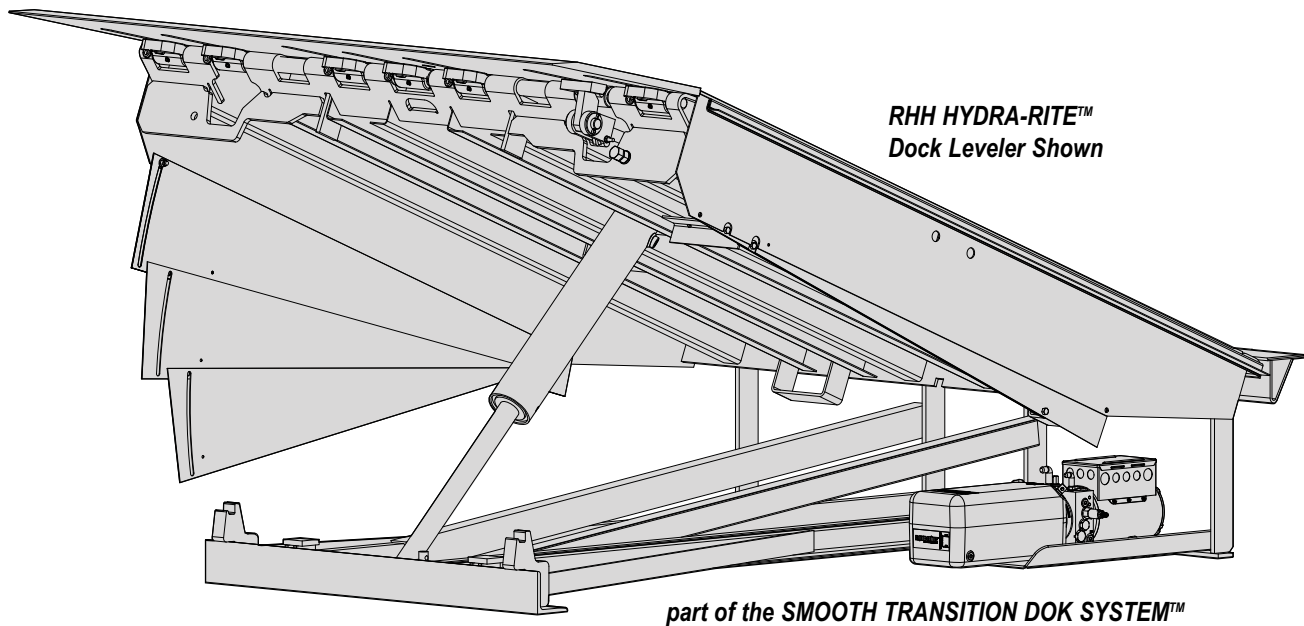

RHH-4000 Hydra-Rite™ / Base

Dock Leveler

Owners Manual



RITE·HITE®
ALWAYS LOOKING AHEAD



**This Manual Covers Dock Levelers Built After Serial Numbers:
13GD480708M and up**

NOTES

TABLE OF CONTENTS

NOTICE TO USER	3
SAFETY WARNINGS	4
OWNER RESPONSIBILITY	7
OPERATION INSTRUCTIONS	8
MAINTENANCE PROCEDURES	11
LEVELER ADJUSTMENTS / TROUBLESHOOTING	14
HYDRAULIC SCHEMATIC	19
ELECTRICAL WIRING CHARTS	23
ELECTRICAL SCHEMATICS	24
REPLACEMENT PARTS	32
STANDARD WARRANTY	BACK COVER

PRODUCT SPECIFIC WARRANTY

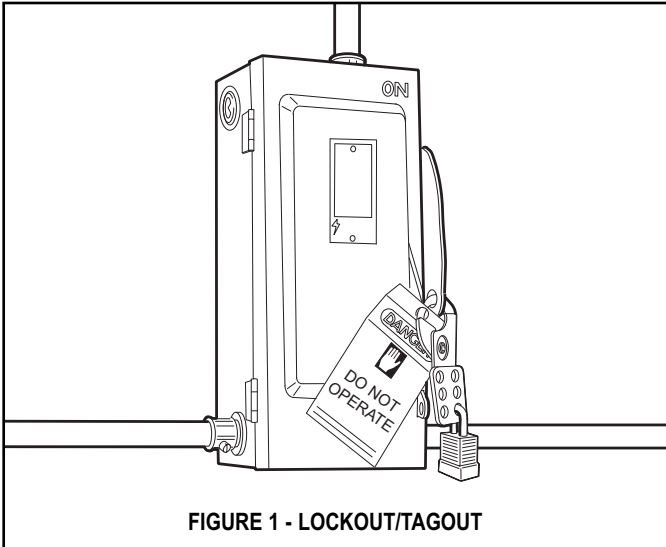
RITE-HITE® warrants the RHH Hydra-Rite™ / Base Dock Leveler for five-years parts and one-year labor from date of shipment in accordance with Rite-Hite's Standard Warranty Policy.

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 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: 5882167, 6065172, 6070283, 6085375, 6092970, 6106212, 6116839, 6190109, 6276016, 6311352, 6318947, 6322310, 6360394, 6368043, 6431819, 6488464, 6524053, 6726432, 6773221, 6832403, 6880301, 7032267, 7062814, 7213285, 7216391, 7363670, 7380305, 7503089, 7533431, 7546655, 7584517, 7681271, 7823239, 7841823, 7877831, 7914042, 8006811, 8065770, 8141189, 8191194, 8286757, 8287223, 8303235, 8307956, 8443474, 8464384, 8464846, 8465245, 8497761, 8499897, 8544130, 8547234, 8590087, 8590673, 8616826, 8657551, 8662535, 8678736, 8690087, 8905198, 9010501, 9096170, 9096397, 9126775, 9139384, 9145273, 9150367, 9174811, 9227799, 9230419 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 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

Never be under the dock leveler platform or lip without:

- Installing the Safe-T-Strut™ or other supporting device.
- If lip needs to be extended, follow procedures shown under Safety Devices on the following page.
- Turning off power to the control box.
- Locking out and tagging out the main power source, as shown under Safety Warnings on preceding page.

WARNING

Always barricade the dock leveler at ground level and dock level from any form of traffic when maintenance is required.

CAUTION

Inspect the dock leveler monthly to ensure that there are no broken or worn parts which could cause injury to personnel or damage to the equipment.

WARNING

- Before starting installation or maintenance, check and follow the safety procedures of the facility where the dock leveler is being installed.
- Never enter a truck/trailer until its brakes are set, air has been dumped from air ride suspension (if applicable), and you have visually inspected to be sure truck/trailer is securely held in place by a vehicle restraint or wheel chock per OSHA regulations.
- Never operate the leveler with you, anyone, or anything on, or in front of the leveler, or without a truck/trailer parked in position, or from on the truck/trailer bed.
- DO NOT operate with anyone under platform or in front of the lip.
- When leveler is not in use, always store it so that it is supported by the lip supports and that it is level with the surrounding dock floor.
- If a malfunction does occur, always call your authorized RITE-HITE® service representative immediately.

SAFETY DEVICES

DANGER

Never be under the dock leveler platform or lip without:

- Installing the Safe-T-Strut™. See below right. This can be done with the assistance of another person by:
 - Raise leveler until platform reaches its highest position and lip extends. Continue to maintain this position.
 - Then have assistant insert the smaller end of the Safe-T-Strut™ through the hole in the middle of the leveler lip and place the strut's wider open end over the base located on the leveler's front frame. Align the holes on the base and the Safe-T-Strut™ so that the leveler may be secured with the retaining pin and safety clip.
 - Release the pushbutton on powered levelers allowing the Safe-T-Strut™ to rest on the underside of the lip.
- Lockout/Tagout power supply.
 - Turn off the power to the control box.
 - Lockout/tagout the main power source, as shown under Safety Warnings on the inside front cover of this manual.
 - Always barricade the leveler at dock level and drive level to prevent any unauthorized use of the leveler.

Remove the Safe-T-Strut™.

- For Safe-T-Strut™ removal, have an assistant raise the leveler to its highest position with lip fully extended. Release the safety clip and remove retaining pin. Lift strut off base, and remove from lip. Return the Safe-T-Strut™ to the proper storage position.
- If you are unable to install the Safe-T-Strut™ properly, contact your authorized RITE-HITE® Service Representative or RITE-HITE® Customer Service at 1-414-355-2600.

CAUTION

- Post warnings and barricades at dock level and at drive level to indicate that work is being done around and under the leveler platform.
- Lockout/Tagout power to the leveler and post warnings when work is being performed on the leveler.

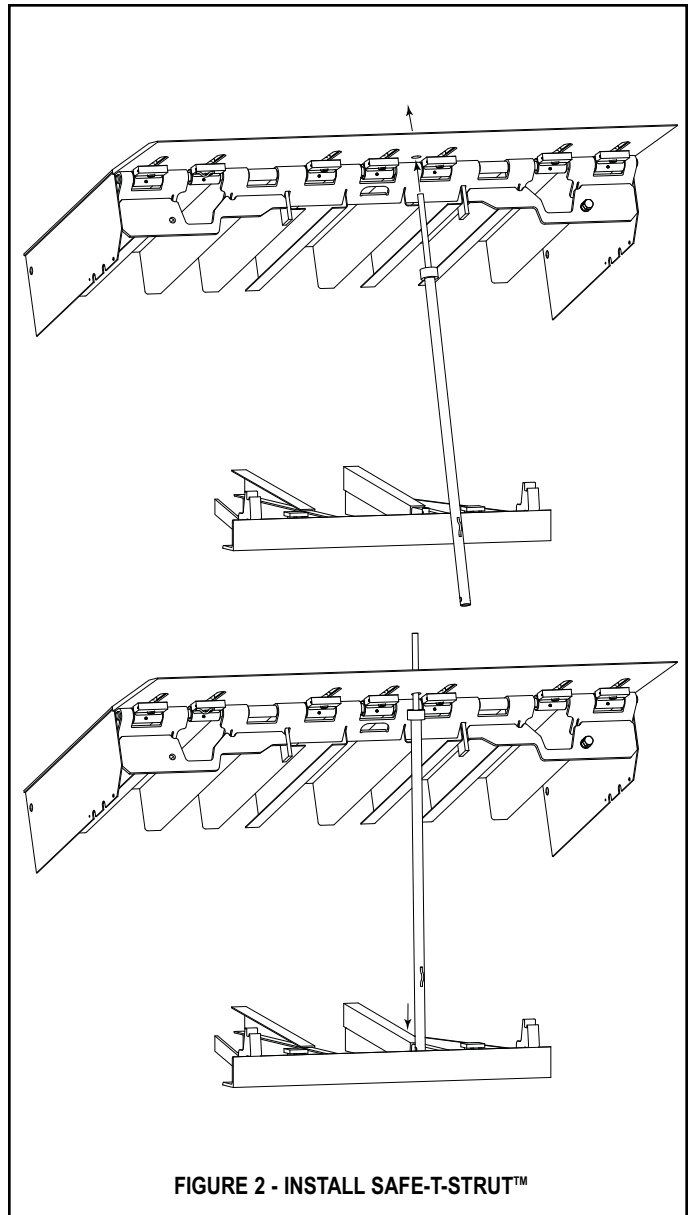


FIGURE 2 - INSTALL SAFE-T-STRUT™

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.

OPERATION INSTRUCTIONS POWERED LEVELERS

NORMAL OPERATION

1. Activate the leveler by pushing and holding the RAISE button until leveler is fully raised and lip is fully extended. See figure 3.

NOTE: Some levelers may be equipped with a two button control box. If so, push and hold the RAISE button to raise the platform. While pressing the RAISE button, push the LIP EXTEND button to fully extend the lip when the lip has cleared trailer bed.

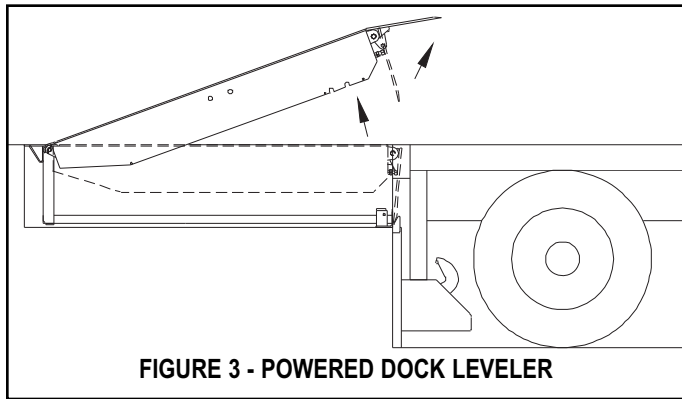


FIGURE 3 - POWERED DOCK LEVELER

2. When lip is fully extended, release RAISE button. The leveler will automatically lower onto the truck/trailer bed. See figure 4.

NOTES:

- a. Some levelers may be equipped with a two button control box. If so, release RAISE and LIP EXTEND buttons.
- b. Be sure the lip is in full contact with the truck/trailer bed before loading or unloading truck/trailer.

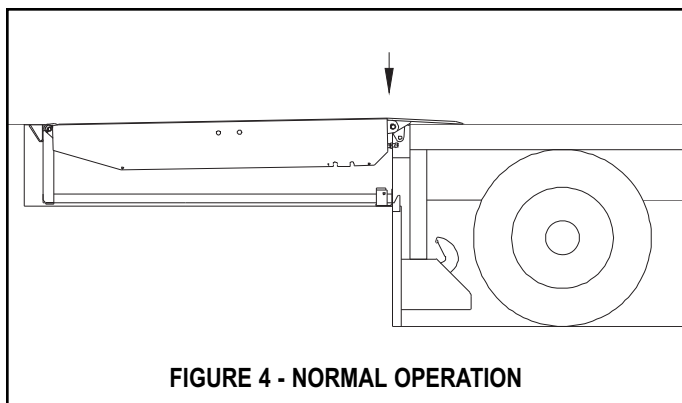


FIGURE 4 - NORMAL OPERATION

3. See *Storing Leveler*.

NOTES:

- a. **Levelers without Automatic Return to Dock (ARTD)** If the truck/trailer departs, the leveler will move to its lowest position and the lip will fall to the pendant position inside the dock bumpers. See *Storing Leveler*.
- b. **Levelers with Automatic Return to Dock (ARTD)** If the lip is on the truck/trailer and the truck departs, the leveler will move to its lowest position and the lip will begin to lower. As the lip drops toward the pendant position, the ARTD system automatically returns the leveler to the stored position without operator assistance.

BELOW DOCK LOADING OPERATION

1. Activate the leveler by pushing and holding the RAISE button until leveler is fully raised and lip is fully extended. See figure 3.

NOTE: Some levelers may be equipped with a two button control box. If so, push and hold the RAISE button to raise the platform. While pressing the RAISE button, push the LIP EXTEND button to fully extend the lip when the lip has cleared trailer bed.

2. When lip is fully extended, release RAISE button. If equipped with safety legs, pull and hold the Safety Leg Chain as the leveler lowers automatically onto the truck/trailer bed. See figure 5.

NOTE: Some levelers may be equipped with a two button control box. If so, release RAISE and LIP EXTEND buttons.

3. When loading/unloading is complete, continue with normal operation or return the leveler to stored position. See *Storing Leveler*.

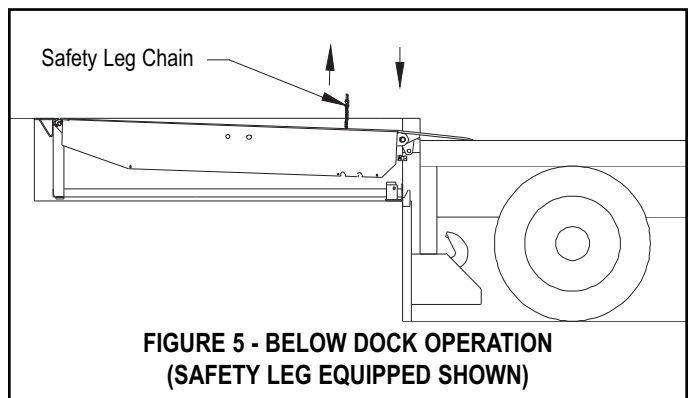


FIGURE 5 - BELOW DOCK OPERATION (SAFETY LEG EQUIPPED SHOWN)

OPERATION INSTRUCTIONS POWERED LEVELERS CONT.

DOCK LEVEL (OR LOWER) END LOADING OPERATION

1. Activate the leveler by pushing and holding the RAISE button until leveler is fully raised and lip begins to extend. See figure 6.

NOTE: Some levelers may be equipped with a two button control box. If so, push and hold the RAISE button until the lip clears the lip supports. While pressing the RAISE button, push the LIP EXTEND button briefly to extend the lip beyond the lip supports.

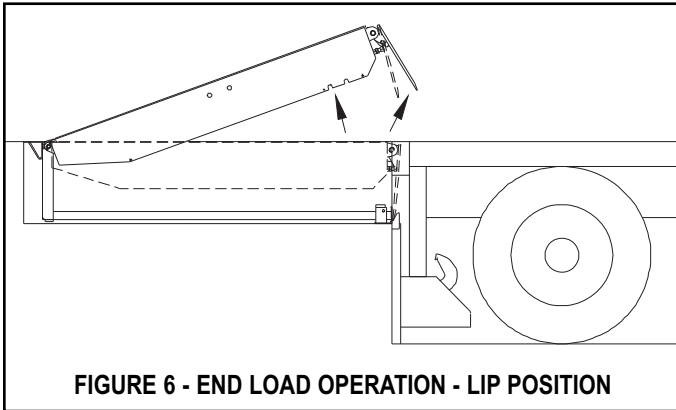


FIGURE 6 - END LOAD OPERATION - LIP POSITION

2. When lip extends about 2 inches, release RAISE button. See figure 6. The leveler will lower to the below dock position with the lip positioned between the face of the loading dock and the truck/trailer bed. See figure 7.

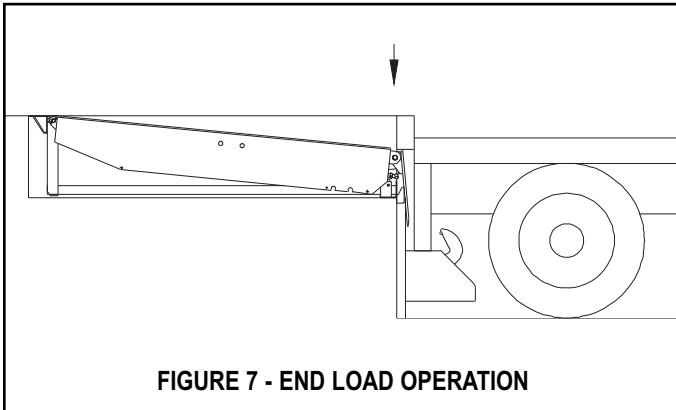


FIGURE 7 - END LOAD OPERATION

NOTES:

- a. Some levelers may be equipped with a two button control box. If so, release RAISE and LIP EXTEND buttons
 - b. If equipped, pull and hold the Safety Leg Chain as the leveler lowers for below dock end loads. See figure 8. DO NOT pull chain for dock level end loads.
 - c. End load at dock level and above can be handled with the leveler in its stored position on units without a Safe-T-Lip®.
 - d. If the lip extended too far, quickly push and release the RAISE button to slightly retract the lip.
 - e. If the lip was not extended far enough and hits the lip supports, repeat this step allowing the lip to extend farther.
3. When loading/unloading is complete, continue with normal operation or return the leveler to stored position. See *Storing Leveler*.

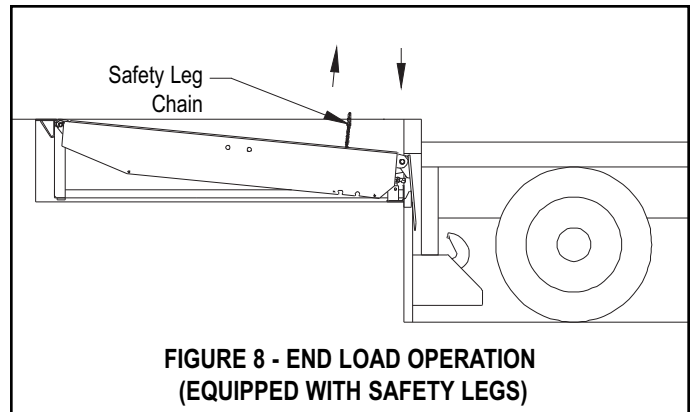


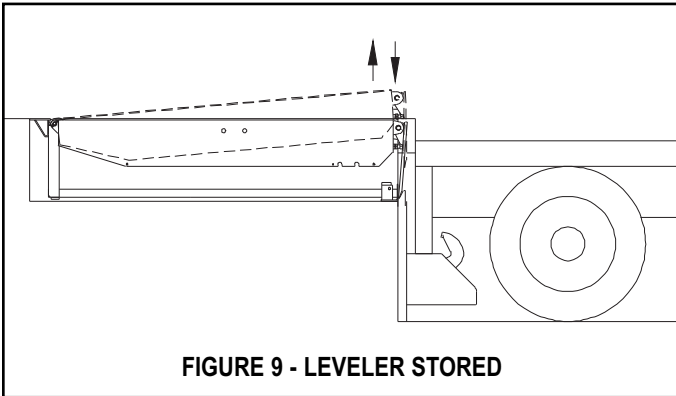
FIGURE 8 - END LOAD OPERATION (EQUIPPED WITH SAFETY LEGS)

OPERATION INSTRUCTIONS POWERED LEVELERS CONT.

STORING LEVELER

1. To store the leveler, push and hold the RAISE button until leveler is about 6 inches above dock level and lip is fully pendant.
2. Release RAISE button. Leveler will lower to dock level with lip resting in the lip supports. See figure 9.

NOTE: On Powered levelers with Automatic Return to Dock (ARTD). If the lip is on the truck/trailer and the truck departs, the leveler will move to its lowest position and the lip will begin to lower. As the lip drops toward the pendant position, the ARTD system automatically returns the leveler to the stored position without operator assistance.



! WARNING

Read and obey these instructions to prevent personal injury.

- Post safety warnings and barricade work area, at dock level and at ground level, to prevent unauthorized use of the dock position before maintenance has been completed.
- Make sure to install the Safe-T-Strut™ before proceeding with any repair work.

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. Clean pit.
3. Inspect hydraulic system (cylinders, hoses, fittings, and power unit).
4. Lubricate the leveler with the proper lubricants. See figure 11 or 12.
5. Inspect all weather seals (if installed) and replace if worn or damaged.
6. Inspect dock bumpers. Four inches (4") of bumper protection is required. Worn, torn, loose or missing bumpers must be replaced.
7. Check conditions of concrete, angles and welds. Repair or replace if necessary.
8. Inspect structure, hinge pins, clevis pins and cotter pins for abnormal wear.

MAINTENANCE PROCEDURES

9. Inspect all conduit boxes, control boxes and electrical connections for damage. Repair or replace if worn or damaged.

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.

10. With the leveler supported by the Safe-T-Strut, check hydraulic fluid level in tank. Add fluid if necessary. Use only Rite-Hite approved hydraulic fluids.

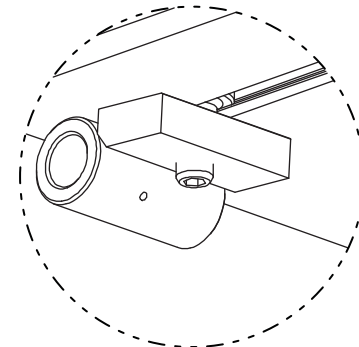
STANDARD: 119181 - Rite-Hite Biodegradable Fluid (quart/light blue in color)

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

360 Days

1. Perform Daily and 90-Day Maintenance.
2. Check and tighten control box mounting hardware.
3. Retorque all shoulder bolts on units equipped with Safe-T-Lip®. See figure 10.

Safe-T-Lip® Shoulder Bolt Torque Specifications






- Torque Range: 290 - 310 Ft-Lbs.

FIGURE 10 - SHOULDER BOLT TORQUE

RHH HYDRA-RITE LUBRICATION CHART

NOTE:

Only if grease zerks are present.

	OIL SAE 30 Weight
	Grease - Moly Based
	Dry Spray Lubricant

NOTE:

Inside and Under Slots
On Safe-T-Lip®

NOTE:

Check Hydraulic Fluid level.

