



USER MANUAL

VULCAN **MAX** RATCHET LEVER HOIST

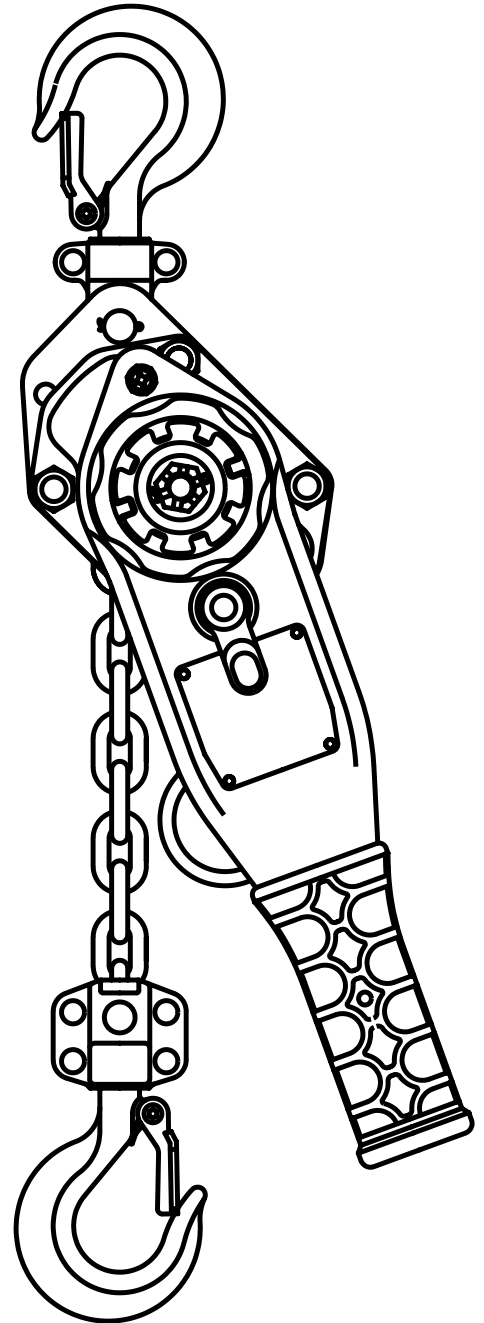
0.8 to 6 Tonnes

APU0.8T to APU06T

Manuel en français de l'autre côté



KEEP THIS MANUAL



WARNING

DO NOT INSTALL, OPERATE, OR PERFORM MAINTENANCE ON THIS EQUIPMENT BEFORE READING AND UNDERSTANDING THIS MANUAL IN ITS ENTIRETY. FAILURE TO READ AND COMPLY WITH THE CONTENTS OF THIS MANUAL COULD RESULT IN SERIOUS BODILY INJURY OR DEATH AND / OR PROPERTY DAMAGE.

Important Information, Warnings and Safety

This manual contains important safety, installation, operation, and maintenance information. Make this manual available to every person designated for the operation, installation, and maintenance of these products. Unless otherwise noted, tons in this manual are metric tonnes (1000kg, 2204 lbs, or 1.102 US short ton). Vulcan Max products are metric. Equivalent imperial (inches, pounds) measurements are provided for informational purposes only.

Danger, Warning, Caution and Notice

Throughout this manual, there are procedures which, if they are not followed or are ignored, may result in injury, death, or substantial property damage.



DANGER

Indicates an imminently hazardous situation which, if not avoided, will result in death or serious injury.



WARNING

Indicates a potentially hazardous situation which, if not avoided, could result in death or serious injury.



CAUTION

Indicates a potentially hazardous situation which, if not avoided, could result in minor or moderate injury or property damage.

NOTICE

Indicates information or company policy which relates directly or indirectly to the safety of personnel or property.

Safety Framework and General Rules



WARNING

This manual cannot cover every possible installation, operation, maintenance, circumstance and situation. You, the owner or operator of the equipment covered in this manual, are responsible for the safe and proper installation, operation, inspection, and maintenance of this equipment in accordance with ASME B30.21 and all applicable laws, regulations and codes.

Anybody interacting with the ratchet puller must have read and understood the instructions laid out in this manual.

Vulcan Hoist will not be liable for any loss, damage, injury, death or compensation if caused, even if partially, by disregarding or misinterpreting an instruction from this manual.

Repairs must only be done with original equipment manufacturer parts by a qualified person. Any modification must be authorised by Vulcan Hoist.



CAUTION

Every safety and identification label and plate that came with the ratchet puller, including the nameplate which displays the ratchet puller's serial number, capacity, and manufacturer, must be securely fastened and legible. If any safety or identification label or plate is missing or no longer legible, contact Vulcan Hoist for a replacement.

NOTICE

This manual covers a wide range of ratchet pullers with different capacities and options, and as such not all instructions in this manual apply to every ratchet puller. Disregard instructions that do not apply.

Safety Rules Before Operation

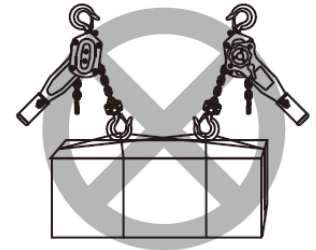
DANGER



NEVER use a puller for lifting, supporting or transporting people.



NEVER apply pressure on a puller.



NEVER use two or more pullers together to lift beyond a puller's rated capacity.



NEVER lift a load heavier than a puller's rated capacity.



NEVER lift or move a load over or near people.

WARNING

Do not ever extend the lever.

