



► **Instruction & Installation Manual**

Lenco-to-Bolt Upgrade Kit

Contents

Contacting Us	3
Compatibility.....	4
Parts List & Diagrams	
Lenco Upper Hinge Triangular Base Option	5
Lenco Adapter Upper Hinge Option	6
General Safety Precautions	
Operating Your Trim Tabs	7
Trim Tab Overview & Operation	
How Trim Tabs Work	8
Special Conditions & Safety	10
Installation Instructions	
To Remove an Existing Lenco Actuator	12
To Install the New BOLT Actuator	14
Troubleshooting	19
Warranty	
Lifetime Limited Warranty	20
Warranty Period	21

Congratulations

You've just made an investment in the most durable and reliable electric trim tab system in the world! Installing a set of Bennett trim tabs on your boat will give you better visibility, increased fuel efficiency, and a smoother, more comfortable ride for everyone on board. Get Bennett on board and **enjoy the ride!**

Bennett Marine—Behind You For The Long Run

Bennett's legendary customer service and support is a priceless perk to your new purchase! Our expert staff with over 50 years of trim tab experience is ready to assist with your installation, help with troubleshooting, or answer any of your questions.

How to Contact Us

Call us at 1-954-427-1400, email Info@BennettTrimTabs.com, or go to BennettTrimTabs.com/Contact and fill out the online form. Please allow 24 hours for online requests. Our office hours are Monday through Friday from 8:00 a.m. to 5:00 p.m. (Eastern Standard Time).

The Benefits of Trim Tabs

Increase Visibility For A Safer Ride

Keeping your bow down at reduced speeds is important, especially in congested waters or foul weather. Bennett trim tabs enable you to plane at a much lower speed, operating your boat more safely.

Save Money With Better Fuel Efficiency

Getting up on plane quicker means your boat spends less time running inefficiently. Bennett trim tabs decrease engine laboring, dramatically improving your fuel economy and prolonging the life of the engine.

Maximize Performance While Smoothing Out The Ride

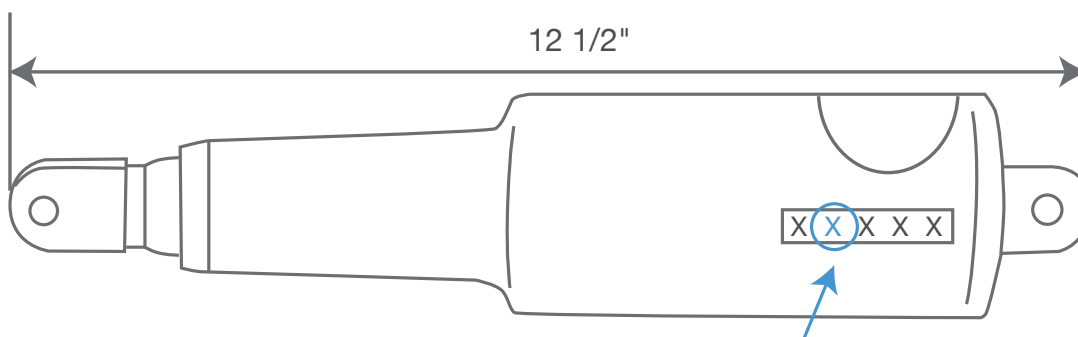
Bennett trim tabs enhance the operating economy of your boat by lifting the stern in proportion to speed, weight distribution, and fuel load changes.

Trim tab system works the same as with Lenco actuators.

How To Determine Compatibility

Bennett Lenco-to-BOLT Upgrade Kit is compatible with Lenco “Standard Mount”, “Standard Performance”, and “Edge Mount” systems.

To determine whether or not your Lenco actuators meet the Compatibility requirements, locate the identification stamp (available since approximately May 2008). The actuator type is indicated by the second number in the 5-digit code.

