



ONLINE TRIM TAB

INSTALLATION INSTRUCTIONS

READ INSTRUCTIONS COMPLETELY BEFORE BEGINNING INSTALLATION

Note: These installation instructions are for "standard" Bennett Trim Tab Kits. Contact Bennett Marine for installation instructions for Bennett Sport Tabs and Tournament Tabs

Tools and Materials List:	
1/2" & 9/16" Wrench	Teflon Tape
Electric Drill	Marine Epoxy
Four Foot Straightedge	Small Funnel
Marine Grade Sealant	Wire Crimpers
Vise Grips	7/64", 9/64", 3/32", 3/16", 5/32" & 1/2" Drill Bits
Tape Measure	Automatic Transmission Fluid
Masking Tape	#1, 2, & 3 Phillips Head Screw Driver
Wire Cutters	1-1/8" Hole Saw (for Rocker Switch or Racing Type Control)
Wire Stripper	1-3/8" Hole Saw (for Single Lever Control)

Fig. 1

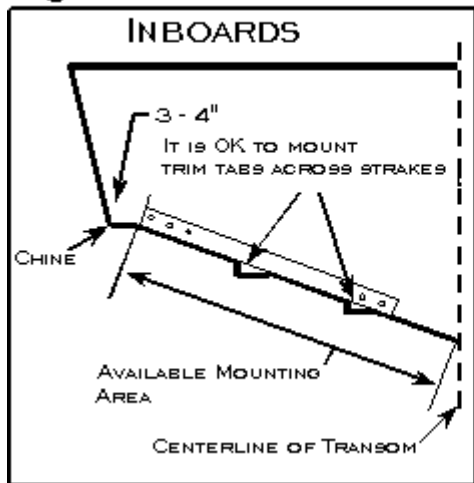
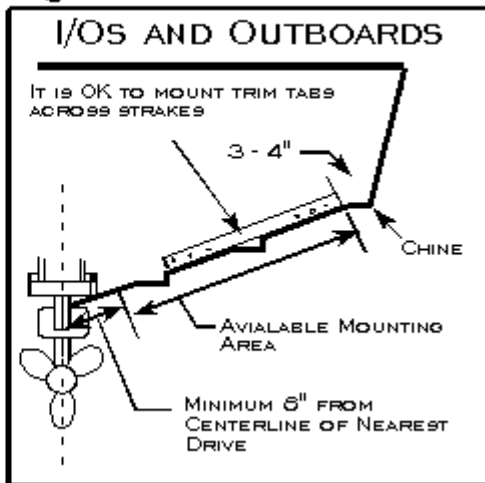


Fig. 2



Step 1 - Position the trim tabs against the transom and check to see that the upper mounts of the hydraulic actuators do not center on an inside obstruction. If they do, reposition tabs slightly outboard. The further outboard the tabs are mounted, the greater the lateral (side-to-side) control. Position tabs 3" to 4" from the chine and run towards the centerline of the boat. Boats with outboard motors or Inboard/Outboards (I/Os) must maintain a minimum of 8" from the centerline of outboard or sterndrive unit to the closest edge of the trim tabs. Boats with inboard motors

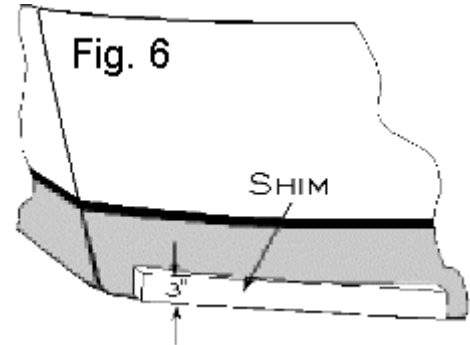
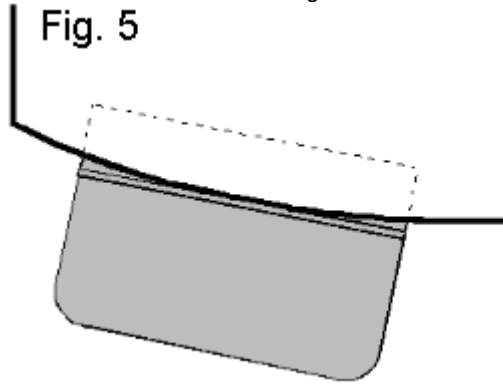
may utilize the entire run of the transom. (See Figures 1 & 2). Note: If the inside of the transom is inaccessible due to fuel tank, floatation, or other obstruction, [click here to view alternate installation options](#), or contact [Bennett Marine](#) (954) 427-1400.

