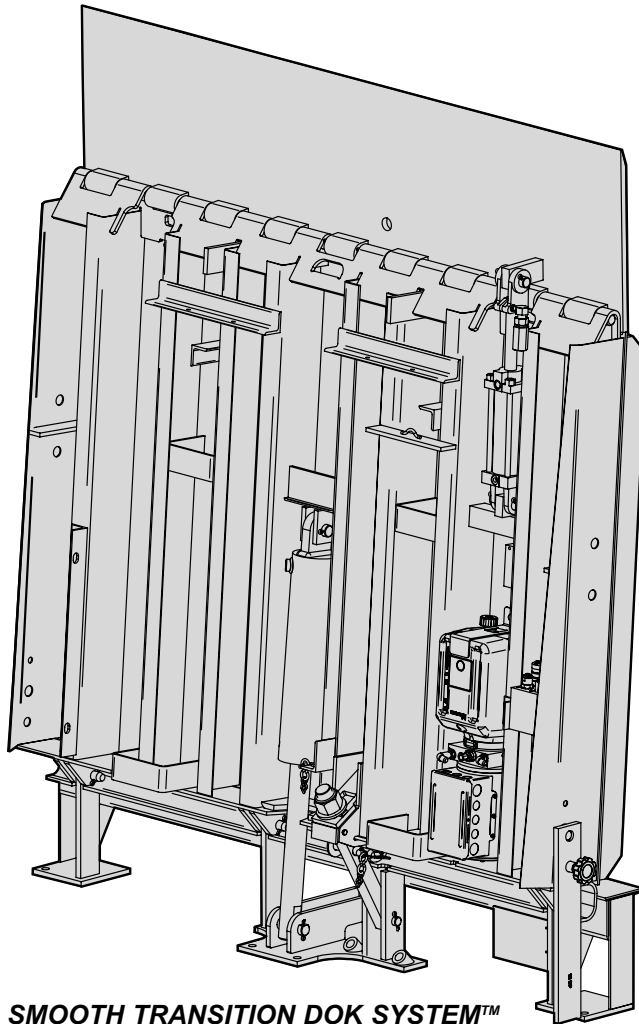

RHV

Dock Leveler

Owners Manual



part of the SMOOTH TRANSITION DOK SYSTEM™



This Manual Covers Dock Levelers Built After Serial Numbers:
07AD930001M 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® warrants the RHV Hydraulic Dock Leveler for five-years parts and one-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 the RITE-HITE® Corporation at 414-355-2600.

The RITE-HITE® products in this manual are covered by one or more of the following U.S. patents: 5,271,183; 5,323,503; 5,546,623; 5,553,987; 5,582,498; 5,664,930; 5,702,223; 5,762,459 (RE: 37,570); 5,882,167; 6,065,172; 6,070,283; 6,085,375; 6,092,970; 6,106,212; 6,116,839; 6,190,109; 6,220,809; 6,276,016; 6,311,352; 6,318,947; 6,322,310; 6,360,394; 6,368,043; 6,431,819; 6,488,464; 6,499,169; 6,502,268; 6,505,713; 6,524,053; 6,634,049; 6,654,976; 6,726,432; 6,773,221; 6,832,403; 6,880,301; 6,892,411; 7,032,267; 7,062,814; 7,134,159; 7,213,285; 7,216,391; 7,363,670; 7,380,305; 7,503,089; 7,553,431; 7,584,517; 7,681,271; 7,823,239; 7,841,823; 7,877,831 and pending U.S and foreign patent applications. RITE-HITE®, LEVEL-RITE®, THINMAN™, SAFE-T-LIP®, HYDRACHEK®, WHEEL-LOK™, DOK-LOK®, DUAL-DOK®, SAFE-T-STRUT™, DOK-COMMANDER®, JUMBO™, HYDRA-RITE™, SAFE-T-GATE®, and SMOOTH TRANSITION DOK SYSTEM™, are trademarks of RITE-HITE® Corporation.

SAFETY WARNINGS

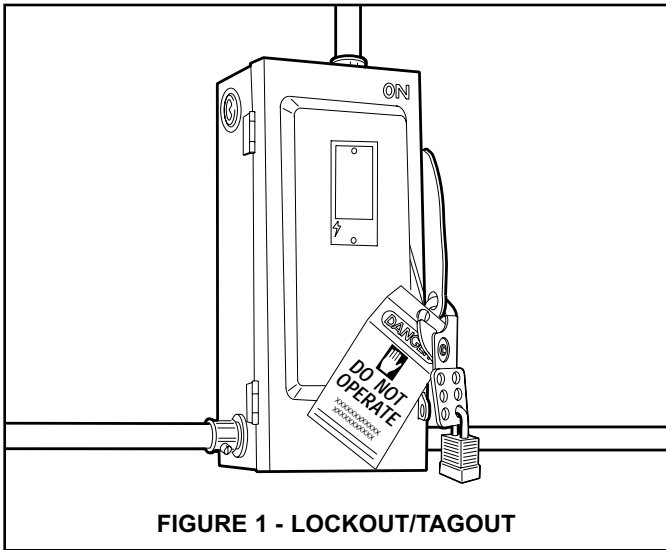


FIGURE 1 - LOCKOUT/TAGOUT

WARNING

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

LOCKOUT/TAGOUT PROCEDURES

The Occupational Safety and Health Administration (OSHA) requires, in addition to posting safety warnings and barricading the work area (including, but not limited to, trucking office and loading docks), that 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® does not recommend any particular lockout device, but recommends the utilization of an OSHA approved device (refer to OSHA regulation 1910.147). RITE-HITE® 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

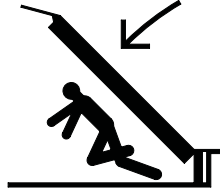
IMPORTANT is used to draw attention to a procedure that needs to be followed to prevent machine damage.

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.

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.

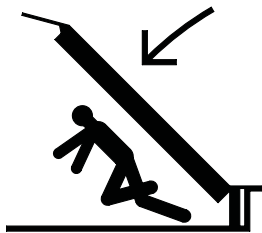
OTHER IMPORTANT OPERATIONAL SAFETY WARNINGS

DANGER

Never be in the path of the dock leveler platform without:

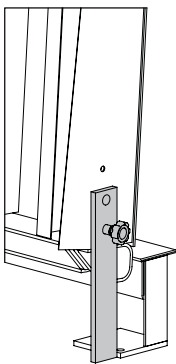
- Raising the platform by pressing and holding RAISE button. Raise platform to its highest position until the lip is fully extended. Release RAISE button.
- Turning off, locking out and tagging out the power to the control box.
- Barricading the dock leveler from any form of traffic.
- Engage the Maintenance 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

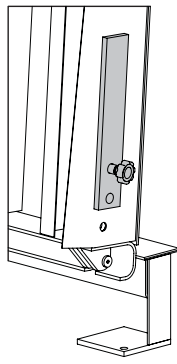


CRUSH HAZARD

- 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



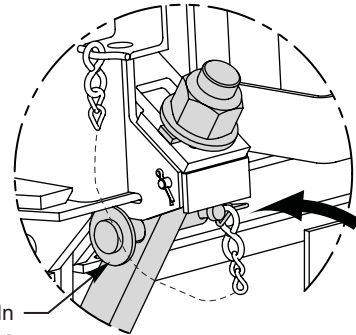
Leveler Stored
Brace Disengaged

WARNING

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

TO ENGAGE:

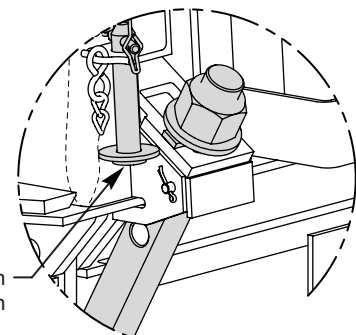
- Press RAISE Button Until Platform Stops Moving.
- Remove Linch Pin And Maintenance Pin From Bracket On Platform.
- Insert Maintenance Pin Into Tilt Back Rod And Secure With Linch Pin. Snap Wire Must Be Engaged On Pin.



Maintenance Pin In
Engaged Position

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.



Maintenance Pin
In Stored Position

FIGURE 2 - MAINTENANCE SUPPORT SYSTEM

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.

OPERATING INSTRUCTIONS

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

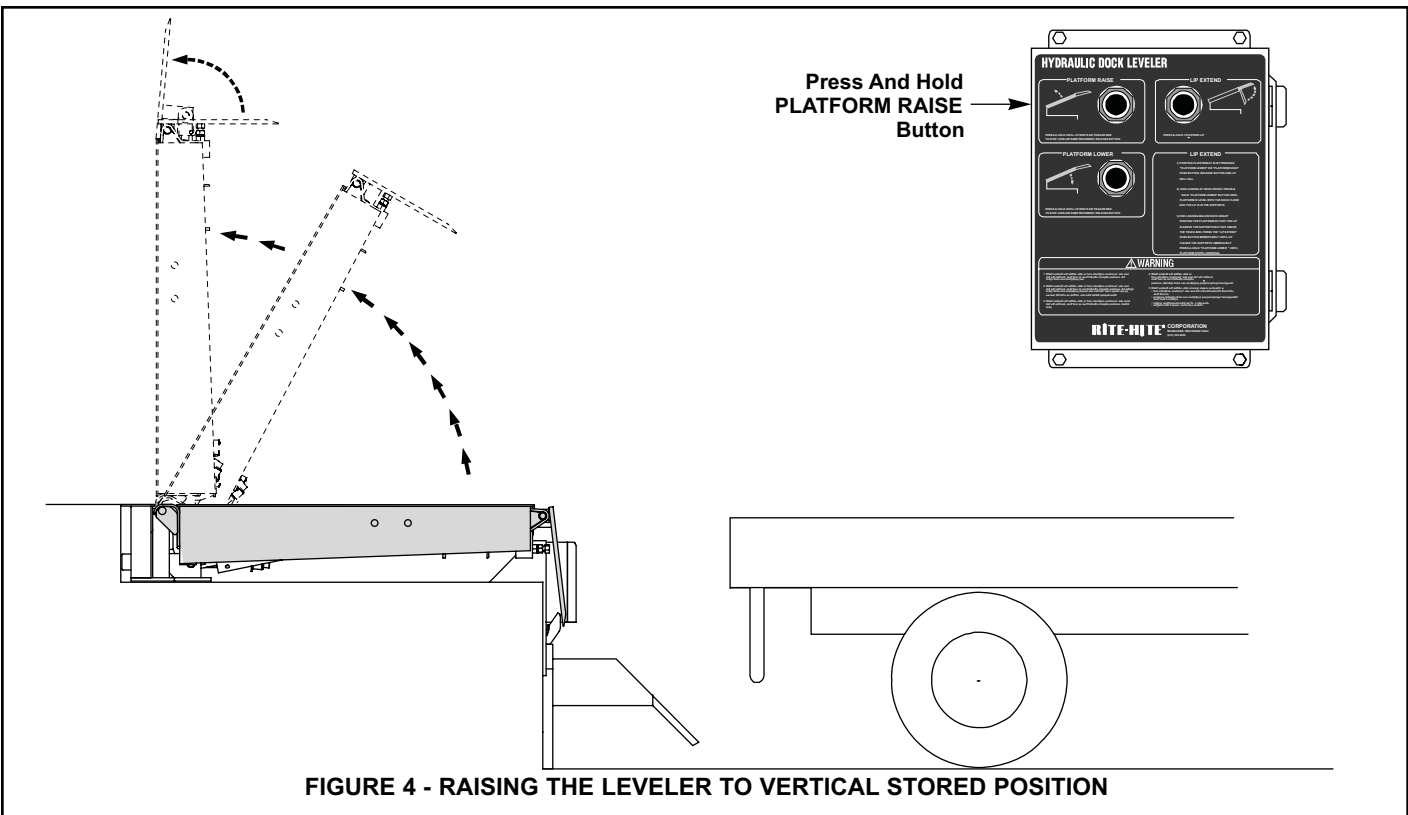
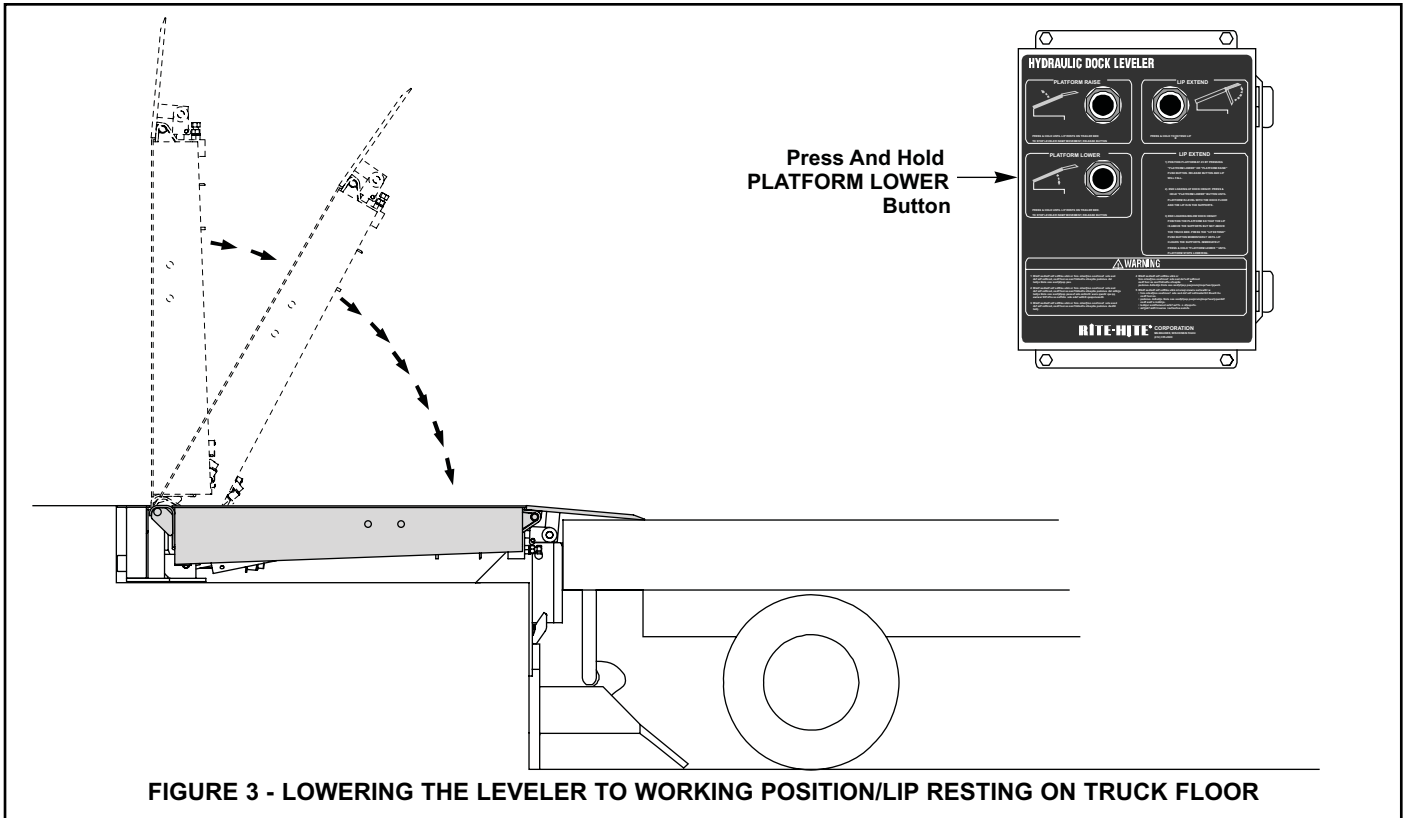
LOWERING LEVELER