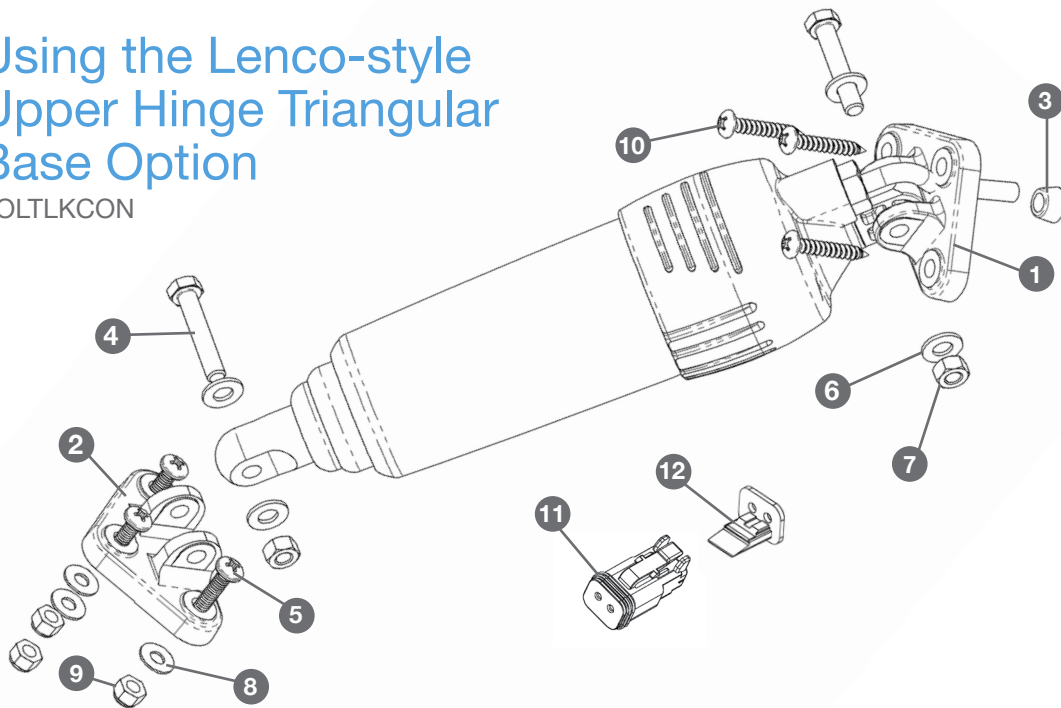


- Lenco actuators with either “A”, “B” or “G” indicated as the second digit in the 5-digit code sequence are compatible with the Bennett Lenco-to-BOLT Upgrade Kit.
- Short stroke Lenco actuators (11-3/8" and 10-7/8" actuator length), and long stroke Lenco actuators (14" and 13" actuator length) are NOT compatible.

Parts List & Diagram

Using the Lenco-style Upper Hinge Triangular Base Option

BOLTLKCON



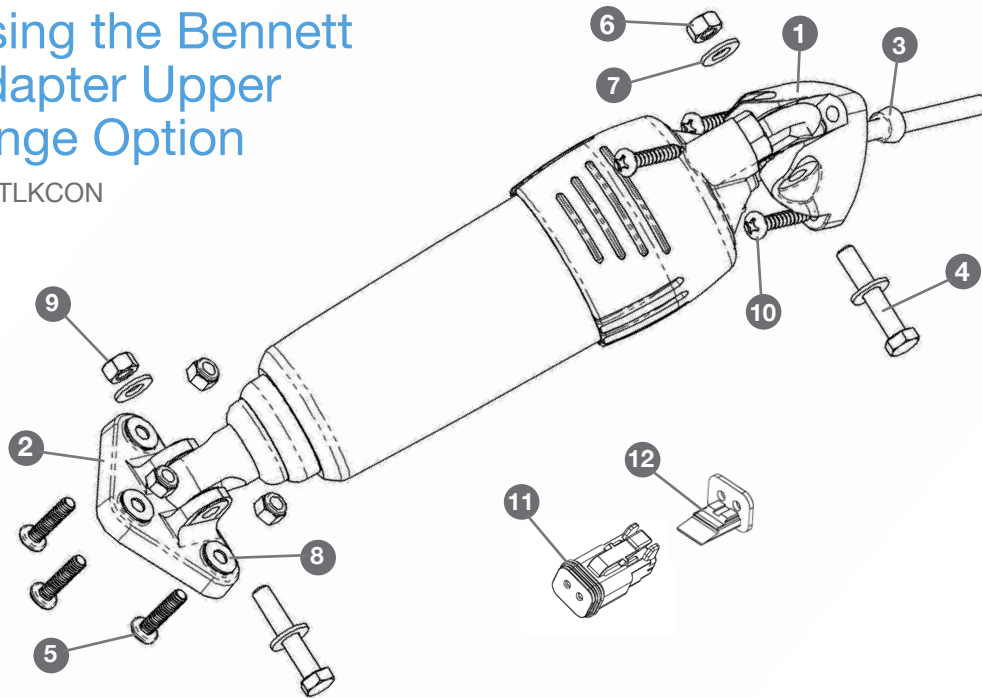
PART	PART NO.	QTY.
1 BQE Upper Hinge, Triangular Base (With Thru Hole)	BQE86-2	2
2 BQE Lower Hinge, Triangular Base (No Thru Hole)	BQE86-1	2
3 BQE Upper Hinge Grommet	BQE87	2
4 Hex Head Bolt 5/16-18 x 1-3/4, 18-8 SS	ML432	4
5 Screw Mach Pan Head PHI 1/4-20 X 1.0, 18-8 SS	ML433	6
6 5/16 Flat Washers, 18-8 SS	ML328	8
7 5/16-18 Nylock Hex Nut, 18-8 SS	ML326	4
8 1/4" X 5/8 Flat Washer, 18-8 SS	ML294	6
9 1/4-20 Nylon Locking Nut SS, 18-8 SS	ML267	6
10 Screw # 14 x 1-1/2 SMS, 18-8 SS	HP2	6
11 Waterproof Plug, 2 Pos, 16 Gauge	ML343	1
12 Wedge Lock Plug, Waterproof 2 Pos.	ML345	1

