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**LOW-SERIES LOW PROFILE MANUAL CHAIN BLOCKS
 INSTRUCTION MANUAL**



After delivery, immediately remove the packaging from the product in a manner that preserves the packaging and maintains the orientation of the product in the packaging; then inspect the product closely to determine whether it sustained damage during transport. **If damage is discovered during the inspection, immediately record a complete description of the damage on the bill of lading.** If the product is undamaged, discard the packaging.

NOTES:

- 1) Compliance with laws, regulations, codes, and non-voluntary standards enforced in the location where the product is *used* is exclusively the responsibility of the owner/end-user.
- 2) Vestil is **not liable** for any injury or property damage that occurs as a consequence of failing to apply either: a) the instructions in this manual; or b) information provided on labels affixed to the product. Neither is Vestil responsible for *any* consequential damages sustained as a result of failing to exercise sound judgment while assembling, installing, using or maintaining this product.

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PRODUCT FEATURES





Thank you for purchasing this compact trolley and chain block combination. Dimensions and other product specifications of each model appear in the following tables:

Model	Trolley movement	I-beam flange dimensions	Minimum turn radius	Distance between bottom of flange roller and top of hook	Uniform capacity	Net weight
LOW-1P	Manual	2in. - 6in.	33 ¹ / ₂ in. 85.1 cm	11 ³ / ₄ in. 30 cm	1,000 lb. 454.5kg	35 lb. 15.9 kg
LOW-2P	Manual	2 ¹ / ₂ in. – 8 ⁵ / ₈ in.	39 ³ / ₈ in. 100 cm	13 in. 33 cm	2,000 lb. 909.1kg	55 lb. 25 kg
LOW-4P	Manual	3 ¹ / ₂ in. – 8in.	43 ⁵ / ₁₆ in. 110 cm	16 ¹ / ₄ in. 41.3 cm	4,000 lb. 1,818.2kg	110 lb. 50 kg
LOW-6P	Manual	4in. – 8in.	51 ³ / ₁₆ in. 103 cm	18 ¹ / ₄ in. 46.4 cm	6,000 lb. 2,727.3kg	140 lb. 63.6 kg
LOW-1G	Manual, gear assisted	2in. - 6in.	33 ¹ / ₂ in. 85.1 cm	11 ³ / ₄ in. 30 cm	1,000 lb. 454.5kg	45 lb. 20.5 kg
LOW-2G	Manual, gear assisted	2 ¹ / ₂ in. – 8 ⁵ / ₈ in.	39 ³ / ₈ in. 100 cm	13 in. 33 cm	2,000 lb. 909.1kg	65 lb. 29.5 kg
LOW-4G	Manual, gear assisted	3 ¹ / ₂ in. – 8in.	43 ⁵ / ₁₆ in. 110 cm	16 ¹ / ₄ in. 41.3 cm	4,000 lb. 1,818.2kg	120 lb. 54.5 kg
LOW-6G	Manual, gear assisted	4in. – 8in.	51 ³ / ₁₆ in. 103 cm	18 ¹ / ₄ in. 46.4 cm	6,000 lb. 2,727.3kg	150 lb. 68.2 kg

HAZARD IDENTIFICATION: explanation of signal words

This manual uses SIGNAL WORDS to indicate the likelihood of personal injuries, as well as the probable seriousness of those injuries, if the product is misused in the ways described. Other signal words call attention to uses of the product likely cause property damage.

The signal words used appear below along with the meaning of each word:

	Identifies a hazardous situation which, if not avoided, WILL result in DEATH or SERIOUS INJURY. Use of this signal word is limited to the most extreme situations.
	Identifies a hazardous situation which, if not avoided, COULD result in DEATH or SERIOUS INJURY.
	Indicates a hazardous situation which, if not avoided, COULD result in MINOR or MODERATE injury.
	Identifies practices likely to result in product/property damage, such as operation that might damage the product.

Each person who assembles, installs, uses, or maintains this product should read the entire manual and fully understand the directions in advance. If after reading the manual you do not understand an instruction, ask your supervisor or employer for clarification, because failure to adhere to the directions in this manual might result in serious personal injury.

SAFETY GUIDELINES

Vestil diligently strives to identify foreseeable hazards associated with the use of its products. However, material handling is inherently dangerous and no manual can address every conceivable risk. The end-user ultimately is responsible for exercising sound judgment at all times while using this product.

DANGER

Electrocution might result if the wrapping machine or a load applied to it contacts electrified wires. Reduce the likelihood of electrocution by applying **common sense**:

- DO NOT *contact* electrified wires with any part of the load or the wrapping machine;
- DO NOT use the work platform *close to* electrified wires or other sources of electricity;
- Before using the platform, always inspect the usage area for unusual conditions that require special precautions.

