

FASTLANE[®]

By Endless Pools, Inc.

OWNER'S MANUAL



Section I**GENERAL OVERVIEW OF AN ENDLESS POOL FASTLANE**

The Fastlane® swimming machine by Endless Pools, Inc. is a hydraulically-powered system that creates a smooth, adjustable-speed swim current in a conventional pool. The Fastlane has been fabricated with the finest, most durable materials and designed to meet the most stringent safety standards including VGB 2008. The swim current produced is wider than your body and deeper than your stroke — far superior to currents created by one or more jets. Two 3/8" hydraulic hoses carrying a non-food grade, biodegradable vegetable oil run between the hydraulic Power Unit and the Fastlane Swim Unit, thus eliminating the need for electricity poolside. When pumped at high pressure, this hydraulic fluid creates a swim current by turning the shaft of a submerged stainless steel hydraulic motor in the Fastlane Swim Unit, which in turn rotates a 16" diameter propeller. The Power Unit is activated using a 3-button radio frequency remote control that can turn the unit on and off and adjust the speed. It is best if the Power Unit is within 25' of the Swim Unit to minimize pressure loss. An optional 6" LED swim pace display is available to monitor your speed. Also, customers often place our swim mirror on the bottom of the pool to observe their swim stroke.

Note: all of the 316L stainless steel screws provided for the assembly of this unit should be tightened to the recommended 25 in-lbs of torque.

W = Wall Mount Fastlane

D = Deck Mount Fastlane

The Fastlane can be mounted one of two ways:

W

The Wall Mount Fastlane fastens to the wall of the pool using the bracket provided. Two 1" polyethylene pipes (or 1 1/2" PVC pipe) which serve as conduits for the hydraulic hoses run under the pool deck to a remotely located, 5-horsepower, hydraulic Power Unit, as shown in Figure 1.1.

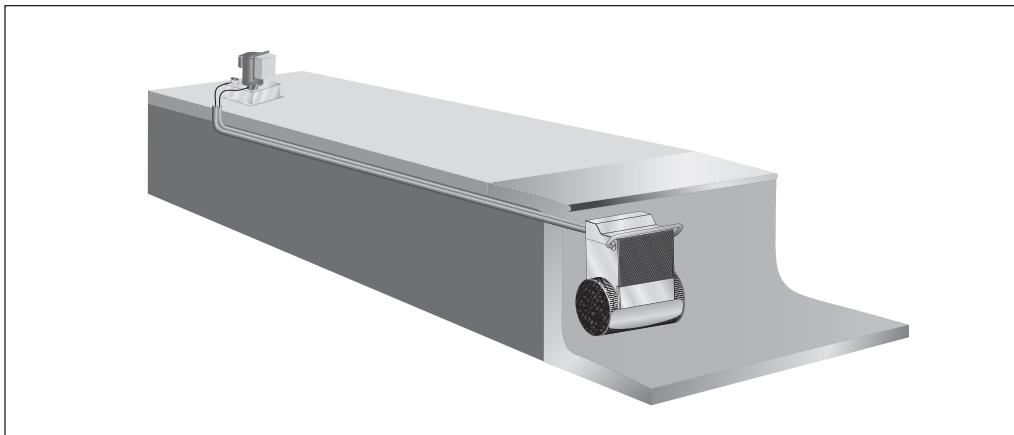


Fig 1.1

D

The Deck Mount Fastlane fastens to the pool deck using the hanger bracket provided. The two hydraulic lines then run back to the remotely located, 5-horsepower, hydraulic Power Unit. The hydraulic hoses can be run through a conduit or run aboveground, as shown in Figure 1.2.

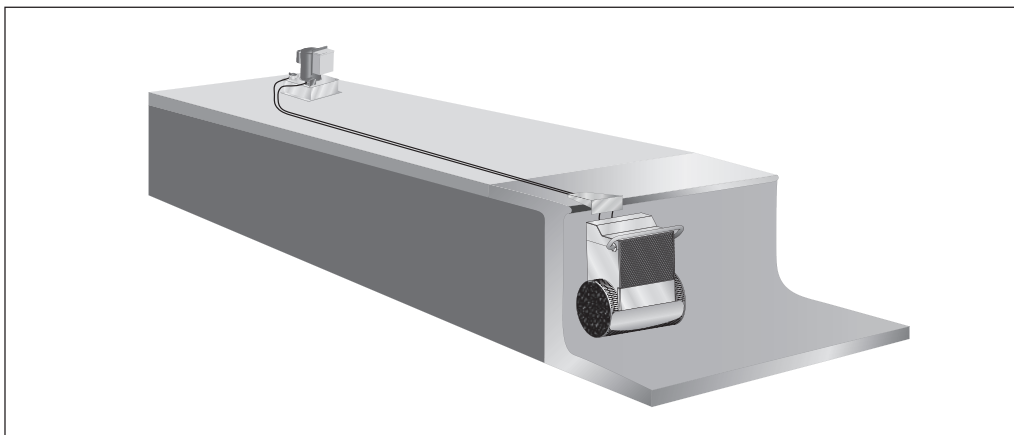


Fig 1.2

Section 2**CHOOSING A LOCATION FOR YOUR FASTLANE**

The Fastlane can fit in virtually any swimming pool. For optimal water flow, we recommend that you allow at least 12 feet between the wall on which the Fastlane is installed and the opposing wall in line with the Swim Unit. The Fastlane has more than 9 square feet of water intake to eliminate any entrapment hazards. The water depth where the Fastlane is installed must be at least 35" deep. In addition, the Fastlane must be installed no closer than 24" from any adjacent wall as shown in Figure 2.1, Minimum Clearance Guidelines.

When choosing a location for your Fastlane, you should also consider the route for the hydraulic hoses to run back to the Power Unit. The Power Unit needs to sit on a solid, level surface, preferably not on wet ground, and requires a 30-amp, 220-volt GFCI electric service. For UK and international electrical requirements, please refer to Section 11. The optional Outdoor Power Unit with Weather Guard may be located outside, but should not be subject to driving rain. Typically, the Power Unit is located with the other pool equipment and, if possible, long hydraulic runs should be avoided because of pressure loss. If you wish to have a run greater than 25', you must transition from 3/8" hydraulic hoses to 1/2" run hoses with the addition of a junction box as reviewed in Section 5.

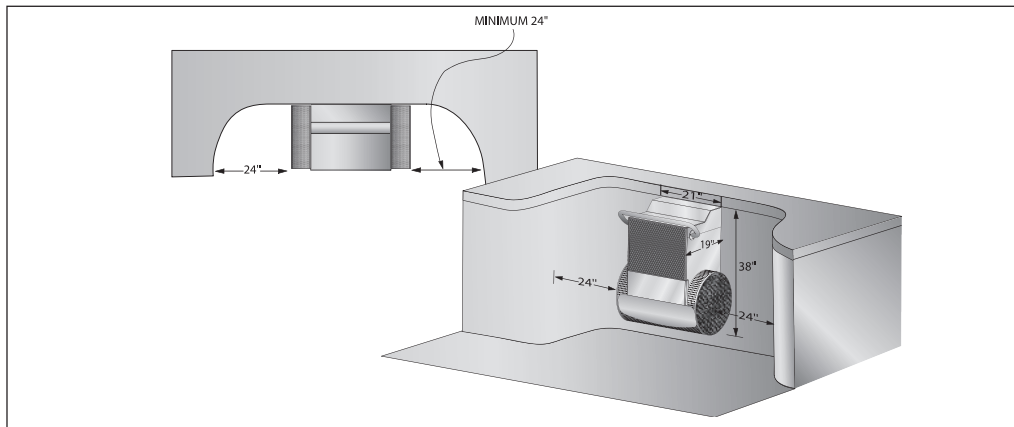


Fig 2.1
Minimum Clearance Guidelines

Section 3**RECEIVING YOUR FASTLANE**

The Endless Pools Fastlane is comprised of a minimum of five (5) parcels. Additional parcels may be shipped as appropriate. All items will be shipped via UPS Ground.

**Items shipped UPS**

Parcel 1: Fastlane Swim Unit – propulsion housing

Parcel 2: Fastlane Swim Unit – base with pre-installed,
25 feet of hydraulic hoses, grab bar

Parcel 3: 5-hp Power Unit with 2 Wireless Remote Controls and Antenna located inside the controller (Heavy Box) Note: If the Outdoor Power Unit was purchased as an option, the Weather Guard will come pre-assembled to the Power Unit.

Parcel 4: Five (5) Gallons of Hydraulic Fluid (Non-Food Grade Vegetable Oil)

Parcel 5: Accessories Kit (Wall Mount or Deck Mount)

Wall Mount Accessories Kit

- Owner's Manual Kit including:
- (2) –8 JIC Female x –6 JIC Male Hydraulic Adapters
- (8) 3/4" stainless steel screws for Fastlane assembly
- (10) 1/2" stainless steel screws for Fastlane assembly
- (6) 3/4" stainless steel screws for Grab Bar installation
- (6) stainless steel nuts for Grab Bar installation
- (2) Protective Hat Channels
- (16) 3/4" stainless steel screws to attach Hat Channels to Upper Housing
- (1) Fastlane Acrylic Top

D

Deck Mount Accessories Kit

- Owner's Manual Kit including:
- (2) –8 JIC Female x –6 JIC Male Hydraulic Adapters
- (8) 3/4" stainless steel screws for Fastlane assembly
- (10) 1/2" stainless steel screws for Fastlane assembly
- (6) 3/4" stainless steel screws for Grab Bar installation
- (6) stainless steel nuts for Grab Bar installation
- (20) 1/2" stainless steel screws for Hanger bracket installation & deck plate assembly
- (1) 3/16" x 2-1/4" Masonry Screws
- (1) 5/32" Masonry Bit
- (4) Hose Clips
- (2) Protective Hat Channels
- (16) 3/4" stainless steel screws to attach Hat Channels to Upper Housing
- (1) Deck Plate Bottom with 3/16" bonding lug attached
- (1) Deck Plate Top
- (1) Fastlane Acrylic Top

W

The Following two packages will be included ONLY if a Wall Mount Fastlane was purchased:

Parcel 6: Wall Mount Bracket Assembly

Parcel 7: Two (2) 24' 6" rolls of 1" Polyethylene Pipe

W D

Optional Equipment

- Outdoor Power Unit with Weather Guard
- Floor Mirror
- Swim Pace Display

Section 4

WALL MOUNT BRACKET AND 1" POLYETHYLENE PIPE INSTALLATION

NOTE: Please read instructions fully before beginning bracket installation.

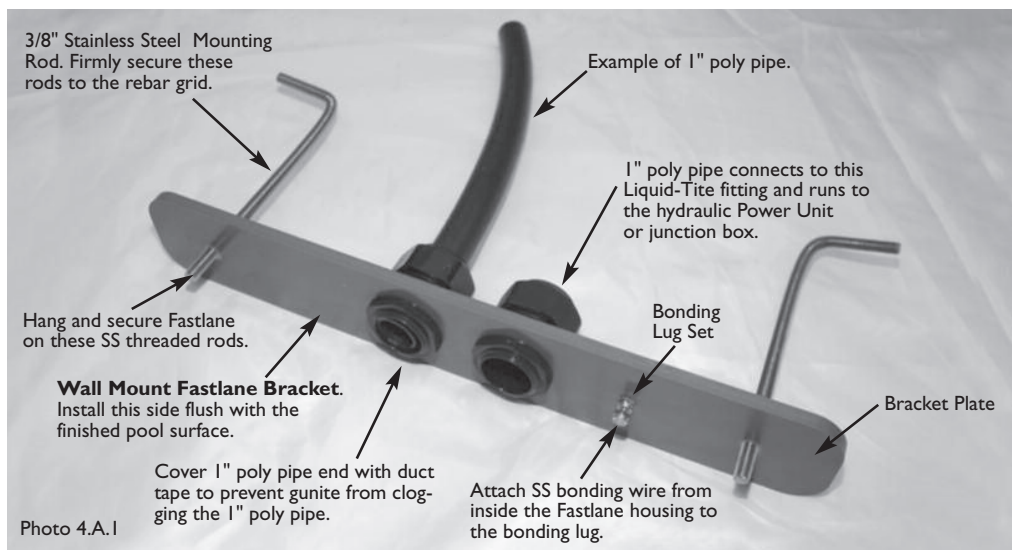
W

4.A. Gunite/Concrete Pool

If the pool being constructed is gunite or concrete, please follow the instructions below.

Parcel 6 includes the Wall Mount Fastlane bracket for concrete or gunite pools. Two (2) 24' 6" rolls of 1" poly pipe are shipped separately. The standard bracket is comprised of the following components (refer to Photo 4.A.1):

- Two (2) 3/8" threaded 316L stainless steel mounting rods with hardware
- One (1) 3/8" PVC bracket plate
- Two (2) thru-wall Liquid-Tite fittings
- One (1) bonding lug set





The bracket is to be installed into the pool wall as shown in Figure 4.2 so that the two mounting rods are 1-1/2" above the intended waterline for the pool, which is typically halfway up the skimmer. (The bottom edge of the Wall Mount Bracket will sit along the pool's intended waterline.) The rods penetrate 1-1/4" to 1- 1/2" into the finished pool and will be used to hang the Wall Mount Fastlane. These rods must be tied back to the rebar of the bond beam in the pool and, once encased in concrete, will serve as a suitable hanger. Additionally, a #8 or larger, solid copper bonding wire must be connected from the pool bonding grid to the bonding lug located on back of the wall mount bracket.

