

PONTOON HYDROFOIL APPLICATIONS INC.

**VARA**®  
**FOIL-STRIYV-T-PLATE**

**VARA**® **Skin**

**INSTALLATION RECOMMENDATIONS**

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**Version 1.7**

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## 1.0 Introduction

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**Thank you for your purchase.**

Your new VARA® **Skin** will provide a new and better way to enjoy your boat. The VARA® **Skin** is mounted to the crossbeams underneath your pontoon decking. It helps to decrease drag produced preventing waves and excess water from contacting the crossbeams while the boat is in motion.

Each application is different, and the purpose of this guide is to assist the installer with recommendations, not required methods, for attaching the VARA® **Skin**. These are **only** recommendations and should not be solely relied upon for the installation. Read the document completely and carefully as PHA, Inc. desires HAPPY and SAFE customers. If you have questions, contact the PHA, Inc. Support Team before proceeding with the installation or use.

**DO NOT ASSUME THIS IS THE MOST CURRENT INFORMATION.** You must verify the latest version on the website at [pontoonhydrofoil.com](http://pontoonhydrofoil.com).

The intended audience of these recommendations must understand ALL the basic terms, definitions, tools, and methods described herein. Additionally, if you do not understand something in this document, **STOP** and verify the recommendation by contacting the PHA, Inc. Support Team by phone, email, or text with the questions or concerns **prior** to moving forward with any additional steps. **WAIT** for written answers before continuing to avoid proceeding with what may be improper and/or create an unsafe installation or boating situation.

It is highly recommended that the installer(s) watch an example of a do-it-yourself installation video posted on YouTube at <https://www.youtube.com/watch?v=WGrTEp3E-0s> .

### **IMPORTANT NOTES:**



**YOU ARE RESPONSIBLE FOR PROPER INSTALLATION AND ALL OF YOUR INSTALL WORK.**

**READ THE ENTIRE GUIDE BEFORE PROCEEDING WITH THE INSTALLATION.**

***If you do not understand or are unable to install the VARA® **Skin** as a do-it-yourself project, paid marine professionals are available and should be hired to perform the install rather than proceeding with an improper installation. Contact the PHA, Inc. Support Team with any questions or concerns.***

**Ensuring all boaters have a safe boating experience is our highest priority.**

## 2.0 Getting Started

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### 2.1 Material and Tool Checklist

Examine shipping box and document any damage with pictures before opening.  
Open box, unwrap, inspect, and inventory all contents.  
Document any damage with pictures.

Content List:

- VARA® Skin (1)
- VARA® Skin Hardware Kit
  - Additional hardware available for purchase

Gather Minimum Tools Needed for Installation:

- Measuring Tape
- Rope or cord (4-5 pieces at 9 ft long each)
- Marker
- Razor knife/ Sharp Scissors
- File or efficient power sander
- Mini straps (2-4)
- Small 2-inch C-clamps (5-6)
- Battery-Powered Impact Driver with ¼ nut driver bits
- Battery-Powered Drill with 5/32" bits used for pre-drill of thicker beams

### 2.2 Cautions and Tips Before Proceeding

1. Each application of the VARA® Skin is different based upon boat type and mounted accessories. Different installation methods identified to date include 1) around the motor pod as indicated in these guidelines, 2) semi-mounted underneath the motor pod, 3) mounted mostly underneath the motor pod, or 4) mounted to join up to added aluminum underskinning on back 2' of deck. You should choose the most appropriate method based on your boat.
2. It is highly recommended that two (2) people work together for the installation.
3. Each installer should watch the basic installation help videos on our YouTube Channel @pontoonhydrofoil prior to proceeding.
4. It is recommended to install the material in temperatures above 55° F.
5. Locate and mark the position of all wiring, cables, fuel lines, etc. that run underneath or through the deck. DO NOT drill into or near any fixtures.

6. Remove battery cables and ignition key prior to beginning any work around the motor including the pre-fit process and installation.
7. The material must be pulled **VERY** tightly when attaching it to the crossbeams so there is no pleating or sagging. Use caution when using tools or clamps to avoid unintended cuts in the material. Loosely attached or damaged material will negatively affect performance, reduce product durability, and void any product warranty.
8. Exercise patience when fitting the material in front of and around the motor pod to ensure a snug fit with no pleating or sagging.
9. Ensure that a minimum of seven (7) self-tapping screws and washers are evenly spaced along each deck crossbeam located in front of the motor pod. Place an appropriate number of self-tapping screws and washers along each side of the motor pod to ensure a tight and secure fit as this section receives the most load when the boat is in moving through the water.
10. Do not cross thread screws and ensure each screw is tight. Keep ALL screws or sharp edges from protruding or being exposed for safety reasons.

