



VESTIL MANUFACTURING CORP.

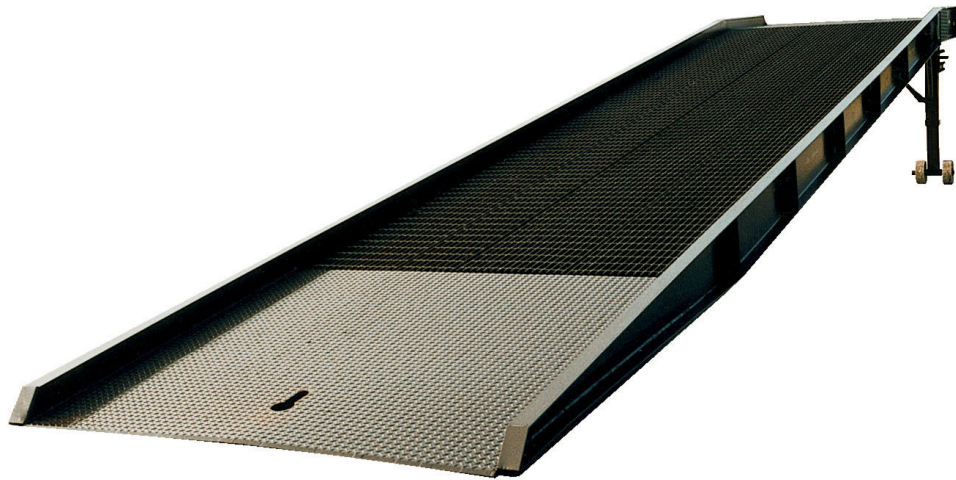
2999 North Wayne Street, P.O. Box 507, Angola, IN 46703

Telephone: (260) 665-7586 -or- Toll Free (800) 348-0868

Fax: (260) 665-1339

www.vestilmfg.com e-mail: sales@vestil.com

YR-HL-DC: DC-Powered Hydraulic Lift System for YR-Series Yard Ramps Instruction Manual



RECEIVING INSTRUCTIONS:

After delivery, IMMEDIATELY inspect the product. Open the packaging in a non-destructive manner and maintain the orientation of the product in the packaging. Then, closely examine the product to determine whether it sustained damage during transport. **If damage is discovered, immediately record a complete description of the damage on the bill of lading.** If the product is undamaged, discard the packaging.

NOTES:

1) Compliance with laws, regulations, codes, and non-voluntary standards enforced in the location where the product is *used* is exclusively the responsibility of the owner/end-user.

2) VESTIL is **not liable** for any injury or property damage that occurs as a consequence of failing to apply either:

a) Instructions in this manual; or b) information provided on labels affixed to the product.

Vestil is also not responsible for *any* consequential damages sustained as a result of failing to exercise sound judgment while assembling, installing, using or maintaining this product.

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SIGNAL WORDS:

This manual uses SIGNAL WORDS to qualify the likelihood of personal injuries as well as the probable seriousness of those injuries if the product is misused in the ways described. Other signal words call attention to uses of the product likely cause property damage. The signal words used appear below along with the meaning of each word:



Identifies a hazardous situation which, if not avoided, **WILL** result in **DEATH** or **SERIOUS INJURY**. Use of this signal word is limited to the most extreme situations.



Identifies a hazardous situation which, if not avoided, **COULD** result in **DEATH** or **SERIOUS INJURY**.



Indicates a hazardous situation which, if not avoided, **COULD** result in **MINOR** or **MODERATE** injury.



Identifies practices likely to result in product/property damage, such as operation that might damage the product.

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

Safe use recommendations:

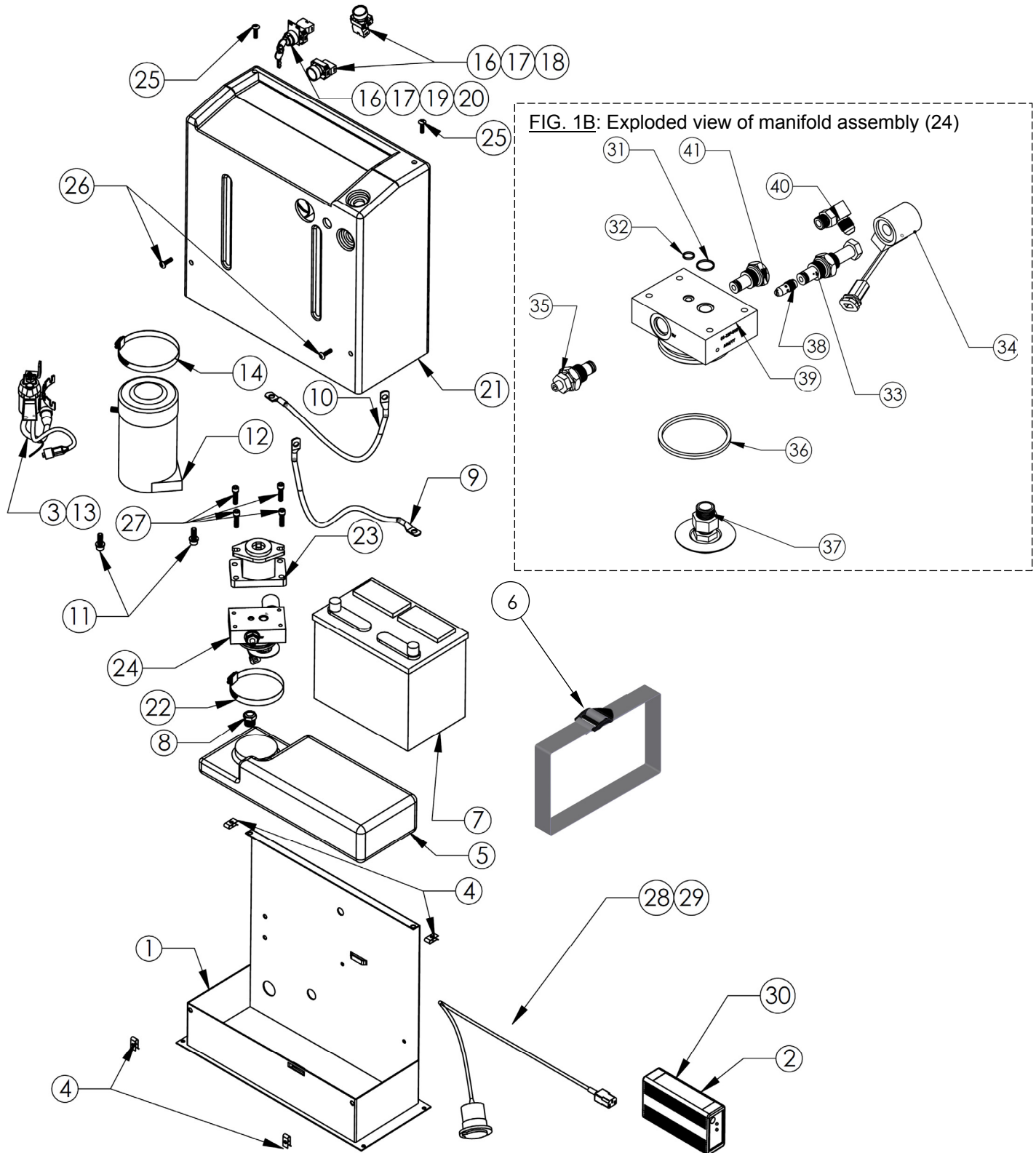
Vestil diligently strives to identify foreseeable hazards associated with the use of its products. However, material handling is inherently dangerous and no manual can address every conceivable risk. The end-user ultimately is responsible for exercising sound judgment at all times.



If this product is used improperly or carelessly, serious personal injuries might occur. To reduce the likelihood of injury:

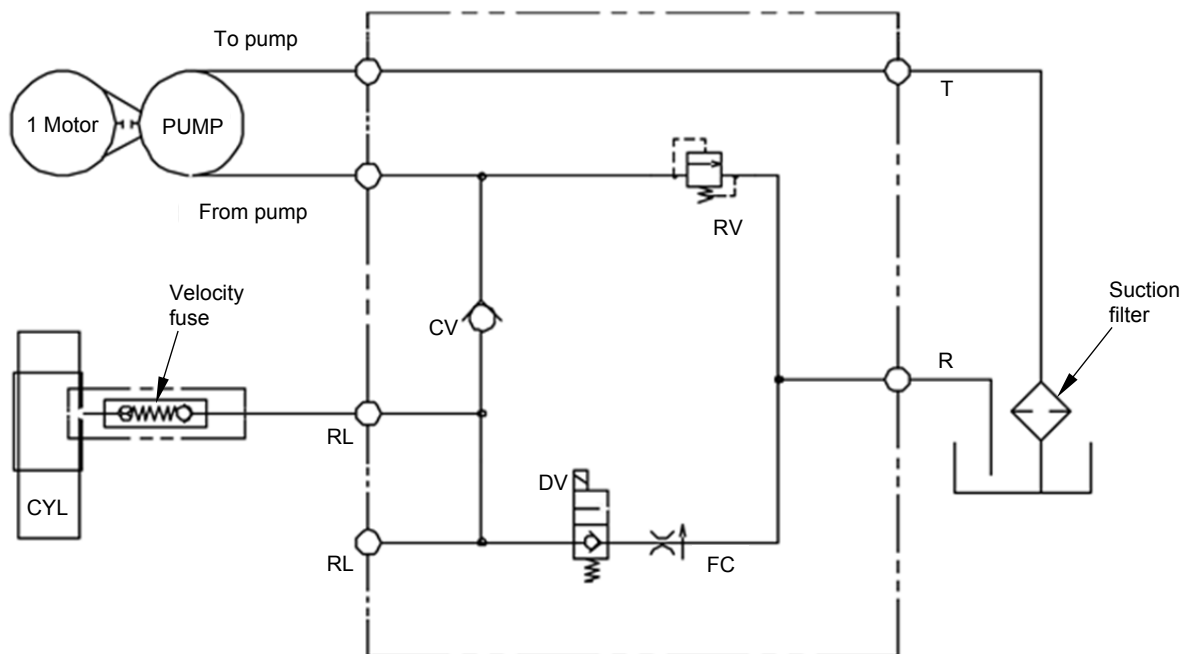
- ***Failure to read and understand the entire manual before assembling, installing, using or servicing the product is a misuse of it. Misuse automatically voids the Limited Warranty.***
- ALWAYS inspect the ramp before each use. Inspect the ramp and remove it from service if any of the following are noticed: 1) Broken welds, stress cracks, warps or bends, indications of metal fatigue, etc.; 2) Severely damaged or deteriorated bumpers; 3) Damage to the ramp lifting mechanism or dock leveling mechanism that interferes with normal operation.
- DO NOT apply more weight to the ramp than the uniform capacity of your model. The capacity of your ramp is displayed on label 287 (see "Labeling diagram" on p. 10).
- DO NOT crawl beneath or travel under the ramp while it is in use, or allow others to do so.
- DO NOT allow people to ride on the ramp while moving it or adjusting the elevation.
- DO NOT stand on the ramp while the vehicle to be unloaded is brought into contact with the ramp bumpers. Direct the driver of the vehicle from the side of the ramp from a location where you can be seen by the driver at all times.
- ALWAYS verify that the lip of the ramp overlaps the truck bed or trailer by AT LEAST 4in.
- DO NOT attempt to position the ramp by pushing it from the side unless your ramp is equipped with the YR-FS (fork lift pickup slots) option! Pushing the ramp from the side is likely to damage the wheels and the landing gear.
- DO NOT remove or obscure any label. Verify the placement and legibility of all labels as shown in the Labeling Diagram on p.10. DO NOT use this device UNLESS all product labels are readable, undamaged, and fastened securely to the ramp.
- DO NOT modify the ramp in any way UNLESS you first obtain written approval from Vestil. Unauthorized modifications automatically void the limited warranty (see p. 11) and might make the scraper unsafe to use.

FIG. 1A: DC modular power unit exploded parts diagram. {NOTE: Bill of materials on following page.}



Item no.	Part no.	Description	Quantity	Item no.	Part no.	Description	Quantity
1	4JY1119	Base	1	22	HS52	Clamp, worm gear	1
2	1212SR	Battery charger	1	23	01-143-906	Pump	1
3	01-033-024	18/3 with 4-pin plug	1	24	01-627-010	Manifold assembly	1
4	37927	Tinnerman clip	4	25	29201	¹ / ₄ in. – 20 x ¹ / ₄ in. TPHMS zinc-plated	2
5	99-023-001	Reservoir	1	26	29185	¹ / ₄ in. – 20 x 1in. TPHMS zinc-plated	2
6	99-034-013	Battery strap	1	27	23255	SHCS utility grade	4
					33687	High collar lock washer	4
7	S2DC36	Battery	1	28	152400-03	Molded cord	1
8	BV-48	Breather vent, brass fitting	1	29	150CCTM.OEM	Connector, charge	1
9	15-533-013	Cable, battery, 23in. black	1	30	3MT ST3540	1in. hook and loop press	10in.
10	15-533-014	Cable, battery, 23in. red	1	31	568-015-BN70	O-ring	1
11	23305	SHCS utility grade	2	32	568-011-BN70	O-ring	1
	33668	High collar lock washer	2				
	33008	USS flat washer zinc-plated	2				
12	99-135-011	12VDC motor	1	33	99-153-015	Valve, cartridge, normally closed	1
13	15-022-004	Relay, start solenoid	1	34	99-034-010	Coil, weather tite plug	1
14	HS64	Clamp, worm gear	1	35	99-153-006	Valve, pressure relief	1
15	BG-12V	Gauge, battery indicator	1	36	568-334-BN70	O-ring	1
16	01-022-003	Base, contact block	3	37	99-531-005	Filter	1
17	M22-A3	Contact block N.O.	3	38	99-153-038	Flow control, 1.0GPM	1
18	M22FP-M-BKO	Operator, black, non-illuminated	2	39	01-127-010	Manifold	1
19		Key switch, 2-position	1	40	6801-06-06-NOW	MJ-MAORB 90 degree	1
20	01-134-007	Legend, ON - OFF	1	41	99-153-011	Valve, check	1
21	091802JY	Fiberglass cover	1				