Do not use this ratchet puller if you notice deep nicks, gouges, bends or significant stretching in the hooks, load chain, or other load-bearing parts.

CAUTION

Ensure that you have read and understood this manual in its entirety.

Ensure that the nameplate and safety warning labels and plates are present, securely fastened and legible.

Perform the daily inspection described in the Daily Inspection section of this manual if it is the ratchet puller's first use of the shift.

Be certain that the weight of the load to be lifted is lower or equal to the ratchet puller's rated capacity.

Estimate how much you plan to move the hook. Make sure that the chain is long enough to reach the furthest point without the ring in the last chain link entering the ratchet puller's body and distance H_{min} (see section Technical Specifications) is short enough for the hook to reach the closest point.

Make sure that the planned lift or pull won't interfere with other operations going on and won't go over people.

Make sure that the load's centre of gravity and attachment point are aligned with the ratchet puller.

Make sure that you have somewhere to safely lower the load before you lift it. Don't leave a raised load unattended.

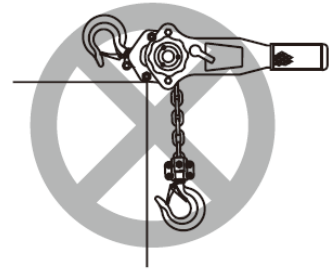
Safety Rules During Operation



NEVER use a twisted, kinked, damaged or stretched load chain.



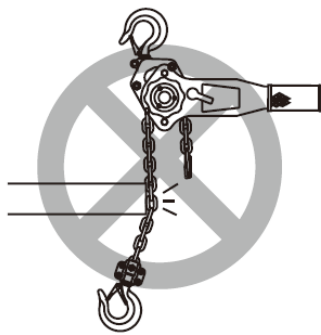
NEVER use the chain as a sling



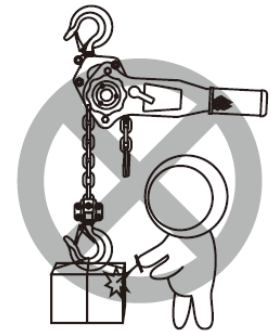
NEVER support or use the ratchet puller as a support



NEVER support a load on the tip of the hook



NEVER run the load chain over a sharp edge



NEVER weld or cut a load suspended by a ratchet puller

Make sure that the load's attachment point sits in the hook's bowl and that the latch is closed.

Start lifting or pulling the load. When the load chain is under tension, check that the lever is still turning smoothly and that the load does not fall or pull away on its own.

NEVER use a damaged ratchet puller or a ratchet puller that is not working properly or requires excessive force to work.

NEVER use a ratchet puller if it makes excessive or unusual noise.

NEVER use a ratchet puller with a chain that makes harsh, jerking moves.

NEVER swing a suspended load.

NEVER use the ratchet puller as a welding electrode.

NEVER move the hook so far that it collides with the ratchet puller or that the lifting ring at the free end of the chain pulls on the ratchet puller's body.

NEVER allow your attention to be diverted from operating the ratchet puller.

Safety Rules After Operation



Land the load and unload the chain slowly and safely.

NEVER suspend a load for an extended period of time.

Operation

Free chaining

Free chaining allows the chain to be pulled quickly in either direction by disengaging the chain sprocket from its driving components and the brake.

1. Flip the selector into the "N" neutral position
2. Pull on the grip ring to pop it out
3. Pull the load chain in either direction up to its desired position
4. Flip the selector clockwise into the "UP/IN" direction
5. Turn the grip ring counterclockwise until it pops back towards the hoist



WARNING

NEVER PULL OR TOUCH THE GRIP RING WHILE THE PULLER IS LOADED. Pulling on the grip ring disengages the chain sprocket from the driving components and the brake, which WILL CAUSE A SUSPENDED LOAD TO FALL.

Do not pull on the grip ring if the selector is not in the "N" neutral position.

NOTICE

Do not pull the chain suddenly while in free chain mode. This may set the brake close and will not allow the chain to be pulled. To reset the brake, turn the grip ring clockwise while pulling on the hook.

Turning the grip ring

Turning the grip ring will move the chain slower than free chaining but faster than cranking the lever. The grip ring must not be in free chaining mode for this to work. The driving components will stay engaged, allowing to pre-tension the chain before cranking the lever.

| Selector | Turning the grip ring clockwise | Turning the grip ring counterclockwise |
|----------|---|--|
| N | The hook will be pulled towards the puller | The hook will be pulled away from the puller |
| UP/IN | The hook will be pulled towards the puller | The ratchet clicks, the chain does not move |
| DOWN/OUT | The ratchet clicks, the chain does not move | The hook will be pulled away from the puller |

Cranking the lever

Cranking the handle will turn the grip ring with maximum force.

| Selector | Turning the lever clockwise | Turning the lever counterclockwise |
|----------|---|--|
| N | The lever will turn freely | The lever will turn freely |
| UP/IN | The hook will be pulled towards the puller | The ratchet clicks, the chain does not move |
| DOWN/OUT | The ratchet clicks, the chain does not move | The hook will be pulled away from the puller |

NOTICE

If cranking the handle does not pull on the chain as it should, start by pre-tensioning the chain by turning the grip ring. If the chain is already tensioned, the friction discs may be worn out or the overload protection may be slipping.

Overload Protection Devices

NOTICE

A load could be over the rated capacity even if the overload protection device does not trigger.

