



## **Making a Splash!**

# **Pond Aerator & Water Circulator Owners Manual**

**2400AF & CF, 3400AF & CF, 3400HAF & HCF,  
4400AF & CF, 4400HAF & HCF, and 8400AF & CF**



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Made in the USA

Rev. 3/21/06

# Thanks!

We at Kasco Marine, Inc. would like to both thank and congratulate you on your purchase of the Pond Aerator or Water Circulator model. We appreciate you choosing Kasco and for your purchase. Your decision to purchase Kasco's Pond Aerator or Water Circulator will not disappoint you. The Pond Aerator or Water Circulator will be a great addition to your body of water. It will help improve the water quality by adding much needed oxygen and circulation. We thank you for choosing Kasco for your aeration needs and want you to be completely satisfied with your purchase.

## **IMPORTANT SAFETY & HANDLING INSTRUCTIONS**

Please read and follow these extremely important safety and handling instructions for your Kasco equipment. Following these instructions will help ensure your safety and the quality performance of your equipment.

- Under **NO** circumstances should anyone enter the water with the electrical equipment plugged in and/or in operation. All Kasco equipment is ETL approved to UL and CSA standards for safety in water. However, it is **NEVER** recommended to enter the water with the equipment in operation.
- Caution should be used when dealing with any electrical and/or moving equipment.
- **NEVER** run the unit out of water. It will damage the seals and create a dangerous situation for the operator.
- Extreme caution should be used around water, especially **cold water**, such as in Spring, Fall, and Winter, which poses a hazard in and of itself.
- **NEVER** lift or drag the pond aerator or water circulator by the power cord. If you need to pull the unit to the side of the pond, use the anchoring ropes.
- **Do not** use waders in deep ponds/lakes or ponds/lakes with drop-offs, drastic slopes, or soft bottom material.
- **Do not** use boats that tip easily for aerator installation, such as a canoe, and follow all boating safety rules and regulations, including wearing a PFD (Personal Flotation Device).
- The Pond Aerator or Water Circulator is supplied with an internal grounding conductor and a grounding-type attachment plug. To reduce the risk of electrical shock, be certain that the pond aerator or water circulator is plugged into a GFI protected circuit or the optional C-25 Control Box (120V) or C-75 Control Panel (240/208V) supplied by Kasco and that the C-25 is plugged or wired into a properly grounded, grounding type receptacle or the C-75 is wired properly.

# GENERAL OWNER'S INSTRUCTIONS

## **INSPECT THE SHIPMENT**

Immediately inspect your Kasco Aerator shipment for any visible damages. Also cross reference the parts supplied with the Parts Included sheet to check for shortages. Shortages should be reported immediately to your Kasco Marine distributor or representative and damages reported to your carrier and Kasco Marine.

## **CAUTION**

***WARNING: Under NO circumstances should anyone enter the water with the unit in operation.***

Always operate the unit in the water and keep people and objects clear of the propeller. Do not lift or pull the unit by the electrical cord. Always use extreme caution around electrical equipment and water situations.

## **ASSEMBLY & INSTALLATION**

Please see the proper Assembly and Installation Instructions enclosed in this manual. Each is specific for your model and size of Aerator. **Note:** It is extremely important to test the GFI breaker in the control panel upon each installation/reinstallation of the unit to ensure proper functioning.

## **WARRANTY**

Kasco Aerators are the result of over 35 years of design and engineering. Kasco products are built to withstand the toughest conditions. Kasco Marine backs each Pond Aerator and Water Circulator with a 2 Year Warranty. This warranty covers any and all manufacturers defects within 2 years from the date of purchase (See Warranty, Warranty Claim, & Return Policy on pages 4 & 5). Please fill out the enclosed, addressed Warranty Card and mail it to Kasco Marine to start your warranty coverage. You may also register your Aerator online at:

[www.kascomarine.com/general\\_info\\_warranty\\_registration.htm](http://www.kascomarine.com/general_info_warranty_registration.htm).

## **USE AND OPERATION**

Kasco Aerators are designed and engineered for continuous duty, such as on fish farms or other aquaculture applications, or on-demand use, as needed in a recreational water feature.

During flotation operation, the water is pulled from 360° around the unit and from below the unit. The water is pulled upward and thrust through the flotation collar into the air.

Your Kasco Marine Aerator is ready for immediate use (after installation). The motor and ball bearings are submerged in oil and no further lubrication is needed. ***Make sure to keep the motor housing clean from hard water deposits and/or algae. (See Maintenance Recommendations on page 6.)***

It is extremely important that proper and sufficient voltage (120V or 240/208V) is supplied to the pond aerator or water circulator motor. Each Pond Aerator or Water Circulator can be used in conjunction with an optional C-25 Control Box (120V) or C-75 Control Panel (240/208V). See page 7 for C-25 Instructions and pages 8 for C-75 Instructions.

Kasco Pond Aerators and Water Circulators are lightweight, energy efficient, and easy to install and operate. We strive to produce products that exceed customer expectations. We hope you enjoy your Kasco Pond Aerator or Water Circulator.

## WARRANTY, WARRANTY CLAIM, & RETURN POLICY

**2 Year Limited Warranty:** Kasco® Marine, Inc. warrants this Pond Aerator or Water Circulator to be free from defects in material or workmanship (except for the ropes, power cord, and propeller) under normal use and service. The Kasco Marine, Inc. obligation under this warranty is limited to replacing or repairing free of charge any defective part within two (2) years from the date of shipment. **Customer shall pay shipping charges for returning the unit to Kasco or an Authorized Repair Center.**

THIS WARRANTY IS IN LIEU OF ANY OTHER WARRANTIES, EXPRESSED OR IMPLIED, AND ANY OTHER OBLIGATION OR LIABILITY WHATEVER ON THE PART OF KASCO MARINE, INC. AND IN NO EVENT SHALL KASCO MARINE, INC. BE LIABLE FOR ANY SPECIAL OR CONSEQUENTIAL DAMAGES.

### *Warranty is void if:*

- The Pond Aerator or Water Circulator is not maintained properly according to the Maintenance Recommendations supplied in this Owners Manual.
- The Pond Aerator or Water Circulator is returned for repair without the power cord or if the unit, control box, or power cord are altered in any way from original shipment. **Cuts in the power cord are not covered under warranty.**
- The Pond Aerator or Water Circulator is damaged by unauthorized tampering.
- The Sacrificial Zinc Anode around the propeller shaft shows significant deterioration. (The Anode must be inspected periodically and replaced if necessary.)

### *Warranty Claim Procedure:*

Check the eight-digit serial number printed either on the black cover of the motor or on the blue nameplate and determine the year of manufacture according to the serial number scheme below:

#### Sample Serial #

60 A 2 1725

- The first two digits represent the reverse of the last two digits of the year of manufacture.  
Example: 60 = 2006 model year.
- The third digit represent the model. (Ex. "A" for 2400AF)
- The fourth digit represents the horsepower of the unit in fourths: 2 = 2/4 = 1/2HP, 3 = 3/4HP, 4 = 1HP, 8 = 2HP
- The remaining four digits are sequential.

The best method for establishing warranty period is through the warranty card included with the unit at the time of purchase and/or the original receipt. If the customer has completed and returned the warranty card at the time of purchase or registered the Aerator online at:

[www.kascomarine.com/general\\_info\\_warranty\\_registration.htm](http://www.kascomarine.com/general_info_warranty_registration.htm) ,

Kasco Marine will have a record of the purchase and will be able to determine whether or not the unit still carries warranty coverage.

for evaluation and repair. Please call Kasco Marine at 715-262-4488 prior to shipping to receive a Return Authorization Number and/or Repair Form, then ship to:

Kasco Marine, Inc.  
800 Deere Rd.  
Prescott, WI 54021  
Attn: Repairs

Or call Kasco Marine at 715-262-4488 to locate your nearest Authorized Repair Center. You can also email Kasco at [service@kascomarine.com](mailto:service@kascomarine.com).

**Note:** Only complete motor assemblies will be accepted for warranty repair. The power cord and all other components must be returned with the motor as originally assembled. Any missing parts will be replaced at the customer's expense and, if determined to have caused the failure, could void the entire warranty. Some parts are essential for structural support during shipping and others, such as the power cord, are essential to properly diagnose potential causes of failure. It is not necessary to return the control box or float with the motor assembly.