WARNING

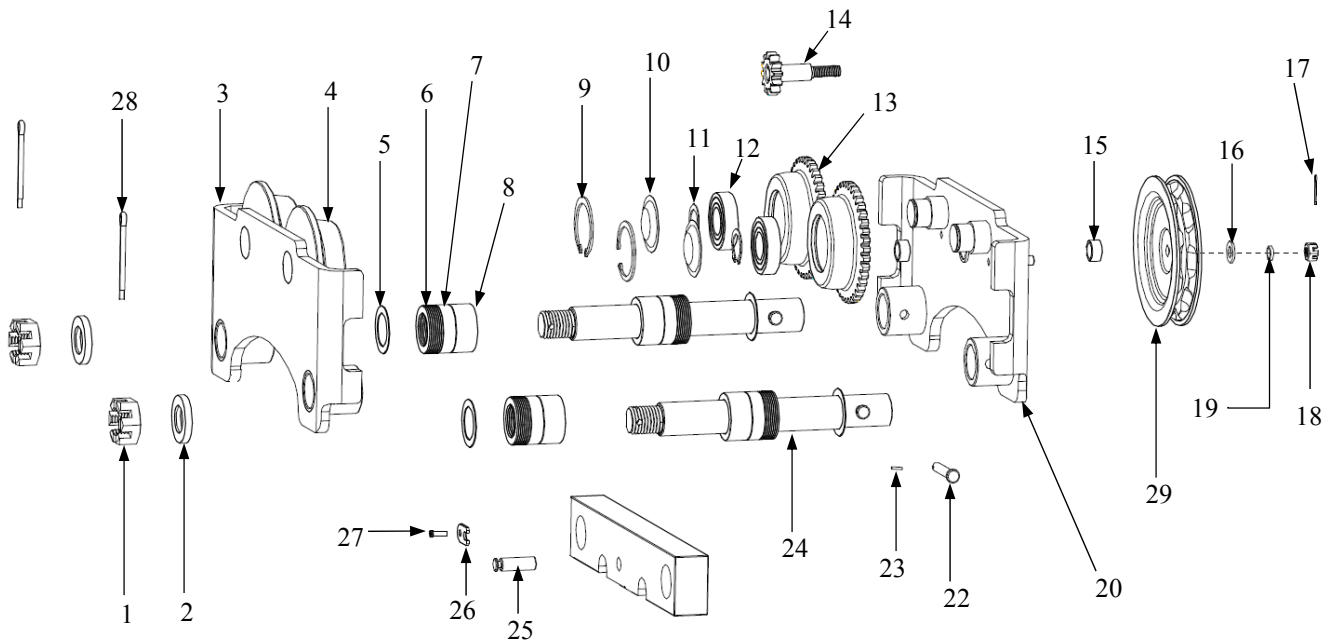
Failure to read and understand the entire manual before installing, using or servicing the product is a misuse of the product. If this product is used improperly or carelessly, the operator and/or bystanders might sustain serious personal injuries. To reduce the likelihood of injury:

- DO NOT modify the chain block or the trolley in any way UNLESS you first obtain written approval from Vestil. Unauthorized modifications automatically void the Limited Warranty and might make the product unsafe to use.
- Read the manual as needed to refresh your understanding of proper use and maintenance procedures.
- DO NOT install this product by yourself. At least two persons should work together to install the unit. Carefully install the trolley on the lower flange of the beam of your crane. DO NOT exceed the maximum rated load (see Label 287 in "Label placement diagram" on p. 9). Only use this chain block with cranes that are capable of supporting both the chain block (see "Product features" table on p. 2 to determine the net weight of your chain block) and the load.
- ALWAYS load the chain block properly. Be sure that the chain block and trolley are centered above the load before elevating the load.
- DO NOT use this chain block system to lift or move people or equipment that supports people (e.g. work platforms)! This chain block is designed for material handling only.
- DO NOT lift loads over people.
- Before using this product, confirm that the path of travel is clear. Inform other people in the area that you will use the chain block and suggest that they remain at a safe distance while the chain block is in use.
- Slowly raise loads off of the ground. Watch the load intently as it is raised. The load should not shift or swing as it rises. If the load begins to swing or shift in the rigging, return the load to the ground immediately.
- Slowly move the load with the trolley and avoid impacts that might damage the trolley or chain block. Carefully release the load once it is in the desired position to prevent the load from swinging.
- DO NOT get between the load and another object such as a wall or ceiling support while moving the load.
- DO NOT leave a suspended load unattended. Always return the load to the ground and confirm that it is stable before leaving.
- DO NOT continue to use the unit if you observe abnormal motion or noise from either the chain block or trolley. Immediately tag the unit "Out of service" and report the problem to maintenance personnel.
- Inspect the unit before each use and according to the inspection schedule on p. 7-8. DO NOT use it if it fails any part of an inspection. Instead, tag it out of service and do not use it until it is restored to normal operating condition.
- DO NOT use this device UNLESS all product labels (see "Label Placement Diagram") are readable and undamaged.
- To determine how law and regulation affects the installation, use, maintenance and inspection of this product, contact your state occupational health and safety authority. Federal OSHA "General industry" rules regarding chain blocks and cranes are found in 29 CFR 1910.179 and are published online at https://www.osha.gov/pls/oshaweb/owadisp.show_document?p_table=STANDARDS&p_id=9830.
- DO NOT use this product unless there are stops at the end(s) of the crane beam. Without stops, the trolley might fall off of the beam.
- Before using the chain block, untangle and untwist the chains. If any chain is damaged during use, immediately unload the chain block and remove the unit from service. Replace all damaged chain links with links of the same specifications.

