HYDRAULIC DOCKLEVELER

KOKE INC.

OWNER'S MANUAL

TABLE OF CONTENTS

DATE : _____

CUSTOMER : _____

MODEL: _____

SERIAL # : _____

POWER PACK :_____
TYPE

POWER PACK
SERIAL#_____

CAPACITY: _____

ELECTRICAL: _____

OPTIONS: _____

HYDRAULIC DOCK LEVELER INSTALLATION INSTRUCTIONS

PRIOR TO INSTALLATION, CHECK PIT FOR CORRECT DEPTH AND SQUARENESS ACROSS CORNERS.
IF PIT IS NOT CORRECT SIZE AND SQUARENESS, MAKE CORRECTIONS BEFORE INSTALLING LEVELER.

STEP 1 Place leveler in pit by means of a crane , hoist or forklift and level back end of leveler with the floor . Weld angles (see WELD &SHIM PLACEMENT DWG.) use shims if necessary.

STEP 2 Shim the front end of the leveler so that the top deck is level to the sides of the pit side curbs.

STEP 3 Weld front base and shims to front curb angle as shown on the shim and weld drawing sheet.

STEP 4 Remove the metal strapping. Elevate using lifting device and attach the ¾" x 10" lifting ring (not supplied) to the ¾" nut at the front of the deck

STEP 5 Prop open the leveler with lip in the extended position using the built in maintenance strut.

STEP 6 Shim under the main lift cylinder ram, this adds rigidity to that location. Weld in place.

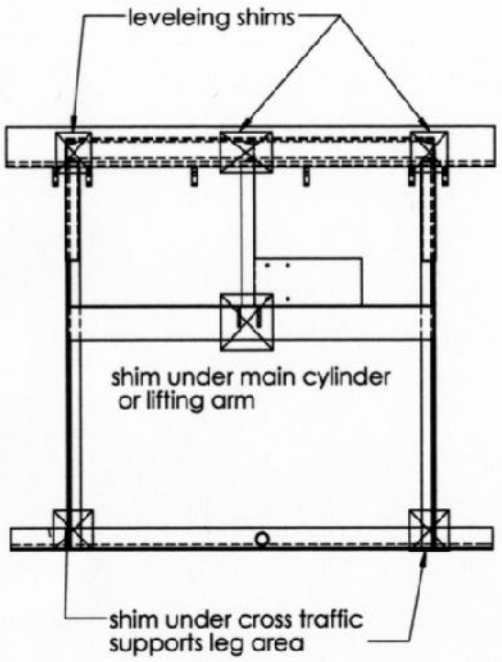
STEP 7 Read operating instructions before completing the connection to the power pack. Operate the the leveler several times, pausing between operations to allow air in the system to bleed out.

NOTE: WHILE THE LEVELER IS FACTORY ADJUSTED, ON SITE ADJUSTMENTS MAY BE NECESSARY DUE TO MOVEMENT CAUSED IN SHIPPING INSTALLATION.

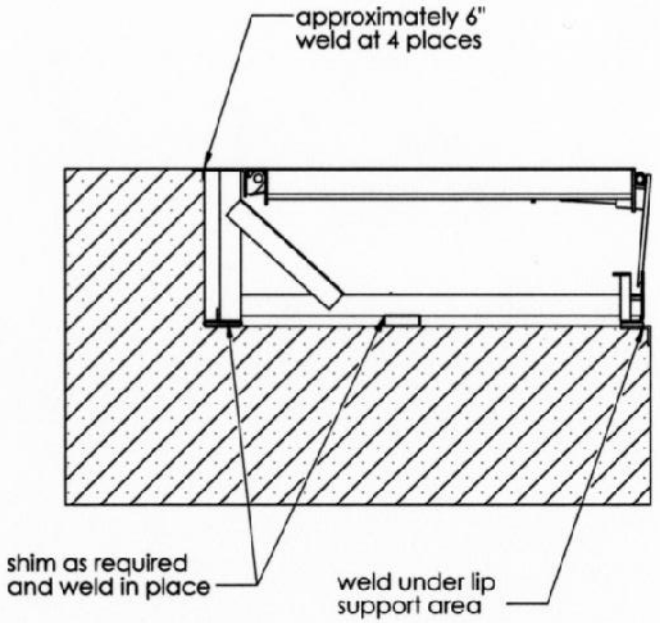
NOTE: ALWAYS MAKE SURE THE MAINTENANCE STRUT IS ENGAGED BEFORE GOING UNDER THE LEVELER FOR SAFETY AND ALWAYS INFORM OTHER PERSONNEL THAT YOU WILL BE WORKING ON THE LEVELER.