Please include the Repair Form received from Kasco Marine or your local distributor with the shipment. If no Repair Form is available, include your name and physical address for return delivery of the repaired unit and a daytime phone number and/or e-mail address for correspondence regarding the warranty claim.

Any expedited shipping method for the return of the unit is at the customer's expense. Kasco Marine will return units repaired under warranty at our expense via ground freight within the continental United States.

### ***Other Repairs:***

Most failed equipment can be repaired at substantially lower costs than replacement with new. Please ship according to the instructions in the previous section. Again, it is best to call ahead for a Return Authorization Number and/or Repair Form so we know the repair is coming.

Kasco Marine offers *free estimates* on repairs at the request of the customer. The request for estimate should be included in the letter that accompanies the returned unit and must include a daytime phone number and/or e-mail address. ***Estimate options are as follows:***

- We will contact the customer with a total after the unit has been evaluated, but before the work is performed.
- We will repair the unit only if repair costs are under a stated dollar amount. Example: "Please repair if total is under \$150.00 before shipping charges."

All estimates that are rejected for repair will be destroyed unless otherwise directed by the customer. If the customer would like the unit returned, the unit will be restored as closely as possible to the condition in which it was received and shipped at the customer's expense for shipping and handling charges.

### ***Billing:***

All non-warranty repairs will be returned to the customer and billed C.O.D. unless otherwise directed. Kasco Marine also accepts Visa and MasterCard credit card payments. Kasco Marine will call for credit card information upon completion of the repair at the customer's request.

All other warranty and repair inquiries should be directed to Kasco Marine, Inc. at 715-262-4488 or [returns@kascomarine.com](mailto:returns@kascomarine.com).

## MAINTENANCE RECOMMENDATIONS

**\*\* Under No Circumstances should anyone enter the water while a fountain is operating. \*\***

**\*\* Please keep the original box for maintenance shipping. \*\***

The following maintenance procedures can be utilized to ensure many years of quality performance from your Kasco Fountain and reduce the need for more costly repair work.

- **PROPER INSTALLATION:** Proper installation of Kasco equipment will include a power source with ground fault interruption. The optional C-25 Control Box (120V) or C-75 Control Panel (240/208V) have built in GFI breakers and are sufficient. Ground fault interrupters are a safety feature that can also alert you to electrical leaks in the equipment. *It is extremely important to test the GFI upon installation, each reinstallation, and monthly thereafter to ensure proper operation.* If you have repeat, consistent trips on your ground fault, the equipment should be disconnected and removed from the water. The power cord should be inspected for damage and you should call Kasco Marine at 715-262-4488 for further instructions or email Kasco at [service@kascomarine.com](mailto:service@kascomarine.com).
- **OBSERVATION:** Operating equipment should be observed on a regular basis (daily, if possible) for any reduction or variation in performance. If a change in performance is observed, the equipment should be disconnected from power and inspected for any material that may have clogged the system or wrapped around the shaft of the motor, especially plastic bags and fishing line. Even though Kasco Pond Aerators Water Circulators are among the most clog-resistant on the market, it is impossible to protect against all items that can clog equipment and still maintain a flow of water. These materials can be very damaging to the equipment under continued operation and must be removed as soon as possible. **ALWAYS UNPLUG THE UNIT BEFORE ATTEMPTING TO REMOVE CLOGS.**
- **WINTER STORAGE:** In regions where there is significant freezing in the wintertime, the Pond Aerator should be removed from the water to protect them from the expansion pressure of the ice. In many areas, aerators will keep some amount of ice open through the winter. However, when the water is thrust into the air, it is exposed to the colder air temperatures longer and can actually make ice thicker on the pond/lake. Storage over winter is best in a location that is out of the sun and cool, but above 32°F. It is not necessary to store Kasco motors upside down. All internal seals are fully lubricated while stored in an upright position. **The Water Circulator can be operational year round.**
- **CLEANING:** Aerators should be removed from the water at least once per year (at the end of the season in cold climates) to clean the exterior of the system, especially the stainless steel motor housing (can). The motor housing is the surface that dissipates heat into the water and any algae, calcium, etc. build-up will become an insulator that blocks heat transfer. In warmer regions it is recommended that the motor is removed and cleaned at least two to three times per year depending on conditions. In most cases a power washer will be sufficient if the unit and algae are still wet.
- **SEAL AND OIL REPLACEMENT:** This is a sealed motor assembly and seals will wear out over time (similar to brake pads on a car). Replacement of the seals and a change of oil after three to five years may add longevity to the operation of the motor, saving you the cost of more expensive repairs. In warmer climates where the fountain runs most or all of the year, it is a good idea to replace seals more regularly than you would need to in colder climates where the unit is removed from the water for several months.
- **ZINC ANODE:** A Sacrificial Zinc Anode is supplied on the shaft of all Aerators and Circulators for protection of the equipment from corrosion and electrolysis. The zinc anode should be updated (replaced) if reduced to half the original size or if white in color. Corrosion from electrolysis is more commonly associated with saltwater or brackish water, but as a matter of precaution, it is important to periodically check the zinc anode in all installations (at least every two to three months).

Seal replacement and all other repair services should be performed by Kasco Marine or a Kasco trained Authorized Repair Center. Any alterations or changes made to Kasco units by an unauthorized source will void the warranty. This includes tampering with the unit, power cord, and/or control box. Please contact Kasco Marine, Inc. at 715-262-4488 for your nearest Authorized Repair Center.

# **C-25 TIMER CONTROL INSTRUCTIONS**

Portable Timer with Ground Fault Interrupter  
(Unit: 9.8 FLA, 58.8 LRA 120 VAC  
Light: 300 W, 120 VAC)

## **IMPORTANT**

This portable timer is designed for CONTROLLING the connected equipment only. Unplug timer before servicing the unit or the equipment it controls. **THE MANUAL OVERRIDE KNOB IS NOT TO BE USED AS A POWER DISCONNECT!** For maximum protection against electrical shock hazard, perform test procedure on G.F.C.I. at least once a month. Mount at least 5 ft. from open water.

## **G.F.C.I. TEST PROCEDURE**

The G.F.C.I. should be checked every month to make sure that it is operating properly. Just follow the simple instructions below. It is recommended to maintain a maintenance diary of your monthly safety check.

1. Push TEST button, RESET button should pop out from inner surface. This should result in power being OFF at the outlet protected by the G.F.C.I. Verify by plugging a test lamp into the outlet. Be sure the timer is in the ON position.
2. If the G.F.C.I. tests okay, restore power by pushing the RESET button back in. THE RESET BUTTON MUST BE PUSHED FIRMLY AND FULLY INTO PLACE UNTIL IT LOCKS AND REMAINS DEPRESSED AFTER PRESSURE HAS BEEN REMOVED.

**DANGER: IF RESET BUTTON DOES NOT POP OUT, IF TEST LAMP REMAINS LIT WHEN RESET BUTTON DOES POP OUT, OR IF THE G.F.C.I. FAILS TO RESET PROPERLY, DO NOT USE TIMER! CONTACT A QUALIFIED SERVICE TECHNICIAN!**

Failure to use the C-25 with Kasco Fountains will void the warranty and cause the Fountain to not be listed to UL and CSA standards via ETL.

**UNDER NO CIRCUMSTANCES SHOULD ANYONE ENTER THE WATER WHEN A UNIT IS IN OPERATION!**

## **TIMER-OPERATION INSTRUCTIONS**

C-25 Control Box will turn the aerator/fountain **ON & OFF** with the TIMER. Kasco lights will turn **ON** with the PHOTO EYE and **OFF** with TIMER. **C-25 Control Box is to be used with Kasco Approved Lights ONLY!**

1. Insert "ON" (GREEN) and "OFF" (RED) trippers into dial at desired **ON** and **OFF** times.
2. Turn dial clockwise one or more revolutions until correct time-of-day (AM or PM) in window is aligned with the arrow.
3. Plug aerator/fountain cord into the RIGHT hand outlet (labeled **UNIT**).
4. Plug transformer light cord into LEFT hand outlet (labeled **LIGHT**).

