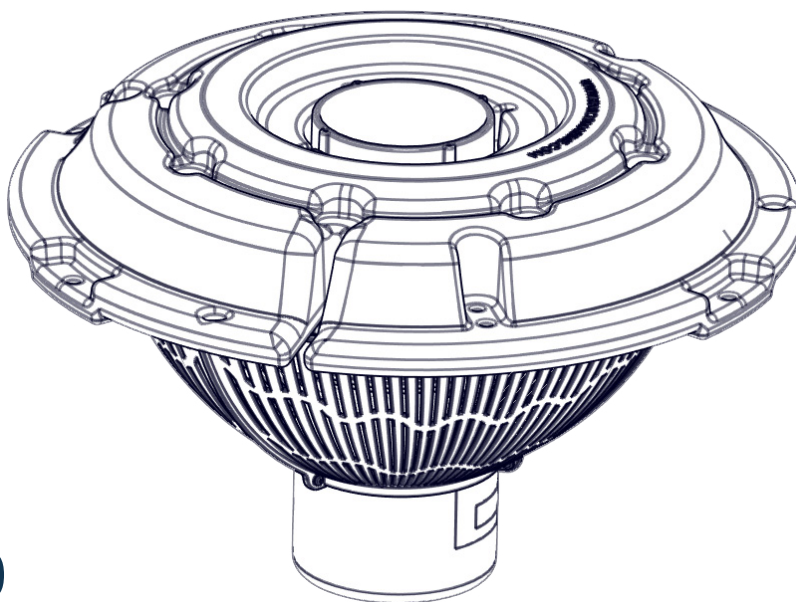




MOVING WATER FORWARD, SINCE 1968

# VFX SERIES FOUNTAIN

2400, 3400, 4400



## Operation & Maintenance Manual



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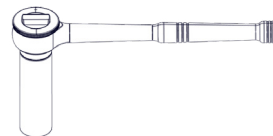
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## TOOLS AND SUPPLIES NEEDED

- 7/16" socket and ratchet
- 7/16" wrench
- 11/32" wrench (for #8 fasteners)