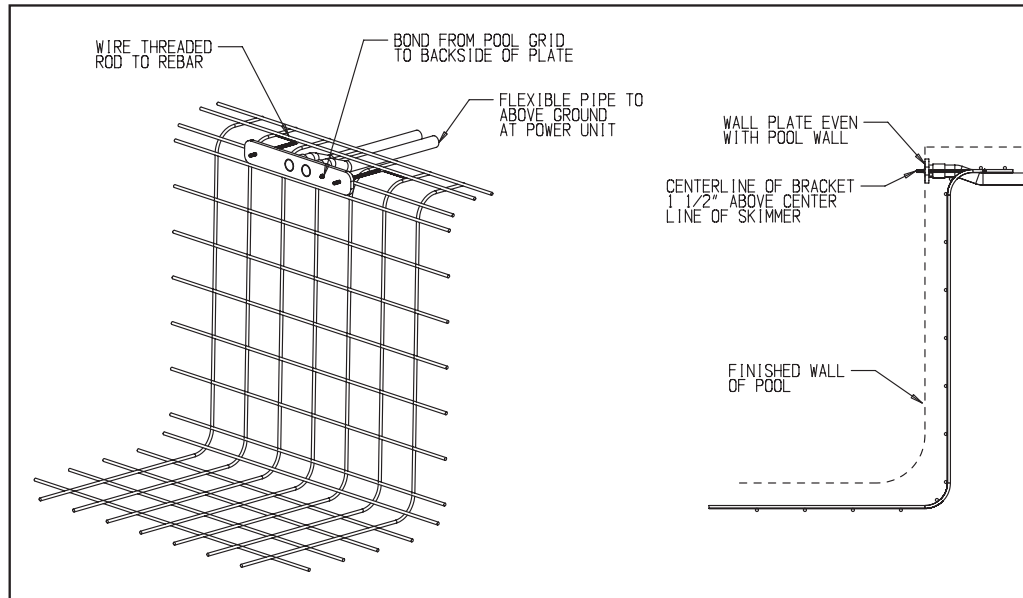


Fig. 4.2

Level and position the bracket so that the PVC surface of the bracket plate will be flush with the finished surface of the pool wall as shown in Figures 4.2 and 4.3. The area below the bracket plate should be no more than 5 degrees less than vertical down to at least 35" below the waterline. The Fastlane is 21" wide. Consequently, the 21" section of wall where the bracket is located should be straight or near straight. Any variations from this requirement should be discussed with your design representative. Additionally, it is imperative that the Fastlane not be installed less than 24" from an adjacent wall to allow for proper water flow. Please refer back to Figure 2.1, Minimum Clearance Guidelines, for clarification.

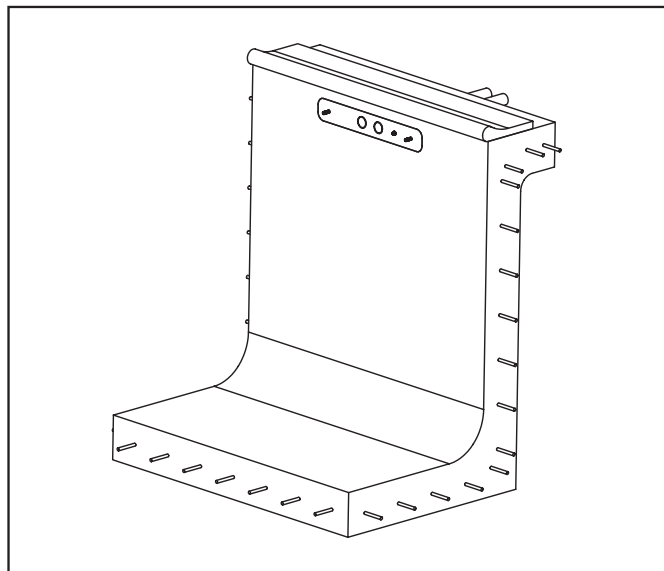


Fig. 4.3

Install two (2) complete 1" poly pipes back to the Hydraulic Power Unit or junction box. The two (2) 1" poly pipes may be partially buried and/or covered with concrete. Care should be taken when rounding corners not to use tighter than 18" radius bends. **It is imperative that this 1" poly pipe not be kinked given the close tolerance of the fittings sliding through later (Section 9.4).** Do not use couplers with this 1"



poly pipe, but rather use a single length for each of the two hydraulic hoses that will run through them. The goal is to provide an easy route for each of the two 3/8" hydraulic hoses — a route free of obstructions and unlikely to bind. The hydraulic hoses may run on the surface outside the 1" poly pipe, but care must be taken not to damage them. It is always best to use the 1" poly pipe provided as it protects the hydraulic hoses from chafing as well as UV damage. The 1" poly pipe is chosen because of its slipperiness and the ease with which the 3/8" hydraulic hose slides through it. At the same time, this 1" poly pipe can be easily kinked which will make it difficult to slide the hydraulic hoses through later.

When planning for these two runs of 1" poly pipe, recognize that they penetrate the pool wall 1-1/2" above the waterline and as a consequence will be flooded if the water level rises to that point. **We strongly recommend that the 1" poly pipe rise to a point above which the water level will never rise to avoid any potential flooding.** This can be done during the 1" poly pipe run or back near the Power Unit. Tighten the bracket liquid-tite fittings so that the 1" poly pipe is squeezed and water cannot leak around the 1" poly pipe.

If you are concerned about subsidence and/or kinking, you may prefer to use a heavier 1-1/2" double run of PVC flex pipe. To accomplish this, simply substitute the two couplings provided with the two (2) liquid-tite fittings threaded into the PVC bracket, apply Teflon Tape to the couplings, and glue in the 1-1/2" PVC flex pipe (refer to Photo 4.A.2).

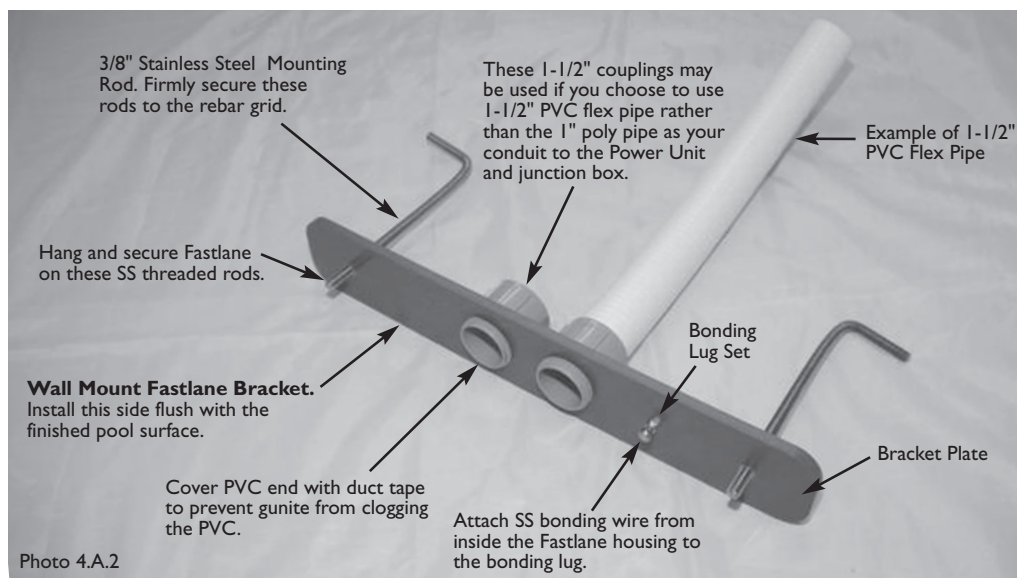


Photo 4.A.2

NOTE: The pool builder/installer must decide if they will be using 1" poly pipe or 1-1/2" PVC flex pipe BEFORE spraying gunite. Once the 1" poly pipe or 1-1/2" PVC flex pipe has been run, cut, and trenched, the gunite can be sprayed.

If installing the provided 1" poly pipe (standard installation), the Wall Mount Fastlane ships with two (2) 24' 6" rolls of 1" poly pipe. From the rear side of the pool, feed each 1" poly pipe into the liquid-tite fittings and tighten the cord grip on the 1" poly pipe so that no water will pass between the 1" poly pipe and the liquid-tite fitting. Unroll the 1" poly pipe to the location where the Power Unit will be located. The 1" poly pipe is 6" shorter than the standard length of hydraulic hoses provided. As you run the 1" poly pipe, be certain it does not kink. To ensure you have sufficient lengths of hydraulic hoses to make the necessary connections to the Power Unit, cut off approximately 3' of each 1" poly pipe. The 1" poly pipe will need to exit the ground near the Power Unit. If you find the 1" poly pipe is not long enough to reach the Power Unit, a junction box and additional hydraulic hoses will need to be ordered and installed. In this case, **DO NOT CUT** the length of the 1" poly pipe. Refer to Section 5 for additional information.

If installing the 1-1/2" PVC flex pipe, remove the two (2) 1-1/4" liquid-tite fittings from the wall mount bracket. Thread and adhere with Teflon tape the two (2) 1-1/2" NPT male/slip female PVC fittings into the wall mount bracket. Unroll the 1-1/2" PVC flex pipe from the wall mount bracket to the Power Unit. The PVC flex pipe should exit the ground near the Power Unit. Each section of the PVC flex pipe should be no longer than 21 feet. This will leave enough hydraulic hose to connect to the Power Unit. If you find that 21 feet of the PVC flex pipe is not long enough to reach the Power Unit, a junction box and additional hydraulic hoses will need to be ordered and installed. Refer to Section 5 for additional information.



4.B. Steel/Polymer Panel Pool with a Vinyl Liner

If the pool being constructed is steel/polymer panel with a vinyl liner, please follow the instructions below.

Remove the star thru-wall fittings and threaded rod pieces with hex coupling nut attachments from the 1/8"-thick, grey PVC template. Position the PVC template where the Fastlane will attach to the pool wall and align the bottom of the template with the expected water level in the pool (which will typically be located at the centerline of the skimmer) as shown in Figure 4.4. Use duct tape, perhaps wrapped over the top flange, to temporarily adhere the PVC template to the pool wall. Be certain that the PVC template is level in the pool. Trace the outline of the star thru-wall fittings and threaded rod hole penetrations that are cut in the PVC template onto the pool wall. Remove the duct-taped PVC template from the pool wall.

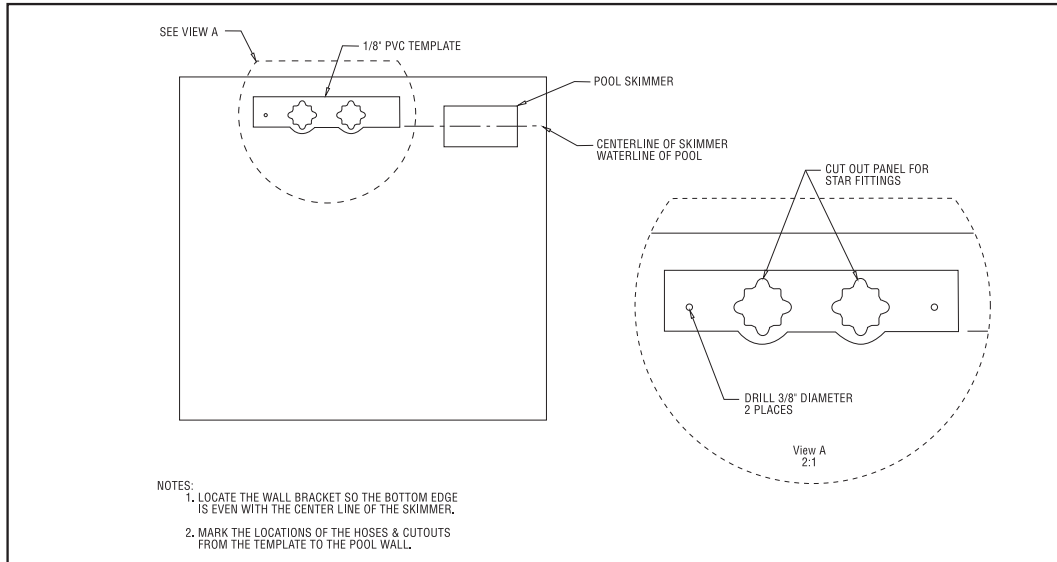


Fig. 4.4

Cut (or punch) the openings for the star thru-wall fittings and threaded rod holes. Install the star thru-wall fittings with the holes for the cover at 12, 3, 6 and 9 (clock positions). Choose the appropriate adapters to thread into the back of the star thru-wall fittings for the type of conduit that will be used for running the hydraulic hoses from the pool to the Power Unit. Use the provided 1" poly pipe with liquid-tite fittings or a standard 1-1/2" PVC flex pipe with the provided 1-1/2" couplings. Refer to Section 5 for length of 1" poly pipe or 1-1/2" PVC flex pipe. The threaded rod with hex coupling assembly must now be tightened against the backside of the pool wall. The 3/8" jam nuts should be fastened on the threaded rod so that half of the hex coupling is threaded onto the rod and the other half facing the poolside remains empty. Use the sacrificial 3/8" bolts and washers to thread into the hex coupling from the inside of the pool through the hole that was previously drilled in the wall as shown in Figure 4.5. Tighten the bolts to secure the assembly to the rear of the pool wall.