Fig. 3

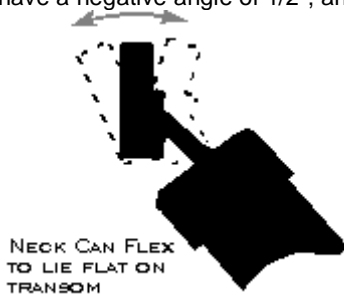
Step 2 - Attach the mounting plates and trim tab with #10 x 1-1/4" stainless steel screws along the bottom of the transom. (See Figure 3). Using the backing plate as a template, mark screw hole locations. Drill 9/64" pilot holes for mounting



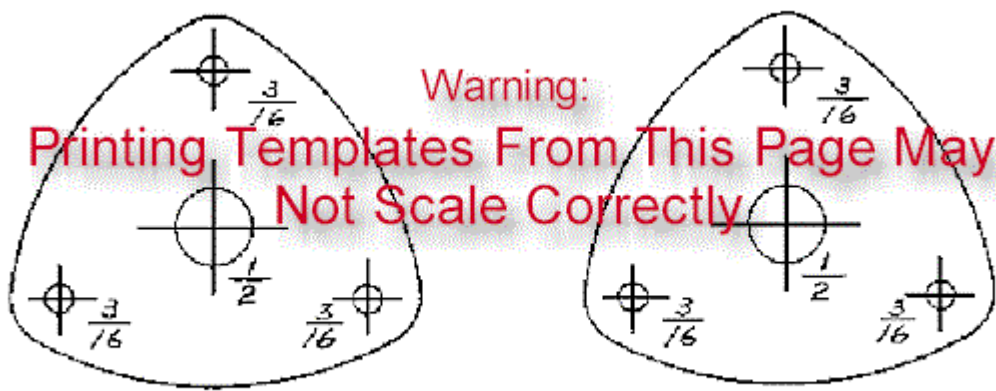
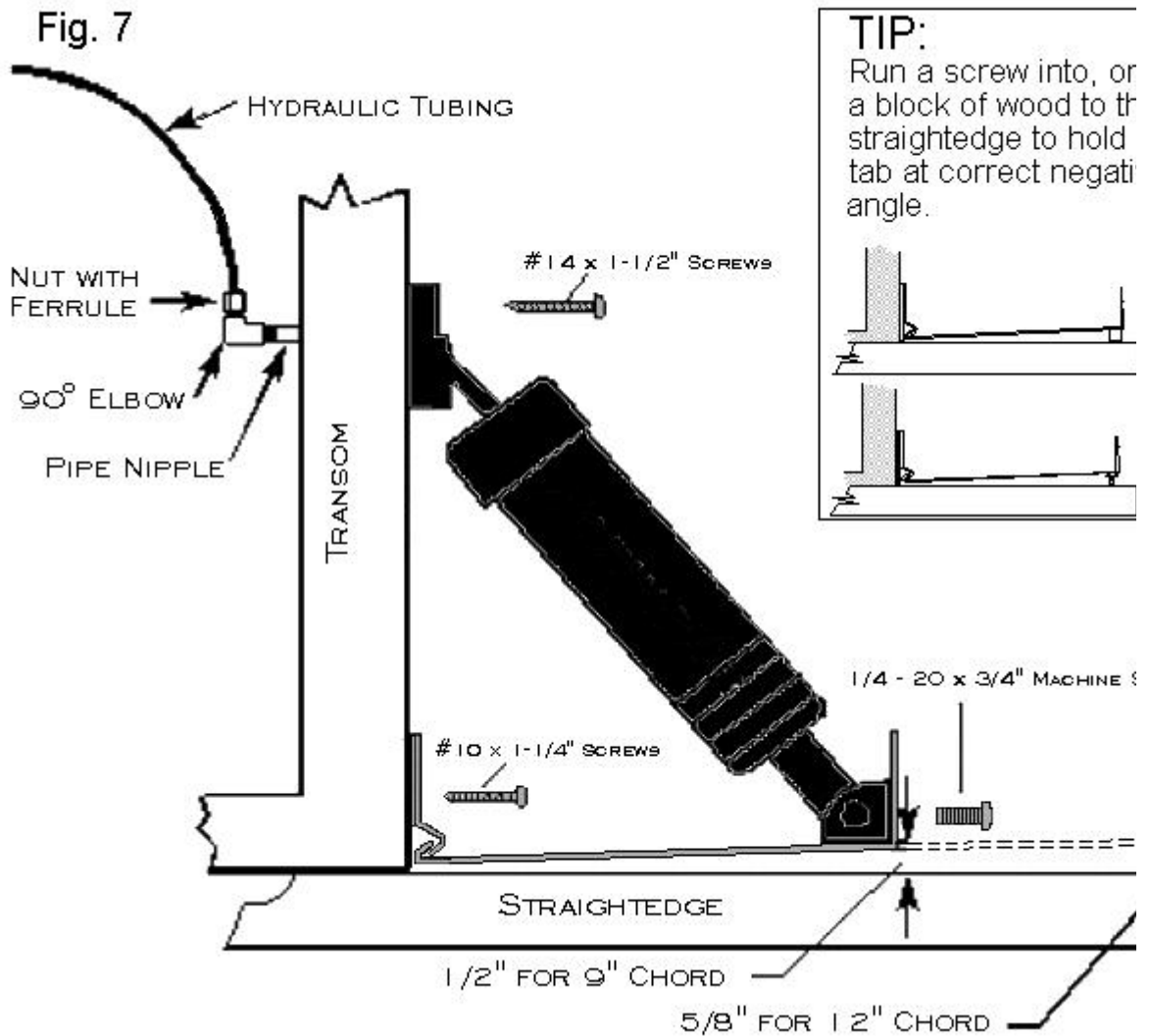
screws and test. If the pilot holes are too tight, enlarge with a 5/32" drill bit. Assemble mounting plates and tab, dip screws in marine epoxy before running in. Slide trim tab between backing plate and hinge plate before running screws tight. Snug screws down to secure mounting plates and trim tab to transom. Aluminum boats should use machine screws and nuts (not included) instead of the enclosed #10 x 1-1/4" self tapping stainless steel screws. If the transom is curved and transom mount style tabs are being installed, a shim must be made of a suitable material to provide a flat mounting surface. (See Figure 6). If the tabs are bottom mount style, the one piece mounting plate is secured to the bottom of the boat with the hinge curl touching the transom and with unequal space at each end of the curl as shown in figure 5.



