearing	
	0				Needle Bearing	
49	0				Idle Shaft	
	0				Idle Shaft	
50	0				Idle Sheave	
	0				Idle Sheave	

REPLACEMENT PARTS

PLH100WO	Qty	Stock #	Reference	MODEL	DESCRIPTION	UPC
1	1	788400		KV010-1	Gear Cover Assembly	661165884005
2	2	788401		KV010-2	Spur Gear Assembly	661165884012
3	1	788402		KV010-3	Drive Shaft	661165884029
4	1	788403		KV010-4	Load Gear	661165884036
5	1	788404		KV010-5	Gear Side Plate Assembly	661165884043
6	2	788405		Φ25xΦ35x10	Caged Roller Bearings	661165884050
7	1	788406		KV010-39	Top Hook Shaft	661165884067
8	2	788445		KV010-8	Casting Safety Latch Assembly	661165884456
9	1	788446		KV010-9	Top Hook Assembly	661165884463
10	1	788409		KV010-10	Lever Side Plate Assembly	661165884098
11	1	788410		KV016-11	Disc Hub	661165884104
12	1	788411		KV016-12	Ratchet Disc	661165884111
13	1	788412		KV010-13	Brake Cover Assembly	661165884128
14	8	788413	McMaster 93279A200	K300-3B	Lock Washer =Blue-Dyed Steel Split Lock Washer for M8 Screw Size, 8.2 mm ID, 15.2 mm OD	661165884135
	8	788414	McMaster 99164A102	K300-3A	Acorn Nut = High-Strength Steel Cap Nut, Class 10, Zinc-Plated, M8 x 1.25 mm Thread	661165884142
15	0	788415		KV016-15	Change Over Gear	
15L	1	788416		KV010-15L	Overload Limiter Assembly	661165884166
16	1	788417		KV010-16	Lever Handle Assembly	661165884173
17	1	788418	McMaster 91280A324	KV016-17	Hex Head Cap Screw = Medium-Strength Class 8.8 Steel Hex Head Screw, Zinc-Plated, M6 x 1 mm Thread, 12 mm Long	661165884180
	1	788419	McMaster 93279A100	K025-3B	Lock Washer = Blue-Dyed Steel Split Lock Washer for M6 Screw Size, 6.2 mm ID, 12.1 mm OD	661165884197
18	1	788420		KV016-18	Cam	661165884203
19	1	788421		KV016-19	Twisting Spring I	661165884210
20	1	788422		KV016-20	Hand Wheel	661165884227
21	1	788423		KV016-21	Twisting Spring II	661165884234
22	1	788424	McMaster 993760A222	KV016-22	Castle Nut = Steel Locknut for Use with Cotter Pins, Medium-Strength, Zinc lated, Class 8, M8 x 1.25 mm Thread	661165884241
23	1	788425	McMaster 98350A316	K300-32B	Split Pin = Split Pin = Cotter Pin, 18-8 Stainless Steel, 2mm Diameter, 16mm Long	661165884258
24	1	788426		KV016-24	Twisting Spring, Housing	661165884265
25	4	788310	McMaster 97358A101	K500-1	Rivet = Low-Profile Flat Head Solid Rivets, 0.119" Diameter, for 0.16" Maximum Material Thickness	661165883107
26	1	788447		KV010-26	Name Plate	661165884470
27	1	788235		KV016-27A	Bolt For Handle	661165882353
	1	788428		KV010-27B	Nut For Handle	661165884289
28	1	788429		KV010-28	Rubber Grip	661165884296
29	1	788430		KV025-29	Spring	661165884302
30	1	788431		KV016-30	Spring Shaft	661165884319
31	1	788432		KV016-31	Change Over Pawl	661165884326
32	2	788433	McMaster 90592A016	KV016-32	Hex Nut = Steel Hex Nut, Medium-Strength, Class 8, M6 x 1 mm Thread	661165884333
	2	788419	McMaster 93279A100	K025-3B	Lock Washer = Blue-Dyed Steel Split Lock Washer for M6 Screw Size, 6.2 mm ID, 12.1 mm OD	661165884197
33	2	788434	McMaster 90967A155	KV016-33	Snap Ring = External Retaining Ring for 9 mm OD, DIN 1.4122 Stainless Steel	661165884340
34	2	788435		KV016-34	Pawl	661165884357
35	2	788436		KV016-35	Pawl Spring	661165884364
36	1	788437		KV010-36	Stripper	661165884371
37	As Req'd Per Foot	788438		Φ5.6x15.7	Load Chain	661165884388
38	1	788439		KV010-38	Chain Stop	661165884395
39	1	788406		KV010-39	Bottom Hook Assembly	661165884067
	1	788441		KV010-40	Load Pin	661165884418
40	1	788442	McMaster 90576A115	KV016-40B	Lock Nut = Medium-Strength Steel Nylon-Insert Locknut, Class 8, Zinc-Plated, M6 x 1 mm Thread	661165884425
41	2	788443		KV010-41	Guide Roller	661165884432
42	1	788444		KV010-42	Load Sheave	661165884449
43	0				Socket Cap Screw	
44	0				Load Pin	
45	0				Lock Nut	
	0				Lock Nut	
46	0				Lock Washer	
	0				Lock Washer	
47	0				Cylinder Pin	
	0				Cylinder Pin	
48	0				Needle Bearing	
	0				Needle Bearing	
49	0				Idle Shaft	
	0				Idle Shaft	
50	0				Idle Sheave	
	0				Idle Sheave	

