

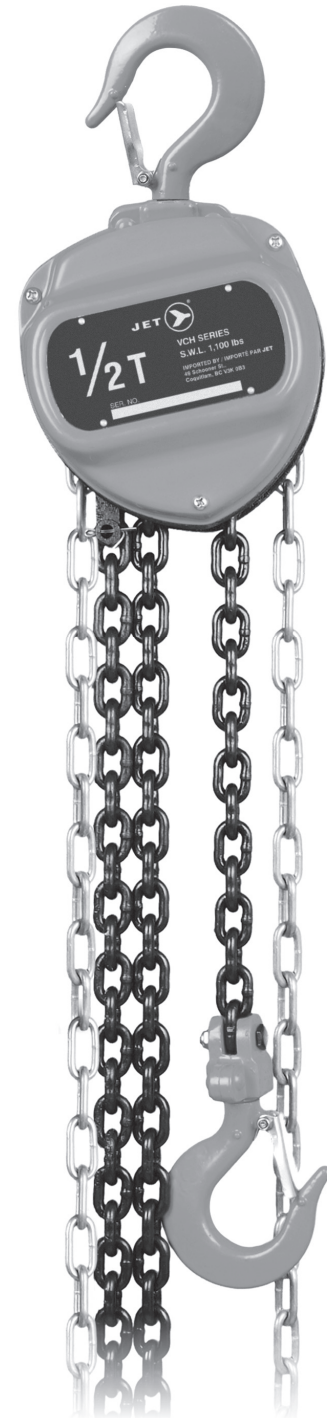


Operation MANUAL

VCH Series Chain Hoist

Prod. No. 101002, 101006, 101012, 101016,
101032, 101036, 101042, 101046

Mod. No. VCH-0510, VCH-0520, VCH-1010, VCH-1020
VCH-2010, VCH-2020, VCH-3010, VCH-3020



A
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WARRANTY POLICY

JET EQUIPMENT AND TOOLS LTD. (JET®) makes every effort to ensure its products are manufactured to the highest standards and are guaranteed against defects in materials and workmanship when the product is used for the purpose for which it was designed.

This guarantee applies only to JET products purchased new from a JET authorized distributor.

JET product warranties are extended to the original retail purchaser only. This warranty does not apply to any product showing signs of abuse, misuse, alteration, or having been improperly maintained or repaired.

This warranty does not cover damage attributable to normal wear and tear.

Any JET product that fails during normal use and is within the specified warranty period for that product will be repaired or replaced at JET's discretion. Repairs and/or replacements are warranted as described for the specific product and only for the remainder of the original warranty period.

Repair or replacement is the exclusive remedy for defective product under this warranty.

Warranty is expressly in lieu of all other warranties, including the implied warranty of merchantability or any implied warranty of fitness for a particular application.

Any JET product for which there is a warranty claim should be returned PREPAID to an authorized JET distributor or service centre. Authorized Warranty Depots are found at surewerx.com

ALL warranty claims must be accompanied by proof of purchase and an explanation of the defect or failure. It is the customer's responsibility to provide this information.

JET shall not be held liable for any consequential or incidental damages for breach of any expressed or implied warranty on their products. No claims for damages of any type will be considered and all products are sold with this understanding.

Any costs incurred to obtain warranty consideration or services are the Customer's responsibility including shipping and handling, travel, lost time, or lost production.

SPECIFIED WARRANTY – MATERIAL HANDLING

1 Year Limited Warranty

Chain Hoists Hand Cable Pullers
Air Hoists Lever Chain Pullers
Electric Hoists Grip Pullers
Electric Trolleys Manual Adjustable Trolleys
Drum Clamps Beam Clamps
Plate Clamps Blocks and Sheaves
Pallet Trucks Mobile Lift Tables
Winches

GENERAL INFORMATION ON JET CHAIN HOISTS AND PULLERS

Customs Lifts – Custom lift lengths are available, however, custom lift hoists and pullers are NOT returnable.

CAUTION: be sure that supporting structures and load-attaching devices used in conjunction with hoists, provide an adequate safety factor to handle the rated load plus the weight of the equipment. If in doubt, consult a qualified structural engineer.

This equipment is not to be used for lifting, supporting, or transporting people, or lifting, supporting, or transporting loads over people.

IMPORTANT: Before installation and operation, see maintenance and operations manual for additional warnings, precautions and operating instructions.