Step 3 - Secure the lower hinge of each actuator to the tab with 1/4-20 x 3/4" Phillips head machine screws. Using a straightedge under the hull bottom, set the "negative angle" of the tab's trailing edge as shown in figure 7. 9" chord tabs should have a negative angle of 1/2", and 12" chord tabs should have a negative angle of 5/8".



Step 4 - With tabs set at negative angle, position the upper mounts of the actuators against the transom. Slide the actuator template behind upper mount, align and tape to transom. It is not necessary that the upper mounts lie flat against the transom as the actuator neck has the ability to flex far more than necessary. The straightedge may now be removed. Drill holes accurately as indicated on templates. Drilling a small pilot hole first helps you locate accurate centers.



Contact Bennett Marine If You Require Replacement Templates

Step 5 - Install the pipe nipples (dry) snugly into the actuator upper mounts. Do not use Teflon tape. **Use care to avoid cross threading and do not over tighten (Turn in nipple finger tight, then two full turns with vise grips, NO MORE).** Apply waterproof sealant on surface around pipe nipples and screw holes. Insert pipe nipples through transom and secure actuator upper mounts to transom with #14 x 1-1/2" screws. **Note: cover the ends of the pipe nipples with masking tape to prevent dirt or debris from entering the system. Remove masking tape before making connections inside the boat.**

Step 6 - Install Hydraulic Power Unit (HPU) in a convenient location with a dry environment **Important: The HPU must be mounted in a dry enough location to avoid submersion and drenching.** Allow space above the HPU so that it may be slid into its mounting bracket (about 3"). Lay-out upper holes on HPU mounting bracket 4-5/8" apart and start #10 x 1" screws using 5/32" pilot holes. Then drill 5/32" pilot holes for lower screws and mount bracket. Slide HPU into bracket.

