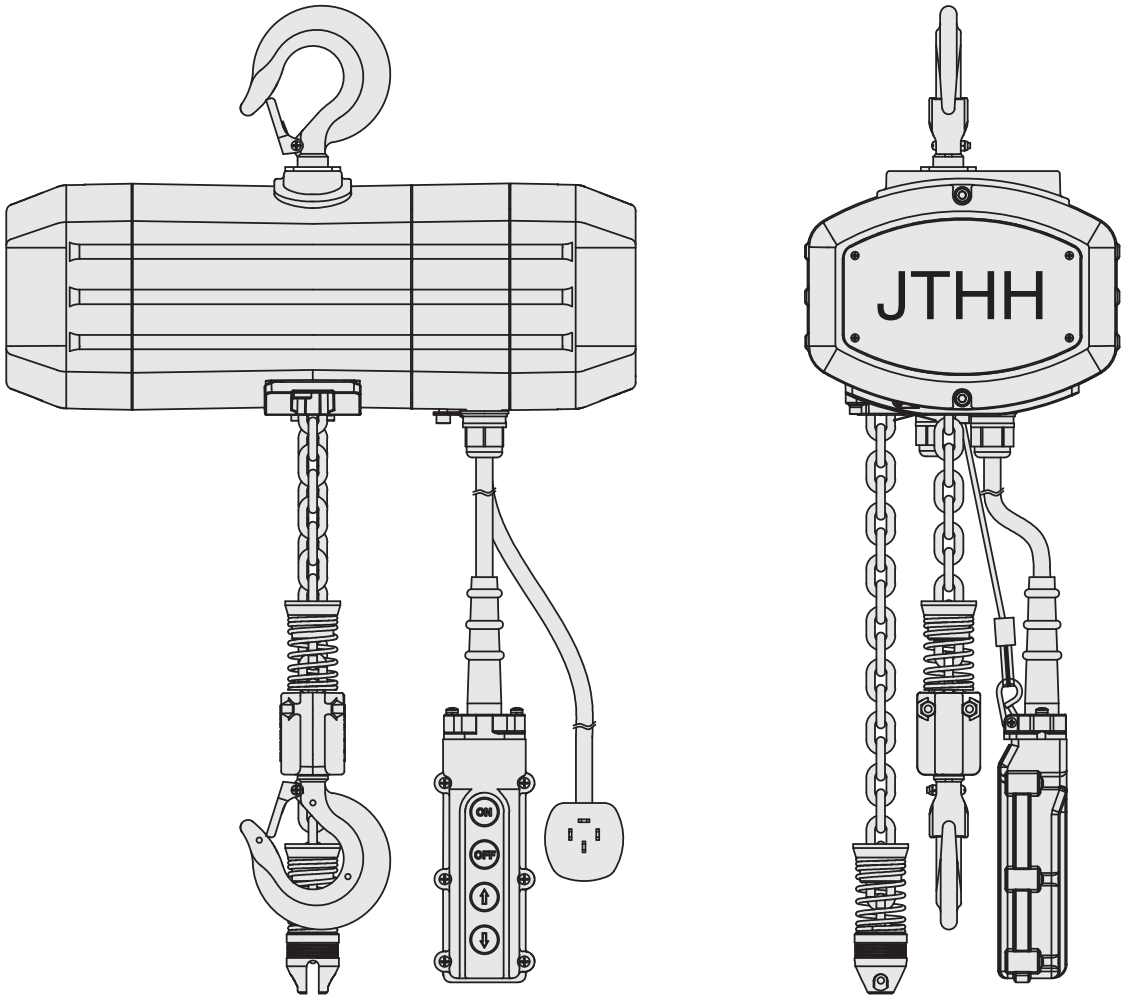
JTHH ProCraft Electric Chain Hoist

Single phase models

Operating instructions and parts manual



ProCraft®
Hoisting Products

Please read and save these instructions. Read carefully before attempting to assemble, install, operate or maintain the product described. Protect yourself and others by observing all safety information. Failure to comply with instructions could result in personal injury and/or property damage! Retain instructions for future reference.

ProCraft Electric Chain Hoists

Description

ProCraft electric chain hoists are rugged, portable hoists that provide quick, precise lifting. The hoists are constructed of tough, but lightweight, die cast Aluminium alloy housings. A transmission with heat-treated, alloy steel gears and an overload limiting clutch provides smooth and reliable operation.

With a pendant control box that fits comfortably in one hand, the operator can safely control the hoist while the other hand is free to guide the load. Other Features that ensure the safe operation of ProCraft electric chain hoists include a magnetic disc brake that delivers sure stopping and secure holding of the load.

ProCraft electric chain hoists are designed and tested in accordance with the American Society of Mechanical Engineers Code B30.16, “Safety Standard for Overhead Hoists.”

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ProCraft Electric Chain Hoists

WARNING

Improper operation of a hoist can create a potentially hazardous situation which, if not avoided, could result in death or serious injury. To avoid such a potentially hazardous situation, operator must observe the following precautions:

