



MaterialHandling.com

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LDLT Long Deck Carts



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
Scope ...	...	...	...	...	...	...	...	...	...	...	...	2
Signal Words ...	...	...	...	...	...	...	...	...	...	...	...	2
Safety Instructions ...	...	...	...	...	...	...	...	...	...	...	...	3
Specifications ...	...	...	...	...	...	...	...	...	...	...	...	3
Exploded Views and Bills of Material ...	...	...	...	...	...	...	...	...	...	...	...	5
Figure 1: Exploded View, LDLT-3060 Cart ...	...	...	...	...	...	...	...	...	...	...	...	5
Figure 2: Exploded View, Foot Operated Hydraulic Jack Assembly (01-640-030) ...	...	...	...	...	...	...	...	...	...	...	...	7
Figure 3: Exploded View, Auto Shifter Foot Pump Assembly, Gen. 2 (99-640-016) ...	...	...	...	...	...	...	...	...	...	...	...	9
Figure 4: Auto Shifter Seal Kit (99-144-031) ...	...	...	...	...	...	...	...	...	...	...	...	10
Record of Satisfactory Condition ...	...	...	...	...	...	...	...	...	...	...	...	11
Using the LDLT Cart ...	...	...	...	...	...	...	...	...	...	...	...	11
Figure 5: Pump Lever and Release Pedal Locations ...	...	...	...	...	...	...	...	...	...	...	...	12
Inspections ...	...	...	...	...	...	...	...	...	...	...	...	13
Troubleshooting & Maintenance ...	...	...	...	...	...	...	...	...	...	...	...	14
Figure 6: Integrated Pump / Cylinder (01-640-030) ...	...	...	...	...	...	...	...	...	...	...	...	15
Figure 7: Auto Shifter Pump (99-640-016) with External Cylinder (99-021-921) ...	...	...	...	...	...	...	...	...	...	...	...	16
Figure 8: O-Ring Locations on Auto Shifter Valves ...	...	...	...	...	...	...	...	...	...	...	...	18
Labeling Diagram ...	...	...	...	...	...	...	...	...	...	...	...	19
Limited Warranty ...	...	...	...	...	...	...	...	...	...	...	...	20

SCOPE

This Owner's Manual provides use and maintenance instructions for the following Long Deck Cart models: LDLT-2060, LDLT-2060-4, LDLT-2072, LDLT-2072-4, LDLT-2096, LDLT-2096-4, LDLT-20120, LDLT-3060, LDLT-3060-4, LDLT-3072, LDLT-3072-4, LDLT-3096, LDLT-3096-4, and LDLT-30120. This manual supersedes the HT, LDLT manual from 10-2003.

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.

	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.

SAFETY INSTRUCTIONS

Vestil strives to identify foreseeable hazards associated with the use of its products. However, no manual can address every conceivable risk that could arise from using a cart. Always apply good judgment while using this Long Deck Cart (hereafter, "Cart").

WARNING

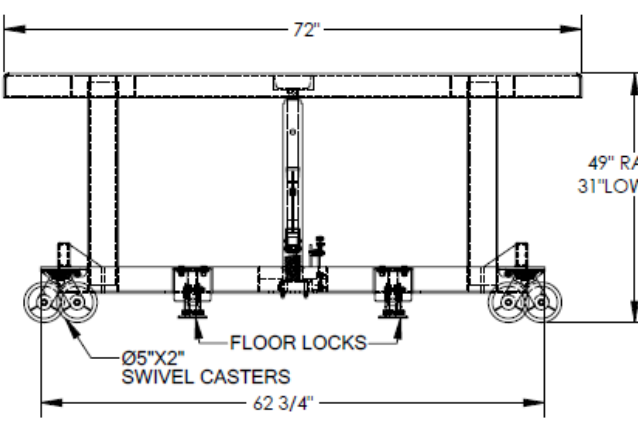
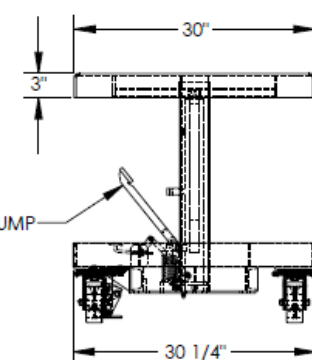
- **Read and understand the entire manual before installing, using, or servicing this Cart.** Keep this manual in a location known to persons who use the Cart. Read the manual whenever necessary to refresh your understanding of proper use, inspection, and maintenance procedures. **Failure to read and understand this Owner's Manual before using or servicing the Cart constitutes a misuse of the product.**
- The Cart is intended for indoor use only on a hard, level surface. DO NOT use this cart on sloped surfaces.
- DO NOT use the Cart if any damage or unusual noises are observed.
- DO NOT load the Cart beyond its rated capacity. Handle only stable and safely arranged loads within the maximum capacity of the Cart. The capacity can be found on the edge of the Platform, facing the operator. See the [Labeling Diagram, p. 19](#).
- ALWAYS use care to center and evenly distribute the load on the Cart. Use caution when sliding a load on or off the Cart.
- ALWAYS watch the Cart and the load when the Cart is being moved or operated.
- DO NOT use the Cart to raise personnel.
- DO NOT store items under the Cart's Platform.
- Avoid sudden stops or quick turns to prevent accidental tipping of the Cart.
- DO ensure that all information, safety, and warning labels remain in place and are legible.
- Maintenance and repairs are to be done only by personnel qualified to perform the required work.
- DO remove any load before servicing the Cart or its hydraulic cylinder. DO completely lower the Platform before servicing this product.
- If oil is needed, DO use an anti-wear hydraulic oil with a viscosity grade of 150 SUS at 100°F (ISO 32 cSt @ 40°C) or Dexron non-synthetic transmission fluid. DO NOT use brake fluid or jack oil in the hydraulic system.
- DO NOT perform any modifications to the Cart without the manufacturer's approval. Failure to receive written authorization for changes to the equipment automatically voids the warranty.
- Use only replacement parts supplied by or approved by the manufacturer.
- Contact the manufacturer for SDS (Safety Data Sheet) information.

