



Vestil Manufacturing Corp.

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PE-Series Dock Levelers Instruction Manual



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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SIGNAL WORDS

This manual uses SIGNAL WORDS to indicate the likelihood that a particular action will cause personal injuries or property damage. Signal words also specify the level of seriousness of injury if the product is misused in the ways described. The following signal words are used in this manual.

- ⚠ WARNING** Identifies a hazardous situation which, if not avoided, **COULD** result in **DEATH** or **SERIOUS INJURY**.
- ⚠ CAUTION** Indicates a hazardous situation which, if not avoided, **COULD** result in **MINOR** or **MODERATE** injury.
- NOTICE** Identifies actions likely to result in product/property damage, such as operation that might damage the product.

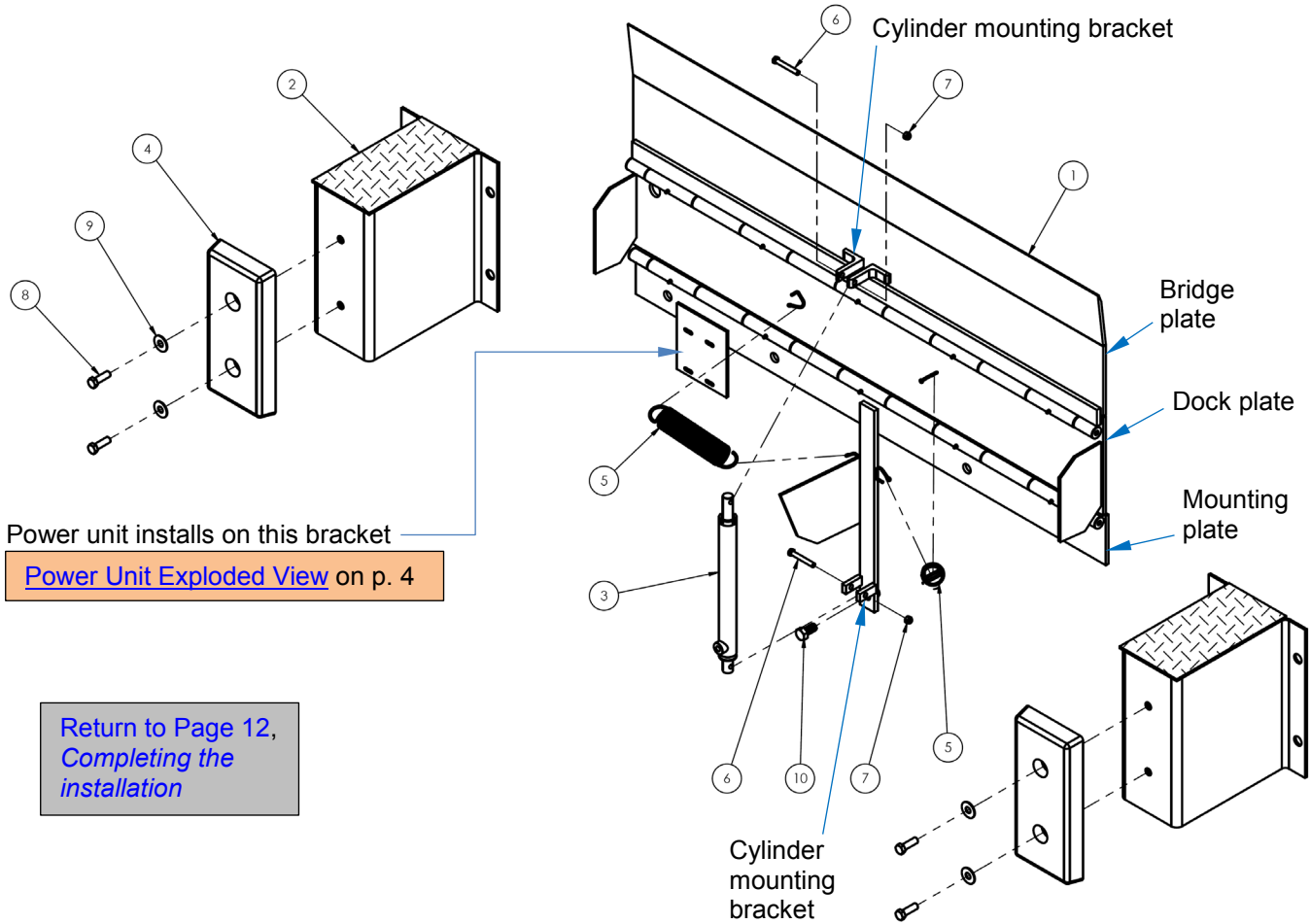
SAFETY INSTRUCTIONS

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

- ⚠ WARNING** If this product is installed, used, or maintained improperly serious personal injuries or death might result. ***Read and understand the entire manual before installing, using, or servicing the product.***
 - The manual should be stored in a location known to all persons who use the dock leveler. It should be available to anyone needing refresh the understanding of proper use and maintenance procedures.
 - DO NOT attempt to resolve any issue with the product unless you are certain that it will be safe to use afterwards.
 - DO NOT modify the product in any way. Unauthorized modifications might make the lifter unsafe to use and automatically void the [Limited Warranty](#) (see p. 25).
 - DO NOT exceed the capacity of your unit. Capacity information appears on the product in label 287. The [Labeling Diagrams](#) on p. 24 indicates where to find label 287 on your dock leveler.
 - Inspect the product according to the instructions on [p. 21 & 22](#). Replace each part that is not in normal condition. DO NOT use the product until it is fully restored to normal condition. ONLY use manufacturer-approved replacement parts.
 - Cycle the deck all the way up and all the way down. Listen for unusual sounds as the deck rises and lowers. Watch the deck for unusual movement.
 - DO NOT use the dock leveler unless all machine guards are in place.
 - This product is NOT a personnel lift. DO NOT use it to lift or transport people.
 - [Hydraulically actuated units] NEVER change the setting of the pressure relief valve.
 - DO NOT use this device UNLESS all labels are in place, readable, and undamaged. See [Labeling Diagrams](#) on. p.24.

- NOTICE** Proper use, maintenance, and storage are essential for this product to function properly.
 - Always use this product in accordance with the instructions in this manual and consistent with any training relevant to machines, devices, etc. used in conjunction with this product.
 - Keep the product clean & dry. Periodically lubricate moving parts.
 - FOR HYDRAULIC UNITS: Do not use brake fluid or jack oils in the hydraulic system. If oil is needed, use an anti-wear hydraulic oil with a viscosity grade of 150 SUS at 100°F, (ISO 32 cSt @ 40°C), or Dexron transmission fluid.
 - Contact the manufacturer for SDS information

EXPLODED VIEW AND BILL OF MATERIALS



Power unit installs on this bracket
[Power Unit Exploded View](#) on p. 4

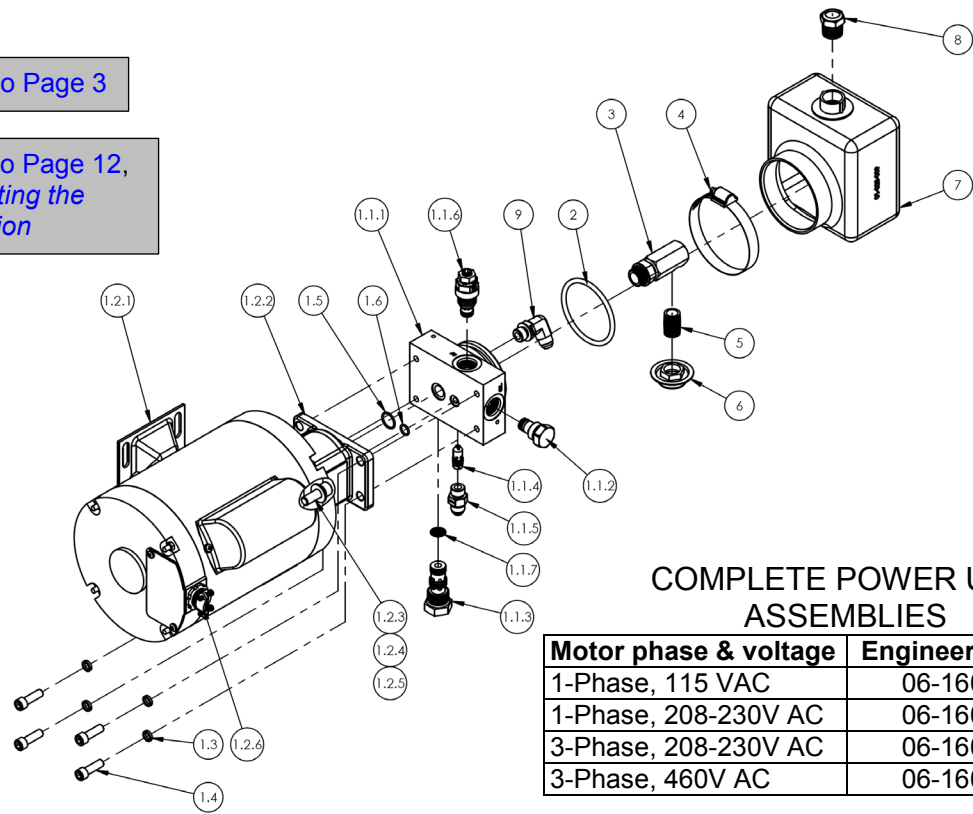
Return to Page 12,
 Completing the
 installation