**** **Koke Inc.** reserves the right to make changes to product without notice or obligation…******

PLAN VIEW

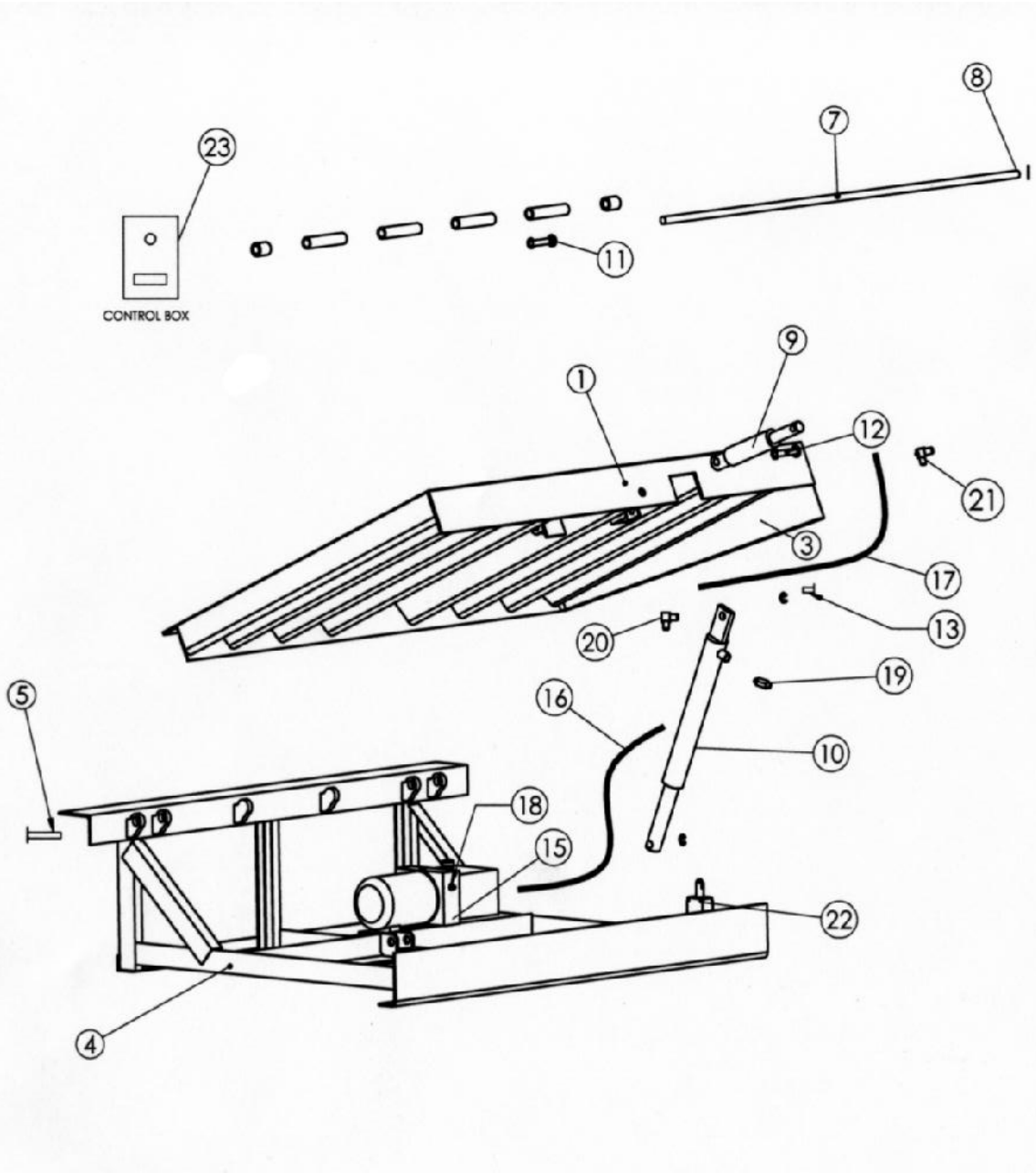