REPLACEMENT PARTS

PLH160WO	Qty	Stock #	Reference	MODEL	DESCRIPTION	UPC
1	1	788448		KV016-1	Gear Cover Assembly	661165884487
2	2	788449		KV016-2	Spur Gear Assembly	661165884494
3	1	788450		KV016-3	Drive Shaft	661165884500
4	1	788451		KV016-4	Load Gear	661165884517
5	1	788452		KV016-5	Gear Side Plate Assembly	661165884524
6	2	788453		Ø30xØ40x13	Caged Roller Bearings	661165884531
7	1	788454		KV016-39	Top Hook Shaft	661165884548
8	2	788455		KV016-8	Casting Safety Latch Assembly	661165884555
9	1	788456		KV016-9	Top Hook Assembly	661165884562
10	1	788457		KV016-10	Lever Side Plate Assembly	661165884579
11	1	788410		KV016-11	Disc Hub	661165884104
12	1	788411		KV016-12	Ratchet Disc	661165884111
13	1	788458		KV016-13	Brake Cover Assembly	661165884586
14	8	788413	McMaster 93279A200	K300-3B	Lock Washer = Blue-Dyed Steel Split Lock Washer for M8 Screw Size, 8.2 mm ID, 15.2 mm OD	661165884135
	8	788414	McMaster 99164A102	K300-3A	Acorn Nut = High-Strength Steel Cap Nut, Class 10, Zinc-Plated, M8 x 1.25 mm Thread	661165884142
15	0	788415		KV016-15	Change Over Gear	
15L	1	788459		KV016-15L	Overload Limiter Assembly	661165884593
16	1	788460		KV016-16	Lever Handle Assembly	661165884609
17	1	788418	McMaster 91280A324	KV016-17	Hex Head Cap Screw = Medium-Strength Class 8.8 Steel Hex Head Screw, Zinc-Plated, M6 x 1 mm Thread, 12 mm Long	661165884180
	1	788419	McMaster 93279A100	K025-3B	Lock Washer = Blue-Dyed Steel Split Lock Washer for M6 Screw Size, 6.2 mm ID, 12.1 mm OD	661165884197
18	1	788420		KV016-18	Cam	661165884203
19	1	788421		KV016-19	Twisting Spring I	661165884210
20	1	788422		KV016-20	Hand Wheel	661165884227
21	1	788423		KV016-21	Twisting Spring II	661165884234
22	1	788424	McMaster 993760A222	KV016-22	Castle Nut = Steel Locknut for Use with Cotter Pins, Medium-Strength, Zinc-Plated, Class 8, M8 x 1.25 mm Thread	661165884241
23	1	788425	McMaster 98350A316	K300-32B	Split Pin = Split Pin = Cotter Pin, 18-8 Stainless Steel, 2mm Diameter, 16mm Long	661165884258
24	1	788426		KV016-24	Twisting Spring Housing	661165884265
25	4	788310	McMaster 97358A101	K500-1	Rivet = Low-Profile Flat Head Solid Rivets, 0.119" Diameter, for 0.16" Maximum Material Thickness	661165883107
26	1	788461		KV016-26	Name Plate	661165884616
27	1	788235		KV016-27A	Bolt For Handle	661165882353
	1	788428		KV010-27B	Nut For Handle	661165884289
28	1	788462		KV016-28A	Rubber Grip	661165884623
29	1	788430		KV025-29	Spring	661165884302
30	1	788431		KV016-30	Spring Shaft	661165884319
31	1	788432		KV016-31	Change Over Pawl	661165884326
32	2	788433	McMaster 90592A016	KV016-31	Hex Nut = Steel Hex Nut, Medium-Strength, Class 8, M6 x 1 mm Thread	661165884333
	2	788419	McMaster 93279A100	K025-3B	Lock Washer = Blue-Dyed Steel Split Lock Washer for M6 Screw Size, 6.2 mm ID, 12.1 mm OD	661165884197
33	2	788434	McMaster 90967A155	KV016-32	Snap Ring = External Retaining Ring for 9 mm OD, DIN 1.4122 Stainless Steel	661165884340
34	2	788435		KV016-34	Pawl	661165884357
35	2	788436		KV016-35	Pawl Spring	661165884364
36	1	788463		KV016-36	Stripper	661165884630
37	As Req'd Per Foot	788464		Ø7.1x19.9	Load Chain	661165884647
38	1	788465		KV016-38	Chain Stop	661165884654
39	1	788454		KV016-39	Bottom Hook Assembly	661165884548
	1	788441		KV010-40	Load Pin	661165884418
40	1	788442	McMaster 90576A115	KV016-40B	Lock Nut = Medium-Strength Steel Nylon-Insert Locknut, Class 8, Zinc-Plated, M6 x 1 mm Thread	661165884425
41	2	788466		KV016-41	Guide Roller	661165884661
42	1	788467		KV016-42	Load Sheave	661165884678
43	0				Socket Cap Screw	
44	0				Load Pin	
45	0				Lock Nut	
46	0				Lock Nut	
	0				Lock Washer	
47	0				Cylinder Pin	
48	0				Needle Bearing	
49	0				Idle Shaft	
50	0				Idle Sheave	