Item	Part no.	Description	Quantity
1	06-513-199 06-513-204 06-513-205 06-513-206 06-513-207 06-513-203 06-513-208 06-513-209	<u>Weldment, deck, assembly:</u> PE-1572-36 PE-2066 PE-2072 PE-2566 PE-2572 PE-2572-36 PE-3066 PE-3072	1
2	06-514-014 06-514-015	<u>Weldment, bumper box:</u> Deep: PE-1572-36; PE-2572-36 15": PE-2066; PE-2072; PE-2566; PE-2572; PE-3066; PE-3072	2
3	99-021-940 99-021-931-001	<u>Cylinder, hydraulic:</u> 1 1/2" x 14": PE-1572-36; PE-2566; PE-2572; PE-2572-36; PE-3066; & PE-3072 1" x 14": PE-2066; PE-2072	1
4	29-001-001	Specialty molded rubber bumper	2
5	15-146-001	Spring, extension, with full loop, 13.57lb./in.	2
6	17165	Hex cap screw, grade 5, zinc finish, 7/16"-20 x 3" Return to p. 12	2
7	37127	Nylon lock nut, grade 2, zinc finish, 7/16"-20 Return to p. 12	2
8	11311	Hex bolt, grade 2, zinc finish, 5/8"-11 x 2"	4
9	33016	Flat washer, low carbon, USS, zinc plated, 5/8"	4
10	13359	Bolt, HHCS, #5, zinc plated, 3/4"-10 x 1 1/2"	1

POWER UNIT EXPLODED VIEW AND BILL OF MATERIALS

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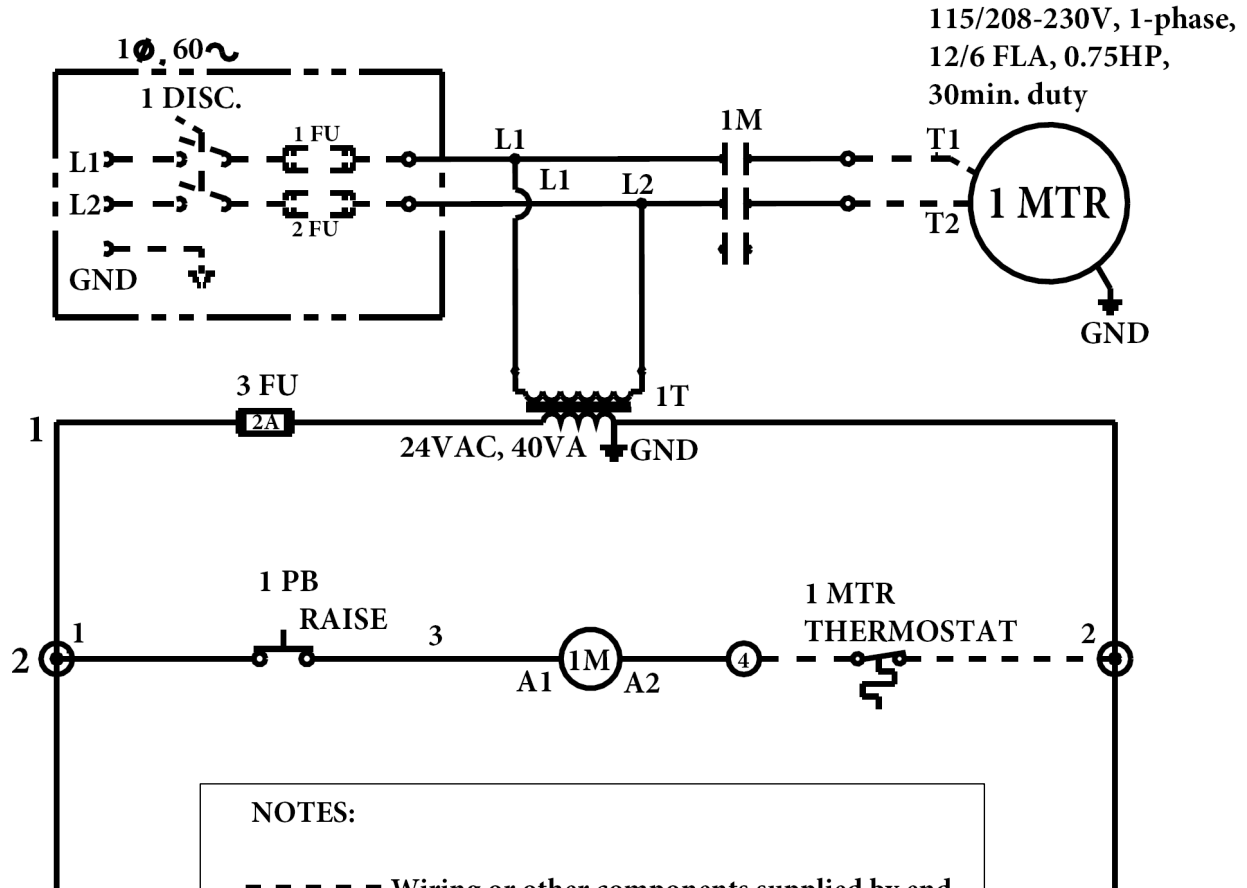


COMPLETE POWER UNIT ASSEMBLIES

Motor phase & voltage	Engineering drawing
1-Phase, 115 VAC	06-160-009-001
1-Phase, 208-230V AC	06-160-009-002
3-Phase, 208-230V AC	06-160-010-003
3-Phase, 460V AC	06-160-010-004

Item	Part no.	Description	Qty.
1	99-160-228-001	Power unit subassembly:	1
	99-160-228-002	a. 1PH, 115V AC, 0.75HP, 1725RPM, 0.06 displacement, 1.0GPM flow control	1
	99-160-229-003	b. 1PH, 208-230V AC, 0.75HP, 1725RPM, 0.06 displacement, 1.0GPM flow control	1
	99-160-229-004	c. 3PH, 208-230V AC, 2HP, 1725RPM, 0.06 displacement, 1.0GPM flow control	1
1.1	99-627-015	Subassembly, manifold, lift-lower	1
	99-127-015	Manifold, PE	1
	99-153-011	Check valve, size 08, nose-in/side-out	1
	99-153-020	Pilot-to-close check valve	1
	99-153-038	Flow control, pressure compensating, 1.0GPM	1
	99-116-030	Fitting, hydraulic, 06MJ-06MORB straight	1
	99-153-004	Valve, pressure relief, 100 bar	1
06-031-004	Accessories, hydraulic, filter disc	1	
1.2	99-137-007-001	a. 1PH Motor/pump, 115V AC, 1PH, 0.75HP, 1725RPM, 0.060 disp.	1
	99-137-007-002	b. 1PH Motor/pump, 208-230V AC, 1PH, 0.75HP, 1725RPM, 0.060 disp.	1
	99-137-015-003	c. 3PH Motor/pump, 208-230V AC, 3PH, 0.75HP, 1725RPM, 0.060 disp.	1
	99-137-015-004	d. 3PH Motor/pump, 460V AC, 3PH,	1
1.2.1	99-135-003	a. Motor, 0.75HP, 1PH, 1725RPM, 56F, 115/208, 60Hz, 2.0SF	1
	99-135-003	b. Motor, 0.75HP, 1PH, 1725RPM, 56F, 115/208-230V, 60Hz, 2.0SF	1
	99-135-005	c. Motor, 2HP, 3PH, 1725RPM, 56F, 208-230V, 50/60Hz	1
	99-135-005	d. Motor, 2HP, 3PH, 1725RPM, 56F, 460V, 50/60Hz	1
1.2.2	01-143-905-002	Pump, hydraulic gear, tang shaft, manifold mount, 0.060disp., 1.0cc/r	1
1.2.3	23305	SHCS, utility grade, 3/8" - 16 x 1"	2
1.2.4	33688	Lock washer, high collar, 3/8"	2
1.2.5	96056	Washer, flat, 3/8" nominal, 0.406" ID, yellow zinc SAE	2
1.2.6	99-034-037	Accessories, electrical, Romex 0.375"	1
2	99-144-007	O-ring; manifold, 3" outer diameter	1
3	99-116-001	Suction fitting, mini-manifold	1
4	99-145-061	Clamp, worm gear hose, 2 13/16" - 3 3/4"	1
5	99-031-033	Accessories, nipple, close pipe	1
6	99-031-029	Accessories, hydraulic, screen, inlet, 1 3/4"	1
7	01-023-009	Reservoir, oil	1
8	01-116-003	Breather, 1/2" Return to p. 12	1
9	99-116-033	Fitting, hydraulic, 06MJ-06MAORB 90° elbow	1

Single Phase Electrical Circuit Diagram (06-124-019 rev. D)

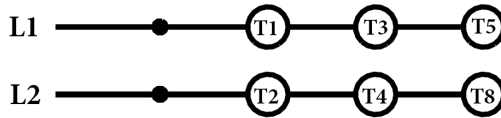


NOTES:

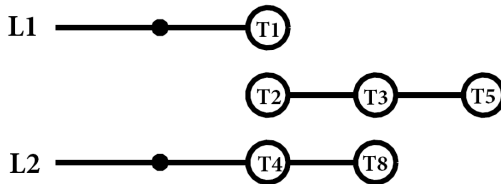
- - - - - Wiring or other components supplied by end-user

Motor connection diagram: Must wire as shown for clockwise rotation facing lead end

