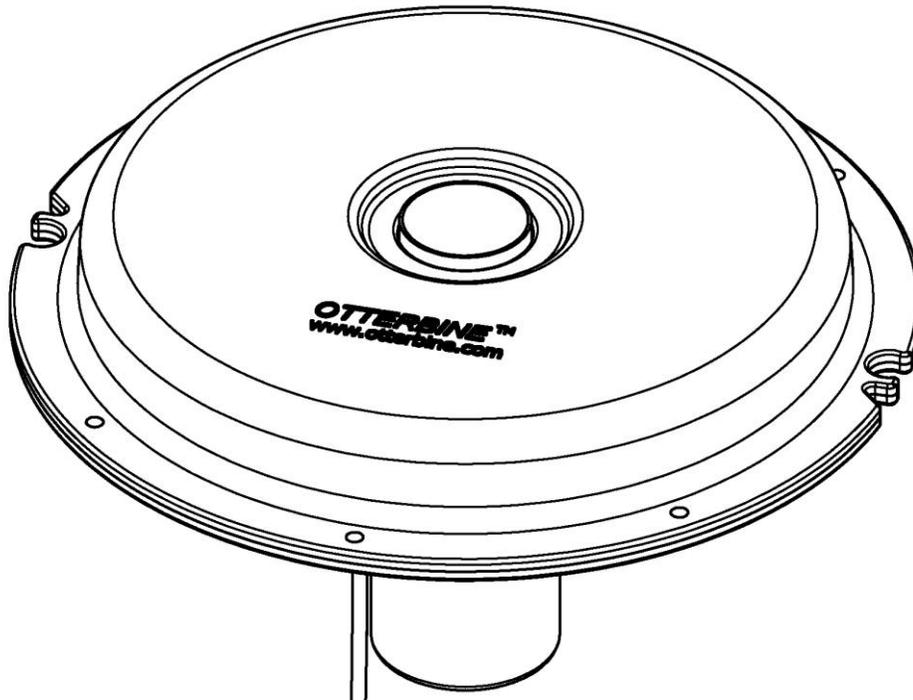
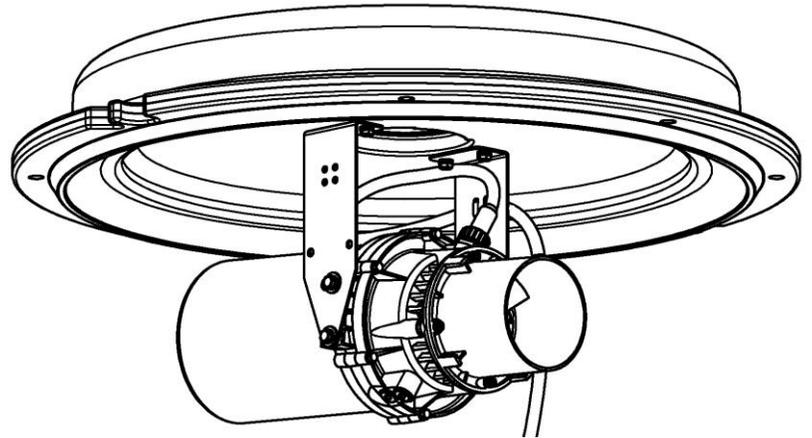
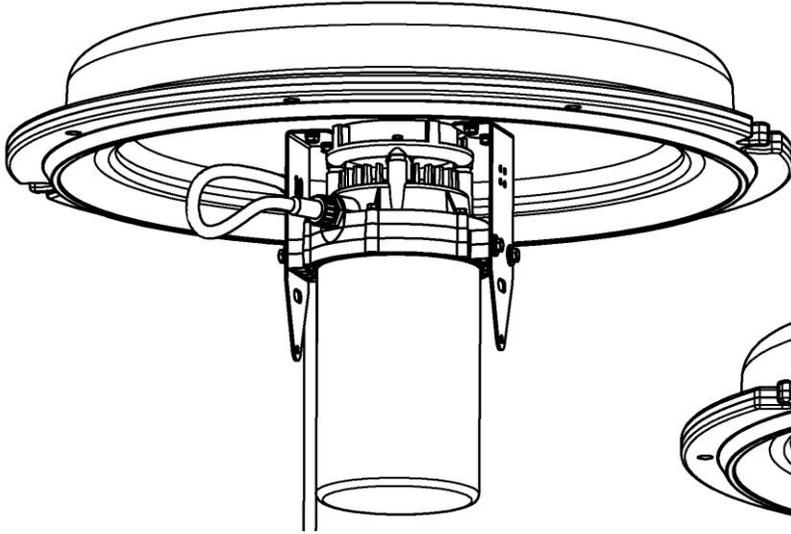




Otterbine Barebo Inc. Fractional Series 50Hz Installation Manual



SAFETY INSTRUCTIONS

 WARNING	
	PLEASE READ THIS MANUAL COMPLETELY BEFORE INSTALLING AND USING THIS PRODUCT. SAVE THIS MANUAL FOR FUTURE REFERENCE AND KEEP IN THE VICINITY OF THE PRODUCT.

ALL ELECTRICAL WORK MUST BE PERFORMED BY A QUALIFIED LICENSED ELECTRICIAN AND CONFORM WITH ALL APPLICABLE ELECTRICAL SAFETY CODES

ALWAYS SWITCH OFF/DISCONNECT ALL EQUIPMENT IN THE WATER BEFORE SERVICING OR PERFORMING ANY MAINTENANCE

DO NOT OPERATE EQUIPMENT WHEN PEOPLE ARE IN THE WATER

CAUTION: KEEP HANDS CLEAR OF THE IMPELLER WHEN OPERATING!

 WARNING 	
	
ELECTRICAL SHOCK HAZARD Disconnect From Electrical Supply When Servicing This Equipment Unplug Or Switch Off All Appliances In The Water Before Carrying Out Maintenance This Product Must Be Properly Grounded	

 DANGER
STAY OUT OF WATER WHEN EQUIPMENT IS ENERGIZED



	WARNING HAZARDOUS VOLTAGE. Contact may cause electric shock or burn. Turn off and lock out power before servicing.
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 DANGER
SPINNING IMPELLER TURBINE ROTATIVE

KEEP HANDS CLEAR TENIR LES MAINS ÉLOIGNÉE

WARNINGS

- Before entering, wading in or swimming in the water in which Otterbine Aerators or Fountains are installed, make sure they are **PHYSICALLY** disconnected from their electrical power sources.
- Aerators located in or near garden ponds and similar locations must be equipped with Ground Fault Circuit Interrupter.
- The permissible temperature range for this equipment is -12°C to 40°C/10°F to 104°F.
- If the power cord is damaged, it must be replaced by a special cord or assembly available from Otterbine Barebo, Inc. or an authorized Otterbine Barebo, Inc. sales and service center.

