

Model 4600 Underwater light Service and repair Guide

Rain Jet - OASE Model 4600

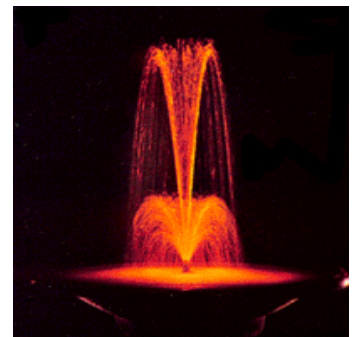


These lights are widely used in all types of fountain applications. From simple single light units, to fountains with multiple lights and animation. For architectural and floating fountain applications. There is an optional "base and yoke" assembly available for use in stationary or architectural fountains.

Architectural fountains often use multiple underwater lights to achieve their nighttime glory. Three lights per nozzle is not uncommon in a commercial application. But due to the cost of the fixtures, in residential applications you may find only one light per nozzle. If multiple lights are used you can add different colored lenses to achieve spectacular effects



With the use of the optional "Color Blender" you can have an ever changing nighttime display, as pictured to the right. With multiple colors available, you can mix and match to find that perfect combination.



Tools Required



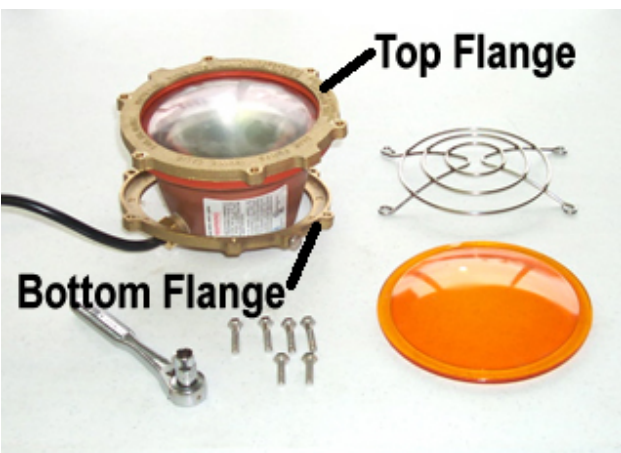
To change a lens, lens gasket, or bulb, the only tool you will need is some type of 7/16" socket or wrench. If you are changing a socket, you will need some wire cutters, wire strippers and some wire nuts.



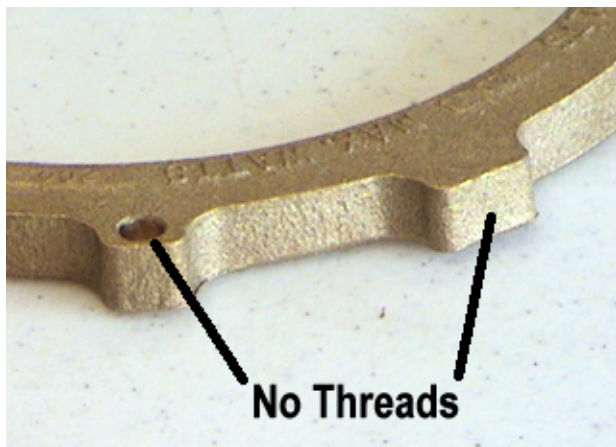
With all of the bolts removed, the bottom flange will separate from the top flange. You will notice that four of the bolts are slightly longer than the other two. The longer bolts are for use with the stainless steel rock guard.



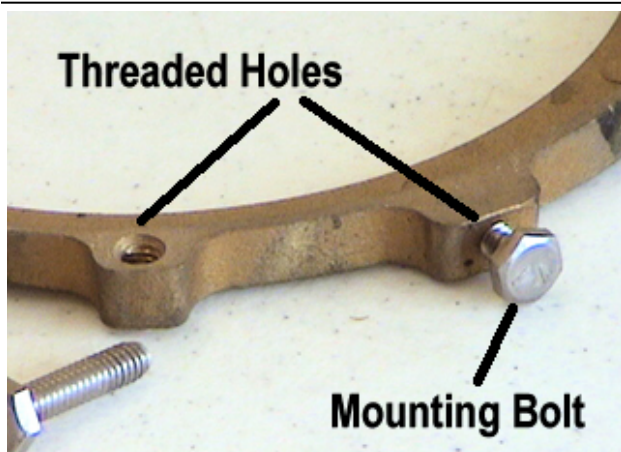
Continue removing all of the bolts (six total) all the way around the the light. When removing the last bolt you may find it necessary to hold up on the opposing side of the flange so the bolt does not bind up.



