

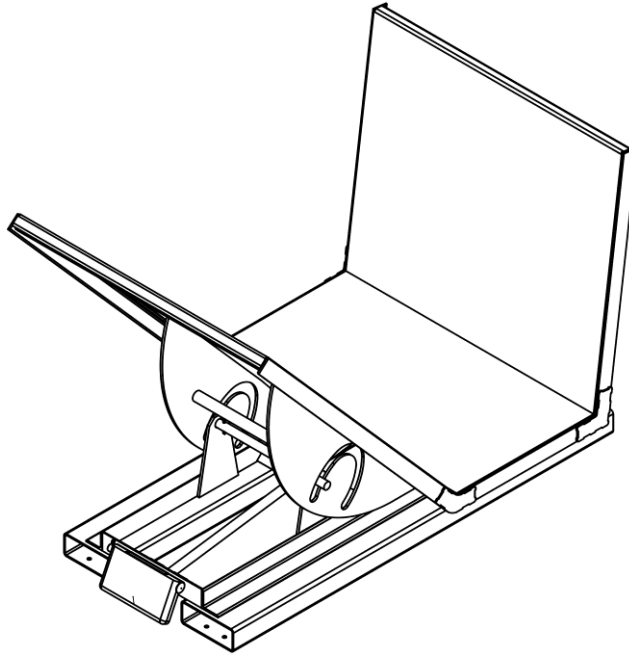


VESTIL MANUFACTURING COMPANY

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D-NS-100/200-LD OPEN-SIDED HOPPER



Receiving instructions

After delivery, remove the packaging from the product. Inspect the product closely to determine whether it sustained damage during transport. If damage is discovered, record a complete description of it on the bill of lading. If the product is undamaged, discard the packaging.

NOTE: The end-user is solely responsible for confirming that product design, use, and maintenance comply with laws, regulations, codes, and mandatory standards applied where the product is used.

Technical Service & Replacement Parts

For answers to questions not addressed in these instructions and to order replacement parts, labels, and accessories, call our Technical Service and Parts Department at (260) 665-7586. The department can also be contacted online at <https://www.vestil.com/page-parts-request.php>.

Electronic Copies of Instruction Manuals

Additional copies of this instruction manual may be downloaded from <https://www.vestil.com/page-manuals.php>.

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SPECIFICATIONS

Specifications for D-NS-100/200-LD hoppers are provided on Vestil's website. To access the current specifications document, navigate to this webpage: <https://www.vestil.com/product.php?FID=456>. Click the "Specifications" tab. Scroll the page to the entry for the model you purchased, and click the button in the PDF column that looks like a pencil inside a blue box. A PDF file will open. This file is the specifications document. Print a copy of the drawing and keep it with your copy of this manual. The following is the specifications document for model D-NS-100-LD that was current as of the revision date of this manual.

OPEN SIDE HOPPER - D-NS-100-LD

APPROX WEIGHT: 465.79 lbs.
DOES NOT INCLUDE WEIGHT OF POWER OR PACKAGING!!!

*** ANY ADDITIONS, DELETIONS, OR OMISSIONS MUST BE CORRECTED ON THIS DRAWING AS THIS DRAWING WILL BE CONSIDERED ALL INCLUSIVE ***
 ALL GRAPHICS PROVIDED ARE FOR REFERENCE ONLY. IF CERTAIN DIMENSIONS ARE CRITICAL PLEASE VERIFY THOSE DIMENSIONS WITH YOUR SALESPERSON

STANDARD FEATURES
 MODEL NUMBER: D-NS-100-LD
 VOLUME: 1 CU. YDS.
 CAPACITY: 2,000 LBS.
 OVERALL WIDTH: 39 13/16"
 OVERALL LENGTH: 61 1/16"
 OVERALL HEIGHT: 42 11/16"
 PULL CABLE IS AT LEAST: 48"
 TOUGH BAKED IN POWDER
 COAT BLUE FINISH