115VAC, 1-Phase



208-230VAC, 1-Phase



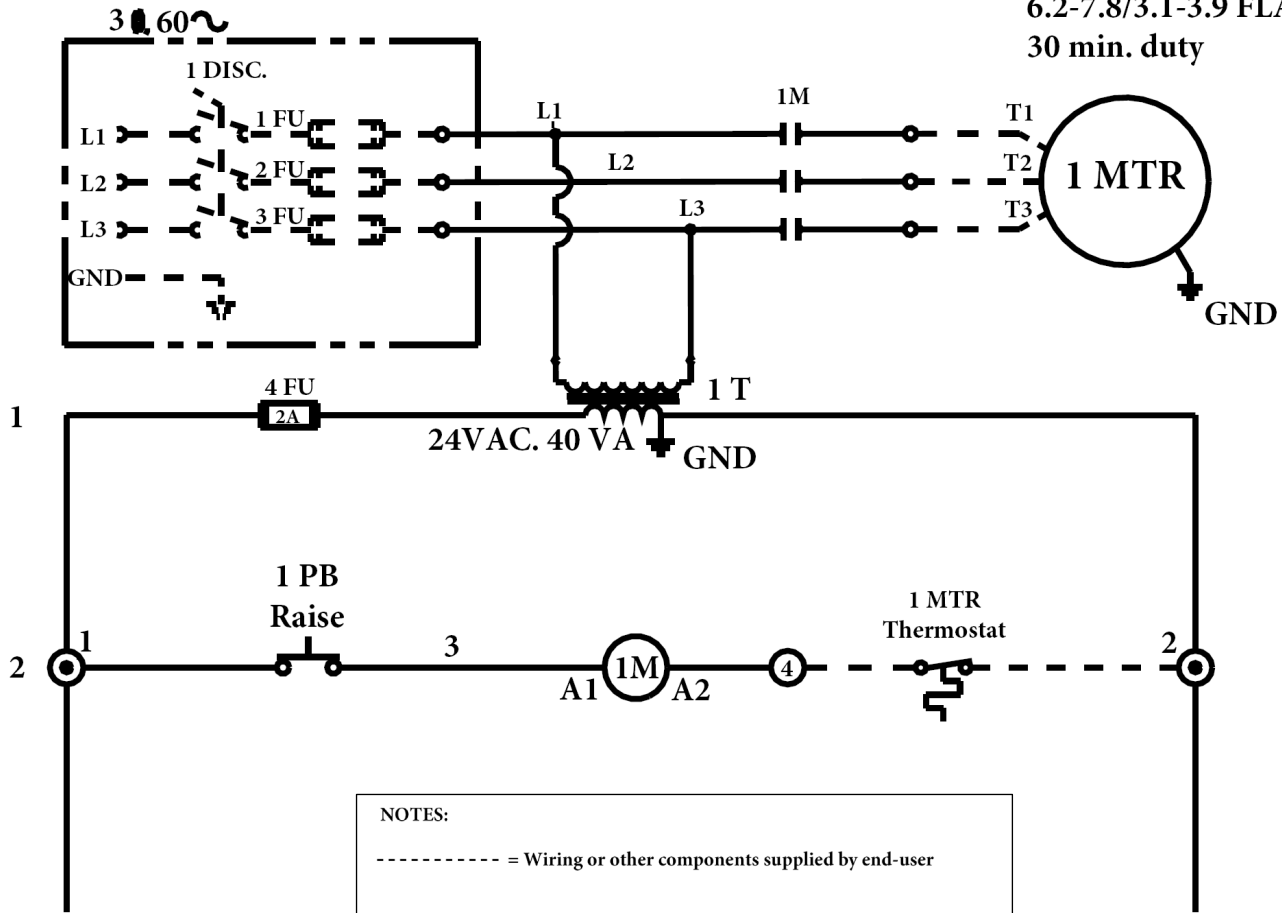
[Return to Page 12, Completing the installation](#)

WARNING Turn off all sources of electrical power and lock and tag them out before beginning this installation.
Always turn off all power sources before beginning work on this equipment.

The end-user must provide overcurrent and short circuit protection compliant with NEC guidelines and local codes.

3-Phase Electrical Circuit Diagram (06-124-020 rev. D)

208-230V/460V, 3-phase,
6.2-7.8/3.1-3.9 FLA, 2 HP,
30 min. duty



NOTES:

----- = Wiring or other components supplied by end-user

Motor connection diagram: To reverse direction, interchange any 2 leads

208-230VAC, 3-Phase

L1	●	(T1)	(T7)	(T4)	Tie together
L2	●	(T2)	(T8)	(T5)	
L3	●	(T3)	(T9)	(T6)	

460VAC, 3-Phase

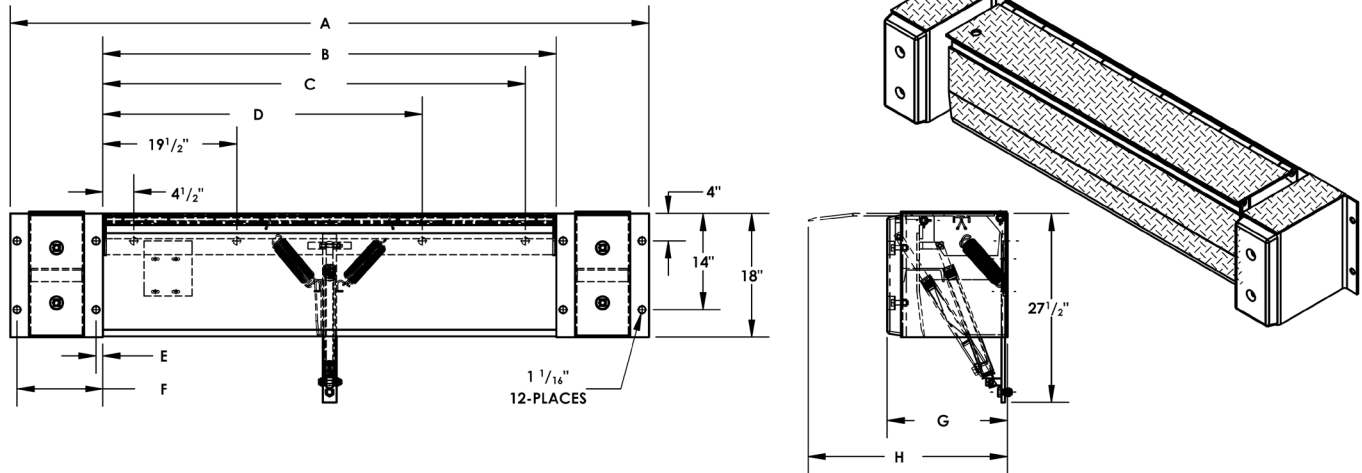
L1	●	(T1)	(T7)	(T4)
L2	●	(T2)	(T8)	(T5)
L3	●	(T3)	(T9)	(T6)

[Return to Page 12, Completing the installation](#)

⚠ WARNING Turn off all sources of electrical power and lock and tag them out before beginning this installation.
Always turn off all power sources before beginning work on this equipment.

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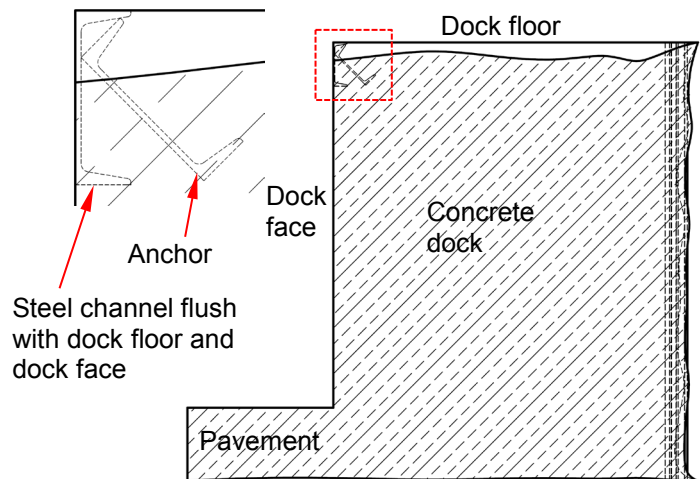
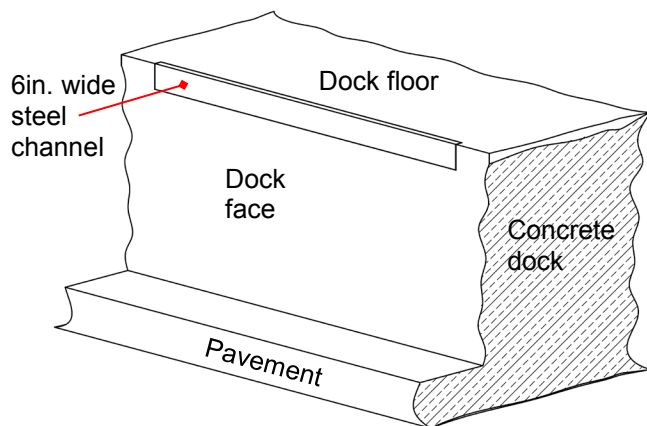
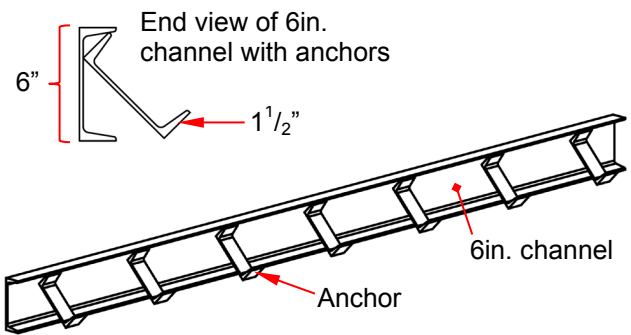
SPECIFICATIONS



MODEL	A	B	C	D	E	F	G	H	NET WEIGHT	CAPACITY
PE-1572-36	98"	72"	67 ¹ / ₂ "	52 ¹ / ₂ "	1 ¹ / ₈ "	11 ⁷ / ₈ "	26 ³ / ₄ "	36 ⁵ / ₈ "	650 lb.	15,000 lb.
PE-2066	98"	66"	61 ¹ / ₂ "	46 ¹ / ₂ "	1"	12 ¹ / ₂ "	17 ¹ / ₂ "	29"	490 lb.	20,000lb.
PE-2072	99"	72"	67 ¹ / ₂ "	52 ¹ / ₂ "	1"	12 ¹ / ₂ "	17 ¹ / ₂ "	29"	517 lb.	20,000 lb.
PE-2566	93"	66"	61 ¹ / ₂ "	46 ¹ / ₂ "	1"	12 ¹ / ₂ "	17 ¹ / ₂ "	29"	558 lb.	25,000 lb.
PE-2572	99"	72"	67 ¹ / ₂ "	52 ¹ / ₂ "	1"	12 ¹ / ₂ "	17 ¹ / ₂ "	29"	590 lb.	25,000 lb.
PE-2572-36	98"	72"	67 ¹ / ₂ "	52 ¹ / ₂ "	1 ¹ / ₈ "	11 ⁷ / ₈ "	26 ³ / ₄ "	36 ⁵ / ₈ "	738 lb.	25,000lb.
PE-3066	93"	66"	61 ¹ / ₂ "	46 ¹ / ₂ "	1"	12 ¹ / ₂ "	17 ¹ / ₂ "	29 ¹³ / ₁₆ "	645 lb.	30,000 lb.