NOTE: Batteries supplied with certain products may have been subjected to long shelf life, resulting in low energy or a dead battery. Please source replacement batteries locally. Please follow instructions in the manuals for products using rechargeable batteries. Dead batteries do not constitute a warranty claim.

INFORMATION FOR YOUR SAFETY

It is the responsibility of the owner/user to install, inspect, test, maintain, and operate these hand chain hoists in accordance with ASME B30.16, Safety Standard for Overhead Hoists.

These general instructions deal with the normal installation, operation and maintenance situations encountered with the hand chain hoists described herein. The instructions should not be interpreted to anticipate every possible contingency or to anticipate the final system or configuration that uses these hand chain hoists.

These instructions include information for a variety of hand chain hoists. Therefore, all instructions and information may not apply to one specific hand chain hoist. Disregard those portions of the instructions that do not apply.

PRIOR TO INSTALLATION

Check for damage during shipment. Place claim with carrier if any damage is discovered. DO NOT install or use a damaged hand chain hoist.

Check and verify that the structure or other equipment that will support the hand chain hoist has a rated load capacity equal to or greater than the rated load capacity of the hand chain hoist to be used.

OPERATION

Before initial operation of hoist:

1. Read and comply with all instructions and warnings furnished with or attached to hoist.
2. Check lubricant.
3. Check operation of brake.
4. Check that chain is properly seated in sheaves and that chain is not twisted, kinked, or damaged.

Before each shift:

1. Inspect hooks for nicks, gouges, cracks, and signs of pulling apart or twisting.
2. Inspect hook latch for proper operation.
3. Check chain for kinks or twists.
4. Check operation of brake.
5. Replace warning label if missing or illegible.

If the hand chain hoist owner/user requires additional information, or if any information in these instructions are not clear, contact your local JET chain hoist distributor.

This hand chain hoist should not be installed, operated, or maintained by any person who has not read all the contents of these instructions, and ASME B30.16, Safety Standard for Overhead Hoists. Failure to read and comply with these instructions or any of the warnings or limitations noted herein can result in serious bodily injury or death, and/or property damage.

Only trained and qualified personnel shall operate and maintain this equipment.

Before operating:

1. Be certain all personnel are clear of the load to be lifted and moved.
2. Make sure load will clear stock piles, machinery, or other obstructions when hoisting and travelling the load.
3. Eliminate any twists or kinks in the load chain.

SAFETY PRECAUTIONS

A. READ these instructions and ASME B30.16, Safety Standard for Overhead Hoists before installing, operating, or maintaining this equipment.

B. WARN personnel of approaching loads.

C. DO NOT:

1. Lift more than rated load.
2. Operate hoist when it is restricted from forming a straight line with the direction of loading.
3. Operate with twisted, kinked, or damaged chain.
4. Operate if chain is not seated in sheaves or sprockets.
5. Wrap chain around load or use chain as a sling.
6. Operate unless load is properly applied to the saddle or bowl of the hook.
7. Operate if load is applied to the tip of the hook.
8. Operate with damaged or missing hook latches.

Equipment described herein is not designed for, and should not be used for lifting, supporting, or transporting people.

User should not use this hand chain hoist in conjunction with other equipment unless necessary and/or required safety devices applicable to the system are installed by the user.

Modifications to upgrade, rerate or otherwise alter these hand chain hoists shall be authorized only by the original equipment manufacturer or qualified professional engineer.

9. Lift people or lift loads over people.
10. Operate with side-pulling or side-loading of load to hoist.
11. Operate a damaged or malfunctioning hoist.
12. Operate with other than hand power.
13. Remove, deface, or obscure warning label or labels on hoist.
14. Leave load suspended when hoist is unattended unless specific precautions have been instituted and are in place.
15. Lengthen load chain or repair damaged load chain by welding.
16. Use chain as a ground for welding.

INSPECTION AND MAINTENANCE

Prior to initial use, all new, modified, and repaired hoists shall be inspected in accordance with Table 2. Thereafter, inspections shall be conducted at intervals shown in Table 1; and items to be inspected are indicated in Table 2 by F (Frequent) or P (Periodic).

Frequent Inspections – Visual inspection by the operator or other authorized person. This inspection includes listening for unusual sounds while the hoist is operated that may indicate deficiencies.

Periodic Inspections – Audible-visual inspection as for Frequent Inspections, with some disassembly to allow a more detailed inspection if external conditions indicate the need.