7/16" combination wrench  
11/32" wrench



7/16" socket

# SAFETY FIRST

## WARNINGS:



Moving Machinery



Shock Hazard

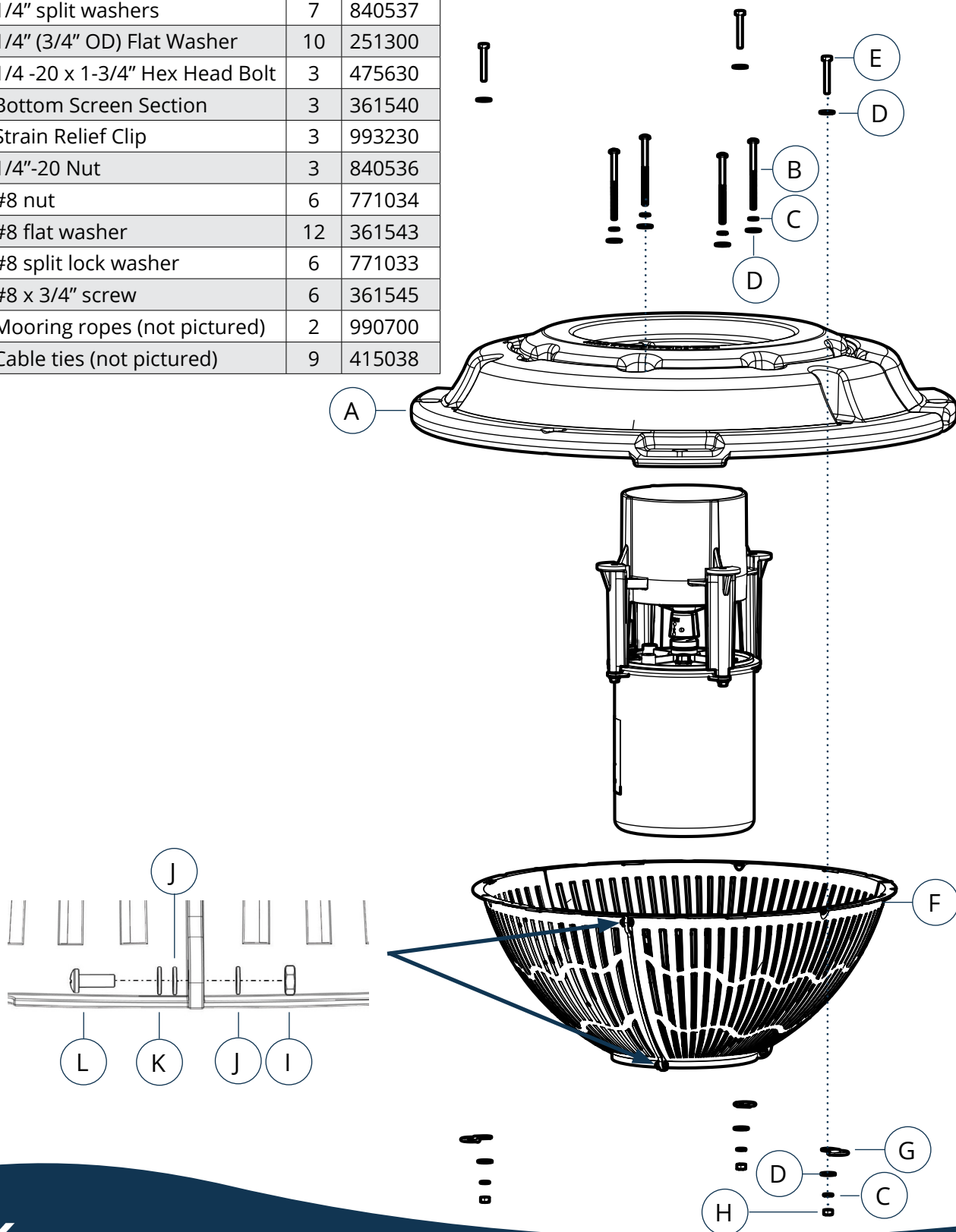
- NEVER enter the water with the electrical equipment connected and/or in operation.
- Stay clear of all moving parts.
- NEVER run the unit out of water. This will damage the equipment and pose a danger to the operator.
- Use extreme caution around water, especially cold water.
- NEVER lift or drag the unit by the power cord. Always use the ropes or mount to remove it from the water.
- Do not use waders in deep water or in areas with drop-offs, drastic slopes, or soft bottom material.
- Do not use boats that tip easily for unit installation (such as canoes).
- Follow all boating safety rules and regulations, including wearing a Personal Flotation Device.
- The unit is supplied with an internal grounding conductor. To reduce the risk of electrical shock, be certain that the unit is plugged in/connected to an approved GFCI-protected circuit.
- Means for disconnection must be incorporated in the fixed wiring, in accordance with local and national wiring rules.
- Consult a qualified electrician for electrical installation.