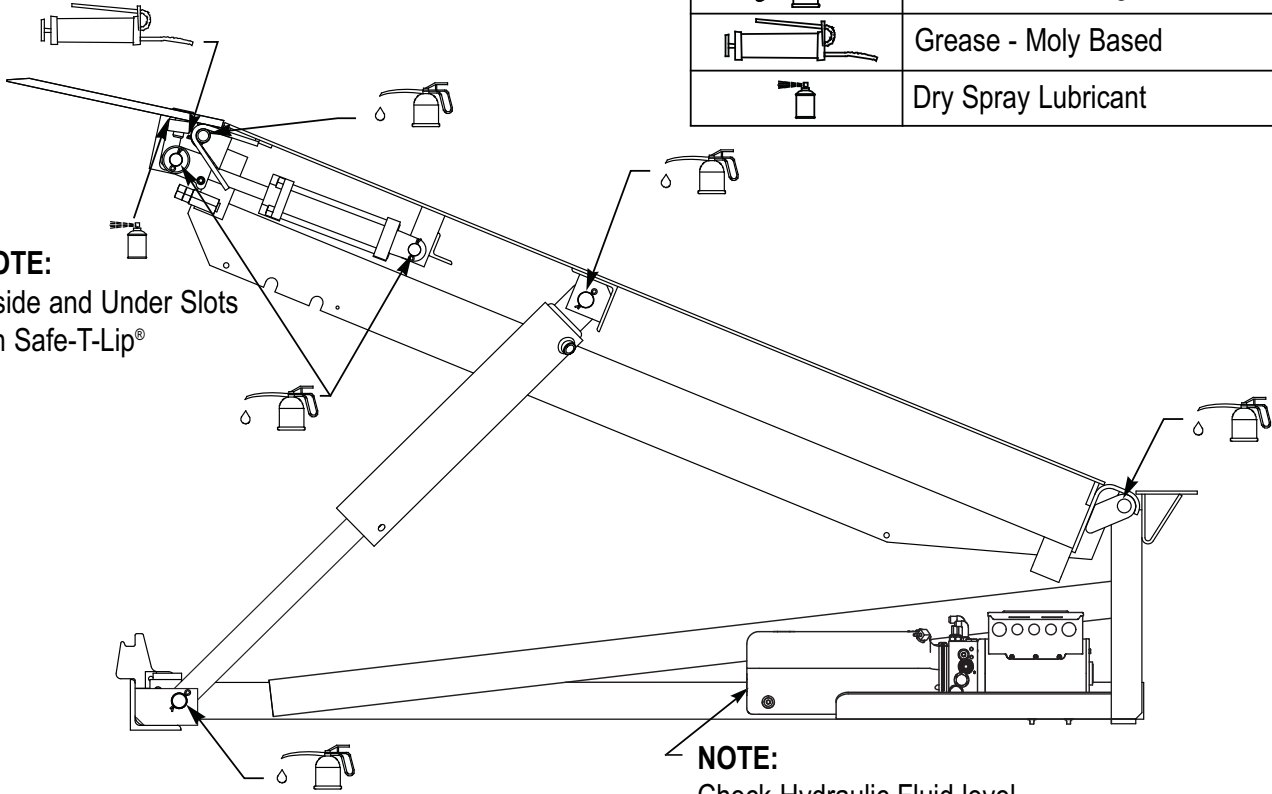
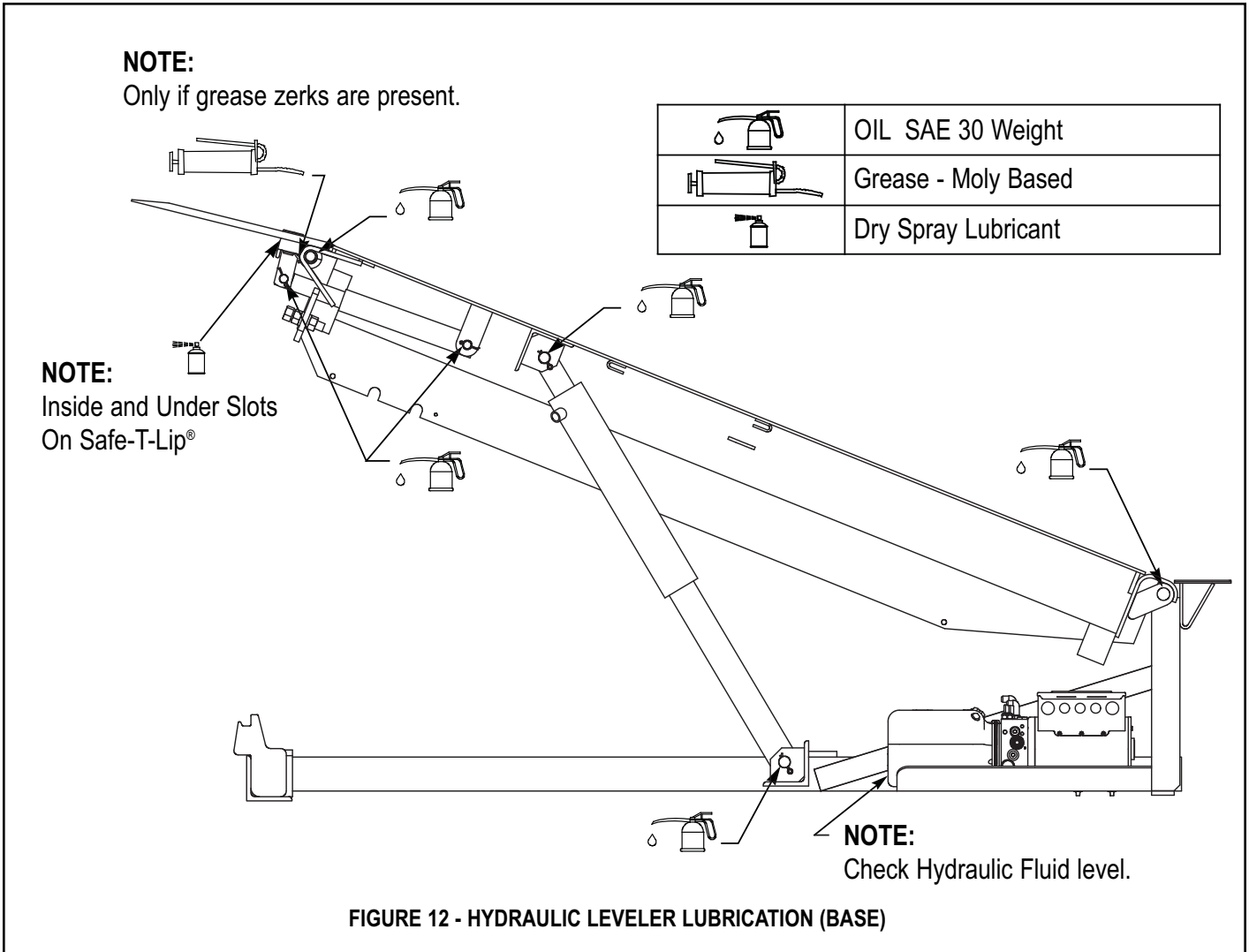


FIGURE 11 - HYDRAULIC POWERED LEVELER LUBRICATION (HYDRA-RITE™)

RHH BASE LUBRICATION CHART

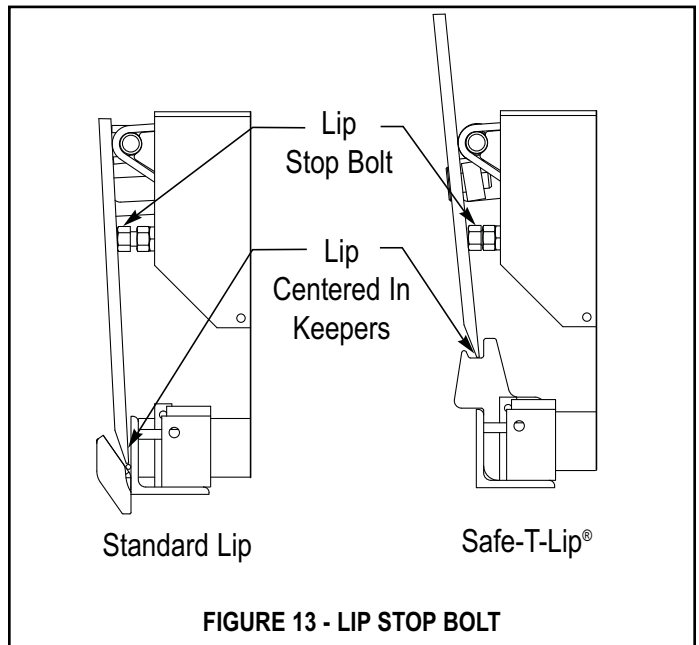


⚠ DANGER

- DO NOT operate leveler with anyone standing on or in front of the lip.
- NEVER go under the hydraulic leveler platform or lip without installing the Safe-T-Strut™.
- Make sure that the leveler power is locked out and tagged out according to OSHA regulations and approved local codes.

LIP STOP BOLT:

The lip stop bolt adjusts the position of the lip when the leveler is stored to allow the lip to be centered on lip supports when stored.



HYDRAULIC LEVELER ADJUSTMENTS

HYDRAULIC POWERED LEVELER ADJUSTMENTS

ARTD ADJUSTMENTS:

ARTD Limit Switch Cam

NOTE: Before continuing be sure the lip stop bolt is properly adjusted. See page 13.

1. Raise leveler and install a strut securely behind the header or mini-header to allow the lip to hang pendant and rest against the lip stop bolt.
2. Adjust ARTD Cam.
 - a. Adjust collars so the front edge of ARTD cam is 1/16" behind the centerline of the ARTD limit switch. See figure 14.
 - b. Tighten front collar while holding the 1/16" adjustment.
 - c. Push the rear collar forward as much as possible and tighten. ARTD cam assembly should rotate freely.
3. Run the leveler to test the adjustment. Verify that the lip falls a minimum of 4" before ARTD is initiated. If not, move the cam forward slightly.

NOTE: It is not recommended to position the ARTD cam in front of the ARTD limit switch centerline.

! WARNING

- Shuttle valve is factory adjusted and sealed.
- Adjustments to be completed by trained technician only.

HYDRAULIC VALVE ADJUSTMENTS (HALDEX POWER UNIT)

SHUTTLE VALVE ADJUSTMENT (Controls Leveler Descent)

NOTE: Check oil level before making any adjustments.

NOTE: Valve Position Illustrated Represents The Nominal Factory Setting Of 3-1/2 Turns Out From The Fully Turned In Position

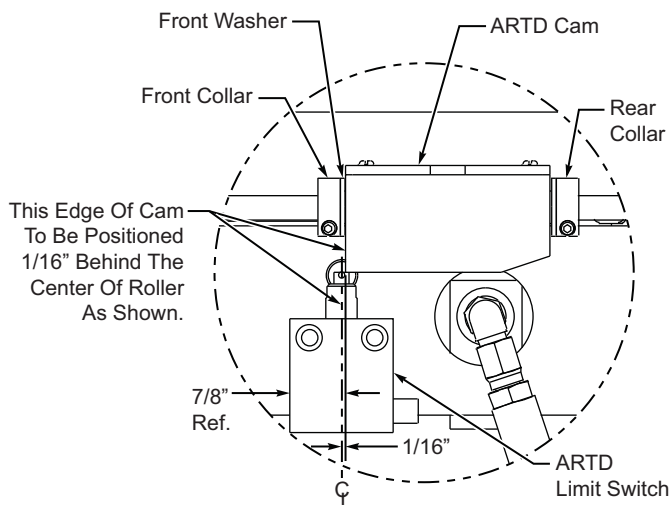
1. Leveler must be adjusted to lower, from full raised position with lip extended to the header stops the proper time frame. See below

Hydra-Rite™ Less than 20 seconds

Base 8 to 12 seconds

2. Remove protective cap and O-ring. Loosen locknut; without turning valve body or adjustment screw. Turn adjustment screw to vary platform lowering speed. Adjustments should be no more than 1/8 turn increments.
3. Tighten adjustment screw to decrease platform speed while lowering (excessive loosening can eliminate platform lowering).
4. Loosen adjustment screw to increase platform speed while lowering (velocity fuse may lock-up as a result of increased platform speeds while lowering).
5. Tighten locknut without turning valve body or adjustment screw.
6. Reinstall o-ring and protective cap and tighten cap.
7. Re-test the unit several times to verify the setting.

NOTE: There Should Be A Small Amount Of Free Movement Between The ARTD Cam And The Rear Collar When The Rear Collar Is Pushed Against The ARTD Cam.



ARTD Cam Adjustment Detail
(Shown With Lip Pendant And Lip Stop Bolt Adjusted)

FIGURE 14 - ARTD LIMIT SWITCH

HYDRAULIC LEVELER ADJUSTMENTS CONT.

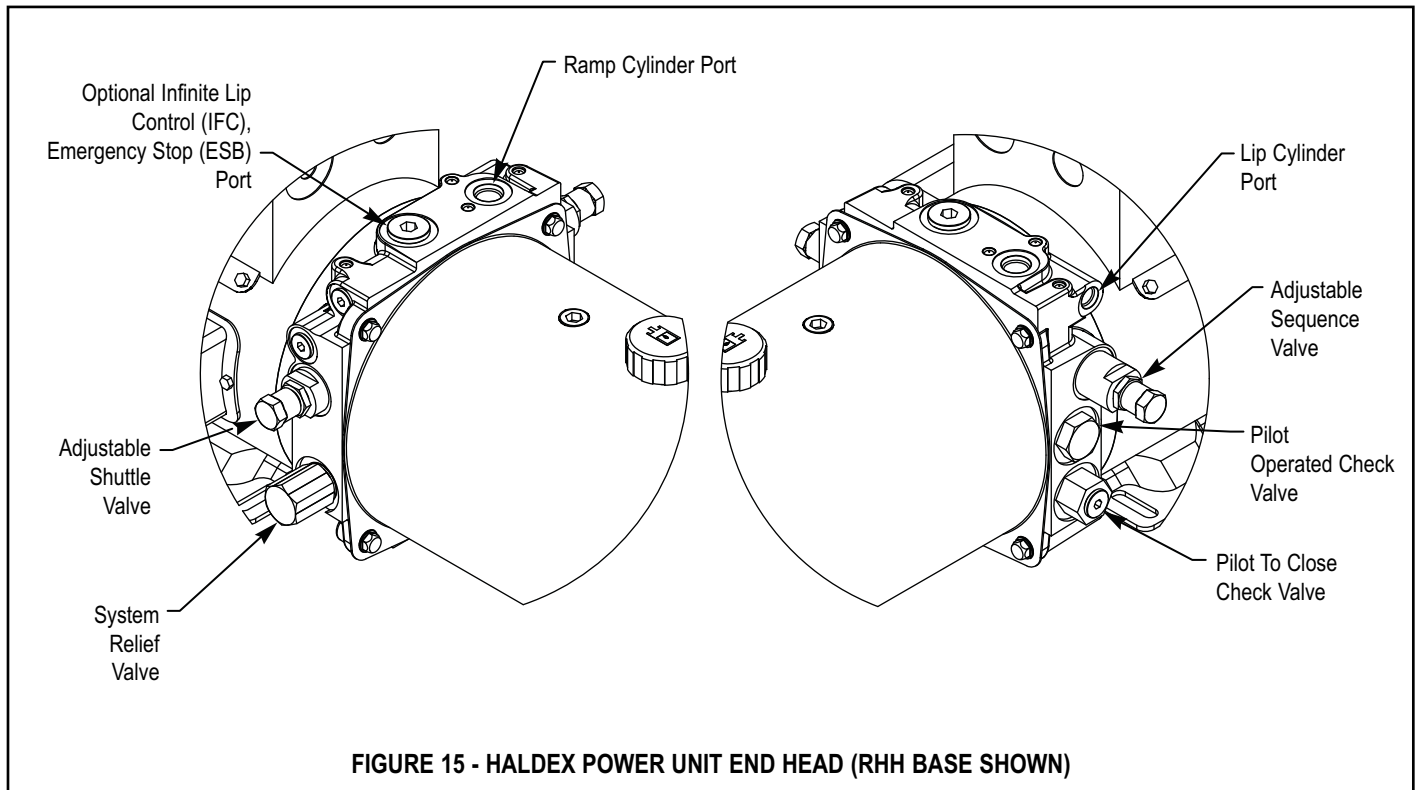
SEQUENCE VALVE ADJUSTMENT

(Controls Lip Extension)

NOTE: Check oil level before making any adjustments.

1. When the leveler is fully raised and the lip does not extend, the Sequence Valve is set too high.
2. Remove protective cap and O-ring. Loosen locknut without turning valve body or adjustment screw. Turn adjustment screw counterclockwise to lower the valve pressure setting. See Figure 15.
3. Adjustments should be no more than 1/8 turn increments.
4. Tighten locknut without turning valve body or adjustment screw.
5. Reinstall O-ring and protective cap and tighten cap.
6. Re-test the unit several times to verify the setting.
7. If the lip begins to extend at any time before the platform has fully raised, the Sequence Valve setting is too low.
8. Remove protective cap and O-ring. Loosen locknut without turning valve body or adjustment screw. Turn adjustment screw clockwise to increase the valve pressure setting.
9. Adjustments should be no more than 1/8 turn increments.
10. Tighten locknut without turning valve body or adjustment screw.
11. Reinstall O-ring and protective cap and tighten cap.
12. Re-test the unit several times to verify the setting.

NOTE: Sequence valve is factory sealed. Adjustments to be completed by trained technician only.



HYDRAULIC LEVELER ADJUSTMENTS CONT.

ARTD ADJUSTMENTS:

ARTD Limit Switch Cam

NOTE: Before continuing be sure the lip stop bolt is properly adjusted. See page 13.

1. Raise leveler and install a strut securely behind the header or mini-header to allow the lip to hang pendant and rest against the lip stop bolt.
2. Adjust ARTD Cam.
 - a. Adjust collars so the front edge of ARTD cam is 1/16" behind the centerline of the ARTD limit switch. See figure 16.
 - b. Tighten front collar while holding the 1/16" adjustment.
 - c. Push the rear collar forward as much as possible and tighten. ARTD cam assembly should rotate freely.
3. Run the leveler to test the adjustment. Verify that the lip falls a minimum of 4" before ARTD is initiated. If not, move the cam forward slightly.

NOTE: It is not recommended to position the ARTD cam in front of the ARTD limit switch centerline.

⚠ WARNING

- Flow Control valve is factory adjusted.
- Adjustments to be completed by trained technician only.

HYDRAULIC VALVE ADJUSTMENTS (BUCHER POWER UNIT)

FLOW CONTROL VALVE ADJUSTMENT (Controls Leveler Descent)

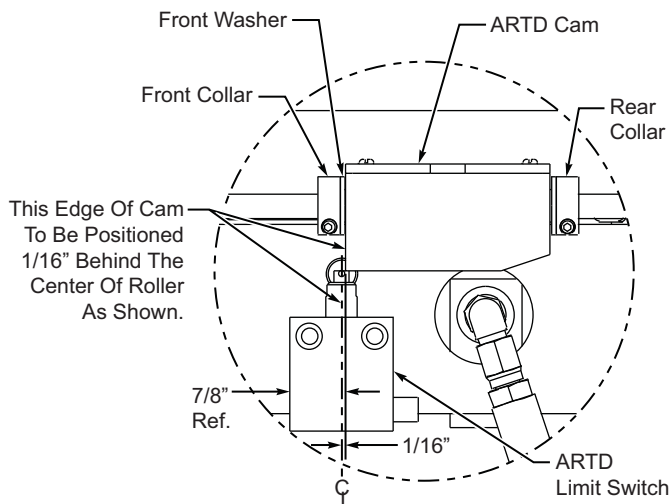
NOTE: Check oil level before making any adjustments.

1. Leveler must be adjusted to lower, from full raised position with lip extended to the header stops in the proper time frame. See below

Hydra-Rite™	Less than 20 seconds
Base	8 to 12 seconds
2. Press RAISE button and run the platform up until the lip extends.
3. Release RAISE button and allow the platform to fall completely below dock and stop. Verify with a stop watch that the platform falls according to the times in step 1. If not, readjust flow control valve.
 - To fall slower - Turn in (clockwise) in 1/4 turn increments.
 - To fall faster - Turn out (counter-clockwise) in 1/4 turn increments.

Or set valve at starting point (3-1/2 turns clockwise from fully out).
5. Repeat procedure to verify fall time as needed to fall according to step 1. 1/8 turns might be necessary to fine tune the adjustment.
6. Tighten locknut on flow control valve.

NOTE: There Should Be A Small Amount Of Free Movement Between The ARTD Cam And The Rear Collar When The Rear Collar Is Pushed Against The ARTD Cam.



ARTD Cam Adjustment Detail
(Shown With Lip Pendant And Lip Stop Bolt Adjusted)

FIGURE 16 - ARTD LIMIT SWITCH

HYDRAULIC LEVELER ADJUSTMENTS CONT.

SEQUENCE VALVE ADJUSTMENT

(Controls Lip Extension)

NOTE: Check oil level before making any adjustments.

NOTE: Sequence valve is factory set. Adjustments to be completed by trained technician only.

1. When the leveler is fully raised and the lip does not extend, the Sequence Valve is set too high.
2. Loosen adjustment nut.
3. Turn adjustment screw in completely (clockwise) with an allen wrench. See Figure 17.
4. Back screw out to get to factory starting point:

For power units built before April 2015: 2-1/2 turns.

For power units built after March 2015: 5-1/2 turns.

Tighten adjustment nut once at factory starting point.

5. Press RAISE button and run the platform up until the lip extends.

6. Verify that the lip extends only at the top of the ramp cylinder stroke. If not, continue with Sequence Valve adjustment.
 - Turn adjustment screw out (counter-clockwise) in 1/8 turn increments. Lip will extend more quickly.
 - Turn adjustment screw in (clockwise) in 1/8 turn increments. Lip will extend more slowly.
7. Release RAISE button and allow the platform to fall completely below dock and stop.
8. Verify that the lip will fall to pendant as the platform is raised up to store the lip in the keepers. If lip re-extends, turn adjustment screw in (clockwise) in 1/8 turns and retest.
9. Re-test the unit several times to verify the setting.

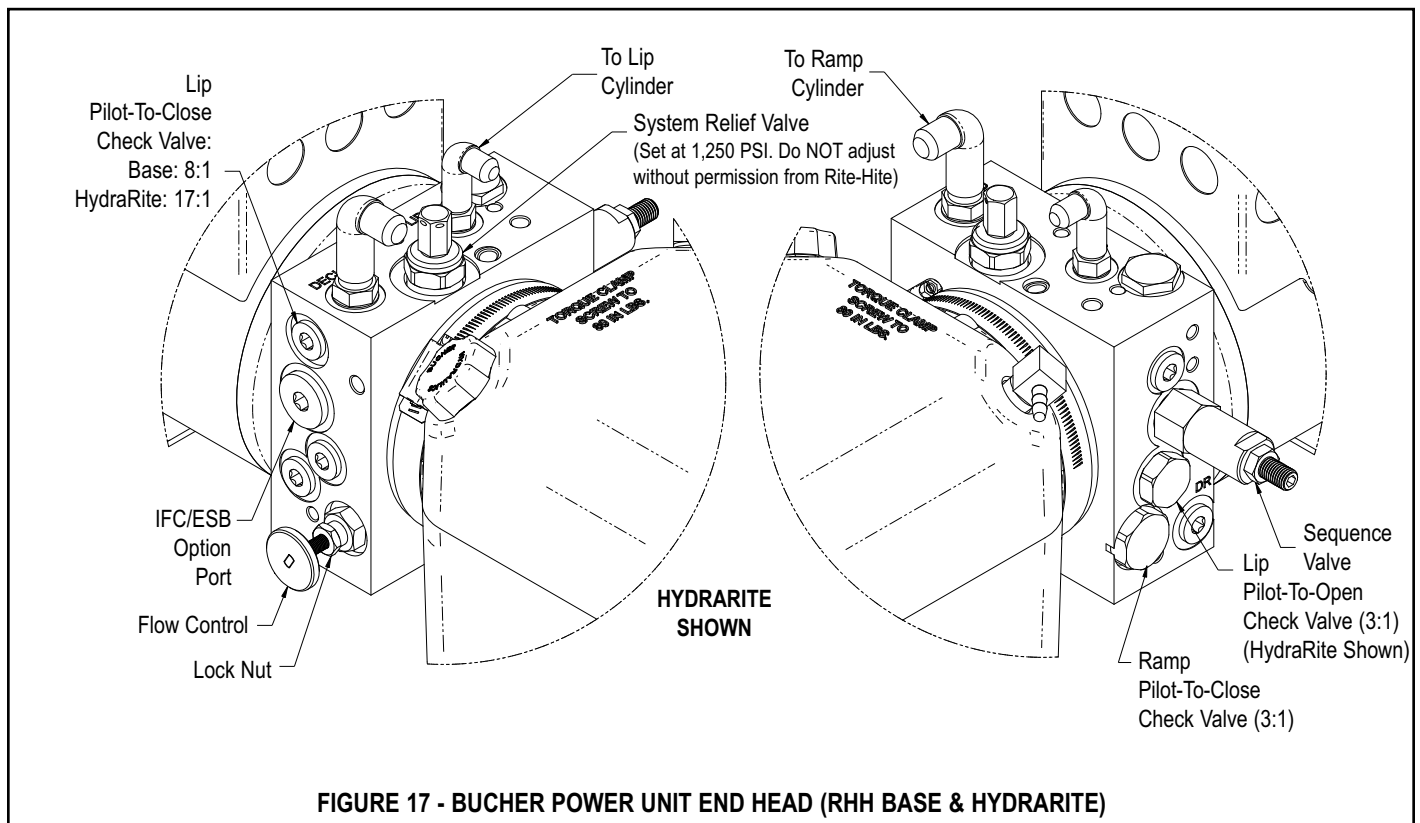
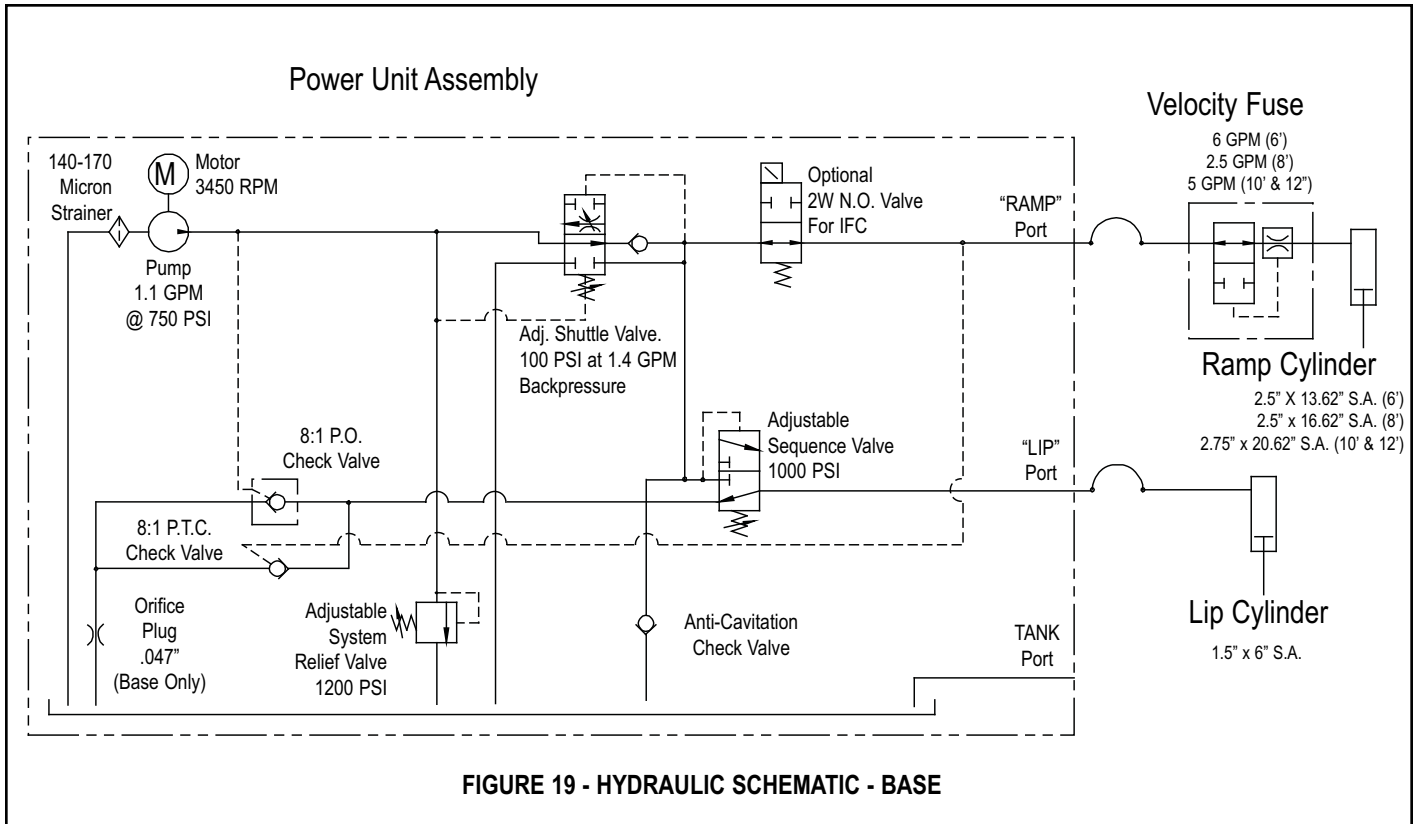
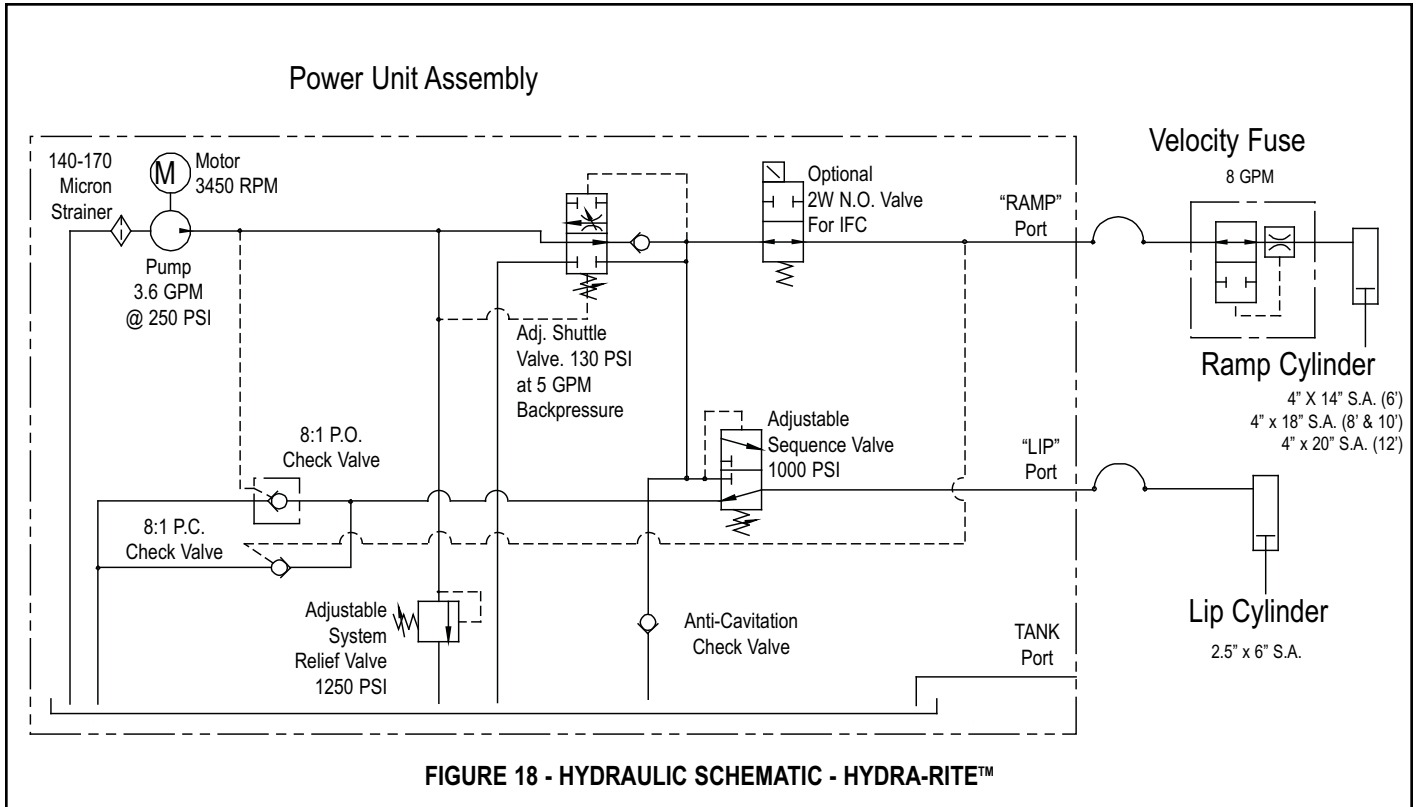