SPECIAL FEATURES
 NONE

NEVER EXCEED LOAD CENTER RATING PER FORK TRUCK MANUFACTURER'S GUIDELINES. DO NOT USE THIS FORK TRUCK ATTACHMENT IF LOAD WILL EXCEED FORK TRUCK MANUFACTURER'S LOAD CENTER RATING.
 APPROX. WEIGHT/ LOST LOAD=465.79 LBS.
 MINIMUM EFFECTIVE THICKNESS= LESS THAN 1"

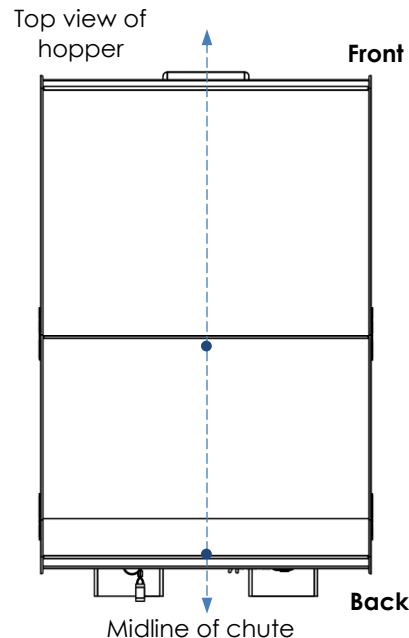
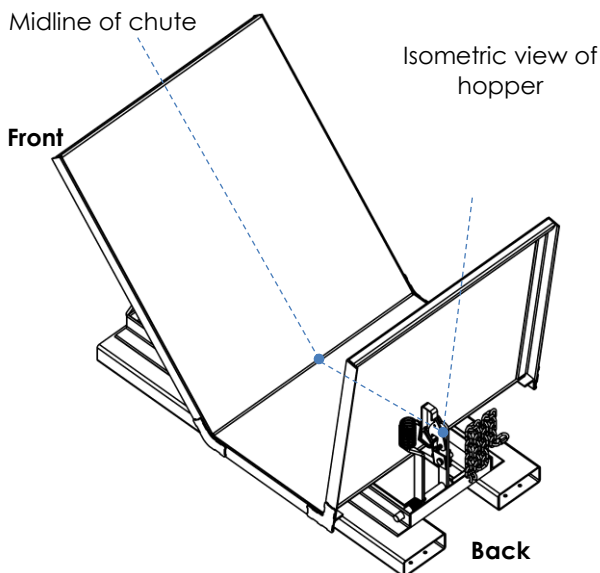
APPROVAL
 I, THE UNDERSIGNED, AGREE THAT THE PRODUCT AS REPRESENTED SATISFIES DESIGN AND DIMENSION REQUIREMENTS. I ALSO ACKNOWLEDGE MY DUTY TO CONFIRM PRODUCT AND INSTALLATION COMPLIANCE WITH ALL APPLICABLE FEDERAL, STATE AND LOCAL REGULATIONS AND STANDARDS.
UNITS REQUIRING APPROVAL DRAWINGS OR MODIFIED ARE NON-RETURNABLE
 As drawn As marked

Signed: _____ Date: _____
 Printed Name: _____
 LEAD TIME WILL START UPON RECEIPT OF SIGNED APPROVAL DRAWING

DISTRIBUTOR'S NAME:		P.O.#
VESTIL MANUFACTURING		X
DRAWN BY: BJB	DATE: 6/7/2016	SALES: X
REFERENCE: X	SCALE: 1:17	FILE NAME:
QUOTED LEAD TIME: X	QUOTE # X	37-007-103

DIMENSION TOLERANCE ± 1/4"