RECOMMENDED INSTALLATION SITE CHARACTERISTICS

The optimal installation site is a loading dock where the floor is 50 inches above the ground. If the dock is lower than 50 inches, ramps and ramp support angles are necessary. The dock face should include 6 inch, integral steel channel along the top edge of the loading dock floor. This feature allows the dock leveler and dock bumpers to be welded directly to the steel channel. Concrete anchors must be at least 1 1/2 inches wide by 6 inches long with a 1 1/2 inch perpendicular segment at both ends. Anchors must be made from at least 1/4" steel and should be welded to the channel in 12 inch increments. Optimal (recommended) dock edge construction is shown in the diagrams.



Installation requirements for loading docks without 6in. steel edge:

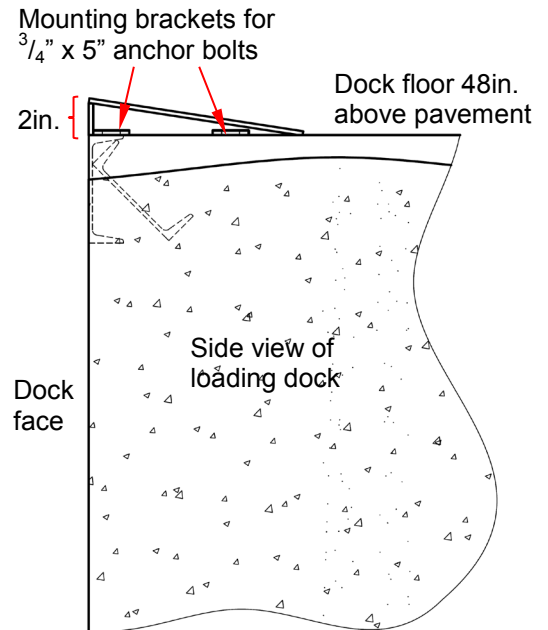
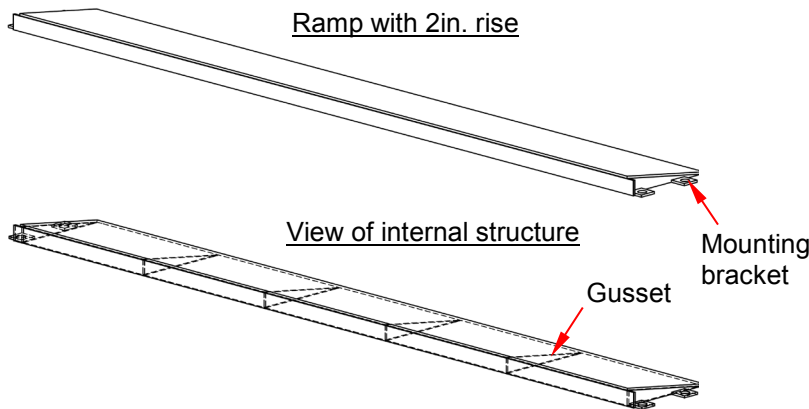
If your loading dock lacks 6 inch steel edging, then either: 1) the edging is less than 6 inches wide; or 2) there is no steel edge.

1) If the installation site includes integral steel channel along the dock edge, but the channel is less than 6 inches wide, the dock leveler must be both welded and fastened to the dock face with anchor bolts. This installation is described in [Method 2](#) on pages 9-10.

2) A steel approach plate must first be anchored to the floor if the dock has no steel edging. The dock leveler is then welded to the front edge of the approach plate. This installation is described in [Method 3](#) on pages 11-12.

Approach ramp installation for loading docks lower than 50 inches (dock floor less than 48 inches above pavement):

If the dock floor is less than 50 inches above the pavement, then a ramp might be necessary. The dock leveler is installed to be 50 inches above the pavement and a ramp provides a smooth transition from the dock floor to the top of the leveler. The diagrams provide an example of a dock floor 48 inches above the pavement.

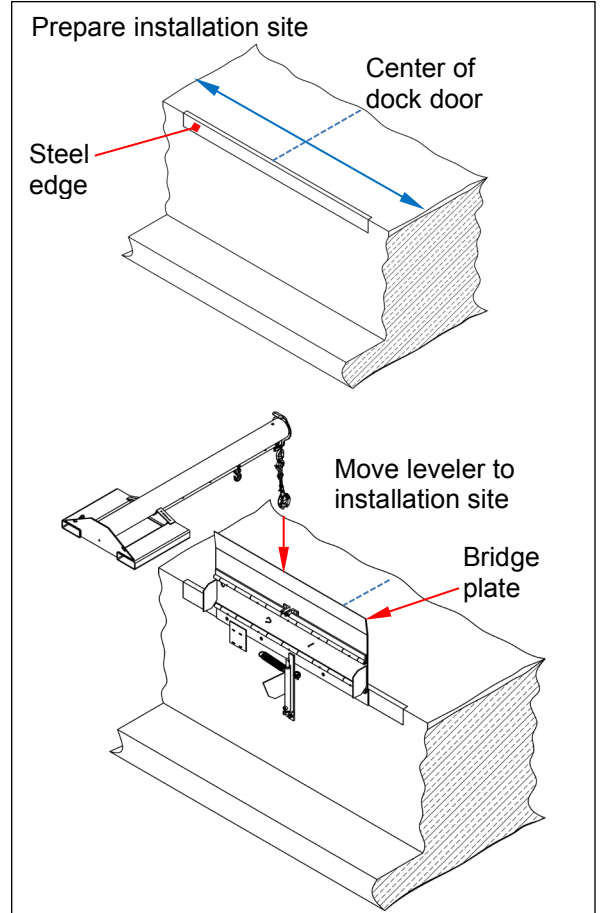


INSTALLATION

⚠WARNING Improperly installing the dock leveler decreases its capacity and might make it unsafe to use. If the dock face does not include integral steel channel, then an approach plate must be installed.

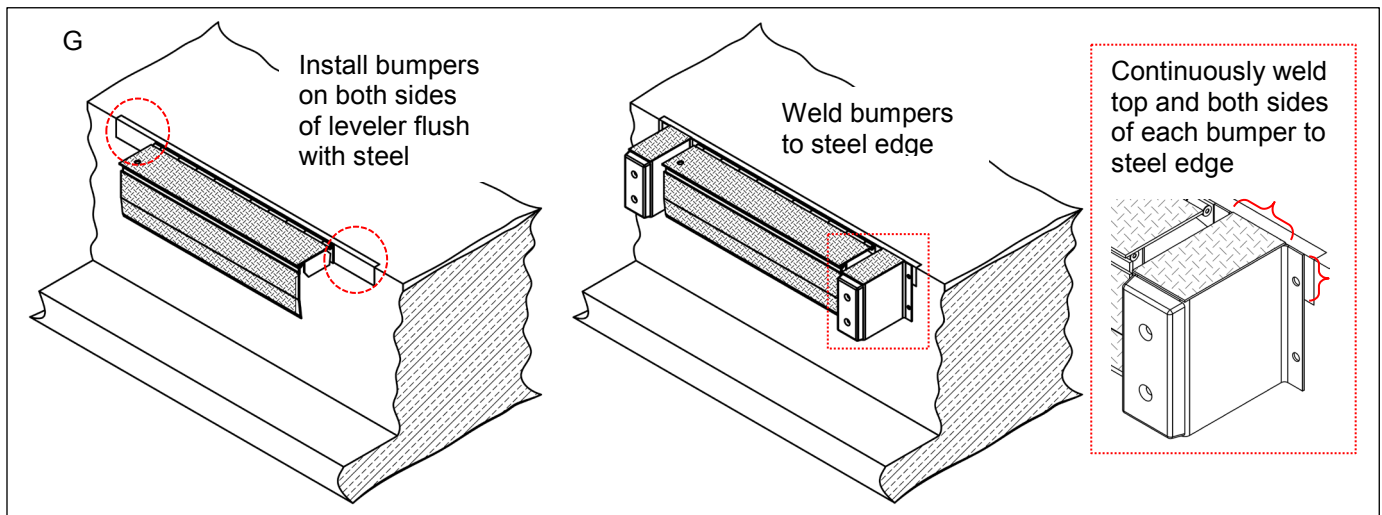
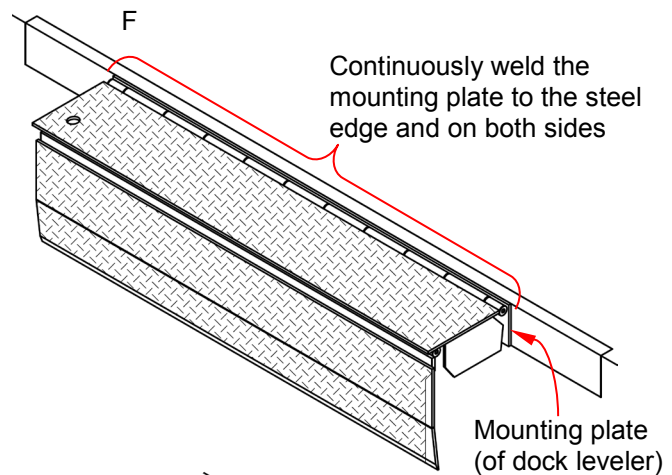
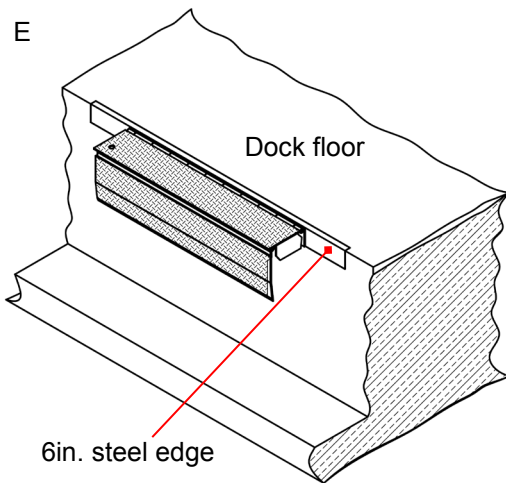
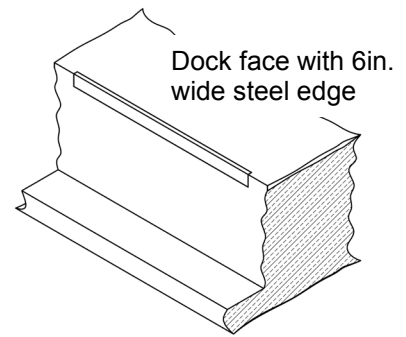
Three methods of installing the dock leveler are provided in this manual. The methods are presented in order of preference, i.e. the unit should be installed according to Method 1, which requires an integral steel edge at least 6 inches wide. If the loading dock has a steel edge that is less than 6 inches wide, then use [Method 2](#). If the dock does not have a steel edge at all, then use [Method 3](#). For all 3 methods, begin the installation with steps A-D by cleaning and preparing the site and moving the dock leveler into position.

