



VESTIL MANUFACTURING CORP.

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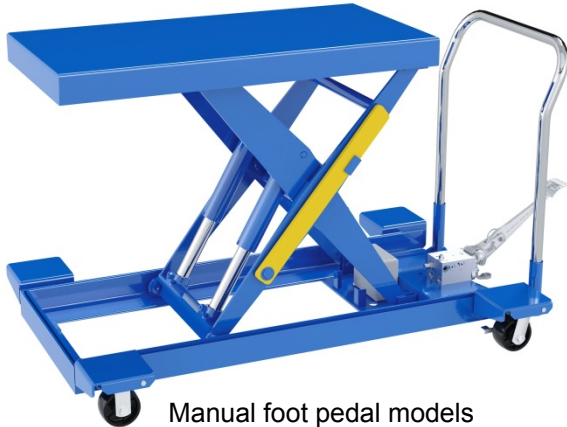
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**CART-LP LOW PROFILE SCISSOR CARTS
INSTRUCTION MANUAL**

ALSO REQUIRES EITHER AUTOSHIFTER (FOOT PUMP) MANUAL OR MPU-DC GEN2 MANUAL



Manual foot pedal models
[AUTOSHIFTER MANUAL](#) also required



Powered models
[MPU-DC MANUAL](#) also required

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 documents for CART-LP series scissor carts are available online to anyone who visits www.vestil.com. Specifications include dimensions, net weight, and capacity information. To access the appropriate specifications document, navigate to the CART-LP webpage at <https://www.vestil.com/product.php?FID=1428>. Scroll the page to the entry for the model you purchased. Click the button in the "PDF" column that looks like a pencil inside a blue-bordered box. A PDF file will open. This is the specifications document. Print a copy of the document and keep it with your copy of this manual. The following is an exemplar specifications document. It shows specifications for model CART-LP-2000-2040-FP.

LOW PROFILE FOOT PUMP HYDRAULIC SCISSOR LIFT CART - CART-LP-2000-2040-FP APPROX WEIGHT: 385 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 IS CART-LP-2000-2040-FP
 OVERALL WIDTH: 34 1/2"
 USABLE WIDTH: 20 3/8"
 OVERALL LENGTH: 63 7/16"
 USABLE LENGTH: 40 3/8"
 RAISED HEIGHT: 34 1/4"
 LOWERED HEIGHT: 10 1/4"
 Ø 4" X 2" GLASS-FILLED-NYLON RIGID CASTER
 Ø 4" X 2" GLASS-FILLED-NYLON SWIVEL CASTER W/ BRAKE
 TABLE CAPACITY (EVENLY DISTRIBUTED)
 MAX CAPACITY IS 2,000 LBS
 SAFETY MAINTENANCE PROPS, DISPLACEMENT
 STYLE CYLINDERS INSTALLED ROD DOWN
 EMERGENCY SAFETY STOP HYDRAULIC FUSES
 UPPER TRAVEL LIMIT SWITCH
 DURABLE LIQUID PAINT BLUE FINISH

SPECIAL FEATURES

NONE

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

FOR INTERNAL USE ONLY PROJECT SIGN OFF		DISTRIBUTOR'S NAME: VESTIL MANUFACTURING		P.O.# X
SALES		DRAWN BY:	DATE:	W.O.# X
ENG.		REFERENCE: X	SCALE: 1:18	SALES: X
FAB.		QUOTED LEAD TIME: X	QUOTE # X	FILE NAME: 01-007-406
POWER				

NOTE: If your model is not included on the CART-LP webpage, or if you cannot access and/or print the specifications document, contact the [Technical Service Dept.](#) Contact information for the department is provided on the cover page of this manual.

SIGNAL WORDS

This manual uses SIGNAL WORDS to direct the reader's attention to important safety-related messages. DANGER, WARNING and CAUTION signal personal injury related messages and indicate specific levels of seriousness. NOTICE calls attention to uses of the product likely to result in property damage.



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.

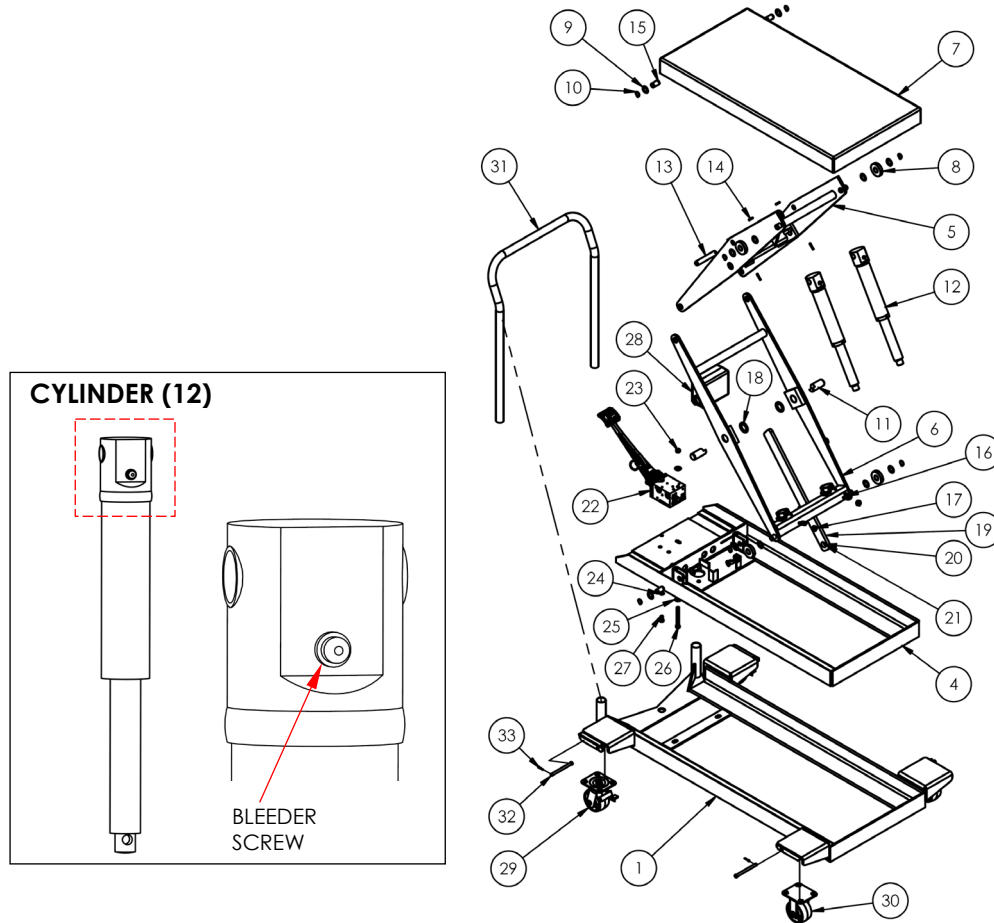
SAFETY INSTRUCTIONS

Vestil strives to identify all foreseeable hazards associated with the use of its products. Material handling is dangerous and no manual can address every conceivable risk. Ultimately, the most effective way to prevent injury is to apply sound judgment whenever using this device. If your product includes a foot pump (models ending with –FP suffix), you should also receive an AUTOSHIFTER manual, which describes the operation of the foot pump. An MPU-DC (Gen2) manual is included with powered models (-DC suffix). These supplementary manuals also include safety messages. Read this manual and the supplementary manual in their entireties before using your cart.