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.

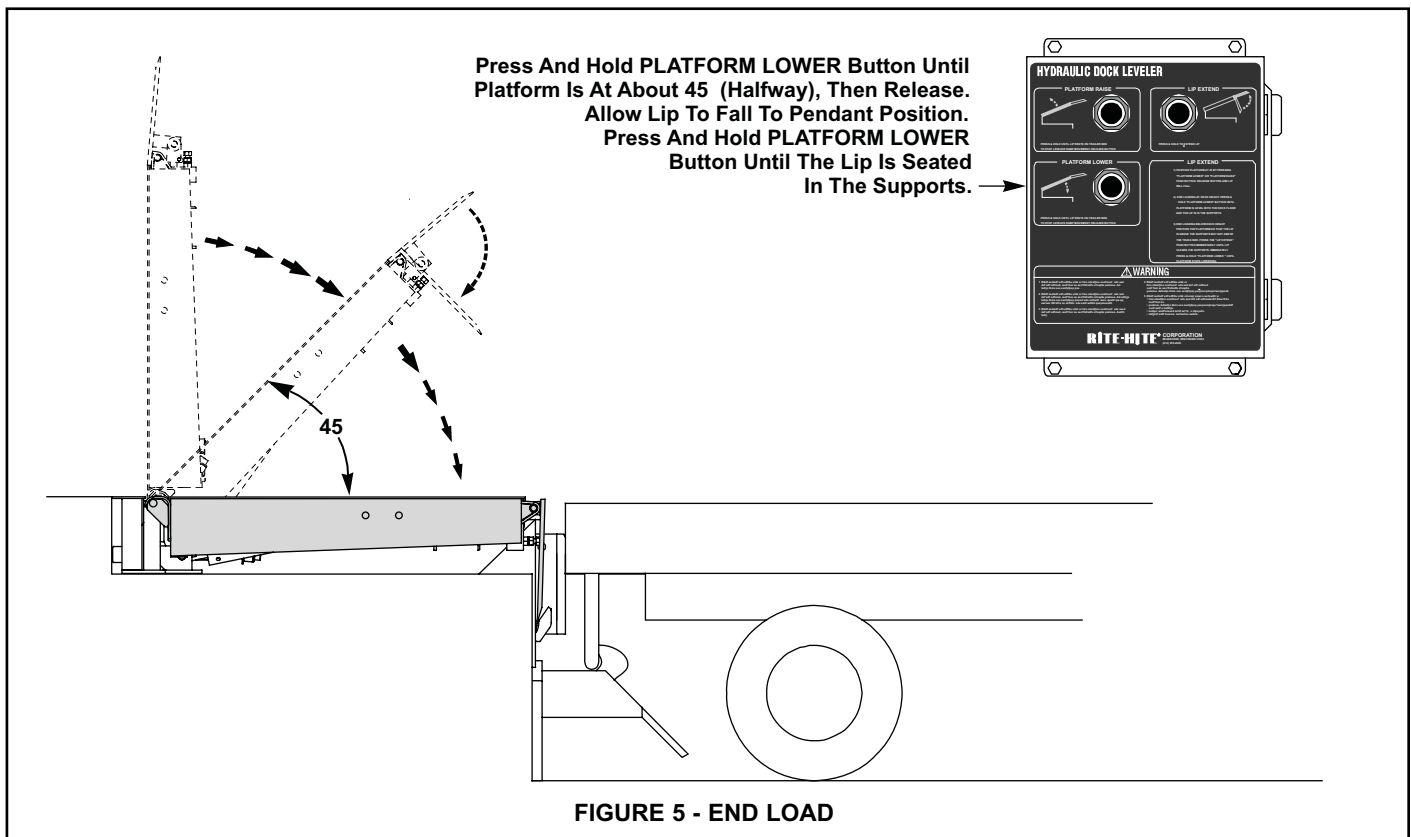
OPERATING INSTRUCTIONS CONT.



OPERATIONS INSTRUCTIONS CONT.

END LOADS

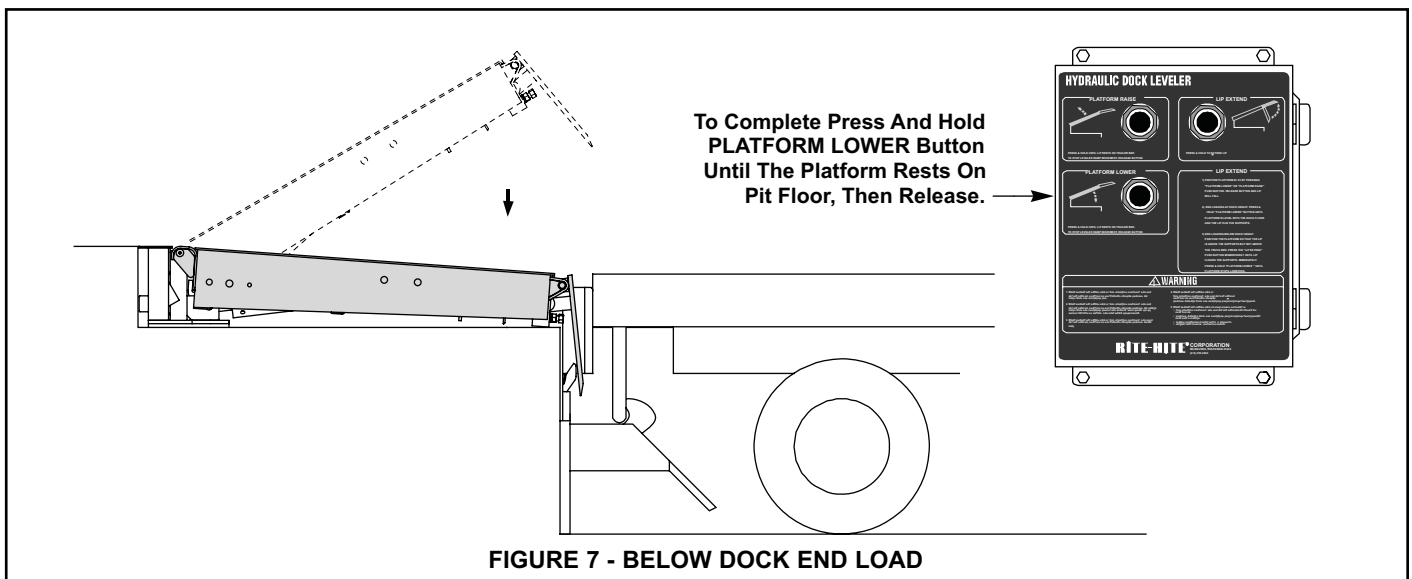
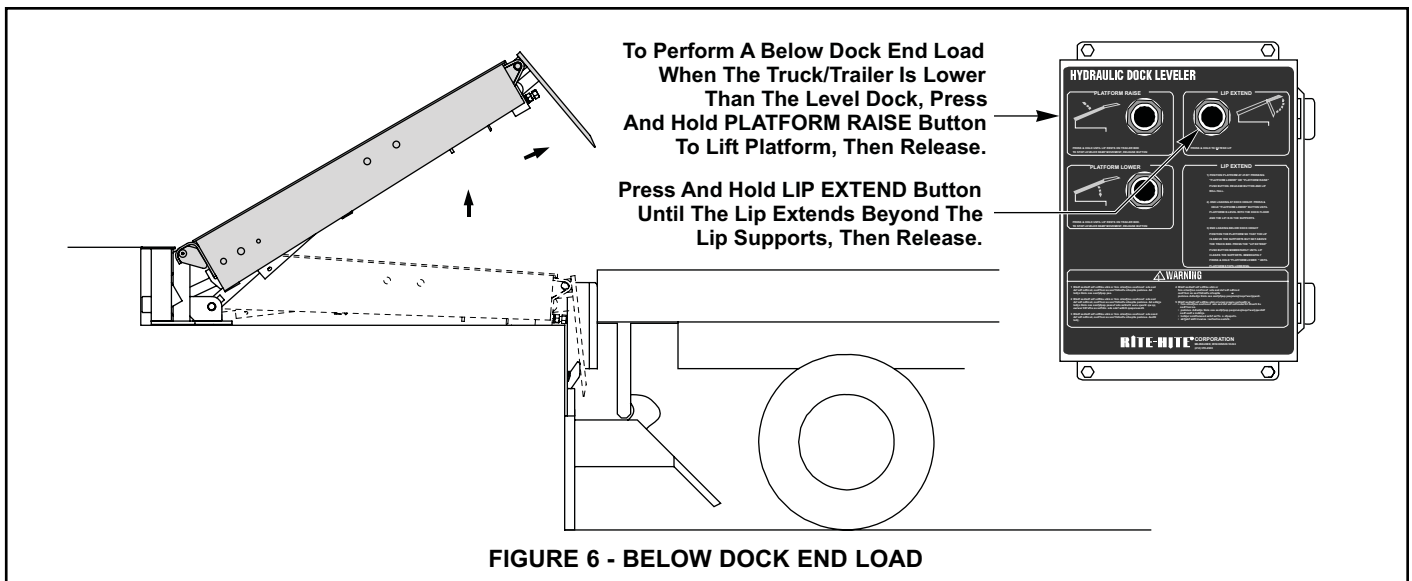
1. Press and hold the PLATFORM LOWER button until the platform is at about 45°. Release the PLATFORM LOWER button. See Figure 5.
2. Allow the platform to stay in this position until the lip falls to the pendant position.
3. Press and hold the PLATFORM LOWER button until the leveler is even with the floor 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.



OPERATING INSTRUCTIONS CONT.