FIG. 2: Hydraulic system logic diagram



Power Unit & Hydraulic System Operation:

An electric motor directly coupled to a gear-type hydraulic pump produces the fluid pressure required to raise the ramp. A manifold contains the hydraulic control components and is bolted directly onto the gear pump. All hydraulic components are rated for 3,000 psi working pressure. Important parts of the power unit include the following:

1. Electric motor (1 Motor): generates the power to turn the gear pump.
2. Gear pump (PUMP): coupled directly to the shaft of the electric motor. The gear pump generates fluid pressure to operate the hydraulic cylinders.
3. Check valve (CV): prevents the backflow of oil through the pump and allows the ramp to maintain any elevation within the serviceable range.
4. Pressure relief valve (RV): opens a path for fluid to follow to the reservoir if the fluid pressure generated by the pump exceeds 3,000 psi. Therefore, the pump cannot generate more than 3,000 psi.
5. Lowering solenoid valve (DV): an electrically-operated cartridge valve. It contains a screen to keep contaminants from entering the valve. When the lowering valve opens in response to signal from the hand control, oil flows out of the cylinders, which causes the ramp to lower.
6. Pressure-compensated flow control spool (FC): the spool is installed in a port next to the lowering valve. It regulates the flow of oil from the cylinders to the reservoir when the valve opens. It allows the table to descend at a uniform rate.
7. Hydraulic cylinders (CYL): displacement-style cylinders that include bleeder valves located at their top end. The bleeder valves allow air to be removed from the hydraulic system.
8. Velocity fuse: There is a brass velocity fuse with a stainless steel spring in the base of each cylinder. In the event of a hydraulic hose or fitting failure, the platform starts to lower at a fast rate. As soon as the descent speed exceeds the preset speed, the Velocity Fuse will shut off the oil flow and the platform will remain nearly stationary until pressure is reapplied. This safety feature reduces the possibility of accidental personal injury or damage to the pallet handler or load.
If air enters the system, the velocity fuse might activate although no failure occurs. To reset the velocity fuse, activate the pump by jogging the UP button. Immediately after resetting the velocity fuse, fully lower the ramp and unload it. Cycle the ramp all the way up and all the way down several times to purge air from the system.
9. Hydraulic fluid: The system uses HO150 hydraulic fluid. Any anti-wear hydraulic oil with a viscosity grade of 150 SUS at 100°F (ISO 32 at 40°C) such as AW 32 or a non-synthetic transmission fluid is acceptable. The fluid level should be approximately 1/2 inch below the fill port of the reservoir when the ramp is completely lowered.

To raise the ramp, press the black UP button on the yellow hand control. This starts the electric motor which turns the hydraulic pump. The pump draws oil from the reservoir, through the suction filter, and into the pump. Pressurized oil flows through the supply hoses, through the check valve, and to the cylinders. The check valve allows oil to flow only in one direction, i.e. from the reservoir to the cylinders, and prevents oil from flowing backwards when the pump stops running. Consequently, oil remains in the cylinders, which allows the ramp to maintain elevation.

If the load exceeds the capacity, pressure builds in the circuit between the pump and the cylinders while the black UP button is activated. If fluid pressure exceeds a preset threshold, the relief valve unseats and opens a path for oil to flow back to the reservoir. This pressure relief mechanism protects the hydraulic system from being damaged by extreme fluid pressure. While the relief valve is open, the ramp will not elevate.

