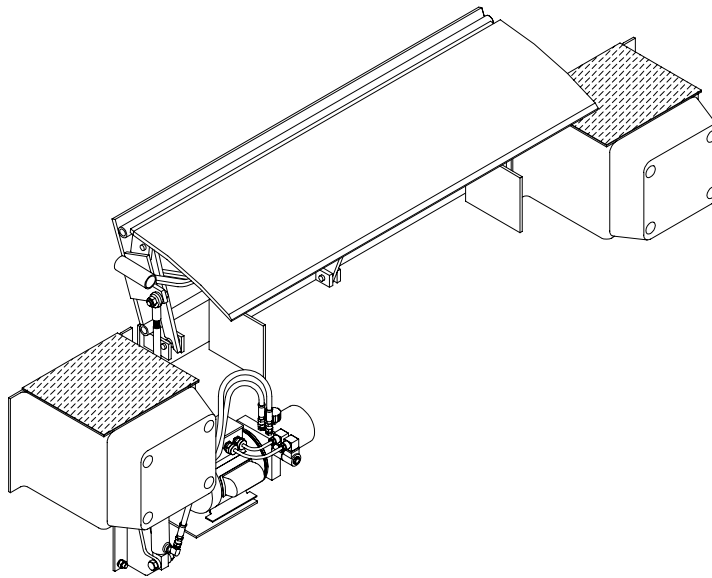


# EDGE-OF-DOCK

## SEL Series

### Hydraulic Power Unit

*(Installation and Owner's Manual)*



*by*  
**JH INDUSTRIES, INC.**



Do not install, operate or service this product unless you have read and understand the Safety Practices, Warnings, and Installation and Operating Instructions contained in this manual. Failure to do so could result in serious injury or death.

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# WARRANTY

**ALL WARRANTY CLAIMS MUST HAVE PRE-APPROVED RATES, TIMES AND AUTHORIZATION NUMBERS PRIOR TO ANY FIELD WORK, IN ORDER TO BE ACCEPTED BY JH INDUSTRIES, INC.**

J H Industries, Inc. expressly warrants that any EDGE-OF-DOCK sold by it will be free from defects in material and workmanship under normal use for a period of one (1) year on all structural parts and six (6) months on all electrical and hydraulic parts from the earlier of, 1) sixty (60) days after the date of shipment, or 2) the date of installation of the EDGE-OF-DOCK by the original purchaser, provided the purchaser maintains and operates the EDGE-OF-DOCK in accordance with the Owners Manual.

In the event that the EDGE-OF-DOCK proves to be defective in materials or manufacturing workmanship within the applicable period, J H Industries, Inc. will, at its option:

1. Replace the EDGE-OF-DOCK or the defective portion thereof without charge to the purchaser, or
2. Alter or repair the EDGE-OF-DOCK, on site or elsewhere, without charge to the purchaser.

This warranty IS EXCLUSIVE AND IS IN LIEU OF ALL GUARANTEES AND WARRANTIES, EXPRESSED OR IMPLIED BY ANYONE OTHER THAN J H Industries, Inc. sole warranty obligation shall be as set forth above.

The warranty does not cover any failure caused by improper installation, abuse, misapplication, overloading, negligence, or failure to lubricate and adjust the EDGE-OF-DOCK properly. Parts requiring replacement due to damage resulting from vehicle impact, abuse, improper operation or lack of proper protection are not covered by this warranty. Seller assumes no responsibility or liability for (1) consequential damages of any kind which result from the use or misuse of the EDGE-OF-DOCK; (2) damage or failure resulting from the use of unauthorized replacement parts or modification to the EDGE-OF-DOCK; (3) damage resulting from the misuse of the EDGE-OF-DOCK. THERE ARE NO WARRANTIES, EXPRESSED OR IMPLIED, WHICH EXTEND BEYOND THE DESCRIPTION ABOVE. THERE IS NO WARRANTY OF MERCHANTABILITY OR OF FITNESS FOR A PARTICULAR PURPOSE.

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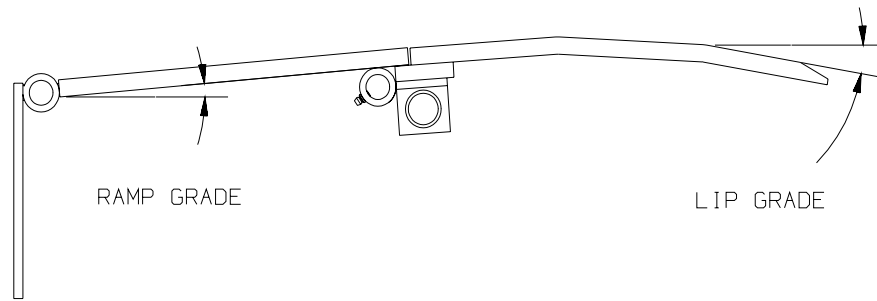
**J H Industries, Inc. warranties extend only to the product itself.**

**J H Industries, Inc. DISCLAIMS all liability arising out of the workmanship, methods and materials used by the installer.**

**J H Industries, Inc. DISCLAIMS all liability for premature wear, product failure, property damage or bodily injury arising from improper installation or maintenance.**