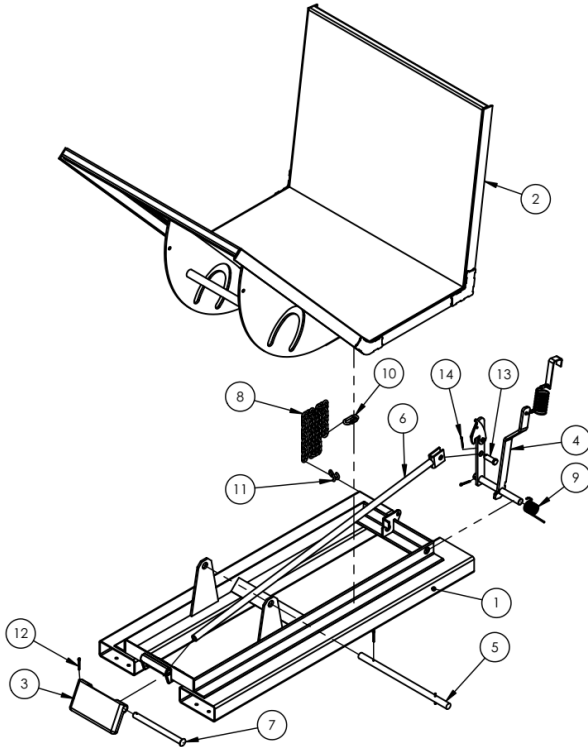
ADDITION OF CASTERS MAY CHANGE WEIGHT CAPACITY BASED ON CASTER RATING



NOTE: When loading the hopper with material with long material, make sure that the material balances. Center all material on the midline of the chute. Drive carefully and turn very slowly to avoid losing the load.

D-NS-100/200-LD SERIES HOPPERS EXPLODED VIEW & BILL OF MATERIALS

37-006-103



Item	Part no.	Description	Qty.
1	37-514-008	WELDMENT, FRAME, BASE	1
	37-514-004	D-NS-100-LD	1
2	37-545-105	WELDMENT, CHUTE	1
	37-545-205	D-NS-200-LD	1
3	37-037-040	BUMPER RELEASE	1
4	37-537-021	WELDMENT, LOCK, RELEASE LEVER ASSEMBLY	1
	37-537-020	D-NS-200-LD	1
5	37-612-005	SUB-ASSEMBLY, PIN, MAIN CONNECTION PIN	1
	37-612-006	D-NS-100-LD	1
6	37-537-006	WELDMENT, RELEASE LEVER ROD	1
7	37-112-006	PIN, BUMPER PLATE	1
8	99-145-037	Ø 5/16" CHAIN 36"	1
9	37-146-005	SPRING, TORSION, HOPPER RELEASE	1
10	99-145-053	5/16" QUICK LINK	1
11	99-145-084	LAP LINK, 5/16" X 1 1/2"	1
12	65127	COTTER PIN Z PLATED, 3/16 x 2	3
13	28-112-043	PIN, Ø3/4 X 2" LG CLEVIS, Z-PLATED	1
14	65080	EXTENDED PRONG COTTER PIN, ZINC FINISH, 1/8" x 2"	1

SIGNAL WORDS

SIGNAL WORDS in this manual draw the reader's attention to important safety-related messages.

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

SAFETY INSTRUCTIONS

Vestil strives to identify all foreseeable hazards associated with the use of its products, but no manual can address every conceivable risk. Prevent injury by applying sound judgment whenever using this device. Acquire a copy of the latest version of ITSDF/ANSI B56.1 ("B56.1" or the "Standard"). The Standard is freely downloadable on www.ITSDF.org. Apply all portions of Part II "For the User" about the use of attachments and removable attachments. The following instructions complement provisions of B56.1.

⚠ WARNING

Risk of serious personal injuries or death! Always apply the following safety instructions.

- Before this product may be used, U.S. Occupational Safety and Health Administration rule 1910.178(a)(4) and (a)(5) require that the owner/user: 1) Obtain written approval from the manufacturer(s) of all forklifts [or from a professional engineer] that will be used with the hopper; 2) Change capacity, operation, & maintenance instruction plates, tags, or decals accordingly; AND 3) Mark the forklift truck to identify the beam and show the approximate weight of the truck and beam combination at maximum elevation with load laterally centered. Requirements are published at https://www.osha.gov/pls/oshaweb/owadisp.show_document?p_table=STANDARDS&p_id=9828
- DO NOT use this hopper with rough terrain lift trucks or telehandlers (boom trucks). ONLY use this hopper with high lift fork trucks utilizing a vertical mast and carriage. DO NOT mount the hopper on stackers or manually propelled lift trucks.

