

VESTIL MANUFACTURING COMPANY

2999 North Wayne Street, P.O. Box 507, Angola, IN 46703 Telephone: (260) 665-7586 -or- Toll Free (800) 348-0868 Fax: (260) 665-1339

www.vestil.com

info@vestil.com

LP-6 LPG Cylinder Truck



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.

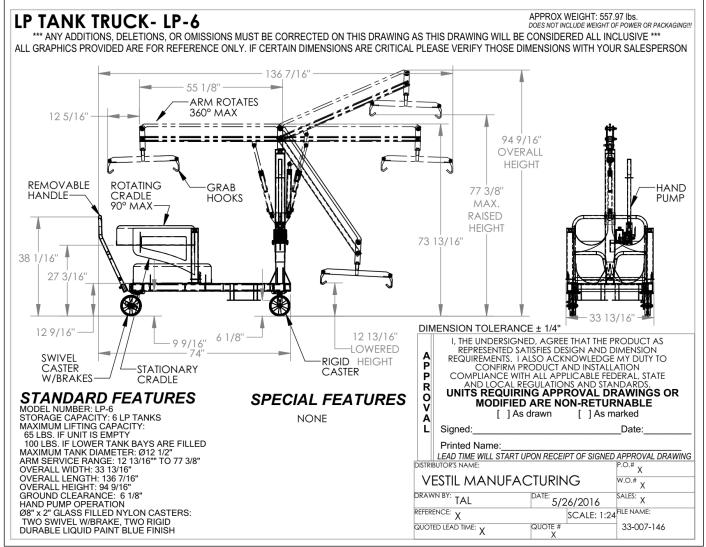
Electronic Copies of Instruction Manuals

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

Table of Contents	Page	Table of Figures	Page
Specifications	. 2	FIG. 1: Exploded View and Bill of Materials	3 - 4
Signal Words	. 2	FIG. 2A: Side View	5
Using the Tank Truck		FIG. 2B: Rack Spring Pins	5
Loading cylinders onto racks	. 5	FIG. 2C: Overhead View; Racks Pinned In-Line	5
Adjusting boom & hook arm	. 6	FIG. 2D: Overhead View with Cylinder Racks Rotated.	. 5
Lifting cylinders with hook arm	6	FIG. 3: Floor Lock	. 5
Record of Satisfactory Condition	. 6	FIG. 4A: Manually-Operated Hydraulic Pump	6
Inspections & Maintenance	7	FIG. 4B: Pump Body Detail View	6
Hand-Operated Hydraulic Pump	7	FIG. 5: Grasp Cylinder with Load Hooks	6
Labeling Diagram	. 7	FIG. 6: Hydraulic Pump Exploded View	. 8
Limited Warranty	. 10	FIG. 7: Labeling diagram	9

SPECIFICATIONS

Specifications documents for LP-series propane tank trucks can be accessed through Vestil's website. To access the appropriate specifications document, navigate to this webpage: https://www.vestil.com/product.php?FID=895. Scroll to the *Product Specifications Table* section of the webpage. Then, scroll down to the entry for the model you purchased and click the button in the *PDF* column that looks like a yellow pencil inside a blue square. A PDF file will open. This file is the specifications document. Print a copy of the document and keep it with a hardcopy of this manual. The following is an exemplar specifications document for the LP-6 model tank truck.



SIGNAL WORDS

SIGNAL WORDS appear in this manual to draw the reader's attention to important safety-related messages. The following are signal words used in this manual and their definitions.