NOTICE

- Proper use, maintenance, and storage are essential for this product to function properly.
- Always use this product in accordance with the instructions in this manual and consistent with any training relevant to chain blocks, trollies and related devices used in conjunction with this product.
 - Keep the product clean & dry.
 - To prevent corrosion and to facilitate assembly/disassembly, periodically lubricate gears, bolts, threads and nuts.
 - Vestil uses only quality parts to make the equipment we manufacture. Vestil bears no responsibility for problems that result as a consequence of using unapproved replacement parts. To order replacement or spare parts for this equipment, contact the factory.

FIG. 1: Trolley assembly and bill of materials



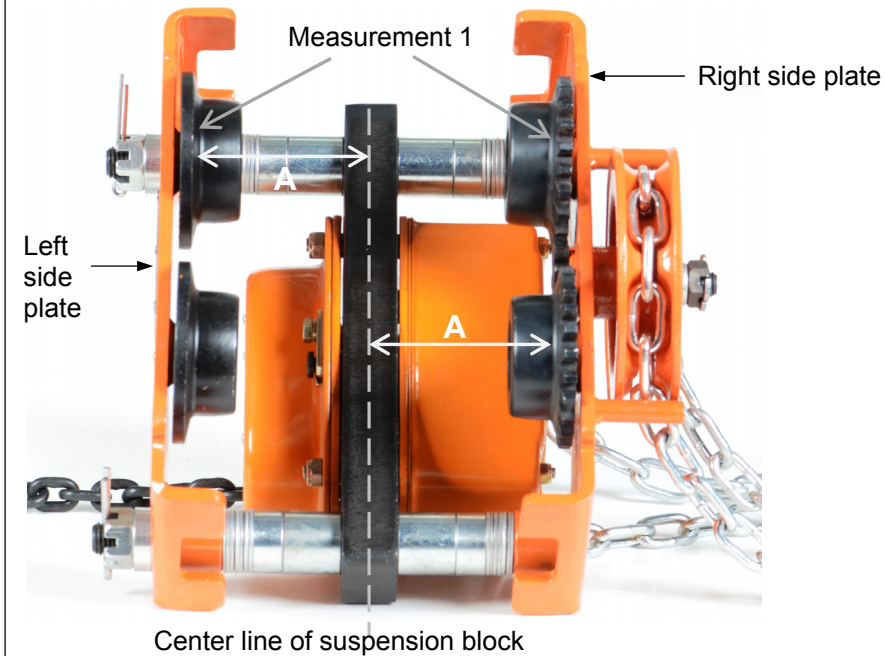
Bill of materials

Item no.	Description	Quantity
1	Crown nut	2
2	Step washer	2
3	Left side plate	1
4	Track roller	2
5	1mm washer	4
6	2mm washer	32
7	Thin spacer	4
8	Wide spacer	4
9	Snap ring	4
10	Bearing cover	4
11	Snap ring	4
12	Deep groove ball bearing	4
13	Geared track roller	2
14	Pinion	1
15	Copper bushing	2
16	Flat washer	1
17	Cotter pin	1
18	Slotted nut	1
19	Lock washer	1
20	Right side plate	1
21	Shaft stopper pin	2
22	Split pin	2
23	Suspension shaft	1
24	Suspension block	1
25	Block pin	1
26	Pin retainer	1
27	Slotted screw	1
28	Cotter pin	2
29	Hand chain wheel	1

Installation:

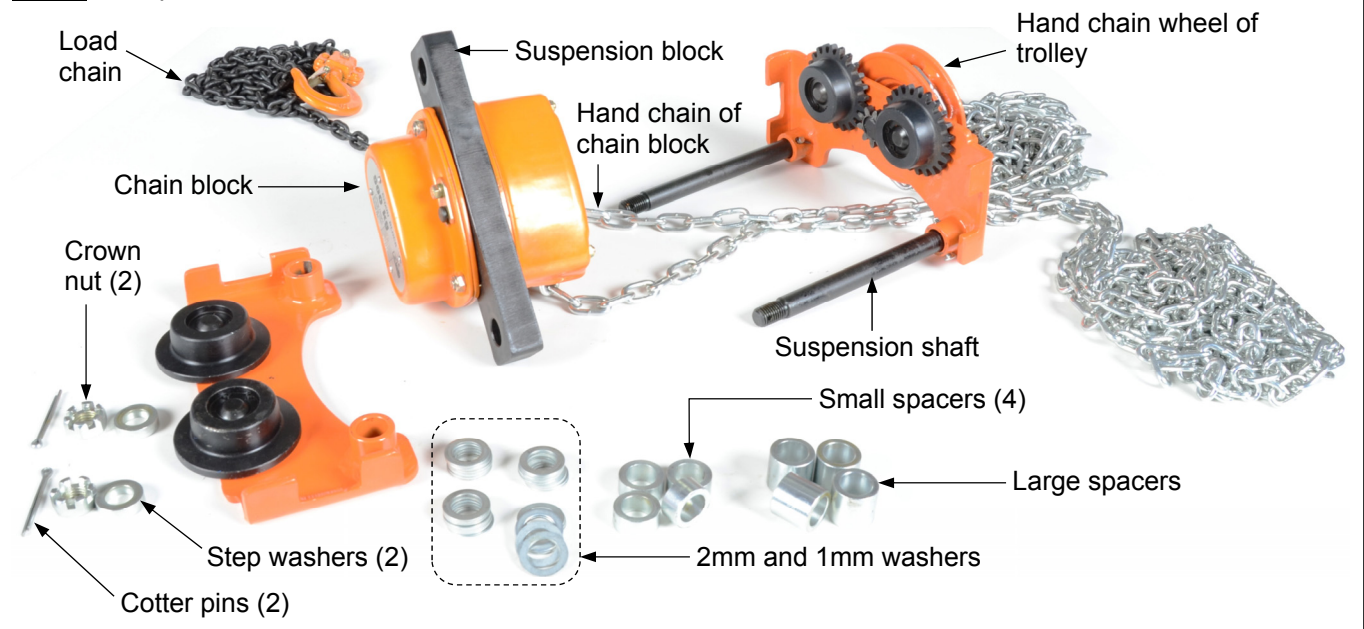
1. Measure the distance between opposed track rollers (measurement #1).

FIG. 2: Measurements



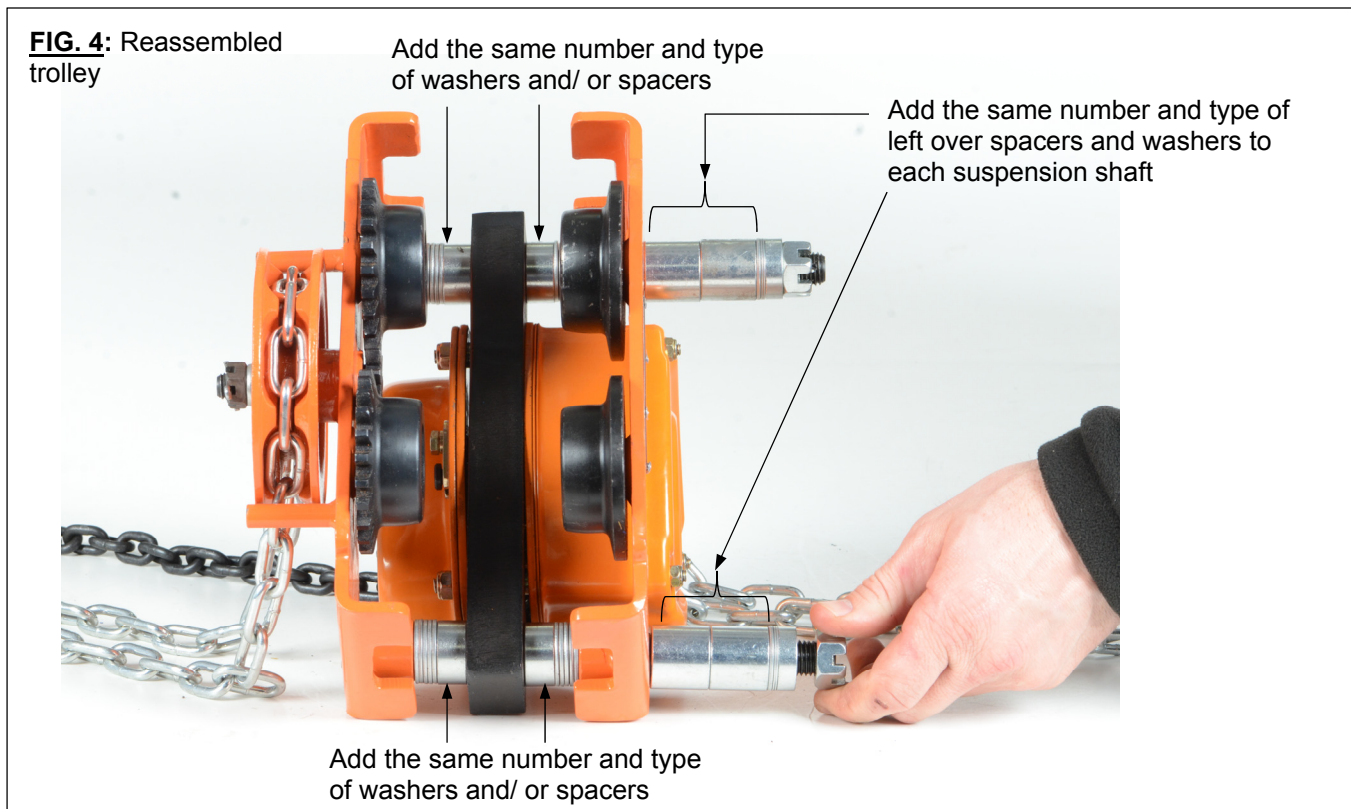
2. Measure the width of the I-beam flange where the trolley will be mounted (measurement #2).
3. Subtract the width of the flange from the width of the trolley (measurement 1 minus measurement 2).
4. Remove the cotter pins from the suspension shafts (24), unscrew the crown nuts (1) and washers (2).
5. Remove the left side plate (3).
6. Remove all spacers and washers (5, 6, 7, & 8) from both suspension shafts as well as the suspension block (25). [NOTE: There are 2 kinds of washers: 2mm thick washers and 1mm thin washers.]