## **FOR TEMPORARY MANUAL OPERATION**

Rotate **MANUAL** knob counter-clockwise (↶) to desired **ON** or **OFF** position. Timer will follow next automatic operation.

# MODEL: C75

## DISPLAY AERATOR CONTROL WITH TIME SWITCH, GFCB, LIGHTENING ARRESTOR AND LOW VOLTAGE TRANSFORMER SUITABLE FOR USE WITH SUBMERSIBLE LIGHTS

IN RAINPROOF (TYPE 3R) ENCLOSURE SUITABLE FOR INDOOR OR OUT-DOOR USE

PUMP CIRCUIT: 2hp max, 240 Vac, LIGHT CIRCUIT: 300 Watt max, 12, 13, or 14 Vac.  
43 Amp MAX. 120/240 Vac SINGLE PHASE

**NOTE:** The short circuit current rating of this panel is 5000 symmetrical amperes.



**IMPORTANT:** This control panel must be installed according to the National Electric Code (including article 680) and local code requirements. The main lugs and neutral main are suitable for No. 14 to 2 AWG **COPPER** conductors. Follow gauge selection table and corresponding terminal screw tightening torque requirements below. An additional branch circuit protector (20 Amp max) may be installed in the unused position for use as an auxiliary circuit. Use only Square D HOM Series circuit breakers for additional or replacement. **Follow manufacturers instructions for testing of ground fault circuit breakers (GFCB).**

After wiring, install front panel over wiring compartment and close unused breaker openings.

**KEEP DOOR CLOSED AT ALL TIMES TO MAINTAIN NEMA 3R RAIN TIGHT RATING.**

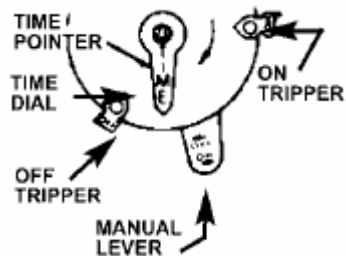
Wiring information-Copper Conductors	
Wire Size	Terminal Tightening Torque
AWG	Lb-In
14	20
12	20
10	20
8	25
6	35
4	45
3	50

### Low Voltage Lighting Connections

White	Neutral
Black	12 Vac
Yellow	13 Vac
Blue	14 Vac

This panel is low voltage lighting ready. For Canadian installations, power to the transformer must be supplied through a ground fault circuit breaker. The low voltage transformer is controlled by a timer/photoelectric circuit. For low voltage lighting connections, please refer to the instructions enclosed with the lights and/or on page 9 of this manual. If lights will **not** be installed, **all** transformer wires and the red wire leading from the photoelectric switch should be **individually** capped.

## TIME SWITCH OPERATING INSTRUCTIONS



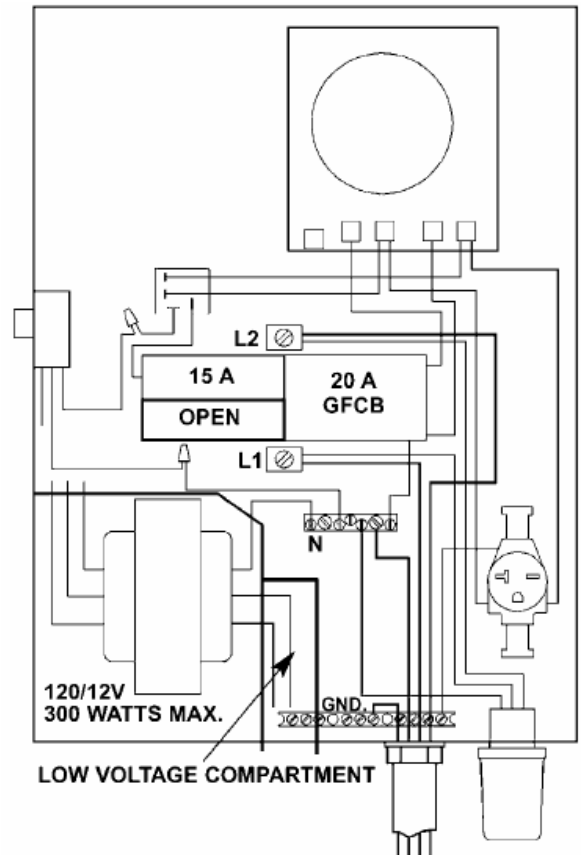
**1. TO SET "ON" AND "OFF" TIMES:** Hold TRIPPERS against edge of CLOCK-DIAL, pointing to time (AM or PM) when ON and OFF operations are desired. Tighten tripper screws firmly.

**2. TO SET TIME-OF-DAY:** Pull CLOCK-DIAL outward. Turn in either direction and align the exact

time-of-day on the CLOCK-DIAL (the time now, when switch is being put into operation) to the pointer.

-DO NOT MOVE POINTER-

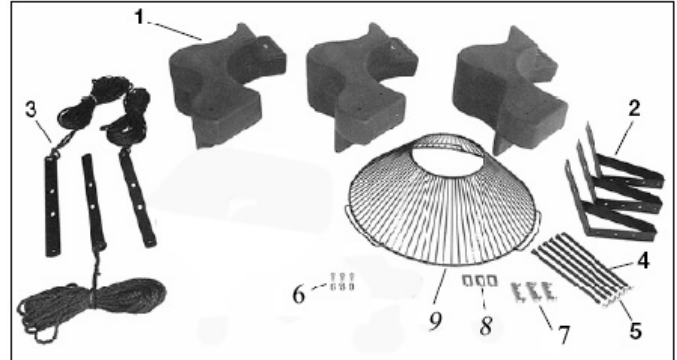
- **TO OPERATE SWITCH MANUALLY:** Move MANUAL-LEVER below left or right as indicated by arrows. This will not affect the next operation.
- **FOR MORE THAN ONE DAILY ON-OFF OPERATION:** Place additional tripper pairs on CLOCK-DIAL (order 156T1978A or Kasco Part Number 984500).
- **IN CASE OF POWER FAILURE:** Reset CLOCK-DIAL to proper time of day. See step 2 above.





## POND AERATOR PARTS INCLUDED

- A. Aerator (Unit with cord) (1)
- B1. Small Float Ring with two 50' mooring ropes attached (For 2400 and 3400 Models) (1)
- B2. Large Float Ring (For 4400 and 8400 Models) See Diagram to Right
  - 1. Float Sections (3)
  - 2. Top Float Bracket (3)
  - 3. Bottom Float Bracket w/Rope (3)
  - 4. 9" x 3/8" Bolt (6)
  - 5. 3/8" Lock Nut (6)
  - 6. 1/4" x 3/4" Bolt with Lock Washer & Nut (3)
  - 7. Unit Mounting Bracket w/Hardware (3)
  - 8. Bottom Screen Clips (3 - optional)
  - 9. Bottom Screen (1 - optional)



### Optional Equipment

- C. Control Box (C-25 for 120V units in Float box or C-75 for 240V units in separate box) (1 - optional)
- D. Bottom Screen with Hardware for Small Float Ring (1 - optional)

## POND AERATOR TOOLS & SUPPLIES NEEDED

- A. Anchors or stakes for installing unit (2 or 3 depending on unit)
- B. Philips head screw driver for mounting optional control panel
- C. 120V or 240V Electrical Supply near pond on a post
- D. Two (or 3 depending on model) 12" pieces of 1" galvanized pipe for weighting ropes (optional)
- G. #10 x 1" long or longer screw(s) for mounting the optional C-25 (3) or C-75 (4)
- H. 9/16" & 7/16" Nut Driver
- I. 9/16" & 7/16" Socket
- J. Adjustable crescent wrench
- K. Nylon Tie for cord