SHIM & WELDING DETAILS



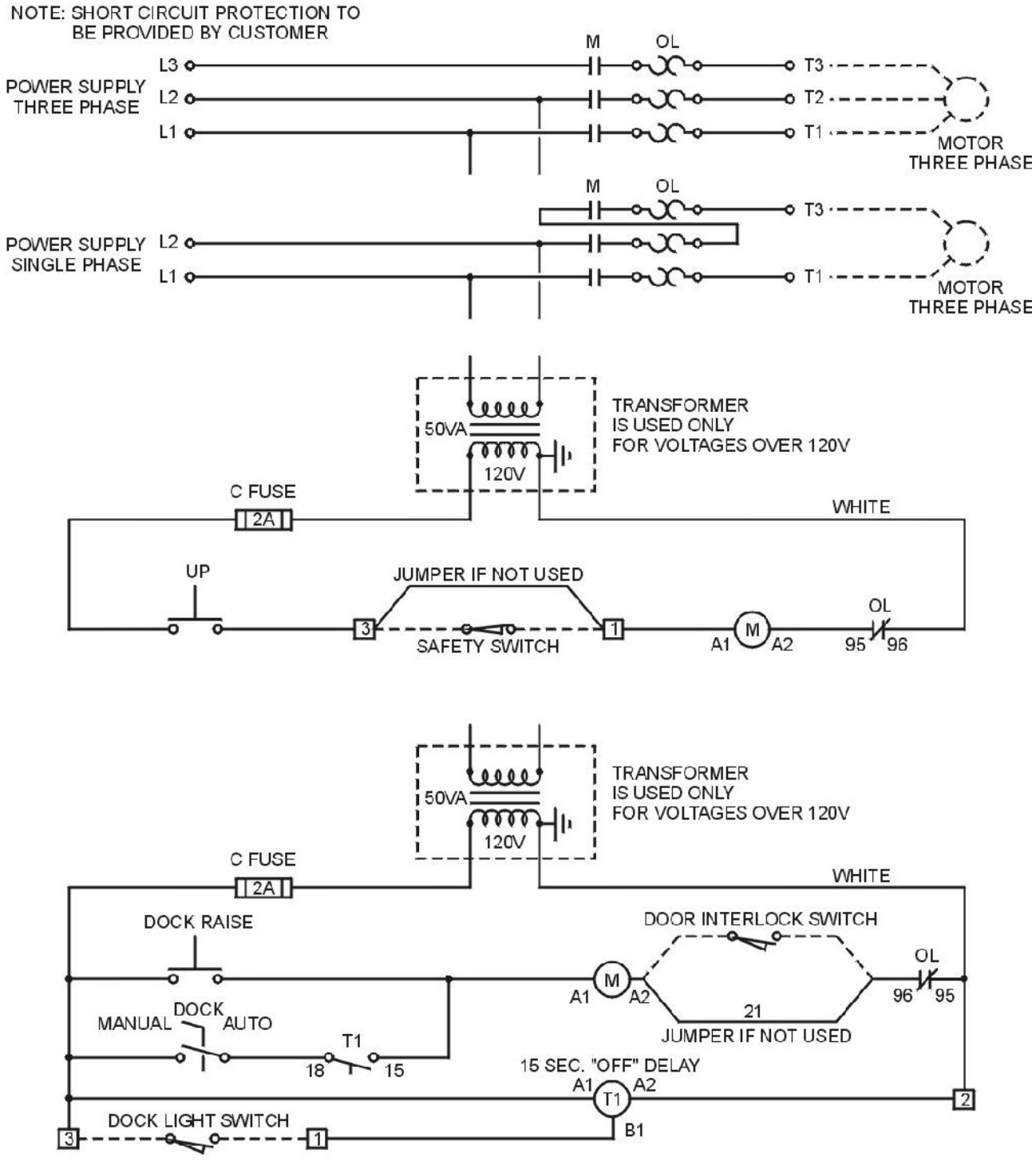
*** CAUTION ****
maintenanace strut must be in place while working under dockleveler.

