

# M80 / M120 Sport Tab Installation Instructions



For information on installing Bennett helm controls, please visit [BennettTrimTabs.com/Installation](http://BennettTrimTabs.com/Installation) or call (954)427-1400.

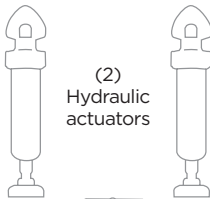
## Items Included in Sets



Helm Control (Various options may be included)



(2) Trim Plane Assemblies



(2) Hydraulic actuators



Hydraulic tubing, wiring, and hardware

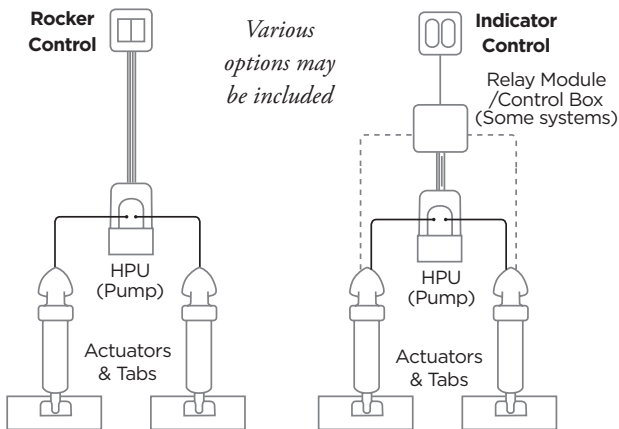


(1) Hydraulic Power Unit (HPU)

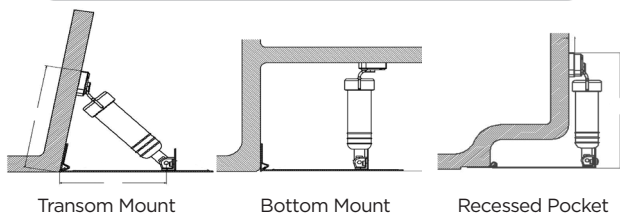
## Materials & Tools Needed

- Wire Stripper
- Wire Cutters
- 3/32", 3/16", 5/32" & 3/4" Drill Bits
- 1/2" & 7/16" Wrenches
- Tape Measure
- Automatic Transmission Fluid
- Small Funnel
- Electric Drill
- #2 & 3 Phillips Screw Drivers
- 2-ft. Straight Edge
- 3M 5200 Marine Grade Sealant

## Basic System Diagrams



## Mounting Options



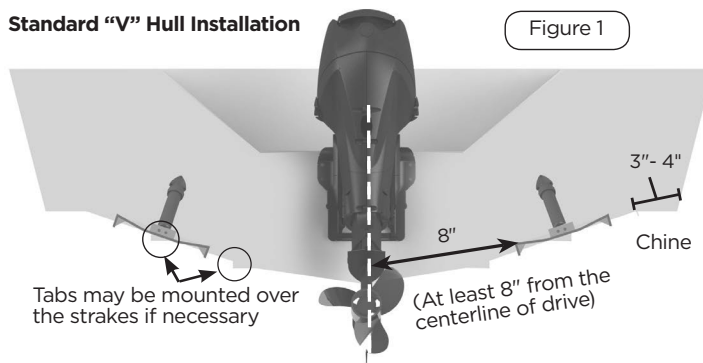
## Step 1: TRIM TAB & ACTUATOR INSTALLATION

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 the tabs slightly outboard. The further outboard the tabs are mounted, the greater the lateral (side-to-side) control. Position the tabs 3" to 4" from the chine (side of boat) and run them towards the centerline of the boat (See Fig. 1). Boats with outboard motors or inboard/outboards (I/Os) must maintain a minimum of 8" from the centerline of outboard or stern drive unit to the closest edge of the trim tabs. Boats with inboard motors may utilize the entire run of the transom. **Note:** If the inside of the transom is inaccessible due to fuel tank, flotation, or other obstruction, call Bennett Marine for alternate installation options at (954) 427-1400.

**For Boats Kept In Salt Water:** To provide protection from

### Standard "V" Hull Installation

Figure 1



electrolytic corrosion, a zinc anode must be applied to each tab. Do not ground tabs to other underwater appendages. Failure to provide zinc anode protection can result in the trim tabs being quickly damaged by electrolysis. Call Bennett Marine for more information.

## Step 2

Attach the mounting plates and trim tab with #10 x 1-1/4" stainless steel screws 1/4" above the hull bottom. (See Figure 2) Using the backing plate as a template, mark screw hole locations. Drill the mounting plate holes using a 5/32"

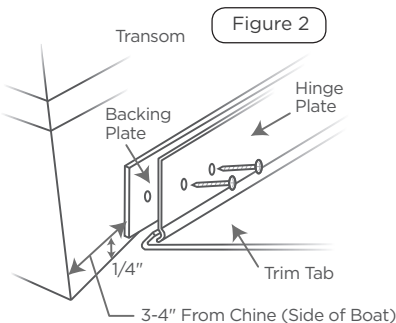
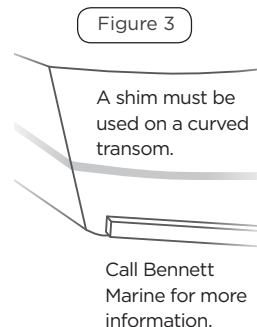