SPECIFICATIONS

<u>Model</u>	<u>Platform Length</u>	<u>Platform Width</u>	<u>Capacity</u>
LDLT-2060	60"	20"	2000 lb
LDLT-2060-4	60"	20"	4000 lb
LDLT-2072	72"	20"	2000 lb
LDLT-2072-4	72"	20"	4000 lb
LDLT-2096	96"	20"	2000 lb
LDLT-2096-4	96"	20"	4000 lb
LDLT-20120	120"	20"	2000 lb

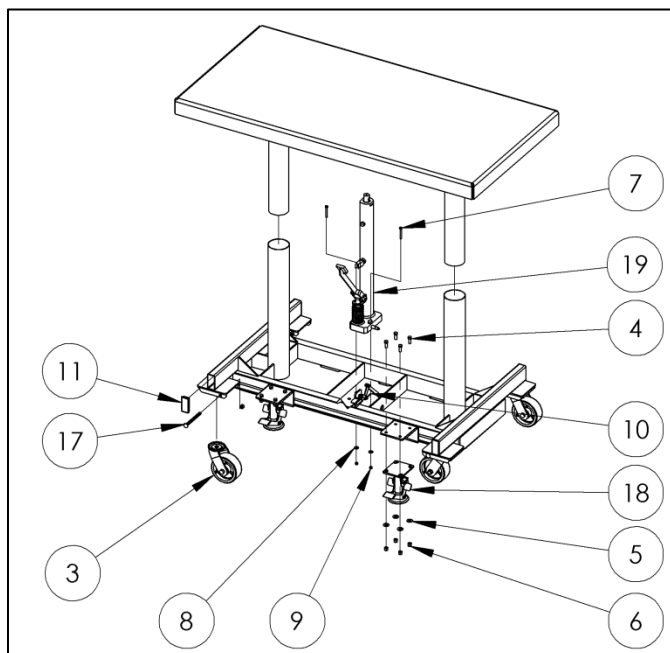
<u>Model</u>	<u>Platform Length</u>	<u>Platform Width</u>	<u>Capacity</u>
LDLT-3060	60"	30"	2000 lb
LDLT-3060-4	60"	30"	4000 lb
LDLT-3072	72"	30"	2000 lb
LDLT-3072-4	72"	30"	4000 lb
LDLT-3096	96"	30"	2000 lb
LDLT-3096-4	96"	30"	4000 lb
LDLT-30120	120"	30"	2000 lb

Documents providing further specifications for the LDLT-series Carts are available online at Vestil Manufacturing's website. To access the specifications document, navigate online to: <https://www.vestil.com/product.php?FID=283>. Click the *Product Specifications Table* tab. Scroll to the entry for the model you purchased, and click the icon in the PDF column that looks like a pencil inside a box () to open the PDF file. This file is the specifications document for your Cart. Print a copy of this document and keep it with your copy of this manual. The following is an exemplar *Specifications* document for the LDLT-3072 Cart.

LONG DECK CART - LDLT-3072 *** 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		APPROX WEIGHT: 520.42 lbs. DOES NOT INCLUDE WEIGHT OF POWER OR PACKAGING!!															
	 DIMENSION TOLERANCE $\pm 1/4$"																
STANDARD FEATURES MODEL NUMBER IS LDLT-3072 CAPACITY IS 2000 LBS. (EVENLY DISTRIBUTED) PLATFORM WIDTH IS 30" FRAME WIDTH IS 30 1/4" PLATFORM LENGTH IS 72" FRAME LENGTH IS 62 3/4" PLATFORM RAISED HEIGHT IS 49" PLATFORM LOWERED HEIGHT IS 31" FOUR SWIVEL 5" X 2" POLY-ON-STEEL CASTERS DUAL FLOOR LOCKS MANUAL FOOT PUMP OPERATION DURABLE LIQUID PAINT BLUE FINISH	SPECIAL FEATURES NONE	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 <table border="1" style="width: 100%; border-collapse: collapse; font-size: x-small;"> <tr> <td colspan="2">DISTRIBUTOR'S NAME:</td> <td>P.O. #</td> </tr> <tr> <td colspan="2" style="text-align: center;">VESTIL MANUFACTURING</td> <td>W.O. #</td> </tr> <tr> <td>DRAWN BY: SR</td> <td>DATE: 10/26/06</td> <td>SALES: X</td> </tr> <tr> <td>REFERENCE: X</td> <td>SCALE: 1:14</td> <td>FILE NAME:</td> </tr> <tr> <td>QUOTED LEAD TIME: X</td> <td>QUOTE # X</td> <td>21-007-055</td> </tr> </table>	DISTRIBUTOR'S NAME:		P.O. #	VESTIL MANUFACTURING		W.O. #	DRAWN BY: SR	DATE: 10/26/06	SALES: X	REFERENCE: X	SCALE: 1:14	FILE NAME:	QUOTED LEAD TIME: X	QUOTE # X	21-007-055
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EXPLODED VIEWS AND BILLS OF MATERIAL

FIGURE 1: EXPLODED VIEW, LDLT-3060 CART. Common service components labeled.



Bill of Materials, 2000-lb Capacity Units (LDLT-####).

ITEM	PART NUMBER	DESCRIPTION	QTY
3	16-132-021	PU-5/2-S, SWIVEL CASTER	4
4	11105	HEX BOLT, GRADE A, ZINC PLATED, 3/8"-16 X 1"	8
5	33008	FLAT WASHER, LOW CARBON, USS, ZINC PLATED, 3/8"	8
6	37024	NYLON INSERT LOCK NUT, GRADE 2, ZINC FINISH, 3/8"-16	8
7	11011	HEX BOLT, GRADE A, ZINC PLATED, 1/4"-20 X 2"	2
8	33004	FLAT WASHER, USS, ZINC PLATED, Ø1/4"	2
9	37018	NYLON LOCK NUT, GRADE 2, ZINC FINISH, 1/4"-20	4
10	65080	EXTENDED PRONG COTTER PIN, ZINC FINISH, 1/8" x 2"	1
11	21-024-021	CAP, RECTANGULAR GLIDE	4
17	99-612-001	PIN, BULLDOG BOLT AND NUT ASSEMBLY	4
18	16-132-350	FLOOR LOCK	2
19	01-640-030	PUMP ASSEMBLY FHJ-18	1