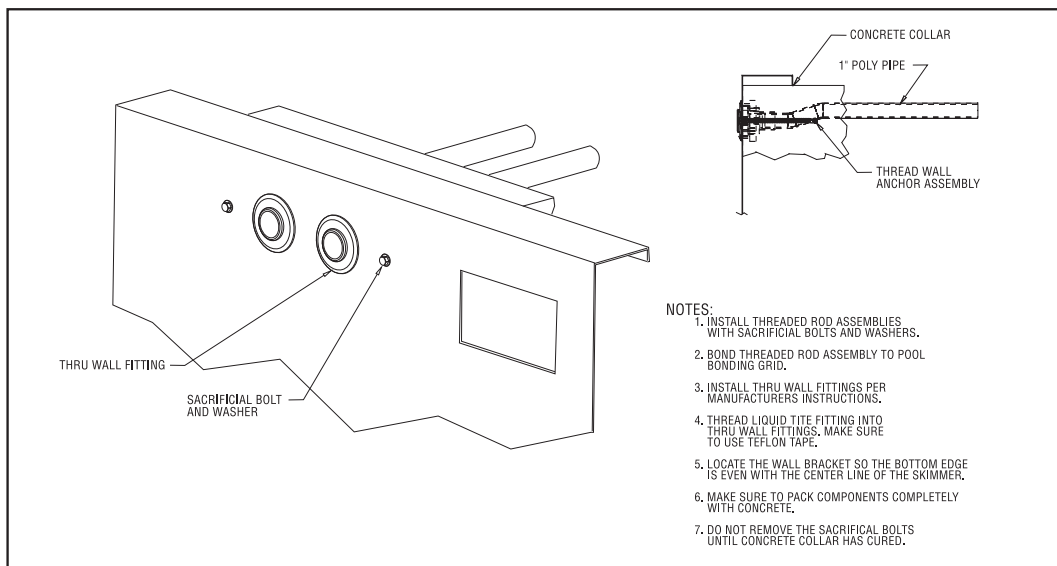


Fig. 4.5

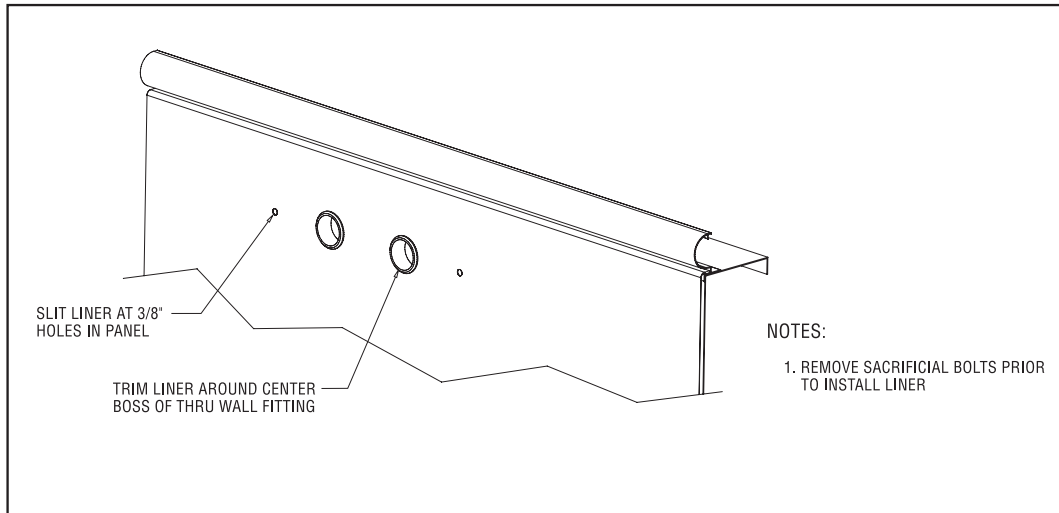


Fig. 4.6

If using rebar in the pool’s collar, tie and bond the bent pieces of threaded rod into the bonded rebar grid. If no rebar is being used, be sure to bond the threaded rod to the pool’s bonding grid.

Pour the concrete collar around the top flange of the pool securely encasing the threaded rod assemblies and conduit adapters in place. Even if a bond beam is not being poured for the pool, it is essential for the operation of the Fastlane that this assembly be securely anchored in concrete. After the concrete has cured, remove the 3/8" bolts and install the pool liner. Note: Before beginning the liner installation, be sure to note the orientation of the star thru-wall holes at 12, 3, 6 and 9 (clock positions) as they will be hidden once the liner is hung. (Refer to Figure 4.6.) Make sure there is some water in the bottom of the pool, giving weight to the liner and pulling it tight, before the holes for the star thru-wall fittings and threaded rod pieces are cut. When the liner is tight enough, cut the holes. Note: Keep the holes for the threaded rod as small as possible. Attach the faceplate to the star thru-wall fittings, coat the threaded stud and rubber washer with RTV or similar caulk, and thread the stub into the threaded rod assembly. (Refer to Figure 4.7.)

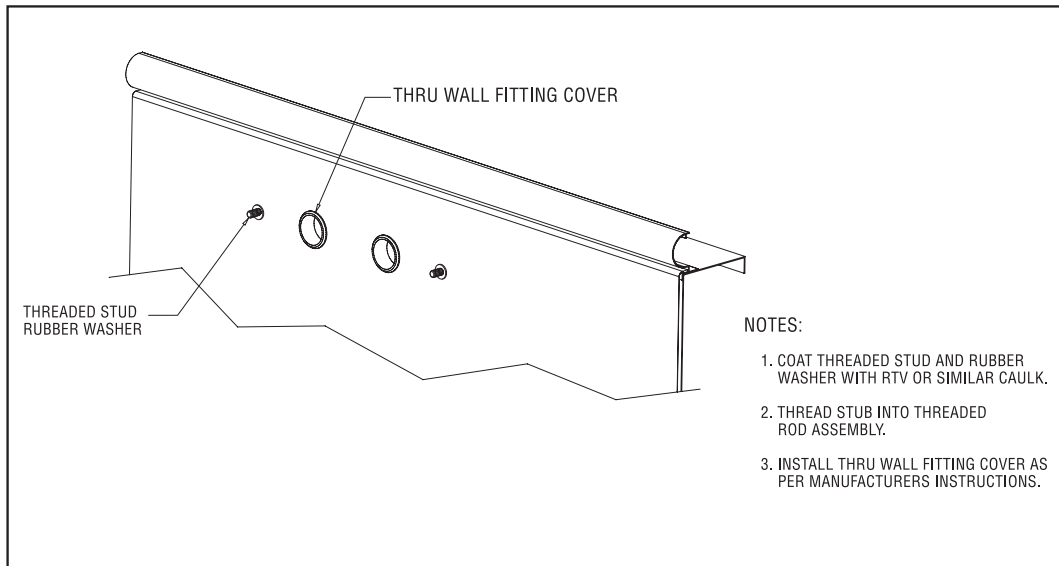


Fig. 4.7

4.C. Fiberglass Pool Installation

If the pool being constructed is fiberglass, please follow the instructions below.

Remove the liquid-tite fittings, bonding lug assembly, and threaded rod pieces from the 3/8"-thick, grey PVC bracket plate which serves as a template. Position the PVC template where the Fastlane will attach to the pool wall and align the bottom of the PVC template with the expected water level in the pool (which will typically be located at the centerline of the skimmer). Refer to Figure 4.8. Use duct tape, perhaps wrapped over the top flange, to temporarily adhere the PVC template to the pool wall. Be certain that the PVC template is level in the pool. Trace the outline of the liquid-tite fittings, bonding lug, and threaded rod hole penetrations that are cut in the PVC bracket onto the pool wall.

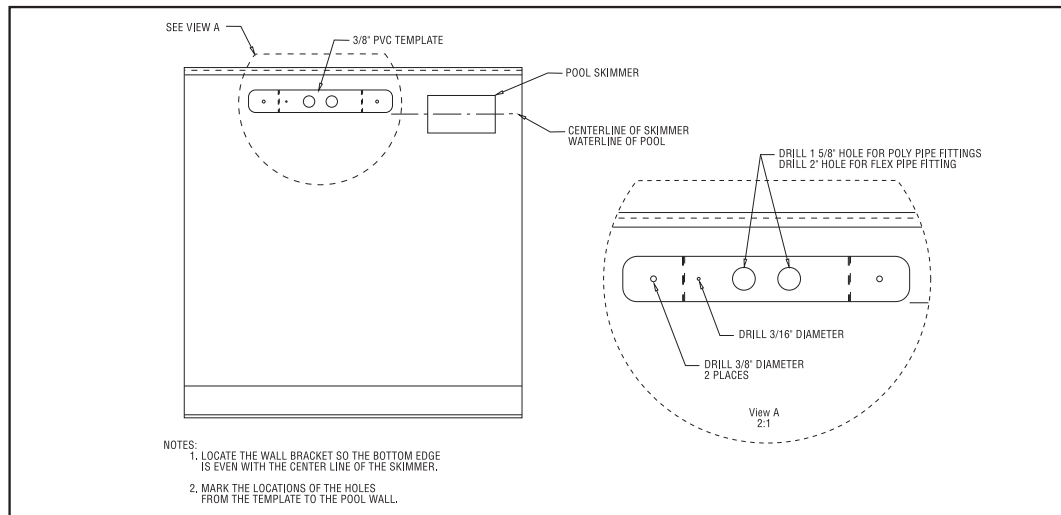


Fig. 4.8

Remove the duct-taped PVC template from the pool wall. Drill the openings for the liquid-tite fittings, bonding lugs and threaded rod holes. Determine if the provided 1" poly pipe or 1-1/2" PVC flex pipe will be used as conduit in which to run the hydraulic hoses from the pool to the Power Unit.

If using the provided 1" poly pipe:

- From the rear of the pool, attach the liquid-tite fitting to the fiberglass pool wall and firmly tighten it to the pool wall. Silicone may be used to get a tight seal.
- Feed the 1" poly pipe into the liquid-tite fittings from the rear of the pool, and tighten the fittings on the poly pipe (from the rear of the pool) to prevent water from passing between the poly pipe and the fittings.
- Cut the ends of the 3/8"-thick, grey PVC bracket plate along the score lines. These two ends will act as washer/bolt heads against the back of the pool wall. Discard the center section as shown in Figure 4.9.

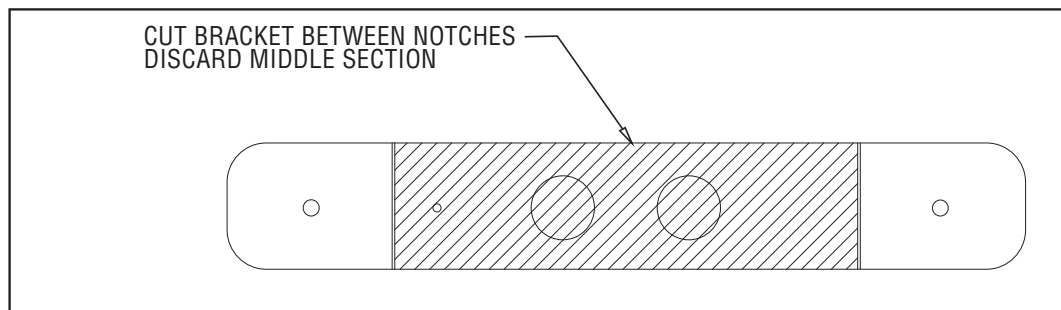


Fig. 4.9

- Thread the 3/8" threaded rod into the holes in the cut off end pieces, so that once permanently installed, 1-1/4" to 1-1/2" of threaded rod will penetrate beyond the pool wall surface. Refer to Figure 4.10. To help prevent cross threading, thoroughly clean the exposed end of the threaded rods of any excess fiberglass before threading nuts onto the threaded rods.
- Attach the bonding lug to the rear of the pool and thread the screw for the bonding lug through the hole in the pool wall. The bonding lug screw should penetrate at least a 1/2" into the pool wall when permanently installed. A #8 or larger, solid copper bonding wire must be connected from the pool bonding grid to the bonding lug located on the back of the wall mount bracket
- Apply the provided silicone adhesive to the side of the PVC bracket plate that will mate against the pool wall to ensure that the seal is watertight.
- Feed the poolside ends of the threaded rods through the holes drilled in the fiberglass pool wall, and using the provided washers and jam nuts, secure the rod tightly to the pool wall. Leave nuts and washers attached until silicone cures.



If using the 1-1/2" PVC flex pipe:

- The bracket will NOT be cut into three pieces.
- Thread and adhere with Teflon tape the provided couplings into the threaded holes in the 3/8"-thick, grey PVC bracket.
- Glue the necessary length of PVC flex pipe to the couplings. Refer to Section 5.
- Thread the 3/8" threaded rod into the holes in the bracket, so that once the PVC bracket plate is permanently installed, 1-1/4" to 1-1/2" of threaded rod will penetrate beyond the pool wall surface. Refer to Figure 4.10. To help prevent cross threading, thoroughly clean the exposed thread of any excess fiberglass before threading nuts onto the threaded rods.
- Attach the bonding lug to the rear of the pool, and thread the screw for the bonding lug through the hole in the pool wall. It should penetrate at least a 1/2" into the pool wall when permanently installed.
- Apply the provided silicone adhesive to the side of the PVC bracket plate that will mate against the pool wall to ensure that the seal is watertight.
- Feed the poolside ends of the threaded rods and bonding lug screw through the holes drilled in the fiberglass pool wall, and using the provided washers and jam nuts, secure the rod tightly to the pool wall and leave until silicone cures.
- Once installed, the adapter threaded into the 3/8" PVC bracket plate should be seen from inside the pool through the holes that are drilled in the pool wall.

Once the bracket is securely attached to the rear of the pool wall, tie the bent pieces of threaded rod into the bonded rebar grid. If no rebar is being used, be sure to bond the threaded rod to other metallic pool items and pool equipment. Attach a bonding wire to the bonding lug on the back of the bracket, and be sure to bond the threaded rod to the pool's bonding grid.

Pour the concrete collar around the top flange of the pool, securely encasing the threaded rod assemblies and conduit (with possible adapters) in place. Even if a bond beam is not being poured for the pool, it is essential for the operation of the Fastlane that this assembly be securely anchored in concrete. Refer to Figure 4.10. Only when the concrete has cured is it okay to remove the washers and jam nuts and install the Fastlane. Note: Do not throw away these washers and nuts, because they will again be used to anchor the Fastlane to the pool wall.

