

10" ULTRA RETRO VINYL SUCTION OUTLET



640-214x V

INSTALLATION INSTRUCTIONS



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WaterwayTM

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VINYL ULTRA RETRO SUCTION OUTLET OWNER'S MANUAL

For Model Numbers: 640-214x V

**VGB
2008**

WARNING



Read and keep these instructions for future reference. Follow all instructions in this owner's manual and on the equipment. Failure to follow instructions can cause severe injury and/or death.

IMPORTANT SAFETY INSTRUCTIONS



WARNING - SUCTION ENTRAPMENT HAZARD

Suction in suction outlets and/or suction outlet covers which are damaged, broken, cracked, missing, or unsecured can cause severe injury and/or death due to the following entrapment hazards:

Hair Entrapment: Hair can become entangled in suction outlet cover.

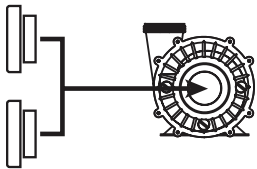
Limb Entrapment: A limb inserted into an opening of a suction outlet sump or suction outlet cover that is damaged, broken, cracked, missing, or not securely attached can result in a mechanical bind or swelling of the limb.

Body Suction Entrapment: A negative pressure applied to a large portion of the body or limbs can result in an entrapment.

Evisceration / Disembowelment Entrapment: A negative pressure applied directly to the intestines through an unprotected suction outlet sump or suction outlet cover which is damaged, broken, cracked, missing, or unsecured can result in evisceration / disembowelment entrapment.

Mechanical Entrapment: There is potential for jewelry, swimsuit, hair decorations, finger, toe, or knuckle to be caught in an opening of a suction outlet cover resulting in mechanical entrapment.

TO REDUCE THE RISK OF ENTRAPMENT HAZARDS:



- Use two or more suction fittings on each pump suction line. The suction fittings shall be separated by a minimum of 3 ft. (91.44 cm), or if any are located closer they shall be located on two different planes (i.e., one on the bottom and one on the vertical wall, or one each on two separate vertical wall).
- In the event of one suction outlet being completely blocked, the remaining suction outlets serving that system shall have a flow rating capable of the full flow of the pump(s) for the specific suction system.
- Dual suction fittings shall not be located on seating areas or on the backrest for such seating areas.
- The maximum system flow rate shall not exceed the flow rating of

any listed (per ASME A112.19.8-2007) suction outlet cover installed. In the event of one suction outlet being completely blocked, the remaining suction outlets serving the system shall have a flow rating capable of the full flow of the pump(s).

- Never use a pool or spa if any suction outlet component is damaged, broken, cracked, missing, or not securely attached.
- Replace damaged, broken, cracked, missing, or not securely attached suction outlet components immediately.
- Two or more suction outlets per pump should be installed in accordance with latest APSP Standards and CPSC guidelines, and follow all National, State, and Local codes applicable.
- Replace the suction within 7 years from the installation date.
- Installation of a vacuum release system, which relieves entrapping suction, is recommended.

USE ONLY GENUINE WATERWAY REPLACEMENT PARTS.

WARNING



Failure to remove pressure test plugs and/or plugs used in winterization of the pool/spa from the suction outlets can result in an increased potential for suction entrapment as described on the previous page.



Failure to keep suction outlet components clear of debris, such as leaves, dirt, hair, paper and other material, can result in an increased potential for suction entrapment as described on the previous page.



Suction outlet components have a finite life. The cover/grate should be inspected frequently and replaced at least every seven years, or if found to be damaged, broken, cracked, missing, or not securely attached.



This fitting is rated at 224 GPM for floor mount and 192 GPM for wall mount. If the fitting is missing or broken, replace with a fitting of equivalent rating or higher. Use of a lower rated suction fitting could result in entrapment of the body which could result in serious injury including drowning.



Do not use or operate pool, spa, or hot tub if this suction fitting is missing, broken or not secured per instructions. The suction fitting is intended to prevent entrapment of the body. Use of the spa hot tub with a missing, broken or improperly secured suction grate may result in serious personal injury including drowning.



When the pool, spa or hot tub is in operation, suction is created at this fitting. Users of the spa or hot tub must be instructed not to come in contact with this fitting in such a way as to block its orifice. If a user of the spa or hot tub blocks this fitting with his/her body, serious personal injury or drowning may occur.