### UNIT SPECS.

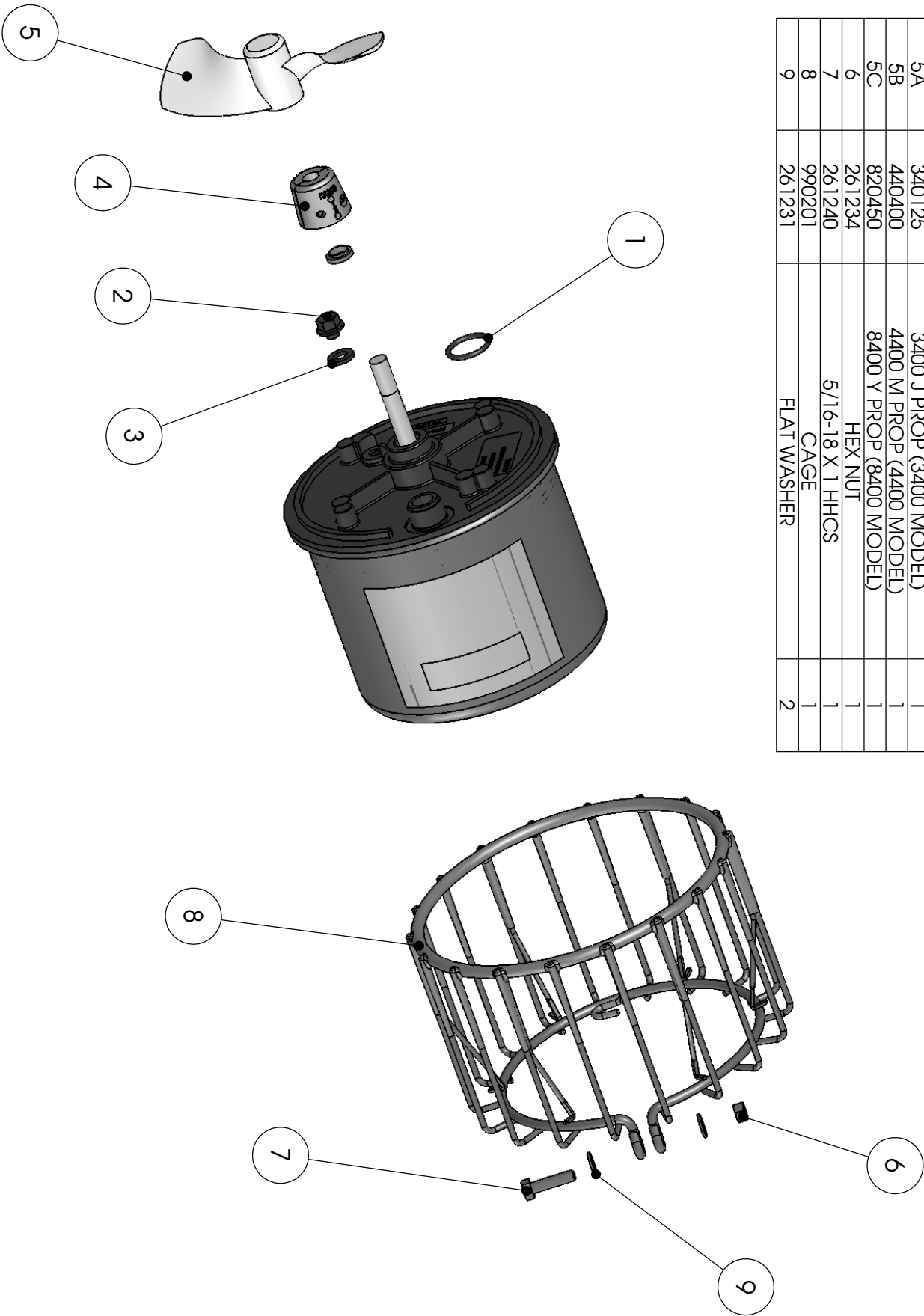
Model	Voltage	Operating Amps	Lock Rotor Amps	Control Box Connection*	Aerator Power Connection**
F2400AF	110-120	5.0 @ 120V	12 @ 120V	C-25 Plugs In	Plug into C-25
F3400AF	110-120	6.7 @ 120V	18 @ 120V	C-25 Plugs In	Plug into C-25
F3400HAF	208-240	3.4 @ 240V	9 @ 240V	C-75 Hardwired at shore	Plug or Hardwire into C-75
4400AF	110-120	11.3 @ 120V	40 @ 120V	C-25 Plugs In	Plug into C-25
4400HAF	208-240	5.7 @ 240V	20 @ 240V	C-75 Hardwired at shore	Plug or Hardwire into C-75
8400AF	208-240	10.5 @ 240V	40 @ 240V	C-75 Hardwired at shore	Plug or Hardwire into C-75

\* If Optional Control Box is purchased.

\*\* If Optional Control Box is purchased, otherwise, the Aerator simply plugs into proper GFI protected power source at ponds edge.

REPLACEMENT PARTS & ASSEMBLY DIAGRAM

ITEM NO.	PART NO.	DESCRIPTION	QTY.
1	990275	CORD O RING	1
2	990280	SEALING PLUG	1
3	990285	SEALING WASHER	1
4	243475	ZINC ASSEMBLY (2400 & 3400 MODELS)	1
4A	840475	ZINC ASSEMBLY (4400 & 8400 MODELS)	1
5	240170	2400 K PROP (2400 MODEL)	1
5A	340125	3400 J PROP (3400 MODEL)	1
5B	440400	4400 M PROP (4400 MODEL)	1
5C	820450	8400 Y PROP (8400 MODEL)	1
6	261234	HEX NUT	1
7	261240	5/16-18 X 1 HHCS	1
8	990201	CAGE	1
9	261231	FLAT WASHER	2



# ASSEMBLY AND INSTALLATION INSTRUCTIONS

## STEP ONE

Remove all contents from package and place on a clean, flat surface. Inspect the shipment for any damages. If damages are found, immediately notify your carrier and your Kasco Marine, Inc. representative. Next, cross reference the parts included in the shipment with the Parts Included sheet in this manual on page 9. Make sure you have all the parts needed. If any shortages are found, contact your Kasco representative immediately.

## FOR F2400 & F3400 MODELS (SMALL FLOAT)

### STEP TWO

Slide the two 50' Mooring Ropes around the float until they are opposite each other.



### STEP THREE (retrofitting bottom screen)

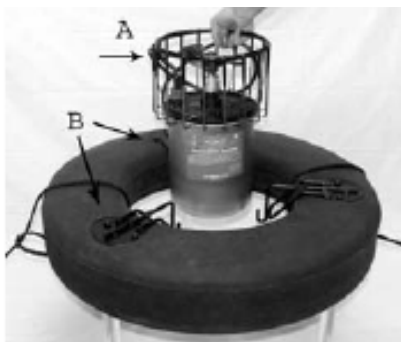
If the retrofitting the optional Bottom Screen, it can be installed now. Remove the Left bolt and nut from each of the three mounting brackets on the float. Turn float assembly upside down (brackets down) and place large open end of screen on the float. Replace the three bolts previously removed with the 3 hooks provided with the Bottom Screen, making sure the hook passes through the screen just inside the top support ring of the screen (not through the "handles"). Reattach the three Nuts removed on the threaded end of the hooks.



### STEP THREE

Support the Float at least 18" above the ground. Lower the Aerator into the Float making sure the cord

and cord retaining hook (A) fall between mounting brackets on the float (B) and preferable in line with one Mooring Rope. Make sure the protective cage on the Aerator is fully seated in the mounting brackets.



### STEP FOUR

Use a Nylon Tie to tie the cord and Mooring Rope together. This will help keep the cord free of the propeller and help prevent damage. The Aerator is now completely assembled and can be installed following the instructions starting on page 13.



## FOR 4400 & 8400 MODELS (LARGE FLOAT)

### STEP TWO

Arrange the three Float Sections upright (plug on bottom) so the overlap on one section aligns with the next section and loosely push the three sections together to form a continuous ring.

