

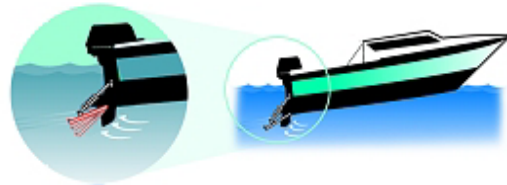
SMART TABS™

Installation & Owner Manual

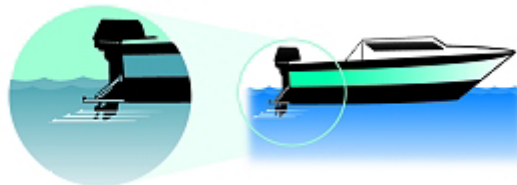
(Models ST780, ST980, ST1290)



**For Power Boats
10 ft. to 20ft.**



As the boat speed increases or decreases the trim plates automatically react.



Pave 35% QUICKER

At cruising speed the trim plates are up, and act as stabilizers.

**Improves: Handling, Performance, Stability,
Comfort, Economy and Safety.**

4196 Racquet Club Drive, Huntington Harbour, CA. 92649
Tel: 714 - 846 - 3896, Toll Free: 800 - 233 - 0194, Fax: 714 - 846 - 6491



INTRODUCTION

Thank you for choosing Nauticus Smart Tabs! We sincerely believe they will live up to all of the performance standards that we have set, for years to come. It is our goal to insure your satisfaction, and we ask that you participate in this partnership. Please read this Manual so that you understand all of the benefits you can expect in performance from the simple installation procedure.

Principle of Operation:

Smart Tabs utilize a Nitrogen Gas filled Actuator to hold the trim plates down during low speed operation, and allow the water to “automatically” push the plates up (horizontal) at higher speeds. This provides additional “lift” to the stern at slow speeds creating a more level attitude.

ADVANTAGES

New Operating Speeds:

In addition to a more level ride at slower speeds, the minimum planing speed is significantly reduced. The result is that you will be able to run at the intermediate (comfortable) range which is not available without trim tabs. Refer to “Typical Speed Curve” Chart on page #3. (Please note that this chart is not meant to represent your specific boat).

Faster Acceleration:

The additional “lift” not only reduces the “on plane” speed, but it allows the prop to efficiently attack the water, using all of the energy to propel the boat forward. Trimming the engine to bring the bow down uses some of the prop energy to correct the boat attitude.

Improved Stability:

The additional surface/planing area on either side of the prop, with its continuous pressure, can improve high speed stability and minimize if not eliminate “chine walk”.

Since the operation of each trim plate is independent, automatic, and speed sensitive the stability Through turns will also improve. When turning the inside tab will take a shorter path than the outside tab, and tend to move down due to the lower water pressure. This will help anchor the turn.

Improved Economy:

This advantage will come in two forms, reduced fuel consumption and reduced engine fatigue due to less resistance and stress.

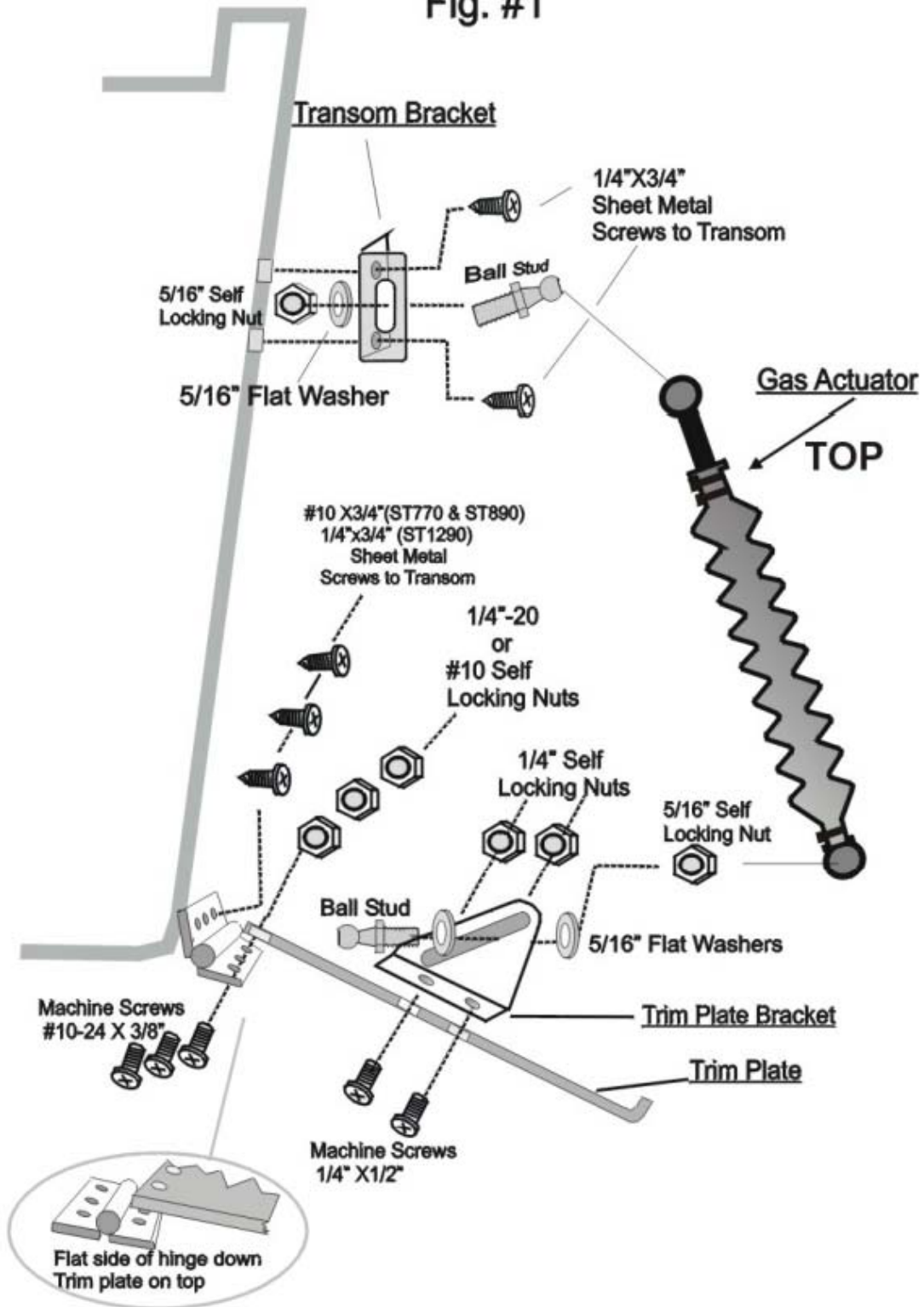
Improved Safety:

Better visibility at slower speeds is an obvious advantage, but improved handling, reduced hull stress, and a smaller wake also add up to more safety.

Note: Salt Water use requires Sacrificial Zincs mounted to the trim plates

Part #	Description	ST780 Qty.	ST980 Qty.	ST1290 Qty.
GA5100-20/30	Gas Actuator	2		
GA5150-30/40	Gas Actuator		2	
GA5150-60/80	Gas Actuator			2
RBS1006	Rubber Boot (installed)	2	2	2
TP770	Trim Plate - 7" x 8"	2		
TP890	Trim Plate - 9" x 8"		2	
TP1290	Trim Plate - 12" x 9"			2
PH6150	Plate Hinge - 6"	2		
PH8150	Plate Hinge - 8"		2	
PH10155	Plate Hinge - 10"			2
TPB1005	Trim Plate Bracket	2	2	2
TRB1007	Transom Bracket	2	2	2
BS1002	Ball Stud	4	4	4
SLN516	Ball Stud Locking Nut	4	4	4
FW516	Flat Washer	6	6	6
SCR1034	Screws #10x3/4"	6	8	
SCR1434	Screws 1/4"-3/4"	4	4	14
	Machine Screws			
MS1038	#10-24x3/8"	6	8	
MS1412	1/4-20X1/2"	4	4	14
LN1024	Lock Nut #10-24	6	8	
LN1420	Lock Nut # 1/4-20	4	4	14
TS7801	Sealing Tape for ST780	1		
TS9801	Sealing Tape for ST980		1	
TS12901	Sealing Tape for ST1290			1
INS1000	Installation Instructions	1	1	1

Fig. #1



Assembly Instruction

1) Assemble all components before attempting installation on the boat: Refer to Fig #1

Bag "A"

A) Mount the hinges to the Trim Plates using the machine screws and self locking nuts.

Bag "B"

B) Mount the Trim Plate Bracket to the Trim Plate using the 1/4" machine screws and 1/4" self locking nuts. (Note: make sure that the angel of the slot in the Trim Plate Bracket is as shown in Fig. #1 and Photo) Mount the Ball Studs to the Trim plate Bracket as using the 5/16" self locking nut and flat washers on both side. Ball faces to the inside of the "L".

Bag "C"

C) Mount the Ball studs to the Transom Bracket the 5/16" self locking nuts and one flat washer on the outside of the "L" as shown in Fig. #1 and Photo on Page 2.

(Note: Center the ball studs in the slots on all four (4) brackets.)



2) Mount the Trim Plate to the Transom Refer to Fig. #2

A) Hold the Trim Plate (with hinge) against the bottom edge of the of the transom (1/2" up from the bottom) and mark the hole locations for the hinge.

B) Drill the holes in the transom (use 1/8" drill for Models ST780 & ST980, and 3/16" drill for ST1290 Models. Apply the Sealant Foam Tape over the hole on the transom.

