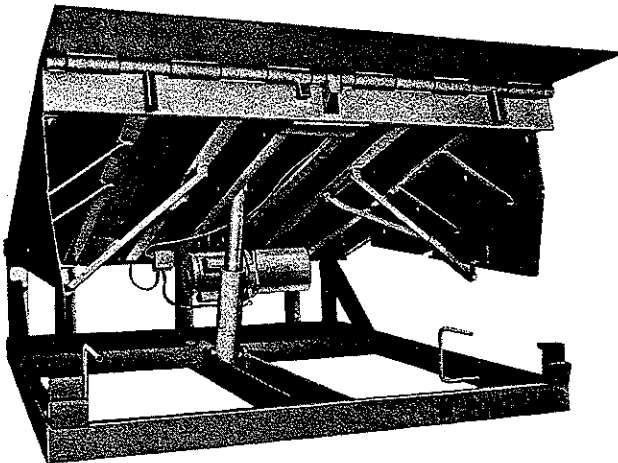
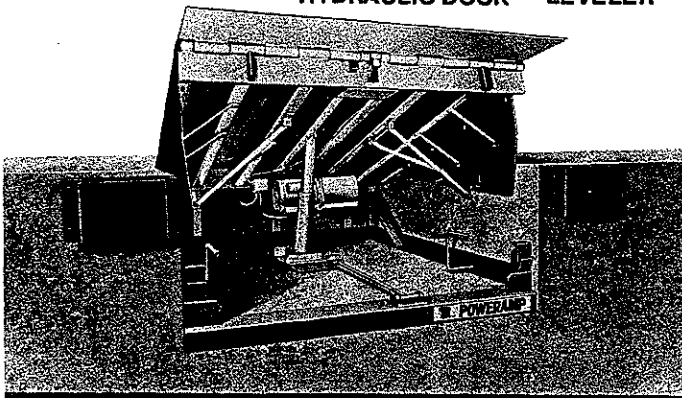

OWNER'S MANUAL



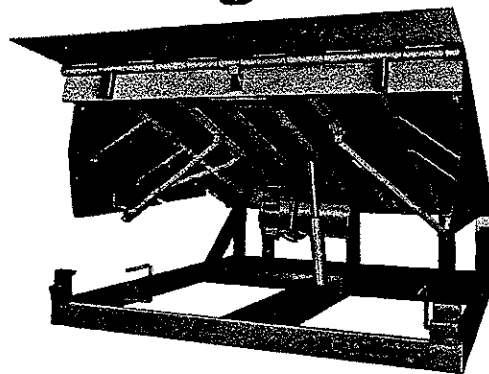
POWERAMP®

Automatic,
Hydraulic Dock Leveler

POWERAMP
CLEANPIT
HYDRAULIC DOCK LEVELER®



POWERAMP
Challenger Hydraulic Dock Leveler



MEETS OR EXCEEDS: American National Standard Institute ANSI MH14.1 - 1984 "Loading Dock Levelers and Dockboards" standards dated Nov. 15, 1984; US. Dept. of Commerce Standard CS-202-56 and OSHA standard requirements for dockboards (levelers) dated May 29, 1971.



systems inc

W194 N11481 McCORMICK DR., P.O. BOX 309, GERMANTOWN, WISCONSIN 53022 U.S.A., PHONE 262-255-1510
MANUFACTURING FACILITIES IN HOOFDDORP, NETHERLANDS



CONGRATULATIONS

ON YOUR CHOICE OF SYSTEMS INC., DOCK LEVELER

YOUR MANUAL COVERS THE STANDARD POWERAMP AND THE CHALLENGER WITH OPTIONS (indicated with a ★). If your Challenger has some or no options, simply disregard items marked with a ★ that do not apply.

Designed by Systems, Inc. to be a marvel of simplicity and efficiency, your dock leveler, when properly installed (see Pages 15 and 16 or 17 and 18) should provide many years of trouble-free performance with an absolute minimum of maintenance. Its revolutionary electro-hydraulic system efficiently controls and operates every function. To obtain maximum performance and longest possible use, as with any piece of equipment, a simple program of preventative maintenance is recommended. (See Page 5).

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Preparing for service under dock leveler | 11 | Hydraulic system |
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LIMITED WARRANTY

POWERAMP®

POWERAMP
Challenger

January 1, 1982

Systems Inc. guarantees the materials, components and workmanship in your POWERAMP and Challenger dock leveler to be of the best quality and to be free from defects in material and workmanship for a period of five (5) years from date of shipment. Any defective material, components or parts will be exchanged at our factory with replacement parts, shipped to you prepaid, if found to be defective from other than improper installation, operating contrary to instructions or beyond rated load capacity, abuse, careless or negligent use, or failure to maintain the unit as recommended by company maintenance schedules and guides.

In addition, components below are guaranteed as follows: on POWERAMP for seven (7) years from date of installation. On Challenger for five (5) years from date of installation.

- A. The Fluid Logic control assembly.
- B. All hydraulic cylinders and pressure lines.
- C. The Powerpack.

Your dock leveler is designed to operate normally in an ambient temperature range of -30°F to +125°F (-35°C to +52°C).

There are no warranties, either express or implied, including any implied warranties or merchantability or fitness for a particular purpose which shall extend beyond the warranty periods above indicated. No responsibility is assumed for any incidental or consequential damages except for those allowed under existing state law. This limited warranty is valid only if unit is unaltered or unmodified from its original condition as installed or as delivered at or from the factory.

The company reserves the right under its product improvement policy to change construction or design details and furnish equipment when so altered without reference to illustrations or specifications used herein.

NOTE:

The important safeguards and instructions appearing in this manual are not meant to cover all possible conditions and situations that may occur. It must be understood that common sense, caution and carefulness are factors which cannot be built into this, or any other, product. These factors must be supplied by the person/s caring for and operating the unit.

OPERATING INSTRUCTIONS

Dock leveler may be operated by two methods:

1. Wall mounted remote control which contains "ON-OFF" switch.

★2. Pull ring in platform deck (optional on Challenger).

When operating by remote control, simply press "RAISE" push-button — dock leveler will rise so that lower edge of lip clears truck — lip will automatically extend. Releasing push-button lets dock leveler drift down to truck bed with extended lip resting on truck platform. Further operation is completely automatic.

★When operating by pull ring in platform deck, simply pull lanyard outward (a gentle tug is all that is necessary). Dock leveler will rise — lip will automatically extend. Releasing pull ring dock leveler will, with lip extended, drift down to truck platform.



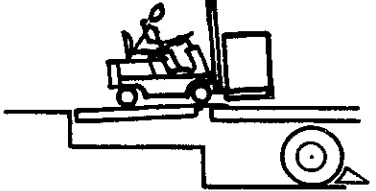
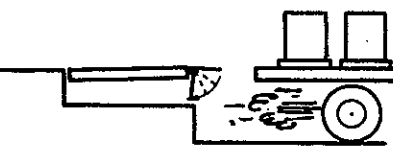
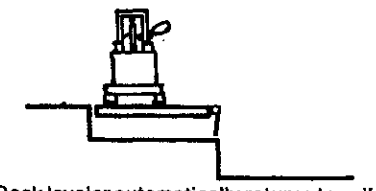
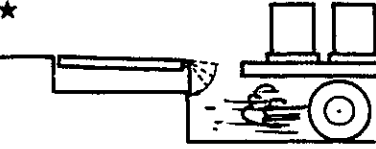
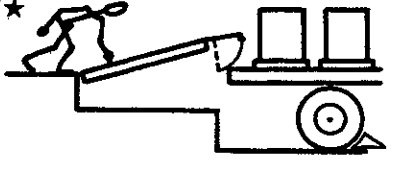
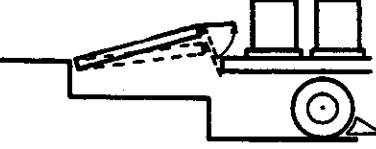

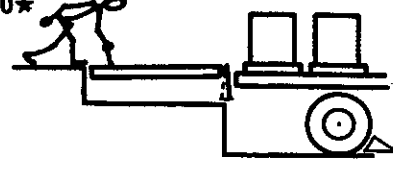

★Pull ring has two functions:

(a) A slight pull starts motor and raises ramp so that lip automatically extends.

(b) A further pull will stop the leveler in its upward travel and will extend lip at any point in ramp's upward movement. This will be useful in some operations shown below.