Continues on next page

⚠ WARNING

- DO NOT operate the truck carrying this hopper on unimproved surfaces. Only operate on concrete or asphalt surfaces.
- *Read & understand this entire manual before using, inspecting, or servicing the hopper.*
- DO NOT use a malfunctioning or structurally damaged hopper. Examples structural damage include: 1) damage to the hopper release mechanism (that allows the hopper to dump); 2) broken fork pocket(s); 3) main connection pin; or 4) broken welds. Inspect the hopper before each use according to the [INSPECTION](#) instructions on p. 6. DO NOT use the hopper unless it passes every part of the inspection.
- DO NOT use the hopper if the safety chain is damaged or absent; DO NOT lift the hopper until it is securely connected to the carriage of the fork truck with the safety chain.
- DO NOT fill the hopper with a load weighing more than the maximum rated load. See [SPECIFICATIONS](#) on p. 2.
- DO NOT stand beneath or travel under the hopper at any time. DO NOT permit any person to stand beneath or travel under the hopper.
- **Hoppers with lifting lugs** can be lifted with overhead hoists and cranes. DO NOT lift a hopper unless the chute is securely latched to the frame. The hopper must not be able to dump while it is suspended.
- DO NOT allow people to ride on or in the hopper.
- DO NOT use the hopper if any product label (see "Labeling diagram" on p. 6) is unreadable, damaged, or missing. Contact Vestil to order replacement labels.
- When loading the hopper, make sure that the load balances. Center all material on the midline of the chute. See diagrams on [p. 2](#). Drive carefully and turn very slowly to avoid losing the load. Strap the material to the chute, if necessary.
- ALWAYS apply proper (fork) lift truck operation practices learned during your training program. Before raising the hopper from the floor AND tilt the (forklift) mast toward the cab of the truck to ensure that the hopper will not slide towards the tips of the forks.
- DO NOT modify the hopper in any way! Modification(s) might make the hopper unsafe to use.
- DO NOT dump the hopper UNLESS every person in the vicinity is safely behind the forklift truck.
- DO NOT dump the hopper if the forklift is facing down a slope. Only dump the hopper while parked on a level surface.
- DO NOT exceed the load rating of the hopper or overfill the hopper, i.e. do not fill above the front and back of the hopper. Injury to personnel or permanent damage to the equipment could result from overloading.

NATIONAL STANDARDS

US OSHA Rule 1910.178 (29 CFR 1910.178; the "Rule") classifies this device as a "front-end attachment" whenever it is mounted on a lift truck. The Rule incorporates American National Standard ANSI/ITSDF B56.1 (the "Standard"). The Standard is published by the Industrial Truck Standards Development Foundation on its website (www.itsdf.org) where it is freely downloadable at <http://www.itsdf.org/cue/b56-standards.html>. **Before putting this device into service**, acquire a copy of the Standard. Apply all relevant parts of Part II: For the User. If instructions provided in this manual apparently conflict with the Standard, then apply the instructions in the Standard. Vestil requests that you immediately bring to its attention any conflicts you discover by contacting its [TECHNICAL SERVICE](#) department. Contact information is provided on the cover page of this manual.

LOADING AND USING THE HOPPER

Standard self-dumping hoppers are suitable for use indoors and outdoors and in most industrial and commercial settings. They are intended to be used with rider forklift trucks as a means for dumping non-hazardous refuse into larger trash receptacles.

Confirm that the hopper chute is latched to the base frame (i.e. cannot dump) before loading the chute with material. Open-sided hoppers are designed to accept material that is too long to fit into closed hoppers. However, all material loaded into this open-sided hopper must balance in the chute. Generally, this requires centering loaded material on the midline of the chute. If necessary, use straps to secure the load before moving the hopper, if necessary. While moving the hopper, turn very slowly to avoid ejecting the load.

