

pow'rtran™

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 the Pow'rTran trim and tilt. When properly installed it will provide trouble-free operation and convenience for many years.

Installation should take about an hour, depending on your boat, motor, and mechanical abilities.

Caution! Make sure that your battery is fully charged before operating your Pow'rTran. The unit will not operate at top efficiency if the battery charge is low or if the electrical connections are not secure.

Pow'rTran maximum horse power ratings are as follows:

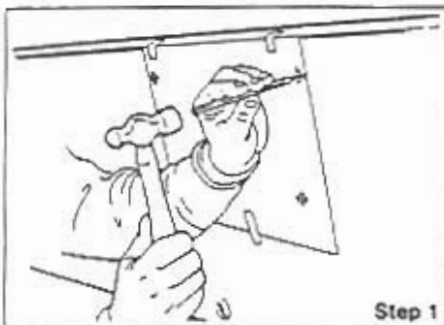
PTT60CSS – 75 hp maximum horse power

PTT60SS – 130 hp maximum horse power

PTT60PSS – 50 hp maximum horse power

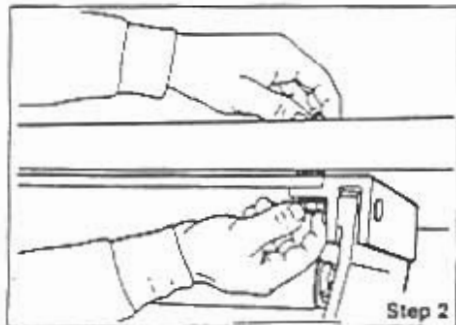
Note: The setback of the Pow'rTran may require longer steering cables or a tiller handle extension. Consult your marine dealer.

Mounting the Pow'rTran to the Transom



Step 1. Remove the outboard. The Pow'rTran'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 the Pow'rTran. In many cases, this pattern will match the pattern already on the transom. Simply center and tape the stencil on your transom. Punch through to mark the holes. Then drill through with a $\frac{1}{2}$ " drill bit. However, it is always a good idea to pre-drill with a *smaller bit* first.

IMPORTANT: The actuator of the Pow'rTran is mounted slightly off-center. Therefore, it *must not* be used as a "centering point" for mounting the Pow'rTran or outboard motor. Use the supplied stencil only!

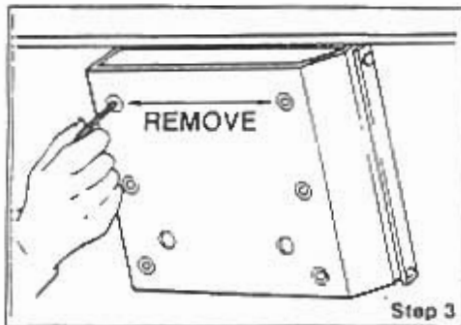


Step 2. Install the Pow'rTran transom bar. Hold the $1\frac{1}{2}$ " x $14\frac{1}{8}$ " bar in position, while securing the Pow'rTran to your transom with the $\frac{1}{2}$ " stainless steel bolts, washers, and lock nuts provided. Mount the Pow'rTran using the upper two mounting holes and the open holes lower in the plate. In the event more height is needed, the Pow'rTran can be mounted higher by drilling new holes.

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

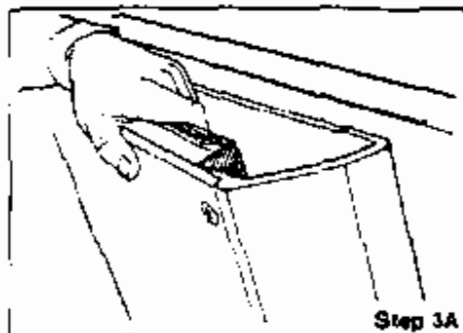
Note: If your transom has any screws or rivets obstructing the "flush" mounting of the Pow'rTran, we recommend using a sheet of treated plywood, 17"W x 14"H x $\frac{1}{4}$ " with relief holes drilled to allow for the protruding screws/rivets. This sheet should be placed between the Pow'rTran and transom.

Mounting Your Outboard to the Pow'rTran



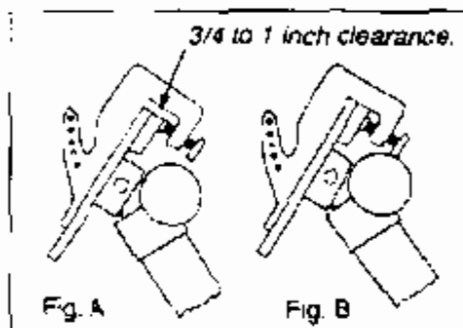
Step 3. FOR BOLT-ON MOTORS ONLY! (If you have a clamp-on motor, proceed to Step 3A).

The Pow'rTran 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 $\frac{1}{2}$ " 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.