- ⚠ WARNING** Improper or careless operation might result in serious personal injuries sustained by the operator and bystanders. Always apply material handling techniques learned during training and use the product properly:
- ***Failure to read and understand the entire manual before assembling, using or servicing the product constitutes misuse.*** Read the manual to refresh your understanding of proper use and maintenance procedures as necessary.
 - DO NOT attempt to lift a load that weighs more than the capacity of your cart. The capacity appears on label 287 as shown in [LABELING DIAGRAM](#) on p. 11. Also see [SPECIFICATIONS](#) on p. 2.
 - DO NOT allow people to stand or sit on either the cart or the load.
 - Stand clear of the cart while raising or lowering the deck.
 - Keep clear of pinch points while the deck rises and lowers.
 - DO NOT reach through the legs or crawl under the deck unless it is supported by maintenance props.
 - DO NOT use the cart in corrosive environments.
 - ONLY use the cart on compacted, improved surfaces capable of supporting the combined weight of the cart plus a maximum rated load.
 - DO NOT perform maintenance on this cart UNLESS it is unloaded and maintenance props are in place. If repairs are necessary, ONLY install manufacturer-approved replacement parts.
 - Center and evenly distribute loads on the deck. Secure loads to the deck if they are likely to roll or slide.
 - DO NOT use the cart unless it is in satisfactory condition (p. 8 or 10). Inspect the unit before each use according to the [INSPECTION](#) instructions on either p. 8-9 (FP) or p. 10 (DC) to determine whether the unit is in satisfactory condition. DO NOT use the cart unless it passes every part of the inspection or until it is restored to normal operating condition.
 - ALWAYS observe the cart while raising and lowering the deck. It should rise smoothly and evenly from side-to-side. Watch for binding or jerky movement and listen for unusual noises. Tag the unit "Out of order" and do not use it if you observe anything abnormal.
 - Always watch the load carefully while raising and lowering the deck.
 - DO NOT continue to press the UP button if the deck is fully elevated.
 - Before leaving the cart unattended, unload it and relieve hydraulic pressure by pressing the DOWN button and holding it until the deck is fully lowered.
 - DO NOT use the cart UNLESS all labels are in place and readable. See [LABELING DIAGRAMS](#) on p. 11.
 - DO NOT modify this product in any way. Modifications automatically void the limited warranty and might make the cart unsafe to use.

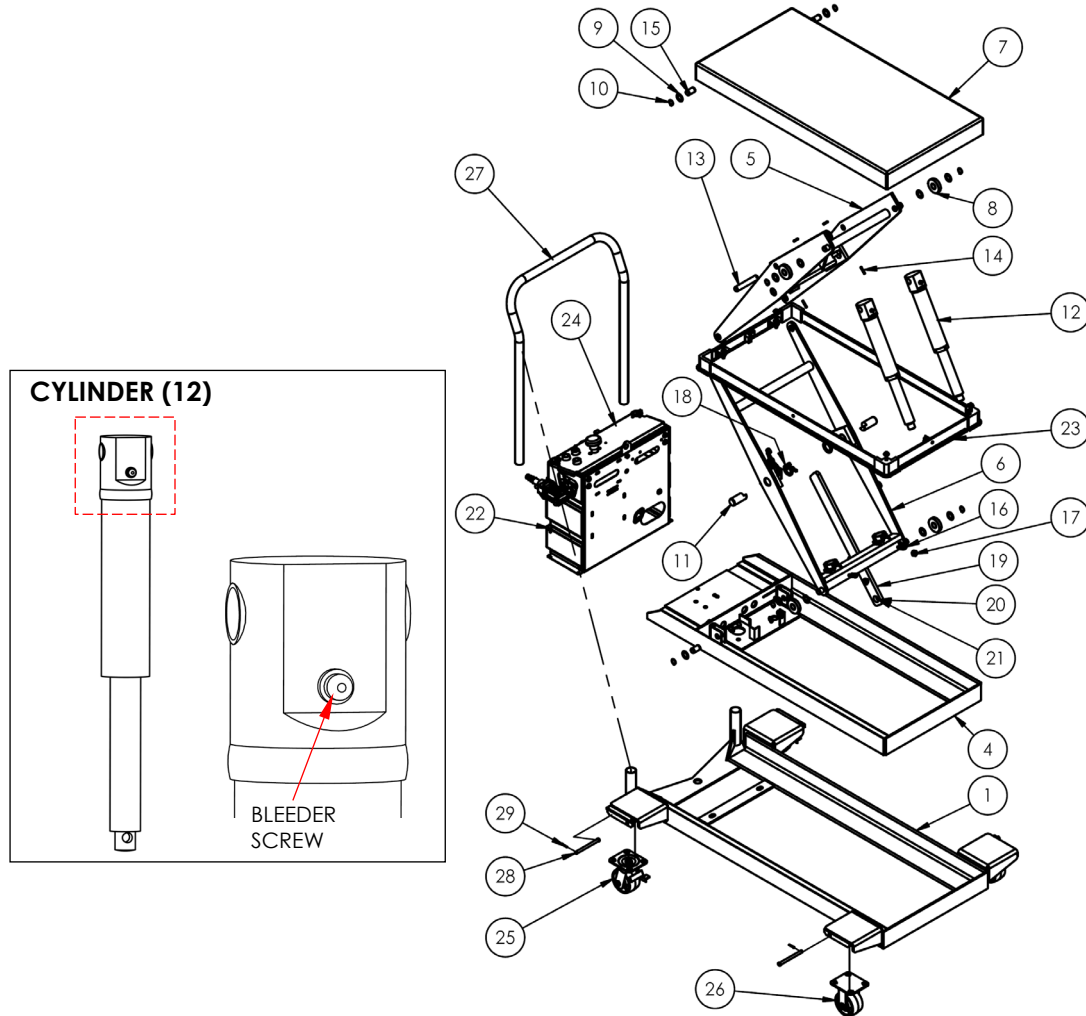
- NOTICE** Proper use and maintenance are essential for this product to function properly.
- Periodically lubricate moving parts.
 - Batteries should be kept at full charge when the cart is stored for prolonged periods. Maintain battery charge by plugging in the charger. If the cart will be out of use for longer than 3 months, remove the batteries and store them in a cool, dry location.
 - Keep the product clean & dry. Do not store this cart where it is exposed to the elements.
 - Only use approved replacement parts. To order replacement or spare parts for this equipment, contact the [TECHNICAL SERVICE DEPARTMENT](#).