NOTE: TRAILERS MUST ALWAYS BE CHOCKED WHEN LOADING OR UNLOADING.

Follow these operating procedures:

<p>1★</p>  <p>Truck backs into position with leveler at rest, flush with top of dock in normal cross-traffic position. Operator pushes remote control button or tugs pull ring (if leveler is so equipped) and leveler raises.</p>	<p>2</p>  <p>Lip extends automatically . . . operator is done . . . as Fluid Logic system takes over . . . leveler drifts to truck bed.</p>	<p>3</p>  <p>Load or unload with POWERAMP'S full-float lip maintaining positive contact with the truck bed at all times.</p>
<p>4</p>  <p>When working above dock level, with loading or unloading completed, truck pulls away and lip moves into pendant position.</p>	<p>5</p>  <p>Dock leveler automatically returns to self-storing, cross-traffic position flush with dock level.</p>	<p>6★</p>  <p>If POWERAMP is below dock when truck pulls away (a) lip drops to vertical position, (b) leveler drifts to full below dock (c) leveler automatically returns to dock level and self-stores in cross-traffic position. *Challenger requires button activation.</p>
<p>7★</p>  <p>If equipped with pull ring, it is not necessary to raise leveler to full height to extend lip. Lower edge of lip must only clear truck platform before extending.</p>	<p>8</p>  <p>If lip is extended before clearing truck platform . . . lip will stop raising . . . leveler will continue to raise until the lip clears the truck. Then the lip will raise with no damage — Fluid Logic!</p>	<p>9</p>  <p>To remove end loads when truck is above dock, simply remove load before operating leveler. Then operate board and proceed.</p>
<p>10★</p>  <p>To remove end load with truck below dock give slight tug on pull ring to raise leveler approximately 1". Give further pull and release when lip has extended slightly.</p>	<p>11</p>  <p>Note: Place selector switch in "OFF" position as leveler drifts to full below dock.</p> <p>If leveler is being operated while truck is backing and truck or load hits extended lip . . . lip will automatically fold with no damage — Fluid Logic!</p>	

12 ★

If POWERAMP is operated with no truck in position

... the Fluid Logic system takes over and "senses" the absence of a truck. Leveler will drift to full below dock and lip will fold smoothly.

Leveler will then return to dock level and self-store.
*Challenger requires button activation.

13

Leveler will service truck 12" above dock... (This height defined as — when lower edge of the folded lip starts to extend).

... or 12" below dock.

Leveler will automatically float through full above and below dock range, compensating for truck spring deflection.

14

Lip will maintain full contact and follow canted truck bed up to 4" on either side. Hinged edge of POWERAMP remains flush with dock level thus eliminating toe and traffic hazards.

15 ★

If operator has left fork truck on the POWERAMP and truck pulls away, leveler will lock and remain locked until load is removed. An outstanding Fluid Logic safety feature! After load is removed, it is only necessary to momentarily actuate leveler for resumption of normal operation.

16

Dock leveler features full-side folding toe guard protection throughout the entire operating range. (Not just in the "working" range).

17

POWERAMP'S Fluid Logic control system offers maximum security when the dock is unattended. The lip and below dock operating mechanism cannot be manually activated from outside the building.

ELECTRICAL

Unit has been factory pre-wired, ready for simple electrical connections into pit outlet box and remote-mounted control. Remote control button and leveler operating switch are connected in parallel, allowing unit to be operated either from remote-mounted control or by the lanyard located at rear center of platform.

Check nameplate for correct voltage and phase.

Challenger without options, Pg. 6

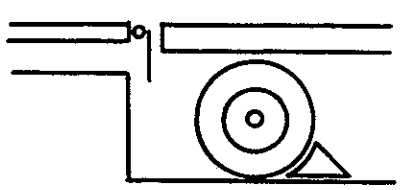
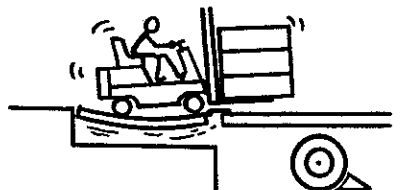


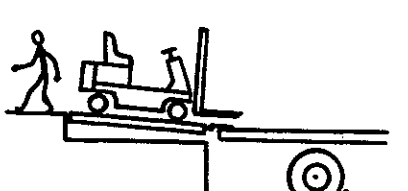


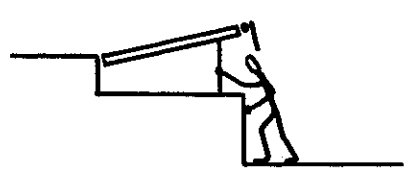
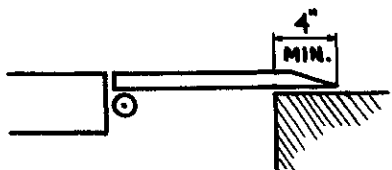
9041 Single Phase, 115V Diagram, Pg. 7

9042 Single Phase, 208-240V Diagram, Pg. 8

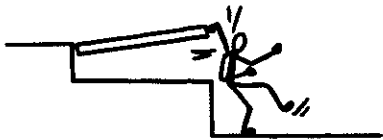

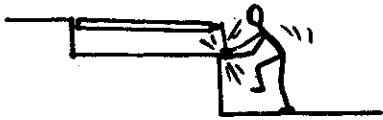
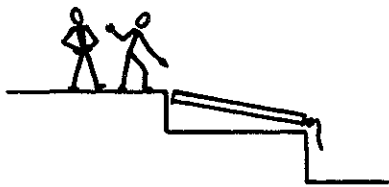
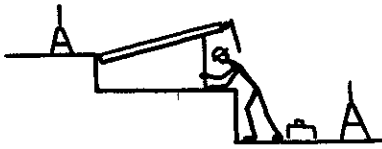
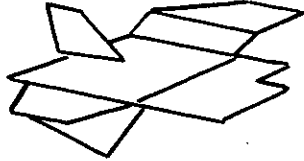


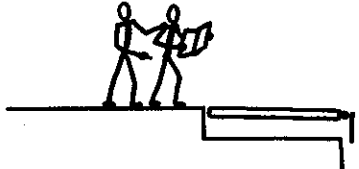
9043 Three Phase, 208-480V Diagram, Pg. 9

DOCK LEVELER SAFETY PRACTICES

This equipment is designed for industrial use by trained and reasonably prudent workers. Operation or maintenance by untrained persons can lead to unsafe conditions. Therefore, any persons working with or on this equipment should read and understand the OWNER'S MANUAL sections on Operation, Maintenance and Safety.

<h3>1 CHOCK</h3>  <p>Wheels of truck/trailer must be chocked before any loading or unloading operations begin and chocks must not be removed until operations are complete. This is so important that it is an OSHA requirement.</p>	<h3>2 NEVER</h3>  <p>A dock leveler should never be used in excess of its stated capacity rating or operating range which is 12" above and 12" below dock level unless otherwise specified.</p>	<h3>3 TOO LOW</h3>  <p>If truck is too low to be within the leveler's operating range, do not use makeshift devices to raise truck high enough to be serviced by the leveler.</p>
<h3>4 WRONG</h3>  <p>Never attempt to use a dock leveler on over-the-road equipment not designed for fork truck loading (i.e.) pick-up or city delivery vehicles, vans, etc.</p>	<h3>5 NO PARKING</h3>  <p>Do not leave fork trucks, equipment or loads parked on the dock leveler. Inadvertent departure of carrier could remove support from lip end of leveler.</p>	<h3>6 STOP</h3>  <p>POWERAMP dock levelers are equipped with a hydraulic safety stop designed to halt the descent within two (2) inches of travel; however, if separation is at or below dock level, resulting downgrade might allow the load to slide off the end of the leveler.</p>
<h3>7 DON'T USE</h3>  <p>If this unit experiences such a loss of support or is otherwise structurally damaged, it should be removed from service until it has been inspected (and repaired, if necessary) by the manufacturer's authorized representative or by a competent engineer.</p>	<h3>8 CHECK</h3>  <p>Periodic inspection of this equipment should be performed to insure that there are no broken or worn parts which could cause injury to personnel or damage to equipment.</p>	<h3>9 OVERLAP</h3>  <p>Always be sure that lip overlaps onto the trailer by a minimum of four (4) inches.</p>