With all of the bolts removed, the bottom flange will separate from the top flange. You will notice that four of the bolts are slightly longer than the other two. The longer bolts are for use with the stainless steel rock guard.



Upon closer inspection, you will notice that the top flange does not have any threads for the bolts. The bolt holes allow the bolts to slide freely through the holes.



In the bottom flange you will notice that all of the holes are threaded in order to receive the bolts. The two small tabs on the bottom flange are used to attach the light to the base and yoke assembly or other type of mounting hardware.



With all of the bolts removed, you can lift the top flange off of the fountain light. This will expose the "Red Silicone Lens Gasket" which surrounds the lens.



Lens and Gasket Removal

With the top and bottom flange removed the lens and lens gasket will be exposed.



The Silicone gasket will lift off of the ridge of the potted can assembly. Sometimes it will stick to the can and is difficult to break free. Being careful not to damage the gasket, you can use a straight sided screwdriver between the lens gasket and the ridge of the potted can. Sometimes the bulb will also be stuck to the lens gasket.



To remove the lens from the lens gasket, begin at one edge and slowly pry the gasket from the lens. Work your way around the outer circumference of the lens.



While working around the lens begin to place the gasket behind the lens until the lens is completely free from the gasket.



The lens is constructed out of glass and are fragile. They are available in a variety of colors.

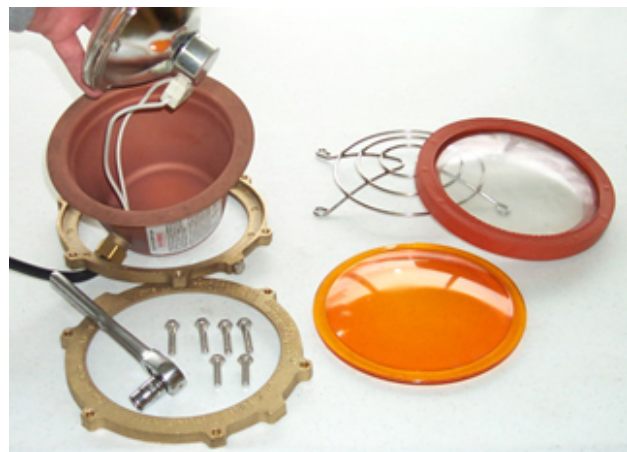
*Clear - Light Red
Dark Red - Amber
Dark Green - Dark Blue
Turquoise*



The red silicone gasket houses the lens. It is compressed between the top flange, potted can, and the bottom flange to make a water tight seal.



Now that the lens and gasket are removed, the bulb is exposed and ready for removal.

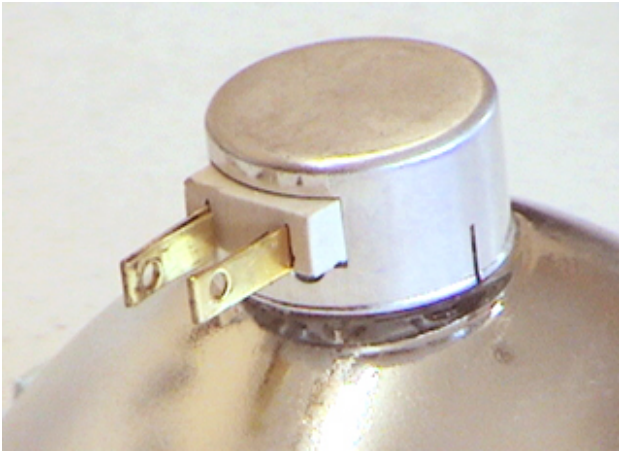


Bulb Removal

At this point the bulb should be easily lifted from the potted can. If you can not get a hold on the bulb, just turn the potted can over and the bulb should fall into you hand.



Gently grab the porcelain socket and pull it off of the bulb.



The plug on the bulb is similar to a standard house type of plug.



The bulb is a 200 Watt 120 Volt Par 46 with side prongs. They are available in "Narrow Spot", "Medium Flood" and "Flood". The most popular of the beam angles is the narrow spot.



Bulb Installation

To install the new bulb, simply hold the new bulb over the potted can assembly



Then re-attach the porcelain socket back onto the side prongs of the bulb.