EXPLODED VIEW: CART-LP-2000-2040-FP
01-006-406



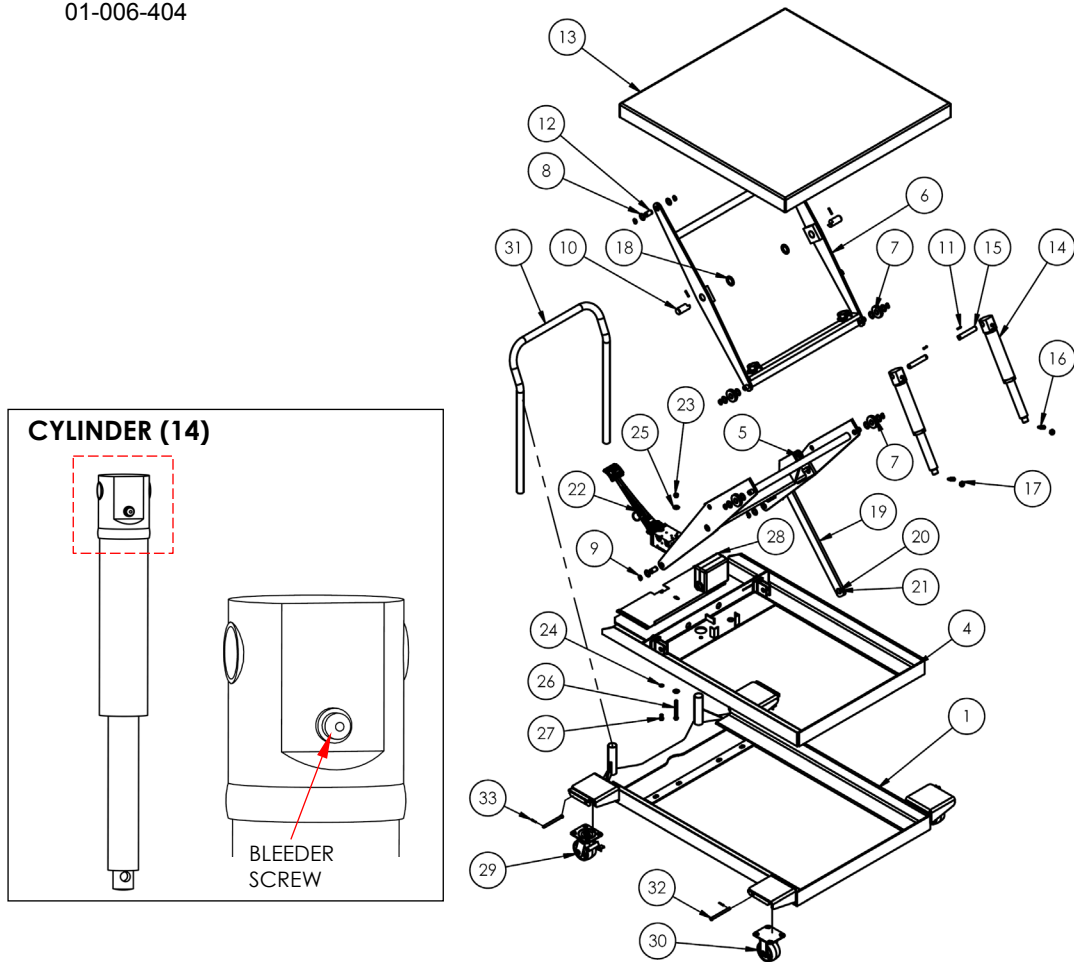
ITEM	PART NO.	DESCRIPTION	QTY.	ITEM	PART NO.	DESCRIPTION	QTY.
1	01-514-183	WELDMENT, FRAME	1	18	33456	MACHINERY BUSHING, PLAIN FINISH, Ø1 1/8" X 10 GA	2
2	01-001-063	SCISSOR TABLE ASSEMBLY	1	19	24-037-001	MAIN PROP, EHLT	1
3	01-002-063	CART ASSEMBLY	1	20	33444	MACHINE BUSHING, Ø 1 X 18 GA.	1
4	01-514-076	WELDMENT, FRAME	1	21	20-117-003	EXTERNAL RETAINING RING, 1" DIA SHAFT	1
5	01-510-006	WELDMENT, LEG SCISSOR, INNER	1	22	99-640-005	HYDRAULIC FOOT PUMP, AUTO-SHIFTER, 2-SPEED	1
6	01-510-007	WELDMENT, LEG, SCISSOR, OUTER	1	23	37024	NYLON INSERT LOCK NUT, GRADE 2, ZINC FINISH, 3/8"-16	1
7	01-513-003	WELDMENT, DECK, 20" X 40"	1	24	33622	SPLIT LOCK WASHER, CARBON STEEL, MEDIUM ZINC FINISH, 3/8"	1
8	01-527-002	ROLLER, ASSY Ø2 1/4" X 1/2" W	4	25	33008	FLAT WASHER, LOW CARBON, USS, ZINC PLATED, 3/8"	2
9	01-113-001	SPACER/SHIM (MCH BUSHING)	16	26	11118	HEX BOLT, GRADE A, ZINC PLATED, 3/8-16 X 3 3/4"	1
10	38-117-001	RETAINER RING, EXTERNAL FOR Ø3/4 SHAFT	12	27	11103	HEX BOLT, GRADE A, ZINC PLATED, 3/8-16X3/4	1
11	01-112-008	PIN, SCISSOR PIVOT	2	28	01-023-003	ROTO MOLDED TANK, 3 x 5 x 6	1
12	99-021-915-001	CYLINDER, HYDRAULIC, Ø1 1/2" x 7", RAM STYLE	2	29	16-132-259	CASTER, SWIVEL W/ BRAKE, 4X2	2
13	01-112-010	PIN, CYLINDER PIVOT	2	30	16-132-260	CASTER, RIGID, 4X2	2
14	64134	SPRING PIN	4	31	99-025-014	HANDLE, PUSH, 22" C/C	1
15	01-112-009	PIN, HINGE PIVOT	4	32	99-112-006	PIN, CLEVIS	4
16	01-118-002	BOLT, CYLINDER RETAINING	2	33	65076	Ø1/8" X 1" COTTER PIN, Z-PLATED	4
17	36209	1/2 - 13 HEX JAM NUT PLAIN	2				