KOKE, INC.	Title: **SHIM INSTALLATION DETAILS**	DWG. NO.	Date: 04/21/06	Page	Drawn by: JV	REV.
		CAD FILE:		Of	Appr. by:	REV. DATE

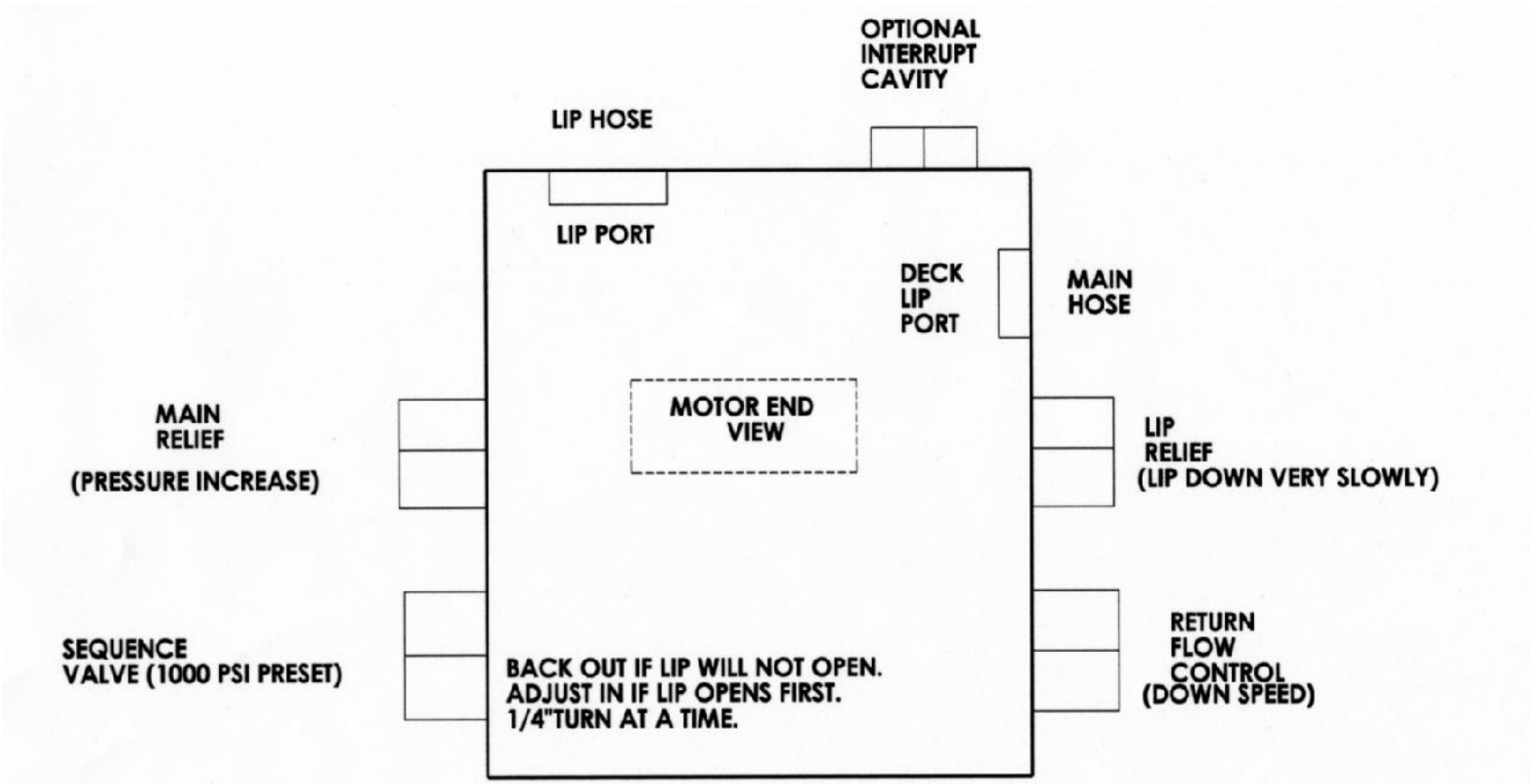


ITEM #	QTY.	PART NO.	DESCRIPTION
1	1	KHD100	COMPLETE DECK ASSEMBLY
2	1	KHD101-6L	TOEGUARD 6' LEVELER -LEFT
3	1	KHD101-6R	TOEGUARD 6' LEVELER -RIGHT
		KHD101-8L	TOEGUARD 8' LEVELER - LEFT
		KHD101-8R	TOEGUARD 8' LEVELER - RIGHT
		KHD101-TL	TELESCOPING TOE GUARD - LEFT
		KHD 101-TR	TELESCOPING TOEGUARD- RIGHT
4	1	KHD200	COMPLETE FRAME ASSEMBLY
5	2	KHD201	MAIN DECK PIN & E-CLIP
6	1	KHD300-1	16" LIP 1/2" THICK
		KHD300-2	16"LIP 3/4" THICK
		KHD300-3	16"LIP 5/8"THICK
		KHD300-4	18" LIP 3/4" THICK
		KHD300-5	18"LIP 5/8" THICK
		KHD300-6	20"LIP 3/4" THICK
		KHD300- 7	20"LIP5/8" THICK
		KHD300-8	22" LIP 3/4" THICK
		KHD300-9	22"LIP 5/8" THICK
7	1	KHD301-6	HINGEPIN 6' WIDE LEVELER
		KHD301-7	HINGE PIN 7' WIDE LEVELER
