

The PTT50 / PTT130 Series by



Pow'r Trim & Tilt Installation Instructions

Read these instructions completely before beginning installation. If you have any questions regarding installation, please call 1-800-466-7697.

Congratulations on your selection of Powrtran's PTT50 / PTT130 Trim & Tilt units. When properly installed, either will provide trouble-free operation and convenience for many years.

Pow'r Trim & Tilt maximum horse power ratings are as follows:

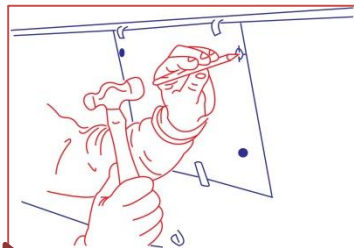
PTT50 (50 HP maximum) PTT130 (130 HP maximum)

Installation normally takes about an hour depending on your boat, motor, and other possible variables.

CAUTION: Make sure that your battery is fully charged before operating your Trim & Tilt unit. The unit will not operate at top efficiency if the battery charge is low or if the electrical connections are not secure.

Note: The setback of the Trim & Tilt may require longer steering cables or a tiller handle extension. Consult your marine dealer.

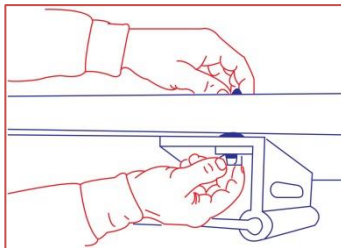
Mounting the PTT50/130 to the Transom



Step 1

Remove your outboard. The PTT50/PTT130's four pre-drilled mounting holes on its transom plate match the pattern of the stencil provided. It is the most common bolt pattern used by motor manufacturers for "bolt-on" type motors. **For maximum strength and safety**, we strongly recommend using this bolt pattern when mounting your PTT50/PTT130 to your boat. (In many cases, this pattern will match the pattern already on your transom.) Simply center and tape the stencil on your transom. Punch through to mark your holes. Then drill through with a 1/2" drill bit. However, it is always a good idea to pre-drill with a smaller drill bit first.

IMPORTANT: The actuator unit of the PTT50/PTT130 is mounted slightly off-center. Therefore, it must not be used as a "center point" for mounting the PTT50/PTT130 or outboard motor. Use the supplied stencil only.



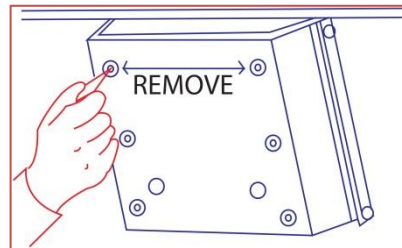
Step 2

Install the PTT50/PTT130 transom bar. Hold the 1 1/2" x 14 1/2" bar in position, while securing the PTT50/PTT130 to your transom with the 1/2" stainless steel bolts, washers, and lock nuts provided. Mount the PTT50/PTT130 using the upper two mounting holes and the open holes lower in the plate. In the event more height is needed, the PTT50/PTT130 can be mounted higher by drilling new holes.

Note: It is important to check the condition of your transom and repair any cracks, dry rot, etc., before reinstalling your engine. Also, plug all boat holes that you will not be using with silicone sealant.

Note: If your transom has any screws or rivets obstructing the "flush" mounting of the PTT50/PTT130, we recommend using a sheet of treated plywood, 17"W x 14"H x 1/4"D with relief holes drilled through to allow for the obstructing screws and rivets. This sheet should be placed between the PTT50/PTT130 and the transom.

Mounting Your Outboard to the PTT50/PTT130



Step 3

FOR BOLT-ON MOTORS ONLY!

