

SAm[®] Spectrum Amerlite[®] Repair Kit Instructions

IMPORTANT SAFETY INSTRUCTIONS READ AND FOLLOW ALL INSTRUCTIONS SAVE THESE INSTRUCTIONS



Attention Installer: These instructions contain important information about the installation, operation and safe use of this product. This information should be given to the owner and/or operator of this equipment after installation.



WARNING — Before installing this product, read and follow all warning notices and instructions which are included. Failure to follow safety warnings and instructions can result in severe injury, death, or property damage. Call (800) 831-7133 for additional free copies of these instructions.



DANGER! Risk of Electrical Shock or Electrocution!



This product must be installed by a licensed or certified electrician or a qualified pool serviceman in accordance with the National Electrical Code and all applicable local codes and ordinances. Improper installation will create an electrical hazard which could result in death --- or serious injury to pool users, installers or others due to electrical shock, and may also cause damage to property. Always disconnect the power to the pool light at the circuit breaker before servicing the light. Failure to do so could result in death or serious injury to serviceman, pool users or others due to electrical shock. READ AND FOLLOW ALL INSTRUCTIONS IN THIS MANUAL.



WARNING — Important Safety Information for Pentair Niche and Light Installation

- All Niche and Light installations must conform with all codes. If local codes mandate a cord seal, use Pentair plastic niches (P/N 79206600 and P/N 79206700).
- Under no circumstances replace lights by splicing wire under water or behind niche.



WARNING — *RISK OF ELECTRIC SHOCK AND INJURY.*
USE ONLY THE INSTALLATION METHOD SPECIFIED BELOW.

Important Safety Information for Fountain Fixture Installations

Location of Luminaire Use	Pentair Fountain Fixture* (P/N 560000 – P/N 560001) (P/N 560002 – P/N 560003)	Required Installation Method
Swimming Pool or Spa	Wet-Niche Swimming Pool (or Spa) Luminaire (Light)	Fixture Housing (Forming Shell) ONLY. DO NOT USE Fountain Fixture Stand.
Fountain	Wet-Niche Submersible Swimming Pool (or Spa) Luminaire (Light)	Fixture Housing (Forming Shell) or Fountain Fixture Stand.

(* **Note:** Wet-niche luminaires complying with requirements for both uses may bear both the Listed Wet-Niche Swimming Pool (or Spa) Luminaire UL Mark and the Listed Wet-Niche Submersible Luminaire UL Mark. A luminaire not bearing the corresponding UL Listing Mark is not considered by UL to have been produced under UL's Listing and Follow-Up Service for the associated usage location.

Pentair Water Pool and Spa, Inc.

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Important Notice

Instructions must be followed carefully to reduce service time, avoid misdiagnosis, and ensure a satisfied customer.

A. Identification of faulty unit.

1. Start with SAm light(s) off for at least 10 seconds. Turn on SAm light(s). Lamps should be on but color wheel should be stationary.
2. Toggle the power switch(es) off/on. If dealing with multiple SAm units be sure that the units are either powered by the same switch or you toggle all switches at the same time. Have someone watching the lights to confirm they all go off and back on.
3. Give the units 21 seconds to go through the synchronization routine. The colorwheel may fast forward or stay locked on white during this period. After the approximate 21 second synchronization cycle, the lights should start to slowly rotate from white to green. If this does not occur then that specific light is faulty.
4. After the initial 21 second synchronization cycle, the light should continue to gradually change colors and eventually come back to the white color. The total cycle time for this is one minute. The light should continue rotating through this cycle of colors. Allow the light to operate for 10 minutes with the colorwheel rotating. If the color wheel stops on a color or fast forwards at any time then it is a faulty unit. When inspecting multiple lights at once be sure to identify only those units with the above symptoms. A multiple unit installation that has been diagnosed as having “out of synch” units may only have one faulty unit.

B. Diagnosis of faulty unit.

1. For 12 Volt SAm models make sure there is adequate voltage supplied to the light fixture.
 - a. Measure the voltage at the J-box or transformer where the orange cord from the light is connected. **The light must be on** in order to get an accurate measurement of the supply voltage.
 - b. Estimate the cord length from the actual light to the end of the orange cord where the voltage measurement was taken (include slack cord stored in the niche).
 - c. The following table provides data on voltage drop in relation to supply voltage and cord length. Use the chart to determine the actual voltage at the light.