The overload protection device is an option. Check your ratchet puller's nameplate to see if it has this option. Overload protection devices have been adjusted in factory between 1.3 to 1.8 times the rated load. When lifting or pulling a load which triggers the overload protection device, the lever will turn if a considerable force exerted on it, but the hook will not move, and you won't hear the clicking of the ratcheting mechanism.

Inspection

There are two types of inspection: daily and periodic. A daily inspection must be done by the ratchet puller's operator, or a person qualified to do so at the beginning of each working shift or the first time the ratchet puller is used in a shift. A periodic inspection must be done by a qualified person at intervals determined by the ratchet puller's service severity.



If a ratchet puller fails any one of the following inspection items, do not use it and remove it from service immediately. Do not put it back into service until every issue has been resolved.

Failure to inspect the ratchet puller as instructed may result in damage, injury, or death.

Contact Vulcan Hoist for spare parts. Do not use non-OEM parts.

These instructions are based on ASME B30.21. Also observe any other regulations that may apply.

| Service Severity and Periodic Inspection Frequency | | |
|--|---|-------------------------------|
| Service | Description | Periodic Inspection Frequency |
| Normal Service | Randomly distributed loads within the rated load limit, or uniform loads less than 65% of rated load for no more than 15% of the time | monthly to yearly |
| Heavy Service | Within the rated load limit but exceeds normal service | weekly to monthly |
| Severe Service | Normal or heavy service with abnormal operating conditions (high humidity, extreme temperatures, salty air, etc.) | daily to weekly |

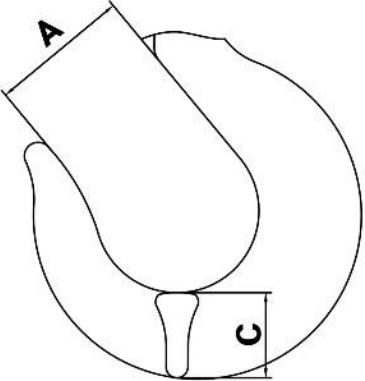
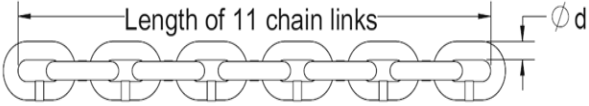
Daily Inspection

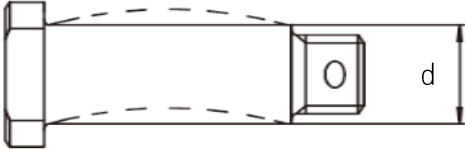
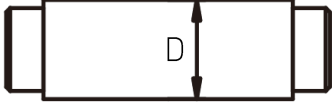
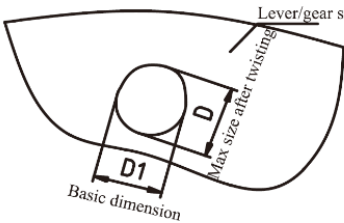
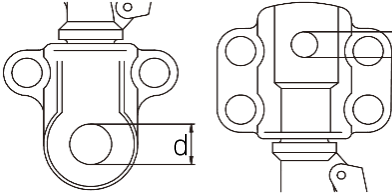
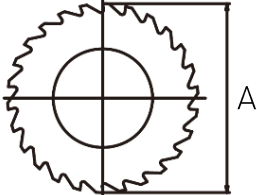
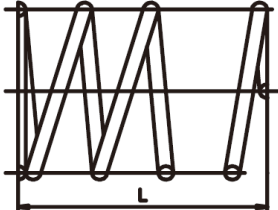
| Part | Items to Inspect |
|-------------------------|--|
| Tags, labels, nameplate | <ul style="list-style-type: none"> Warning labels and tags must be present, securely fastened and legible The nameplate and the ratchet puller's capacity tags must be securely fastened and legible |
| Hook latches | <ul style="list-style-type: none"> Hook latches must be present on both hooks and close on their own |
| Load chain | <ul style="list-style-type: none"> The load chain must be lubricated. Apply oil if it appears dry Especially for ratchet pullers with multiple chain falls (6 t), make sure that the load chain is not twisted. Make sure that it will enter the ratchet puller straight in both directions Eliminate kinks and twists. Do not use the ratchet puller if they keep reoccurring Look for excessive wear. Do not use the ratchet puller even if a single chain link appears worn <div style="display: flex; justify-content: space-around; text-align: center;"> <div> <p>Normal</p> </div> <div> <p>Twisted</p> </div> <div> <p>Kinked</p> </div> <div> <p>Worn out</p> </div> </div> |
| Hooks | <ul style="list-style-type: none"> Both hooks must swivel freely |

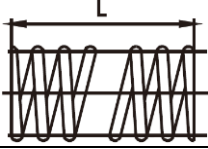
| Part | Items to Inspect |
|----------------------|--|
| Hooks and load chain | <ul style="list-style-type: none"> The hooks and load chain must be free of deep nicks, gouges, bends, kinks or significant stretching |
| Function | <ul style="list-style-type: none"> The grip ring and the lever must turn smoothly |
| Lever | <ul style="list-style-type: none"> The lever must not be bent or damaged The lever must not have been extended longer than its original length |
| Chain ring | <ul style="list-style-type: none"> The chain ring or handle must be present in the last free chain link and in good condition |
| Overall | <ul style="list-style-type: none"> There must not be any missing nut, bolt, or pin There must not be any sign of major damage such as bumps or burns |
| Selector switch | <ul style="list-style-type: none"> Must move smoothly and hold still in each of the three positions (in/up, neutral, out/down) |

Periodic Inspection

A periodic inspection includes a daily inspection.