Float up

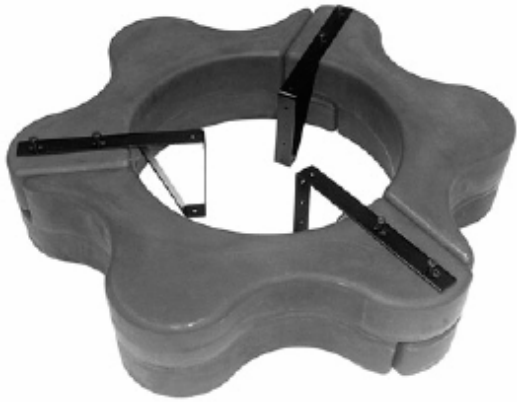
Float down

(plug)

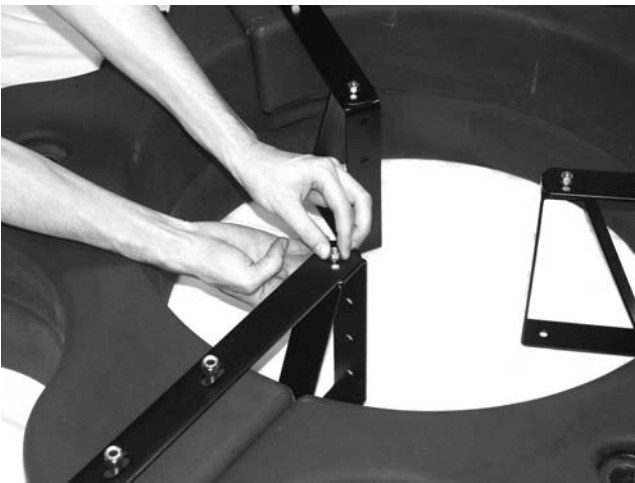


**STEP THREE**

Position one Float Bracket so the bolt holes in the bracket align with the bolt holes in the two adjoined float sections and insert two 9" Bolts through the assembly. This may require some minor repositioning of the Float Sections as you push the bolt all the way through. *Do not force the bolt through.* Repeat at the remaining two joints.

**STEP FOUR**

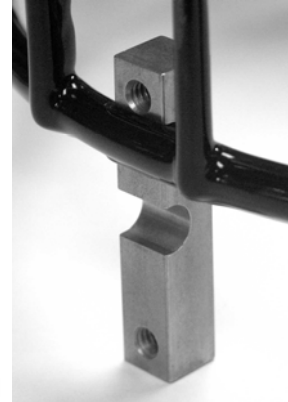
Turn the assembly upside down and place the Lower Brackets over the bolts, the ends of which should now be extending through the assembly. Loosely install the six Lock Nuts on the ends of the bolts (*do not tighten*). Connect the top and bottom brackets using three 1/4" x 3/4" Bolts with the three 1/4" Nuts and tighten.

**STEP FIVE**

Place the motor assembly (can side up, white propeller down) in the center of the float. Attach the motor to the float using the Unit Mounting Brackets. (This step may require a second person or object about 4.5' tall to support the weight of the motor inside the float. If a support object is used, make sure the weight is supported on the cage, not the propeller.)

For Model 8400AF, the notch in the center of the Unit Mounting Bracket should be positioned over the top ring of the cage and should be attached to the Float Bracket using the two lowest holes (closest to the Lower Bracket) of the Top Float Bracket. (Please refer to photos below.)

For Models 4400AF and 4400HAF, the lower notch of the Unit Mounting Bracket should be positioned over the top ring of the cage and should be attached to the Float Bracket using the two lowest holes (closest to the Lower Bracket) of the Top Float Bracket.



4400AF and 4400HAF

8400AF

**STEP SIX (Optional Bottom Screen)**

If the optional Bottom Screen was purchased, it can now be installed. Position the Bottom Screen over the float so the motor housing (can) passes through the large hole in the center of the screen. Remove the center three Lock Nuts from the 9" Bolts and place the Bottom Screen Clips over the Bolts as shown. Replace the three inside Lock Nuts and tighten all six Lock Nuts.

**STEP SEVEN**

On 10 and 12 gauge power cords lengths of 100 feet or longer with the watertight Quick Disconnect, the Additional Strain Relief should be attached to one of the lower float brackets as pictured. Double check the Quick Disconnect to make sure the threaded

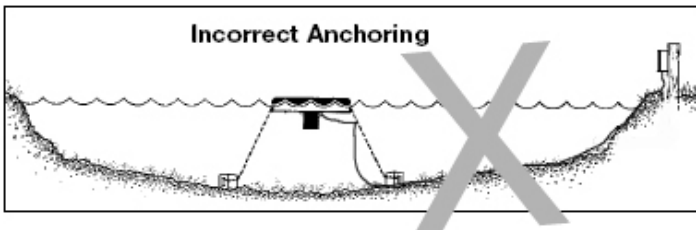
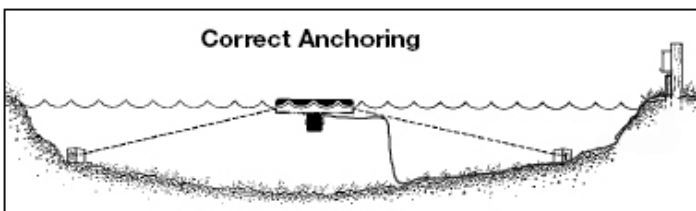
collar has not come loose in shipping before placing in the water. Use a Nylon Tie to tie the cord and Mooring Rope together. This will help keep the cord free of the propeller and help prevent damage. The Aerator is now completely assembled and can be installed following the instructions below.



## **INSTALLATION INSTRUCTIONS**

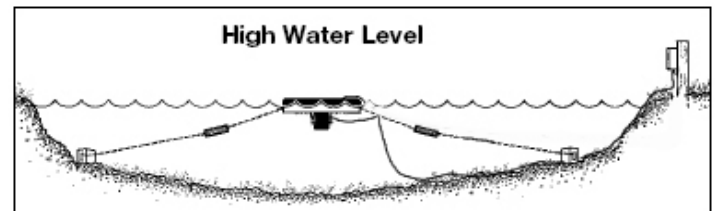
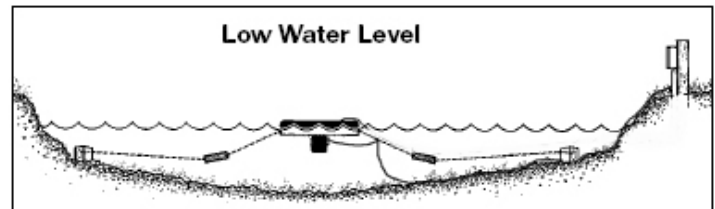
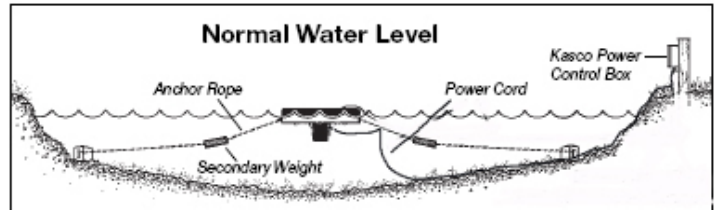
### **STEP ONE**

Use the ropes to position the Aerator in the desired location in the pond/lake (secure the cord near power source to prevent it from being dragged into the water). Anchor the ropes or secure them to the shoreline so the ropes are free of slack, but not tight. To prevent twisting of the unit due to torque, you should place the anchor at least 3 feet from the float for each foot of depth (Ex. A 6 foot deep pond would require an anchor 18 feet horizontally from the float.) For ease of removal, you may choose to keep at least one anchor within reach from shore, just below the water's surface.



### **STEP TWO (ALTERNATE INSTALLATION)**

In ponds where the water level fluctuates significantly, you may need to suspend a small weight (12" of 1" galvanize pipe works well) at the mid-point of the rope to take up any slack as the water level drops. The weight should be light enough so the Aerator can rise as the water level rises. This can also help hide ropes by sinking them further below the surface.



### **STEP THREE**

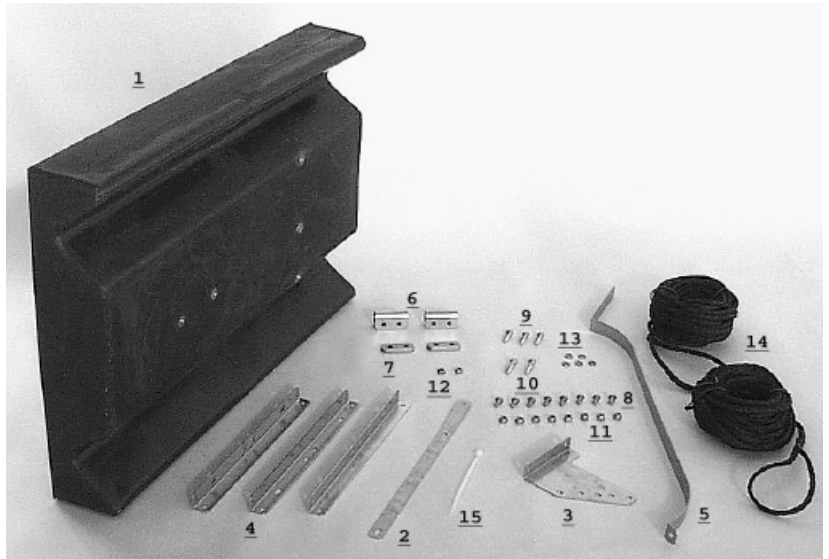
At this time the Aerator is ready for operation. It can be plugged into the power supply at the pond edge.