DOCK LEVELER SAFETY PRACTICES

<p>10 CAUTION</p>  <p>Never raise or lower a dock leveler when a person is standing in front of it or is under it.</p>	<p>11 SIDES</p>  <p>Use caution when operating a fork truck near side edges of leveler because a fall of even a few inches can cause injury.</p>	<p>12 NO HANDS</p>  <p>Never use your hands to lift the lip into place. Keep fingers clear of hinge lines and pinch points.</p>
<p>13 BROKEN</p>  <p>Never use a broken or damaged dock leveler. If equipment is not operating correctly, tell your supervisor.</p>	<p>14 WORKING</p>  <p>While work on leveler is being performed, always barricade it to any form of traffic, lock out electrical disconnects and use maintenance prop.</p>	<p>15 CHANGES</p>  <p>Do not modify or alter any dock leveler without written authorization from the manufacturer.</p>
<p>16 INFLUENCE</p>  <p>Do not operate equipment while under the influence of drugs, alcohol or any medication.</p>	<p>17 CLEAN</p>  <p>Keep area clear of clutter and spills which invite accidents.</p>	<p>18 LEARN</p>  <p>If you are not thoroughly familiar with the operation of dock levelers, obtain advice from your supervisor or other qualified person. Also, see the American National Standards Institute standard No. ANSI MH14.1-1984 "Loading Dock Levelers and Dockboards" for other safety requirements.</p>

Additional or replacement copies of the Owner's Manual, Maintenance Procedures, Operating Instructions and other pertinent data may be obtained from:



systems inc
P.O. Box 309
Germantown, WI 53022

PREVENTATIVE MAINTENANCE

EACH MONTH

1. Dock leveler should be operated through its full cycle several times each week to maintain lubrication.
2. Using a good grade of lubricating oil, place a few drops on rear hinge pins and lip hinge. See Pg. 14, Frame, Item 2 and Platform, Item 3.
3. Using WD-40 penetrating oil, or the equivalent, lubricate the following:
 - A. Toe Guard hinges, strut pins, links and braces. See Pg. 14, Platform, Items 4 through 11.
 - B. Lip Lifter and pin assembly. See Pg. 12, Items 2, 3, 4.
 - C. Logic Block assembly. See Pg. 12, Items 21 and 29.

EVERY TWO MONTHS

4. Check hydraulic fluid level. See Pg. 12, Item 30.
Place leveler in full below-dock position. PUT SELECTOR/POWER SWITCH IN "OFF" POSITION. Remove inspection plate, remove breather from tank. Oil should be approximately one (1) inch from top of tank.
5. Check retainer ring at top of cylinder for proper seating.

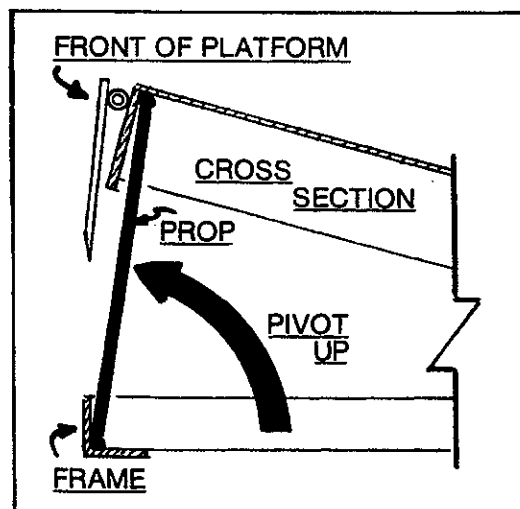
PREPARING FOR SERVICE UNDER DOCK LEVELER

CAUTION — when propping up dock leveler, STAND CLEAR OF LIP because it moves to vertical position when dock leveler makes contact with prop.

INSTRUCTIONS — raise platform until it comes to full "UP" position with lip fully extended. Raise maintenance prop until it comes to position behind the front hinge plate. See diagram (right). KEEPING CLEAR OF LIP, let platform drift down onto prop.

CAUTION — before working under leveler, DISCONNECT ELECTRIC POWER TO UNIT in addition to turning selector/power switch off. Begin work.

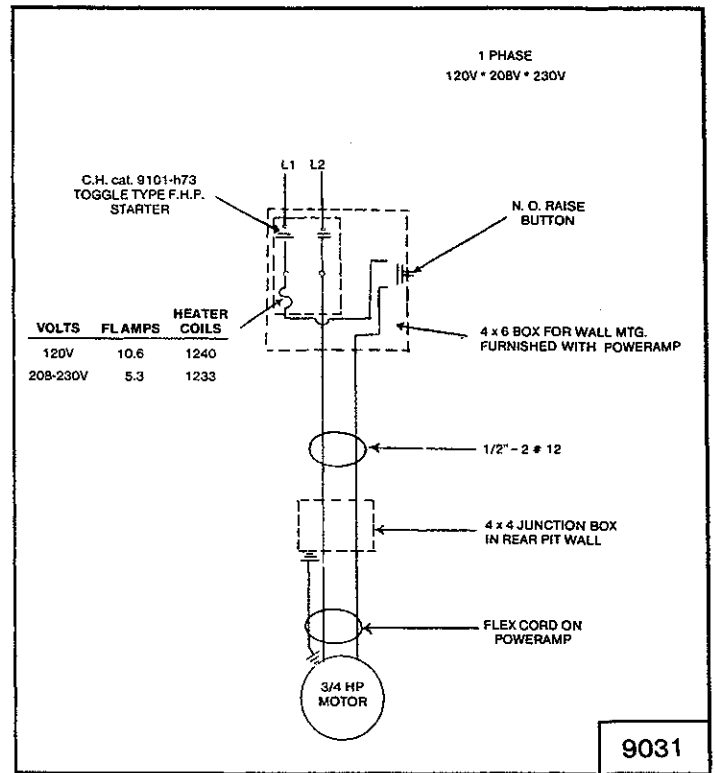
When finished, check under leveler to be sure personnel and materials are clear of leveler. To disengage maintenance prop, reconnect electric power to unit and turn selector/power switch on. Raise platform until prop can be lowered. Return leveler to cross-traffic position.