BELOW DOCK END LOADS — FROM HORIZONTAL POSITION

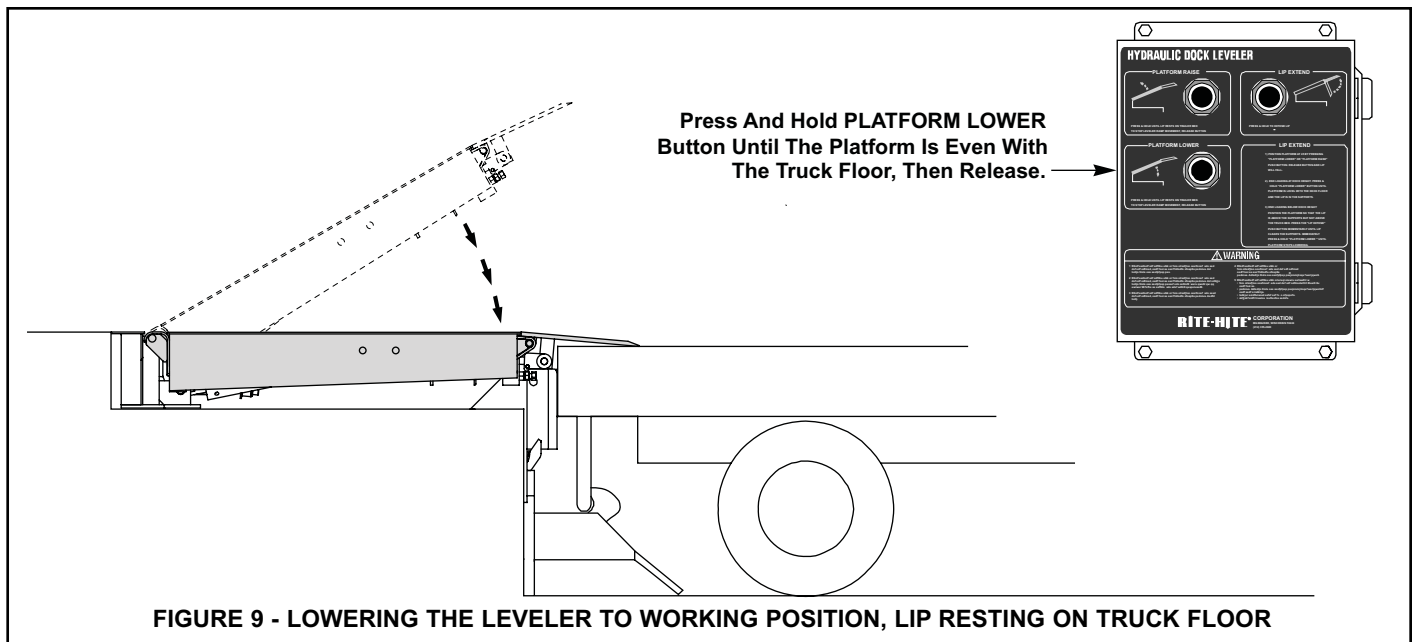
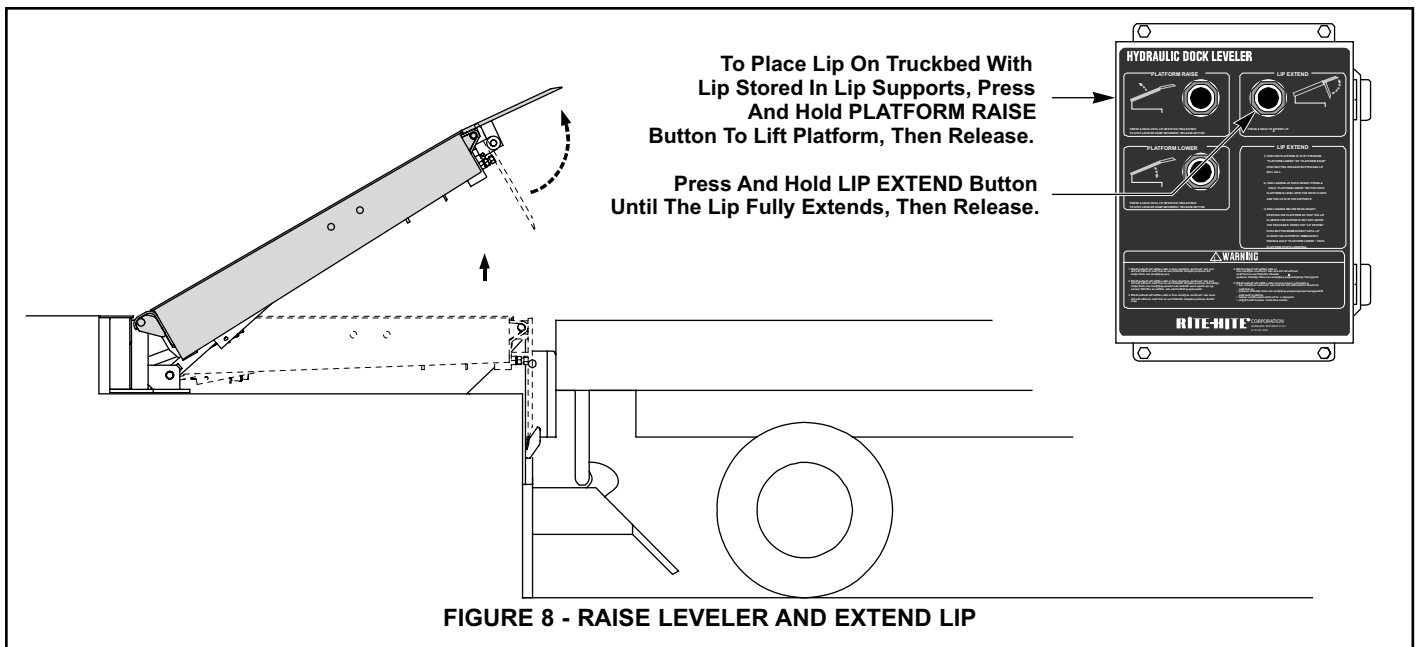
1. If the truck/trailer is lower than the level dock, press and hold the PLATFORM RAISE button to lift the platform and lip from the lip supports. Release the PLATFORM RAISE button. See Figure 6.
2. Press and hold the LIP EXTEND button until the lip extends just beyond the lip supports while still in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



OPERATIONS INSTRUCTIONS 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.

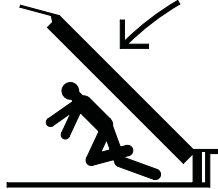


MAINTENANCE

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 procedures 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.

SUGGESTED LEVELER MAINTENANCE

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.

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.

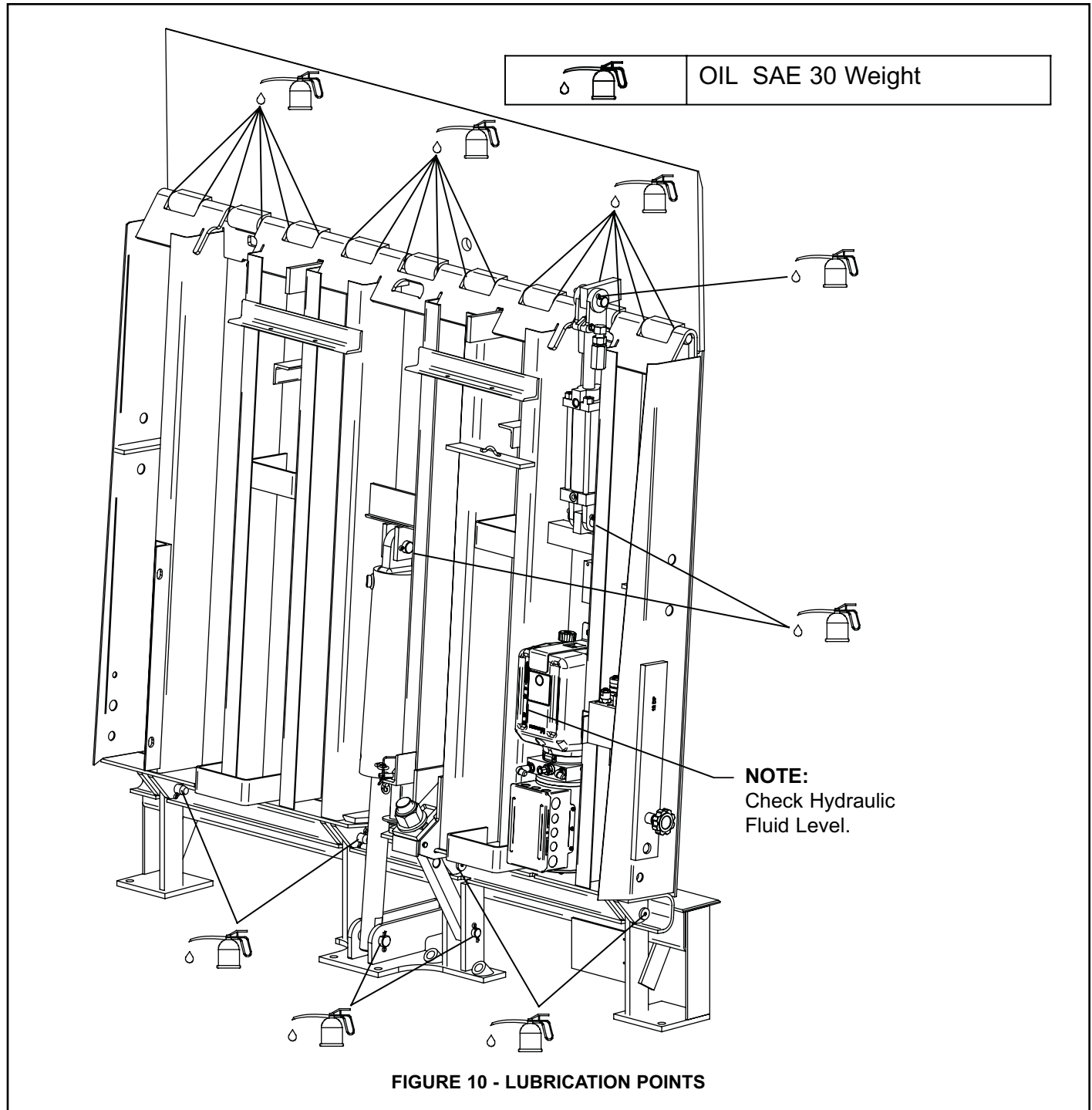
180 Days

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 17.



HYDRAULIC ADJUSTMENTS

IMPORTANT

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

CAUTION

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

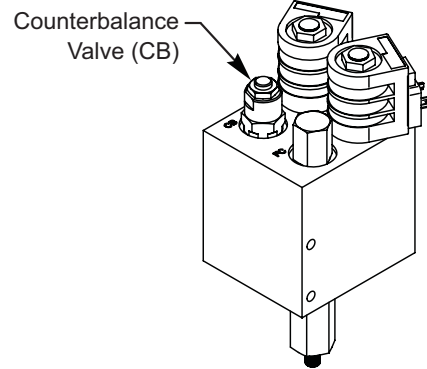


FIGURE 12 - COUNTERBALANCE VALVE

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.

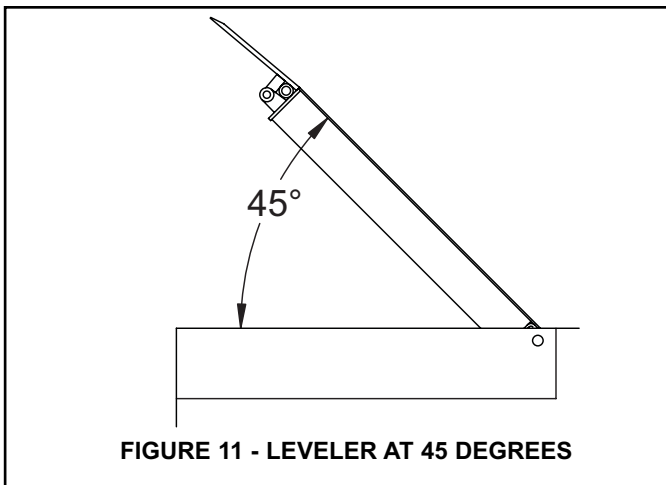


FIGURE 11 - LEVELER AT 45 DEGREES

- 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.

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.

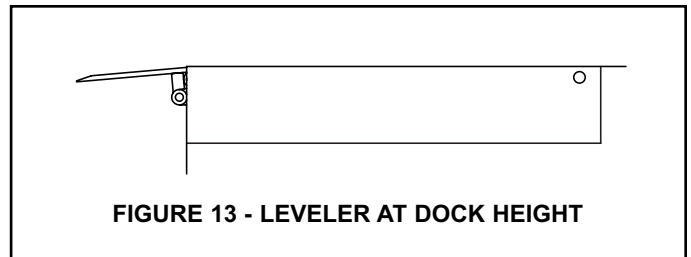


FIGURE 13 - LEVELER AT DOCK HEIGHT

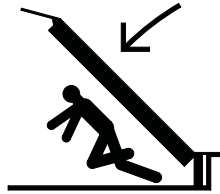
- b. If the empty platform does not hold at dock height position, rotate the adjustment screw another 1/8 of a turn clockwise as described in step #1B.
- c. If the platform does not easily break and lower to below dock level, raise platform and engage the Maintenance Pin. See page 6. Loosen the lock 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.

TILT BACK ADJUSTMENT

⚠ 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.