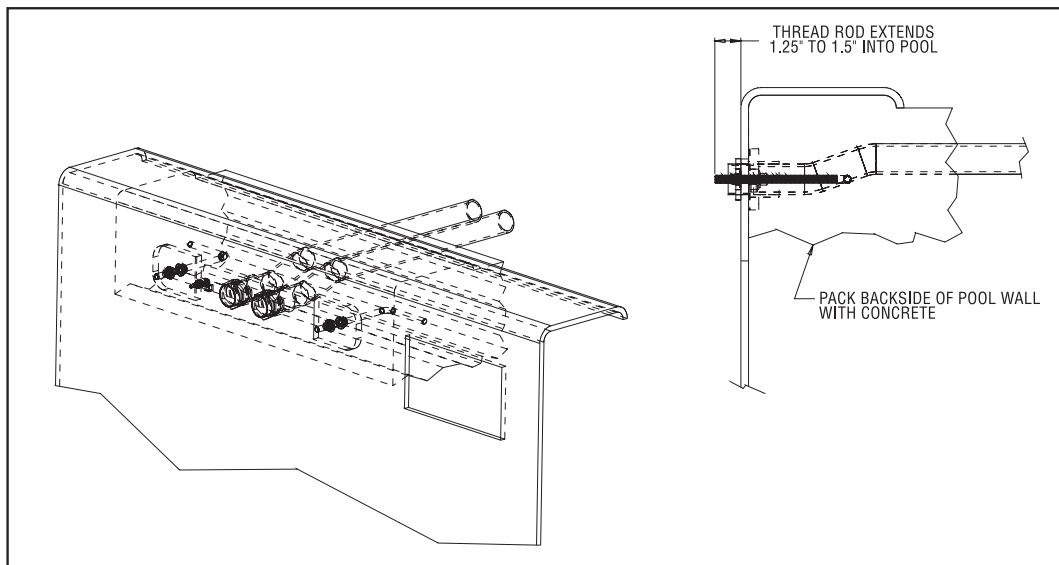


Fig. 4.10

Section 5**JUNCTION BOX AND 1/2" RUN HOSES (OPTIONAL)**

The wall mount bracket must be attached on the pool wall as explained in the installation instructions in Section 4. Attached to this bracket are two (2) lengths of 1" poly pipe or 1-1/2" PVC flex pipe that run back under the deck and carry two (2) hydraulic hoses.

If the hydraulic hose runs back to the Power Unit are less than 25', it is not necessary to step up to 1/2" run hose to reduce pressure loss. Instead, the 3/8" hydraulic hose can run directly to the Power Unit in the protective conduit.

If the hydraulic hose runs are greater than 25', in order to reduce pressure loss and potential reduction in speed, a junction box must be used. It is at the junction box where a step up to 1/2" run hose occurs. The hydraulic hose from the Fastlane Swim Unit to the junction box is 3/8" and the run hose from the junction box to the Power Unit is 1/2". The junction box must be located at the elevation equal to or higher than the pool deck.

Junction Box Kit (optional) includes:

- One (1) junction box with feet
- Two (2) 1-1/2" liquid-tite fittings
- Four (4) 1-1/2" NPT male/slip female PVC fittings
- Six (6) 1-1/2" locknuts
- Roll of anti-corrosion tape

If installing the optional junction box with the 1" poly pipe:

- The Fastlane ships with two (2) 24' 6" rolls of 1" poly pipe. Do NOT cut down the length of this 1" poly pipe.
- Install the two (2) 1-1/2" liquid-tite fittings in the same side of the junction box.
- Feed the 1" poly pipe into the liquid-tite fittings and tighten the fittings so that no water will pass between the 1" poly pipe and the fittings.
- To get from the junction box to the Power Unit, run 1-1/2" PVC flex pipe.
- Roll two (2) lengths of PVC flex pipe from the junction box to the Power Unit. The PVC flex pipe should exit near the Power Unit.
- Measure the length of PVC flex pipe. Your 1/2" run hose will need to be AT LEAST 4 feet longer than the length of the PVC flex pipe. Order your 1/2" run hoses at this time by calling our Customer Service Department at 800-910-2714.
- Glue the 1-1/2" NPT male/slip female fittings on the end of the PVC flex pipe that will connect to the junction box. Secure the fittings to the junction box with the provided lock nuts. The PVC flex pipe can be buried in a trench.
- Adapters to connect the 1/2" run hoses to the 3/8" hoses attached to the Fastlane have been provided. They can be found in the 1/2" run hose box and will be attached at a later step (see section 7).
- If desired, the junction box can be anchored by attaching the feet included with the kit.

If installing the optional junction box with the 1-1/2" PVC flex pipe:

- The 1-1/2" PVC flex pipe will need to be cut to 24' 6" from the wall mount bracket to the junction box.
- Glue the 1-1/2" NPT male/slip female fittings on the end of the PVC flex pipe that will connect to the junction box. Secure the fittings to the junction box with the provided lock nuts.
- To get from the junction box to the Power Unit, run 1-1/2" PVC flex pipe.
- Unroll the two (2) lengths of PVC flex pipe from the junction box to the Power Unit. The PVC flex pipe should exit the ground next to the Power Unit.
- Measure the length of PVC flex pipe. Your 1/2" run hoses will need to be AT LEAST 4 feet longer than the length of the PVC flex pipe. Order your 1/2" run hoses at this time by calling our Customer Service Department at 800-910-2714.
- Glue the 1-1/2" NPT male/slip female fittings on the end of the PVC flex pipe that will connect to the junction box. Secure the fittings to the junction box with the provided lock nuts. The PVC flex pipe can be buried in a trench.
- Adapters to connect the 1/2" run hoses to the 3/8" hoses attached to the Fastlane have been provided. They can be found in the 1/2" run hose box and will be attached at a later step (see section 7).
- If desired, the junction box can be anchored by attaching the feet included with the kit.

Section 6

ASSEMBLY OF THE FASTLANE SWIM UNIT



- 6.1 Carefully unpack the swim unit from its boxes. Make sure to remove any hardware packs from the boxes as well. The packaging can be collapsed and used as a protective surface upon which to assemble the Fastlane. The foam packing material can be used to wedge under the base to prevent it from tipping over.
- 6.2 Take care when handling or working with any of the stainless steel components of the swim unit. The ends can be sharp. The first step is to remove the two circular end caps from each side of the cylindrical base. There are 3 arced cover strips around the perimeter of the end cap. Unthread the nine screws that secure the cover strips (3 screws per cover strip). There will be a stainless steel wire connecting the end cap to the base. The wire can be disconnected to make assembly of the unit easier. If disconnected, the wire must be re-attached when assembled. Repeat this step for the other side of the stainless steel base. Carefully set each end cap aside (Fig 6.1).

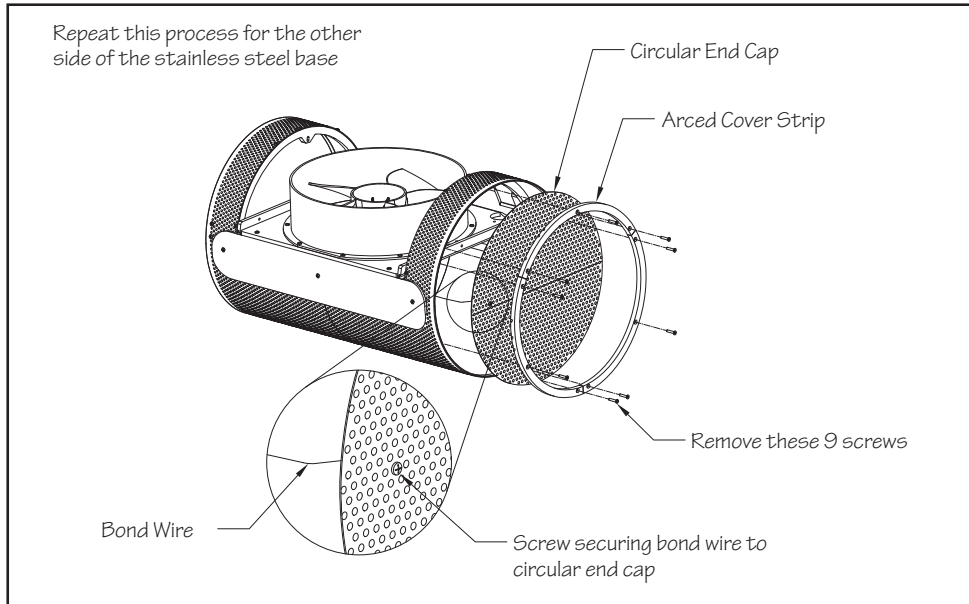


Fig. 6.1

- 6.3 Uncoil the two lengths of hydraulic hose that are attached to the cylindrical base. Make sure that the hoses are seated into their respective notches in the backside of the base (Fig 6.2).

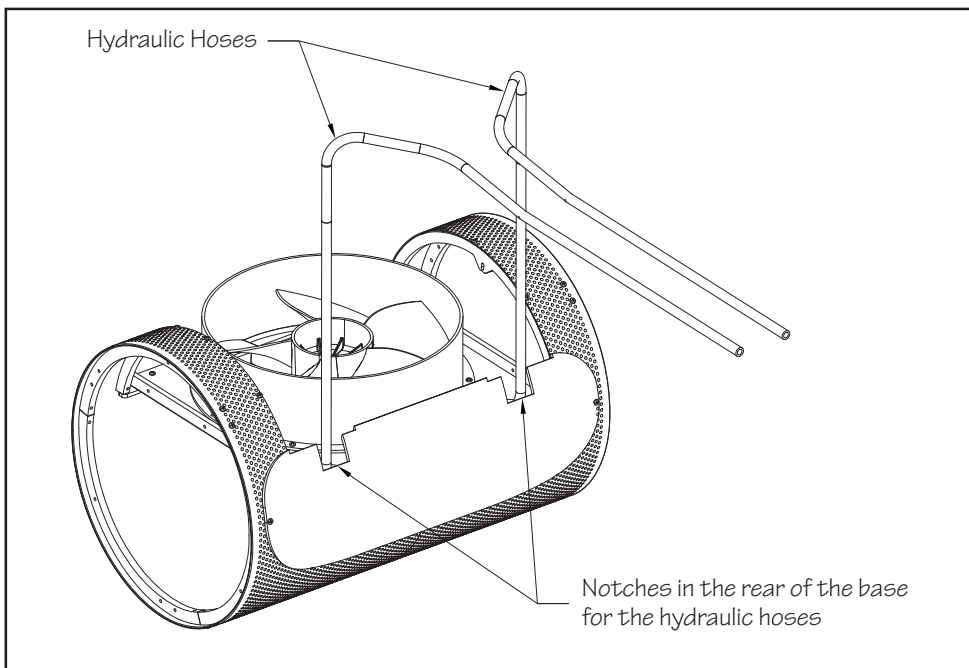


Fig. 6.2



6.4 Remove the throat from the upper housing. There are two screws on each side of the throat. Pull the throat off of the housing and set it aside. Pull the vertical water-conditioning grill up and out of the housing. Pull the horizontal grill out of its track and remove from the housing. Make sure to remove and discard the wood 2x4 spacer from the bottom of the housing before proceeding (Fig 6.3).

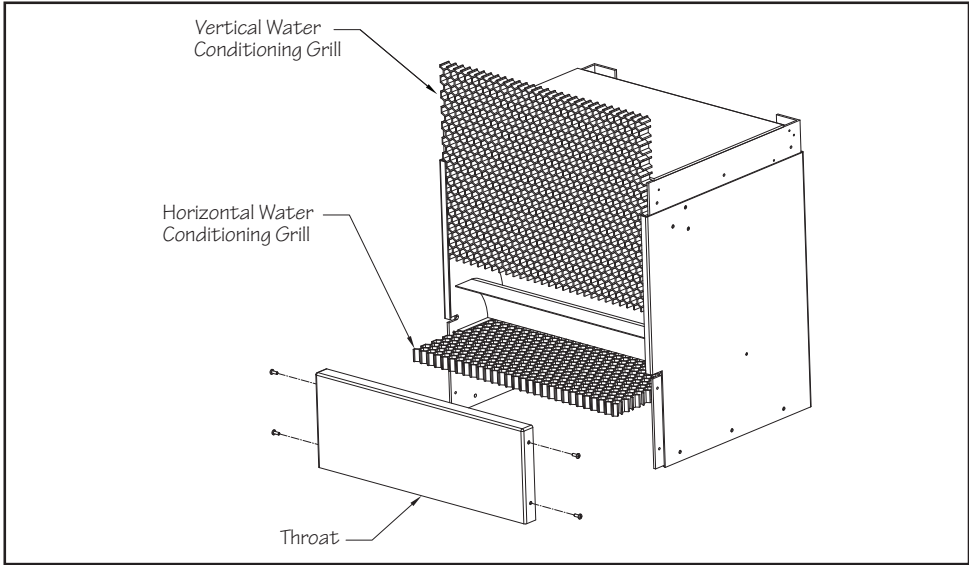


Fig. 6.3

6.5 Carefully remove the protective film encasing the upper housing. Place the upper housing into the opening of the cylindrical base (Fig 6.4A). The hydraulic hoses connected to the base should be aligned with the back of the upper housing. Make sure that the stainless steel bonding wire attached to the motor mount is positioned inside of the upper housing.

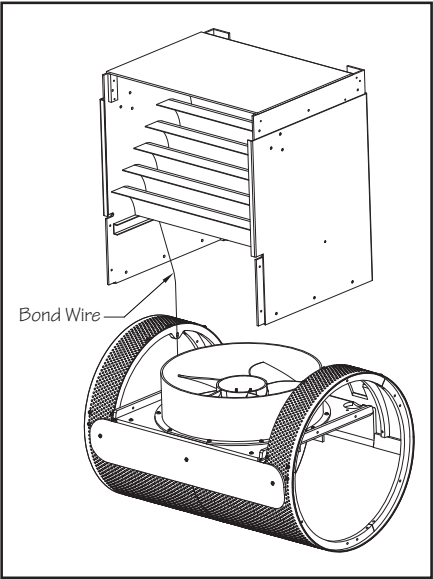


Fig. 6.4A

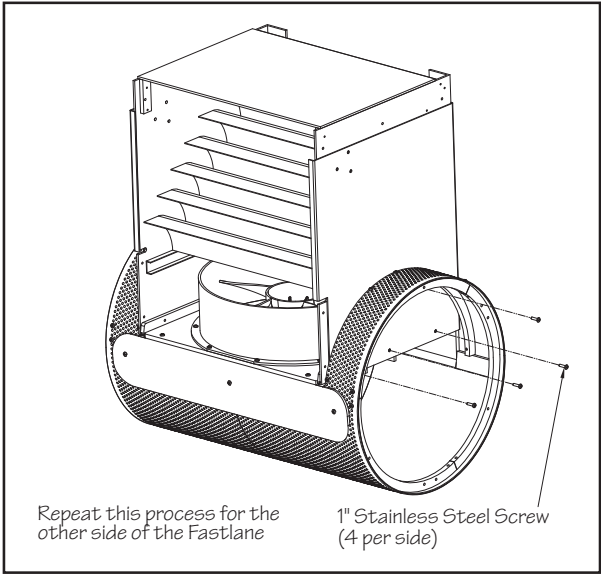


Fig. 6.4B

6.6 Use the provided stainless steel screws to attach the upper housing to the base. There will be 4 screws per side (total of 8). On each side of the housing, there will be 3 screws securing the upper housing to PVC motor mount support and 1 screw attaching the stainless steel reinforcing support to the housing just above the 3 previous screws (Fig 6.4B).