1. DO NOT operate a damaged, malfunctioning or unusually performing hoist
2. DO NOT operate the hoist until you have thoroughly read and understood this Operating Instructions and Parts Manual.
3. DO NOT operate a hoist which has been modified
4. DO NOT lift more than rated load for the hoist
5. DO NOT use hoist with twisted, kinked, damaged, or worn load chain
6. DO NOT use the hoist to lift, support, or transport people.
7. DO NOT lift loads over people.
8. DO NOT operate a hoist unless all persons are, and remain clear of the supported load.
9. DO NOT operate unless load is centred under hoist.
10. DO NOT attempt to lengthen the load chain or repair damaged load chain.
11. Protect the hoist's load chain from weld splatter or other damaging contaminants.
12. DO NOT operate hoist when it is restricted from forming a straight line from hook to hook in the direction of loading.
13. DO NOT use load chain as a sling, or wrap load chain around load.
14. DO NOT apply the load to the tip of the hook or to the hook latch.
15. DO NOT apply the load unless load chain is properly seated in the load sheave(s)
16. DO NOT apply load if bearing prevents equal loading on all load sheave(s).
17. DO NOT operate beyond the limits of load chain travel.
18. DO NOT leave the hoist unattended while energized or loaded.
19. DO NOT allow the load chain or hook to be used as an electrical or welding ground.
20. DO NOT allow the load chain or hook to be touched by a live welding electrodes.
21. DO NOT remove or obscure the warnings on the hoist.
22. DO NOT operate a hoist on which the safety placards or decals are missing or illegible.
23. DO NOT operate a hoist unless it has been securely attached to a suitable support.
24. DO NOT operate a hoist unless load slings or other approved single attachments are properly sized and seated in the hook saddle.
25. Take up slack carefully and make sure load is balanced and load holding action is secure before continuing.
26. Shut down a hoist that malfunctions or performs unusually and report such malfunction.
27. Make sure hoist limit devices function properly.
28. Warn personnel of an approaching load
29. Maintain a firm footing or be otherwise secured when operating the hoist.
30. Check brake function by tensioning the hoist prior to each lift operation.
31. Use hook latches, latches are to retain slings, Chains, etc. Under slack conditions only.
32. Make sure the hook latches are closed and not supporting any parts of the load.
33. Make sure the load is free to move and will clear all obstructions.
34. Avoid swinging the load or hook.
35. Make sure the hook travel is in the same direction as shown on the controls.

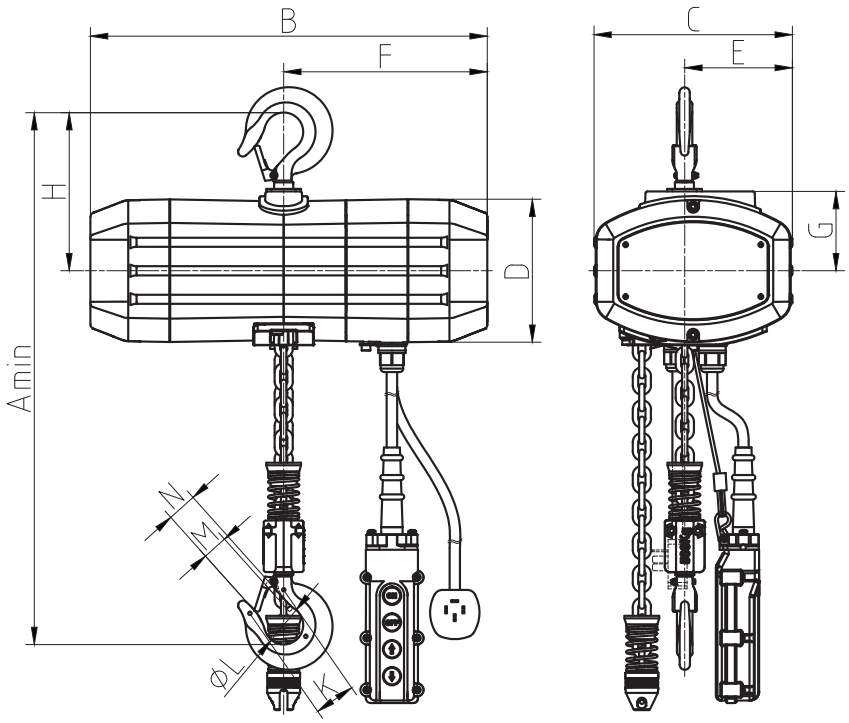
36. Inspect the hoist regularly, replace damaged or worn parts, and keep appropriate records of maintenance.
37. Use ProCraft parts when repairing the unit.
38. Lubricate load chain per instructions in this manual.
39. DO NOT use the hoist's overload limiting clutch to measure load.
40. DO NOT use the hoist's limit switches as routine operating stops. They are emergency devices only.
41. DO NOT allow your attention to be diverted from operating the hoist.
42. DO NOT allow the hoist to be subjected to sharp contact with other hoists, structures and objects through misuse.
43. DO NOT adjust or repair the hoist unless qualified to perform such adjustments or repairs

Specifications

Item		Specifications
Operating temperature		-20°C to + / - 40°C.
Protection insulation class	Hoist	IP 55
	Controller	IP 55
Power		1 phase 115V - 220V, 50/60Hz
Noise level		81db
Load level and service life		H4

H4 load level and service life
High-volume handling of heavy loads, frequently near rated load in steel warehousing, machine and fabricating shops, mills, and foundries, with total running time not more than 50% of the work period. Manual or automatic cycling operations of lighter loads with rated loads infrequently handled such as in heat treating and plating operations, with total running time frequently 50% of the work period.
Uniformly distributed work periods
30 minutes an hour maximum work time (50%) and 300 maximum number of starts
Infrequent work periods
30 minutes an hour maximum work time (50%) and 300 maximum number of starts

	Working conditions	Load	Time	Maintenance Interval (Months)	Expected Life (Working Hours)				
					800	1,600	3,200	6,300	12,500
Light	Light Mechanisms subjected normally to light loads and very rarely to the maximum load.			6 - 12	H1	H2	H3	H4	H5
Normal	Mechanisms subjected normally to moderate loads and frequently to the maximum load.	< 65%	< 25%	6 - 12	H2	H3	H4	H5	
Heavy	Mechanisms subjected normally to loads of heavy magnitude and frequently to the maximum load.	> 65%	> 25%	3 - 6	H3	H4	H5		
Severe	Mechanisms subjected regularly to the maximum load	Normal conditions environmental, geographical etc < 100% < Duty cycle limit		1 -3	H4	H5			



Model	Capacity Ton	Lifting Speed (ft / min)	Min. distance between hooks (inches)	Motor Power (kw)	Load continu-ity rate	Load chain d x p (mm)	Weight Pounds	Extra weight per foot (lbs)
91ELC-PRJT05201S	0.5	16	17.9	0.5	30 minutes (50%)	6.3 x 19	88.2	0.60
91ELC-PRJT10201S	1.0	16	21.5	1.30	30 minutes (50%)	8 x 24	149	0.95

Model	A	B	C	D	E	F	G	H	L	K	M	N
91ELC-PRJT05201S	17.7	18.6	9.0	6.5	4.9	9.3	3.6	6.6	1.6	1.8	1.1	1.2
91ELC-PRJT10201S	21.4	19.4	11.6	7.6	6.7	9.7	4.5	7.8	1.8	1.9	1.2	1.4

Standard height 20 feet
Frequency 60Hz
Using power single phase / 220 volt
The parameters listed in above table may change due to continuous improvement of products.