REPLACEMENT PARTS

PLH320WO	Qty	Stock #	Reference	MODEL	DESCRIPTION	UPC
1	1	788468		KV032-1	Gear Cover Assembly	661165884685
2	2	788469		KV032-2	Spur Gear Assembly	661165884692
3	1	788470		KV032-3	Drive Shaft	661165884708
4	1	788471		KV032-4	Load Gear	661165884715
5	1	788472		KV032-5	Gear Side Plate Assembly	661165884722
6	2	788473		Ø40xØ50x13	Caged Roller Bearings	661165884739
7	1	788474		KV032-39	Top Hook Shaft	661165884746
8	2	788475		KV032-8	Casting Safety Latch Assembly	661165884753
9	1	788476		KV032-9	Top Hook Assembly	661165884760
10	1	788477		KV032-10	Lever Side Plate Assembly	661165884777
11	1	788478		KV032-11	Disc Hub	661165884784
12	1	788479		KV032-12	Ratchet Disc	661165884791
13	1	788480		KV032-13	Brake Cover Assembly	661165884807
14	8	788413	McMaster 93279A200	K300-3B	Lock Washer = Blue-Dyed Steel Split Lock Washer for M8 Screw Size, 8.2 mm ID, 15.2 mm OD	661165884135
	8	788414	McMaster 99164A102	K300-3A	Acorn Nut = High-Strength Steel Cap Nut, Class 10, Zinc-Plated, M8 x 1.25 mm Thread	661165884142
15	0	788481		KV032-15	Change Over Gear	
15L	1	788482		KV032-15L	Overload Limiter Assembly	661165884821
16	1	788483		KV032-16	Lever Handle Assembly	661165884838
	1	788484		KV032-17	Hex Cap Screw	661165884845
17	1	788413	McMaster 93279A200	K300-3B	Lock Washer = Blue-Dyed Steel Split Lock Washer for M8 Screw Size, 8.2 mm ID, 15.2 mm OD	661165884135
18	1	788485		KV032-18	Cam	661165884852
19	1	788486		KV032-19	Twisting Spring I	661165884869
20	1	788487		KV032-20	Hand Wheel	661165884876
21	1	788488		KV032-21	Twisting Spring II	661165884883
22	1	788489		KV032-22	Castle Nut	661165884890
23	1	788425	McMaster 98350A316	K300-32B	Split Pin = Split Pin = Cotter Pin, 18-8 Stainless Steel, 2mm Diameter, 16mm Long	661165884258
24	1	788490		KV032-24A	Twisting Spring Housing	661165884906
25	4	788310	McMaster 97358A101	K500-1	Rivet = Low-Profile Flat Head Solid Rivets, 0.119" Diameter, for 0.16" Maximum Material Thickness	661165883107
26	1	788491		KV032-26	Name Plate	661165884913
27	1	788235		KV016-27A	Bolt For Handle	661165882353
	1	788492		KV032-27B	Nut For Handle	661165884920
28	1	788493		KV032-28A	Rubber Grip	661165884937
29	1	788494		KV032-29	Spring	661165884944
30	1	788495		KV032-30	Spring Shaft	661165884951
31	1	788496		KV032-31	Change Over Pawl	661165884968
32	2	788497	McMaster 90576A117	KV032-32	Hex Nut	661165884975
	2	788413	McMaster 93279A200	K300-3B	Lock Washer = Blue-Dyed Steel Split Lock Washer for M8 Screw Size, 8.2 mm ID, 15.2 mm OD	661165884135
33	2	788498	McMaster 98541A445	KV032-33	Snap Ring = External Retaining Ring for 11 mm OD, Black-Phosphate 1060-1090 Spring Steel	661165884982
34	2	788499		KV032-34	Pawl	661165884999
35	2	788500		KV032-35	Pawl Spring	661165885002
36	1	788501		KV032-36	Stripper	661165885019
37	As Req'd Per Foot	788502		Ø10x28	Load Chain	661165885026
38	1	788503		KV032-38	Chain Stop	661165885033
39	1	788474		KV032-39	Bottom Hook Assembly	661165884746
	1	788504		KV032-39	Load Pin	661165885040
40	1	788505	McMaster 90576A118	K500-53A	Lock Nut - Medium-Strength Steel Nylon-Insert Locknut, Class 8, Zinc-Plated, M10 x 1.5 mm Thread	661165885057
41	2	788506		KV032-41	Guide Roller	661165885064
42	1	788507		KV032-42	Load Sheave	661165885071
43	0				Socket Cap Screw	
44	0				Load Pin	
45	0				Lock Nut	
46	0				Lock Nut	
	0				Lock Washer	
47	0				Cylinder Pin	
48	0				Needle Bearing	
49	0				Idle Shaft	
50	0				Idle Sheave	

