



**SEASTAR
SOLUTIONS®**

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pro-trim
PT1000/2000
SINGLE/DUAL BEZEL SWITCH ASSEMBLY
INSTRUCTIONS


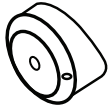


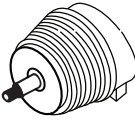
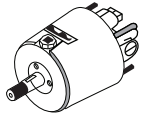
INSTALLER: THESE INSTRUCTIONS CONTAIN IMPORTANT SAFETY INFORMATION AND MUST BE FORWARDED TO BOAT OWNER.

These instructions describe how to install the PRO TRIM™ Single or Dual Bezel Switch Assembly on a boat. The switches are designed to fit SeaStar Solutions Safe-T®, NFB, Rack & Pinion, Performance Tilt and Sea Star® Hydraulic Helms. Before beginning, take a moment to identify your steering system using the illustrations provided and then follow the instructions for your system.

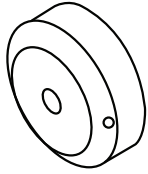
NOTE: IF YOUR STEERING SYSTEM IS NOT SHOWN IN THE FOLLOWING ILLUSTRATIONS, PLEASE CALL SEASTAR SOLUTIONS TECHNICAL SERVICE AT (217) 324-9781 FOR ADDITIONAL INFORMATION.

(PT2000 SHOWN WITH 90 DEGREE SAFE-T/NFB)

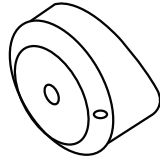
***pro-trim* installs on the Following:**

					
Safe-T; NFB (90 Degree) (1986-Present for Safe-T) (1990-Present for NFB)	Safe-T; NFB (20 Degree) (1986-Present for Safe-T) (1990-Present for NFB)	Rack & Pinion (1984-Present)	Back Mount Rack & Pinion (Std; NFB) (1996-Present)	Performance Tilt (1991-Present)	SeaStar Hydraulic (1991-Present)

MOUNTING INSTRUCTIONS FOR SAFE-T AND NO FEEDBACK (NFB) STEERING SYSTEMS



Safe-T; NFB
(90 Degree)

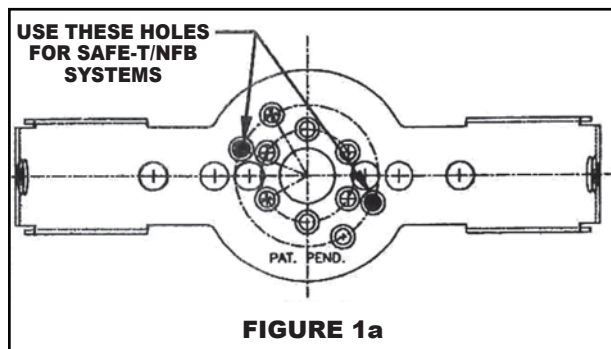


Safe-T; NFB
(20 Degree)

Safe-T Steering (1986-present)/No FeedBack Steering (1990-present). These helms can be identified by the plastic bezel (trim piece) through which the steering shaft passes. Both Safe-T and No FeedBack utilize the same types of bezels.

Step 1. Remove the steering wheel.

Step 2. Using the template provided, mark the plastic bezel and drill two 3/16" diameter holes (see Figure 1a). NOTE: IF YOUR BEZEL ALREADY HAS RECESSED HOLES AT THESE LOCATIONS, THEN NO DRILLING OF THE BEZEL IS NECESSARY.



Step 3. Provide a passageway for the wires to the inside or underside of the dash. This can be done one of three ways:

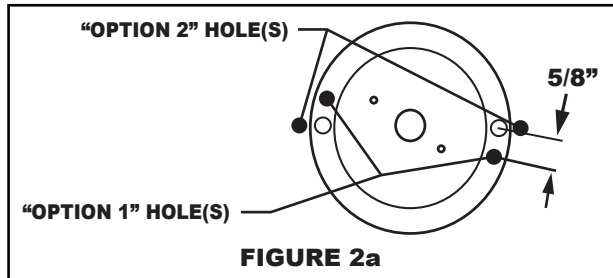
Option 1: Drill 3/8" diameter hole(s) (one for single switch; two required for dual switch) in the beveled face of the helm bezel (see Option 1 holes in Figure 2a). The holes will allow the wires to pass through the dash while concealed by the bezel. Note: If installing a single switch, be sure that the hole is drilled on the side the switch lever will be installed.

Option 2: Drill 3/8" diameter hole(s) (one for single switch; two for dual switch) through the dash (see Option 2 holes in Figure 2a).

