

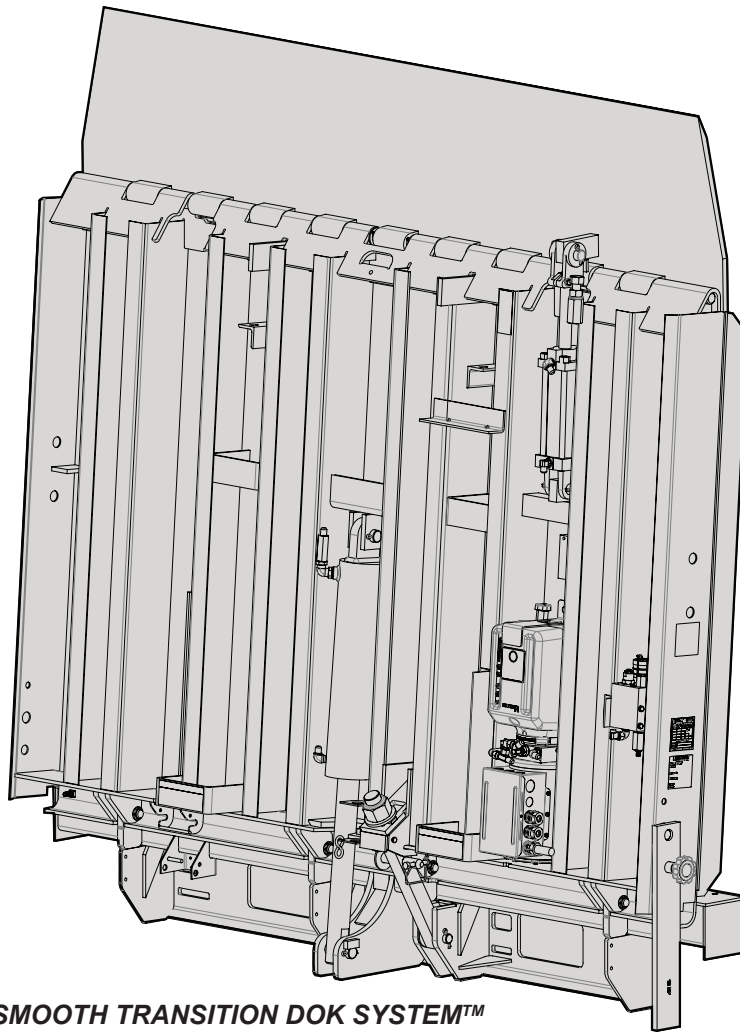
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# RHV-4100

## Dock Leveler

### Owner's Manual

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*part of the SMOOTH TRANSITION DOK SYSTEM™*

**RITE·HITE®**  
ALWAYS LOOKING AHEAD



**This Manual Covers Dock Levelers Built After Serial Numbers:**  
11JH170001M and up







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### INTRODUCTION

Read and understand this entire manual before installing the RHV Hydraulic Dock Leveler. The RHV Hydraulic Dock Leveler by Rite-Hite® is designed to provide a safer work place for workers in the shipping and receiving dock areas. The RHV Hydraulic Dock Leveler is an electromechanical device that when properly installed and operated provides safe and secure access between the loading dock and truck. The RHV Hydraulic Dock Leveler is operated at the top of the dock from an operator control station.

### PRODUCT SPECIFIC WARRANTY

RITE-HITE Company, LLC and its affiliates (collectively "RITE-HITE") warrants to the owner ("Owner") that the RHV-4100 Dock Leveler by Rite-Hite® sold to the Owner will be free of defects in design, materials and workmanship (ordinary wear and tear excepted) for a period of 5 years parts and 1 year labor from date of shipment in accordance with Rite-Hite's Standard Warranty Policy.

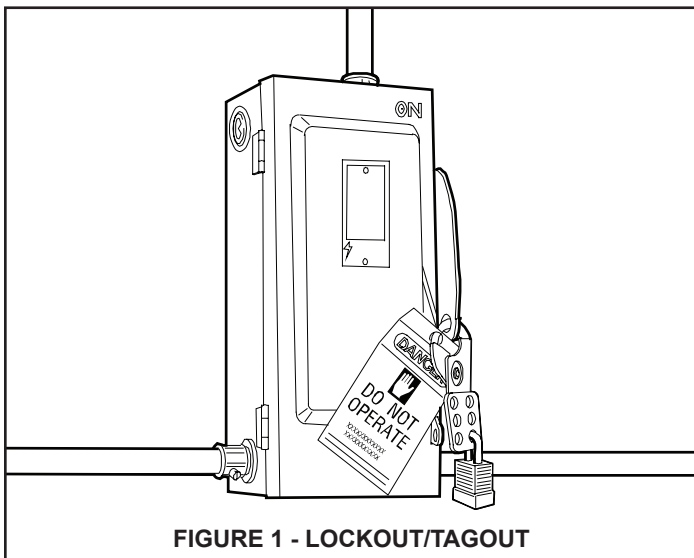
### NOTICE TO USER

Your local Rite-Hite® representative provides a Planned Maintenance Program (P.M.P.) which can be fitted to your specific operation. Call your local representative or Rite-Hite® at 414-355-2600.

The Rite-Hite products in this manual are covered by one or more of the following U.S. patents: 5,882,167; 6,065,172; 6,070,283; 6,085,375; 6,089,544; 6,092,970; 6,106,212; 6,116,839; 6,190,109; 6,276,016; 6,311,352; 6,318,947; 6,322,310; 6,360,394; 6,368,043; 6,431,819; 6,488,464; 6,524,053; 6,726,432; 6,773,221; 6,832,403; 6,880,301; 7,032,267; 7,062,814; 7,213,285; 7,216,391; 7,363,670; 7,380,305; 7,503,089; 7,533,431; 7,546,655; 7,584,517; 7,681,271; 7,823,239; 7,841,823; 7,877,831; 7,914,042; 8,006,811; 8,065,770; 8,141,189; 8,191,194; 8,286,757; 8,287,223; 8,303,235; 8,307,956; 8,443,474; 8,464,384; 8,449,897; 8,544,130; 8,547,234; 8,590,087; 8,590,673; 8,616,826; 8,657,551; 8,678,736; 8,905,198 and pending U.S and foreign patent applications. RITE-HITE®, THINMAN™, SAFE-T-LIP®, HYDRACHEK®, WHEEL-LOK™, DOK-LOK®, DUAL-DOK®, SAFE-T-STRUT™, DOK-COMMANDER®, JUMBO™, HYDRA-RITE™, SAFE-T-GATE®, RITE-VU™ LIGHT COMMUNICATION SYSTEM and SMOOTH TRANSITION DOK SYSTEM™, are trademarks of Rite-Hite®.



## SAFETY WARNINGS



### **WARNING**

When working with electrical or electronic controls, make sure that the power source has been locked out and tagged according to OSHA regulations and approved local electrical codes.

### LOCKOUT/TAGOUT PROCEDURES

The Occupational Safety and Health Administration requires that, in addition to posting safety warnings and barricading the work area, the power supply has been locked in the OFF position or disconnected. It is mandatory that an approved lockout device is utilized. An example of a lockout device is illustrated. The proper lockout procedure requires that the person responsible for the repairs is the only person who has the ability to remove the lockout device.

In addition to the lockout device, it is also a requirement to tag the power control in a manner that will clearly note that repairs are under way and state who is responsible for the lockout condition. Tagout devices have to be constructed and printed so that exposure to weather conditions or wet and damp locations will not cause the tag to deteriorate or become unreadable.

RITE-HITE® Corporation does not recommend any particular lockout device, but recommends the utilization of an OSHA approved device (refer to OSHA regulation 1910.147). RITE-HITE® Corporation also recommends the review and implementation of an entire safety program for the Control of Hazardous Energy (Lockout/Tagout). These regulations are available through OSHA publication 3120.

### **DANGER**

This is the highest level statement. Failure to follow the listed instructions will most likely result in severe injury or death.

### **CAUTION**

The statements used with this level of warning deal with a safe operating procedure. If the procedure is ignored, the possibility of personal injury may exist.

### **WARNING**

This is a statement of serious hazard. Failure to follow the listed instructions could place the individual at risk of serious injury or death.

### **IMPORTANT**

**IMPORTANT** is used to draw attention to a procedure that needs to be followed to prevent machine or property damage.

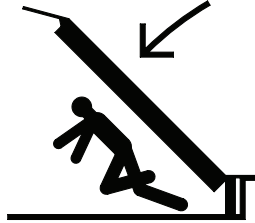


## OTHER IMPORTANT OPERATIONAL SAFETY WARNINGS

### **DANGER**

#### CRUSH HAZARD.

- DO NOT operate leveler with anyone standing in the path of the leveler.
- DO NOT service leveler unless Maintenance Pin is properly engaged. See page 6.
- Before beginning any service procedures:
  - Position the RHV leveler in the vertical/stored position.
  - Disconnect the power and follow all LOCKOUT/TAGOUT procedures as stated on the inside front cover of this manual.
- DO NOT operate leveler without following the procedure below if the leveler has not been in service for an extended period of time.
- Procedure for filling cylinder:
  - Press and hold the RAISE button (Run Pump) to operate for (35) seconds.



### **WARNING**

- Keep away from hinge when operating leveler.
- Post safety warnings and barricade work area at dock level and at ground level to prevent unauthorized use of the dock leveler during maintenance/service.
- During installation, anchors must be properly torqued to obtain the necessary anchoring strength. DO NOT USE IMPACT DRIVERS.
- DO NOT drive or walk onto truck/trailer until the truck/trailer is parked against the dock bumpers and the wheels are chocked or the DOK-LOK® has been fully engaged and the lights have changed to GREEN inside and RED outside.
- NEVER attempt to lift the lip or hold the lip out by hand. Serious personal injury could occur.
- DO NOT remove lifting equipment until:
  - a) the main cylinder has been filled.
  - b) Maintenance Pin has been installed and engaged.
- ALWAYS check the rigging to make sure that it is secure before proceeding with lifting the unit. Never stand under any unit being lifted.
- NEVER remove the wheel chocks until loading/unloading is finished and the truck driver has been given permission to drive away from the dock or the DOK-LOK® has been released and the lights have changed to RED inside and GREEN outside.



## OTHER IMPORTANT OPERATIONAL SAFETY WARNINGS

### CAUTION

- This equipment should not be operated or serviced except by trained personnel.
- DO NOT operate leveler until truck/trailer is parked against the dock bumpers and the truck/trailer has been secured.
- ALWAYS return the leveler platform to the proper stored position.
- Failure to conduct routine inspections and maintenance could cause personal injury or damage to equipment.
- ALWAYS call your authorized Rite-Hite Service Representative or Rite-Hite (1-800-456-0600) immediately if a malfunction occurs.

### FCC COMPLIANCE

**NOTE:** This equipment has been tested and found to comply with the limits for a Class A digital device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference when the equipment is operated in a commercial environment. This equipment generates, uses, and can radiate radio frequency energy and, if not installed and used in accordance with the instruction manual, may cause harmful interference to radio communications. Operation of this equipment in a residential area is likely to cause harmful interference in which case the user will be required to correct the interference at his or her own expense.

**NOTE:** Changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate the equipment.

This device complies with Part 15 of the FCC Rules. Operation is subject to the following conditions: (1) This device may not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesirable operation.

### IMPORTANT

- DO NOT ground welding equipment to any hydraulic cylinder or electrical components.
- DO NOT attach welder ground to leveler platform when welding on base frame assembly. Attach welder ground to base frame assembly only. Damage to bearings or hydraulic equipment will occur.
- When drilling holes in the control box, do not allow the drill to go too deeply into the box. Damage to the control systems may occur.
- Use a vacuum to remove debris from control box. NEVER use air to blow debris from control box.
- DO NOT connect green ground lead into control box or junction box until all welding has been completed.
- Check hydraulic fluid level. Deck mounted power unit has been filled with fluid but cylinders, hoses and manifold are shipped dry.
- NOTE — check motor rotation. Jog the motor until rotation has been determined. DO NOT run the motor in reverse because this will damage the motor and power unit.
- Make sure that the cylinder clevis and the rod will not contact either the rear header or frame clevis during operation.
- DO NOT force valve adjustment screws against internal stops. Damage will occur to the valve.
- If a procedure is not clearly defined in this manual, contact your authorized Rite-Hite Service Representative or Rite-Hite at 1-800-456-0600 before proceeding.



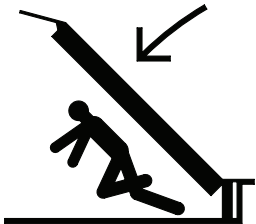
## OTHER IMPORTANT OPERATIONAL SAFETY WARNINGS

### DANGER

Never be under the dock leveler platform or lip without:

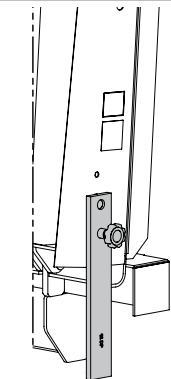
- Raising the platform by pressing and holding RAISE button. Raise platform to its highest position until the lip is fully extended. Release RAISE button.
- Turning off, locking out and tagging out the power to the control box.
- Barricading the dock leveler from any form of traffic.
- Engage the Maintenance Pin. See Figure 2.
- If you are unable to engage the Maintenance Pin, contact your authorized Rite-Hite Service Representative or Rite-Hite at 1-800-456-0600.

### DANGER

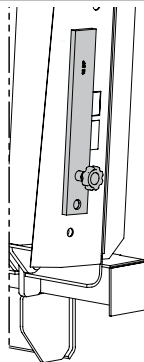


#### CRUSH HAZARD.

- DO NOT operate leveler with anyone standing in the path of the leveler.
- Access Brace is NOT a substitute for the Integral Maintenance Support System.



Leveler Stored  
Brace Engaged



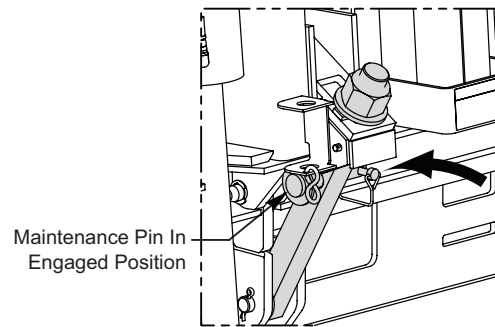
Leveler Stored  
Brace Disengaged

### WARNING

Post safety warnings and barricade work area at dock level and at drive level to prevent unauthorized use of the dock leveler during maintenance/service.

#### TO ENGAGE:

- Press RAISE Button Until Platform Stops Moving.
- Remove Linch Pin And Maintenance Pin From Bracket On Platform.
- Insert Maintenance Pin Into Tilt Back Rod And Secure With Linch Pin. Snap Wire Must Be Engaged On Pin.



#### TO DISENGAGE:

- Press RAISE Button Until Platform Stops Moving.
- Remove Linch Pin And Maintenance Pin From Tilt Back Rod.
- Insert Maintenance Pin Into Storage Plate And Secure With Linch Pin. Snap Wire Must Be Engaged On Pin.

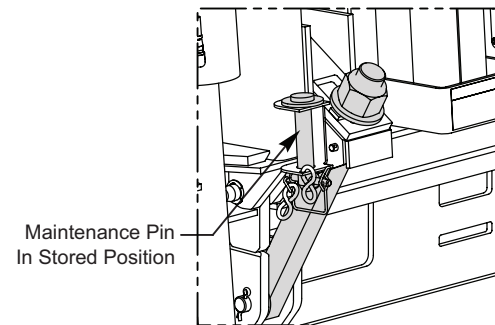


FIGURE 2 - INSTALL MAINTENANCE STRUT



## OWNER RESPONSIBILITY

1. The owner should recognize the inherent danger of the interface between dock and transport vehicle. The owner should, therefore, train and instruct operators in the safe use of dock equipment in accordance with the information provided below. The manufacturer shall publish, provide to the initial purchaser, and make the following information readily available to owners:

- Installation instructions
- Recommended initial and periodic inspections procedures
- Maintenance procedures
- Operating instructions
- Descriptions or specifications for replaceable or repairable parts
- Tables identifying the grade (slope) for all variations of length or configuration of the dock equipment, and
- Information identifying the maximum uncontrolled drop encountered upon sudden removal of support while within the working range of the equipment.

It shall be the responsibility of the owner to verify that the material listed in this section has been received and that it is made available for the instruction and training of personnel entrusted with the use or maintenance of the dock equipment.

2. When a transport vehicle is parked at a loading dock, it is important that the vehicle is relatively perpendicular to the dock face and in close contact with at least one of the dock bumpers.
3. Nameplates, cautions, instructions, and posted warnings shall not be obscured from the view of operating or maintenance personnel for whom such warnings are intended.
4. Manufacturer's recommended periodic maintenance and inspection procedures in effect at date of shipment shall be followed, and written records of the performance of these procedures should be kept.

5. As with any piece of machinery, dock equipment requires routine maintenance, lubrication, and adjustments. Your local Rite-Hite representative offers owners the option of a Planned Maintenance Program (P.M.P.). As part of this service, your local Rite-Hite representative will do all routine maintenance, lubrication, and adjustments.
6. Dock equipment that is structurally damaged shall be removed from service, inspected by a manufacturer's authorized representative, and repaired as needed before being placed back in service.
7. The manufacturer shall make available replacement nameplates, caution/instruction labels, and operating/maintenance manuals upon request of the owner. The owner shall see that all nameplates, caution/instruction markings or labels are in place and legible, and that the appropriate operating/maintenance manuals are provided to users.
8. Modifications or alterations of dock equipment shall be made only with written permission of the original manufacturer. These changes shall also satisfy all safety recommendations of the original equipment manufacturer for the particular application of the dock equipment.
9. In order to be entitled to the benefits of the standard product warranty, the dock equipment must have been properly installed, maintained and operated within its rated capacities and/or specific design parameters, and not otherwise abused.
10. It is recommended that trailers equipped with air ride suspensions should remove the air from the suspension to minimize trailer bed drop, prior to loading or unloading.
11. When industrial trucks are driven on and off transport vehicles during the loading and unloading operation, the brakes on the transport vehicle shall be applied and wheel chocks or a positive restraining device shall be engaged.
12. In selecting dock equipment, it is important to consider not only present requirements but also future plans or adverse environments.



**! DANGER**

DO NOT operate leveler with anyone standing in the path of the leveler.

**! WARNING**

- NEVER attempt to lift the lip or hold the lip out by hand. Serious personal injury could occur.
- Keep away from hinge when operating leveler.

**! CAUTION**

- This equipment should not be operated except by trained personnel.
- DO NOT operate leveler until truck/trailer is parked against the dock bumpers and the truck/trailer has been secured.
- ALWAYS return the leveler platform to the proper stored position.
- NEVER remove the wheel chocks until loading/unloading is finished and the truck driver has been given permission to drive away from the dock or the DOK-LOK® has been released and the lights have changed to RED inside and GREEN outside.
- ALWAYS call your authorized Rite-Hite Service Representative or Rite-Hite (1-800-456-0600) immediately if a malfunction occurs.

**IMPORTANT**

- The hydraulic dock leveler will not fall or move under normal circumstances until one of the buttons are activated.
- If the dock leveler is to be left in the vertical/stored position for a prolonged period of time, it is recommended that the Maintenance Pin be engaged. See page 6.
- When properly adjusted, the leveler will stop at any position when all buttons are released. If the leveler does not stop, see "Hydraulic Adjustments".

**OPERATING INSTRUCTIONS — FROM VERTICAL-STORED POSITION****LOWERING LEVELER**

1. Press and hold the PLATFORM LOWER button until the lip rests on the truck floor. See Figure 3.

**RAISING LEVELER**

1. When the truck leaves, the lip will drop to the pendant position. Press and hold the PLATFORM RAISE button until the dock leveler raises to the fully upright position and the lip fully extends. See Figure 4.