REPLACEMENT PARTS

PLH630WO	Qty	Stock #	Reference	MODEL	DESCRIPTION	UPC
1	1	788468		KV032-1	Gear Cover Assembly	661165884685
2	2	788469		KV032-2	Spur Gear Assembly	661165884692
3	1	788470		KV032-3	Drive Shaft	661165884708
4	1	788471		KV032-4	Load Gear	661165884715
5	1	788472		KV032-5	Gear Side Plate Assembly	661165884722
6	2	788508		Ø340xØ50x13	Caged Roller Bearings	661165885088
7	1	788474		KV032-39	Top Hook Shaft	661165884746
8	2	788509		KV063-8	Casting Safety Latch Assembly	661165885095
9	1	788510		KV063-9	Top Hook Assembly	661165885101
10	1	788477		KV032-10	Lever Side Plate Assembly	661165884777
11	1	788478		KV032-11	Disc Hub	661165884784
12	1	788479		KV032-12	Ratchet Disc	661165884791
13	1	788480		KV032-13	Brake Cover Assembly	661165884807
14	8	788413	McMaster 93279A200	K300-3B	Lock Washer = Blue-Dyed Steel Split Lock Washer for M8 Screw Size, 8.2 mm ID, 15.2 mm OD	661165884135
	8	788414	McMaster 99164A102	K300-3A	Acorn Nut = High-Strength Steel Cap Nut, Class 10, Zinc-Plated, M8 x 1.25 mm Thread	661165884142
15	0	788481		KV032-15	Change Over Gear	
15L	1	788482		KV032-15L	Overload Limiter Assembly	661165884821
16	1	788483		KV032-16	Lever Handle Assembly	661165884838
	1	788484		KV032-16	Hex Cap Screw	661165884845
17	1	788413	McMaster 93279A200	K300-3B	Lock Washer = Blue-Dyed Steel Split Lock Washer for M8 Screw Size, 8.2 mm ID, 15.2 mm OD	661165884135
18	1	788485		KV032-18	Cam	661165884852
19	1	788486		KV032-19	Twisting Spring I	661165884869
20	1	788487		KV032-20	Hand Wheel	661165884876
21	1	788488		KV032-21	Twisting Spring II	661165884883
22	1	788489	Available only from VITALU-INTL	KV032-22	Castle Nut	661165884890
23	1	788425	McMaster 98350A316	K300-32B	Split Pin = Split Pin = Cotter Pin, 18-8 Stainless Steel, 2mm Diameter, 16mm Long	661165884258
24	1	788490		KV032-24A	Twisting Spring, Housing	661165884906
25	4	788310	McMaster 97358A101	K500-1	Rivet = Low-Profile Flat Head Solid Rivets, 0.119" Diameter, for 0.16" Maximum Material Thickness	661165883107