FIGURE 17 - BUCHER POWER UNIT END HEAD (RHH BASE & HYDRARITE)

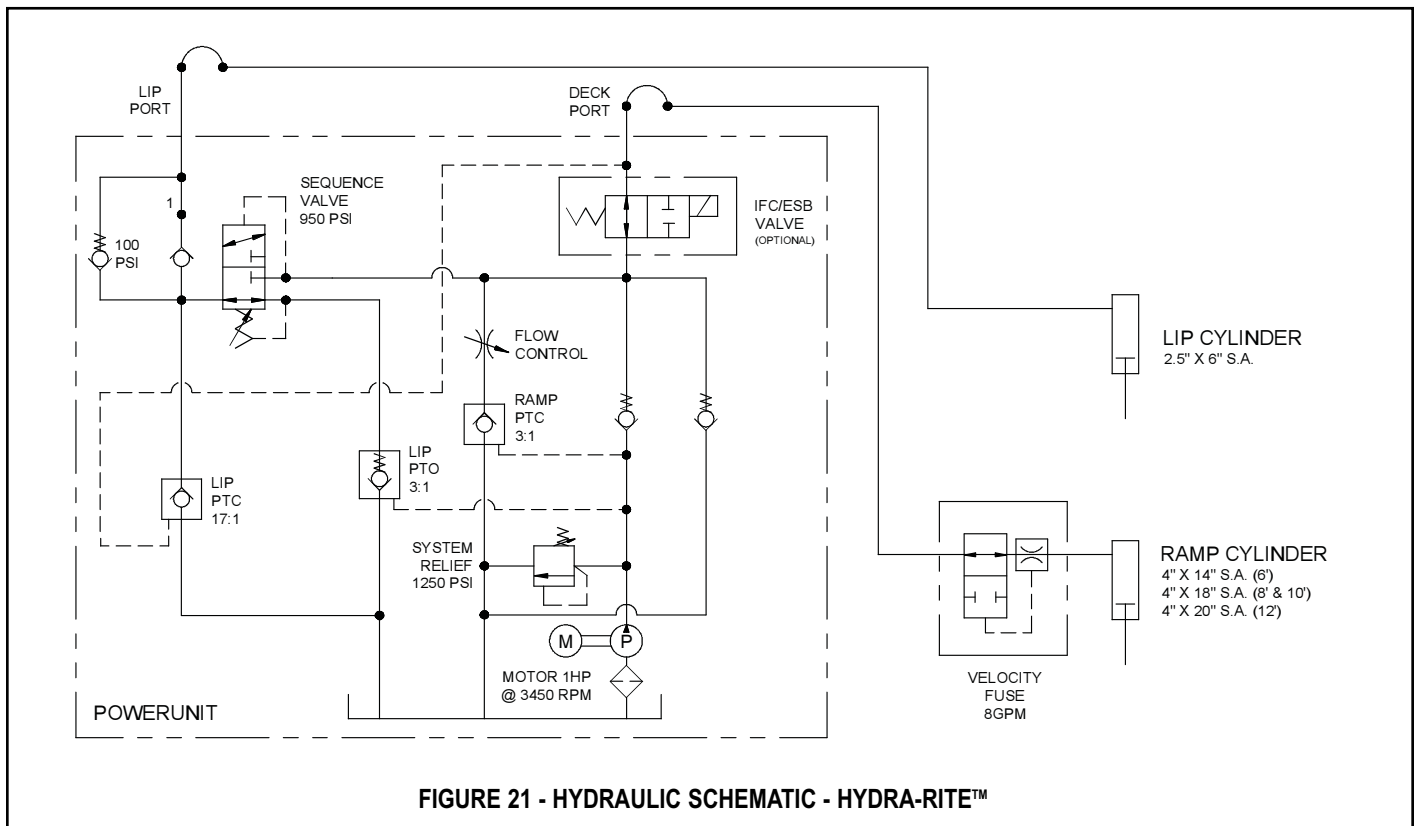
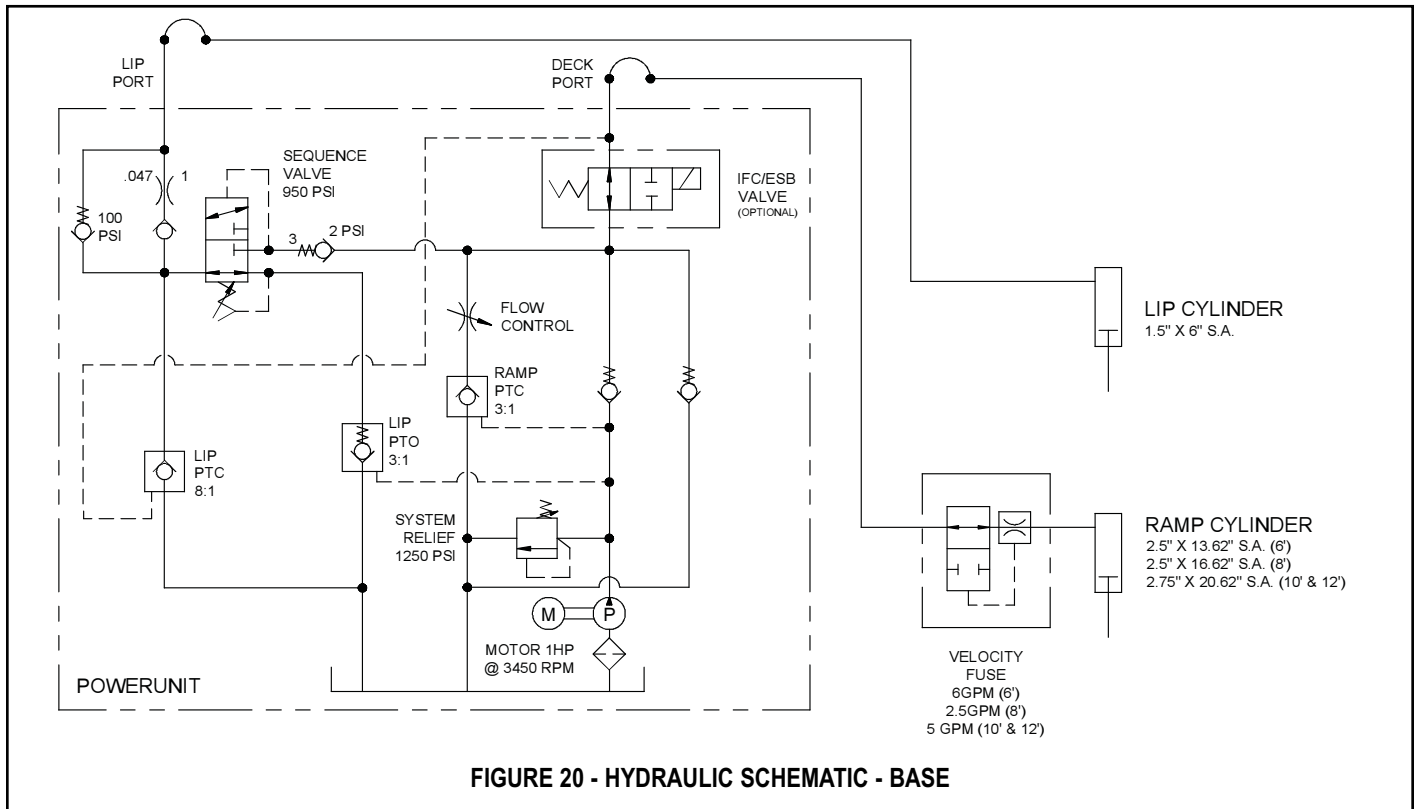
HYDRAULIC POWERED LEVELER TROUBLESHOOTING

Problem	Probable Cause	Solution
1. Platform does not raise	<ul style="list-style-type: none"> a. Power has been disconnected. b. The motor has been miswired. c. Overload tripped. d. Debris is lodged on or around the leveler. e. Hydraulic fluid level is low. 	<ul style="list-style-type: none"> a. Verify that power has not been disconnected. Verify that disconnect circuit breaker or fuses are not tripped. b. Verify that the motor has been wired according to the motor wiring diagram. c. Push RESET on overload relay. d. Check for and remove any lodged materials on or around the leveler. e. Check oil level when the unit is held open with the maint. support. Refill if necessary.
2. Leveler runs continuously.	<ul style="list-style-type: none"> a. The pushbutton, contact block or motor contactor damaged. 	<ul style="list-style-type: none"> a. Repair or replace components.
3. Lip extends slowly and/or does not extend.	<ul style="list-style-type: none"> a. Debris on lip hinge. b. Lip impacted or bent. c. Hydraulic fluid level low. 	<ul style="list-style-type: none"> a. Remove debris from the lip hinge. b. Lubricate per maintenance procedures or replace lip. c. Check oil level when unit is held open with the maint. support. Refill if necessary.
4. Platform does not lower.	<ul style="list-style-type: none"> a. Velocity fuse has locked up. b. Debris is lodged on or around the leveler. 	<ul style="list-style-type: none"> a. Attempt to raise the unit to unlock the velocity fuse. b. Check and remove any lodged debris on or around leveler.
5. Platform raises very slowly.	<ul style="list-style-type: none"> a. Weight on top of platform. b. Hydraulic fluid level is low. c. Low voltage d. Power unit/pump/motor failure. 	<ul style="list-style-type: none"> a. Remove weight from platform. b. Check oil level when the unit is held open with the maint. support. Refill if necessary. c. Verify $\pm 10\%$ nominal voltage while unit is running. d. Replace power unit assembly.
6. Lip does not store properly.	<ul style="list-style-type: none"> a. The lip stop bolt is not adjusted properly. b. Debris. c. Lip supports. 	<ul style="list-style-type: none"> a. Verify that the lip stop bolt is properly adjusted. b. Remove debris. c. Repair or replace the lip supports.
7. Fuse or circuit breaker trips.	<ul style="list-style-type: none"> a. Undersized fuse or circuit breaker. b. Low voltage. c. Short circuit in wiring. d. Wire gage is too small. Distance is too long. 	<ul style="list-style-type: none"> a. Verify 20 amp for 120VAC and 15 amp for 240VAC. b. Verify $\pm 10\%$ nominal voltage while unit is running. c. Check wiring connections and verify. d. Verify minimum wire gage per distance is correct. See chart on page 22.

HYDRAULIC SCHEMATIC (HALDEX POWER UNIT)



HYDRAULIC SCHEMATIC (BUCHER POWER UNIT)



LED STATUS CHART - STANDALONE

PIT DOCK LEVELER RITE-HITE PRODUCTS CORP. STANDALONE CONTROLS	LEVELER CONTROL BOARD										LEVELER AUX BOARD		
	INPUTS							OUTPUTS			OUTPUTS		
	FIELD				PUSH BUTTONS			12VDC			RELAY		12VDC
	ARTD INPUT	COMBINED POWER UNIT INPUT [CMBD PU]	GREEN LIGHT TO OPERATE LEVELER INPUT [GLT ITL] [SEE DIP SWITCH #2]	OVERHEAD DOOR OPEN INTERLOCK INPUT [OHD ITL] [SEE DIP SWITCH #3]	RAISE PUSH BUTTON	LIP OUT PUSH BUTTON	EMERGENCY STOP MUSHROOM BUTTON [IF EQUIPPED]	MOTOR CONTACTOR OUTPUT [LVLR CONTR]	12VDC POWER SUPPLY OK	LEVELER SOLENOID #1 - LIP OUT (K1) [STANDARD]	LEVELER SOLENOID #1 - LIP OUT (K1) [E-STOP EQUIPPED]	AUX BOARD POWER SUPPLY OK	
TERMINAL BLOCK NO.	J9.2	J11.2	J11.1	J9.1	J16.4	J16.3	J16.1	J10.3	J10.1-2	J2.3	J2.3	-	
LEVELER CONTROL BOARD LEDs	LD5	LD3	LD2	LD4	LD11	LD12	LD14	LD6	LD1	-	-	-	
LEVELER AUX BOARD LEDs	-	-	-	-	-	-	-	-	-	LD1	LD1	LD4	
02.01.00	REST STATE	F	F	?	?	-	-	T	F	T	F	T	T
02.01.01	RAISE SEQUENCE	F	F	ITL	ITL	M	-	T	T	T	F	T	T
02.01.02	AUTOMATIC RETURN TO DOCK	T	F	ITL	ITL	-	-	T	T	T	F	T	T
02.01.03	COMBINED POWER UNIT SEQ	F	T	?	?	-	-	T	T	T	F	T	T
02.02.00	LIP EXTEND SEQUENCE	F	F	ITL	ITL	M	M	T	T	T	T	F	T
02.02.01	PLATFORM HOLD STATE	F	F	?	?	-	M	T	F	T	T	F	T
02.04.00	EMERGENCY STOP STATE [IF EQUIPPED]	?	?	?	?	?	?	F	F	T	F	F	T
02.05.00	RUN FAULT STATE	?	?	?	?	?	?	F	T	?	?	T	
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.

LED STATUS CHART - DOK-COMMANDER

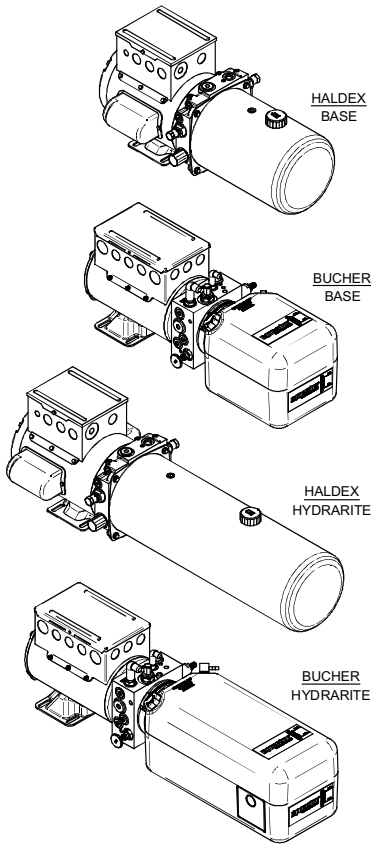
PIT DOCK LEVELER RITE-HITE PRODUCTS CORP. DOK-COMMANDER CONTROLS	MICRO CONTROL BOARD							POWER BOARD	LEVELER AUX BOARD			
	INPUTS						OUTPUTS		OUTPUTS			
	FIELD			PUSH BUTTONS			12VDC	12VDC	RELAY	12VDC		
	ARTD INPUT	OVERHEAD DOOR OPEN INTERLOCK INPUT [OHD ITL]	LEVELER STORED INTERLOCK TO UNLOCK* [UNLK ITL]	RAISE PUSH BUTTON	LIP OUT PUSH BUTTON	EMERGENCY STOP MUSHROOM BUTTON [IF EQUIPPED]	MOTOR CONTACTOR OUTPUT [LVLR CONTR]	12VDC POWER SUPPLY OK	LEVELER SOLENOID #1 - LIP OUT (K1) [STANDARD]	LEVELER SOLENOID #1 - LIP OUT (K1) [E=STOP EQUIPPED]	AUX BOARD POWER SUPPLY OK	
TERMINAL BLOCK NO.	J14.4	J14.2	J14.3	MEMBRANE	MEMBRANE	J7.8	J15.1	J2.1-6	J7.3	J7.3	-	
MICRO CONTROL BOARD LED _s	LD32	LD29	LD30	LD52	LD52	LD31	LD42	LD7	-	-	-	
LEVELER AUX BOARD LED _s	-	-	-	-	-	-	-	-	LD10	LD10	LD4	
02.01.00	REST STATE	F	?	?	-	-	T	F	T	F	T	T
02.01.01	RAISE SEQUENCE	F	ITL	?	M	-	T	T	T	F	T	T
02.01.02	AUTOMATIC RETURN TO DOCK	T	ITL	?	-	-	T	T	T	F	T	T
02.01.03	COMBINED POWER UNIT SEQ	F	?	?	-	-	T	T	T	F	T	T
02.02.00	LIP EXTEND SEQUENCE	F	ITL	?	M	M	T	T	T	T	F	T
02.02.01	PLATFORM HOLD STATE	F	F	?	-	M	T	T	T	T	F	T
02.04.00	EMERGENCY STOP STATE [IF EQUIPPED]	?	?	?	?	?	F	F	T	F	F	T
02.05.00	RUN FAULT STATE	?	?	?	?	?	?	F	T	?	?	T
NO.	STATE / SEQUENCE NO.											

KEY	
? - VARIES 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.

ELECTRICAL WIRING CHARTS

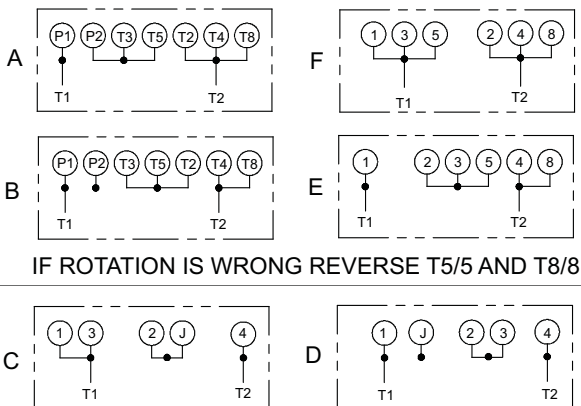
MOTOR CONNECTION DETAIL / FLA



BASE	Motor FLA Ratings & Connection Detail				Minimum Wire Size (AWG) Chart for Various Line Lengths and Line Loads			
	HALDEX		BUCHER		Line Length (ft)			
	FLA	CONN DETAIL	FLA	CONN DETAIL	0-50	51-100	101-150	151-200
110-120/1/60/.75HP	10	A			12	10	8	6
110-120/1/60/1.0HP			12.4	C	10	8	6	6
208-240/1/50/.75HP	5.0	B			14	14	14	12
208-240/1/50/1.0HP			7.0	D	14	12	12	10
208-240/1/60/.75HP	5.0	B			14	14	14	12
208-240/1/60/1.0HP			6.6	D	14	12	12	10
208-240/3/60/1.0 HP	3.8	G	3.0	G	14	14	12	12
380-415/3/50/1.0 HP	2.5	H	1.7	H	14	14	14	14
440-480/3/60/1.0 HP	1.9	H	1.5	H	14	14	14	14
575/3/60/1.0 HP	1.5	J	1.4	J	14	14	14	14

HYDRARITE	Motor FLA Ratings & Connection Detail				Minimum Wire Size (AWG) Chart for Various Line Lengths and Line Loads			
	HALDEX		BUCHER		Line Length (ft)			
	FLA	CONN DETAIL	FLA	CONN DETAIL	0-50	51-100	101-150	151-200
110-120/1/60/1.0 HP	21.2	A	19.0	F	10	8	6	4
208-240/1/50/1.0 HP	17.6	B	16.0	E	14	12	12	10
208-240/1/60/1.0 HP	10.6	B	9.5	E	14	12	12	10
208-240/3/60/1.0 HP	5.4	G	3.0	G	14	14	12	12
380-415/3/50/1.0 HP	2.3	H	1.7	H	14	14	14	14
440-480/3/60/1.0 HP	2.5	H	1.5	H	14	14	14	14
575/3/60/1.0 HP	2.4	J	1.4	J	14	14	14	14

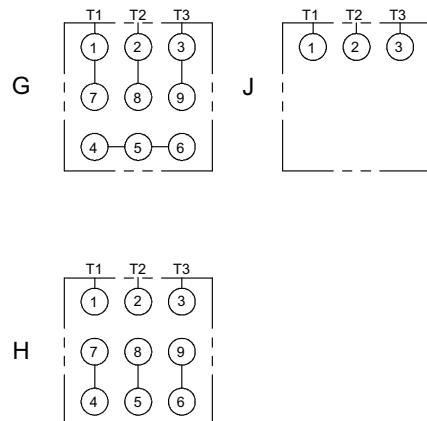
1 PH CONNECTOR DETAIL



IF ROTATION IS WRONG REVERSE T5/5 AND T8/8

MOTOR ROTATION IS NOT REVERSIBLE

3 PH CONNECTOR DETAIL



IF ROTATION IS WRONG REVERSE ANY 2 LINES

ELECTRICAL SCHEMATIC

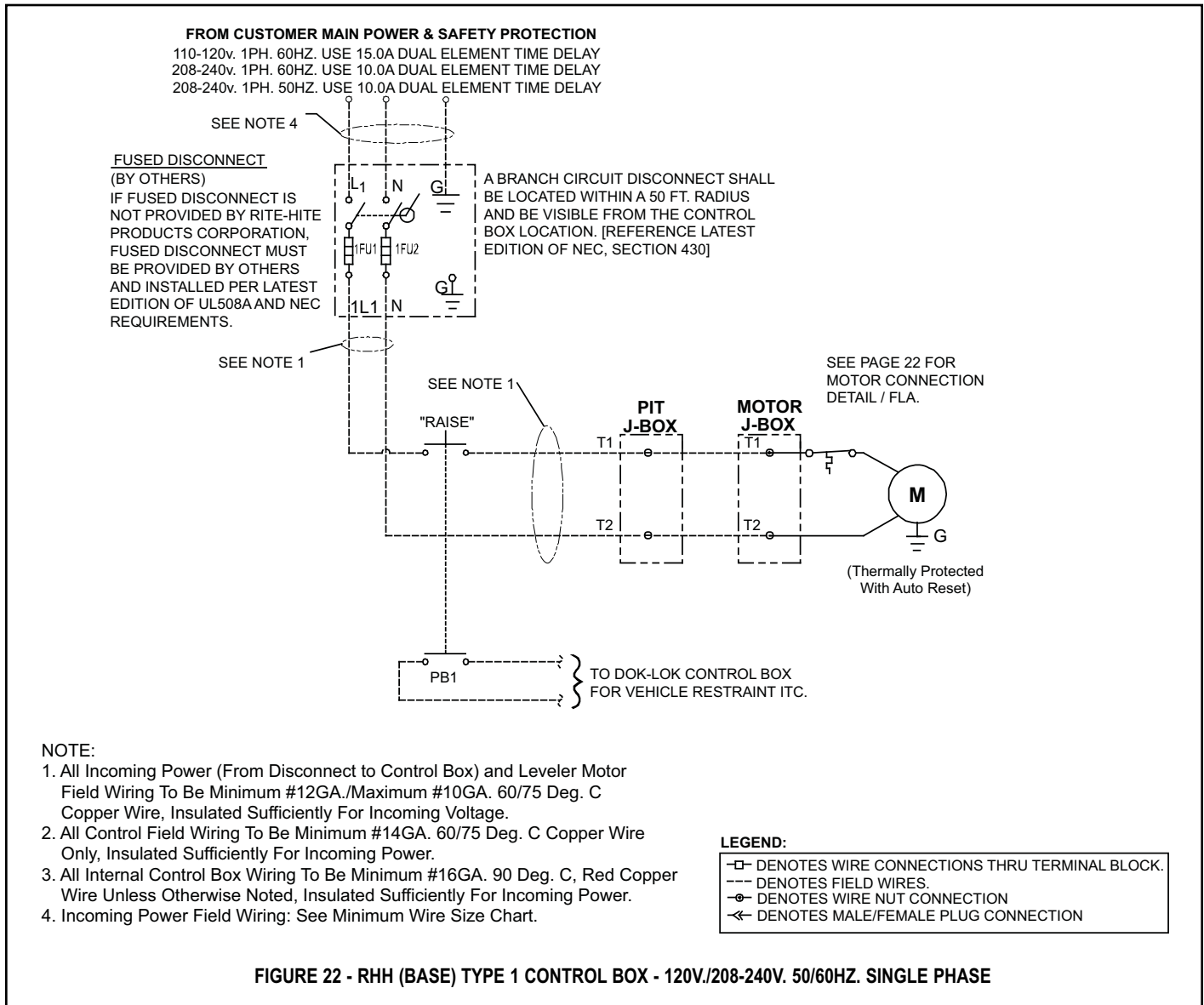


FIGURE 22 - RHH (BASE) TYPE 1 CONTROL BOX - 120V./208-240V. 50/60HZ. SINGLE PHASE

ELECTRICAL SCHEMATIC CONT.