- A. Clean the installation site and the steel edge. The edge must be free of protrusions. Remove burrs, etc. from the edge surface. The floor surface and front face of the dock should be smooth.
 - B. Measure the width of the dock door (double-ended arrow). Find and mark the center of the door opening (dashed line).
 - C. Move the leveler to the installation site, e.g. with a forklift boom. In the diagram, a forklift boom is shown attached to the bridge plate.
 - D. Center the dock leveler on the center of the dock doorway.
- Proceed to the instructions for:
- i. [Method 1](#) if the dock has a 6in. (or wider) steel edge; OR
 - ii. [Method 2](#) if the dock has steel edge less than 6in. wide; OR
 - iii. [Method 3](#) if the dock does not have a steel edge.

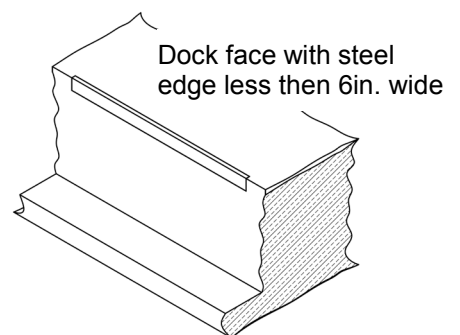


METHOD 1: Loading dock with at least 6in. wide steel edge

- E. The top of the dock leveler mounting plate should be flush with the top of the steel edge. Tack weld the mounting plate to the edge at both ends.
- F. Continuously weld the top edge of the mounting plate to the steel edge.
- G. Install dock bumpers on both sides of the leveler.
- Align the top of each bumper with the top of the steel edge/dock floor.
 - Tack weld the bumpers to the steel edge.
 - Continuously weld the top and both sides of both bumpers to the steel edge.

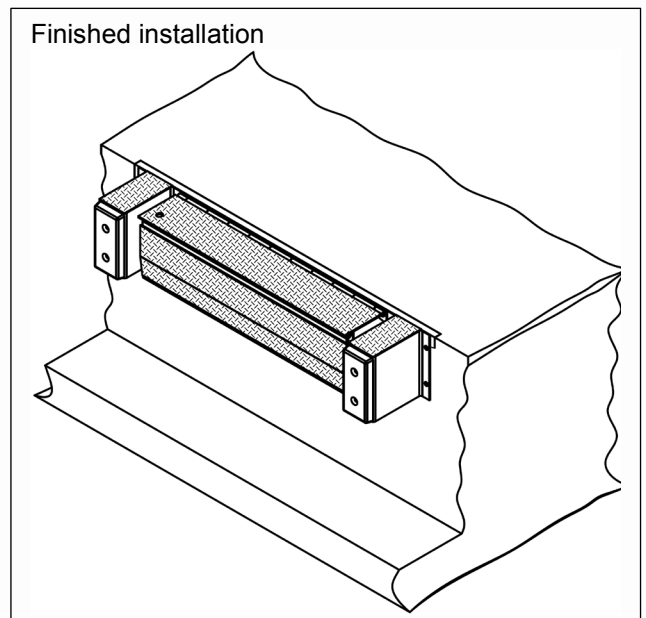
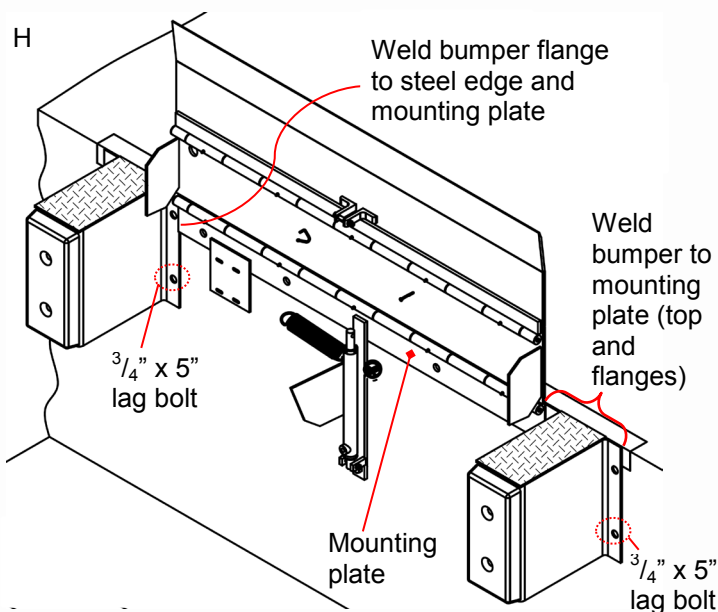
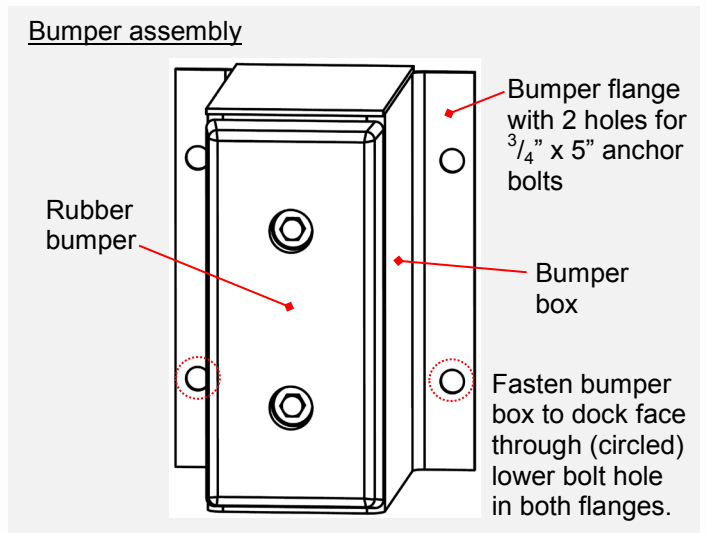
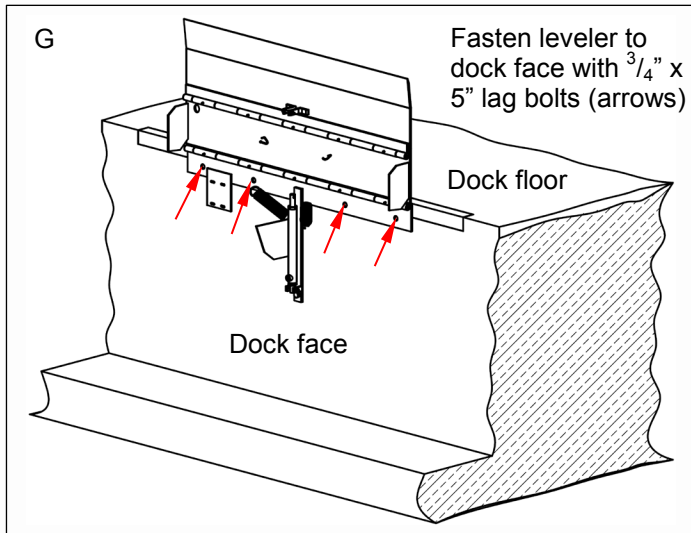
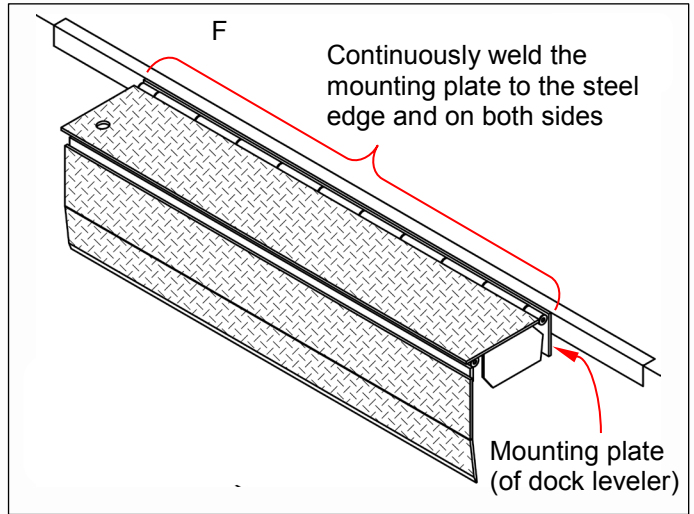
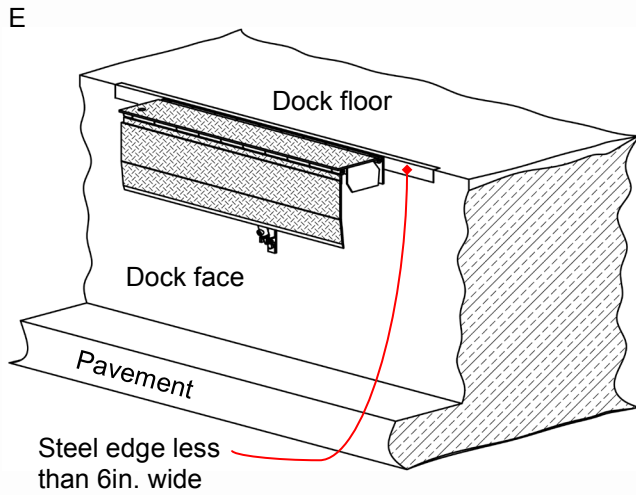
**METHOD 2: Loading dock with steel edge less than 6in. wide**

- E. The top of the dock leveler mounting plate should be flush with the top of the steel edge. Tack weld the mounting plate to the edge at both ends.
- F. Continuously weld the mounting plate to the steel edge.
- G. Install four (4) $\frac{3}{4}$ " x 5" lag bolts to fasten the (dock leveler) mounting plate to the dock face.
- H. Install dock bumpers on both sides of the leveler.
- Align the top of each bumper with the dock floor.
 - Tack weld the bumpers to the steel edge.
 - Continuously weld the top of both bumpers.
 - Continuously weld the sides of each bumper.
 - Install a $\frac{3}{4}$ " x 5" lag bolt through the outside and inside flanges of both bumpers.