INSPECT EQUIPMENT

Immediately report any shipping damage to the carrier that delivered your unit.

Inspect your equipment and verify the following:

Unit - Check the nameplate located on the housing of the unit to make sure you have received the correct horsepower and voltage unit.

Power Control Center - Verify the PCC is compatible with the unit horsepower and voltage. Refer to the electrical specifications on the nameplate located inside on the door of the PCC.

Power Cable Assembly - Verify the correct cable gauge and length.

Use Only OTTERBINE power cord. Do not splice or repair the cord, replacement is necessary if damage occurs.

FOR PROPER WARRANTY CONSIDERATION RETURN THE WARRANTY REGISTRATION CARD OR REGISTER ONLINE AT www.otterbine.com/warrantyform

ELECTRICAL/PCC INSTALLATION

ELECTRICAL INSTALLATION MUST BE PERFORMED BY A QUALIFIED LICENSED ELECTRICIAN AND CONFORM TO ALL APPLICABLE LOCAL AND NATIONAL CODES

ALWAYS DISCONNECT EQUIPMENT FROM ELECTRICAL SUPPLY BEFORE SERVICING OR PERFORMING MAINTENANCE

Caution: RCD/GFCI Protection is required. If RCD/GFCI protection is not used, serious or FATAL electrical shock may occur.

The standard Power Control Center includes a fiberglass NEMA 4X or 3R enclosure with twenty-four hour timer and personnel GFCI protection.

Fractional Series 50Hz. Electrical Specifications				
HP	Volts	Phase	Max. Amps	Maximum 12AWG Cable Length (meters)
1/2	230	1	2.8	183

A. Feeder

1. Proper feeder circuit protection in accordance with all applicable local and national codes **must** be provided to the power control center.
2. Be certain to properly size feeder conductors to allow for no more than 5% voltage drop for the entire circuit from the feeder source to the unit. Failure to do so may damage the unit and void product warranty.

IMPORTANT: An Electrical Disconnect must be provided before the Power Control Center and shall be mounted where easily visible from the shoreline where the unit is located. Acceptable disconnecting means are a molded case circuit breaker, cord and plug rated for the full load current rating or other device suitable as a motor disconnect.

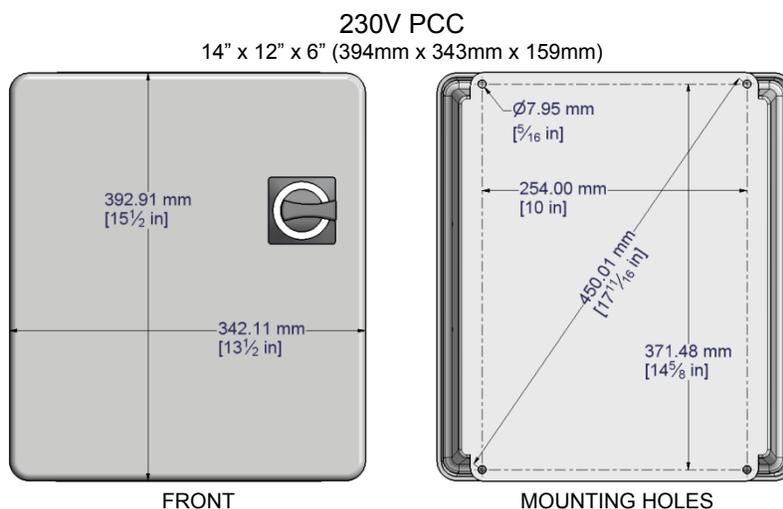
B. PCC Location

1. The power control center **shall not** be accessible from the water.

C. PCC Mounting

1. To prevent damage to the enclosure use all four (4) mounting holes.
2. Whenever possible do not mount the PCC in direct sun light.

ELECTRICAL/PCC INSTALLATION (cont.)

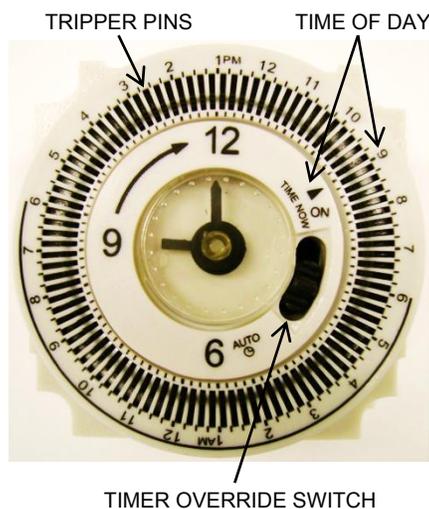


D. PCC Cables & Connections

1. Only Otterbine Barebo, Inc. factory approved power cord is to be used from the PCC to the unit with no junction boxes or splices. **Only** use power cord gauges and lengths specified by Otterbine at the time of cable purchase. (Contact your Otterbine Distributor for proper cable sizing)
2. It is recommended that all exposed cable between the PCC and the shoreline be installed in non-metallic conduit. It is **important** the unit and lighting cables be installed in individual conduits to avoid induced interference between cables which causes random GFCI tripping.
3. **Always** use strain relief cord connectors to attach the Otterbine cable to the PCC.
4. Cables and conduits must only enter into the bottom of the PCC.
5. Factory connections may loosen during shipping. Verify tightness of all screw terminal connections before energizing.
6. Power input and output wiring connections are accessed from the bottom of the enclosure.

Terminal Torque Values: **Input & Output** – 3.4 N-m (30 in/lb) Maximum

E. PCC Timer Operation



1. Push **in** (towards center) all tripper pins on the timer dial.
2. Pull **out** the tripper pins on the dial that are between the times you want the unit to operate. When the dial rotates to a tripper pin that is in, it will turn off.
3. Turn the outer dial clockwise to align the time of day to the stationary arrow positioned at "2 o'clock".
4. To enable the timer move the timer override switch to the "ON" (up) position. To manually turn off the fountain move the switch to the "OFF" (down) position.