| Item | Discard Criteria | | | | | |
|--|---|-------------------|-------------------|------------------|-----------------|------------------|
| Hooks (lower and upper) | | | | | | |
| Hook stretch and wear |  <p>*These values are nominal. The A and C dimensions must be measured when the hook is new. The hook must be discarded when the A dimension is 1.05 times greater than when new. Top and Lower hooks have the same dimensions.</p> | Capacity (t) | A, mm [in] | | C, mm [in] | |
| | | | Normal | Discard | Normal | Discard |
| | | 0.8 | 31.0 [1.220] | ≥32.6 [1.281] | 19.5 [0.768] | ≤17.9 [0.706] |
| | | 1.5 | 38.0 [1.496] | ≥39.9 [1.571] | 28.5 [1.122] | ≤26.2 [1.032] |
| | | 2 | 42.0 [1.654] | ≥44.1 [1.736] | 31.5 [1.240] | ≤29.0 [1.141] |
| | | 3 | 46.0 [1.811] | ≥48.3 [1.902] | 39.0 [1.535] | ≤35.9 [1.413] |
| | | 6 | 50.0 [1.969] | ≥52.5 [2.067] | 46.0 [1.811] | ≤42.3 [1.666] |
| Flaws and wear | <ul style="list-style-type: none"> Must be free from significant rust, welds, weld splatter, deep nicks, and gouges | | | | | |
| Rotation | <ul style="list-style-type: none"> Must rotate freely without rough spots | | | | | |
| Hook yokes | <ul style="list-style-type: none"> Must not miss rivets or bolts. Must have no slack between yoke halves | | | | | |
| Latches | <ul style="list-style-type: none"> Latches must be present and stay closed when not forced open | | | | | |
| Load Chain | | | | | | |
| Wear and stretch | Capacity (t) | d, mm [in] | Length, mm [in] | | Chain Grade | |
| | | Normal | Normal | Discard | | |
| | 0.8 | 6.3 [0.248] | 210.3 [8.280] | 220.8 [8.694] | G80 | |
| | 1.5 | 7.1 [0.280] | 233.4 [9.189] | 245.1 [9.648] | | |
| | 2 | | | | | |
| 3, 6 | 9.0 [0.354] | 299.2 [11.780] | 314.2 [12.369] | G100 | | |
|  <p>Measure the pitch of 11 chain links at different places on the load chain. Discard the entire chain even if a single section has reached the discard criteria.</p> | | | | | | |
| Flaws | <ul style="list-style-type: none"> Must be free from welds, weld splatter, nicks and gouges | | | | | |
| Rust | <ul style="list-style-type: none"> Only surface rust is acceptable. No pitting from rust, rust flakes or rust bubbles | | | | | |
| Lubrication | <ul style="list-style-type: none"> Must be oiled | | | | | |

| Item | Discard Criteria | | | | | | |
|---------------------------------------|--|---------------|--|--------------|---------------------------------------|--------------|---------------|
| Hook Pins | | | | | | | |
| Lower hook pin wear and deformation |  <ul style="list-style-type: none"> Discard the hook pin if there is obvious bend or deformation Screw thread must be in good condition | Capacity (t) | d, mm [in] | | | | |
| | | | Standard | Discard | | | |
| | | | 0.8 | 8.0 [0.315] | ≤7.6 [0.299] | | |
| | | | 1.5, 2 | 10.4 [0.409] | ≤9.9 [0.389] | | |
| 3, 6 | 12.0 [0.472] | ≤11.4 [0.449] | | | | | |
| Top hook pin wear and deformation |  <ul style="list-style-type: none"> Discard the hook pin if there is obvious bend or deformation | Capacity (t) | Pin Diameter D, mm [in] | | | | |
| | | | Standard | Discard | | | |
| | | | 0.8 | 12.0 [0.472] | ≤11.4 [0.449] | | |
| | | | 1.5, 2 | 14.0 [0.551] | ≤13.3 [0.524] | | |
| 3, 6 | 16.0 [0.630] | ≤15.2 [0.598] | | | | | |
| Top hook pin holes in the side plates |  <p>*Measure the holes' maximum diameters</p> | Capacity (t) | D, mm [in] | | | | |
| | | | Standard | Discard* | | | |
| | | | 0.8 | 12.5[0.492] | ≥13.1 [0.517] | | |
| | | | 1.5, 2 | 14.5[0.571] | ≥15.2 [0.599] | | |
| 3, 6 | 16.5[0.650] | ≥17.3 [0.682] | | | | | |
| Top and Lower hook pin holes |  <p>*Measure the holes' maximum diameters</p> | Capacity (t) | Top Hook Pin Hole Diameter, mm [in] | | Lower Hook Pin Hole Diameter, mm [in] | | |
| | | | Standard | Discard* | Standard | Discard* | |
| | | | 0.8 | 12.5 [0.492] | ≥13.1 [0.517] | 9.0 [0.354] | ≥9.5 [0.372] |
| | | | 1.5, 2 | 14.5 [0.571] | ≥15.2 [0.599] | 10.5 [0.413] | ≥11.0 [0.434] |
| | | | 3, 6 | 16.5 [0.650] | ≥17.3 [0.682] | 13.0 [0.512] | ≥13.7 [0.537] |
| Braking System | | | | | | | |
| Rust | <ul style="list-style-type: none"> All parts should be rust-free | | | | | | |
| Pawls | <ul style="list-style-type: none"> Pawls must have no surface wear Pawl springs must push the pawl into the ratchet | | | | | | |
| Friction disc | Friction Disc Thickness, mm [in] | | <ul style="list-style-type: none"> The friction disc must have the same thickness throughout. Its surfaces must be clean, flat and free from cracks and gouges. | | | | |
| | Discard | | | | | | |
| 3, 6 | ≤2.0 [0.079] | | | | | | |
| Ratchet |  | Capacity (t) | External Diameter A, mm [in] | | | | |
| | | | Standard | Discard | | | |
| | | | 0.8 | 66 [2.60] | ≤62.7 [2.47] | | |
| | | | 1.5 to 6 | 72 [2.83] | ≤68.4 [2.69] | | |
| Grip ring compression spring |  | Capacity (t) | Length L, mm [in] | | | | |
| | | | Standard | Discard | | | |
| | | | 0.8 | 43 [1.69] | ≤39.6 [1.56] | | |
| | | | 1.5 to 6 | 55 [2.17] | ≤50.6 [1.99] | | |