EXPLODED VIEW: CART-LP-2000-2040-DC
01-006-405



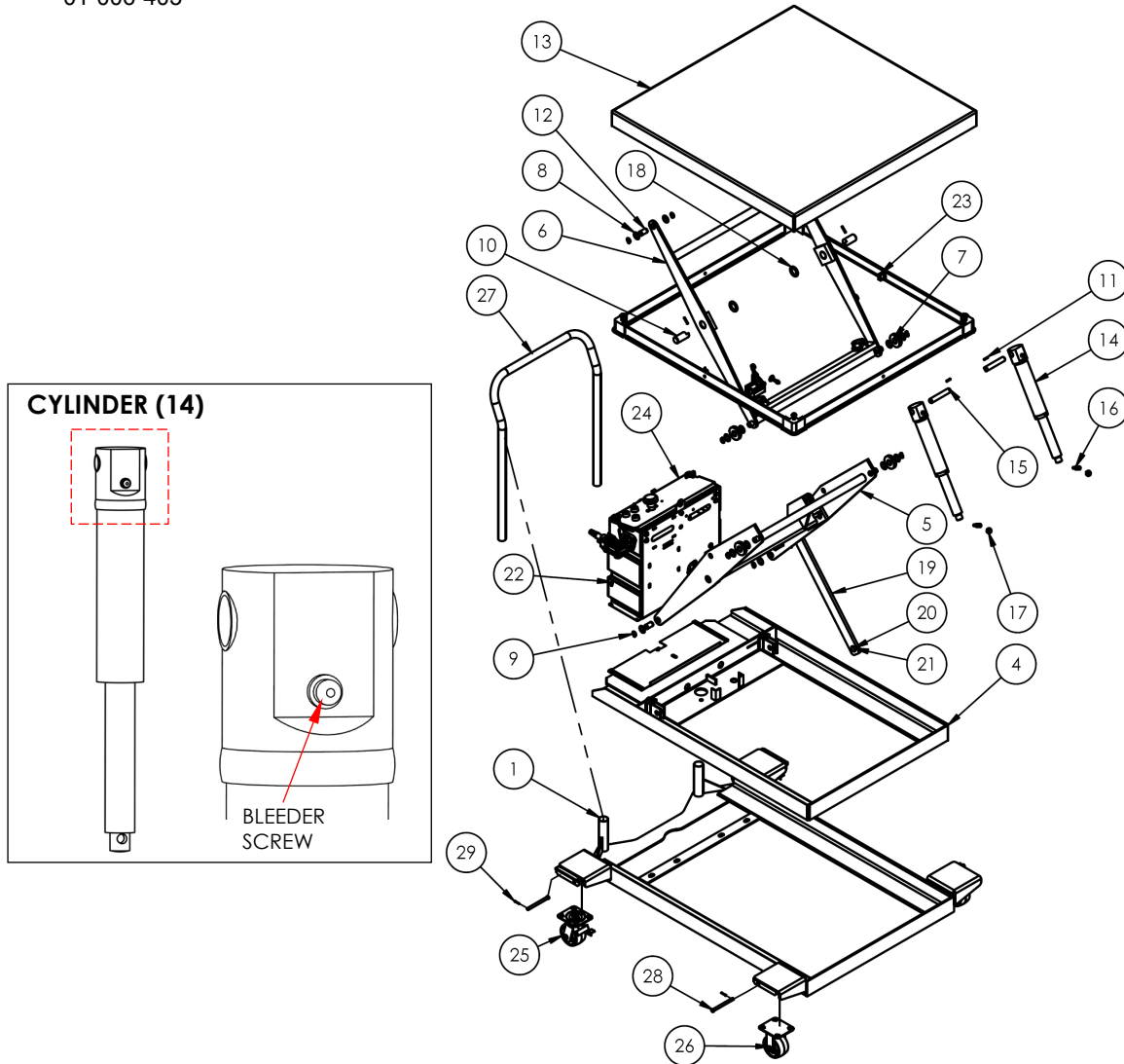
ITEM	PART NO.	DESCRIPTION	QTY.	ITEM	PART NO.	DESCRIPTION	QTY.
1	01-514-183	WELDMENT, FRAME	1	16	01-118-002	BOLT, CYLINDER RETAINING	2
2	01-001-365	FINAL ASSEMBLY W/O SHIPPING	1	17	36209	1/2 - 13 HEX JAM NUT PLAIN	2
3	01-002-063	FINAL ASSEMBLY W/O POWER UNIT	1	18	33456	MACHINERY BUSHING, PLAIN FINISH, Ø1 1/8" X 10 GA	2
4	01-514-076	WELDMENT, FRAME	1	19	24-037-001	MAIN PROP, EHLT	1
5	01-510-006	WELDMENT, LEG SCISSOR, INNER	1	20	33444	MACHINE BUSHING, Ø 1 X 18 GA.	1
6	01-510-007	WELDMENT, LEG, SCISSOR, OUTER	1	21	20-117-003	EXTERNAL RETAINING RING, 1" DIA SHAFT	1
7	01-513-003	WELDMENT, DECK, 20" X 40"	1	22	31802	SCREW, SELF-TAPPING SCREW	2
8	01-527-002	ROLLER, ASSY Ø2 1/4" X 1/2" W	4	23	01-515-030	SUB-ASSEMBLY, TOE GUARD, 20" X 40", INCLUDES HARDWARE & SWITCHES	1
9	01-113-001	SPACER/SHIM (MCH BUSHING)	16	24	99-160-097	MODULAR POWER UNIT, GEN II (DISPLAY ONLY)	1
10	38-117-001	RETAINER RING, EXTERNAL FOR Ø3/4 SHAFT	12	25	16-132-259	CASTER, SWIVEL W/ BRAKE, 4X2	2
11	01-112-008	PIN, SCISSOR PIVOT	2	26	16-132-260	CASTER, RIGID, 4X2	2
12	99-021-915-001	CYLINDER, HYDRAULIC, Ø1 1/2" x 7", RAM STYLE	2	27	99-025-014	HANDLE, PUSH, 22" C/C	1
13	01-112-010	PIN, CYLINDER PIVOT	2	28	99-112-006	PIN, CLEVIS	4
14	64134	SPRING PIN	4	29	65076	Ø1/8" X 1" COTTER PIN, Z-PLATED	4
15	01-112-009	PIN, HINGE PIVOT	4				

EXPLODED VIEW: CART-LP-2000-4242-FP
01-006-404



ITEM	PART NO.	DESCRIPTION	QTY.	ITEM	PART NO.	DESCRIPTION	QTY.
1	01-514-182	WELDMENT, FRAME	1	18	33456	MACHINERY BUSHING, PLAIN FINISH, Ø1 1/8" X 10 GA	2
2	01-001-003	FINAL ASSEMBLY W/O SHIPPING	1	19	24-037-001	MAIN PROP, EHLT	1
3	01-002-003	FINAL ASSEMBLY W/O POWER UNIT	1	20	33444	MACHINE BUSHING, Ø 1 X 18 GA.	1
4	01-514-002	WELDMENT, FRAME, SCTAB	1	21	20-117-003	EXTERNAL RETAINING RING, 1" DIA SHAFT	1
5	01-510-003	WELDMENT, LEG, SCISSOR, INNER	1	22	99-640-005	HYDRAULIC FOOT PUMP, AUTO-SHIFTER, 2-SPEED	1
6	01-510-004	WELDMENT, LEG, SCISSOR, OUTER	1	23	37024	NYLON INSERT LOCK NUT, GRADE 2, ZINC FINISH, 3/8"-16	1
7	01-527-002	ROLLER, ASSY Ø2 1/4" X 1/2" W	4	24	33622	SPLIT LOCK WASHER, CARBON STEEL, MEDIUM ZINC FINISH, 3/8"	1
8	01-113-001	SPACER/SHIM (MCH BUSHING)	16	25	33008	FLAT WASHER, LOW CARBON, USS, ZINC PLATED, 3/8"	2
9	38-117-001	RETAINER RING, EXTERNAL FOR Ø3/4 SHAFT	12	26	11118	HEX BOLT, GRADE A, ZINC PLATED, 3/8-16 X 3 3/4"	1
10	01-112-008	PIN, SCISSOR PIVOT	2	27	11103	HEX BOLT, GRADE A, ZINC PLATED, 3/8-16X3/4	1
11	64134	SPRING PIN	4	28	01-023-003	ROTO MOLDED TANK, 3 x 5 x 6	1
12	01-112-009	PIN, HINGE PIVOT	4	29	16-132-259	CASTER, SWIVEL W/ BRAKE, 4X2	2
13	01-513-004	WELDMENT, DECK 42 x 42	1	30	16-132-260	CASTER, RIGID, 4X2	2
14	99-021-915-001	CYLINDER, HYDRAULIC, Ø1 1/2" x 7", RAM STYLE	2	31	99-025-014	HANDLE, PUSH, 22" C/C	1
15	01-112-010	PIN, CYLINDER PIVOT	2	32	99-112-006	PIN, CLEVIS	4
16	01-118-002	BOLT, CYLINDER RETAINING	2	33	65076	Ø1/8" X 1" COTTER PIN, Z-PLATED	4
17	36209	1/2 - 13 HEX JAM NUT PLAIN	2				

EXPLODED VIEW: CART-LP-2000-4242-DC
01-006-403



ITEM	PART NO.	DESCRIPTION	QTY.	ITEM	PART NO.	DESCRIPTION	QTY.
1	01-514-182	WELDMENT, FRAME	1	16	01-118-002	BOLT, CYLINDER RETAINING	2
2	01-001-364	FINAL ASSEMBLY W/O SHIPPING	1	17	36209	1/2 - 13 HEX JAM NUT PLAIN	2
3	01-002-003	FINAL ASSEMBLY W/O POWER UNIT	1	18	33456	MACHINERY BUSHING, PLAIN FINISH, Ø1 1/8" X 10 GA	2
4	01-514-002	WELDMENT, FRAME, SCTAB	1	19	24-037-001	MAIN PROP, EHLT	1
5	01-510-003	WELDMENT, LEG, SCISSOR, INNER	1	20	33444	MACHINE BUSHING, Ø 1 X 18 GA.	1
6	01-510-004	WELDMENT, LEG, SCISSOR, OUTER	1	21	20-117-003	EXTERNAL RETAINING RING, 1" DIA SHAFT	1
7	01-527-002	ROLLER, ASSY Ø2 1/4" X 1/2" W	4	22	31802	SCREW, SELF-TAPPING SCREW	2
8	01-113-001	SPACER/SHIM (MCH BUSHING)	16	23	01-515-032	SUB-ASSEMBLY, TOE GUARD, 42" X 42", INCLUDES HARDWARE & SWITCHES	1
9	38-117-001	RETAINER RING, EXTERNAL FOR Ø3/4 SHAFT	12	24	99-160-097	MODULAR POWER UNIT, GEN II (DISPLAY ONLY)	1
10	01-112-008	PIN, SCISSOR PIVOT	2	25	16-132-259	CASTER, SWIVEL W/ BRAKE, 4X2	2
11	64134	SPRING PIN	4	26	16-132-260	CASTER, RIGID, 4X2	2
12	01-112-009	PIN, HINGE PIVOT	4	27	99-025-014	HANDLE, PUSH, 22" C/C	1
13	01-513-004	WELDMENT, DECK 42 x 42	1	28	99-112-006	PIN, CLEVIS	4
14	99-021-915-001	CYLINDER, HYDRAULIC, Ø1 1/2" x 7", RAM STYLE	2	29	65076	Ø1/8" X 1" COTTER PIN, Z-PLATED	4
15	01-112-010	PIN, CYLINDER PIVOT	2				

