

# 'TOON FENDER™ INSTALLATION INSTRUCTIONS

## General Pontoon Information

U.S. Patent Number 6,951,181 B1

The unique attachment method of the 'TOON Fender will allow you to protect your pontoon boat at any height that you want to put the protection. You can protect it from the top of rails (fencing) to below the floor molding/rub rail (from here on referred to as rub rail only), at the high setting, or you can adjust them low to protect the pontoons themselves and still protect more than half of the side fencing and railing. The 36" fenders can adjust any place in between depending on your rail locations. Please read all information prior to assembly and installation.

## There are three basic designs of railing on pontoon boats.

**Type I** has the aluminum framing on the outside of the fencing panels. Usually you will have at least two horizontal rails to attach the top hook of the 'TOON Fender.

**Type II** has some of the aluminum framing concealed on the inside of the pontoon with aluminum panels. Some models will have a higher aluminum railing giving two different heights of horizontal rails to attach too. If possible, you should try to attach the fender where you have a vertical rail. On type II look for the rivets that run in a vertical line. Some of these models have a low railing system around some areas, (which will put the fender under water) in this case you may want to consider using a shorter 24-in. fender, available from DockEdge Inc..

**Type III** has fencing made of a strong composite material. There is no horizontal railing to attach to except the top of the panel. Type II and III more susceptible to damage, since the panels are not recessed as in type I. All three of these railing systems are set back from the rub rail one half to one and a half inches.

## Description of Fender and Parts

Your 'TOON Fender has a stainless steel top hook with PVC coating and woven through an adjustable strap. Attach the hook to one of the upper horizontal rails of the pontoons fencing. There is a black plastic hook in the bottom of the fender that is adjustable up or down in the receivers that are molded into the PVC fender. This hook hooks under the bottom edge of your rub rail. In the parts bag there is a black plastic tab that you will need to adjust one time only in the bottom black plastic hook (see "Initial set up for bottom hook with tab").

In the parts bag there are 3 "STOPS" (A, B & C), two pieces of double faced tape and a plastic shim. By attaching the "STOP" to the rub rail as illustrated on the drawings on page 2, it will prevent the fender from sliding on impact and prevent damage to the hooks or your railing. One style of the STOP should fit your pontoon and you can disregard the other ones. (See "Installation of "STOP"). *When your fender is installed properly, with the "STOP", and you catch or impact something hard, the bottom hook should pop out of the PVC receiver in the fender. This prevents over-stressing the bottom hook or your rail. **Periodically, or after hard impact, make sure to check your bottom hook for proper attachment.***

## Initial Set Up For Bottom Hook With Tab

The design of the rub rail that the bottom of your 'TOON Fender attaches to, will vary from pontoon manufacturer-to-manufacturer, year-to-year and even model-to-model of the same manufacturer in the same year. For this reason you will have to choose the correct channel in the bottom black plastic hook to install the black plastic tab from the parts bag into. To do this you need to look under and behind the bottom edge of the rub rail to determine the width that the tab will need to be adjusted to in the channel. Adjust the tab by sliding it into the channel from left to right when facing the backside of the fender (the side that goes against the pontoon). If the tab goes in hard, rotate 180 degrees, it should slide in easy about half way (do not slide it all the way in at this time). The hook assembly should not bind or hang up when you take the fender off, if it does move, the tab to the next channel to make the opening of the hook larger. If your pontoon rub rail is curved like in drawing 3 of the installation of "STOPS" or has a vinyl insert in the rub rail, move the tab to the next channel to make the hook opening larger to compensate for the radius or vinyl insert.

Once you have selected the proper channel, carefully pull the black lock pin out that holds the safety cord in the fender and remove the hook assembly. Tap the tab, with a hammer, all the way in the channel and cut off the remaining end of the hook with a hack saw if you need too. If you have a grinder or a file available you can radius the corners. Reinstall the hook with safety cord back into the fender with the black lock pin. Adjust the bottom hook in the fender receiver for proper height as per the instructions. (How to install on a pontoon)

In the situation where you do not have an opening behind your rub rail for the black tab of the hook to fit into without binding, you will have to use the 90-degree STOP that is marked C. This STOP was designed to have a notch on it to catch in one of the channels of the black plastic bottom hook. ***In this case you do not use the plastic tab.*** The plastic hook still may need to be cut off so it does not hit anything. The STOP notch should catch in the second or third channel of the black plastic hook if you are mounting the C "STOP" flush to the outside edge of your rub rail.

