



MODEL 35 MOTOR LIFT
INSTALLATION AND OPERATING
INSTRUCTIONS



THIS UNIT IS SUITABLE FOR USE WITH
AUXILIARY OR KICKER MOTORS UP TO 35 HP
OR 150 LBS

CUSTOMER MUST RECEIVE THIS MANUAL AT TIME OF SALE OR AFTER INSTALLATION

INTRODUCTION

Congratulations! You have just purchased the best auxiliary outboard motor lift available today. With proper installation and care, this motor lift will provide you with years of trouble free use and performance.

Please take a few moments to review the information contained in this booklet to familiarize yourself with the installation procedures suggested to successfully mount your new motor lift. Installation is easy particularly when you know each step ahead of time.

BEFORE USING YOUR MOTOR LIFT, READ THE OPERATING TIPS AT THE END OF THIS BOOKLET FOR PRECAUTIONS WHEN USING YOUR MOTOR LIFT ON THE WATER AND WHEN TRAILERING YOUR BOAT.

GETTING STARTED

Here is a list of the tools and hardware that you will need:

Tools and Equipment:

1. Electric drill with 1/8, 3/16, 3/8 and 1/2 inch drill bits
2. Two 3/4 inch wrenches
3. A Phillips head screw driver
4. For heavier motors, a hoist to lift the motor while installing the bracket

Hardware and Supplies: (not included)

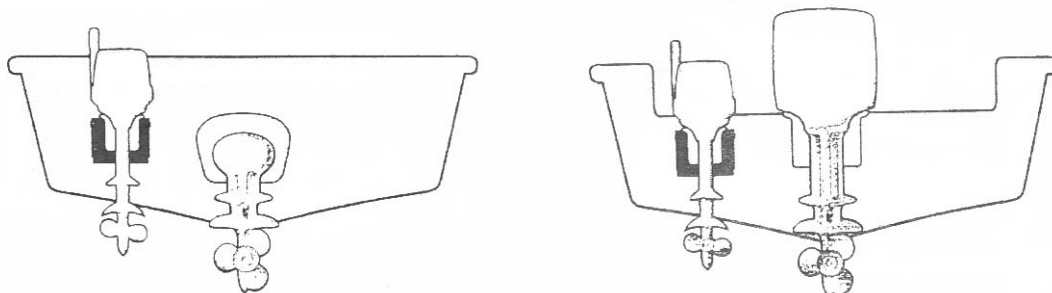
- 4 – 1/2 inch diameter stainless steel Hex Cap Screws of the appropriate length*
- 4- 1/2 inch stainless steel Nylon insert nuts
- 8 – 1/2 inch stainless steel flat washers
- 1 – Tube of clear RTV silicon for sealing the transom mounting holes (recommended)
- 1 – Tube of dielectric grease for the electrical connections (recommended)
- 2 – Security bolts that match the clamp bracket on your motor (recommended)

For proper bolt length selection see the information on the following page.

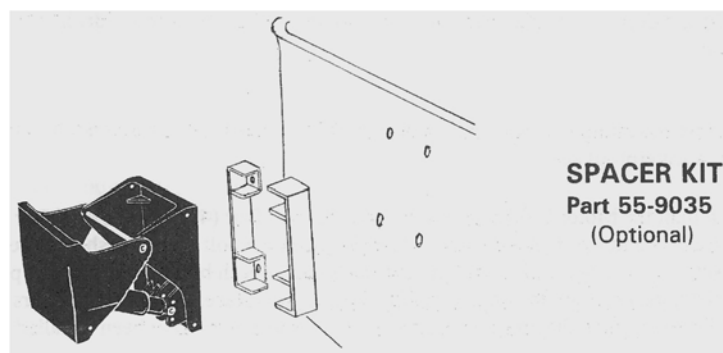
BEFORE STARTING

Selecting the Mounting position

The Panther Trim and Tilt is designed so that the motor can be mounted either at or below the top of the transom. In either case, the unit should be mounted so that the prop will have sufficient depth when the motor is lowered into the water.



Because of the extended set back option on the Model 35, the Panther motor lift provides sufficient clearance to mount the motor bracket as low as necessary for optimum performance. As will be described, the bracket itself can be adjusted to provide 13 inches of set back or up to 16 inches of set-back with the optional spacer kit as shown:



Once you have selected the best mounting position, be sure to check inside the transom to make sure that there is adequate clearance for the bolts and nuts and that the transom is sufficiently reinforced for mounting the bracket.