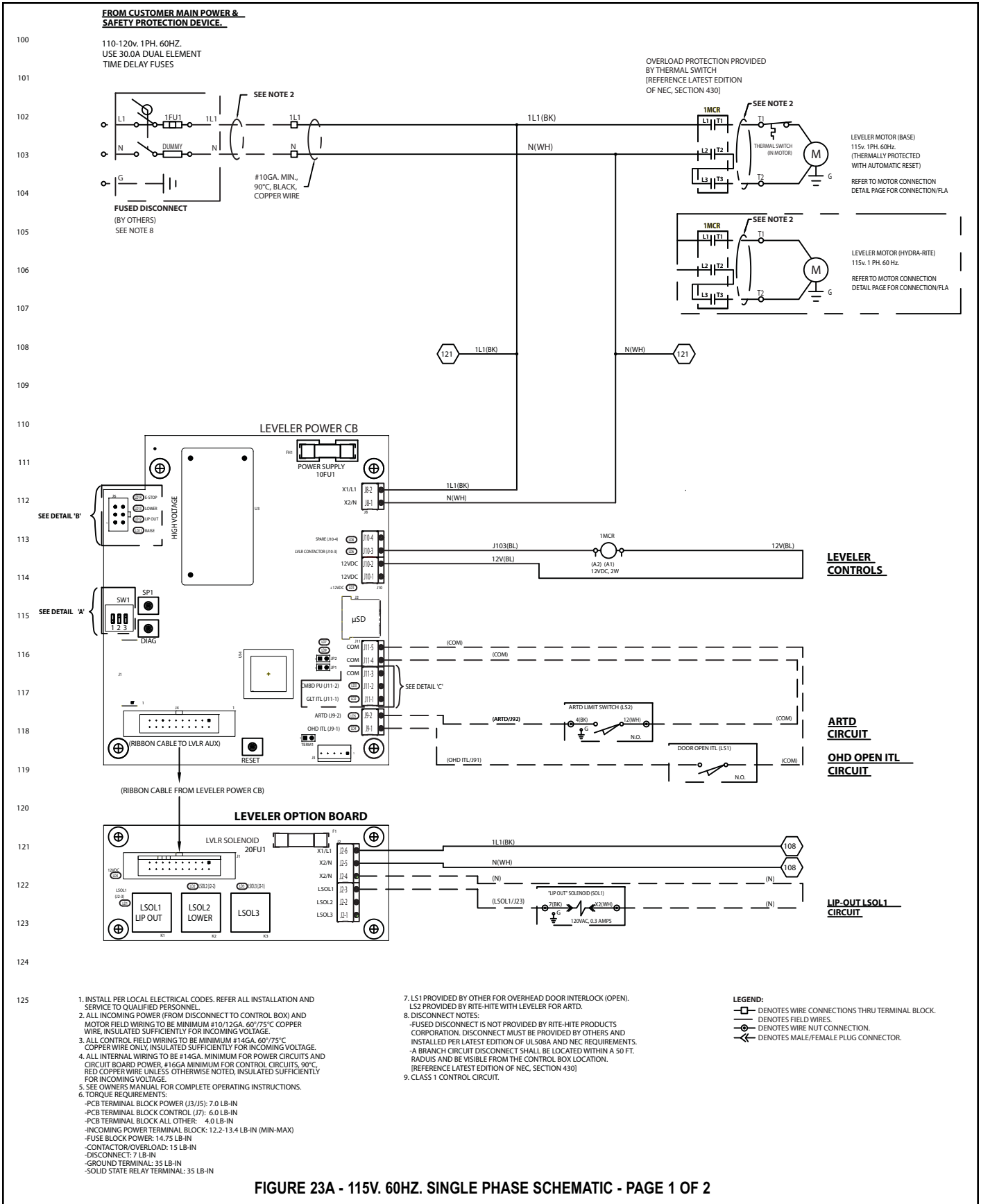


FIGURE 23A - 115V, 60HZ, SINGLE PHASE SCHEMATIC - PAGE 1 OF 2

ELECTRICAL SCHEMATIC CONT.

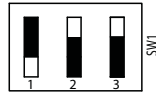
DETAIL A - DIP SWITCH SETTINGS

FACTORY POSITION

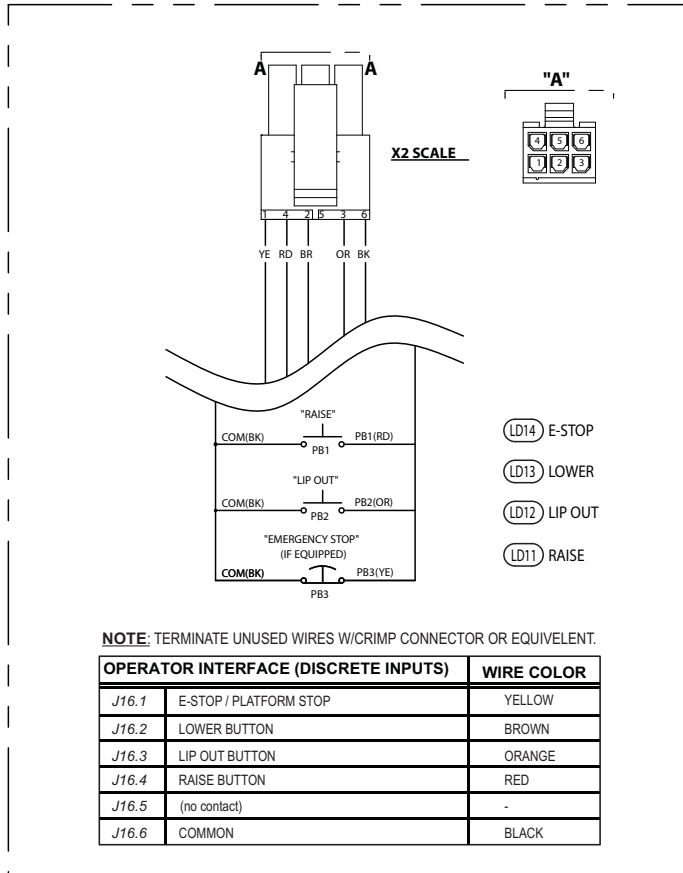
- 1 (DOWN)
- 2 (UP)
- 3 (UP)

FUNCTION CONTROLLED

- (DIP SWITCH 1 NOT USED)
- GREEN LIGHT ITL/ITC
- (DOWN - IF REQUIRED/UP TO DISABLE)
- OVERHEAD DOOR INTERLOCK
- (DOWN - IF EQUIPPED/UP TO DISABLE)



DETAIL B - DISCREET INPUTS PUSHBUTTONS



OPERATOR INTERFACE (DISCRETE INPUTS)	WIRE COLOR	
J16.1	E-STOP / PLATFORM STOP	YELLOW
J16.2	LOWER BUTTON	BROWN
J16.3	LIP OUT BUTTON	ORANGE
J16.4	RAISE BUTTON	RED
J16.5	(no contact)	-
J16.6	COMMON	BLACK

DETAIL C - RESTRAINT CONTROLS (IF EQUIPPED)

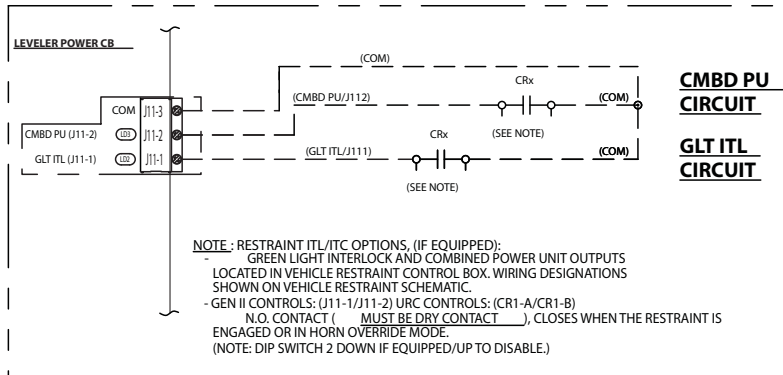


FIGURE 23B - 115V. 60HZ. SINGLE PHASE SCHEMATIC - PAGE 2 OF 2

ELECTRICAL SCHEMATIC CONT.

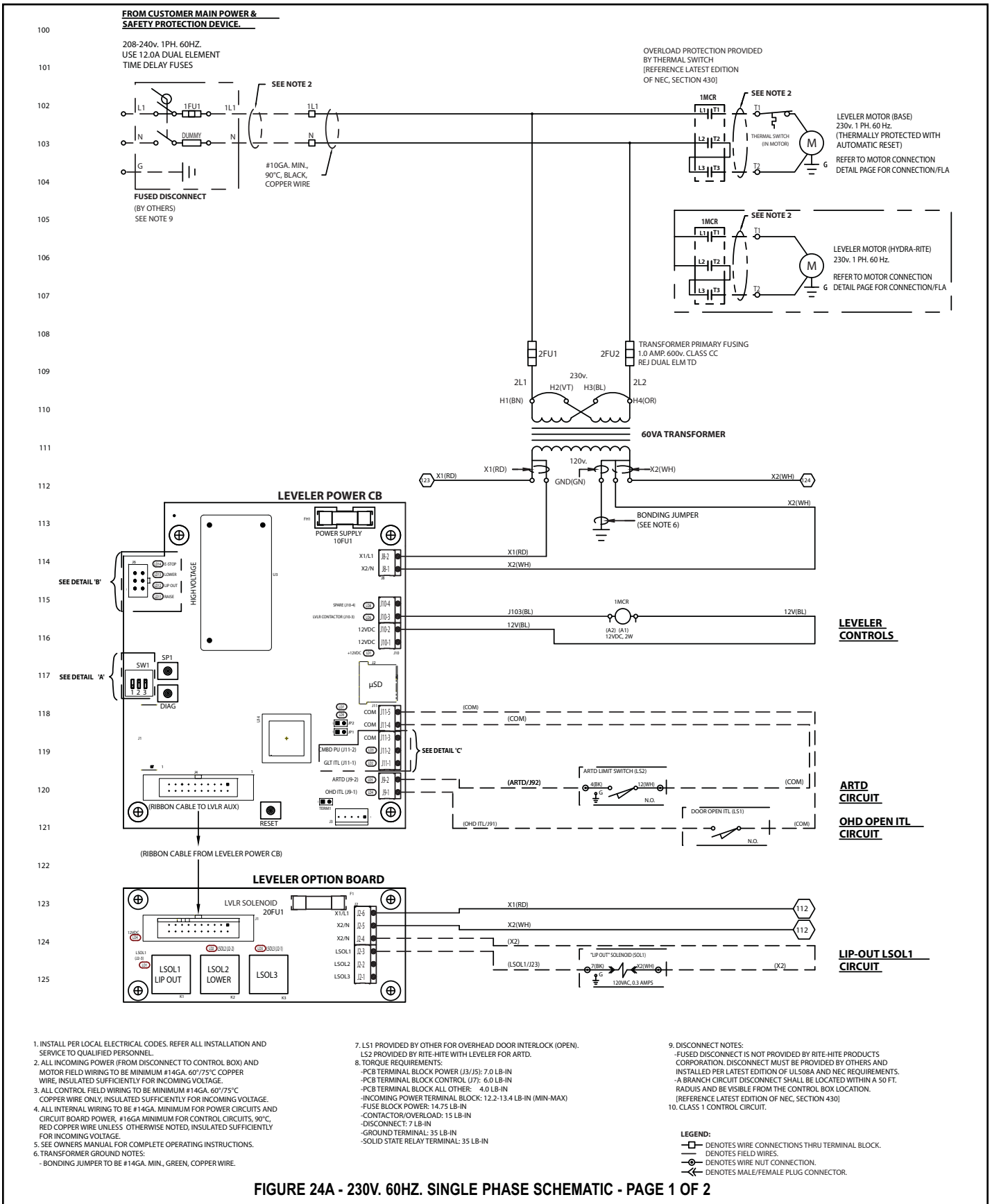
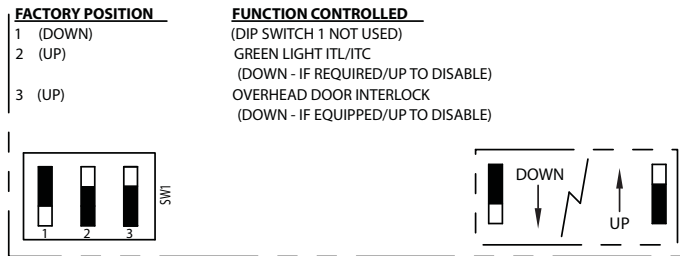


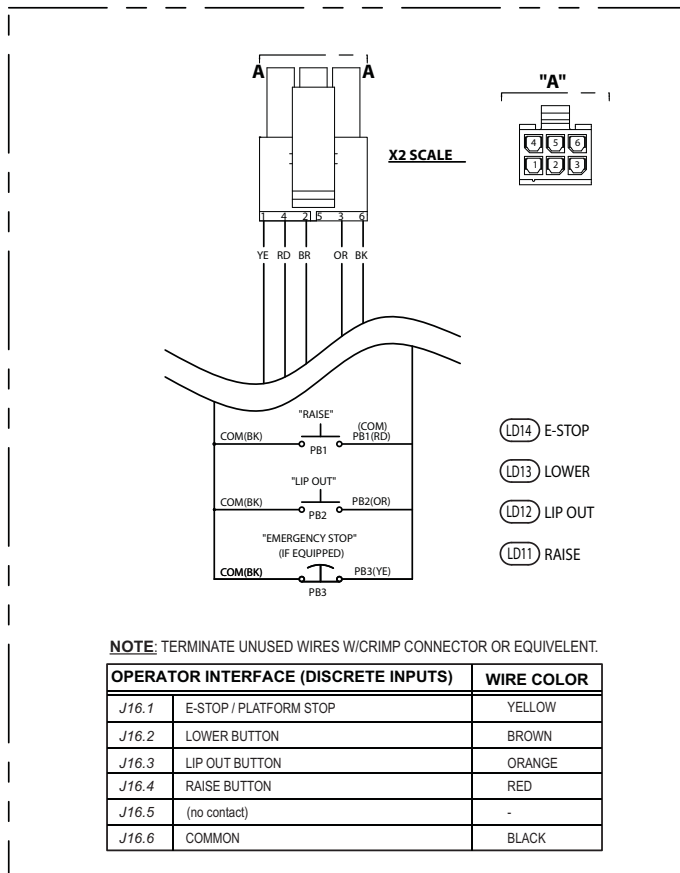
FIGURE 24A - 230V, 60HZ, SINGLE PHASE SCHEMATIC - PAGE 1 OF 2

ELECTRICAL SCHEMATIC CONT.

DETAIL A - DIP SWITCH SETTINGS



DETAIL B - DISCREET INPUTS PUSHBUTTONS



DETAIL C - RESTRAINT CONTROLS (IF EQUIPPED)

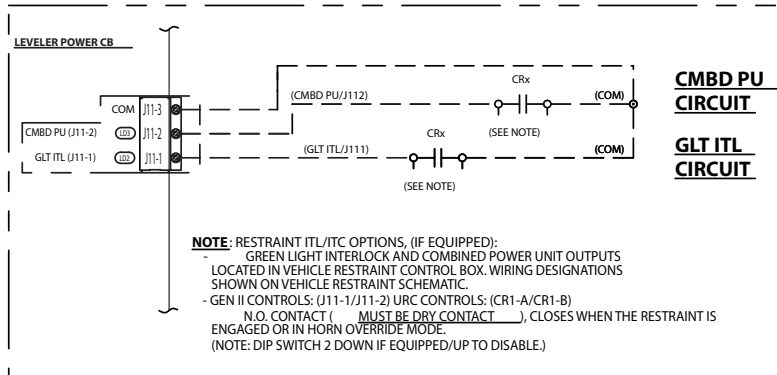


FIGURE 24B - 230V. 60HZ. SINGLE PHASE SCHEMATIC - PAGE 2 OF 2

ELECTRICAL SCHEMATIC CONT.

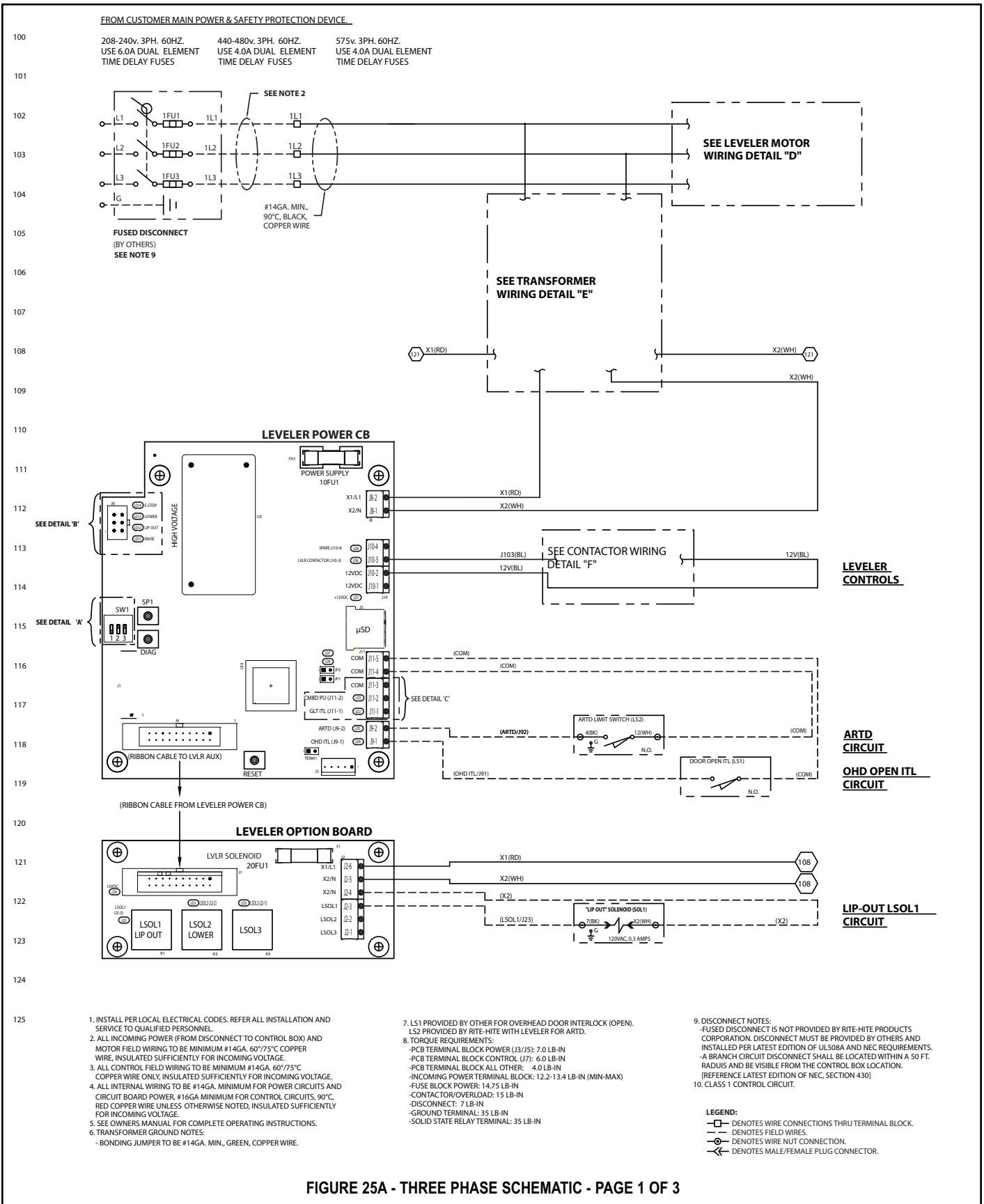


FIGURE 25A - THREE PHASE SCHEMATIC - PAGE 1 OF 3

ELECTRICAL SCHEMATIC CONT.

DETAIL A - DIP SWITCH SETTINGS

FACTORY POSITION

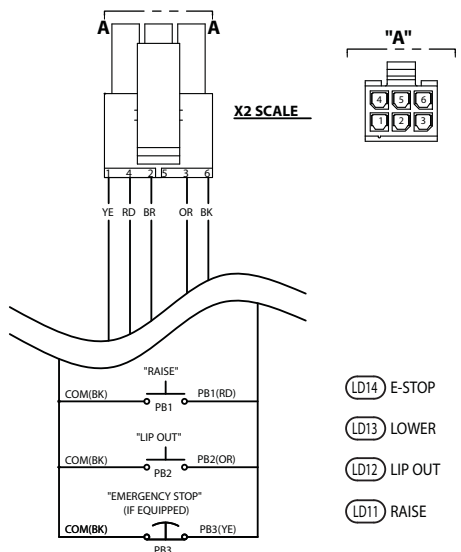
- 1 (DOWN)
- 2 (UP)
- 3 (UP)

FUNCTION CONTROLLED

(DIP SWITCH 1 NOT USED)
 GREEN LIGHT ITL/ITC
 (DOWN - IF REQUIRED/UP TO DISABLE)
 OVERHEAD DOOR INTERLOCK
 (DOWN - IF EQUIPPED/UP TO DISABLE)



DETAIL B - DISCREET INPUTS PUSHBUTTONS



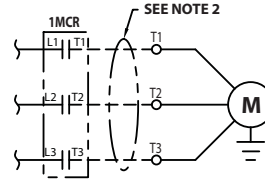
NOTE: TERMINATE UNUSED WIRES W/CRIMP CONNECTOR OR EQUIVALENT.

OPERATOR INTERFACE (DISCREET INPUTS)	WIRE COLOR	
J16.1	E-STOP / PLATFORM STOP	YELLOW
J16.2	LOWER BUTTON	BROWN
J16.3	LIP OUT BUTTON	ORANGE
J16.4	RAISE BUTTON	RED
J16.5	(no contact)	-
J16.6	COMMON	BLACK

DETAIL D - LEVELER MOTOR WIRING (BASE)

OVERLOAD PROTECTION PROVIDED BY BRANCH CIRCUIT FUSES [REFERENCE LATEST EDITION OF NEC, SECTION 430]

230/460V
3PH

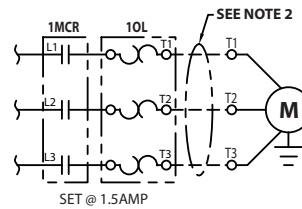


LEVELER MOTOR
 208-240v. 3 PH. 60 Hz.
 460v. 3 PH. 60 Hz.