To lower the ramp, press the white DOWN button. Pressing the button energizes the lowering solenoid valve coil, which unseats the poppet valve and allows oil to return to the reservoir. While the valve is open, oil flows from the cylinders through the pressure-compensated flow control valve and back to the reservoir via the return hoses.

Releasing the DOWN button de-energizes the solenoid and closes the poppet valve. The poppet valve prevents oil from flowing through the return hoses to the reservoir when closed. Because the check valve prevents oil from returning to the reservoir through the supply hoses, when both the check valve and poppet valve are closed the pistons do not retract. The unit maintains elevation until the operator presses a button on the controller.

LOWERING SOLENOID VALVE

The hydraulic system is equipped with a cartridge lowering valve. If a malfunction occurs while lowering the ramp, refer to the solutions presented in "Troubleshooting" on pp. 7-8. To clean the lowering solenoid, follow this procedure:

1. Completely lower the ramp.
2. Use a sharp object to push the poppet in from the bottom and open the valve.
3. Repeat several times while immersing the valve in kerosene or mineral spirits. Dry the cleaned valve with compressed air.
4. Blow compressed air through the valve while holding the valve open as described in step 2.
5. Inspect the O-rings and the PTFE (polytetrafluoroethylene) washer. If either component is torn, cut, or damaged in some other way, replace it.
6. Reinstall the valve. Tighten it in the manifold port with approximately 20 ft-lb of torque.

AIR BLEED PROCEDURE

If the forks descend very slowly or fail to lower at all, air probably is trapped in the hydraulic circuit and must be bled from the system. The Pallet Server utilizes a bleeder screw at the top of the cylinder. To bleed air from the hydraulic circuit, follow these directions.

- 1.) Completely unload the forks.
- 2.) Loosen the bleeder screw at the top of the cylinder with approximately a 1/4 to 1/2 turn to allow trapped air to escape. Jog the motor to push air out of the system.
- 4.) When the cylinder is free of air only clear hydraulic fluid will flow from the bleeder screw fitting. When you observe only oil flowing from the bleeder, retighten the bleeder screw.

To raise the ramp, press the black "UP" button on the hand control. In response, the motor turns and spins the gear pump. This causes oil to be drawn out of the reservoir, through a suction filter, and into the pump. The pump then pushes the pressurized oil through the check valve and to the cylinders. As the pistons extend from the cylinders, the ramp elevates.

To lower the ramp, press the white "DOWN" button. The lowering valve opens which opens a path for oil in the cylinders to bypass the check valve and return to the reservoir through the return hose. The rate at which the ramp descends is regulated by the internal pressure-compensated flow spool.

Correcting simple issues with the hydraulic system:

The following instructions describe how to solve 2 problems that commonly affect hydraulic systems.

1. Ramp slowly descends on its own (without pressing the DOWN button).
If the ramp slowly descends on its own, remove the lowering cartridge valve for inspection and cleaning:
 - a. Unload the ramp. The ramp must not be occupied or supporting a load.
 - b. Lower the ramp completely.
 - c. Remove the nut that fastens the lowering solenoid coil to the valve stem and remove the coil.
 - d. Unscrew the valve from the manifold and inspect the valve for contaminants. Examine the O-rings and washers for cuts, tears, and other damage.
 - e. Immerse the valve in mineral spirits or kerosene and use a thin tool (e.g. a small screwdriver or a small hex wrench) to push the poppet in and out several times from the bottom end of the valve. The valve should move about 1/16" between the closed and open positions. If the poppet sticks when pushed in, then the valve stem might be bent. If this is the case, the stem must be replaced. When finished the valve, dry it with compressed air while continuing to push the poppet in and out.
 - f. Inspect the valve port (in the manifold) for contaminants. Clean the port to remove debris.
 - g. Remove the plug located in the corner of the manifold next to the lowering valve. Inspect the plug for contaminants that might clog the flow control located at the bottom of the cavity. Clean the plug as necessary with mineral spirits. With the thin tool, press gently but firmly on the center of the flow control spool. It should move down and recoil freely.
 - h. Reinstall the plug; then reinstall the lowering solenoid valve. Tighten the valve with 20 lb-ft of torque.
2. Ramp lowers extremely slowly or not at all even though the DOWN button is pressed.
The most likely reason that the ramp does not lower properly is that air trapped in the cylinders is causing the velocity fuses to close. The solution is to bleed air from the system. The cylinders are mounted to the ramp with bleeder valves up to allow the cylinders to automatically purge air.
If necessary, manually bleed the air from the system:
 - a. Unload the ramp. The ramp must not be occupied or supporting a load.
 - b. Lower the ramp completely.
 - c. Hold a rag over the bleeder screw at the top of one cylinder. Loosen the screw 1/2 turn with a 1/4" crescent wrench to allow air to escape. Oil and air will flow from the valve. Jog the motor to push air out the system. The passage of air produces a sputtering sound. When sputtering stops and only clear hydraulic fluid flows from the bleeder screw fitting, retighten the bleeder screw to close the valve.