How to measure for transom mounting bolts

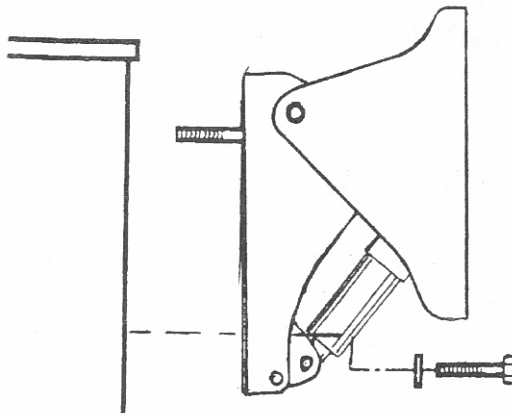
Because each transom is different, you will need to determine the right length of mounting bolts. For installations where mounting holes will be drilled, you can take this measurement after the holes have been drilled. Simply measure the thickness of the transom and add 2 inches.

Make sure motor hoses and cables are long enough for set back

This motor lift places your outboard 7 to 13 inches farther away from the controls, battery and gas tank than if were mounted directly to the transom. Check to make sure that each of these cables and hoses has the required amount of slack. An easy way to check this is to unclamp the outboard from the boat while it is secured to an engine hoist. Then simply move the motor back 7 to 13 inches with all of the hoses and cables still connected.

MOUNTING THE MOTOR LIFT BRACKET

1. Position the transom plate in the selected location of the transom. Check to make sure that the hole placement will not interfere with any moldings, rivets, etc.
2. Once positioned, use a punch to mark the hole location. You may find that using a stencil will make this easier. You can make your own stencil by tracing the shape of the transom plate on cardboard.
3. Using a 3/16 bit, drill a pilot hole in each location to make sure the holes are properly aligned and that there will be no interference with the mounting bolts. Then finish drilling the holes with a ½ inch drill bit.
4. Before mounting the unit, apply a bead of RTV silicone sealant around the edge of each hole to insure a watertight seal.
5. To mount the Motor Lift bracket to the transom, use four ½" diameter stainless steel bolts with washers and nylon locking nuts. Start by placing a bolt with a washer into each of the upper mounting holes. Stick a piece of tape over the head of each bolt to hold them in place, then lift the unit up to the transom, align the bolts and slide the unit into place. Install the washers and the nuts inside the boat. Do not tighten the nuts completely until the lower bolts have been installed.

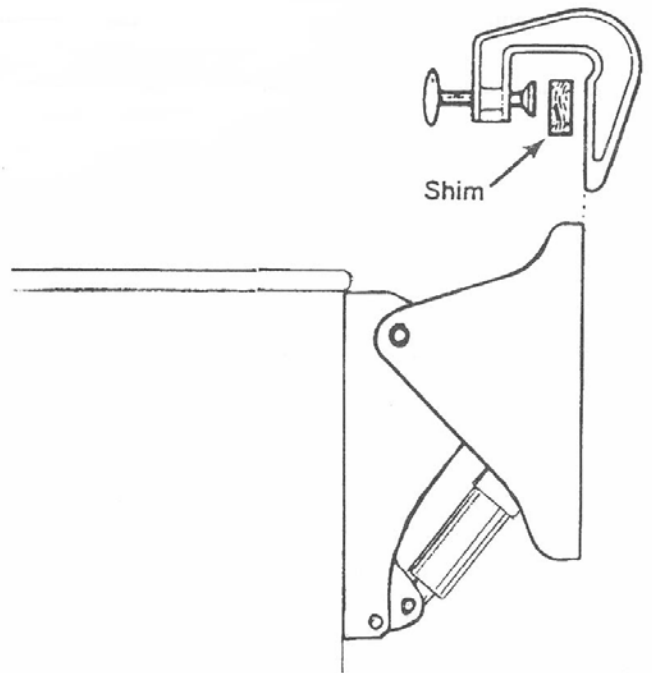


6. Complete the installation by inserting the two lower mounting bolts, together with washer and the nylon locking nuts. Tighten each bolt evenly, taking care not to over torque the nut to the point where the transom or the bracket could be damaged.