It is imperative to securely attach the suction cover to the wall fittings (use only the original supplied screws or obtain original replacements). Do not over tighten the screws. Inspection of fasteners and observation for damaged/tampered with suction fittings is required.



Any and all broken or missing parts must be replaced prior to starting spa or pool pump. Never operate spa or pool without drain cover in place and properly affixed, death or serious injury can result.



Do not exceed the safe flow rate. Do not increase flow through system by increasing pump size or horsepower.



Do not allow children to sit, play or interact with main drains or suction outlet.

VINYL ULTRA RETRO SUCTION OUTLET - IMPORTANT INFORMATION

Ultra Retro is an underwater suction drain cover system intended to replace any drain cover up to 10 inches in diameter.

The maximum flow rate for Ultra Retro is 224 gallons per minute (GPM) Floor and 192 GPM Wall. Ultra Retro should operate best when used with residential pumps of up to 3 HP. Please ensure your pool or spa pump system meets this specification.

CAUTION: if you do not have two underwater points of suction in your pool or spa for each pump, safety issues regarding suction entrapment exist and could cause serious injury or death. Although Ultra Retro incorporates patent pending features to better protect from suction entrapment, this product may not resolve all single point of suction issues. If you do not have two underwater points of suction for each pump in your pool or spa, we recommend you contact a licensed pool builder or remodeler to install a second point of suction.

ULTRA RETRO SUCTION OUTLET INCLUDED COMPONENTS

Your Ultra Retro includes five important components. All components #1-4 below must be used for proper installation. These components are as follows:

1. Gray drain cover support plate
2. Drain cover
3. Vinyl ring
4. Eight white plastic oval slot plugs that must be installed in the drain cover support plate after it is affixed to the pool or spa surface
5. Three #10 x 7/8" security screws to secure drain cover to drain cover support plate, together with a tool for installing these screws
6. Assorted screws and fasteners for attaching drain cover support plate to pool or spa surface (see Figure 1)

See the following Installation Instructions to determine which components you will need to use for your installation.