## OPERATING PROCEDURES CONT.

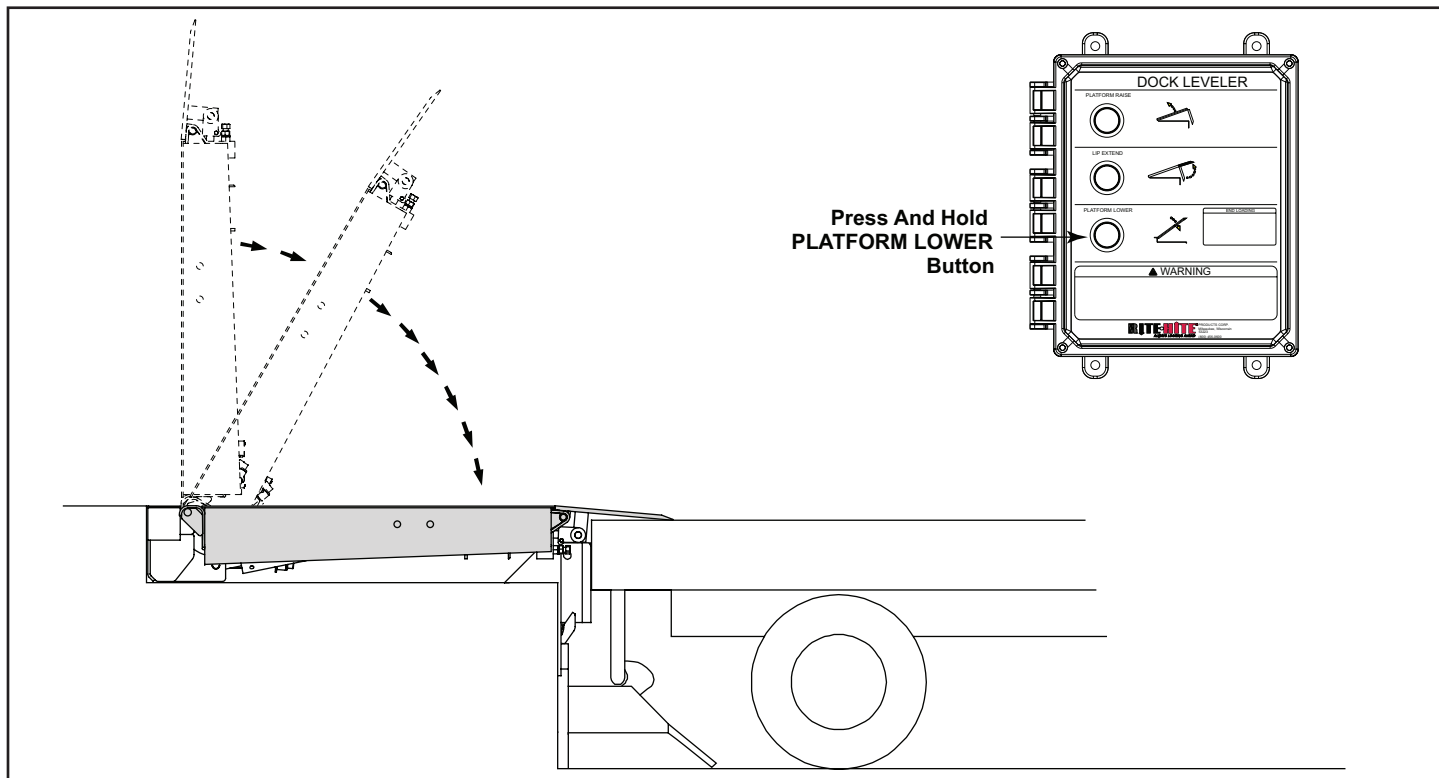


FIGURE 3 - LOWERING THE LEVELER TO WORKING POSITION/LIP RESTING ON TRUCK FLOOR

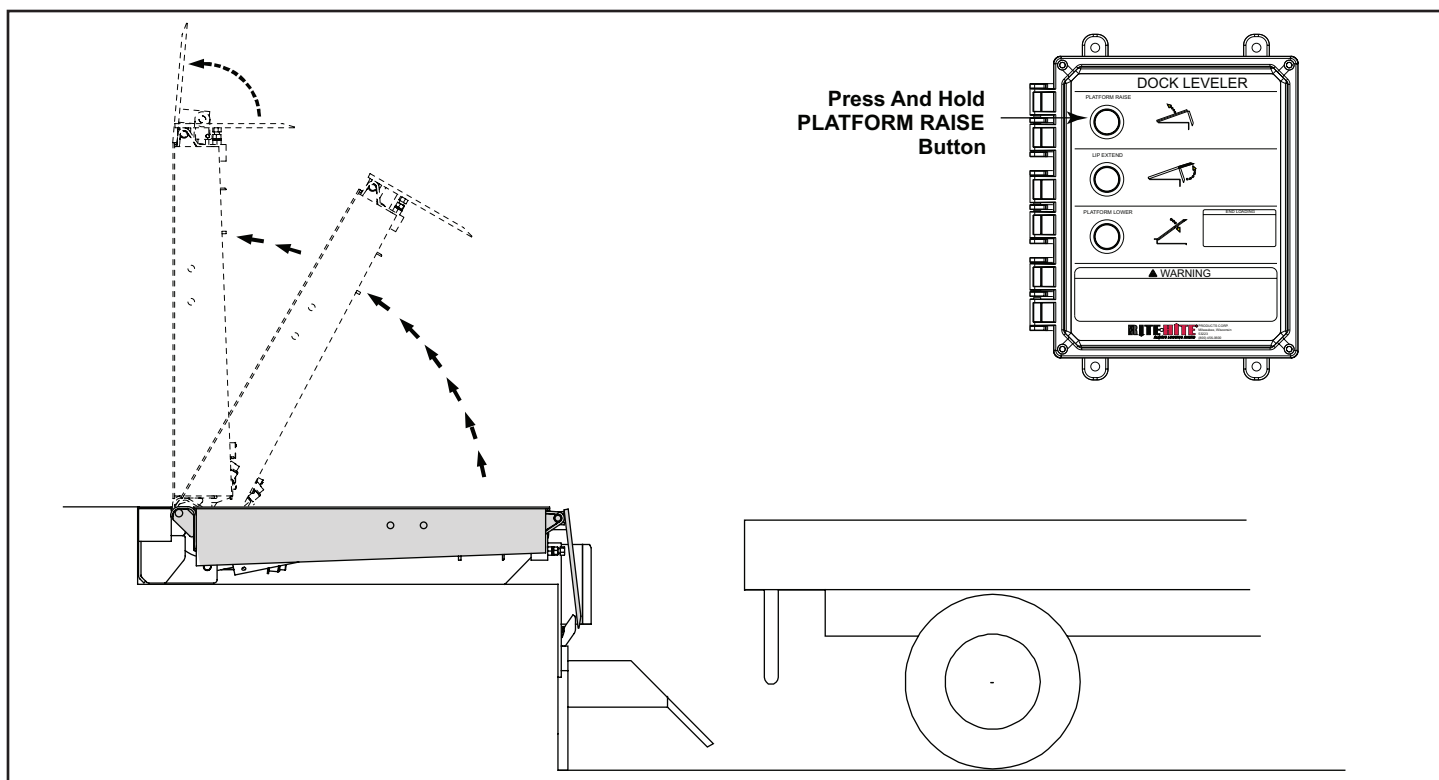


FIGURE 4 - RAISING THE LEVELER TO VERTICAL STORED POSITION



## OPERATING PROCEDURES CONT.

### END LOADS

1. Press and hold the PLATFORM LOWER button until the platform is at about 45°. Release the PLATFORM LOWER button. See Figure 5.
2. Allow the platform to stay in this position until the lip falls to the pendant position.
3. Press and hold the PLATFORM LOWER button until the leveler is even with the floor and the lip is seated in the lip supports.
4. When completed, raise the platform, extend the lip and lower the lip onto the truck/trailer for normal loading/unloading operations.

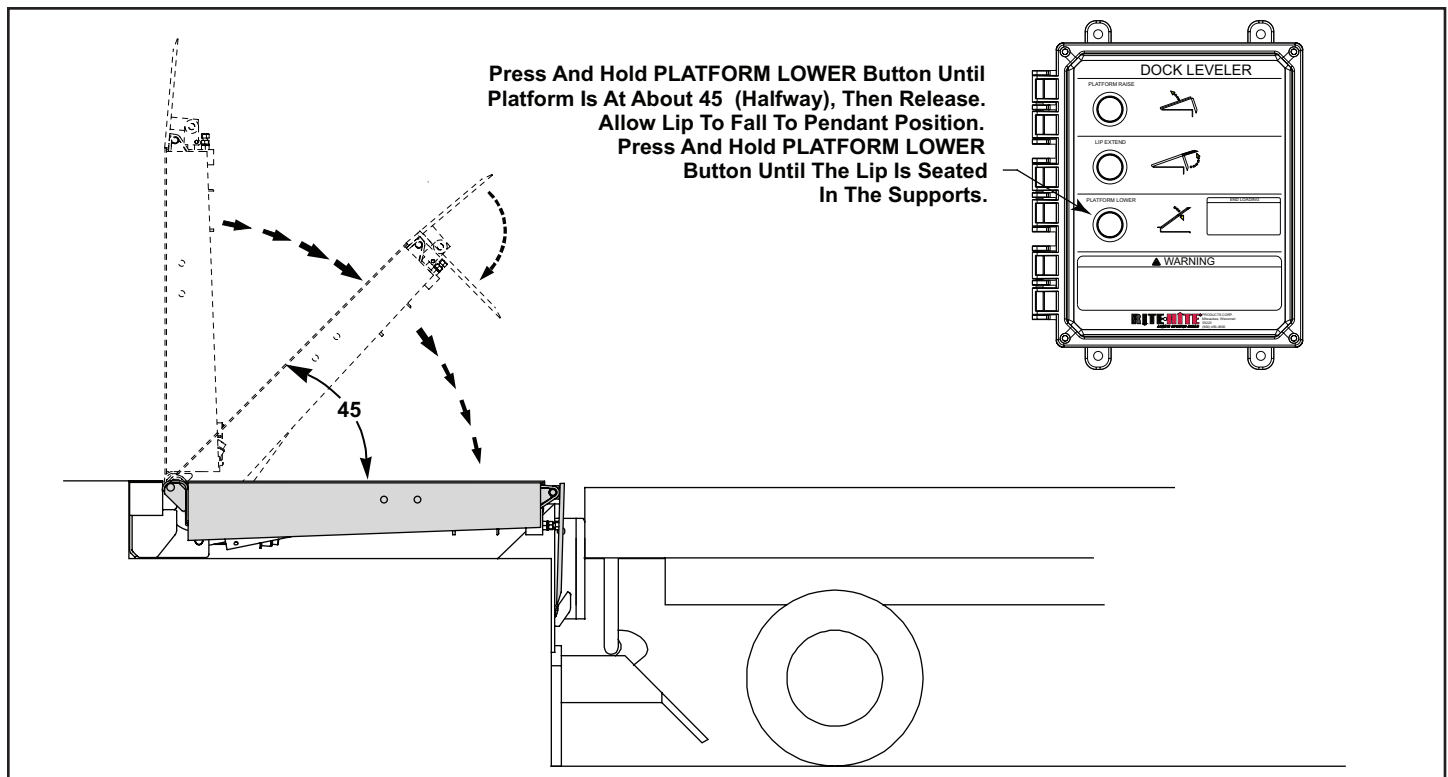


FIGURE 5 - END LOAD



## OPERATING PROCEDURES CONT.

### BELOW DOCK END LOADS — FROM HORIZONTAL POSITION

1. If the truck/trailer is lower than the level dock, press and hold the PLATFORM RAISE button to lift the platform and lip from the lip supports. Release the PLATFORM RAISE button. See Figure 6.
2. Press and hold the LIP EXTEND button until the lip extends just beyond the lip supports while still in the pendant position and release the button.
3. Press and hold the PLATFORM LOWER button until the platform comes to rest on the pit floor. Release the button. See Figure 7.
4. When completed, raise the platform, extend the lip and lower the lip onto the truck/trailer for normal loading/unloading operations.

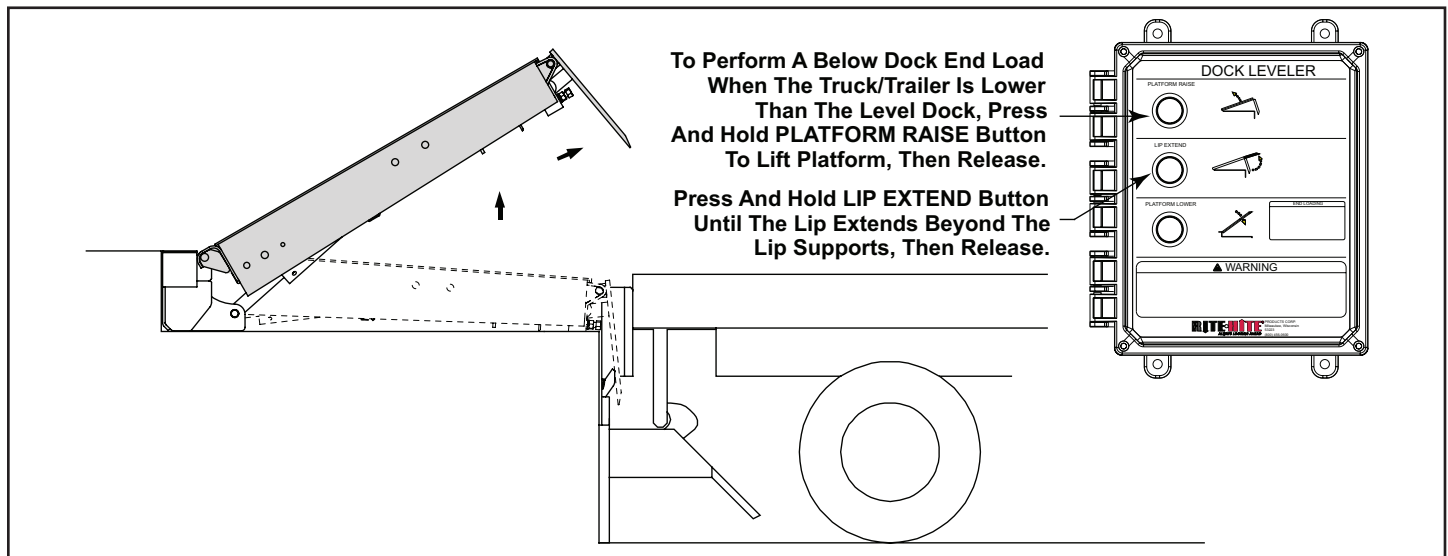


FIGURE 6 - BELOW DOCK END LOAD - EXTEND LIP

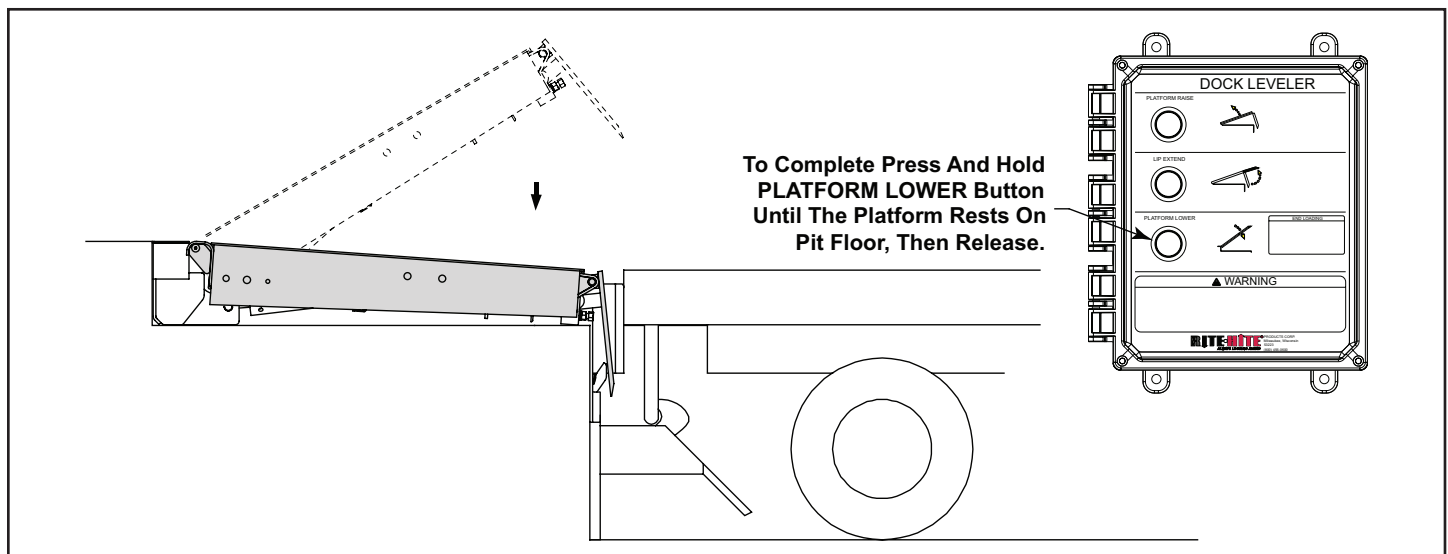


FIGURE 7 - BELOW DOCK END LOAD - LOWER LEVELER



## OPERATING PROCEDURES CONT.

### OPERATING INSTRUCTIONS — FROM HORIZONTAL POSITION

1. Press and hold the PLATFORM RAISE button until the platform and pendant lip have fully cleared the truck floor. Release button. See Figure 8.
2. Press and hold the LIP EXTEND button until the lip has fully extended. Release button.
3. Press and hold the PLATFORM LOWER button until the lip rests on the truck floor. See Figure 9.
4. When the truck leaves, the lip will drop to the pendant position. Press and hold the PLATFORM RAISE button until the lip clears the lip supports, then press and hold the PLATFORM LOWER button until the leveler descends to the horizontal position. The lip will come to rest in the lip supports.

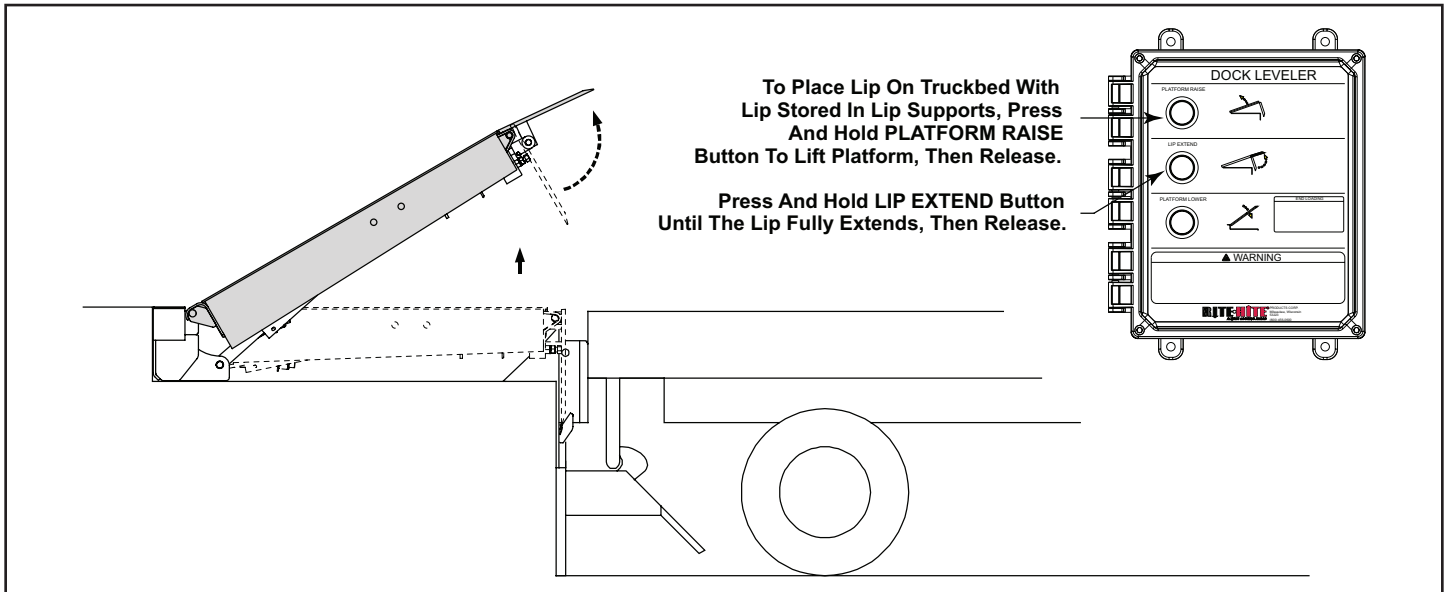


FIGURE 8 - RAISE LEVELER AND EXTEND LIP

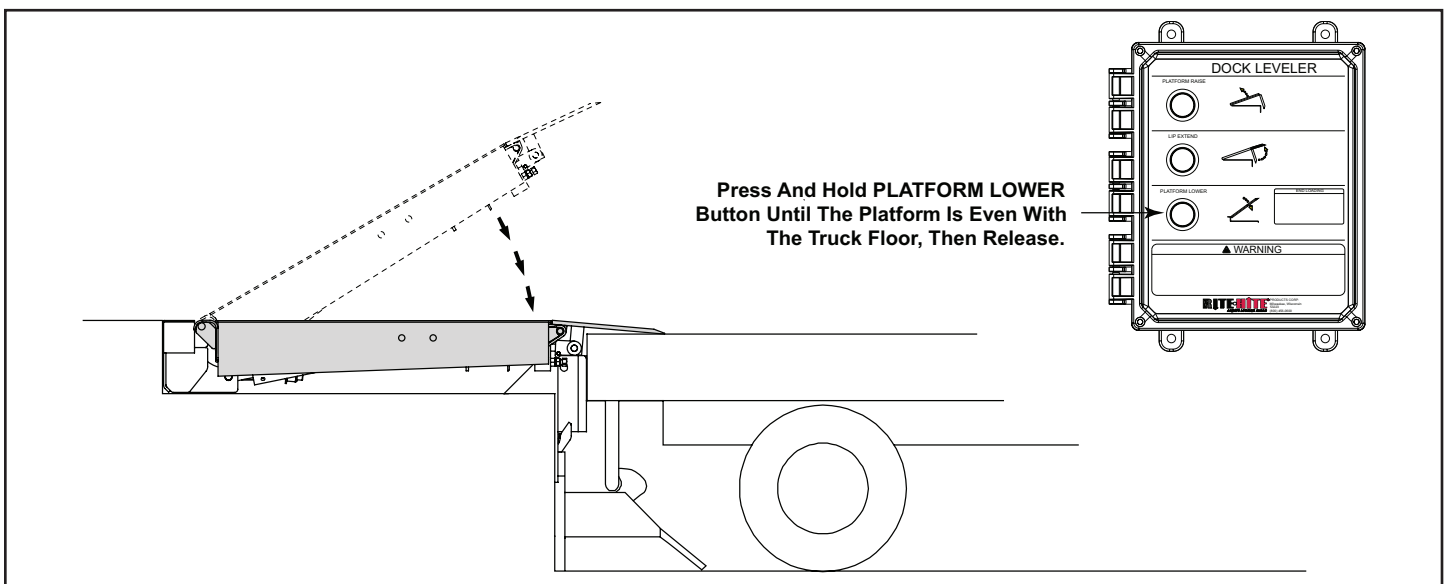


FIGURE 9 - LOWERING THE LEVELER TO WORKING POSITION, LIP RESTING ON TRUCK FLOOR

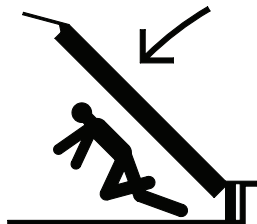


## MAINTENANCE

### DANGER

#### CRUSH HAZARD.

- DO NOT operate leveler with anyone standing in the path of the leveler.
- DO NOT service leveler unless Maintenance Pin is properly engaged. See page 6.
- Before beginning any service procedures:
  - Position the RHV leveler in the vertical/stored position.
  - Disconnect the power and follow all LOCKOUT/TAGOUT procedures as stated on the inside front cover of this manual.
- DO NOT operate leveler without following the procedure below if the leveler has not been in service for an extended period of time.
- Procedure for filling cylinder:
  - Press and hold the RAISE button (Run Pump) to operate for (35) seconds.