**WARRANTIES, whether expressed or implied, relating to workmanship and materials used in connection with the installation of J H Industries, Inc. products are specifically DISCLAIMED.**

# Edge-of-Dock Grade Chart



Truck Bed Position from Dock (in.)		EOD Grade (%)	
		RAMP	LIP
<b>ABOVE DOCK</b>	5.0	28.3	3.1
	4.5	26.4	1.4
	4.0	24.5	-0.4
	3.5	22.7	-2.1
	3.0	20.8	-3.9
	2.5	19.0	-5.6
	2.0	17.2	-7.4
	1.5	15.4	-9.2
	1.0	13.6	-11.0
	0.5	11.8	-12.7
	0.0	10.0	-14.4

Truck Bed Position from Dock (in.)		EOD Grade (%)	
		RAMP	LIP
<b>BELOW DOCK</b>	0.0	10.0	-14.4
	0.5	8.3	-16.3
	1.0	6.5	-18.1
	1.5	4.8	-19.9
	2.0	3.0	-21.8
	2.5	1.2	-23.6
	3.0	-0.5	-25.5
	3.5	-2.3	-27.4
	4.0	-4.0	-29.3
	4.5	-5.8	-31.2
	5.0	-7.5	-33.1

## **Owner's Responsibilities:**

The owner's responsibilities include the following:

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 leveling devices.

When a transport vehicle is positioned as closely as practicable to a dock leveling device, there shall be at least 4" of overlap between the front edge of the lip and the edge of the floor or sill of the transport vehicle.

Nameplates, cautions, instructions and posted warnings shall not be obscured from the view of operating or maintenance personnel for whom such warnings are intended.

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.

Dock leveling devices that are structurally damaged or have experienced a sudden loss of support while under load, such as might occur when a transport vehicle is pulled out from under the dock leveling device, shall be removed from service, inspected by the manufacturer's authorized representative, and repaired as needed before being placed back in service.

The owner shall see that all nameplates, caution and instruction markings or labels are in place and that the appropriate operating and maintenance manuals are provided to users.

Modifications or alterations of dock leveling devices shall be made only with written permission of the original manufacturer.

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 positive restraints that provide the equivalent protection of wheel chocks engaged.

The dock leveler should never be used outside its vertical working range or vertical lifting range or outside the manufacturer's labeled rated capacity. It must also be compatible with the loading equipment and other conditions relating to the dock.

### **NOTE:**

Insure that all equipment used on the dock leveling device can safely negotiate the grade angle as outlined on the Ramp Grade Chart above. (Check specifications with equipment manufacturers)

Insure that the weights of all equipment used on the dock leveling device do not exceed the capacity as determined by the formula included in the CAPACITY section of this manual.

# SAFETY PRACTICES

## SAFETY PRACTICES

### **WARNING**

***Read these safety practices before installing, operating or servicing Dockleveler. Failure to follow these safety practices could result in property damage, serious injury or death.***

READ AND FOLLOW THE OPERATING INSTRUCTIONS CONTAINED IN THIS MANUAL BEFORE OPERATING THE DOCKLEVELER. If you do not understand the instructions, ask your supervisor to teach you how to use the dockleveler.

Before doing any maintenance or repair on the dockleveler SECURE WITH THE MAINTENANCE STRUT. See Figure 17. on page 10.

## FOR ALL MODELS

Never exceed 5 mph when driving on leveler.

Never exceed the rated capacity of leveler.

Never travel on leveler unless lip is securely on truck floor.

Never travel on leveler while in rest position.

Never travel on the bumper blocks or over the edges of the leveler.

Do not operate the dockleveler while under the influence of drugs or alcohol.

Do not operate the dockleveler with equipment, material, or people on the ramp or lip.

Do not operate the dockleveler when anyone is in front of it unless they are securing the maintenance strut.

Stay clear of the dockleveler when it is moving.

Keep hands and feet clear of the hinges at all time. Do not use hands to position dockleveler ramp or lip in truck or to store dockleveler.

Do not stand in the driveway between the dockleveler and a backing truck.

Chock truck wheels, or lock truck in place with a truck restraining device and set brakes before loading or unloading.

Do not use the dockleveler if it looks broken or does not seem to work right. Tell your supervisor it needs repair right away.

Do not use this unit to service trailers outside its intended working range, which is 5 inches above and 5 inches below dock.

Store dockleveler before allowing the truck to pull out. Move all equipment, material or people off dockleveler before allowing the truck to pull out.

Many trailers have air ride suspensions that may cause the trailer to move away from the dock during loading and unloading operations (commonly referred to as dock or trailer walk). The potential for dock walk caused by air ride suspensions may be reduced by exhausting or "dumping" the air from the air ride suspension system before servicing the trailer.

Do not attempt to lift the dockleveler ramp or lip by any means other than that described in the operating procedures contained in this manual. If the dockleveler does not operate correctly when using the operating procedures contained in this manual, **DO NOT USE THE DOCKLEVELER.**

Do not use a fork truck or other material handling equipment to lower the ramp.

Keep feet clear of the underside of ramp and lip when raising and lowering dockleveler.

Place barricades around dockleveler on dock floor and drive while installing, maintaining or repairing dockleveler.