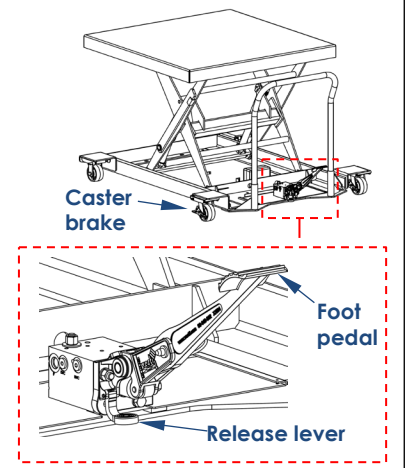
MANUAL CARTS (CART-LP-2000-####-FP)

USING THE CART (FP UNITS)

All loads applied to the deck must be centered and evenly distributed. Loads should not overhang the deck, i.e. should be entirely contained within the deck area. The capacity of the cart appears on the data label of your unit. See [LABELING DIAGRAMS](#), label 287 on [p. 13](#). Capacity is the maximum *net* weight the cart can support. Exceeding the capacity could result in personal injury and/or the cart might be permanently damaged.

Elevate the cart by pressing and releasing the pump pedal. Pump the pedal as many times as necessary to achieve the desired deck elevation. Lower the deck by pressing the release lever. Transport loads with the deck lowered. Elevate the deck to an ergonomic height when removing loads or working on an item. See Autosifter instruction manual for detailed instructions about the operation of the foot pump.

Apply the caster brakes whenever the cart is stopped. See diagrams in [INSPECTIONS AND MAINTENANCE \(FP UNITS\)](#) section on p. 8-9. Push down on the brake lever to apply the brake. Lift the release lever to disengage the brake.

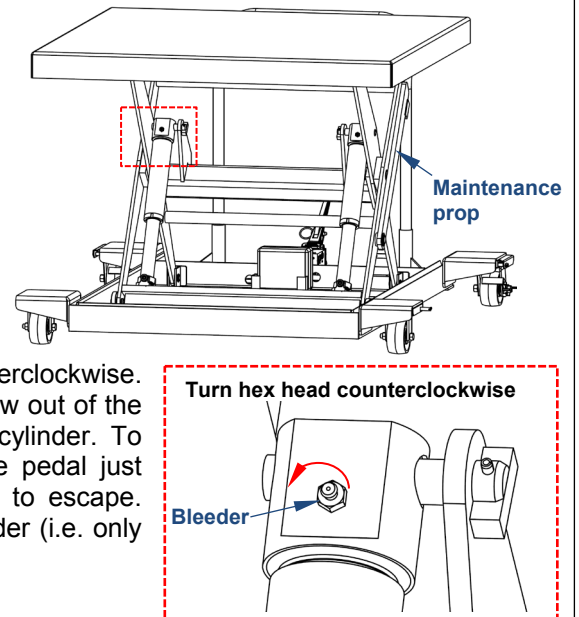


BLEEDING AIR FROM HYDRAULIC SYSTEM (FP UNITS)

If the deck lowers extremely slowly or not at all when the release lever pressed, air might be caught in the cylinder. Air causes a safety feature called a velocity fuse to close. When the velocity fuse is closed, the deck will not lower. To correct this issue, bleed air from the system. A bleeder screw is located at the top of the cylinder. The bleeder screw includes a hose fitting for a small diameter hose. By attaching a hose to the screw, any oil that escapes during the bleeding process can be directed into a container for proper disposal.

To bleed air from the cylinder:

1. Raise the deck. Deploy the maintenance prop.
2. Lower the deck until it is supported by the maintenance prop.
3. Pump the foot pedal once.
4. Slowly open the bleeder screw by turning the hex head counterclockwise. Pressure generated by pumping the pedal causes air and oil to flow out of the bleeder screw. Pressure will drop as air and oil flow from the cylinder. To repressurize the system, close the bleeder screw and pump the pedal just once. Open the bleeder screw again to allow more trapped air to escape. Repeat this process until air is completely removed from the cylinder (i.e. only oil flows from the bleeder screw).
5. Check all of the hydraulic lines for oil leaks.
6. Close the bleeder screw and return the unit to service.

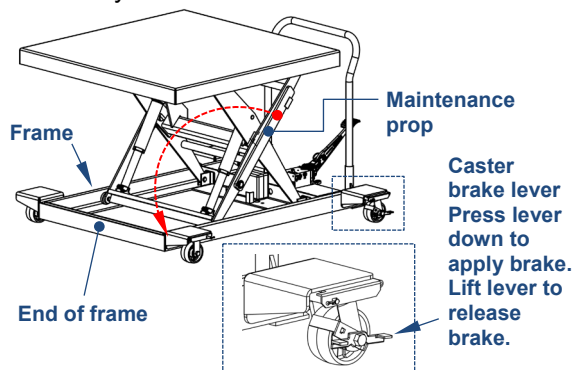


RECORD OF SATISFACTORY CONDITION (FP UNITS)

Before putting the cart into regular service, make a record of its appearance and operation. Pay particular attention to pivot points and pivot point hardware. Cycle the deck up and down. Describe the motion of the legs and roller. Describe the sound of the foot pump as it operates. Also include a description of the cylinders as they extend and retract. Each CYLINDER should extend and retract smoothly and at the same rate as the other. Photograph the cart from multiple angles. Include close range photographs of deck rollers, labels, casters, and the maintenance prop. This record establishes normal condition. During future inspections, compare observations to the record to determine if a component is in normal condition. DO NOT use the cart unless it is in satisfactory condition.

INSPECTIONS AND MAINTENANCE (FP UNITS)

Inspections and repairs should only be performed by qualified persons. Compare the results of each inspection to the [RECORD OF SATISFACTORY CONDITION \(FP UNITS\)](#). Do not use the cart unless all parts are in satisfactory condition. Replace parts that are not in satisfactory condition before returning the cart to service. **DON'T GUESS! If you have any questions about the condition of your cart, contact the [TECHNICAL SERVICE](#) department.** 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.



1. Unload the cart.
2. Raise the deck to its maximum height.
3. Rotate the free end of the maintenance prop into contact with the frame. See dashed arrow.
4. Press the release lever. Lower the deck until the maintenance prop presses against the end of the frame.

NOTE: Inspect and maintain the foot pump as directed in the supplementary [AUTOSHIFTER manual](#).

(A) Before each use, check the cart for any of the following conditions.

- Oil leaks;
- Pinched or chafed hoses;
- Deformation of legs, frame, or deck;
- Unusual noise or binding.