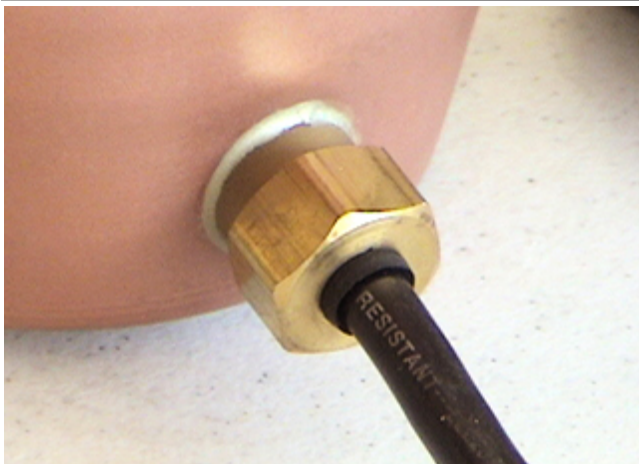
Set the new bulb back into the potted can so the bulb comes to rest on the slight indentation in the potted can.



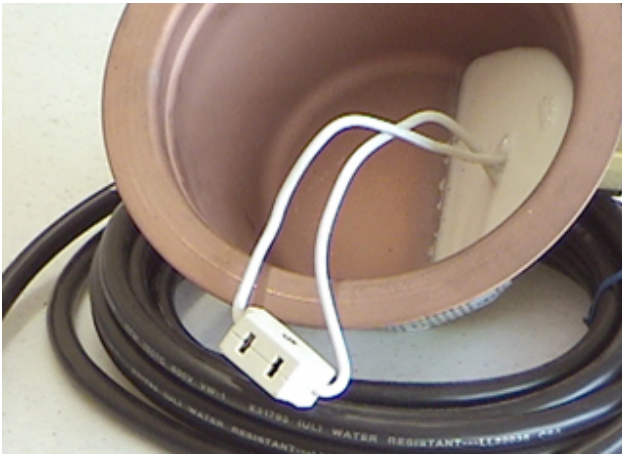
Potted Can Assembly



The potted can assembly consists of the power cord, copper can with cord seal, and the porcelain socket. The porcelain socket is the only serviceable item in the potted can assembly.



The power cable which supplies the AC current to the light is not a replaceable item. If the cord or cord seal is bad, you will have to replace the entire potted can.



If any of the wiring inside the potted can is damaged, you should replace the entire potted can assembly. Cased inside the porcelain sealant are the wire connections as well as a thermal overload circuit. This is not a serviceable item.



If the wires in your potted can are in good condition, you can replace the porcelain socket.

In order to replace the socket, cut the wires in your existing potted can close to the socket. **DO NOT** cut the wires close to the porcelain sealant.



Using wire nuts attach the new porcelain socket to the newly cut and stripped wires in your potted can.

Upon completion of the socket replacement you can re-install the bulb.



Lens Replacement

*Lenses are available in.
Clear – Amber - Light Red
Dark Red - Dark Green
Dark Blue - Turquoise*



Before you re-assemble your light, clean the top surface of the potted can and your silicone gasket. Inspect the gasket for any cut or tears. They are pretty durable, but may need replacing after many years of service.



With the gasket in one hand, place the lens under the lip of the gasket.



Begin to work your lens into the gasket by folding the lip of the gasket up and over the lens



You may have to stretch the last portion of the gasket in order to get it over the final portion of the lens.

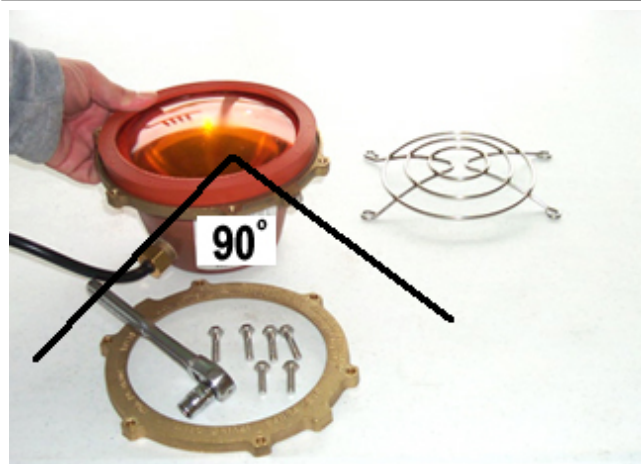


When completed, you are ready to put the lens onto the potted can. The lens should sit flush on the lip of the can. You may have to adjust the bulb slightly if the lens and gasket do not want to sit flush on the lip of the can.