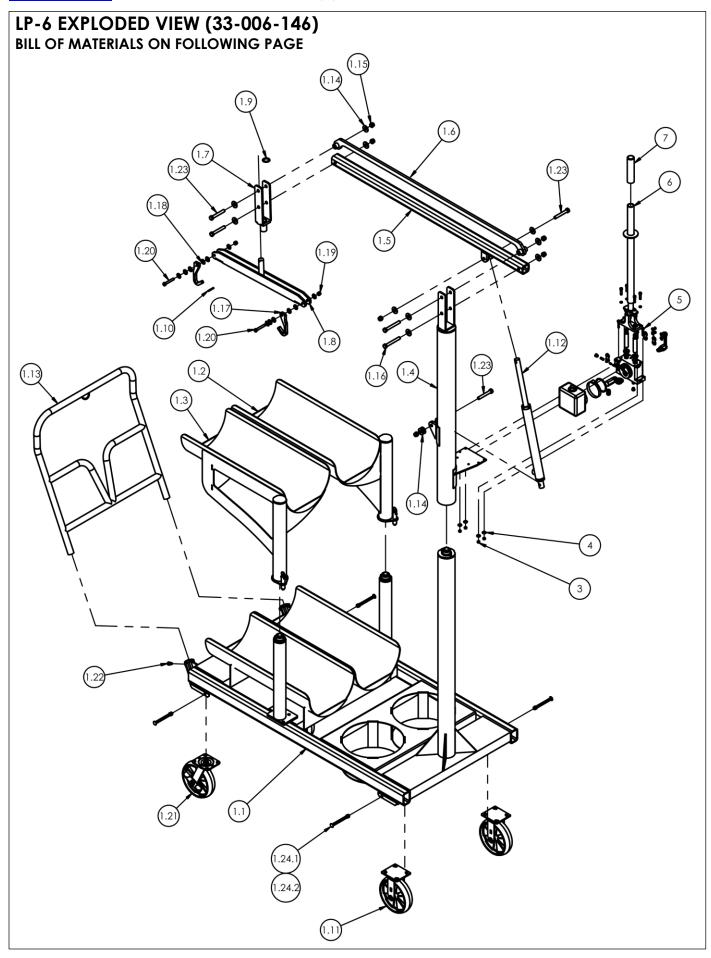
NOTICE

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.

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.



LP-6 BILL OF MATERIALS

Exploded view on prior page

ITEM	PART NO.	DESCRIPTION	QTY.	ITEM	PART NO.	DESCRIPTION	QTY.
1	33-002-146	FINAL ASSEMBLY W/O POWER UNIT	1	1.17	33-037-002	HOOK, LOCK	2
1.1	33-514-113	WELDMENT, FRAME	1	1.18	33008	FLAT WASHER, LOW CARBON, USS, ZINC PLATED, 3/8"	12
1.2	33-538-001	WELDMENT, CRADLE, RIGHT	1	1.19	37024	NYLON INSERT LOCK NUT, GRADE 2, ZINC FINISH, 3/8"-16	2
1.3	33-538-002	WELDMENT, CRADLE, LEFT	1	1.2	11113	HEX BOLT, GRADE A, PLAIN FINISH, 3/8"-16 X 2-1/2"	2
1.4	33-514-114	WELDMENT, INNER MAST TUBE	1	1.21	16-132-248	GFN-8/2-S-SWB	2
1.5	33-514-117	WELDMENT, ARM TUBE	1	1.22	11103	HEX BOLT, GRADE A, ZINC PLATED, 3/8-16X3/4	2
1.6	33-514-115	WELDMENT, ARM, STIFFENER	1	1.23	11217	HEX BOLT, GRADE A, ZINC PLATED, 1/2-13 X 3 1/2"	4
1.7	33-512-001	WELDMENT, OUTER HINGE	1	1.24	99-612-001	PIN, BULLDOG BOLT AND NUT ASSEMBLY	4
1.8	33-514-116	WELDMENT, HOOK ARM	1	1.24.1	21373	CARRIAGE BOLT, GRADE A, ZINC FINISH, 3/8"-16 X 5"	1
1.9	33444	MACHINE BUSHING, Ø 1 X 18 GA.	1	1.24.2	37024	NYLON INSERT LOCK NUT, GRADE 2, ZINC FINISH, 3/8"-16	1
1.1	64137	SPRING PIN,AISI 1070-1095,PLAIN FINISH, Ø3/16 x 1 1/2" LG.	1	2	99-640-012	ASSEMBLY, HAND PUMP, 1/4 GAL. TANK	1
1.11	16-132-233	CASTER, RIGID, GFN-8/2-R	2	3	36102	HEX NUT, GRADE A, ZINC PLATED, 1/4-20	4
1.12	99-021-931- 001	CYLINDER, HYDRAULIC, Ø1" x 14" RAM STYLE	1	4	33004	FLAT WASHER, USS, ZINC PLATED, Ø1/4"	4
1.13	16-025-031	HANDLE, CHROMED, PUSH CARTS	1	5	11009	HEX BOLT, GRADE A, ZINC PLATED, 1/4"-20 X 1-1/2"	4
1.14	33012	FLAT WASHER, LOW CARBON, ZINC FINISH, 1/2"	14	6	07-525-008	ASSEMBLY, HANDLE	1
1.15	37030	1/2"-13 NYLON INSERT LOCK NUT, GRADE 2	6	7	07-025-005	HANDLE, BLACK RUBBER, 6"	1
1.16	11219	BOLT, HEX HEAD, GRADE A, Ø 1/2 - 13 UNC X 4 LG	2				

USING THE TANK TRUCK

The operating instructions in this manual are intended to *supplement LPG* cylinder handling practices applied at your worksite. LP-6 cylinder trucks are designed for indoor use.

