Trim Tab Operation

Lenco trim tab kits include two stainless steel planes, two electromechanical actuators and all mounting hardware for installation (Kits with backplates do not include mounting hardware). The trim tabs operate independently of one another to provide optimal performance by redirecting water flow at the transom of the boat. Lenco trim tabs have been designed to improve the overall attitude of a boat. If used properly, Lenco trim tabs improve the ride, reduce drag, increase speed and improve the fuel efficiency of your boat.

The operation of Lenco trim tabs is basic. The two stainless steel planes are mounted with the actuators on the transom of the boat. When the tabs are lowered, the water flow is redirected creating an upward force at the stern of the boat. When the stern rises, the bow will lower.

Since Lenco actuators are electromechanical, they provide an immediate response at the touch of the switch. This applies to all of our trim tab switch kits. All Lenco switches are based on the position of the bow. The left side of the switch controls the starboard tab. The right side of the switch controls the port tab. The system is set up this way to minimize the guesswork while underway. To lower the starboard bow, press the right (starboard) switch where it reads Down. To lower the port bow, press the left (port) switch where it reads Down.

Since all boats are different in weight, length, speed and performance, it takes practice to understand how your boat reacts with trim tabs installed. Lenco trim tabs allow your boat to get on plane faster and continue planing at lower speeds. This improves visibility and the overall safety of your boat. When making adjustments with the trim tabs, use short momentary taps of the switch.

To become knowledgeable on how your boat performs with Lenco trim tabs, remember, practice makes perfect.

Lenco electromechanical actuators provide an instant response. When making adjustments, use short momentary taps of the switch.

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SPECIAL CONDITIONS

Head Sea — (Waves or current running directly against the course of a boat) Lower both tabs slightly by pressing Bow Down on both sides. this brings bow down while maintaining speed. This adjustment allows the hull of the boat to absorb the impact of the waves, resulting in a more efficient and smoother ride.

Following Sea — (Waves or current running with the course of a boat) Make sure the tabs are fully retracted by pressing Bow Up on both sides. This brings both tabs to a fully retracted position decreasing lift in the stern, allowing the bow to rise. If tabs are deployed, the bow may dig.

Windy Chop — To raise the windward side of the boat press Bow Up on that side. If this is not sufficient, press Bow Down on the leeward side of the boat. Do not over trim when attempting this. This allows the windward side of the boat to rise and minimizes spray.

Shallow Water/Hole Shot — Lower both tabs completely down by pressing Bow Down on both sides. This provides lift in the stern of the boat and keeps the bow down. As you throttle up and speed increases, raise tabs by pressing Bow Up on both sides.

Uneven Load — If one side of the boat is higher than the other while running, press Bow Down on the switch on that side. This lowers the tab on the listing side (low side) to bring the boat level.

Porpoising — (When the bow of the boat leaps clear out of the water after striking a wave.) To stop porpoising, press Bow Down on both sides of the switch. The tabs need only to be deployed slightly to correct this adverse situation.

SAFETY

• While the boat is underway, do not move one tab up or down significantly as this may cause listing.

• While at higher speeds, do not over trim. This causes the bow to lower quickly, resulting in a reduction of speed and may cause the boat to veer.

• When in following seas or when running an inlet, the tabs should be fully retracted. This allows for optimal performance.

• While operating trim tabs, use caution. Improper use of trim tabs may cause accidents and/or injury.

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Trim Tab Installation Instructions

Warning: The following instructions contain important safety information and should be followed carefully. Failure to do so may result in injury and will void warranty.

Please read through the instructions in their entirety prior to beginning installation!

Tools and materials list

• Electric drill

• Tape measure

• _3/16" & 3/8" drill bits (.48 & .95 cm)

• 7/16" (1.11 cm) wrench

• 4' (1.22 m) level

• Straight edge

• 2" (5.08 cm) hole saw

• #2 & #3 Phillips screwdrivers

• 3M 5200 adhesive caulking

• Wire crimper / cutter

Installation of Trim Tab Blades

1. _To begin, determine where the Lenco Trim Tab Kit will be installed. Note: When laying out the desired tab location, hold the tab against the transom with the bottom of the hinge knuckle 3/8" (.95 cm) up from the bottom of the transom, approximately 1" to 4" (2.54 to 10.56 cm) in from the chine, and parallel with the hull.