Figure 3



**Instructions continued on the rear page...**

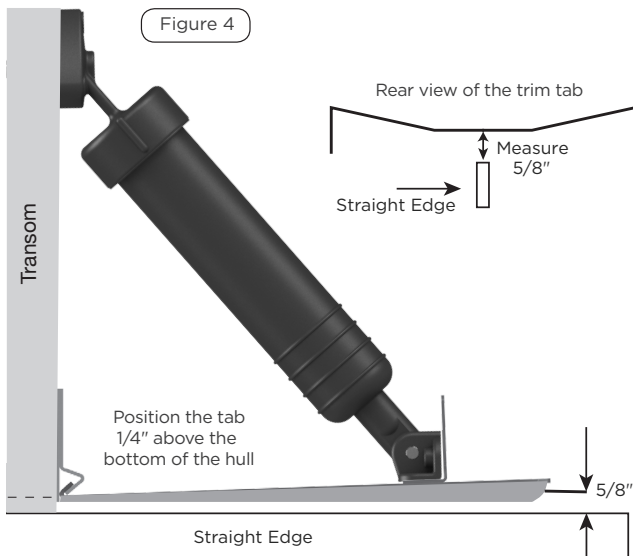
drill bit. Assemble backing plates and hinge plates, dip screws in 3M 5200 (or equivalent marine epoxy) before running in. Slide trim tab between backing plate and hinge plate before running screws tight. Snug screws down to secure mounting plates and trim tab to transom. Aluminum boats should use machine screws and nuts (not included) instead of the enclosed #10 x 1-1/4" self-tapping stainless steel screws. If the transom is curved, a shim must be made of a suitable material to provide a flat mounting surface (see figure 3 on the previous page).

Call Bennett Marine for more information.

### Step 3

Secure the lower hinge of each actuator to the tab with the 1/4-20 x 3/4" Phillips head machine screws. Using a straight edge under the hull bottom, set the "negative angle" of the tab's trailing edge with a negative angle of 5/8" (See figure 4.)

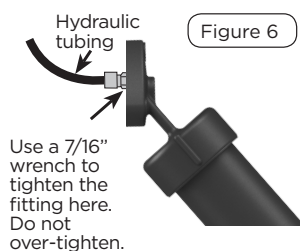
### Step 4



With tabs set at a 5/8" negative angle, position the upper mounts of the actuators against the transom. Slide the attached actuator template (see reverse page) 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 (See Figure 5). The straight edge may now be removed. Drill holes accurately as indicated on templates. Drilling a small pilot hole first helps you locate accurate centers.

### Step 5

Screw the brass fitting with the attached tubing into the upper mount of the actuator. Tighten the fitting only snug with a 7/16" wrench. Do not attempt to "bottom out" the fitting. (See figure 6)



### Step 6

Feed the taped end of the tubing through the 3/4" hole in the transom. Apply sealant on the mounting surface of the actuators and around the brass fitting. Secure the actuator upper to the transom with the #14x 1/12" screws.

### Step 7: INSTALLING THE HPU

Remove plug from filler stack located at the front left corner of the reservoir. Fill the reservoir to "Full Line" using any type automatic transmission fluid (ATF).



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 secure bracket. Slide HPU into bracket.

### Step 8

With plastic hangers or cable ties, secure hydraulic tubing along hullside or bulkheads to HPU. Make the port and starboard hydraulic tube lengths as equal as possible. When facing HPU, the brass fitting on the left of the pump face connects with the tubing from the port actuator, the fitting on the right connects with tubing from the starboard actuator. These fittings are identified "P" & "S" for port and starboard by small letters directly above each one. 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 the tube bending clip at desired 90 degree bends in the tubing to prevent kinking. Connect the HPU ground wire to any convenient ground. Then run the wiring harness from the HPU to the helm.

### Step 9: INSTALLING THE HELM CONTROL

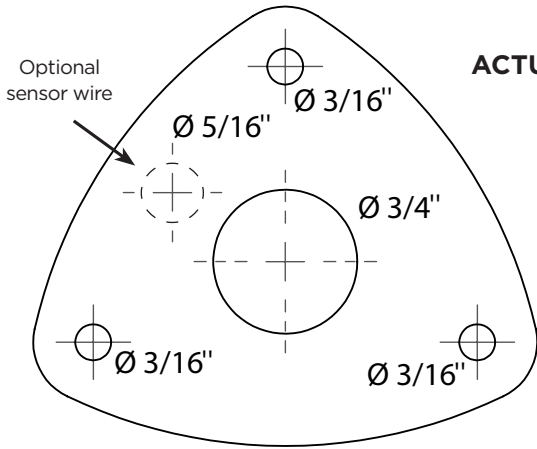
The M80/M120 Sport Tab kits are available with various helm control options. Please follow the helm control instructions included with your particular kit. Helm control installation manuals can also be found at [BennettTrimTabs.com/Install](http://BennettTrimTabs.com/Install).

### Step 10: BLEEDING THE SYSTEM

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. Place both trim tabs in the full down position and check the hydraulic system for leaks. Bring the tabs in full up position and check fluid level. Add ATF if necessary.

# Have questions?

**We're here to help.** Call us at (954) 427-1400 for assistance.



## ACTUATOR DRILLING TEMPLATE

Must be printed or copied  
at 100% scale