If you have any problems or questions using or operating the dock leveler, contact your supervisor for assistance.

Do not operate the dockleveler if operation causes undue physical strain or if physical impairments could lead to undue strain in back, muscles, limbs, or joints.

Keep both hands firmly on the hand lever while raising or lowering the dockleveler. Keep other body parts clear of hand lever travel path while raising or lowering the dockleveler. Do not use legs or feet to move or hold lever.

# INSTALLATION

## INSTALLATION

### POWER UNIT INSTALLATION

#### **⚠ WARNING**

Before installing the dockleveler, read and follow Safety Practices on page iv.

Power to control box must be from a fused disconnect supplied by others. For correct fuse size refer to Wiring Diagram section of this manual. Before doing any electrical work, make certain the power is disconnected and properly tagged or locked off. All electrical work must be done by a qualified technician and must meet all applicable codes. If it is necessary to make trouble shooting checks inside the control box with the power on, USE EXTREME CAUTION. Do not place fingers or un-insulated tools inside the control box. Touching wires or other parts inside the control box could result in electrical shock, serious injury or death.

Place barricades around pit on dock floor and drive while installing, maintaining or repairing dockleveler.

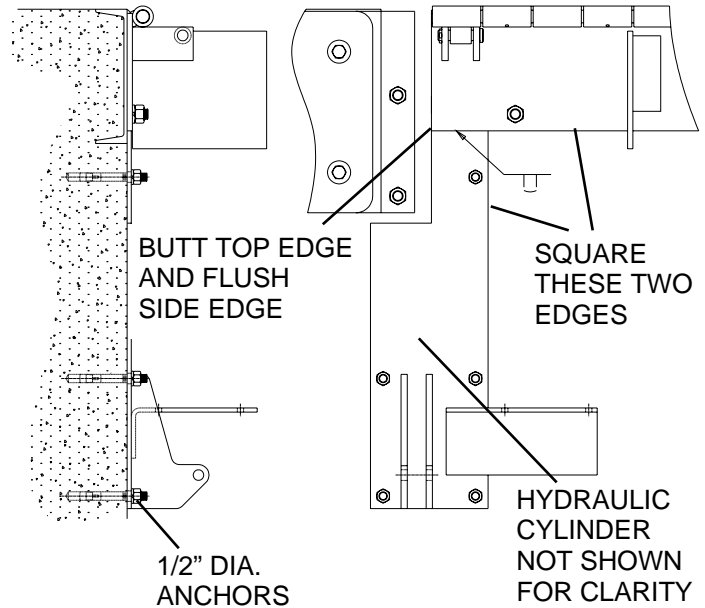
1. Install the dockleveler in place per standard Mechanical installation instructions. Leaving tension springs attached and set for standard Mechanical operation.
2. Attach power unit mounting plate by butting to the bottom of the dockleveler mounting plate and flush with the edge of the plate as shown in Figure 1.
3. Square and plumb the power unit mounting plate to the bottom edge of the dockleveler to ensure proper alignment.
4. Secure power unit mounting plate by butt welding to the dockleveler mounting plate and using the holes provided with 1/2" dia. anchor bolts to suit.

#### **NOTICE**

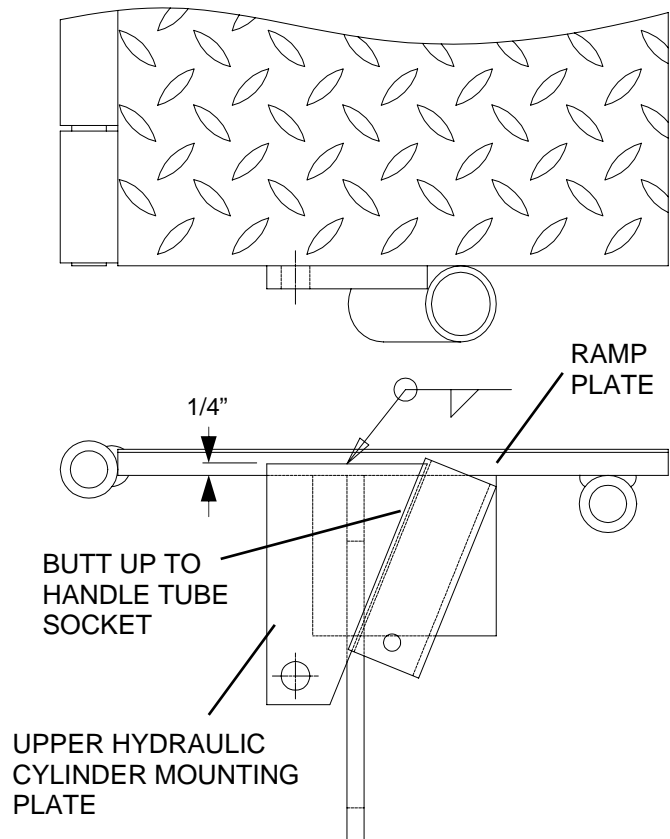
All anchor bolt lengths must suit local codes and conditions. Type and depth of concrete will determine type and length of anchor bolts required.

5. If retrofitting a power unit to an existing dockleveler, follow step 6 if not continue to step 7.
6. Locate and weld Hydraulic Cylinder upper mounting bracket to the dockleveler ramp plate as shown. See Figure 2.