### CAUTION

**This equipment should not be operated or serviced except by trained personnel.**

**NOTE:** Follow maintenance procedures below as outlined. Include the specific steps for your leveler model.

**NOTE:** Your local Rite-Hite representative provides a Planned Maintenance Program (P.M.P.) which can be fitted to your specific operation. Call your local representative.

#### DAILY

1. Remove debris on and around leveler. Be sure the hinge section of the lip and the platform is clean.
2. Check unit for proper operation.

#### 90 Days

1. Perform all Daily maintenance.
2. Lubricate the unit with the proper lubricants. See Figure 10.
3. Inspect structure, hinge pins, clevis pins and cotter pins for abnormal wear.
4. With the leveler supported by the Safety Pin, check hydraulic fluid level in tank. Add fluid if necessary. Use only Rite-Hite approved hydraulic fluids.

**NOTE:** The correct fluid level is indicated by the decal on the front of the tank.

STANDARD: 119181 - Rite-Hite Biodegradeable Fluid (quart/light blue in color)

OPTIONAL: 108303 - Mil 5606 Fluid (quart/red in color)

5. Inspect all conduit, boxes and electrical connections for damage.
 

**NOTE:** If control box has evidence of condensation.

  - a. Inspect conduit. Conduit should be routed to enter through the bottom or side of the enclosure. A drip leg may be needed if the conduit is filling with water.
  - b. Inspect the seal on the cover of the enclosure. The seal should be securely adhered to the cover with no signs of peeling or bubbling. Repair or replace if worn or damaged.
  - c. For non-metallic enclosures, breather vent part number 122130 may be installed. The vent is NEMA 4X and will not change the environmental rating of the control box.
6. Check condition of Tilt Back Rod.
7. Inspect all weather seals (if installed) and replace if worn or damaged.
8. Inspect dock bumpers, Replace if torn/worn. 4" of bumper protection is required.
9. Check conditions of concrete, angles and welds.

#### 180 Days

1. Perform all Daily and 90 Days Maintenance.
2. Check that all concrete anchor bolts are torqued to 100 ft-lbs.



## MAINTENANCE CONT.

### 360 Days

1. Perform Daily, 90-Day and 180-Day Maintenance.
2. Check and tighten control box mounting hardware.
3. Check for proper Tilt Back. See page 16.

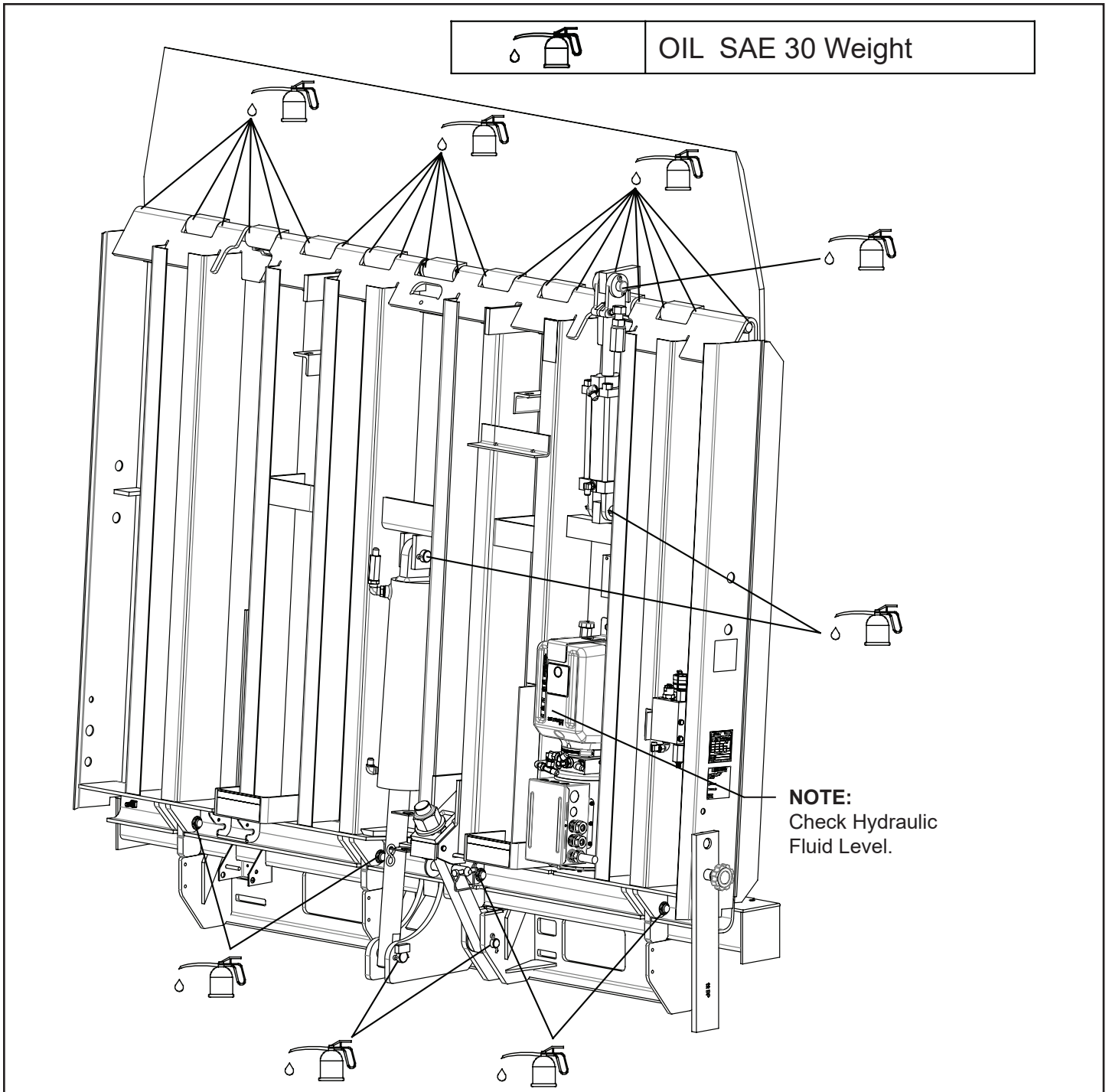


FIGURE 10 - LUBRICATION POINTS



## HYDRAULIC ADJUSTMENTS

### CAUTION

This equipment should not be operated or serviced except by trained personnel.

### IMPORTANT

DO NOT force valve adjustment screws against internal stops. Damage will occur to the valve.

## COUNTERBALANCE VALVE ADJUSTMENT

### 1. Initial adjustment.

**NOTE:** This adjustment must be completed before fine adjustment.

- a. From the fully raised position, lower the platform to 45° above dock height. See figure 11. The platform should completely stop moving and the lip should retract.

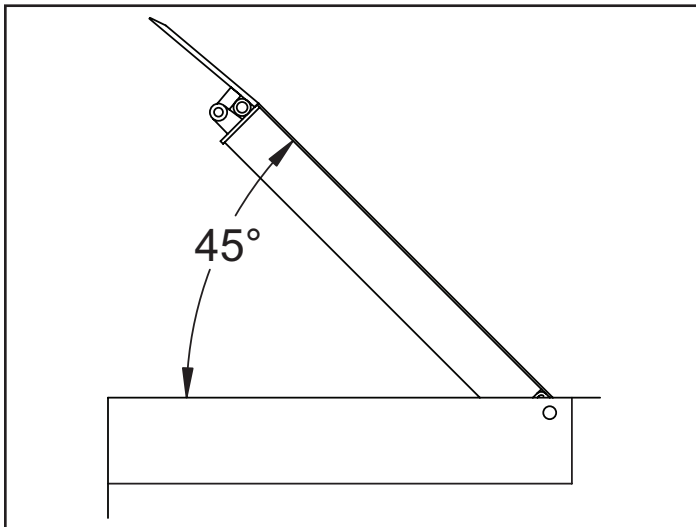


FIGURE 11 - LEVELER AT 45 DEGREES

- b. If the platform continues to move downward, raise the platform and engage the Maintenance Pin, See page 6. Loosen the lock nut on counterbalance valve while holding adjusting screw with a hex key wrench, See figure 12. Rotate the adjustment screw 1/8 of a turn clockwise. Tighten locknut while holding adjustment screw. Disengage Maintenance Pin and verify step #1A performance. If ok, proceed to step 2. If not, repeat step #1B.

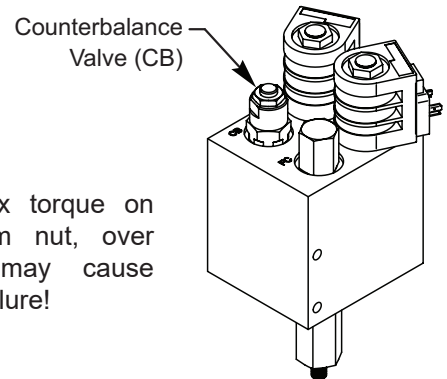


FIGURE 12 - COUNTERBALANCE VALVE

### 2. Fine adjustment.

**NOTE:** This adjustment must be completed after initial adjustment.

- a. Return the platform to the fully raised position then lower the platform to dock height. See figure 13. The platform should hold that position until someone stands on the platform near the lip.

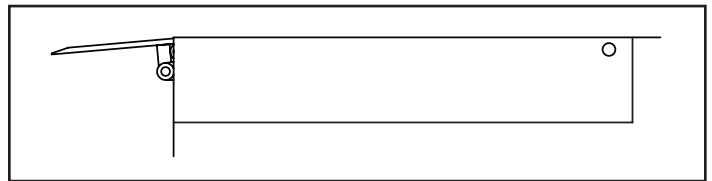


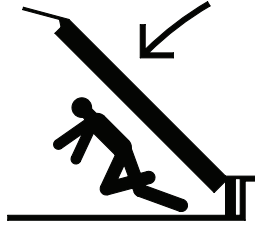
FIGURE 13 - LEVELER AT DOCK HEIGHT

- b. If the empty platform does not hold at dock height position, rotate the adjustment screw another 1/8 of a turn clockwise as described in step #1B.
- c. If the platform does not easily break and lower to below dock level, raise platform and engage the Maintenance Pin. See page 6. Loosen the lock nut on the counterbalance valve while holding the adjusting screw with a hex key wrench. See figure 12. Rotate the adjustment screw 1/16 of a turn counterclockwise. Tighten locknut while holding the adjusting screw. Disengage Maintenance Pin and verify that both steps #1 and #2 have been met. Repeat if necessary.



**! DANGER****CRUSH HAZARD.**

- DO NOT operate leveler with anyone standing in the path of the leveler.
- DO NOT service leveler unless Maintenance Pin is properly engaged. See page 6.
- Before beginning any service procedures:
  - Position the RHV leveler in the vertical/stored position.
  - Disconnect the power and follow all LOCKOUT/TAGOUT procedures as stated on the inside front cover of this manual.

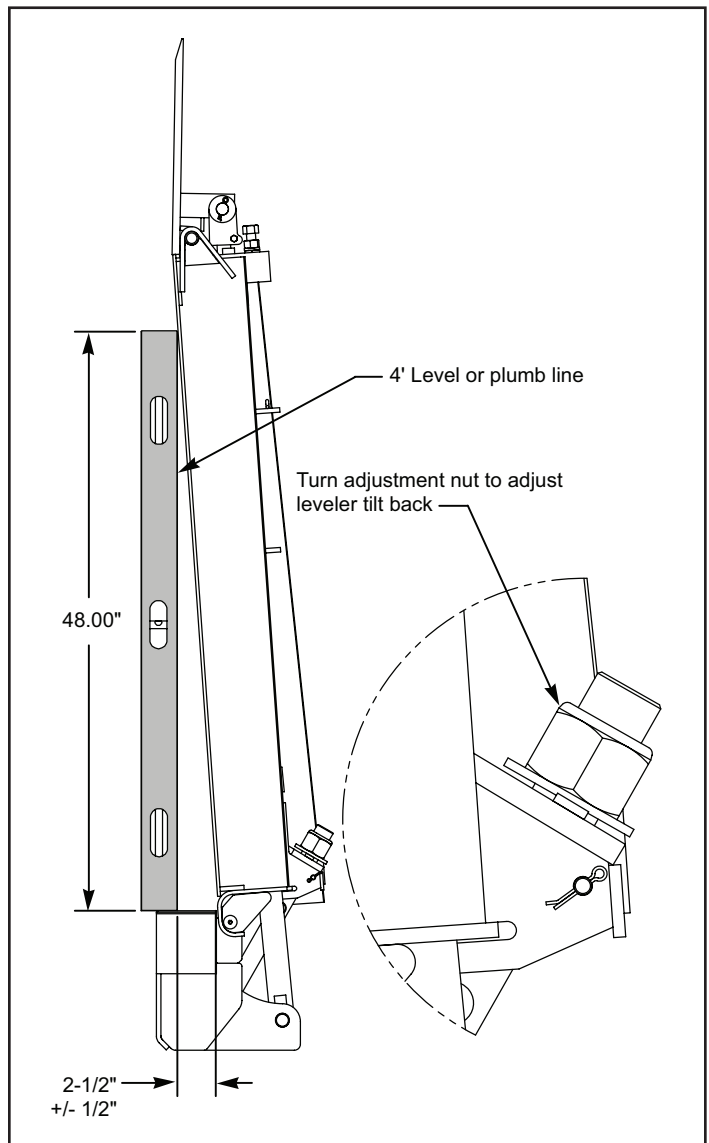
**IMPORTANT**

DO NOT use a level or plumb line longer than 4'

**LEVELER TILT BACK ADJUSTMENT**

**NOTE:** This adjustment must be completed for all units. However, when multiple levelers are being installed, it is recommended that the tilt back adjustment be the same on each unit so that the units are uniform in function and appearance.

1. Press the RAISE button so that the leveler is in the "full back, over center" position.
2. Check that the leveler is tilted back the proper distance using a 4' level or plumb line held plumb. Place the level against the platform and flush with dock floor. See figure 14.
3. Adjust the tilt back, if necessary, by adjusting the nut on the leveler tilt back rod. See figure 14.
4. Repeat Steps 1 through 3 until tilt back adjustment is correct.

**FIGURE 14 - TILT BACK ADJUSTMENT**



# TROUBLESHOOTING CHART

Problem	Probable Cause	Solution
1. Unit will not operate	a. No power. b. Overload relay tripped. c. Loose connection. d. Is the voltage/motor phase correct? e. Is motor wired correctly?	a. Check the main power supply. Check fuses in the control box and disconnect. b. Reset overload relay c. Verify that all connections are tight and no wires are broken. Verify that pushbutton contacts are functional. d. Check power requirements. e. Check wiring.
2. Unit functions slowly.	a. Low oil. b. Improper voltage. c. Improper maintenance. d. Hose leak. e. Debris in hydraulic system. f. Spool valves are not opening fully. g. Faulty pump or motor.	a. Check oil level and refill if necessary. b. Verify that the power unit is proper for the incoming voltage. c. Perform all required maintenance, see "Maintenance Procedures". d. Check hoses, valves and fittings for leaks, and replace if necessary. e. Verify that there is not debris stuck in the system. f. Verify that the spools are magnetized. If not, verify wiring and/or replace solenoid coil. Check power requirements for motor. g. Replace power unit assembly.
3. Functions stop during control box cycle.	a. No power. b. Overload relay tripped. c. Loose connection. d. Improper maintenance. e. "CB" valve is not adjusted properly (velocity fuse lockup). f. Hydraulic system.	a. Check main power supply. Check fuses in the disconnect. b. Reset overload relay. c. Verify that all connections are tight and no wires are broken. Verify that pushbutton contacts are functional. d. Perform all required maintenance, see "Maintenance Procedures". e. Verify "CB" valve setting. See page 16. f. Check to make sure that the hydraulic pump has power. Check hoses, valves, and fittings for leaks. Replace power unit assembly.
4. Lip falls too slowly or not at all.	a. Improper maintenance. b. Lip cylinder binding. c. Faulty or incorrect flow control. d. Faulty or incorrect check. e. Lip bent.	a. Perform all required maintenance, see "Maintenance Procedures". b. Check for debris, replace lip cylinder. c. Check for debris in system, replace P.C. flow control, (FC). d. Make sure check valve is correct for lip size, check for debris, replace check valve (C1). e. Call your authorized RITE-HITE® Service Representative or RITE-HITE® at 1-800-456-0600.



## TROUBLESHOOTING CHART CONT.

Problem	Probable Cause	Solution
5. Lip falls too fast.	a. Faulty or incorrect flow control. b. Three-way valve is not operating properly.	a. Check for debris in system, replace P.C. flow control, (FC). b. Check solenoid coil for magnetism/operation. Check valve for debris by removing from valve block and plunging valve. Replace valve assembly.
6. Platform falls too slowly.	a. Improper maintenance.. b. "CB" valve not adjusted properly.	a. Perform all required maintenance, see "Maintenance Procedures". b. Verify "CB" valve setting. See page 16.
7. Platform falls too quickly. Does not stop at any position (too much float).	a. Improper maintenance. b. "CB" valve not adjusted properly.	a. Perform all required maintenance, see "Maintenance Procedures". b. Verify "CB" valve setting. See page 16.
8. Platform drops suddenly and then will not operate.	a. Jammed velocity fuse.	a. Check the velocity fuse for a jammed poppet. Contact your authorized RITE-HITE® Service Representative or RITE-HITE®.
9. Unit raises when either the PLATFORM LOWER or PLATFORM RAISE button is pressed.	a. Four-way valve is not shifting. b. Button not making contact with contact block, is not energizing.	a. Check solenoid coil for magnetism/operation. Check valve for debris by removing from valve block and plunging valve. Replace valve assembly. b. Replace contact block on button. Check motor for motor operation.
10. Unit raises when LIP EXTEND button is pressed.	a. Lip Extend 3-way valve is not energizing. b. Leakage past valves. c. Button not making contact with block, motor is not energizing.	a. Verify wiring of solenoids. b. Check solenoid coil. Replace assembly. c. Replace contact block on button. Check motor for motor operation.
11. When pressing the PLATFORM LOWER button, the lip extends only, and when pressing LIP EXTEND button, the unit lowers.	a. Lip Extend 3-way valve is energizing when the LOWER button is pressed. The 4-way valve is energizing when the LIP EXTEND button is pressed.	a. Check wiring of #2 and #3 solenoid wires in control and junction boxes.
12. Solenoids have power and operate, but motor doesn't run.	a. Overload relay tripped. b. Improper electrical hookup.	a. Single phase unit should reset automatically. Three phase unit should be reset manually in the control box. b. Verify motor wiring.
13. Lip falls while lowering the platform onto the truckbed.	a. Faulty orifice.	a. Verify that the orifice under the 3-way, 2-position valve is not damaged or missing.
14. Platform will not lower.	a. Safe-T-Pit sensors activated. b. Safe-T-Pit sensor wiring.	a. Check for motion around the sensors. b. Check cords are plugged in and verify wiring.