## UNIT SPECIFICATIONS

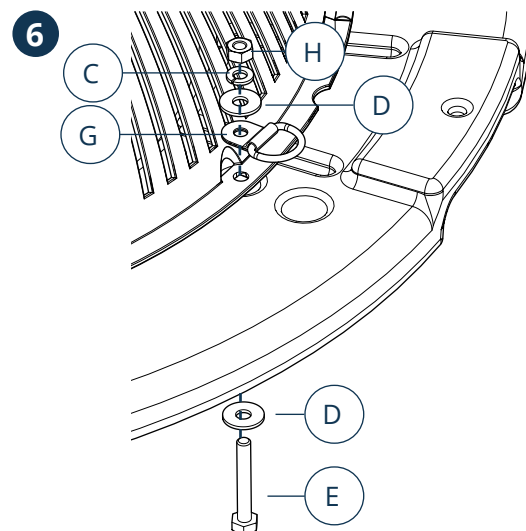
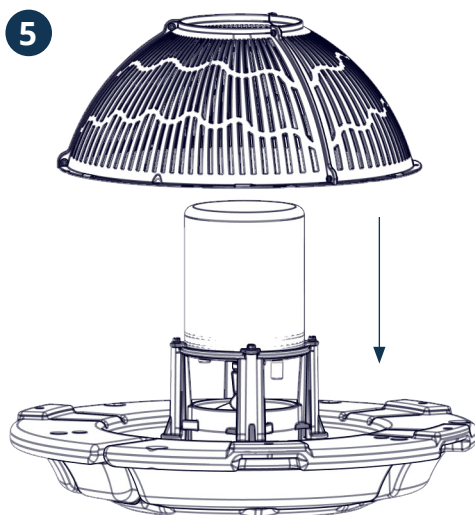
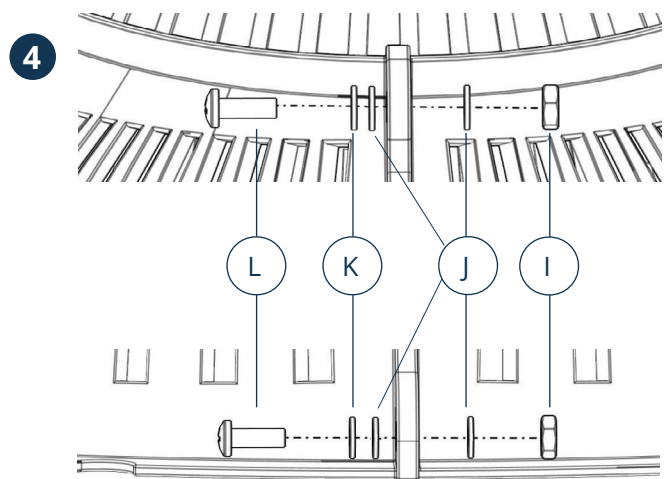
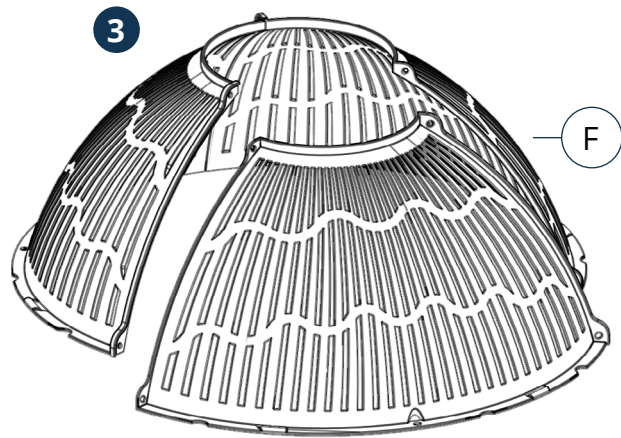
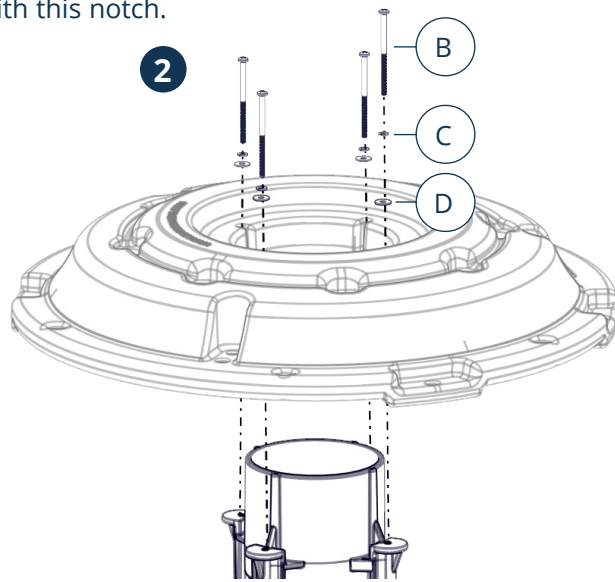
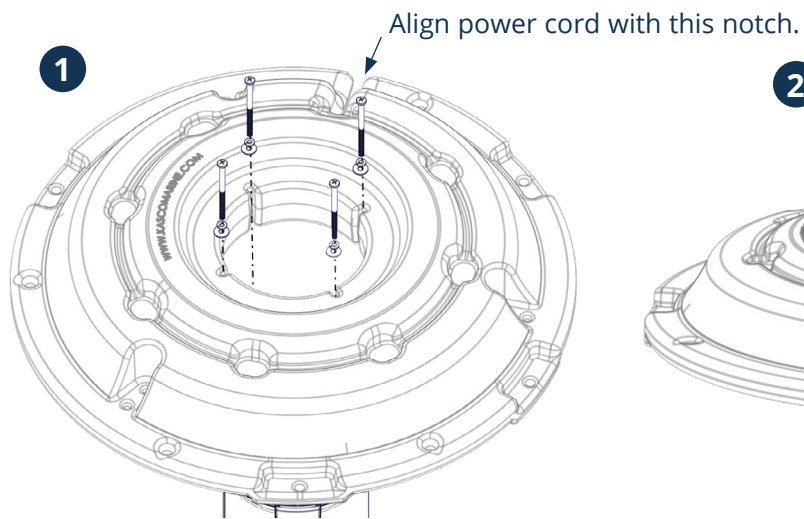
Model	Pattern Size		Voltage	Operating Amps	Locked Rotor Amps	Control Panel Connection / Unit Connection
	Height	Width	Single-Phase Units			
2400VFX	5 ft.	15 ft.	110-120	6	20	C-25 plug in / Plug into C-25
3400VFX	5.5 ft.	21 ft.	110-120	7	24	C-25 plug in / Plug into C-25
3400HVFX	5.5 ft.	21 ft.	208-240	4	12	Hardwire C-85 / Hardwire into C-85
4400VFX	8 ft.	26 ft.	110-120	11	39	C-25 plug in / Plug into C-25
4400HVFX	8 ft.	26 ft.	208-240	6	19	Hardwire C-85 / Hardwire into C-85