MOUNTING THE MOTOR

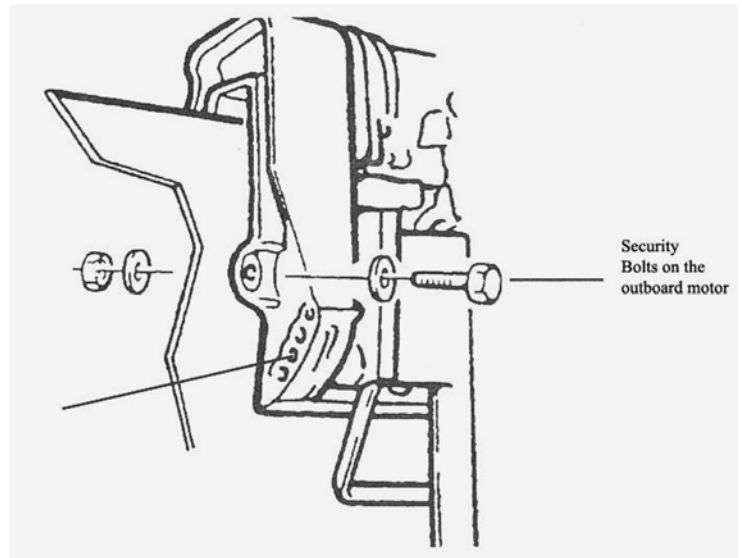
1. Your motor lift bracket is supplied with a 2 X 3 synthetic wooden shim to help mount the motor to the motor mount plate.
2. Place the shim on the inside of the mounting plate and hold it in place while placing the motor over the top edge of the bracket.

3. Before final installation, slowly run the bracket up to full tilt to check for interference with the clamp bracket or the clamp handles. Reposition the motor as necessary. If more clearance is needed between the motor and the transom, follow the instructions on the following page to adjust the bracket setback.



4. Attach security bolts to the bracket by drilling mounting holes into the bracket that match the size and location of the security bolt holes on the outboard bracket. Tighten the motor clamps securely. Also use cable ties or other means to secure the clamp handles to prevent accidental loosening during operation.

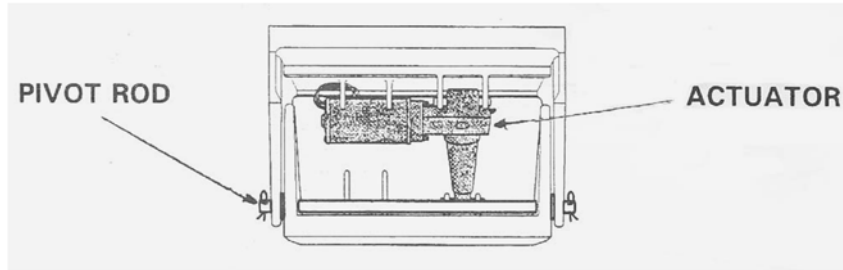
5. After attaching the electrical components, slowly run the motor up to a full tilt position to make sure that there is sufficient clearance. If more clearance is required, follow the instructions on the following page.



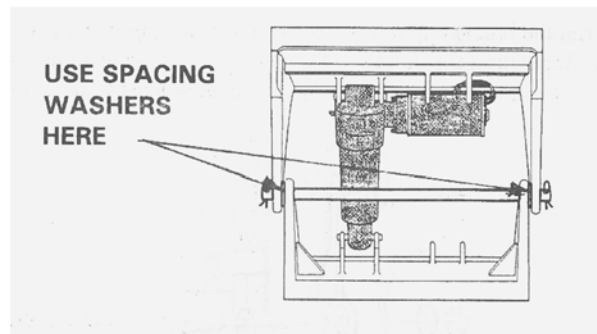
ADJUSTING THE TRANSOM SETBACK

In some installations where the motor bracket is mounted beneath the transom, or where additional clearance may otherwise be required when the motor is tilted up, the bracket may be adjusted as follows:

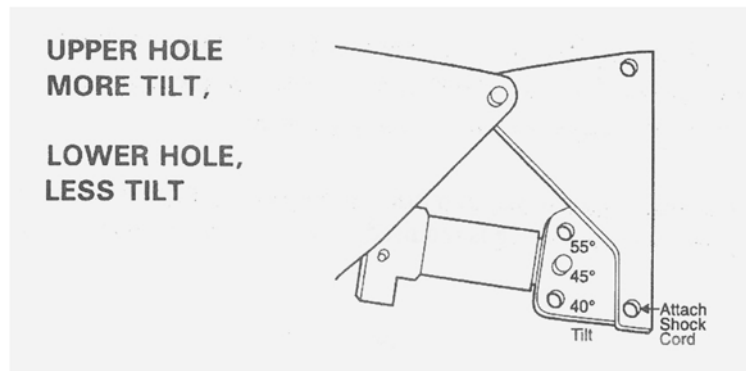
1. Detach the clevis pins that are holding the actuator in place and remove the actuator from the frame.
2. Remove the pivot rod from the motor lift bracket.