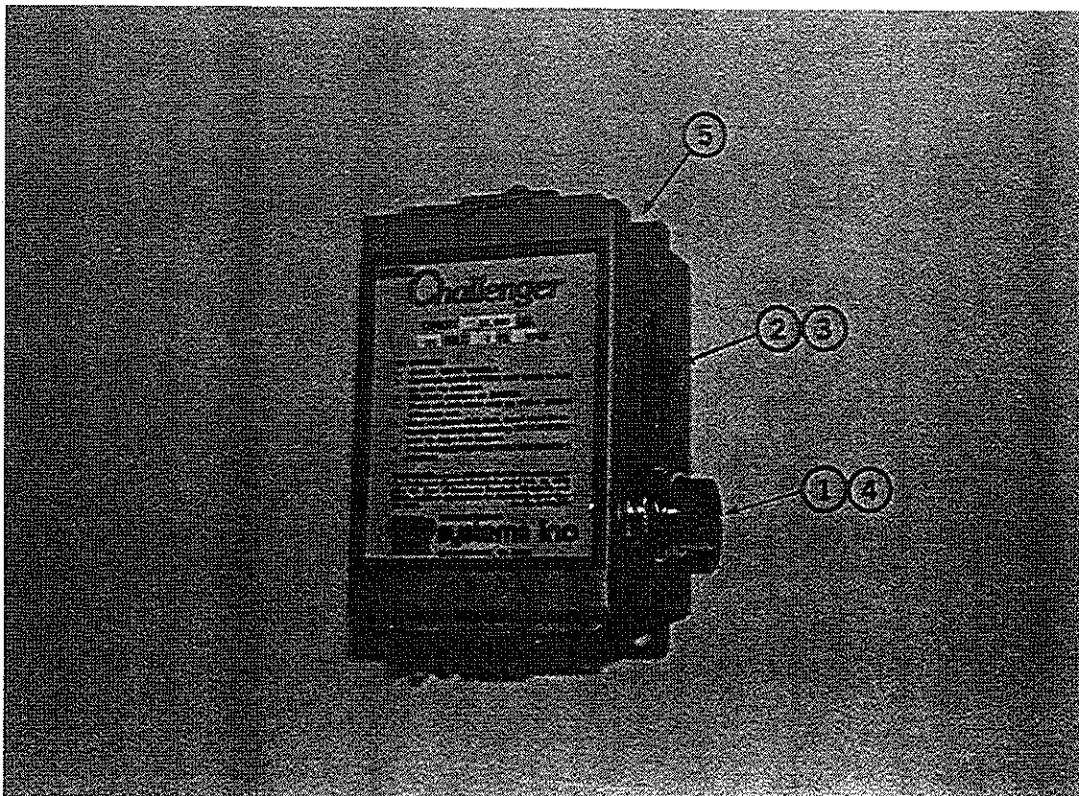
ELECTRICAL DIAGRAMS

Challengers without options

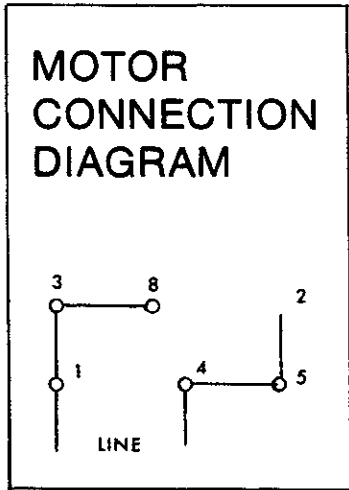
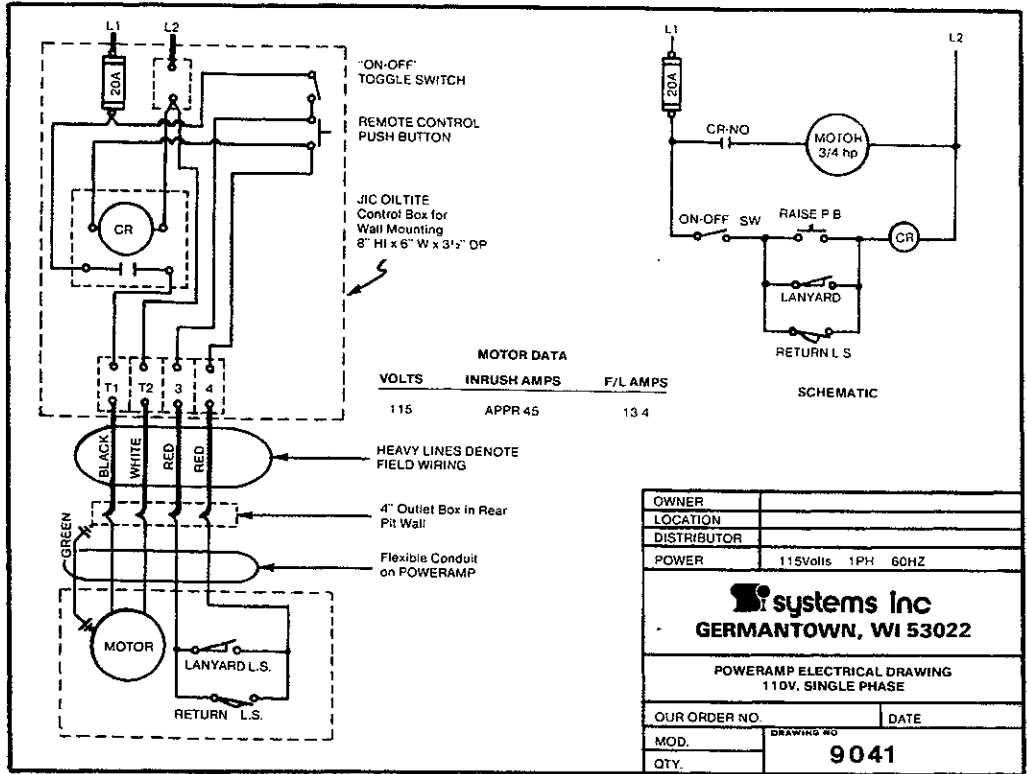
If your Challenger has options, the specific electrical drawing is included separately.



ITEM	PART NO.	DESCRIPTION
1	0961-0002	Push Button Operator
2	0961-0009	Manual Motor Starter
3	—	OL Coil for #2 - specify voltage
4	0961-0001	Contact Block
5	2751-0015	Enclosure (4" x 6")



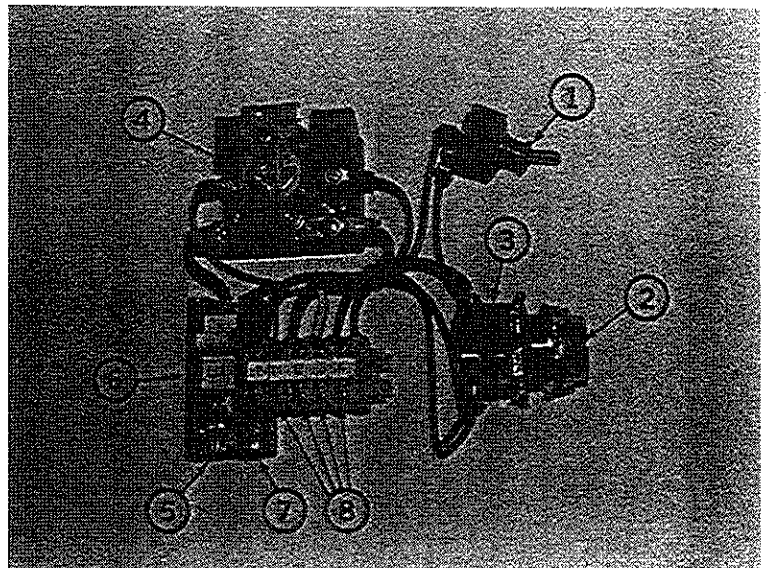
SINGLE PHASE ELECTRICAL DIAGRAMS (115V)



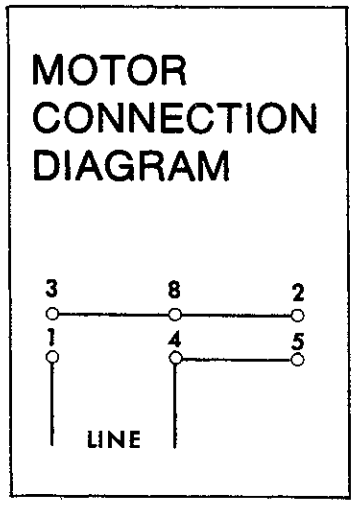
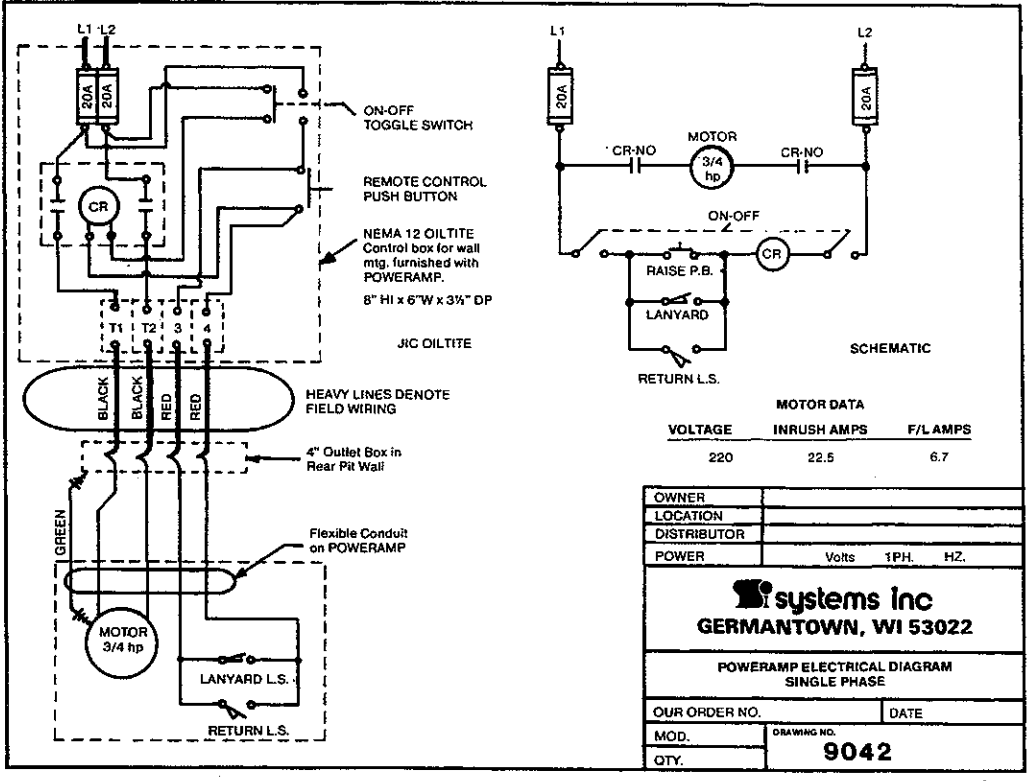
ITEM	PART NO.	DESCRIPTION
------	----------	-------------