The hopper chute rotates through a 70° dump angle and can be dumped in 2 ways: 1) manually by pulling the release cable; or 2) remotely by pressing the bumper plate against an object. To dump the hopper, follow the 6 steps provided on the next page.

Step 1: Drive the lift truck forward and insert the forks into the fork tubes. Drive forward until either: 1) the tips of the forks begin to stick out of the ends of the tubes; or 2) if the forks are not long enough to extend all the way through the tubes, drive forward as far as possible.

Step 2: Securely attach the hopper to the fork carriage with the safety chain. Wrap the chain around part of the fork carriage; then connect the quick link at the end of the chain to a link in the chain with as little slack as possible.

⚠ WARNING

DO NOT wrap the release cable around any part of your body, e.g. hands, or attach the handle at the end of the cable to your clothing. If you do and the chute is released, you might be seriously injured.

Step 3: If you will release the chute manually by pulling the release handle, store the handle within reach of the forklift operator, for example by hooking it to the frame of the cab. Make sure that there is plenty of slack in the cable to avoid accidentally releasing/dumping the chute.

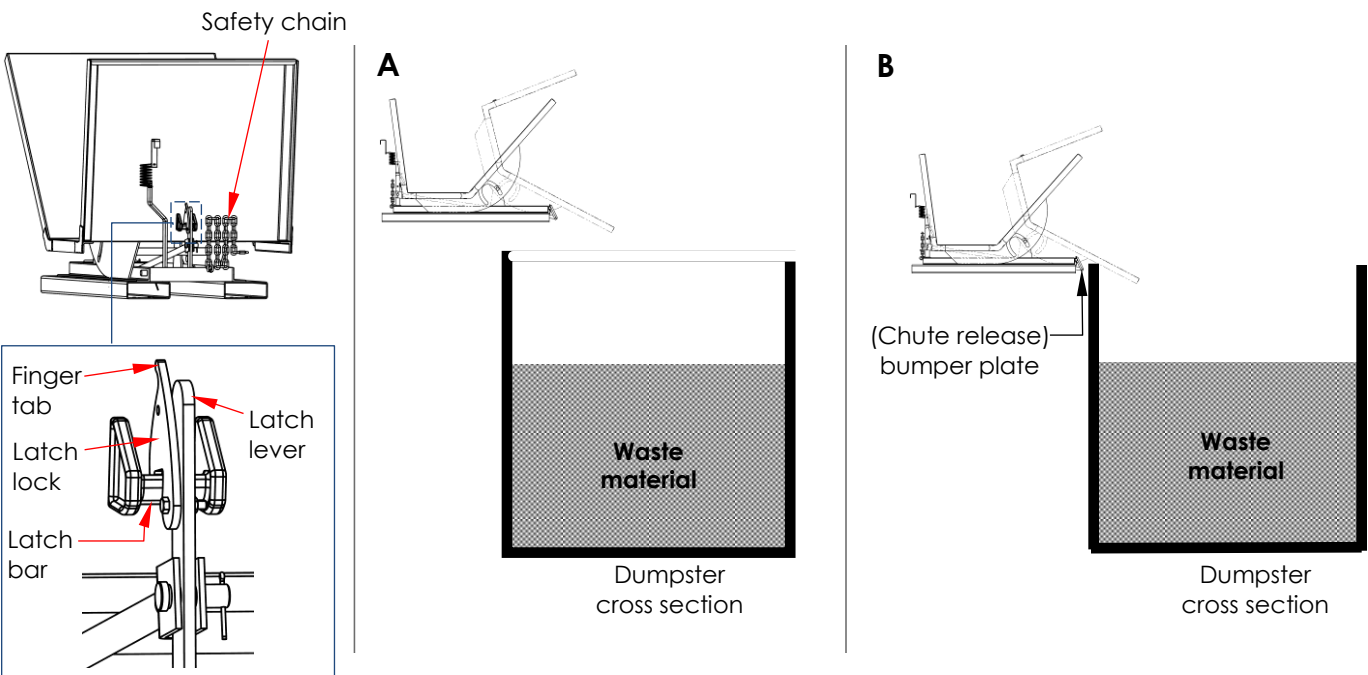
NOTE: If you will use the bumper plate mechanism to dump the chute, attach the handle to the frame of the hopper. Do not hook the handle to the chute because it could be torn from the cable when the chute is dumped.