Note: The reason the hinge knuckle is mounted 3/8" (.95 cm) from the bottom of the transom is to allow water to travel along the bottom of the boat and create lift when it is redirected in the tab area. Tabs are also mounted in this manner for protection while on a boat trailer or when being dry-stored.

When mounting the hinge to the hull make sure that the inside corner of the hinge knuckle is no closer than 2" (5.08 cm) to the left or right of any strake edge. The hinge may overlap a strake edge as long as any corner of the hinge knuckle is no closer than 2" (5.08 cm) to the left or right of the strake edge (see Fig.1). Transfer (trace) the hinge screw hole pattern onto the transom for drilling.

Note: All Performance Series tabs with single-tapered blades should be mounted with the tapered end facing toward the center of the boat.

2. _Using the 3/16" (.48 cm) drill bit, drill the previously marked hole locations to a depth of 1-1/4" (3.17 cm).

Note: When drilling out the screw hole pattern for the trim tab hinge you may drill through the transom. Hinge screws should be installed with 3M 5200 adhesive caulking which will seal the holes. All supplied screws and fasteners are stainless steel or brass. Do not use any other type of alloy.

Mount the trim tab hinge to the transom using provided #14 x 1-1/4" (3.17 cm) stainless steel sheet metal screws. We recommend using 3M 5200 adhesive caulking to bed the hinge and screws.

DO NOT OVERTIGHTEN.

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End of page 5

Installation of Upper and Lower Mounting Brackets & Actuators

1. _Loosely attach the upper mounting bracket (bracket with four holes) to the top of the actuator using the 5/16-18" X 1-3/4" (4.45 cm) large hex head bolt and 5/16-18 hex nut provided. Attach the actuator to the lower mounting bracket using the 5/16-18" X 1-3/4" (4.45 cm) large hex head bolt and 5/16-18" hex (.79 cm) nut provided. Attach the lower mounting bracket to the tab with the bolts, washers, and nylon lock nuts (KIT4) provided (see Fig. 4).

2. _In order to properly position the upper mounting bracket against the transom, you must lift the trim tab so that the trailing edge is approximately, 5/8" (1.59 cm) for a 9" trim tab and 3/4" (1.9 cm) for a 12" trim tab, above the straight edge when held to the hull (see Fig. 2.1 & 2.2). When the trim tab is at the appropriate level and the actuators are fully retracted, transfer (trace) the outer shape of the upper mounting bracket onto the transom. The upper mounting bracket should be marked where it lays naturally against the transom to prevent binding during functioning of trim tabs.

Note: Do not adjust the upper mounting bracket to the right or left, as this will cause binding. Allow the bracket to come to rest at its natural position.

Remove the upper mounting bracket from the actuator and align to the previously marked location to mark the upper mounting bracket screw hole locations and cable hole location. Using the 3/16" (.48 cm) drill bit, drill the three previously marked screw hole locations to a depth of 1-1/4" (3.17 cm).

Warning: With some installations, fuel, water tanks and/or other systems may prevent the actuator cable from entering the hull through the upper mounting bracket. Be sure to check inside the hull before drilling the 3/8" (.95 cm) cable hole.

Note: When drilling out the screw hole pattern for the upper mounting bracket, you may drill through the transom. The screws should be installed with 3M 5200 adhesive caulking which will seal the holes when installed.

All supplied screws and fasteners are stainless steel and brass. Do not use any other type of alloy.

(Continued on page 7)

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If all is clear, use the 3/8" (.95 cm) drill bit and drill the previously marked cable hole completely through the transom. Insert the actuator cable through the appropriate hole in the upper mounting bracket until the mount reaches the actuator. Insert the actuator cable through the gland seal until it reaches the rear of the upper mounting bracket.

Note: For appropriate orientation of upper mounting bracket and gland seal, (see Fig 3 on page 6).

If, however, you are prevented from drilling a hole through the transom at the bracket location, using the 3/8" (.95 cm) drill bit, simply drill a 3/8" (.95 cm) hole 4" to 5" (10.16 to 12.7 cm) above the waterline and insert the cable. Cover the hole and cable with a clamshell vent sealed with 3M 5200 for a waterproof and finished effect.