(B) Monthly inspections

- Check the oil level. Oil should be 1in. to 1¹/₂in. below the top of the reservoir/tank with the deck fully lowered. Check for oil leaks. Resolve the issue as described in [TROUBLESHOOTING](#) on p. 12-13. Add oil, if necessary.
- Check the hydraulic hoses for wear, kinks, cuts, etc. Replace damaged hoses.
- Check hardware: roller bushings, axle pins and retaining rings, clevises, pivot points, fasteners, and casters for severe wear and damage. Tighten fasteners. Replace all components that are severely worn or damaged.
- Inspect each leg roller for looseness, cracks, uneven and/or severe wear. Replace rollers as necessary.
- Cycle the deck. Listen for unusual noise; watch for abnormal movement. See [TROUBLESHOOTING](#), p. 12-13.
- Make sure all labels are in place & in readable condition. See [LABELING DIAGRAMS](#), p. 11.
- Clean debris from all surfaces.
- Perform inspections and maintenance described in the [AUTOSHIFTER MANUAL](#).

(C) Yearly inspection

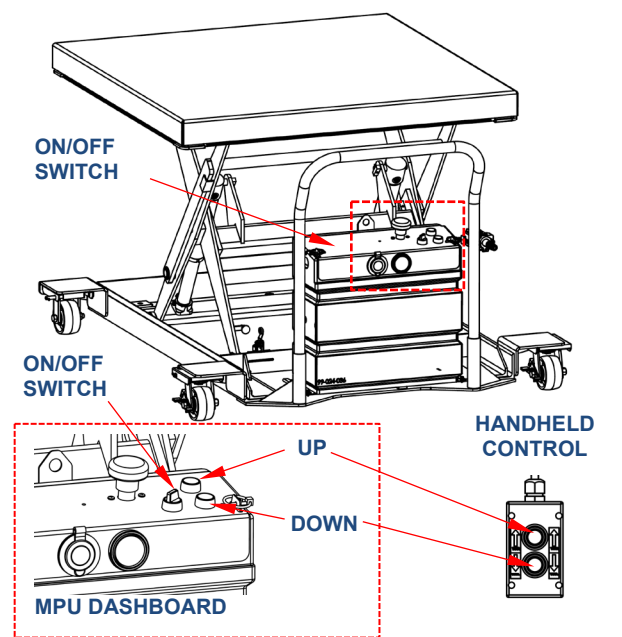
Change the oil at least once a year. Oil should be changed as soon as it darkens, becomes gritty, or appears milky. Milky appearance indicates the presence of water. Replace the oil with AW-32 hydraulic fluid or its equivalent.

POWERED UNITS (CART-LP-2000-####-DC)

USING THE CART (DC UNITS)

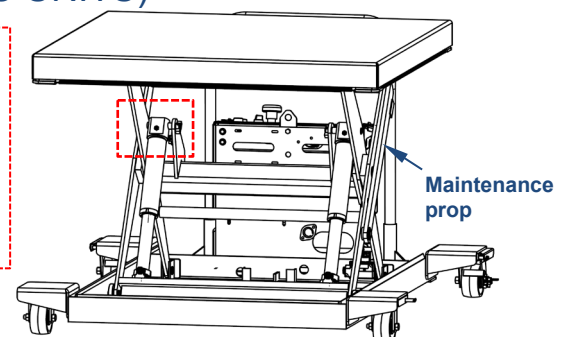
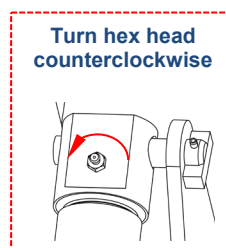
All loads applied to the deck must be centered and evenly distributed. Loads should not overhang the deck, i.e. should be entirely contained within the deck area. The capacity of the cart appears on the data label of your unit. See label 287 in [LABELING DIAGRAMS](#) on p. 11. Capacity is the maximum *net* weight the cart can support. Exceeding the capacity could result in personal injury and/or the cart might be permanently damaged.

Turn the ON/OFF switch on. Elevate the deck to an ergonomic height when the cart is stopped and caster brakes are applied by pressing the UP button of the handheld control or the dashboard of the modular power unit. Lower the deck by pressing the DOWN button. See MPU-DC instruction manual for detailed instructions about the operation of the modular power unit (MPU). Transport loads with the deck lowered. Apply the caster brakes whenever the cart is stopped. Push down on the brake lever to apply the brake. Lift the release lever to disengage the brake. See diagram in [INSPECTIONS AND MAINTENANCE](#) section on p. 10.



BLEEDING AIR FROM HYDRAULIC SYSTEM (DC UNITS)

If the deck lowers extremely slowly or not at all when the DOWN button is pressed, air might be caught in the cylinder. Air causes a safety feature, called a velocity fuse, to close. The deck will not lower when the velocity fuse is closed. To correct this issue, bleed air from the system. A bleeder screw is located at the top of the cylinder. The bleeder screw includes a hose fitting for a small diameter hose. Attach a hose to the screw



to direct any oil that escapes during the bleeding process into a container.

- Unload the deck.
- Rotate the maintenance prop into position. See diagram in [INSPECTIONS AND MAINTENANCE \(DC UNITS\)](#) section on p. 10 (below).
- Press the DOWN button until the deck is entirely supported by the maintenance prop.
- Locate the bleeder valve located at the top of the cylinder. It looks like a grease zerk and is identified in the [BLEEDING AIR FROM HYDRAULIC SYSTEM \(DC UNITS\)](#) on page 9. Hold a rag over the valve. Turn the hex head with a wrench until air begins to escape (about a half turn). Oil and air will sputter from the valve.
- Jog the motor a few times by briefly pressing and releasing the UP button. If air continues to escape from the bleeder valve, jog the motor several more times. Wait 5-10 seconds between jogs.
- Close the valve once air no longer is seen in it or heard bubbling out of it. A clear stream of oil, i.e. without bubbles, should be seen flowing from the valve.
- Remove the cover from the modular power unit. Perform the inspections and maintenance described in the MPU-DC manual. For instance, check the oil level in the reservoir. If the surface of the oil is lower than 1 to 1½ in. below the fill port, then add oil. Use anti-wear hydraulic fluid with a viscosity grade of 150 SUS at 100°F (ISO 32 @ 40°C) like AW-32 or Dexron transmission fluid.

RECORD OF SATISFACTORY CONDITION (DC UNITS)

Before putting the cart into regular service, make a record of its appearance and operation. Photograph the cart from multiple angles. Include close range photographs of pivot points and pivot point hardware, deck rollers, labels, casters, and the maintenance prop. Cycle the deck up and down. Describe the motion of the legs and rollers. Describe the sound of the power unit as it operates. Also include a description of the cylinders as they extend and retract. Each cylinder should extend and retract smoothly. The cylinders should extend/retract at the same rate. Collect all photographs and writings in a file. The file is a record of the cart in satisfactory condition. Compare inspection results to this RECORD to determine if all components of the cart are in satisfactory condition. DO NOT use the cart unless it is in satisfactory condition.

INSPECTIONS AND MAINTENANCE (DC UNITS)

NOTE: Inspect and maintain the modular power unit as directed in the supplementary [MPU-DC MANUAL](#).

Inspections and repairs should only be performed by qualified persons. Compare the results of each inspection to the [RECORD OF SATISFACTORY CONDITION \(DC UNITS\)](#). Do not use the cart unless it is in satisfactory condition. Replace parts that are not in satisfactory condition before returning the cart to service. **DON'T GUESS!** If you have any questions about the condition of your cart, contact the [TECHNICAL SERVICE](#) department. 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.

Immobilize the deck with the maintenance prop before inspecting, or performing maintenance on, the cart.