Step 4: Drive the forklift to the dumping area. Before raising the hopper, unlock the latch lever by pulling the finger tab until the lock disengages the latch bar. See diagrams with Step 5 below.

Step 5: Raise the forks and tilt the forklift mast forward (towards the dumpster). To dump the hopper:
 A. Manually: elevate the entire hopper above the side wall of the dumpster (see diagram A) and pull the release cable

NOTE: NEVER wrap the release cable around your fingers, hand, etc.

B. Remotely: elevate the hopper so that the bumper plate will contact the side of the dumpster at or near the top (see diagram B). Drive slowly towards the dumpster and press the bumper plate against the top of the side wall.



Step 6: Return the chute to the latched position. Tilt the forklift mast toward the cab and back away from the dumpster. The hopper will automatically return to the latched position. Confirm that the chute is latched to the base by raising the forks and tilting the mast forward. The hopper should not dump. If necessary, lower the forks completely and manually latch the chute to the frame by pressing down on the rear wall of the chute until the latch lever engages the latch bar. Then, apply the latch lock.

RECORD OF SATISFACTORY CONDITION

After receiving the unit and before using it for the first time, create a record that describes the appearance and operation of the hopper. Thoroughly photograph the unit from multiple angles. Take close range photographs of the labels, release mechanisms, safety chain—particularly at each end, pivot points, and pivot point hardware. Mount the hopper of the forks of your forklift and apply the safety chain. Elevate the hopper and release the chute. Record your observations about how the unit looks and sounds as the chute rotates. Lower the unit and secure the chute to the frame. Record your observations. This written record establishes satisfactory condition. Compare the results of all inspections to this record to determine whether a component is in satisfactory condition or requires repair or replacement. If issues are discovered during an inspection, DO NOT use the hopper until it is restored to satisfactory condition. Purely cosmetic changes, like damaged surface coating (paint or powdercoat) are not changes from satisfactory condition. However, touchup paint should be applied wherever the finish is damaged as soon as damage occurs.

INSPECTIONS & MAINTENANCE

Inspections and repairs should only be performed by qualified persons. Compare the results of each inspection to the [RECORD OF SATISFACTORY CONDITION](#) (the "RECORD"). Do not use the hopper unless all parts are in satisfactory condition. Replace parts that are not in satisfactory condition before using the hopper again. **DON'T GUESS! If you have any questions about the condition of your hopper, speak with TECHNICAL SERVICE personnel.** The phone number is provided on the cover page of this manual. **Never make temporary repairs of damaged or missing parts.** Only use manufacturer-approved replacement parts.

Step 1: At least once per month, tag the hopper "Out of Service."

Step 2: Inspect the hopper. Replace any component that is not in [satisfactory condition](#).

- 1.) Pivot points: Check for excessive wear, warping, or other significant damage to pivot pins, cotter pins, and pin receivers.
- 2.) Hopper chute and base frame: Examine the structures for damage, deformation, and corroded or excessively rusted regions. Remove rust with a steel bristle brush and apply touch-up paint to exposed metal.
- 3.) Hardware (bolts, nuts, pins, cotter pins, retaining rings): Inspect hardware for looseness and severe wear. Tighten loose connections and replace all damaged hardware.
- 4.) Casters (if hopper is equipped with caster kit): Check for looseness, excessive wear, and damage to the caster wheels, caster bearings, mounting brackets, and mounting hardware.
- 5.) Release mechanism: The torsion spring should cause the latch lever to automatically recoil and the lever should firmly contact the release lock bar. Check the release cable for frays, thinning, corrosion, and bird-caging. Replacement kit 37-154-044 (shown in exploded views on p. 5-13) includes a handle, cable, and 2 wire clamps (1/4"). To install a replacement handle and cable kit, loosen the nuts of both wire clamps and feed the free end of the cable through the clamps. Insert the end of the cable through the hole in the manual chute release lever (see diagram on p. 15). Feed the cable back through the clamps and tighten all 4 nuts.
- 6.) Pivot points: Listen for unusual sounds. Watch for irregular movements. Remove dirt and debris from areas that could affect the dumping motion.
- 7.) Carriage chain: Examine the chain, the attachment to the base frame, & the quick links for damage.
- 8.) Labels: All labels should be present in the locations shown in the [Labeling Diagram](#) on p. 17.