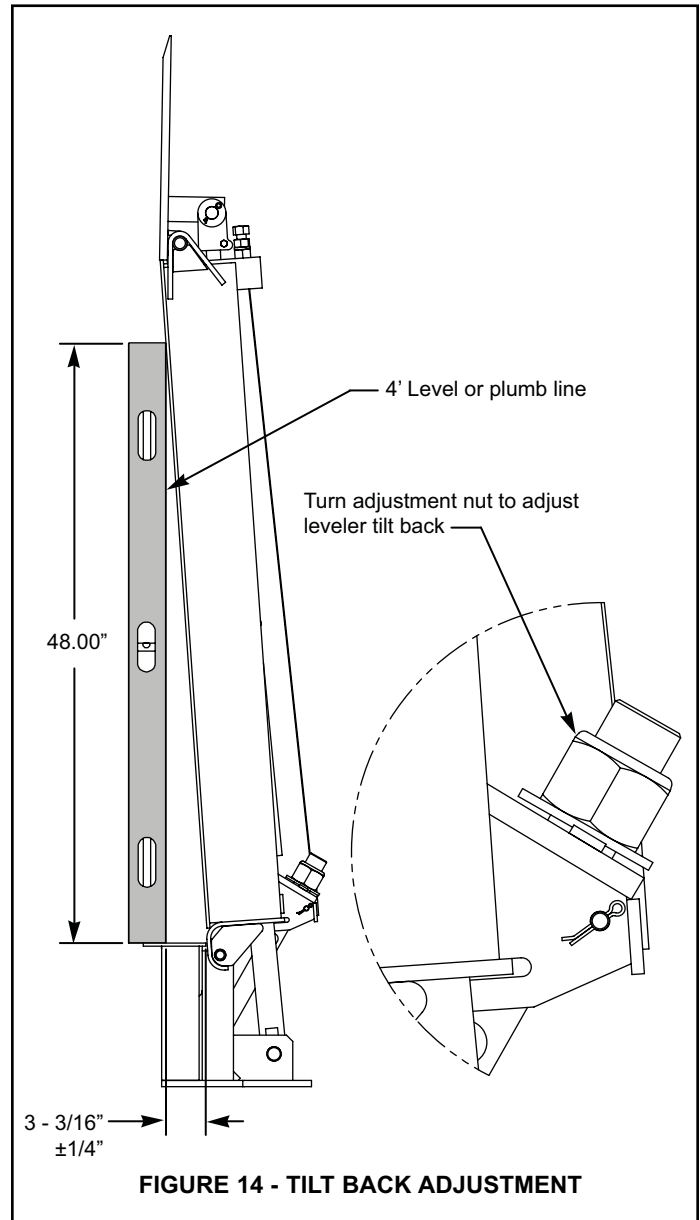


FIGURE 14 - TILT BACK ADJUSTMENT

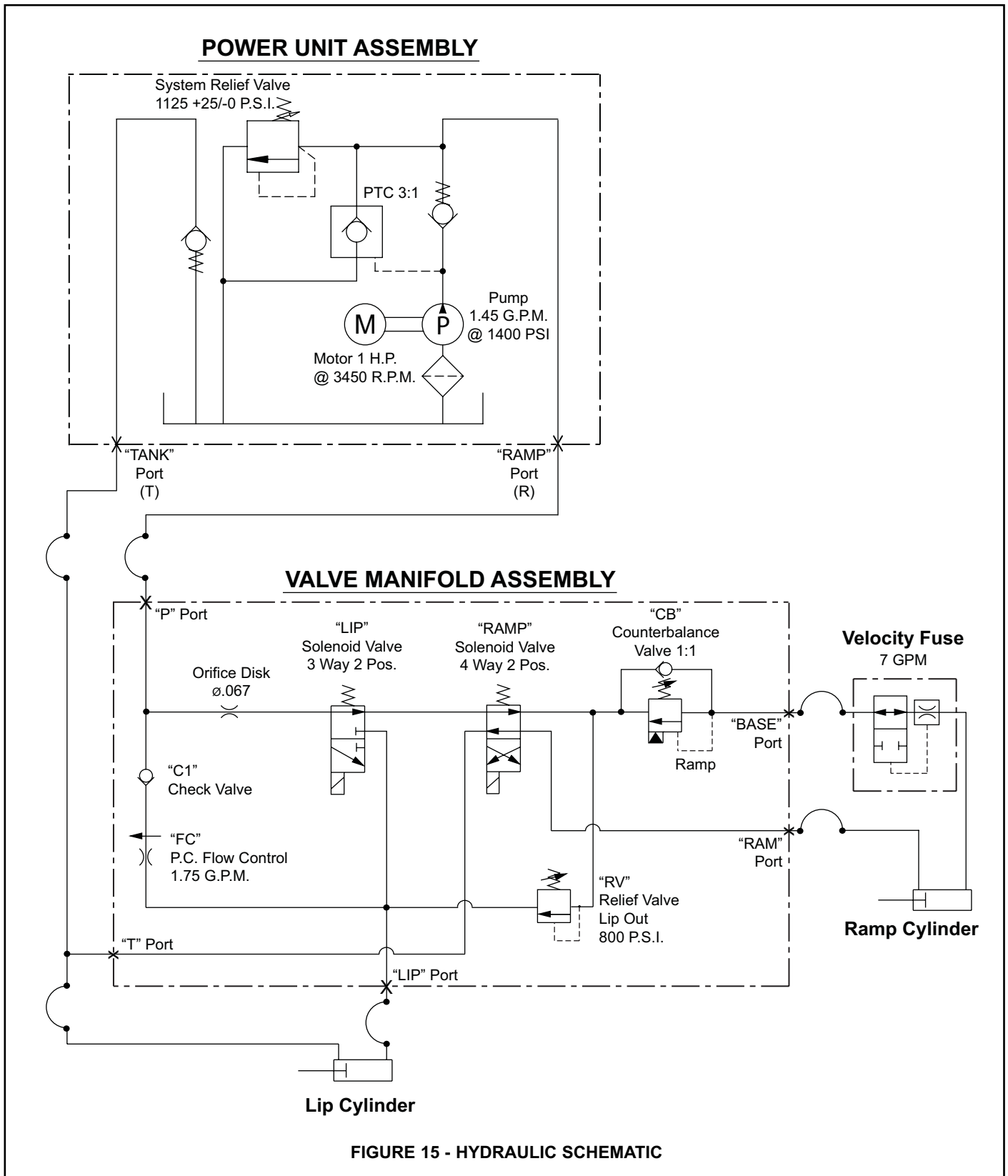
TROUBLESHOOTING CHART

Problem	Cause	Solution
1. Unit will not operate.	<ul style="list-style-type: none"> a. No power. b. Overload relay tripped. c. Loose connection. d. Is the voltage/motor phase correct? e. Is motor wired correctly? 	<ul style="list-style-type: none"> 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.	<ul style="list-style-type: none"> 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. 	<ul style="list-style-type: none"> 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.	<ul style="list-style-type: none"> 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. 	<ul style="list-style-type: none"> 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 15. 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.	<ul style="list-style-type: none"> a. Improper maintenance. b. Lip cylinder binding. c. Faulty or incorrect flow control. d. Faulty or incorrect check valve. f. Lip bent. 	<ul style="list-style-type: none"> a. Check for debris, lubricate lip spools. 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). f. Call your authorized RITE-HITE® Service Representative or RITE-HITE® at 1-800-456-0600.
5. Lip falls too fast.	<ul style="list-style-type: none"> a. Faulty or incorrect flow control. b. Three-way valve is not operating properly. 	<ul style="list-style-type: none"> 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.

TROUBLESHOOTING CHART CONT.

Problem	Cause	Solution
6. Platform falls too slowly.	<ul style="list-style-type: none"> a. Improper maintenance. b. "CB" valve not adjusted properly. 	<ul style="list-style-type: none"> a. Perform all required maintenance, see "Maintenance Procedures". Verify that the solenoids are properly adjusted. b. Verify "CB" valve setting. See page 15.
7. Platform falls too quickly. Does not stop at any position (too much float).	<ul style="list-style-type: none"> a. Improper maintenance. b. "CB" valve not adjusted properly. 	<ul style="list-style-type: none"> a. Perform all required maintenance, see "Maintenance Procedures". b. Verify "CB" valve setting. See page 15.
8. Platform drops suddenly and then will not operate.	<ul style="list-style-type: none"> a. Jammed velocity fuse. 	<ul style="list-style-type: none"> 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.	<ul style="list-style-type: none"> a. Four-way valve is not shifting. b. Button not making contact with contact block, is not energizing. 	<ul style="list-style-type: none"> 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.	<ul style="list-style-type: none"> a. Lip Extend 3-way valve is not energizing. b. Leakage past valves. c. Button not making contact with block, motor is not energizing. 	<ul style="list-style-type: none"> a. Verify wiring of solenoids. b. Check solenoid coil. Replace assembly. c. Replace contact block on button. Check motor for contact operation.
11. When pressing the PLATFORM LOWER button, the lip extends only, and when pressing LIP EXTEND button, the unit lowers.	<ul style="list-style-type: none"> a. Lip Extend 3-way valve is energizing when the LOWER button is pressed. The 4-way valve is energizing when the the LIP EXTEND button is pressed. 	<ul style="list-style-type: none"> 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.	<ul style="list-style-type: none"> a. Overload relay tripped. b. Improper electrical hookup. 	<ul style="list-style-type: none"> 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.	<ul style="list-style-type: none"> a. Faulty orifice. 	<ul style="list-style-type: none"> a. Verify that the orifice under the 3-way, 2-position valve is not damaged or missing.

HYDRAULIC SCHEMATIC



ELECTRICAL SCHEMATICS

Power Requirement: 120V, 1 Ph. 50/60 Hz.
 Branch Circuit Disconnect Fusing Requirement:
 30 Amp Dual Element Time Delay Or Low Peak
 Fuse (Supplied By Others).
 Use One Leveler Per Overload Protection Device.
 [Ref. N.E.C. 1999 Para. 430-110 (C)] Consult Local Code.
 A Branch Circuit Disconnect Shall Be Located Within A
 50 Ft. Radius And Be Visible From The Control Box Location.
 [Ref. N.E.C. 1999 Para. 430-102 (A) And Article 100].
 Installation Per Local Electrical Codes. Refer All Installation And
 Service To Qualified Personnel.