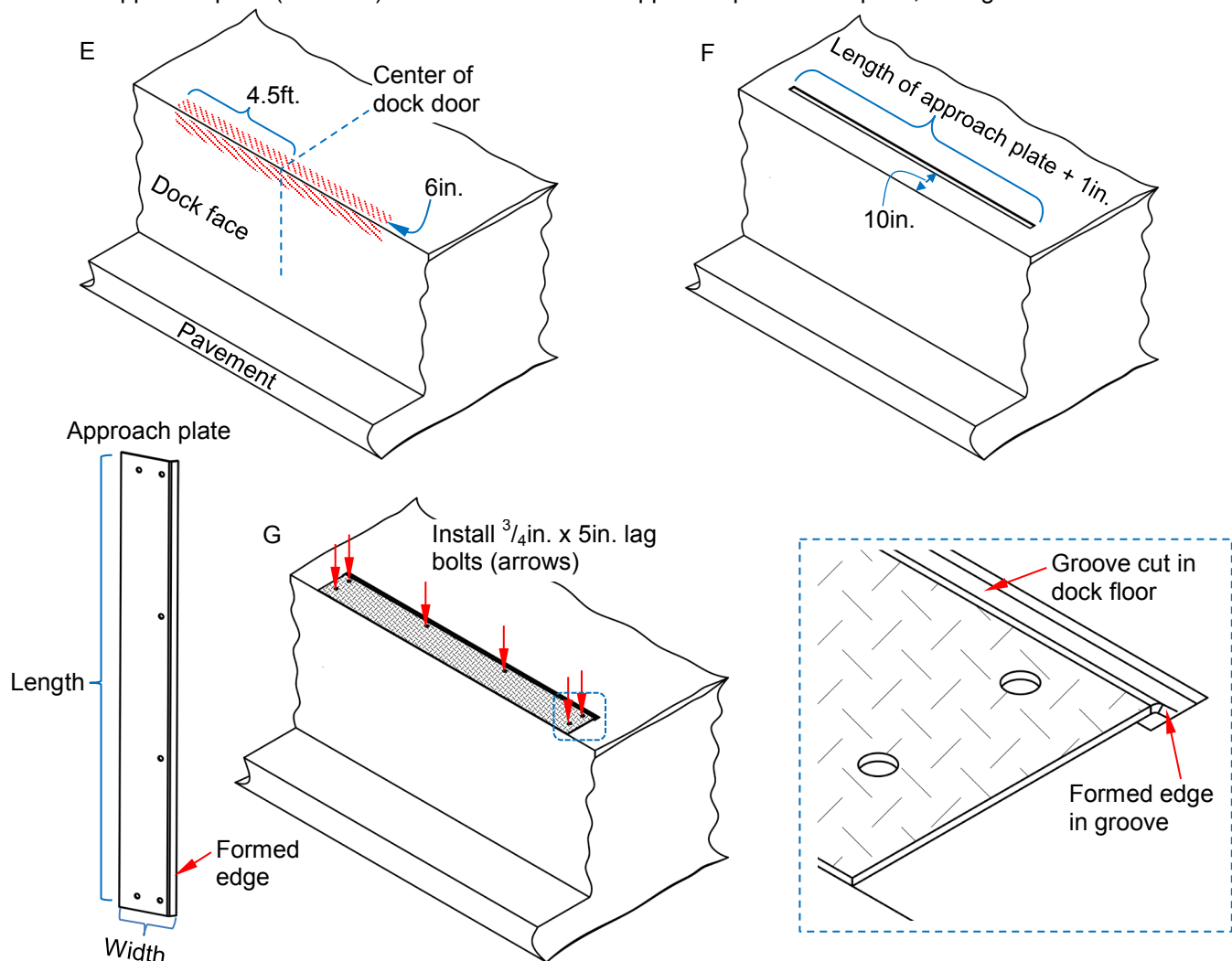
[Additional diagrams on following page](#)

METHOD 2 (continued): Loading dock with steel edge less than 6in. wide

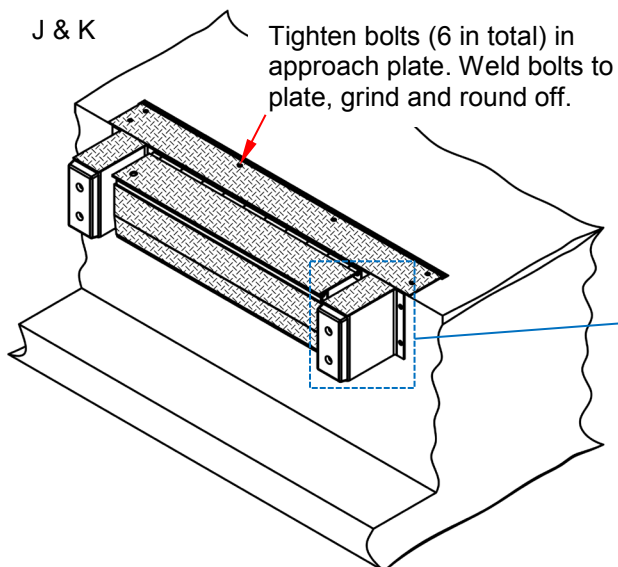
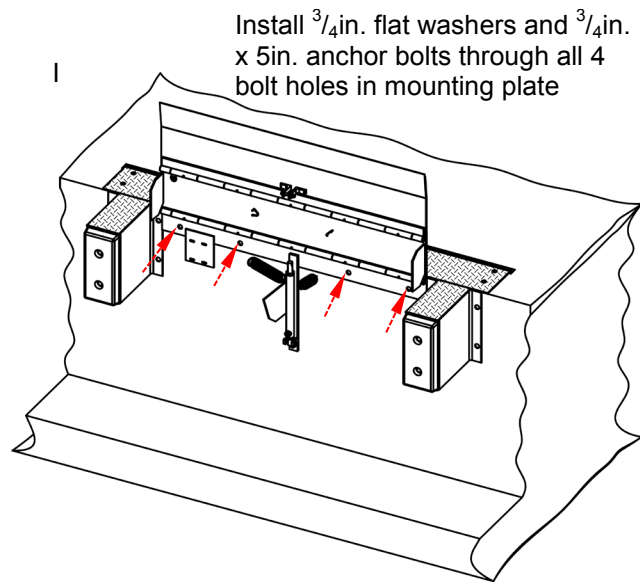
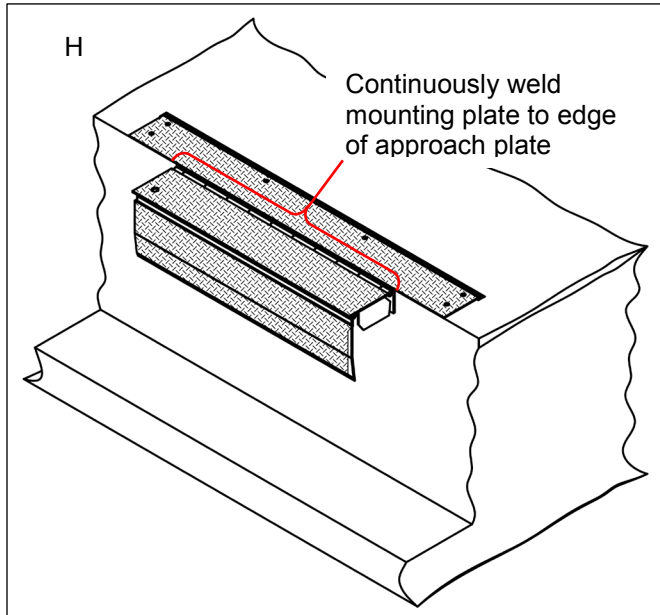


METHOD 3: Loading dock without steel edge

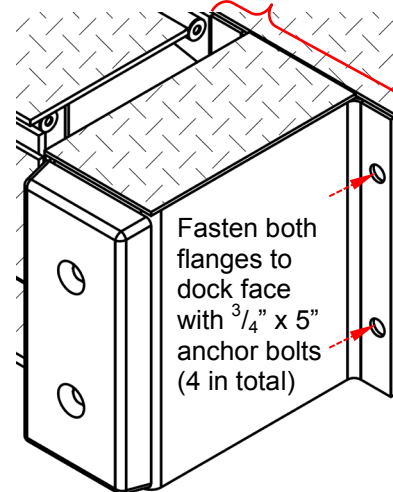
- E. Make sure that the dock floor and dock face are smooth. Grind/sand surface features on the concrete along the dock edge. Sand a 6in. region 4.5ft. on each side of the center of the dock door. The areas to sand on the dock floor and dock face are cross-hatched.
- F. Your installation might require an approach plate to provide a smooth transition from the dock floor to the dock leveler. For example, loading docks where palletized goods are slid across the floor and into a trailer, an approach plate is necessary. If your installation requires an approach plate, the lip of the plate must be recessed in a groove in the dock floor. Measure the length of the plate. Find the center of the door opening and mark the floor. Mark the floor the length of the approach plate plus ~1in. parallel to the dock edge 12 inches from the face of the dock. Cut a $\frac{3}{8}$ in. deep x 2in. wide groove along the mark. [NOTE: The inside edge of the groove will be 10in. from the dock edge.]
- G. One edge of the approach plate is formed with a slight downward bend. Set this edge of the plate in the groove. Adjust plate position so that the opposite edge is flush with the dock face. Then, anchor the plate to the floor with six (6) $\frac{3}{4}$ in. x 5in. lag bolts. Do not tighten the bolts at this time.
- H. Tack-weld the mounting plate of the leveler to the approach plate at both ends. The tops of the mounting plate and approach plate should be flush and level. Continuously weld the mounting plate to the edge of the approach plate.
- I. The mounting plate includes 4 bolt holes. Drill holes into the dock face at all 4 locations for $\frac{3}{4}$ in. x 5in. anchor bolts. Install the bolts but do not tighten them completely at this time.
- J. Install a dock bumper on each side of the leveler. Begin by welding the top edge of each bumper box to the edge of the approach plate. Then, drill 4 holes (2 in each flange; see [Bumper assembly](#) on p. 10) for $\frac{3}{4}$ in. x 5in. anchor bolts. Install the bolts and $\frac{3}{4}$ in. flat washers.
- K. Tighten the bolts installed through the mounting plate (4) and bumpers (4 each; 8 in total). Then, tighten the bolts in the approach plate (6 in total). Weld the bolts in the approach plate to the plate; then grind and round them off.