ALWAYS TURN OFF THE POWER USING THE MAIN DISCONNECT BEFORE SERVICING OR PERFORMING ANY MAINTENANCE

Note: When the main disconnect is off or in the case of power failure the timer/s will not operate and the time of day will need to be reset.

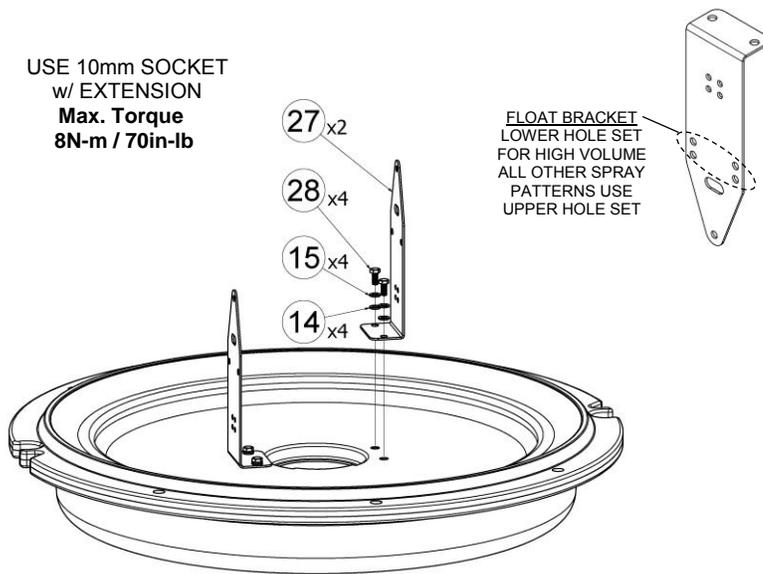
F. GFCI (Ground Fault Circuit Interrupter) operation.

1. Power must be applied to PCC to enable RCD (GFCI).
 2. With power applied press the RESET button.
- CAUTION – UNIT WILL START IF TIMER IS ON.
3. Test RCD (GFCI) every 6 months.
 4. Start the unit, record the operating voltage and amperage and power cable length on the door inside the power control center.

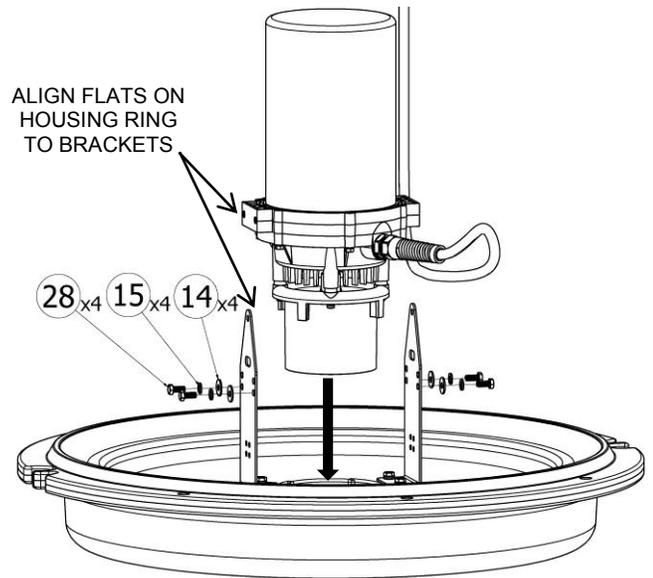


FRACTIONAL SERIES AERATING FOUNTAIN ASSEMBLY

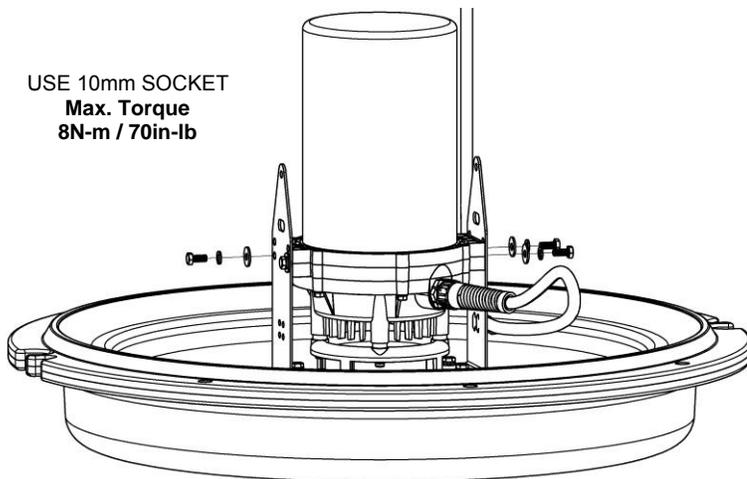
STEP 1 – FASTEN BRACKETS TO FLOAT



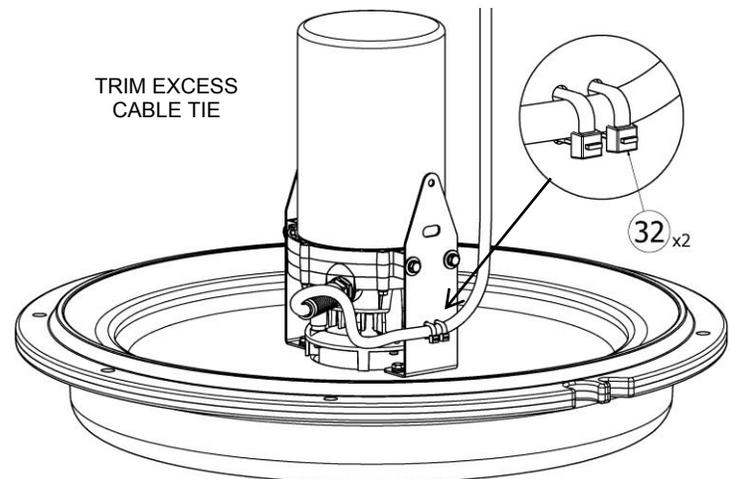
STEP 2 – PLACE POWER UNIT BETWEEN BRACKETS