6.7 Carefully lay the Fastlane onto its front face. Run the hydraulic hoses up the back of the upper housing. The two hat channels will be placed over the hydraulic hoses. Make sure that the mounting hole in the end of the hat channel is facing up and that the bottom of the hat channel has been inserted into the notch in the cylindrical base. Use the provided 3/4" stainless steel screws to attach the hat channels to the upper housing. There will be eight screws per hat channel (Fig 6.5).

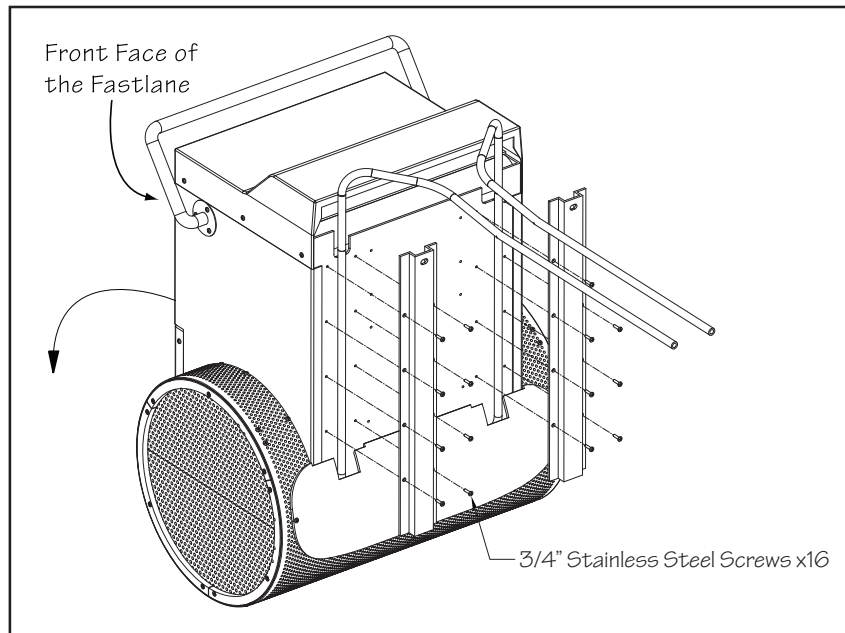


Fig. 6.5

6.8 Pull any excess hose out of the hat channel.

6.8a) If the hydraulic hoses are to be run up and over the pool deck, then proceed to step 6.9 (Fig 6.6A).

6.8b) If the hydraulic hoses are to go through the pool wall, attach the two hoses to the top of the upper housing. There are 2 green hose clamps attached to the top of the housing. The screws that are securing the clamps to the housing will have to be removed in order to secure the hoses to the clamps (Fig 6.6B).

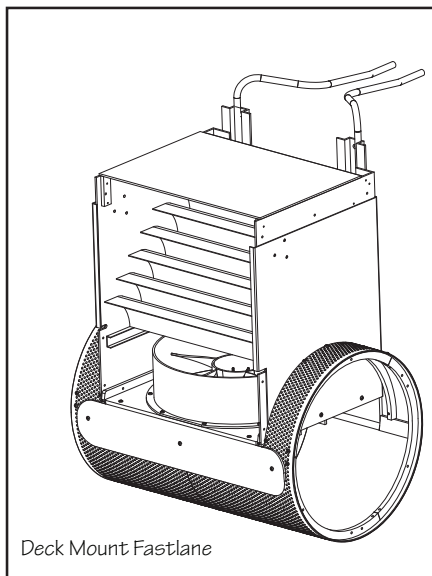


Fig. 6.6A

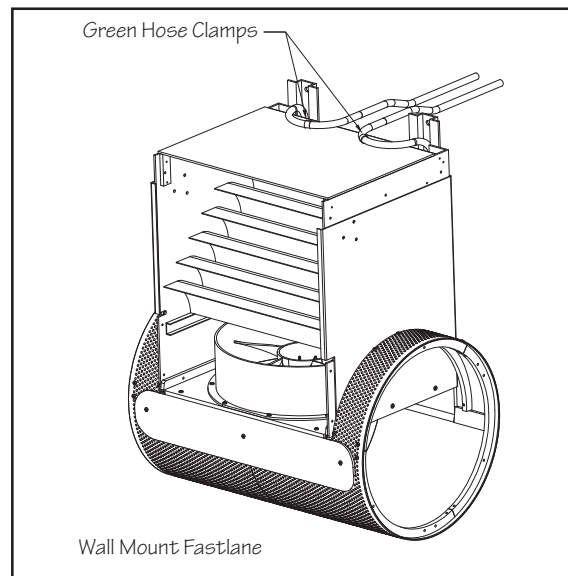


Fig. 6.6B



6.9 Slide the horizontal water-conditioning grill back into its track inside the housing. The horizontal grill is the wider of the two grills (Fig 6.7).

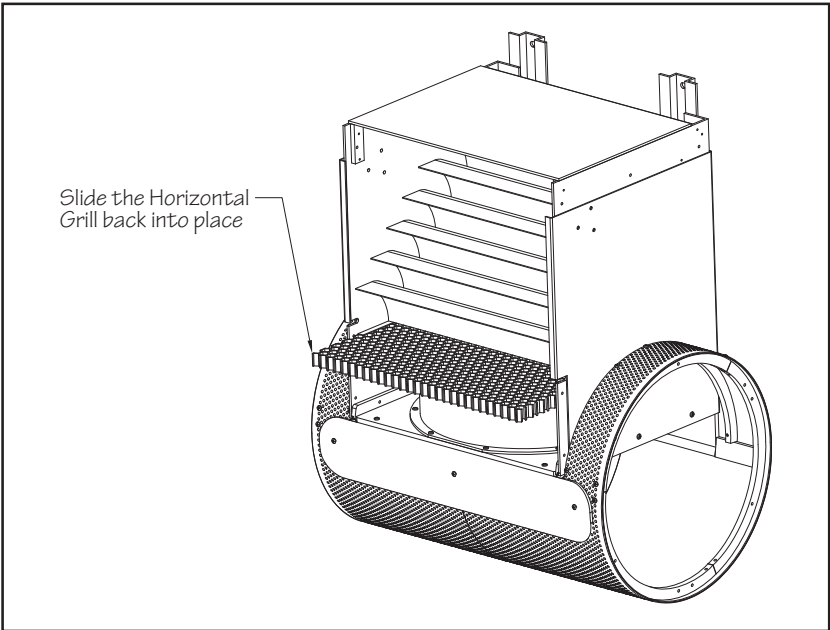


Fig. 6.7

6.10 Install the stainless steel grab bar to the upper housing using the provided stainless steel screws and lock nuts. Feed the stainless steel wire attached to the motor mount up through the horizontal grill. Then feed the wire up between two of the turning vanes. Place the stainless steel wire (from the motor mount in the base) around the bottom screw on the left side before tightening down on the nut. Place the second stainless steel wire (that exits the top rear of the upper housing) around another screw before tightening down on the nut. On the opposite side of the grab bar, secure the provided sacrificial anode under one of the grab bar mounting screws (Fig 6.8).

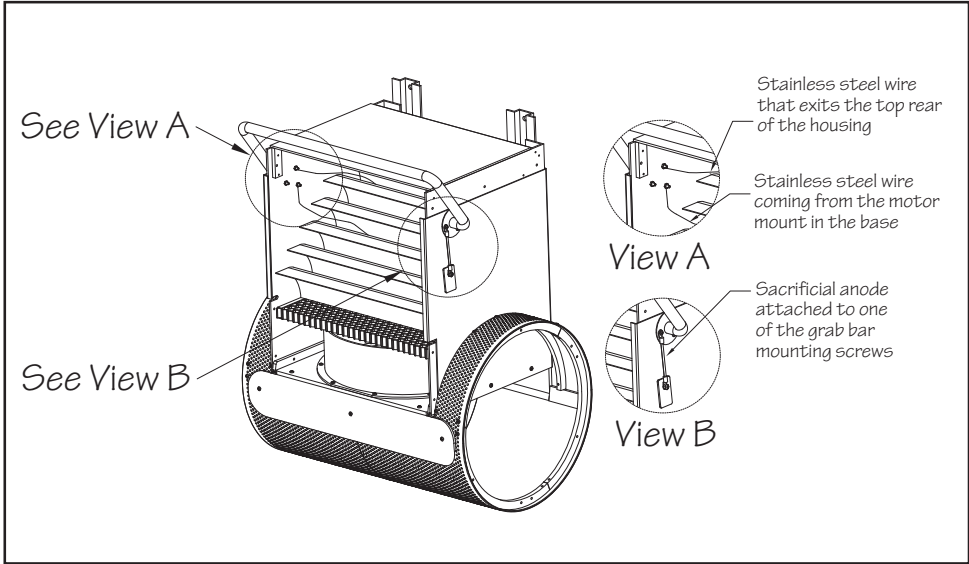


Fig. 6.8



6.11 Reattach the throat (removed in step 4) to the upper housing. Again, there will be 2 screws on either side of the throat (Fig 6.9).

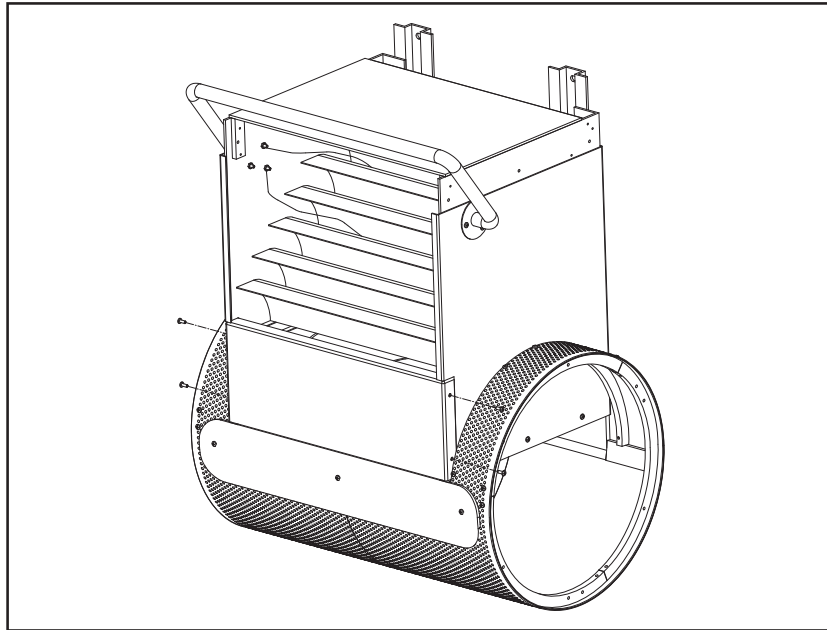


Fig. 6.9

6.12 Slide the vertical water-conditioning grill back down into the housing (Fig 6.10).

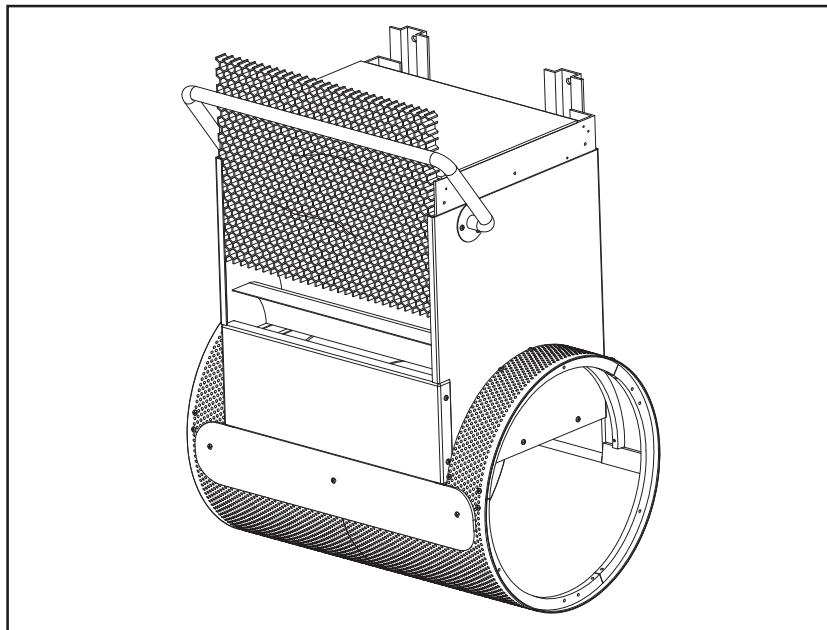


Fig. 6.10



- 6.13 Re-install the circular end caps. Make sure that the “smooth” surface of the end caps are facing out. If the stainless steel wire from the base to the end cap was removed, then it must be reattached at this time. Align the end caps to the internal PVC supports so that the holes in the internal supports are aligned with holes in the end caps. Position the arced cover strips over the end caps, making sure to align the hole in the arced cover strips with the holes in the stainless end caps and the internal PVC supports. Install the nine screws (3 per cover strip) that were removed in step 6.2. Repeat for the remaining end cap (Fig 6.11).