Material provided for two actuators

Parts List & Diagram

Using the Bennett Adapter Upper Hinge Option

BOLTLKCON



PART	PART NO.	QTY.
1 BQE Upper Hinge, Bennett Adapter	BQE82	2
2 BQE Lower Hinge, Triangular Base	BQE86-1	2
3 BQE Upper Hinge Grommet	BQE87	2
4 Hex Head Bolt 5/16-18 x 1-3/4, 18-8 SS	ML432	4
5 Screw Mach Pan Head PHI 1/4-20 X 1.0, 18-8 SS	ML433	6
6 5/16 Flat Washers, 18-8 SS	ML328	8
7 5/16-18 Nylock Hex Nut, 18-8 SS	ML326	4
8 1/4" X 5/8 Flat Washer, 18-8 SS	ML294	6
9 1/4-20 Nylon Locking Nut SS, 18-8 SS	ML267	6
10 Screw # 14X1-1/2 SMS, 18-8 SS	HP2	6
11 Waterproof Plug, 2 Pos, 16 Gauge	ML343	1
12 Wedge Lock Plug, Waterproof 2 Pos.	ML345	1

Material provided for two actuators

Operating Your Trim Tabs

Bennett trim tabs have a significant effect on the operation and versatility of your boat. No one knows your boat better than you, so the best learning method is to spend time getting familiar with your boat's reaction to the trim tabs. Remember, practice makes perfect! As your experience increases, so will your enjoyment. Always operate your boat with safety first in mind.

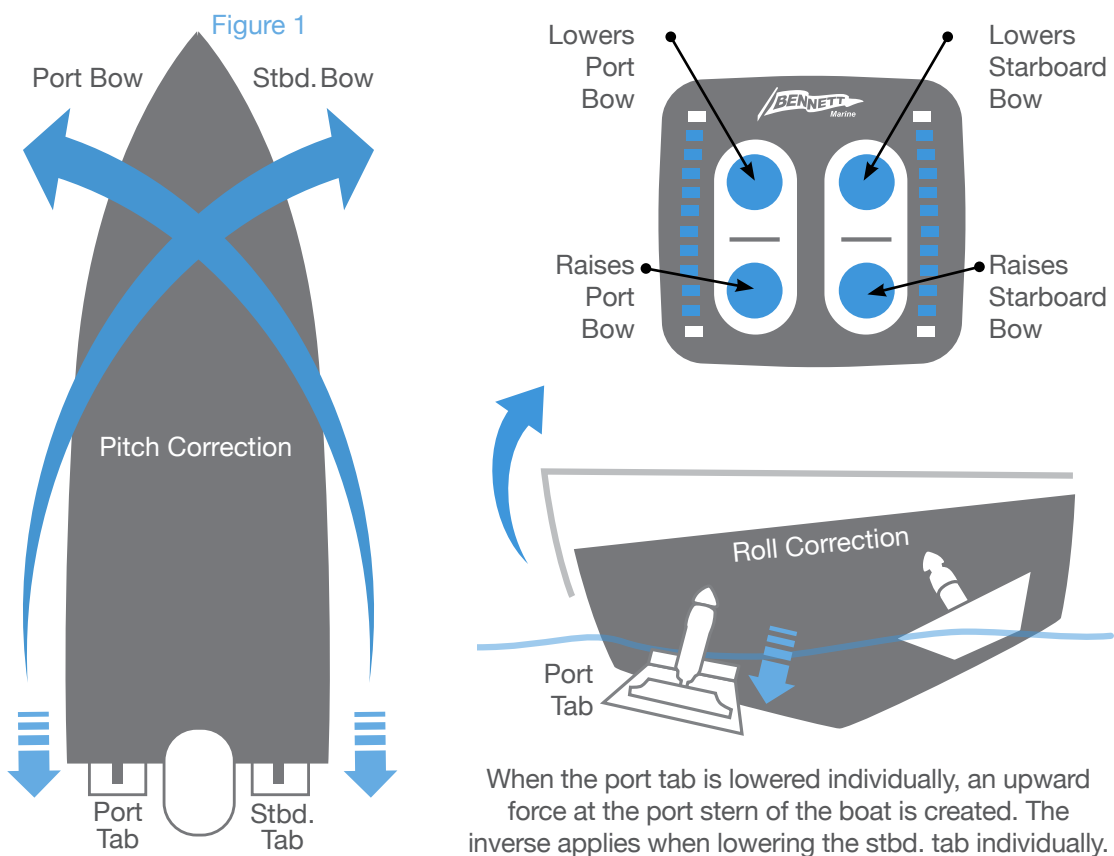
- Do not over-trim, particularly at high speeds as the bow will dig in and wave action may cause the boat to veer.
- While operating trim tabs, use caution. Improper use of trim tabs may cause accidents and/or injury.
- For best maneuverability, trim tabs should be fully retracted in a following sea, or when running in an inlet.