| Item | Discard Criteria | | | | |
|--------------------------------|---|--------------|---|----------|---------|
| Pulling System and Body | | | | | |
| Load Chain Sprocket | <ul style="list-style-type: none"> • Must not show significant wear or deformation | | | | |
| Gears | <ul style="list-style-type: none"> • Must not show significant wear or deformation especially on teeth and bearing surface • Must be greased | | | | |
| Gearcase | <ul style="list-style-type: none"> • Must not show deformation. Must not show significant wear on bearing surface | | | | |
| Side plates | <ul style="list-style-type: none"> • Must be straight. See Hook Pins for the side plates' top hook pin hole dimensions | | | | |
| Lever Handle System | | | | | |
| Ratchet spring |  | Capacity (t) | Length L, mm [in] | | |
| | | All | <table border="1"> <thead> <tr> <th>Standard</th> <th>Discard</th> </tr> </thead> <tbody> <tr> <td>38 [1.50]</td> <td>≤35 [1.38]</td> </tr> </tbody> </table> | Standard | Discard |
| Standard | Discard | | | | |
| 38 [1.50] | ≤35 [1.38] | | | | |
| Function | | | | | |
| Pulling and slackening | <ul style="list-style-type: none"> • No difficulty, abnormality, roughness in pulling and slackening with loads | | | | |
| Brake | <ul style="list-style-type: none"> • No braking resistance when lifting or pulling. Loads must not slip down slowly when suspended. Loads must not slip after the lever is jerked suddenly in the lowering direction | | | | |

Maintenance



WARNING

After performing maintenance, test the ratchet puller and perform a daily inspection.

NEVER perform maintenance while the ratchet puller is being used or supporting a load.

NEVER grease or oil the braking mechanism.

Failure to perform maintenance as instructed may result in damage, injury, or death.

It is recommended to perform maintenance at the same frequency as periodic inspections. Only qualified personnel must perform maintenance. Vulcan Hoist offers inspection, maintenance, and repair services.

1. Clean the ratchet puller and load chain without getting water inside the gearcase and the braking mechanism.
2. Open the gearcase. Wipe off excess worn grease. Apply new grease directly on gear teeth and bearing surfaces. Re-fasten the gearcase. NLGI No. 2 grease is recommended.
3. Oil the hook pins, hook shanks (for rotation), load chain and load chain sprockets. An ISO 68 oil is recommended.

Storing

Always store above freezing temperatures in a dry environment.

Do not use a ratchet puller in storage to hold or support a load.

Perform a periodic inspection before using a ratchet puller which is coming out of storage.

Allowable Operating Conditions

1. -10°C to 60°C
2. Can work in up to 100% relative humidity, but must not be used under water.

Outdoor Installations

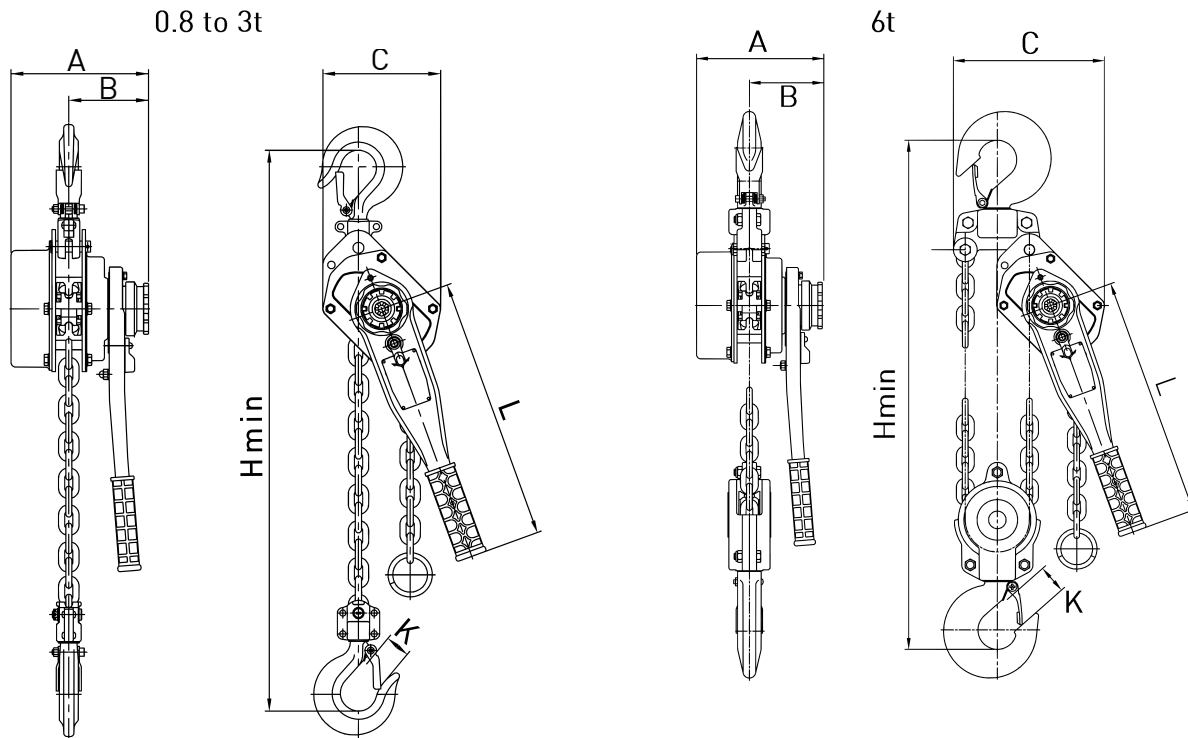
1. Outdoor ratchet pullers should be sheltered from rain and snow or brought inside when not in use.
2. If the ratchet puller is exposed to salty air, extreme temperature, high humidity environments or exposure to rain or snow, increase the inspection and maintenance frequency.

