



800-821-3177

## AQUARIAN/ICE-AWAY DIFFUSER / PROPELLER MOTOR and MOTOR LEAD REPLACEMENT INSTRUCTION

2/28/13

- STEP 1) Place the unit upright on a flat surface. **CAUTION: Do not allow the unit to fall over as damage may occur.**
- STEP 2) Cut and discard the retaining ties that are used to retain the original motor lead along the diffuser support arm.
- STEP 3) Remove the four 5/16-24 nylon-locking nuts and flat washers. Use a ½ inch wrench for the removal of the motor nuts.
- STEP 4) Lift the diffuser upward to clear the motor attachment studs. Position the diffuser out of the way to enable access to the propeller and the remaining four motor washers. Place these four washers with the other previously removed washers (Step 3) and the nylon locking nuts for use upon re-assembly. The propeller is not attached in anyway to the motor shaft other than the combination of a spline within the propeller and on the motor shaft and downward thrust. No screws, glues or fasteners are used.
- STEP 5) Grasp the propeller and pull upward close to the hub of the propeller. The hub of the propeller is “splined” to engage the splined shaft of the motor. The force to disengage the propeller from the motor shaft may require the use of a flat bladed screwdriver positioned with the flat of the blade just under the hub of the propeller. Using one of the motor studs as a fulcrum point, exert downward pressure on the handle of the screwdriver to assist in the removal of tightly fitting propellers and separate the propeller, diffuser and motor. If you are replacing the propeller only, you may stop here and reverse the steps you have taken back from STEP 5 to Step 1.
- STEP 6) Loosen and remove the motor lead jam nut and wire by using a ¾ inch open-end wrench. After loosening the nut pull directly and straight upward to remove the motor lead watertight connector from the motor.
- STEP 7) Position the existing or the replacement motor on a flat surface.
- STEP 8) As desired, insert the original or the replacement motor lead through the diffuser (small hole) into the motor lead socket. Be certain to place the motor lead so that the lead enters on the right of the diffuser arm that is closest to the motor lead connector socket in the top of the motor. The diffuser arm to be used is identified by the “wire-guide” channel on the side of the diffuser arm. Apply silicone dielectric grease to the rubber plug on the motor lead insert the plug into the motor, insert and tighten the jam nut. **Caution: Do not cross thread the jam nut.**

- STEP 9) Reinstall four of the flat washers previously set aside onto the motor studs and position the existing or replacement diffuser over the motor and allowing the motor shaft to project through the center hole in the diffuser.
- STEP 10) Align the existing or replacement propeller hub spline with the motor shaft spline and press downward. It may be necessary, due to tightly fitting propellers to “TAP” the propeller into the seated position on the motor shaft using the handle end of a hammer. **CAUTION: Do not use excessive force or hammering to the propeller on to the motor shaft. Damage will result to the propeller, motor OR both.**
- STEP 11) Reinstall the remaining four flat washers and secure with the four nylon lock nuts. Tighten to 85-in/lbs. of torque.
- STEP 12) Install new retaining ties around the diffuser arm and motor lead previously mentioned in step # 8 positioning and tightening the ties in the molded notches provided.

#### AQUARIAN AQUACULTURE PARTS LIST