ProCraft JTHH Electric Chain Hoists

General Information

This hoist is intended for general industrial use for lifting and transporting freely suspended material loads within its rated capacity, prior to installation and operation, we caution the user to review his application for abnormal environmental or handling conditions and to observe the applicable recommendations as follows:

ADVERSE ENVIRONMENTAL CONDITIONS

Do not use the hoist in areas containing flammable vapours. Liquids, gases or any combustible dusts or fibres. Refer to Article 500 of the National Electrical Code, Do not use the hoist in highly corrosive, abrasive or wet environments, Do not use the hoist in applications involving extended exposure to ambient temperatures below -20°C or above 40°C.

LIFTING OF HAZARDOUS LOADS

This hoist is not recommended for use in lifting or transporting hazardous loads or materials which could cause widespread damage if dropped. The lifting of loads which could explode or create chemical or radioactive contamination if dropped requires fail-safe redundant supporting devices which are not incorporated into this hoist.

LIFTING OF GUIDE LOADS

This hoist is not recommended for use in the lifting of guided loads, including dumbwaiters and elevators, such applications require additional protective devices which are not incorporated into this hoist. Refer to your state and local regulations, governing the requirements for elevator and dumbwaiter installations.

Models JTHH

WARNING. Before installing, removing, inspecting, or performing any maintenance on the hoist, the main switch must be de-energized, locked out, and tagged out.

General Safety Information

1. Following all local electrical and safety code, as well as the National Electric Code (NEC) and the Occupational Safety and Healthy Act (OSHA) in the United States.
2. Hoist must be securely and adequately grounded, hoist power cable is provided with an additional lead (green) for ground purposes.
3. Be careful when touching the exterior of an operating motor, it may be hot enough to be painful or cause injury, with modern motors this condition is normal if operated at rated load and voltage, (modern motors are built to operate at higher temperatures).
4. Protect the power cable and control cable from coming in contact with sharp objects.
5.Do not kink power cable and control cable and never allow the cable to come in contact with oil, grease, hot surfaces or chemicals.

6. Make certain that power source conforms to the requirements of your equipment.
7. Inspect the unit daily before operating hoist
8. Cluttered areas and benches invite accidents.
9. The operator should not engage in any practice which will divert his attention while operating the hoist
10. Before using the hoist, the operator should be certain that all personnel are clear.
11. Do not operate hoist with loads exceeding its rated capacity.
12. Supporting frames or beams used as a hoist hanger must have a greater load capacity than the hoist.
13. Do not attempt to operate hoist beyond normal maximum lift range.
14. Align hoist for a straight line pull, avoid side pull or end pull.
15. Do not operate hoist with twisted or damaged chain.
16. Do not operate a damaged or malfunctioning hoist until necessary adjustments or repairs have been made.
17. Do not use hoist to lift people or to carry loads over people.
18. Do not leave a load suspended in the air unattended.
19. Always remove load before making repairs.
20. Do not remove or obscure capacity or warning decals.

Installation

1. Before installing the hoist, check the following:
a. Make sure all supporting structures and attaching devices are strong enough to hold your intended loads, if in doubt, consult a qualified structural engineer.
b. Provide proper branch circuit protection for the hoist as recommended in the National Electrical Code.
c. Power supply should be plus or minus 10% of the voltage specified on the nameplate, It is critical to use adequately sized power cables, especially with 1-phase hoists. Be sure dual voltage hoists are connected or wired to correspond with your supply.
d. The installation area must provide sate operating conditions for the operator, including sufficient room for the operator and other personnel to stand clear of the load at all times.
e. For installations where the slack chain hanging from the unit may be objectionable or hazardous, the use of a chain container is recommended. See INSTALLATION OF CHAIN CONTAINER ASSEMBLY.

2. Before operating the hoist, be sure to observe the following:
a. **ALWAYS DISCONNECT HOIST FROM POWER SUPPLY** before removing electrical cover or when making any electrical connection in the hoist or push button station.
b. The ground wire (green coloured) of the power cable should always be connected to a suitable ground by means of a screw or clamp. An alligator clip does not make a safe ground connection.
c. When installing a three-phase hoist, make only temporary connections at the power source. Push the “UP” button and observe the direction of the load block, if it raises, the phasing is correct and permanent connections may be made at the power source. If the load block lowers when the “UP” button is pushed, release the button immediately since the limit switches will not operate to protect the hoist from over-travel. Reverse any two wires (except the green ground wire) at the power source to correct the load hook direction(phasing). Do not change connections in the hoist or push button assembly.
d. Make sure load chain is not twisted as it travels into the hoist.

e. Operate hoist in a hanging position only. Hoist should be permitted to align itself for a straight line lift. Do not attempt to lift or pull around corners.
f. Read ASME-B30.16 Safety Code for Hoists.

3. Lubricate the chain if necessary.

INSTALLATION OF CHAIN CONTAINER ASSEMBLY (OPTIONAL ACCESSORY)

1. Run load hook down to its lowest position. Place the slack end of chain in chain container. Do not remove the chain stop.
2. Place the chain container flush against screw hole of housing. Insert the screw and washer.
3. Feed the remainder of chain into container by operating hoist in the "UP" direction to the top limit. This will permit the chain to pile freely and prevent the chain from kinking, which may occur if the chain is placed in the container by hand.

CAUTION Do not allow load to come in contact with the chain container.

Operation

OVERLOAD LIMITING PROTECTION

The hoist is equipped with a factory-calibrated overload limiting clutch that will permit the lifting of loads within its rated capacity, but will prevent the hoist from lifting damaging overloads. If the load being lifted exceeds the lifting capacity of the over load clutch, the hoist motor will continue to run, causing overheating of both the clutch and hoist motor. This condition should be avoided by immediately releasing the "UP" button and reducing the load to within the rated capacity of the hoist.