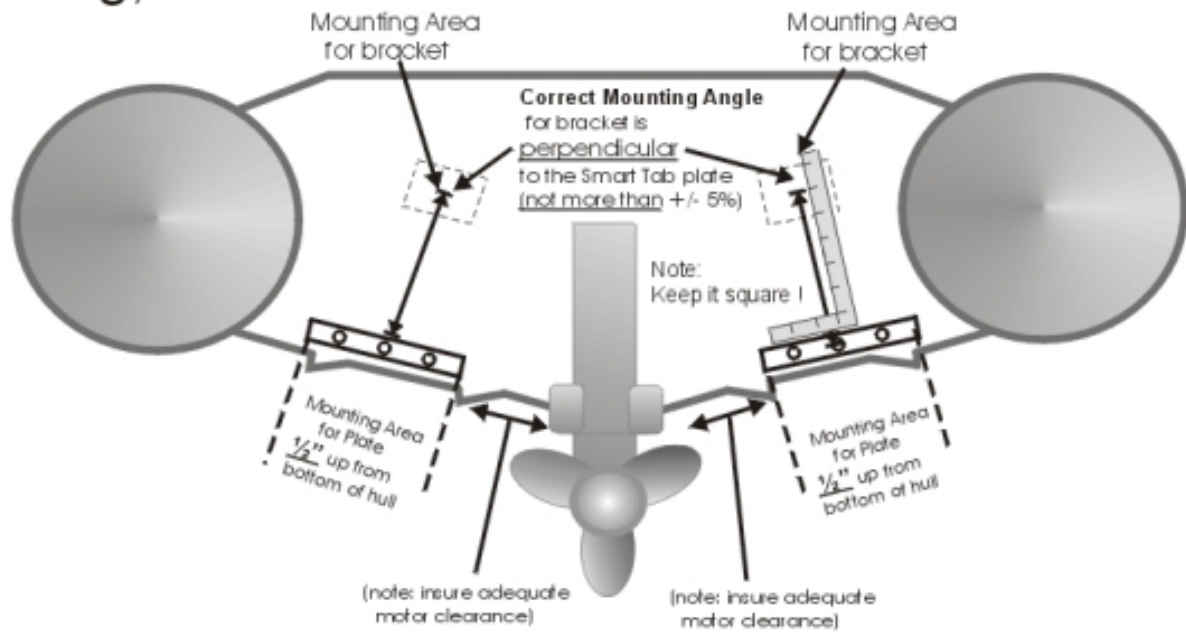
C) Mount both Trim Tab Plates securely using the machine screws from Bag "A"



Note:
Salt Water
use requires
Zinc Anodes
mounted to
the trim plates

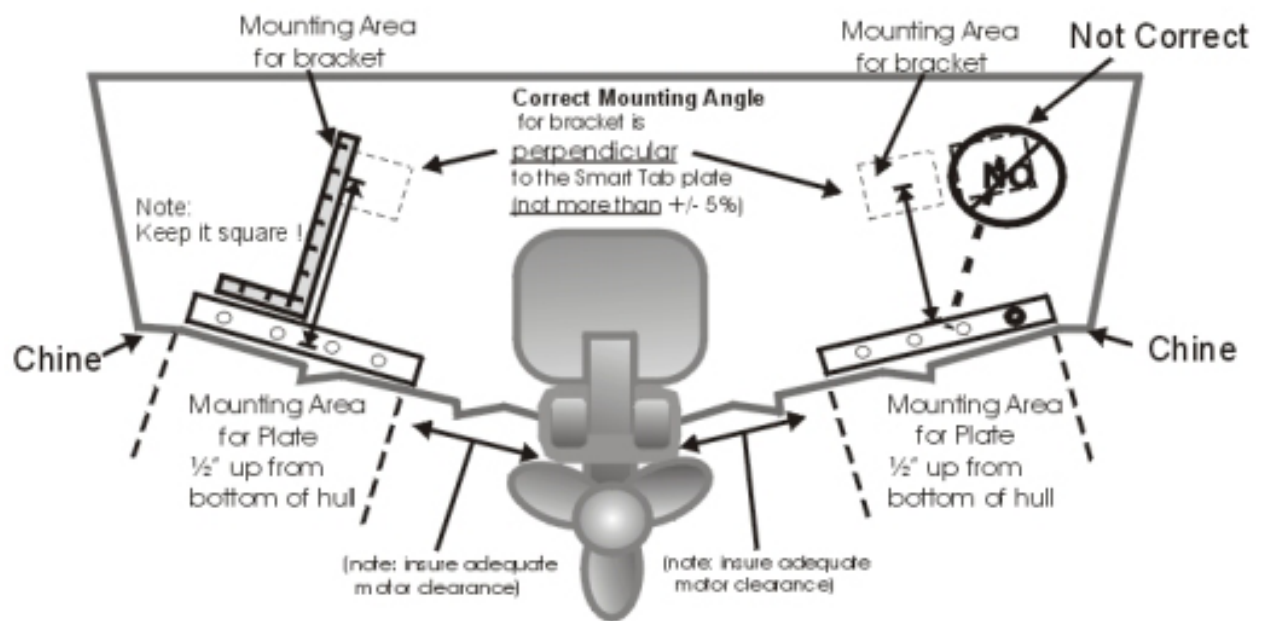
Standard RIB Design

Fig, #2a



Standard "V" Hull Designs

Fig, #2b



3) Mount the Smart Tab Gas Actuator and Transom Bracket: Refer to Fig. 3A and Photo Below.