- | | | |
|---|-----------|-------------------------|
| 1 | 0961-0003 | "On-Off" Toggle Switch |
| 2 | 0961-0002 | "Raise" Push-Button |
| 3 | 0961-0001 | Contact Block |
| 4 | 7141-0001 | Motor Relay — 1ph. 115V |
| 5 | 5101-0001 | 20 Amp Fuse |
| 6 | 5101-0003 | Fuse Block |
| 7 | 5101-0002 | Fuse Block End |
| 8 | 1431-0001 | Terminal Blocks |

NOTE: 2751-0001 Enclosure 6" x 8" x 3" JIC (not shown)

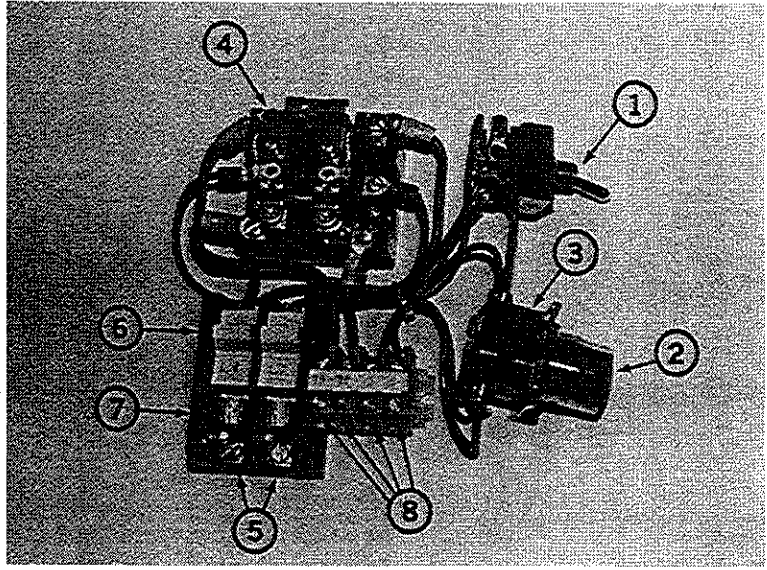


SINGLE PHASE ELECTRICAL DIAGRAM (208-240V) ⁸

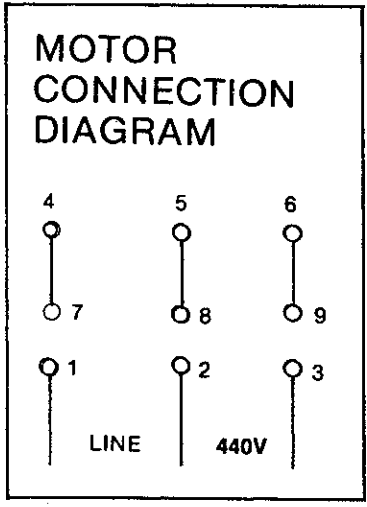
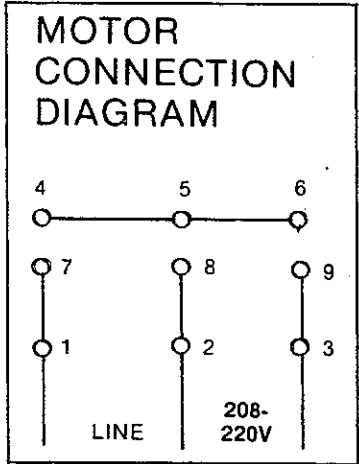
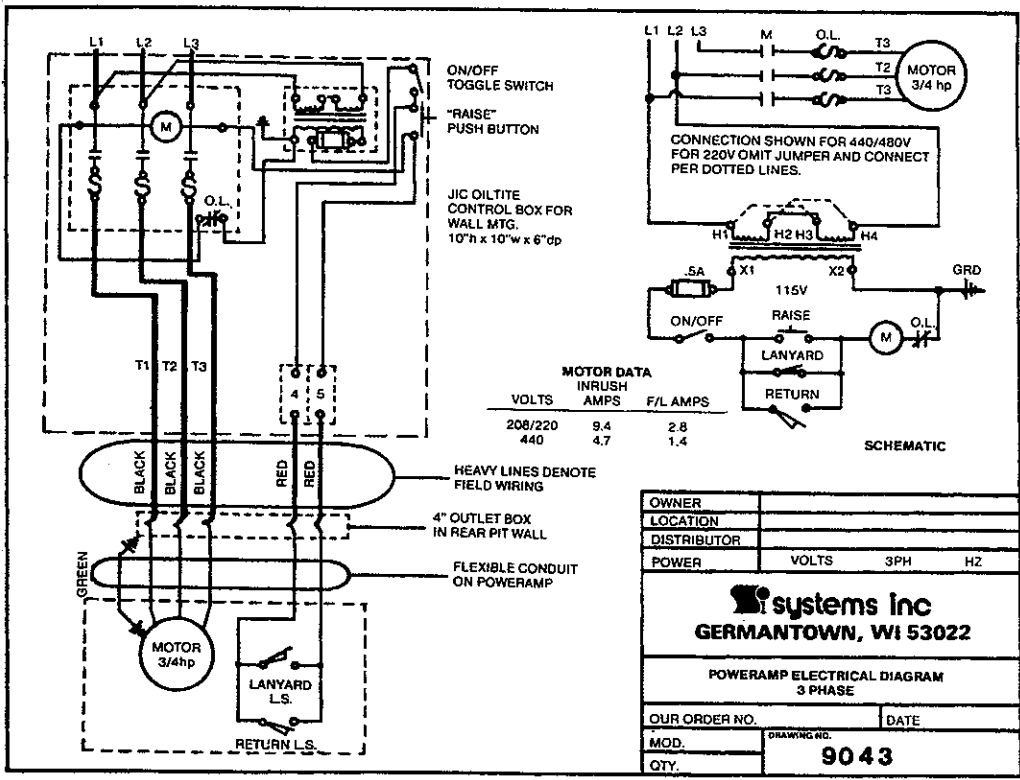


ITEM	PART NO.	DESCRIPTION
1	0961-0003	"On-Off" Toggle Switch
2	0961-0002	"Raise" Push-Button
3	0961-0001	Contact Block
4	7141-0003	Motor Relay — 1 ph. 208V
4	7141-0002	Motor Relay — 1 ph. 220-240V
5	5101-0001	20 Amp Fuse
6	5101-0003	Fuse Block
7	5101-0002	Fuse Block End
8	1431-0001	Terminal Blocks

NOTE: 2751-0001 Enclosure 6" x 8" x 3" JIC (not shown)



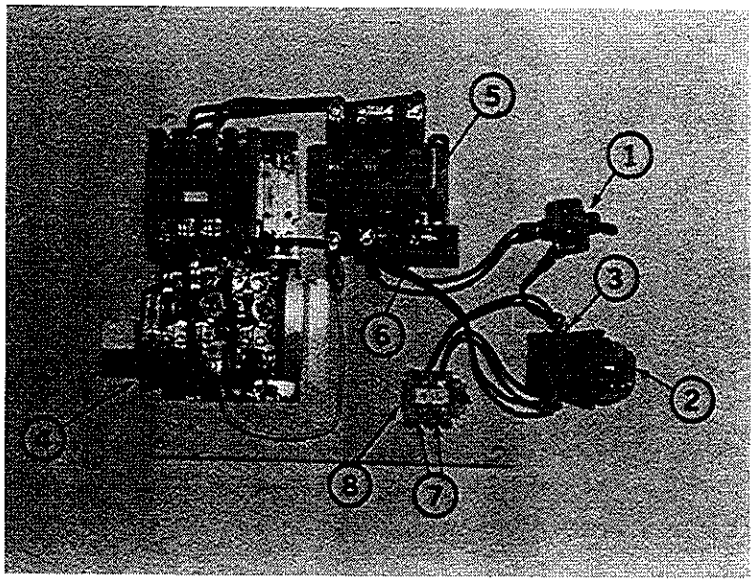
THREE PHASE ELECTRICAL DIAGRAM (208-220V) (440V)