**FIGURE 1**



**FIGURE 2**



## INSTALLATION

### HYDRAULIC CYLINDER CONNECTION

7. With the dockleveler in the rest position, adjust the hydraulic cylinder rod eye so that the rod eye hole center is about 3-1/2" from the unthreaded portion of the extension rod. Then extend the hydraulic cylinder until the rod eye lines up with the hole in the upper mounting bracket. See Figure 3.

#### **WARNING**

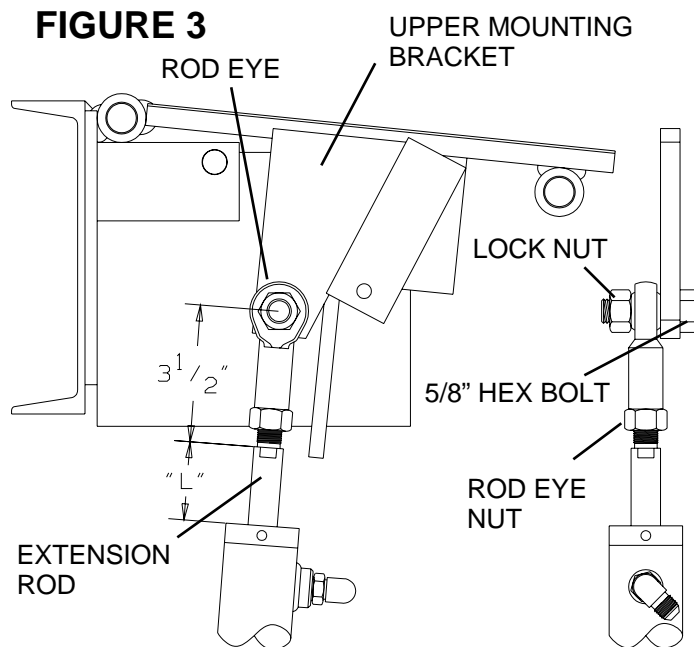
*Do not use fingers to check alignment, use bolt supplied. A pinch point could result in serious injury.*

*If electrical connections are completed prior to hydraulic cylinder adjustment, disconnect and lockout until all work is done. Failure to follow these safety practices could result in serious injury or death.*

#### **CAUTION**

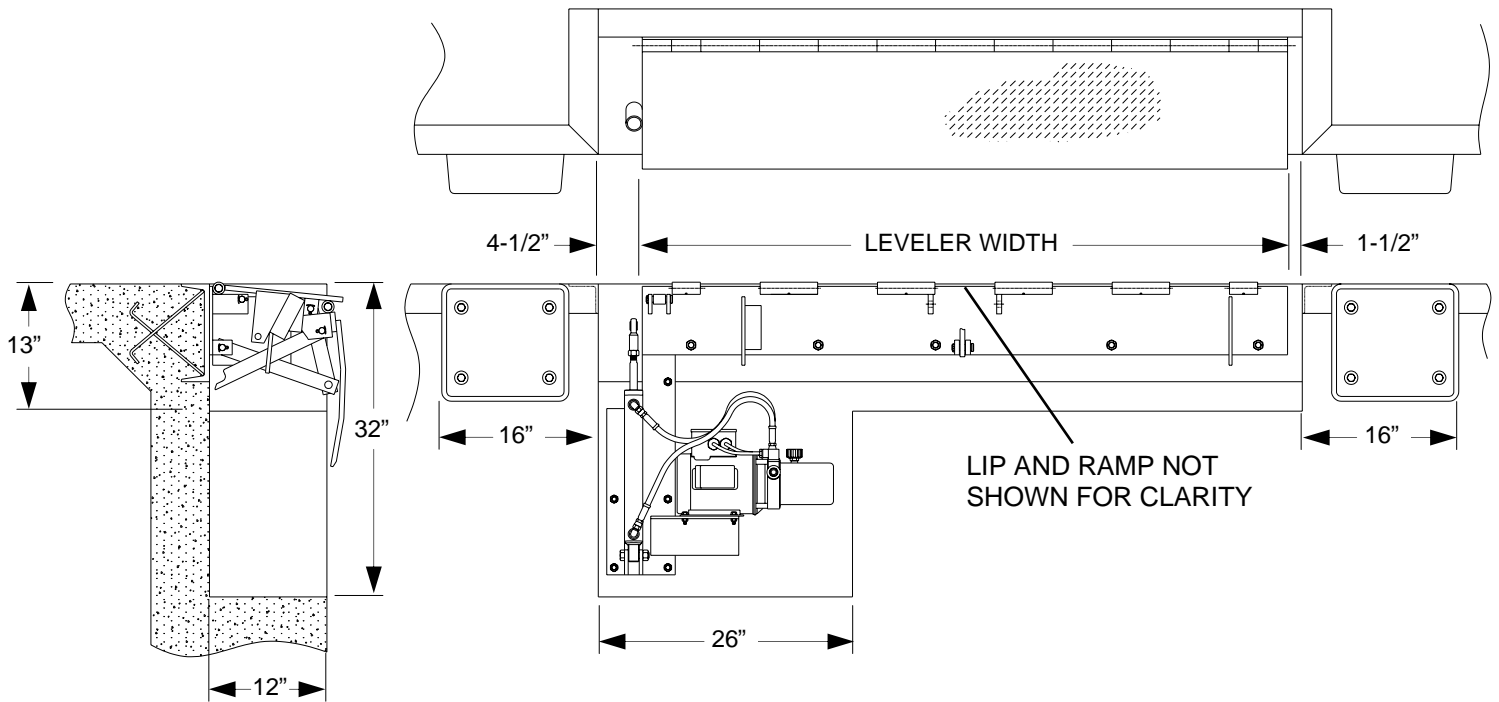
*The "L" dimension (or minimum amount of exposed extension rod with the dockleveler in its rest position.) must be greater than 1-3/4". Failure to do so will cause the hydraulic cylinder to bottom out under load resulting in permanent damage to the hydraulic cylinder.*