26	1	788511		KV063-26	Name Plate	661165885118
27	1	788235	Available only from VITALU-INTL	M3.5x6	Bolt For Handle	661165882353
	1	788492	Available only from VITALU-INTL	M3.5x27	Nut For Handle	661165884920
28	1	788512		KV032-28A	Rubber Grip	661165885125
29	1	788494		KV032-29	Spring	661165884944
30	1	788495		KV032-30	Spring Shaft	661165884951
31	1	788496		KV032-31	Change Over Pawl	661165884968
32	2	788497	McMaster 90576A117	KV032-32	Hex Nut	661165884975
	2	788413	McMaster 93279A200	K300-3B	Lock Washer = Blue-Dyed Steel Split Lock Washer for M8 Screw Size, 8.2 mm ID, 15.2 mm OD	661165884135
33	2	788498	McMaster 98541A445	KV032-33	Snap Ring = External Retaining Ring for 11 mm OD, Black-Phosphate 1060-1090 Spring Steel	661165884982
34	2	788499		KV032-34	Pawl	661165884999
35	2	788500		KV032-35	Pawl Spring	661165885002
36	1	788501		KV032-36	Stripper	661165885019
37	As Req'd Per Foot	788502		Ø10x28	Load Chain	661165885026
38	1	788503		KV032-38	Chain Stop	661165885033
39	1	788513		KV063-39	Bottom Hook Assembly	661165885132
40	0	788309		N/A	Lock Nut	
	0	788309		N/A	Load Pin	
41	2	788506		KV032-41	Guide Roller	661165885064
42	1	788507		KV032-42	Load Sheave	661165885071
43	6	788399	McMaster 91280A634	M10x30	Hex Head Cap Screw = Medium-Strength Class 8.8 Steel Hex Head Screw, Zinc-Plated, M10 x 1.5 mm Thread, 30 mm Long	661165883992
	0	788309		N/A	Load Pin	
44	1	788514		KV063-45	Load Pin	661165885149
45	1	788505	McMaster 90576A118	K500-53A	Lock Nut - Medium-Strength Steel Nylon-Insert Locknut, Class 8, Zinc-Plated, M10 x 1.5 mm Thread	661165885057
46	6	788505	McMaster 90576A118	K500-53A	Lock Nut - Medium-Strength Steel Nylon-Insert Locknut, Class 8, Zinc-Plated, M10 x 1.5 mm Thread	661165885057
	0	788309		N/A		
	2	788515		Ø8x18		661165885156
	0	788309		N/A	Cylinder Pin	
48	29	788516		Ø3x40	Needle Bearing	661165885163
	0	788309		N/A		
49	1	788517		KV063-50	Idle Shaft	661165885170
	0	788309		N/A		
	1	788518		KV063-51	Idle Sheave	661165885187
50	0	788309		N/A		