REFER TO MOTOR CONNECTION
 DETAIL PAGE FOR CONNECTION/FLA

ONE LEVELER PER OVERLOAD PROTECTION DEVICE, [REFERENCE LATEST EDITION OF NEC, SECTION 430]

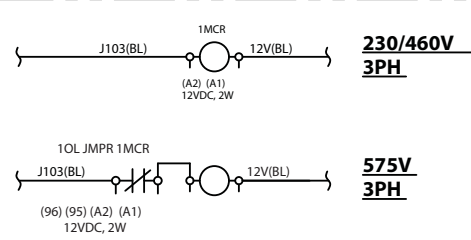
575V
3PH



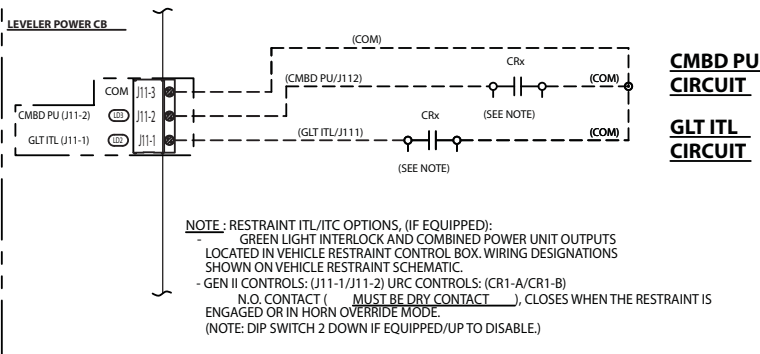
LEVELER MOTOR
 575v. 3 PH. 60 Hz.

REFER TO MOTOR CONNECTION
 DETAIL PAGE FOR CONNECTION/FLA

DETAIL E - CONTACTOR WIRING



DETAIL C - RESTRAINT CONTROLS (IF EQUIPPED)



NOTE: RESTRAINT ITL/ITC OPTIONS, (IF EQUIPPED):
 - GREEN LIGHT INTERLOCK AND COMBINED POWER UNIT OUTPUTS LOCATED IN VEHICLE RESTRAINT CONTROL BOX. WIRING DESIGNATIONS SHOWN ON VEHICLE RESTRAINT SCHEMATIC.
 - GEN II CONTROLS: (J11-1/J11-2) URC CONTROLS: (CR1-A/CR1-B)
 - N.O. CONTACT (MUST BE DRY CONTACT), CLOSING WHEN THE RESTRAINT IS ENGAGED OR IN HORN OVERRIDE MODE.
 (NOTE: DIP SWITCH 2 DOWN IF EQUIPPED/UP TO DISABLE.)

FIGURE 25B - THREE PHASE SCHEMATIC - PAGE 2 OF 3

ELECTRICAL SCHEMATIC CONT.

DETAIL E - CONTROL TRANSFORMER WIRING

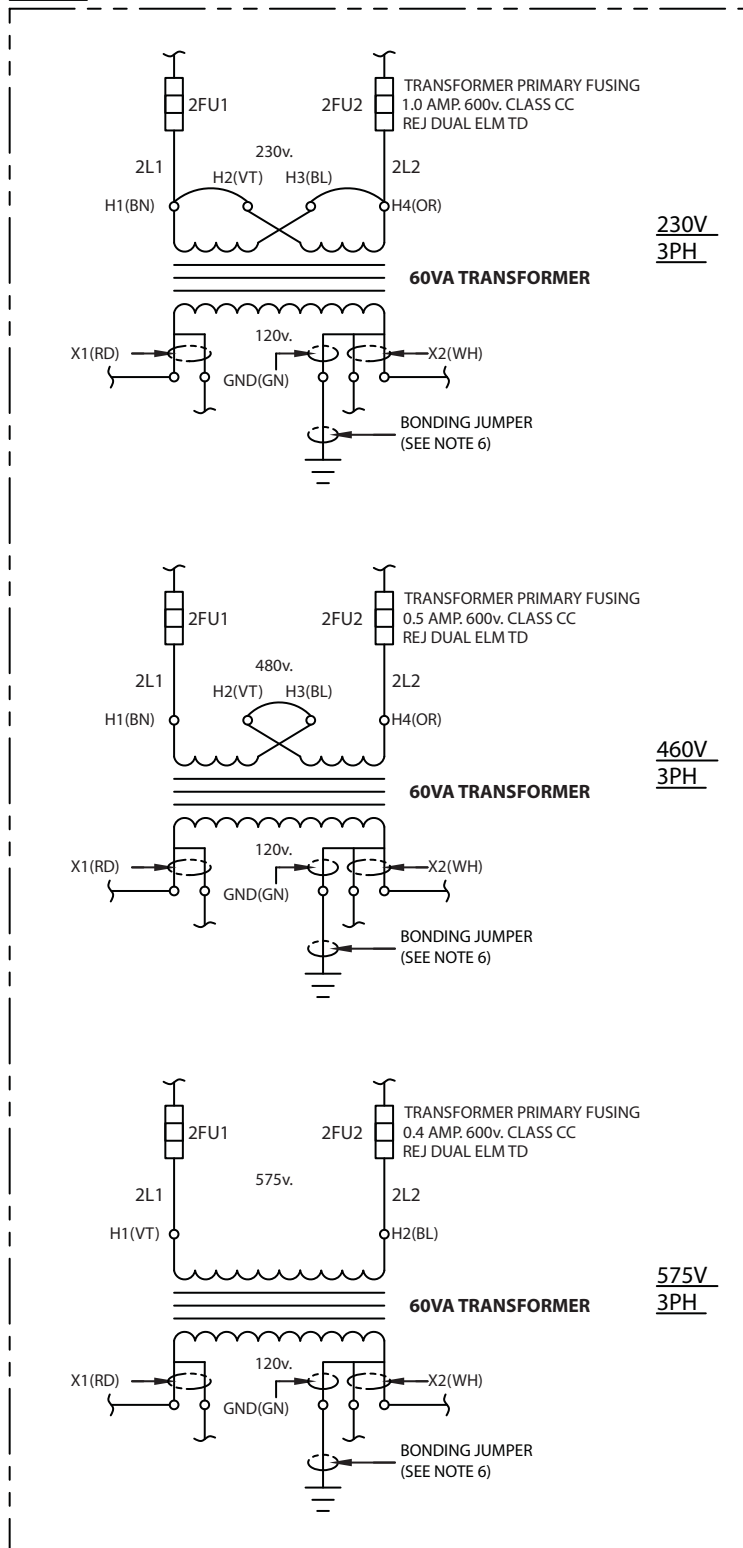
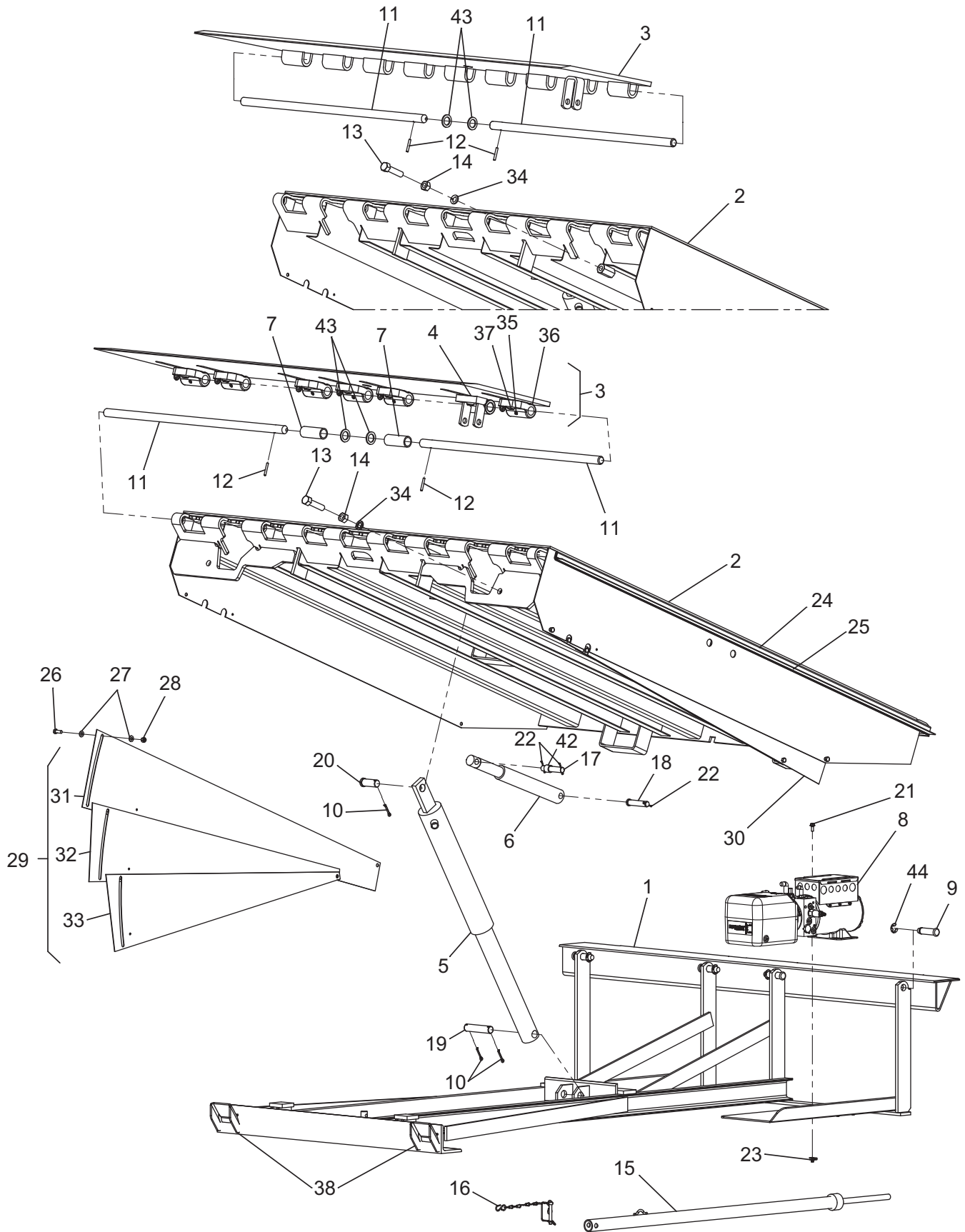


FIGURE 25C - THREE PHASE SCHEMATIC - PAGE 3 OF 3

REPLACEMENT PARTS - BASE UNIT

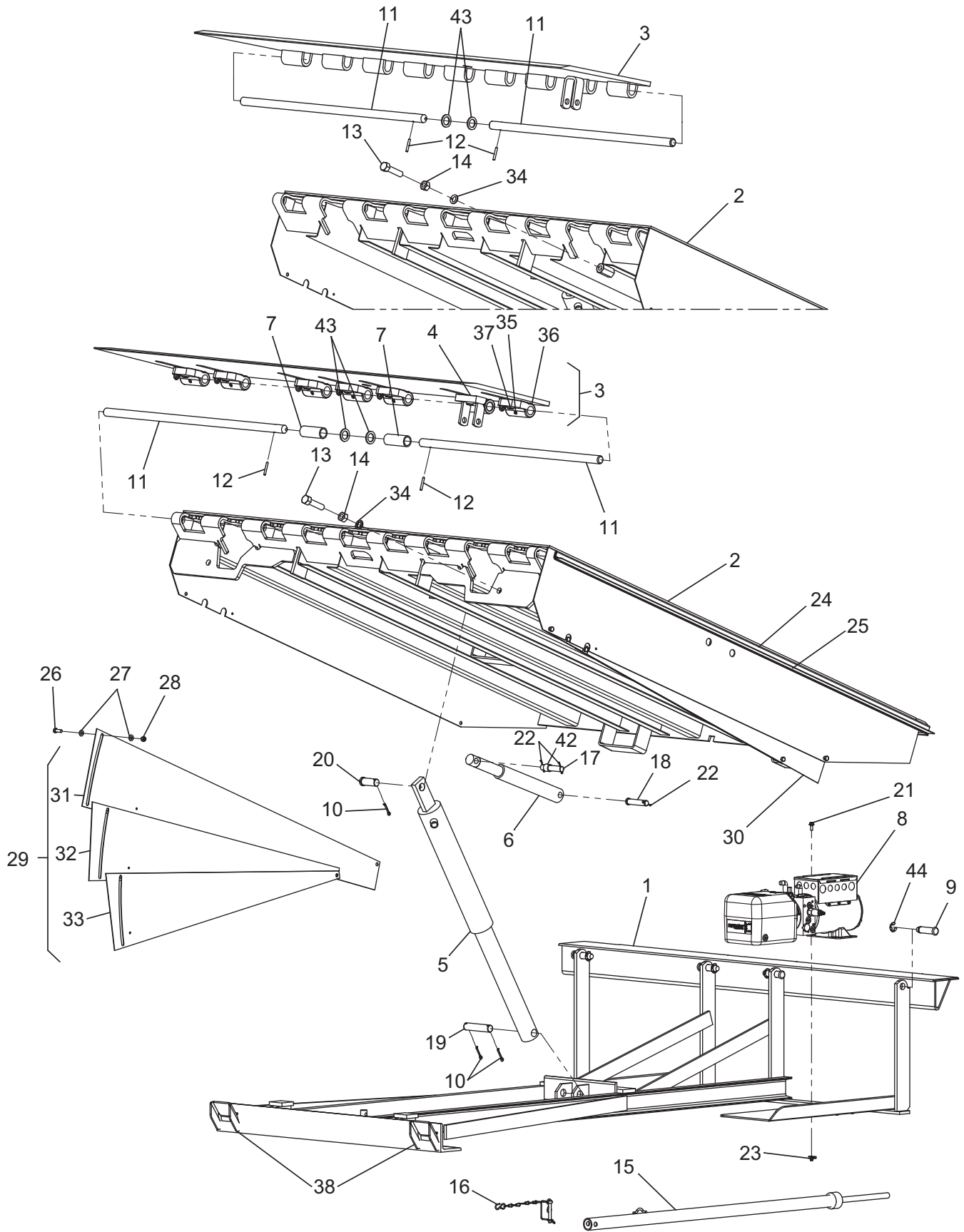


REPLACEMENT PARTS LIST - BASE UNIT

Item	Qty.	Description	Leveler Length			
			6' Long	8' Long	10' Long	12' Long
1	1	Frame HL9/RHH40	573.____	573.____	573.____	573.____
2	1	Platform Standard Lip	571.____	571.____	571.____	571.____
	1	Platform Safe-T-Lip	652.____	652.____	652.____	652.____
3	1	Safe-T-Lip Assembly	See Page 53-54			
	1	Lip Weldment	569.____	569.____	569.____	569.____
4	1	Lip Lug Spool Module (Safe-T-Lip Only)	See Page 53			
5	1	Ramp Cyl. Hyd SA 2Port	129344	129340	129341	129341
6	1	Lip Cyl. Hyd 1.5 BR X 6 STR 1Port	102239	102239	102239	102239
7	1	Tube Rnd 1.5OD 1.188ID 3.88L (Safe-T-Lip Only)	477.100	477.100	477.100	477.100
8	1	Power Unit	See Page 44-49			
9	2	Pin Clevis HD .875 X 3.25L Groove ZP	129307	129307	129307	129307
	1	Pin Clevis HD .875 X 3.25L ZP Grv (Stainless Steel)	129309	129309	129309	129309
10	3	Pin Cotter .188 Dia. X 1.50L ZP	51907	51907	51907	51907
11	2	Lip Hinge Pin 6' Wide	562.112	562.112	562.112	562.112
	2	Lip Hinge Pin 6.5' Wide	562.113	562.113	562.113	562.113
11	2	Lip Hinge Pin 7' Wide	562.111	562.111	562.111	562.111
	2	Lip Hinge Pin 6' Wide (Stainless Steel)	490.105	490.105	490.105	490.105
	2	Lip Hinge Pin 6.5' Wide (Stainless Steel)	490.106	490.106	490.106	490.106
	2	Lip Hinge Pin 7' Wide (Stainless Steel)	490.107	490.107	490.107	490.107
12	2	Pin Tension .25 Dia X 1.75 L	123960	123960	123960	123960
13	1	Bolt Hex .75-10 UNC X 3L ZP	51186	51186	51186	51186
14	1	Nut Hex .75-10 UNC ZP (Standard Lip)	51517	51517	51517	51517
	2	Nut Hex .75-10 UNC ZP (Safe-T-Lip)	51517	51517	51517	51517
15	1	Safe-T-Strut	113265	15795	15795	15795
16	1	Safe-T-Strut Chain	117678	117678	117678	117678
17	1	Pin Clevis .75 X 3.875L 1141 CRM	129231	129231	129231	129231
18	1	Pin Clevis .75 Dia X 3.5L 1141 CRM	130015	130015	130015	130015
19	1	Pin Clevis 1 X 4.75L 2Hole ZP	122972	122972	122972	122972
20	1	Pin Clevis 1 X 2.555 2Hole(.203 Dia) HD ZP	130013	130013	130013	130013
21	4	Bolt .313-18X.75 Serr FLG Hex G5 ZP	142701	142701	142701	142701
22	4	Pin Cotter .12Dia X 1.5L	51903	51903	51903	51903
23	4	Nut .313-18 TRW Palnut ZP	56540	56540	56540	56540
24	2	Channel Formed Weatherseal 12GA	489.105	489.106	489.109	489.113
25	2	Insert WSL - PT2	513.105	513.104	513.106	513.103
25	2	Insert WSL - NB1 (Not Shown)	514.105	514.104	514.106	514.103
26	10	Bolt .375-16 X 1L Hex G5 ZP	51600	51600	51600	51600
27	20	Washer Flat .38 ZP	51700	51700	51700	51700
28	10	Nut .38-16 Nylk ZP	51501	51501	51501	51501
29	1	Full Range LH (2Fan) Units W/O ADS	417.102	417.103	417.104	417.105
29	1	Full Range LH (3Fan) Units With ADS	-	-	419.102	419.103
30	1	Full Range RH (2Fan) Units W/O ADS	418.102	418.103	418.104	418.105
	1	Full Range RH (3Fan) Units With ADS	-	-	420.101	420.103

NOTE: Lip Spool Module part numbers above apply to most levelers. If you are not sure, contact Rite-Hite before ordering.

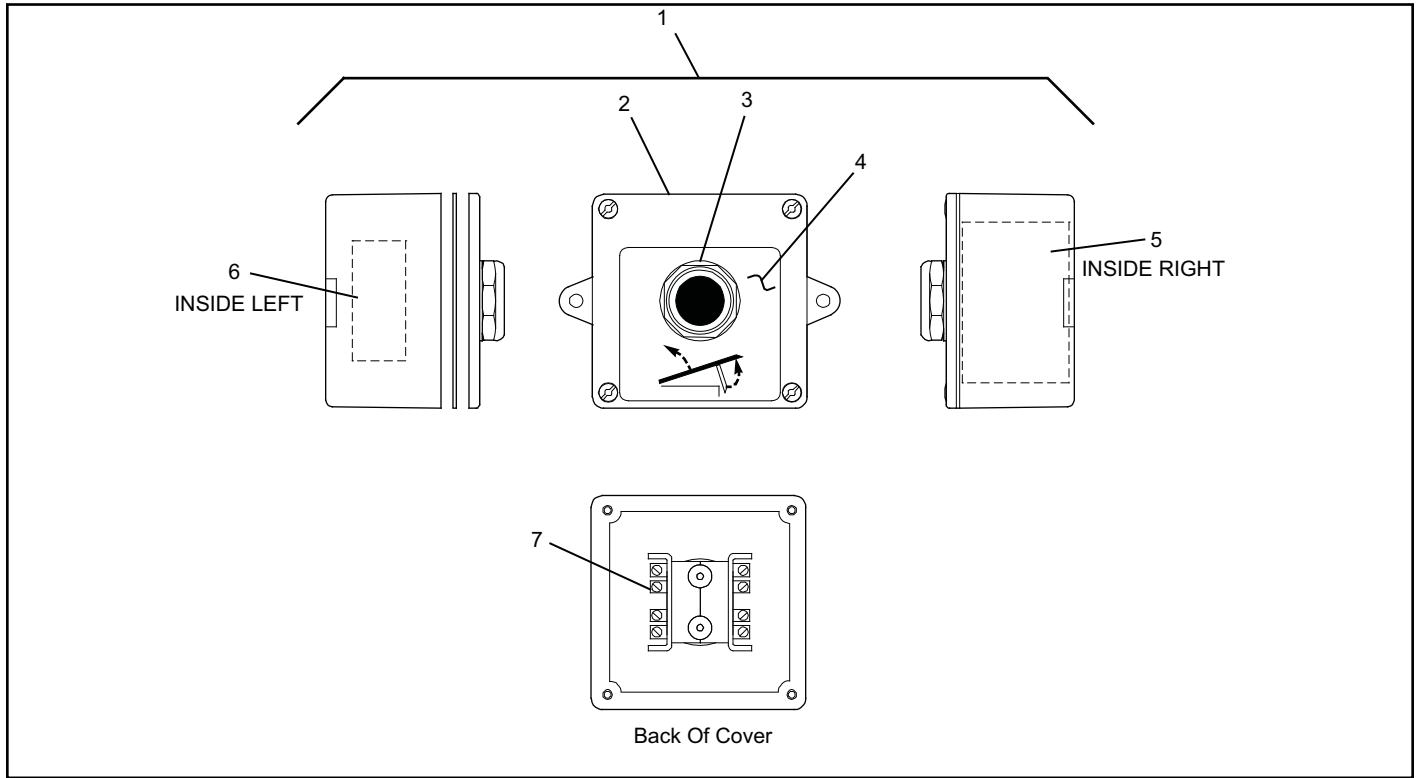
REPLACEMENT PARTS - BASE UNIT



REPLACEMENT PARTS LIST - BASE UNIT

Item	Qty.	Description	Leveler Length			
			6' Long	8' Long	10' Long	12' Long
31	1	Toeguard Fan 14GA X 11 4Hole 1 Slot LH	411.100	411.101	563.100	563.101
	1	Toeguard Fan 14GA X 11 4Hole 1 Slot RH	411.100	411.101	564.100	564.101
32	1	Toeguard Fan 14GA X 11 3Hole 1 Slot LH	416.100	416.101	565.100	565.101
	1	Toeguard Fan 14GA X 11 3Hole 1 Slot RH	416.100	416.101	566.100	566.101
33	1	Toeguard Fan 14GA X 11 2Hole 1 Slot LH (3 Fan Only)	-	-	567.100	567.101
34	1	Toeguard Fan 14GA X 11 2Hole 1 Slot RH (3 Fan Only)	-	-	568.100	568.101
	1	Washer .75 Split LK Heavy ZP (Standard Lip)	51814	51814	51814	51814
	2	Washer .75 Split LK Heavy ZP (Safe-T-Lip)	51814	51814	51814	51814
35	7	Grease Fitting .188Dia (Safe-T-Lip Only)	51169	51169	51169	51169
36	7	Lip Spool Module (Safe-T-Lip Only)	See Page 53-54			
37	7	Shoulder Bolt (Safe-T-Lip Only)	129099	129099	129099	129099
38	2	Lip Keepers (Non Safe-T-Lip Units Only)	129201	129201	129201	129201
39	1	Decal Sheet Manufacturing (Not Shown)	128116	128116	128116	128116
40	1	Operational Sign (Not Shown)	128111	128111	128111	128111
41	1	Decal Sheet Field (Not Shown)	128121	128121	128121	128121
42	1	Tube 1 OD x 13/16 Long	129241	129241	129241	129241
43	2	Washer Flat 1.125ID 1.75OD .1406THK ZP	139809	139809	139809	139809
44	4	Ring, Ext. Retaining .875OD	129308	129308	129308	129308

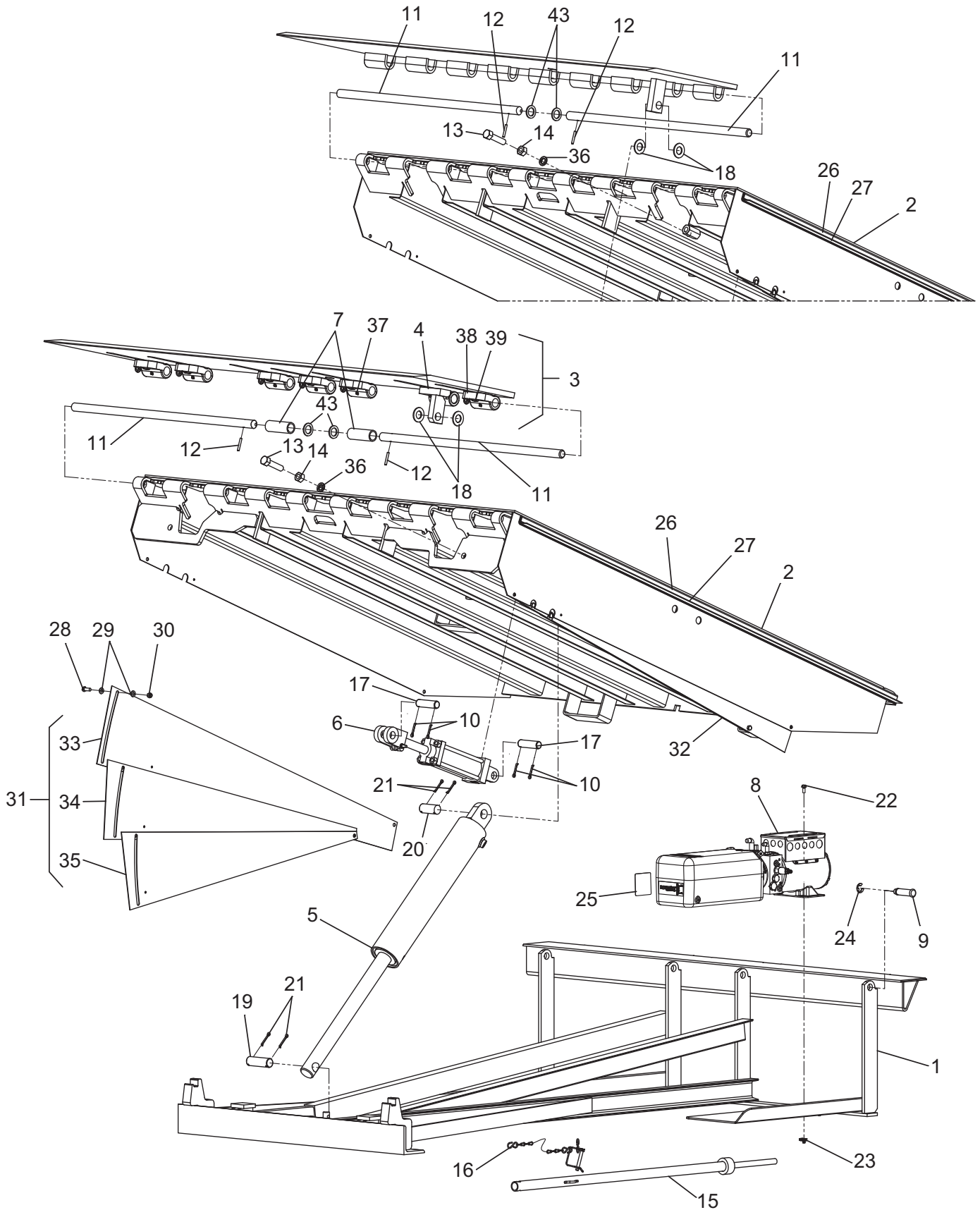
TYPE 1 CONTROL BOX PARTS



Item	Qty.	Description	Part Number
1	1	Control Box Complete	228dxxx
2	1	Control Box Enclosure, 4 x 4 x 2 N4XF	117342
3	1	Push Button N12/N4	57075
	1	Push Button N4X	118316
4	1	Control Box Cover Decal, Raise 3 x 3 Hole (30.5MM Oprtr)	117414
5	1	Decal V/PH/FLA	230dxxx
6	1	Decal UL/ULC - Consult RITE-HITE	-
7	1	Contact Block, NO 30.5MM 600V (1.5 HP)	118315