8	2	KHD302	SPLIT PIN
9	1	KHD401	LIP CYLINDER
10	1	KHD402	MAINCYLINDER
11	1	KHD404A	PIN & E-CLIP(LIP CYL. TOP)
12	1	KHD404B	PIN & E-CLIP(LIP CYL. BTM)
13	1	KHD405A	PIN &E-CLIP(MAIN CYL. TOP)
14	1	KHD405B	PIN &E-CLIP(MAIN CYL. BTM)
15	1	KHD406-1PH	110V/220V/1PH POWER PACK
		KHD406-3PH	208V/480V/3PH POWER PACK
16	1	KHD407	MAIN HYDR. HOSE 54"
17	1	KHD408	LIP HYDR. HOSE 60"
18	1	KHD409	STRAIGHT FITTING @ VALVE
19	1	KHD410	#3 VELOCITY FUSE
20	1	KHD 411	90DEGREE FITTING @VALVE
21	1	KHD412	90 DEGR. FITTING @LIP CYL.
22	1	KHD413	AUTO RETURN SWITCH(OPT)
		KHD414	SEAL KIT- HYDR. LIP
		KHD415	SEAL KIT- HYDR. MAIN CYL.
23	1	KHD50-110	CONTROL BOX1 PH /SINGLE PB
		KHD50-110A	CONTROL BOX 1PH/AUTORET.
		KHD50-208	CONTROL BOX 3PH /SINGLE PB
		KHD50-208A	CONTROL BOX 3PH /AUTORET.
		KHD50-220	CONTROL BOX 1PH /SINGLEPB
		KHD50-220A	CONTROL BOX 1PH /AUTORET.
		KHD50-480	CONTROL BOX 3PH /SINGLE PB