## 3.0 Installing the VARA® Skin

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### 3.1 Pre-Installation Steps:

1. Determine if there are any attached accessories (i.e., under-deck lights, tow eye reinforcements, etc.) that may interfere with achieving a smooth, finished surface. If possible, remove the accessories to avoid having to make unnecessary cuts in the material. **You will re-attach each one as you mount the material in that area but before the final screw install.**
2. Determine which direction is desired for your starting point to begin mounting the material (from front to back as shown in these guidelines) or back to front. Some customer feedback suggests it may be easier to start in the back and move forward with the application.
3. Measure the boat to determine the centerline under the deck. Mark the centerline points on all beams possible to use as a guide and ensure a straight line.
4. Using rope or cord, tie several guiding lines pulled tightly sideways under the deck from side to side (equally spaced and approximately 3-4' apart) to help hold material up off the ground and closer to the cross beams.
5. Lay the rolled VARA® Skin down on a flat surface such as a tool table nearby. Notice there is a smooth and a coarse side. **The smooth side should face down and the coarse side will face toward the decking during the installation.**
6. Determine the center point of the VARA® Skin and mark the location. You will line up the center mark with the mark with the centerline marks placed on crossbeams during install.
7. Measure the width of the underdeck and mark the material with that measurement in the front area and “projected” back area. Note that extra material is usually left here for final removal/trimming after installation of screws is complete. We recommend no less than 4” overhang and 8 -12” is preferable.

### 3.2 Measuring and Attaching a VARA® Skin in Front of the Motor Pod

1. Unroll material starting at front edge of the VARA® Skin. Unroll material and pull towards the back underneath the boat. [HINT: Use rope/cord previously discussed as a method to hold material off ground for install. It is sometimes easier to loosen lines for pulling material between deck and rope, then tighten rope as needed.]
2. Line up the center mark placed on the VARA® Skin with the center of front cross beam leaving extra material overhang forward of deck line. At centerline apply a self-tapping screw and washer to attach material. Remember the coarse side faces the decking underneath the boat and the smooth side faces toward the water.
3. Using the side-to-side cord or rope guiding lines, pull the material between the deck and the cord aft to the centerline in front of the motor pod's closest accessible cross beam - pulling material tightly to remove any loose material. A 2<sup>nd</sup> person is recommended to pull. Attach a self-tapping screw and washer on both sides of the centerline point to the closest beam in front of the motor pod to hold it in place.
4. Pull tightly while screwing the material into place to remove slack helps achieve a straight/tight look. [HINT: Each application is different, and you may choose to pop a chalk line to mark the centerline from front to back to aid in keeping screw location lines straight. Vise grips or similar clamps help, but DO NOT overtighten!]
5. Using the self-tapping screws and washers, attach material to the remaining center line beams on each cross beam between the bow and motor pod. [HINT: Keep the material straight using c-clamps as needed.]
6. After centerline forward is screwed down attach the two outermost screw locations at the front cross beam while pulling tightly to remove loose material. Make sure you try and keep material square to beams. Use the thread lines contained in the material to assist in visual squareness. Finish attaching forward screws and washers for a minimum of seven (7) across the front beam. [HINT: Pull the VARA® Skin very tightly toward the outside to remove any loose material while keeping the lines straight.]

### 3.3 Attaching the VARA® Skin Around the Motor Pod

Determine which mounting procedure mentioned in Section 2.2.1 you prefer before proceeding.