DC-POWERED HYDRAULIC SYSTEM TROUBLESHOOTING GUIDE



Before performing maintenance on this product, unload the ramp and completely lower it.

Observation	Possible Cause	Remedy
1. Unit does not elevate and motor does not run	a. Low battery voltage. (Check light) b. One or more chassis connections to negative post of battery not made well.	a. Recharge battery b. Check and tighten or clean connections if necessary.
2. Unit does not rise but motor is running or humming.	c. Voltage at motor terminals might be too low to run pump at existing load. d. Fluid level in reservoir is low. e. Load exceeds capacity. Relief valve is open allowing hydraulic fluid to flow back into the reservoir. f. Suction filter is clogged. g. Suction line leaking due to loose fittings. h. Filter/Breather cap on tank is clogged. i. Lowering solenoid valve might be energized by faulty wiring or might be stuck open. j. Hydraulic pump malfunctioning.	c. Measure voltage at motor terminals or as near as possible, while pump is running under load. Check for loose connections. d. Add fluid. See "9. Hydraulic fluid" on p. 5 and label 206 (see "Labeling diagram", p. 10). e. DO NOT CHANGE RELIEF VALVE SETTING. Instead, reduce the load to rated capacity. f. Remove and clean. g. Inspect all fittings for proper tightness. h. Remove and clean. i. Remove lowering solenoid valve. Check and clean. (See instructions on p. 6.) j. Disconnect hydraulic line at power unit. Put pressure line in a large container and operate the pump. If no output, check the pump motor coupling which may be defective, and correct as necessary. If pump is worn, contact factory for replacement parts.
3. Unit rises too slowly.	k. Foreign material stuck in down solenoid valve, allowing some fluid to flow back into the reservoir. l. Foreign material clogging suction filter or breather cap, or a hose is pinched. m. Low motor voltage. n. Unit overloaded. o. Inoperative pump.	k. Lower the deck. Remove the lowering solenoid valve and clean. (See p. 6). l. Correct as necessary. (See also 2(f), (h)). m. See 2 (b) n. See 2 (e) o. See 2 (j)
4. Motor labors or is excessively hot.	p. Low voltage. q. Oil starvation causing pump to bind & high internal heat develops. When this happens, pump can be permanently damaged. r. Binding cylinders.	p. See 2 (b) q. See 2 (d), (f), (g), (h), (j) r. Align cylinders correctly.
5. "Spongy" or "Jerky" unit operation.	s. Fluid starvation. t. Air in system.	s. See 2 (d), (f), (g), (j) t. See air bleed procedure (p. 6).
6. Unit lowers too slowly when loaded.	u. Lowering solenoid valve screen clogged. v. Pinched tube or hose. w. Foreign material in flow control valve. x. Binding cylinders. y. Debris in velocity fuse.	u. Remove lowering solenoid valve and clean filter screen. v. Correct as necessary. w. Remove and clean flow control valve. Refer to Hydraulic System Logic Diagram on p. 4. x. Align cylinders correctly. y. Remove and clean velocity fuse. Refer to Hydraulic System Diagram on p. 4.
7. Unit lowers too quickly. Carriage initially lowers at a normal rate but accelerates as the carriage descends.	z. Foreign material stuck in flow control valve.	z. Remove flow control valve from the valve block and clean. Refer to Hydraulic System Diagram on p. 4.
8. Unit raises then lowers slowly.	aa. Lowering solenoid valve incorrectly wired or is stuck open. bb. Check valve stuck open. cc. Check for leaking hoses, fittings, pipes. dd. Cylinder packings worn or damaged.	aa. See 3 (a). bb. Remove and clean check valve. cc. See 2 (c). dd. Replace packings (contact factory for replacement parts).
9. Ramp elevates, but does not lower.	ee. Incorrect lowering solenoid valve	ee. Correct per diagram (p. 8-10).

	wiring. ff. Lowering solenoid valve is stuck. gg. Faulty lowering solenoid coil. hh. Binding cylinders. ii. If the ramp lowers too rapidly, air is present in the hydraulic system causing the velocity fuse to activate and shut off the oil flow from the cylinders. Consequently, the deck will not lower.	ff. Lightly tap the solenoid coil body to seat it properly. (DO NOT hit coil hard because permanently damage might occur). gg. Remove and replace. DO NOT remove the down solenoid valve from the block because the unit will descend instantly. hh. See 4 (c). ii. To unlock, re-pressurize the hydraulic system by pressing the UP button.
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Battery Charger Operation:



WARNING Working with or near lead acid batteries is dangerous.

