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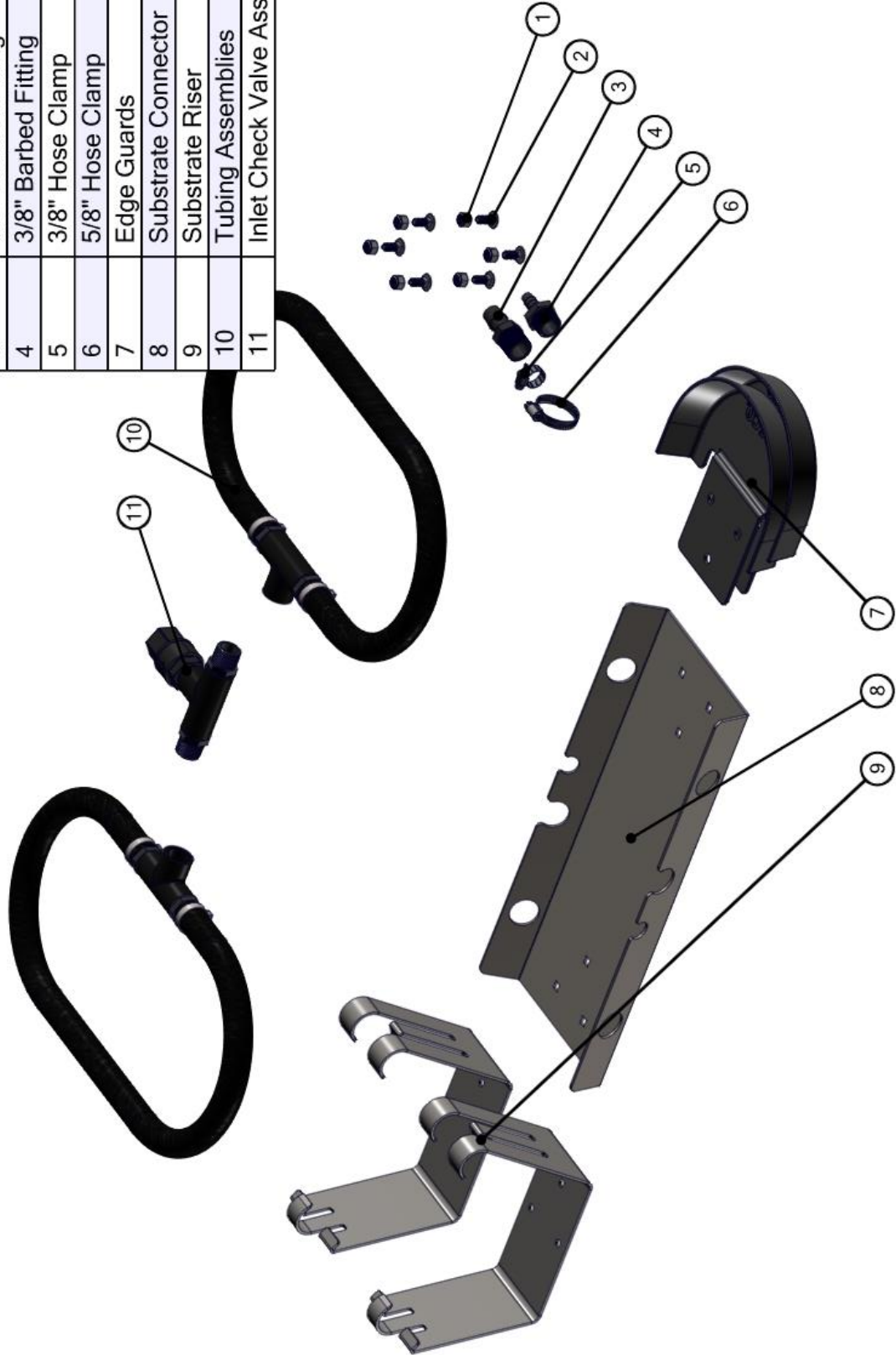
## Robust-Aire Diffuser Assembly



Watch our assembly animation at <http://kascomarine.com/products/diffusers/robust-aire/video>

An unpacked Robust-Aire Diffuser. Please reference this image throughout assembly for part names.

