

# EP L. AERATION<sub>3</sub> N



**YOUR WATER AS NATURE INTENDED IT**  
2615 Meadow St. San Luis Obispo, CA 93401  
Telephone: 805-541-6140 Fax: 805-541-6149

**Installation & Maintenance Manual**

# **IMPORTANT NEW INSTRUCTIONS**

## **E P AERATION HAS CHANGED THE CONFIGURATION FOR THE EP-LK/UNI2 CABINETS**

**TO IMPROVE AIR FLOW THE TWO COMPRESSORS  
NOW EXIT THE CABINET SEPARATELY AND MUST BE  
MANIFOLDED TO THE LAKE PIPING WITH THE  
EXTRA VALVE AND TUBING PROVIDED.**

**This will not only improve air flow but will help with restarting  
the system after shut down.**

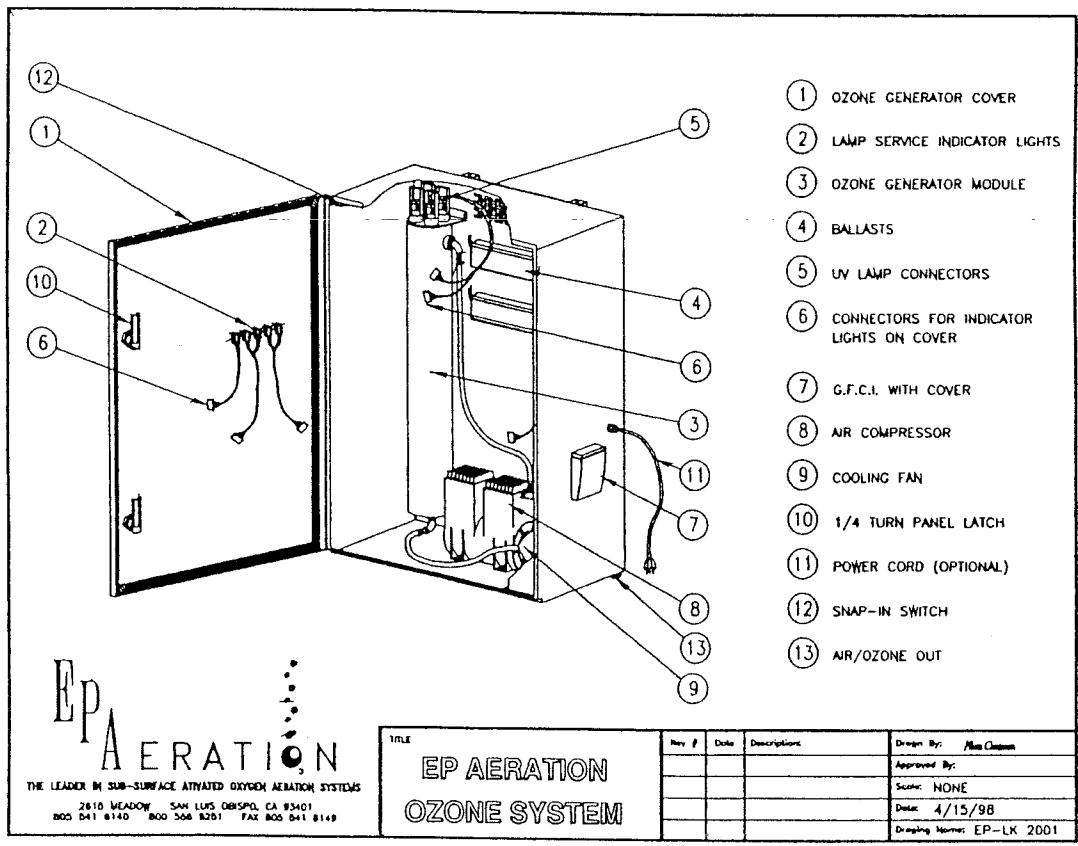
**Please save this bulletin with blue maintenance manual**

**QUESTIONS?**

**PLEASE CALL E P AERATION 1-800-556-9251**

## SITE SELECTION (Outdoor):

1. Ensure that the outdoor cabinet is installed on a suitable base, such as a concrete pad (24" x 24" x 3").
2. Electrical supply lines must be of sufficient size to provide full power (120 VAC, 20 AMP, single-phase, duplex receptacle) to equipment. Local electrical codes to apply.
3. Trench and piping is supplied to water's edge from site location.
4. Systems must be out of irrigation sprinkler path.
5. If possible, locate systems out of direct sunlight, or where shaded during heat of day.
6. Mounting equipment to slab.
  - A. Secure E P outdoor cabinet to slab with appropriate anchors.
  - B. Install electrical according to local codes.
  - C. Install length of flexible tubing from 1/2" hose to lake piping. Secure with hose clamps provided.



**EP AERATION  
MODEL EP-2001**

# MOUNTING INSTRUCTIONS FOR EP 2001

## 1. Location

EP2001 is designed for either floor or wall mounting in a clean, protected area, either indoors or outdoors. Locate generator out of reach of sprinklers or drainage spouts. Allow sufficient access for maintenance and all tubing and electrical wires. Ozone generator should be installed no less than one foot above maximum water level.

## 2. Location Requirements\*:

**Mounting:** Floor or wall mount in a clean, protected area using supplied brackets.

**Ambient Temp:** 40°F - 100°F (5°C - 40°C)

**Ventilation:** 6 air changes per hour. (min)

\* Protection from weather elements must be provided for outdoor installations.

Operating outside of the recommended temp. ranges may result in damage not covered under the manufacturer's warranty.

## 3. Mounting

### 2A. Wall Mount Option

1. Attach two mounting brackets to wall using anchors appropriate for mounting surface.  
*See figure 1.*
2. Using 1/4"-20 bolts (with washers as shown) secure generator to mounts.

### 2B. Floor Mount Option

1. Use the 4 1/4"-20 bolts with washers to secure feet to bottom of cabinet.
2. Stand upright and securely fasten to concrete slab using appropriate anchors and bolts.