Warranty

Your Vulcan Max ratchet puller is guaranteed against defects in materials and workmanship for 2 years from the date of purchase if all the following conditions are met:

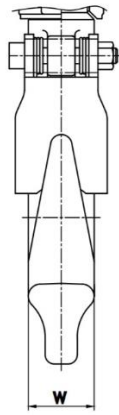
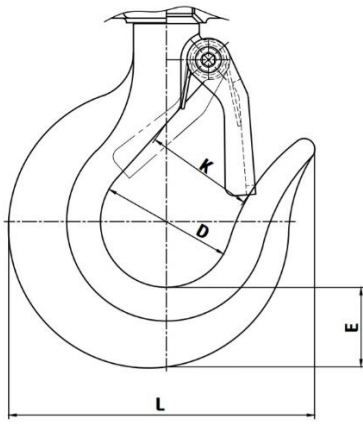
1. Any part replacement or modification of the Vulcan Max ratchet puller **must** be approved in writing by Vulcan Hoist.
2. No credit will be issued for defective parts. Vulcan Hoist will ship only replacement parts, subject to warranty inspection.
3. For major problems, the Vulcan Max ratchet puller must be returned prepaid to Vulcan Hoist for inspection and repair. If the repairs are under warranty, the ratchet puller will be returned prepaid.

Technical Specifications



| Capacity, t [lb] | Force to lift max load, kg [lbf] | Load chain \emptyset (mm) x nb. falls | Load Chain Grade | Net weight*, kg [lb] | Extra weight/lift, kg/m [lb/ft] | Dimensions, mm [in] | | | | | |
|------------------|----------------------------------|---|------------------|----------------------|---------------------------------|---------------------|---------------|-----------------|------------------|-----------------|-----------------|
| | | | | | | A | B | C | H min | L | K |
| 0.8 [1763] | 30 [66.1] | 6.3 x 1 | 80 | 7 [15.5] | 0.86 [0.58] | 155.5 [6.12] | 102 [4.02] | 121 [4.76] | 329.5 [12.97] | 273 [10.75] | 31.0 [1.220] |
| 1.5 [3306] | 30 [66.1] | | | 10.5 [23.2] | 1.10 [0.74] | 168.5 [6.63] | 107 [4.21] | 141.5 [5.57] | 379 [14.92] | | 386 [15.20] |
| 2 [4409] | 40 [88.2] | 11 [24.3] | | 395 [15.55] | | | | | 42.0 [1.654] | | |
| 3 [6613] | 37 [81.5] | 9.0 x 1 | 100 | 17.5 [38.7] | 1.76 [1.18] | 201 [7.91] | 117 [4.61] | 172.5 [6.79] | 465 [18.31] | 46.0 [1.811] | |
| 6 [13227] | 38 [83.8] | 9.0 x 2 | | 29 [64.1] | | | | 3.52 [2.37] | 241 [9.49] | 615 [24.21] | 50.0 [1.969] |

*For a ratchet puller with 5' of lift or pull distance.