**ENJOY YOUR NEW KASCO AERATOR!**

If an Optional Control Panel was purchased, follow the Instructions on the next page for installing the Control Panels.

## **PARTS INCLUDED**

- A. Circulator (Unit with cord) (1)
- B. Float in separate box (1) (Diagram to Right)
  - 1. Float (1)
  - 2. Base Strap (1)
  - 3. Adjustment Bracket (1)
  - 4. Angle Bracket (3)
  - 5. Draw Band (1)
  - 6. U-Bracket (2)
  - 7. Spacer Bracket (2)
  - 8. 1/4" x 1/2" Stainless Steel Bolt (8)
  - 9. 1/4" x 1" Stainless Steel Bolt (3)
  - 10. 1/4" x 1-1/4" Stainless Steel Bolt (2)
  - 11. 1/4" Stainless Steel Lock Nut (8)
  - 12. 1/4" Stainless Steel Hex Nut (2)
  - 13. 1/4" Stainless Steel Lock Washer (5)
  - 14. 50' Black Nylon Ropes (2)
  - 15. Nylon Tie (1)



## **TOOLS & SUPPLIES NEEDED**

- A. Anchors or stakes for installing unit (2)
- B. Philips head screw driver for mounting control panel (if purchased) (1)
- C. 120V or 240V Electrical Supply near pond on a post (1)
- D. 12" pieces of 1" galvanized pipe for weighting ropes (optional) (3)
- G. #10 x 1" long or longer screw(s) for mounting the optional control panel (4)
- H. 7/16" Wrench (1)
- I. 7/16" Socket & Wrench (1)
- J. Felt-tip marker (1)

## **UNIT SPECS.**

Model	Voltage	Operating Amps	Lock Rotor Amps	Control Box Connection*	Circulator Power Connection**
F2400CF	110-120	5.0 @ 120V	12 @ 120V	C-25 Plugs In	Plug into C-25
F3400CF	110-120	6.7 @ 120V	18 @ 120V	C-25 Plugs In	Plug into C-25
F3400HCF	208-240	3.4 @ 240V	9 @ 240V	C-75 Hardwired at shore	Plug or Hardwire into C-75
4400CF	110-120	11.3 @ 120V	40 @ 120V	C-25 Plugs In	Plug into C-25
4400HCF	208-240	5.7 @ 240V	20 @ 240V	C-75 Hardwired at shore	Plug or Hardwire into C-75
8400CF	208-240	10.5 @ 240V	40 @ 240V	C-75 Hardwired at shore	Plug or Hardwire into C-75

\* If Optional Control Box is purchased.

\*\* If Optional Control Box is purchased, otherwise, the Circulator simply plugs into proper GFI protected power source at ponds edge.



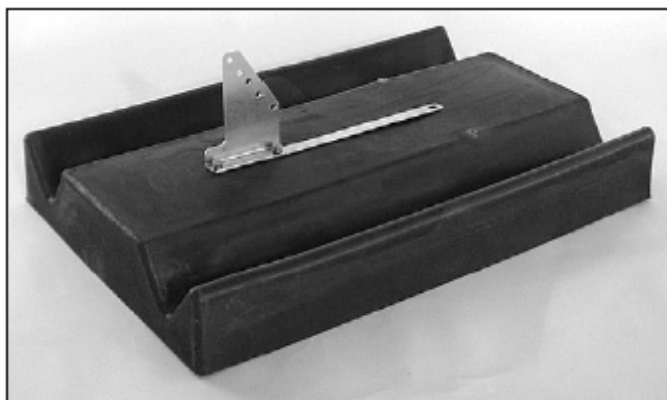
# ASSEMBLY AND INSTALLATION INSTRUCTIONS

## STEP ONE

Remove all contents from package and place on a clean, flat surface. Inspect the shipment for any damages. If damages are found, immediately notify your carrier and your Kasco Marine, Inc. representative. Next, cross reference the parts included in the shipment with the Parts Included sheet in this manual on page 14. Make sure you have all the parts needed. If any shortages are found, contact your Kasco representative immediately.

## STEP TWO

Position the Float upside down (lengthwise channels facing up) and place the Base Strap so the three holes in the Base Strap align with the three threaded holes that comprise the lengthwise midline of the Float.

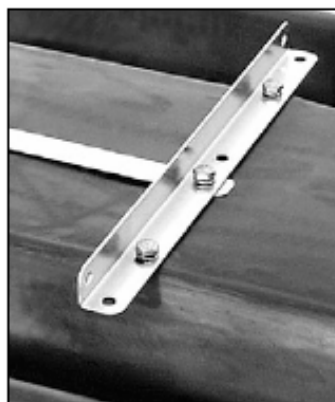


## STEP THREE

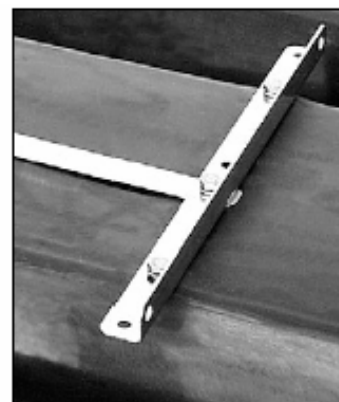
Position the Adjustment Bracket over the two holes at the back end of the Float and Base Strap. Loosely secure the Adjustment Bracket to the Float using two 1/4" x 1/2" Stainless Steel Bolts and two Stainless Steel Lock Washers. (See photo above for orientation.)

## STEP FOUR

Place one of the three Angle Brackets perpendicular to the Base Strap at the front end of the Base Strap. One of the two center holes of the Angle Bracket should be positioned over the hole in the Base Strap and the threaded hole in the Float. Secure the Angle Bracket to the Float using three 1/4" x 1/2" Stainless Steel Bolts and three Stainless Steel Lock Washers. (See photos in the next column for specific instructions based on the size circulator purchased.) Tighten all hardware at this time with the 7/16" socket and wrench.



Models F2400, F3400  
and 4400 - Angle  
posterior to bolts.



Model 8400 - Angle  
anterior to bolts.

## STEP FIVE

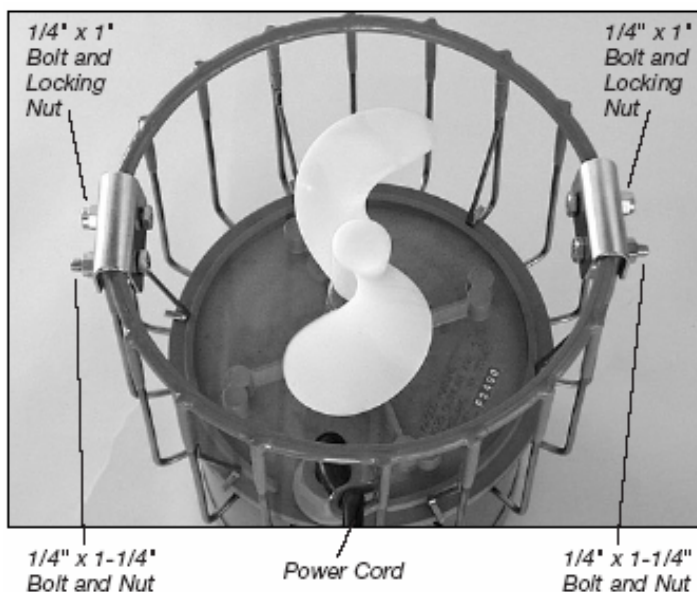
With a felt-tip marker, draw three to four marks around the circumference of the motor housing at the appropriate measurement from the back (or bottom) of the motor housing given below:

Model F2400: 3/4"  
Model F3400: 3-3/8"  
Model 4400: 3-3/8"  
Model 8400: 3-1/4"



## STEP SIX

Place the two U-Brackets directly across from each other (180°) over the top ring of the motor cage. The cord clamp on the cage should be 90° from each of the U-Brackets. (See pictures on next page)



**STEP SEVEN**

Insert the Spacer Bracket under the U-Bracket and inside the cage. Secure this assembly using one 1/4" x 1" Bolt and a 1/4" Lock Nut, and one 1/4" x 1-1/4" Bolt and a 1/4" Hex Nut. The longer bolt should be on the side of the U-Bracket that is closer to the cord clamp. Tighten the hardware using the 7/16" wrench and socket & wrench until the U-Bracket clamps firmly around the cage (U-Bracket should pull together slightly). Repeat with the second U-Bracket.