8. Assemble and tighten 5/8" hex bolt and lock nut supplied. Then tighten the rod eye nut to secure rod eye. See Figure 3.
9. Mount control box per local codes. Control box should be mounted near the dockleveler unit so as to monitor cycle action. See parts list section of this manual for general lay-out.
10. Wire power unit and control box per local codes. Reference electrical connection section of this manual.



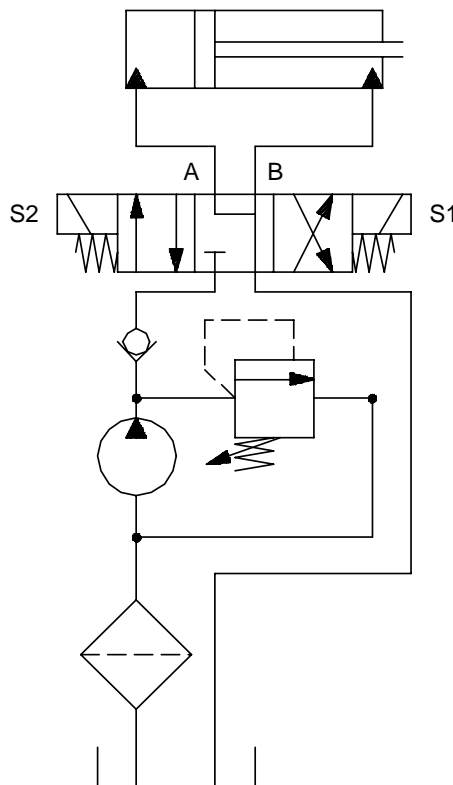
# RECESSED PIT INSTALLATION

## RECESSED PIT INSTALLATION DIAGRAM



# HYDRAULIC SCHEMATIC

## HYDRAULIC SCHEMATIC



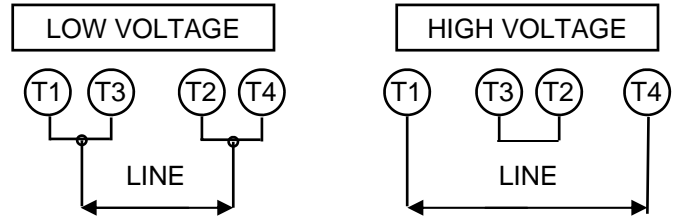
# ELECTRICAL SCHEMATIC

## ELECTRICAL SCHEMATIC

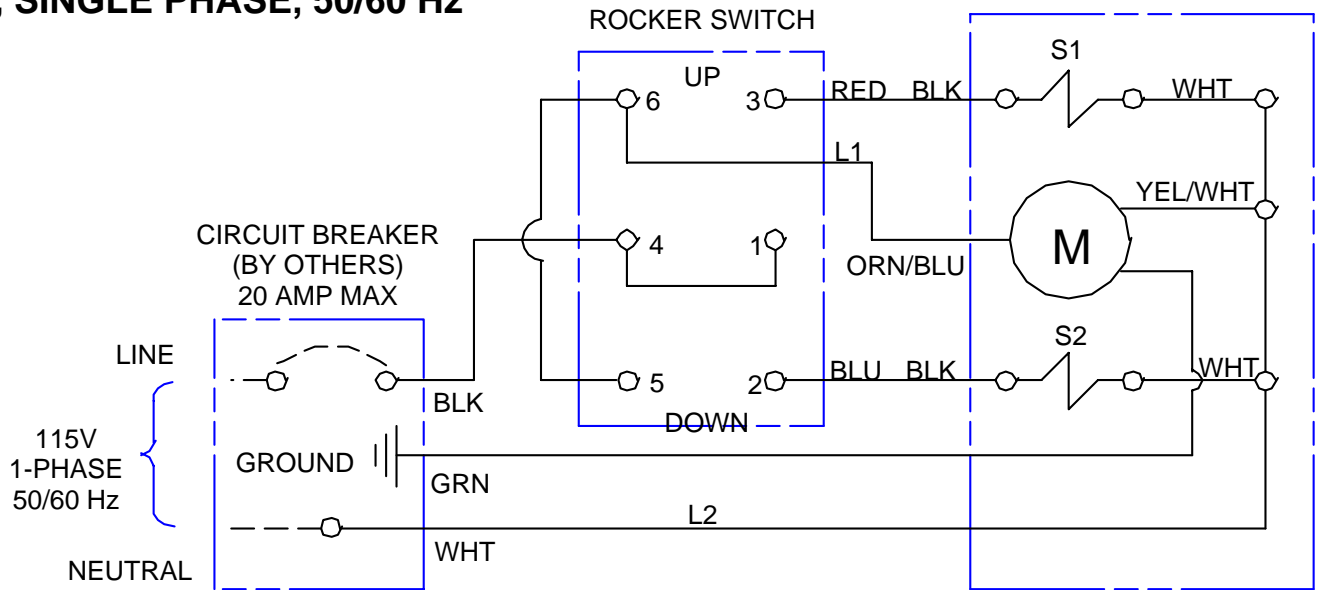
### ⚠ WARNING

Before doing any electrical work, make certain the power is disconnected and properly tagged or locked off. All electrical work must be done by a qualified technician and must meet all applicable codes. Failure to do so could result in electrical shock, serious injury or death.