FIG. 3: Components



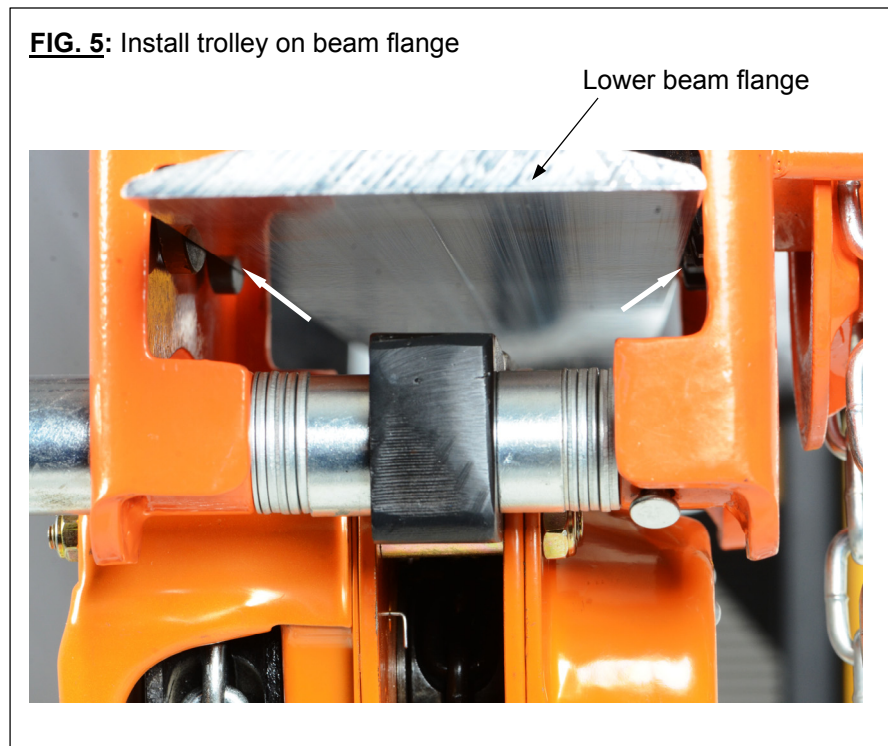
7. Mark the center of the suspension block (25); then measure half of the flange width (half of measurement 2) from the center of the block.

8. Add spacers and washers to the suspension shafts on both sides of the suspension block. Add spacers and washers so that dimension A in FIG. 2 on p. 5 is *at most* 1/16in. longer than half the flange width (calculated in step 7).
9. Slide the suspension block onto the suspension shafts. Orient the block with the hand chain of the trolley on the opposite side from the hand chain of the trolley.
10. Add exactly the same number of spacers and washers on the other side of the suspension block.
11. Reinstall the left side plate.
12. Slide the spacers and washers that were removed to the ends of the suspension shafts. Maintain symmetry when adding spacers and washers, i.e. add the same number and type of spacers/washers to each shaft. (See FIG. 4)



13. Install the trolley on the lower flange of the beam. Track rollers ride on the top of the lower flange. [NOTE: One end of both suspension shafts was left unassembled to allow the trolley to be installed on the beam flange.]
14. Reinstall the crown nuts (1) and washers (2). Tighten the nuts and secure the connections with cotter pins (34).