Insert the actuator cable through the transom. With the actuator loosely supported, start the provided #14 x 1-1/4" (3.17 cm) stainless steel sheet metal screws through the upper mounting bracket holes and into the transom. MAKE SURE TO LEAVE THE SCREWS ONLY PARTIALLY INSTALLED.

Insert the actuator clevis (mounting ear) into the upper mounting bracket and hold the actuator in the approximate installed position. Pass the actuator cable through the transom removing slack on the cable until it looks like the installation on Fig 2.1 on page 6. Finish installing the previously started #14 x 1-1/4" (3.17 cm) stainless steel sheet metal screws through the upper mounting bracket and into the transom. We recommend using 3M 5200 adhesive caulking to bed the upper mounting bracket and screws. DO NOT OVERTIGHTEN.

Attach and secure the actuator to the upper mounting bracket using the 5/16-18 X 1-3/4" (4.45 cm) large hex head bolt and 5/16-18 (.79 cm) hex nut provided.

We recommend using 3M 5200 adhesive caulking to seal the cable hole on the inside of the transom

hex nut provided.

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Attach connector ends to the actuator wire pins as instructed in Actuator Deutsch Connector Instructions insert card provided. If using actuator extension cables, this would be a good time to run them to the control box mounting area.

Switch Installation

Installation instructions for Standard (124SSR), Indicator (123SC), and Dual Ram Indicator (123DR) Digital Tactile Switches.

1. _At the helm, determine where the tactile key pad will be installed, locate the template on page 22 and secure to helm. Cut a circular opening using a 2" (5.08 cm) hole saw (Hole must be 2"). Before cutting, make sure the area inside the helm is clear of wires and other equipment that could be damaged. Using the template on page 22, drill four 3/16" (.48 cm) holes through the helm.

2. _Install the black control box (hardware not included) within 24" (60.96 cm) of the key pad hole. Make sure control box is mounted on a vertical surface with wires facing down toward the deck. Mounting the control box in the incorrect orientation will void the warranty.

After mounting the control box, feed the key pad cable up thru the 2" hole and connect it to the backside of the key pad. Leave adequate slack in the cable connecting to the plug on the backside of the key pad. No slack or the tight bundling of the wires can cause damage to the key pad plug!

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On the cable from the control box to the key pad plug, there is a release mechanism that needs to be squeezed and released prior to pulling the cable from the key pad plug (see Fig 1).

NOTE: Not releasing the locking mechanism on the end of the cable before pulling will cause damage to the connector on the backside of the key pad. This will cause failure with the trim tab system and void the warranty.

Insert the four key pad posts into the four holes and drop key pad into place. Make sure that the 2" hole has been cut to protect the electronics on the underside of the key pad. Secure the key pad with the nylon nuts (KIT9) provided. DO NOT OVERTIGHTEN.

3. _Following the trim tab switch wiring diagram on pages 10-12, connect the actuator wire leads or the actuator extension cables to the switch control box. Be very careful of sharp edges that may damage the cables. Remember the left side of the key pad controls the right (starboard) tab and the right side of the key pad controls the left (port) tab.

Each digital tactile switch has a retractor wire (orange) coming from the control box. The tabs retract to the up position when power or analog signal is removed and then shuts the system down. You have several switch options from which to choose depending on your boating / fishing needs:

Orange Wire Connection Options

Standard Tactile Switch (124SSR):

• Connect to a mechanical on / off switch. Do not install the orange and red wire on the same mechanical switch.

• Connect to an engine analog tach signal (Retractor feature activated until tach signal is removed).

• Do not install orange wire and retractor feature will not be operational (it is not necessary for the orange wire to be installed for system to operate).

• 12 Volt system only.

Indicator Switches (123SC/123DR)

• Connect to a mechanical on / off switch. Do not install the orange and red wire on the same mechanical switch.

• Connect to an engine analog tach signal (Retractor feature activated until tach signal is removed).

• Orange wire must be installed for system to operate.

• Connect to an engine analog tach signal (Retractor feature activated until tach signal is removed).

• Orange wire must be installed for system to operate.

• For 12 Volt & 24 Volt systems.

Installation for Dual Rocker Switch (122)

This switch kit does not require a control box. Please follow the wiring diagram on page 13 for installation instructions.