OWNER	
LOCATION	
DISTRIBUTOR	
POWER	VOLTS 3PH HZ
systems inc GERMANTOWN, WI 53022	
POWERAMP ELECTRICAL DIAGRAM 3 PHASE	
OUR ORDER NO.	DATE
MOD.	DRAWING NO.
QTY.	9043

ITEM	PART NO.	DESCRIPTION
1	0961-0003	"On-Off" Toggle Switch
2	0961-0002	"Raise" Push-Button
3	0961-0001	Contact Block
4	7141-0010	Motor Starter — 3 ph. (480V)
4	7141-0011	Motor Starter — 3 ph. (240V)
5	1841-0001	Control Transformer w/Fuse Holder
6	5101-0015	.5 Amp Fuse
7	1431-0001	Terminal Blocks
8	1431-0002	Terminal Block End

NOTE: 2751-0011 Enclosure 10" x 10" x 6" JIC (not shown)



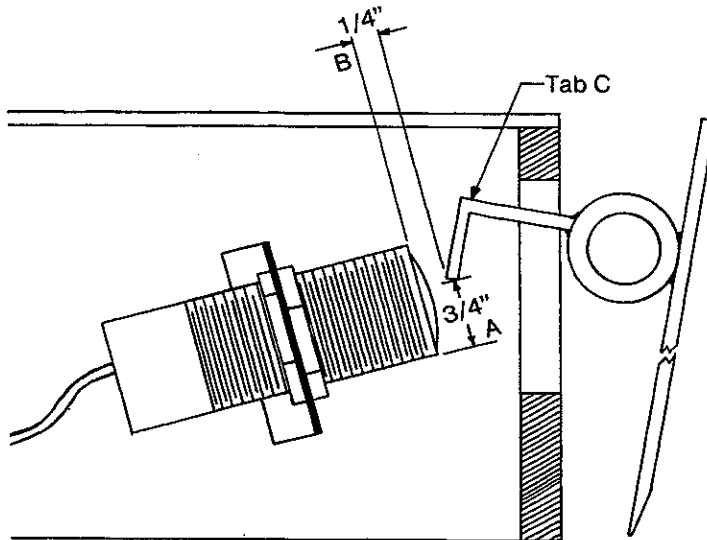
TROUBLE SHOOTING THE ELECTRICAL SYSTEM

Designed by Systems, Inc. to be as efficient and dependable as a machine can be, your dock leveler should seldom, if ever, need repairs. This is especially true if you practice the preventive maintenance program outlined on Page 5. However, no machine is perfect, so we have listed here a few possible operational malfunctions which might conceivably occur, possible causes and probable remedies.

TROUBLE	POSSIBLE CAUSE	PROBABLE REMEDY
1. With Push-button pressed, pump motor does not run; leveler does not raise.	1. No power. OR, blown fuses or overload open.	1. Check voltage input at dock leveler control. Check fuses, replace if necessary with correct type. Reset overload.
2. Leveler will not raise, single phase motor.	2. Line voltage too low. OR, defective capacitor. OR, open centrifugal switch at zero RPM.	2. Check for low voltage. Increase wire size to correct voltage drop. Disconnect capacitor from motor. Test. Replace if necessary. Repair or replace centrifugal switch.
3. Leveler will not raise, three phase motor running or humming.	3. Phase reversed, motor running. OR, Motor single-phasing (motor humming).	3. Reverse any two legs at disconnect box. Check fuses, wiring and overload reset.
4. Leveler will not automatically return to cross-traffic position (if so equipped).	4. No power to starter coil. OR, proximity switch out of adjustment.	4. Check on-off toggle switch. Adjust per Diagram below.
4A. Lip does not raise high enough to store.		4A. Bend tab downward slightly to decrease 3/4" dimension "A".
4B. Unit continues to raise.		4B. Bend tab upward to increase 3/4" dimension "A".

NOTE: If tab is bent for adjustment, work lip by hand to be sure that tab "C" is not gouging switch which would happen if gap "B" were closed completely.

Approximate dimensions shown with lip in pendant position.



HYDRAULIC SYSTEM POWER PAC

1. Sealed unit – positive displacement gear pump with 400 psi pressure relief by-pass. Normal operating pressure is 250 to 325 psi. Pump motor – TENV, 3/4 HP, 3,450 RPM.

B. Oil capacity – 1½ Gal. reservoir. On 60,000 lb. capacity POWERAMPS there are two lip and hoist cylinders, thus reservoir is 3 Gal. capacity.

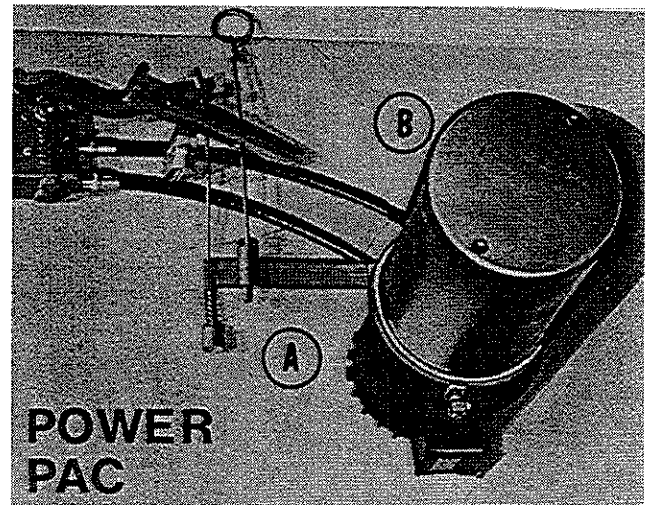
CHECKING AND ADDING HYDRAULIC FLUID – place leveler in full below-dock position. Put selector switch in “OFF” position. Remove inspection plate. Remove breather from tank. Proper oil level is approximately one (1) inch from top of tank.

HYDRAULIC FLUID – to assure normal operating in an ambient temperature range of -30° to $+125^{\circ}$ F these fluids are recommended:

Aero Shell Fluid #4 Code #60421 by Shell Oil Co.
Mobile Aero HFA Mil-Hs606A by Mobil Oil Co.

- Texaco Type BB
- Filmite No 530
- Exxon “UnivisJ13”

Note: Hydraulic fluids with equivalent specifications may be used.



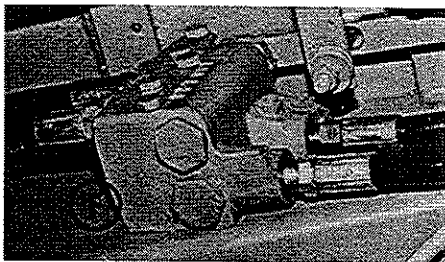
HOIST CYLINDER

C. Type – top fed, self-bleeding, hollow ram, 3½ in. diameter and 3/8 in. wall thickness.

D. Safety Stop – built into hoist cylinder. Supports personnel, vehicles and loads if truck pulls away from dock while load is on leveler. A single steel ball is only moving part.

E. Retainer Ring – at top of cylinder. Check every two months for proper seating.

Oil on piston – a small amount is required to maintain normal lubrication.