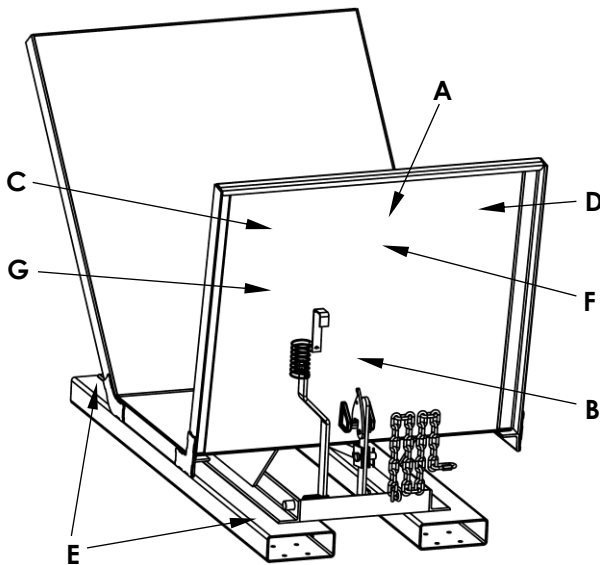
Step 3: Make all adjustments, replacements, and repairs necessary to restore [satisfactory condition](#).

⚠ WARNING DO NOT modify the hopper in any way without first obtaining written approval from Vestil. Modifications automatically void the [Limited Warranty](#) and might make the hopper unsafe to use. Modifications are changes that alter the hopper, like or removing or bending a component.

Step 4: Make a dated record of all repairs and replacements.

LABELING DIAGRAM

The unit should be labeled as shown in the diagram. Label content and location are subject to change so your product might not be labeled exactly as shown. Compare this diagram to your [Record of Satisfactory Condition](#). Replace all labels that are damaged, missing, or not easily readable (e.g. faded). Order replacement labels by contacting the [Replacement Parts Department](#) online at <http://www.vestil.com/page-parts-request.php>. Alternatively, you may request replacement parts and/or service by calling (260) 665-7586 and asking the operator to connect you to the Parts Department.



A: Label 620 (on back)

⚠ WARNING	
	<p>DO NOT wrap release cable around hand.</p> <p>Severe injury or amputation might occur if cable wrapped around body part when chute dumped.</p>
<p>STAY CLEAR of hopper when dumping.</p> <p>DO NOT hook manual release handle on hopper when using bumper release.</p> <p>Each person who uses this hopper should have access to the user manual. Copies of the manual can be downloaded from www.vestil.com.</p>	
⚠ ADVERTENCIA	
<p>NO AGARRAR el cable con la mano.</p> <p>Puede causar un daño severo o amputación si el cable se envuelve alrededor del cuerpo al estar descargando la tolva.</p> <p>MANTENTE ALEJADO de la tolva al descargar.</p> <p>Nunca agarrar el gancho de la tolva.</p> <p>Cada persona que use la tolva debe de usar el manual, las copias se pueden descargar de la dirección www.vestil.com.</p>	

B: Label 549 (on back)