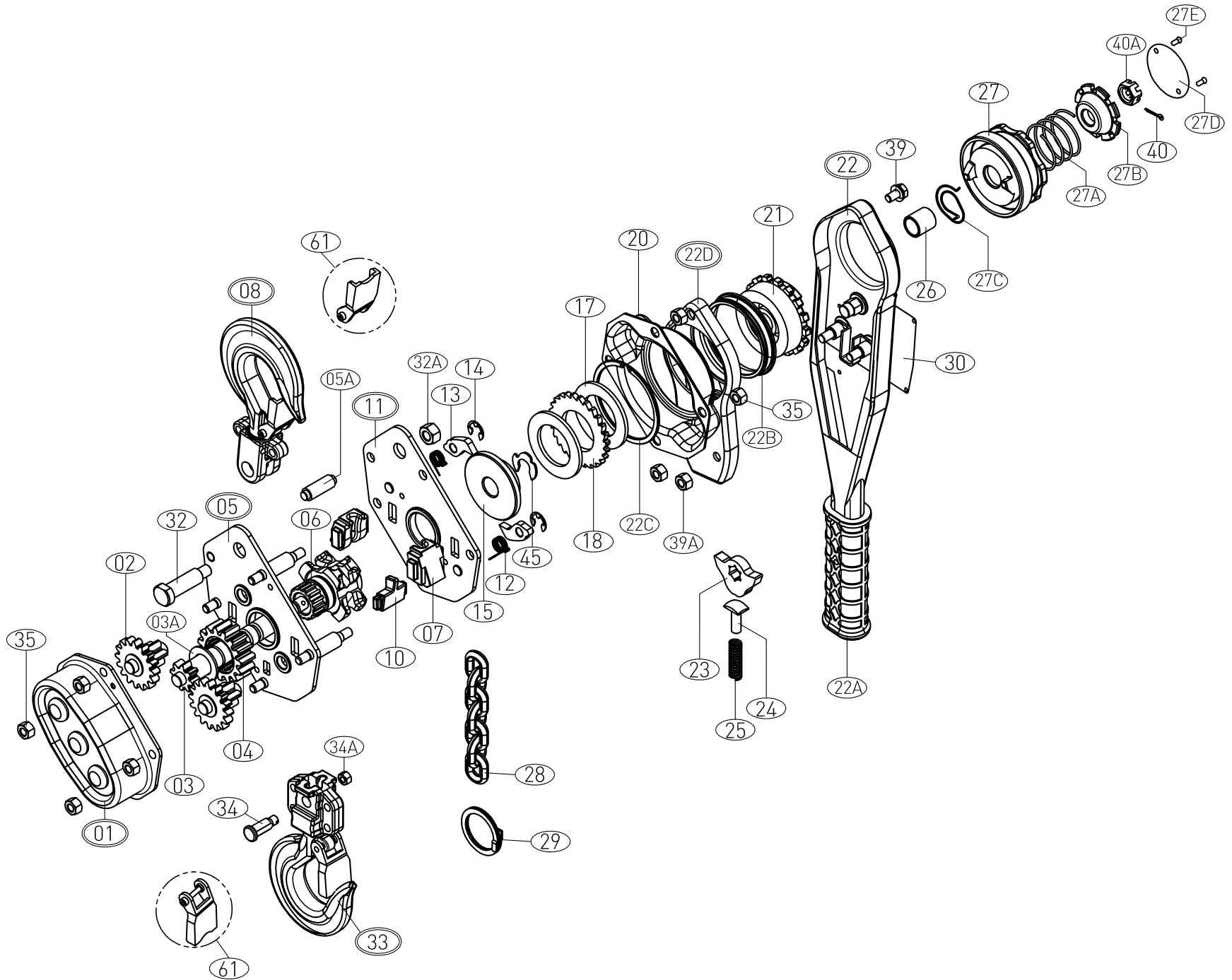
| Capacity (t) | Hook Dimensions, mm [in] | | | | |
|--------------|--------------------------|-----------------|-----------------|-----------------|--------------|
| | L | W | E | D | K* |
| 0.8 | 74.0 [2.913] | 15.0 [0.591] | 19.5 [0.768] | 37.0 [1.457] | 25 [0.98] |
| 1.5 | 102.5 [4.035] | 21.5 [0.846] | 28.5 [1.122] | 46.0 [1.811] | 28 [1.10] |
| 2 | 112.8 [4.441] | 24.0 [0.945] | 31.5 [1.240] | 50.0 [1.969] | 30 [1.18] |
| 3 | 131.0 [5.157] | 32.0 [1.260] | 39.0 [1.535] | 54.0 [2.126] | 38 [1.50] |
| 6 | 152.0 [5.984] | 37.0 [1.457] | 46.0 [1.811] | 62.0 [2.441] | 46 [1.81] |

*Here, K takes the safety latch into account.

Troubleshooting

| Symptom | Cause | Solution |
|--|--|--|
| The puller will not pull and the ratchet doesn't click | The pawl doesn't engage the ratchet due to foreign materials or corrosion | Clean foreign materials and corrosion. Lubricate the pawl's pivot |
| | The pawl spring is damaged or disengaged | Replace the pawl spring. Assemble it properly |
| | The ratchet spring is loose or damaged | Tighten or replace |
| | The overload protection mechanism is engaged | Pull or lift loads below the ratchet puller's capacity. If overload protection is engaged with loads within the capacity, it must be replaced or recalibrated by a qualified person. |
| | The load is too light | Start by tensioning the chain by using the handwheel |
| The load slips away from the ratchet puller | The brake is slipping due to lubricant | Replace the friction disc. Clean adjacent parts. |
| | Worn out friction disc due to overloading, misuse or long-term wear | Replace. See the Periodic Inspection section |
| | Foreign materials are disrupting the ratchet puller's mechanisms | Clean |
| The chain cannot be slackened under load | The brake is stuck closed, maybe due to being loaded too long, shock loaded, or extensively corroded | Place the selector in out/down and pull hard on the lever. If this does not reset the brake, unload the ratchet puller and replace the braking system. |
| The lever is tight when pulling, even without a load, may be squeaking | Worn gear teeth or worn bearing surfaces | Replace worn parts and grease regularly |