- A) Cut the 25 degree templet from the Smart Tab box lid using the paper outline supplied.
- B) Snap the Smart Tab Gas Actuator onto the Ball Studs on both the Trim Plate Bracket and the Transom Bracket.
- C) Hold the 25 degree templet against the bottom of the boat and allow the Trim Plate to rest on the templet (with the Gas Actuator attached).
- D) Place the Gas Actuator, with the transom Bracket attached, against the transom of the boat and mark the hole locations.

Refer to Figure. # 3B

Note: Make sure the Actuator is perpendicular to the hinge / plate.

- E) Drill the two holes in the transom using:
a 1/8" drill for models ST780 & St980 or a 3/16" drill for model St1290.
Then cover both holes with the Sealing Tape provided.
- F) Mount the Transom Bracket securely, using the sheet metal screws from Bag "C".



Fig. #3A
Transom Bracket Installation
25 degree angle

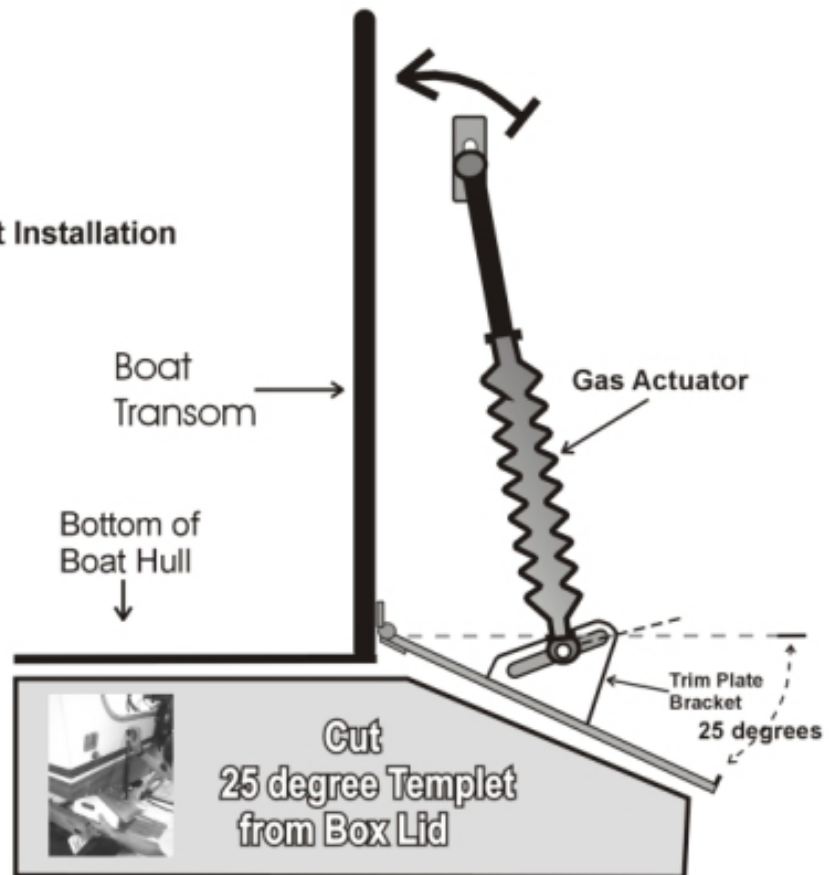
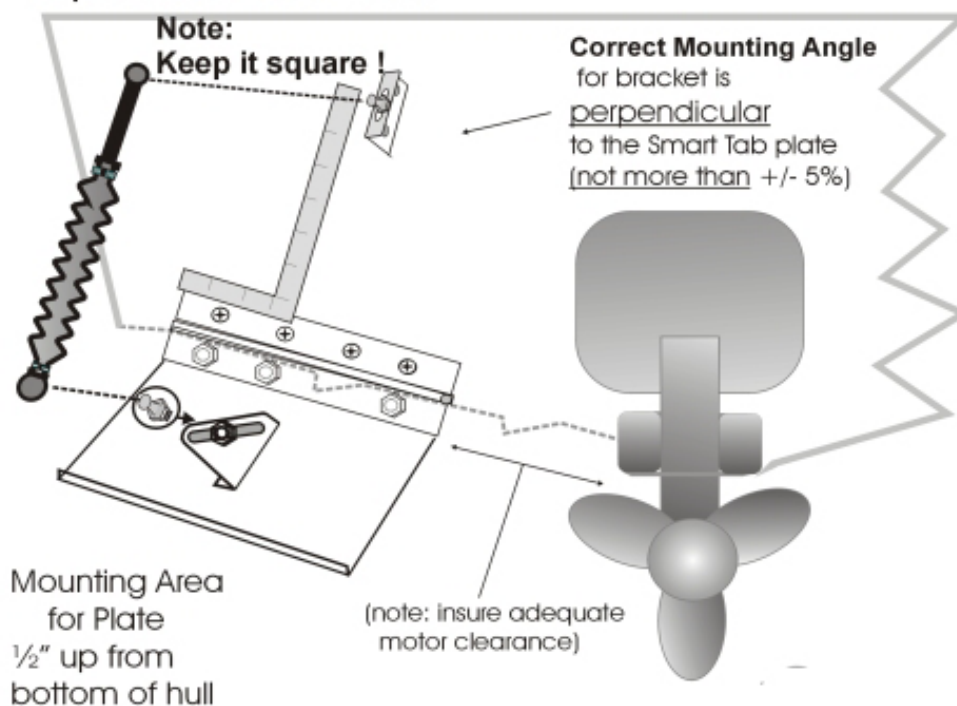