Failure to read and understand the instructions included in this manual before using or maintaining the cylinder truck constitutes misuse. Read the manual, as necessary, to refresh your understanding of the INSPECTIONS AND MAINTENANCE procedures explained on p. 7. DO NOT attempt to resolve any issue with the product unless you are qualified to do so.

A WARNING

Risks of serious personal injury or death. Always follow these safety recommendations to minimize risk

- Fully lower the boom and remove the load (cylinder) from the hook arm before leaving the truck unattended and before performing any work on the truck.
- DO NOT ride on or allow other person(s) to ride or climb on the truck.
- Instruct everyone to clear the area, including the travel path, where the truck will be used. Instruct any person(s) assisting you to avoid contact with the boom and load. Keep all parts of your body out from underneath a suspended cylinder.
- DO NOT attempt to lift a cylinder with the hook arm unless BOTH load hooks securely engage the cylinder. See <u>LIFTING CYLINDERS WITH HOOK ARM</u> on page 6.
- All labels affixed to the product must be readable and undamaged.
- Always carefully watch the boom and any suspended cylinder while using the truck to lift cylinders.
- ONLY use the truck on even, level surfaces.

(Safety messages continue on next page)

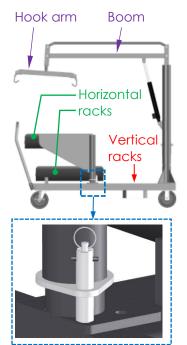
AWARNING

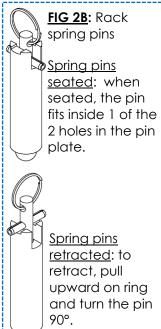
- DO NOT use the cylinder truck if you: 1) observe any warping, deformation, or other significant damage to the frame, boom, mast, hooks, or hook arm; 2) hear unusual noise during use; 3) notice caster damage or an uneven wear pattern on any of the casters; or 4) the pump does not operate normally or makes unusual sounds during use. Remove the unit from service and notify your supervisor and qualified maintenance personnel if you notice anything out of the ordinary.
- Do not exceed the load rating (capacity)! Injury to personnel or property damage including permanent damage to the truck could result. Rated load data appears on your <u>SPECIFICATIONS</u> document and on the label 1153 affixed to the truck. See <u>LABELING DIAGRAM</u> on p. 8. The label indicates the <u>net</u> capacity of the cylinder truck when handling a static (stable, non-shifting) load that has a horizontal center of gravity directly under the lifting hook. DO NOT apply side loads to a suspended cylinder, i.e. pull load to the side.
- DO NOT modify the truck IN ANY WAY. Unapproved modifications automatically void the <u>LIMITED</u> <u>WARRANTY</u> on p. 10 and might make the cylinder truck unsafe to use.

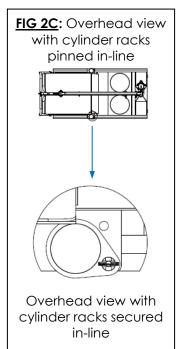
Loading Cylinders onto Racks

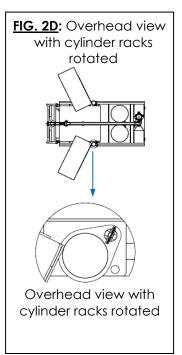
The upper cylinder racks can be rotated outward to give access to the lower racks. Spring pins fix the position of each upper rack in either an inline or rotated orientation. See Fig.'s 2C and 2D below. Each of the drawings below pair a view of the truck with the corresponding position of the spring pins below:

FIG. 2A: Side view

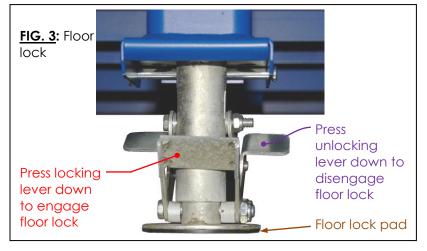








Place filled cylinders on the horizontal racks only. Use the vertical cylinder racks (refer to FIG. 2A above) to transport empty cylinders. Push the cylinder truck to the unloading location. Position the truck as needed and immobilize it with the floor lock. Step on the locking lever until the floor lock pad firmly contacts the floor (see FIG. 3). To release the floor lock, press on the unlocking lever.