NOTES

REPLACEMENT PARTS - HYDRA-RITE™ UNIT

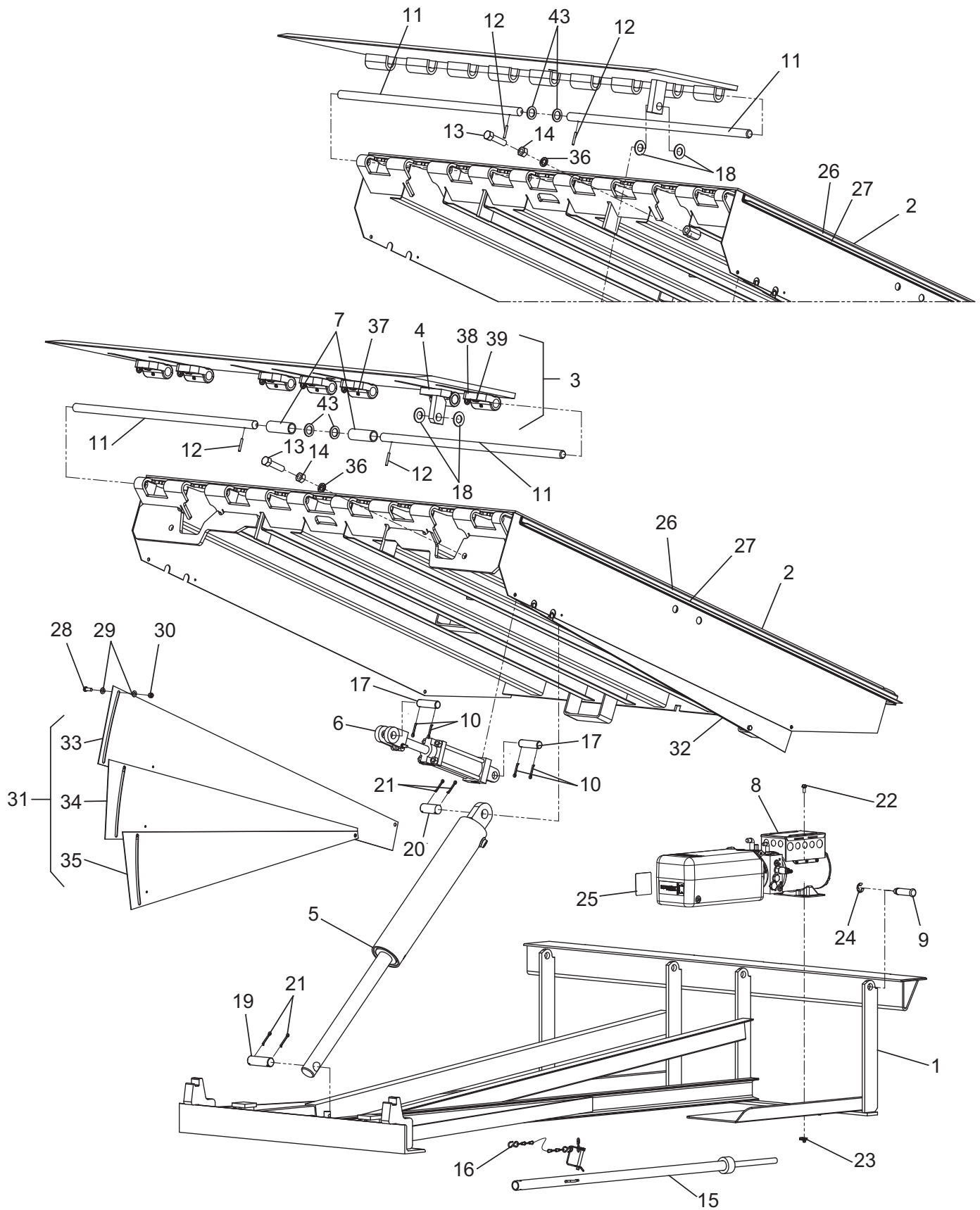


REPLACEMENT PARTS LIST - HYDRA-RITE™ UNIT

Item	Qty.	Description	Leveler Length			
			6' Long	8' Long	10' Long	12' Long
1	1	Frame RHH40 HydraRite	688.____	688.____	688.____	688.____
2	1	Platform HydraRite (Standard Lip)	576.____	576.____	576.____	576.____
	1	Platform HydraRite (Safe-T-Lip)	653.____	653.____	653.____	653.____
3	1	Safe-T-Lip Assembly	See Page 53-54			
	1	Lip Weldment	581.____	581.____	581.____	581.____
4	1	Lip Lug Spool Module (Safe-T-Lip Only)	See Page 53			
5	1	Ramp Cyl. Hyd 4" BR SA 2Port	128997	128913	128913	128914
6	1	Lip Cyl. Hyd 2.5 BR X 6 STR 2Port	119291	119291	119291	119291
7	2	Tube Rnd 1.5OD 1.188ID 3.875L (Safe-T-Lip Only)	477.100	477.100	477.100	477.100
8	1	Power Unit	See Page 42-47			
9	4	Pin Clevis HD .875 X 3.25L ZP	129307	129307	129307	129307
9	4	Pin Clevis HD .875 X 3.25L ZP (Stainless Steel)	129309	129309	129309	129309
10	4	Pin Cotter .188 Dia. X 1.50L ZP	51907	51907	51907	51907
11	2	Lip Hinge Pin 6' Wide	562.112	562.112	562.112	562.112
	2	Lip Hinge Pin 6.5' WIDE	562.113	562.113	562.113	562.113
11	2	Lip Hinge Pin 7' Wide	562.111	562.111	562.111	562.111
	2	Lip Hinge Pin 6' Wide (Stainless Steel)	490.105	490.105	490.105	490.105
	2	Lip Hinge Pin 6.5' Wide (Stainless Steel)	490.106	490.106	490.106	490.106
	2	Lip Hinge Pin 7' Wide (Stainless Steel)	490.107	490.107	490.107	490.107
12	2	Pin Tension .25 Dia X 1.75 L	123960	123960	123960	123960
13	1	Bolt Hex .75-10 UNC X 3L ZP	51186	51186	51186	51186
14	1	Nut Hex .75-10 UNC ZP (Standard Lip)	51517	51517	51517	51517
	2	Nut Hex .75-10 UNC ZP (Safe-T-Lip)	51517	51517	51517	51517
15	1	Safe-T-Strut	118021	15795	113265	18869
16	1	Safe-T-Strut Chain	117678	117678	117678	117678
17	2	Pin Clevis 1.000 X 3.625 ZP	52630	52630	52630	52630
18	2	Washer 1.00 Flat Sae ZP	51721	51721	51721	51721
19	1	Pin Clevis 1.25 X 4L ZP	52643	52643	52643	52643
20	1	Pin Clevis 1.25 X 2.875L 2Hole	119424	119424	119424	119424
21	4	Pin Cotter .188 Dia. X 1.75L ZP	51908	51908	51908	51908
22	4	Bolt .313-18X.75 Serr Flg	142701	142701	142701	142701
23	4	Nut .313-18 TRW Palnut ZP	56540	56540	56540	56540
24	4	Ring Rtnng Ext(E) .875OD	129308	129308	129308	129308
25	1	Decal Oil Hyd Bio FL(85+%)	119530	119530	119530	119530
26	2	Channel Formed Weatherseal 12GA	489.105	489.106	489.104	489.113
27	2	Insert Weatherseal - PT2	513.105	513.104	513.106	513.103
	2	Insert Weatherseal - NB1 (Not Shown)	514.105	514.104	514.106	514.103
28	10	Bolt .375-16 X 1L Hex G5 ZP	51600	51600	51600	51600
29	20	Washer .375 Flat ZP	51700	51700	51700	51700
30	10	Nut .38-16 Nylk ZP	51501	51501	51501	51501
31	1	Full Range LH (2FAN) Units W/O ADS	417.102	417.103	417.104	417.105
	1	Full Range LH (3FAN) Units With ADS	-	-	419.102	419.103

NOTE: Lip Spool Module part numbers above apply to most levelers. If you are not sure, contact Rite-Hite before ordering.

REPLACEMENT PARTS - HYDRA-RITE™ UNIT

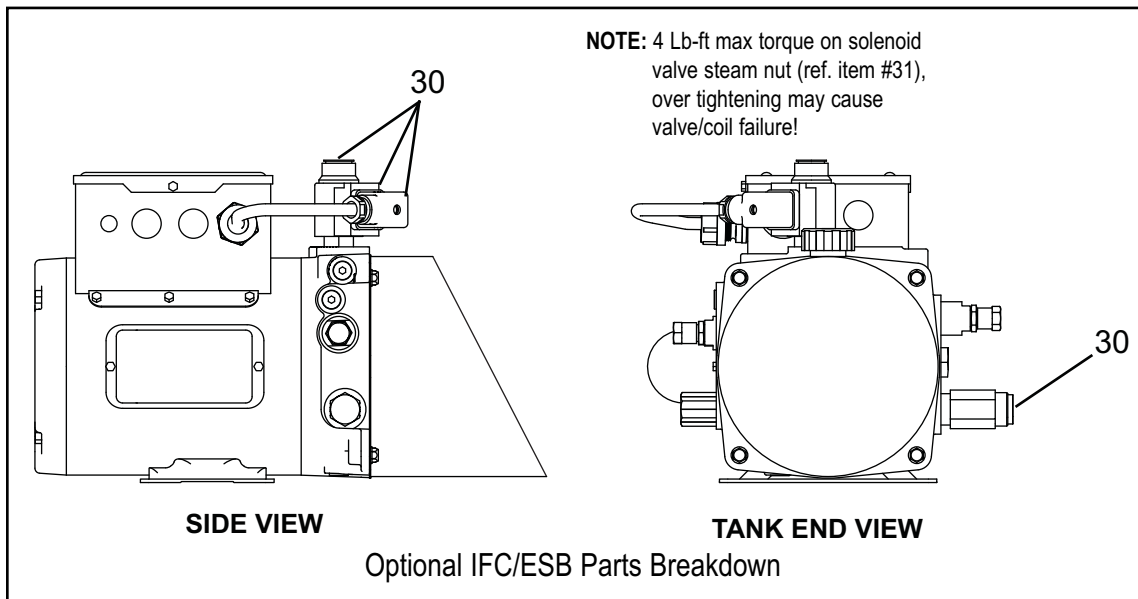
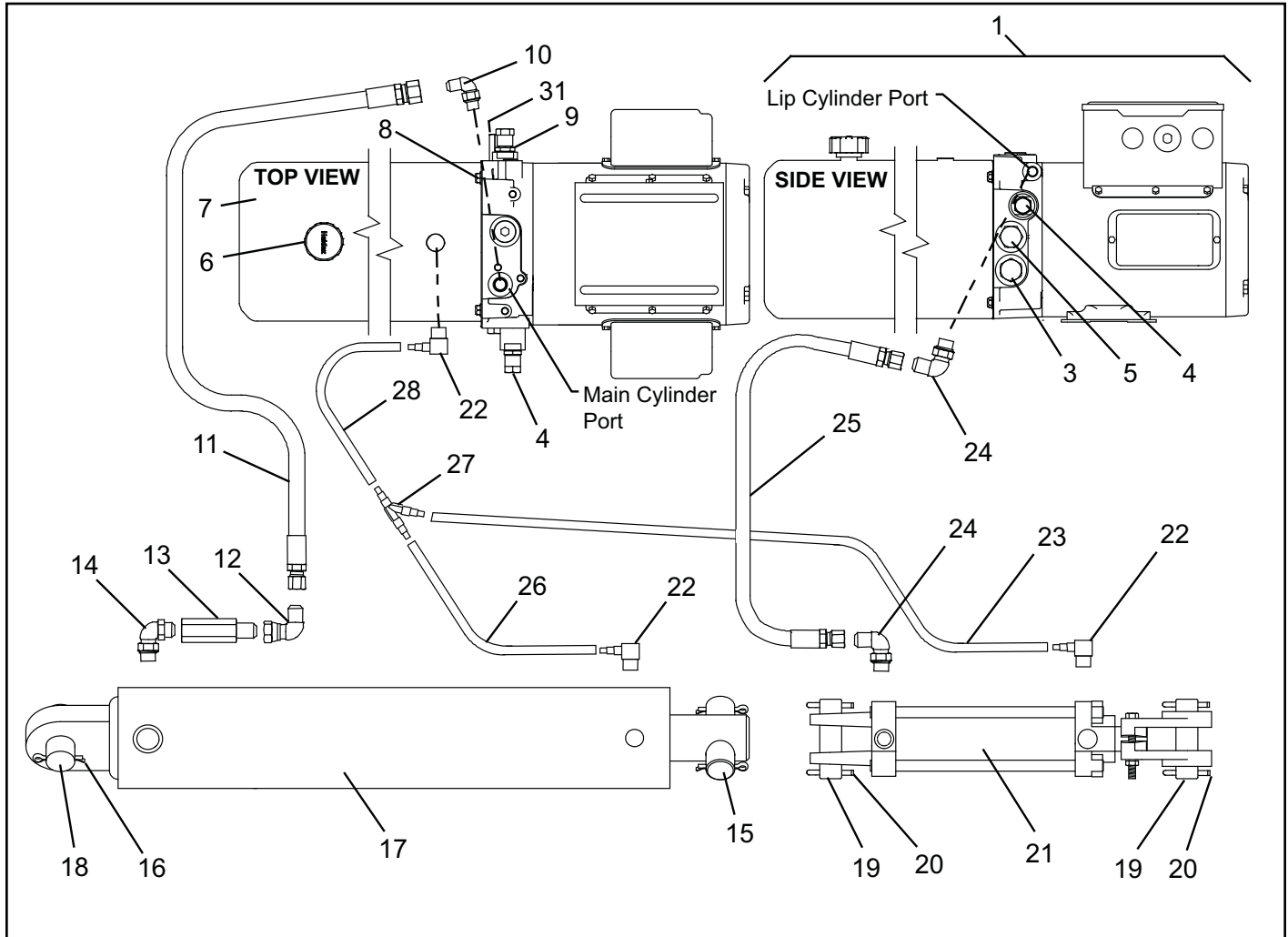


REPLACEMENT PARTS LIST - HYDRA-RITE™ UNIT

Item	Qty.	Description	Leveler Length			
			6' Long	8' Long	10' Long	12' Long
32	1	Full Range RH (2FAN) Units W/O ADS	418.102	418.103	418.104	418.105
	1	Full Range RH (3FAN) Units With ADS			420.101	420.103
33	1	Toeguard Fan 14GA X 11 4Hole 1 Slot LH	411.100	411.101	563.100	563.101
	1	Toeguard Fan 14GA X 11 4Hole 1 Slot RH	411.100	411.101	564.100	564.101
34	1	Toeguard Fan 14GA X 11 3Hole 1 Slot LH	416.100	416.101	565.100	565.101
35	1	Toeguard Fan 14GA X 11 3Hole 1 Slot RH	416.100	416.101	566.100	566.101
	1	Toeguard Fan 14GA X 11 2Hole 1 Slot LH (3 Fan Only)	-	-	567.100	567.101
36	1	Toeguard Fan 14GA X 11 2Hole 1 Slot RH (3 Fan Only)	-	-	568.100	568.101
	1	Washer .75 Split LK Heavy ZP (Standard Lip)	51814	51814	51814	51814
	2	Washer .75 Split LK Heavy ZP (Safe-T-Lip)	51814	51814	51814	51814
37	7	Grease Fitting .188Dia (Safe-T-Lip Only)	51169	51169	51169	51169
38	7	Lip Spool Module (Safe-T-Lip Only)	See Page 53-54			
39	7	Shoulder Bolt (Safe-T-Lip Only)	129099	129099	129099	129099
40	1	Decal Sheet Manufacturing (Not Shown)	128116	128116	128116	128116
41	1	Operational Sign (Not Shown)	128111	128111	128111	128111
42	1	Decal Sheet Field (Not Shown)	128121	128121	128121	128121
43	2	Washer Flat 1.125ID 1.75OD .1406THK ZP	139809	139809	139809	139809

NOTE: Lip Spool Module part numbers above apply to most levelers. If you are not sure, contact Rite-Hite before ordering.

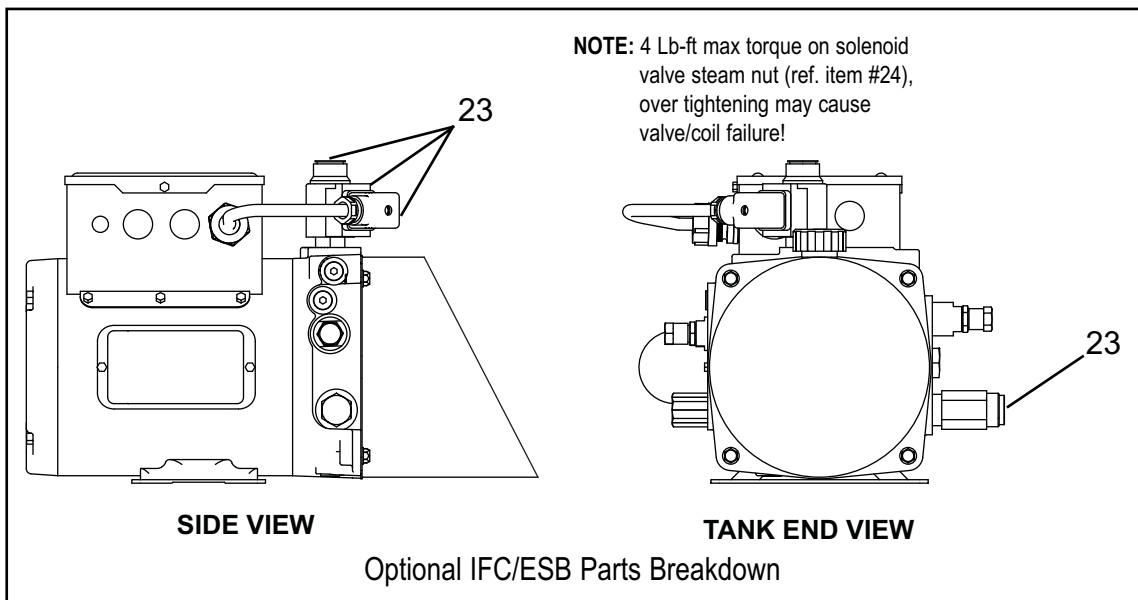
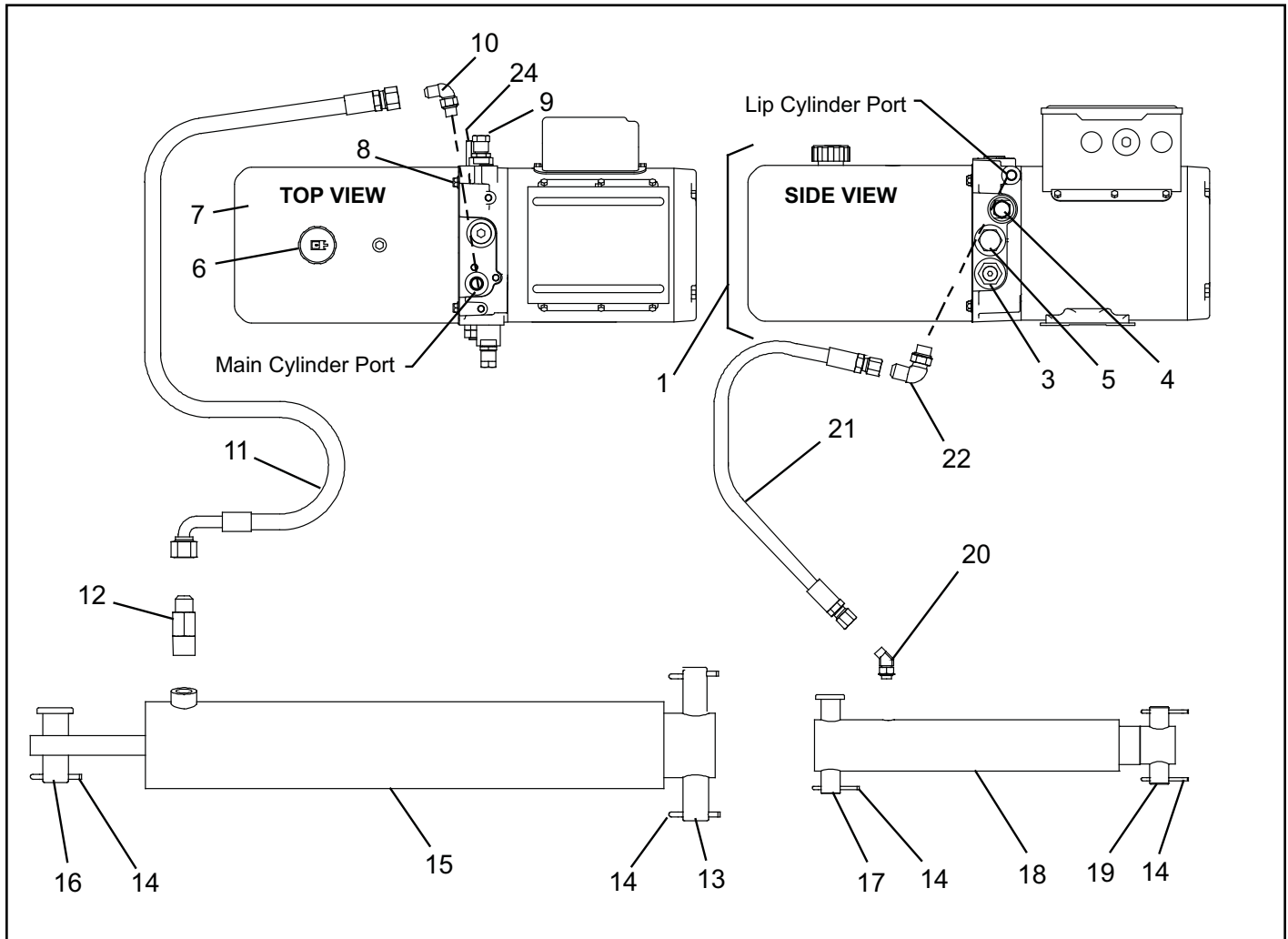
HYDRAULIC REPLACEMENT PARTS - HYDRA-RITE™ (HALDEX POWER UNIT)



HYDRAULIC REPLACEMENT PARTS LIST - HYDRA-RITE™ - (HALDEX POWER UNIT)

Item	Qty.	Description	Leveler Length			
			6' Long	8' Long	10' Long	12' Long
1	1	Power Unit - 120/240 Single Phase	126501	126501	126501	126501
	1	Power Unit - 240/380 - 415/480 Three Phase	126502	126502	126502	126502
	1	Power Unit - 575 Three Phase	126503	126503	126503	126503
	1	Power Unit - 120/240 Single Phase with IFC	119605	119605	119605	119605
	1	Power Unit - 240/380 - 415/480 Three Phase with IFC	119606	119606	119606	119606
2	1	Power Unit - 575 Three Phase with IFC	119607	119607	119607	119607
	1	Tank Seal/O-Ring (Not Shown)	118824	118824	118824	118824
	1	Pilot To Open Check Valve	122947	122947	122947	122947
	1	Sequence Valve	123760	123760	123760	123760
	1	Pilot To Close Check Valve	118830	118830	118830	118830
6	1	Hydraulic Oil Tank Cap	118829	118829	118829	118829
	1	Hydraulic Oil Tank	120447	120447	120447	120447
	4	Hydraulic Oil Tank Screws	118825	118825	118825	118825
	1	Shuttle Valve	122946	122946	122946	122946
	1	Ramp Cylinder Hose Fitting, Power Unit	55267	55267	55267	55267
11	1	Ramp Cylinder Hose Assembly	16927	120373	120373	120373
	1	Velocity Fuse/ Hose Fitting - Elbow 90 #8 MJ #8 FJS	16921	16921	16921	16921
	1	Velocity Fuse	123258	123258	123258	123258
	1	Ramp Cylinder Hose Fitting, Main Cylinder	17808	17808	17808	17808
	1	Clevis Pin, Ramp Cylinder Lower Pin	52643	52643	52643	52643
16	4	Cotter Pin	51908	51908	51908	51908
	1	Ramp Cylinder	128997	128913	128913	128914
	1	Clevis Pin, Ramp Cylinder Upper Pin	119424	119424	119424	119424
	2	Clevis Pin, Lip Cylinder	52630	52630	52630	52630
	4	Cotter Pin	51907	51907	51907	51907
21	1	Lip Cylinder	119291	119291	119291	119291
	1	Return Line Fitting	17806	17806	17806	17806
	*	Return Hose, Lip Cylinder (Qty. = 1" of hose)	55372	55372	55372	55372
	1	Lip Cylinder Hose Fitting, Lip Cylinder	16918	16918	16918	16918
	1	Lip Cylinder Hose Assembly	16931	120372	120372	120372
26	*	Return Hose, Ramp Cylinder (Qty. = 1" of hose)	55372	55372	55372	55372
	1	Return Hose Y Fitting	17807	17807	17807	17807
	*	Return Hose, Power Unit (Qty. = 1" of hose)	55372	55372	55372	55372
	1	Lip Cylinder Hose Fitting, Power Unit	16920	16920	16920	16920
	1	IFC Kit Haldex	122318	122318	122318	122318
31	1	ESB Kit Haldex	122531	122531	122531	122531
	1	System Relief Valve	126784	126784	126784	126784
	-	STD - RH Biodegradable Fluid (quart/light blue in color)	119181	119181	119181	119181
32	-	OPT - Mil 5606 Fluid (quart/red in color)	108303	108303	108303	108303