ACTUAL VOLTAGE AT THE LIGHT					
Estimated Cord Length (feet)	Measured Voltage				
	10.0 V	11.0 V	12.0 V	13.0 V	14.0 V
15	9.5 V	10.5 V	11.4 V	12.4 V	13.4 V
30	9.0 V	9.9 V	10.9 V	11.8 V	12.8 V
50	8.4 V	9.3 V	10.2 V	11.1 V	12.0 V
75	7.7 V	8.5 V	9.4 V	10.3 V	11.1 V
100	7.0 V	7.9 V	8.7 V	9.5 V	10.3 V

- d. If the actual voltage at the light is less than 9V the unit will not operate properly. Switch transformer to a higher tap. If there is a long run between the transformer and J-box the wire size on this run may need to be increased in order to achieve the desired 9V minimum.
- e. Once the actual voltage at the light is above 9V retest light as described in Section A.

2. Turn off main electrical switch or circuit breaker as well as the switch which operates the light itself.

DANGER



Always disconnect power to the pool light at the circuit breaker before servicing the light. Failure to do so could result in death or serious injury to installer, serviceman, pool users or others due to electrical shock.

3. Remove light from niche and place on the deck.
4. Remove lens assembly and restore power to unit.
5. Follow Steps 1 through 3 described in Section A. **Do not operate light for more than 3 minutes.**
 - a. If the light functions properly then only the lens is faulty. Only the lens and gasket need to be replaced.
 - b. If the light still does not function properly the motor bracket may have been damaged also. The motor assembly as well as the lens and gasket need to be replaced.

C. Repairing the Faulty Unit.

1. Replacing the motor assembly (if required).
 - a. Turn off main electrical switch or circuit breaker as well as the switch that operates the light itself.
 - b. Remove the outer colorwheel hub. This is the plastic part with the word “LIFT” molded across the center. Use a screwdriver to individually undo the three locking tabs.
 - c. Remove the colorwheel.
 - d. Remove the colorwheel motor assembly ground wire attached to the colorwheel motor support bracket. Use a pair of needle nose pliers or a 5/32 nut driver on the retaining nut.
 - e. Remove the retaining screw located on the bottom of the colorwheel motor support bracket.
 - f. Carefully remove the 4-pin connector from the colorwheel motor assembly. Wiggle the connector gently while pulling. **DO NOT** pull on the wires.
 - g. Plug in the new colorwheel motor assembly and replace retaining screw. Align the colorwheel motor support bracket with two locating pins. Do not over tighten retaining screw.
 - h. Replace the colorwheel motor assembly ground wire and retaining nut. Be sure that the ground wire is parallel or facing downward in relation to the base of the light. If the ground wire is angled up it could interfere with the lens.
 - i. Replace the colorwheel. There is no particular orientation
 - j. Snap the white colorwheel retainer into place. Align the word “TOP” on the retainer with the word “TOP” inside the light. Confirm it is fully snapped into position.
 - k. Restore power to unit and follow Steps 1 through 3 described in Section A. **Do not operate light for more than 3 minutes.** The colorwheel should now function properly. If it does not, replace entire unit.
2. Replacing the lens assembly (required on every repair).
 - a. Turn off main electrical switch or circuit breaker as well as the switch that operates the light itself.
 - b. Use the new gasket and lens provided in the kit. **DO NOT** reinstall the old lens and gasket.
 - c. Align the special pilot screw on the face ring with the letter “O” of the word “TOP” on the surface of the lens. The pilot screw and the “O” in “TOP” should also align with the cord compression fitting on the top rear or the light fixture.
 - d. With the bent ends of the circular uni-tension clamp away from the lens spread the clamp and place it in the “U” recesses of the locking levers. Place the ends of the clamp between a pair of the locking levers so they are oriented in either the 2 or 10 o’clock position in reference to the pilot screw. Check to see that the clamp is properly engaged with all of the locking levers.
 - e. Tighten the uni-tension clamp nut and bolt assembly until the distance between the ends of the clamps equals ¼ inch or less.
 - f. Restore power to unit and follow Steps 1 through 3 described in Section A. **Do not operate light for more than 3 minutes.** The colorwheel should now function properly. If it does not, replace entire unit.

SAVE THESE INSTRUCTIONS

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