Note: If installing a single switch, be sure that the hole is drilled on the side the switch lever will be installed.

CAUTION

IF DRILLING THROUGH THE DASH, BE SURE THAT THE DRILL WILL NOT INTERFERE WITH ANY OBJECTS SUCH AS WIRES, INSTRUMENTATION, OR BRACKETS ON THE INSIDE OF THE DASH.



Option 3: If you choose to route the wires underneath the dash then no drilling of holes will be required.

Step 4. Remove the plastic cover of the switch assembly by first unscrewing the operating lever with boot (counterclockwise). Then remove the face nut, and then the plastic cover (see parts list diagram on page 6).

Step 5. Attach wires to switch (red to center terminal, green to top and blue to bottom terminal).

Step 6. Remove the bezel from the dash, taking care to leave the attachment screws in the countersunk holes of the bezel.

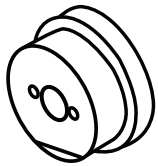
Step 7. Attach Pro Trim™ to the bezel using the two short (7/16" long) screws and locknuts (only if no recessed holes were provided in the bezel). If recessed holes were provided then use the two 5/8" long self tapping screws supplied with this kit. If Option 1 was chosen then feed the wires through the bezel and dash in the available space around the helm mounting bracket.

Step 8. Replace bezel over steering shaft; using access holes provided in switch bracket, tighten bezel attachment screws securely.

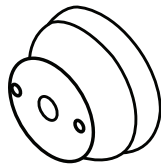
Step 9. Reinstall the cover, face nut, and operating lever with boot on the switch assembly.

Please proceed to **WIRING INSTRUCTIONS (ALL SYSTEMS)** for the remaining instructions.

MOUNTING INSTRUCTIONS FOR RACK & PINION STEERING SYSTEMS



Rack & Pinion



Back Mount Rack & Pinion

Rack & Pinion Steering (1984-present). These helms can be identified by the plastic bezel (trim piece) through which the steering shaft passes.

Step 1. Remove the steering wheel.

Step 2. Using the template provided, mark the plastic bezel and drill two 3/16" diameter holes (see Figure 1b). NOTE: IF YOUR BEZEL ALREADY HAS RECESSED HOLES AT THESE LOCATIONS, THEN NO DRILLING OF THE BEZEL IS NECESSARY.

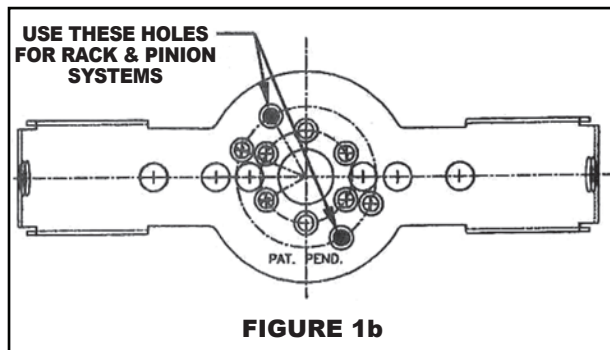


FIGURE 1b

Step 3. Provide a passageway for the wires to the inside or underside of the dash. This can be done one of two ways:

Option 1: Drill 3/8" diameter hole(s) (one for single switch; two required for dual switch) through the dash (see Figure 2b). Note: If installing a single switch, be sure that the hole is drilled on the side the switch lever will be installed.

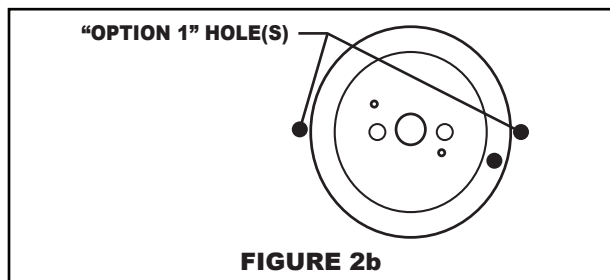


FIGURE 2b

CAUTION

IF DRILLING THROUGH THE DASH, BE SURE THAT THE DRILL WILL NOT INTERFERE WITH ANY OBJECTS SUCH AS WIRES, INSTRUMENTATION, OR BRACKETS ON THE INSIDE OF THE DASH.

Option 2: If you choose to route the wires underneath the dash then no drilling of holes will be required.

Step 4. Attach wires to switch (red to center terminal, green to top and blue to bottom terminal).