## LED STATUS CHART - STANDALONE

VERTICAL DOCK LEVELER RITE-HITE PRODUCTS CORP. STANDALONE CONTROLS																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																		
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FIGURE 15 - LED STATUS CHART - STANDALONE CONTROLS



## LED STATUS CHART - DOK-COMMANDER

VERTICAL DOCK LEVELER RITE-HITE PRODUCTS CORP. DOK-COMMANDER CONTROLS	MICRO CONTROL BOARD						POWER BOARD	LEVELER AUX BOARD	
	INPUTS			OUTPUTS			12VDC POWER SUPPLY OK	OUTPUTS	
	FIELD	PUSH BUTTONS		12VDC	RELAY	12VDC			
	SAFE-T-PIT INPUT	OVERHEAD DOOR OPEN INTERLOCK INPUT [OHD ITL]	LEVELER STORED INTERLOCK TO UNLOCK* [UNLK ITL]	RAISE PUSH BUTTON	LIP OUT PUSH BUTTON	LOWER PUSH BUTTON	MOTOR CONTACTOR OUTPUT [LVLR CONTR]		
	J14.4	J14.2	J14.3		MEMBRANE		J15.1	J2.1-6	
	LD32	LD29	LD30		LD52		LD42	LD7	
	-	-	-				-	-	
	?	?	?				-	-	
	?	ITL	?	M			-	-	
	?	?	?				-	-	
	?	ITL	?		M		-	-	
	T	ITL	?			M	-	-	
	?	?	?		?	?	?	?	
NO.	STATE / SEQUENCE NO.								
KEY									
? - VARYS DEPENDING ON OPERATION				M - LIGHTS WHEN BUTTON PRESSED					
F - OFF				P - PULSING / FLASHING [SET TO STEADY USING DIP SWITCHES]					
ITL - INTERLOCK INPUT ON				T - STEADY ON					
RUN FAULT STATE									
If Leveler Motor is operated continuously for 60 seconds, system will enter RUN FAULT STATE. After a 60 second rest period, system will automatically enter the REST STATE and resume normal operation.									
SAFE-T-PIT OPERATION									
SAFE-T-PIT Input is T during normal operation. If Input turns F while lowering, unit will stop. To resume operation, store unit (see Leveler Stored Interlock Input) first, and ensure SAFE-T-PIT Input is T. *NOTE: For a Dok-Commander, LEVELER STORED INTERLOCK TO UNLOCK is shown. If the requirement is LEVELER STORED INTERLOCK TO CLOSE OVERHEAD DOOR, Leveler Stored is wired to DOK AUX BOARD (Terminal J6.1, LED LD9).									

FIGURE 16 - LED STATUS CHART - DOK-COMMANDER CONTROLS



# HYDRAULIC SCHEMATIC

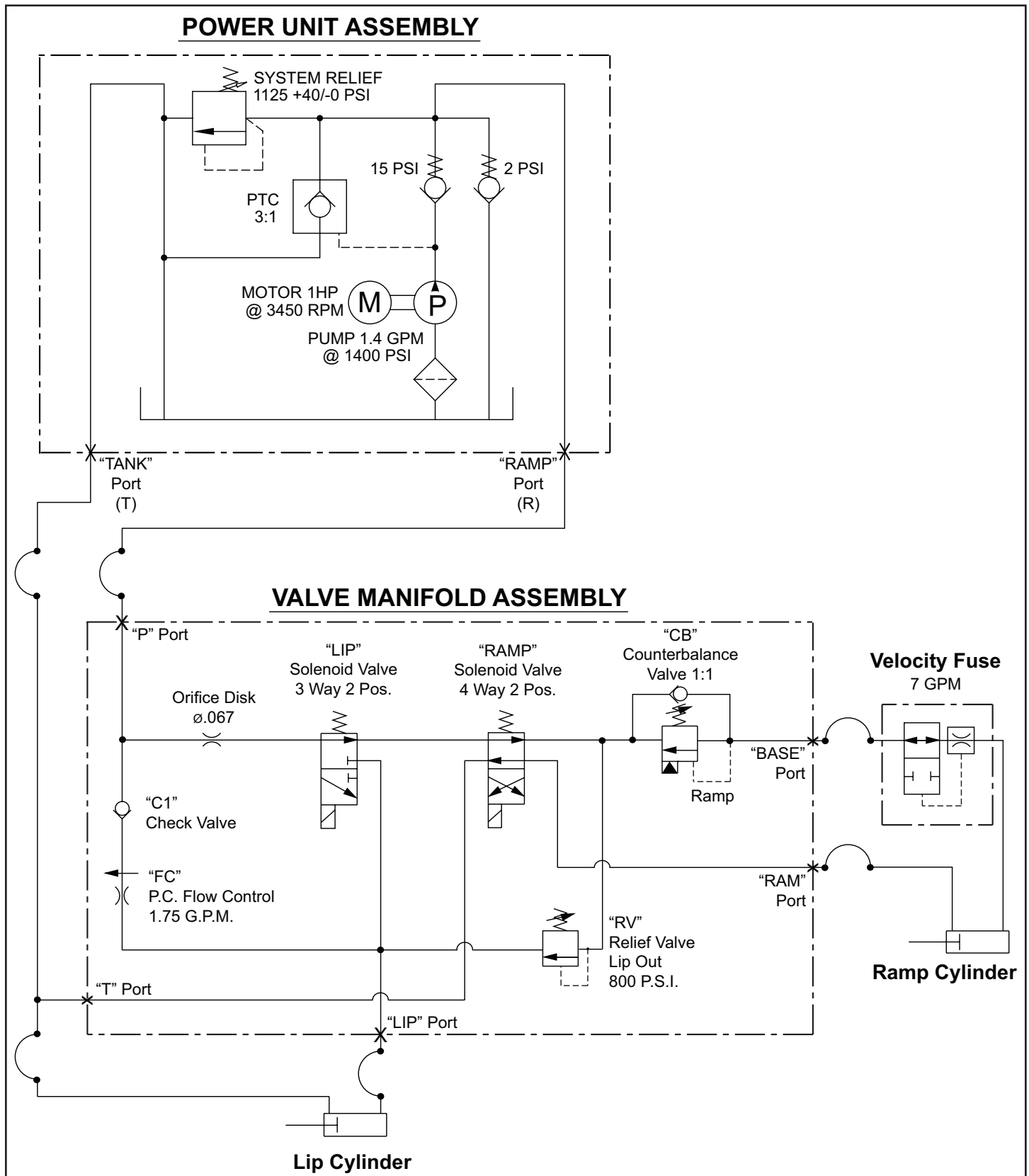


FIGURE 17 - HYDRAULIC SCHEMATIC



## ELECTRICAL SCHEMATICS

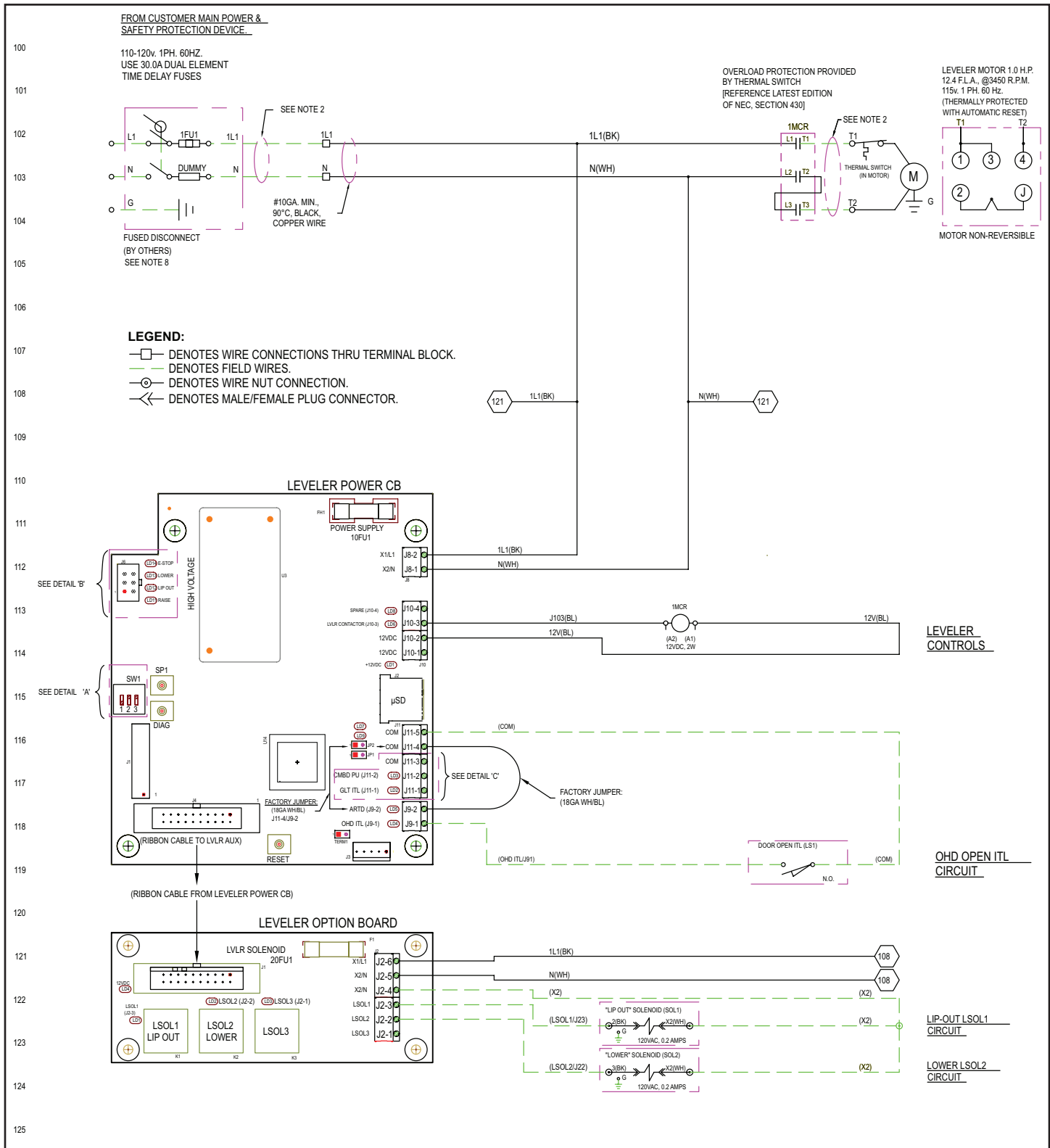
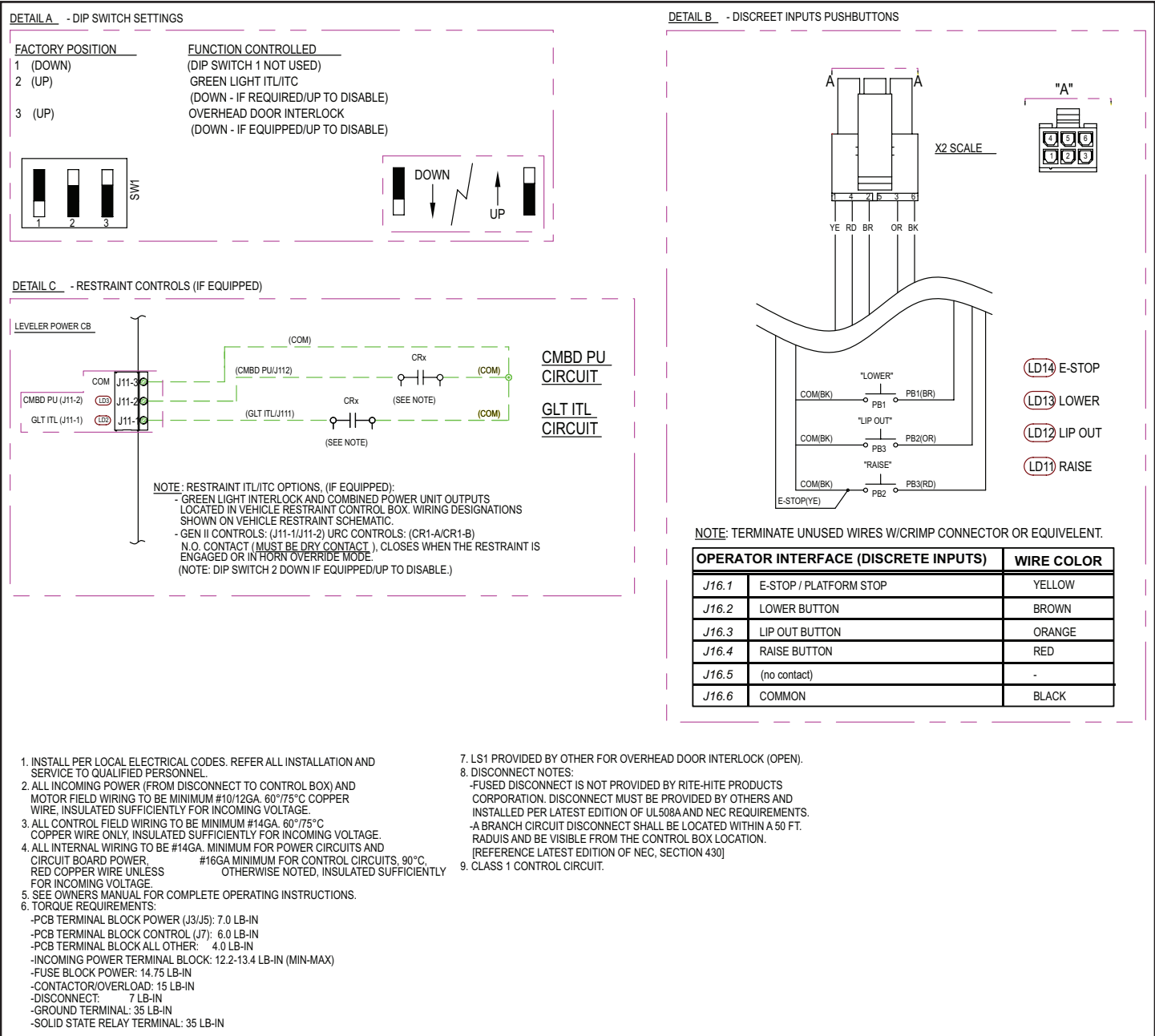


FIGURE 18 - 110/115V 1 PHASE SCHEMATIC



ELECTRICAL SCHEMATICS CONT.



1. INSTALL PER LOCAL ELECTRICAL CODES. REFER ALL INSTALLATION AND SERVICE TO QUALIFIED PERSONNEL.

2. ALL INCOMING POWER (FROM DISCONNECT TO CONTROL BOX) AND MOTOR FIELD WIRING TO BE MINIMUM #10/12GA. 60°/75°C COPPER WIRE, INSULATED SUFFICIENTLY FOR INCOMING VOLTAGE.

3. ALL CONTROL FIELD WIRING TO BE MINIMUM #14GA. 60°/75°C COPPER WIRE ONLY, INSULATED SUFFICIENTLY FOR INCOMING VOLTAGE.

4. ALL INTERNAL WIRING TO BE #14GA. MINIMUM FOR POWER CIRCUITS AND CIRCUIT BOARD POWER, #16GA MINIMUM FOR CONTROL CIRCUITS, 90°C, RED COPPER WIRE UNLESS OTHERWISE NOTED, INSULATED SUFFICIENTLY FOR INCOMING VOLTAGE.

5. SEE OWNERS MANUAL FOR COMPLETE OPERATING INSTRUCTIONS.

6. TORQUE REQUIREMENTS:  
-PCB TERMINAL BLOCK POWER (J3/J5): 7.0 LB-IN  
-PCB TERMINAL BLOCK CONTROL (J7): 6.0 LB-IN  
-PCB TERMINAL BLOCK ALL OTHER: 4.0 LB-IN  
-INCOMING POWER TERMINAL BLOCK: 12.2-13.4 LB-IN (MIN-MAX)  
-FUSE BLOCK POWER: 14.75 LB-IN  
-CONTACTOR/OVERLOAD: 15 LB-IN  
-DISCONNECT: 7 LB-IN  
-GROUND TERMINAL: 35 LB-IN  
-SOLID STATE RELAY TERMINAL: 35 LB-IN

7. LS1 PROVIDED BY OTHER FOR OVERHEAD DOOR INTERLOCK (OPEN).

8. DISCONNECT NOTES:  
-FUSED DISCONNECT IS NOT PROVIDED BY RITE-HITE PRODUCTS CORPORATION. DISCONNECT MUST BE PROVIDED BY OTHERS AND INSTALLED PER LATEST EDITION OF UL508A AND NEC REQUIREMENTS.  
-A BRANCH CIRCUIT DISCONNECT SHALL BE LOCATED WITHIN A 50 FT. RADUIS AND BE VISIBLE FROM THE CONTROL BOX LOCATION. [REFERENCE LATEST EDITION OF NEC, SECTION 430]

9. CLASS 1 CONTROL CIRCUIT.

FIGURE 19 - 110/115V 1 PHASE SCHEMATIC - DETAILS







ELECTRICAL SCHEMATICS CONT.