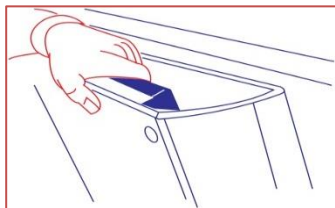
*(If you have a **clamp-on** motor, proceed to **Step 3A**).*

The PTT50/PTT130 motor plate also has pre-drilled mounting holes for the majority of "bolt-on" type motors. Remove the top two frame bolts that are in the top two mounting holes. Using 1/2" stainless steel bolts, washers and lock nuts (not supplied). Center, mount and secure your outboard. If your motor has a bolt pattern that is different, make a stencil of your outboard's mounting holes. Mark the holes and drill in the motor plate. Mount your outboard and secure. Always test run unit to its full tilt position paying very close attention for any clearance problems. **Check clearance between outboard clamp bracket and the actuator.**

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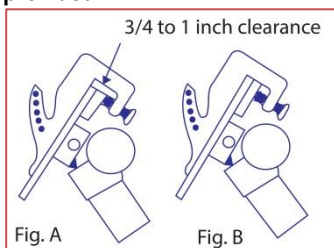
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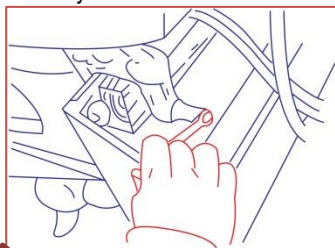
Step 3A

FOR CLAMP-ON MOTORS ONLY!

We have included a shim to be used with "clamp-on" type motors. Because of clearance between this shim and the actuator's electric motor, **it is strongly recommended to use the PTT50/PTT130 factory pre-cut shim provided.**



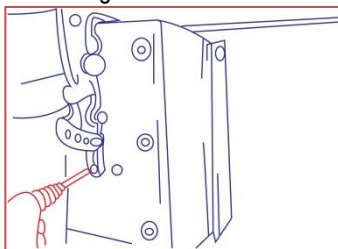
MAKE CERTAIN that there is clearance between the outboard clamps and the electric motor on the actuator when the unit is fully tilted (Fig. A). The motor must be clamped on approximately $\frac{3}{4}$ " to 1 inch about the top of the frame (Fig. A). With inadequate clearance the outboard clamps will hit the actuator causing eventual failure of the unit (Fig B). This type of damage is not covered under warranty.



Step 3B

Center and clamp the outboard onto the PTT50/PTT130. Before drilling "security" mounting holes, slowly run the PTT50/PTT130 to its full tilt position paying very close attention to clearance

between your outboard's clamp bracket, the shim, and actuator motor. The clamp handles should be secured together so they cannot create a pinching problem when tilting.



Step 3C

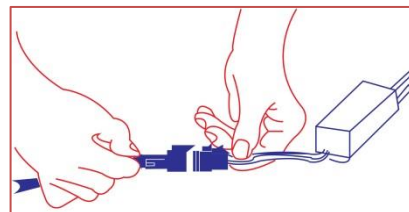
Most clamp-on motors have "security" mounting holes on their transom brackets. **These must be utilized!** Now that the outboard is mounted, secure motor by inserting stainless steel bolts, washers and lock nuts (not included) through the motor's transom bracket holes and then through the PTT50/PTT130's pre-drilled holes. If your motor's transom bracket holes do not match the PTT50/PTT130's, just drill through the bracket holes. Secure with bolts, washers, and lock nuts. Again, it's recommended that you use a smaller drill bit first.

Step 4

Securely mount the electrical control box out of the way and away from possible contact with water. The control box is water resistant but cannot be submerged at any time. Mount accordingly.

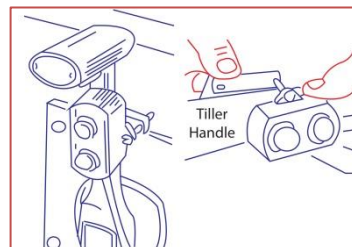
Step 4B

The PTT50/PTT130's actuator is equipped with a breather hose which runs into the wiring harness. Therefore, when running the harness from the actuator to the control box caution must be taken not to kink or strap it down so tightly as to restrict its ability to act as a breather line. Also make sure that either end of the wiring harness will not become submerged, which could cause the actuator to draw in water.