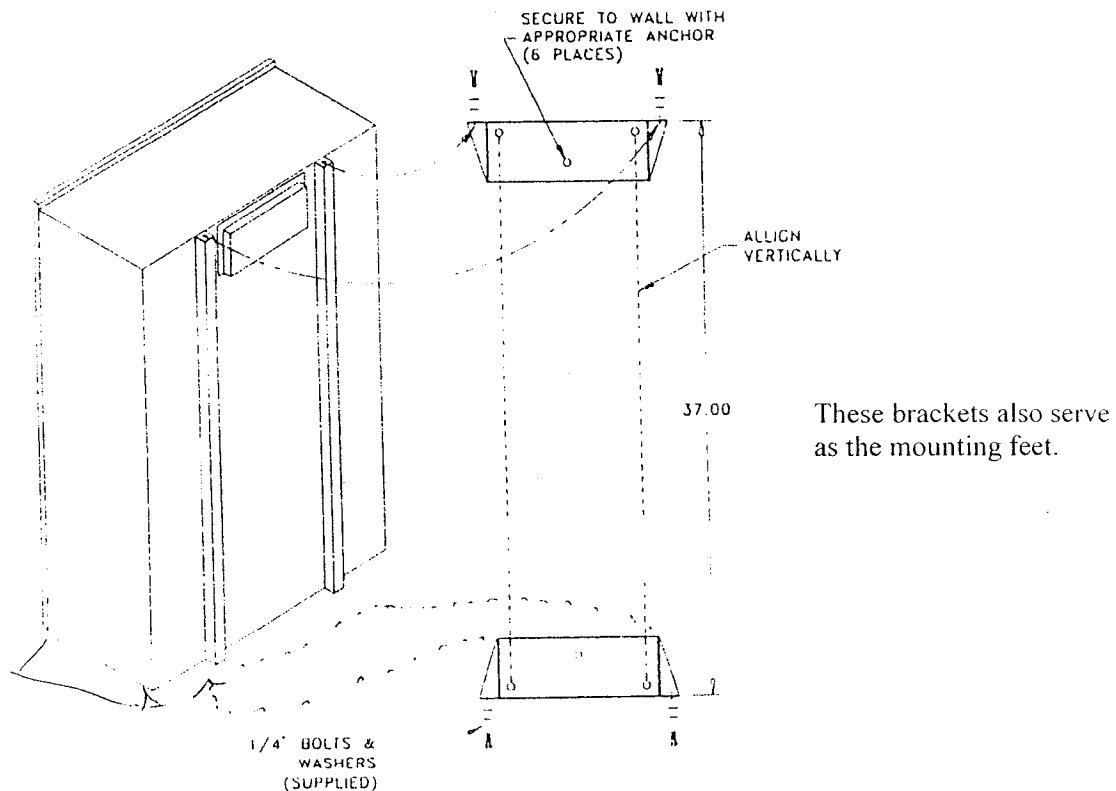


Figure 1: Wall Mount

## Installation of Feeder & Aeration Tubing

1.
    - A. **Unroll Feeder Tubing.** This can be done by hand or by using uncoiling reel. **DO NOT PULL TUBING OFF THE TOP OF COIL.**
    - B. **Cut end of tubing evenly, so that you have a flat end.** Cut tubing to desired length for your installation, if you have multiple lines.
    - C. **Remove one-half inch of the lead keel from the square-cut end.**
  2.
    - A. **Connect the feeder tubing to the PVC line at the lake's edge (run from the equipment location).**
      1. Slide stainless steel clamp over tubing head.
      2. Insert Thread x Slip Nipple into header.
      3. Insert Feeder Tubing into above nipple.
      4. Secure stainless steel clamp.
- NOTE: If using JACO compression fittings, follow JACO instructions on page 6.**
3.
    - A. **Unroll the Weighted Aeration Tubing following the same procedure as in Item 1 above.**
    - B. **Cut Aeration Tubing to desired lengths (specified in system drawings).**
    - C. **Cut end of tubing evenly, so that you have a flat end.**
    - D. **Remove one-half inch of the lead keel from the square-cut end.**
    - E. **Slide two (2) stainless steel clamps over the Aeration Tubing.**
    - F. **Insert one end of the Slip x Slip Nipple into the Feeder Tubing and the other end into the Aeration Tubing.** (Again, if using JACO compression fittings, see JACO instructions on Page )
    - G. **Push both ends of the tubing so that they meet flush at the center of the nipple.**
    - H. **Secure with stainless steel clamps.**
    - I. **Turn on compressor to blow out any dirt which may have accumulated on the inside of the tubing.**
    - J. **Insert stainless steel clamp over end of tubing.**
    - K. **Insert End Plug into end of tubing and secure clamp.**
  4.
    - A. **With the compressor turned on, drop the Aeration Tubing into the water as indicated in drawings.** As the tubing sinks, bubbles will rise to the surface. If there are no bubbles, the tubing has a kink, and will have to be raised from the bottom and straightened.

## Installation of Feeder & Aeration Tubing (continued)

5. Once the tubing has been completely installed, the pressure should be recorded and observed on a regular basis. If the pressure is greater than 10 PSI, contact E P Aeration for instructions.

**NOTE:** Make sure that equipment is located so that all horizontal runs are above the frost line.  
Weighted Feeder Tubing should be connected directly to the discharge nipple from the PVC feeder line and drop immediately into the water.

(Tubing illustrations)

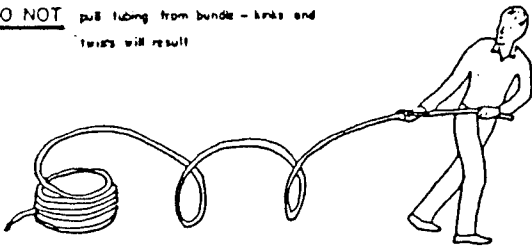
### IMPORTANT READ BEFORE UNCOILING TUBING

BEFORE UNCOILING TUBING, REMOVE PLUG FROM OUTSIDE COIL OF TUBING AND CONNECT TO COMPRESSOR. INSTALL TUBING WITH AIR COMPRESSOR ON

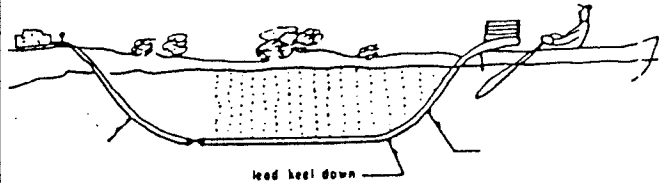
KINKING OR TWISTING OF TUBING MUST BE AVOIDED