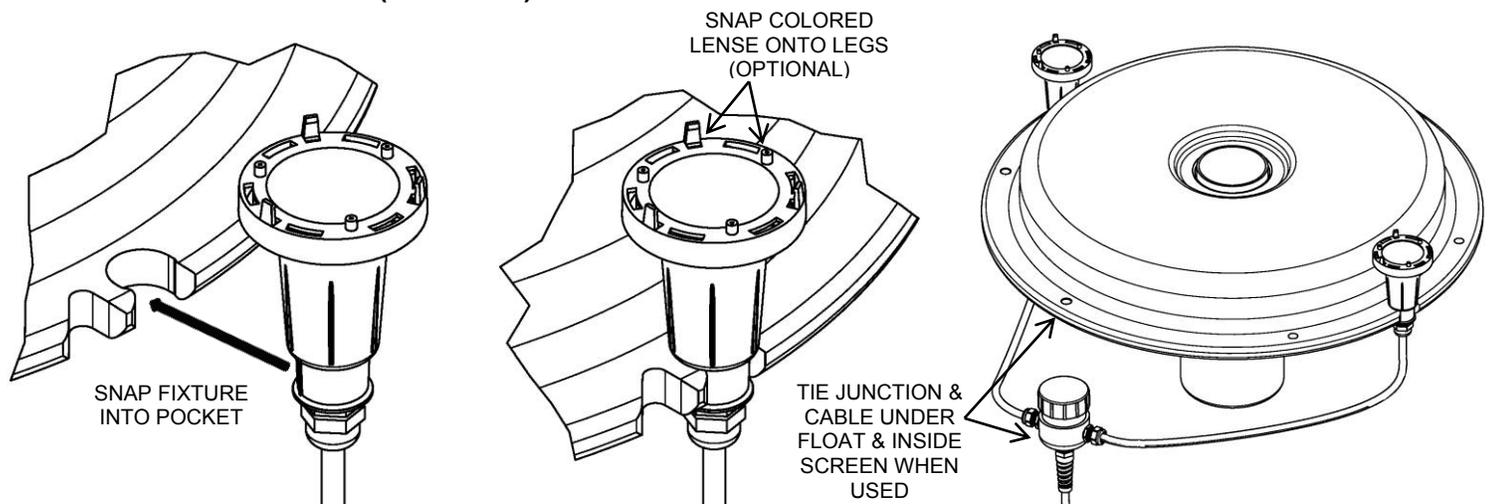
STEP 3 – POSITION UNIT & TIGHTEN BOLTS



STEP 4 – INSTALL STRAIN RELIEF CABLE TIES

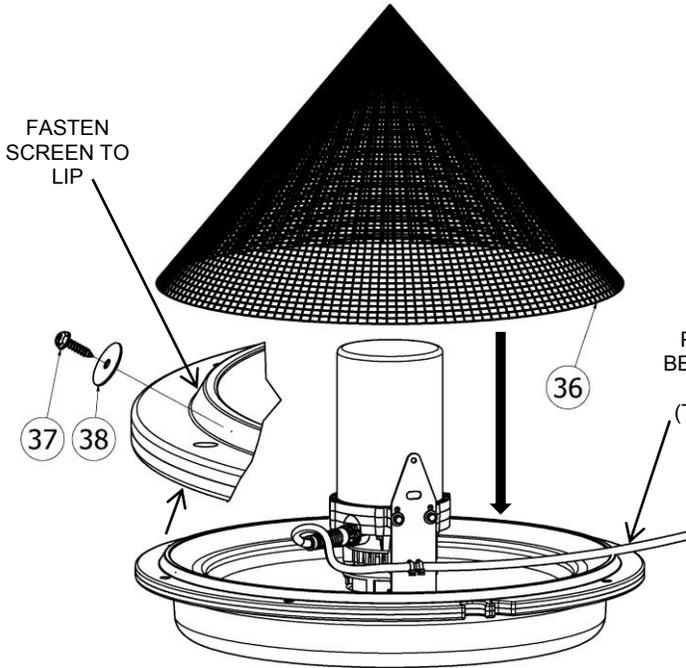


STEP 5 – ATTACH LIGHTING (OPTIONAL)



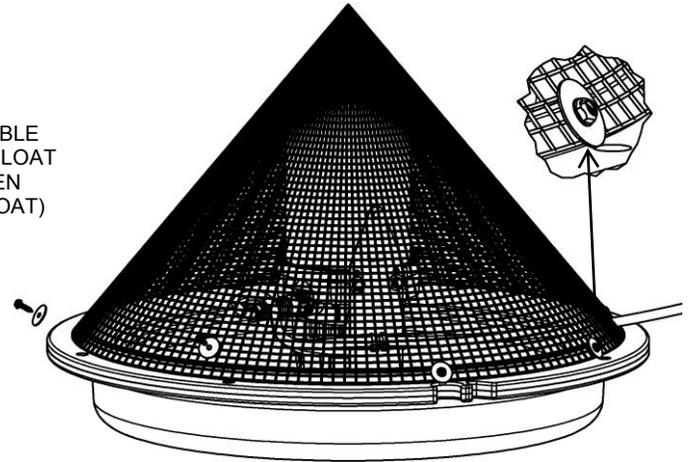
STEP 6 – ATTACH SCREEN (NOT USED WITH MIXER)

**WHEN NOT USING SCREEN REPLACE SCREWS INTO HOLES
ALWAYS PLUG OR SEAL UNUSED HOLES IN FLOAT**



USE SCREEN TO PREVENT PUMP CHAMBER
CLOGGING DUE TO LARGE DEBRIS
(GEMINI & HIGH VOLUME LESS PRONE TO CLOGGING)