- Batteries contain sulfuric acid and produce explosive gases. A battery explosion could result in loss of eyesight or serious burns.
- DO NOT smoke near the battery or expose the battery to a spark or flame.
- ONLY charge batteries in clean, dry, and well ventilated locations.
- DO NOT lay tools or any metallic item on top of a battery.
- When working with batteries, remove personal items such as rings, bracelets, necklaces, and watches. A battery can produce enough voltage to weld jewelry to metal.
- Always have plenty of fresh water and soap nearby in case contact with battery acid occurs.
- Operating the battery with a low battery voltage can cause premature motor contact failure.
- The charger is equipped with an external ground wire (small green). During installation the charger must be grounded to the equipment which it is connected to. Be sure this wire is always connected to the chassis, frame, or other metallic surface considered to be ground.
- Confirm that all battery connections are sound and clean.
- Replace defective cords and wires immediately.
- DO NOT use the charger if the flanged inlet is damaged.
- DO NOT connect the charger to a damaged extension cord.

Each YR-HL-DC is equipped with an onboard battery charger with a flanged electrical inlet. The charger is current limited and will not exceed its rated output even if loads are placed on the battery while it is charging. The charger fuse will break if it is connected in reverse polarity.

To charge the battery:

- 1.) Plug the charger into a 115VAC, 60 Hz receptacle by connecting the flanged inlet on the charger to an extension cord. Plug the other end of the cord to a wall socket. Use a short, thick extension cord.
- 2.) When properly connected, the charge LED will indicate the status of charge current flowing to the battery.
 - If only the red LED is on, the charger is providing full output to the battery.
 - If both the red and green LED's are on, the charger is "topping off" the battery.
 - When only the green LED is on, the unit is providing a "float" (maintenance) charge.
 - DO NOT leave the charger on for long periods after the battery is fully charged.
- 3.) Unplug the charger before using the ramp. Failure to do so could cause damage to cords, receptacles, or other equipment.

TROUBLESHOOTING--If the charger does not work:

- 1) Make sure all battery connections are electrically and mechanically sound.
- 2) Confirm that the AC source (e.g. wall socket) for power.
- 3) Check the fuse. Replace only with a fuse having the same rating as originally supplied.
- 4) Determine battery condition. It may take some time before current begins to flow through a highly sulfated battery.

Inspections & Maintenance:

NOTICE Before beginning maintenance, unload the ramp and completely lower it. ONLY use ISO AW-32 hydraulic fluid or its equal in the hydraulic system.

Inspections:

(A) Before Each Use--Inspect the following:

1. Wiring: inspect the electrical wiring for cuts or frays;
2. Wheels: examine the wheels and confirm normal operating condition;
3. Hydraulic hoses: check for pinches, punctures, or loose connections;
4. Structure: inspect the walkway and frame, especially the landing gear, for deformations and cracked welds;
5. Hydraulic system: cycle the ramp up and down while listening and watching unusual noise, motion, or binding;
6. Pushbutton controller: inspect the controller and look for damage that exposes

(B) Monthly Inspections--at least once per month check the following:

1. Oil level. Oil should be 1" to 1-1/2" below the top of the tank with the ramp in the fully lowered position. Add oil when necessary. Check hoses, fittings, etc. for leaks. See "Troubleshooting" (p. 7-8) and correct as necessary.
2. Battery inside the modular power unit): check the water level in the battery.
3. Pivot points: inspect for excessive wear.
4. Hydraulic system, wiring, and pushbutton controller: Check for worn or damaged hydraulic hoses, electrical wires, and cords. Repair as necessary.
5. Wheels and landing gear: examine the wheels and confirm the each is adequately inflated (pneumatic wheels only). Inspect the landing gear. Cycle the ramp all the way up and all the way down while watching the landing gear. Watch for binding and jerky movement and listen for unusual sounds.
6. Labels (see "Labeling diagram" on p. 10): confirm that all labels are in place and in readable condition. Replace any label that is not easily readable.
7. Surfaces: remove dirt and debris.