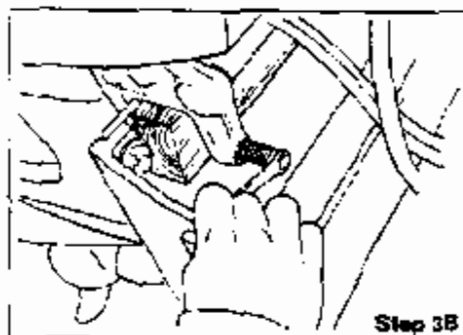


Step 3A. FOR CLAMP-ON MOTORS ONLY.

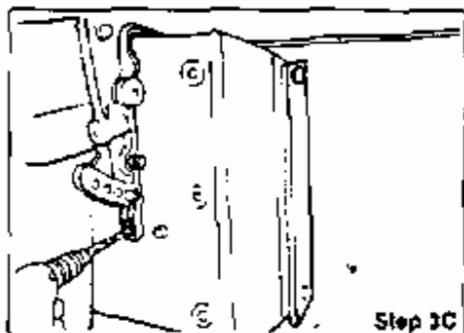
An optional wood shim is available for "clamp-on" type motors. Because of clearance between this shim and the actuator's electric motor, it is strongly recommended to use the Pow'rTran factory pre-cut shim.



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



Step 3B. Center and clamp the outboard onto the Pow'rTran. Before drilling "security" mounting holes, slowly run the Pow'rTran to its full tilt position paying very close attention to clearance between your outboard's clamp bracket, the wood shim and actuator motor. The clamp handles should be secured together so they cannot create a pinching problem when tilting.

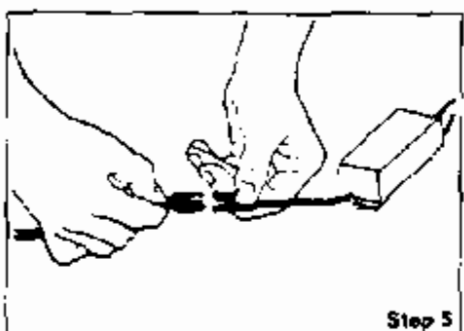


Step 3C. Most clamp-on motors have "security" mounting holes on their transom brackets. These must be utilized! Now that the outboard is mounted, secure motor by inserting stainless steel bolts, washers and lock nuts (not included) through the motor's transom bracket holes and then through the Pow'rTran's pre-drilled holes.

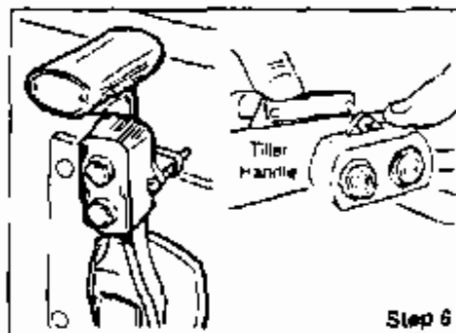
If your motor's transom bracket holes do not match the Pow'rTran's, just drill through the bracket holes. Secure with bolts, washers and lock nuts. Again, it's recommended that you use a smaller drill bit first.

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 can not be submerged at any time. Mount accordingly.

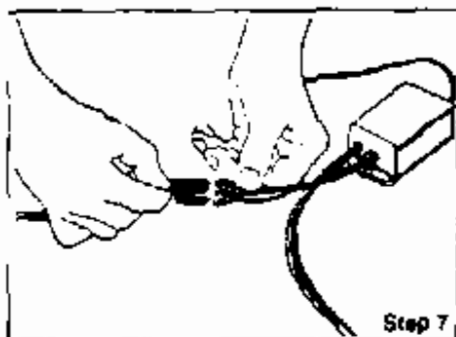
Step 4B. The Pow'rTran's Actuator is equipped with a breather hose which runs into the wiring harness. Therefore, when running the harness from the actuator to the control box caution must be taken not to kink or strap it down so tightly as to restrict its ability to act as a breather line. Also make sure that either end of the wiring harness will not become submerged which could cause the actuator to draw in water.



Step 5. Apply corrosion 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, the red goes to the positive post.

Step 9. Reconnect your steering and shifting cables and gas line to the motor.

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.

Trouble Shooting Guide

The left hand column identifies possible problems that may be experienced in the operation of your Pow'rTran Power Trim and Tilt. The center column lists possible causes and the right hand column lists suggested remedies.

PROBLEM	POSSIBLE CAUSE	SUGGESTED REMEDY
Lack of power—motor stops & goes	Low battery charge Battery old or weak—won't hold a charge Dirty/loose battery cable connections Loose control box/plug/cable connections Defective control box Defective actuator motor	Charge battery Replace battery Clean and tighten battery connections Check and tighten plug connections Replace control box Replace actuator motor
Unit will run one direction only—up or down	Defective control box or switch	Consult Pow'rTran Factory Service

Removing Pow'rTran Actuator

The Pow'rTran 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 Pow'rTran.

With the actuator removed, the Pow'rTran 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.

The Pow'rTran Warranty Program

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

For a two (2) full years after date of purchase, your Pow'rTran 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 Pow'rTran so appropriate and satisfactory action may 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.