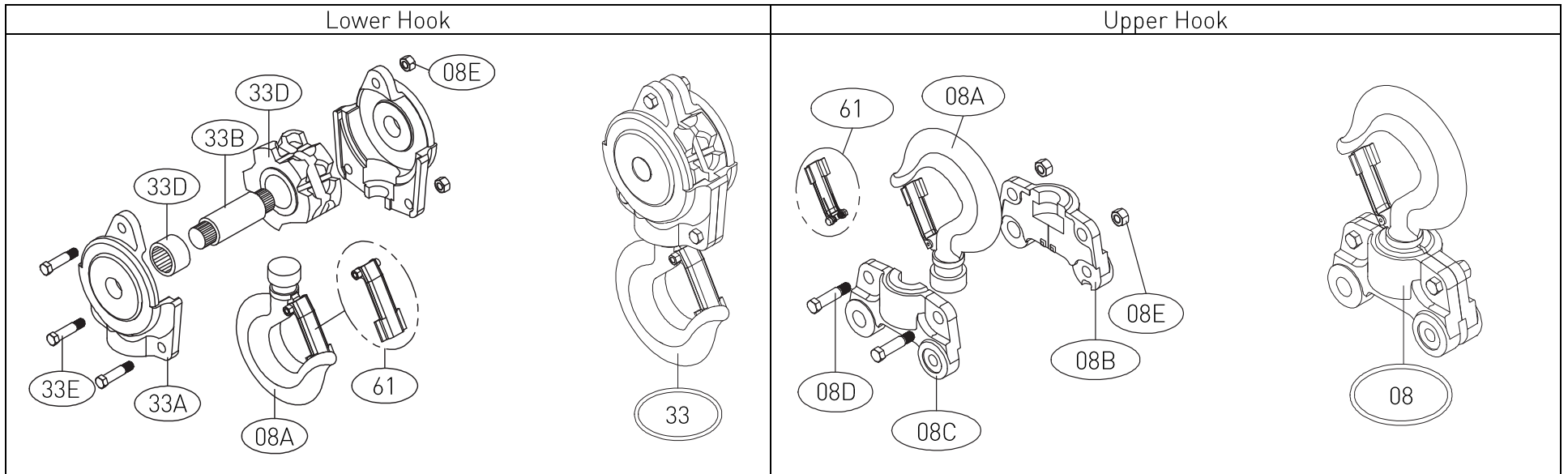
Parts



Parts list

| No. | English Description | No. | English Description |
|-----|-----------------------------|-----|--------------------------------|
| 01 | GEAR COVER ASSY. | 23 | CHANGE OVER PAWL, ALL CAP. |
| 02 | PINION GEAR | 24 | CHANGE OVER PIN, ALL CAP. |
| 03 | PINION SHAFT | 25 | CHANGE OVER SPRING, ALL CAP. |
| 03A | PINION SHAFT WASHER | 26 | BUSHING |
| 04 | LOAD GEAR | 27 | GRIP RING, HANDWHEEL |
| 05 | GEAR SIDE PLATE ASSY. | 27A | GRIP RING COMPRESSION SPRING |
| 05A | SIDE PLATES PIN | 27B | GRIP RING SPRING COVER |
| 06 | CHAIN SPROCKET, SHEAVE | 27C | GRIP RING RADIAL RETURN SPRING |
| 07 | CHAIN GUIDE | 27D | GRIP RING HAND WHEEL COVER |
| 08 | TOP HOOK COMPLETE ASSY. | 27E | GRIP RING COVER RIVET, ALL CAP |
| 08A | HOOK ASSY. (HOOK AND LATCH) | 28 | LOAD CHAIN |
| 08B | TOP HOOK YOKE FRAME SIDE 1 | 29 | END RING STOPPER, ALL CAP. |
| 08C | TOP HOOK YOKE FRAME SIDE 2 | 30 | NAMEPLATE |
| 08D | TOP HOOK YOKE BOLT | 32 | TOP HOOK SUSPENDING BOLT |
| 08E | TOP HOOK YOKE NUT | 32A | TOP HOOK SUSPENDING NUT |
| 10 | CHAIN STRIPPER | 33 | LOWER HOOK COMPLETE ASSY. |
| 11 | HANDLE SIDE PLATE ASSY. | 33A | LOWER HOOK YOKE FRAME SIDE |
| 12 | PAWL SPRING | 33B | LOWER HOOK SPROCKET AXLE |
| 13 | PAWL | 33C | LOWER HOOK SPROCKET |
| 14 | SNAP RING FOR PAWL | 33D | LOWER HOOK SPROCKET BEARING |
| 15 | DISK HUB | 33E | LOWER HOOK YOKE BOLT |
| 17 | FRICTION DISC | 34 | LOWER HOOK/LOAD CHAIN BOLT |
| 18 | RATCHET | 34A | LOWER HOOK/LOAD CHAIN NUT |
| 20 | RATCHET COVER | 35 | GEAR COVER HEX NUT |
| 21 | CHANGE GEAR (NOT OLP) | 39 | HANDLE BOLT & WASHER, ALL CAP |
| 21A | CHANGE GEAR CLUTCH (OLP) | 39A | HANDLE NUT, ALL CAPACITIES |
| 22 | OPERATING HANDLE ASSY. | 40 | COTTER PIN FOR PINION SHAFT |
| 22A | RUBBER HANDLE | 40A | SLOTTED NUT FOR PINION SHAFT |
| 22B | HANDLE/BRAKE BUSHING | 45 | BRAKE SNAP RING |
| 22C | HANDLE/BRAKE RING | 61 | LATCH KIT |
| 22D | HANDLE REAR PLATE | | |

6t Hooks



| Capacity (t) | 0.8 | 1.5 | 2 | 3 | 6 |
|--------------|-----|------|----|----|----|
| xx | 0.8 | 01.5 | 02 | 03 | 06 |

Parts codes:

The part number structure is:

BLPAPUxx-#yy

Where "yy" is the code appearing in the exploded view drawings and "xx" is the capacity from the table above.

For example, the rubber grip for the 1.5t model is BLPAPU01.5-#22A