Fig. #3B
Transom Bracket Installation
Perpendicular to the Trim Plate



Optimizing Smart Tabs for Your Boat : (Conduct a trial run before making any adjustments!)

See Fig. # 4

1 - Smart Tab Plate Angle - Start with 25 degrees!

Purpose: The transom bracket allows you to adjust the starting angle of the Smart Tab Plate which can compensate for transom angle, and power to weight ratio. The recommended range limit is between 20 and 30 degrees down from the parallel line of the hull.

Transom Angle: If the transom is not straight up and down (i.e. Tilted back) this adjustment will allow you to compensate for the tilt.

Power to Weight Ratio: If your boat has a high powered engine (for the size of the boat) you may wish to increase the starting angle to 30 degrees down which will provide more “LIFT” in the early stages of acceleration. If your boat is more modestly powered you will want to limit the starting angle to 20 to 25 degrees, which will allow early acceleration to facility maximum “LIFT” once the boat is underway.

Note: Too much starting angle (i.e.: 35 to 40 degrees) will turn the Smart Tabs into

BRAKES Do not exceed 30 degrees.

2 - Smart Tab “Lift” Pressure - Start At the Mid Point!

Purpose:

The slotted plate bracket allows you to increase or decrease the amount of “LIFT” pressure that the Smart Tabs will provide, and optimize the performance of your boat.

Since the balance of your boat is unique Smart Tabs can provide more or less “LIFT” as required.

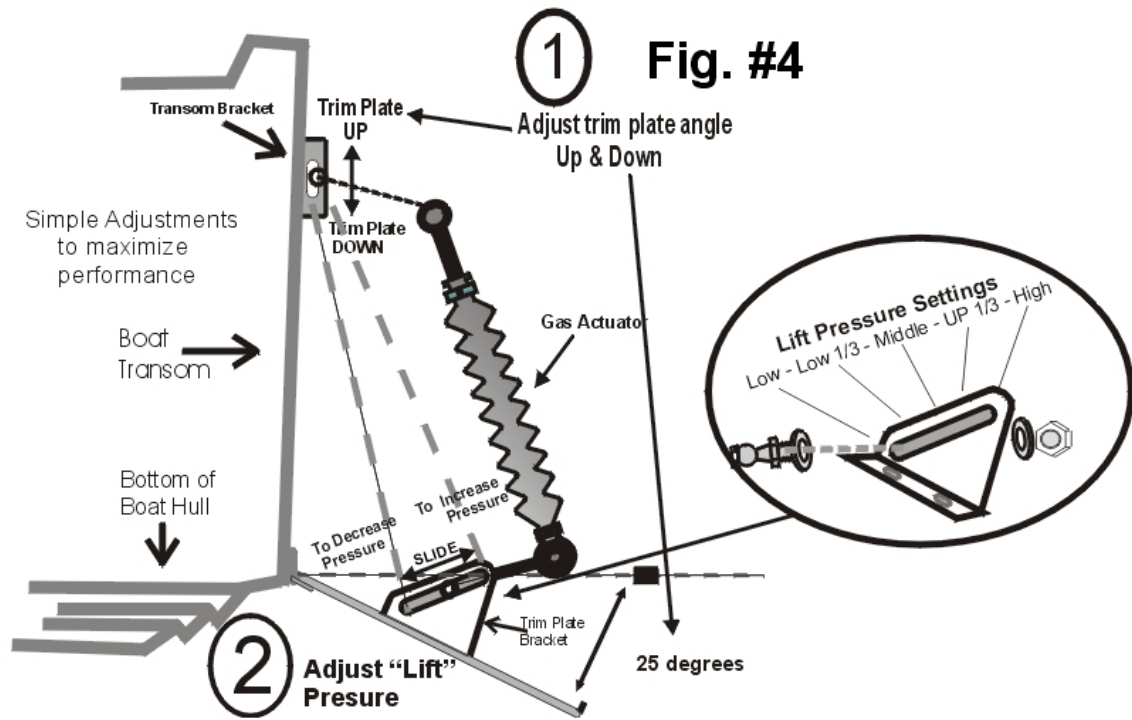
Refer to page 10 & 11 for detailed instructions.