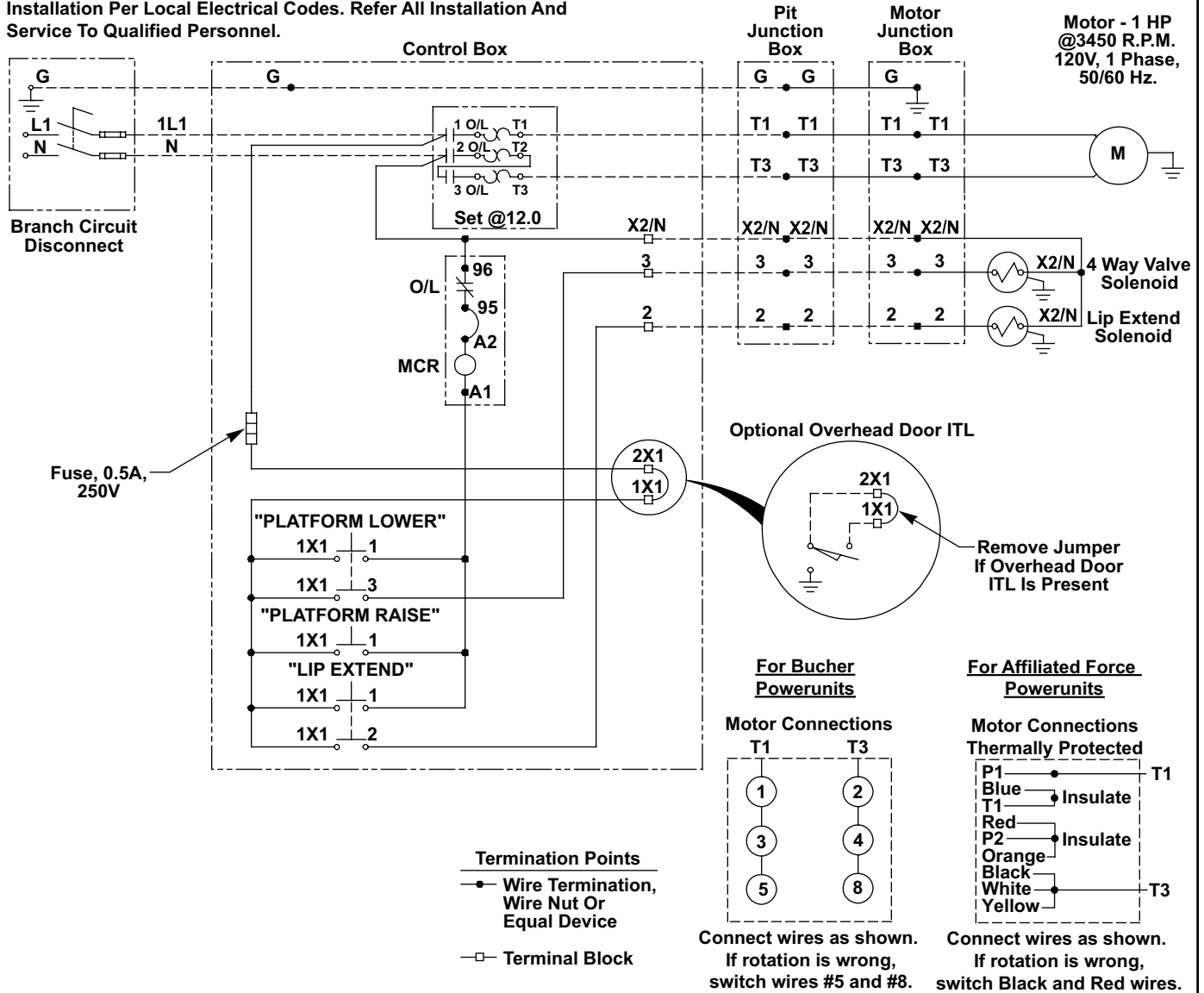


FIGURE 16 - 110/115V 1 PHASE SCHEMATIC

ELECTRICAL SCHEMATICS CONTINUED

Power Requirement: 240V, 1 Ph. 50/60 Hz.
 Branch Circuit Disconnect Fusing Requirement:
 20 Amp Dual Element Time Delay Or Low Peak
 Fuse (Supplied By Others).
 Use One Leveler Per Overload Protection Device.
 [Ref. N.E.C. 1999 Para. 430-110 (C)] Consult Local Code.
 A Branch Circuit Disconnect Shall Be Located Within A
 50 Ft. Radius And Be Visible From The Control Box Location.
 [Ref. N.E.C. 1999 Para. 430-102 (A) And Article 100].
 Installation Per Local Electrical Codes. Refer All Installation And
 Service To Qualified Personnel.

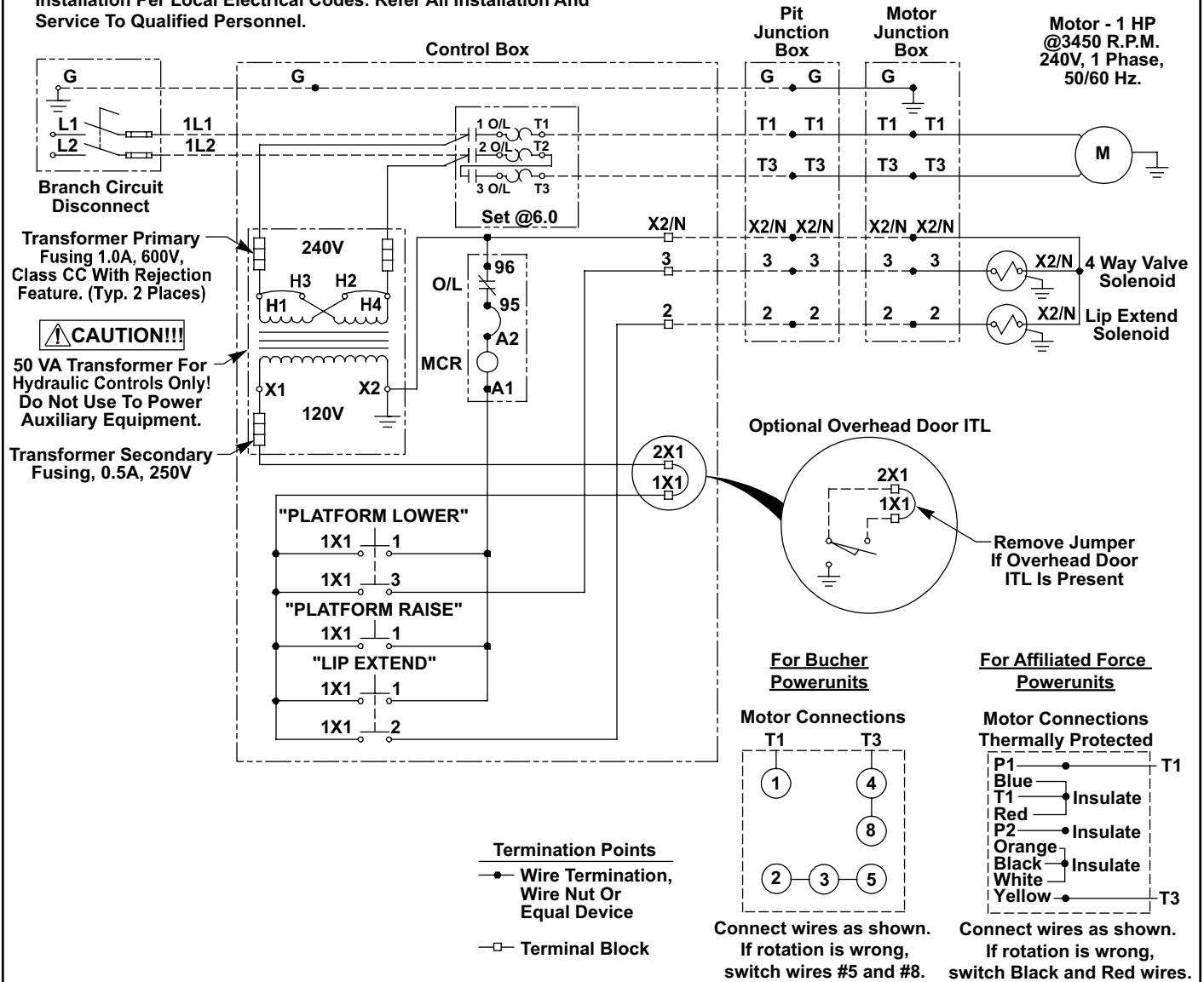


FIGURE 17 - 220/208-230V 1 PHASE SCHEMATIC

ELECTRICAL SCHEMATICS CONTINUED

Power Requirement: 240V, 3 Ph. 50/60 Hz.
 Branch Circuit Disconnect Fusing Requirement:
 8 Amp Dual Element Time Delay Or Low Peak Fuse (Supplied By Others).
 Use One Leveler Per Overload Protection Device.
 [Ref. N.E.C. 1999 Para. 430-110 (C)] Consult Local Code.
 A Branch Circuit Disconnect Shall Be Located Within A 50 Ft. Radius And Be Visible From The Control Box Location.
 [Ref. N.E.C. 1999 Para. 430-102 (A) And Article 100].
 Installation Per Local Electrical Codes. Refer All Installation And Service To Qualified Personnel.

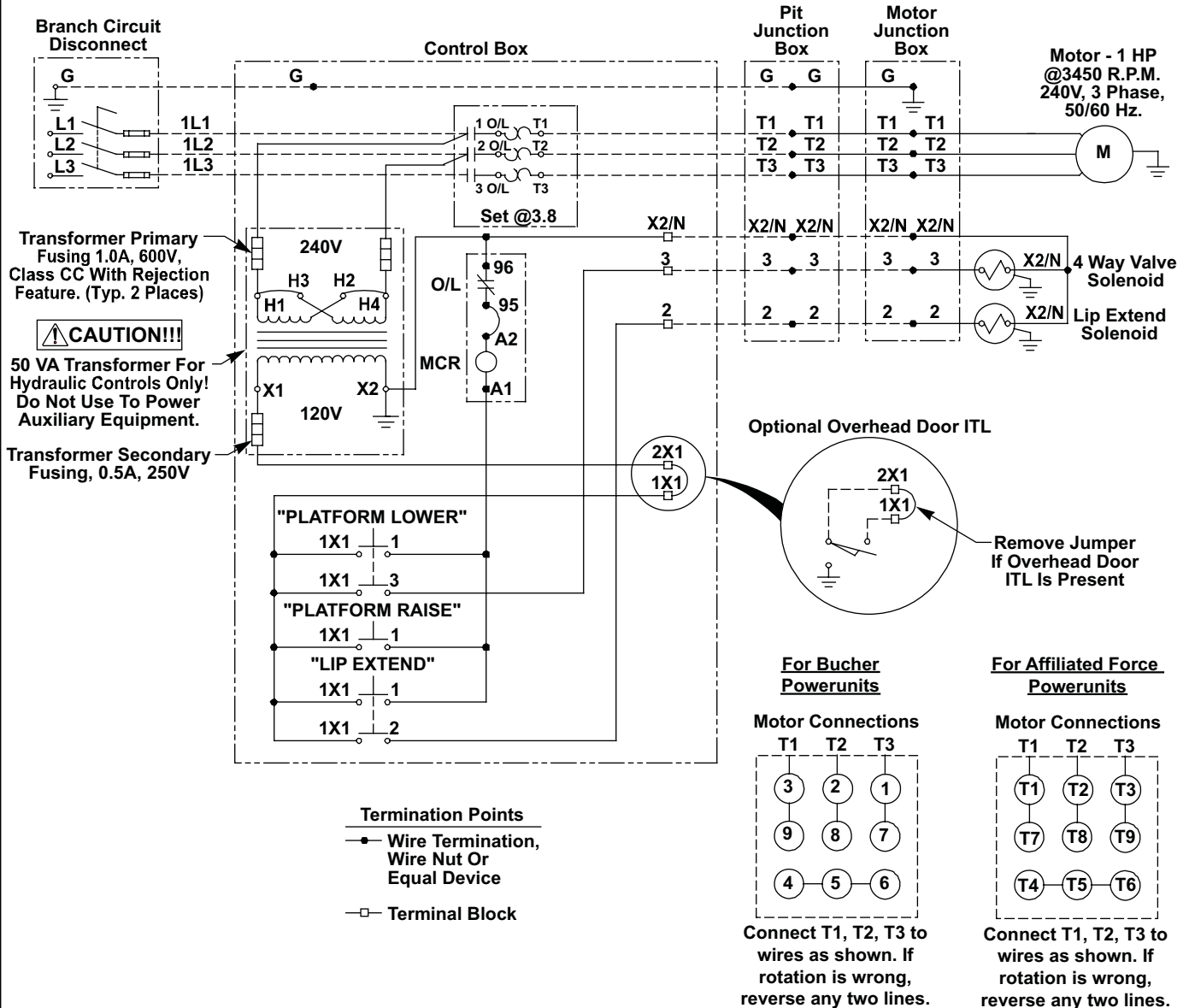


FIGURE 18 - 190/208-230-277V 3 PHASE SCHEMATIC

ELECTRICAL SCHEMATICS CONTINUED

Power Requirement: 380V, 3 Ph. 50 Hz.
 Branch Circuit Disconnect Fusing Requirement:
 4 Amp Dual Element Time Delay Or Low Peak
 Fuse (Supplied By Others).
 Use One Leveler Per Overload Protection Device.
 [Ref. N.E.C. 1999 Para. 430-110 (C)] Consult Local Code.
 A Branch Circuit Disconnect Shall Be Located Within A
 50 Ft. Radius And Be Visible From The Control Box Location.
 [Ref. N.E.C. 1999 Para. 430-102 (A) And Article 100].
 Installation Per Local Electrical Codes. Refer All Installation And
 Service To Qualified Personnel.