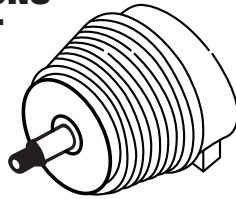
Step 5. Remove the bezel from the dash.

Step 6. Attach Pro Trim™ to the bezel using the two short (7/16" long) screws and locknuts (only if no recessed holes were provided in the bezel). If recessed holes were provided then use the two 5/8" long self tapping screws supplied with this kit.

Step 7. Replace bezel over steering shaft and tighten the bezel attachment screws securely.

Please proceed to **WIRING INSTRUCTIONS (ALL SYSTEMS)** for the remaining instructions.

MOUNTING INSTRUCTIONS FOR PERFORMANCE TILT STEERING SYSTEMS



Performance
Tilt

Performance Tilt (1991-present). These units can be identified by a grooved rubber boot and plastic baseplate attached to the dashboard.

Step 1. Remove the steering wheel.

Step 2. Using the template provided, punch mark the rubber boot through to its metal mounting flange. Carefully remove the boot and drill two 3/16" diameter holes in the metal mounting flange of the tilt mechanism. SH91800 tilt has pre-drilled holes. (see Figure 1c).

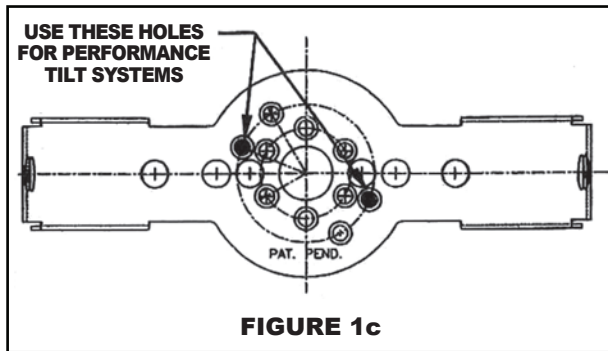


FIGURE 1c

Step 3. Attach the wires to switch (red to center terminal, green to top and blue to bottom terminal).

Step 4. Provide a passageway for the wires to the inside or underside of the dash. This can be done one of two ways:

Option 1: Drill 3/8" diameter hole(s) (one for single switch; two required for dual switch) through the dash (see Figure 2c). Note: If installing a single switch, be sure that the hole is drilled on the side the switch lever will be installed.

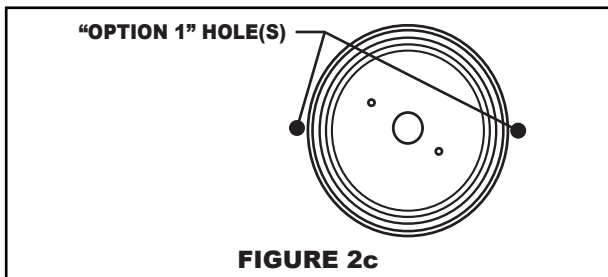


FIGURE 2c

CAUTION

IF DRILLING THROUGH THE DASH, BE SURE THAT THE DRILL WILL NOT INTERFERE WITH ANY OBJECTS SUCH AS WIRES, INSTRUMENTATION, OR BRACKETS ON THE INSIDE OF THE DASH.

Option 2: If you choose to route the wires underneath the dash then no drilling of holes will be required.

Step 4. With the tilt shaft in the *middle position*, install the boot on the tilt mechanism, making sure to align the punch marks of the boot with the drilled holes of the metal mounting flange. Note: Push down completely around the top of the boot to engage it on the metal mounting flange. When pushing down, use a rolling motion with your fingers over the corners to ensure that the boot face is resting flush on the metal flange. (There is an undercut inside the boot near the face that accepts the edges of the mounting plate flange). Make sure the boot is flush against the flange before proceeding to Step 5. **Do not** attach the bottom part of the boot to the plastic bezel at this time.

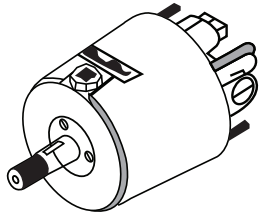
Step 5. With the tilt in the *full up position*, hold the Pro Trim™ switch assembly in place against the boot face and install one long (5/8" long) flat head screw on the right side through the switch bracket, rubber boot, and drilled hole of the mounting flange. While holding the screw in place, pull the rubber boot up from the bottom at the right side to allow installation of the locknut to the flat head screw and install the nut. Thread the nut to take up the slack but do not tighten at this time. SH91800 tilt unit install two 8/32 x 1/2 self tapping screws, do not tighten at this time.

Step 6. Repeat Step 5 for the left side screw with the tilt adjusted to the *full down position*.