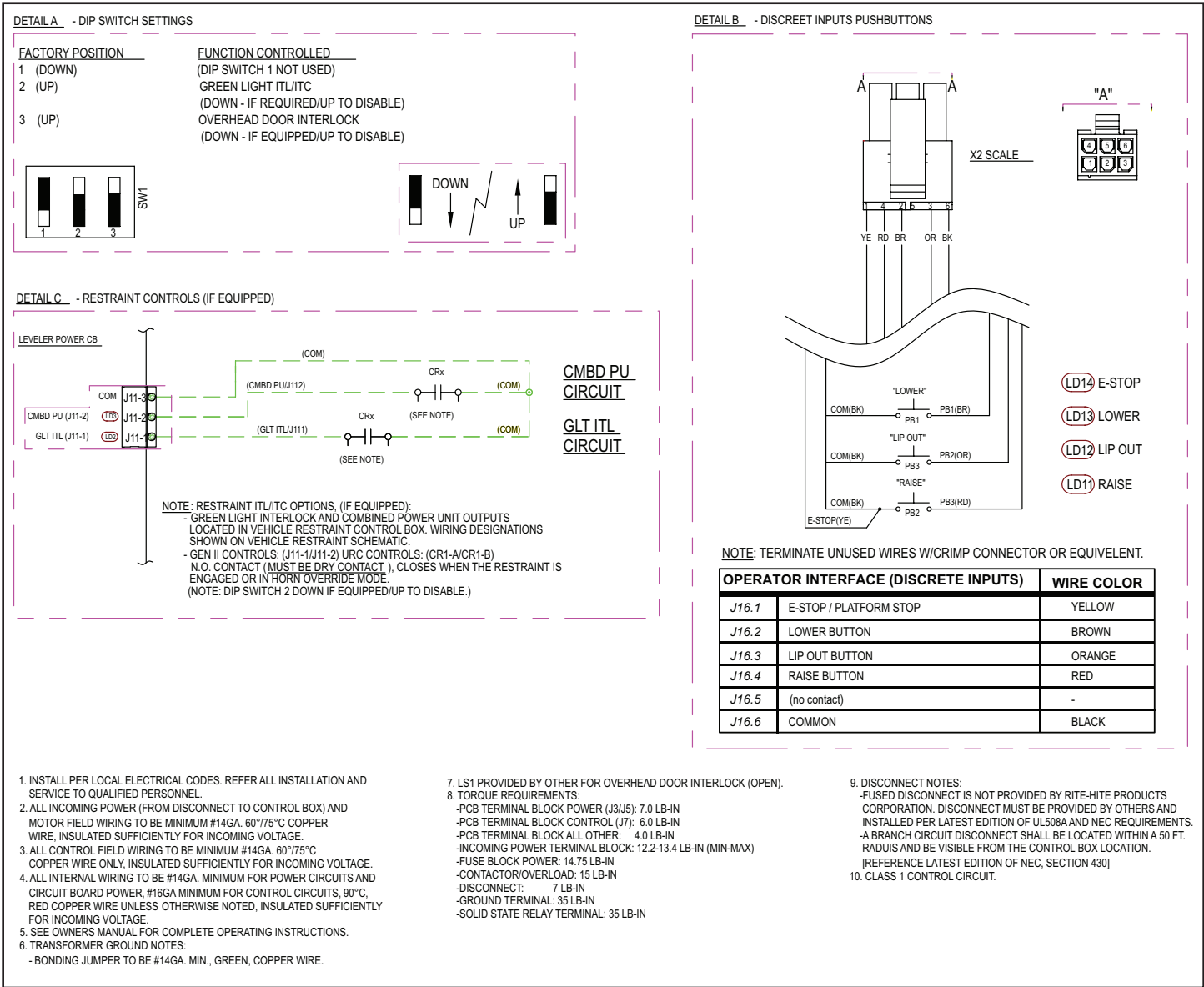


FIGURE 21 - 230V 1 PHASE SCHEMATIC - DETAILS







## ELECTRICAL SCHEMATICS CONT.

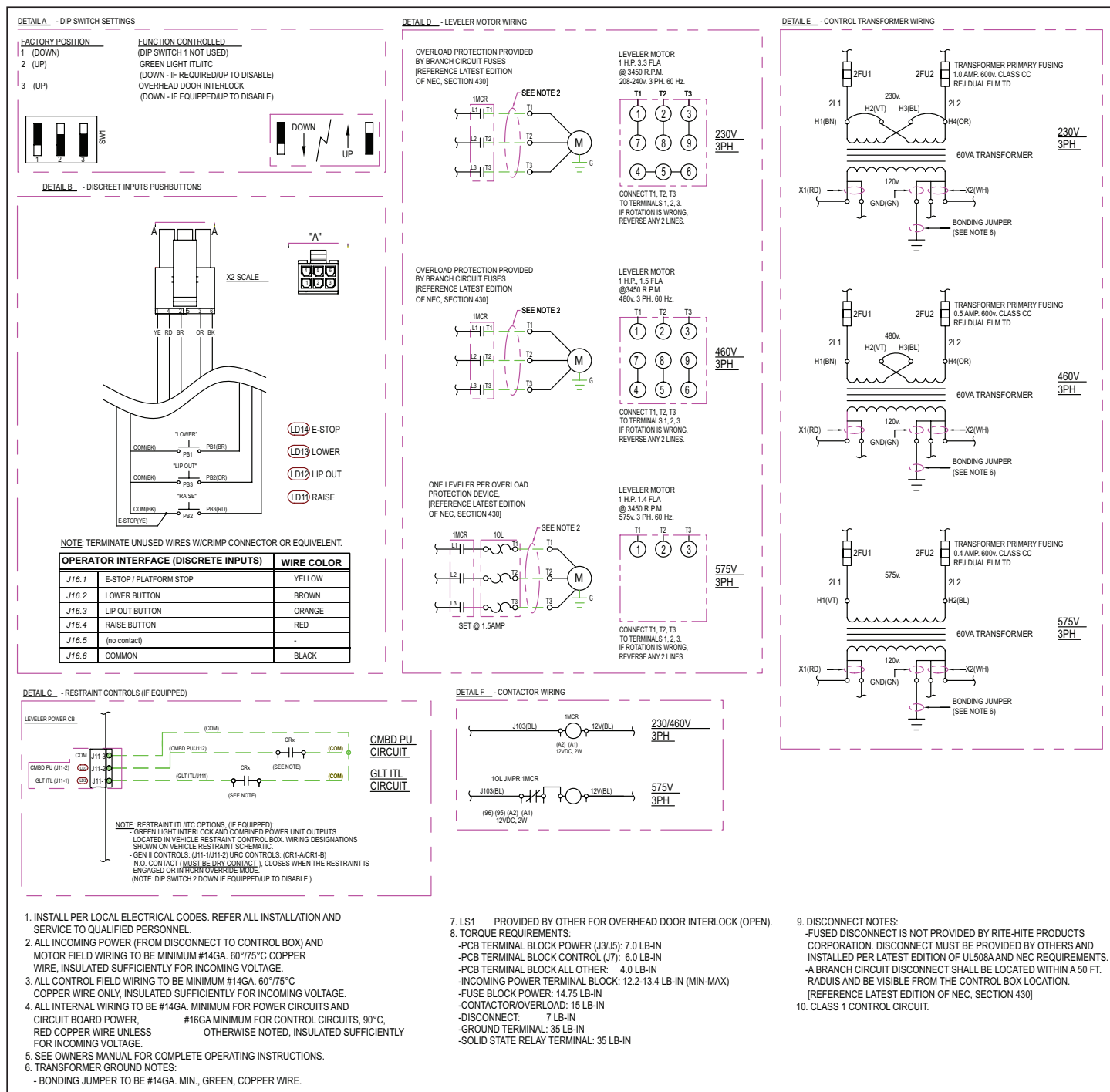


FIGURE 23 - 3 PHASE SCHEMATIC - DETAILS



# ELECTRICAL SCHEMATICS CONT.

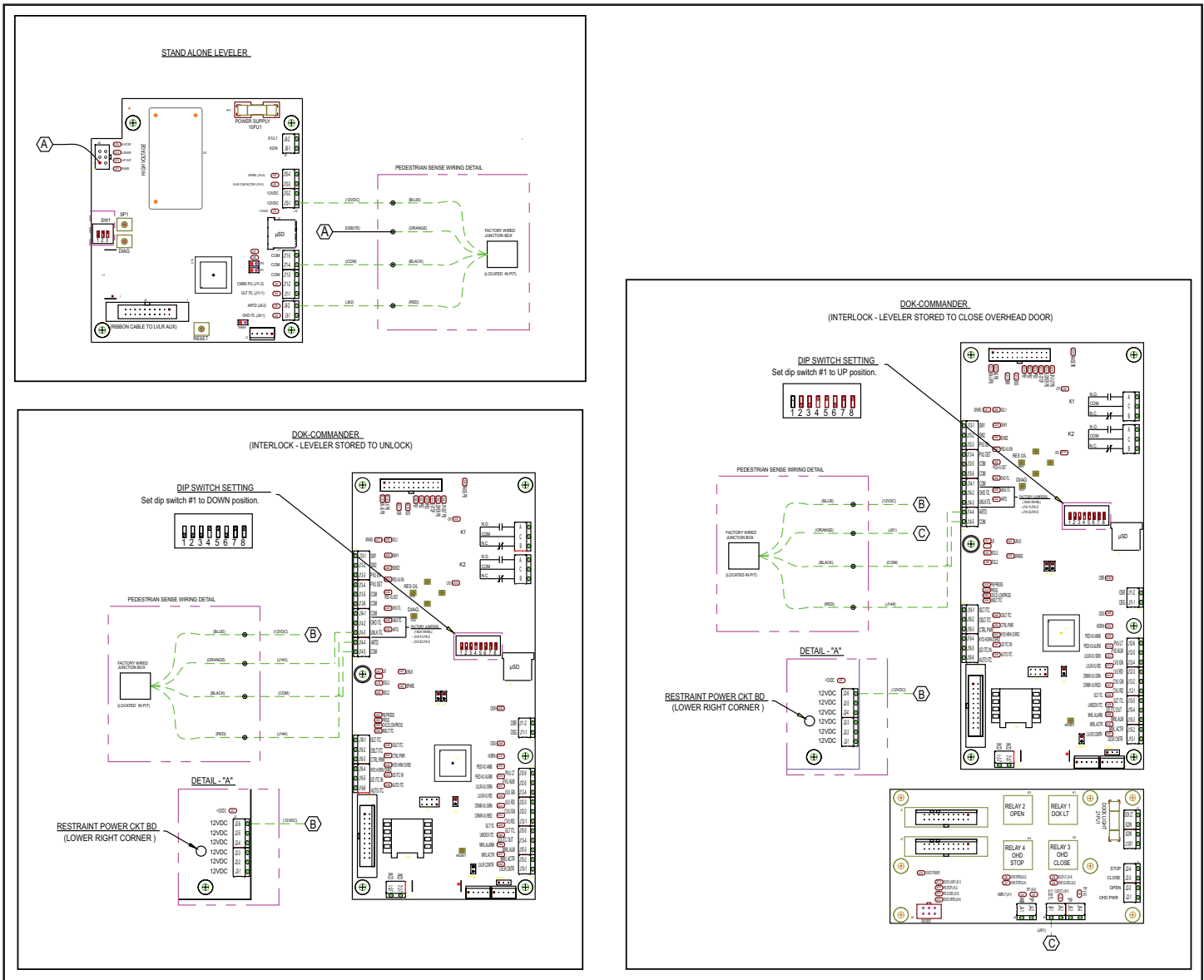
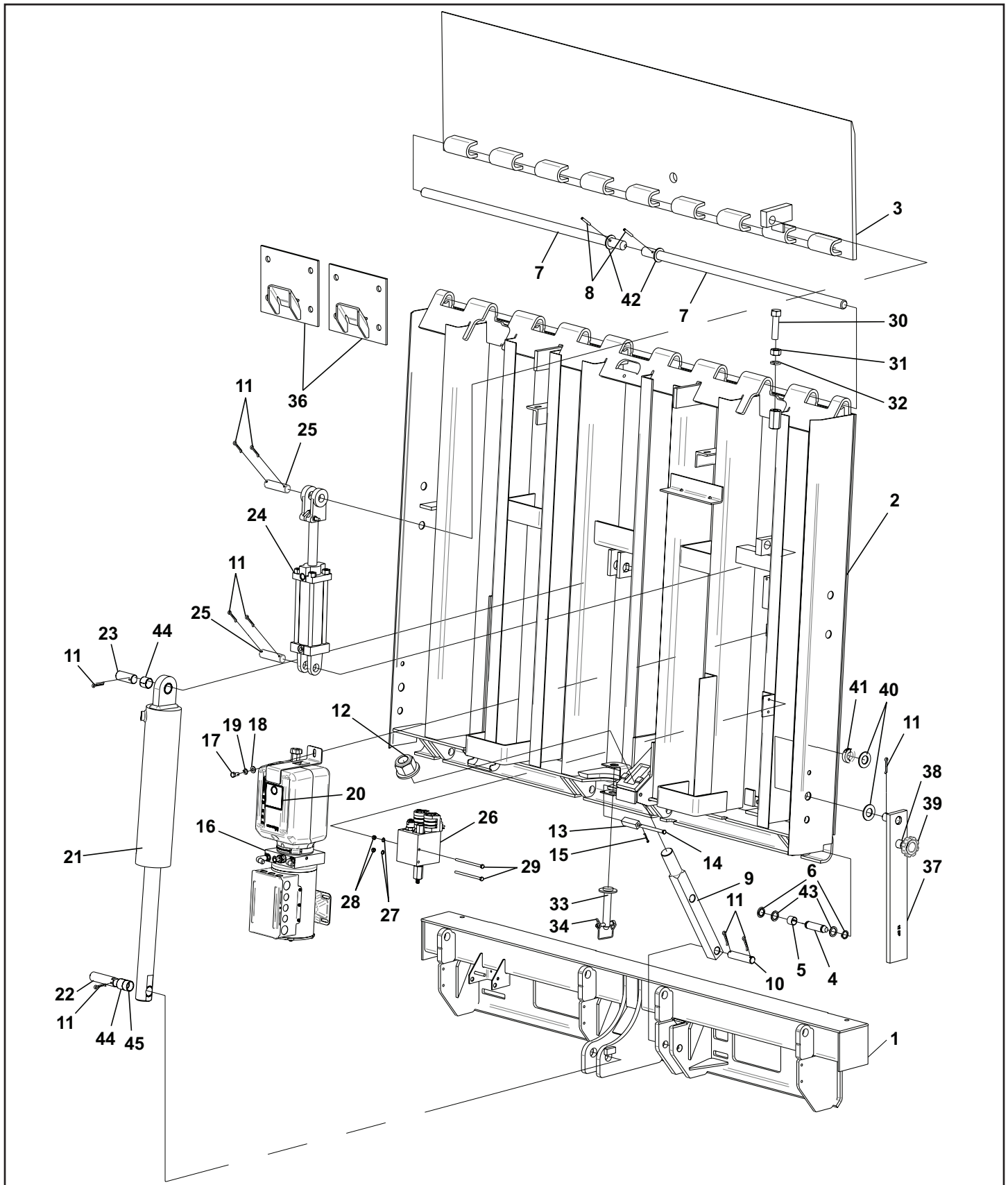


FIGURE 24 - SAFE-T-PIT SENSE WIRING OPTIONS SCHEMATIC



## REPLACEMENT PARTS - LIP AND PLATFORM



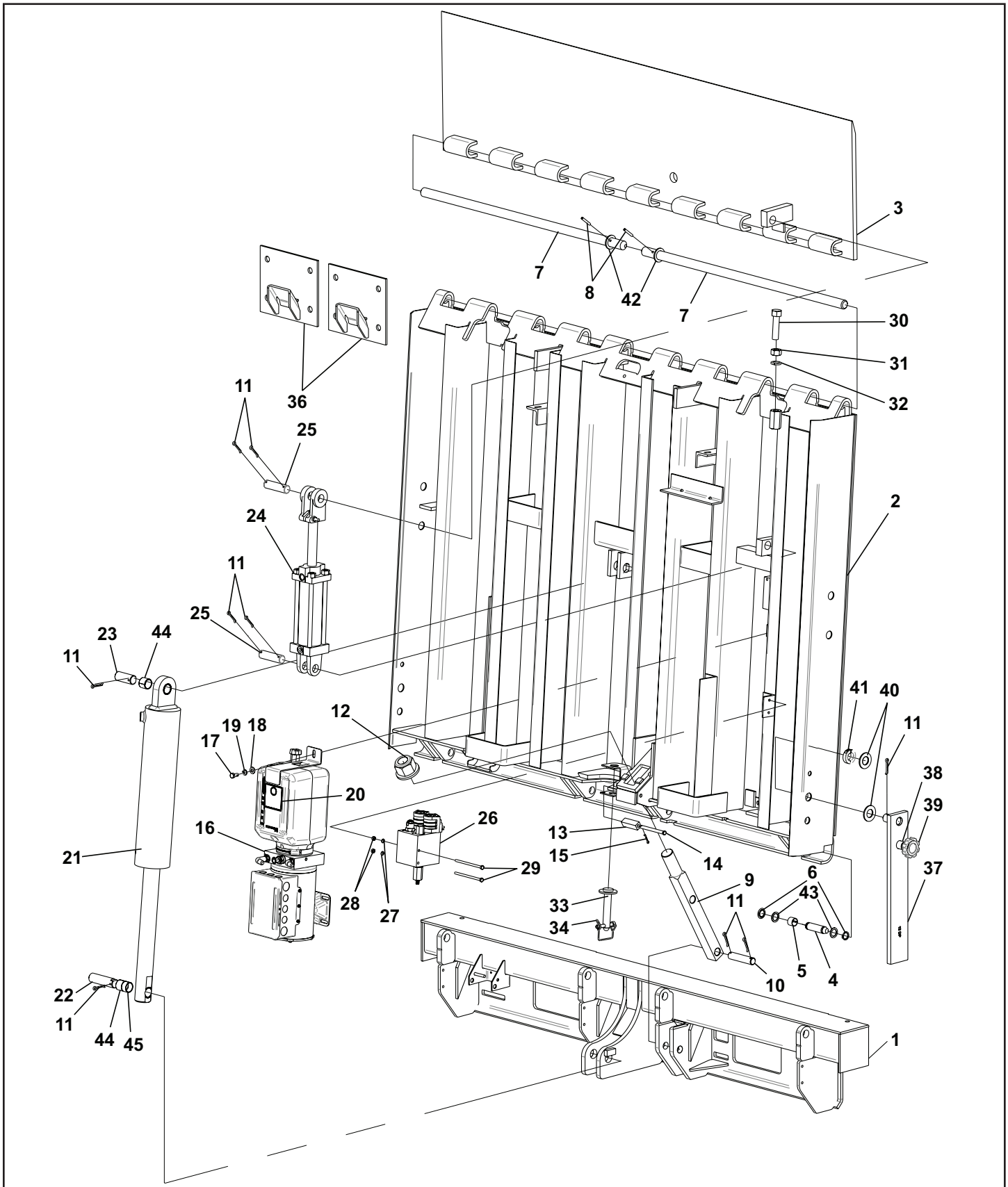


## LIP AND PLATFORM REPLACEMENT PARTS LIST

			Power Unit Location		Left		Right
			Rear Frame Depth		10" Deep Pit	12" Deep Pit	12 - 15" Deep Pit
Item	Qty.	Description	Part No.	Part No.	Part No.	Part No.	Part No.
1	1	Rear Frame Weldment	803.XXX	800.XXX	800.XXX		
2	1	Platform Weldment	819.XXX	820.XXX	821.XXX		
3	1	Lip Weldment	619.XXX	619.XXX	619.XXX		
4	4	Rear Hinge Pin - 2 Groove - .817 x 2.63L (Stainless)	148612	148612	148612		
5	4	Split Bushing .875 x 1 x .75L	137310	137310	137310		
6	8	Heavy Duty Snap Ring	144977	144977	144977		
7	2	Lip Hinge Pin 6' Wide	562.100	562.100	562.100		
		Lip Hinge Pin 6.5' Wide	562.101	562.101	562.101		
		Lip Hinge Pin 7' Wide	562.102	562.102	562.102		
		Lip Hinge Pin 6' Wide (Stainless Steel)	490.100	490.100	490.100		
		Lip Hinge Pin 6.5' Wide (Stainless Steel)	490.101	490.101	490.101		
		Lip Hinge Pin 7' Wide (Stainless Steel)	490.102	490.102	490.102		
8	2	Tension Pin .25 Dia x 1.75L	123960	123960	123960		
9	1	Tilt Back Rod	123997	123997	123997		
10	1	Clevis Pin .875Dia x 4L	123635	123635	123635		
11	9	Cotter Pin .188 Dia. x 1.50L	51907	51907	51907		
12	1	Nut Weldment 1.5-6 HEX	123710	123710	123710		
13	1	Guide, Tilt Back Rod	123683	123683	123683		
14	1	Clevis Pin .38 x 4L	125592	125592	125592		
15	1	Cotter Pin .125 x 1L	51901	51901	51901		
16	1	Power Unit	SEE PAGE 42				
17	1	Bolt .375-16 x .75 HHCS	122979	122979	122979		
18	1	Washer Flat .38	51700	51700	51700		
19	1	Washer Lock .38	51773	51773	51773		
20	1	Hydraulic Oil Decal	119530	119530	119530		
21	1	Ramp Cylinder 4" Bore Double Acting	123692	123691	123691		
22	1	Clevis Pin 1.125Dia x 4L Flat	129280	129280	129280		
23	1	Clevis Pin 1.125Dia x 2.75L Flat	124878	124878	124878		
24	1	Lip Cylinder 2.5" Bore x 6 Stroke	119291	119291	119291		
25	2	Clevis Pin 1 x 3.625L	52630	52630	52630		
26	1	Valve Manifold Assembly	SEE PAGE 42				
27	2	Washer Lock .25	51800	51800	51800		
28	2	Nut HEX .25-20	51524	51524	51524		
29	2	Bolt HEX .25-20 x 4.5L	58065	58065	58065		
30	1	Bolt HEX .75-10 x 3L	51186	51186	51186		
31	1	Nut HEX .75-10 Grade 5	51517	51517	51517		
32	1	Washer Lock .75 Dia	51814	51814	51814		
33	1	Chain Assy. Safety Pin	123741	123741	123741		
34	1	Linch Pin .375 x 2.5	68014	68014	68014		
35	2	S-Hook .219 Wire	51102	51102	51102		