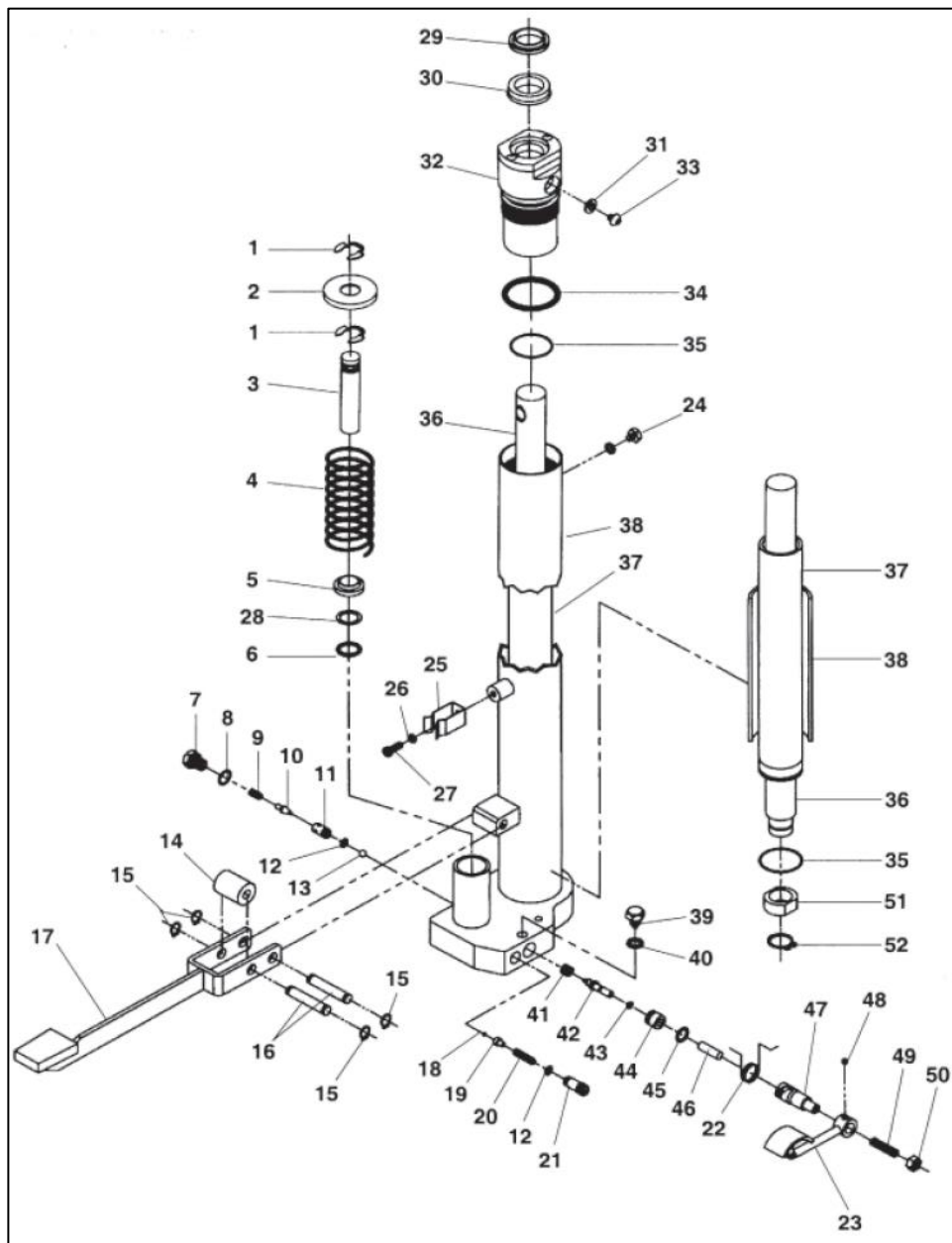
Bill of Materials, 4000-lb Capacity Units (LDLT-####-4).

ITEM	PART NUMBER	DESCRIPTION	QTY
3	16-132-021	PU-5/2-S, SWIVEL CASTER	4
4	11105	HEX BOLT, GRADE A, ZINC PLATED, 3/8"-16 X 1"	8
5	33008	FLAT WASHER, LOW CARBON, USS, ZINC PLATED, 3/8"	8
6	37024	NYLON INSERT LOCK NUT, GRADE 2, ZINC FINISH, 3/8"-16	8
7	11113	HEX BOLT, GRADE A, ZINC PLATED, 3/8"-16 X 2 1/2"	4
8	33008	FLAT WASHER, LOW CARBON, USS, ZINC PLATED, 3/8"	4
9	37024	NYLON INSERT LOCK NUT, GRADE 2, ZINC FINISH, 3/8"-16	4
10	65080	EXTENDED PRONG COTTER PIN, ZINC FINISH, 1/8" x 2"	1
11	21-024-021	CAP, RECTANGULAR GLIDE	4
17	99-612-001	PIN, BULLDOG BOLT AND NUT ASSEMBLY	4
18	16-132-350	FLOOR LOCK	2
19.1	99-021-921	CYLINDER, HYDRAULIC, Ø 1 3/4" x 18", RAM STYLE W/ RESERVOIR	1
19.2	99-640-016*	FOOT PUMP, AUTO SHIFTER (GEN. 2)	1

* Carts manufactured before 2025 use the 99-640-005 FOOT PUMP, AUTO SHIFTER (GEN. 1).

Bill of Materials, Plumbing Components, 4000-lb Capacity Units (components not depicted in Fig. 1).

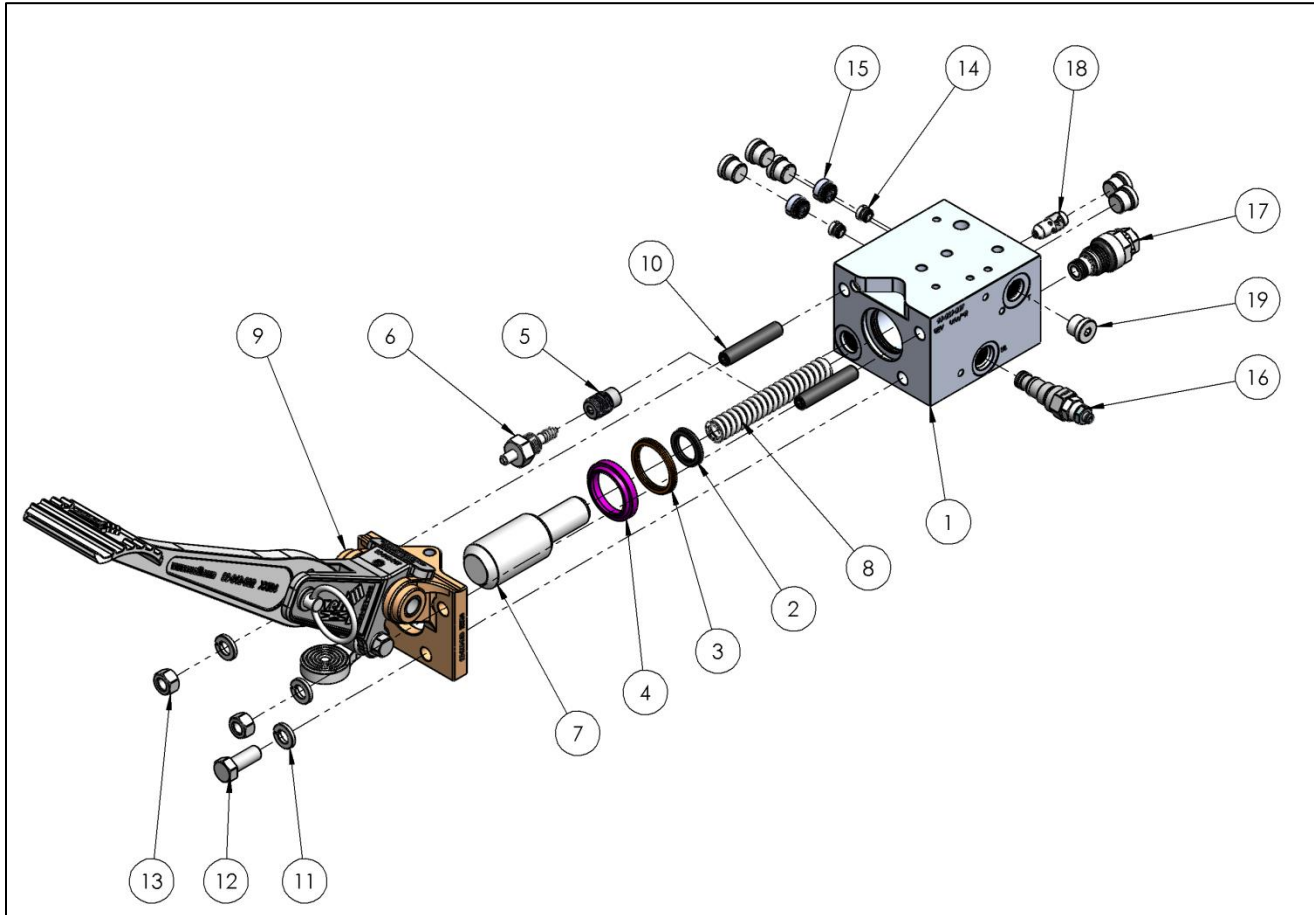
ITEM	PART NUMBER	DESCRIPTION	QTY
N/A	99-116-030	FITTING, HYDRAULIC, 06MJ-06 MORB STRAIGHT	4
N/A	99-116-140	FITTING, HYDRAULIC, 90° PUSH LOCK #6 JIC TO 3/8" HOSE	2
N/A	99-116-028	FITTING, HYDRAULIC, HOSE, 04G-06FJX 90° ELBOW	2
N/A	01-531-003	FUSE, VELOCITY, 3 GPM	1
N/A	N/A	PRESSURE LINE	1
N/A	N/A	RETURN LINE	1