CAUTION The overload limiting clutch is an emergency protective device and should not be used to measure the maximum load to be lifted, or to sense the overload imposed by a constrained load. While the overload limiting clutch will protect he hoist from damaging overloads, it will not ensure that a load is within the rated capacity of the hoist.

SAFE OPERATION

The hoist is designed for safe operation within the limits of its rated capacity. It is controlled with the 2-button station. There are many safety features to protect the operator from injury due to failure of the hoist. Here are some points which should be observed to maintain safe operation.
1. Do not overload the hoist.
2. Do not make extreme side pulls with the hoist.
3. Operate the hoist only in a hanging position with adequate support.
4. Do not “sling” the load hook and chain around the load. Use an approved sling.
5. Be sure there are no twists in the load chain as it travels into the hoist housing. This condition should be constantly checked on double chain hoists because it is possible for the load block to be”capsized” or turned over one or more times.

6. Before raising a load, always check to see that it is held securely in the hook or sling chains, etc. Raise the load only until the load chain is taut and then double check the rigging before continuing to raise the load.
7. Do not stand beneath a load! Do not move a load in such a manner as to endanger personnel.
8. Don't lower into areas where visibility is obscured unless someone else is guiding the operation.
9. Use common sense at all times when operating a hoist.
10. Do not operate if direction of hook travel is not the same as indicated on button being pushed.
11. Do not operate unless hook travel limit devices function. Test without load each shift.
12. Do not operate when hoist is not centred over load.
13. Do not operate if chain is not seated properly in sprockets or sheave grooves.
14. Do not operate damaged or malfunctioning hoist.

WARNING Do not use hoist to lift, support or otherwise transport people.

TROUBLE SHOOTING CHART

Sympton	Possible Cause(s)	Corrective Action
Hook fails to stop at end of travel	1. Hoist reversing contactor malfunctioning	1. Remove electrical cover and check reversing contactor
Hoist does not respond to push button	1. Power failure in supply lines 2. Wrong voltage or frequency 3. Improper connections in hoist or push button 4. Rectifier damaged so that the brake won't work 5. Brake does not release 6. Faulty hoist reversing contactor 7. Fuse blow or circuit breaker tripped	1. Check circuit breakers, switches and connections in power supply lines 2. Check voltage and frequency of power supply against the rating on the nameplate of the motor 3. Check all connections at line connectors and on terminal block. Check terminal block on dual-voltage hoists for proper voltage connections. 4. Check the rectifier replace as needed. 5. Check connections to the solenoid coil. Check the rectifier. Check for proper adjustment (see BRAKE ADJUSTMENT) 6. Check coils for open or short circuit. Check all connections in control circuit. Check for burned contacts, replace as needed 7. Replace fuse/re-set circuit breaker
Hook does not stop promptly	1. Hoist overload 2. Brake not holding	1. Reduce load to within rated capacity of hoist 2. Check brake adjustment. It may be necessary to replace discs.
Hook moves in wrong direction	1. Three phase reversal 2. Improper connections	1. Reverse any two wires (except the green ground wire) at the power (see installation 2c) 2. Check all connections against wiring diagram

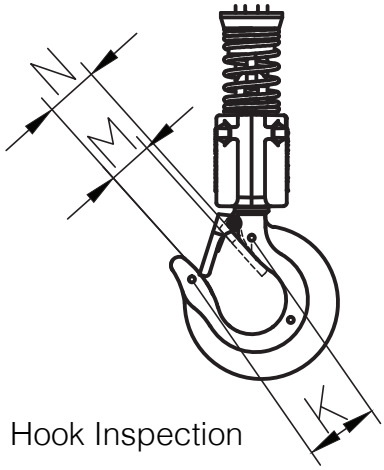
Sympton	Possible Cause(s)	Corrective Action
Hook raises but will not lower	1. “DOWN” circuit open 2. Broken conductor in push-button cable	1. Check circuit for loose connections, check “DOWN” limit switch for malfunction 2. Check each conductor in the cable. If one is broken, replace entire cable 3. Check coils for open circuit. Check all connections in control circuit. Check for burned contacts and replace as needed
Hook lowers but will not raise	1. Hoist overloaded. Overload clutch slipping 2. Low voltage 3. “UP” circuit open 4. Broken conductor in push button cable 5. Faulty hoist reversing contactor 6. Faulty capacitor (single phase hoist only)	1. Reduce load to within rated capacity 2. Ensure that the voltage at the reversing contactor is within +10% of the nominal voltage while lifting a load 3. Check circuit for loose connections. Check “UP” limit switch for malfunction. 4. Check each conductor in the cable. If one is broken replace entire cable 5. Check coils for open or short circuit, check all connections in control circuit. Check for burned contacts. Replace as needed.
Lack of proper lifting speed	1. Hoist overloaded. Overload clutch slipping 2. Brake dragging 3. Low voltage	1. Reduce load to within rated capacity 2. Check for proper brake adjustment or other defects 3. Ensure that the voltage at the reversing contactor is within +10% of the nominal voltage while lifting a load
Motor brake noise or chatter (while starting hoist)	1. Brake needs adjusting 2. Low voltage	1. See BRAKE ADJUSTMENT 2. Ensure that the voltage at the reversing contactor is within +10% of the nominal voltage while lifting a load
WARNING In all instances, remove load and disconnect hoist from power source		

INSPECTIONS

A planned inspection routine should be established for this hoist based upon frequency of use, severity of use, and environmental conditions. (Reference ASME Standard B30.16). Some inspections should be made frequently (daily to monthly) and others periodically (monthly to yearly). It is strongly recommended that an Inspection and Maintenance Check List be kept for each individual hoist.

All inspections should be performed or overseen by a designated inspector. Special inspections should be made following any significant repairs or any operating occurrence leading one to suspect that the hoist's capability may have been impaired.