BOM ID	Description	Qty
1	Lock Nut	6
2	Carriage Bolt	6
3	5/8" Barbed Fitting	1
4	3/8" Barbed Fitting	1
5	3/8" Hose Clamp	1
6	5/8" Hose Clamp	1
7	Edge Guards	2
8	Substrate Connector	1
9	Substrate Riser	2
10	Tubing Assemblies	2
11	Inlet Check Valve Assembly	1



Please refer to parts reference guide on back page if a part is missing.

## Suggested Installation Tools & Methods

- 7/16" socket wrench with shaft extension or 7/16" nut driver
- Adjustable Wrench
- Flathead screw driver or ¼" Nut Driver
- Retrieval ropes longer than the desired installation depth. (Optional)
- Marker Buoy (Optional)

## Warnings and Suggestions

When installing do not use boats that tip easily, such as a canoe. Follow all boating safety rules and regulations, including wearing a PFD. (Personal Flotation Device)

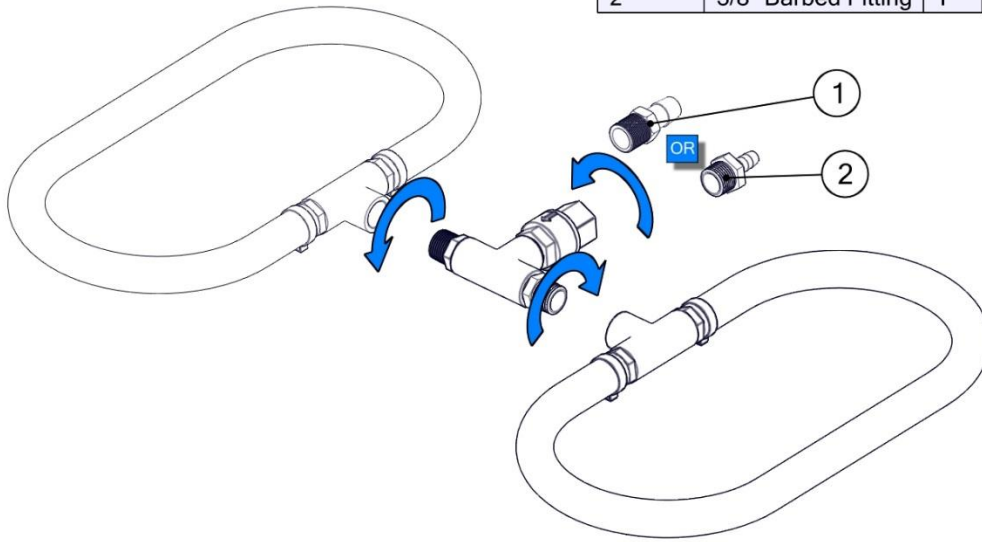
Make sure to unroll any rolls of SureSink tubing that have been received before installing the diffuser. Unrolling the tubing will make it less likely to kink as it is being taken out with the diffuser to the installation site. Make sure to also unroll and connect any additional rolls of Suresink before going to the installation site.

Using a retrieval rope coupled with a buoy will allow for easy retrieval of the unit if maintenance is ever needed or the need to move the diffuser arises.

## Assembly Instructions

<p>3/8" Hose Clamp</p> <p>3/8" Barbed Fitting</p> <p>5/8" Hose Clamp</p> <p>5/8" Barbed Fitting</p>	<p><b>Note:</b> When finished assembling your diffuser you will be left with the parts needed for either the 3/8" or 5/8" SureSink tubing. These are included in the kit as user SureSink size is unknown at the time of making the product.</p>
	<p><b>Step 1:</b> After unpacking your box, the tubing assembly tee's open end will be turned towards the center of the loop. Twist the tee fitting so the open end will face away from the center of the tubing loop.</p>