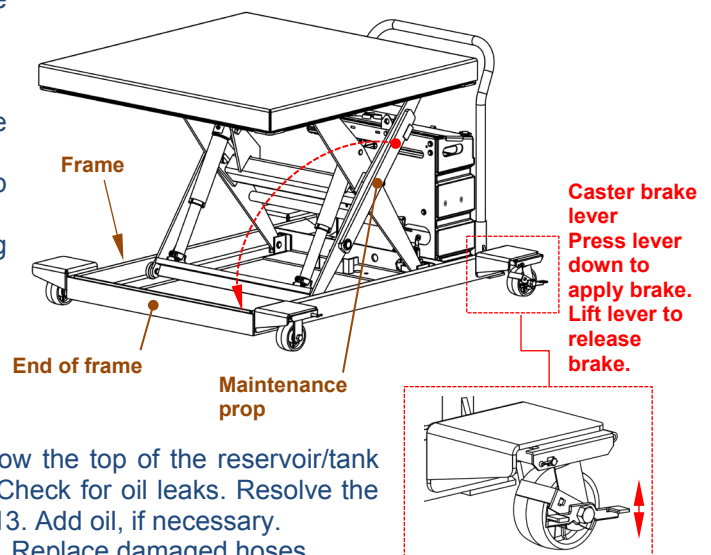
1. Unload the cart.
2. Raise the deck to its maximum height.
3. Deploy the maintenance prop by pivoting the free end into contact with the frame (dotted arrow).
4. Lower the deck until the maintenance prop presses against the end of the frame.

(A) Before each use, check the cart for any of the following conditions. Correct all problems.

- Oil leaks;
- Pinched or chafed hoses;
- Deformation of legs, frame, or deck;
- Unusual noise or binding.

(B) Monthly inspections:

- Check the oil level. Oil should be 1in. - 1½in. below the top of the reservoir/tank with the deck fully lowered. See MPU-DC manual. Check for oil leaks. Resolve the issue as described in [TROUBLESHOOTING](#) on 12-13. Add oil, if necessary.
- Check the hydraulic hoses for wear, kinks, cuts, etc. Replace damaged hoses.
- Check hardware: roller bushings, axle pins and retaining rings, clevises, pivot points, fasteners, and casters for severe wear and damage. Replace all components that are severely worn or damaged.
- Inspect each leg roller for looseness, cracks, uneven or severe wear. Replace rollers as necessary.
- Cycle the deck. Listen for unusual noises; watch for abnormal movement. See [TROUBLESHOOTING](#).
- Make sure all labels are in place & in readable condition. See [LABELING DIAGRAMS](#) on p. 13.
- Clean debris from all surfaces.



(C) Yearly: Change the oil at least once a year. The oil should be changed as soon as it darkens, becomes gritty, or appears milky. Milky appearance indicates the presence of water. Replace the oil with AW-32 hydraulic fluid or its equivalent.

LABELING DIAGRAMS

Label content and location are subject to change. Your product might not be labeled exactly as shown. Compare this diagram to your *RECORD OF SATISFACTORY CONDITION*. If differences exist between the diagram and the *RECORD*, contact [TECHNICAL SERVICE](#). Replace all labels that are damaged, missing, or not easily readable (e.g. faded). Order replacement labels by contacting the technical service and parts department online at http://www.vestilmfg.com/parts_info.htm or by calling (260) 665-7586 and asking the operator to connect you to the *PARTS DEPARTMENT/TECHNICAL SERVICE*.

CART-LP-2000-####-FP

Label 658:

⚠️ WARNING	⚠️ ADVERTENCIA	⚠️ AVERTISSEMENT
Do not operate or move with unstable loads DO NOT LOAD beyond rated capacity DISTRIBUTE LOAD EVENLY DO NOT sit or ride	No use a mueva con cargas inestables No cargue mas de la capacidad tasada DISTRIBUYA LA CARGA A NIVEL NO SE SIENTE o vaya en el carro	Ne pas utiliser avec une charge instable NE PAS CHARGER au-delà du débit nominale DISTRIBUER la charge régulièrement NE PAS VOUS ASSEoir OU VOUS PROMENER sur le chariot

Label 287: Model & capacity

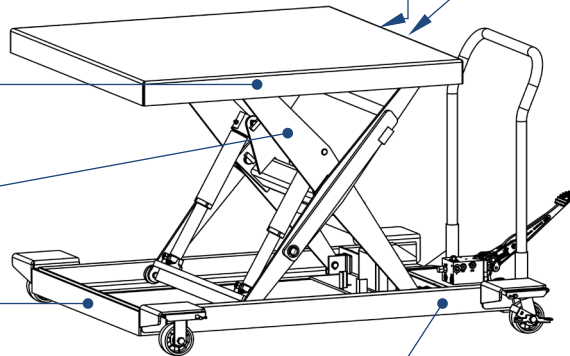
MODEL/MODELO/MODELE	_____
STATIC CAPACITY (evenly distributed)	_____ lbs.
LA CAPACIDAD CONSTANTE (distribuida uniformemente)	_____ kgs.
CAPACITE STATIQUE (distribuee régulièrement)	_____ kgs.
SERIAL/SERIE/SERIE	_____

Label 824: Stand clear

⚠️ DANGER To avoid bodily injury, stand clear while in motion.		⚠️ PELIGRO Para evitar daños, manténgase alejado cuando en movimiento
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Label 208: Keep clear of pinch point

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



Label 206 (on oil tank): Hydraulic oil specifications

ISO 32 / 150 SUS
HYDRAULIC OIL OR NON-SYNTHETIC TRANSMISSION FLUID
ACEITE HIDRAULICO O LIQUIDOS DE TRANSMISION NO SINTETICOS
HUILE OU LIQUIDE HYDRAULIQUE NON-SYNTHEIQUE

Label 269: Use maintenance prop

⚠️ WARNING	⚠️ ADVERTENCIA
INSTALL ALL SUPPLIED MAINTENANCE STOPS before any maintenance is performed on unit. DO NOT perform maintenance with load on unit.	INSTALE TODAS LAS PARADAS DE MANTENIMIENTO SUMINISTRADAS antes de hacer cualquier reparación en la unidad. NO haga ninguna reparación con la unidad cargada.

Label 212: Lock casters

⚠️ WARNING	⚠️ ADVERTENCIA	⚠️ AVERTISSEMENT
Immobilize by applying all caster brakes and/or floor locks when in use, loading, and unloading.	Inmovilice aplicando todos los frenos de las ruedas y / o bloques del piso cuando esté en uso, cargando y descargando.	Immobiliser en appliquant tous les freins des roulettes et / ou les verrous de plancher lors de l'utilisation, du chargement et du déchargement.

CART-LP-2000-####-DC

Label 658:

⚠️ WARNING	⚠️ ADVERTENCIA	⚠️ AVERTISSEMENT
Do not operate or move with unstable loads DO NOT LOAD beyond rated capacity DISTRIBUTE LOAD EVENLY DO NOT sit or ride	No use a mueva con cargas inestables No cargue mas de la capacidad tasada DISTRIBUYA LA CARGA A NIVEL NO SE SIENTE o vaya en el carro	Ne pas utiliser avec une charge instable NE PAS CHARGER au-delà du débit nominale DISTRIBUER la charge régulièrement NE PAS VOUS ASSEoir OU VOUS PROMENER sur le chariot

Label 287: Model & capacity

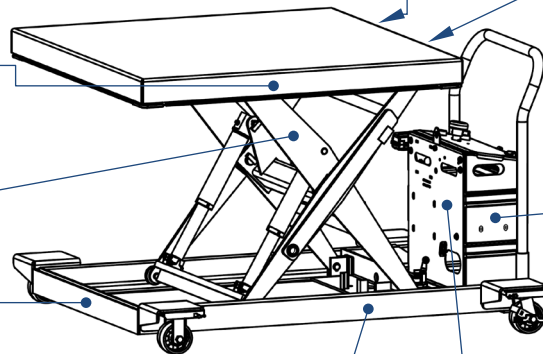
MODEL/MODELO/MODELE	_____
STATIC CAPACITY (evenly distributed)	_____ lbs.
LA CAPACIDAD CONSTANTE (distribuida uniformemente)	_____ kgs.
CAPACITE STATIQUE (distribuee régulièrement)	_____ kgs.
SERIAL/SERIE/SERIE	_____

Label 824: Stand clear

⚠️ DANGER To avoid bodily injury, stand clear while in motion.		⚠️ PELIGRO Para evitar daños, manténgase alejado cuando en movimiento
--	---	---

Label 208: Keep clear of pinch point

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



Label 295 (on outside of power unit housing): Battery handling hazards

⚠️ WARNING Enclosed battery contains hazardous chemicals. DO NOT handle enclosed battery UNLESS wearing eye protection and other appropriate personal protective equipment. DO NOT directly contact skin with battery. DO NOT expose to sparks or extreme heat; battery contains explosive gases.
⚠️ ADVERTENCIA La batería incluye continúe materiales peligrosos. NO use la batería incluida A NO SER que lleve protección de ojos y otros equipos de protección apropiados para el personal. NO tenga contacto directo en la piel con la batería. NO exponga a destellos o a calor excesivo, la batería contiene gases explosivos.