FIGURE 2: EXPLODED VIEW, FOOT OPERATED HYDRAULIC JACK ASSEMBLY (01-640-030).


Bill of Materials, Foot Operated Hydraulic Jack Assembly (01-640-030)

ITEM	SEAL KIT*	PART NUMBER	DESCRIPTION	QTY
1		FHJ-P103	Snap Ring	2
2		FHJ-P104	Spring Holder	1
3		FHJ-P102	Plunger	1
4		FHJ-P105	Pressure Spring	1
5	K	FHJ-P106	Rod Wiper	1
6	K	HYD-02-2706	O-Ring	1
7		FHJ-P113	Check Valve Plug	1
8	K	HYD-01-2514	O-Ring	1
9		PLT-P1036	Valve Spring	1
10		PLT-P1037	Cone Valve	1
11		PLT-P1038	Cone Valve Seat	1
12	K	HYD-01-0803	O-Ring	2
13		SB-9-32	Steel Ball	1
14		FHJ-P153	Roller	1
15		FHJ-P151	Snap Ring	4
16		FHJ-P152	Pedal Pin	2
17		FHJ-P168	Foot Pedal	1
18		SB-5-32	Steel Ball	1
19		FHJ-P111	Relief Seat	1
20		FHJ-P110	Relief Spring	1
21		FHJ-P109	Relief Plug	1
22		FHJ-P121	Lowering Pedal Spring	1
23		FHJ-P119	Lowering Pedal	1
24		FHJ-P147	Filler Breather Plug	1
25		FHJ-P150	Pedal Crimp Spring	1
26		FHJ-P148	Lock Washer	1
27		FHJ-P149	Screw	1
28	K	FHJ-P107	Back-Up Ring	1
29	K	FHJ-P166	Dust Seal	1
30	K	FHJ-P167	Rod Seal	1
31	K	CYL-M0010-020	Dyna Seal	1
32		FHJ-P135	Gland Nut	1
33		FHJ-P163	Socket Head Cap Screw	1
34	K	HYD-02-2811	O-Ring (Gland)	1
35	K	HYD-02-6038	O-Ring (Inner Tube)	2
36		FHJ-P156-3020-00	Piston Rod	1
37		FHJ-P141-2424	Inner Tube	1
38		FHJ-P101-2424	Base & Tube Weldment	1
39		FHJ-P129	Bolt	1
40		FHJ-P130	Lock Washer	1
41		FHJ-P1015	Valve Spring	1
42		FHJ-P123	Pressure Pin	1
43	K	HYD-01-2506	O-Ring	1
44		FHJ-P124	Bushing	1
45	K	HYD-01-2637	O-Ring	1
46		FHJ-P122	Lowering Spacer	1
47		FHJ-P120	Lowering Sleeve	1
48		FHJ-P128	Set Screw	1
49		FHJ-P118	Push Bolt	1
50		FHJ-P164	Lock Nut	1
51		FHJ-P139	Piston	1
52		FHJ-P165	Snap Ring	1

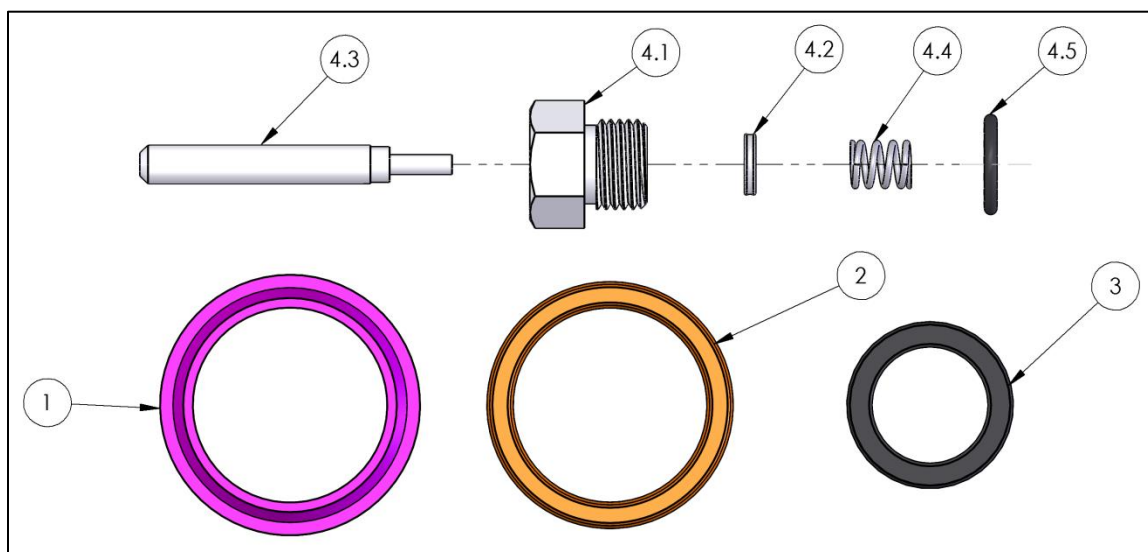
* Items identified in this column are only available in the FHJ-SK seal kit.

FIGURE 3. EXPLODED VIEW, AUTO SHIFTER FOOT PUMP ASSEMBLY, GEN. 2 (99-640-016).

NOTE: Color added for visual contrast.

Bill of Materials, Auto Shifter Foot Pump (99-640-016).