# PARTS INCLUDED

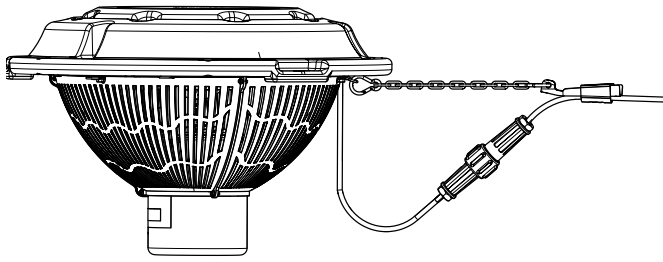
ID	Description	Qty	Part #
A	Float	1	242001
B	1/4"-20 x 3-1/2" screw	4	251210
C	1/4" split washers	7	840537
D	1/4" (3/4" OD) Flat Washer	10	251300
E	1/4 -20 x 1-3/4" Hex Head Bolt	3	475630
F	Bottom Screen Section	3	361540
G	Strain Relief Clip	3	993230
H	1/4"-20 Nut	3	840536
I	#8 nut	6	771034
J	#8 flat washer	12	361543
K	#8 split lock washer	6	771033
L	#8 x 3/4" screw	6	361545
M	Mooring ropes (not pictured)	2	990700
N	Cable ties (not pictured)	9	415038



# ASSEMBLY INSTRUCTIONS



# INSTALLATION INSTRUCTIONS



Utilizing the provided strain relief on the cord helps ensure that its weight and any strain placed on it in the water will not cause the float to tilt or cause damage to the unit.