A Heavy Rear End Needs More “Lift”: If your boat has more weight near the stern, increasing the “LIFT” pressure will bring the boat on plane sooner.

Move the BALL STUD and spring attachment up the ramp (away from the transom) on the plate bracket.

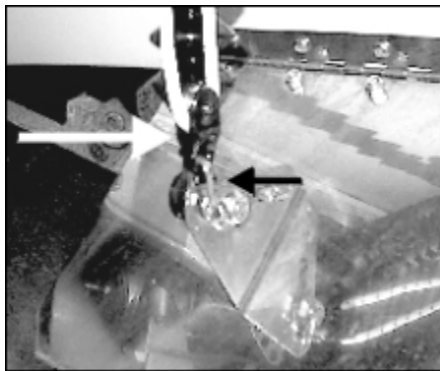
A Lighter Rear End Needs Less “Lift”: If your boat is more balanced you may wish to decrease the “LIFT” pressure.

Move the BALL STUD and spring attachment down the ramp (closer to the transom) on the plate bracket.

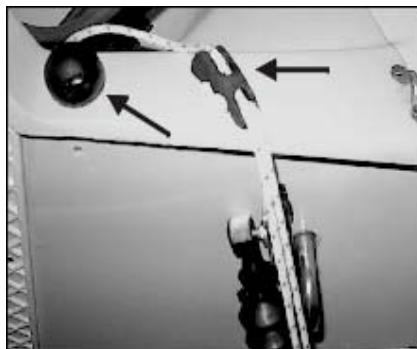


Beaching / Storage Kit

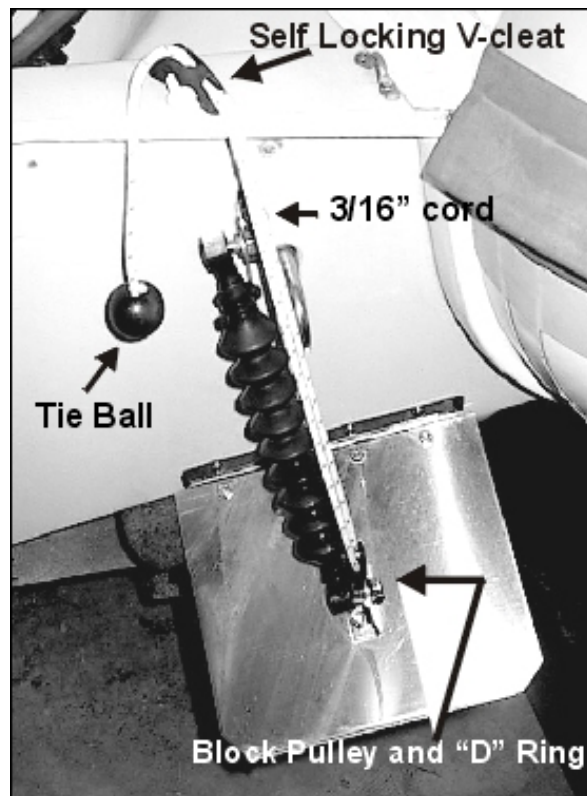
To temporarily retract the Smart Tabs when beaching a shore boat or storing any boat on chocks or trailer. Easily retract for beaching /storage and quickly release for use from inside the boat. All parts are available at most marine accessory retailer stores or available from Nauticus Customer Service.



Single Block Pulley for 3/16" cord (Ronstan #RF668) with Standard "D" Ring (Ronstan # RF6616).