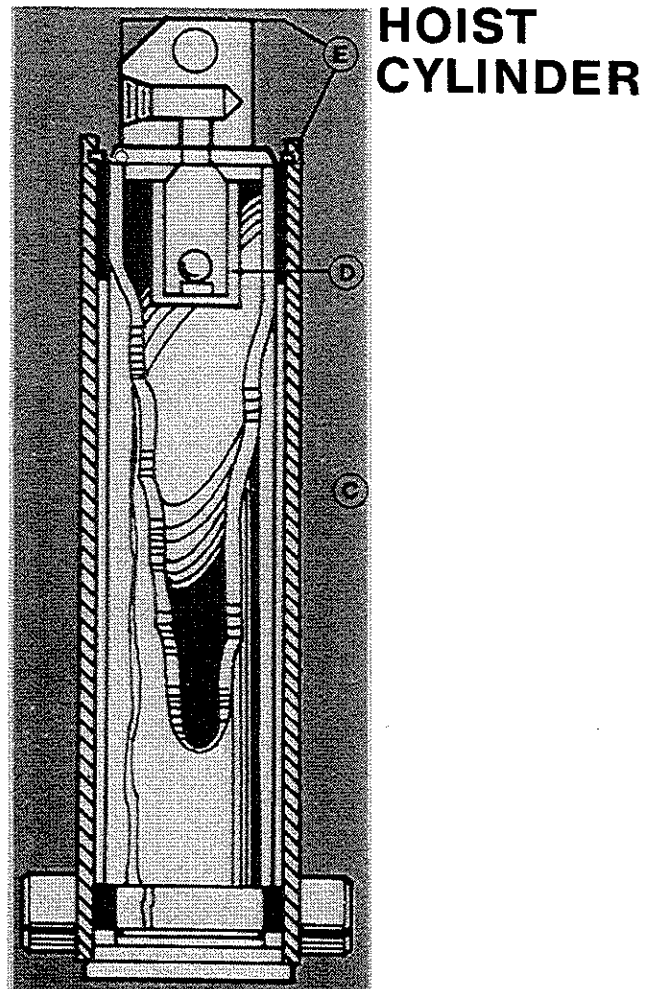
LOGIC BLOCK

F. Controls and operates every hydraulic function without the use of solenoid-activated valves. Platform speed adjustment is the only adjustment required. This regulates the downward speed of the leveler.

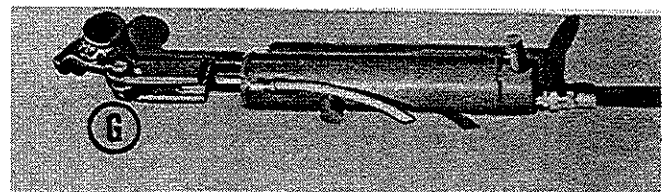
Hoses – one to hoist cylinder and one to lip cylinder.

LIP CYLINDER

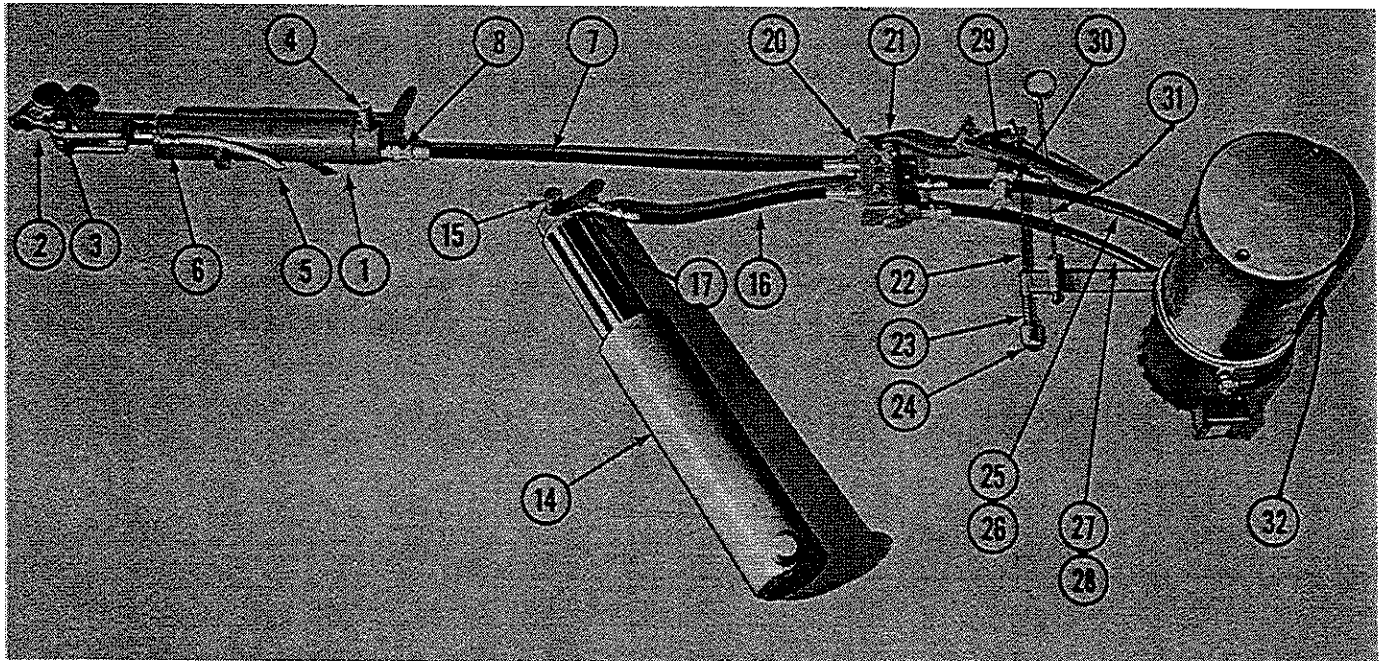
G. Controls and operates the lip.
Type – bottom fed, self-bleeding, 2½ inc. diameter with 3/16 in. walls.



LIP CYLINDER



HYDRAULIC SYSTEM PART LIST



LIP CYLINDER ASSEMBLY

Item	Qty.	Part	Description
1	1	0525-0001	Lip Cylinder Assy.
2	1	0522-0006	Lip Lifter
3	1	0522-0005	Pin - Front - Lip Cylinder
4	1	9202-0004	Pin - Rear - Lip Cylinder
5	1	5202-0001	Drain Line (Cyl. to Tank)
6	1	0521-0007	Ell - Drain Line
7	1	9905-0004	Hose Assembly Lip Cylinder
8	1	0521-0015	Straight Hose Adapter

AUXILIARY OPERATING ASSEMBLY

Item	Qty.	Part	Description
29		5405-0001	Lever
30		0611-0001	Limit Switch
31		5265-0001	Pull Ring and Cable Assembly

HOIST CYLINDER ASSEMBLY - SAFETY STOP

Item	Qty.	Part	Description
14		0525-0002	Hoist Cylinder Assembly
15		9202-0005	Pin - Hoist Cylinder
16		9905-0001	Hose Assembly - Hoist Cylinder
17		0521-0016	45° Hose Adapter - Hoist Cylinder

POWER-PAC

Item	Qty.	Part	Description
32		9395-0000	Power Pack - Includes: Motor, Pump, Tank, Filter and Breather

LOGIC BLOCK ASSEMBLY

Item	Qty.	Part	Description
20		9575-0001	Logic Block Assembly
21		5402-0001	Operating Arm - Logic Block
22		7952-0001	Cable - Logic Block Operating Arm
23		9572-0004	Spring - Operating Arm Cable
24		8102-0001	Weight - Operating Arm Cable
25		9905-0003	Hose Assembly - Return Line
26		0521-0017	90° Hose Adapter (Bottom of Tank)*
27		9905-0002	Hose Assembly - Pressure Line
28		0521-0015	Straight Hose Adapter (On Hyd. Tank)*

HYDRAULIC FLUIDS - See Page 11
Packing kit not shown.

*not shown

When ordering, USE PART NUMBERS AND DESCRIPTION TO HELP IDENTIFY THE ITEM ORDERED. Do not use "item" numbers which serve only to help you locate the position of the parts. Always give dock leveler MODEL NUMBER and/or SERIAL NUMBER.

TROUBLE SHOOTING THE HYDRAULIC SYSTEM

Your POWERAMP should seldom, if ever, need repairs. However, since no machine is perfect, here are a few malfunctions which might conceivably occur, possible causes and probable remedies.

TROUBLE

1. Dock leveler will not raise.
2. Dock leveler raises very slowly.
3. While leveler is descending it locks into "safety". Lip drops to vertical position.

POSSIBLE CAUSE

1. Load on platform.
2. Low hydraulic fluid.

OR, pump by-pass set too low.
3. Platform down-speed is too fast.

PROBABLE REMEDY

1. Remove load. Unit is designed to raise no more than its own weight as a safety feature.
2. Add hydraulic fluid as needed See Page 11, Item B.

OR, increase by-pass pressure. Fig. A. Remove acorn nuts and washer back of nut. Back up jam nut and, with screwdriver, turn adjustment.
3. Slow speed as follows. Remove inspection plate. See Fig. B. Loosen jam nut in radius of fluid logic block. Using 1/8" Allen wrench, turn Allen screw clock-wise approximately one full turn; tighten jam nut. Check down-speed. If leveler still descends too rapidly, repeat above. If leveler descends TOO SLOWLY repeat above, BUT turn Allen Screw counter-clockwise.