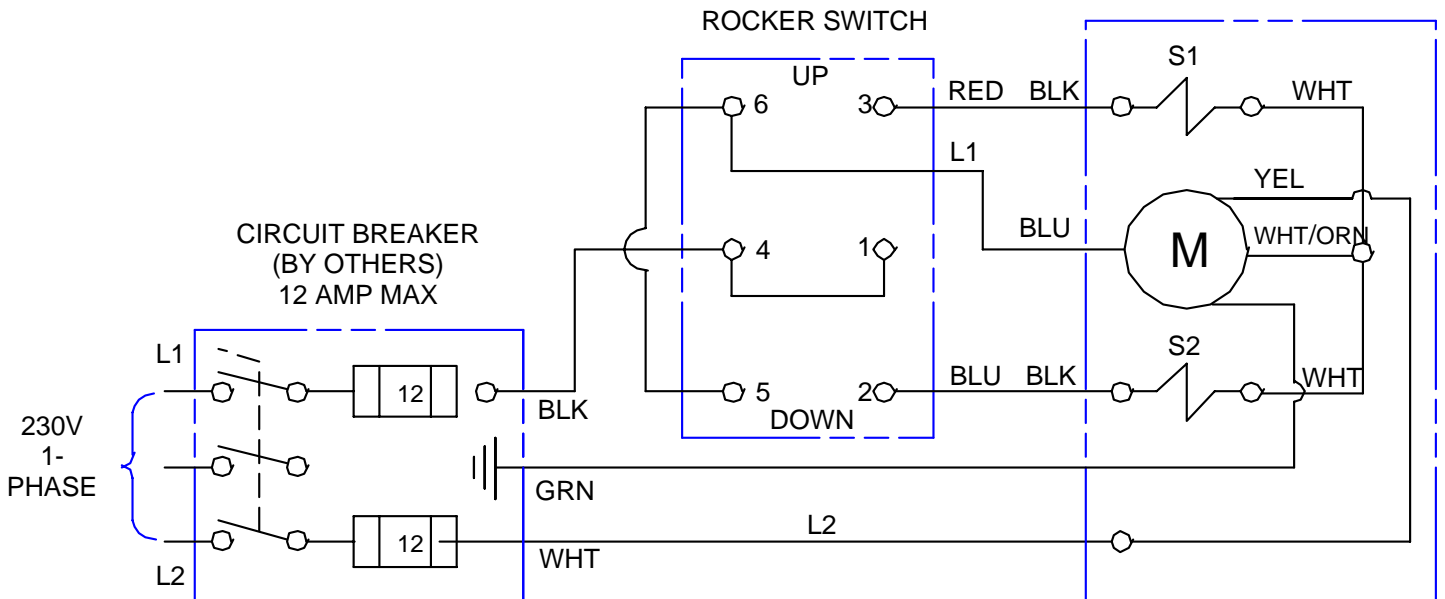
## MOTOR WIRING DIAGRAM



### 115V, SINGLE PHASE, 50/60 Hz



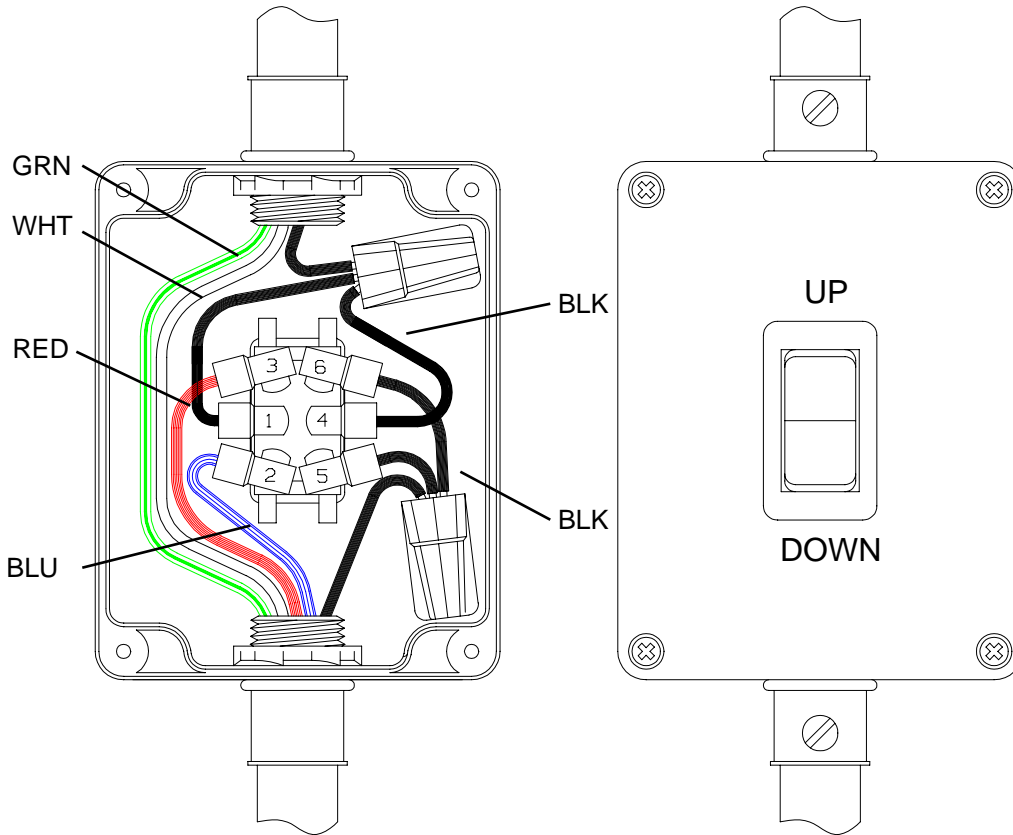
### 230V, SINGLE PHASE, 50/60 Hz



# ELECTRICAL CONTROLS WIRING

## ELECTRICAL CONTROLS WIRING

### WALL MOUNT ROCKER SWITCH



## OPERATION

### OPERATION

#### **⚠ WARNING**

**Before operating the dockleveler, read and follow Safety Practices on page iv.**

*Use by untrained people could result in serious injury or death. Read and follow complete Operation instructions. DO NOT USE THE DOCKLEVELER IF IT LOOKS BROKEN OR DOES NOT SEEM TO WORK RIGHT. Tell your supervisor it needs repair.*

*Always be certain that the truck is locked in place by a truck restraining device and the brakes are set, before loading or unloading. Trucks pulling away from the dock unexpectedly could result in serious injury or death.*

### OPERATING CYCLE

Push the "UP" button and hold until the dockleveler raises and reaches full back position. Then push the "DOWN" button, the dockleveler will extend its lip and reach out onto the carrier floor. Hold the down button until the ramp plate and the lip plate are pulled to an even surface. Release the "DOWN" button, the dockleveler is now ready to use.

When done using the unit, push the "UP" button until the lip falls clear of the carrier floor then release the button, the lip and ramp will coast back down to the rest position.