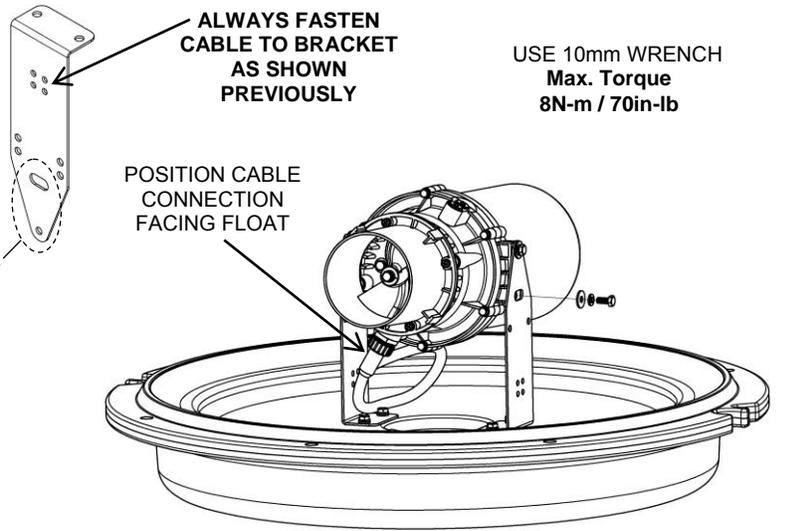
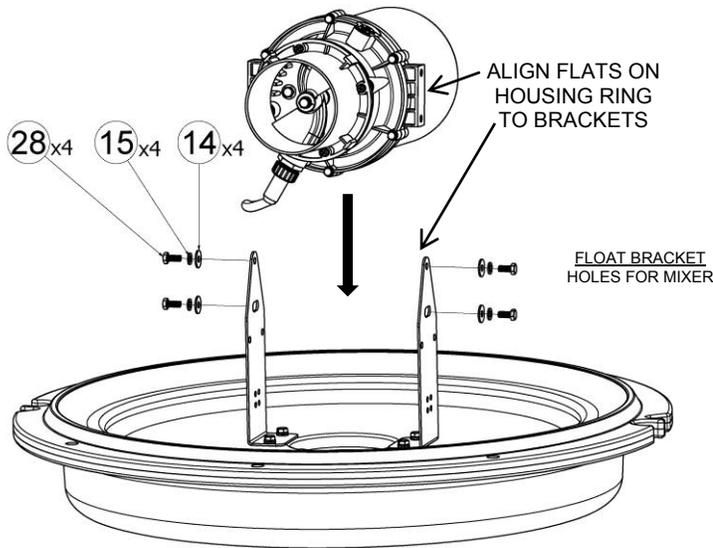
FASTEN SCREEN (8) PLACES EVENLY SPACED
USE DRIVER OR PRE-DRILL 2.5mm (3/32") HOLES



FRACTIONAL SERIES MIXER ASSEMBLY

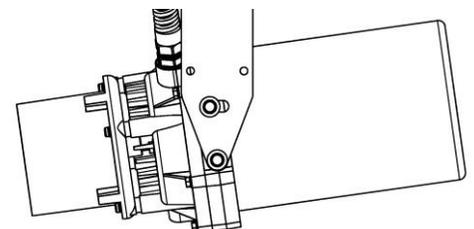
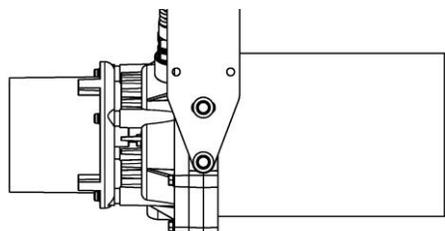
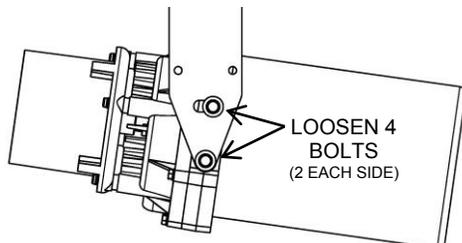
STEP 1 – PLACE POWER UNIT BETWEEN BRACKETS

STEP 2 – POSITION UNIT & TIGHTEN BOLTS



FRACTIONAL SERIES MIXER PITCH ADJUSTMENT

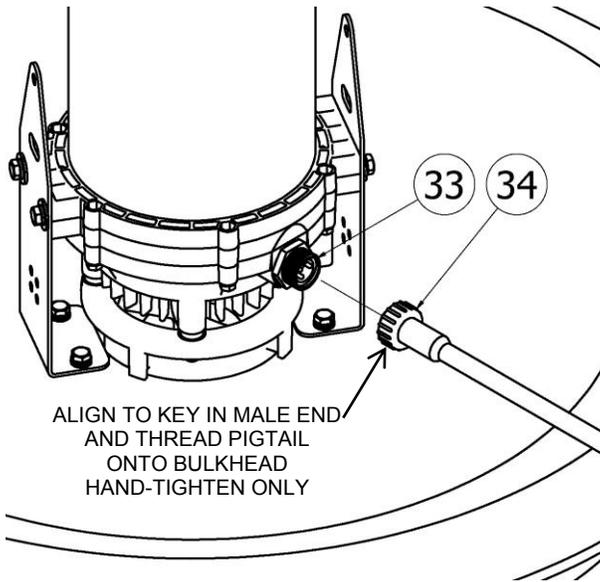
LOOSEN BOLTS, POSITION & TIGHTEN **Max. Torque 8N-m / 70in-lb**



PREPARE UNIT TO LAUNCH

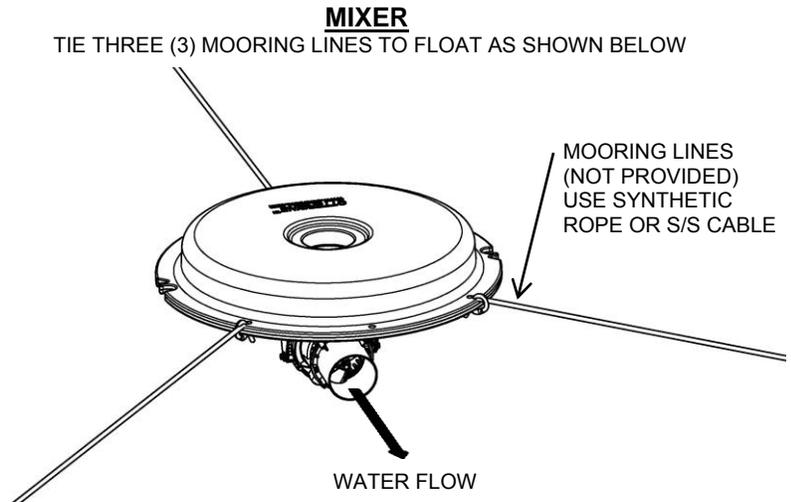
STEP 1 – ELECTRICAL CONNECTOR

(Bulkhead/Pigtail Optional - Skip when hardwired)