Test the trolley by rolling it several feet along the beam flange. If necessary, washers and spacers can be added symmetrically (on both sides of both suspension shafts) to allow the trolley to roll more freely. However, total clearance between the edge of the beam flange and the track roller flanges cannot be more than 1/8in. (3mm) or 1/16in. per side. (Shown by white arrows in FIG. 5).



Use Instructions:

Before using the chain block, untangle and untwist the chains. Attach the load to the load hook via appropriate rigging. Be certain to use only rigging that at least matches the capacity of your chain block (see “Product Features” table on p. 2). DO NOT exceed the capacity of any component of your lifting system, i.e. crane, trolley, chain block, rigging.

To raise the load:

1. Face the hand chain wheel of the chain block;
2. Pull down on the right side of the hand chain (pull chain clockwise);
3. As the hand chain turns the hand chain wheel, the load chain

The trolley of models LOW-1P, -2P, -4P and -6P is moved purely by manual power. To move the trolley, apply a steady pulling force to the load or the load hook. Only release the load when it is centered beneath the trolley to prevent the load from swinging.

The trolley used with models LOW-1G, -2G, -4G and -6G is moved by manual effort, but that effort is transmitted to the track rollers through a gear system. To move the trolley, pull the hand chain one way or the other. As the chain interacts with the hand chain wheel, it rotates the pinion, and the pinion causes the geared track rollers to rotate.

- To move the trolley to the left, face the hand wheel (of the trolley) and pull on the right side of the hand chain.
- To move the trolley to the right, face the hand wheel and pull on the left side of the hand chain.

Inspections:

⚠WARNING DO NOT use the chain block-trolley combination until all problems discovered during an inspection have been resolved.

Frequent Inspection:

At least once per month (once per week for heavy service chain blocks and daily for severe service chain blocks), inspect all functional operating mechanisms. Inspect the trolley and chain block for conditions that interfere with normal operation; correct/repair any problems identified during the most recent inspection:

- a. Trolley:
 - i. Operation:
 1. Move the trolley along the beam flange and evaluate its operation. The trolley should roll smoothly along the flange.
 2. Check both side plates of the trolley for evidence of spreading, bending, warping, and cracking. Clearance between each roller and the beam flange should be no more than 1/16in.
 - ii. Track rollers, pinion, suspension shafts, hand chain wheel, and suspension block: Visually inspect each component. Confirm that all are in normal operating condition.
- b. Chain block:
 - i. Load chain:
 1. Reeving. It should be reeved properly through the load sheave. Make sure that it is not twisted, kinked or tangled.
 2. Use the hand chain to raise and lower the load hook. Confirm that chains and the associated gears, sprockets, etc. operate smoothly without binding, jumping or unusual noise or other problems. Apply a load to the chain block and reevaluate the function of the chains and sprockets.
 3. The surface of the entire chain should be lubricated and be free of dirt and other debris.
 4. Links should be undamaged—no gouges, nicks, dents, corrosion, etc. Individual links should not be bent or twisted. The points of contact between links should not be significantly worn.
 - ii. Load hook: inspect the hook in accordance with ANSI/ASME B30.10; look for twists, cracks, and elongations.

- iii. Load hook latch: inspect the hook latch in accordance with ANSI/ASME B30.10. The latch should be straight and sound, without deformation. Its attachment to the hook should not be loose. The latch should quickly snap against the tip of the hook when released.

Periodic Inspection:

At least once per year (once every 6 months for chain blocks in heavy service or 3 months for severe service chain blocks), inspect the chain block and trolley for the following; correct/repair any problems identified during the most recent inspection:

- a. Perform a "Frequent Inspection"
- b. Evidence of loosening fasteners: check bolts, nuts, washers, etc. Make sure that connections are tight.
- c. Evidence of wear, corrosion, cracks, or deformations of operational components: examine track rollers, pinion, suspension shafts, suspension block, all pins, chains, chain attachments, gears, bearings and the housing pieces.
- d. Evidence of damage to hook, hook retaining hardware, and end connections of load chain.
- e. Evidence of damage to or significant wear sprockets and wheels (inside chain block housing): inspect the hand chain wheels, load sprockets, and idler sprockets.
- f. Condition of warning labels: labels, plates, and tags should be easily readable and affixed or attached to the chain block system as shown in the label placement diagram on p. 9.

NOTE: Label appearance and content is subject to change over time, and consequently, replacement labels might differ from labels shown in the manual supplied with the unit.