HOOKS



Hook Inspection

1. Inspect hooks once daily for cracks, extreme wear (any wear exceeding 10% of the original section dimension of the hook or its load pin means the hook should be removed from service) or spreading. Replace hooks showing any of these signs. If the throat openings are spread wider than the maximum permissible 5% increase (or 1/4 inch), the hooks have been over stressed and must be replaced. Any hook that is bent or twisted more than 10 degrees from the plane of an unbent hook must also be replaced.

2. The hook latches should be inspected to ensure that they close the hook throat opening in a secure manner when a load is applied. Inspect the hooks shank and nut for any stripping of the threads or other damage. The hook nut should be fully restrained by the retaining pin.

Capacity	"K" Dimension Inches		"M" Dimension Inches		"N" Dimension Inches	
	New	Maximum permissible	New	Maximum permissible	New	Maximum permissible
1/2 ton	1.77	1.86	1.06	1.12	1.18	1.23
1 ton	1.93	2.03	1.22	1.28	1.42	1.49

3. In addition to the above, load hooks should be inspected for cracks by the magnetic particle, dye penetrant or other suitable crack testing inspection method. This should be done at the least once a year.

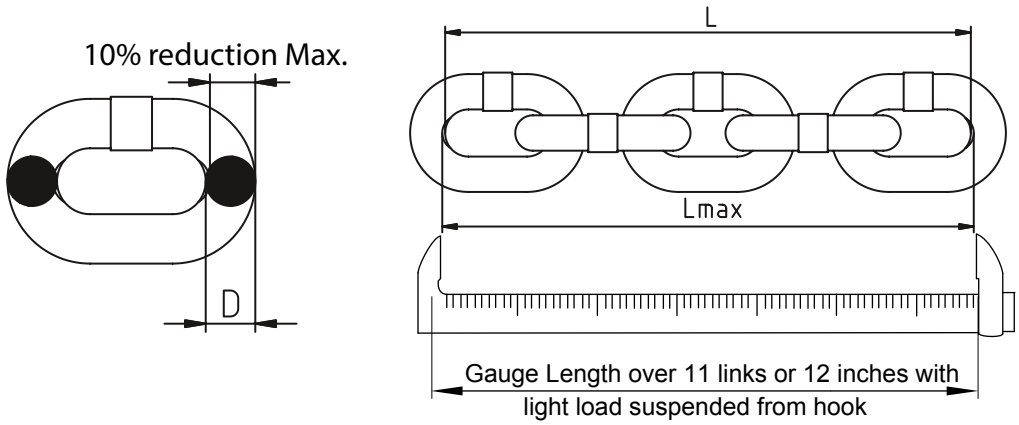
CHAIN

Chain is to be kept clean and lubricated. Visually check chain every time hoist is used. Hoist must not be operated when chain is twisted or kinked. An important phase of hoist maintenance is chain inspection. Check individual links and check for chain elongation.

1. Check the chain for overall wear or stretch by selecting an unworn, unstretched length of chain (at the slack end for example). Let the chain hang vertically with a light load (about 20 pounds) on the chain to pull it taut. Use a large calliper to measure the outside length of a convenient number of links (about 12 inches). Measure the same number of links in a used section of chain and calculate the percentage increase in length of the worn chain.

2. If the length of the worn chain is more than 1.5 % longer than the unused chain, then the chain should be replaced. If the chain is worn less than 1.5 %, check it at several more places along its length. If any section is worn more than 1.5 %, the chain should be replaced.

3. Check the chain links for wear, if the wire diameter anywhere on the link measures 10% less than the nominal wire diameter, the chain must be replaced.



CAUTION

The chain used on this hoist has very specific calibration dimensions and heat treatment suitable for this hoist. Do not attempt to substitute other manufacturer's chain.

Replacing Load Chain

Over time, the load chain will wear or elongate. This can cause damage to the hoist, breakage, or non-engagement of the load sheave. Load chain replacement should be performed by experienced personnel only.

CONTROLLER

Both the push button and the reversing contactor are mechanically interlocked to prevent shortening the circuit and causing damage. As part of maintenance and inspection, always check for proper closure of contact points as well for burned contacts.

Inspection Check List

INSPECTION AND MAINTENANCE CHECK LIST
ELECTRIC POWERED OVERHEAD CHAIN HOIST

Type of Hoist ..... Capacity .....

Location ..... Original installation date .....