ITEM	PART NUMBER	DESCRIPTION	QTY
1	99-039-007	BODY, MANUAL PUMP, 1.25 / .75 BORE, CB UNLOADER	1
2	99-144-015	SEAL, U-CUP	1
3	99-144-018	SEAL, 1 1/4" X 1/8" CS	1
4	99-031-067	WIPER, 1 1/4" ID X 1 1/2" OD X 3/16"	1
5	99-153-116	VALVE, CHECK, 5 PSI CRACK, INSERTABLE	1
6	99-653-010	ASSEMBLY, RELEASE VALVE PACKING	1
7	99-041-001	PISTON, PUMP, 1 1/4" X 3/4"	1
8	99-146-009	SPRING, COMPRESSION, RETURN PISTON	1
9	99-640-010	PUMP, MANUAL, FRONT SUB ASSEMBLY	1
10	25547	SOCKET HEAD SET SCREW, BLACK OXIDE FINISH, 3/8"-16 X 2"	2
11	33622	SPLIT LOCK WASHER, CARBON STEEL, MEDIUM ZINC FINISH, 3/8"	3
12	11105	HEX BOLT, GRADE A, ZINC PLATED, 3/8"-16 X 1"	1
13	36106	HEX NUT, GRADE A, ZINC PLATED, 3/8-16	2
14	99-153-117	VALVE, HYDRAULIC, CHECK, PANCAKE	2
15	99-153-118	VALVE, HYDRAULIC, CHECK, PANCAKE	2
16	99-153-119	VALVE, COUNTERBALANCE, SIZE 06-3	1
17	99-153-006	VALVE, PRESSURE RELIEF, 210 BAR	1
18	99-153-040-001	FLOW CONTROL, PRES. COMP., 2.0 GAL.	1
19	99-116-042	FITTING, HYDRAULIC, 06MORB HOLLOW HEX PLUG	6

FIGURE 4. AUTO SHIFTER SEAL KIT (99-144-031).


Bill of Materials, Auto Shifter Seal Kit (99-144-031).

ITEM	PART NUMBER	DESCRIPTION	QTY
1	99-031-067	WIPER, 1 1/4" ID X 1 1/2" OD X 3/16"	1
2	99-144-018	SEAL, 1 1/4" X 1/8" CS	1
3	99-144-015	SEAL, U-CUP	1
4	99-653-010	ASSEMBLY, RELEASE VALVE PACKING	1
4.1*	99-031-116	NUT, PACKING, 9/16-18 THREADS, HEX HEAD	1
4.2*	99-144-029	X-RING, 1/4" ID X 3/8" OD X 1/16" CS	1
4.3*	99-041-006	PIN, RELEASE PLUNGER	1
4.4*	99-146-025	SPRING, COMPRESSION	1
4.5*	99-144-027	O-RING, SAE #6, NBR 90	1

* 99-653-010 sold as a unit; subcomponents not sold separately.

RECORD OF SATISFACTORY CONDITION

After receiving the Cart, and before putting it in service, make a detailed written Record of its appearance and operation. Describe the condition of the frame, Platform, cylinder, and pump components. Take photographs of each feature and add them to the Record. Take photographs of all labels, describing where each is located on the Cart. **This Record established the normal condition of the Cart.**

ALWAYS compare future inspections to the Record to determine if the Cart is in satisfactory condition for use. NO NOT use the Cart unless it is in satisfactory condition. Purely cosmetic changes, like damaged paint or powder coat, do not constitute changes from satisfactory condition. However, touchup paint should be applied to affected areas as soon as damage occurs.

USING THE LDLT CART

Review the [Safety Instructions \(p. 3\)](#) before using the Cart.

At the beginning of every work shift, inspect the overall condition of the Cart. Check for any leaks in the hydraulic cylinder and pump. Check for any missing or broken hardware. Make sure all labels are present and legible. If any of these conditions exist, remove the Cart from service and remedy the condition before returning to service.

The load rating, in pounds, can be found on the machine name plate found on the edge of the Platform, facing the operator. This indicates the net capacity of the Cart for a static load, centered and evenly distributed on the Cart's Platform. The size of the load should not exceed Platform dimensions by more than 50%, and should not exceed twenty-four inches (60 cm) in height.

WARNING

DO NOT exceed the Cart's load rating. Injury to personnel or permanent damage to the Cart can result from exceeding the listed capacity. Note: Take into account the weight of any equipment added to the Platform by third parties when determining the maximum working load.

WARNING

This Cart is not approved for lifting personnel.

Before loading the Cart, engage both floor locks to prevent unintentional movement. Add or remove items on the Platform, making sure the load remains centered and evenly distributed as much as possible.

Before lifting or lowering the Platform, engage both floor locks to prevent unintentional movement.

2000-lb capacity models. 2000-lb Carts have an integrated cylinder/pump assembly. To lift the Platform, press the Pump Lever down completely using smooth, firm strokes. A poppet valve inside the cylinder piston allows hydraulic fluid to pass through the piston. Excessively fast operation of the Pump Lever does not allow the poppet valve to reseal between strokes, and will prevent cylinder motion. To lower the Platform, press the smaller Release Pedal to the right of the Lever.

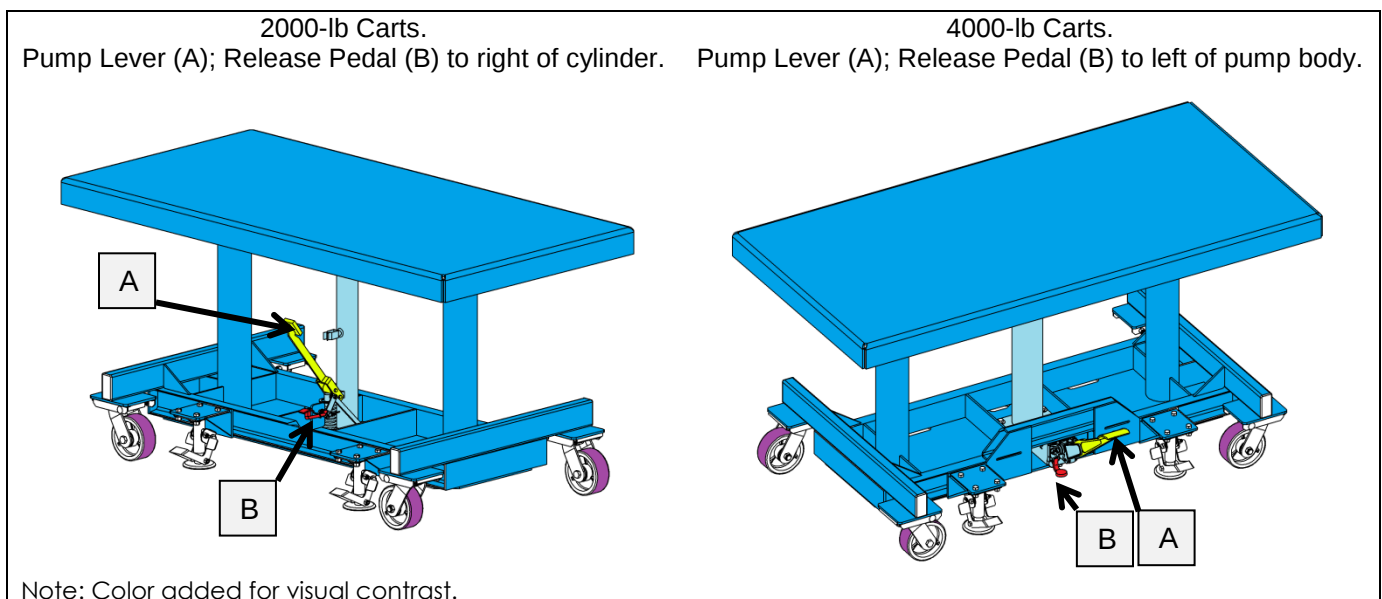
4000-lb capacity models. 4000-lb Carts have a two-stage, Auto Shifter Foot Pump. At lower pressures, the pump displaces 1.2 in³ of oil per stroke. A Counterbalance Valve bypasses a fraction of the oil at higher pressures. This reduces the effort needed to lift heavier loads, but reduces displacement to 0.44 in³ per stroke. The Counterbalance Valve release pressure setpoint may be adjusted for individual users.