(C) Yearly Inspection

Hydraulic oil should be changed at least once a year or sooner if the oil darkens or becomes gritty. Flush the reservoir with fresh hydraulic oil before refilling it. Similarly, if the oil appears milky, then it is contaminated with water. The oil should be changed.

Maintenance:

The end-user/your employer should implement a maintenance program to ensure the proper function and safety of the device. The following steps should be utilized in conjunction with maintenance procedures applied at your worksite.

Step 1: Tag the unit, "Out of Service."

Step 2: Perform a "Before each use" inspection. If deformity, corrosion, rusting, or excessive wear of structural members is present, DO NOT use the ramp.

Step 3: Clean all surfaces as necessary.

Step 4: Perform all needed adjustments and repairs. DO NOT modify any part of the ramp, power unit, or hydraulic system.

⚠ WARNING A modification is a change that alters the machine from normal operating condition, like bending the structural members or removing a part or several parts. **NEVER modify the unit. Modifications automatically void the Limited Warranty and might make the ramp unsafe to use.**

Step 5: Make a dated record of the repairs, adjustments and/or replacements.

Labeling diagram:

The product should always be be labeled as shown in the diagram below. Replace all labels that are damaged or not easily readable.

⚠ WARNING	⚠ ADVERTENCIA
CHAIN BOTH SIDES OF RAMP TO TRAILER & CHOCK WHEELS 427 REV 1111	ENCADENE AMBOS LADOS DE LA RAMPA AL REMOLQUE O CUÑAS DE LAS RUEDAS

Both Sides

427

Both Sides

⚠ WARNING

Material handling is inherently dangerous, users and/or bystanders might sustain serious personal injuries if the yard ramp is not properly secured to truck/trailer. To reduce the likelihood of injury:

- DO NOT exceed maximum rated load.
- Unintended separation of the ramp and truck/trailer might cause serious personal injuries.
- Attach BOTH safety chains to the truck/trailer.
- Wrap free end of each chain around a sturdy part of truck/trailer, like the underbody guard, at least once. DO NOT wrap the chains around a structure that might change positions or that might allow a chain to slide free.
- Remove slack by pulling both chains taut.
- Attach each hook to its chain by inserting the end of the hook into a link in the chain. Choose links that will allow both chains to remain taut.

During every loading/unloading operation, periodically inspect chains to verify that hook connections are sound.

MOBILE DOCK TRUCK/ TRAILER

903

903

Edge-O-Dock Option



See FM or PE/PP for labels

Hand Pump Option



⚠ WARNING

- BEFORE DRIVING ON RAMP ALWAYS OPEN HYDRAULIC VALVE
- ALL PERSONNEL MUST REMAIN CLEAR OF THE MOBILE DOCK WHILE IT IS BEING RAISED OR LOWERED.
- SECURELY CHAIN RAMP TO TRUCK BEFORE USE.
- PLACE THE PUMP HANDLE IN THE STORAGE TUBE WHEN NOT BEING USED.

PUMP CONTROL

RAISE ← LOWER

621

Modular power unit (DC-powered units)



206

⚠ 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 incluida contiene 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.

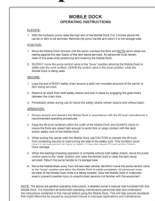
NO exponga a destellos o a calor excesivo, la batería contiene gases explosivos.

295



295

Without Pump Option



622

With Pump Option

Both Sides

CAPACITY / CAPACIDAD / CAPACITÉ

16,000 LBS. / 7257 KGS.

or

616

CAPACITY / CAPACIDAD / CAPACITÉ

20,000 LBS. / 9071 KGS.

or

614

CAPACITY / CAPACIDAD / CAPACITÉ

25,000 LBS. / 11339 KGS.

or

612

CAPACITY / CAPACIDAD / CAPACITÉ

30,000 LBS. / 13607 KGS.

615

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

VESTIL MANUFACTURING CORPORATION • Phone (260) 665-7586 • www.vestil.com

206

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LIMITED WARRANTY

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

Who may request service?

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

What is an "original part"?

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

What is a "proper request"?

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

Mail

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

Fax

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

Email

sales@vestil.com

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

What is covered under the warranty?

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

How long is the warranty period?

The warranty period for original dynamic components is 30 days. For wearing parts, the warranty period is 30 days. The warranty periods begin on the date when 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 the warranty periods 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?

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

Do any other warranties apply to the product?

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