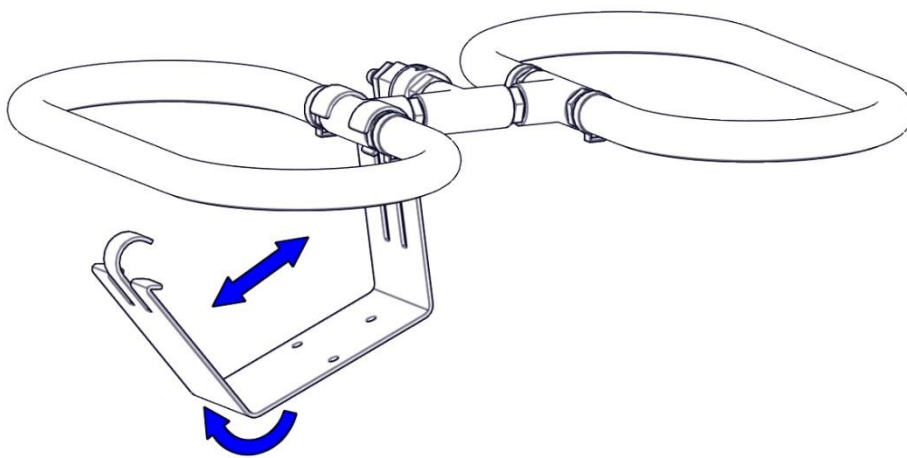
BOM ID	Description	Qty
1	5/8" Barbed Fitting	1
2	3/8" Barbed Fitting	1



**Step 2:** Assemble both Tubing Assemblies to the Inlet Check Valve assembly.

Tighten until snug making sure blue line on both aeration tubing assemblies face the same direction and are parallel with the Inlet Check Valve Assembly.

Tighten a barbed fitting into the check valve assembly. Choosing a barbed fitting depends on the customer's SureSink tubing size. Use an adjustable wrench to tighten the barbed fitting to the Inlet Check Valve Assembly.



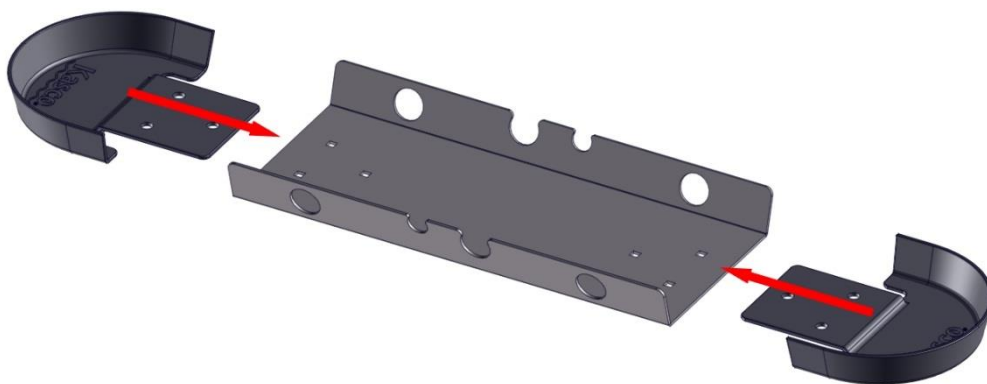
**Step 3:** With the blue line on the tubing facing down, attach substrate riser around tee fitting.

Rotate up and secure aeration tubing into substrate riser.



**Step 4:** Repeat step 3 to attach both substrate risers to the assembly.

**Note:** For best performance, adjust tubing to have equal amount of tubing on either side of substrate risers.



**Step 5:** Take the Substrate Connector Plate and the Substrate Edge Guards and slide the guards onto the connector as shown.