Step 7. With the screws in place (but not fully tightened) adjust the tilt to the *middle position*. Now take the opportunity to align the switch bracket to the tilt shaft and boot. Following the previous procedures, tighten the screws securely and work the rubber boot back into the groove on the plastic base plate attached to the dash.

Please proceed to **WIRING INSTRUCTIONS (ALL SYSTEMS)** for the remaining instructions.

MOUNTING INSTRUCTIONS FOR SEASTAR HYDRAULIC STEERING



SeaStar Hydraulic Steering (1991-present). The helm can be identified by a metallic “SeaStar” decal behind the oil fill plug. Pro Trim™ fits helms with an oil seal retaining ring held by 3 countersunk Phillips screws. This ring is on the front of the helm and surrounds the steering wheel shaft. (If your SeaStar helm does not have the ring with the three screws around the shaft, Pro Trim™ cannot be fitted. Call SeaStar Solutions Technical Service at (217) 324-9781 for additional information.

Step 1. Remove the steering wheel.

Step 2. Provide a passageway for the wires to the inside or underside of the dash. This can be done one of two ways:

Option 1: Drill 3/8” diameter hole(s) (one for single switch; two required for dual switch) through the dash (see Figure 1d). Note: If installing a single switch, be sure that the hole is drilled on the side the switch lever will be installed.

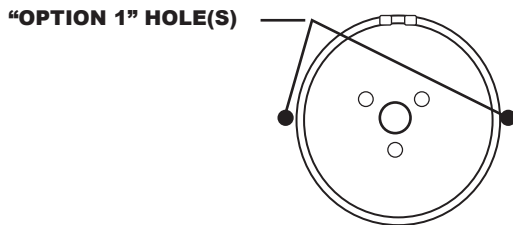


FIGURE 1d

CAUTION

IF DRILLING THROUGH THE DASH, BE SURE THAT THE DRILL WILL NOT INTERFERE WITH ANY OBJECTS SUCH AS WIRES, INSTRUMENTATION, OR BRACKETS ON THE INSIDE OF THE DASH.

Option 2: If you choose to route the wires underneath the dash then no drilling of holes will be required.

Step 3. Attach the wires to the switch(es) (red to center terminal, green to top and blue to bottom terminal.)

Step 4. Remove the three countersunk Phillips head screws that hold the shaft seal retaining ring in place on the front of the helm (do not remove the seal retaining ring). Slide Pro Trim™ over the shaft and position the bracket to align with the three holes of the helm.

Step 5. Attach Pro Trim™ *using the three (short) countersunk screws provided in the Pro Trim™ hardware kit.* Install screws, torquing alternately and gradually until all three holes of the helm are tightened securely.

Please proceed to **WIRING INSTRUCTIONS (ALL SYSTEMS)** for the remaining instructions.



WIRING INSTRUCTIONS (ALL SYSTEMS)

WARNING

BEFORE MAKING ANY CUTS OR SPLICES, DISCONNECT THE BATTERY!

Step 1. Disconnect the battery.

Step 2. Locate the boat's existing engine trim and/or jack plate wiring. This will be 3 wires running together (1 red, 1 green, and 1 blue). Engine trim wires are typically routed from the engine to the side mount control while jack plate switches are usually found at the dash. Locate a convenient point at which to splice the wire from the switch into this group of wires.

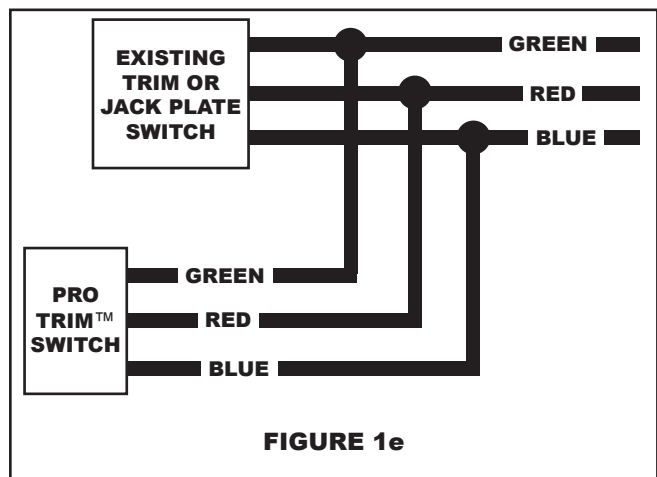


FIGURE 1e

WIRING INSTRUCTIONS (ALL SYSTEMS) (CONTINUED)

Step 3. Feed the switch wires to the inside or underside of the dash according to the passageway option chosen at installation.