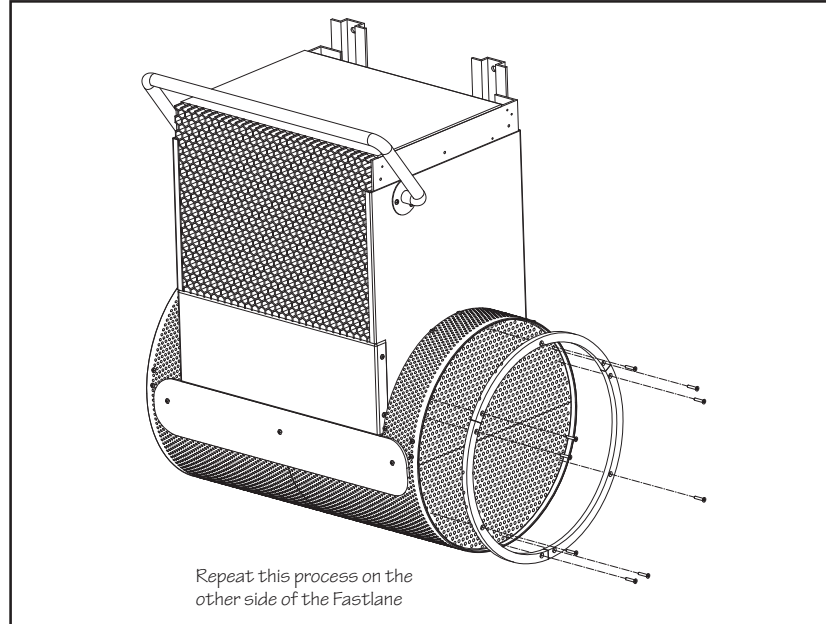


Fig. 6.11

- 6.14 Once the Fastlane is installed in the pool, place the housing lid onto the housing and use the provided screws to attach. There will be three screws per side, for a total of six (Fig 6.12).

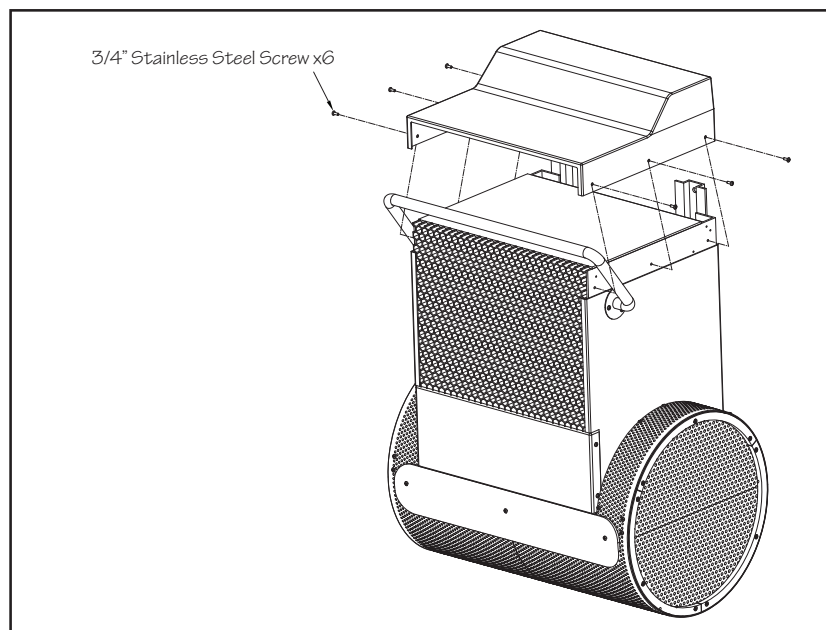


Fig. 6.12

Section 7**INSTALLATION OF YOUR WALL MOUNT FASTLANE**

- 7.1 Fill the pool up with water. The water line should be halfway up the skimmer and aligned with the bottom of the wall mount bracket (1-1/2" below the two (2) mounting rods).
- 7.2 Using two people, one on each side of the Fastlane Swim Unit, place one hand on the side of the grab rail and the other hand on the back of the Swim Unit. Carefully, lift the Swim Unit and gently lower it into the pool. NOTE: Be watchful not to scratch the Swim Unit on the stainless steel, threaded rods protruding from the wall mount bracket.
- 7.3 Hang the hydraulic hoses down over the front of the Fastlane Swim Unit. Match the holes on the top of the "hat" channel of the housing with the stainless steel, threaded rods in the wall mount bracket. Secure tightly with the two (2) 3/8" stainless steel flat washers, the two (2) lock washers, and the two (2) nuts provided (one for each rod) as shown in Figure 7.1. Attach the bonding wire to the bonding lug set located on the wall mount bracket to bond the entire swim unit to the pool.
- 7.4 Once the Fastlane is secured to the wall mount bracket, feed one hydraulic hose through one of the 1" poly pipes until all of the hose is through. Repeat for the second hydraulic hose. Install the Fastlane lid (see Section 6.15).
- 7.5 If a junction box and additional 1/2" hydraulic hoses were installed, then the hoses attached to the Fastlane need to be connected to the 1/2" hoses. Use the adapters that were provided with the 1/2" hydraulic hoses to make this connection.

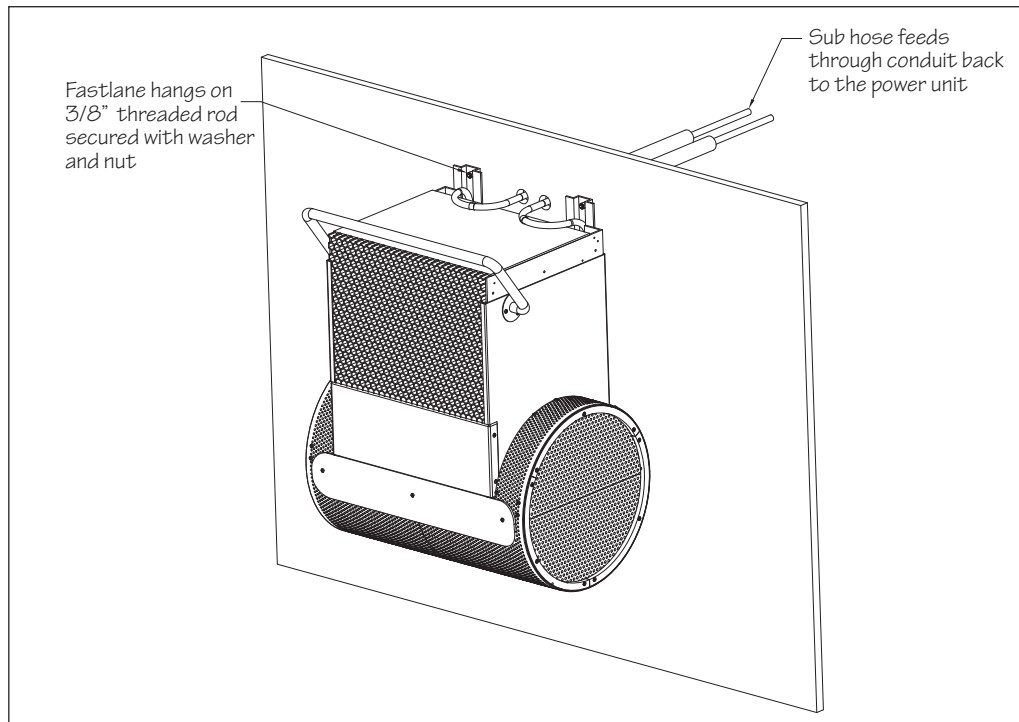


Fig 7.1

Section 8

DECK MOUNT FASTLANE HOSE COVER TRAY INSTALLATION

D

- 8.1 Choose where the Fastlane is to be placed in the pool. The water depth must be 35". There must be a minimum of 24" between the Fastlane and any adjacent wall or pool obstruction.
- 8.2 Position the hose cover tray onto the pool deck so that the vertical lip of the tray is seated firmly against the coping. The tray will be centered to the Fastlane. If the pool has bullnose coping it is acceptable for the hose cover tray to be slightly out of level as shown in figure 8.1.

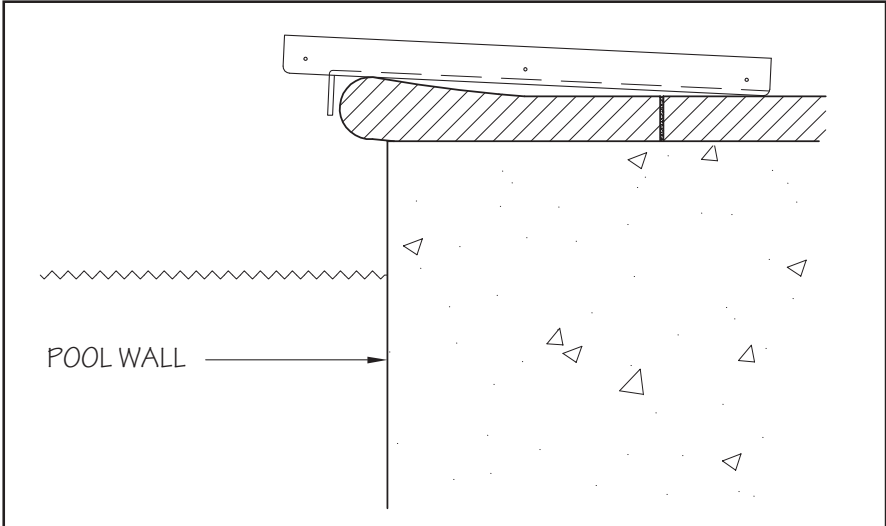


Fig. 8.1

- 8.3 Use the provided 5/32" drill bit to drill a hole into the deck approximately 2" deep through the two holes in the rear of the tray. While these 2 screws are enough to secure the Fastlane to the pool wall, extra anchor screws have been provided for additional anchor points if desired.

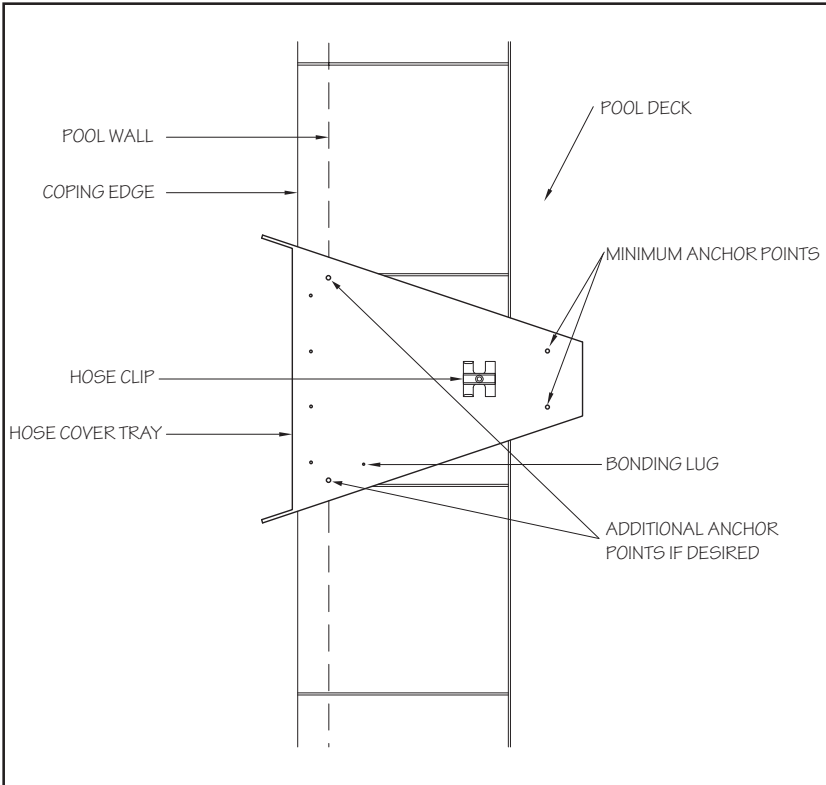


Fig. 8.2

Section 9

DECK MOUNT FASTLANE INSTALLATION

D

9.1 Loosely secure the hanger bracket to the hose cover tray with one of the provided 1/2" stainless steel screws. Measure down from the top of the hanger bracket to the water line (this measurement is called freeboard). Once the measurement has been taken, remove the hanger bracket from the tray.

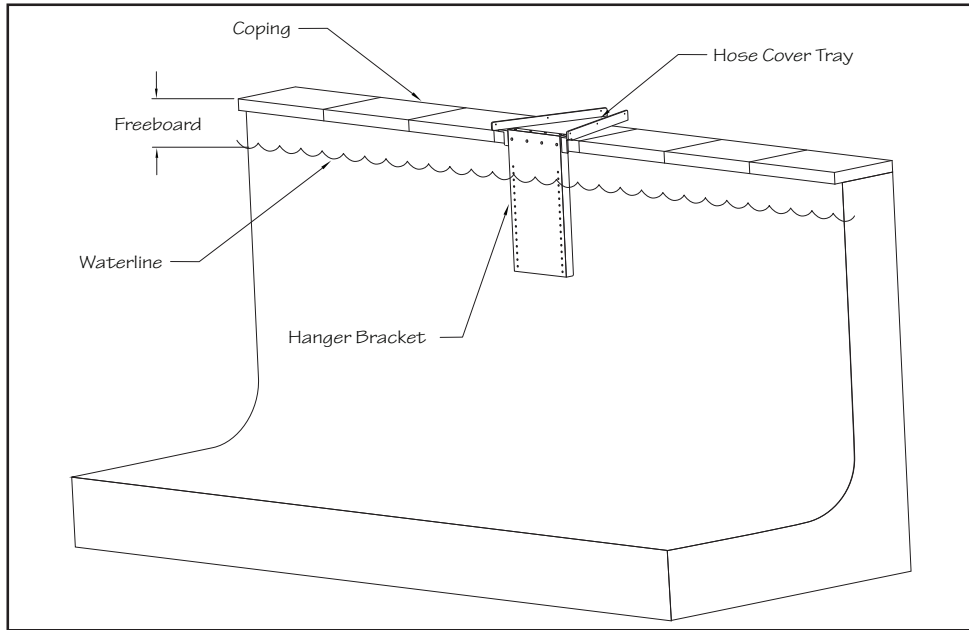


Fig. 9.1

9.2 Carefully lay the assembled Fastlane down on its front face. There are six pre-drilled holes in the center of the top housing (between the protective hat channels). Align the top set of holes in the rear of the housing with appropriate number hole in the hanger bracket (if the freeboard is 6" then align the #6 holes with the top holes in the housing). When the hanger bracket is positioned on the housing, use the provided 3/4" screws to attach.