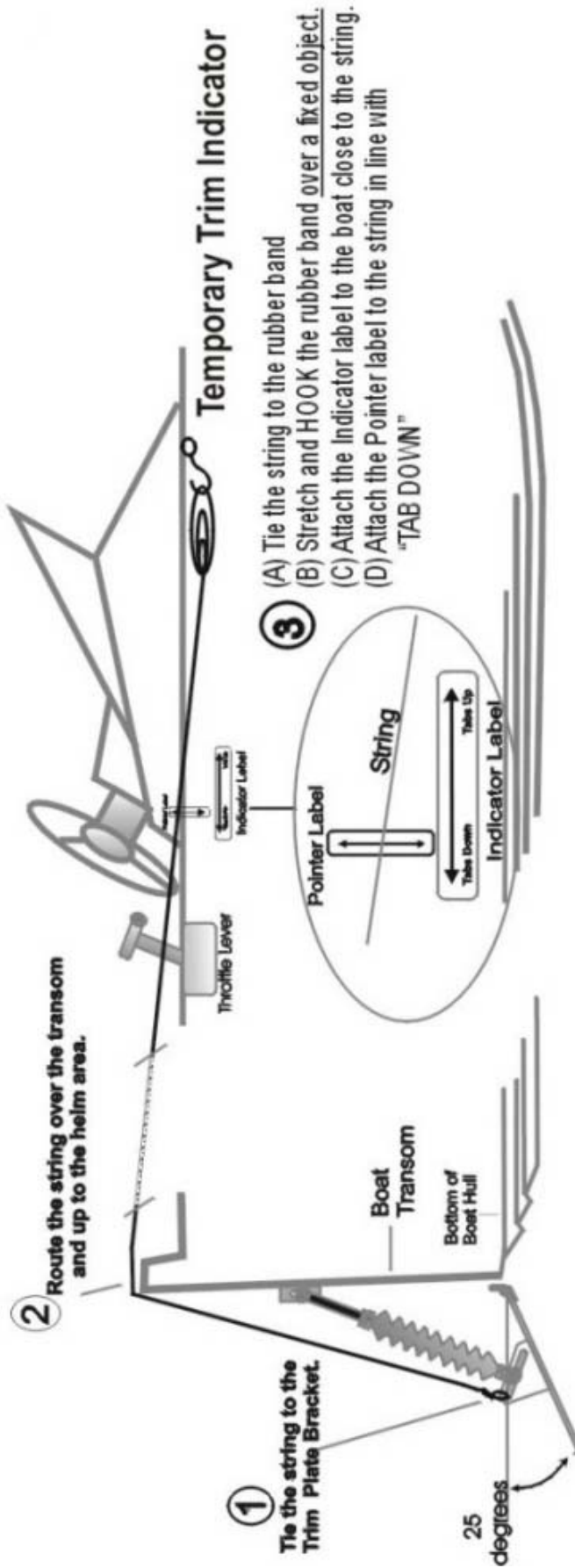


Self Locking "V" – cleat (Ronstan #RF5101) & Tie Ball (Ronstan # RF1315 Blk).



Q: When do SMART TABS Come up?

A: Ideally SMART TABS should be adjusted to come up when the boat "rotates" to "on plane", not before and not after. The simple 5 minute procedure below will allow you to watch the plates movement.



During the Test Ride: watch the pointer on the string - it will move UP and DOWN as the SMART TABS move.

Note: This is a one time adjustment unless you drastically change the weight balance of your boat.

Adjusting Smart Tab Lift Pressure Correct

Adjustment:

The Trim Tab Plates should be UP (level with the bottom of the boat) when the boat goes “on plane”

Too Much Lift Pressure:

If the Trim Tab Plates remain DOWN when the boat is “on plane”, make the adjustment to decrease Lift pressure. This will reduce the top speed!

Not Enough Lift Pressure:

If the Trim Tab Plates come UP before the boat is “on plane”, make the adjustment to increase the Lift pressure. This makes it harder to get on Plane.

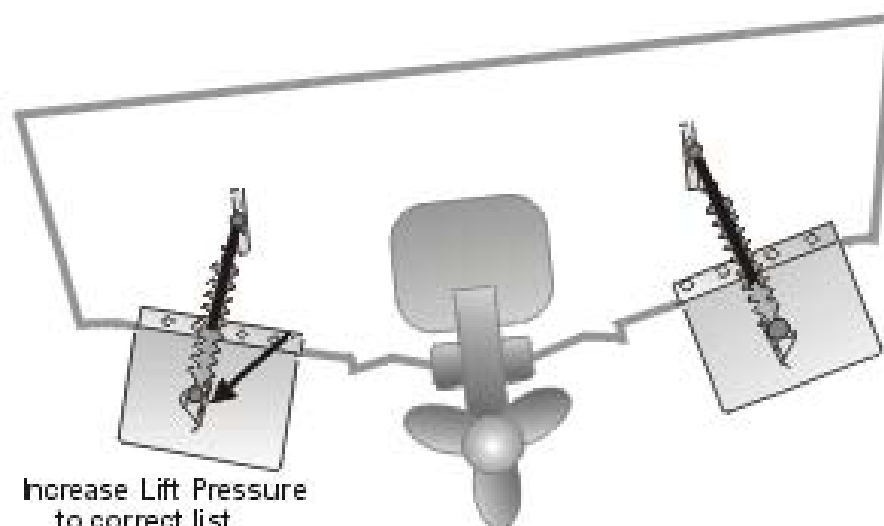
Follow the “1-2-3 Tricks of the Trade” steps on page 10 to monitor your adjustments.