Exception: Brakes require more than audible-visual inspection. Check daily by operating hoist with and without load, stopping at various positions to test holding power and amount of drift, if any occurs. TO ADJUST BRAKE (Refer to Figure 1):

1. Fully tighten nut to position A.
2. Slack off nut from position A to position B and insert cotter key.

TABLE 1 – FREQUENCY OF INSPECTION

SERVICE	FREQUENT (F) INSPECTION	PERIODIC (P) INSPECTION
Normal	Monthly	Annually
Heavy	Weekly to Monthly	Semi-Annually
Severe	Daily to Weekly	Quarterly

FIGURE 1

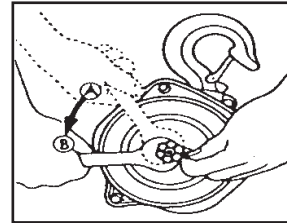


TABLE 2 – INSPECTION CHART

In chart, F indicates Frequent Inspection, P indicates Periodic Inspection

LOCATION		CHECK FOR		F	P	LOCATION		CHECK FOR		F	P
Braking mechanism	Slipping under load			✓		Hook Retaining Members (Pins, Bolts, Nuts)	Not tight or secure				✓
	Hard to release			✓		Hook Latch	Damaged; does not close	✓			
Brake Parts						Suspension Members (Sheaves, hand-wheels, chain attachments, suspension bolts or pins)	Excessive wear				✓
	Brake Discs	Glazing			✓		Cracks	✓		✓	
		Oil contamination			✓	Gears	Distortion				✓
Pawl; Ratchet	Excessive wear				✓		Broken or worn teeth				✓
Pawl Spring	Corrosion; stretch				✓		Cracks				✓
Hooks	Chemical damage			✓			Inadequate lubrication				✓
	Deformation			✓		Load Block; Suspension Housing	Distortion	✓		✓	
	5% in excess of normal throat opening				✓		Cracks	✓		✓	
	10° twist from plane of unbent hook				✓	Trolley; Supporting Structure	Possible inability to continue supporting imposed loads				✓
	Cracks (dye penetrant, magnetic particle, or other suitable detection method)				✓	Bolts, Nuts, Rivets	Not tight or secure				✓
						Warning Label	Removed or illegible	✓			

Refer to ASME B30.16 for additional information on inspection, test, and maintenance.

HOOKS WARNING

1. Any hook that requires replacement because of excessive bends, twists, or throat opening indicates abuse or overloading of the hoist. Therefore, other load-supporting components of the hoist should be inspected for possible damage when such conditions are found.
2. Never repair hooks by welding or reshaping. Heat applied to the hook will alter the original heat treatment of the hook material and reduce the strength of the hook.
3. Never weld handles or other attachments to the hook. Heat applied to the hook will alter the original heat treatment of the hook material and reduce the strength of the hook.

HOOKS INSPECTION

Refers to ASME B30.10, Safety Standard for Hooks. Inspect hooks and measure hook throat opening at least once a month. Between regular inspections check visually daily for deformation, distortion, twisting, damage, and missing or damaged hook latches. Inspect as follows:

1. Measure hook opening at raised dots to check for stretch. Raised dots provide a constant reference point and eliminate measurement errors. Replace hook when measurement between dots reaches "Dimension Y Replace Hook" figures below.

CAPACITY TONS	DIMENSION Y NEW HOOK	DIMENSION Y REPLACE HOOK	DIMENSION H NEW HOOK	DIMENSION H REPLACE HOOK
1/2	35mm	37mm	16mm	15mm
1	46mm	48mm	21mm	20mm
2	52mm	55mm	28mm	27mm
3	62mm	66mm	36mm	34mm
5	78mm	82mm	43mm	41mm

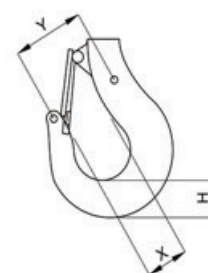


Figure 2

2. Measure hook depth at load bearing point in the bowl of the hook. Hook must be replaced when wear at load bearing point reaches "Dimension H Replace Hook" figures above.
3. A bend or twist of the hook exceeding 10° from the plane of the unbent hook requires replacement of the hook.
4. A hook latch that is missing shall be replaced.
5. A hook latch that is inoperative shall be repaired or replaced.
6. A hook with a hook latch that does not close the throat opening of the hook shall be removed from service until the latch is replaced or repaired.
7. Hooks having damage from chemicals, corrosion, or deformation shall be repaired or replaced.