Trim Tab Overview & Operation

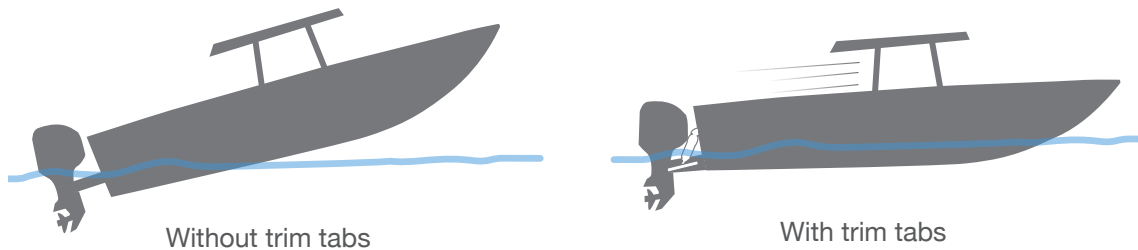
How Trim Tabs Work

Bennett trim tabs most often attach to the bottom edge of the transom (although other mounting variations are available). When the helm control is pressed, the trim tabs move into position. Water-force on the trim tab creates upward pressure, raising the stern and lowering the bow. Properly sized trim tabs improve the performance of your boat in a wide range of weight, weather and water conditions.

In general, trim tabs operate in reverse of what you may think (Figure 1). The port (left) trim tab controls the starboard (right) bow. Conversely, the starboard (right) trim tab controls the port (left) bow. The helm control is wired so that all you have to do is press the control in the direction you want the bow to move. Don't worry about which trim tab is moving. The proper use of Bennett Trim Tabs becomes second nature after a short time.



Trim Tab Overview & Operation



Getting and staying trimmed

Most boats break over (get on plane) at a particular speed. This speed is determined by weight distribution, and water conditions, etc. Bennett's trim tabs enable your boat to plane at speeds lower than the natural planing speed. By pressing the control to the BOW DOWN position, your trim tabs move down. This will raise your stern and lower your bow, getting you up on plane faster.

Optimum Attitude

A good way to find your boat's optimum attitude is to conduct this test. Run the boat lightly loaded, at full speed on flat water. Notice the bow in relation to the horizon. This should be your boat's best running attitude. Properly sized trim tabs can be used to recreate this optimum attitude regardless of weight distribution, speed or water conditions.

Getting Used to the Feel of Your Trim Tabs

When learning to use your tabs, begin by pressing the helm control in half second bursts for gradual trimming. Be careful not to over-trim your boat. An over-trimmed boat will plow or bow-steer. If you over-trim the boat, simply press BOW UP and the bow of the boat will rise.