## REPLACEMENT PARTS - LIP AND PLATFORM CONT.



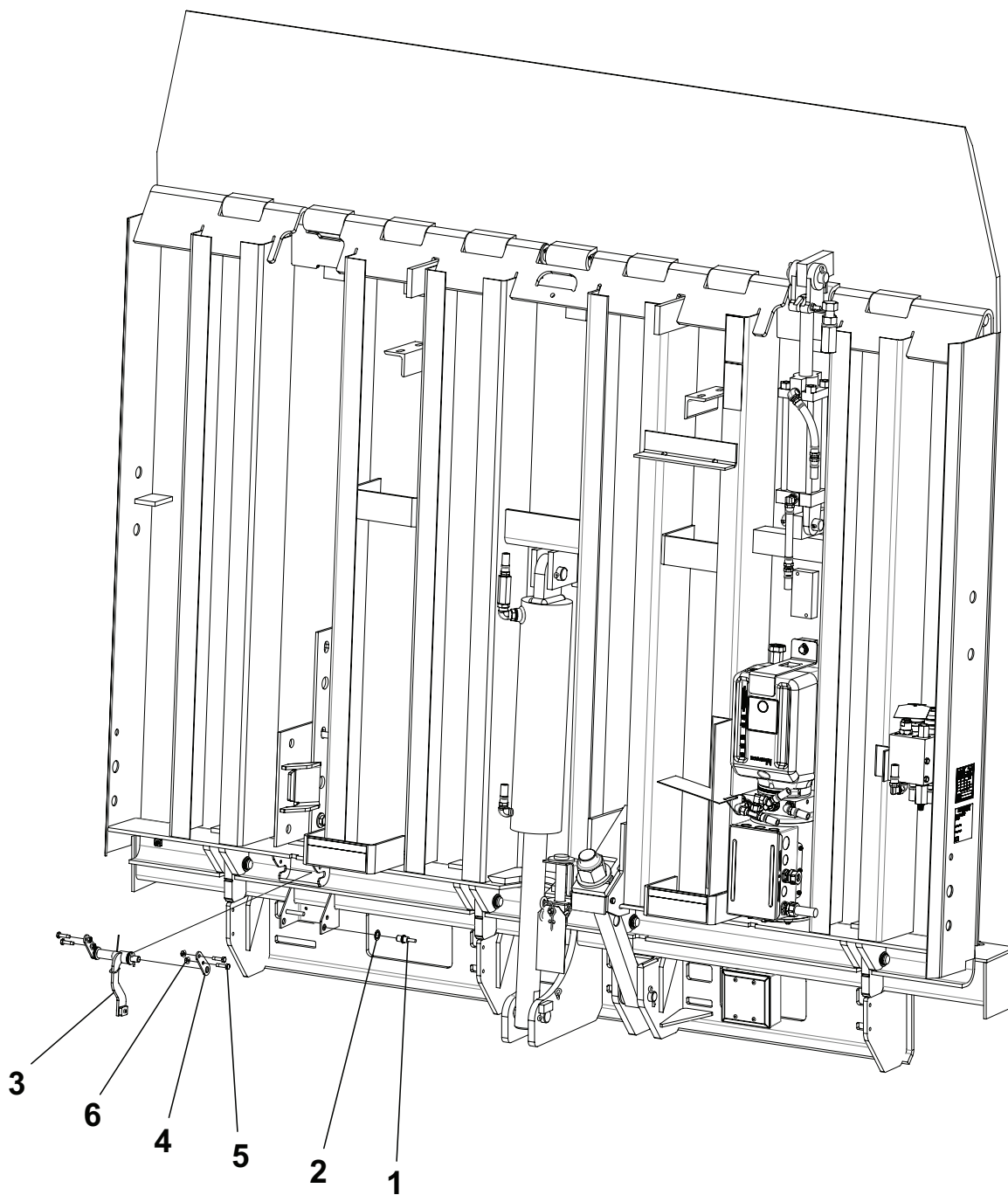


## LIP AND PLATFORM REPLACEMENT PARTS LIST CONT.

			Power Unit Location	Left		Right
			Rear Frame Depth	10” Deep Pit	12” Deep Pit	1 2 - 1 5 ” Deep Pit
Item	Qty.	Description	Part No.	Part No.	Part No.	
36	2	Lip Keeper Weldments	124304	124304	124304	
37	1	Access Brace .63 x 3 x (Length)	135724	135846	135848	
38	1	Weld Pin Pull Pin	135721	135721	135721	
39	1	Handle With Rubber Grip	129175	129175	129175	
40	2	Washer Flat 1.00 SAE ZP	51721	51721	51721	
41	1	Shaft Collar 1.00 ID 1.75 OD	132822	132822	132822	
42	2	Washer Flat 1.125 ID 1.75 OD .1406 Thk ZP	139809	139809	139809	
43	8	Washer Flat .88 ID 1.25 OD .075 Thk ZP	142804	142804	142804	
44	2	Bearing 1.125 id 1L	120945	120945	120945	
45	1	Bearing 1.125 id .75L	120944	120944	120944	
46	1	RHV4 Side Access Brace Kit (Optional) (Includes 11, 37, 38, 39, 40 and 41)	139941	139941	139941	



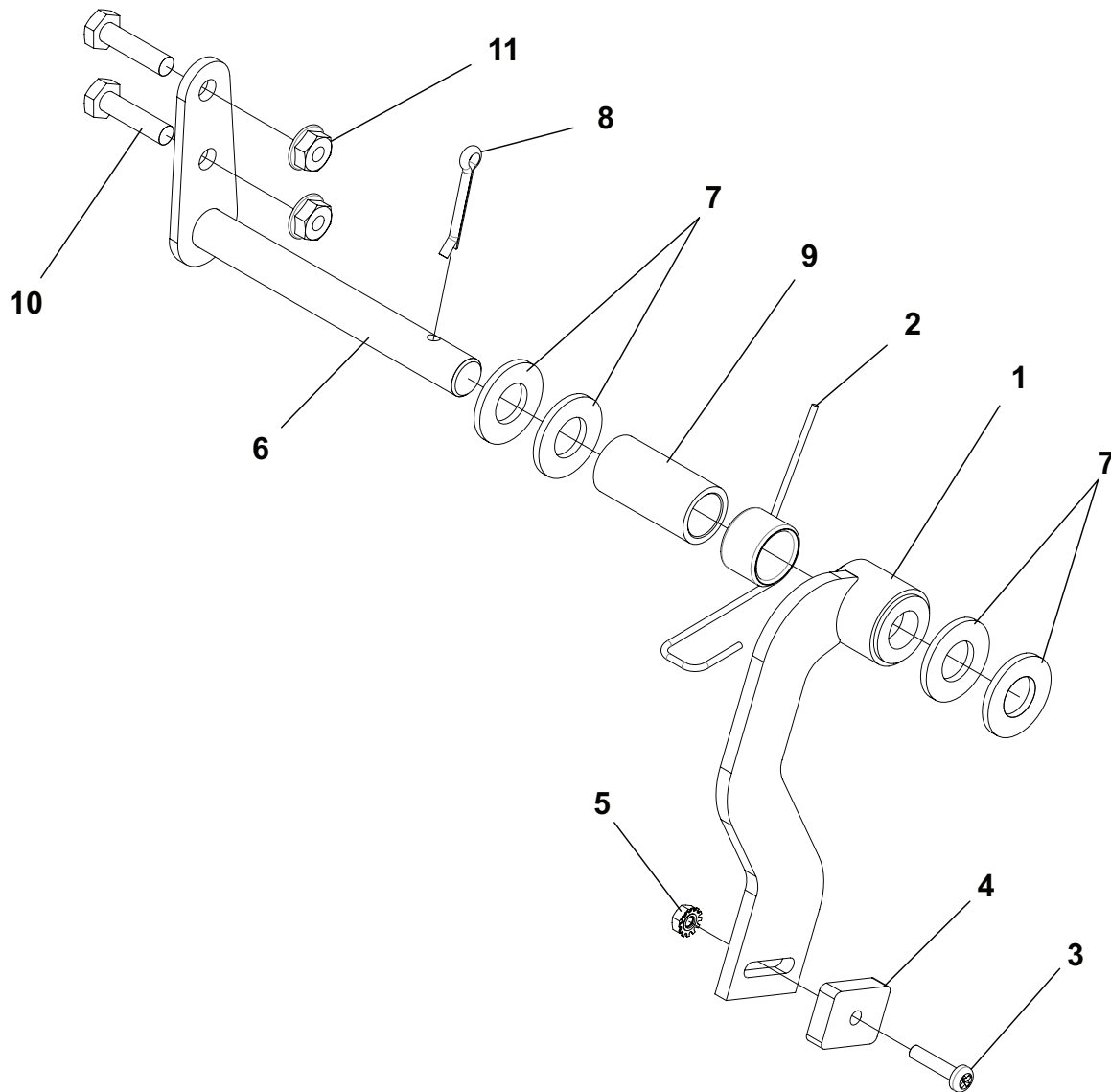
## REPLACEMENT PARTS - LEVELER STORED



Item	Qty	Description	Part Number
1	1	SW MAG RES 99L 2WIRE	134087
2	1	WSHR .5 LK INTL TOOTH	51808
3	1	TRIG ASSY STRD RHV	148021
4	1	BAR .135 X 1 X 2.875 3HOLE	148013
5	2	BOLT .250-20X1.000 HEX ZP	125348
6	2	NUT .25-20 HEX FLG ZP	51552



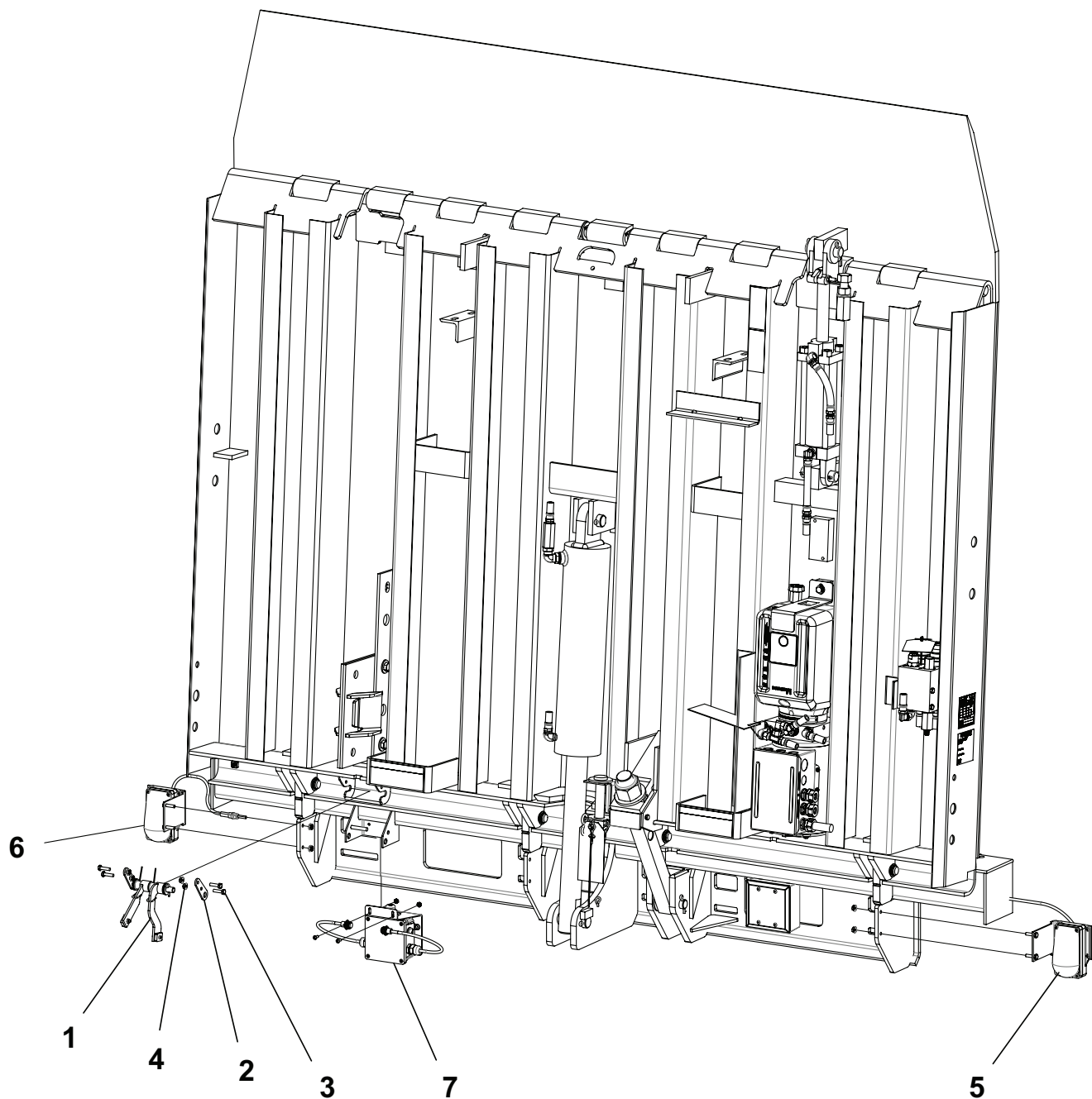
## REPLACEMENT PARTS - LEVELER STORED TRIGGER ASM



Item	Qty	Description	Part Number
1	1	TRIG SUBASSY STRD(MAGRES) RHV4	146357
2	1	SPRG TRSN 180DEG 0.803OD MWG(.079DIA)	148006
3	1	SCR #8-32X.750 MACH PAN PHLP	141616
4	1	MAG HIGH ENGY RBR .25X.75X1L HOLE	18344
5	1	NUT #8-32 KEPS ZP	118327
6	1	PIN WLDMT SNSR(STRD/DSBL) RHV	148014
7	4	WSHR .5 FLAT SAE ZP	51706
8	1	PIN COTR .125 X 1L ZP	51901
9	1	TUBE RND .75OD .56ID 1.5L	147331
10	2	BOLT .250-20X1.000 HEX ZP	125348
11	2	NUT .25-20 HEX FLG ZP	51552



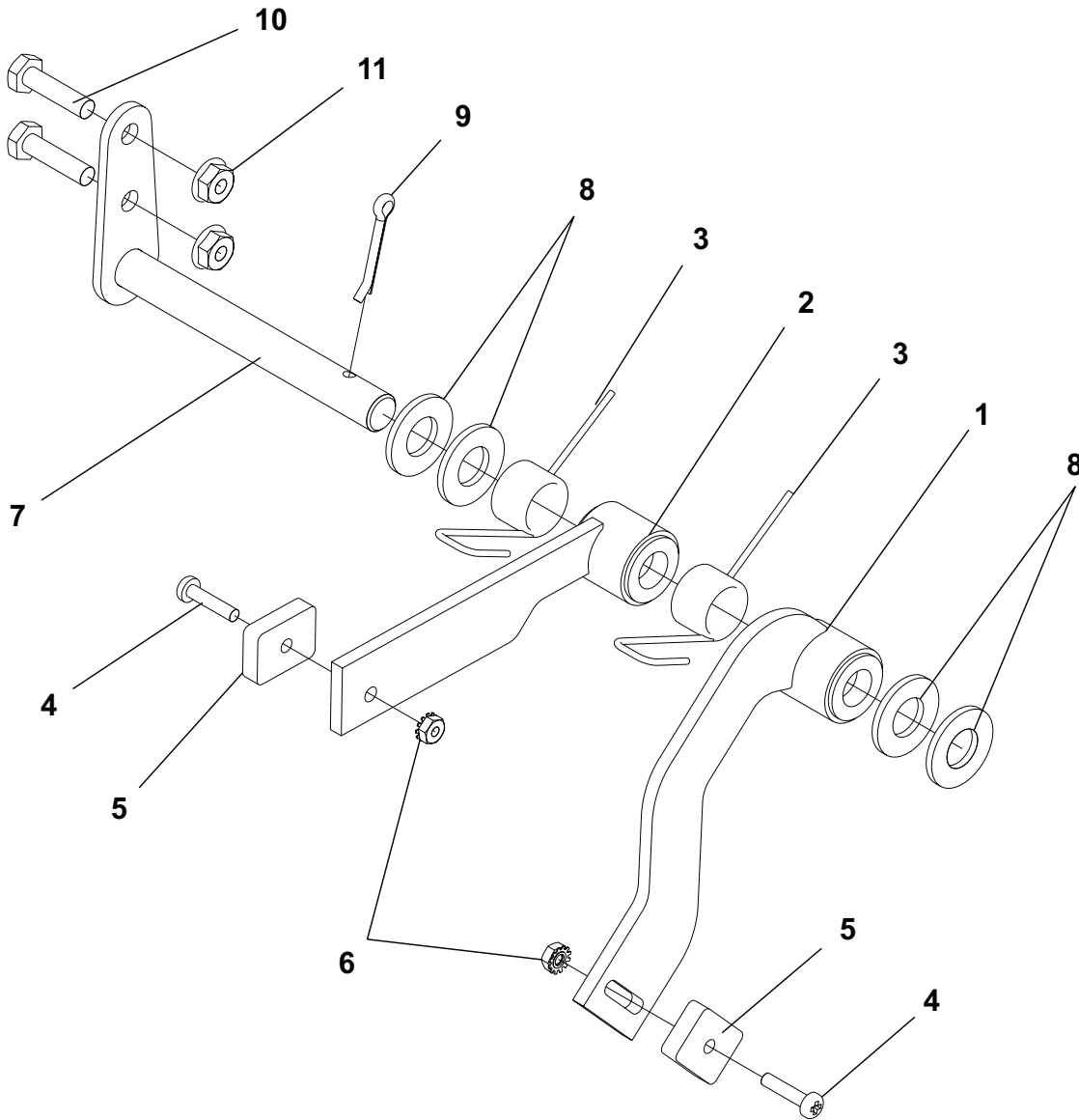
## REPLACEMENT PARTS - SAFE-T-PIT



Item	Qty	Description	Part Number
1	1	TRIG ASSY STRD/DSBL RHV	148020
2	1	BAR .135 X 1 X 2.875 3HOLE	148013
3	2	BOLT .250-20X1.000 HEX ZP	125348
4	2	NUT .25-20 HEX FLG ZP	51552
5	1	JB ASSY SAFE-T-PIT SNSR 72L	147352
6	1	JB ASSY SAFE-T-PIT SNSR 25L	147326
7	1	JB ASSY SAFE-T-PIT SNSR/STRD RHV	147280



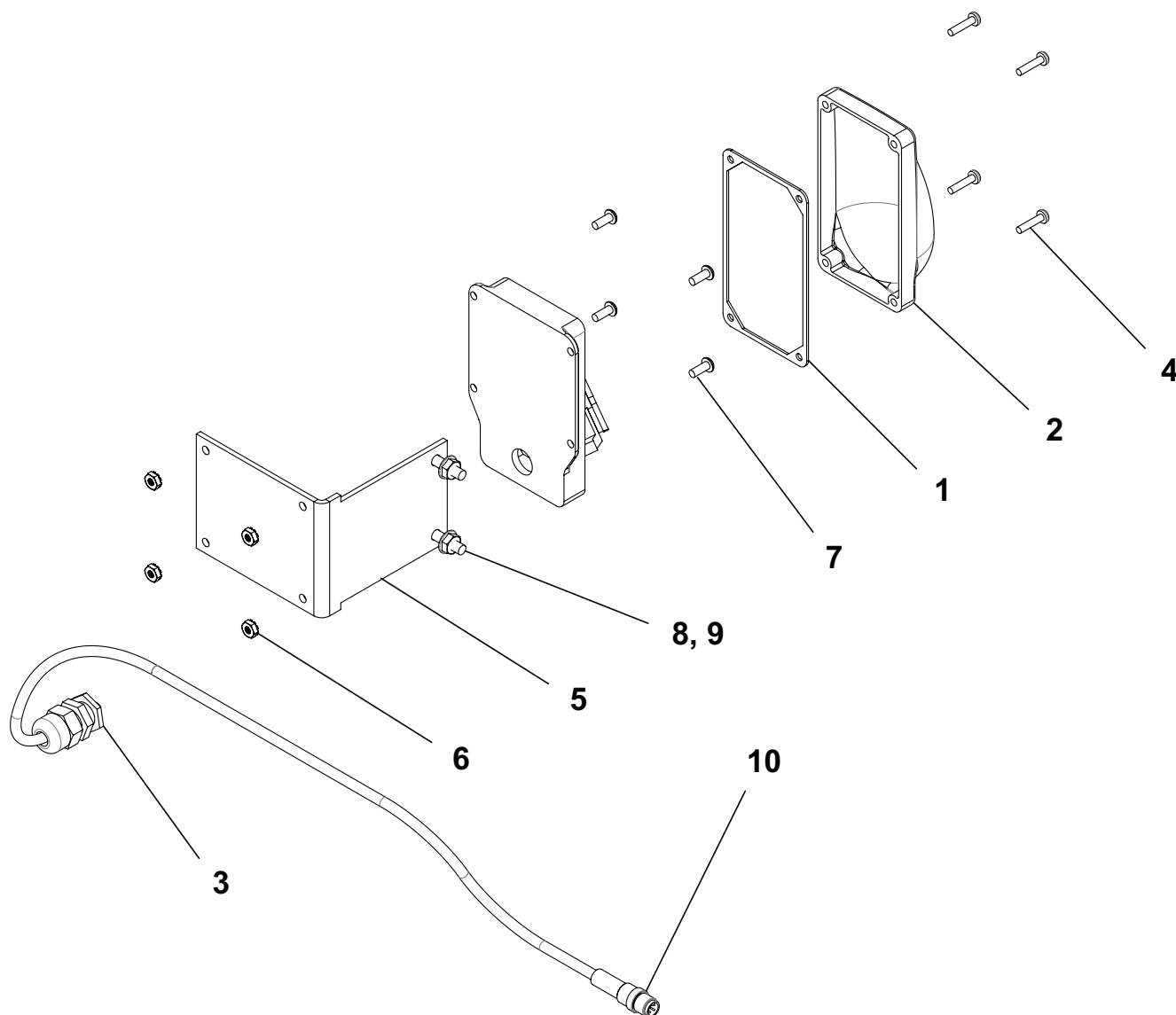
## REPLACEMENT PARTS - SAFE-T-PIT TRIGGER ASM