Due to variations in the manufacturing process, the dimensions of a new hook are variable. For accurate record keeping, we recommend users record measurements Y and H of the hook before use. Record this information in the spaces above and calculate the replacement value by multiplying by 1.05 for Dimension Y or by 0.95 for Dimension H.

CHAIN

Inspect chain at least once a month. Between regular inspections, check visually daily for nicks, gouges, weld splatter, corrosion, or distorted links. Inspect chain thoroughly if it does not feed smoothly over load sheaves. Inspect as follows:

1. Clean chain with solvent before inspection.
2. Test hoist with load and observe operation of chain over load sheaves.
3. Slacken chain and inspect contact points for excessive wear. Refer to Figure 3.
4. Using caliper-type gauge, measure inside length of 5 links under light tension. Refer to Figure 4. Replace chain if measurement exceeds maximum allowable gauge length as follows:

CAPACITY TONS	CHAIN WIRE DIAMETER	5 LINKS NORMAL	5 LINKS MAXIMUM
1/2	6.0mm	90mm	92.7mm
1	6.0mm	90mm	92.7mm
2 + 3	8.0mm	119.8mm	123.7mm
5	10.0mm	150.1mm	154.4mm

FIGURE 3

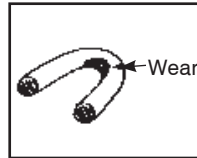
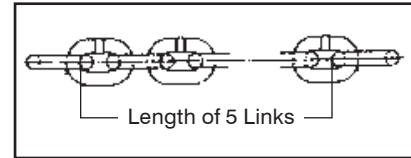


FIGURE 4



INSTALLING LOAD CHAIN

WARNING: DO NOT ADD TO LOAD CHAIN; REPLACE ENTIRE CHAIN

To install load chain into load chain sprocket:

1. Position load chain sprocket by rotating handchain wheel so that wide and narrow grooves show.
2. Using a forked poker, insert top chain link into sprocket grooves so that chain will wind up and back over sprocket. Welds must be away from sprocket.
3. Rotate hand chain wheel so that load chain winds around sprocket. Stop when chain falls 6 to 8 inches at back of sprocket.
4. Attach end link of the load chain to the chain stopper pin.

To install load chain into chain anchor:

1. Remove cotter pin and chain anchor pin.
2. Insert last chain link and replace chain anchor pin. If last link is not lined up correctly to accept anchor pin, cut it off. Do not twist it to fit.
3. Replace cotter pin.

To install load chain into lower hook (1/2, 1 and 2 ton):

1. Remove self locking nut.
2. Insert last chain link into lower hook slot. Check that chain is not twisted.
3. Insert chain bolt through lower hook slot and chain link.
4. Secure with new self locking nut.

To install load chain into lower hook (3 and 5 ton)