Trim Tab Overview & Operation

Special Conditions & Safety Precautions

Correcting for a List

Bennett Trim Tabs may be operated individually so that you can correct for listing. Your control is designed so that you can use it intuitively. Do not think about what the trim tabs are doing, just concentrate on the bow. If the port bow is high, push the port side BOW DOWN direction. If the starboard bow is high, push the starboard side BOW DOWN direction. Press the control in half-second bursts to avoid over-trimming, allowing time between corrections for the boat to react.

Using In Conjunction With Outboard Trim/Tilt

Using your trim tabs in conjunction with your engine's power trim will give you increased speed and power.

1. Adjust the trim tabs to achieve a planing attitude.
2. Use the power trim to position the prop path parallel to the water flow as indicated by increased RPM / Speed.
3. If necessary, re-adjust the trim tabs to fine tune the trim of your boat. In other words, use your trim tabs to trim the boat and your power trim to trim your prop.

Running In Rough Water

When running in a chop or heavy seas, press BOW DOWN on both tabs. This will bring the "V" of the hull in contact with the waves rather than having the waves pound the hull and your passengers.

Following Sea

For maximum control and maneuverability in a following sea or when running in an inlet, make sure the trim tabs are fully retracted by pressing BOW UP on both tabs. This brings up the tabs, 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. This allows the windward side of the boat to rise and minimizes spray. Do not overtrim when attempting this.

Trim Tab Overview & Operation

Shallow Water / Hole Shot

To lift the stern and lower the bow, lower both tabs completely down by pressing BOW DOWN on both tabs. As you throttle up and speed increases, raise the tabs by pressing BOW UP on both tabs.

Porpoising

Porpoising is a condition more common in faster boats. As speed increases, the bow repeatedly rises out of the water until gravity overcomes lift and the bow falls down. Press “Bow Down” in half second bursts. As the trim tabs deflect, the porpoising subsides and your speed should remain the same or decrease. Only a slight amount of trim tab deflection should be necessary.

Safety Precautions

Bennett trim tabs have a significant effect on the operation and versatility of your boat. No one knows your boat better than you, so the best learning method is to spend time getting familiar with your boat’s reaction to the trim tabs. Remember, practice makes perfect! As your experience increases, so will your enjoyment. Always operate your boat with safety first in mind.

- Do not over-trim, particularly at high speeds as the bow will dig in and wave action may cause the boat to veer.
- While operating trim tabs, use caution. Improper use of trim tabs may cause accidents and/or injury.
- For best maneuverability, trim tabs should be fully retracted in a following sea, or when running in an inlet.

Installation Instructions

Before Installation

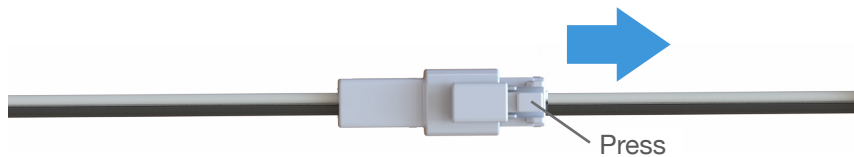
The actuator replacement must be done when the vessel is out of the water. Do not attempt to replace the actuators while the vessel is in the water as the actuators are mounted below the water line.

Before performing any electrical work on a vessel, disconnect the battery by removing the positive (+) cable or if equipped, turning the battery disconnect switch to the OFF position.

BEA3000 Adjustable Upper Hinge

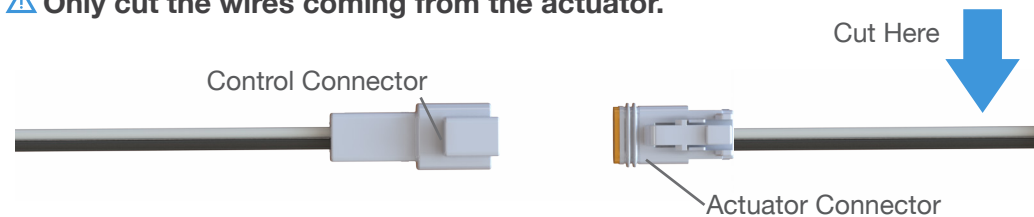
To Remove an Existing Lenco Actuator

- Unplug the wiring harness connection from the actuator to the relay control module.



- Cut off the wiring harness connector from the actuator cable so it can pass through the transom hole.

⚠ Only cut the wires coming from the actuator.



Installation Instructions

- Unbolt the lower hinge mount from the Lenco actuator by removing the 5/16-18 lock nut and bolt using a 1/2" wrench.



- Unscrew the lower hinge mount of the Lenco actuator from the trim tab by removing the (3) 1/4-20 x 1" long Phillips head screws and nuts using a #3 Phillips head screw driver and a 7/16" wrench.