CAUTION
(PERFORMANCE TILT USERS ONLY)
LEAVE ENOUGH WIRE ON THE FRONT SIDE OF THE DASH TO ALLOW THE TILT MECHANISM TO MOVE THROUGH ITS RANGE WITHOUT CAUSING A STRAIN ON THE WIRES. ADJUST THE TILT IN ALL POSITIONS AND CHECK BEFORE AND AFTER CONNECTING THE WIRES.

Step 4. Make the wire connections as shown in figure 1e. When cutting into the boat's trim or jack plate wiring, cut only one wire at a time. Strip both cut ends. Using a butt connector, put these two wires into one end of the connector and the appropriate color switch wire into the other end of the connector. Note: Be sure that the connector will accept (1) 16 gauge wire on one end and (2) 16 gauge wires on the other. Follow this same procedure (one wire at a time) for the remaining wires.

Step 5. When all wiring is connected, reconnect the battery.

TESTING THE INSTALLATION

Test Pro Trim™ to make sure it performs properly and the engine moves in the direction you expect when the switch is activated in either direction. Pushing the lever up should make the engine move upward. Pushing the lever down should make the engine move down. A test of the

original trim switches should also be done at this time. If all systems work properly, make a final inspection of the wiring connections and wrap them with a good quality electrical tape.

FINAL ADJUSTMENTS

Install the appropriate decal(s) as show in figure 2e (be sure plastic switch cover(s) is (are) clean and dust-free). Install the steering wheel, using the woodruff key and lock nut that was removed with the wheel. With the seat (and wheel position, if equipped with tilt) adjusted properly, try activating the switch from a normal driving grip. If the lever seems too close or too far from the steering wheel rim, this can be adjusted to suit the driver's taste. By bending this bracket slightly, the lever can be moved closer to or farther from the rim of the steering wheel.

We recommend that the driver operate Pro Trim™ for some time without adjusting this bracket until he or she has determined the most suitable lever distance.

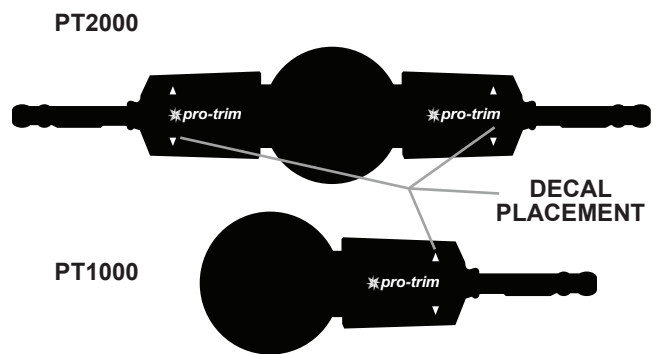
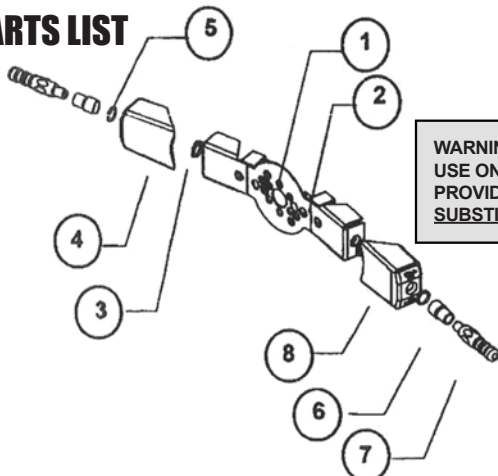


FIGURE 2e

PARTS LIST



WARNING
USE ONLY HARDWARE
PROVIDED. DO NOT
SUBSTITUTE.

ITEM	DESCRIPTION	QUANTITY	
		PT1000	PT2000
1	BRACKET	1	1
2	TOGGLE SWITCH	1	2
3	HEX LOCK NUT	1	2
4	COVER	1	2
5	KNURLED FACE NUT	1	2
6	BOOT	1	2
7	OPERATING LEVER	1	2
8	DECAL SET	1	1
9*	WIRE HARNESS	1	2
10*	5/8" L. FLAT HD. SCREW	2	2
11*	7/16" L. FLAT HD. SCREW	3	3
12*	#8-32 LOCK NUT	2	2
13*	5/8" SELF TAP F.H. SCR.	2	2
14*	8/32 X 1/2 SELF TAP F.H.	2	2
*ITEMS NOT SHOWN			