#### FOLLOW INSTRUCTIONS BELOW

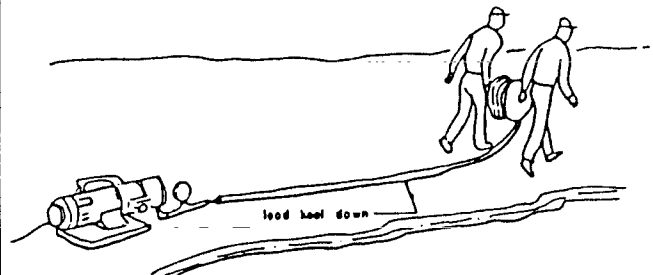
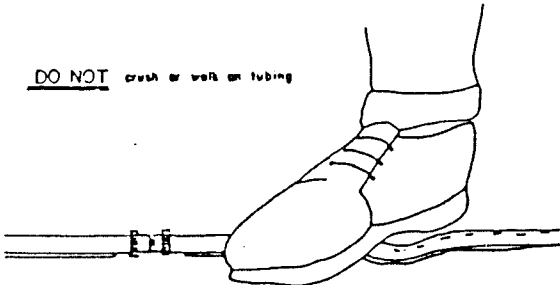
DO NOT pull tubing from bundle - kinks and twists will result



for 250'



DO NOT crush or walk on tubing

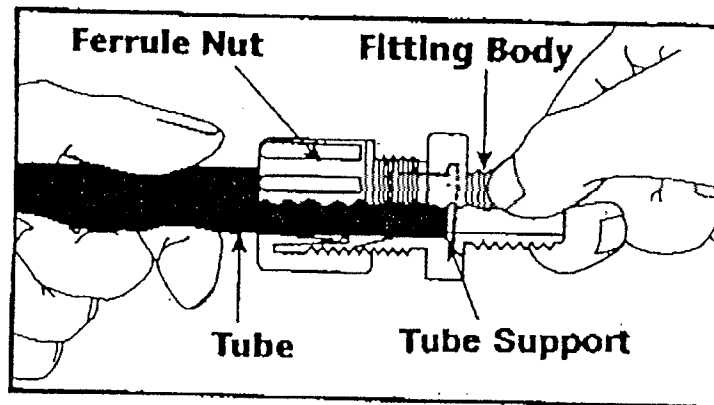


I N S T R U C T I O N S F O R U N C O I L I N G T U B I N G

## INSTALLATION INSTRUCTIONS FOR JACO TUBE FITTINGS

1. Cut the tubing end squarely and remove two (2) inches of the lead keel.
2. Insert Tube Support.
3. Insert the tubing through the back of the nut, all the way through the nut assembly to the tube stop in the fitting body. If the tubing does not enter the nut easily, loosen the nut one turn and then insert the tubing all the way to the tube stop in the fitting body.
4. Turn the nut hand tight.
5. Wrench tighten the nut 1 ½ to 2 turns.
6. All nuts must be retightened when the system reaches projected operating temperature.

NOTE: Squeaking sound when tightening nut is normal. For pipe-threaded connections, Teflon Tape must be used.



CAUTION: To insure proper assembly, tubing **MUST** be fully inserted into the fitting body to the tube stop.

## **Air Diffusion Tubing**

The air diffusion tubing should function well for many years. However, there are several circumstances which may diminish the effectiveness of the tubing. One of the most common is on golf courses, where divers (or golfers with recovery tools) may disturb the tubing when recovering balls. The keel weight should always be on the bottom. Some weed abatement activities may also disturb the tubing. A diver may be able to correct the problem, if made aware of it, or the tubing can be recovered from a boat and relaid, keel down, in its original position (see **INSTALLATION OF FEEDER & AERATION TUBING**).

In water features where the water has a high content of metals such as iron or manganese, it is possible for “plating” to occur, where the oxidized metal adheres to the tubing and blocks the aeration apertures. The tubing can be reeled in and scrubbed, using an abrasive kitchen scrubbing pad, then unreel and relaid (see **INSTALLATION OF FEEDER & AERATION TUBING**).

Through the activities mentioned above, or improper installation, the tubing may be turned upside down along certain portions of its length, or kinked. Again, the clearest indication of such disturbance may be found in the bubble pattern, which should be fairly consistent throughout the length of the aeration tubing. Clumps of bubbles, and/or gaps in the bubble pattern, are indicators that disturbance or plating (only in the case of high iron or manganese levels in the water) may have occurred.



## **INITIAL START-UP PROCEDURES**

After tubing is installed in the water feature and is connected to the air delivery system, open all valves and start compressor.

At this time, there will be some backpressure on the system due to water pressure over the tubing. This will slowly be overcome. Watch the bubble stream to ensure that it reaches the end of the aeration tubing.

After initial start-up, visually check operation of all components and tightness of hose connections. Ensure panel lights (green for power, red for failure) on ozone generators are operational.

Check for excessive heat build-up daily for one week.

## MAINTENANCE GUIDELINES

EP Aeration equipment is designed to require very little maintenance, in order to keep both maintenance equipment and personnel costs as low as possible. However, the principal components of modular aeration/ozonation systems do require the following maintenance procedures.

### Ozone Generators

Each ozone generator has a pressure-tested aluminum ozone-generating cell, with four individually replaceable ozone generating ultraviolet lamps. On a regular basis, the lamps should be checked to see if they are properly seated. Indications that one or more lamps are improperly seated include: loss of pressure (diminished bubble pattern in the pond's surface), and/or a strong smell of ozone in the vicinity of the ozone generator. Although improper seating may produce a strong smell of ozone, it is unlikely that the levels present in the atmosphere would reach those harmful to humans.

The lamp manufacturer says that after 10,000 hours of operation (roughly 14 months) the lamps are reduced to 75 percent of their ozone-producing capacity. For this reason, we recommend users *replace the lamps on an annual basis*, as most of EP Aeration's customers do. This will ensure the systems are running at optimum capacity. For users on a limited budget, replacement of the lamps where multiple systems are employed might be staggered over a 12 to 18-month period, without seriously reducing the performance of the systems, but annual replacement is the best option.

Ozone generators are covered by a manufacturer's warranty for 12 months from the date of installation. Check the supplied warranty information for coverage details.

### Air Compressors

Each air compressor is equipped with a Solberg filter, which contains a replaceable paper filter cartridge. The filters should be cleaned on a regular basis, and the cartridge should be replaced every 3 months under normal conditions. In extremely dusty areas, and/or in areas of intense construction, grading, etc., filter replacement may be necessary much more frequently.

To ensure that compressors perform at optimum capacity, they *should be rebuilt every 12 months*. The rebuild kits are available from E P Aeration. Each compressor rebuild should take 30 minutes or less, and is quite simple to perform.