- Clean the tab of any paint and/or barnacles.
- Allow the Trim Tab to swing down and out of the way.
- Unbolt the Lenco actuator from the adjustable upper hinge by removing the 5/16-18 lock nut and bolt using a 1/2" wrench.
- Allow the Lenco actuator to hang by the wire.
- Unscrew the upper hinge mount of the Lenco actuator from the transom by removing the (3) #14 x 1-1/2" long screws using a #3 Phillips head screw driver.

Installation Instructions

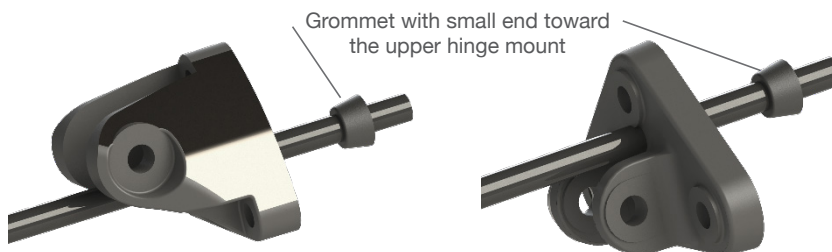
- The actuator can then be removed. Take care to gently pull the electrical wires through the transom hole.
- Clean the hull using a sharp blade to remove any old sealant from the actuator mounting locations. Wipe clean using a solvent.

To Install the New BOLT Actuator

- The supplied kit contains 2 different upper hinge mounting options. Compare the new upper hinges to the old Lenco upper hinge and use the upper hinge that matches the bolt pattern of the old actuator. Disregard the other pair of upper hinge mounts as they will not be used.



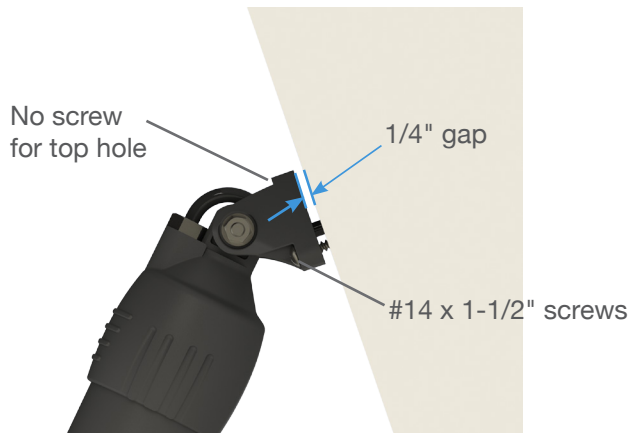
- Carefully insert the end of the electrical cable through the adjustable upper hinge mount and install the sealing grommet onto the cable.



- Pull the cable through the mount until the mount is about 8" from the actuator.
- Insert the end of the cable through the transom hole.
- Temporarily mount the actuator to the adjustable upper hinge using the supplied 5/16-18 bolt and lock nut (using a 1/2" wrench) to set the cable length.

Installation Instructions

- Temporarily mount the upper hinge of the new actuator to the transom using (2) of the supplied #14 x 1-1/2" screws in the lower mounting positions, leaving a gap of 1/4" between the upper hinge and the transom.

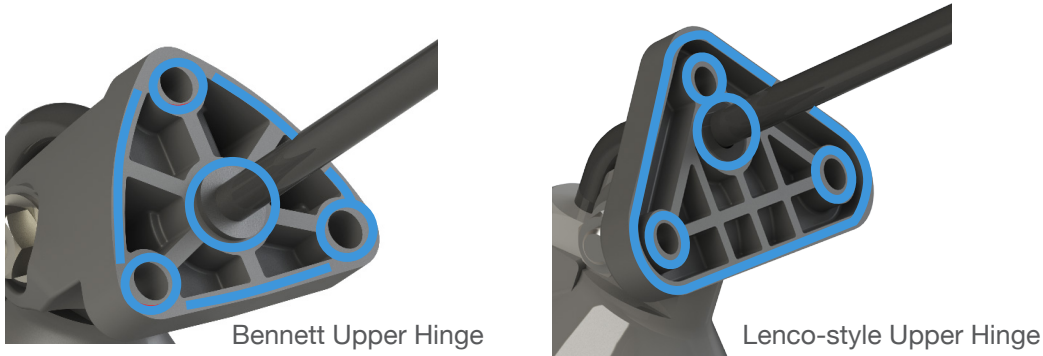


- Pull the excess cable through the transom leaving enough cable to prevent the actuator from binding during its normal movement.
- Ensure that the cable sealing grommet is moved down the cable to its seat on the upper hinge.
- Swing the actuator through its maximum range of motion to ensure there is the proper amount of cable to allow movement without binding.