Adjustments for List:

Since Smart Tabs adjust themselves, compensating for any list caused by load imbalance or prop torque, is only recommended if the list is consistent. This adjustment is usually done only once, at the same time the lift pressure is adjusted. It is highly recommended that this adjustment be made only if the boat has a noticeable list at normal cruising speeds.

Compensate for the list by increasing the lift pressure on the same side to which the boat is listing. **Do not change the Trim Plate angle, as this will cause steering problems!**

Note: If the list is due to load balance, make sure that this is a permanent condition, and not due to temporary equipment or passenger seating arrangements.



Notice: Be sure to install zincs on the trim plates when used in a salt water.

Maintenance

Metal parts

All of the Smart Tab metal components are made from corrosion resistant #304 or #316 Stainless Steel, and therefore require minimal maintenance. Normal cleaning and inspection will be sufficient for these parts.

Gas Spring Actuator

The Gas Actuator with the protective rubber boot is the heart of the Smart Tab system, and requires some attention. The specially designed boot is sealed to keep dirt, water, and corrosive chemicals from damaging the actuator shaft.

Follow these simple steps to extend performance and to life:

1. When not in use it is good to occasionally compress the actuator by raising the trim plate to a horizontal position or higher several times . This keeps the shaft lubricated. The Actuator may be stored in the compressed position.

Note: If the boat is stored on a trailer, load the boat onto the trailer first. As an option you may wish to remove the actuators from the boat.

2. Inspect the protective rubber boot for any holes, rips, or tears. If any are found, remove the actuator as soon as possible and replace the boot. If the shaft of the actuator is damaged or corroded, replace the actuator.

TIP: To **check the boot for holes**, simply raise the trim plate (compressing the actuator) and observe the bellows. If properly sealed the bellows will hold in the compressed air.

Common Questions and Answers and Problems!

Q: The Actuator seems to be frozen or too stiff?

A: The Actuator pressure is directly related to the amount of lift required for your boat. Larger heavier boats require more lift at the stern. The plate and actuator pressure need to be sized to fit your boat. Make the adjustment as shown on pages 8 to 10, and they will work properly.

Q: The boat is not as fast as it was before using Smart Tabs?

A: There are two probable causes which require a simple adjustment.

1. Before installing Smart Tabs you may have the motor "Trimmed" into the transom so that the boat planed quicker. This is no longer necessary, and should be changed so that the motor is straight up and down. You regain the speed and improve efficiency.

2. Smart Tabs may be incorrectly adjusted with too much pressure. Refer to pages 8 to 10, and reduce the pressure.

Q: The boat does not plane any better with Smart Tabs?

A: If the correct model has been chosen increase the lift pressure (refer to pages 8 to 10). If increasing the pressure does not give satisfactory results, call customer service for assistance.

Q: How do I keep the Smart Tabs up for beaching, tailoring, or placement on chocks?

A: Refer to page # 9 for Storage and Beaching instructions.

Q: The boat is unstable at high speeds?

A: On fast boats this is called chine walking. The boat is running on a very small part of the hull. Increasing the lift pressure will permit Smart Tabs to resist the side to side movement and stabilize the boat.

Customer Service

Once you have read the installation and owners manuals, and taken a test ride in your boat, please feel free to call Nauticus with any questions or for technical assistance. Your complete satisfaction with Smart Tabs is our goal.

You may contact us at the address below or call during business hours which are: Monday to Friday
8:00 AM to 5:00 PM Pacific Standard Time

4196 Racquet Club Drive . Huntington Harbour . CA. 92649
Tel: 714-846-3896 . Toll Free: 800-233-0194 . Fax: 714-846-6491



Limited Warranty (US ONLY)

Nauticus, Inc. Warrants to the first retail purchaser of this product that it is free from defects in material and/or workmanship for a period of:

Five (5) years on all Metal Components

Two (2) year for rubber Boot Covers and Gas Springs, from the date of purchase.

The proper operation of this product is dependent upon your compliance with the Installation and Owners Manual instructions regarding installation, operation, maintenance and testing. Failure to comply with the instructions may void the warranty.

If during the period of this warranty, it appears as though this product or component has a defect, call our Toll Free number for assistance and instruction (800-233-0194).

This Limited warranty is in lieu of any other warranties, express or implied. This warranty does not cover non-defective damage, damage caused by improper installation, operation or care (including but not limited to abuse, misuse, failure to provide reasonable and necessary maintenance, or any alterations to this product), labor charges for removal or reinstallation.

Under no circumstances shall Nauticus, Inc. be liable for consequential, incidental or special damages arising in connection with the use, or inability to use, this product. In no event shall the liability of Nauticus, Inc. Exceed the cost of the product covered hereby.

Some states do not allow the exclusion or limitation of consequential, incidental or special damages, so the above limitation or exclusion may not apply to you. This limited warranty gives you specific legal rights, and you may also have other rights which vary from state to state.