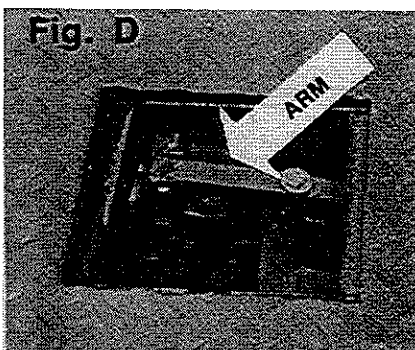
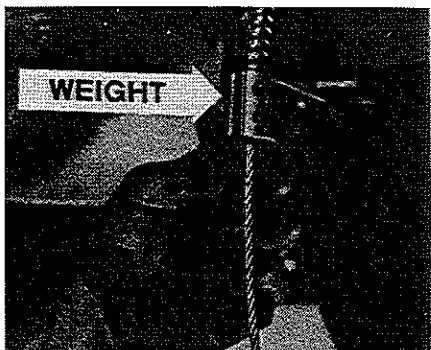
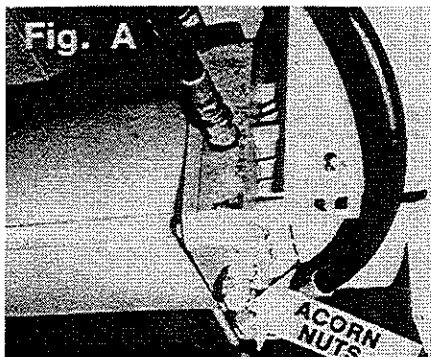
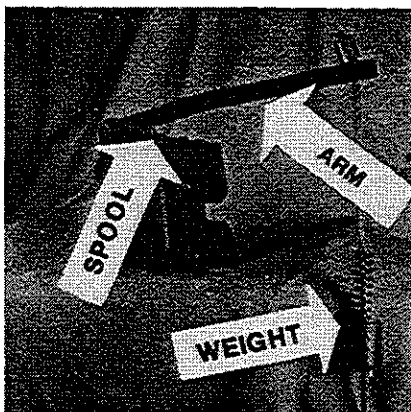


Fig. E



4. Operating with remote push-button control, platform reaches full height, but lip does not automatically extend.

4. Low Hydraulic fluid.

OR, weight on operating arm cable has slipped down on cable.

4. See Item 2 above.

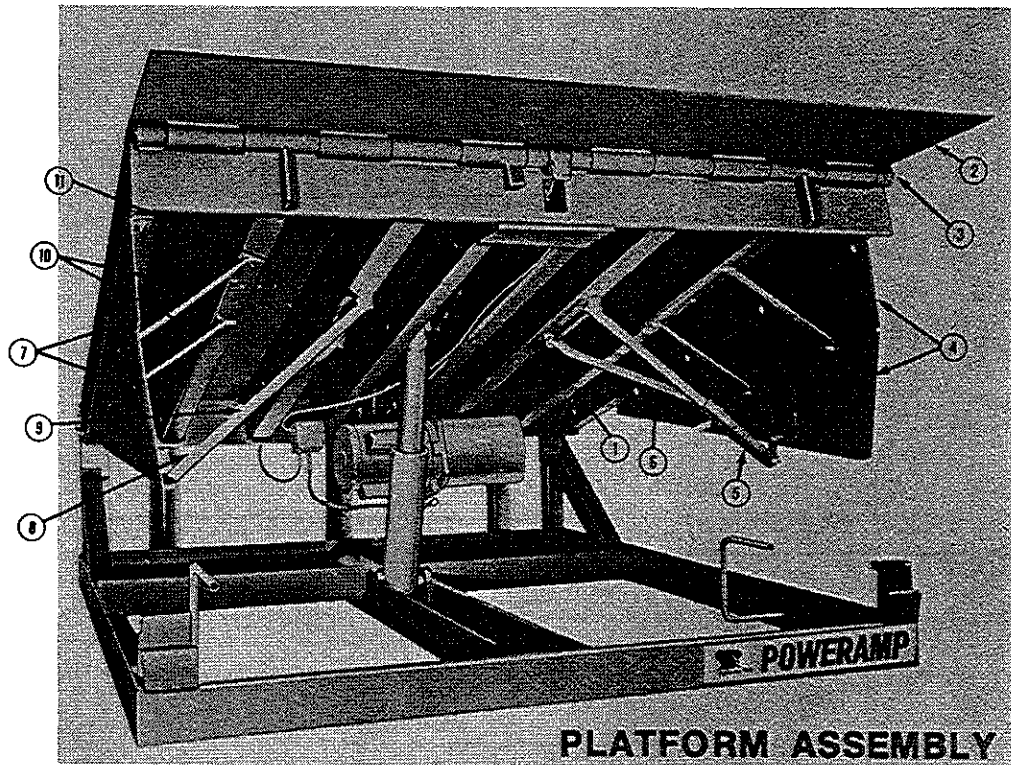
OR, prepare for service under leveler as shown on Pg. 5. Now, see Fig. C. Loosen set screws. CAUTION! DO NOT LOSE steel ball under each screw. Raise weight 1/2" to 3/4" and secure screws. If spring is worn, replace.

5. From full below-dock position with lip folded, board raises, lip extends slightly, but leveler repeatedly returns to below dock position.

5. Spool extending through top of logic block might be stuck. Operating arm may be binding. Oil port to lip cylinder may be held open.

5. Turn "OFF" selector switch. Remove inspection plate. See Fig. D. Manually free-up operating arm and spool. See Fig. E. If necessary, detach arm from logic block. Spray WD-40 penetrating oil or equivalent over top of logic block, Fig. D.

PLATFORM AND FRAME PARTS LIST



PLATFORM ASSEMBLY

Item	Qty.	Part	Description
1	1	9515-0001	Platform Weld Assembly
2	1	0595-0001	Lip Weld Assembly
3	1	9202-0003	Pin — Lip Hinge
4	1	0015-0001	Toe Guard — L.H.
5	1	5275-0001	Link — L.H. Toe Guard
6	1	0145-0001	Strut — L.H. Toe Guard
7	1	0015-0002	Toe Guard — R.H.
8	1	5275-0001	Link — R.H. Toe Guard
9	1	0145-0001	Strut — R.H. Toe Guard
10	4	9402-0001	Brace — Toe Guards
11	2	9202-0001	Pin — Toe Guard Strut

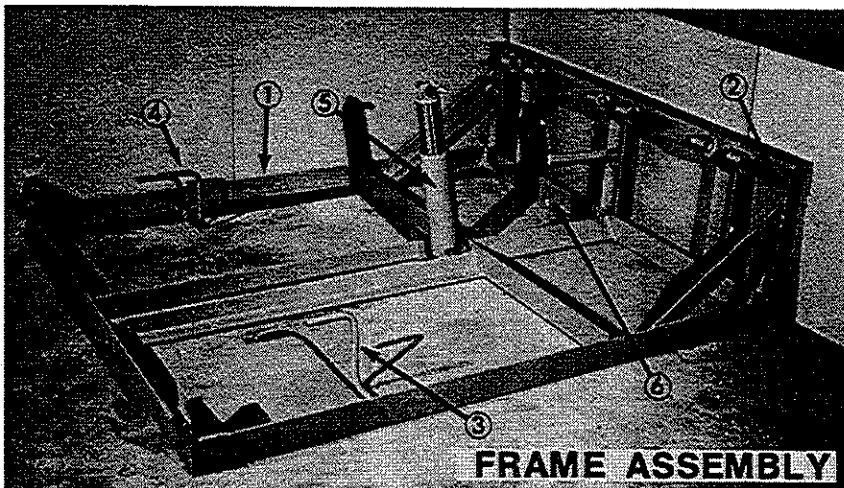


systems inc

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 GERMANTOWN, WI 53022
 414-255-1510

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FRAME ASSEMBLY



Item	Qty.	Part	Description
1	1	8435-0001	Frame Assembly
2	1	9202-0002	Hinge Pin — Rear
3	1	8432-0008	Cam — L.H.
4	1	8432-0009	Cam — R.H.
5	1		Hoist Cylinder (See Hyd. Section)
6	1		Cable Assembly (See Hyd. Section)