#### **NOTICE**

*The hydraulic cylinder and power pack will allow the cylinder to extend and retract with normal truck and dockleveler deflection.*

# MAINTENANCE

## MAINTENANCE

### 3-6 MONTH INTERVALS

Clean area at hinge joints and sweep away all debris. With leveler in the rest position, inspect all moving parts for wear or damage. Lubricate all grease fittings and oil pivot points as necessary. If linkage parts, hydraulic components or electrical items must be replaced due to wear or damage, raise leveler to its full rear position and install the maintenance bar (*reference installation and owner's manual*).

### Seasonally

Change the hydraulic fluid for ambient temperatures change if appropriate or if there is any evidence of accumulating condensation creating water contamination.

### OIL RECOMMENDATIONS

## CAUTION

*Do not use brake fluid or any other fluids not approved by the manufacturer. Use of fluids not approved by the manufacturer may attack the hydraulic systems seals and hoses.*

### FLUIDS

1. The first choice for fluid is Citco AW-46(200) hydraulic fluid. This is the fluid normally supplied by the factory and is suitable for a ambient temperature range of  $-10^{\circ}$  to  $+100^{\circ}$  Fahrenheit ( $-23^{\circ}\text{C}$  to  $+38^{\circ}\text{C}$ ).
2. Following is a recommended list of oils with a compatible ambient temperature range.