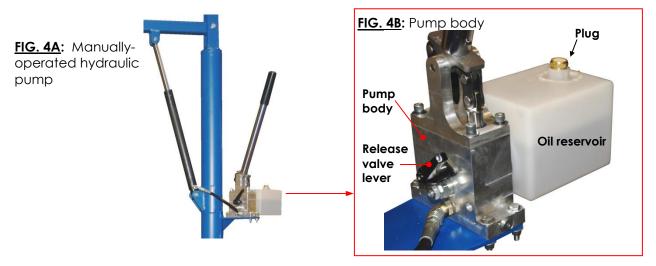


Adjusting Boom & Hook Arm

The boom (see <u>FIG. 2A</u> on p. 5) and mast rotate freely through 360°, i.e. the boom and mast do not lock in position. The manually-operated hydraulic pump adjusts the vertical position of the hook arm. To raise the boom, rotate the release valve lever on the pump body to the position shown in FIG.'s 4A & 4B below. Then work the handle back-and-forth. Lower the boom by opening the release valve. To open the release valve rotate the lever counterclockwise.

The operator can adjust the lowering speed by gradually and only partially opening the release valve, which can be accomplished by slowly rotating the release lever and not rotating it to the fully opened position. The boom is completely lowered when it will not lower further even though the release valve is still open.

The boom can be fixed at an elevation between completely lowered and fully raised by closing the release valve as the boom lowers. The boom will maintain vertical position until the release valve is opened again.

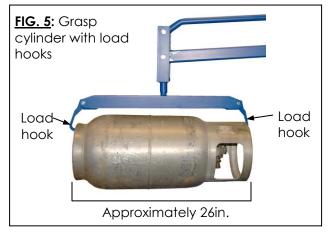


Lifting Cylinders with Hook Arm

Use the hook arm to load and unload cylinders from the horizontal racks only. See <u>diagrams</u> on p. 5.

NOTE: Use vertical storage racks to store and transport empty cylinders.

Only lift LPG cylinders that fit securely in the hooks. To fit properly in both hooks, a cylinder should be approximately 26in. (~66cm) tall/long. DO NOT attempt to lift a cylinder that cannot be firmly engaged by BOTH lifting hooks as shown in FIG. 5. Raise the boom to the height required for the job: 1) close the release valve if it is open (boom fully lowered); 2) move the handle backand-forth to raise the boom.



RECORD OF SATISFACTORY CONDITION (THE "RECORD")

Thoroughly inspect the truck after assembling it and before putting it into service. Record the condition and appearance of each of the frame members (boom, mast, and mast socket), pivot points, hook arm and load hooks, all fasteners (bolts, nuts, etc.), casters, handle, tank storage racks, etc. Thoroughly photograph the truck from multiple angles. Include close range photographs of all pivot points, casters, the cylinder, hoses, and oil tank, all labeling, and all boom connections/fasteners. Add the photographs to the record. Collect all photographs and writings in a file. This file is a record of the truck in satisfactory condition. Compare the results of all <u>INSPECTIONS</u> to this RECORD to determine whether the truck remains in satisfactory condition. Do not use the truck unless it is in satisfactory condition. Purely cosmetic changes, like damaged paint or powdercoat, are not changes from satisfactory condition. However, touchup paint should be applied as soon as damage occurs. If not treated, metal exposed by damaged paint/powdercoat will rust.

INSPECTIONS & MAINTENANCE

Inspections and all necessary repairs should be performed by qualified persons. Compare the results of each inspection to the <u>RECORD OF SATISFACTORY CONDITION</u>. Do not use the truck unless every part is in satisfactory condition. **DON'T GUESS! If you have any questions about the condition of your unit, contact the <u>TECHNICAL SERVICE</u> department. The phone number is provided on the cover page of this manual.**

<u>Never make temporary repairs of damaged or missing parts</u>. Only use manufacturer-approved replacement parts to restore the truck to satisfactory condition.

NOTE: Numbers in parentheses correspond to item numbers in the <u>LP-6 EXPLODED VIEW</u> on p. 3 and <u>BILL</u> <u>OF MATERIALS</u> on p. 4.