ELECTRICAL SCHEMATIC



AMPS	16	24	4.25	10.4	15.9	25	8	17	9.04	27.3	1.84	4.52	6.9	10.8	1.47	2.49	3.62	5.5	8.7
HP	1	2	1	3	5	7.5	1	3	3	10	1	3	5	7.5	1	2	3	5	7.5
PHASE	1	1	3	3	3	3	1	1	3	3	3	3	3	3	3	3	3	3	3
VOLTS	120	120	208	208	208	208	240	240	240	240	480	480	480	480	575	575	575	575	575
ITEM	/01	/02	/03	/04	/05	/06	/07	/08	/09	/10	/11	/12	/13	/14	/15	/16	/17	/18	/19



KOKE, INC.	Title: HYDRAULIC LEVELER POWER PACK	DWG. NO.	Date:	Page	Drawn by: JV	REV.
		CAD FILE:		Of	Appr. by:	REV. DATE

TROUBLE SHOOTING

NOTE: BEFORE PERFORMING ANY MAINTENANCE CHECKS, ALWAYS POSITION WORK STRUT SECURELY UNDER THE DECK & LIP, THEN PROCEED INTO PIT TO CLEAN OR MAKE NECESSARY ADJUSTMENTS.

(SEE HYDRAULIC LEVELER POWER PACK DRAWING FOR PROPER VALVE ADJUSTMENT LOCATIONS)

PROBLEM: DECK WILL NOT RAISE, MOTOR WILL NOT ATTEMPT TO START

CAUSE:

- Power supply is disconnected, ensure area is safe, and restart.
- Fuse burned out. Replace fuse, if fuse continues to burn out, check for short circuit and repair as required.
- Thermal overload has tripped. Ensure power supply has been disconnected, wait up to 5 minutes for automatic overload to reset. If problem reoccurs, locate cause and repair as required. (Automatic overload is only available with single phase motors.)

PROBLEM: DECK WILL NOT RAISE, MOTOR ATTEMPTS TO RUN, BUT BREAKER SWITCH TRIPS PRIOR TO MOTOR REACHING FULL SPEED

CAUSE:

- This is not normally a fault in the power unit of its controls.
- This problem is more prevalent with the 115/1/60 volt power unit. The single phase circuit could have problems due to line loss possibilities, such as other equipment being used on the same circuit or in a branch circuit. For a permanent solution to this problem, ensure that size 10 or 12 conductors are used and provide a minimum 20 amp, isolated circuit.

PROBLEM: DECK WILL NOT RAISE, MOTOR DOES RUN

CAUSE:

- Incorrect motor rotation with three phase power supply instructions and electrician to interchange any 2 motor leads to attain the proper rotation. The single phase motor will turn in the correct rotation without interchanging any wires as described on the motor badge
- No hydraulic fluid. Ensure all hose and leak points are intact. Replace or Repair as required.
- Foreign material trapped between the deck and the pit wall will cause the pressure relief valve to by-pass. Ensure the pit area is free from debris.
- Power unit is running on relief valve by-pass. Most power units are pre-set to their maximum capacity at the factory. Sometimes it may be necessary to increase the setting of the relief valve. Remove the hexagonal locking nut below the stamping “RV” and turn the adjustment screw clockwise in 1/16” increments until the deck is able to rise. Replace the hexagonal lock nut

ensuring the sealing ring is in place. (Only increase the relief valve setting as much as needed to achieve the proper action. Excessive relief pressure may cause the motor to stall.)

PROBLEM: DECK DOES NOT RAISE IMMEDIATELY WHEN MOTOR STARTS, DELAY MAYBE AS LONG AS 10-15 SECONDS

CAUSE:

- Air is trapped in lift cylinder. Bleed the air from the system as required. Ensure the main lift cylinder is completely retracted prior to installation

PROBLEM: DECK RAISES SLOWLY (SLUGGISH)

CAUSE:

- Hydraulic unit contamination. Clean and flush complete unit and refill.
- Main relief pressure too low. Adjust relief valve screw stamped “RV” in 1/8” turn increments and keep count of number of rotations.