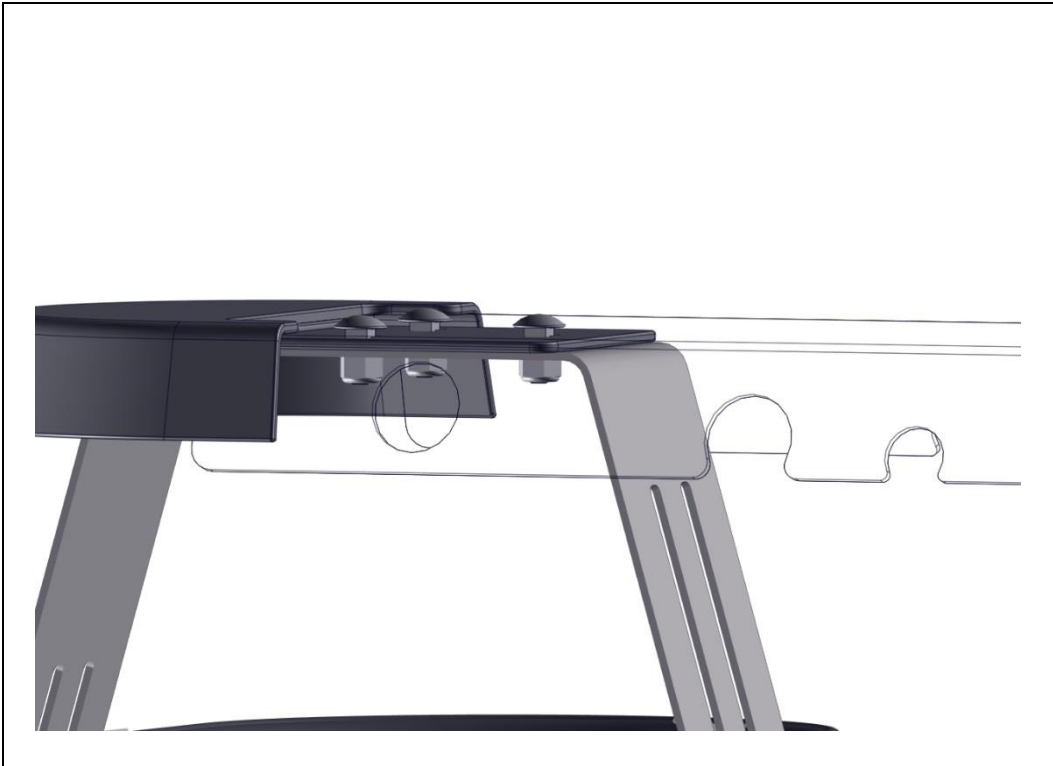


**Step 6:** Rotate the entire assembly and set the tubes on a flat surface.

Next take your substrate edge guards and substrate connector plate and set on top of the assembly as shown.



**Step 7:** Insert the six provided carriage bolts into the holes on