To lift the Platform, press the Pump Lever down completely using smooth, firm strokes. To lower the Platform, press the smaller Release Pedal to the left of the Lever.

Adjusting the Counterbalance Valve (4000-lb models). The Counterbalance Valve is located on the right side of the pump body (Fig 7, p. 16). Use a 7/16" wrench to loosen the locking nut on the Valve body. Use a 1/8" hex key to adjust the set screw. Turning the screw clockwise increases the release pressure, and thus the human effort needed to lift a heavier load. Turning the screw counterclockwise lowers the release pressure / human effort.

NOTE: Carts manufactured prior to 2025 have a Foot Pump cannot be adjusted for pressure.

FIGURE 5. PUMP LEVER AND RELEASE PEDAL LOCATIONS.



When moving the Cart, ensure both floor locks are disengaged. Use smooth motions, avoiding sudden stops or quick turns that could tip the Cart or cause its load to slide. Only move the Cart on hard, level surfaces. Avoid ramps, as even a moderate slope can cause the pushing force to exceed that which a person can safely exert.

INSPECTIONS

Perform the following inspections before each use.

1. Check the surface of the product for dirt or other foreign matter. Clean surfaces as needed.
2. Examine hardware and fasteners, including but not limited to bolts, nuts, and pins. Replace damaged, worn, or corroded hardware.
3. Examine the pump, cylinder, and hydraulic lines for leaks or damage. DO NOT use a Cart having visible leaks or damage to hydraulic components. Have a qualified person make repairs.
4. Examine frame elements for excessive wear, bending, breakages, corrosion or rusting, or any other damage.
5. Examine the structure for severe rusting or corrosion. For superficial or surface rusting, remove the rust/corrosion with a steel bristle brush or steel wool. Clean the affected area and apply touchup paint. If rusting has thinned or weakened the material, contact Vestil technical service for advice.
6. Check all labels (see the [Labeling Diagram, p. 19](#)). Replace labels that are damaged or not easily readable.

Check the condition of the oil once a year. Change the oil if it darkens, becomes gritty, or turns a milky color (indicating the presence of water). Replace with an anti-wear hydraulic oil with a viscosity grade of 150 SUS at 100°F (ISO 32 cSt @ 40°C), such as AW 32, HO 150 or Dexron non-synthetic transmission fluid.

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TROUBLESHOOTING & MAINTENANCE

Troubleshooting Guide

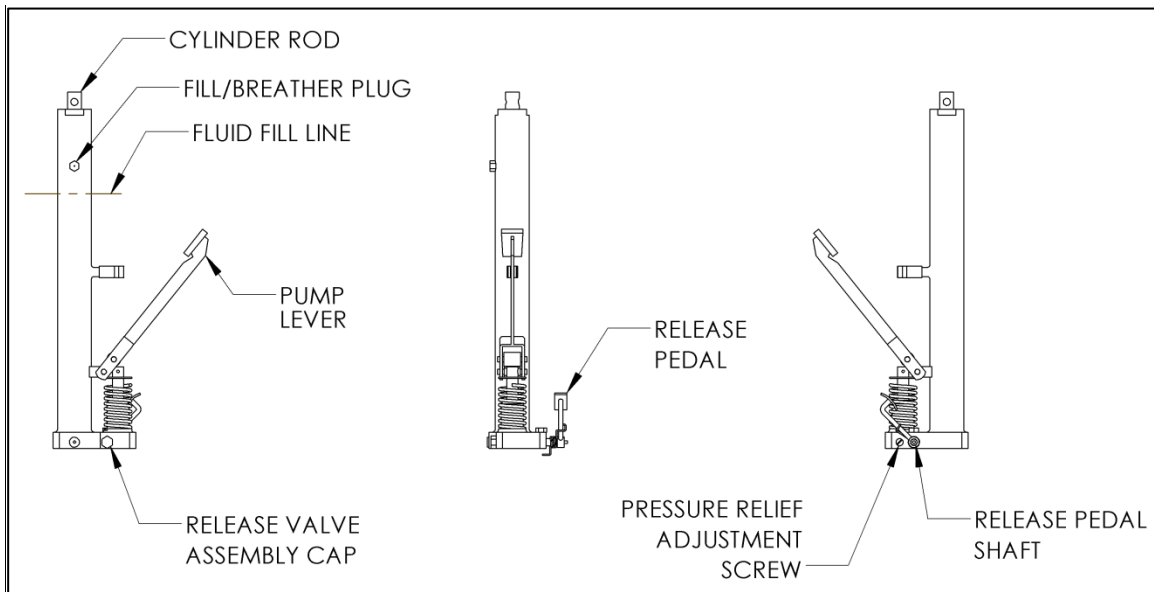
Before performing any maintenance task, lower the Platform completely. Detailed instructions follow this table. Consult the factory for any problems not addressed below.

<u>Problem</u>	<u>Possible Causes</u>	<u>Action</u>
Platform does not move up when Foot Pedal pressed.	Oil level low.	Check the oil level in the cylinder. Fill as needed.
		Check for hydraulic leaks.
	Air trapped in hydraulic system.	Purge air from hydraulic system. Check oil level after purging.
	Pinched or kinked hydraulic hose.	Inspect all hoses. Reposition or replace as necessary.
	Contamination in Pressure Relief Valve*.	Clean and flush the Relief Valve.
Foot Pedal goes down without resistance.	Oil level low.	Check the oil level in the cylinder. Fill as needed.
Platform motion is inconsistent or "jerky".		Check for hydraulic leaks.
	Air trapped in hydraulic system.	Purge air from hydraulic system. Check oil level after purging.
Platform drifts down.	Contamination holding Check Valve open.	Clean and flush the Check Valve assembly.
	Contamination in the Counterbalance Valve‡.	Clean and flush the Counterbalance Valve assembly.
Foot Pedal force too high.	Excessive operating pressure.	Check for an excessive load on the Platform.
	Valve setpoint too high.	Adjust the Relief Valve* / Counterbalance Valve‡ setpoint.
	Contamination in the Counterbalance Valve‡.	Clean and flush the Counterbalance Valve assembly.
Platform doesn't move down when the release pedal is pressed. Platform moves slowly when the release pedal is pressed.	Object under Platform obstructing motion.	Remove any objects from under the Platform.
	Pinched or kinked hydraulic hose.	Inspect all hoses. Reposition or replace as necessary.
	Damage to leg assembly.	Inspect for evidence of rubbing, binding, twisting, etc. of the leg set.
	Contamination in the Pedal Check Valve‡.	Clean and flush the Check Valve assembly.
	Velocity fuse stuck‡.	Pump cylinder up to reset velocity fuse.

* Only applicable to 2000-lb models.

‡ Only applicable to 4000-lb models.