PROBLEM: DECK DOES NOT RAISE FULLY AND STOPS, THE MOTOR CONTINUES TO RUN AND THE POWER UNIT IS NOISY AND STRAINING

CAUSE:

- The oil in reservoir is low. Proceed to add oil to the reservoir to the proper level. Double check all possible leak locations to ensure oil level is maintained.

PROBLEM: DECK RAISES TO FULL HEIGHT AND LIP DOES NOT ATTEMPT TO EXTEND

CAUSE:

- Sequence valve is set too high. Remove the hexagonal cover nut. Turn the sequence valve adjusting screw counter clockwise in 1/2 turn increments until the proper action is achieved. Replace sealing ring and tighten the hexagonal cover nut to a minimum of 200 lbs./in.
- Power unit is running on relief valve by-pass. Most power unit s are pre-set to their maximum capacity at the factory. Sometimes it may be necessary to increase the setting on the main pressure relief valve. Remove the hexagonal locking nut below the stamping ”RV” and turn the adjusting screw clockwise in 1/16 increments until the desired action is achieved. Replace the hexagonal lock nut ensuring the sealing ring is in place. (Only increase the relief valve setting as much as needed to achieve the proper action. Excessive relief pressure may cause the motor to stall.)
- The oil in reservoir is low. Proceed to add oil to the reservoir to the proper level. Double check all possible leak locations to ensure oil level is maintained.

PROBLEM: LIP DOES NOT EXTEND COMPLETELY AT ANY POINT

CAUSE:

- Foreign material has lodged in the lip hinge. Ensure the area is free from debris.
- Damaged lip or hinge. In some cases slight imperfections may be overcome by increasing the valve settings. Remove the hexagonal locking nut below the stamping ”RV” and turn the adjusting screw clockwise in 1/16 increments until the desired action is achieved. Replace the hexagonal lock nut ensuring the sealing ring is in place. (Only increase the relief valve setting as much as needed to achieve the proper action. Excessive relief pressure may cause the motor to stall.) Once the pressure relief valve has been increased, it may be necessary to increase the sequence valve pressure setting. Remove the hexagonal cover nut. Turn the sequence valve adjusting screw counter clockwise in 1/2 turn increments until the proper action is achieved. Replace sealing ring and tighten the hexagonal cover nut to a minimum of 200 lbs./in.

PROBLEM: LIP EXTENDS PREMATURELY

CAUSE:

- Sequence valve is set too low. Remove the hexagonal cover nut. Turn the sequence valve adjusting screw counter clockwise in 1/2 turn increments until the proper action is achieved. Replace sealing ring and tighten the hexagonal cover nut to a minimum of 200 lbs./in.

PROBLEM: LIP FALLS PREMATURELY

CAUSE:

- Contamination in the shuttle valve assembly. Clean and flush complete hydraulic unit.

PROBLEM: LIP WILL NOT FADE ONCE THE DECK HAS BEEN LOWERED TO THE BOTTOM OF THE PIT

CAUSE:

- Crossover relief valve setting is too high. Remove the hexagonal nut directly below the main lift port and turn the crossover adjusting screw counter clockwise in ½ turn increments until desired action is achieved. Replace the hexagonal lock nut ensuring the sealing ring is in place.
- In some cases this cannot be corrected by adjusting the power unit. The lip lowers by gravity and the hinge must pivot freely its entire length. Ensure the lip hinge is completely free from debris and that the hinge is lubricated thoroughly.
- Ensure the hydraulic hose connected to the lip cylinder does not get pinched causing a restriction while the power unit cycles.