Item	Qty	Description	Part Number
1	1	TRIG SUBASSY STRD(MAGRES) RHV4	146357
2	1	TRIG SUBASSY SNSR(DSBL) RHV	147396
3	2	SPRG TRSN 180DEG 0.803OD MWG(.079DIA)	148006
4	2	SCR #8-32X.750 MACH PAN PHLP	141616
5	2	MAG HIGH ENGY RBR .25X.75X1L HOLE	18344
6	2	NUT #8-32 KEPS ZP	118327
7	1	PIN WLDMT SNSR(STRD/DSBL) RHV	148014
8	4	WSHR .5 FLAT SAE ZP	51706
9	1	PIN COTR .125 X 1L ZP	51901
10	2	BOLT .250-20X1.000 HEX ZP	125348
11	2	NUT .25-20 HEX FLG ZP	51552



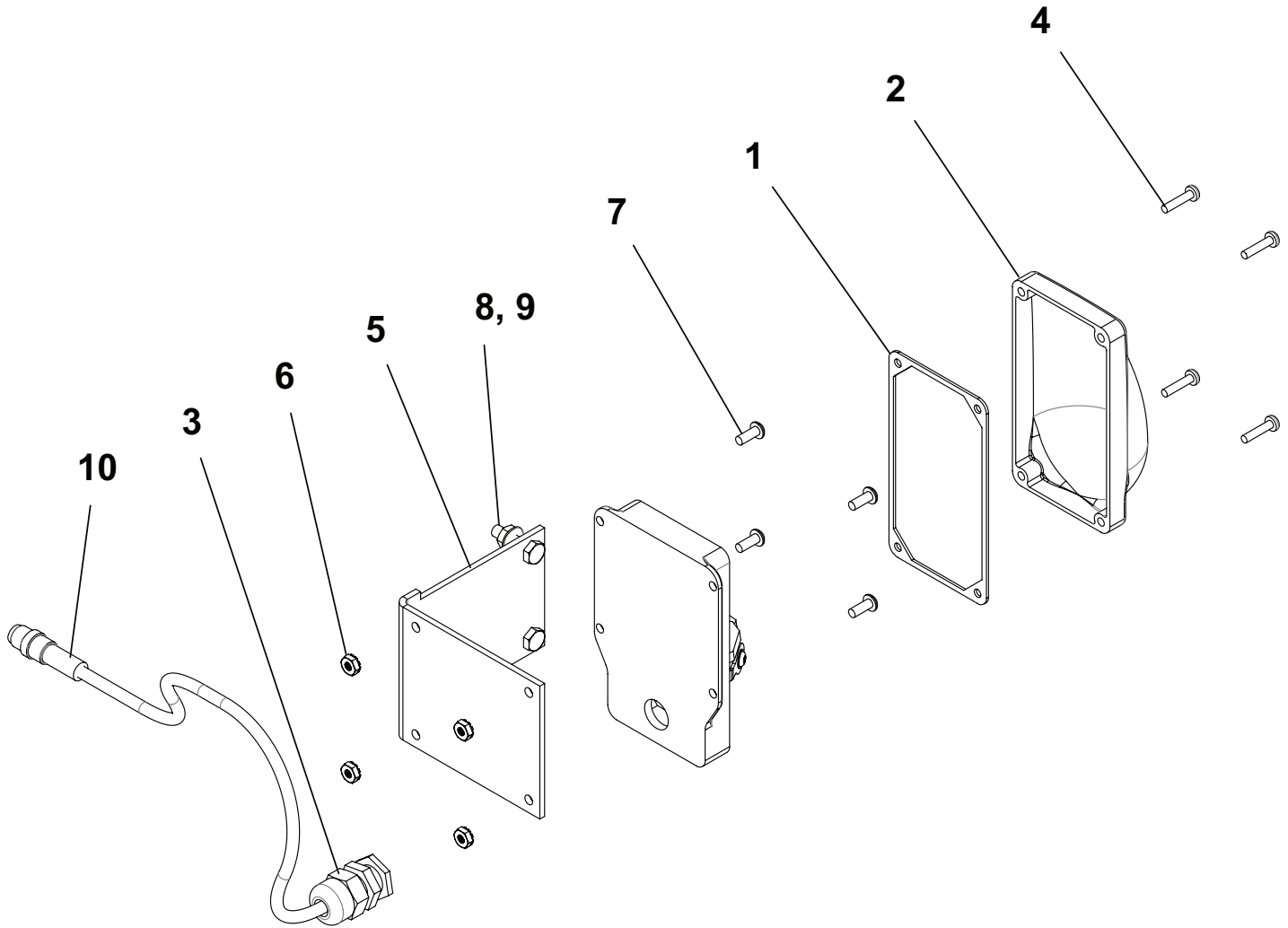
## REPLACEMENT PARTS - SAFE-T-PIT RIGHT SENSOR ASM



Item	Qty	Description	Part Number
1	1	GSKT ENCL SNSR(SAFE-T-PIT)	147347
2	1	COV ENCL SNSR(SAFE-T-PIT)	147346
3	1	CORD GRIP .19-39 BLK NUT	112345
4	4	SCR #8-32X.750 MACH PAN PHLP	141616
5	1	ANG FRMD 4.125 X 4.125 X .135 X 3.25 6HOLE	148015
6	4	NUT 10-32UNC HEX W/LKWSHR ZP	140933
7	4	SCR #10-32X.500 MACH RND PHLP	51629
8	2	BOLT .250-20X1.000 HEX ZP	125348
9	2	NUT .25-20 HEX FLG ZP	51552
10	1	CABLE ASSY PLUG(MALE) 22/4 72L	148060



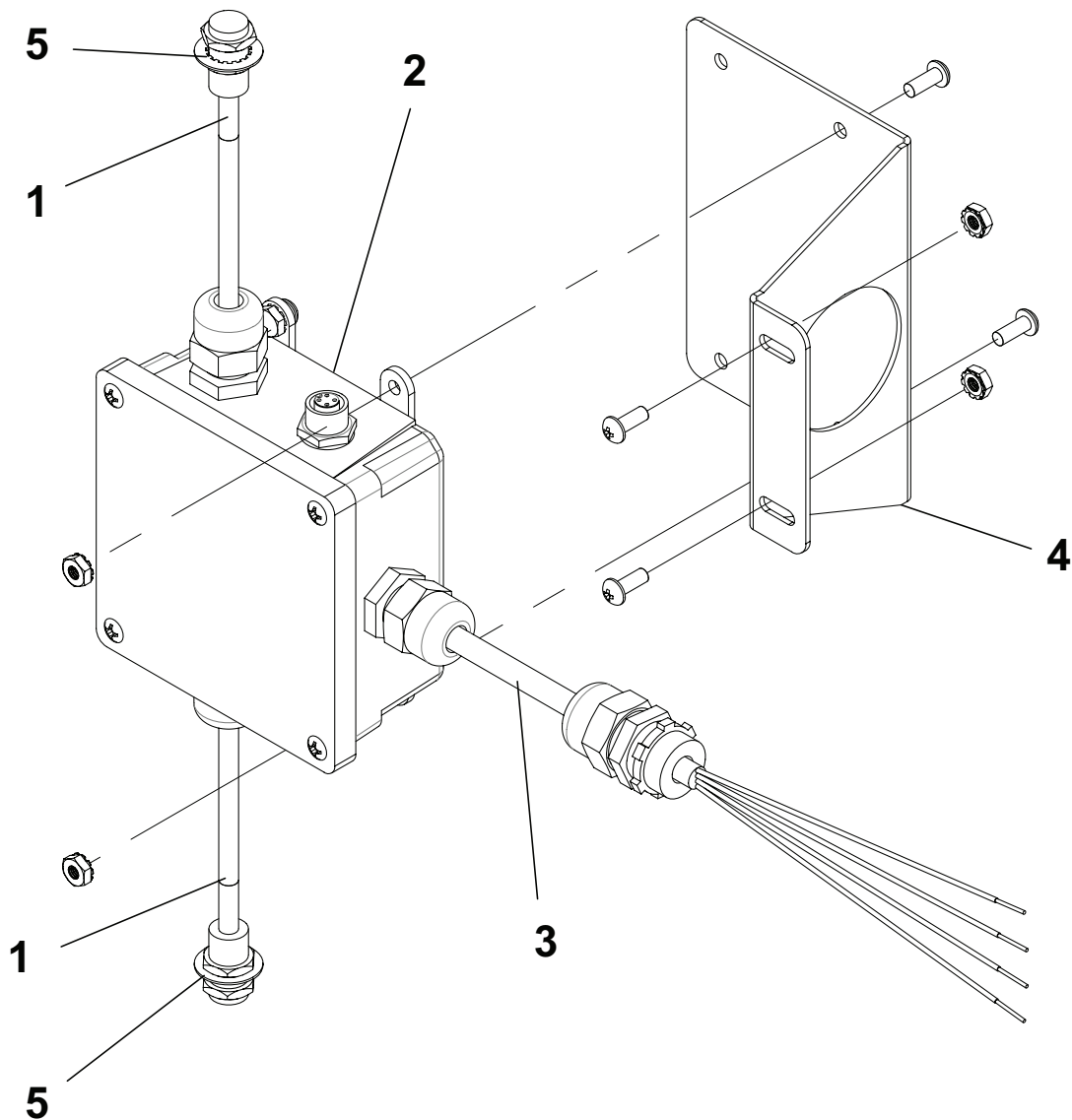
## REPLACEMENT PARTS - SAFE-T-PIT LEFT SENSOR ASM



Item	Qty	Description	Part Number
1	1	GSKT ENCL SNSR(SAFE-T-PIT)	147347
2	1	COV ENCL SNSR(SAFE-T-PIT)	147346
3	1	CORD GRIP .19-39 BLK NUT	112345
4	4	SCR #8-32X.750 MACH PAN PHLP	141616
5	1	ANG FRMD 4.125 X 4.125 X .135 X 3.25 6HOLE	148015
6	4	NUT 10-32UNC HEX W/LKWSHR ZP	140933
7	4	SCR #10-32X.500 MACH RND PHLP	51629
8	2	BOLT .250-20X1.000 HEX ZP	125348
9	2	NUT .25-20 HEX FLG ZP	51552
10	1	CABLE ASSY PLUG(MALE) 22/4 25L	147910



# REPLACEMENT PARTS - SAFE-T-PIT JUNCTION BOX ASM



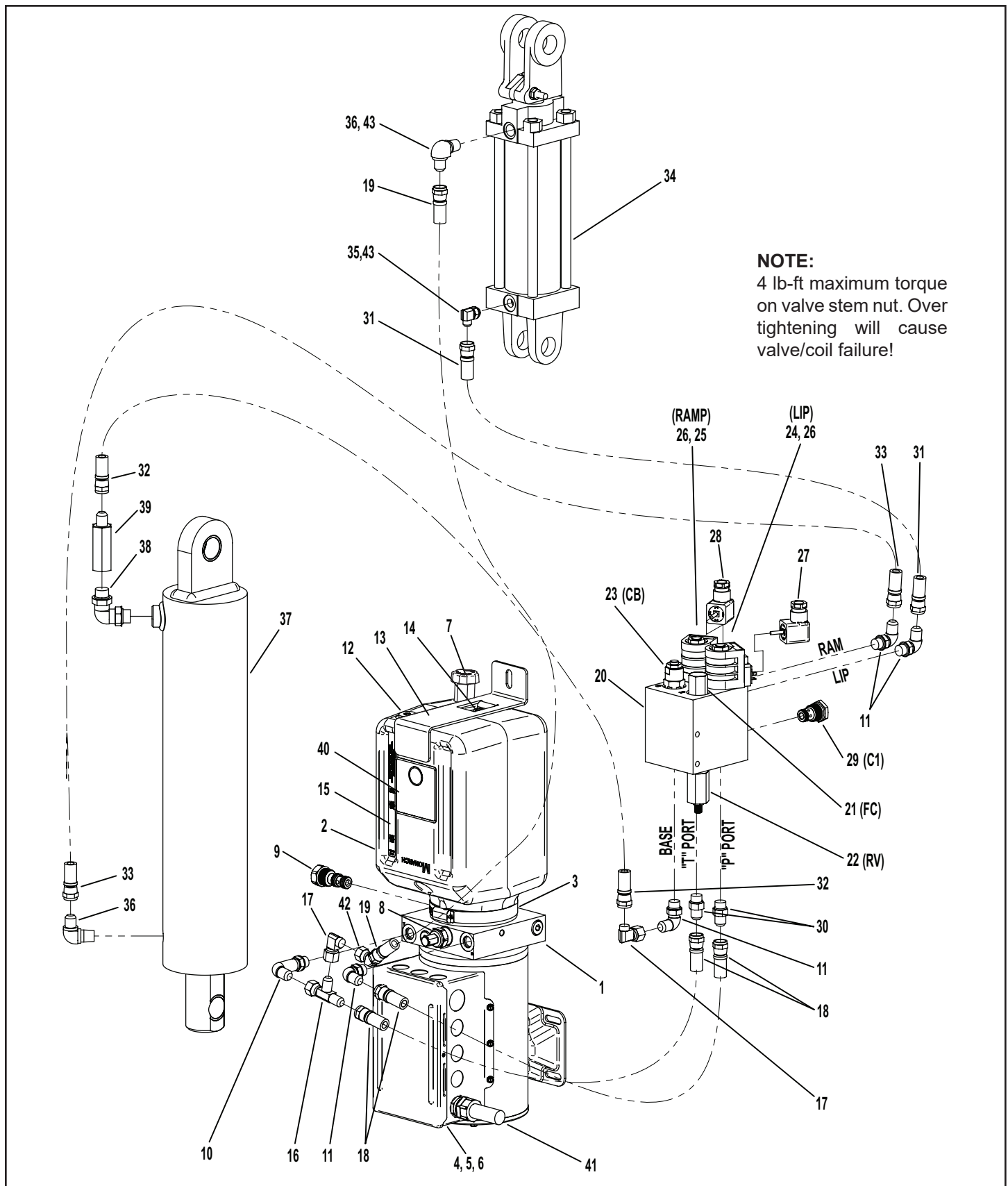
Item	Qty	Description	Part Number
1	2	SW MAG RES	134087
2	2	RCPT FEM 22/4 6L	145792
3	1	CABLE ASSY 18/4 X 72L	147286
4	1	BRKT JB(SAFE-T-PIT) RHV	148004
5	2	WSHR .5 LK INTL TOOTH	51808



## NOTES



## REPLACEMENT PARTS - HYDRAULIC COMPONENT PARTS



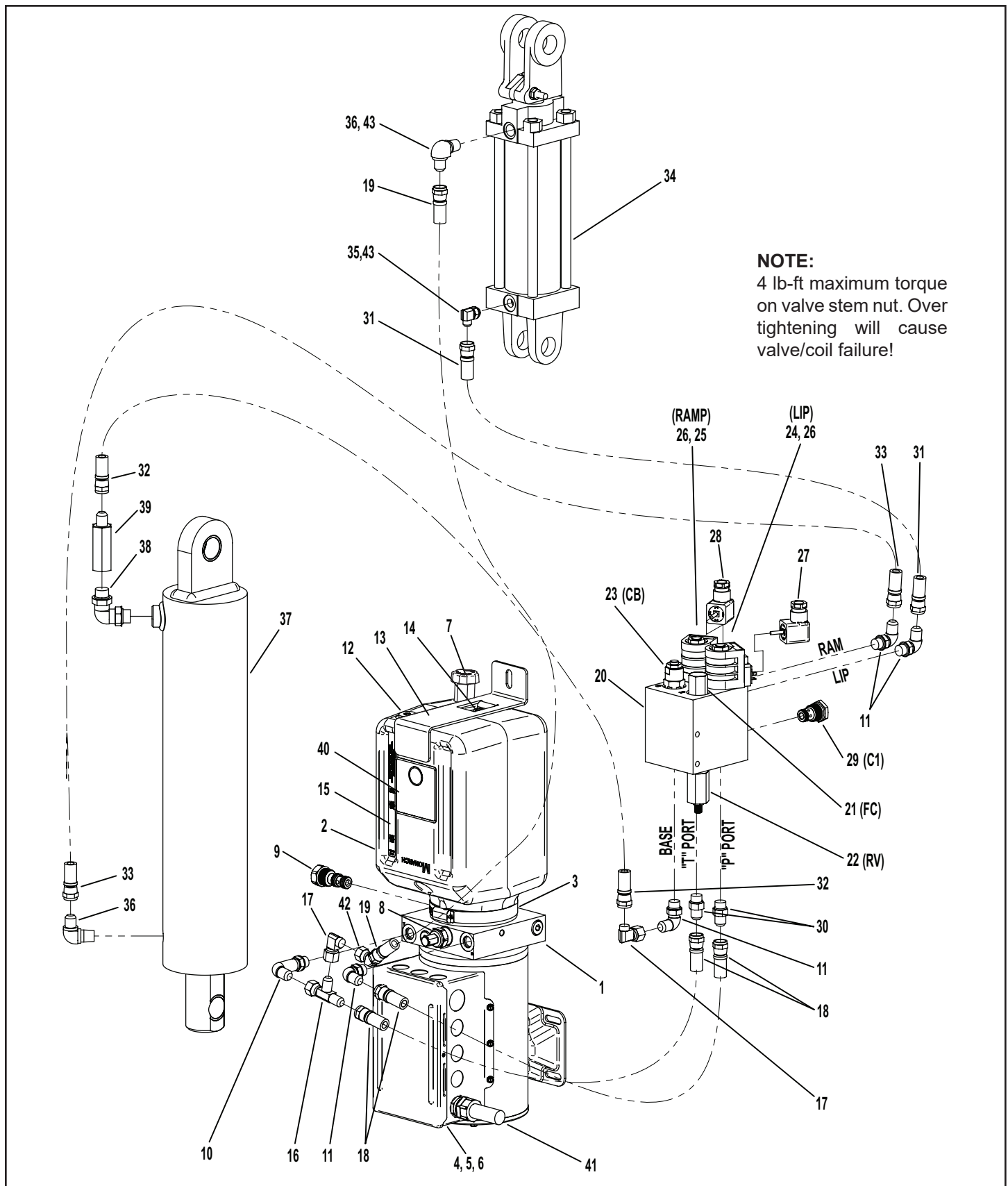


## HYDRAULIC COMPONENTS REPLACEMENT PARTS LIST

Power Unit Location Leveler Length			Left		Right		
			5' Long	6' Long	6' Long	6'L Drive	8' Long
Item	Qty.	Description	Part No.	Part No.			Part No.
1	1	Power Unit 1HP 115V/208-230V 1 Phase (Includes Items #2-15)	132749	132749	132749	132749	132749
	1	Power Unit 1HP 208-230V/380V-460V 3 Phase (Includes Items #2-15)	132750	132750	132750	132750	132750
	1	Power Unit 1HP 575V 3 Phase (Includes Items #2-15)	132751	132751	132751	132751	132751
2	1	Plastic Tank 1.5Gal	132753	132753	132753	132753	132753
3	1	Hose Clamp - Tank	132754	132754	132754	132754	132754
4	1	Motor Junction Box	132760	132760	132760	132760	132760
5	1	Junction Box Cover	132759	132759	132759	132759	132759
6	1	Capacitor 1PH	132755	132755	132755	132755	132755
7	1	Breather Vent Assy .38NPT	144000	144000	144000	144000	144000
8	1	Relief Valve Kit	132757	132757	132757	132757	132757
9	1	Check Valve PTC	132758	132758	132758	132758	132758
10	1	Fitting #6MORB #6MJ 90 Long	16917	16917	16917	16917	16917
11	4	Fitting #6MORB #6MJ 90	55267	55267	55267	55267	55267
12	1	Fitting Plug #8MORB	132745	132745	132745	132745	132745
13	1	Retaining Bracket	132761	132761	132761	132761	132761
14	1	Retaining Bracket Bolt	58069	58069	58069	58069	58069
15	1	Oil Level Decal	132764	132764	132764	132764	132764
16	1	Fitting Tee 6FJS 6MJ 6MJ	121070	121070	121070	121070	121070
17	2	Fitting Elbow 90 #6MJ #6FJS	100364	100364	100364	100364	100364
18	2	Hose .38DIA #6FJS (Manifold)	124728	124728	124728	124728	124728
19	1	Hose .38DIA #6FJS	125002	124738	124731	124732	124733
20	1	Manifold Assy RHV40 ADJ Relief	137488	137488	137488	137488	137488
21	1	Fixed Pressure Comp. Flow Control Valve "FC"	55299	55299	55299	55299	55299
22	1	Lip Out Valve (Adjustable) 800 PSI Relief "RV"	137489	137489	137489	137489	137489
23	1	Counterbalance Valve 1:1 Ratio "CB"	55388	55388	55388	55388	55388
24	1	3 WAY 2 POS. Cartridge Valve "LIP"	55186	55186	55186	55186	55186
25	1	4 WAY 2 POS. Cartridge Valve "RAMP"	55184	55184	55184	55184	55184
26	2	120 VAC Coil HC Encap.	57731	57731	57731	57731	57731
27	1	Cable Hirschmann Yellow	128102	128102	128102	128102	128102
28	1	Cable Hirschmann Black	128101	128101	128101	128101	128101
29	1	Lip Check Valve "C1"	CONSULT FACTORY				
30	2	Fitting #6MORB #6MJ	55386	55386	55386	55386	55386
31	1	Hose .38DIA #6FJS (10" Deep Frame)	124729	124729	-	-	-
	1	Hose .38DIA #6FJS (12-15" Deep Frame)	124729	124729	124728	124731	124732
32	1	Hose .38DIA #6FJS (10" Deep Frame)	132937	124733	-	-	-
	1	Hose .38DIA #6FJS (12-15" Deep Frame)	124732	124999	124734	124734	124734
33	1	Hose .38DIA #6FJS (10" Deep Frame)	125002	124729	-	-	-