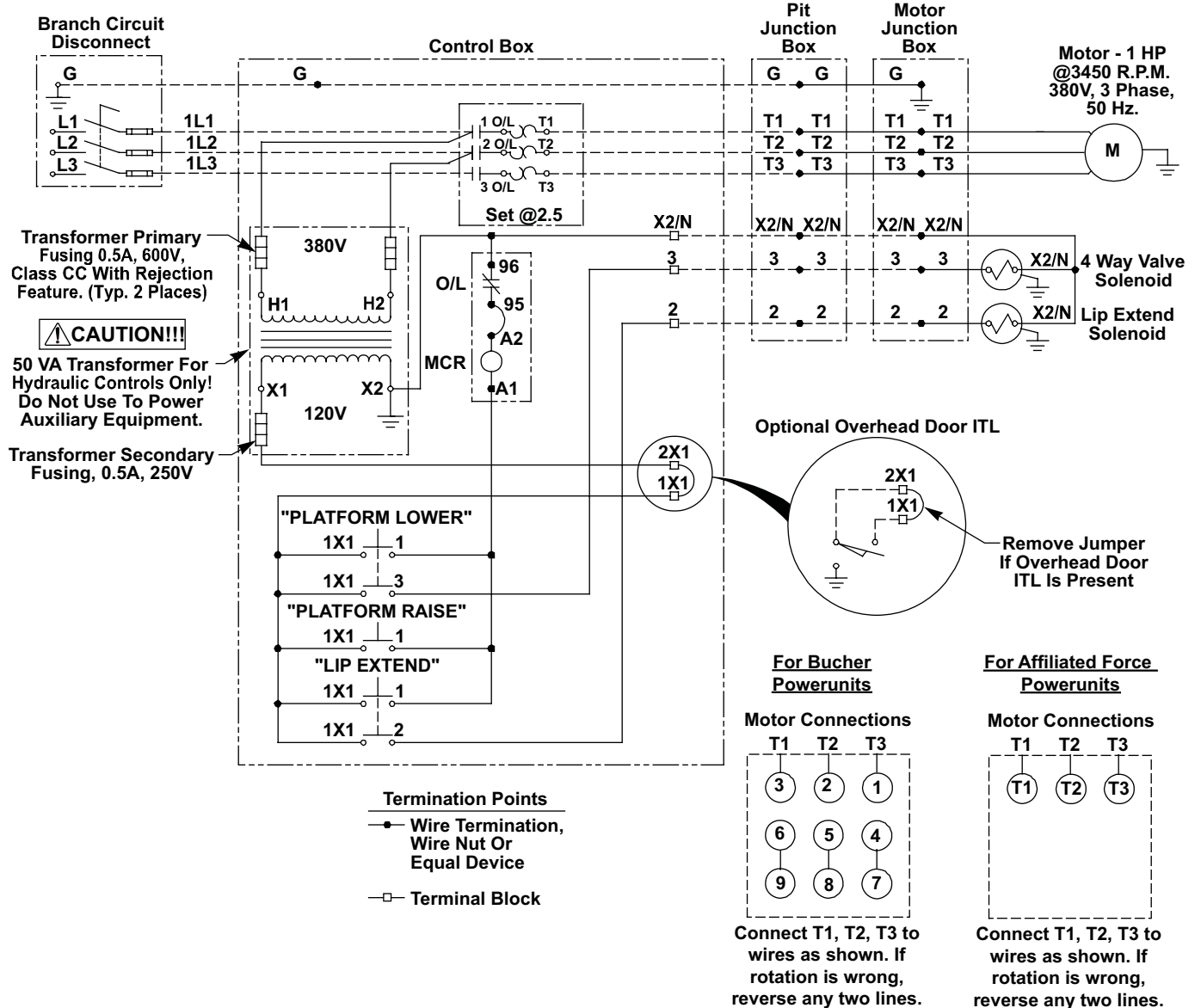


FIGURE 19 - 380V 3 PHASE SCHEMATIC

ELECTRICAL SCHEMATICS CONTINUED

Power Requirement: 480V, 3 Ph. 50/60 Hz.
 Branch Circuit Disconnect Fusing Requirement:
 4 Amp Dual Element Time Delay Or Low Peak
 Fuse (Supplied By Others).
 Use One Leveler Per Overload Protection Device.
 [Ref. N.E.C. 1999 Para. 430-110 (C)] Consult Local Code.
 A Branch Circuit Disconnect Shall Be Located Within A
 50 Ft. Radius And Be Visible From The Control Box Location.
 [Ref. N.E.C. 1999 Para. 430-102 (A) And Article 100].
 Installation Per Local Electrical Codes. Refer All Installation And
 Service To Qualified Personnel.

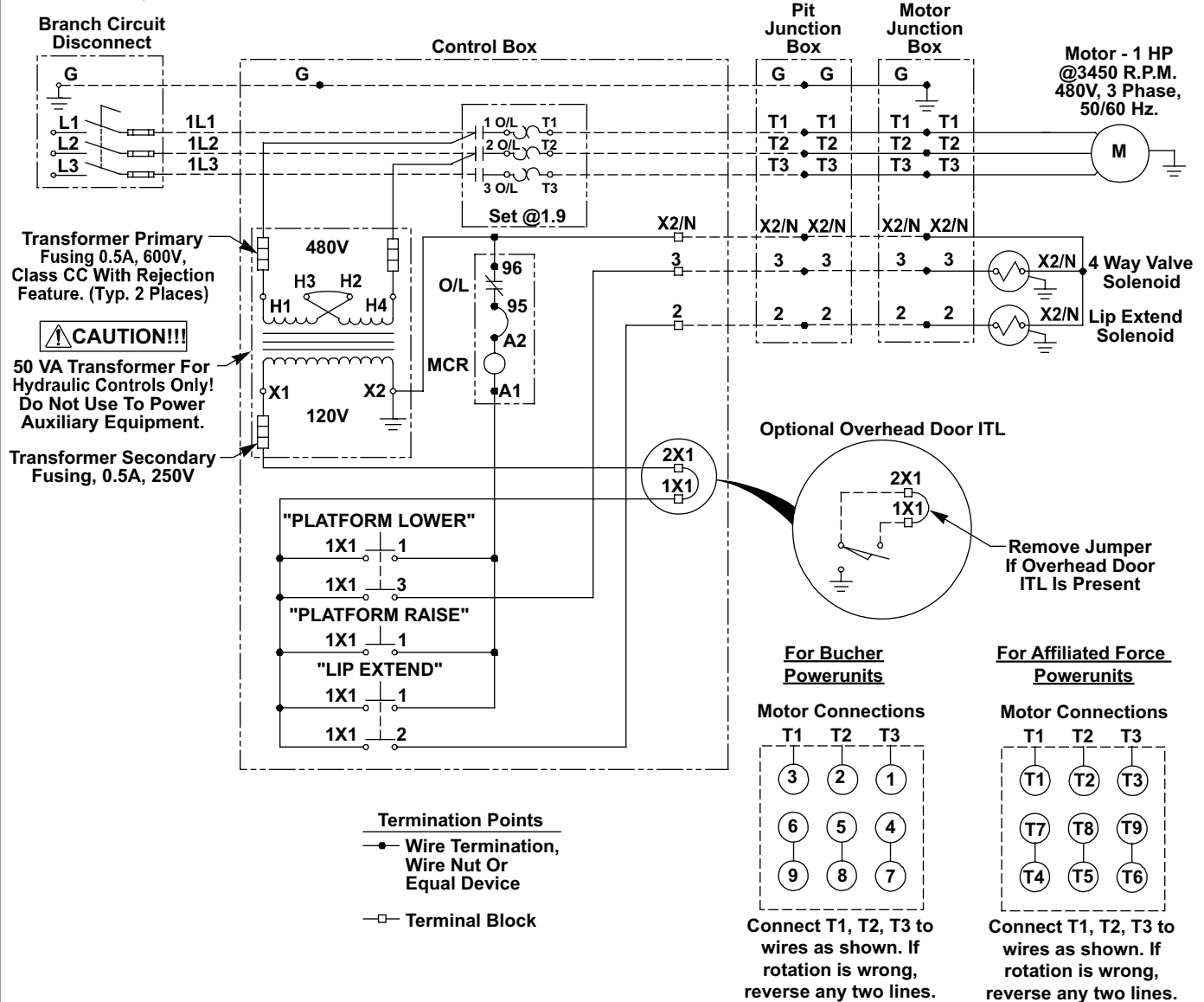


FIGURE 20 - 460V 3 PHASE SCHEMATIC

ELECTRICAL SCHEMATICS CONTINUED

Power Requirement: 575V, 3 Ph. 50 Hz.
 Branch Circuit Disconnect Fusing Requirement:
 3 Amp Dual Element Time Delay Or Low Peak
 Fuse (Supplied By Others).
 Use One Leveler Per Overload Protection Device.
 [Ref. N.E.C. 1999 Para. 430-110 (C)] Consult Local Code.
 A Branch Circuit Disconnect Shall Be Located Within A
 50 Ft. Radius And Be Visible From The Control Box Location.
 [Ref. N.E.C. 1999 Para. 430-102 (A) And Article 100].
 Installation Per Local Electrical Codes. Refer All Installation And
 Service To Qualified Personnel.

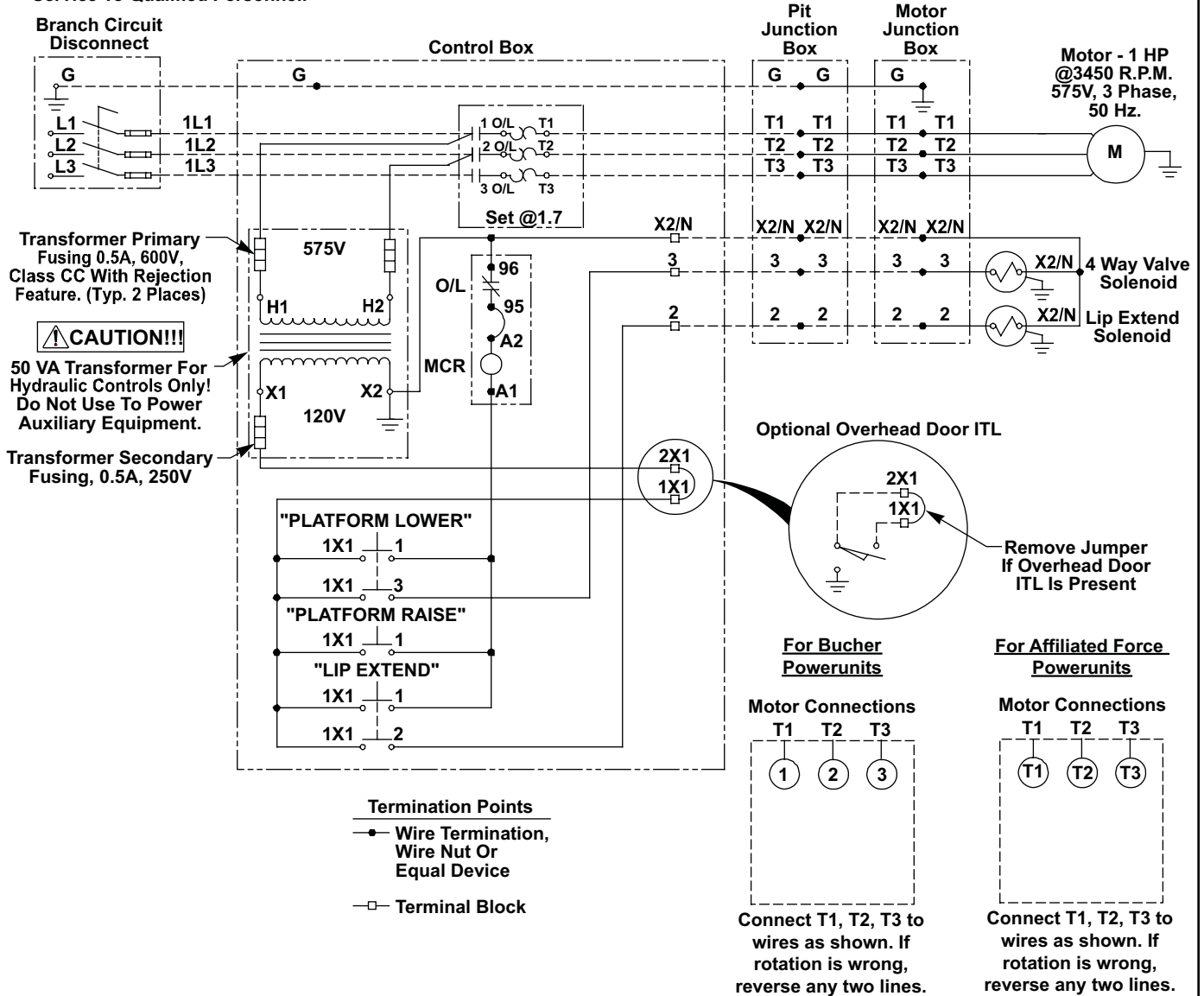
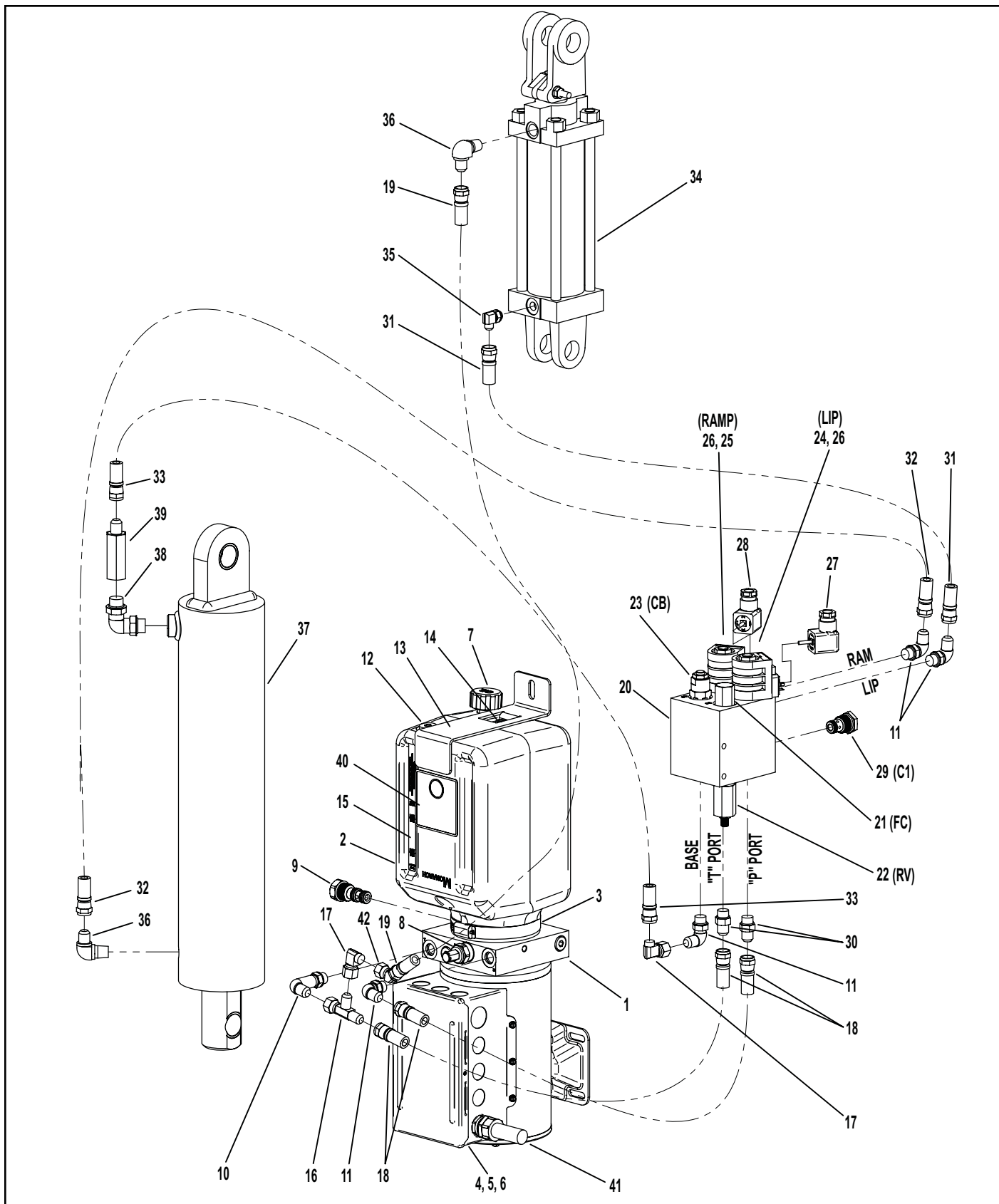