REPLACEMENT PARTS

PLH900WO	Quantity	Stock #	Reference	MODEL	DESCRIPTION	UPC
1	1	788468		KV032-1	Gear Cover Assembly	661165884685
2	2	788469		KV032-2	Spur Gear Assembly	661165884692
3	1	788470		KV032-3	Drive Shaft	661165884708
4	1	788471		KV032-4	Load Gear	661165884715
5	1	788472		KV032-5	Gear Side Plate Assembly	661165884722
6	2	788508		Ø340xØ50x13	Caged Roller Bearings	661165885088
7	1	788474		KV032-39	Top Hook Shaft	661165884746
8	2	788519		KV090-8	Casting Safety Latch Assembly	661165885194
9	1	788520		KV090-9	Top Hook Assembly	661165885200
10	1	788477		KV032-10	Lever Side Plate Assembly	661165884777
11	1	788478		KV032-11	Disc Hub	661165884784
12	1	788479		KV032-12	Ratchet Disc	661165884791
13	1	788480		KV032-13	Brake Cover Assembly	661165884807
14	8	788413	McMaster 93279A200	K300-3B	Lock Washer = Blue-Dyed Steel Split Lock Washer for M8 Screw Size, 8.2 mm ID, 15.2 mm OD	661165884135
	8	788414	McMaster 99164A102	K300-3A	Acorn Nut = High-Strength Steel Cap Nut, Class 10, Zinc-Plated, M8 x 1.25 mm Thread	661165884142
15	0	788481		KV032-15	Change Over Gear	
15L	1	788482		KV032-15L	Overload Limiter Assembly	661165884821
16	1	788483		KV032-16	Lever Handle Assembly	661165884838
	1	788484		KV032-17	Hex Cap Screw	661165884845
17	1	788413	McMaster 93279A200	K300-3B	Lock Washer = Blue-Dyed Steel Split Lock Washer for M8 Screw Size, 8.2 mm ID, 15.2 mm OD	661165884135
18	1	788485		KV032-18	Cam	661165884852
19	1	788486		KV032-19	Twisting Spring I	661165884869
20	1	788487		KV032-20	Hand Wheel	661165884876
21	1	788488		KV032-21	Twisting Spring II	661165884883
22	1	788489		KV032-22	Castle Nut	661165884890
23	1	788425	McMaster 98350A316	K300-32B	Split Pin = Split Pin = Cotter Pin, 18-8 Stainless Steel, 2mm Diameter, 16mm Long	661165884258
24	1	788490		KV032-24A	Twisting Spring, Housing	661165884906
25	4	788310	McMaster 97358A101	K500-1	Rivet = Low-Profile Flat Head Solid Rivets, 0.119" Diameter, for 0.16" Maximum Material Thickness	661165883107
26	1	788521		KV090-26	Name Plate	661165885217
27	1	788235		M3.5x6	Bolt For Handle	661165882353
	1	788492		M3.5x27	Nut For Handle	661165884920
28	1	788512		KV032-28A	Rubber Grip	661165885125
29	1	788494		KV032-29	Spring	661165884944
30	1	788495		KV032-30	Spring Shaft	661165884951
31	1	788496		KV032-31	Change Over Pawl	661165884968
32	2	788497	McMaster 90576A117	KV032-32	Hex Nut	661165884975
	2	788413	McMaster 93279A200	K300-3B	Lock Washer = Blue-Dyed Steel Split Lock Washer for M8 Screw Size, 8.2 mm ID, 15.2 mm OD	661165884135
33	2	788498	McMaster 98541A445	KV032-33	Snap Ring = External Retaining Ring for 11 mm OD, Black-Phosphate 1060-1090 Spring Steel	661165884982