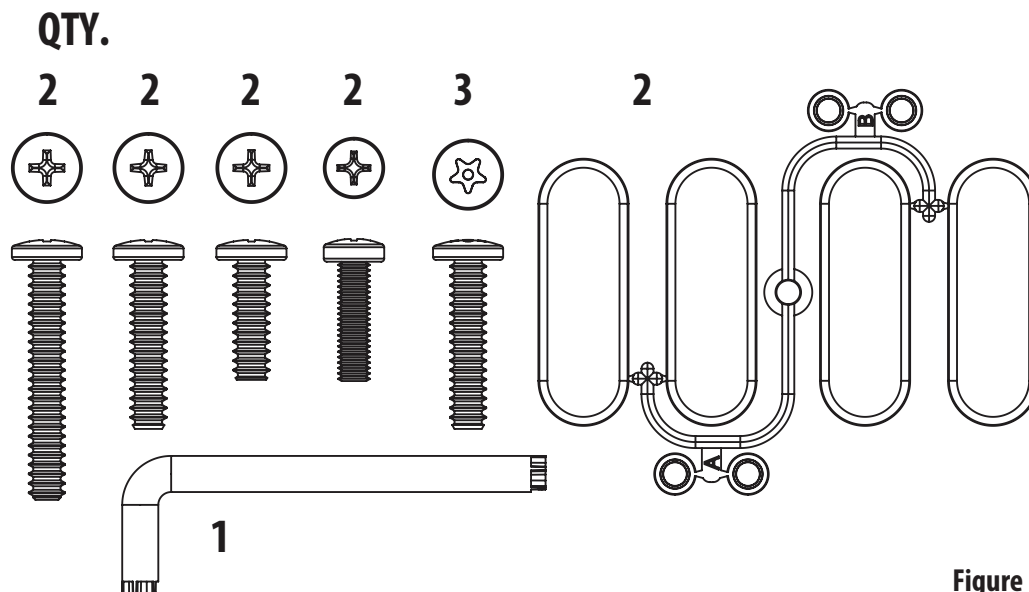
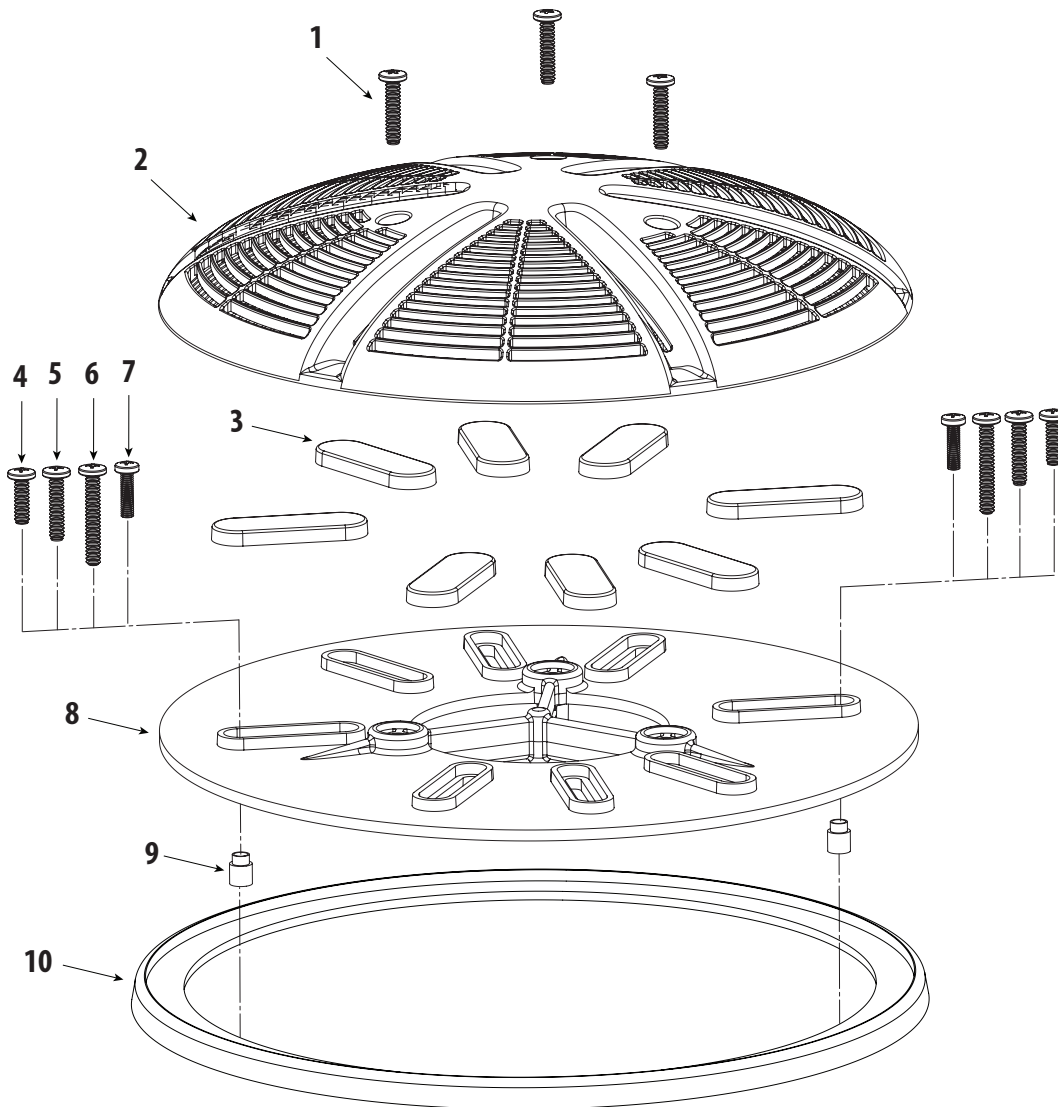


Figure 1

VINYL ULTRA RETRO SUCTION OUTLET COMPONENTS



Item	Part No.	Description
1	819-0913	#10 x 7/8" Security Screw
2	642-3170 V	10" Ultra Retro Suction Cover
3	642-3220A	Screw Slot Cover
4	819-0910	#10 x 5/8" Self-Threading Screw
5	819-0912	#10 x 7/8" Self-Threading Screw
6	819-0911	#10 x 1 1/4" Self-Threading Screw
7	819-0999	#8-32 x 3/4" Screw
8	642-3180	Support Plate
9	642-3220B	Spacer Bushing
10	642-3240	Vinyl Ring

INSTALLATION INSTRUCTIONS

1. Turn off all power to pool or spa and pump systems. Installation is easiest when pool or spa is drained.

CAUTION: Draining a pool or spa may cause structural damage. Before draining contact your local licensed pool builder or remodeler.