INTEGRATED PUMP/CYLINDER

FIGURE 6. INTEGRATED PUMP / CYLINDER COMPONENTS (01-640-030)


Check Fluid Level.

1. Retract the cylinder rod.
2. Remove the filler/breather plug. Inspect the hydraulic fluid level. The proper level is 2" to 2-1/2" (5 cm to 6.4 cm) from the bottom edge of the hole.
3. Add hydraulic fluid until the fluid is at the proper level. An overfilled cylinder will seep oil from the filler/breather plug. NOTE: USE ONLY ANTI-WEAR HYDRAULIC OIL WITH A VISCOSITY GRADE OF 150 SUS AT 100°F (ISO 32 cSt @ 40°C), OR DEXRON NON-SYNTHETIC TRANSMISSION FLUID. DO NOT USE BRAKE FLUID OR JACK OIL.

Purge air from the pump/cylinder assembly.

1. Press and hold the Release Pedal down.
2. Press the Pump Lever down through 15-25 complete cycles.
3. Test the cylinder. Repeat procedure until no signs of air in the system are present.
4. If the problem persists, or if the unit leaks fluid, contact the factory at (260) 665-7586.

Clean release valve assembly

1. Remove the release valve assembly cap and internal components ([Fig. 2, p.7, items 7-13](#)). Clean these components.
2. With the assembly removed, pump the foot pedal at least five times. NOTE: Fluid will be discharged from the release valve's cavity.
3. Reassemble release valve components. Check the fluid level, replenish as necessary.

Adjust Release Pedal.

1. Place the pump/cylinder on a hard, level surface.
2. Loosen the setscrew on the Release Pedal. Rotate the Release Pedal down until it touches the surface.
3. Holding the Release Pedal down, use a 3mm hex key to rotate the Release Pedal Shaft in the same direction until it reaches its limit of travel. NOTE: Take care to not loosen the lock nut on the release pedal shaft.
4. Tighten the release pedal set screw.

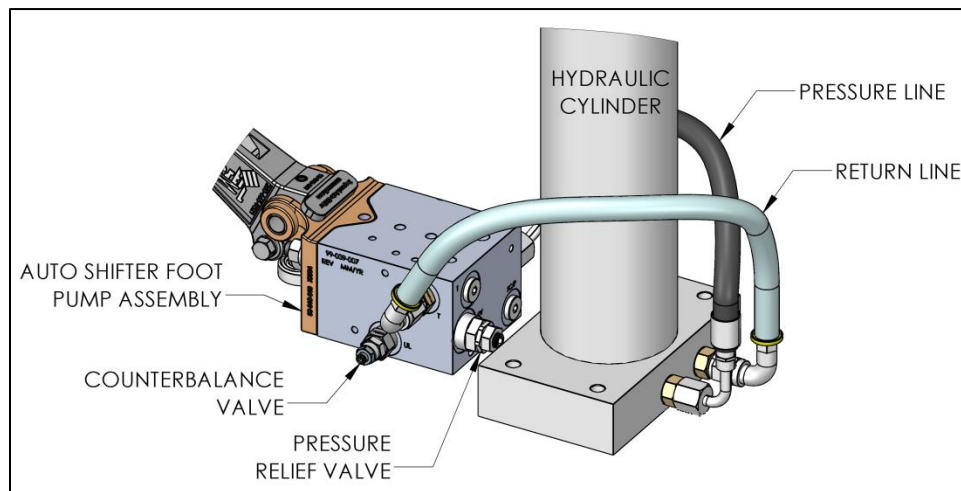
Adjust the Relief Valve Setpoint.

Adjusting the relief valve setpoint may be necessary if the user finds it difficult to press the pedal down when the Platform is fully loaded. NOTE: Reducing the relief valve setpoint will reduce the lifting capacity of the cylinder.

1. Use a flat screwdriver to adjust the Pressure Relief Adjustment Screw ([Fig. 6, p. 15](#)). Clockwise increases the setpoint pressure; counterclockwise lowers it.

AUTO SHIFTER PUMP.

FIGURE 7. AUTO SHIFTER PUMP (99-640-016) WITH EXTERNAL CYLINDER (99-021-921).



Check Fluid Level.

1. Lower the cylinder rod.
2. Remove the filler/breather plug. Inspect the hydraulic fluid level. The proper level is 2" to 2-1/2" (5 cm to 6.4 cm) from the bottom edge of the hole.
3. Add hydraulic fluid until the fluid is at the proper level. An overfilled cylinder will seep oil from the filler/breather plug. NOTE: USE ONLY ANTI-WEAR HYDRAULIC OIL WITH A VISCOSITY GRADE OF 150 SUS AT 100°F (ISO 32 cSt @ 40°C), OR DEXRON NON-SYNTHETIC TRANSMISSION FLUID. DO NOT USE BRAKE FLUID OR JACK OIL.

Purge air from the pump and cylinder.

1. Use the Pump Lever to lift an unloaded Platform. Use the Release Pedal to lower the Platform completely.
2. Repeat through 5-10 cycles.
3. Test the cylinder. Repeat procedure until no signs of air in the system are present.
4. If the problem persists, or if the unit leaks fluid, contact the factory at (260) 665-7586.

Clean Valves.