Compressors do occasionally fail. Again, an indication of compressor failure or loss of pressure is a diminished or nonexistent bubble pattern on the surface of the water feature. A simple test for compressor effectiveness is to place a finger over the air intake hole on the filter. If the compressor "drags" (slows down significantly) and pulls on the finger, the compressor is probably functioning well. If no drag occurs, the compressor is likely to need rebuilding.

In the event of a problem which cannot be solved by rebuilding, check the supplied compressor warranty information for details on coverage.

## **MAINTENANCE SCHEDULE**

### **A. DAILY**

1. Visually verify the presence of the bubble stream in the water feature.
2. During break-in period (1 week) check for excessive heat buildup.

### **B. WEEKLY**

Visually verify bubble stream and check indicator lights on units (green for power, red for failure)

### **C. MONTHLY**

1. A & B above.
2. Check air filters, clean and/or replace as necessary. (Order from E P Aeration)
3. Check hoses for cracks and/or leaks.

### **D. SEMI-ANNUALLY**

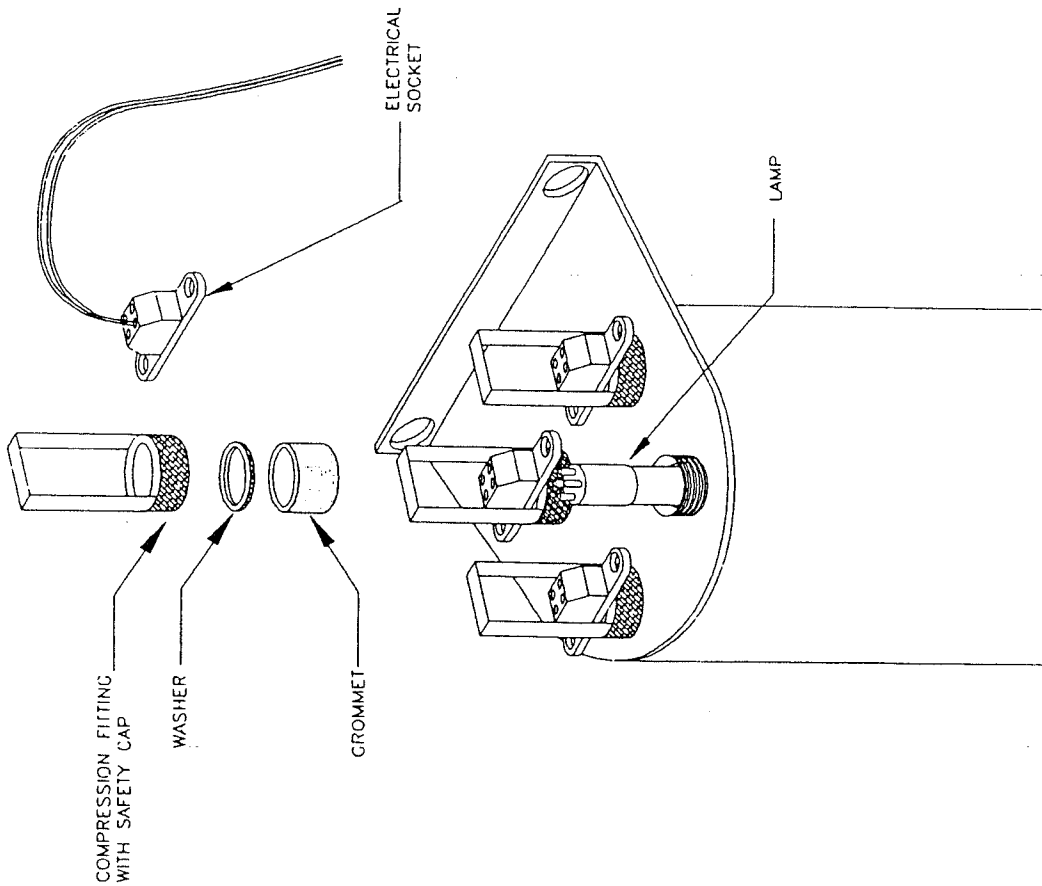
1. Inspect internal components. Clean as necessary.
2. Check all hoses and clamps for wear. Replace if necessary.
3. Check and tighten all hose connections.

### **E. YEARLY**

1. Rebuild compressors using rebuild kits (order from E P Aeration, instructions included).
2. Replace connecting hoses as necessary.
3. Replace ozone-generating UV lamps (order from E P Aeration).

**NOTE: If system is shut down for any length of time, refer to initial start-up procedures**

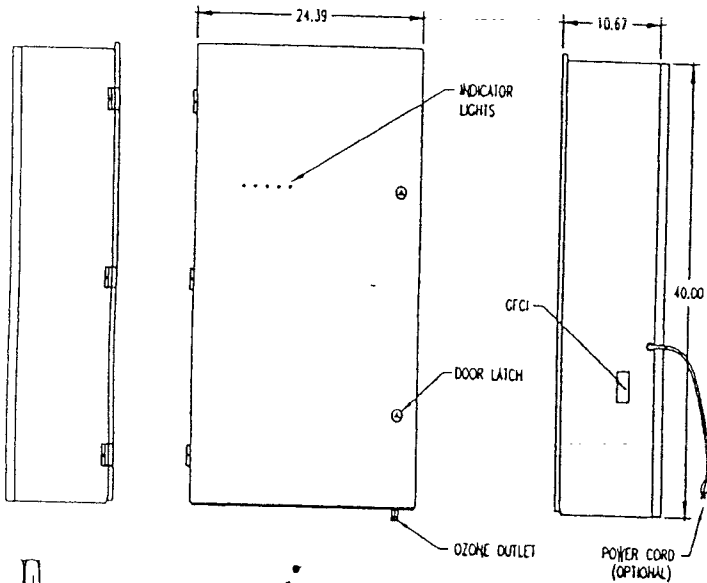
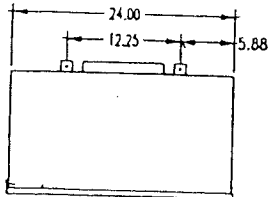
FIND QTY.	PART NO.	DESCRIPTION
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FILE NAME: LK-SHOP.DWG	TOLERANCES:
DATE: 10/12/95	ALL DIMENSIONS ARE IN INCHES
DRAWN BY: F.R.	xx ± .03
CHECKED BY:	xxx ± .010
RELEASED:	MATERIAL:

PROJECT:	LK-2000
TITLE:	LAMP REPLACEMENT
PART NO.	LK-2000
REV.	0
SCALE:	Ø
SHEET NO.	1 OF 1

LTR	DESCRIPTION	DATE
	REVISIONS	



**EP-LK 2001 SPECIFICATIONS**

I COMP.      2 COMP.