A. Amoco Oil Co.

*Rycon Oil No. 32, 46  
Amoco AW 32, 46*

B. Cities Service Oil Co.

*Citco AW Hyd. Oil 32, 46  
Citgo All Temp. Hyd. Oil*

C. Chevron USA

*Chevron EP Hyd. Oil 32, 46*

D. Fina Oil Co.

*Fina AW 32, 46  
Fina Automatic Transmission Fluid  
Dexron II*

E. Gulf Oil Corporation

*Gulf Harmony 32 AW, 46 AW*

F. Mobil Oil Corporation

*DTE 15, 24, 25  
Mobil Fluid #300 Transmission Fluid*

G. Sentinel Lubricants Corp.

*Sentinel SH-10 Hydraulic Oil*

H. Shell Oil Co.

*Tellus Hyd. Oil 32, 46  
Tellus "T" Hyd. Oil 32, 46*

I. Texaco Inc.

*Rando Oil Hd-32, 46*

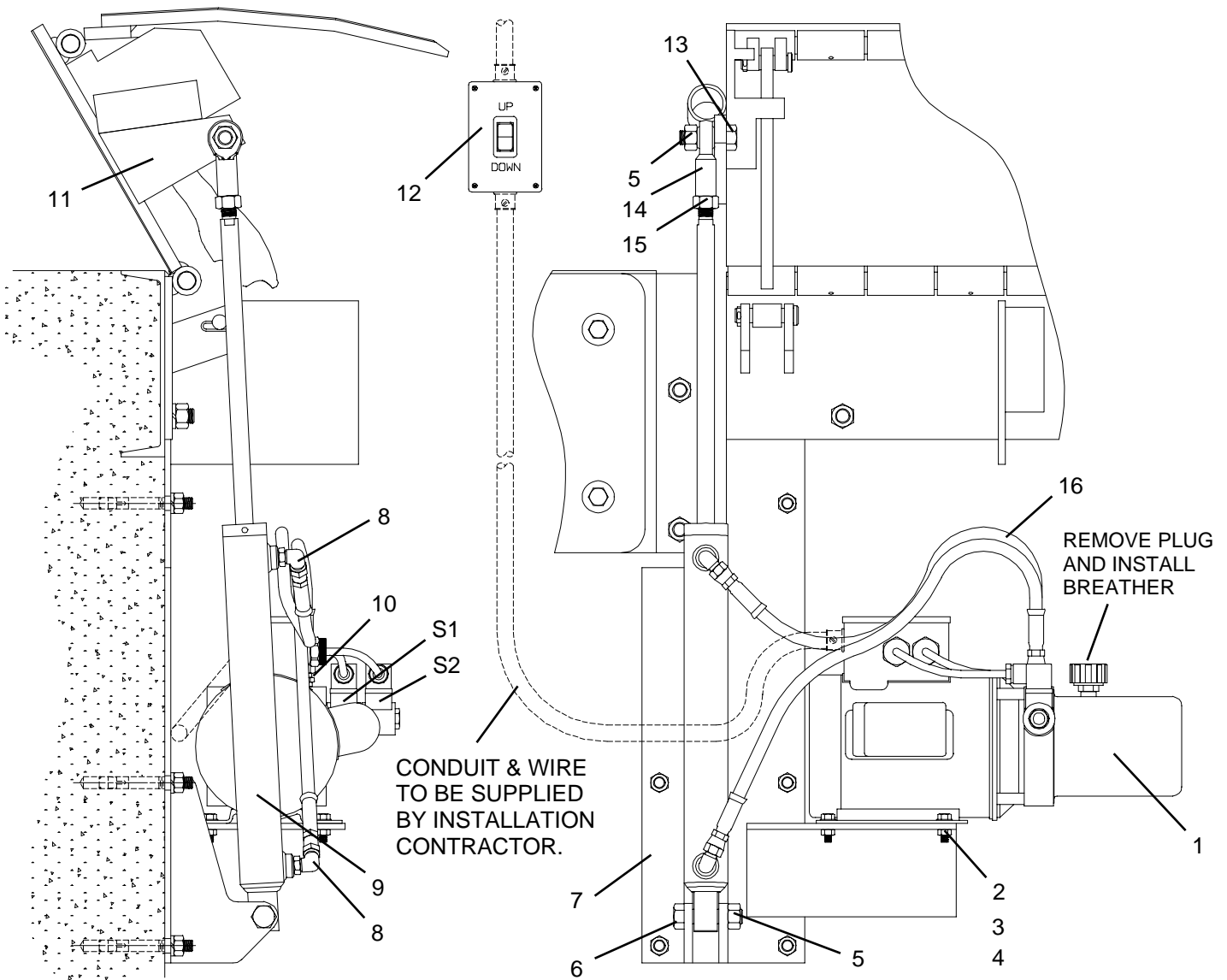
J. Union 76

*Xcel AW 46 (200)*

# PARTS LIST

## PARTS LIST: POWER UNIT ASSEMBLY

ITEM	QTY	DESCRIPTION	P/N
1	1	Hydraulic Power Pack, Ass'y	7649DA
2	4	Scr, Hh, Gr5, 5/16"-18 x 1"	002-054
3	4	Wshr, Fl, 5/16"	046-004
4	4	Nut, Hx, Lock, Rev, Gr-B, 5/16"-18	024-010
5	2	Nut, Hx, Lock, Rev, Gr-B, 5/8"-11	002-047
6	1	Scr, Hh, Gr5, 5/8"-11 x 2-3/4"	002-045
7	1	Hydraulic Cylinder, Mtg. Brkt., Lower	7648DA
8	2	Elbow, 90°, #6 SAE 37° to #6 O-Ring	063-002
9	1	Hydraulic Cyl., 1-1/2"Dia. x 12"Stroke	063-001
10	2	Straight, #6 SAE 37° to #6 O-Ring	063-003
11	1	Hydraulic Cylinder, Mtg. Brkt., Upper	7438B01
12	1	Rocker Switch, Control Box	7650BA
13	1	Scr, Hh, Gr5, 5/8"-11 x 2"	002-058
14	1	Rod End, Female, 5/8"-18, Plain Ball	063-004
15	1	Nut, Hx, Gr-B, 5/8"-18, Fine Thread	063-005
16	2	1/4", Hydraulic Hose, Ass'y	7654BA



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