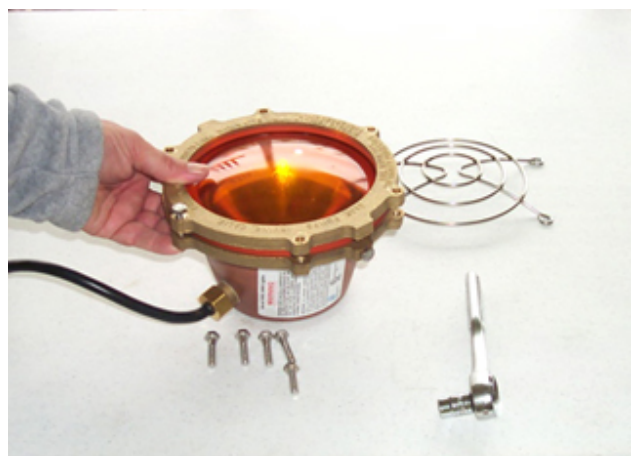
If you have power available to your light, it is a good idea to make sure that the bulb is working before closing up the light fixture.

CAUTION: Do Not leave the bulb on for extended periods of time while out of the water.



Final Assembly

Hold the bottom flange back up to the bottom side of the lip on the potted can. Notice where the mounting holes are in relationship to the cord. It's a good idea to have the mounting holes 90 degrees from the cord assembly, so it doesn't interfere with any mounting hardware.



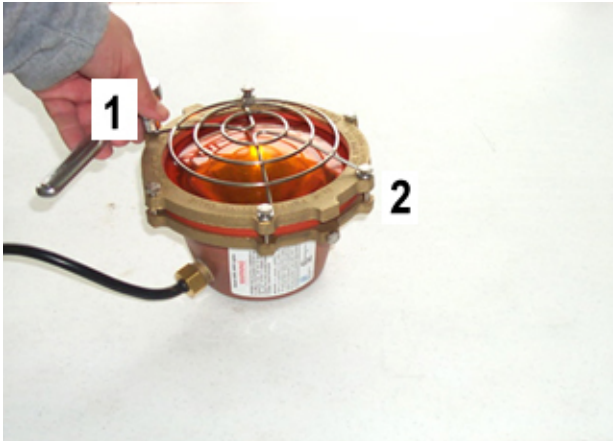
Place the top flange back onto the light so that the wholes properly align and the mounting points align. Using the two shorter bolts, place one of the bolts in the hole which is 90 degrees from the mounting bolt hole. Just place it in finger tight at this point.



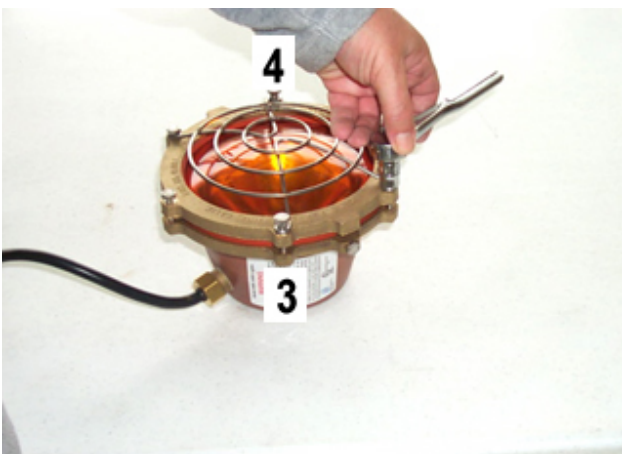
Using the other short bolt place it 180 degrees (or the opposite side) of the previous bolt. Again just finger tight at this point. This will hold the assembly together while you replace the remaining bolts.



Place the rock guard on the light and using the four longer bolts loosely return all four of the into the last four holes. Sometimes the rock guard will put the last bolt into a slight bind which will make it more difficult to turn. You can use your wrench if you need to, but make sure that you do not cross thread the bolt. .



It is best to start working opposite sides when tightening the bolts. Tighten the first bolt about half way. Then move to the opposite side and tighten it about half way.



Go completely around the light working opposite sides until all of the bolts are about half tight. Once you get back to the first bolt you started with, go ahead and tighten it all the way.