(A) Inspect daily for:

- 1) Oil leaks;
- 2) Pinched or chafed hoses;
- 3) Damage or structural deformation to the frame (1), the boom (1.5), and hook arm (1.8), load hooks (#21);
- 4) Unusual noise or binding;
- 5) Pump operates properly.
- (B) Perform the following inspections and service at least once per month:
 - 1) Oil level. Completely lower the boom; then remove the reservoir plug. See <u>FIG. 4B</u> on p. 6. Oil should be within 3/4" of the top of the reservoir. Change the oil if it darkens, becomes gritty, or turns a milky color (indicating the presence of water). Replace with anti-wear hydraulic oil of viscosity grade 150 SUS at 100°F, (ISO 32 at 40°C).

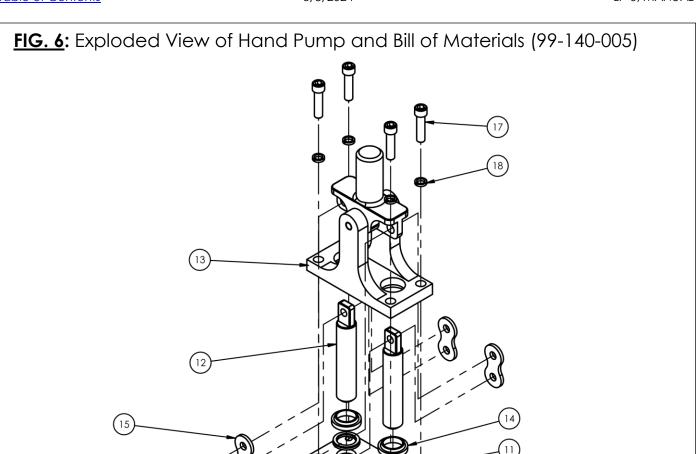
NOTICE Do not use brake fluid or jack oils in the hydraulic system. If oil is needed, use an anti-wear hydraulic oil with a viscosity of 150 SUS at 100°F (ISO 32 @ 40°C), such as AW 32 or HO 150 hydraulic oil, or a non-synthetic transmission fluid. You may use a synthetic transmission fluid if you flush the system with the synthetic fluid before filling the reservoir.

- 2) Worn or damaged hydraulic hose.
- 3) Condition of fasteners/hardware: bolts, nuts, pins, etc.
- 4) Looseness, wear, or damage to the casters' bearings, mounting hardware, or surface material.
- 5) Unusual noises or movement during operation.
- 6) Labels (see <u>LABELING DIAGRAM</u> on p. 9): each label should be clean, readable, and undamaged.

Manual Hydraulic Pump (99-140-005)

If your pump is new or recently serviced, air likely is trapped inside the pump. To remove air from the pump:

- 1. Completely lower the boom. See <u>ADJUSTING BOOM & HOOK ARM</u> on p. 6.
- 2. Remove the plug from the oil reservoir. See <u>FIG. 4B</u> on p. 6.
- 3. Disconnect the hose from the cylinder, insert it into the reservoir, and submerge the end of the hose in the oil.
- 4. Work the pump handle back-and-forth a number of times and observe the stream of oil flowing back into the reservoir. Pockets of air will escape from the stream of oil.
- 5. Once the stream is free of air, reconnect the hose to the cylinder.



Item	Part No.	Description	Qty.	Item	Part No.	Description	Qty.
1	99-039-005	BODY, MANUAL PUMP, HAND	1	10	99-153-080	VALVE, CARTRIDGE w/TOGGLE ARM	1
2	99-110-007	BEARING, BALL, Ø1/4"	2	11	99-144-015	SEAL, U-CUP	2
3	99-146-004	SPRING, COMPRESSION, INLET CHECK	2	12	99-041-004	PLUNGER/PISTON, PUMP	2
4	99-146-006	SPRING, COMPRESSION, RETAINER	2	13	99-640-008	SUB-ASSEMBLY, PUMP, ROCKER	1
5	99-110-006	BEARING, BALL, Ø3/8"	2	14	99-144-003	WIPER, SOLID PROFILE, PISTON	2
6	99-146-005	SPRING, COMPRESSION, OUTLET CHECK	2 15	99-042-001	CHAIN, SLIP FIT, SIDE PLATE, #80	4	
7	99-116-005	FITTING, HYDRAULIC, 04MORB HOLLOW HEX PLUG	3	16	11484- 01103	PIN, SS GROOVED CLEVIS W/ SNAP RING	4
8	99-153-038	FLOW CONTROL, PRES. COMP., 1.0 GAL.	1	17	93257	SHCS 5/16-18 x 1 1/4	4
9	99-153-006	VALVE, PRESSURE RELIEF, 210 BAR	1	18	129169	LOCK WASHER, HI COLLAR, ZINC PLATED	4