2. Remove existing drain cover.

3. Place the Support Plate (#8) over the Vinyl Ring (#10) (Figure 2).

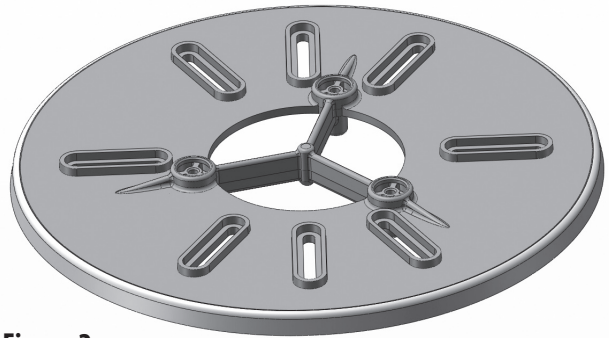


Figure 2

4. Place the assembled support plate and ring over the vinyl sump. Line up the correct slots with the existing screw holes that were used for the previous grate cover.

CAUTION: If the sump has brass inserts in it for machine screws DO NOT install; call Waterway for instructions.

5. Use the provided self-threading screws according to the following table (below).

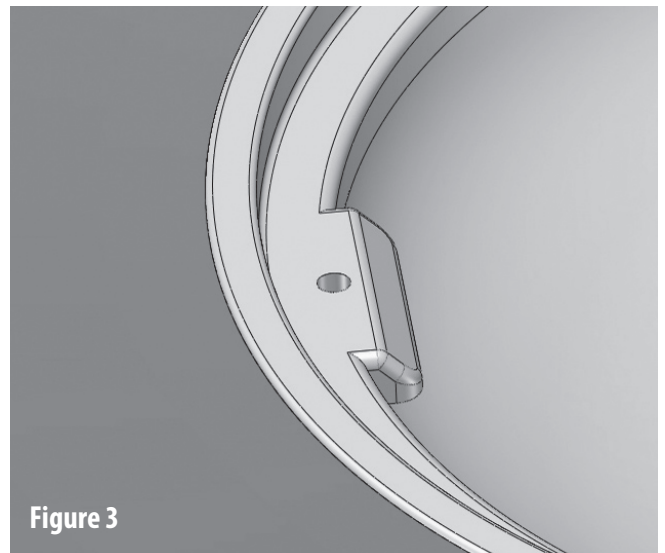


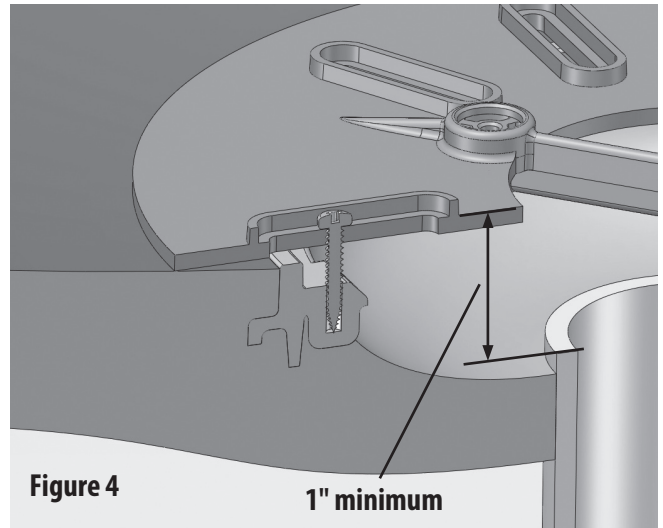
Figure 3

Distance Between Pool Surface and Tops of Screw Hole	Type of Self-Threading Screw
0 - 1/4"	#10 x 5/8"
1/4" - 1/2"	#10 x 7/8"
1/2" - 3/4"	#10 x 1 1/4"

INSTALLATION INSTRUCTIONS

4. Align the drain cover support plate and ring over the ring or sump. The top of the outlet pipe should be recessed a minimum of 1 inch from the back of the plate (Figure 4).

5. Attach the drain cover support plate (#8) to the pool or spa surface with the appropriate screws as described in 3 above. Once installed, be sure that the drain cover support plate is firmly in place and cannot be pulled out of the pool or spa surface. The Drain cover support must be firmly in place or **DO NOT** proceed to next step.