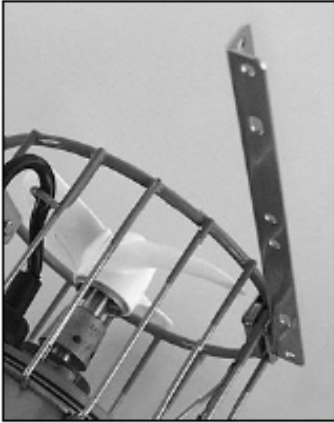


**STEP EIGHT**

Attach an Angle Bracket to each of the longer (1-1/4") bolts on the U-Brackets (See photo for orientation) with a 1/4" Lock Nut.



Models F2400, F3400  
and 4400



Model 8400

**STEP NINE**

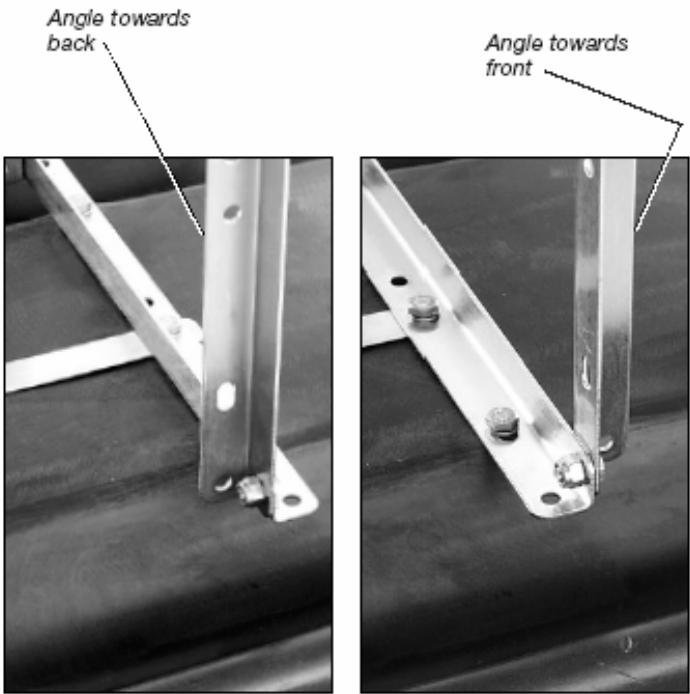
Wrap the Draw Band around the motor housing and position so that the back of the Draw Band touches the marks drawn in Step Five. There is no front or back to the Draw Band itself - it is reversible. Orient the arm of the Draw Band so it aligns with the cord clamp on the cage of the motor housing and is parallel to the Angle Brackets attached in Step Eight. Secure using a 1/4" x 1" Stainless Steel Bolt and a 1/4" Lock Nut. (See photo in next column)



Step Nine

**STEP TEN**

Attach the Angle Bracket on the motor to the Angle Bracket on the Float using two 1/4" x 1/2" Bolts and two 1/4" Lock Nuts (one set for each Bracket). See photos for orientation based on model size. Also, the cord clamp on the cage should be oriented toward the Float.



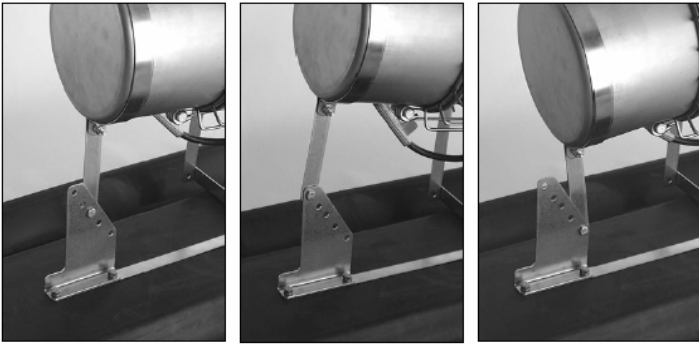
Models F2400, F3400  
and 4400

Model 8400

**STEP ELEVEN**

Attach the Draw Band on the motor to the Adjustment Bracket on the Float using a 1/4" x 1/2" Bolt and a 1/4" Lock Nut. Select one of the five possible positions to mount the Draw Band for your preferred direction of flow (three are pictured on next page). We do not recommend the two outer (most upward and most downward) mounting positions for 8400 models.





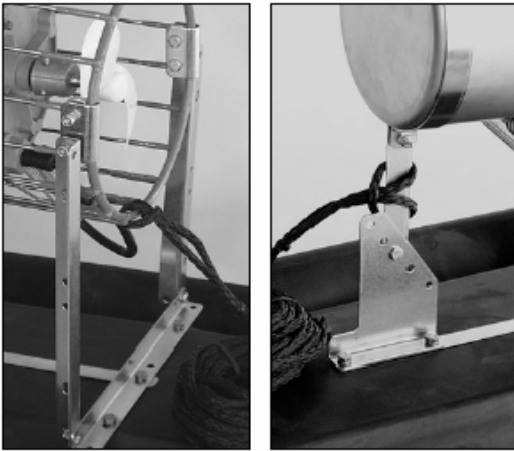
Horizontal

Angled Up

Angled Down

## STEP TWELVE

Attach the Ropes to the front (on the cage) and back (around the Draw Band) of the motor. At this time, use the Nylon Tie provided to connect the power cord and front Rope to prevent the cord from tangling in the prop. Also, if the power cord has a Quick Disconnect and Additional Strain Relief, attach the Strain Relief to the cage of the unit and double check the threaded collar on the Quick Disconnect to ensure it didn't loosen during shipping.



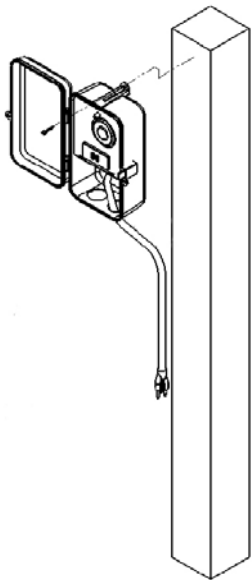
## STEP THIRTEEN

Float the circulator in the water and position where desired. Tie the front Rope to a stake on the shore or weight. If a weight is used sink weight in front of unit so rope is taught. (Circulator create great force, make sure weight is enough to prevent movement.) Tie back Rope to a stake on opposite shore or weight. Sink weight behind the unit so rope is taught. At this time take up any slack in the line.

## C-25 (120V) Control Panel Installation Instructions (Optional)

### STEP ONE

Install the optional control panel (C-25 for 120V and C-75 for 240V) if purchased, on the post with the power supply. Use the #10 x 1" long or longer screws and the screw placements on the control panel to secure the panel to the post. **NOTE:** The control panel must be hung upright in order to be waterproof.