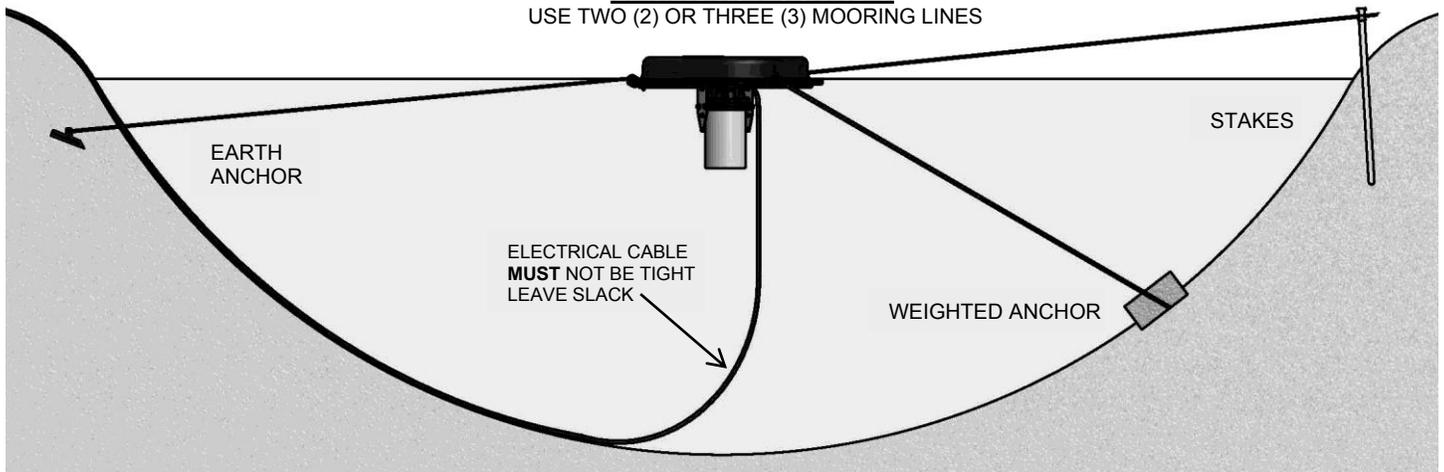
STEP 2 – FASTEN MOORING LINES & LAUNCH

TIE MOORING LINES TO SHORE MOUNTED STAKES, EARTH ANCHORS OR WEIGHTED ANCHORS (USE A MINIMUM OF 7kg/15lb EACH)



AERATING FOUNTAIN

USE TWO (2) OR THREE (3) MOORING LINES



TO PREVENT DAMAGE TO YOUR FRACTIONAL SERIES

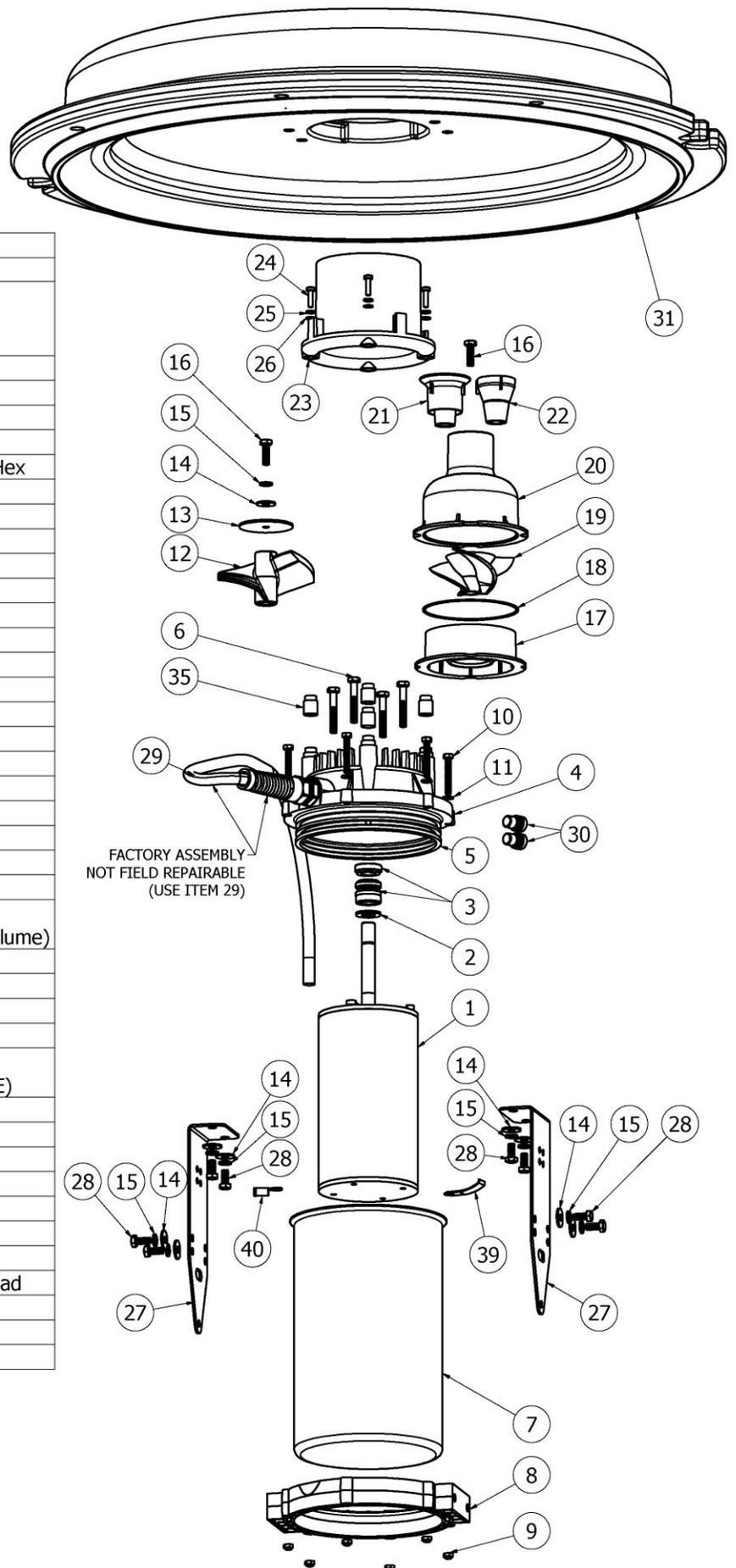
!Warning!