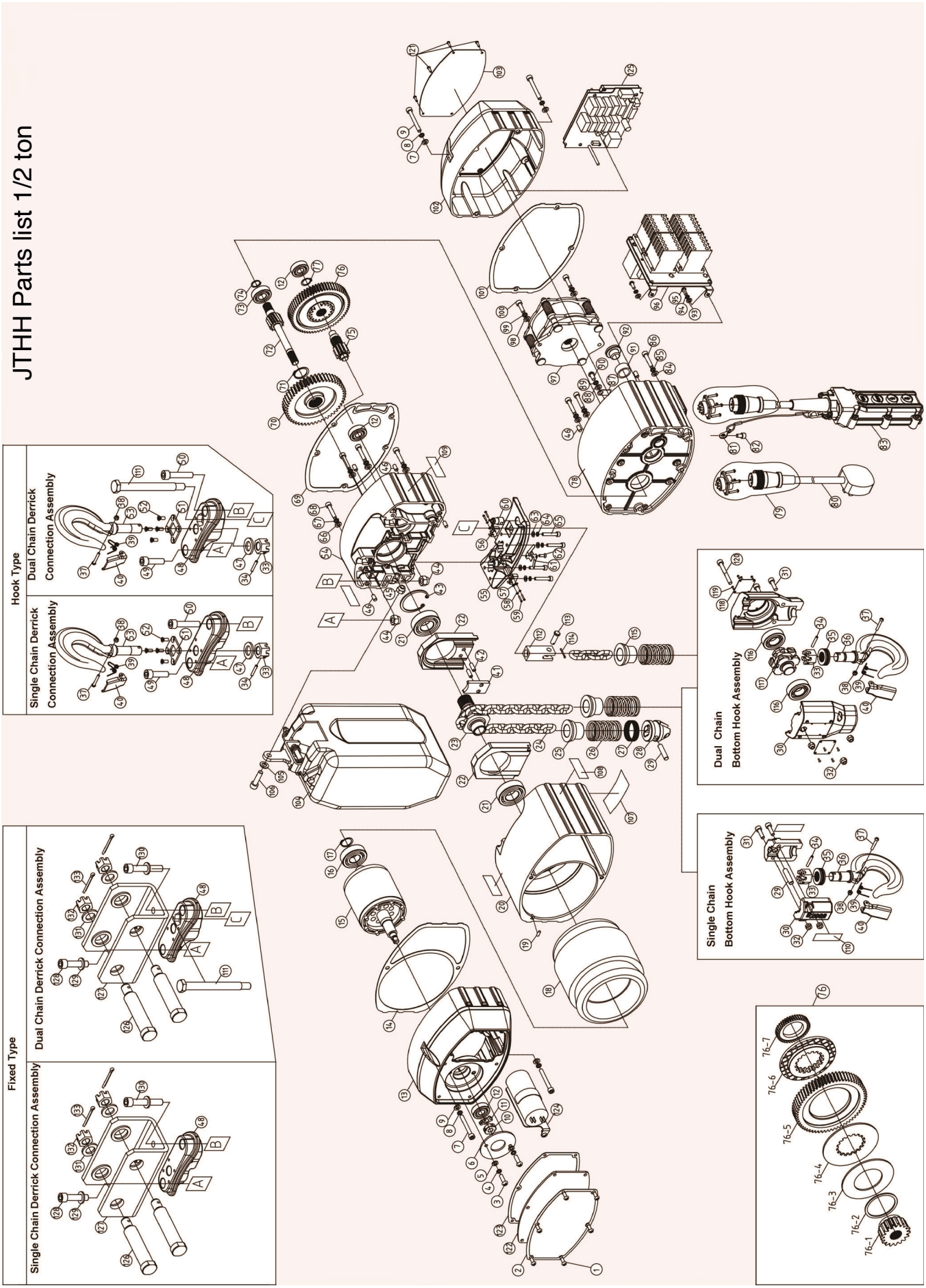
Model & Manufacturer..... Serial Number .....

Item	Frequency of Inspection			Possible Deficiencies	OK	Action Required
	Frequent		Periodic			
	Daily	Monthly	1-12 Mo.			
Operating Controls	*	*	*	Any deficiency causing improper operation		
Limit Switches	*	*	*	1. Any deficiency causing improper operations 2. Pitting or deterioration		
Brake Mechanism	*	*	*	1. Slippage 2. Glazing, contamination or excessive wear		
Hooks	*	*	*	Excessive throat opening by 5%, bent or twisted more than 10 Degrees from the plane, damaged hook latch, excessive wear or mechanical damage or Cracks (NDT test required)		
Suspension lug (if used)	*	*	*	Cracks (NDT Test Required), excessive wear or other damage which may impair the strength of the lug.		
Chain	*	*	*	Inadequate lubrication, excessive wear or stretch, cracked, damaged or twisted links, corrosion or foreign substances		
Hook & connection bar			*	Cracks, bending & stripped threads		
Pins, Bearings, Bushings, Shafts & Couplings			*	Excessive wear, corrosion, cracks & distortion		
Nuts & Bolts			*	Looseness, stripped or damaged threads & corrosion		
Sheaves			*	Cracks, distortion, excessive wear, build-up of foreign substances.		
Housing Load Block			*	Cracks, distortion, excessive wear, internal build-up of foreign substances.		
Wiring & Terminals			*	Fraying & defective insulation		
Contact Block, Hoist Reversing Contactor & other electrical components			*	Loose connections, burned or pitted contacts		
Supporting Structure & Trolley (if used)			*	Damage or wear which restricts ability to support imposed loads		
Nameplates, Decals & Warning Labels			*	Missing, damaged or illegible		
NOTE: Refer to maintenance and inspection sections of the hoists maintenance manual for further details						