Installation Instructions

- Unscrew the two #14 x 1-1/2" screws holding the adjustable upper hinge and pull back from the transom making sure the cable length does not change.
- Apply 3M 5200 waterproof sealant on the mounting surface and around the wiring of the new actuator.



- Screw the adjustable upper hinge to the transom using (2) of the supplied #14 x 1-1/2" screws in the lower 2 mounting positions.
- Remove the BOLT actuator from the upper hinge allow the actuator hang.



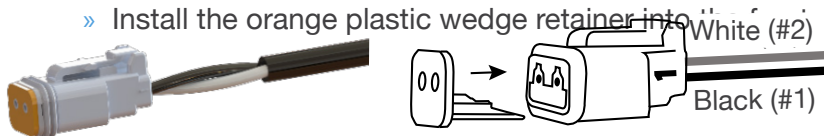
- Install the remaining (1) #14 x 1-1/2" screw into the top position of the hinge.
- Install the BOLT actuator to the upper hinge using the supplied 5/16-18 bolt and nut. Make sure not to over-tighten as the actuator needs to rotate within the hinge. Over-tightening will cause the actuator to bind. Do not collapse upper hinge mount uprights.

Installation Instructions

- Tighten until the bolt and nut contact the flanges of the upper hinge. There should be a gap between the uprights of the upper hinge mount and the flanges on the actuator.
- Install the lower hinge mount to the BOLT actuator using the supplied 5/16-18 bolt, washers, and lock nut. Do not to over tighten as the actuator.
- Install the lower hinge mount to the trim tab using the (3) supplied 1/4-20 x 1" screws and nuts using a 1/2" wrench.



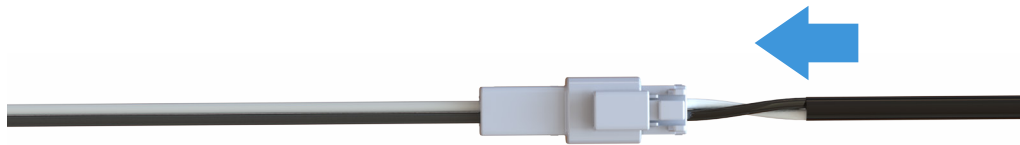
- Install the wiring connector onto the wires:
 - » Insert the black wire into location pin #1, insert the white wire into location pin #2 one at a time into the back of the connector until the pin locks into place.
 - » Ensure the proper wire color is on the correct side of the connector by comparing the old connector that was cut off.
 - » Install the orange plastic wedge retainer into location pin #2 of the connector.



Installation Instructions

Note: Older Lenco systems may not have a waterproof connector. If your system does not have waterproof connectors, cut the crimped sockets off the actuator wires and connect using heat shrinkable butt splices (not splices).

- Connect the male wiring connector to female wiring connector coming from the relay module. For help with connectors visit [Youtu.be/LIR9-ZdG958](https://youtu.be/LIR9-ZdG958).



- Reconnect the positive (+) battery cable or turn battery disconnect switch to the ON position and check the system for functionality.
- Troubleshooting: If the actuators are working backwards, the wires are reversed.

- **Symptom:** Actuators work reverse.
 - » Wires installed backwards. Remove wires from connectors and reverse.
 - » For help with connectors visit [Youtu.be/LIR9-ZdG958](https://youtu.be/LIR9-ZdG958).
- **Symptom:** Actuator not working at all.
 - » Check fuse
 - » Check output of switch or control using a volt meter. Connect meter leads to wire harness leads and press control or switch.
 - » Caution: Do not allow wire harness leads to touch as control is pressed or a short circuit will occur.
 - » Switch meter should show (+)12VDC or (-)12VDC. If there is no output from the controls, the Lenco controls are defective. Call Bennett Marine for replacement options or visit BennettTrimTabs.com.

Bennett Marine Warranty

(United States Only)

We at Bennett Marine, (Bennett) are committed to product quality and customer satisfaction. We've supported our products for more than half a century and have earned a reputation for exceptional service and support. In keeping with that tradition Bennett provides a Limited Warranty for its Products. Please see the table on page 32 for our Warranty details.