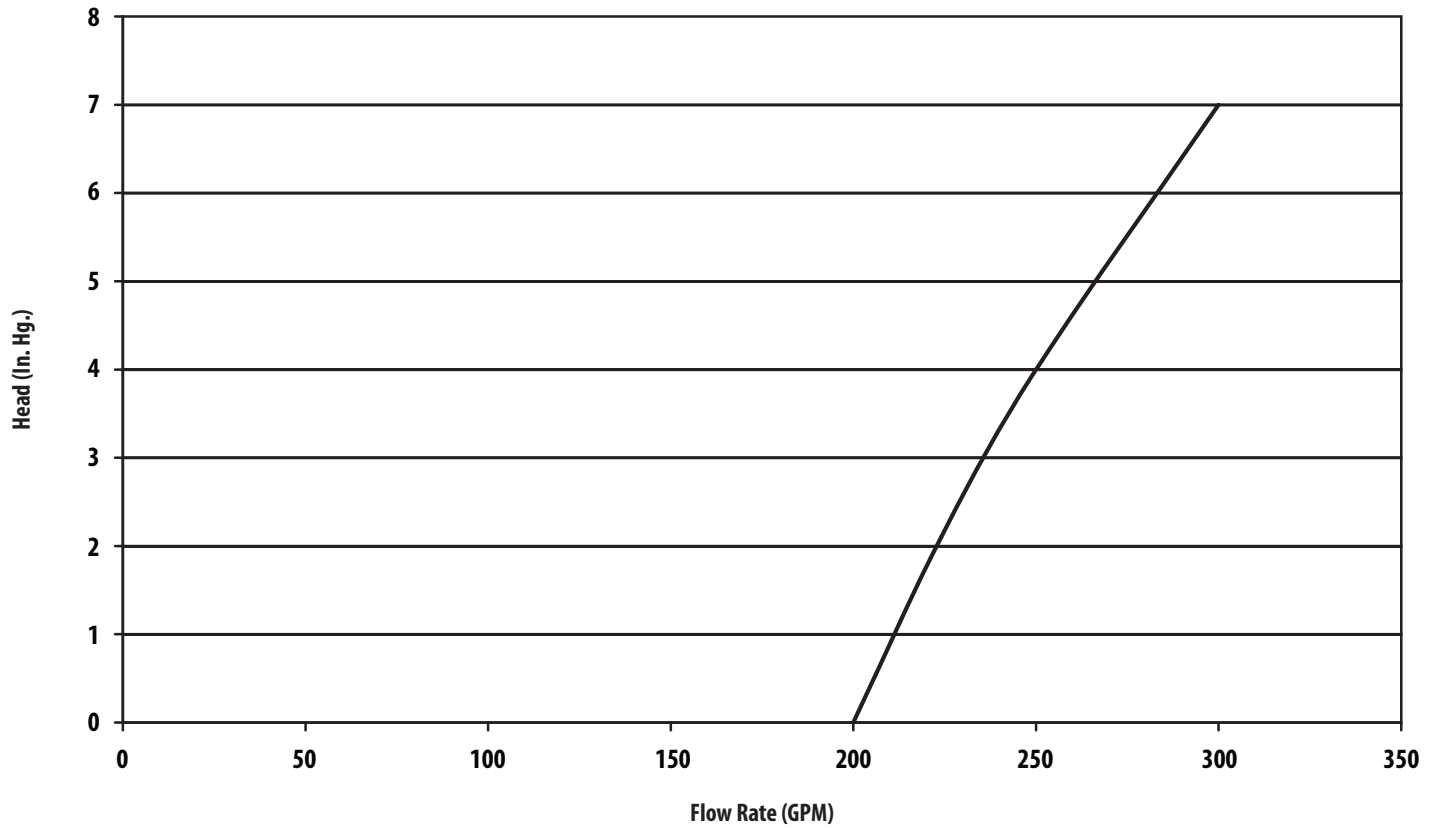
6. Securely snap all (8) eight oval slot plugs (#3) provided onto the (8) eight slots in the drain cover support plate (#8).

7. Attach the drain cover (#2) to the drain cover support plate (#8) using the tool and the three 10 x 7/8 security screws provided. Waterway requires the use of security screws to secure the cover.

CAUTION: Use only supplied screws to secure the cover. DO NOT use power tools.

VINYL ULTRA RETRO SUCTION OUTLET HEAD LOSS CURVE

Head Loss Curve - Ultra Retro Suction Outlet



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