Model / Modelo / Modèle D- -	⚠ WARNING	⚠ ADVERTENCIA
Capacity / Capacidad / Capacité lb. kg	<ul style="list-style-type: none"> SECURELY ATTACH safety restraint to forklift Tilt load backwards to prevent hopper from sliding Distribute load evenly DO NOT exceed rated capacity Hopper MUST be locked when not dumping Disengage lock on hopper release before dumping hopper DO NOT wrap release cable around any body part 	<ul style="list-style-type: none"> ASEGURE la cadena de seguridad a la transpaleta Vuelque la carga hacia atrás para prevenir que el carrito resbale Distribuya la carga uniformemente NO exceda la capacidad de carga tasada El depósito de alimentación debe ser cerrado al no descargar Suete cerradura en la liberación de depósito de alimentación antes de descargar depósito de alimentación No envuelva cable de liberación alrededor de cualquier parte del cuerpo
Serial No. / Serie No. / Serie No.	539 REV 1011	

C: Label 375 (on back)

⚠ WARNING	⚠ ADVERTENCIA	⚠ AVERTISSEMENT
DO NOT PLAY ON OR AROUND	NO JUEGE ALREDEDOR	NE PAS JOUER SUR OU AUTOUR DE L'UNITÉ

D: Label 220 (on back)

⚠ WARNING	⚠ ADVERTENCIA	⚠ AVERTISSEMENT
KEEP CLEAR WHEN IN USE	MANTENGASE ALEJADO CUANDO SE ESTA OPERANDO	SE TENIR À DISTANCE LORS DU FONCTIONNEMENT

E: Label 208 (both fork tubes)

⚠ WARNING	⚠ ADVERTENCIA	⚠ AVERTISSEMENT
KEEP CLEAR OF PINCH POINT	MANTENGASE ALEJADO DEL PUNTO DE CORTE	SE TENIR À DISTANCE DU POINT DE PINCEMENT

F: Label 995 (on back)

⚠ WARNING	⚠ ADVERTENCIA
DO NOT use this product to lift or transport people.	NO use este producto para transportar o elevar personas.

G: Label 1210 (on back)

⚠ WARNING
<p>Using this front end attachment exposes occupants & bystanders to risks of serious personal injuries or death.</p> <ul style="list-style-type: none"> DO NOT use this front end attachment with rough terrain lift trucks or telehandlers (boom lifts). ONLY use this attachment with high lift fork trucks utilizing a vertical mast and carriage. DO NOT operate truck with attachment on unimproved surfaces. ONLY operate the truck with the attachment on concrete or asphalt surfaces capable of supporting the truck and a full capacity load.

LIMITED WARRANTY

Vestil Manufacturing Company ("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 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.

Definition of "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 one of the following methods:

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

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

Email
info@vestil.com
Enter "Warranty service request" in the subject field.

In the written request, list the parts believed to be defective and include the address where replacements should be delivered. 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 will require you to send the entire product, or just the defective part (or parts), to its facility in Angola, IN.

What is covered under the warranty?

The warranty covers defects in the following original, dynamic parts: motors, hydraulic pumps, motor controllers, 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 dynamic components is 90 days. For wearing parts, the warranty period is 90 days. Both warranty periods begin on the date Vestil ships the product to the Warrantee. If the product was purchased from an authorized distributor, the periods begin when the distributor ships the product. Vestil may, at its sole discretion, extend a warranty period for products shipped from authorized distributors by up to 30 days 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?

The Warrantee (you) is responsible for paying labor costs and freight costs to return the product to Vestil for warranty service.

Events that automatically void this Limited Warranty.

- Misuse;
- Negligent assembly, installation, operation or repair;
- Installation/use in corrosive environments;
- Inadequate or improper maintenance;
- Damage sustained during shipping;
- Collisions or other accidents that damage the product;
- Unauthorized modifications: Do not modify the product IN ANY WAY without first receiving written authorization from Vestil.

Do any other warranties apply to the product?

Vestil Manufacturing Co. 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. Vestil makes no warranty or representation that this product complies with any state or local design, performance, or safety code or standard. Noncompliance with any such code or standard is not a defect in material or workmanship.