Maintenance:

Always unload the chain block and trolley before performing maintenance on them.

To maximize the service life of the chain block and trolley, routinely clean and lubricate them.

1) Cleaning: clean the following components with an acid-free solvent at least once per year. Heavy usage requires more frequent cleaning.

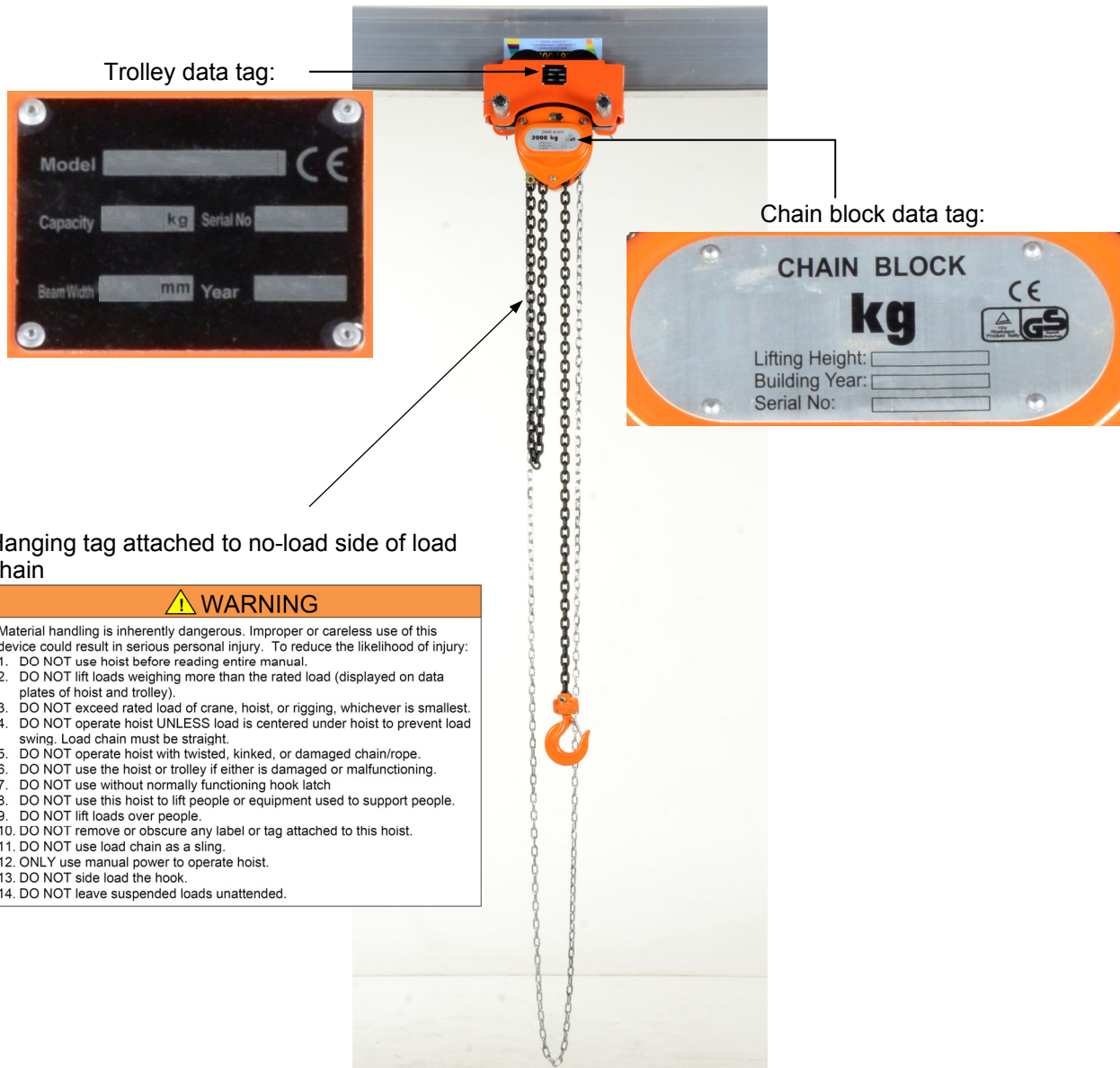
- a. Load Chain (chain block)
- b. Hand Chain (trolley)
- c. Hand Chain (chain block)
- d. Load Hook
- e. Track Rollers (chain block)
- f. Suspension Shafts
- g. Pins and Fasteners

2) Lubrication: [NOTE: Roller bearings of the trolley are sealed and require no lubrication.]