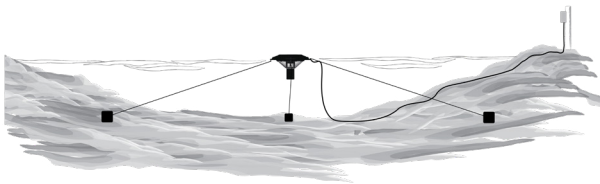
If your Kasco power cord comes with a strain relief kit, attach the available carabiner to a corresponding strain relief clip (G) on the underside of the unit, as pictured here.

**NOTE** If your cord does not have a strain relief clamp and chain attached, you can secure the cord to one of the strain relief clips using the cable ties (N).

If a Kasco light kit is added to the float and includes a strain relief, attach it to one of the remaining strain relief clips (G) to help distribute the weight of the power cords.

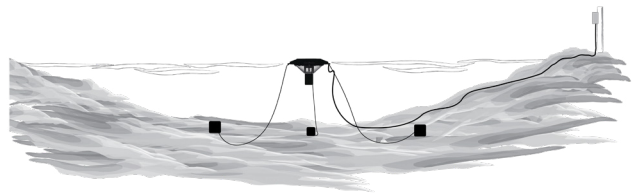
## Correct anchoring

Mooring lines are proper length and taut between unit and anchors (at least 3 feet from the float for every foot of water depth).

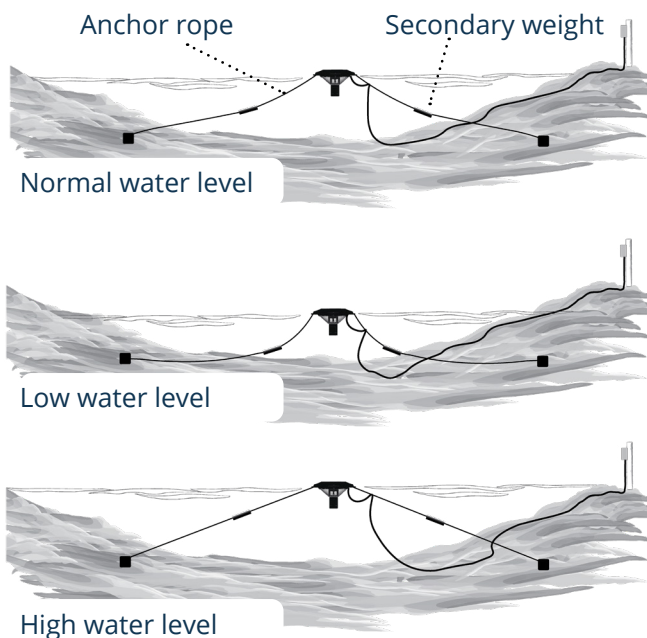


## Incorrect anchoring

Mooring lines are too short or loose between unit and anchors.



## Alternate Installation





# MAINTENANCE RECOMMENDATIONS

## Proper Installation

Proper installation of Kasco equipment will include a power source with ground fault protection. The control panel included with the equipment has built-in ground fault protection. There should only be one GFCI in a circuit. Ground fault interrupters can also alert you to electrical leaks in the equipment. It is extremely important to test the GFCI upon installation and every month thereafter to ensure proper operation. In the case of consistent trips of the ground fault device, disconnect the equipment and remove it from the water. Inspect the power cord for damage and contact your distributor or Kasco Marine (715.262.4488, support@kascomarine.com) for further instructions. A complete list of control panels can be found in the Accessories section of kascomarine.com. Kasco recommends placing an extra serial number sticker on the inside of the control panel cover.

**ALWAYS DISCONNECT POWER BEFORE PERFORMING MAINTENANCE.**

## Observation

Observe equipment in operation on a regular basis (daily, if possible). If you observe a change in performance, disconnect the equipment from the power source and inspect for any material clogging the system or wrapped around the motor shaft. To avoid damage to the equipment, it is important to remove clogs as soon as possible. ALWAYS DISCONNECT POWER TO THE UNIT BEFORE ATTEMPTING TO REMOVE CLOGS.