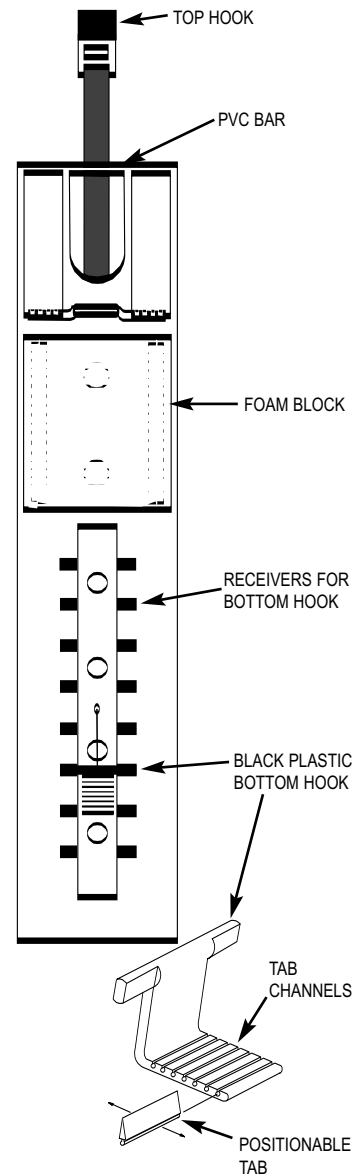
## General Information For Installation Of "STOPS"

Look over the drawing enclosed to aid you in selecting correct attachment.

After you have fitted and determined what "STOP" you are going to use, clean the surface of the "STOP" with one of the alcohol wipes. Allow to completely dry and apply the double-faced tape to the "STOP" you selected, make sure to adhere tape to the correct side per drawing of "STOP".

Available pontoon information is only for the past 2 yrs. Some pontoons may need to be individually fitted.

1. "STOPS" A & B notch should be mounted flush with the bottom edge of the rub rail. The legs that stick down from the STOP will prevent horizontal movement of the hook. Your primary strength for attachment should be the plastic hook



and tab behind and under your rub rail.

2. On "STOP" C when you use it as the receiver for the bottom black plastic hook in place of the tab in the channel of the plastic hooks, and you do not have a good wide flat area to mount it on, you may have to pop rivet it to the surface you are attaching to.
3. Some applications may need a shim, which we have enclosed. The shim should be used with drawing 1 and 3 if there is a small lip on the inside of the rub rail. A shim should also be used with "STOP" B, in drawing #4, if the off set is not sufficient. To apply shim, peel the release paper off the tape on the aluminum STOP and apply it to the non-taped side of the shim.
4. Fit all "STOPS" before you clean and apply the "STOPS".
5. Clean and dry surface to be attached to with alcohol wipes enclosed.
6. If possible, apply pressure with C clamp, Vice Grips and by wedging wood blocks to the taped area for 24 hours for maximum holding strength.

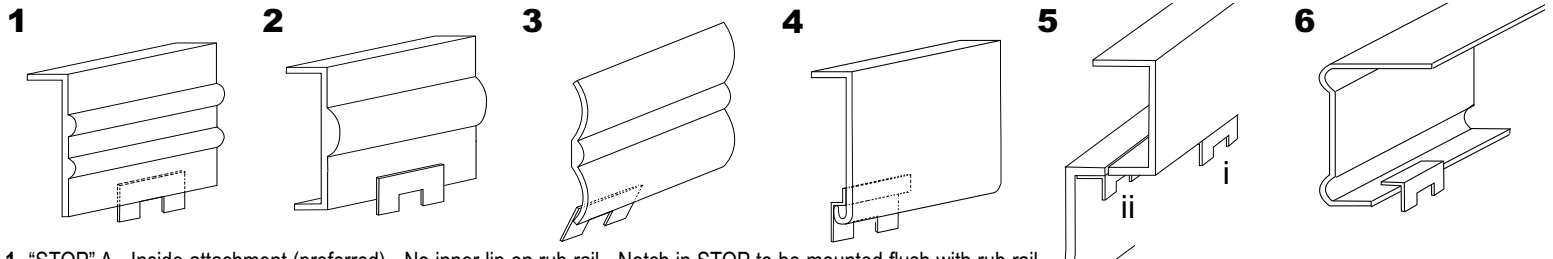
#### Definitions And Pictures Of "STOPS" and Miscellaneous Parts Enclosed

1. STOP "A" -Flat aluminum hook "STOP" (A)
2. STOP "B" -Off set shaped aluminum hook "STOP" with optional holes. (B)
3. STOP "C" -90-degree aluminum hook "STOP" with two optional holes. (C)
4. Clear Plastic shim
5. 2 Alcohol wipes
6. 2 piece, 1/2" x 4" double sided tape (1 for STOP, 1 for shim)

#### Installation Preparation:

Ensure that the area the STOP is to be affixed to is clean, smooth and dry. Use the alcohol wipes provided to remove any dirt or oils.