**OPTIONAL: ONLY IF IT IS SAFE TO DO SO AND THE MOTOR IS SUFFICIENTLY STABILIZED AND BLOCKED FROM FALLING, you may choose to loosen the bolts in front of the motor pod (if they are accessible) to mount the material underneath the motor pod before making any cuts for each side. It is recommended to get as much material between the motor pod and the deck beams as safely possible.**

**Remember you MUST firmly re-attach/replace any bolts loosened in the process. Check to make sure the old bolts are structurally sound (not cross-threaded, rusted, or otherwise weakened or compromised) prior to replacement. New hardware is always recommended. You may contact a marine professional or PHA, Inc. Support Team for additional tips.**

**Recommendations if you decide to mount AROUND the motor pod:**

1. At the front of the motor pod, place a slit at the centerline of the material leaving enough excess material to cover and attach to motor pod later. [HINT: The idea is to have plenty of material around motor pod but not too much that it affects pulling material tight sideways from under deck pontoon to pontoon.]
2. Pull both sides of the material toward the back of boat.
3. Using the C-clamps, secure the material in such a way at the back end to pull the material tight with no pleats or sagging. When pulled tightly back, material should be equal distance from centerline or outside pontoon attachments or both. For example, if your distance from inside pontoon to pontoon is 65" then match the distance of C-clamps to the same dimension for best results.
4. Attach a self-tapping screw and washer on the first side starting at the back then moving forward along the OUTER EDGE from back to front with while keeping material straight and aligned. Repeat for the opposite side applying the self-tapping screw and washers to the remaining beams.
5. Finish attaching the remaining material along the motor pod.  
Previous users have purchased a screen cap (example shown here: <https://www.homedepot.com/p/Screen-Tight-1-1-2-in-Beige-Porch-Screening-System-Cap-BCAP18/100000075>) which has worked well for them. You may also use aluminum flat bar to tighten down. Keep in mind this is a high load area, so make sure you are satisfied with the strength of your application.
6. Fold down and screw material to cover the pontoon to deck transition. This is important and recommended for best performance and a finished look.
7. Re-tighten any motor pod bolts in the process, if needed.

### 3.4 VARA® Skin Trimming and Final Inspections

1. Double check ALL screws are in place and the VARA® Skin is pulled tight and lays flat in all directions. At a minimum, ensure that seven (7) self-tapping screws and washers have been used along each cross beam forward of motor well.
2. Ensure an adequate number self-tapping screw and washers have been used around the motor pod to ensure a proper and tight fit. Use reliable amounts of hardware around the well and at the finished back end as these sections are a high load area because of the water compressing under the deck and the formation of the aft wave.
3. Ensure all screws and nuts/bolts are tight.
4. Trim any excess VARA® Skin material as needed. It is recommended to save any left-over scrap pieces for patch material if needed.
5. Apply the VARA® Skin sticker supplied to the material in a location of your choice (recommended in the front and on the center point).
6. Tighten any under-deck accessories previously removed.
7. Replace battery cables and ignition key once ALL checks are complete and everyone is safely clear from the area.
8. Check and double check that ALL drain plugs are tightened before use or returning the boat to the water.

### 3.5 How to Repair Small Rips or Tears

1. Using excess material saved from the initial installation, measure and cut a section (circle, or square, rectangle or triangle with radiused edges) to fit the repair area with at least two (2) inches overlapped on each side.
2. Clean the area with alcohol.
3. Apply a piece of thin, double-sided tape to the patch piece(s) approximately 3/16 inch from the edges.
4. Evenly apply a small amount of super glue onto the patch inside and outside of the double-sided tape and apply patch to affected area. Use a straight edge to smooth the patch and allow to dry.



## 4.0 Maintenance and Care

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PHA, Inc. highly recommends each boat owner routinely perform regular maintenance and safety checks on all VARA® products including the VARA® Skin, VARA® Plate and VARA® Foil Hydrofoil System components. Contact PHA, Inc. for any replacement parts that may be required.

At a minimum, complete the following on a regular basis:

- Visually inspect the VARA® Skin material for rips or tears. See Section 3.5 for repair steps. Contact PHA Inc. for additional assistance.
- Inspect all screws and washers to ensure they are tight, but not over-tightened. Tighten any loose hardware. Replace any missing or worn hardware.
- Ensure all bolts for the motor pod are tight and in proper working condition. Replace any missing or worn hardware.

### PHA, Inc. Contact Information

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Check out our other patent-pending VARA® products when upgrading your pontoon, tritoon or power catamaran including the VARA® Plate and VARA® Foil Hydrofoil Kits.

Follow us on our [YouTube Channel](#) and visit the website for complete details.

Consider joining the Pontoon and Tritoon Speed Gearheads Facebook group for more discussions and tips on how to improve your boat's speed and performance.

**You are now ready to start enjoying the VARA® Life!**