## Cleaning

Buildup of algae, calcium, barnacles, or other matter on the motor housing creates insulation and blocks heat transfer, so to prevent overheating, it is important to clean the unit. In warmer regions or in other areas prone to buildup such as this, inspect and clean the equipment regularly. In all regions, inspect and clean the equipment at least once a year. It is easiest to clean the unit immediately after removing it from the water, when the equipment is still wet. If you use a power washer, avoid hitting the mechanical seal area directly.

## Unit Storage

Store the equipment with the cage down if it is going to be out of the water for long periods of time, such as during off-season storage. Seals on units that sit upright on a shelf for extended periods of time are more likely to dry out. Storing upside down or sideways will ensure oil is reaching the seals and help to prevent drying.

## Sacrificial Anode

All Kasco units include a sacrificial anode installed on the shaft to protect against corrosion and electrolysis. Replace the anode if it is reduced to half the original size or if it is white in color. Corrosion from electrolysis most commonly occurs in saltwater or brackish water, but it is important to check the anode in all installations at least every two to three months.

## Seal And Oil Replacement

This is a sealed motor assembly. Like brake pads on a car, seals wear out over time. Replace the seals and change the oil after three years to increase the motor's longevity and to avoid more expensive repairs.

## Other Repairs

Seal replacement and all other repair services should be performed at Kasco or a Kasco-trained authorized repair center. Please contact your Kasco distributor or representative to find your nearest service center.

Please keep the original box for maintenance shipping.

# TROUBLESHOOTING TIPS

More troubleshooting tips are available in control panel manuals and at [www.kascomarine.com](http://www.kascomarine.com).

## ***"My equipment trips a ground fault protection device."***

A trip can indicate an electrical service problem, water contamination in the unit, motor issues, and problems with the cord, breaker, or control box. Consult Kasco or an electrician to address the issue.

Prior to any consultation, collect this information:

- 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?
- Have there been any electrical problems in the area recently?

## ***"My equipment seems to run slowly."***

The unit may not be receiving proper voltage. This could also indicate a problem with the motor, which should be serviced by an authorized repair center. Check that the unit is receiving the proper voltage, and contact Kasco for further steps. Note: If the equipment has been stored or exposed to cold for an extended period without running, it may take some time for the prop to reach full speed once power is supplied.

## ***"My equipment hums but will not start. When I spin the prop with a stick, it starts up."***

This indicates a problem with the starting capacitor. If the equipment is running but the prop is not spinning and spinning the prop with a stick starts the unit, then the starting capacitor needs to be replaced by an authorized repair center.

## ***"My equipment turns itself off and back on without the timer and without tripping the breaker."***

Each Kasco unit is equipped with thermal overload protection, which turns the unit off if it overheats. The unit will start up again once it has cooled down. If you are noticing these symptoms, unplug the equipment immediately to prevent damage to the motor. Remove the equipment from the water and inspect for the cause of the problem. Some possible causes are low water levels, build-up preventing heat dissipation through the housing, or something stopping the free rotation of the shaft. If something is caught in the unit, or if there is a buildup on the can, remove the debris and clean the equipment.

## ***"My equipment flow seems to fluctuate and/or be less than usual."***

Most of the time, this symptom is caused by debris clogging the unit. A mat of weeds, leaves, plastic bags, etc., can create a clog. If the unit does not have the proper amount of water, the flow or pattern will fluctuate and appear sporadic. If you are seeing these symptoms, unplug the unit and clean away the debris. While the unit is unplugged, check for another possible cause: a chipped or damaged prop, which can cause the unit to wobble in the water. Replace the prop if it is damaged.