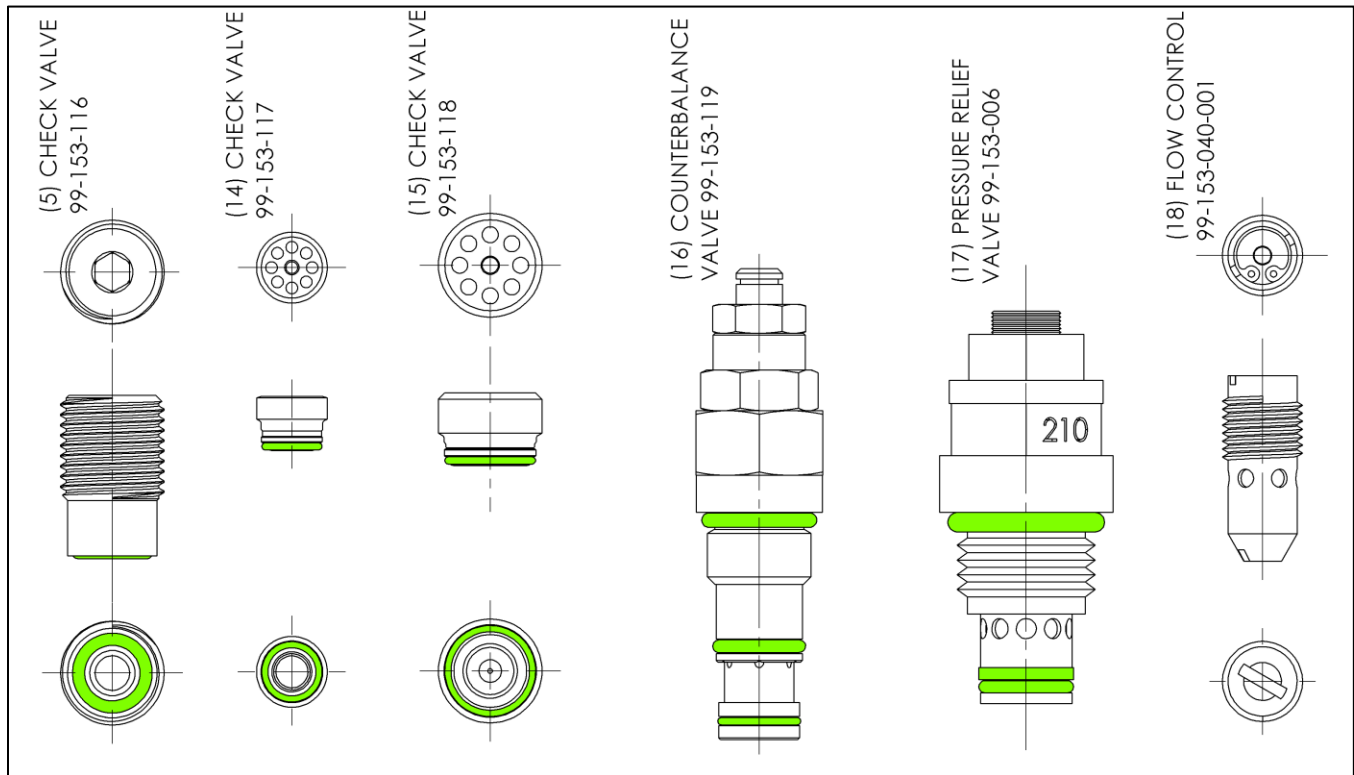
1. Lower the Platform. Remove any load from the Platform.
2. It may be necessary to unbolt the Auto Shifter Pedal Assembly from the Cart.
3. Remove any plugs covering the Valve. Remove the valve from the foot pump assembly. Take care not to drop or misplace any O-rings on the Valve. NOTE: Hydraulic fluid will drip from the Valve opening.
4. Inspect the Valve for contaminants. Inspect the O-rings and back-up washers for cuts, tears, or other damage.
5. *This step for Check Valves and Pressure Relief Valves only!* With the Valve immersed in mineral spirits or kerosene, insert a thin, blunt tool, such as a small screwdriver or a small hex wrench, in the hole at the bottom of the Valve. Push the spool in and out several times. A properly functioning spool should move freely. Use mineral spirits to flush the Valve.
6. Gently blow the Valve off with a compressed-air gun while again pushing the spool in and out.
7. Inspect the Valve cavity for contaminants.
8. Make sure the O-rings are properly seated on the Valve body ([Fig. 8, p. 18](#)).
9. Re-install the Valve. Re-install any plug covers.
10. Check the fluid level; replenish as necessary.

Adjust the Counterbalance Valve Setpoint.

1. Use a 7/16" wrench to loosen the locking nut on the valve body.
2. Use a 1/8" hex key to adjust the set screw. Turning the screw clockwise increases the release pressure, and thus the human effort needed to lift a heavier load. Turning the screw counterclockwise lowers the release pressure / human effort.
3. Test the new setting with a load on the Platform. When satisfied, tighten the lock nut.

FIGURE 8. O-RING LOCATIONS ON AUTO SHIFTER VALVES

Valves to scale. O-Rings and gaskets highlighted in green.



ORDERING REPLACEMENT PARTS:

We take pride in using quality parts on the equipment we manufacture. We are not responsible for equipment problems resulting from the use of unapproved replacement parts.

To order replacement or spare parts for this equipment, contact the factory.

In any communication with the factory, please be prepared to provide the machine's serial number, as indicated on the machine dataplate.

LABELING DIAGRAM

CAUTION	ATENCIÓN	ATTENTION
PLATFORM MUST BE LOWERED BEFORE MOVING LIFT	LA PLATAFORMA DEBE DE ESTAR EN LA POSICIÓN BAJA ANTES DE MOVER EL ELEVADOR	LA PLATE-FORME DOIT ÊTRE ABAISSÉE AVANT D'ACTIVER LE MONTE-CHARGE

210

MODEL / MODELO / MODÈLE _____

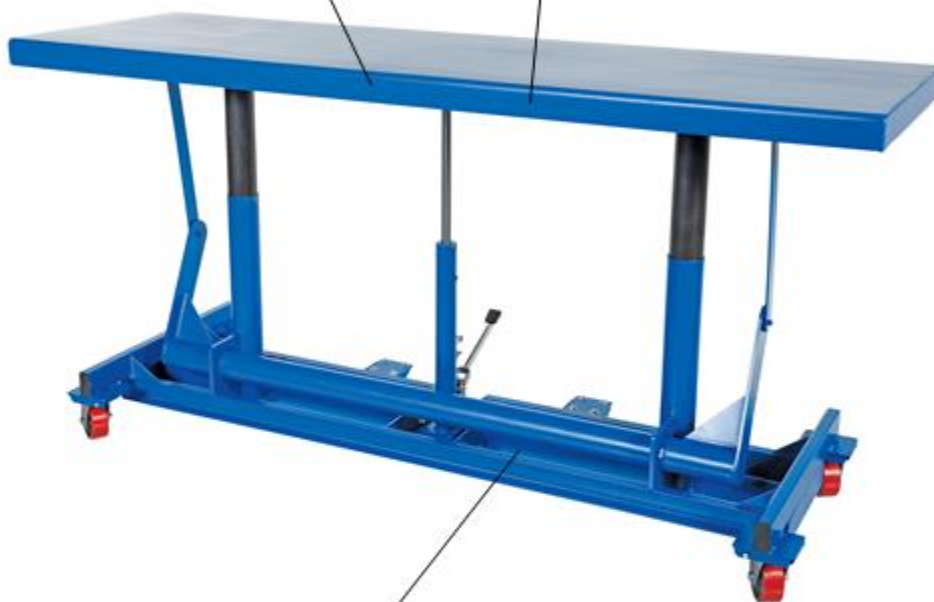
WEIGHT / PESO / MASS _____

CAPACITY / CAPACIDAD / CAPACITÉ _____

SERIAL / SERIE / SÉRIE _____

UNITS: 2.2 lb. = 1kg 1" (or 1in.) = 2.54cm

1153

**ISO 32 / 150 SUS**

HYDRAULIC OIL OR NON-SYNTHETIC TRANSMISSION FLUID
ACEITE HIDRAULICO O LIQUIDOS DE TRANSMISION NO SINTETICOS
HUILE OU LIQUIDE HYDRAULIQUE NON-SYNTHÉTIQUE

206
Rev. 11/11

206

**Label 1072 is to be applied to the
outside of individual packaging**

WARNING: Reproductive Harm - www.P65Warnings.ca.gov.	ADVERTENCIA: Daño Reproductivo - www.P65Warnings.ca.gov.
WARNING: Cancer - www.P65Warnings.ca.gov.	ADVERTENCIA: Cáncer - www.P65Warnings.ca.gov.

1072

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:

<u>US Mail</u>	<u>Fax</u>	<u>Email</u>
Vestil Manufacturing Company 2999 North Wayne Street, PO Box 507 Angola, IN 46703	(260) 665-1339 <u>Phone</u> (260) 665-7586	info@vestil.com Enter "Warranty service request" in 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 1 year. 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.