FIGURE 21 - 575V 3 PHASE SCHEMATIC

REPLACEMENT PARTS LISTS - LIP AND PLATFORM

Item	Qty.	Description	Power Unit Location		Left		Right		
			Rear Frame Depth		10' Deep	12' Deep	12' Deep	15' Deep	
			Part No.	Part No.	Part No.	Part No.	Part No.	Part No.	
1	1	Rear Frame Weldment	639.xxx	639.xxx	380.xxx	391.xxx			
2	1	Platform Weldment	378.xxx	398.xxx	368.xxx	368.xxx			
3	1	Lip Weldment	581.xxx	581.xxx	581.xxx	581.xxx			
4	4	Pin Clevis HD .875 x 3.25L ZP	118782	118782	118782	118782			
	4	Pin Clevis HD .875 x 3.25L ZP (Stainless Steel)	-	-	-	-			
5	4	Split Bushing .875 x 1 x .625L	123690	123690	123690	123690			
6	13	Cotter Pin .188 Dia. x 1.50L	51907	51907	51907	51907			
7	2	Lip Hinge Pin 6' Wide	562.100	562.100	562.100	562.100			
	2	Lip Hinge Pin 6.5' Wide	562.101	562.101	562.101	562.101			
	2	Lip Hinge Pin 7' Wide	562.102	562.102	562.102	562.102			
	2	Lip Hinge Pin 6' Wide (Stainless Steel)	490.100	490.100	490.100	490.100			
	2	Lip Hinge Pin 6.5' Wide (Stainless Steel)	490.101	490.101	490.101	490.101			
	2	Lip Hinge Pin 7' Wide (Stainless Steel)	490.102	490.102	490.102	490.102			
8	2	Tension Pin .25 Dia x 1.75L	123960	123960	123960	123960			
9	1	Tilt Back Rod	123997	123997	123997	123997			
10	1	Clevis Pin .875Dia x 4L	123635	123635	123635	123635			
11	1	Nut Weldment 1.5-6 HEX	123710	123710	123710	123710			
12	1	Guide, Tilt Back Rod	123683	123683	123683	123683			
13	1	Clevis Pin .38 x 3.75L	125592	125592	125592	125592			
14	1	Cotter Pin .125 x 1L	51901	51901	51901	51901			
15	1	Power Unit	See Page 28						
16	1	Bolt .375-16 x .75 HHCS	122979	122979	122979	122979			
17	1	Washer Flat .38	51700	51700	51700	51700			
18	1	Washer Lock .38	51773	51773	51773	51773			
19	1	Hydraulic Oil Decal	119530	119530	119530	119530			
20	1	Ramp Cylinder 4" Bore Double Acting	123692	123691	123691	123691			
21	1	Clevis Pin 1.125Dia x 4L Flat	124879	124879	124879	124879			
22	1	Clevis Pin 1.125Dia x 2.75L Flat	124878	124878	124878	124878			
23	1	Lip Cylinder 2.5" Bore x 6 Stroke	119291	119291	119291	119291			
24	2	Clevis Pin 1 x 3.625	52630	52630	52630	52630			
25	1	Valve Manifold Assembly	See Page 28						
26	2	Washer Lock .25	51800	51800	51800	51800			
27	2	Nut HEX .25-20	51524	51524	51524	51524			
28	2	Bolt HEX .25-20 x 4.5L	58065	58065	58065	58065			
29	1	Bolt HEX .75-10 x 3L	51186	51186	51186	51186			
30	1	Nut HEX .75-10 Grade 5	51517	51517	51517	51517			
31	1	Washer Lock .75 Dia	51814	51814	51814	51814			
32	1	Chain Assy. Safety Pin	123741	123741	123741	123741			
33	1	Linch Pin .375 x 2.5	68014	68014	68014	68014			
34	2	S-Hook .219 Wire	51102	51102	51102	51102			
35	2	Lip Keeper Weldments	124304	124304	124304	124304			
36	1	Access Brace .63 x 3 x (Lenght)	135724	135846	135846	135848			
37	1	Weld Pin Pull Pin	135721	135721	135721	135721			
38	1	Handle With Rubber Grip	129175	129175	129175	129175			
39	1	Washer Flat 1.00 SAE ZP	51721	51721	51721	51721			
40	1	Shaft Collar 1.00 ID 1.75 OD	132822	132822	132822	132822			