## REPLACEMENT PARTS - HYD. COMPONENT PARTS CONT.



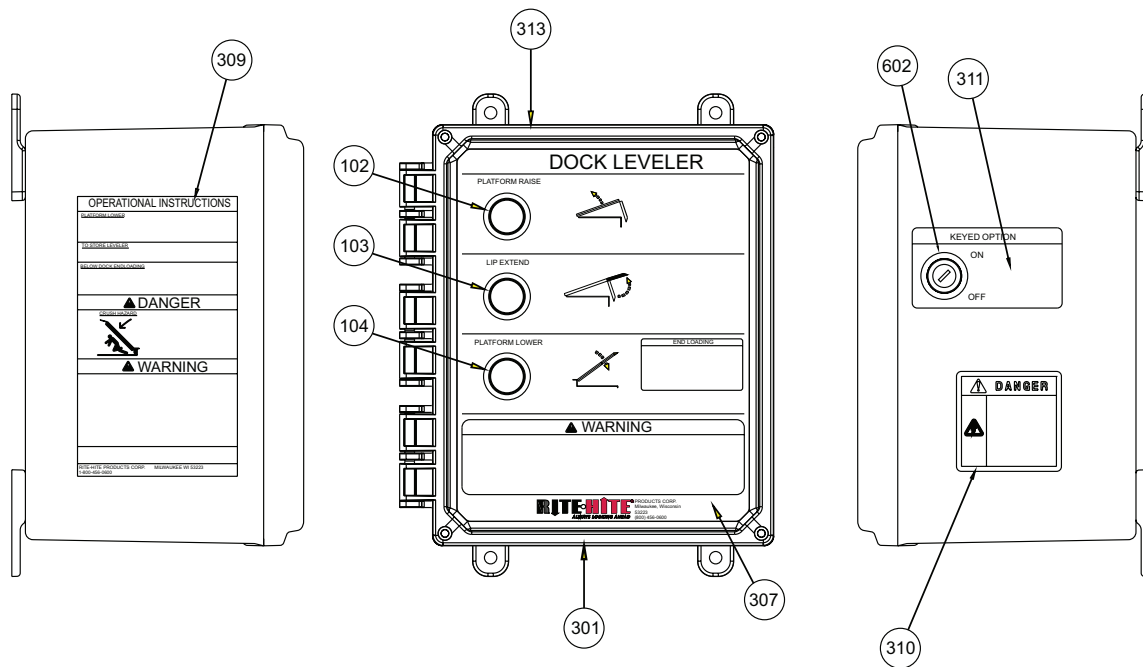


**HYDRAULIC COMPONENTS REPLACEMENT PARTS LIST CONT.**

Power Unit Location Leveler Length			Left		Right		
			5' Long	6' Long	6' Long	6'L Drive	8' Long
Item	Qty.	Description	Part No.	Part No.			Part No.
	1	Hose .38DIA #6FJS (12-15" Deep Frame)	125002	124736	124738	124738	124738
34	1	Lip Cylinder 2.5" Bore 6STR 2PORT	119291	119291	119291	119291	119291
35	1	Fitting Elbow 90 #4MORB #6MJ	19035	19035	19035	19035	19035
36	2	Fitting Elbow 90 .38NPT 6MJ ZP	104787	104787	104787	104787	104787
37	1	Ramp Cylinder 4" Bore (12"-15" PIT)	123691	123691	123691	123691	123691
	1	Ramp Cylinder 4" Bore (10" PIT)	123692	123692	-	-	-
38	1	Elbow 90 #8MORB	17808	17808	17808	17808	17808
39	1	Velocity Fuse 7GPM 8FORB 6MJ	55393	55393	55393	55393	55393
40	1	Decal Oil HYD BIO FL(85+%)	119530	119530	119530	119530	119530
41	1	Power Harness 31L	124466	124466	124466	124466	124466
42	1	Fitting Elbow 45 #6MJ #6FJS	-	-	55364	55364	55364
43	0/2	Hose .38DIA 6L #6FJS #6MJ (non standard length only)	129304	129304	129304	129304	129304
44	-	STD - RH Biodegradeable Fluid( quart/blue in color)	119181	119181	119181	119181	119181
	-	OPT - Mil 5606 Fluid (quart/red in color)	108303	108303	108303	108303	108303



# REPLACEMENT PARTS - ELECTRICAL

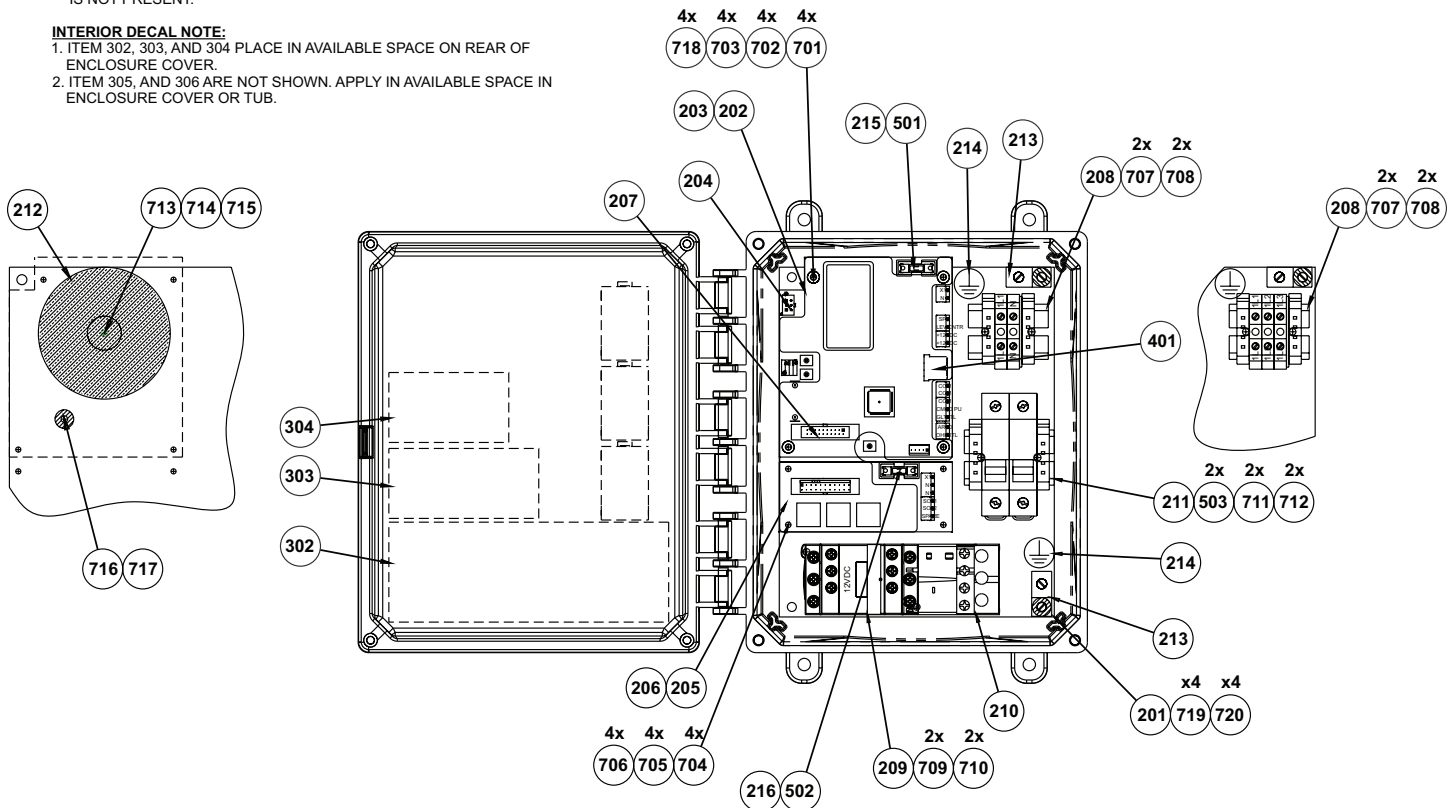


## EXTERIOR DECAL NOTE:

1. PLACE ITEM 310 IN UPPER PORTION OF ENCLOSURE WHEN ITEM 309 IS NOT PRESENT.

## INTERIOR DECAL NOTE:

1. ITEM 302, 303, AND 304 PLACE IN AVAILABLE SPACE ON REAR OF ENCLOSURE COVER.
2. ITEM 305, AND 306 ARE NOT SHOWN. APPLY IN AVAILABLE SPACE IN ENCLOSURE COVER OR TUB.





## ELECTRICAL REPLACEMENT PARTS LIST

Item	Qty	Description	Part Number
1	1	Control box assembly, Complete (Consult Rite-Hite for specific part number)	867.xxx
102	1	Push button, black	146827
103	1	Push button, black	146830
104	1	Push button, black	146830
201	1	Pre-drilled control box sub panel	144763
202	1	Standard Micro Control Board, Blank	144555-883D101
		Standard Micro Control Board, Including Fuse	144574-883D101
		Micro control board with Program Options, Blank (Consult Rite-Hite for specific part number)	144555-xxx
		Micro control board with Program Options, Including Fuse (Consult Rite-Hite for specific part number)	144574-xxx
203	1	Micro circuit board cover	146552
204	1	Control wiring harness	144862-06
205	1	Options Board, Leveler, Blank	143135
		Options Board, Leveler, Including Fuse	143137
207	1	Ribbon Cable for leveler micro control board to leveler options board	144866
208	1	Terminal block assembly, 115V 1PH	144559
		Terminal block assembly, 230V 1PH	146662
		Terminal block assembly, 3PH	144884
209	1	Motor Contactor, 1PH	144540
		Motor Contactor, 3PH	144541
210	1	Motor Overload Relay	145118
211	1	Transformer fuse assembly	146341
212	1	Transformer, 60VA, 230/460V	144800
		Transformer, 60VA, 575V	144801
213	2	Ground lug	55902
214	2	Ground lug decal	105454
215	1	Fuse cover, 5mm x 20mm	144544
216	1	Fuse cover, 5mm x 20mm	144544
301	1	Standard Enclosure with decals, English	875.107
		Enclosure with decals other than above (Consult Rite-Hite for specific part number)	875.xxx
	1	Enclosure mounting feet, includes 4 feet (Not needed if ordering new enclosure)	147845
302	1	Electrical schematic decal (Consult Rite-Hite for specific part number)	880.xxx
303	1	Fuse replacement decal	144850
304	1	Full load amperage and voltage/phase decal (Consult Rite-Hite for specific part number)	882.xxx
305	1	Program configuration decal (Consult Rite-Hite for specific part number)	884.xxx
307	1	Cover decal, stand alone vertical leveler	144360
309	1	Operation/danger/warning decal for vertical leveler	144848
310	1	Lockout/tagout/multiple disconnect warning decal	114331
311	1	Control power ON/OFF decal	144838
312	1	Circuit board UL rating decal	144860
313	1	Do Not Drill decal	147552

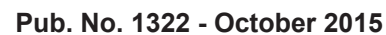




- EXTERIOR DECAL NOTE:**  
1. PLACE ITEM 310 IN UPPER PORTION OF ENCLOSURE WHEN ITEM 309 IS NOT PRESENT.

**INTERIOR DECAL NOTE:**

- INTERIOR DECAL NOTE:**
1. ITEM 302, 303, AND 304 PLACE IN AVAILABLE SPACE ON REAR OF ENCLOSURE COVER.
  2. ITEM 305, AND 306 ARE NOT SHOWN. APPLY IN AVAILABLE SPACE IN ENCLOSURE COVER OR TUB.



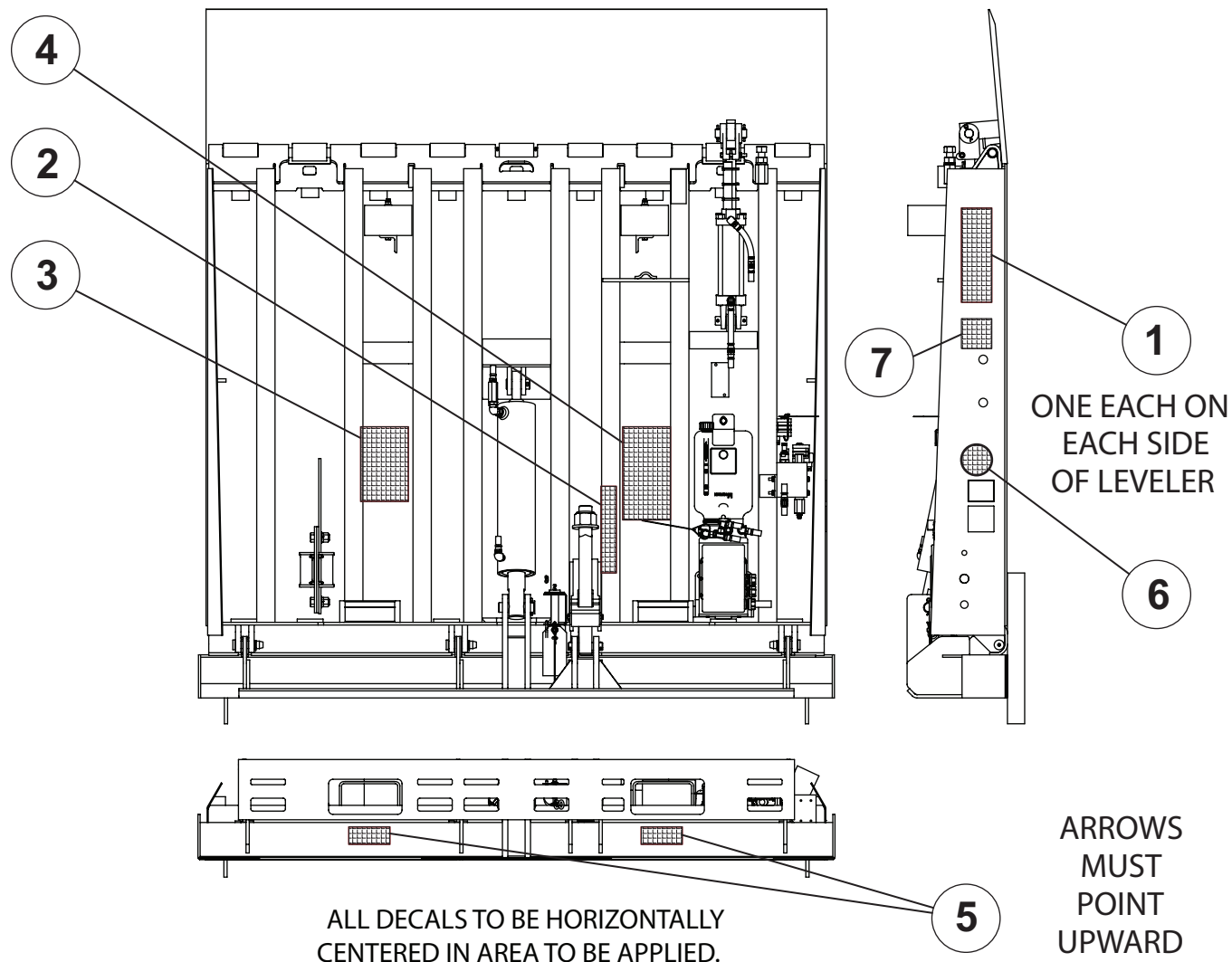


**ELECTRICAL REPLACEMENT PARTS LIST CONT.**

<b>Item</b>	<b>Qty</b>	<b>Description</b>	<b>Part Number</b>
501	1	0.5A fuse, 5mm x 20mm	145216
502	1	0.5A fuse, 5mm x 20mm	145216
503	2	1A fuse, CC, Dual element time delay	66003
		0.5A fuse, CC, Dual element time delay	66005
		0.4A fuse, CC, Dual element time delay	66006
602	1	Selector switch, keyed (If equipped)	125194
701	4	Standoff, Male/Female, #6-32, 2.5" length	133365
702	4	Screw, round head, #6-32, 0.25" length	133366
703	4	Lock washer, #6	51826
704	4	Standoff, Male/Female, #6-32, 2.5" length	133365
705	4	Screw, round head, #6-32, 0.25" length	133366
706	4	Lock washer, #6	51826
707	2	Screw, round head, #8-32, 0.5" length	51645
708	2	Lock washer, star, #8	51839
709	2	Screw, round head, #8-32, 0.5" length	51645
710	2	Lock washer, star, #8	51839
711	2	Screw, round head, #8-32, 0.5" length	51645
712	2	Lock washer, star, #8	51839
713	1	Screw, round head, #8-32, 2.0" length	111165
714	1	Washer, flat, 0.25" diameter	51737
715	1	Lock washer, star, #8	51839
716	1	Screw, round head, #8-32, 0.5" length	51645
717	1	Lock washer, star, #8	51839
718	4	Standoff, Male/Female, #6-32, 0.875" length	115871
719	4	Screw, round head, #10-32, 0.5" length	51629
720	4	Lock washer, star, #10	51762



## REPLACEMENT PARTS - LEVELER DECALS



Item	Qty	Description	Part Number
1	2	DECAL, SUPPORT PIN (SIDE)	123756-1
2	1	DECAL, SUPPORT PIN (FLANGE)	123756-2
3	1	DECAL, "DO NOT STAND..." / RHC	123756-3
4	1	DECAL, CB VALVE ADJUST	123756-4
5	2	DECAL, FORK HERE	123756-5
6	2	DECAL, NO FORKLIFT FROM SIDE	123756-6
7	1	DECAL, DANGER ACCESS BRACE	135360

### NOTES:

1. All decals listed are english, for foreign language decals contact RITE-HITE.
2. All decals marked with an (\*) are part of decal sheet 123756 and are purchased together under this part number.



## NOTES



## **RITE-HITE STANDARD WARRANTY**

Rite-Hite warrants that its products will be free from defects in design, materials, and workmanship for a period of 365 days from the date of shipment. All claims for breach of this warranty must be made within 30 days after the defect is or can, with reasonable care, be detected and in no event no more than 30 days after the warranty has expired. In order to be entitled to the benefits of this warranty, the products must have been properly installed, maintained, and operated within their rated capacities and/or specified design parameters, and not otherwise abused. Periodic lubrication and adjustment is the sole responsibility of the owner. This warranty is Rite-Hite's® exclusive warranty. RITE-HITE EXPRESSLY DISCLAIMS ALL IMPLIED WARRANTIES, INCLUDING THE IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS. Non-standard warranties, if any, must be specified by Rite-Hite in writing.

In the event of any defects covered by this warranty, Rite-Hite will remedy such defects by repairing or replacing any defective equipment or parts, bearing all the costs for parts, labor, and transportation. This shall be the exclusive remedy for all claims whether based on contract, negligence, or strict liability.

## **LIMITATION OF LIABILITY**

RITE-HITE SHALL NOT IN ANY EVENT BE LIABLE FOR ANY LOSS OF USE OF ANY EQUIPMENT OR INCIDENTAL OR CONSEQUENTIAL DAMAGES OF ANY KIND, WHETHER FOR BREACH OF WARRANTY, NEGLIGENCE, OR STRICT LIABILITY.



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**8900 N. Arbon Drive**

**P.O. Box 245020**

**Milwaukee, Wisconsin 53224**

**Phone: 414-355-2600**

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