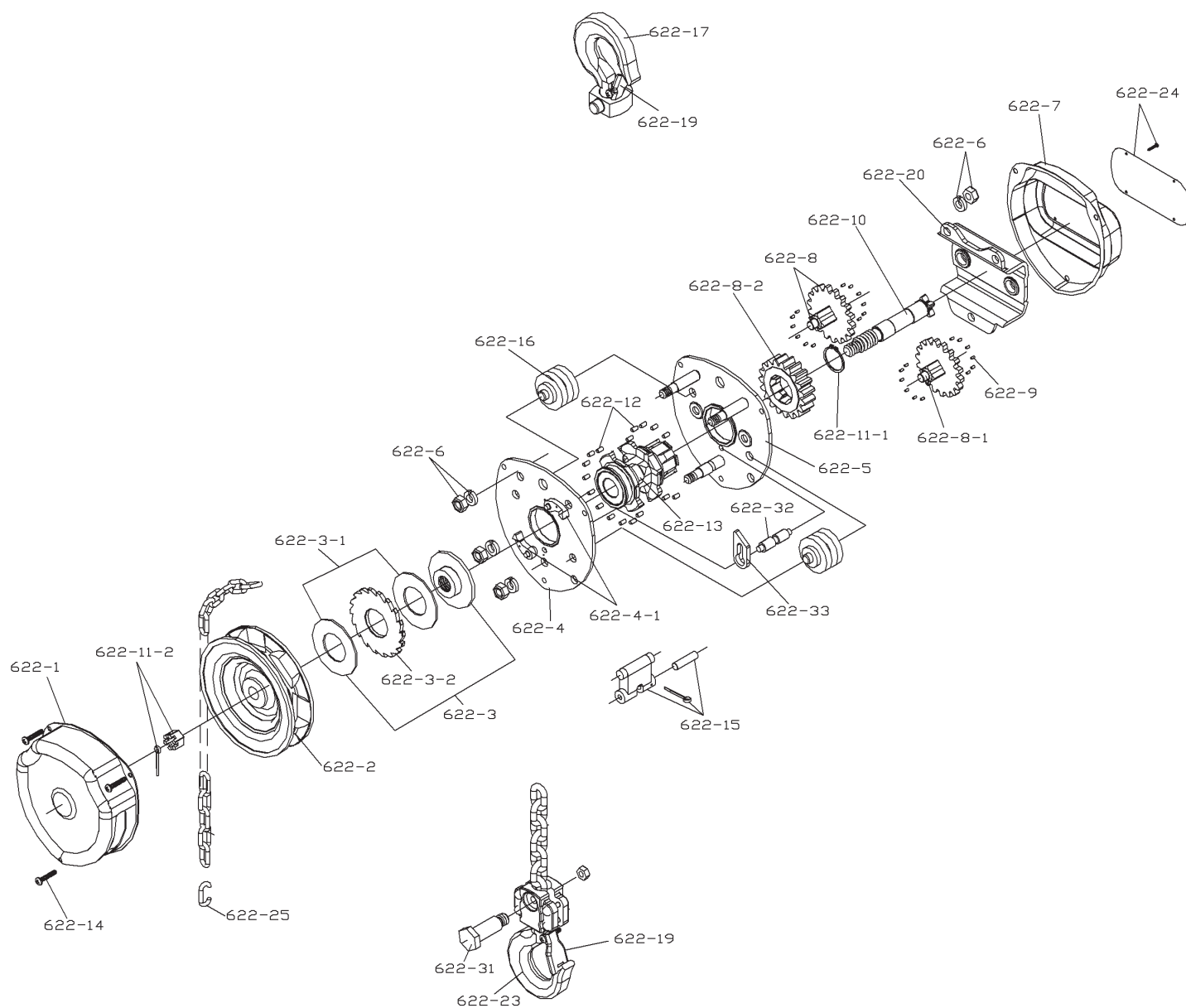
1. After installing chain through chain sprocket, secure end link of chain with chain anchor pin on hoist body.
2. Run chain through sprocket in lower hook and up to chain anchor bolt in upper hook, ensuring chain is not twisted.
3. Insert last link into chain anchor bolt on upper hook and secure. If last link is not lined up correctly to accept anchor pin, cut it off. Do not twist it to fit.

REPLACEMENT CHAIN:

Use only genuine JET grade 80 replacement load chain.

VCH Series Chain Hoist

Prod. No. 101002, 101006, 101012, 101016, 101032, 101036



VCH Series Chain Hoist

Prod. No. 101002, 101006, 101012, 101016, 101032, 101036

Ref.	Part Number	Description	Req.
622-1	PVI-VCH20-622-1	Handwheel Cover	1
622-2	PVI-VCH20-622-2	Handwheel	1
622-3	PVI-VCH20-622-3	Brake Set (Includes 2 x 622-3-1, 622-3-2 and 622-3-3)	1
622-3-1	PVI-VCH20-622-3-1	Friction Washer (1 Set = 2 Pieces)	1
622-3-2	PVI-VCH20-622-3-2	Ratchet Disc	1
622-4	PVI-VCH20-622-4	Handwheel Side Plate (Includes Bearing Race and 622-4-1)	1
622-4-1	PVI-VCH20-622-4-1	Pawl and Pawl Spring	1
622-5	PVI-VCH20-622-5	Gear Side Plate (Includes Bearing Race, 2 Bushings and 3 Studs)	1
622-6	PVI-VCH20-622-6	Main Hardware Kit (Includes 2 Gear Cover Nuts and 3 Handwheel Cover Nuts)	1
622-7	PVI-VCH20-622-7	Gear Cover	1
622-8	PVI-VCH20-622-8	Gear Set (Includes 2 x 622-8-1 and 622-8-2)	1
622-8-1	PVI-VCH20-622-8-1	Disc Gear	1
622-8-2	PVI-VCH20-622-8-2	Splined Gear	1
622-9	PVI-VCH20-622-9	Gear Set Roller Kit	1
622-10	PVI-VCH20-622-10	Pinion Shaft	1
622-11-1	PVI-VCH20-622-11-1	Lift Wheel Snap Ring	1
622-11-2	PVI-VCH20-622-11-2	Pinion Shaft Castle Nut and Slit Pin	1
622-12	PVI-VCH20-622-12	Liftwheel Roller Kit (1 Set = 2 Pieces)	1
622-13	PVI-VCH20-622-13	Liftwheel	1
622-14	PVI-VCH20-622-14	Studs for Cover	6
622-15	PVI-VCH20-622-15	Strippers	1
622-16	PVI-VCH20-622-16	Roller Guide (1 Set = 2 Pieces)	1
622-17	PVI-VCH20-622-17	Top Hook Assembly (Includes Hook, Hook Holder and 622-19)	1
622-19	PVI-VCH20-622-19	Safety Latch Kit (Includes Latch, Spring, Bolt and Nut)	1
622-20	PVI-VCH20-622-20	Gear Cage (Includes 2 Bushings)	1
622-23	PVI-VCH20-622-23	Bottom Hook Assembly (Includes 622-19, 622-34, 622-31, 622-27 and 622-23)	
622-24	PVI-VCH20-622-24	Name Plate	1
622-25	PVI-VCH20-622-25	Hand Chain Connecting Link	1
622-31	PVI-VCH20-622-31	Load Pin and Nut for Bottom Hook	1
622-32	PVI-VCH20-622-32	Chain Stripper Pin	1
622-33	PVI-VCH20-622-33	Chain Stripper	1