REPLACEMENT PARTS - HYDRAULIC COMPONENT PARTS

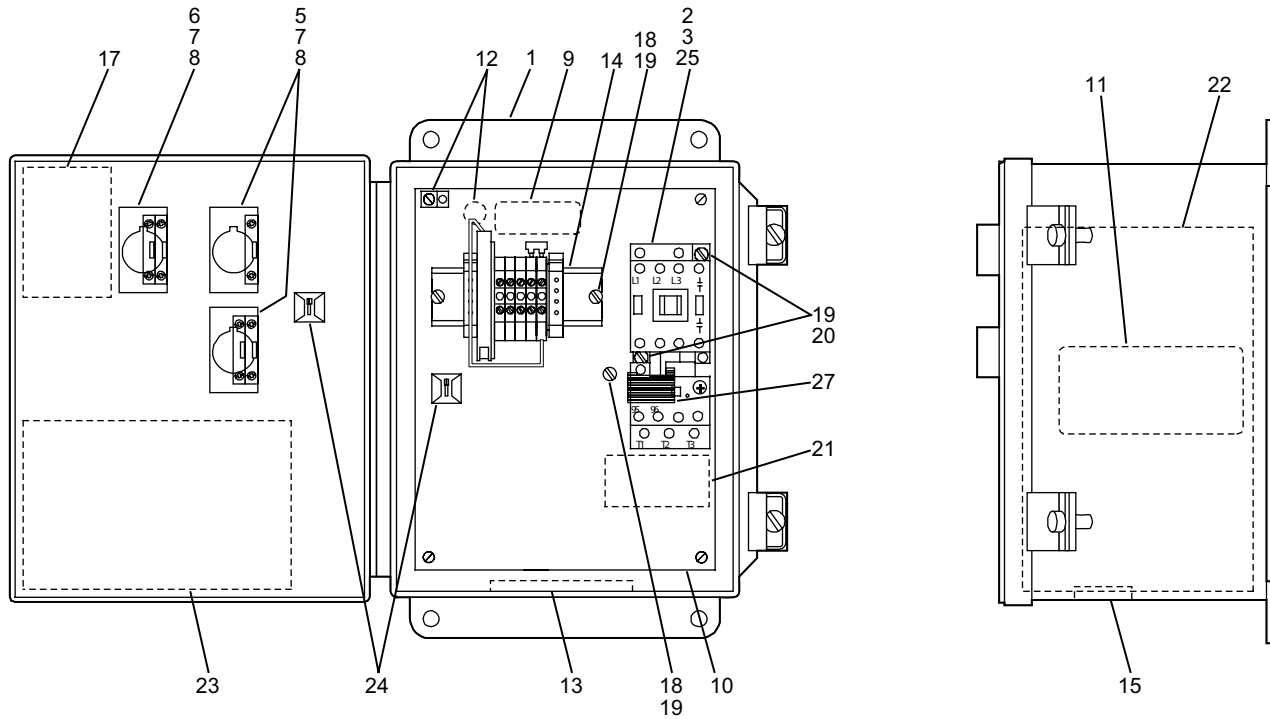


REPLACEMENT PARTS LIST - HYDRAULIC COMPONENT PARTS

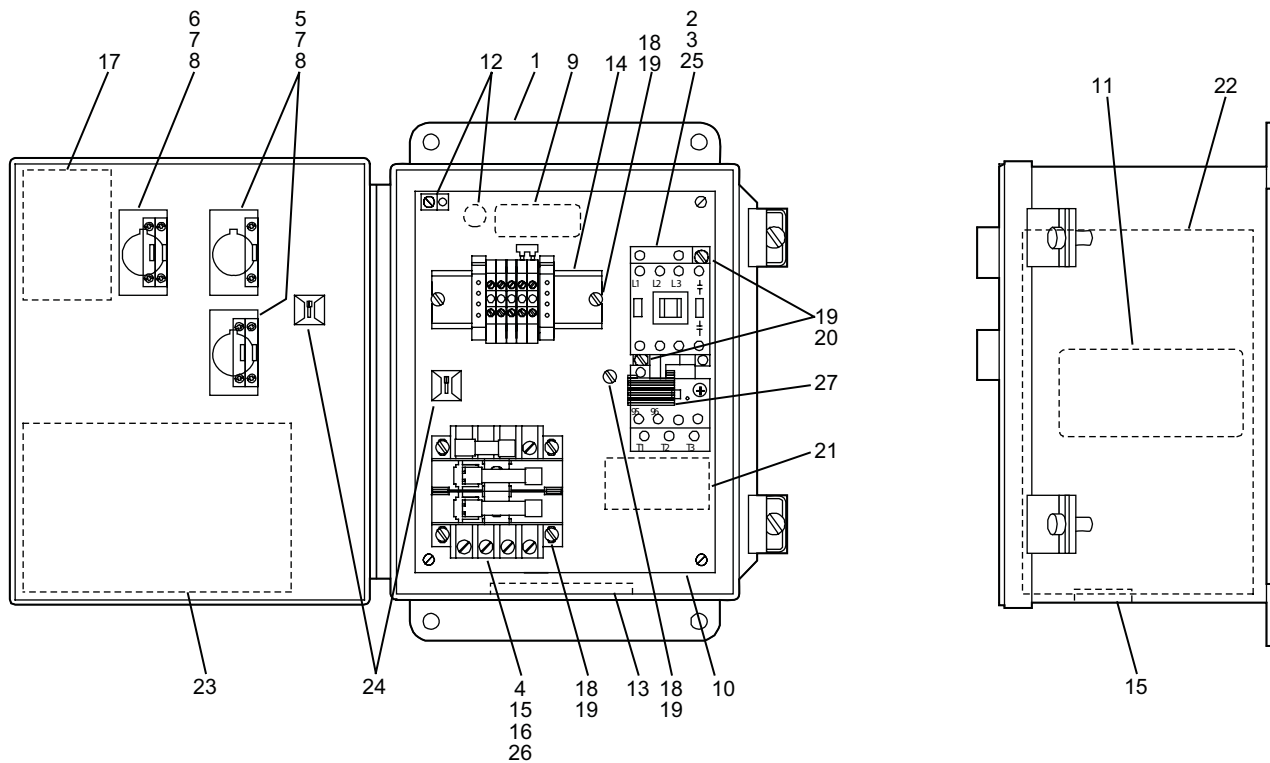
Item	Qty.	Description	Power Unit Location		Left		Right	
			Leveler Length		5' Long	6' Long	6' Long	8' Long
			Part No.	Part No.	Part No.	Part No.	Part No.	Part No.
1	1	PU 1HP 115/208-230V 1 Phase (Items #2-15)	132749	132749	132749	132749	132749	132749
	1	PU 1HP 208-230/380-460V 3 Phase (Items #2-15)	132750	132750	132750	132750	132750	132750
	1	PU 1HP 575V 3 Phase (Items #2-15)	132751	132751	132751	132751	132751	132751
2	1	Plastic Tank 1.5 Gal	132753	132753	132753	132753	132753	132753
3	1	Hose Clamp - Tank	132754	132754	132754	132754	132754	132754
4	1	Motor Junction Box	132760	132760	132760	132760	132760	132760
5	1	Junction Box Cover	132759	132759	132759	132759	132759	132759
6	1	Capacitor 1PH	132755	132755	132755	132755	132755	132755
7	1	Vent Fitting .38NPT	132756	132756	132756	132756	132756	132756
8	1	Relief Valve Kit	132757	132757	132757	132757	132757	132757
9	1	Check Valve PTC	132758	132758	132758	132758	132758	132758
10	1	Fitting #6MORB #6MJ 90 LONG	16917	16917	16917	16917	16917	16917
11	4	Fitting #6MORB #6MJ 90	55267	55267	55267	55267	55267	55267
12	1	Fitting Plug #8MORB	132745	132745	132745	132745	132745	132745
13	1	Retaining Bracket	132761	132761	132761	132761	132761	132761
14	1	Retaining Bracket Bolt 5/16-18 X 5/8L Serr Flange	58069	58069	58069	58069	58069	58069
15	1	Oil Level Decal	132764	132764	132764	132764	132764	132764
16	1	Fitting Tee 6FJS 6MJ 6MJ	121070	121070	121070	121070	121070	121070
17	2	Fitting Elbow 90 #6MJ #6FJS	100364	100364	100364	100364	100364	100364
18	2	Hose .38DIA #6FJS	124728	124728	124728	124728	124728	124728
19	1	Hose .38DIA #6FJS	125002	124738	124731	124733	124733	124733
20	1	Manifold Assy Adj Relief (Does not include item #29)	137488	137488	137488	137488	137488	137488
21	1	Fixed Pressure Comp. Flow Control Valve "FC"	55299	55299	55299	55299	55299	55299
22	1	Lip Out Valve (Adjustable) 800 PSI Relief "RV"	137489	137489	137489	137489	137489	137489
23	1	Counterbalance Valve 1:1 Ratio "CB"	55388	55388	55388	55388	55388	55388
24	1	3 Way 2 Pos. Cartridge Valve "LIP"	55186	55186	55186	55186	55186	55186
25	1	4 Way 2 Pos. Cartridge Valve "RAMP"	55184	55184	55184	55184	55184	55184
26	2	120 Vac Coil HC Encap.	55261	55261	55261	55261	55261	55261
27	1	Cable Hirschmann Yellow	128102	128102	128102	128102	128102	128102
28	1	Cable Hirschmann Black	128101	128101	128101	128101	128101	128101
29	1	Lip Check Valve "C1"	Consult Factory					
30	2	Fitting #6MORB #6MJ	55386	55386	55386	55386	55386	55386
31	1	Hose .38DIA #6FJS	124729	124729	124728	124732	124732	124732
32	1	Hose .38DIA #6FJS (10" Deep Frame)	124729	124729	-	-	-	-
		Hose .38DIA #6FJS (12-15" Deep Frame)	124736	124736	124738	124738	124738	124738
33	1	Hose .38DIA #6FJS (10" Deep Frame)	124733	124733	-	-	-	-
	1	Hose .38DIA #6FJS (12-15" Deep Frame)	124999	124999	124734	124734	124734	124734
34	1	Lip Cylinder 2.5" Bore 6STR 2Port	119291	119291	119291	119291	119291	119291
35	1	Fitting Elbow 90 #4MORB #6MJ	19035	19035	19035	19035	19035	19035
36	2	Fitting Elbow 90 .38NPT 6MJ ZP	104787	104787	104787	104787	104787	104787
37	1	Ramp Cylinder 4" Bore 14STR DA (12"-15" Pit)	123691	123691	123691	123691	123691	123691
	1	Ramp Cylinder 4" Bore 10STR DA (10" Pit)	123692	123692	n/a	n/a	n/a	n/a
38	1	Elbow 90 #8MORB	17808	17808	17808	17808	17808	17808
39	1	Velocity Fuse 7GPM 8FORB 6MJ	55393	55393	55393	55393	55393	55393
40	1	Decal Oil Hyd Bio FL(85+%)	119530	119530	119530	119530	119530	119530
41	1	Power Harness 31L	124466	124466	124466	124466	124466	124466
42	1	Fitting Elbow 45 #6MJ #6FJS	55364	55364	55364	55364	55364	55364

REPLACEMENT PARTS - CONTROL BOX PARTS

CONTROL BOX 1 PHASE 120V



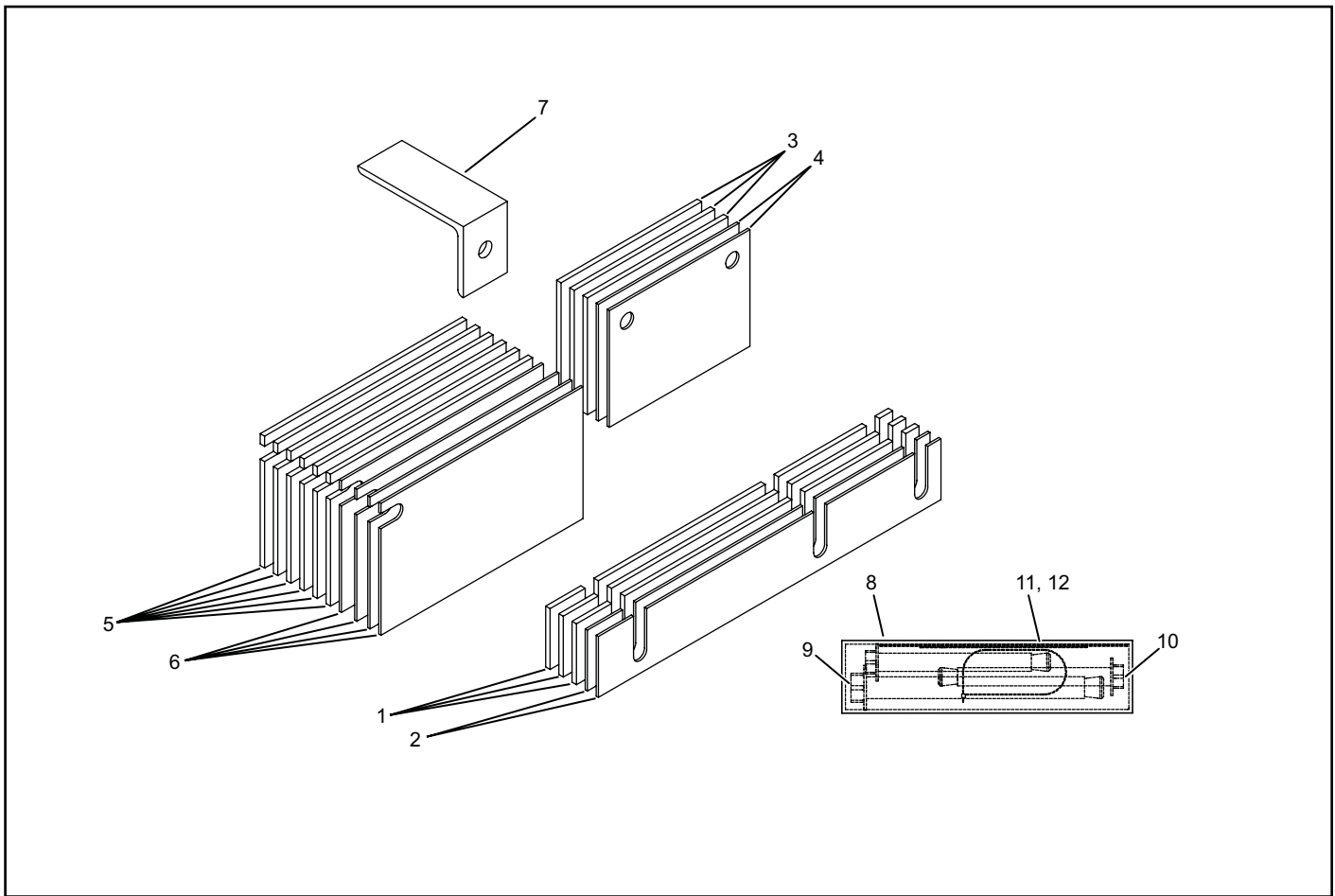
**CONTROL BOX 1 PHASE 240V
CONTROL BOX 3 PHASE 240/480V**



REPLACEMENT PARTS LIST - CONTROL BOX PARTS

Item	Qty.	Description	1 Phase 120V	1 Phase 240V	3 Phase 240V	3 Phase 380V	3 Phase 480V	3 Phase 575V
1	1	NEMA 12 Enclosure 10 x 8 x 6,	104180	104180	104180	104180	104180	104180
2	1	Contactora 120V/1/16A	65910	—	—	—	—	—
	1	Contactora 120V/1/9A	—	65911	65911	65911	65911	65911
3	1	Overload Relay 5.0 — 15.0A	65913	65913	—	—	—	—
	1	Overload Relay 1.6 — 5.0A	—	—	65912	65912	65912	65912
4	1	Transformer — 50 VA	—	18736	18736	18737	18736	18738
5	2	Black Pushbutton	124898	124898	124898	124898	124898	124898
6	1	Red Pushbutton	124901	124901	124901	124901	124901	124901
7	5	Contact Block — 1 N.O. IEC	124885	124885	124885	124885	124885	124885
8	3	Latch, Mtg, 3 across	124889	124889	124889	124889	124889	124889
9	1	Decal, Ground Lug	54069	54069	54069	54069	54069	54069
10	1	Panel, DR N12/N4 (10 x 8 x 6)	100222	100222	100222	100222	100222	100222
11	1	Decal, Lockout/Tagout English	59170	59170	59170	59170	59170	59170
12	1	Ground Lug & Symbol	55902	55902	55902	55902	55902	55902
13	1	Pad, Corrosion	55561	55561	55561	55561	55561	55561
14	1	Terminal Block Assembly	104553	104553	104552	104552	104552	104552
15	2	Fuse, 0.4A "CC" Rej Time Delay	—	—	—	—	—	66006
	2	Fuse, 0.5A "CC" Rej Time Delay	—	66005	66005	66005	66005	—
16	1	Fuse, 0.5A 250V	57024	57024	57024	57024	57024	57024
17	1	Decal, Voltage, Ph & FLA 120V1Ph	104550	104551	103729	103730	103731	103732
18	See Part No.	Screw, Rd Hd, Mac, #8-32 x .50L	51699(3)	51699(7)	51699(7)	51699(7)	51699(7)	51699(7)
19	See Part No.	Washer, Lock, Ext. Tooth Star	51839(7)	51839(11)	51839(11)	51839(11)	51839(11)	51839(11)
20	2	Screw, Rd Hd, Mac, #8-32 x .75 Lg	51698	51698	51698	51698	51698	51698
21	1	Decal, CB Fuse Replacement	18744	18744	18744	18745	18744	18745
22	1	Schematic, Electrical	04283	04282	04281	104713	04280	104714
23	1	Decal, Electrical Schematic	19544	19545	19546	104711	19547	104712
24	3	Mount Adhesive Backed	55809	55809	55809	55809	55809	55809
25	1	Guard, Cover Contactora, Touch	18746	18746	18746	18746	18746	18746
26	1	Guard, Transformer Touch Safe	—	18735	18735	18735	18735	18735
27	1	Shield, O/L Relay Current Adjustment	66320	66320	66320	66320	66320	66320

REPLACEMENT PARTS - SHIM KIT



Item	Qty.	Description	Part No.
1	3	Bar Shim .25 x 3 x 19.5L 3Notch (.75 x 2.25)	124305
2	2	Bar Shim .125 x 3 x 19.5L 3 Notch(.75 x 2.25)	124306
3	3	Plate .25 x 5.75 x 8L 2Hole (.75Dia)	124307
4	2	Plate .125 x 5.75 x 8L 2Hole (.75Dia)	124308
5	6	Plate .25 x 3 x 11.5 Slot (.75 x 1.25)	124309
6	4	Plate .125 x 3 x 11.5 Slot (.75 x 1.25)	124310
7	1	Angle 6 x 3.5 x .312 x 2.5L Hole (.75Dia)	124463
8	1	Anchor Kit - Complete	124775
9	3	Anchor Bolt .750 x 8.25L Rawl P/N: 6957	123992
10	4	Anchor Bolt .625 x 6L Rawl P/N: 6945	123991
11	1	Installation Instructions, RHV40 Bumper Bracket	122106
12	1	Installation Instructions RHV40	125576

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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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