Label 269: Use maintenance prop

⚠️ WARNING	⚠️ ADVERTENCIA
INSTALL ALL SUPPLIED MAINTENANCE STOPS before any maintenance is performed on unit. DO NOT perform maintenance with load on unit.	INSTALE TODAS LAS PARADAS DE MANTENIMIENTO SUMINISTRADAS antes de hacer cualquier reparación en la unidad. NO haga ninguna reparación con la unidad cargada.

MPU labels shown in MPD-DC Manual

Label 212: Lock casters

⚠️ WARNING	⚠️ ADVERTENCIA	⚠️ AVERTISSEMENT
Immobilize by applying all caster brakes and/or floor locks when in use, loading, and unloading.	Inmovilice aplicando todos los frenos de las ruedas y / o bloques del piso cuando esté en uso, cargando y descargando.	Immobiliser en appliquant tous les freins des roulettes et / ou les verrous de plancher lors de l'utilisation, du chargement et du déchargement.

TROUBLESHOOTING

Use this guide in conjunction with the Troubleshooting section of your [AUTOSHIFTER](#) or [MPU-DC](#) manual. Solutions in *italics* are found in the MPU-DC manual. Contact [TECHNICAL SERVICE](#) for assistance with issues that do not appear in this guide.

Issue	Explanation	Solution
1. Deck does not rise when UP button pressed, but pump is running.	<ul style="list-style-type: none"> a. Voltage at motor terminals too low to run pump. b. Hydraulic hose leaking. c. Fluid level in hydraulic reservoir too low. d. Load exceeds capacity/max. rated load limit (relief valve opening). e. Clogged suction filter. f. Suction line leaking or loose fittings. g. Clogged filler/breather cap on tank. h. Lowering valve energized by faulty wiring or stuck open. i. Hydraulic pump malfunctioning. j. Low battery charge. 	<ul style="list-style-type: none"> a. <i>Measure voltage at motor terminals (or as close to terminals as possible) while pump runs under load. If voltage is adequate, check wiring.</i> b. Correct as appropriate. c. <i>Add fluid. The system uses HO150 hydraulic fluid. Replace the hydraulic fluid with an anti-wear hydraulic fluid of viscosity grade of 150 SUS at 100°F (ISO 32 @ 40°C) such as AW-32 or Dexron transmission fluid.</i> d. Reduce weight applied to deck. DO NOT change relief valve setting!! e. <i>Remove filter and clean it.</i> f. <i>Inspect all fittings for proper fit.</i> g. <i>Remove and clean.</i> h. <i>Remove lowering valve and clean.</i> i. <i>Disconnect hydraulic line from cylinder. Put free end of hose in large container and cycle the pump. If no oil output, check pump-motor coupling. Contact factory to order replacement pump, if necessary.</i> j. <i>Recharge battery.</i>
2. Forks rise too slowly	<ul style="list-style-type: none"> k. Debris stuck in lowering solenoid valve causing portion of fluid to flow to reservoir. l. Debris clogging suction filter or breather cap. m. Pinched hose. n. Low motor voltage. o. Too much weight applied to deck. p. Pump malfunctioning. q. Insufficient battery charge. 	<ul style="list-style-type: none"> k. <i>Lower deck. Remove solenoid valve and clean.</i> l. <i>Correct as appropriate (see also solutions "f" and "h").</i> m. Repair the hose. n. <i>Measure voltage at motor terminals (or as close to terminals as possible) while pump runs under load. If voltage is adequate, check wiring.</i> o. Reduce weight applied to deck. DO NOT change relief valve setting!! p. <i>Disconnect hydraulic line from cylinder. Put free end of hose in large container and cycle the pump. If no oil output, check pump-motor coupling. Contact factory to order replacement pump, if necessary.</i> q. <i>Recharge battery.</i>
3. Motor labors or is really hot	<ul style="list-style-type: none"> r. Low voltage. s. Incorrect wiring. t. Oil starvation causing pump to bind. High heat produced. Pump might be permanently damaged. u. Binding cylinders. v. Insufficient battery charge. 	<ul style="list-style-type: none"> r. See solution a. s. <i>Confirm that one leg of motor line not connected to ground.</i> t. See d, f, g, h, and i. u. Contact technical service. v. <i>Recharge battery.</i>
4. Deck rises in jerks or support of the deck feels spongy.	<ul style="list-style-type: none"> w. Fluid starvation. x. Air trapped in cylinder(s). 	<ul style="list-style-type: none"> w. See solutions d, f, g, l. x. <i>See Bleeding air from hydraulic system.</i>
5. Deck lowers too slowly when loaded.	<ul style="list-style-type: none"> y. Filter of lowering solenoid valve clogged. z. Pinched hydraulic hose. aa. Debris in flow control valve. 	<ul style="list-style-type: none"> y. <i>Remove lowering solenoid. Clean filter.</i> z. Repair hose. aa. <i>Remove and clean flow control valve.</i>

	bb. Binding cylinders. cc. Debris in velocity fuse.	bb. Contact technical service. cc. <i>Remove and clean fuse.</i>
6. Deck lowers too rapidly.	dd. Leaking hoses and/or fittings. ee. Check valve stuck open. ff. Debris in flow control valve.	dd. Repair as appropriate. ee. <i>Remove and clean check valve.</i> ff. <i>Remove flow control valve from manifold and clean.</i>
7. Deck rises but does not maintain elevation and slowly lowers on its own.	gg. Lowering solenoid valve incorrectly wired or stuck open. hh. Check valve stuck open. ii. Leaking hoses or fittings. jj. Cylinder packing worn or damaged.	gg. <i>See solution k.</i> hh. <i>Remove and clean check valve.</i> ii. Repair as appropriate. jj. Replace packing.
8. Deck rises but does not lower.	kk. Lowering solenoid wired incorrectly. ll. Lowering solenoid valve stuck open. mm. Faulty lowering solenoid coil. nn. Object in frame blocking leg rollers. oo. Binding cylinders. pp. Velocity fuse is open.	kk. <i>Correct wiring.</i> ll. <i>Lightly tap the solenoid coil body to seat it properly. Striking the coil hard might damage the stem. DO NOT remove the solenoid from the manifold because the deck will descend dangerously quickly.</i> mm. <i>Refer to electrical system diagram</i> nn. Raise deck a clean debris affecting rollers from frame. oo. Contact technical service. pp. <i>Jog motor to repressurize hydraulic system.</i>
9. Erratic operation	qq. Insufficient battery charge.	qq. <i>Recharge battery.</i>

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 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 Corporation 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, 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 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) are responsible for paying labor costs and freight costs to return the product to Vestil for warranty service.

Events that automatically void the 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 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. 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.