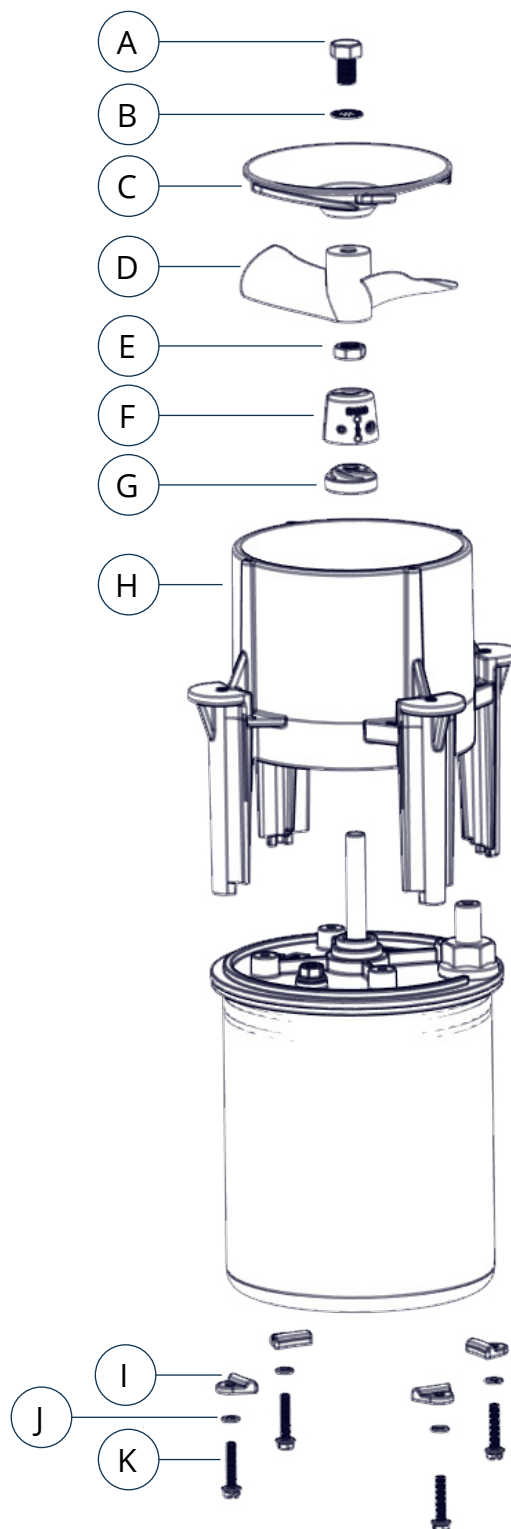
## ***"The breaker trips randomly and sporadically. Sometimes it is a few hours of operation, other times it can be days or weeks."***

Nuisance trips usually occur when the unit is installed far away from the initial electric service where the ground stake is located on the property. 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 may eliminate the induced current and any base voltage differences. This problem can also be caused by unbalanced incoming voltage lines or by a bad breaker or receptacle.



# REPLACEMENT PARTS

Item	Part #	Description	Qty.
A	243405	HEX SCREW	1
B	241024	WASHER	1
C	241025	DISC, 2400 MODEL	1
C	241035	DISC, 3400 MODEL	1
C	241045	DISC, 4400 MODEL	1
D	240595	PROPELLER, 2400 VFX	1
D	340595	PROPELLER, 3400 VFX	1
D	440600	PROPELLER, 4400 VFX	1
E	342058	JAM NUT	1
F	243475	ZINC ASSEMBLY	1
G	990410	FLINGER	1
H	241005	VFX TUBE	1
I	140312	RETAINING CLIP	4
J	840537	SPLIT LOCK WASHER	4
K	251250	1-1/4" SCREW	4



# WARRANTY

Warranty period:

2400VFX, 3400VFX, 3400HVFX, 4400VFX, 4400HVFX = 2-year Limited Warranty

Kasco® Marine, Inc. warrants this fountain to be free from defects in material or workmanship under normal use and service (excluding ropes, power cord, and propeller). The Kasco Marine, Inc. obligation under this warranty is limited to replacing or repairing free of charge any defective part within the warranty period 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 equipment is not maintained properly according to the Maintenance Recommendations supplied in this Owner's Manual.
- The equipment is returned for repair without the power cord.
- The unit, control panel, or power cord are altered in any way from original shipment. Cuts in the power cord are not covered under warranty.
- The equipment is damaged by unauthorized tampering.
- The sacrificial zinc anode around the motor shaft shows significant deterioration (not maintained according to Recommendations supplied in this Owner's Manual).

Warranty Claim Procedure: The best method for establishing warranty period is by keeping your original receipt and registering the equipment online at [kascomarine.com](http://kascomarine.com) under the Support section.

Once warranty coverage has been established, the unit may be sent to Kasco Marine or any Kasco Authorized Repair Center for evaluation and repair. See Repair section for more information regarding warranty repair procedure.



Kasco only accepts complete assemblies for warranty repair. We must receive the power cord and all other components with the motor as originally assembled. **THIS DOES NOT INCLUDE CONTROL PANEL, FLOAT, MOUNT, OR OTHER PARTS THAT CAM IN ADDITION TO THE MOTOR ASSEMBLY, UNLESS SPECIFICALLY REQUESTED BY A KASCO REPRESENTATIVE.** Kasco will bill the customer to replace any missing parts necessary for repair.

Please attach a repair form with the shipment. The repair form must include a name, physical address (for return delivery of the repaired unit), daytime phone number, and an 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.

# NON-WARRANTY REPAIRS

Most failed equipment can be repaired at substantially lower costs than replacement with new. If your aerator requires repair and is no longer covered under warranty, please contact Kasco Marine or your local distributor for available options. Please ship according to the instructions on the previous provided.

Kasco Marine does 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. We will contact the customer with a total after the unit has been evaluated but before the work is performed.

All estimates that are rejected for repair will be destroyed unless otherwise directed by the customer. Rejected equipment can be returned at the customer's expense for shipping and handling charges.

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

Please see the Support section of [kascomarine.com](http://kascomarine.com) for more information about warranty and repairs. Contact Kasco Marine at 715-262-4488 or [support@kascomarine.com](mailto:support@kascomarine.com) for additional information and your closest Authorized Repair Center.

# KASCO PATENTS

To view a full list of Kasco patent and patent-pending information, visit <https://kascomarine.com/patents/>.

# CONTACT US



Kasco Marine  
800 Deere Road  
Prescott, WI 54021



715.262.4488



[kascomarine.com](http://kascomarine.com) | [support@kascomarine.com](mailto:support@kascomarine.com)



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# REPAIR CONTACT FORM

## IMPORTANT:

Due to OSHA and shipping regulations, Kasco does not accept units for repair that have been used in wastewater or other hazardous applications. If you have equipment that has been used in a hazardous application and believe you are experiencing a warranty failure, please reach out to Kasco at [support@kascomarine.com](mailto:support@kascomarine.com).

- Kasco requires that all equipment sent for repair MUST be accompanied by this form and marked to Repairs attention.
- Unit should be cleaned before shipping.
- Kasco is NOT responsible for shipping damage accrued in return shipment.
- It is the responsibility of the customer to ship and pay freight to Kasco.

Kasco Marine  
800 Deere Road  
Prescott, WI 54021  
Attn: Repairs

Note: Contact information should be that of the person or company to contact for repair information.

Company name			
Contact name	First name	Last name	
Address	Street		
	City		
	State		
	ZIP code		
Phone number	Primary	Alternate	
Email address			
Preferred method of contact (circle one)	Phone	Email	
Purchase order number			
Additional product information	Serial Number	Cord Length	
Was this unit used in a chemical treatment or wastewater application? (circle one)	Yes	No	
Additional notes			