METHOD 3 (continued): Loading dock without steel edge



Weld top of bumper box to edge of approach plate. Weld inside flange to mounting plate.



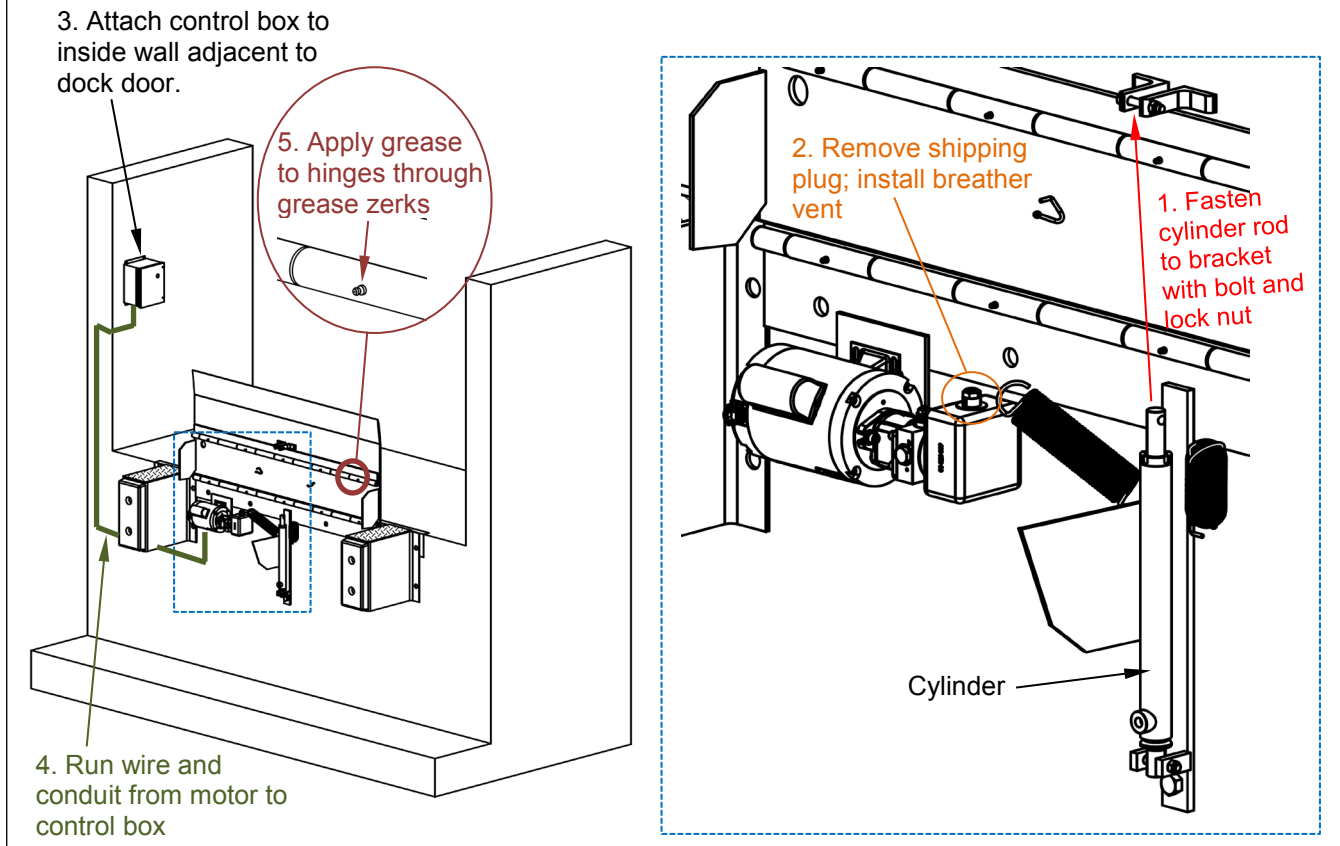
Completing the installation: [Diagrams](#) appear on the next page (13).

NOTE: Numbers in parentheses correspond to part numbers in the bills of materials for the exploded views on pages 3 ([dock leveler](#)) & 4 ([power unit](#)).

After the leveler is attached to the loading dock, the hydraulic and electrical control systems must be assembled.

1. Attach the top of the cylinder rod to the cylinder brackets with the bolt (17165) and lock nut (37127) in the bracket.
2. The hydraulic fluid reservoir ships with a shipping plug. Remove the shipping plug from the reservoir and install the breather vent (01-116-013).
3. Mount the [control box](#) where it is close to the leveler and protected from the elements (i.e. indoor wall).
4. Install electrical wiring to connect the control box to the motor. Using $\frac{1}{2}$ " electrical conduit to protect the wiring is recommended and might be required by law, regulation, or local code or ordinance. The conduit should follow a path that runs below the nearer (to the motor) bumper box and up to the control box. Refer to the appropriate electrical circuit diagram ([single phase](#) on p. 5; [3-phase](#) on p. 6) to complete the wiring. Then, connect the control box to electrical service.
5. Lubricate all hinges by applying grease at each of the [grease zerks](#). Reapply grease at least every 3 months or more regularly if the leveler is under heavy use (more than 10 cycles per day).

Completing the installation (continued from p. 12)

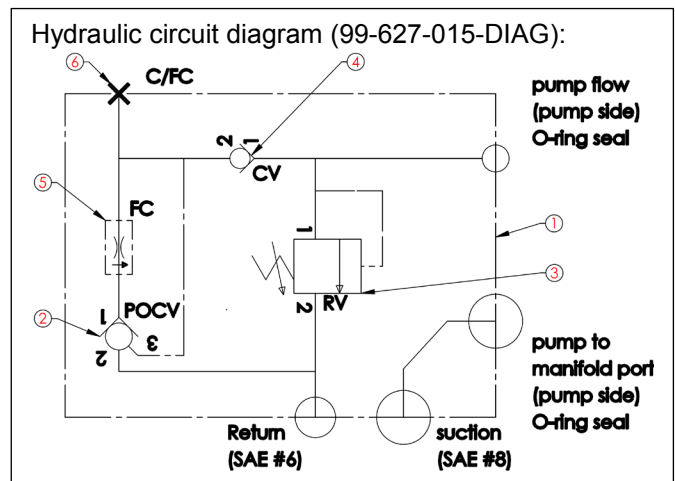


THE POWER UNIT

PE-series dock levelers use an electric-hydraulic power unit to deploy an articulated (hinged) dock plate. All hydraulic components are rated for 3,000 psi working pressure. Power is provided by an electric motor which is directly coupled to a pump. Pressing and holding the RAISE button on the control box activates the motor. The motor shaft turns and rotates the pump. The pump pressurizes fluid (oil) and circulates it through the hydraulic circuit. A manifold houses all valves in the circuit and is fastened onto the pump. A hose provides a passage for oil to flow from the manifold to the cylinder. As the cylinder fills with pressurized fluid, a cylinder rod extends. The cylinder rod is connected to the underside of the bridge plate. As the cylinder rod extends, it lifts the dock plate and extends the bridge plate. When the bridge plate is fully extended, release the RAISE button. The cylinder rod retracts into the cylinder which causes the bridge plate to descend. The bridge plate eventually contacts the floor of a parked trailer/vehicle and bridges the gap between the loading dock and the trailer/vehicle.

The following descriptions further explain the functions of noteworthy components of the power unit:

- A. Electric motor: A/C motor operates on either single-phase or 3-phase AC, depending on the motor ordered. A variety of motor voltages is available.
- B. Pump: The pump shaft is coupled directly to the motor shaft. Motor shaft rotation turns the pump.
- C. Manifold: the following numbers correspond to (ballooned/circled) item numbers in the hydraulic circuit diagram:
 1. Manifold (99-127-015-DIAG): lift/return circuit
 2. Pilot operated check valve (99-153-020-DIAG; nose in, side out; size 08): when pilot pressure achieved at 3, a ball prevents flow between 1 and 2.



3. Relief valve (99-153-006-DIAG; 210bar; size 08): At pressures greater than 1,500 psi, the valve opens and allows fluid to flow back into the reservoir.
 4. Check valve (99-153-011-DIAG; size 08): prevents fluid backflow into the pump.
 5. Flow control valve (99-153-038; PC; 7/16-20; 2gpm): regulates the lowering rate of the leveler.
 6. Plug (6408-H-06-DIAG; socket head; with o-ring): stops oil from flowing out of the circuit.
- D. Hydraulic cylinder: A displacement-style cylinder that raises and lowers the dock plate and bridge plate.
- E. 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.