34	2	788499		KV032-34	Pawl	661165884999
35	2	788500		KV032-35	Pawl Spring	661165885002
36	1	788501		KV032-36	Stripper	661165885019
37	As Req'd Per Foot	788502		Ø10x28	Load Chain	661165885026
38	1	788503		KV032-38	Chain Stop	661165885033
39	1	788522		KV090-39	Bottom Hook Assembly	661165885224
	1	788523		KV090-40	Load Pin	661165885231
40	1	788505	McMaster 90576A118	K500-53A	Lock Nut - Medium-Strength Steel Nylon-Insert Locknut, Class 8, Zinc-Plated, M10 x 1.5 mm Thread	661165885057
41	2	788506		KV032-41	Guide Roller	661165885064
42	1	788507		KV032-42	Load Sheave	661165885071
	0	788309		N/A	Socket Cap Screw = High-Strength Flanged Hex Head Screw, Class 10.9 Steel, M10 x 1.5 mm Thread, 35 mm	661165885248
	5	788524	McMaster 98095A629	M10X35	Load Pin	
44	0	788309		N/A	Lock Nut	
45	0	788309		N/A	Lock Nut	
	0	788309		N/A	Lock Nut	
46	5	788505	McMaster 90576A118	K500-53A	Lock Nut - Medium-Strength Steel Nylon-Insert Locknut, Class 8, Zinc-Plated, M10 x 1.5 mm Thread	661165885057
	0	788309		N/A		
	4	788525		Ø 8x18	Cylinder Pin	661165885255
48	0	788309		N/A	Needle Bearing	
	58	788516		Ø3x40		661165885163
	0	788309		N/A		
49	2	788517		KV063-50	Idle Shaft	661165885170
	0	788309		N/A		
50	2	788518		KV063-51	Idle Sheave	661165885187

WARRANTY ON SUMNER EQUIPMENT

What Does This Warranty Cover?

Limited Lifetime Warranty on Sumner Equipment

Under Sumner's Equipment Limited Lifetime Warranty, Sumner Manufacturing Co., LLC warrants that all Sumner Equipment will be free from manufacturer defects for a Limited Lifetime except for moving parts deemed consumables from the date of the original end user's purchase. Products deemed as consumable products, components and parts such as steel cables, rollers, bearings, wheels, lift mast sections components are excluded from this Limited Lifetime Warranty and are subject to One -Year Limited Warranty terms. Sumner electrical components are excluded from this Limited Lifetime Warranty and are subject to One -Year Limited Warranty terms. Under this Limited Lifetime Warranty, the following are also excluded, and Sumner will have no liability for any of the following: normal wear and tear resulting from product use and damage arising out of misuse, abuse, modification, and improper product maintenance. This warranty also does not cover Sumner's Equipment products that have been modified by any party other than Sumner or its authorized third-party designee. This Limited Lifetime Warranty is not transferrable to or enforceable by any person other than the product's original end user.