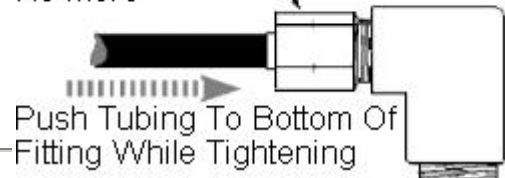
Step 7 - Inside the transom, apply Teflon tape on male threads of pipe nipples and tighten 90 degree brass elbows to pipe nipples. **While tightening elbow, hold pipe nipple with vise grips to prevent stripping actuator upper mount threads.**

Step 8 - Run hydraulic tubing from actuators at transom to HPU and cut to length. Note: Make port and starboard lengths as equal as possible.

Step 9 - Insert tubing through the nut with ferrule at 90 degree elbow. Push until it bottoms in the fitting. While continuing to bottom the tubing in the fitting, tighten nut "finger tight", then one full turn with a 1/2" wrench. . . **no more.** (See Figure 8).

Fig. 8

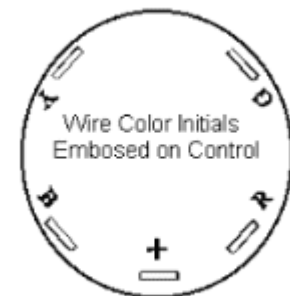
Tighten Nut With 1/2" Wrench
One Full Turn Past Finger Tight
No More



Step 10 - With plastic hangers, secure hydraulic tubing along hullside or bulkheads to HPU. When facing HPU, the brass fitting on the left of the pump face connects with the tubing from the port actuators, the fitting on the right connects with tubing from the starboard actuators. These fittings are marked "P" & "S" for port and starboard. To connect tubing to the pump, insert tubing through the nut with ferrule fitting and push into the pump-face fitting until it bottoms. While continuing to bottom the tubing in the fitting, tighten nut "finger tight", then one full turn with a 1/2" wrench...**no more.** Use tube bending clips at desired 90 degree bends in tubing to prevent kinking.

Step 11 - Connect HPU ground wire to any convenient ground.

Step 12 - To install the Single Lever control bore a 1-3/8" hole at desired mounting location. The orange hot lead is fused at 20 amps and goes to a 12 volt source. Plug the wiring harness into the HPUs connector. Run wiring harness from HPU to control location and pull through hole. Cut the wire harness to length. Strip insulation and crimp supplied connectors to each wire. Identify the male spades on the bottom of the single lever control. (See Figure 9). Each spade is identified by the first letter of the color wire that connects to it. Slide the wire harness spade connectors on to appropriate spade on the control. Push control into hole, positioning BOW DOWN facing forward. Mark mounting screw locations and drill 7/64" pilot holes and screw control into place.



Step 13 - Remove plug from filler stack located at the front left corner of the reservoir. Fill reservoir to "Full Line" using any type **automatic transmission fluid (ATF)**. (Hint: An easy way to fill reservoir is to detach either side hydraulic tubing 90 degree elbows and insert into a quart container of ATF. Then activate the control "Bow Up" until reservoir is full. Reconnect fitting).

Step 14 - Using the control, hold the "Bow Down" position for 15 seconds, then "Bow Up" for 15 - 20 seconds. Repeat 3 times.

This will purge any air from the system. No bleeding is necessary.

Step 15 - Place both tabs in the "full down" position and check all hydraulic connections for leaks. Bring the tabs to the full up position and check fluid level. Add ATF if necessary.

IMPORTANT NOTE FOR BOATS KEPT IN SALT WATER: To provide protection from electrolytic corrosion a zinc anode must be applied to each Tab or in the case of Tabs installed on the boat as original equipment by the builder a bonding system may be utilized for your particular model.

Trim tabs may be painted with anti-fouling paint to prevent fouling by marine growth. Follow paint manufactures recommendations for proper priming and painting of 304 stainless steel. Note: Do not paint under zincs in order to achieve maximum electrical contact to trim tabs.

PLEASE KEEP THIS SHEET AND TRIM TAB OWNERS MANUAL WITH YOUR BOAT'S OPERATING MANUALS.

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