**DAMAGE CAUSED DUE TO FREEZING WILL NOT BE ELIGIBLE FOR WARRANTY CONSIDERATION
DO NOT ALLOW THE UNIT TO OPERATE “DRY” OUT OF THE WATER**

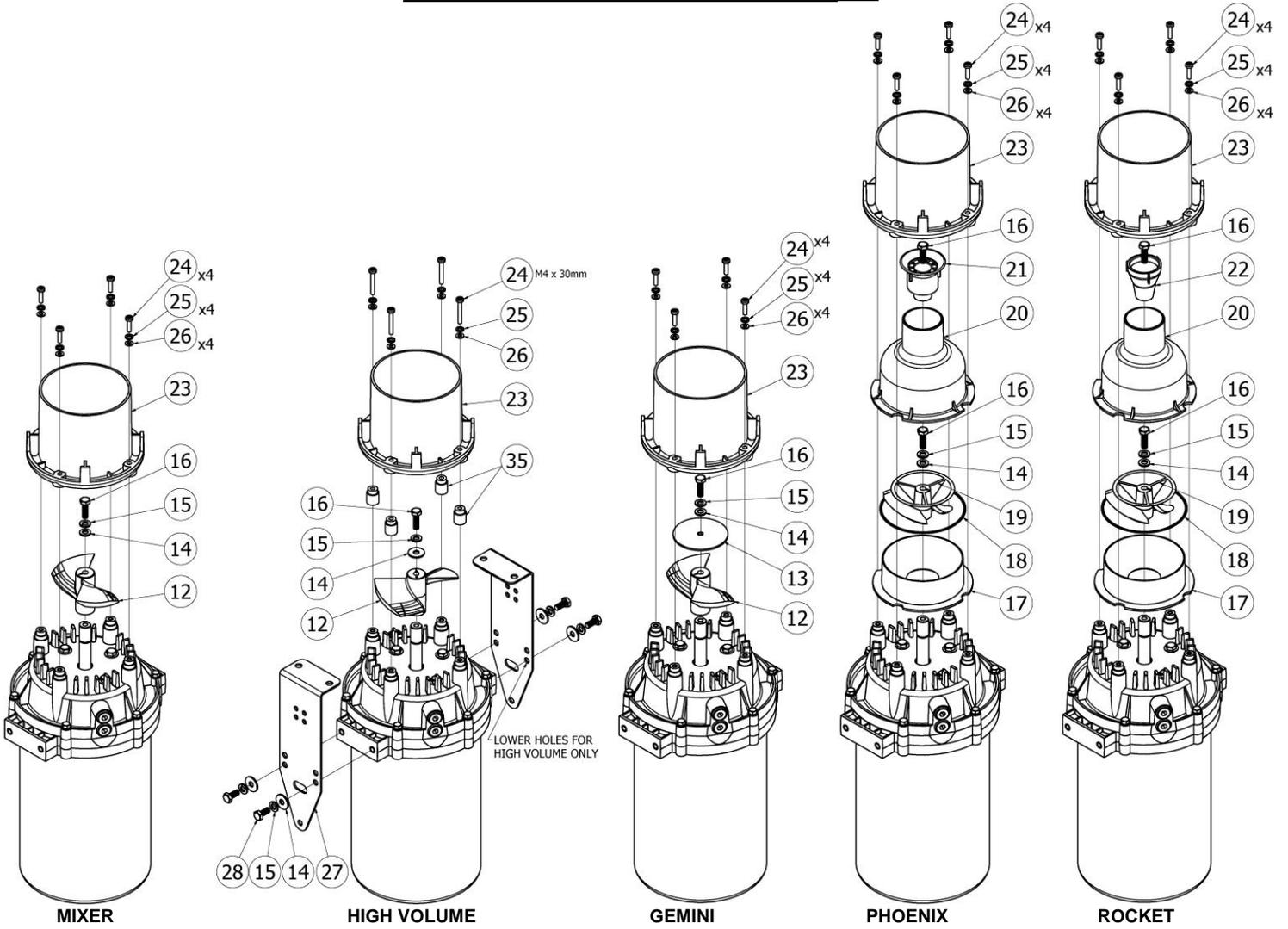
- **Never** operate the Fractional Series Fountain when not submersed (EXCEPT FOR “JOGGING” DURING TESTING)
- Remove the unit from the water when temperatures are expected below 0°C (32°F)
- For longer unit life store the unit indoors at temperatures above 0°C (32°F)
- Operating Depth is 0.4m (16in.)
- Clean debris from screen and unit intake as necessary
- Inspect and clean the throat and nozzle components as required
- Annually clean and inspect the unit and cables for physical damage