Three-Year Limited Warranty on Pallet Jacks and Hydraulic Tools

Under Sumner's 3-Year Limited Warranty, Sumner Manufacturing Co., LLC warrants that all Sumner Pallet Jacks and Hydraulic Tools will be free from manufacturer defects for a period of three (3) years from the date of the original end user's purchase. Under this Three-Year Limited Warranty for Pallet Jacks and Hydraulic Tools, the following are excluded and Sumner Manufacturing Co., LLC will have no liability for any of the following: normal wear and tear resulting from product use and damage arising out of misuse, abuse, modification, and improper product maintenance. This warranty also does not cover Pallet Jacks and Hydraulic Tools that have been modified by any party other than Sumner Manufacturing Co., LLC or its authorized third-party designee. This 3-Year Limited Warranty is not transferrable to or enforceable by any person other than the product's original end user.

One-Year Limited Warranty on All Products

Under Sumner's 1-Year Limited Warranty, Sumner Manufacturing Co., LLC warrants that all products will be free from manufacturer defects for a period of one-year from the date of the original end user's purchase. Under this 1-Year Limited Warranty, Sumner Manufacturing Co., LLC will have no liability for any of the following: normal wear and tear resulting from product use and damage arising out of misuse, abuse, modification, and improper product maintenance. This warranty also does not cover Sumner Equipment that has been modified by any party other than Sumner Manufacturing Co., LLC or its authorized third-party designee. This 1-Year Limited Warranty is not transferable to or enforceable by any person other than the product's original end user.

Exclusion of Incidental, Consequential, Indirect, Special and Punitive Damages

SUMNER MANUFACTURING CO. LLC MAKES NO WARRANTY THAT SUMNER MANUFACTURING CO. LLC PRODUCTS WILL BE MERCHANTABLE OR FIT FOR ANY PARTICULAR PURPOSE. SUMNER MAKES NO OTHER WARRANTY, EXPRESSED OR IMPLIED, OTHER THAN THE RELEVANT WARRANTY SPECIFICALLY SET FORTH IN THIS WARRANTY SECTION. SOUTHWIRE WILL NOT BE LIABLE FOR ANY INCIDENTAL, CONSEQUENTIAL, INDIRECT, SPECIAL, OR PUNITIVE DAMAGES FOR ANY BREACH OF THIS LIMITED LIFETIME WARRANTY.

Some states do not allow the exclusion or limitation of incidental or consequential damages, so the above limitation or exclusion may not apply to you.

Warranty Claim Information/How Do You Get Service?

For all warranty, customer service, and product return authorizations and inquiries, please contact Sumner at:

Sumner Manufacturing Co., LLC
7514 Alabonson Road
Houston, Texas 77088
Phone Number: 1.281.999.6900

Sumner – Canada
75 Saltman Drive, Unit 5
Cambridge, Ontario N3H 4R7
Phone Number: 1.519.651.5300

Sumner – U.K.
Unit 3 Kepton Road
Keytec 7 Business Park
Pershore Worcestershire
WR10 2TA, UK
Phone Number: +44 (0) 1386 556278

Sumner – Netherlands
Handelsweg 26
3881LS Putten
The Netherlands

Phone Number: +31 (0) 85 489 0284

1. All warranty claims must be approved by Sumner's Warranty Department prior to return of product. If Sumner determines that a product is defective, Sumner will, at its option, repair or replace defective products or defective product components, free of charge.
2. Upon approval, Sumner will issue a Product Return Authorization Form which will include instructions on how and where to return the product. **The product serial number and the original date of delivery must be set forth on the Product Return Authorization Form.**
3. Sumner will cover standard freight charges (Courier Ground rate) incurred in connection with products that Sumner ultimately determines to be defective.
4. All defective components and defective products that Sumner replaces under these Warranties will become Sumner's property and will be retained by Sumner.

Repair Your Product When it is Out of Warranty

Sumner is happy to provide information about where a purchaser can send a product for repair at consumers' own expense, please contact 1.281.999.6900 or visit www.sumner.com for more information about servicing for Sumner Products.