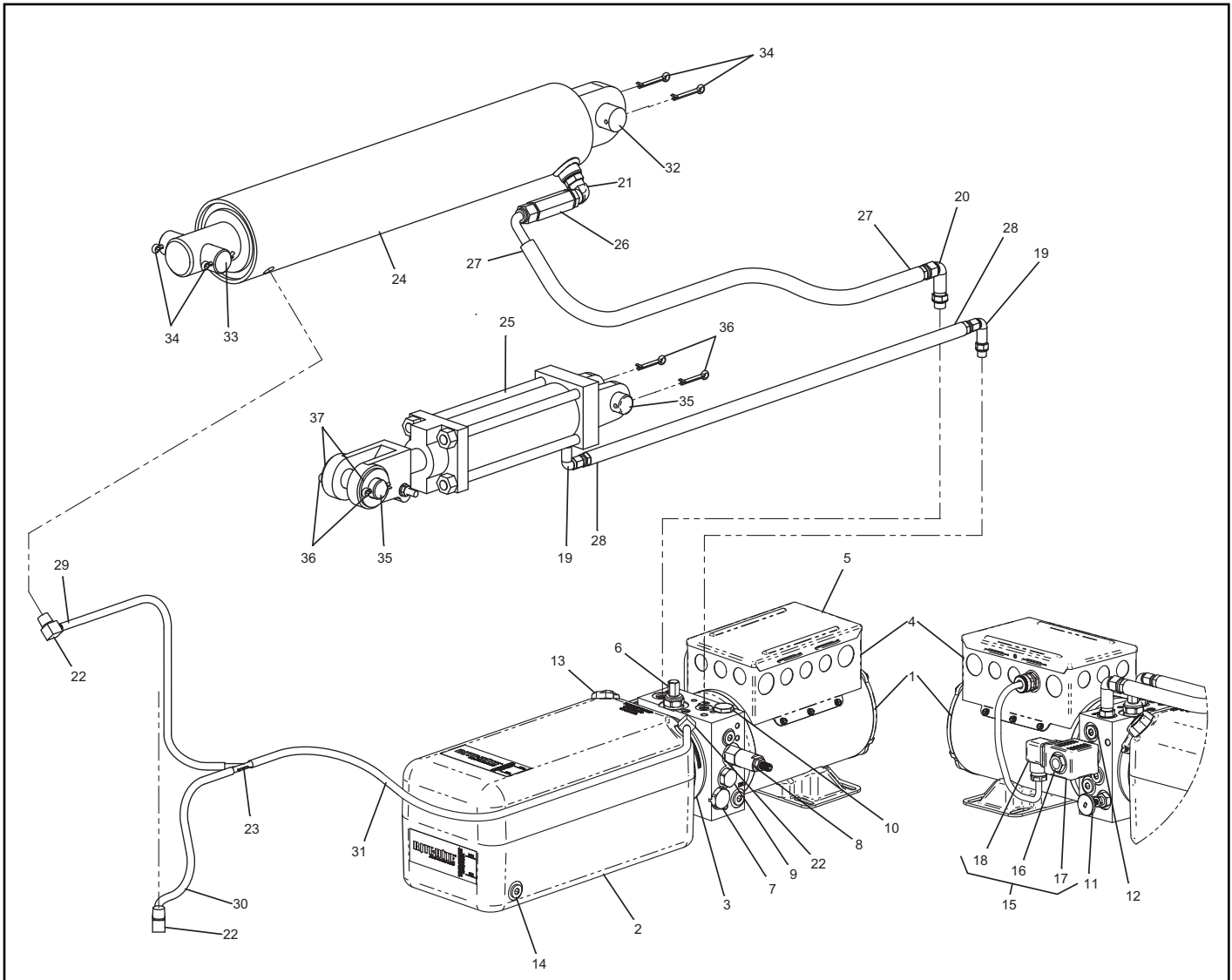
HYDRAULIC REPLACEMENT PARTS - BASE (HALDEX POWER UNIT)



HYDRAULIC REPLACEMENT PARTS LIST - BASE UNIT (HALDEX POWER UNIT)

Item	Qty.	Description	Leveler Length			
			6' Long	8' Long	10' Long	12' Long
1	1	Power Unit - 120/240 Single Phase	126498	126498	126498	126498
	1	Power Unit - 240/380 - 415/480 Three Phase	126499	126499	126499	126499
	1	Power Unit - 575 Three Phase	126500	126500	126500	126500
	1	Power Unit - 120/240 Single Phase with IFC	116679	116679	116679	116679
	1	Power Unit - 240/380 - 415/480 Three Phase with IFC	116680	116680	116680	116680
2	1	Power Unit - 575 Three Phase with IFC	116681	116681	116681	116681
	1	Tank Seal/O-Ring (Not Shown)	118824	118824	118824	118824
	1	Pilot To Open Check Valve	118826	118826	118826	118826
	1	Sequence Valve	123759	123759	123759	123759
	1	Pilot To Close Check Valve	118830	118830	118830	118830
6	1	Hydraulic Oil Tank Cap	118829	118829	118829	118829
	1	Hydraulic Oil Tank	118828	118828	118828	118828
	4	Hydraulic Oil Tank Screws	118825	118825	118825	118825
	1	Shuttle Valve	118823	118823	118823	118823
	1	Ramp Cylinder Hose Fitting, Power Unit	55267	55267	55267	55267
11	1	Ramp Cylinder Hose Assembly	108961	119776	119844	117058
	1	Velocity Fuse	129343	129342	129346	129346
	1	Pin, Clevis 1 x 4.75L ZP	122972	122972	122972	122972
	7	Cotter Pin	51907	51907	51907	51907
	1	Ramp Cylinder	129344	129340	129341	129341
16	1	Pin, Clevis 1 x 2.555L ZP	130013	130013	130013	130013
	1	Pin, Clevis .75 x 3.5L 1141 CRM	130015	130015	130015	130015
	1	Lip Cylinder	102239	102239	102239	102239
	1	Pin, Clevis .75 x 3.00L 1141CRM	102247	102247	102247	102247
	1	Lip Cylinder Hose Fitting, Lip Cylinder	100363	100363	100363	100363
21	1	Lip Cylinder Hose Assembly	108964	108963	117053	117526
	1	Lip Cylinder Hose Fitting, Power Unit	16920	16920	16920	16920
	1	IFC Kit Haldex	122318	122318	122318	122318
	1	ESB Kit Haldex	122531	122531	122631	122631
	1	System Relief Valve	126784	126784	126784	126784
25	-	STD - RH Biodegradeable Fluid (quart/light blue in color)	119181	119181	119181	119181
	-	OPT - Mil 5606 Fluid (quart/red in color)	108303	108303	108303	108303

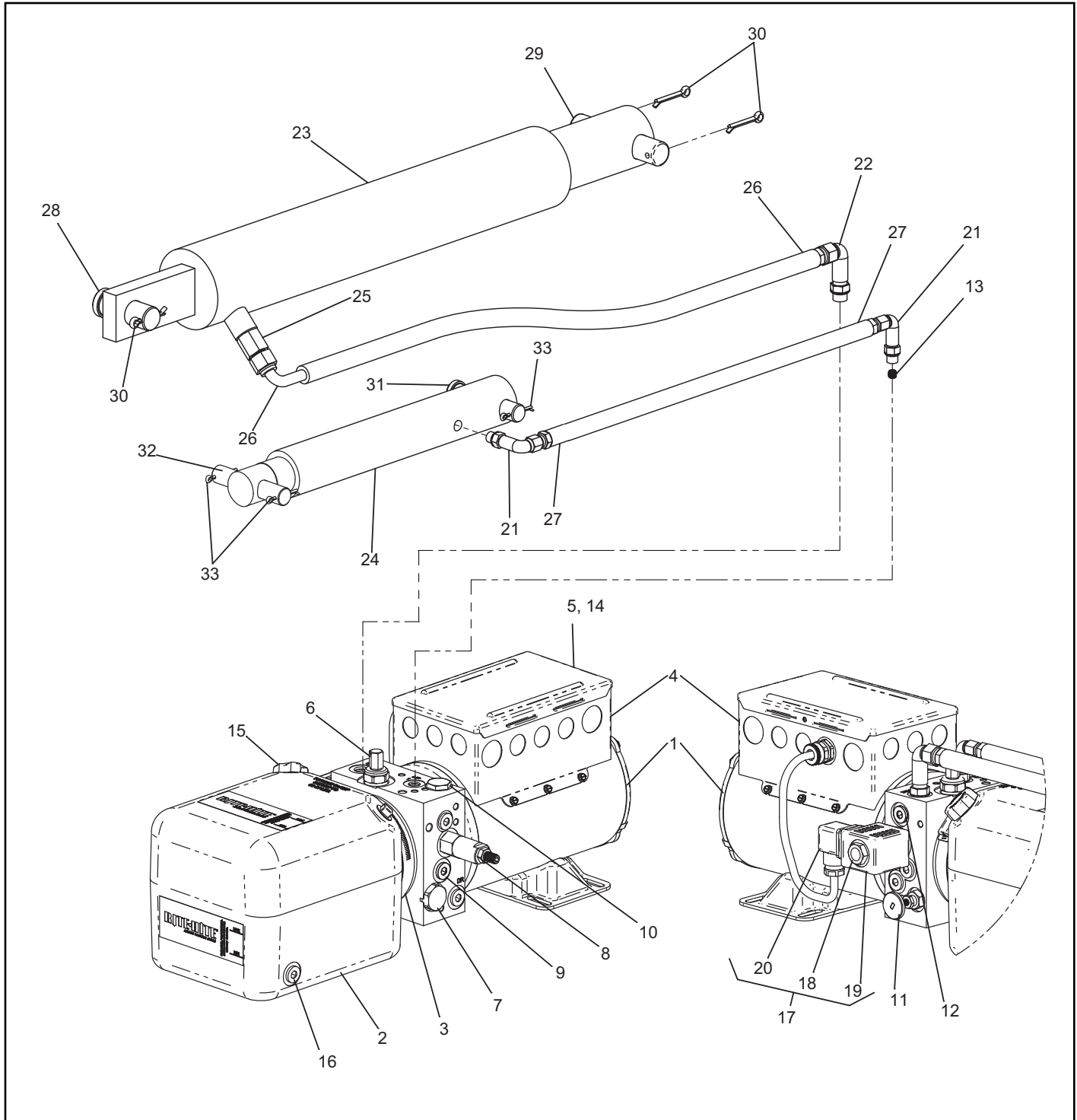
HYDRAULIC REPLACEMENT PARTS - HYDRA-RITE™ (BUCHER POWER UNIT)



HYDRAULIC REPLACEMENT PARTS LIST - HYDRA-RITE™ - (BUCHER POWER UNIT)

Item	Qty.	Description	Leveler Length			
			6' Long	8' Long	10' Long	12' Long
1	1	Power Unit 115/230v 1ph	141170	141170	141170	141170
	1	Power Unit 208-230/380-460v 3ph	141171	141171	141171	141171
	1	Power Unit 575v 3ph	141172	141172	141172	141172
2	1	Tank Assembly 16.5L Plastic	141178	141178	141178	141178
3	1	Hose clamp	132754	132754	132754	132754
4	1	Junction Box 3ph	132760	132760	132760	132760
	1	Junction Box 1ph	141162	141162	141162	141162
5	1	Junction Box Cover 3ph	132759	132759	132759	132759
	1	Junction Box Cover 1ph	141163	141163	141163	141163
6	1	Relief Valve Kit	132757	132757	132757	132757
7	1	Check Valve PTC 3:1 (Ramp)	142602	142602	142602	142602
8	1	Sequence Valve	147785	147785	147785	147785
9	1	Check Valve PTO 3:1 (Lip)	142605	142605	142605	142605
10	1	Check Valve with Screen	142606	142606	142606	142606
11	1	Needle Valve (Flow control)	142607	142607	142607	142607
12	1	Check Valve PTC 17:1 (Lip)	143218	143218	143218	143218
13	1	Breather cap	141470	141470	141470	141470
14	1	Plug fitting	137254	137254	137254	137254
15	1	ESB Kit 120v	128904	128904	128904	128904
	1	IFC Kit 120v	128903	128903	128903	128903
16	1	ESB valve	128906	128906	128906	128906
	1	IFC valve	128907	128907	128907	128907
17	1	ESB/IFC Coil 120v	17273	17273	17273	17273
18	1	Harness	19091	19091	19091	19091
19	2	Elbow fitting #4	16918	16918	16918	16918
20	1	Elbow fitting #6	16917	16917	16917	16917
21	1	Elbow fitting #8	17808	17808	17808	17808
22	3	Elbow fitting barb	17806	17806	17806	17806
23	1	Y-fitting	17807	17807	17807	17807
24	1	Main Cylinder	128997	128913	128913	128914
25	1	Lip Cylinder	119291	119291	119291	119291
26	1	Velocity fuse	123258	123258	123258	123258
27	1	Hose Assembly (Ramp)	119776	119776	117058	117058
28	1	Hose Assembly (Lip)	108963	108963	117526	117526
29	*	Return Hose, Ramp Cylinder (Qty = 1" of hose)	55372	55372	55372	55372
30	*	Return Hose, Lip Cylinder (Qty = 1" of hose)	55372	55372	55372	55372
31	*	Return Hose, Power Unit (Qty = 1" of hose)	55372	55372	55372	55372
32	1	Clevis pin, Main Cylinder (Top)	119424	119424	119424	119424
33	1	Clevis pin, Main Cylinder (Bottom)	52643	52643	52643	52643
34	4	Cotter pin, .188dia	51908	51908	51908	51908
35	1	Clevis pin, Lip Cylinder (Rear)	52630	52630	52630	52630
	1	Clevis pin, Lip Cylinder (Front, no ARTD)	52630	52630	52630	52630
36	4	Cotter pin, .188dia	51907	51907	51907	51907
37	2	Washer	51721	51721	51721	51721
38	-	STD - RH Biodegradeable Fluid (quart/light blue in color)	119181	119181	119181	119181
	-	OPT - Mil 5606 Fluid (quart/red in color)	108303	108303	108303	108303

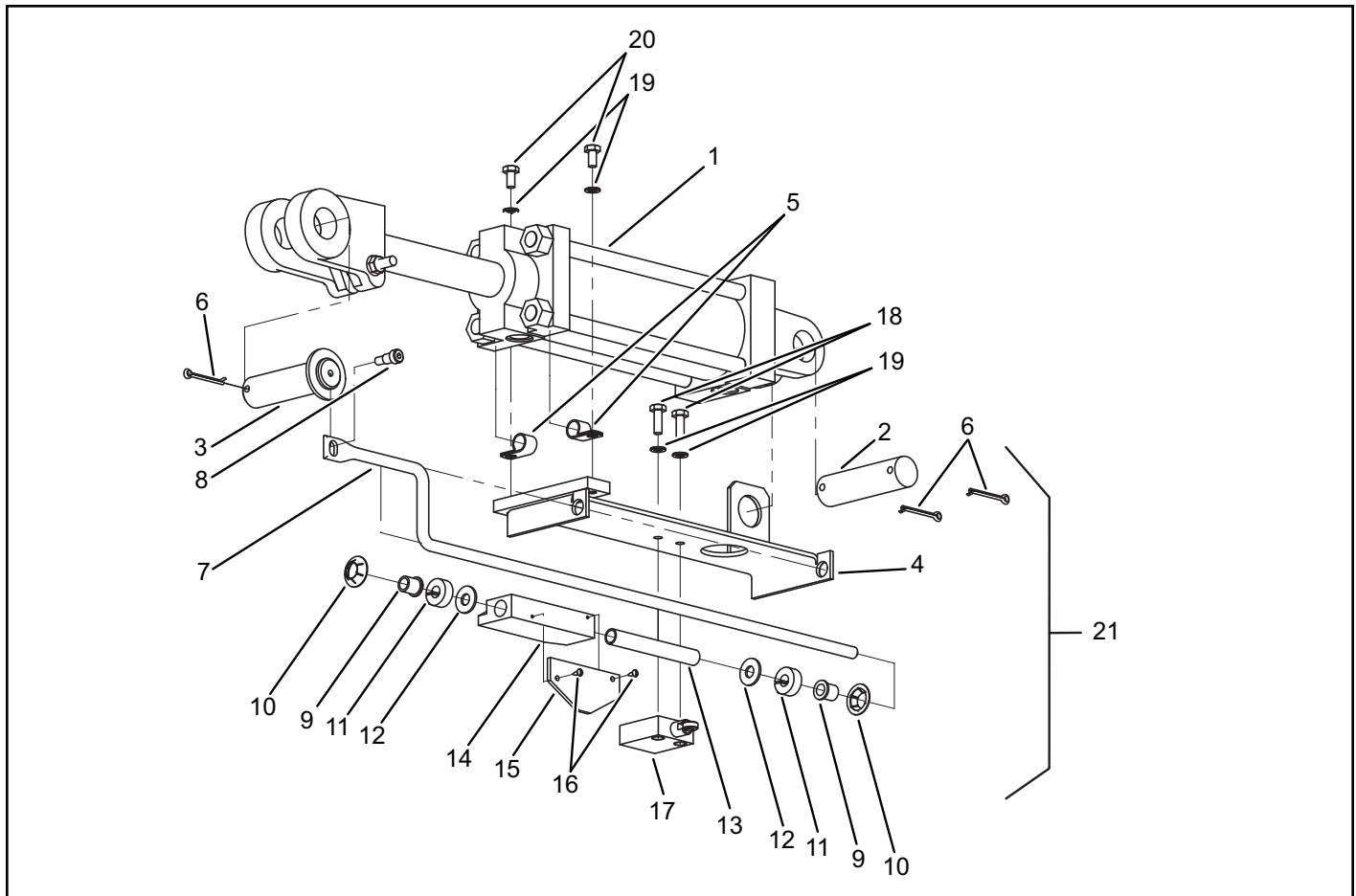
HYDRAULIC REPLACEMENT PARTS - BASE (BUCHER POWER UNIT)



HYDRAULIC REPLACEMENT PARTS LIST - BASE - (BUCHER POWER UNIT)

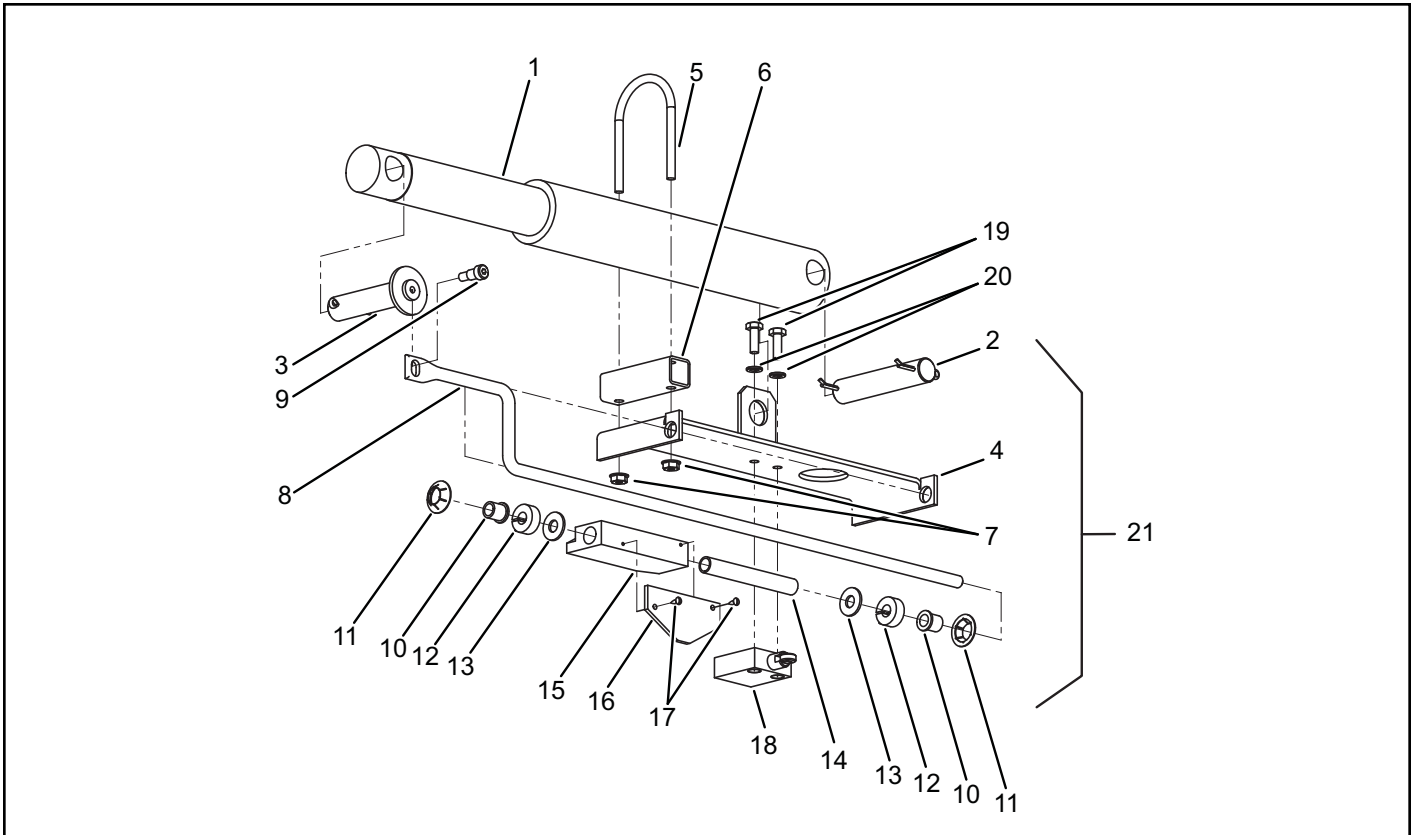
Item	Qty.	Description	Leveler Length			
			6' Long	8' Long	10' Long	12' Long
1	1	Power Unit 115/230v 1ph	141167	141167	141167	141167
	1	Power Unit 208-230/380-460v 3ph	141168	141168	141168	141168
	1	Power Unit 575v 3ph	141169	141169	141169	141169
2	1	Tank Assembly 10L Plastic	141177	141177	141177	141177
3	1	Hose clamp	132754	132754	132754	132754
4	1	Junction Box	132760	132760	132760	132760
5	1	Junction Box Cover	132759	132759	132759	132759
6	1	Relief Valve Kit	132757	132757	132757	132757
7	1	Check Valve PTC 3:1 (Ramp)	142602	142602	142602	142602
8	1	Sequence Valve	147785	147785	147785	147785
9	1	Check Valve PTO 3:1 (Lip)	142604	142604	142604	142604
10	1	Check Valve with Screen	142606	142606	142606	142606
11	1	Needle Valve (Flow control)	142607	142607	142607	142607
12	1	Check Valve PTC 8:1 (Lip)	143217	143217	143217	143217
13	1	Plug fitting	142608	142608	142608	142608
14	1	Capacitor (1ph only)	132755	132755	132755	132755
15	1	Breather cap	141470	141470	141470	141470
16	1	Plug fitting	137254	137254	137254	137254
17	1	ESB Kit 120v	128904	128904	128904	128904
	1	IFC Kit 120v	128903	128903	128903	128903
18	1	ESB valve	128906	128906	128906	128906
	1	IFC valve	128907	128907	128907	128907
19	1	ESB/IFC Coil 120v	17273	17273	17273	17273
20	1	Harness	19091	19091	19091	19091
21	2	Elbow fitting #4	16918	16918	16918	16918
22	1	Elbow fitting #6	16917	16917	16917	16917
23	1	Main Cylinder, Single Acting	129344	129340	129341	129341
24	1	Lip Cylinder, Single Acting	102239	102239	102239	102239
25	1	Velocity fuse	129343	129342	129346	129346
26	1	Hose Assembly (Ramp)	119776	119776	117058	117058
27	1	Hose Assembly (Lip)	108963	108963	117526	117526
28	1	Clevis pin, Main Cylinder (Top)	130013	130013	130013	130013
29	1	Clevis pin, Main Cylinder (Bottom)	122972	122972	122972	122972
30	3	Cotter pin, .188dia	51907	51907	51907	51907
31	1	Clevis pin, Lip Cylinder (Rear)	130015	130015	130015	130015
32	1	Clevis pin, Lip Cylinder (Front, no ARTD)	129231	129231	129231	129231
33	3	Cotter pin, .125dia	51903	51903	51903	51903
34	-	STD - RH Biodegradeable Fluid (quart/light blue in color)	119181	119181	119181	119181
	-	OPT - Mil 5606 Fluid (quart/red in color)	108303	108303	108303	108303