FRACTIONAL SERIES PARTS LIST & EXPLODED VIEW

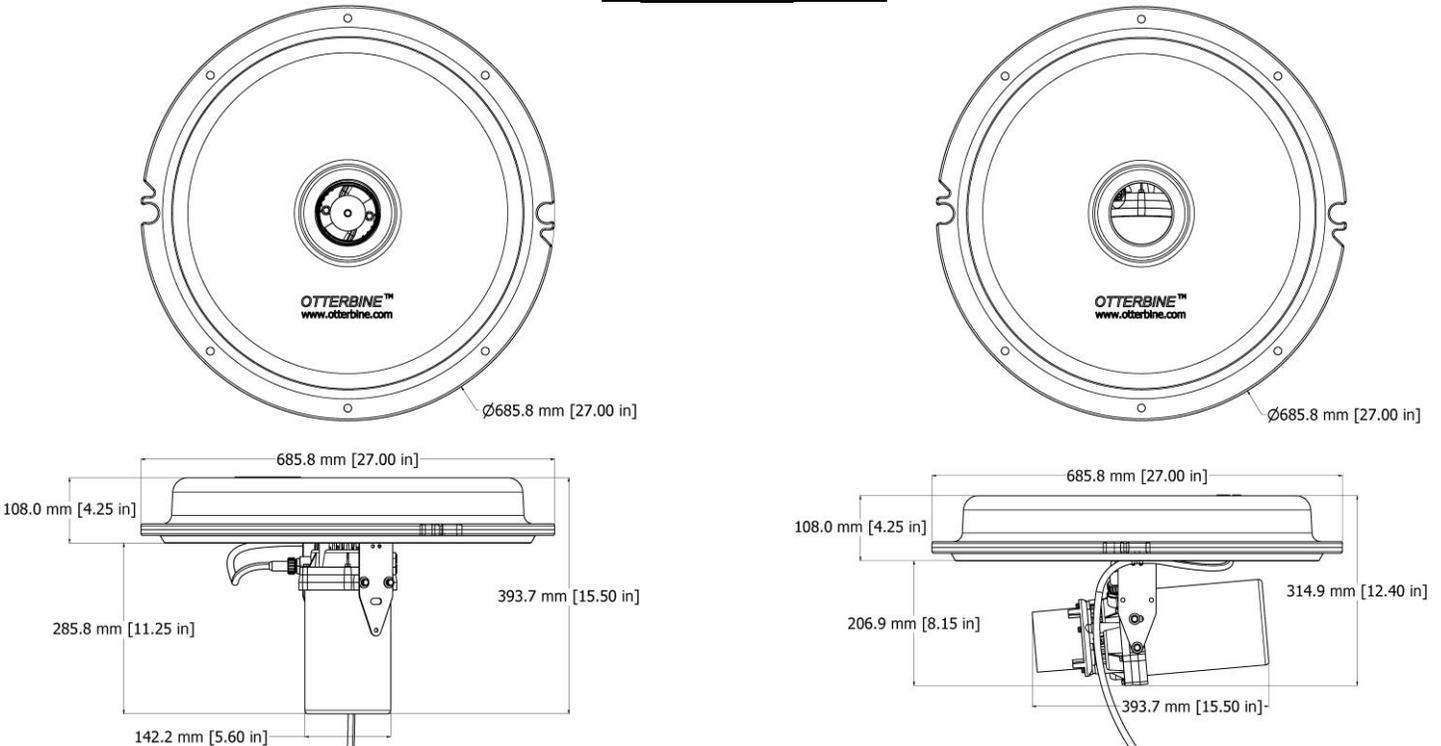
Fractional Series Parts List			
ITEM	QTY	PART NUMBER	DESCRIPTION
1	1	30-0001	Motor - 1/2HP 115/230V 1Ph, 50/60Hz.
2	1	28-0005	Mechanical Seal Washer
3	1	49-0054	Mechanical Rotary Seal
4	1	42-0100	Motor Base Plate
5	1	49-0056	O-ring, Motor Base Plate
6	4	22-0040	Bolt, M6-1 x 40mm Sealing Hex
7	1	47-0012	Motor Housing, 316 S/S
8	1	42-0101	Housing Ring
9	6	26-0006	Nut, M5 Nylon Locknut
10	6	22-0006	Bolt, M5 x 35mm Hex
11	6	28-0016	Washer, M5 Flat
12	1	42-0108	Prop, Open Throat
13	1	40-0014	Slinger Disc, Gemini
14	4	28-0023	Washer, M6 Fender
15	9	28-0021	Washer, M6 Split Lock
16	2	24-0022	Bolt, M6-1 x 20mm Hex
17	1	42-0104	Intake, Decorative Impeller
18	1	49-0055	O-ring, Intake
19	1	42-0106	Impeller, Mixed Flow
20	1	42-0103	Chamber, Decorative Pump
21	1	42-0110	Nozzle, Phoenix
22	1	42-0111	Nozzle, Rocket
23	1	42-0102	Chamber, Open Throat
24	4	24-0010 or 24-0034	Screw, M4 x 16mm Screw, M4 x 30mm (High Volume)
25	4	28-0015	Washer, M4 Split Lock
26	4	28-0014	Washer, M4 Flat
27	2	40-0017	Bracket, Float
28	8	22-0041	Bolt, M6-1 x 14mm Hex
29	1	09-0003	Factory Cable Assembly (MUST REPLACE WITH SAME)
30	2	10-0004	Oil Plug
31	1	42-0042	Float
32	2	GP5008	Cable Tie
33	1	MP6510	Connector, Bulkhead
34	1	MP6511	Connector, Pigtail
35	4	41-0064	High Volume Throat Spacer
36	1	15-0026	Screen
37	8	BP2803B	Screw, 10 x 3/4" S/S Hex Head
38	8	800-011	Washer, 10 x 1" S/S Fender
39	1	47-0002	Ground Clip
40	1	178-003B	Connector, Ring



PATTERN COMPONENT ASSEMBLY



UNIT DIMENSIONS



INTENTIONALLY BLANK

Limited 2 Year Warranty
Otterbine® Product

WARRANTY: Barebo, Inc 3840 Main Road East, Emmaus Pennsylvania 18049, U.S.A. hereby warrants, subject to the conditions herein below set forth, that should the **OTTERBINE** product prove defective by reason of improper workmanship or materials at any time during the warranty period the Purchaser at retail will be guaranteed that **BAREBO** will repair or replace the said **OTTERBINE** product as may be necessary to restore it to satisfactory operating condition, without any charge for materials or labor necessarily incident to such repair or replacement, provided that:

- a) For proper warranty consideration register on line at: **www.otterbine.com/warrantyform** and/or return the warranty registration card by mailing it to **BAREBO** within fifteen (15) days of the original receipt by the Purchaser at retail in order to avoid delays:
- b) The **OTTERBINE** product must be delivered or shipped, prepaid, in its original container or a container offering an equal degree of protection, to **BAREBO** or a facility authorized by **BAREBO** to render the said repair or replacement services or, if purchased from an authorized **OTTERBINE** dealer, to such dealer;
- c) The **OTTERBINE** product must not have been altered, repaired or serviced by anyone other than **BAREBO**, a service facility authorized by **BAREBO** to render such service, or by an authorized **BAREBO** dealer, and the serial number of the **OTTERBINE** product must not have been removed or altered: and
- d) The **OTTERBINE** product must not have been subjected to lightning strikes and other Acts of God, vandalism, freezing-in, accident, misuse or abuse, and must have been installed in conformance with applicable electrical codes (including proper electrical protection), and also installed, operated and maintained in accordance with guidelines in the Owner's Manual shipped with the Otterbine product.

No implied warranties of any kind are made by **BAREBO** in connection with this **OTTERBINE** product, and no other warranties, whether expressed or implied, including implied warranties of merchantability and fitness for a particular purpose, shall apply to this **OTTERBINE** product. Should this **OTTERBINE** product prove defective in workmanship or material, the retail Purchaser's sole remedy shall be repair or replacement as is hereinabove expressly provided and, under no circumstances, shall **BAREBO** be liable for any loss, damage or injury, direct or consequential, arising out of the use of, or inability to use, the **OTTERBINE** product, including but not limited to retail Purchaser's cost, loss of profits, goodwill, damages due to loss of product or interruption of service, or personal injuries to Purchaser or any person.



Water Works With Otterbine!

FOR FURTHER INFORMATION OR INSTRUCTIONS ON OTTERBINE PRODUCTS

VISIT OUR WEBSITE:

www.otterbine.com

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E-mail: aeration@otterbine.com