- FLOW RATE (max) ..... 5 scfm ..... 10 scfm
- PRESSURE (max) ..... 25 psi
- POWER REQUIREMENTS:
  - DOMESTIC MODEL ..... 120 VAC, 50/60 Hz, 1Ø, 10.0 Amp ..... 18.0 Amp
  - EXPORT MODEL ..... 240 VAC, 50 Hz, 1Ø, 5.0 Amp ..... 9.0 Amp
- NET WEIGHT ..... 120 lb. ..... 140 lb
- MOUNTING ..... floor or wall mounting with supplied brackets.
- AMBIENT TEMP (max) ..... to 100°F
- VENTILATION ..... 5 Air changes per minute. (min)

**FEATURES:**

- Ozone generator - Aluminum cartridge
  - Four individually replaceable UV lamps
- Compressor - 1/3 Hp Thomas Ultra-Quiet Oilless Piston Air Compressor(s)
- Internal Circuit Breaker
- External GFCI Disconnect
- High Pressure Relief Valve, 25 psi
- Powdercoated Steel Enclosure

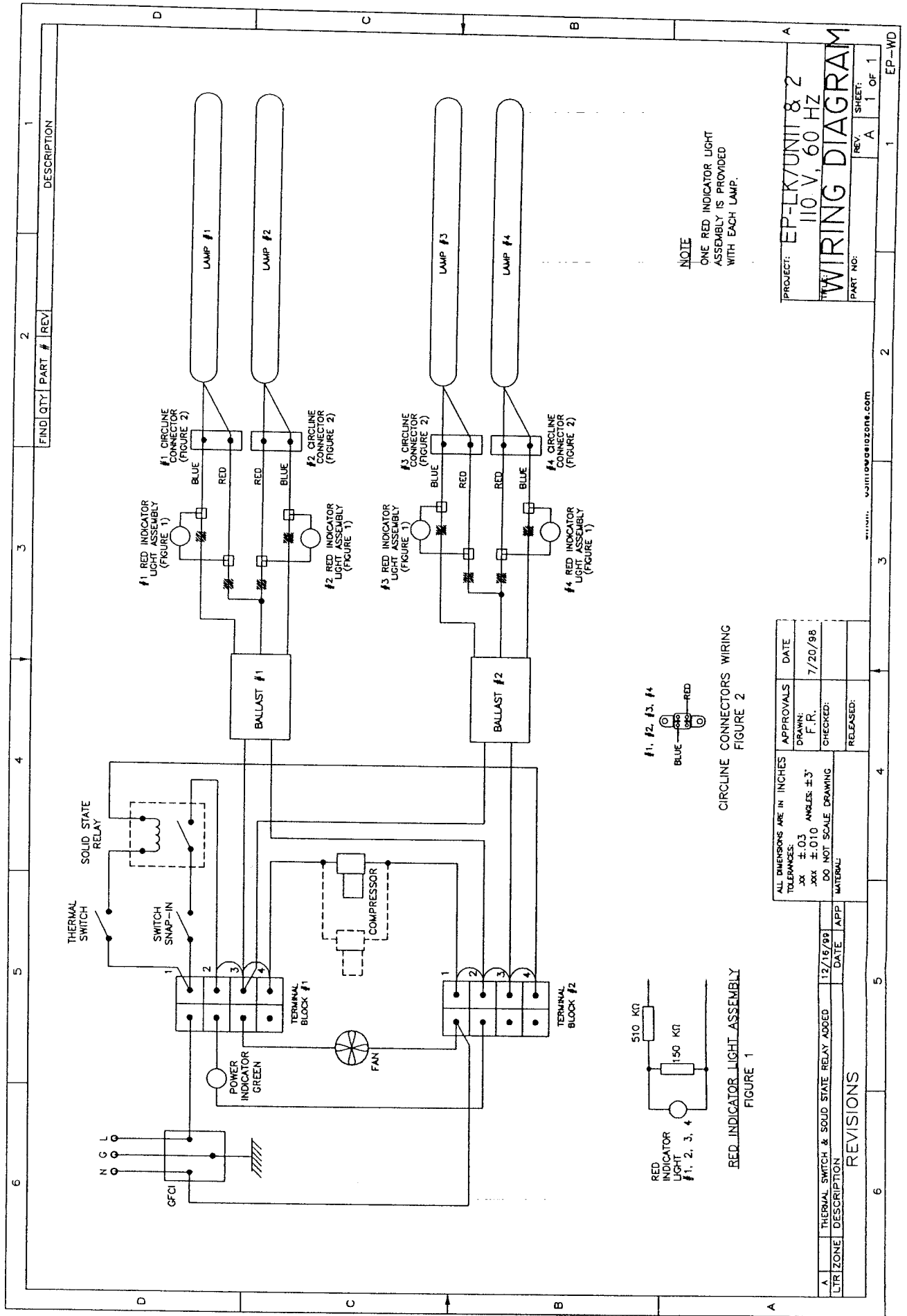
**EP AERATION**

THE LEADER IN SUB-SURFACE AERATED OXYGEN AERATION SYSTEMS

2815 WEAVER SAN LUIS OBISPO, CA 93401  
805 541 6140 800 356 9251 FAX 805 541 6149

TITLE  
**EP AERATION  
OZONE SYSTEM**

Rev #	Date	Description	Drawn By: Alan Clemon
			Approved By:
			Scale: NONE
			Date: 4/15/98
			Drawing Number: EP-LK 2001



1	2	3	4	5	6
DESCRIPTION					
FIND QTY PART # REV					

**NOTE**  
ONE RED INDICATOR LIGHT ASSEMBLY IS PROVIDED WITH EACH LAMP.

PROJECT: EP-LK/UNIT 8 2	
110 V, 60 HZ	
<b>WIRING DIAGRAM</b>	
PART NO:	REV. SHEET: A 1 OF 1

APPROVALS				DATE
DRAWN:	F. R.	CHECKED:	RELEASED:	7/20/98

REVISIONS	
DESCRIPTION	DATE / APP
THERMAL SWITCH & SOLID STATE RELAY ADDED	12/15/99

CIRCLINE CONNECTORS WIRING  
FIGURE 2

RED INDICATOR LIGHT ASSEMBLY  
FIGURE 1

www.eptronics.com

EP-WD

## MODEL NUMBERS:

2750CE50 2750CGHI50 2750CE60 2750CGHI60 2750BE75 2750BGHI75

Read and understand the following information and instructions included with this product before using. This information is for your safety and to prevent damage to this product.