OPERATION

Once the vehicle/trailer is in position at the dock, i.e. resting against the dock bumpers with wheels properly chocked, press the RAISE button on the control box. Pressing the button activates the power unit. The motor rotates which spins the hydraulic gear pump. Oil is drawn from the reservoir and flows into the pump. The pump pushes pressurized oil through the manifold, through the hose, and into the cylinder. As oil accumulates in the cylinder, the cylinder rod extends. The extending cylinder rod presses on the underside of the bridge plate. The bridge plate pivots upwards. Both the bridge plate and the dock plate elevate. When the plates are completely elevated (pressing the button does not cause them to rise any further), release the control button. The plates descend until the bridge plate rests on the trailer.

To return the leveler to home position, simply drive away from the dock. Be certain that nobody is in the vicinity of the leveler because it swiftly falls once the bridge plate slides off of the trailer/vehicle.

TROUBLESHOOTING

Contact the Technical Service department for assistance with issues not covered in this guide. [Contact information](#) is provided on the cover page of this manual.

Issue	Cause	Solution
I press the control button but the motor does not run and the leveler does not respond.	<ol style="list-style-type: none"> 1. Transformer fuse blown or tripped circuit breaker 2. No supply voltage 3. Bad control transformer 4. Malfunctioning motor relay coil 5. Malfunctioning control button 6. Thermal-overload switch tripped 	<ol style="list-style-type: none"> 1. Replace fuse or reset circuit breaker. 2. Test voltage with meter, Check fuses, breakers, and overloads. 3. Check for 24VAC; replace if bad. 4. Test with meter; replace if bad. 5. Test with meter; replace if bad. 6. Wait for motor to cool.
When I press the control button, I see the motor turn, but leveler does not rise.	<ol style="list-style-type: none"> 1. Motor rotation is wrong 2. Pumps failing to pressurize hydraulic system 3. Load applied to the leveler. The leveler will only lift its own weight. 	<ol style="list-style-type: none"> 1. Confirm that motor turns clockwise 2. Contact Technical Service. 3. Unload the leveler.
While control button pressed, motor hums and/or pump squeals but deck does not rise or rises very slowly.	<ol style="list-style-type: none"> 1. Excessive voltage drop to motor because power cord wire size too small, wire length too long, or incoming voltage too low. 2. Motor running slowly, is hot, or (3-phase only) lost one phase. 4. Pressure relief valve opening at full system pressure. 5. Check valve failing to close 6. Load applied to deck. 	<ol style="list-style-type: none"> 1. Check power installation. Check incoming voltage with voltmeter <i>while motor running</i>. 2. Check voltage on all legs; check fuses; repair as necessary. 4. Check for frame damage or binding at the hinges. Check for overload condition. 5. Remove valve and inspect. 6. Remove load from deck.

RECORD OF NORMAL CONDITION

When the unit is first installed, make a detailed record of its condition. Include observations about all features: hinges, the power unit (cylinder, pump, hoses, etc.), welds, the frame (particularly the mounting plate and cylinder mounting brackets), dock plate, bridge plate, control box, and bumper assemblies. Thoroughly photograph the unit in both the raised and home positions. Photograph all labels applied to the leveler and control box. Add the photographs to the record. Describe where each label is located. Press the control button until the leveler is fully extended/raised; then release the button and watch the leveler return to the home position. Write a detailed description of the cycle and/or make a video recording of the leveler in operation. This record establishes “normal condition”. During future inspections, compare your observations to the record to determine if the unit is in normal condition. See [Inspections & Maintenance](#).

INSPECTIONS AND MAINTENANCE

Before beginning maintenance, secure the leveler in the extended position. For example, use at least 2 props or attach a locking plate clamp to the bridge plate and lift it with an overhead lifting device like a hoist or forklift boom. It is strongly recommended that more than one method of securing the leveler be applied each time it is serviced to provide redundancy if one method fails.

(A) Inspect the unit at least **once per week** for the following:

- 1.) Frayed wires and loose conduit fittings. Repair or replace wiring/conduit as necessary.
- 2.) Damage and deformation of the structural members, cylinder brackets, etc.
- 3.) Run the leveler through a complete cycle. Listen for unusual noises. Watch the dock plate and bridge plate for binding or unusual movement. Grease the hinges if the plates are noisy as they move but are otherwise in normal condition.

(B) Inspect the following at least **once per month**:

- 1.) Oil leaks – check the hose, cylinder, fittings, etc. for oil leaks. Also check the oil level in the reservoir. Oil should be 1” to 1½” below the fill hole in the reservoir. If you need to add oil, or if the oil needs to be replaced, only use anti-wear hydraulic oil with a viscosity grade of 150 SUS at 100°F, (ISO 32 at 40°C), for example AW 32 or HO 150 hydraulic oil or a non-synthetic transmission fluid. Synthetic transmission fluid can be used, but the system must first be flushed with the synthetic fluid before the reservoir is filled.
- 2.) Hydraulic hose and electrical wiring – check the hose and electrical wires for damage. Replace the hose if it is leaking, bulging, or cracking.
- 3.) Hinge and cylinder pivot points – check for excessive wear at all pivot points. Apply grease to all hinges through the grease zerks. Examine both cylinder mounting brackets for damage.
- 4.) Welds – check all welds for cracks and signs of metal fatigue, especially around hinges and cylinder mounting brackets.
- 5.) Hardware – examine each anchor bolt and the concrete around it. Tighten any bolt that is loose. The leveler must be rigidly anchored to the dock at all times. The frame should not move (e.g. rock or wobble) while the leveler operates. Make sure that the bolt holes in the mounting plate are not elongating, cracking, etc. Also inspect the cylinder mounting bolts (part no. 17165 in *Exploded View* on p. 3).
- 6.) Labels – confirm that each label is in place and in good condition. Refer to the [Labeling Diagram](#) on p. 16.
- 7.) Leveler surfaces - clean the surfaces of the leveler, underneath and around the power unit. Remove corrosion/rust and apply touchup paint to all areas where the finish is damaged.

(C) Yearly Maintenance

- 1.) Thoroughly grease the hinges and both cylinder pivot points. See [Exploded View](#) on p. 3.
- 2.) The oil should be changed if it darkens, becomes gritty, or has a milky appearance (indicating the presence of water). Replace the original oil with anti-wear hydraulic oil, viscosity grade 150 SUS at 100°F, (ISO 32 at 40°C). Examples of replacement oils include AW 32 or HO 150 hydraulic oil or a non-synthetic transmission fluid. Synthetic transmission fluid can be used only if the system is flushed with the synthetic fluid before the reservoir is filled.

LABELING DIAGRAM

Each unit should be labeled as shown in the diagram. However, label content and locations are subject to change so your product might not be labeled exactly as shown. Compare the diagram below to your *Record of Normal Condition*. If there are any differences between actual labeling and this diagram, adapt the diagram to reflect actual labeling. Replace all labels that are damaged, missing, or not easily readable (e.g. faded). To order replacement labels or to inquire whether your unit is properly labeled, contact the technical service and parts department online at http://www.vestilmfg.com/parts_info.htm or by calling (260) 665-7586 and asking for the Parts Department.



A: Label 206 (Not shown; Applied to control box)

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. 1003
VESTIL MANUFACTURING CORPORATION • Phone (260) 665-7586 • www.vestil.com	

B: Label 584 (Applied above control button)

REMOVE PLUG AND INSTALL BREATHER CAP QUITE EL TAPON INSTALE LA TAPA DEL RESPIRADERO DÉBOUCHER ET INSÉRER BOUCHON RENIFLARD	584
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C: Label 362 (Applied to control box)

INSTRUCCIONES DE SEGURIDAD
1) READ OWNERS MANUAL AND ALL INSTRUCTIONS BEFORE OPERATING OR WORKING ON DOCK LEVELER. 2) Always return the deck to the level, supported (cross-traffic) position. 3) Do not operate the leveler with personnel or any type of load on its deck. 4) The trailer's wheels must be chocked before entering the trailer, per OSHA 1910-178(k)(1). 5) Block off the dock's approaches to truck and forklift traffic before doing maintenance or repairs.
OPERATING INSTRUCTIONS
TO POSITION THE DECK FOR LOADING/UNLOADING: Hold the "RAISE" push-button until the lip is extended up, then release it to allow the leveler to settle onto the trailer bed. When the trailer pulls out, the deck will automatically drop to its starting position again.
INSTRUCCIONES DE OPERACIÓN
PARA POSICIONAR EL ANDÉN PARA CARGA/DESCARGA: Aguante el botón "ELEVAR" hasta que el labio se extienda, entonces sueltelo para dejar que la palanca se asiente en la plataforma del remolque. Cuando el remolque se vaya, el andén se volverá a la posición inicial automáticamente.
INSTRUCTIONS DE SECURITE
1) LIRE LE MANUEL D'UTILISATION ET TOUTES LES INSTRUCTIONS AVANT DE METTRE EN MARCHÉ OU DE TRAVAILLER SUR LE NIVEAU. 2) Toujours retourner le pont jusqu' au niveau de position soutenue (croisement). 3) Ne pas faire fonctionner le niveau avec une charge personnelle ou de tout autre type sur son pont. 4) Les roues de la remorque doivent être calées avant d'introduire la remorque per OSHA 1910-178(k)(1). 5) Bloquer la circulation sur le quai près du chariot et de la fourche pendant la maintenance ou les réparations.
INSTRUCTIONS DE FONCTIONNEMENT
POUR POSITIONNER LE PONT POUR CHARGER/DECHARGER: Tenir le bouton-poussoir "MONTÉE" jusqu' au bout, puis le relâcher pour permettre au niveau de se poser sur l'assise de la remorque. Quand la remorque se retire, le pont retombera automatiquement sur sa position de départ.

D: Label 287 (Applied to outside surface of foot guard)

MODEL/MODÉLO/MODELE _____ STATIC CAPACITY (evenly distributed) _____ lbs. LA CAPACIDAD CONSTANTE (distribuida uniformemente) _____ kgs. CAPACITÉ STATIQUE (distribuée régulièrement) _____ kgs. SERIAL/SERIE/SÉRIE _____
287 REV 0812

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, 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 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.