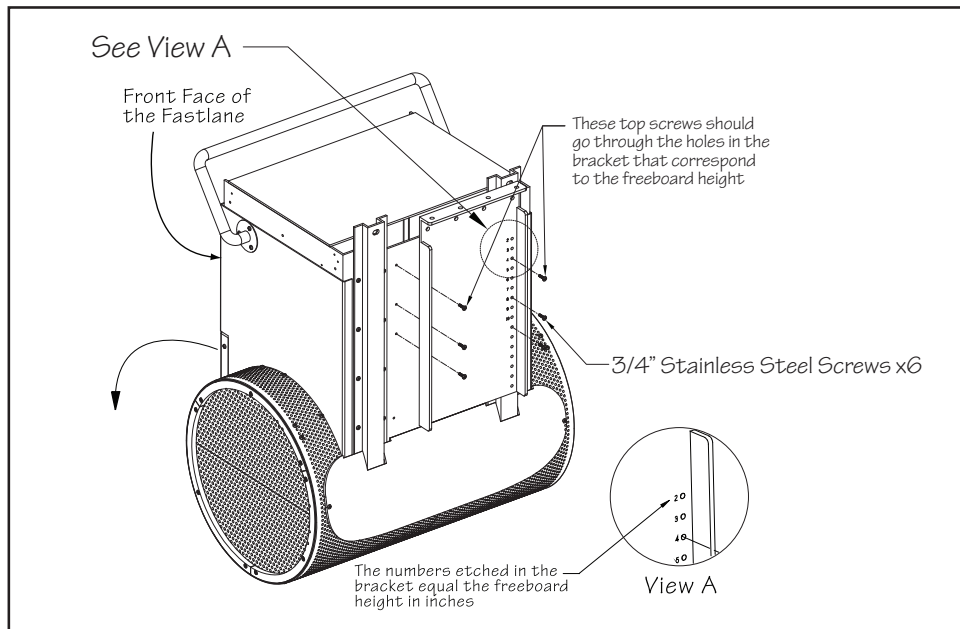


Fig. 9.1

D

9.3 This next step is best done with two people. Carefully lower the Fastlane into the pool. Align the holes in the bracket with the holes in the hose cover tray. Use the provided 1/2" screws to attach the top screws first and then the vertical screws next (total of 8 screws) (Fig 9.2).

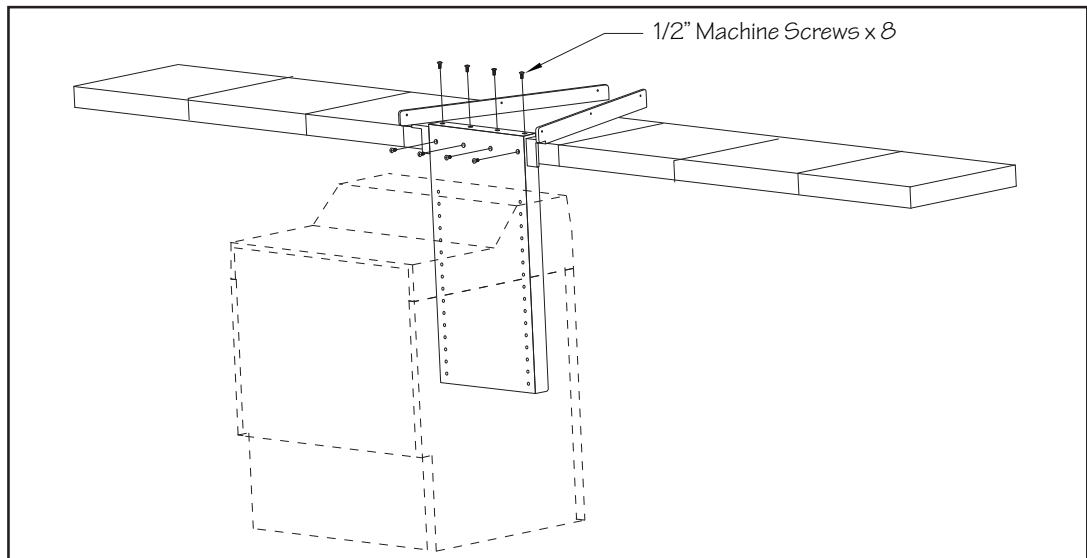


Fig. 9.2

9.4 Run the hydraulic hoses up and out of the pool and into the hose cover tray. Place the hoses under the hose clip that was previously secured to the tray. Pull any excess hose out of the pool and out of the tray. Once the hoses are in the hose clip, tighten the hose clip screw.

9.5 Secure the stainless steel bond wire (that exits the top of the Fastlane) to the bond lug attached to the hose cover tray. Attach a #8 AWG bare copper wire to the bonding lug (attached to the hose cover tray) and then incorporate that wire into the pool's bonding grid.

9.6 Place the Fastlane lid onto the top of the Fastlane and use the six 3/4" stainless steel screws that were provided (3 on each side) (See Fig 6.12).

9.7 Place the hose cover onto the hose tray and use the provided 1/2" stainless steel screws to attach the cover to the tray (Fig 9.3).

9.8 If the distance between the Fastlane and Power Unit is 25' or less, then the hoses attached to the Fastlane will connect directly to the Power Unit (see section 12). If the distance between the Fastlane and Power Unit is greater than 25', then additional run hoses will be required. Use the adapters provided with the hydraulic run hose to connect the hoses attached to the Fastlane and the additional run hose.

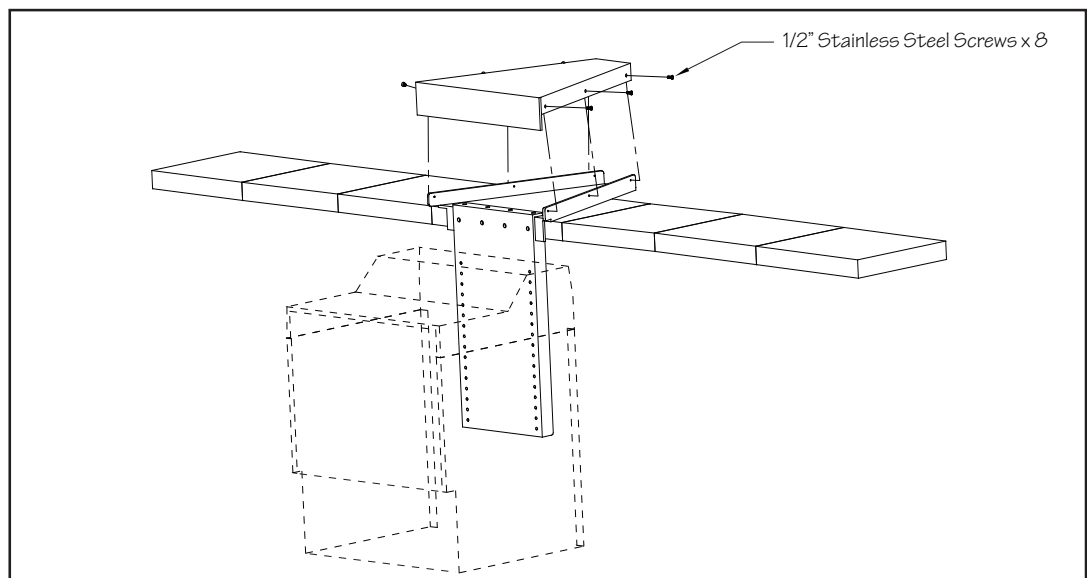
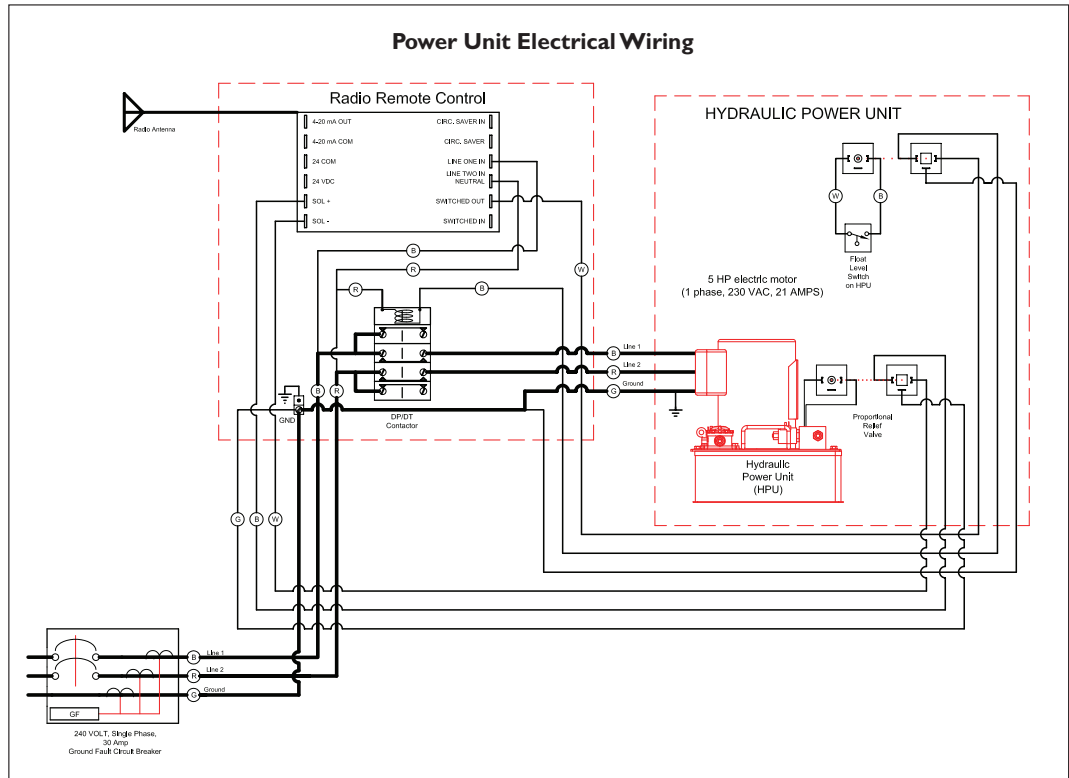


Fig. 9.3

Section 10

ELECTRICAL REQUIREMENTS FOR THE UNITED STATES (and countries with similar electrical requirements)



Section 11

ELECTRICAL REQUIREMENTS FOR THE UK (and countries with similar electrical requirements)



The unique design of the Fastlane facilitates sales to UK and international customers. The Fastlane is shipped in kit form for easy assembly and installation into any new conventional pool following the detailed instructions provided.

The Fastlane is ETL marked and CE listed.

The Power Unit circuit must be RCD (GFI) protected. The MCB (breaker) that operates the hydraulic Power Unit should be C-type or motor-rated.

United States wire color-coding is different than international color-coding. The following chart identifies the color-coding used in the United States as it relates to the wire type. In addition, the wires of the controller have a short, colored sleeve wrapped around them to conform to the international color codes.

US Wiring Color	Wire Type	Wire Sleeve Color
Black, Red, or Blue	Live or Hot	Brown
White	Neutral	Blue
Green	Ground	Yellow with Green Stripe

Should you have any questions, please call the Customer Service Department at 800-910-2714 (US), 0800-520-0196 (UK) or 610-497-4538 (Direct), or email us at poolhelp@endlesspools.com.

Section 12**INSTALLATION OF THE HYDRAULIC POWER UNIT**

- 12.1 Placement Considerations: The Power Unit should be placed on a flat, level surface, preferably not on wet ground. If placing outside, it is recommended the Outdoor Power Unit with Weather Guard be purchased (see Fig 12.1), but should not be subject to driving rain. If placing indoors and at a level below the pool deck, such as a basement, a floor drain is mandatory to accommodate the unlikely event of a hole developing in the hydraulic hose creating a siphon. Whether placed indoors or out, this is an air-cooled unit and must have ample ventilation. Therefore, a minimum of 12" air space must be provided on all sides of the Power Unit motor. In addition, while frequent access is not required, it is imperative the Power Unit is accessible.

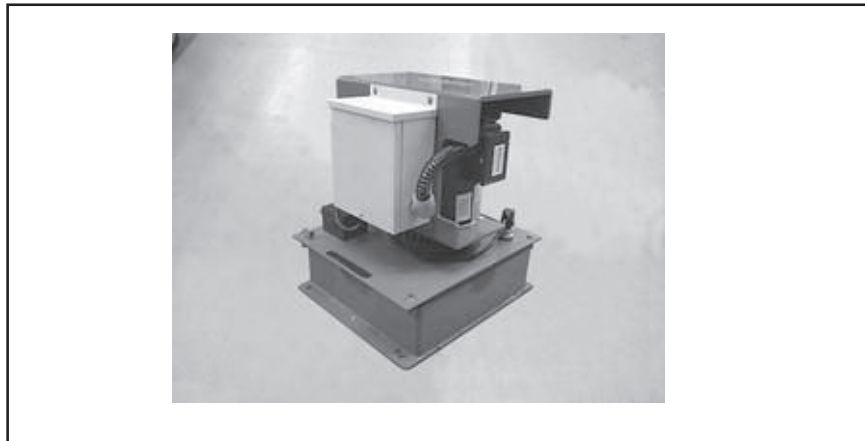


Fig. 12.1

- 12.2 Carefully remove the Power Unit from the packaging. Note: The Power Unit is very heavy. To remove the Power Unit open box top flaps, lay box on its side, open box bottom flaps, and slide the Power Unit out of the box sideways on the bottom foam.
- 12.3 Place the Power Unit in the selected position and verify that the hose connections are pointed in the direction you desire.
- 12.4 Have an electrician make the electrical connections using the whip provided. Make this connection by hard wiring to a disconnect or using an appropriate lock tight plug and socket. The Power Unit requires single-phase 220-volt, 30-amp GFCI-protected power. Verify proper incoming voltage and wiring. Refer to Section 10, "Power Unit Electrical Wiring." Note: The white wire will not be used in this application (no neutral is required). For UK and international electrical requirements, please refer to Section 11.
- 12.5 Turn the circuit breaker for the Power Unit off. Connect the hydraulic hoses from the Fastlane to the Power Unit. The low-pressure hose (connected to the Fastlane) will have red tape wrapped around the hydraulic fitting. This hose will connect to the port on the fill cap. The high-pressure hose will connect to the port on the high-pressure manifold (blue box) (See Fig 12.2).