FREQUENCY OF INSPECTION

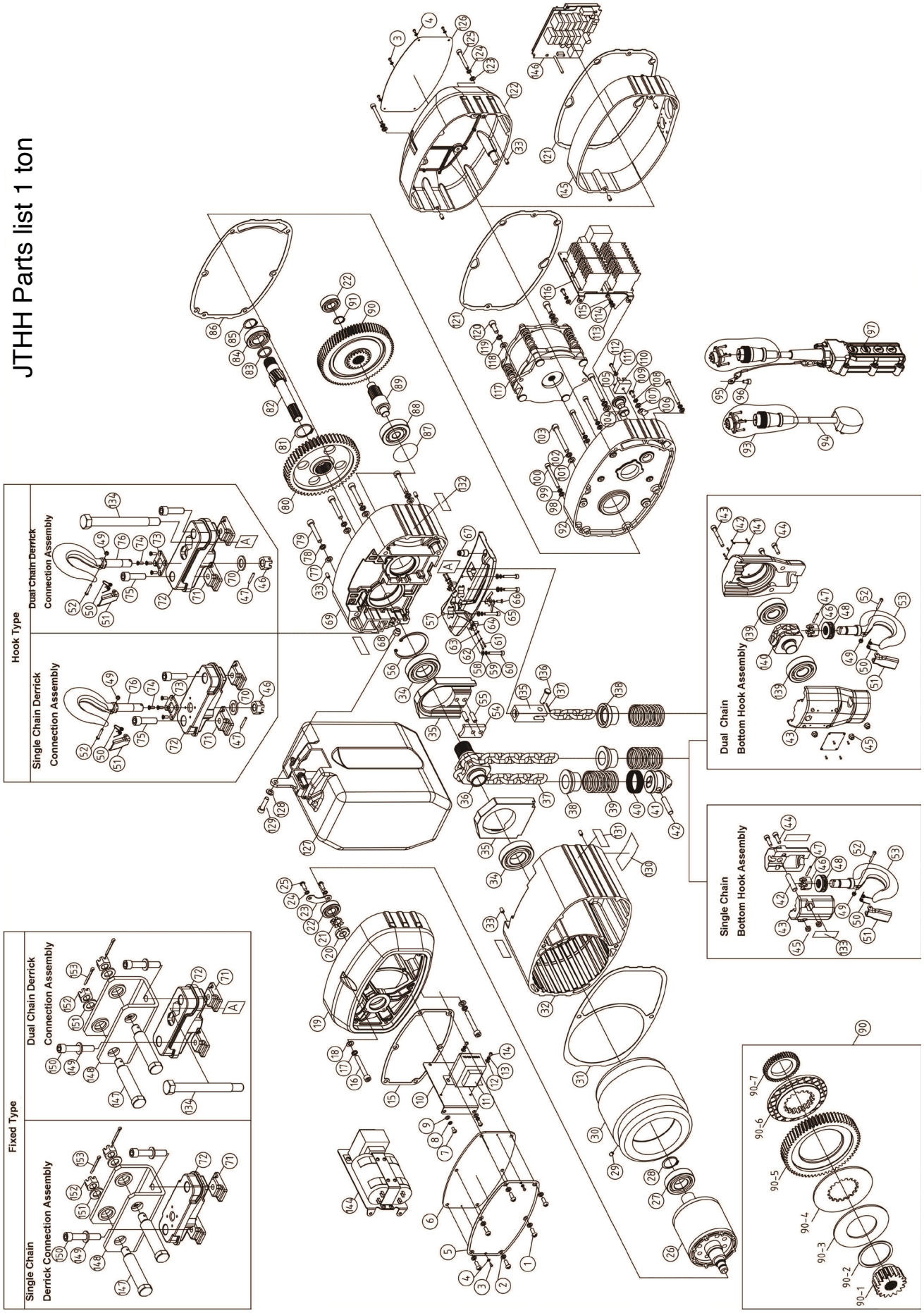
Frequent- Indicates items requiring inspection daily to monthly. Daily inspections may be performed by the operator if properly designated.
Periodic-Indicates items requiring inspection monthly to yearly. Inspections to be performed by or under the direction of a properly designated period. The exact period of inspection will depend on frequency and type of usage. Determination of this period will be based on the user's experience. It is recommended that the user begin with a monthly inspection and extend the periods to quarterly, semi-annually or annually based on user's monthly experience.

NOTE: This inspection and maintenance check list is in accordance with our interpretation of the requirements of the Safety Standard for Overhead Hoists ASME B30.16. It is, however, the ultimate responsibility of the employer/user to interpret and adhere to the applicable requirements of this safety standard.


JTHH Parts list 1/2 ton
Hook Type
Dual Chain Derrick Connection Assembly
Single Chain Derrick Connection Assembly
Fixed Type
Dual Chain Derrick Connection Assembly
Single Chain Derrick Connection Assembly
Dual Chain Bottom Hook Assembly
Single Chain Bottom Hook Assembly
76-1
76-2
76-3
76-4
76-5
76-6
76-7

No.	Description	Qty	No.	Description	Qty.	No.	Description	Qty.			
1	Cross disc head screw	6	38	Hexagon lock nuts	2	74	Washer	1	103	Nameplate	1
2	Nameplate	1	39	Dual spring	2	75	Gear shaft	1	104	Set chain bucket assembly	1
3	Cross disc head screw	2	40	Safety latches	2	76	Safety clutch assembly	1	105	Flat washer	1
4	Spring washers	2	41	Block chain block	1	76.1	Spline housing	1	106	Hexagon socket head cap screw	1
5	Small washers	2	42	Cylindrical pins	2	76.2	Adjust washer	1	107	Safety warning label	1
6	Block slice	1	43	Elastic retainer for hole	1	76.3	Butterfly spring	1	108	Logo label	2
7	Hexagon socket head cap screw	4	44	Hexagon lock nuts	2	76.4	Clutch support	1	109	Lifting weight logo	2
8	Spring washers	4	45	Hexagon lock nuts	2	76.5	Intermediate gear	1	110	Label	2
9	Small washers	4	46	Cylindrical pins	6	76.6	Clutch friction plate	1	121	Cross head disc screw	4
10	Round nut	1	47	Thrust washer	1	76.7	Adjusting round nut	1	122	Cover plate	1
11	Lock washer	1	48	Derrick connection(single fall)	1	77	Washer	1	123	Cover plate seal washer	1
12	Deep groove ball bearing	3	49	Hexagon socket head cap screw	1	78	Base	1	124	Hangar component	1
13	Electrical box cover	1	50	Hexagon socket head cap screw	1	79	Nylon cable waterproof clamping joint & aviation plug connector	2	125	Wireless remote built-in receiver circuit board (optional)	1
14	Electrical box sealing washer	1	51	Fixed plate	1	80	Power cord assembly	1	126	King pin	2
15	Motor rotor assembly	1	52	Cross disc head screws	4	81	Fastener	1	127	U-channel assembly	1
16	Deep groove ball bearing	1	53	Top hook	1	82	Hexagon socket head cap screw	1	128	Hexagon socket head cap screw	1
17	Washer	1	54	Gearbox	1	83	Control button assembly	1	129	Flat washer	2
18	Motor rotor assembly	1	55	Limit block	1	84	Small washers	3	130	Hexagon socket head cap screw	1
19	Cylindrical pin	1	56	Waterproof micro switches	2	85	Spring washers	3	131	Flat washer	2
20	Electrical box	1	57	Flat washers	4	86	Hexagon socket head cap screw	3	132	Hexagon slotted thin nut	2
21	Deep groove ball bearing	2	58	Spring washers	4	87	Grounding wire mark	1	133	Cotter pin	2
22	Chain guide	2	59	Cross disc head screws	4	88	Small washers	1			
23	Load chain wheel	1	60	Seal ring	1	89	Spring washers	1			
24	Load Chain	1	61	Leaf spring	1	90	Cross disc head screw	1			
25	Top piece of armour	2	62	Cross disc head screws	1	91	Copper set	1			
26	Limit Spring (single fall)	2	63	Small washers	4	92	Rubber plug	1			
27	Steel wire ring	1	64	Spring washers	4	93	Flat washer	2			
28	Tail chain block	2	65	Hexagon socket head cap screw	4	94	Spring washer	2			
29	Chain hoist pins	2	66	Small washers	4	95	Cross disc head screws	2			
30	Bottom hook housings	2	67	Spring washers	4	96	Electrical wiring board	1			
31	Hexagon socket head cap screw	2	68	Hexagon socket head cap screw	4	97	DC brake (spline hole)	1			
32	Hexagon lock nuts	2	69	Base seal washer	1	98	Small washer	2			
33	Hexagon slotted thin nuts	2	70	Lifting gear	1	99	Spring washer	2			
34	Elastic cylindrical pins	2	71	Washer	1	100	Hexagon socket head cap screw	2			
35	Thrust ball bearing	1	72	Pinion shaft	1	101	Base cover seal washer	1			
36	Bottom hook	1	73	Deep groove ball bearings	1	104	Base cover	1			
37	Cross disc head screws	2									