PROBLEM: LIP DOES NOT RETRACT WHEN THE DECK IS RAISING

CAUSE:

- Sequence valve is set too low causing the lip to extend prematurely. Remove the hexagonal cover nut. Turn the sequence valve adjusting screw counter clockwise in 1/2 turn increments until the proper action is achieved. Replace sealing ring and tighten the hexagonal cover nut to a minimum of 200 lbs./in.

- Ensure the lip hinge is completely free from debris and that the hinge is lubricated thoroughly.

PROBLEM: LIP DOES NOT RETRACT WITH A SMOOTH MOTION AS DECK RAISES

CAUSE:

- Sequence valve is set too low causing the lip to chatter. Remove the hexagonal cover nut. Turn the sequence valve adjusting screw counter clockwise in 1/2 turn increments until the proper action is achieved. Replace sealing ring and tighten the hexagonal cover nut to a minimum of 200 lbs./in.

- Ensure the lip hinge is completely free from debris and that the hinge is lubricated thoroughly. .

PROBLEM: LIP LOWERS SLOWLY UNDER NORMAL TEMPERATURES

CAUSE:

- In some cases this cannot be corrected by adjusting the power unit. The lip lowers by gravity and the hinge must pivot freely its entire length. Ensure the lip hinge is completely free from debris and that the hinge is lubricated thoroughly.

- Ensure the hydraulic hose connected to the lip cylinder does not get pinched causing a restriction while the power unit cycles

- Ensure the power unit hoses are not excessively long. It may be necessary to increase the size of the hose if the power unit location is unavoidably far from the pit area.

PROBLEM: LIP LOWERS VERY SLOWLY IN COLD WEATHER

CAUSE:

- Hydraulic fluid becomes too thick. Use the appropriate fluid to suit local conditions. Sometimes it may be necessary for the hydraulic fluid to be changed seasonally.

RAM ASSEMBLY OVERHAUL

The ram seals generally have a long life. However, due to adverse or an extremely dusty environment. Premature failure of the seals can occur. This problem will always manifest itself by oil leaking out of the ram.

Seals can be replaced using the following directions:

1. Raise the leveler to a comfortable working height and prop up, using the built in maintenance strut before performing any work inside the leveler.
2. Remove cylinder from dock leveler and disassemble.
3. Remove worn seals from cylinder.
4. Make certain that all parts are clean and there is no damage to either the piston or cylinder.
5. Install new seals.
6. Apply a small amount hydraulic fluid to piston and insert into the cylinder.
7. Disconnect hydraulic line, to allow air to escape.
7. Re-install cylinder and hydraulic lines, raise the deck off the maintenance strut, then operate the leveler several times to make sure everything is in proper working order.

SERVICE POLICY & WARRANTY

KOKE INC. warrants that each **KOKE** manufactured product shall be free from defects in materials and workmanship . Any part of this product which under normal and proper use , maintenance proves defective in material and workmanship within (12) twelve months on mechanical components ‘ (90) days on electrical components and (60) months on structural components, provided that notice of any such defects and satisfactory proof of defects is given by the buyer to the seller, with transportation prepaid, and seller’s examination proves such part to be defective.

KOKE’S OBLIGATION UNDER THIS WARRANTY IS LIMITED TO THE REPLACEMENT OF DEFECTIVE COMPONENTS AT THE FACTORY, OR, AT THE DISCRETION OF KOKE INC. , AT A LOCATION DESIGNATED BY THE COMPANY. KOKE INC. WILL NOT BE LIABLE FOR ANY LOSS, INJURY OR DAMAGE TO PERSONS OR PROPERTY, NOR FOR DAMAGES OF ANY KIND RESULTING FROM FAILURE OR DEFECTIVE OPERATION OFANY MATERIALS OR EQUIPMENT. “NO OTHER WARRANTY EXISTS EXCEPT AS STATED HEREIN”

KOKE INC. is constantly striving to improve its equipment. Improvements and necessary design changes will be made whenever **KOKE INC.** believes the performance or operation of the equipment will be improved with no obligation to incorporate any improvements to any equipment that may be in service.

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