**⚠ CAUTION: To reduce risk of electrical shock . . .**

1. Do not disassemble. Disassembly or attempted repairs if accomplished incorrectly can create electrical shock hazard. Refer servicing to qualified service agencies only.
2. If this plug is supplied with a three pronged plug, connect unit to a properly grounded outlet only.

**⚠ WARNING: To reduce risk of electrocution . . .**

1. This product should never be left unattended when plugged in.
2. Always unplug this product immediately after using and store in dry place.
3. Do not use this product in or near area where it can fall or be pulled into water or other liquids.
4. Do not reach for this product if it has fallen into liquid. Unplug immediately.
5. Never operate this product outdoors in the rain or in a wet area.

**⚠ DANGER: To reduce risk of explosion or fire . . .**

1. Do not use this product in or near explosive atmospheres or where aerosol (spray) products are being used.
2. Do not pump anything other than atmospheric air.
3. Do not pump combustible liquids or vapors with this product or use in or near an area where flammable or explosive liquids or vapors may exist.
4. Do not use this product near flames.

Failure to observe the above safety precautions could result in severe bodily injury, including death in extreme cases.

**⚠ CAUTION: To prevent injury . . .**

1. Close supervision is necessary when this product is used near children or invalids. Never allow children to operate the unit.
2. Never operate this product if it has a damaged cord or plug. If it is not working properly. If it has been dropped or damaged. Or if it has fallen into water, return the product to a service center for examination and repair.
3. Keep the cord away from heated surfaces.
4. Never block any air openings (inlet) of this product or place it on a soft surface where the openings may be blocked. Keep all air openings free of lint, dirt and other foreign objects.
5. Never use while sleeping or drowsy.
6. Never drop or insert fingers or any other object into any openings.
7. Do not operate this product where oxygen is being administered.
8. This unit may be thermally protected and can automatically restart when the protector resets. Always disconnect power source before servicing.
9. Wear safety glasses or goggles when operating this product.
10. Use only in well ventilated areas.
11. Do not use any tools or attachments without first determining maximum air pressure for that tool or attachment.
12. Never point any air nozzle or air sprayer toward another person or any part of the body.
13. All electrical products generate heat. To avoid serious burns never touch unit during or immediately after operation.

## SAVE THESE INSTRUCTIONS



Warning: Thomas Compressors & Vacuum Pumps compressors are precision-made, and carefully assembled and wired. Therefore do not disassemble or attempt to repair these products. Only qualified personnel should perform repair service.



## IMPORTANT NOTICE TO PURCHASER: WARRANTY AND EXCLUSIVE REMEDIES

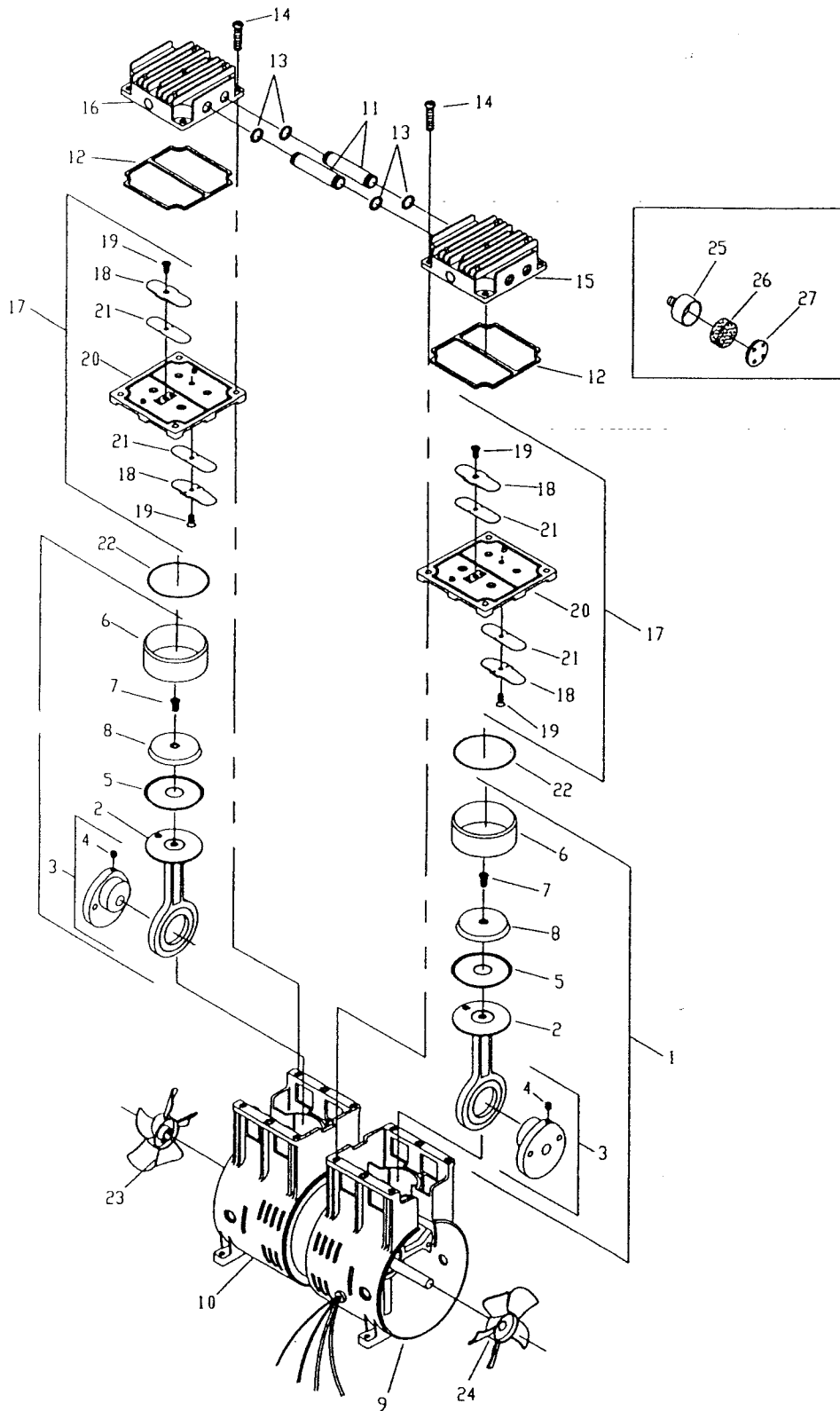
Thomas Compressors & Vacuum Pumps' (Thomas) finished OEM products, when properly installed and under normal conditions of use, are warranted by Thomas to be free from defects in material and workmanship at time of shipment. Warranty claims regarding OEM limited products must be asserted within 13 months (the "warranty period") from date of manufacture encoded on the product (unless otherwise agreed in writing or specified in a Thomas OEM Quotation). The customer's exclusive remedy against Thomas for a warranty claim or otherwise, shall be limited to repair or replacement of the subject OEM finished product if it is shown to have been defective in material and workmanship at time of shipment, and then only if the claim is asserted during the warranty period. Thomas' maximum liability under this exclusive remedy shall never exceed the cost of the subject product and Thomas reserves the right, at its sole discretion, to refund the purchase price in lieu of repair or replacement. Except for such warranty and exclusive remedy as stated (and except for the express warranty of title) THOMAS DISCLAIMS ALL OTHER WARRANTIES WITH RESPECT TO ITS OEM FINISHED PRODUCTS, WHETHER IMPLIED, AND SPECIFICALLY DISCLAIMS THE IMPLIED WARRANTIES OF MER-

CHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE. IN NO EVENT SHALL THOMAS BE LIABLE TO CUSTOMERS OR THIRD PARTIES IN WARRANTY, CONTRACT, NEGLIGENCE, STRICT LIABILITY, OR OTHERWISE, FOR ANY DAMAGES, WHETHER INCIDENTAL OR CONSEQUENTIAL, WHICH ARE ALLEGED TO HAVE BEEN CAUSED BY ONE OR MORE OF OUR PRODUCTS BEYOND THE COST TO THE CUSTOMER OF THE SUBJECT PRODUCT OR PRODUCTS. THE EXCLUSIVE REMEDY FOR ANY CLAIM HAVING BEEN LIMITED TO REPAIR OR REPLACEMENT AS AFORESAID.

Because Thomas' OEM warranties and remedies extend only to our direct customers, the customer is not authorized to extend warranties on our behalf to anyone. Unauthorized extensions of warranties by the customer shall remain customer's responsibility.

CUSTOMER IS RESPONSIBLE FOR DETERMINING THE SUITABILITY OF OUR PRODUCTS FOR CUSTOMER'S USE OR RESALE, OR FOR INCORPORATING THEM INTO OBJECTS OR FOR APPLICATIONS WHICH CUSTOMER DESIGNS, ASSEMBLES, CONSTRUCTS OR MANUFACTURES. 8/97

# DRAWING AND PARTS LIST



## MODEL 2750CE50\*, 2750CGH150\*

Item No.	Part No.	Component Part	Description	Qty.
1	666877		Conn. Rod, Ecc. Sleeve & Brq. Ass'y	2
2	666387		Conn. Rod & Bearing Assembly	2
3	667073		Eccentric Assembly	2
4	625008		Set Screw - Eccentric	2
5	614753		Piston Cup	2
6	618119		Piston Sleeve	2
7	625776		Screw - Piston Cup Retainer	2
8	626730		Retainer - Piston Cup	2
9	664061		Housing	1
10	664062		Housing	1
11	615866		Connector Tube	2
12	623624		O Ring Gasket - Head	2
13	623632		O Ring - Connector Tube	4
14	625645		Screw - Head	8
15	664651		Head	1
16	664652		Head	1
17	662307		Valve Plate Assembly	2
18	617312		Valve Restraint	4
19	625634		Screw - Valve Flapper	4
20	662306		Valve Plate	2
21	662054		Valve Flapper - Intake & Exhaust	4
22	623638		O Ring - Sleeve	2
23	638208		Fan - Black	1
24	638223		Fan - White	1
25	660777		Filter Body	1
26	641010		Filter	1
27	660803		Cap - Filter Body	1

## MODEL 2750CE60\*, 2750CGH160\*

Item No.	Add Part	Description	Delete Part
1	666882	Conn. Rod, Ecc. Sleeve & Brq. Ass'y	666877
2	666295	Connecting Rod & Bearing Ass'y	666387
3	645998	Eccentric Assembly	667073

## MODEL 2750BE75\*, 2750BGH175\*

Item No.	Add Part	Description	Delete Part
1	666876	Conn. Rod, Ecc. Sleeve & Brq. Ass'y	666877
2	666374	Connecting Rod & Bearing Ass'y	666387
3	667084	Eccentric Assembly	667073

\* Unit supplied with Part Number 603103 20 MFD/370VAC Capacitor.

+ Unit supplied with Part Number 603101 12.5 MFD/370VAC Capacitor and Part Number 606018 Insulator Boot.



# MODEL 2750 SERIES COMPRESSOR REBUILD KIT

**CAUTION:** Improper assembly or use of damaged parts may lead to premature failure. To avoid frequent repairs follow the recommended assembly procedures.

**NOTE:** Before you begin, read these instructions thoroughly. Assemble the necessary tools. You will need a flat tip and phillips head screwdriver, and a T-25 Torx driver attachment for an Inch-pound scale Torque wrench, and a 5/32" allen wrench.

**WARNING:** Unplug the compressor and drain all air from the tank before beginning disassembly.

## DISASSEMBLY

**STEP 1.** Clean loose dirt from the outside of the compressor.

**STEP 2.** Loosen the 8 head screws and remove the compressor heads. Leave heads attached by the connector tubes - removing the tubes may damage the O-rings.

**NOTE:** To avoid confusion only service one end of compressor at a time.

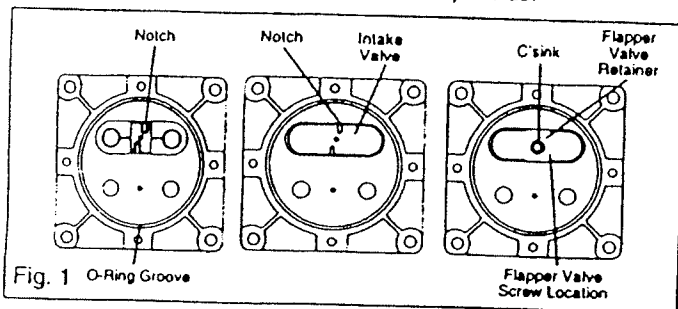
**STEP 3.** Lift off the valve plate.