JTHH Parts list 1 ton



No.	Description	Qty	No.	Description	Qty.	No.	Description	Qty.			
1	Cross disc head screw	6	39	Limit spring (single fall)	2	77	Small washers	4	108	Spring washers	1
2	Flat washer	6	40	Steel wire ring	1	78	Spring washers	4	109	Cross disc head screw	1
3	Cross disc head screw	6	41	Tail chain block	1	79	Hexagon head socket cap screw	4	110	Rectifier 50A	1
4	Small washer	6	42	Chain hoist pin	2	80	Lifting gear	1	111	Flat washer	1
5	Name plate	1	43	Bottom hook housing	2	81	Washer	1	112	Cross disc head screw	1
6	Cover plate	1	44	Hexagon head socket cap screw	2	82	Pinion shaft	1	113	Flat washer	2
7	Cross disc head screw	2	45	Hexagon nut	2	83	Every ring	1	114	Spring washer	2
8	Spring washer	2	46	Hexagon slotted thin nut	2	84	Deep groove ball bearings	1	115	Cross disc head screw	2
9	Flat washer	2	47	Elastic cylindrical pin	2	85	Washer	1	116	Electrical wiring board assembly	1
10	Hanger	1	48	Thrust ball bearing	1	86	Base cover seal washer	1	117	Direct current brake	1
11	Transformer assembly	1	49	Hexagon nut	2	87	Cap	1	118	Small washer	2
12	Flat washer	2	50	Dual spring	2	88	Deep groove ball bearings	1	119	Spring washers	2
13	Spring washer	2	51	Safety latch	1	89	Gear shaft	1	120	Hexagon head socket cap screw	2
14	Cross disc head screw	2	52	Cross disc head screw	2	90	Safety clutch assembly	1	121	Base cover seal washer	2
15	Cover plate seal washer	1	53	Bottom hook	1	90.1	Spline housing	1	122	Base cover	1
16	Hexagon head socket cap screw	2	54	Block chain block	1	90.2	Adjusting washer	1	123	Small washer	2
17	Spring washers	2	55	Cylindrical pin	2	90.3	Butterfly spring	1	124	Spring washer	2
18	Small washers	2	56	Elastic retainer for hole	1	90.4	Clutch support	1	125	Hexagon head socket cap screw	2
19	Electrical box cover	1	57	Limit block	1	90.5	Intermediate gear	1	126	Name plate	1
20	Round nut	1	58	Flat washer	4	90.6	Clutch friction plate	1	127	Set chain bucket assembly	1
21	Lock washer	1	59	Spring washers	4	90.7	Adjusting round nut	1	128	Small washer	1
22	Deep groove ball bearing	2	60	Hexagon head socket cap screw	4	91	Washer	1	129	Hexagon head socket cap screw	1
23	Block slice	1	61	Cross disc head screw	4	92	Base	1	130	Safety warning label	1
24	Spring washer	2	62	Spring washers	4	93	Nylon cable waterproof clamping connector & aviation plug connector	2	131	Logo label	2
25	Cross disc head screw	2	63	Flat washer	4	94	Power cord assembly	1	132	Lifting weight logo	2
26	Motor rotor assembly	1	64	Waterproof micro switch	2	95	Fastener	1	133	Label	2
27	Deep groove ball bearings	1	65	Leaf spring	1	96	Hexagon head socket cap screw	1	144	Hanger component	1
28	Washer	1	66	Cross disc head screw	1	97	Control button assembly	1	145	Base	1
29	Cylindrical pin	1	67	Sealing ring	1	98	Small washer	4	146	Wireless remote built-in receiver (optional)	1
30	Motor rotor assembly	1	68	Hexagon lock nut	1	99	Spring washer	4	147	The king pin	2
31	Electrical box sealing washer	1	69	Gear box	1	100	Hexagon head socket cap screw	4	148	U-channel assembly	1
32	Electrical box	1	70	Thrust washers	1	101	Small washers	2	149	Flat washer	2
33	Cylindrical pin	6	71	Derrick nut	2	102	Spring washers	2	150	Hexagon head socket cap screw	2
34	Deep groove ball bearings	2	72	Derrick connection (single fall)	1	103	Hexagon head socket cap screw	2	151	Flat washer	2
35	Chain guide	2	73	Fixed plate	1	104	Copper set	1	152	Hexagon slotted thin nut	2
36	Load chain wheel	1	74	Cross disc head screw	4	105	Rubber plug	1	153	Cotter pin	2
37	Load chain	1	75	Hexagon head socket cap screw	2	106	Grounding wire mark	1			
38	The top piece of armour	2	76	Top hook	1	107	Small washers	1			

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Ratings shown in this catalogue are based upon the items being new or in “as new” condition. Strengths are shown in either working load limit or rated capacity which is the maximum load that should be applied to the product, or breaking strength where the product must be used with an appropriate design factor applied to calculate the rated capacity of the product. All details are correct at time of printing and specifications may change without notice. It is the customers responsibility to determine the suitability of the product to its intended use, including all industry regulations and guidelines. Careful inspection of any lifting and rigging product is highly recommended for any wear, deformation and misused prior to use.