LABELING DIAGRAM

Label content and location are subject to change so your product might not be labeled exactly as shown. Compare the diagram below to your <u>RECORD OF SATISFACTORY CONDITION</u>. If there are any differences between actual labeling and this diagram, contact <u>TECHNICAL SERVICE</u>. Replace all labels that are damaged, missing, or not easily readable (e.g. faded). To order replacement labels or to inquire whether your unit is properly labeled, contact the technical service and parts department online at https://www.vestil.com/page-parts-request.php or by calling (260) 665-7586 and asking for the Parts Department.



C: Label 206 on oil reservoir

S. Laber 200 Off Officaci voli							
ISO 32 / 150 SUS							
HYDRAULIC OIL OR NON-SYNTHETICTRANSMISSION FLUID							
ACEITE HIDRAULICO O LIQUIDOS DETRANSMISION NO SINTETICOS							
HUILE OU LIQUIDE HYDRAULIQUE NON-SYNTHÉTIQUE	206 Rev.1003						
VESTIL MANUFACTURING CORPORATION • Phone (260) 665-7586 • www.ves	stil.com						
	ISO 32 / 150 SUS HYDRAULIC OIL OR NON-SYNTHETICTRANSMISSION FLUID ACEITE HIDRAULICO O LIQUIDOS DETRANSMISION NO SINTETI						

A: Label 1153

MODEL / MODÉLO / MODÈLE WEIGHT / PESO / MASS	
CAPACITY / CAPACIDAD / CAPACITÉ _	
SERIAL / SERIE / SÉRIE	
UNITS: 2.2 lb. = 1kg 1" (r 1in.) = 2.54cm 1153

B: Label 260

	NOTICE			
1. 2. 3.	OPERATING INSTRUCTIONS Close valve clockwise. Actuate pump to desired height. Release valve counter-clockwise and allow leveler to rest on truck bed.			
	CAUTION: Keep valve released while loading truck			
	NOTA			
	INSTRUCCIONES DE USO			
1. 2. 3.	Cierre la válvula hacia la derecha. Bombee hasta la altura deseada. Abra la válvula hacia la izquierda y permita que la palanca se apoye en la cama del camión.			
	PRECAUCIÓN: Mantenga la válvula abierta mientras se cargue el camión.			
	AVIS			
ı	NSTRUCTIONS DE FONCTIONNEMENT			
Fermer la soupape dans le sens des aiguilles d'une montre. Pousser la pompe à la hauteur désirée. Ouvrir la soupape en sens inverse des aiguilles d'une montre et laisser l'égalisateur de niveau reposer sur la plate-bande du camion.				
F	PRUDENCE: Laisser la soupape ouverte pendant le chargement du camion.			
VESTIL MANUFACTURING CORPORATION 260 Angola, IN 46703 • (260) 665-7586 rev 6965				

D: Label 212 (on both the left and right upper cylinder rack)

AWARNING	ADVERTENCIA	▲ AVERTISSEMENT			
LOCK CASTER and/or	La RUEDECILLA de la	LE PLANCHER de et/ou de ROULETTE			
FLOOR LOCK when	CERRADURA y/o el PISO	DE SERRURE VERROUILLE en chargant			
loading and unloading	CIERRAN al cargar y descargar	et décharger			
Vestil Manufacturing Corporation • Phone (260) 665-7586 • www.vestil.com 212 Rev 0709					

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 <u>Customer Invoice</u> that displays the shipping date; AND 2) a <u>written request</u> for warranty service including your name and phone number. Send requests by one of the following methods:

<u>US Mail</u>
Vestil Manufacturing Company

Fax

[Email]

[260] 665-1339

info@vestil.com

2999 North Wayne Street, PO Box 507 Phone Write "Warranty service request" Angola, IN 46703 (260) 665-7586 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 <u>1 year</u>. For wearing parts, the warranty period is <u>90 days</u>. 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 <u>not</u> 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;
- <u>Unauthorized modifications</u>: 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.