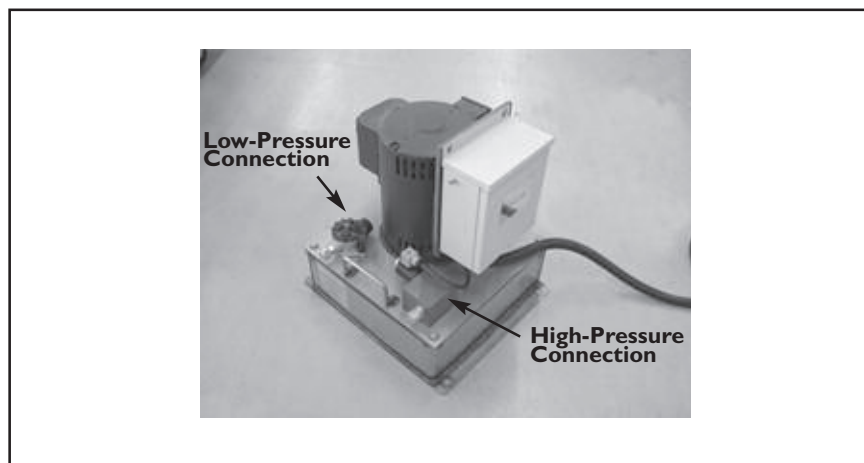


Fig. 12.2

- If the hoses attached to the Fastlane are to be directly connected to the Power Unit, the use the adapters (-8 female JIC x -6 male JIC) that were provided in the Accessories Kit.
 - If the 1/2" run hoses are to be attached to the Power Unit, then these hoses will connect directly to the appropriate connections on the power unit.
- 12.6 Remove the oil filter by lifting it out of the fill opening. Fill the Power Unit with the approximately four (4) gallons of hydraulic fluid provided. (The fill cap is at the low-pressure fitting.) Once filled with oil, replace the oil filter and cap and press firmly to ensure proper seating of the filter. Turn circuit breaker on. Install antenna and test the Power Unit operation using the remote control.
 - 12.7 Once the Fastlane is fully installed and operational, turn the system off and disconnect the hydraulic return hose which connects to the fill cap port (red tape). Place this hose end into an empty 5-gallon bucket.
 - 12.8 Turn on the Fastlane, making sure to hold the hose firmly in your hand over the bucket. The returning hydraulic fluid will flow into the bucket. The system will automatically shut off when the float level switch inside the fluid reservoir is tripped.
 - 12.9 TURN OFF POWER TO THE UNIT AT THE CIRCUIT BREAKER.
 - 12.10 Reconnect the hose to the power unit and tighten. Open the fill cap and add a little more than one cup of hydraulic fluid back to the reservoir. Reattach the fill cap to the power unit.
 - 12.11 Restore power and test the unit. It should stay on continuously. (If it turns off, even intermittently, turn off the power, add 1 cup of oil, restore electrical power, and re-start the unit).

Section 13**USING YOUR FASTLANE**

The Fastlane features 52 incremental steps in speed. Press and release the FASTER button to increase the speed of the current one step at a time. Alternatively, press and continue to hold the FASTER button to ramp up the speed until the button is released or the maximum speed is achieved. Reduce the speed in the same manner using the SLOWER button.

Turn off the Fastlane by again pressing the ON/OFF button.

The Power Unit remote control is equipped with an automatic timer shutting off the system 30 minutes after receiving its last command. Because the Fastlane “remembers” the speed at which it was turned off, it will return to that same pace when it is turned back on.

Section 14**GENERAL INFORMATION**

Once installed, the Fastlane will provide years of exercise and fun with minimal maintenance. Clean the intake grills of leaves as needed and wipe down the stainless steel cylindrical base and grab rail with warm water, a Scotch Brite pad, and brisk rubbing. Clean the acrylic housing with any typical non-ammonia, non-abrasive kitchen cleanser. Periodically, check all electrical and ground wire connections and test the GFCI circuit breaker for proper function.

It is important for the long-term operation of your Fastlane that your pool water be properly balanced and in accordance with normal pool industry standards. In addition, it is imperative that the Fastlane be bonded to the pool bonding grid.

Endless Pools, Inc. is an industry leader in customer service, should you ever have questions or concerns about your Fastlane, please contact our Customer Service Department at 800-910-2714 (US), 0800-520-0196 (UK) or 610-497-4538 (Direct).

Section 15**SCHEDULED MAINTENANCE**

15.1 Hydraulic Motor and Fluid Maintenance. We recommend the hydraulic motor, which is located in your swim unit and submerged underwater, be replaced after four years of usage. We also recommend changing the non-food grade, biodegradable vegetable oil and filter in the Power Unit after every 500 hours of use.

15.2 Grill Cleaning. Should you perceive a reduction in speed of your Fastlane, it may be caused by a reduction in water flow due to a blockage of the inlet assembly of the cylindrical base. Because the underside of your Fastlane will be sucking in water, it may occasionally become necessary to clean the cylindrical base of any debris or leaves that may have been in your pool when the Fastlane was in operation. With the Fastlane unit turned off, this is very easy to accomplish while in the pool.

15.3 Cold Weather Maintenance. At the end of the swimming season, it is recommended the Fastlane Swim Unit be removed from the swimming pool and winterized. A winterizing kit for the Fastlane can be purchased from Customer Service. For specific instructions, please contact our Customer Service Department at 800-910-2714 (US), 0800-520-0196 (UK) or 610-497-4538 (Direct).

15.4 Use of Salt-chlorine generators. Placing a Fastlane in a pool sanitized using a salt-chlorine generator creates increased risk of a hydraulic system failure and oil leaks. Any Fastlane placed in this type of environment must be properly bonded, and water chemistry must be closely monitored. As stated in our warranty, pH levels must be maintained between 7.4 and 7.8, total alkalinity between 80 and 120 ppm, salt chlorine levels below 4000 ppm, and total dissolved solids below 7000 ppm. Failure to properly bond the Fastlane or maintain proper water chemistry will void the warranty.

If you are using a salt-chlorine generator, please complete the following tasks:

- Remove and inspect your Fastlane unit annually. Once removed, rinse the Fastlane with fresh water before storing for the off-season.
- Replace the underwater hydraulic motor and submersible hoses every two years.
- Ensure that the fluid level in your power unit is no more than one cup above the float level switch.

This simple procedure ensures that any oil leak is minimized

15.5 Cathodic Protection Maintenance Program. The Fastlane been fabricated using the finest, most durable materials and has been designed to meet the most stringent safety standards, including VGB 2008. However, unbalanced water chemistry and salt chlorine generators can shorten the lives of these materials if the unit has not been properly bonded. Endless Pools has provided a sacrificial anode to draw any corrosion to itself and away from the Fastlane. To maximize the life span of your Fastlane, it is imperative that the Fastlane be properly bonded and the sacrificial anode be replaced after it has given up half its mass. Endless Pools offers a Preventative Maintenance Program.

This program will automatically send you a “sacrificial anode” on a regular basis for a nominal charge to help prevent product damage due to electrolysis. Enrollment in this program is recommended if the Fastlane is installed in a pool with a salt-chlorine generator. Contact Endless Pools Customer Service at 800-910-2714 to enroll in this program.

Section 16

FASTLANE CONSIDERATIONS



- The Submerged Suction Model #29-19 is certified only for use with Endless Pool Inc. Fastlane system. It may not be used in any other application.
- This Submerged Suction Model #29-19 may only be installed as described below.
- The Submerged Suction Model #29-19, is 19" in diameter and 29" long and is constructed of 316L perforated stainless steel. It should be replaced after 25 years using a Phillips head screwdriver. It shall be marked with the following label: NSF VGB 2008 SUBMERGED SUCTION 29-19. FOR USE ONLY WITH FASTLANE® SWIMMING MACHINE MANUFACTURED BY ENDLESS POOLS, INC. LIFE 25 YEARS, WALL ONLY. MAXIMUM FLOW FROM SINGLE 5 HP POWER UNIT WITH ALP2-16 GEAR PUMP PRESET TO MAXIMUM FLOW OF 4.8 GPM UTILIZING 16" DIAMETER OPEN FLOW PROPELLER. ENDLESS POOLS, INC. ASME A112.19.8-2008
- The Submerged Suction Model #29-19 does not require routine service during the year or as part of Endless Pool winterizing procedures. However, before using the Fastlane verify that the Submerged Suction Model #29-19 including the fasteners is undamaged and has not been tampered with,
- Do not use the Fastlane if there is any evidence of damage or tampering. Call the Endless Pools, Inc, Customer Service Department at 800 910 2714 immediately. The Submerged Suction Model #29-19 must be secured as described below before the Fastlane is used again.
- Do not increase flow through the Submerged Suction Model #29-19 by increasing the size of the pump.
- Please Read and then keep these instructions for future reference.

Section 17

FASTLANE® BY ENDLESS POOLS, INC. WARRANTY



Endless Pools, Inc. warrants to the original purchaser of Fastlane manufactured by us to be free from defects in material and workmanship under normal use for two years from purchase. OUR OBLIGATION UNDER THIS WARRANTY SHALL BE LIMITED TO THE REPAIR OR EXCHANGE (AT OUR OPTION) OF ANY PART OR PARTS WHICH MAY THUS PROVE DEFECTIVE UNDER NORMAL USE WITHIN TWO YEARS FROM DATE OF PURCHASE BY THE ORIGINAL PURCHASER, AND WHICH OUR EXAMINATION SHALL DISCLOSE TO OUR SATISFACTION TO BE THUS DEFECTIVE. THIS WARRANTY IS EXPRESSLY IN LIEU OF ALL OTHER WARRANTIES EXPRESSED OR IMPLIED INCLUDING THE WARRANTIES OF MERCHANTABILITY AND FITNESS FOR USE AND OF ALL OTHER OBLIGATIONS OR LIABILITIES FOR ALL DAMAGES DIRECT OR CONSEQUENTIAL TO PERSON, PROPERTY, OR BUSINESS WHETHER OR NOT OCCASIONED BY OUR NEGLIGENCE, AND WE NEITHER ASSUME FOR US ANY OTHER LIABILITY IN CONNECTION WITH THE SALE OF THIS FASTLANE. THIS WARRANTY SHALL NOT APPLY TO THIS FASTLANE OR ANY PART THEREOF, WHICH HAS BEEN SUBJECT TO ACCIDENT, NEGLIGENCE, FREEZING, IMPROPER INSTALLATION, ALTERATION, ABUSE, OR MISUSE. THIS INCLUDES, BUT IS NOT LIMITED, TO FLOW RESTRICTIONS OR OBSTRUCTIONS ON ALL WATER AND HYDRAULIC SYSTEMS AND NOT PROPERLY BONDING OR MAINTAINING PROPER WATER CHEMISTRY (pH level must be maintained between 7.4 and 7.8 and total alkalinity between 80 and 120 ppm. The total dissolved solids (TDS) must be no greater than 3,000 ppm). POOLS USING SALT CHLORINE GENERATORS require additional maintenance. MAINTAIN A SALT CONTENT BELOW 4,000 ppm AND TDS WITH SALT BELOW 7,000 ppm. Remove the Fastlane annually, rinse with fresh water and inspect underwater hydraulic motor and hose fittings. Set the hydraulic fluid level to one cup over the float level switch (contact Customer Service for detailed instructions).

THE TERM "ORIGINAL PURCHASER", AS USED IN THIS WARRANTY, SHALL BE DEEMED TO MEAN THAT PERSON FOR WHOM THE FASTLANE WAS ORIGINALLY INSTALLED. THIS WARRANTY SHALL APPLY ONLY WITHIN THE BOUNDARIES OF THE CONTINENTAL UNITED STATES.

WE DO NOT WARRANT THIS MACHINE TO MEET THE REQUIREMENTS OF ANY SAFETY CODE OF ANY STATE, MUNICIPALITY, OR OTHER JURISDICTION. PURCHASER ASSUMES ALL RISK AND LIABILITY WHATSOEVER RESULTING FROM THE USE THEREOF, INCLUDING DAMAGE OR STAINING TO ANY POOL OR POOL DECK, WHETHER USED SINGLY OR IN COMBINATION WITH OTHER MACHINES OR APPARATUS.

In order to claim under this warranty, original purchaser must promptly notify our Customer Service Department in writing of the existence of the claim and then follow our written instructions regarding the procedures for remedying the defect. Endless Pools, Inc. shall not be responsible for cartage, transportation, removal, and/or re-installation labor or any other such costs relating to performance of the warranty.

All orders are FOB Aston, PA. We will NOT be liable for any costs or losses due to changes in shipping schedules, or delivery times. It is the responsibility of the Customer to supply safe and proper site preparation, installation and operation for all Endless Pool Swimming Machines. This includes, but is not limited to, adequate drainage at any pool and/or equipment site, to control humidity, to post necessary safety signage and to ensure safe and proper use of all Endless Pool Swimming Machines. Customer shall be responsible for any and all building permits, fees, licenses, and authorizations necessary to comply with local building codes or requirements. Customer takes all responsibility for site preparation including, but not limited to, any slab or foundation. Any Endless Pools product installed above grade must be placed on a properly engineered structure, which is the responsibility of the customer.

In the event any portion of this warranty shall be deemed unenforceable by a court of law, the remainder of this warranty shall remain in full force and effect as if the voided portion were never included.

Endless Pools, Inc. 1601 Dutton Mill Rd, Aston, PA 19014 800-910-2714



Endless Pools, Inc. • 1601 Dutton Mill Rd • Aston, PA 19014-2931
800-910-2714 US • 0800 520 0196 UK • 610-497-8693 fax • www.myendlesspool.com



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