AUTOMATIC RETURN TO DOCK PARTS - HYDRA-RITE™



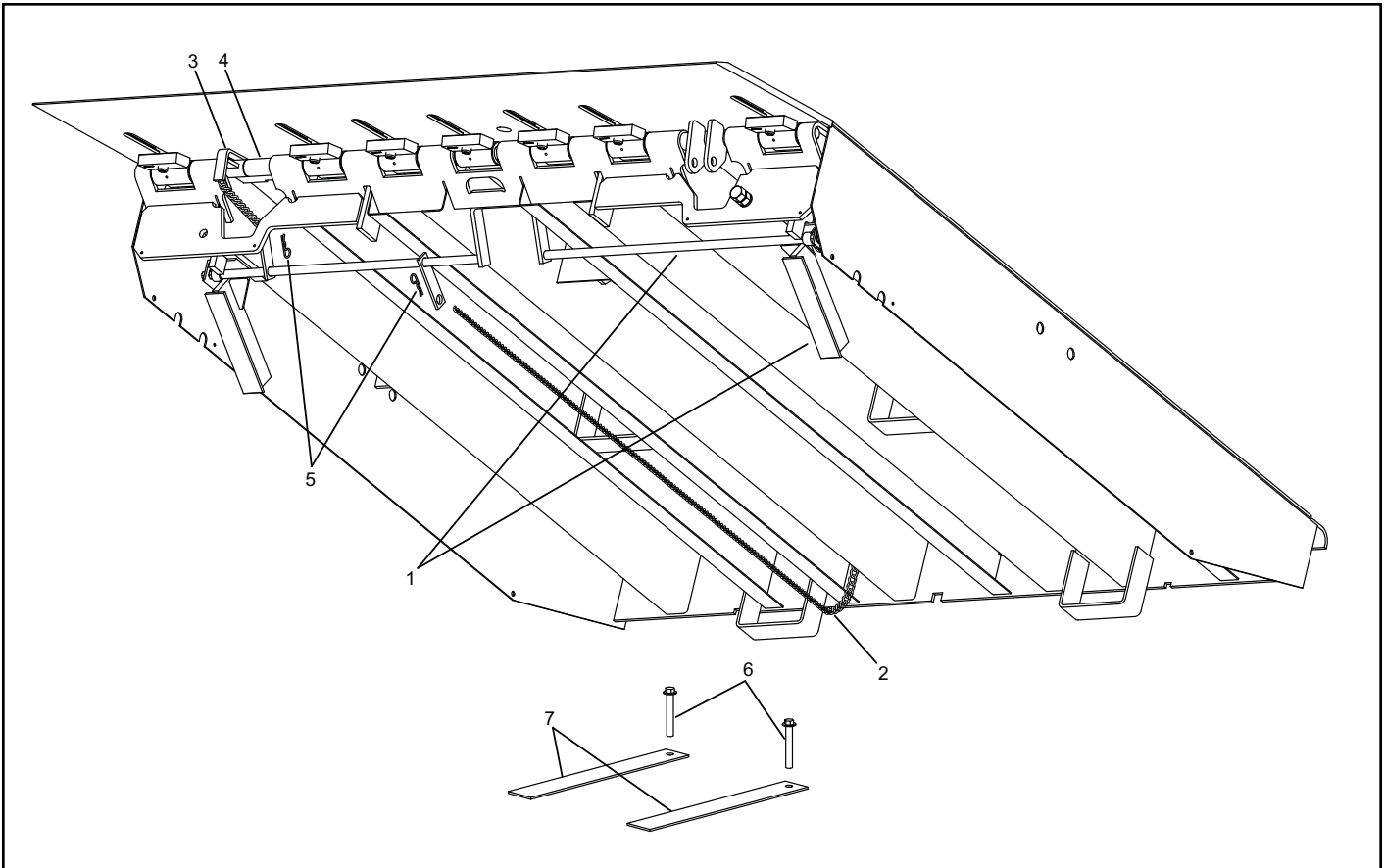
Item	Qty.	Description	Leveler Length			
			6' Long	8' Long	10' Long	12' Long
1	1	Lip Cylinder, Single Acting	119291	119291	119291	119291
2	1	Clevis Pin, 1.00Dia. x 3.625L ZP	52630	52630	52630	52630
3	1	Hd. Clevis Pin, 1 x 3.531L ZP	122186	122186	122186	122186
4	1	Mtg. Bracket HD17/HL9	122183	122183	122183	122183
5	2	Starp Loop .05THK .5ID	110145	110145	110145	110145
6	3	Cotter Pin .12DIA x 1.5L	51903	51903	51903	51903
7	1	Guide Rod	122290	122290	122290	122290
8	1	Shoulder Bolt w/PEL .313 x .38 x .25-20 ZP	104394	104394	104394	104394
9	2	Flange Bushing .375 x .50 x .50L	68162	68162	68162	68162
10	2	Retainer Clip .50 Dia.	19650	19650	19650	19650
11	2	Collar Shaft 3/8ID x 7/8OD Blk	68163	68163	68163	68163
12	2	Flat Washer 3/8ID x 7/8OD 18-8 SS	18261	18261	18261	18261
13	1	Cam Pivot Tube 3.156L	125410	125410	125410	125410
14	1	Rotary Cam 3.125L	125408	125408	125408	125408
15	1	Counter Weight Plate 3.125L	68167	68167	68167	68167
16	2	Sht. Metal Screws #4 x .375L	68161	68161	68161	68161
17	1	Limit Switch Assembly	119557	119557	119558	119558
18	2	Bolt Hex .25-20 UNC x .75 Gr5 ZP	51648	51648	51648	51648
19	4	Washer .25 LK MED ZP	51800	51800	51800	51800
20	2	Bolt .25-20UNC .5L HHCS ZP	122281	122281	122281	122281
21	1	ARTD HydraRite Field Upgrade (Includes 3-20)	122409	122409	122409	122409

AUTOMATIC RETURN TO DOCK PARTS - BASE



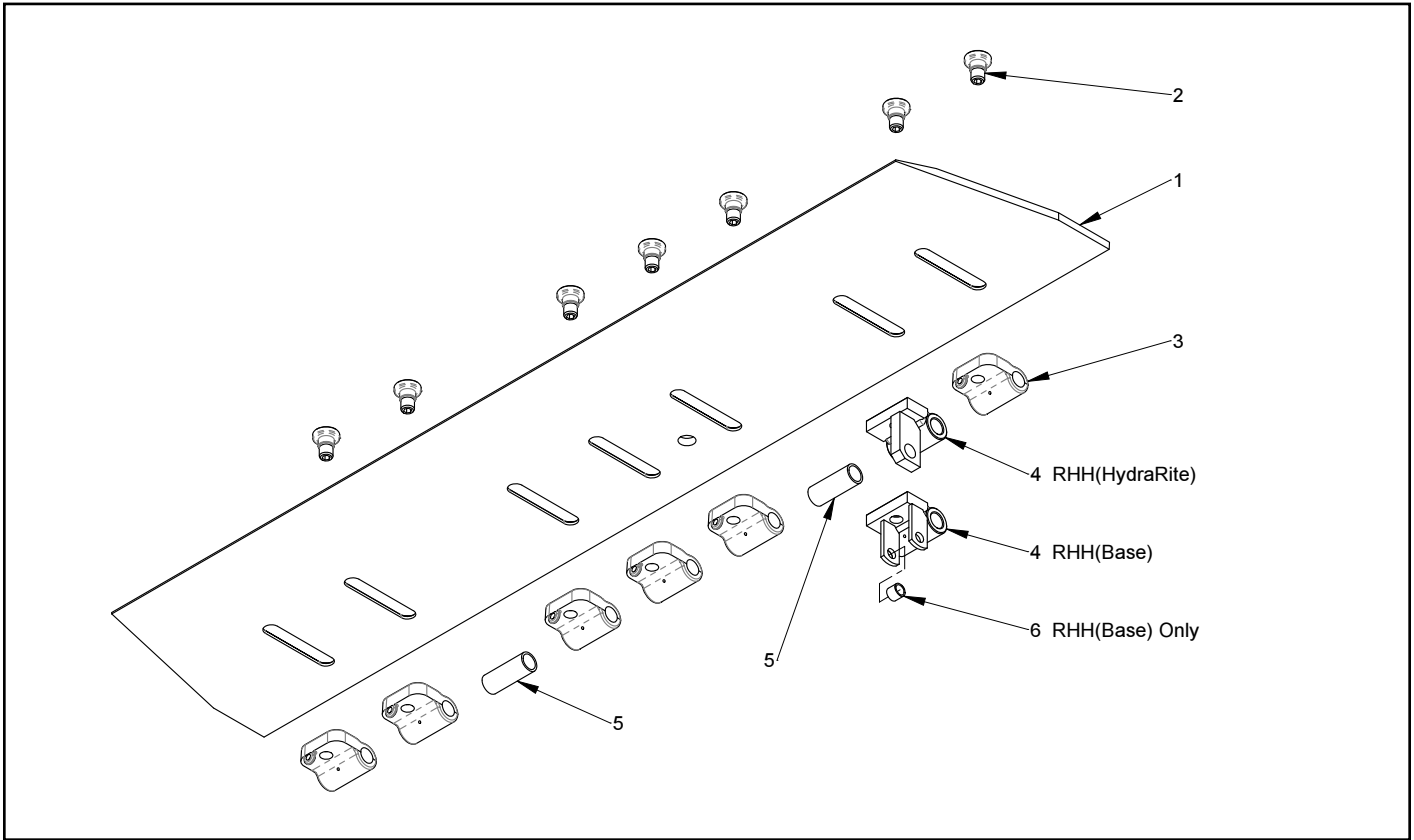
Item	Qty.	Description	Leveler Length			
			6' Long	8' Long	10' Long	12' Long
1	1	Lip Cylinder, Single Acting	102239	102239	102239	102239
2	1	Clevis Pin, .75Dia. x 3.75L CRM	130015	130015	130015	130015
3	1	Hd. Clevis Pin, .75Dia. W/Washer	129232	129232	129232	129232
4	1	Mtg. Bracket HD17/HL9	122182	122182	122182	122182
5	1	U-Bolt 2ID x 3.25 x .25-20 thrd	100130	100130	100130	100130
6	1	Spacer Tube 3L	100131	100131	100131	100131
7	2	Nut .25-20 UNC Hex	51552	51552	51552	51552
8	1	Guide Rod	122290	122290	122290	122290
9	1	Shoulder Bolt w/PEL .313 x .38 x .25-20 ZP	104394	104394	104394	104394
10	2	Flange Bushing .375 x .50 x .50L	68162	68162	68162	68162
11	2	Retainer Clip .50 Dia.	19650	19650	19650	19650
12	2	Collar Shaft 3/8ID x 7/8OD Blk	68163	68163	68163	68163
13	2	Flat Washer 3/8ID x 7/8OD 18-8 SS	18261	18261	18261	18261
14	1	Cam Pivot Tube 3.156L	125410	125410	125410	125410
15	1	Rotary Cam 3.125L	125408	125408	125408	125408
16	1	Counter Weight Plate 3.125L	68167	68167	68167	68167
17	2	Sht. Metal Screws #4 x .375L	68161	68161	68161	68161
18	1	Limit Switch Assembly	119557	119557	119558	119558
19	2	Bolt Hex .25-20 UNC x .75 Gr5 ZP	51648	51648	51648	51648
20	2	Washer .25 LK MED ZP	51800	51800	51800	51800
21	1	ARTD HL9/Base Field Upgrade (Includes 3-20)	122411	122411	122411	122411

ENDLOAD LEG OPTION PARTS



Item	Qty.	Description	Part Number
1	1	Endload Leg Assembly - Hydrarite	121708
	1	Endload Leg Assembly - Base	121850
2	1	Lanyard Chain Assembly 147L	510d123
3	1	Lever Weldment	121902
4	1	Spacer Tube 2.75L	477d108
5	2	Hairpin	56527
6	2	Skid Plate Anchor Bolt	53150
7	2	Skid Plate (Call factory for skid plates used with DPC's)	121096

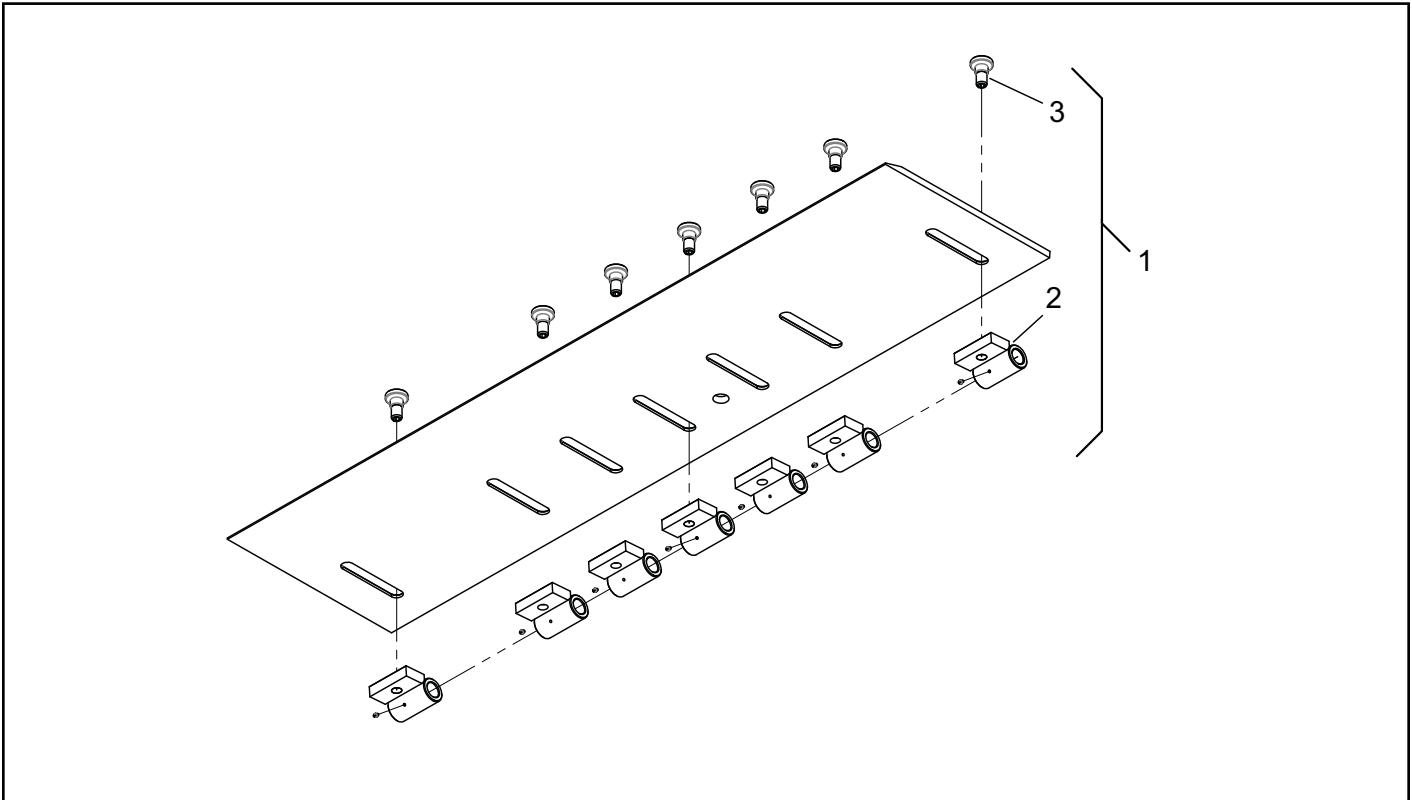
SAFE-T-LIP (2-3-2) ASSEMBLY PARTS



Item	Qty.	Description	Leveler Hydraulics	
			RHH(Base)	RHH(HydraRite)
1	1	Safe-T-Lip Plate Square Ends TAPERED Ends (Shown) Notched Ends	See Description Below	
			684dxxx	684dxxx
			685dxxx	685dxxx
			686dxxx	686dxxx
2	7	Shoulder Bolt - 1.125Dia	See Description Below	
			129099	129099
			See Description Below	
			140484	140484
			140485	140485
3	6	Lip Spool Module (Cast Standard) 3/8" Header, 5/8" - 11/16" Lip 3/8" Header, 3/4" Lip 1/2" Header, 5/8" - 11/16" Lip 1/2" Header, 3/4" Lip	See Description Below	
			140486	140486
			140487	140487
			See Description Below	
			129226	129237
4	1	Lip Spool Module - Anchor 3/8" Header, 5/8" - 11/16" Lip 3/8" Header, 3/4" Lip 1/2" Header, 5/8" - 11/16" Lip 1/2" Header, 3/4" Lip	See Description Below	
			129227	129238
			129228	129239
			129229	129240
			See Description Below	
5	2	Tube 1-1/2 OD X 3-7/8 Long	477d100	477d100
6	1	Tube 1 OD X 13/16 Long	129241	-

SAFE-T-LIP (1-5-1) ASSEMBLY PARTS

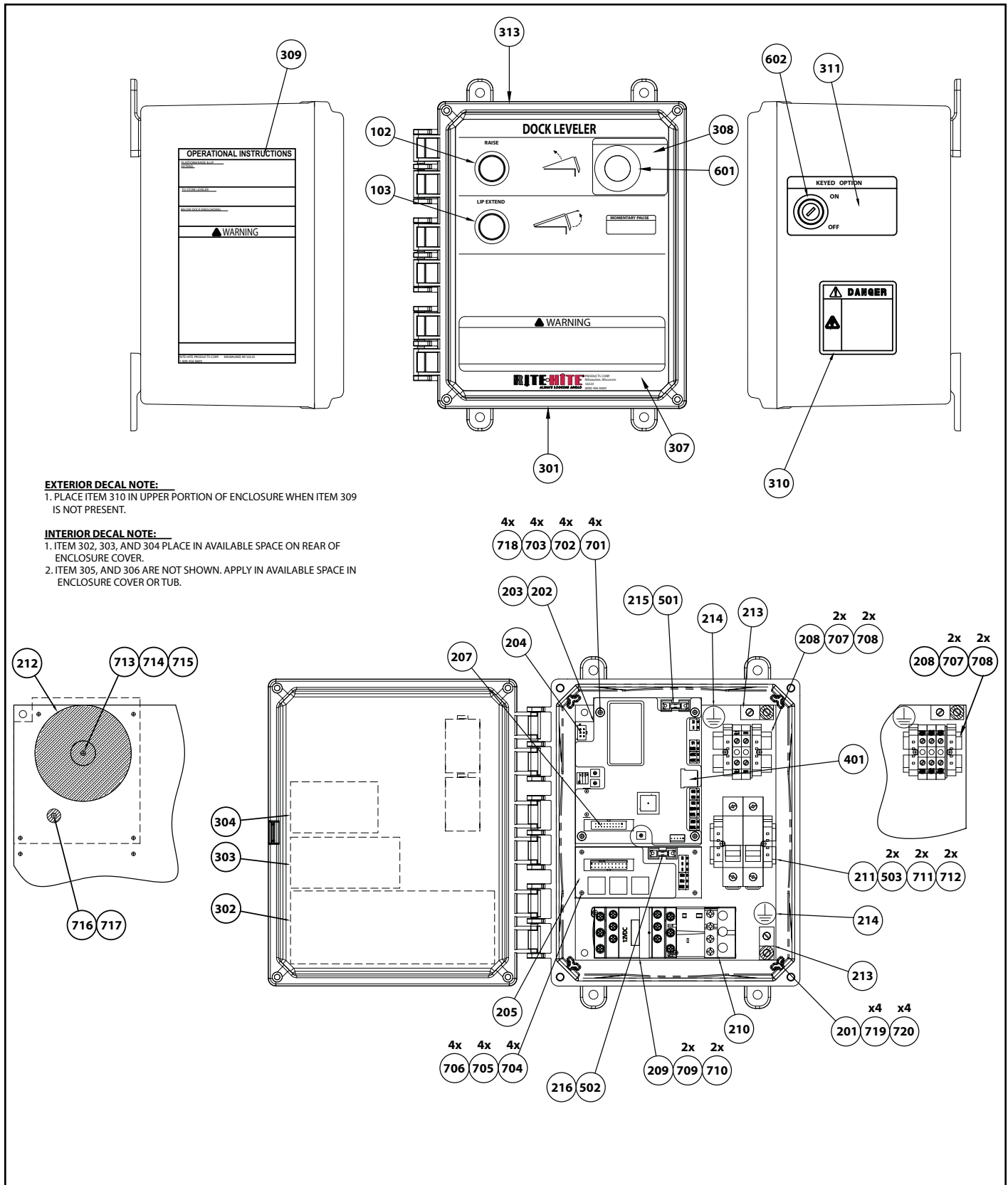
PRIOR TO SERIAL NUMBER 11GD480214M



Item	Qty.	Description	Part Number
1	1	Safe-T-Lip Assembly	396dxxx
2	7	Spool Module	Consult Factory
3	7	Shoulder Bolt 1" Dia. x .66L	119920

NOTES

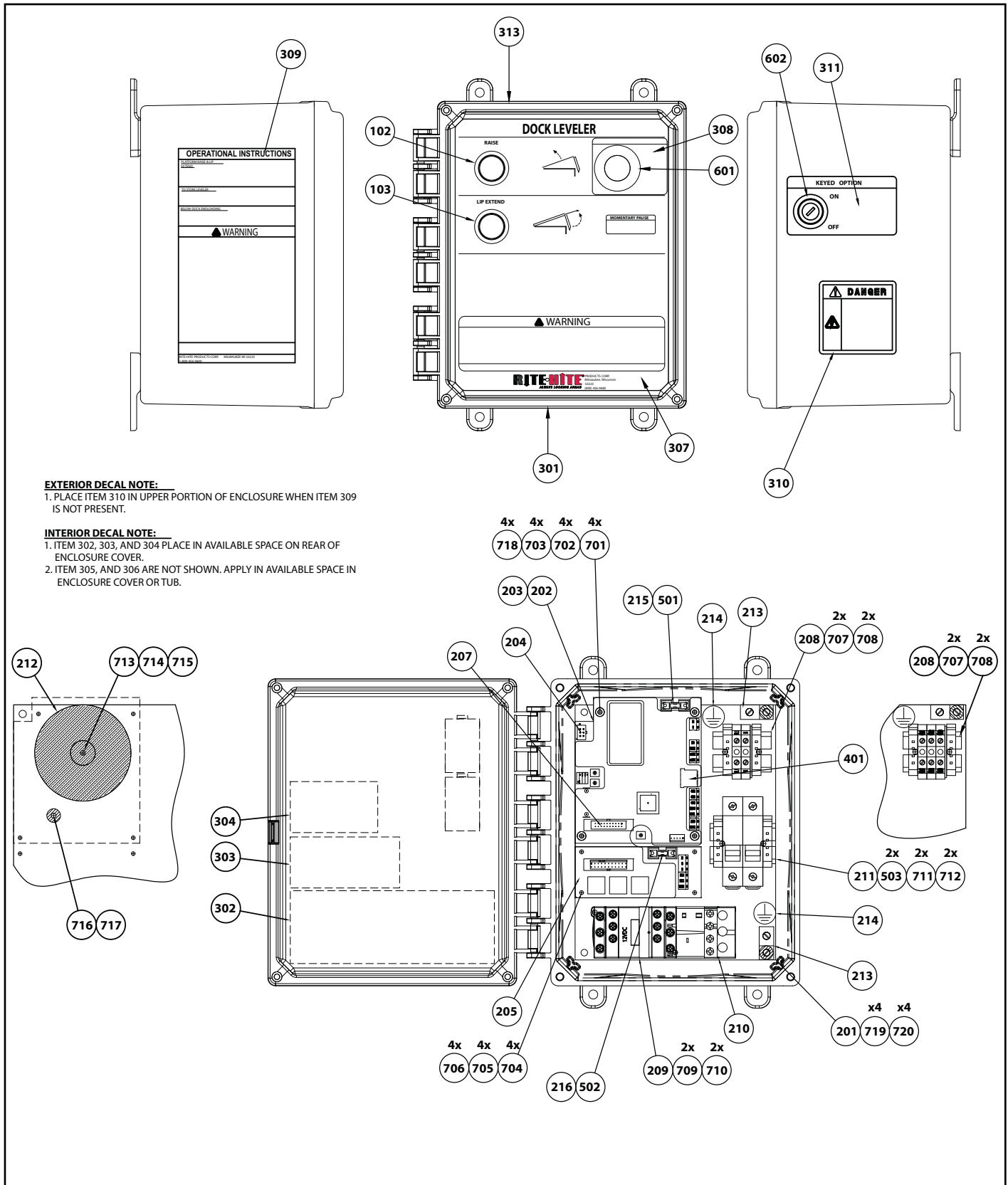
REPLACEMENT PARTS - ELECTRICAL



ELECTRICAL REPLACEMENT PARTS LIST

Item	Qty.	Description	Part Number
1	1	Control box assembly, Complete (Consult Rite-Hite for specific part number)	873.xxx
102	1	Push button, black	146827
103	1	Push button, red	146829
201	1	Pre-drilled control box sub panel	144763
202	1	Standard Leveler Control Board, Blank	144555-883D100
		Standard Leveler Control Board, Including Fuse	144574-883D100
		Leveler control board with Program Options, Blank (Consult Rite-Hite for specific part number)	144555-xxx
		Leveler control board with Program Options, Including Fuse (Consult Rite-Hite for specific part number)	144574-xxx
203	1	Leveler 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, Base	144540
		Motor Contactor, 1PH, Hydra-Rite	144879
		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	875.103
		Standard Enclosure with decals, IFC, English	875.100
		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 pit leveler	144361
		Cover decal, stand alone pit leveler, IFC	144357
308	1	Emergency stop overlay decal, English	144836
309	1	Operation/danger/warning decal for pit leveler	144844
		Operation/danger/warning decal for pit leveler, IFC	144846
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
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
601	1	Mushroom stop button (Emergency stop - if equipped)	125163

REPLACEMENT PARTS - ELECTRICAL - CONTINUED



ELECTRICAL REPLACEMENT PARTS LIST - CONTINUED

Item	Qty.	Description	Part Number
602	1	Selector switch, keyed (If equipped)	149175
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

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.

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Global Sales & Service Office:

RITE-HITE®
8900 N. Arbon Drive
P.O. Box 245020
Milwaukee, Wisconsin 53224

Phone: 414-355-2600
1-800-456-0600
www.ritehite.com

Representatives in all Major Cities