Limited Warranty:

Bennett warrants to the original purchaser and subsequent owners, that Bennett will repair or replace, at the discretion of Bennett, any part or component manufactured by Bennett which is proven to the satisfaction of Bennett to be defective, and which failure has occurred under normal use and within the warranty period. This Limited Warranty does not apply to products that have been damaged, or which fail, as a result of causes other than manufacturing defects (such as but not limited to electrical overloads, electrolysis, casualty, fire, collision, improper installation, lack of maintenance, exposure to elements, alteration, or misuse). This warranty does not cover damage to finishes. The warranty commences from the first date a product is purchased by the customer. If the product is installed on a boat by an OEM then the warranty commences on the first day on which the first retail customer purchases the boat. This warranty applies exclusively to products purchased and used in the United States.

Disclaimer And Exclusion Of Warranties:

This warranty is meant to be a complete and exclusive statement of the terms of all express warranties offered by Bennett. To the extent permitted by law, there are no warranties, express or implied, including any implied warranties of merchantability or fitness for a particular purpose extended by Bennett other than the express warranty set forth in this instrument. Some states do not allow the exclusion of, or limitations to, implied warranties so the above limitation may not apply to you.

Warranty Claim Procedure:

To make a claim please call Bennett Marine at 954-427-1400 to trouble-shoot the issue and start the claim process. You will be asked to complete a form that can be found online at BennettTrimTabs.com/Warranty and return the part for warranty evaluation. Parts will be evaluated upon receipt and any part found to meet the above warranty criteria will be repaired or replaced at Bennett's option. Replacement or repaired part will be shipped at no cost to customer via ground freight to US destinations only. Any expedite methods will be at customers expense.

Transferability:

Before expiration of the warranty period, this Limited Warranty is fully transferable to subsequent owners of the boat on which it is originally installed and is void if the product is removed and reinstalled on another boat or is used for purposes for which it was not originally purchased.

Bennett Marine Warranty

Limitation And Exclusion Of Remedies:

Bennett's sole responsibility shall be the repair or replacement, at its option, of any defective part or component. In certain instances Bennett reserves the right to provide refurbished parts. Customer agrees that this is the sole and exclusive remedy under this Limited Warranty. Bennett will not be responsible for any incidental, consequential or indirect damages, including loss of use as a result of any manufacturing defect in a product. Bennett will not be responsible for labor, haul out, or any other fees associated with the removal or installation of warranted part. Some states do not allow the exclusion or limitation of incidental or consequential damages, so this limitation may not apply to you.

Product modification:

Bennett reserves the right to change, modify or improve the products without obligation to incorporate such changes in products previously sold or installed. With respect to components or products replaced under this warranty, Bennett Marine reserves the right, in its sole discretion, to provide updated or current model components or products.

Warranty Period For Bennett Products

PRODUCT	WARRANTY PERIOD	COMMENCEMENT DATE
Bolt Electric Actuator	Limited Lifetime	Purchased after 9/1/15
Classic Hydraulic Actuator	Limited Lifetime	Purchased after 9/1/15
Premier Stainless Steel Actuator	3 years	Purchased after 9/1/15
Stainless Steel Hatch-lifters	3 years	Purchased after 9/1/15
Classic Hydraulic Pump	5 years	Purchased after 9/1/15
Control Switches	3 years	Purchased after 9/1/15
Electronic Indicator Control	3 years	Purchased after 9/1/15
Auto Tab Retractor	3 years	Purchased after 9/1/15
Auto Tab Control	3 years	Purchased after 9/1/15
Relay Modules	3 years	Purchased after 9/1/15
Tab Gauges	3 years	Purchased after 9/1/15
NMEA Systems	3 years	Purchased after 9/1/15

***Please note, products not listed on the above table are not covered under Bennett's Limited Warranty.

***Limited Lifetime Warranty refers to the life of the product, not the boat, or the owner. Limited Lifetime Warranty ends when the product becomes unusable for reasons other than manufacturing defects.

Return Procedure For Customers Outside Us:

For international returns, please refer to our worldwide distributor map on our website BennettTrimTabs.com/find-a-dealer to contact your local Bennett Marine distributor for warranty and returns procedures in your respective country.



Bennett Marine, Inc.

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954-427-1400

M-F 8am to 5pm (EST)



BennettTrimTabs.com



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954-480-2897

Info@BennettTrimTabs.com

Download your owners instruction manual at
BennettTrimTabs.com/BOLTLKCON-Install

Or
scan this