the substrate connector plate and loosely tighten them down with the six provided lock nuts to temporarily hold them in place.



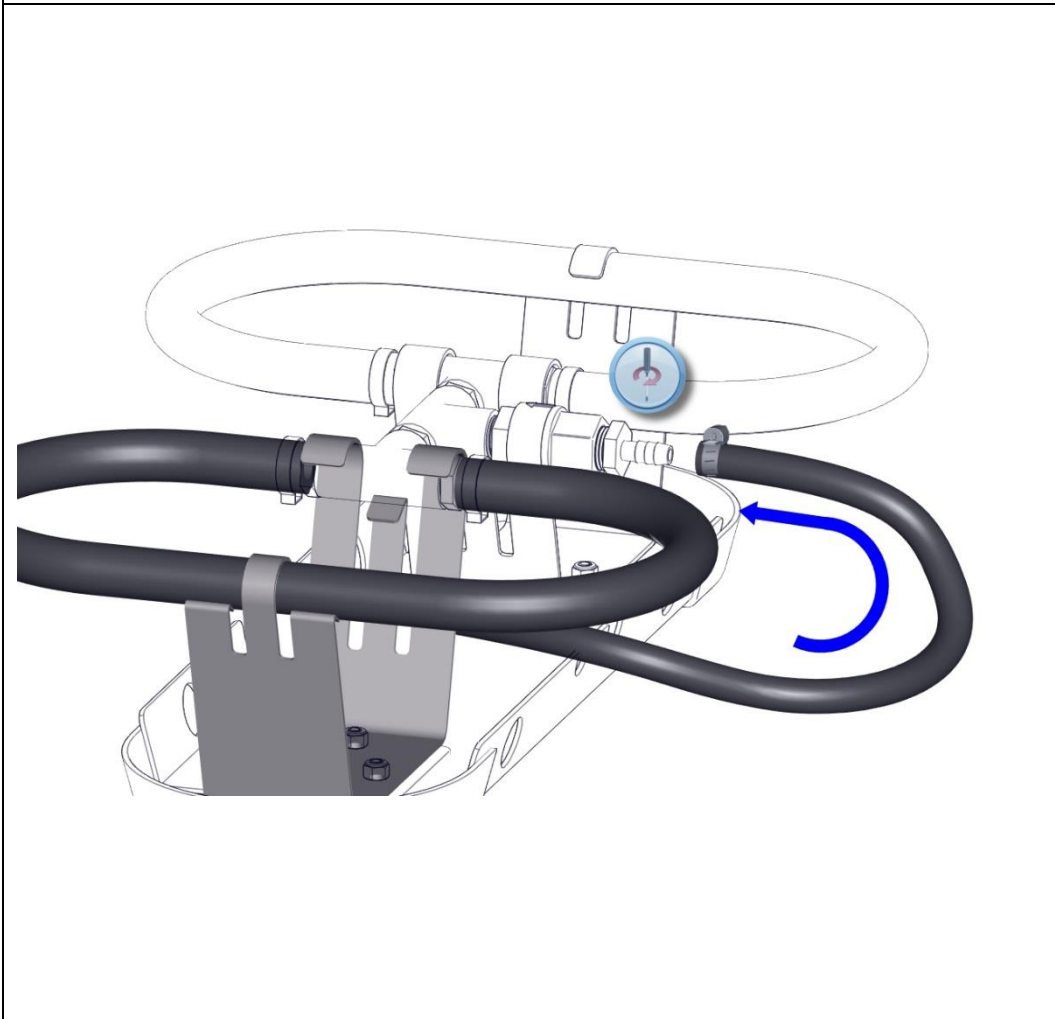
**Step 8:** Flip the diffuser assembly back over and tighten down each nut until snug with a socket wrench or a 7/16" nut driver.