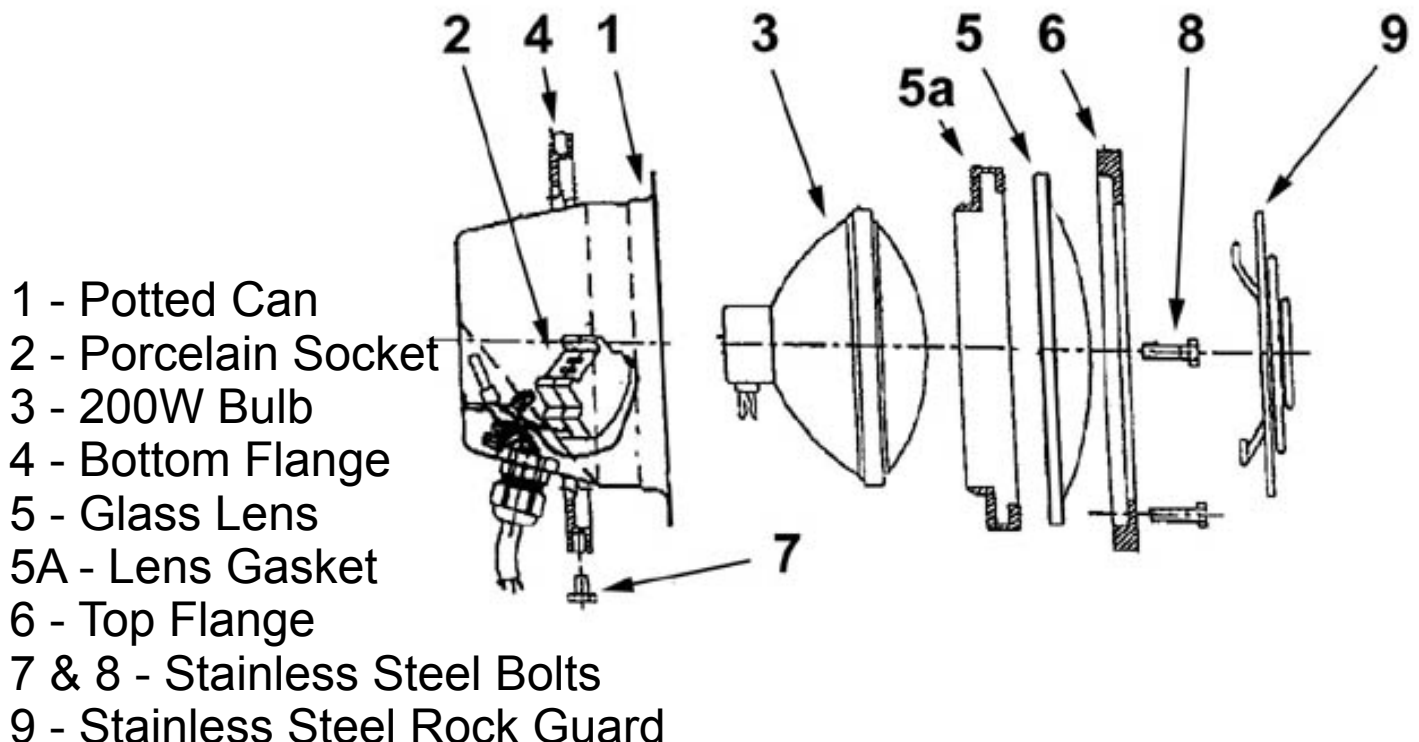
Continue tightening the bolts until they are all tight. For the most part you can't over tighten the bolts. When you are finished, the metal on the top and bottom flanges should be almost touching. It is OK if there is a slight gap between the top and bottom flange.



Your light is now ready to be put back into service.

CAUTION: ALL ELECTRICAL circuits in a fountain must be protected by a GFCI or have Ground Fault protection. This will turn the power off in the event that you have a short circuit.

Model 4600 Light parts breakdown



1) My Lights are tripping the Circuit Breaker.

If your light or lights are tripping the circuit breaker, this is an indication that you have some type of short circuit. You will need to inspect each light on the circuit for a possible leak. If you find one light which has some water in it, this would more than likely be the cause. Electrical issues can be the most difficult to find and fix. Sometimes it is obvious what the problem is, a broken lens, a cut cord etc. But other times it can be extremely difficult. If you have multiple lights on the one circuit, Disconnect all of the lights in the main junction box. Then hook each on up to the power separately and test the circuit. The circuit will trip when you find the offending fixture. Caution: sometimes the lights will not trip the circuit when they are out of the water. So you may need to test them fully submerged. With a lot of patience, you will find and fix the problem.

2) Does the light have to be underwater.

Yes, the light has to be fully submerged to operate. If the light or lights are operated with the lens exposed out of the water, it will get extremely hot and break the lens. It will possibly burn out the bulb also.

3) Can I replace the cord.

No: you can not replace the cord. The only part that can be replaced in the potted can assembly is the porcelain bulb socket.

4) What type of bulb does it take.

The Model 4600 light fixture, required a 200 Watt 120V PAR46 bulb with side prongs. They are available in NSP (narrow spot) or MFL (medium flood) with NSP being the most popular.

5) Where can I get replacement parts.

<http://www.pondandlake.com>

6) Do I have to replace the gasket.

The lens gaskets seem to last forever, but if it is cut or damaged in any way we would recommend that you replace the gasket.