In some cases such as irregular surfaces it may be preferable to drill and pop-rivet or screw the STOP in place on the rub rail of the pontoon boat.



- 1- "STOP" A - Inside attachment (preferred) - No inner lip on rub rail - Notch in STOP to be mounted flush with rub rail.
- 2- "STOP" A - Outside attachment - Inner lip on rub rail prevents inside mounting - Mount on exterior of rub rail with STOP notch flush with bottom of rub rail.
- 3- "STOP" A with shim - Inside attachment - Rub rails with radius - Legs of stop do not need to be vertical with rub rail.
- 4- "STOP" B - Inside attachment - Rub rail has 1/2" or less inner lip - Wider lip will require "STOP" C - Notch flush with lowest edge of rub rail
- 5- "STOP" C - Underside attachment - Rub rails with MIN 1/2" flat surface underneath to affix STOP - Mount stop flush with outer edge of rub rail in either position shown - STOP C also works when there is insufficient room to insert the tab into the bottom hook. The STOP will catch inside the channels of the bottom hook.
- 6- "STOP" C - If it is possible to affix the STOP behind the rub rail - Install the STOP on the top side of the lower rub rail flange as shown

#### How To Install On Pontoon

Loosen the top hook from its shipping position on the PVC Bar that goes across at the top "U" of the fender and loop it behind the PVC Bar it was hooked onto. (See drawing on page 1) Now tip the bottom hook out of the fender a little so it can hook on the rub rail and between the legs of the STOP. Then hook the top hook on the upper rail and while pulling up on the fender PVC Bar, pull straight down (not out) on the strap. The first time you install the fenders you might need to help the webbing through the stainless steel rod and the PVC material. When installing a 'TOON Fender on type I and II railings, adjust the bottom hook so that the top of the fender U shape comes just in contact with the upper railing. If the top of the U is too high on the rail, (one inch or more) you will not be able to tighten the fender up because the top hook is out of adjustment and is hitting the bottom of the U of the fender. In this case, you have to lower the bottom plastic hook to the next receiver. Insert the foam block so it centers on one of the horizontal aluminum rails between the top and the bottom of the fender.

**Some manufacturers install the seat upholstery tight to the top rail so you will need to find an area where it is a looser to fit the top hook. If you can not find a loose spot and need to install the fender hook in the area, try to loosen the screw that attaches the upholstery to the rail up a little in the area, or you can try to install a shim between the rail and upholstery, being careful not to sag the material.**

When adjusting the fender to protect the pontoons themselves, select one of the higher receivers for the bottom hook and install the top hook on a lower horizontal rail with the U contacting that area as above. (you do not need to use the foam in this situation) Then tighten as above.

On type III pontoon fencing, adjusting the fender the same way as type I, but you can only hook the top hook on the top framing of the panel since you do not have any horizontal rail on this type of boat. Install the foam anywhere, as you have a smooth side. To protect the pontoons on this style readjust the bottom hook as above and leave the top hook on the top rail and loosen the strap for proper adjustment. (Based on how low you adjust the fender you may or may not need the foam block). The first time you use the fencing in warm weather you will have to retighten the strap a few times until the PVC material is done stretching

#### Use With Pontoon Covers

On most pontoon boats you can readjust the fender so that your cover can fit on. On type I and II most of the covers will wrap over the top rail and snap to a lower rail. In this case you will have to readjust the 'TOON Fender as explained above, with the top hook on the same railing as the snap studs. The cover material goes over the hook and behind the "U" of the fender. Then all you have to do is slide the U over the hook and between the fender and rail. Some covers are loose enough that the cover will slip right over the top of the fender if you leave a snap loose in the area.

#### Docking And Rafting

Like any fender, the contact area should hit the fender in the corner to allow the maximum movement up and down and prevent the fender from getting caught on top of a dock or any other pontoon when rafting. When docking with extreme pipe on the dock, you should come in a safe distance away, and then pull the pontoon sideways into the dock. It is a good idea if you have this type of dock to fill this area in between the pipes with wood to give a smooth side. The same holds true when you are leaving the dock, push the pontoon away to clear the pipes.