An extender for the socket wrench is recommended.



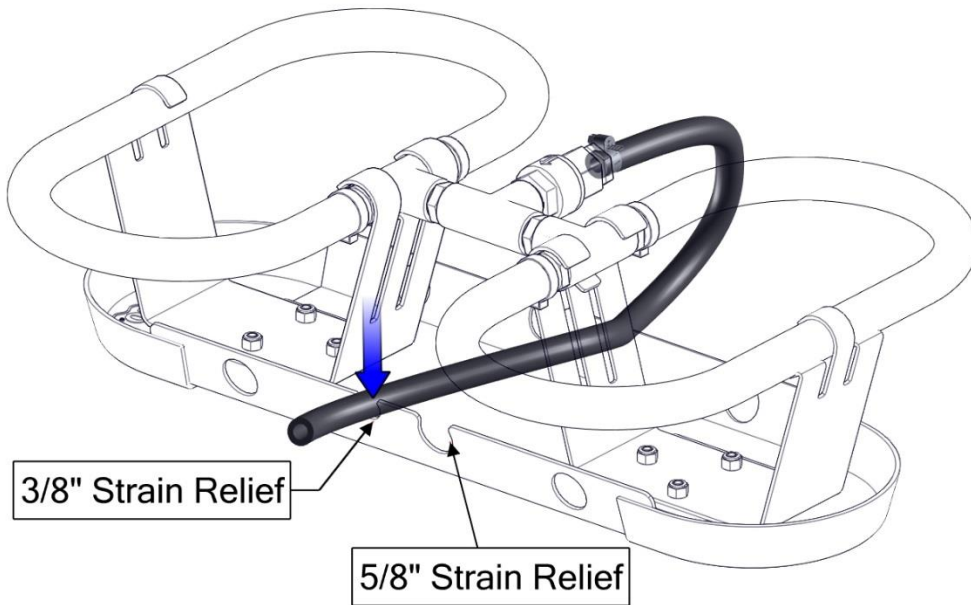


Step 8 completed

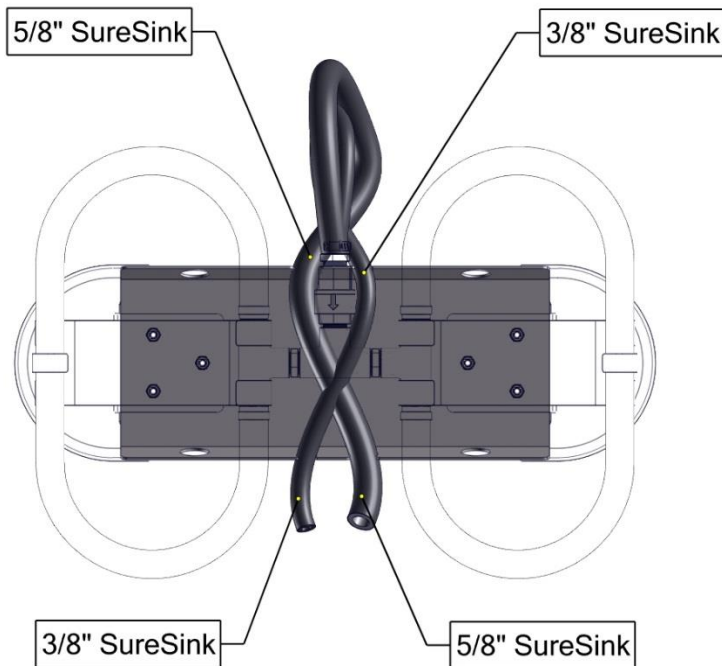


**Step 9:** Slide the provided hose clamp onto the SureSink tubing. Hose clamp size depends on the user's SureSink Size. Feed the weighted tubing over substrate connector leaving plenty of slack, make a generous loop and secure tubing to barbed fitting with the hose clamp.

Tighten down clamp with a flathead screwdriver or a 1/4" nut driver.



**Step 10:** Press weighted tubing into strain relief features on both sides of the connector plate, being sure tubing loop isn't too tight to cause strain on barbed fitting. Strain relief features are designed to accommodate both 3/8" and 5/8" SureSink tubing.

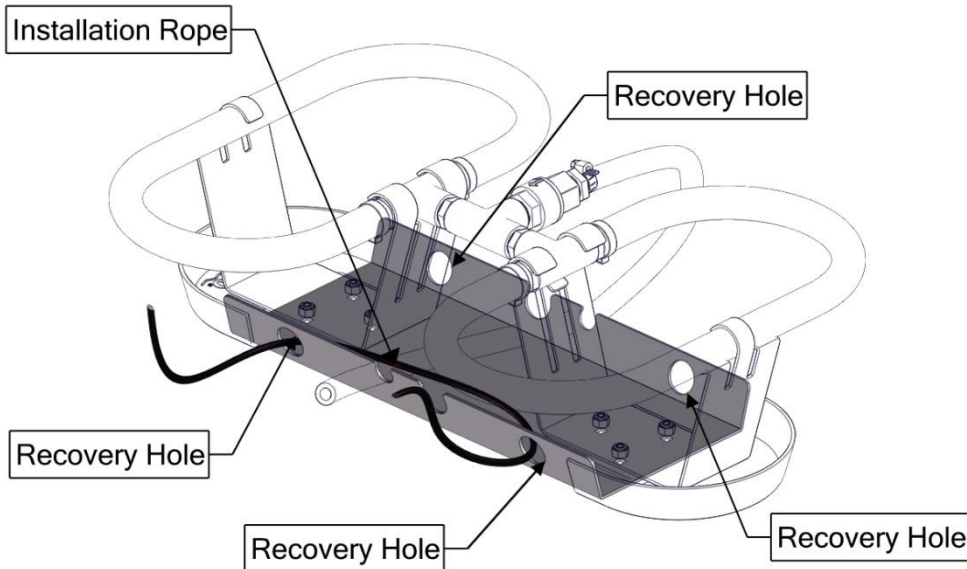


**Step 11:** The SureSink strain reliefs run diagonally through the substrate connector plate. Make sure to press the Sure Sink into both correctly sized holes before installing the unit.



**Water Installation:**

With the SureSink tubing the diffuser is ready to install. If you are unsure how many feet of tubing you will need bring the SureSink out with you and connect the tubing needed on the way back.