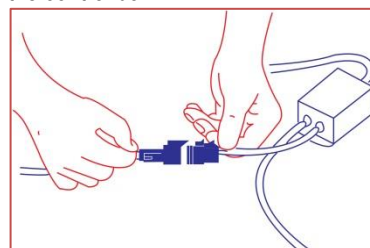
Step 5

Apply corrosive protective grease (not supplied) to the wiring harness plug. Connect the 2-wire actuator motor cord plug to the 2-wire plug from the control box.



Step 6

Mount the control switch in a convenient location, such as a throttle control or motor tiller. Run the switch cable back to the control box.



Step 7

Apply corrosion protective grease (not supplied) to the 3-wire plug. Connect this 3-wire control switch plug to the 3-wire plug from the control box.

Step 8

Connect the lead wires from the electrical control box to the battery posts. The black goes to the negative post, and the red goes to the positive post.

Step 9

Reconnect your steering and shifting cables and gas line to the motor.

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Note: Retighten all mounting bolts after one hour of use

For continued use in saltwater or an abnormally corrosive environment we recommend that you install an anode on your unit.

The left hand column identifies possible problems that may be experienced in the operation of your PTT50/PTT130. The center column lists possible causes and the right hand column lists suggested remedies.

Problem	Possible Cause	Suggested Remedy
Lack of power - motor stops and starts	Low battery charge	Charge battery
	Battery old or weak - won't hold a charge	Replace battery
	Dirty / loose battery cable connections	Clean and tighten battery connections
	Loose control box / plug / cable connections	Check and tighten plug connections
	Defective control box	Replace control box
	Defective actuator motor	Replace actuator motor
Unit will run one direction only – up or down	Defective control box or switch	Consult Powrtran Factory Service



Warranty Program

Thank you for choosing a Powrtran product. This quality unit is covered by the following limited warranty.

For two (2) full years after date of purchase, your PTT50/PTT130 unit is warranted to operate properly under conditions of normal use. This warranty includes all electrical and mechanical components.

If the unit fails to operate properly during the first two years after purchase, call Powrtran so appropriate and satisfactory action can be taken. If a return is required, a company representative will provide you with information to facilitate the return.

Repair or replacement will be made and the repaired or new unit shipped back to you via prepaid freight, usually within ten (10) days of receipt. **Proof of purchase must be provided for all warranty claims.**

This warranty does not cover damage due to rust, corrosion, accident, or abuse of the unit.

This is the only warranty and all other warranties, including implied warranties of merchantability or fitness for a particular purpose, are disclaimed. Some states do not allow limitation on how long an implied warranty lasts, so the above limitation may not apply to you. This warranty does not cover any incidental or

consequential damages. Some states do not allow the exclusion or limitation of incidental or consequential damages, so the above limitations may not apply to you.

This warranty applies only if the unit is installed pursuant to instructions and the unit is not subject to damage, (other than that which may occur in ordinary use), such as collision from the rear, fire, explosion, vandalism or sinking. Warranties are valid only if serviced by the factory.

To find a dealer near you go to powrtran.com

or call 1-800-466-7697

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Actuator Removal

The PTT50/PTT130 actuator is secured by two clevis pins, located at the top and bottom of the actuator. To remove the clevis pins, carefully remove the cotter pins or clip pins from the clevis pins. **To avoid possible injury, support motor lower unit before attempting to remove clevis pins or actuator.**

CAUTION: DO NOT PUSH CLEVIS PINS OUT WITH FINGERS AS SUDDEN MOVEMENT COULD RESULT IN SERIOUS INJURY.

After removing the clevis pins, lift the actuator out of the Trim & Tilt.

With the actuator removed, the Trim & Tilt can be locked in the "down" position by placing a clevis pin in the hole located on the lower side plate of the unit. Be sure to reinstall the cotter pin into the clevis pin during use.

 Pow'r Tran, Inc.
24253 County Road 7
St. Cloud, MN 56301

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or call 1-800-466-7697