VCH Series Chain Hoist

Prod. No. 101042, 101046

Ref.	Part Number	Description	Req.
622-1	PVI-VCH30-622-1	Handwheel Cover	1
622-2	PVI-VCH30-622-2	Handwheel	1
622-3	PVI-VCH30-622-3	Brake Set (Includes 2 x 622-3-1, 622-3-2 and 622-3-3)	1
622-3-1	PVI-VCH30-622-3-1	Friction Washer (1 Set = 2 Pieces)	1
622-3-2	PVI-VCH30-622-3-2	Ratchet Disc	1
622-4	PVI-VCH30-622-4	Handwheel Side Plate (Includes Bearing Race and 622-4-1)	1
622-4-1	PVI-VCH30-622-4-1	Pawl and Pawl Spring	1
622-5	PVI-VCH30-622-5	Gear Side Plate (Includes 2 Bushings and 3 Studs)	1
622-6	PVI-VCH30-622-6	Nut and Washer	6
622-7	PVI-VCH30-622-7	Gear Cover	1
622-8	PVI-VCH30-622-8	Gear Set (Includes 2 x 622-8-1 and 622-8-2)	1
622-8-1	PVI-VCH30-622-8-1	Disc Gear	2
622-8-2	PVI-VCH30-622-8-2	Splined Gear	1
622-9	PVI-VCH30-622-9	Gear Set Roller Kit (Needles)	1
622-10	PVI-VCH30-622-10	Pinion Shaft	1
622-11-1	PVI-VCH30-622-11-1	Lift Wheel Snap Ring	1
622-11-2	PVI-VCH30-622-11-2	Pinion Shaft Castle Nut and Slit Pin	1
622-12	PVI-VCH30-622-12	Liftwheel Roller Kit (1 Set = 2 Pieces)	1
622-13	PVI-VCH30-622-13	Liftwheel	1
622-14	PVI-VCH30-622-14	Studs for Cover	1 set
622-15	PVI-VCH30-622-15	Strippers	1
622-16	PVI-VCH30-622-16	Roller Guide (1 Set = 2 Pieces)	2
622-17	PVI-VCH30-622-17	Top Hook Assembly (Includes Hook, Hook Holder and 622-19)	1
622-19	PVI-VCH30-622-19	Safety Latch Kit (Includes Latch, Spring, Bolt and Nut)	1
622-20	PVI-VCH30-622-20	Gear Cage (Includes 2 Bushings)	1
622-23	PVI-VCH30-622-23	Bottom Hook Assembly (Includes 622-19, 622-34 and 622-23)	
622-24	PVI-VCH30-622-24	Name Plate	1
622-25	PVI-VCH30-622-25	Hand Chain Connecting Link	1
622-31	PVI-VCH30-622-31	Load Pin and Nut for Bottom Hook	1
622-32	PVI-VCH30-622-32	Chain Stripper Pin	1
622-33	PVI-VCH30-622-33	Chain Stripper	1