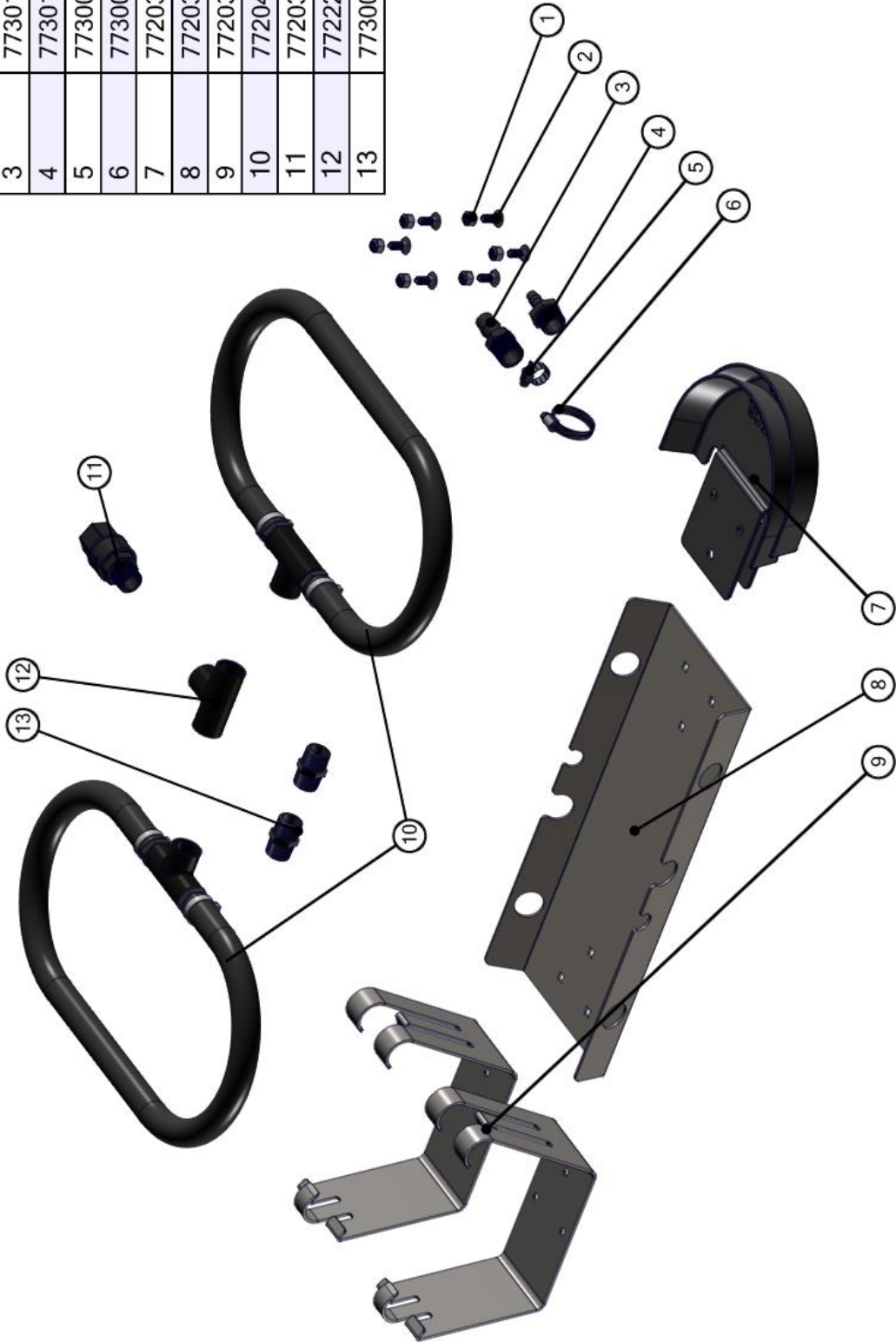


**Optional Step:** Once at the desired location thread a rope through two of the four recovery holes on the diffuser base. Pull through until the rope is at the midway point on the diffuser base.

Slowly lower diffuser until it reaches the bottom of the pond. Once at the bottom tie the installation rope to a marker buoy. Doing this will allow for easier maintenance in the future and also will notify others of the location of the diffuser. Repeat the steps for additional Robust-Aire Diffuser locations.

BOM ID	PartNo	Qty
1	451100	6
2	772034	6
3	773013	1
4	773012	1
5	773008	1
6	773009	1
7	772032	2
8	772031	1
9	772030	2
10	772040	1
11	772033	1
12	772221	1
13	773003	2

# Replacement Parts



In the event of a missing part please call Kasco Marine at 715-262-4488