- a. Load Chain (chain block) - lubricate the load chain at least once every 3 months. Lubricate the chain with industrial general lithium grease (NLGI No. 0). If the chain block is used in dusty environments, dry lubricant can be used. It is particularly important that lubricant be applied to the surfaces of the chain that contact the load sheave.
- b. Load Sheave (of chain block) - Apply lubricant to the pockets of the load sheave as well.
- c. Pinion & Geared Track Rollers (trolley) – Apply EP1 grease or the equivalent if the usage environment temperature is in the range from -20°F to 50°F. EP2 grease is appropriate for temperatures from 30°F to 120°F. Apply lubricant to the contact surfaces as frequently as necessary to ensure that all teeth are thoroughly covered.
- d. Fasteners and pins – Lubricate fasteners and pins, especially threaded surfaces, with appropriate lubricants (e.g. anti-seize compound or thread lubricant).

Label placement diagram:

The chain block a trolley should be labeled as shown in the diagram below. Contact Vestil to order a replacement hanging tag if the original tag is lost, damaged, or unreadable.



Hanging tag attached to no-load side of load chain

⚠ WARNING

Material handling is inherently dangerous. Improper or careless use of this device could result in serious personal injury. To reduce the likelihood of injury:

1. DO NOT use hoist before reading entire manual.
2. DO NOT lift loads weighing more than the rated load (displayed on data plates of hoist and trolley).
3. DO NOT exceed rated load of crane, hoist, or rigging, whichever is smallest.
4. DO NOT operate hoist UNLESS load is centered under hoist to prevent load swing. Load chain must be straight.
5. DO NOT operate hoist with twisted, kinked, or damaged chain/rope.
6. DO NOT use the hoist or trolley if either is damaged or malfunctioning.
7. DO NOT use without normally functioning hook latch
8. DO NOT use this hoist to lift people or equipment used to support people.
9. DO NOT lift loads over people.
10. DO NOT remove or obscure any label or tag attached to this hoist.
11. DO NOT use load chain as a sling.
12. ONLY use manual power to operate hoist.
13. DO NOT side load the hook.
14. DO NOT leave suspended loads unattended.

LIMITED WARRANTY

Vestil Manufacturing Corporation (“Vestil”) warrants this product to be free of defects in material and workmanship during the warranty period. *Our warranty obligation is to provide a replacement for a defective original part if the part is covered by the warranty, after we receive a proper request from the warrantee (you) for warranty service.*

Who may request service?

Only a warrantee may request service. *You are a warrantee if* you purchased the product from Vestil or from an authorized distributor AND Vestil has been fully paid.

What is an “original part”?

An original part is a part used to make the product as shipped to the warrantee.

What is a “proper request”?

A request for warranty service is proper if Vestil receives: 1) a photocopy of the Customer Invoice that displays the shipping date; AND 2) a written request for warranty service including your name and phone number. Send requests by any of the following methods:

Mail
Vestil Manufacturing Corporation
2999 North Wayne Street, PO Box 507
Angola, IN 46703

Fax
(260) 665-1339
Phone
(260) 665-7586

Email
sales@vestil.com

In the written request, list the parts believed to be defective and include the address where replacements should be delivered.

What is covered under the warranty?

After Vestil receives your request for warranty service, an authorized representative will contact you to determine whether your claim is covered by the warranty. Before providing warranty service, Vestil may require you to send the entire product, or just the defective part or parts, to its facility in Angola, IN. The warranty covers defects in the following original dynamic components: motors, hydraulic pumps, electronic controllers, switches and cylinders. It also covers defects in original parts that wear under normal usage conditions (“wearing parts”), such as bearings, hoses, wheels, seals, brushes, and batteries.

How long is the warranty period?

The warranty period for original components is 30 days. The warranty period begins on the date when Vestil ships the product to the warrantee. If the product was purchased from an authorized distributor, the period begins when the distributor ships the product. Vestil may extend the warranty period for products shipped from authorized distributors by up to 30 days to the duration necessary to account for shipping time.

If a defective part is covered by the warranty, what will Vestil do to correct the problem?

Vestil will provide an appropriate replacement for any covered part. An authorized representative of Vestil will contact you to discuss your claim.

What is not covered by the warranty?

1. Labor;
2. Freight;
3. Occurrence of any of the following, which automatically voids the warranty:
 - Product misuse;
 - Negligent operation or repair;
 - Corrosion or use in corrosive conditions;
 - Inadequate or improper maintenance;
 - Damage sustained during shipping;
 - Accidents involving the product;
 - Unauthorized modifications: DO NOT modify the product IN ANY WAY without first receiving written authorization from Vestil. Modification(s) might make the product unsafe to use or might cause excessive and/or abnormal wear.

Do any other warranties apply to the product?

Vestil Manufacturing Corp. makes no other express warranties. All implied warranties are disclaimed to the extent allowed by law. Any implied warranty not disclaimed is limited in scope to the terms of this Limited Warranty.