### STEP TWO

Set Timer in the control panel to desired ON and OFF times per the Instructions on page 7 for the C-25 or page 8 for the C-75. ***Make sure to test the GFI using the Test Button located on the outlet before turning the equipment on and every 30 days thereafter.***

### STEP THREE

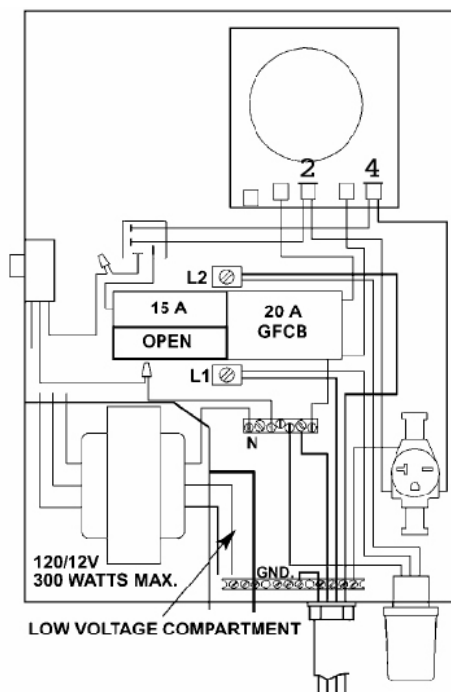
Plug the aerator or circulator cord into the C-25 outlet labeled "UNIT". Now you are ready to plug the C-25 into the 120V power supply on the post and **ENJOY YOUR NEW KASCO POND AERATOR OR WATER CIRCULATOR!**

## C-75 (208/240V) Control Panel Installation Instructions (Optional)

Hardwire the 240V, 4 wire power into the C-75 control panel per the Instructions on page 8 of this manual. The aerating fountain can either be plugged into the 240V outlet on the right hand side of the C-75 panel or hard-wired into the panel.

**PLUG:** *Test the GFCB with the test button now and every 30 days.* Insert the plug on the unit into the outlet and securely close the outlet cover until it snaps into place.

**HARDWIRE:** The bottom of the C-75 control panel has several knock-outs for hardwiring the unit and lights. Remove a knock-out that is not used for the main power or lights (secondary side wires). Remove the plug from the power cord on the unit and strip back 12" of cord jacket to expose the wires (2 hot and 1 ground). With the main power disconnected, connect the bare wire (stripped) portion of the GREEN ground wire to the grounding strip at the bottom of the panel and secure tightly. Locate and remove the plastic shield under the yellow timer (black or clear depending on model). Under shield, lug #2 and #4 are LOAD lugs. Loosen the screws and insert the bare wire (stripped) portion of the WHITE wire into #2 and the bare wire (stripped) portion of the BLACK wire into #4. Tighten both lugs securely. ***Test the GFCB with the test button now and every 30 days.***



Once completed, power can be restored to the panel. **ENJOY YOUR NEW KASCO POND AERATOR OR WATER CIRCULATOR!**

## **TROUBLESHOOTING TIPS**

Below are some helpful troubleshooting tips. If a problem occurs, please double check the assembly and installation instructions as well as the instructions for the proper control panel. More troubleshooting tips can be found at [www.kascomarine.com/general\\_info\\_troubleshooting.htm](http://www.kascomarine.com/general_info_troubleshooting.htm) . Contact Kasco Marine at 715-262-4488 for further diagnosis if these fail.

### **“My Aerator/Circulator trips the ground fault interrupter on the circuit or in the C-25 or C-75.”**

This is the most common symptom of several possible problems. To correctly diagnose the problem, you will need to collect more information. A Ground Fault Interrupter (GFI) breaker that trips can indicate an electrical service problem, water contamination in the unit and/or cord, bad breaker, control box problems, motor problems, etc. Try to find out the answers to these questions before you contact Kasco to narrow down the problem.

- \* How long does it take to trip the breaker?
- \* Does it always take the same amount of time to trip?
- \* How many times has it tripped?
- \* Has there been any electrical problems in the area recently?

### **“My Aerator/Circulator seems to run slowly.”**

This can also be a symptom of several possible problems. There could be an electrical problem where the unit is not getting the proper voltage. This could also indicate a problem with the motor of the unit, which needs to be looked at by an Authorized Repair Center. Check that the unit is receiving the proper voltage, and, if so, contact Kasco for further steps.

### **“My Aerator/Circulator hums, but will not start. When I spin the prop with a stick, it starts up.”**

This indicated a problem with the Starting Capacitor. Each Kasco Aerator is equipped with a Starting Capacitor to get the unit going when it is first plugged in. If it is operating, but not spinning and can be started by spinning the prop with a stick, the Starting capacitor needs to be replaced by an Authorized Repair Center.

### **“My Aerator/Circulator turns itself off and back on without the timer and without tripping the GFI breaker.”**

Each Kasco Aerator has a Thermal Overload built in that will turn the unit off when it overheats. Once the unit has cooled down, it will start back up. If you are noticing these symptoms, the unit should be unplugged immediately because the Thermal Overload will continue to turn on and off until it burns out and damages the motor. The unit should be unplugged and taken out of the water to find the cause of the problem. The problem could be one of many, such as, low water levels, build-up on the unit to prevent heat dissipation, something inhibiting the free rotation of the shaft, etc. If something is caught in the unit or there is a build-up on the unit, remove the debris and, if caught early enough, the unit should be fine. Contact a Kasco representative before restarting the unit.

### **“My Aerator/Circulator flow seems to fluctuate and/or be less than usual.”**

This can occur because of a few different reasons. Most of the time, this symptom is caused from unit being clogged with debris. A mat of weeds, many leaves, plastic bags, etc. can clog up the unit and cause it to be starved of water. If the unit does not have the proper amount of water, the flow or pattern will fluctuate up and down and look sporadic. If you are seeing these symptoms, unplug the unit and clean away the debris that is clogging up the screen. Another possibility if these symptoms are noticed, is a chipped or damaged prop that is causing the unit to wobble and not pump properly. When the unit is unplugged, check the prop for damages and replace if damage is found.

### **“The GFI breaker trips randomly and sporadically. Sometimes it is a few hours of operation, other times it can be days or weeks.”**

This is referred to as a Nuisance Trip. This usually occurs where the unit is installed a great distance from the initial electric service on the property where the ground stake is placed. It is caused by either induced current in the ground wire or a base voltage difference due to soil pH levels. To resolve the problem, contact an electrician and install a local grounding stake. This will eliminate the induced current and any base voltage differences.



800 Deere Rd.  
 Prescott, WI 54021  
 Phone: 715-262-4488 - Fax: 715-262-4487  
[www.KascoMarine.com](http://www.KascoMarine.com)   [Sales@KascoMarine.com](mailto:Sales@KascoMarine.com)

## **Kasco Repair Sheet — Customer Info.**

### **\* Important Reminders \***

- **All repairs sent in MUST be accompanied by a copy of this completed sheet!**
- Routine maintenance consists of checking the zinc anode regularly and replacing if necessary, keeping the unit clean, keeping the stainless steel can clean, and having the seals and oil replaced every 3-5 years depending on use.
- Address your Repair to Kasco Marine, Attn: Repairs (or to your Authorized Repair Center).
- Shipping to Kasco or an Authorized Repair Center is paid for by the customer.
- You must include the power cord and cage assembly with each unit sent in for repair to be considered for warranty repair!
- Do not ship the float and/or control box with the unit for repair, unless otherwise instructed.

Today's Date: \_\_\_\_\_

### **Customer Information**

Name: \_\_\_\_\_

Phone Number: \_\_\_\_\_

Address: \_\_\_\_\_

Alternate Number: \_\_\_\_\_

City: \_\_\_\_\_

Email Address: \_\_\_\_\_

State: \_\_\_\_\_

Zip Code: \_\_\_\_\_

### **Unit Information:**

Model # (Ex. F3400AF): \_\_\_\_\_

Serial # (Ex. 60A34025): \_\_\_\_\_

Date Purchased: \_\_\_\_\_

Purchased From: \_\_\_\_\_

Earliest Date of Problem: \_\_\_\_\_

### **Description of Problem**

### **Comments**

## Aerator/Circulator Warranty Information

Please fill out the enclosed, addressed warranty card and mail to Kasco Marine, Inc. or register your fountain online at [www.kascomarine.com/general\\_info\\_warranty\\_registration.htm](http://www.kascomarine.com/general_info_warranty_registration.htm). **Also, fill in the information below and keep for your records.**

**Model # (Ex. 2400AF)** \_\_\_\_\_

**Serial # (Ex. 60A21725)** \_\_\_\_\_

**Purchase Date:** \_\_\_\_\_

**Purchased From:** \_\_\_\_\_

**How Registered? — Mailed Card — or — Registered Online**

**Registration Date (Date card sent in or registered online)** \_\_\_\_\_



**Kasco Marine, Inc.**

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Prescott, WI 54021

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