**STEP 4.** Remove sleeve from connecting rod. Remove the screw (discard) from cup retainer. Remove piston cup (discard) and wipe debris from top of connecting rod with clean damp cloth.

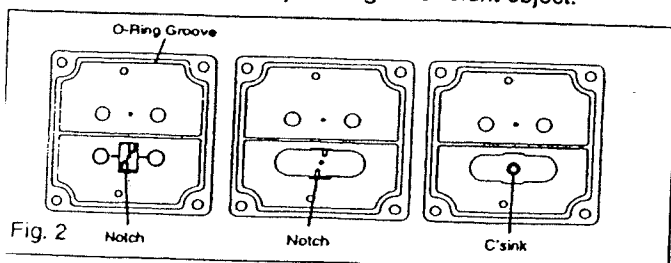
## REBUILD AND ASSEMBLY

**STEP 1.** Remove the sleeve O-ring (discard) from the bottom of the valve plate. Remove the flapper valve screw (discard), valve retainer (retain) and intake valve (discard). Clean the valve plate with a clean soft cloth. Install the new valve, matching the cut-out notches of the valve to the notches on the valve plate. Place the valve retainer on top of the flapper with the C'sink side up (facing you) install retainer screw. (See Fig. #1) Install the new sleeve O-ring, seating it firmly into the groove with your fingers or blunt object.

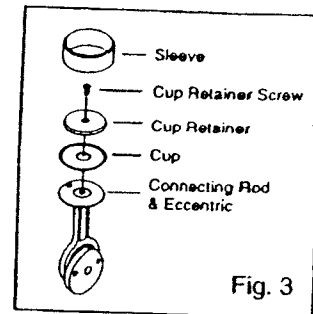
**NOTE:** Torque flapper screws to 12 inch-pounds.



**STEP 2.** Turn the valve plate over. Remove the head O-ring (discard) from the top of the valve plate. Remove the flapper valve screw (discard), valve retainer (retain) and exhaust valve (discard). Clean the valve plate with a clean soft cloth. Install the new valve matching the cut-out notches of the valve to the notches on the valve plate. Place the valve retainer on top of the flapper with the C'sink side up (facing you) install retainer screw. (See Fig. #2) Install the new head O-ring, seating it firmly into the groove with your fingers or blunt object.



**STEP 3.** Align the new cup on the connecting rod top. Place the cup retainer on the rod top, over the cup. Make sure the retainer is seated squarely over the cup.



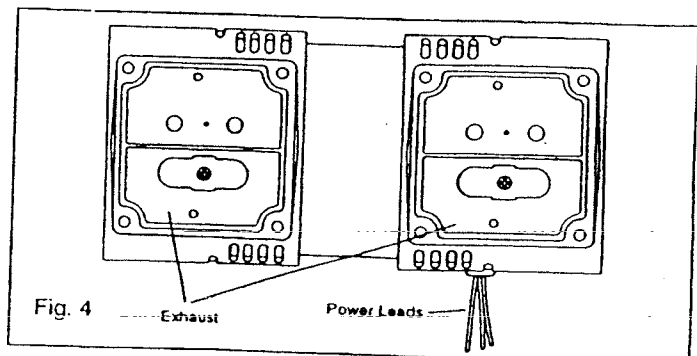
**STEP 4.** Install new screw. Torque to 60 inch - pounds.

**CAUTION:** Do not crimp the connecting rod cup when you replace the sleeve. If the cups crimped, you must replace it.

**STEP 5.** Slide the sleeve down until it contacts the housing. The 4 locator ribs should bear against the bottom surface of the sleeve.

**STEP 6.** Hold the sleeve down against the housing with one hand, and slowly rotate the eccentric with the other hand. As the piston travels up and down it will also rock from side to side. This is a feature of the WOB-L Piston. However, if it rocks from front to rear, the connecting rod is misaligned on the eccentric. If the front to rear rocking is detected, contact the nearest service center.

**STEP 7.** With the sleeve located and firmly seated on the housing, replace the valve plate in same manner as it was. (See Fig. #4). Make sure the top edge of the sleeve locates in the O-ring groove in the bottom of the valve plate.



**CAUTION:** Make sure O-ring is not twisted when seated in groove.

**STEP 8.** Place the heads on top of the valve plates. Tighten the head screws in a criss-cross pattern to 40 in. - lbs.



### ASSURANCES AND WARRANTIES

Water dynamics is not an exact science. Nature counterbalances events in open bodies of water: biological loads fluctuate; wind, rain, and runoff can overwhelm water systems with organic material; temperature and sunlight create ideal conditions for algae growth.

For these reasons an absolute guarantee as to the efficacy of any aeration system is impossible.

E P Aeration does make the following assurances.

The system specified by E P Aeration will:

1. Eliminate thermal stratification, the major cause of low dissolved oxygen levels at the bottom of the water column. De-stratification is accomplished by circulating the volume of water a minimum of four times a day (based on 24 hour operation). Deep water lakes may need less circulation.

2. Increase and evenly distribute dissolved oxygen throughout the water column, especially at the sludge-water interface. This assures the aerobic, (as opposed to anaerobic) decomposition of organic material, thereby eliminating pond odors and reducing nutrients associated with algae growth.

3. Increase water clarity by reducing total suspended solids(TSS). Suspended solids are carriers of algae nutrients. A visual depth of 18-24 inches is considered normal for pond water. **Clarity may vary due to seasonal conditions, or unusual nutrient influxes.**

4. Reduce the occurrence of nuisance algae blooms. Nuisance algae are defined as heavy mat or filamentous algae.

5. Control volatile organic compounds associated with urban runoff. These compounds greatly reduce the available oxygen in the water system.

These assurances assume proper maintenance and apply to the condition and depth of the water system at the time of installation. Any radical change in these conditions, such as the addition of plants fish, or chemicals, without consulting E P Aeration, renders these assurances null and void.

Improvement will not happen overnight. The time period for the above assurances to take effect shall be a period of up to 120 days from installation.

All E P Aeration equipment carries a one (1) year warranty against manufacturing defects. Manufacturer's warranties apply to all rotating equipment.