3. Reposition the motor plate to the outside holes on the arms of the transom plate. Replace the pivot rod, making sure to use the extra spacing washer supplied in the hardware pack as shown to eliminate any space between the motor plate and the transom plate. The extra spacing washers in the install pack are only used when the motor bracket is in this extended position. Since each frame is slightly different, you may need to use from one to three spacing washers on each side. You want to make sure that the two halves of the frame are snug to prevent any sideways movement of the motor plate.



4. Now, remount the actuator as shown above. Note that the actuator mounts with the motor on the left side in this position. When the motor lift bracket is retracted, the actuator mounts with the motor on the right-hand side as shown in the top illustration.
5. Additional adjustments to the amount of tilt may be made with the frame in the extended position by repositioning the lower mounting position of the actuator.

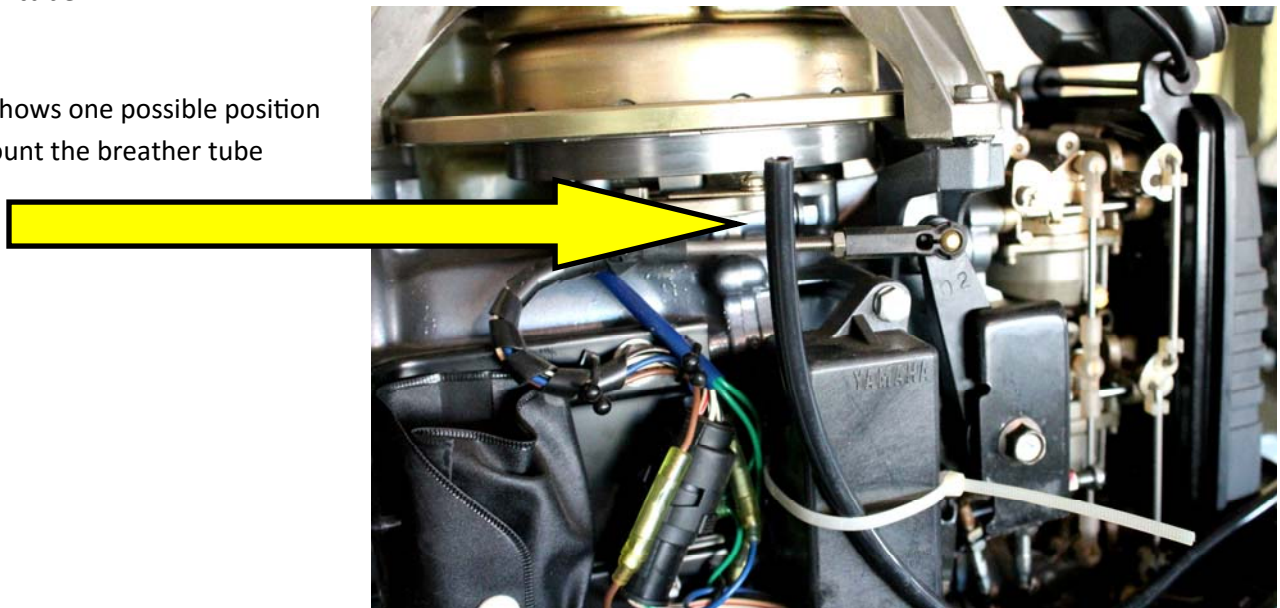


THE BREATHER TUBE

The actuator is the mechanism that raises and lowers the motor. Because of its precision design, it is equipped with a “breather tube” to allow the actuator to have full up and down function. The breather tube allows the actuator to move freely without creating a vacuum. The breather tube **MUST** be mounted in a way to prevent water intake. The best location for this is under the hood of the motor.

1. Thread the breather tube through an existing opening in the base of the motor, or if necessary drill a 3/8 inch hole for access.
2. Making sure there is plenty of slack in the tube to allow for full movement of the motor, attach the breather tube inside the motor compartment in a location that will not be affected by moving engine parts. Use cable ties to ensure that the end of the tube stays high up in the compartment to prevent accidental water intake. The tube **MUST** be installed so that no water can get inside the breather tube.

This shows one possible position to mount the breather tube

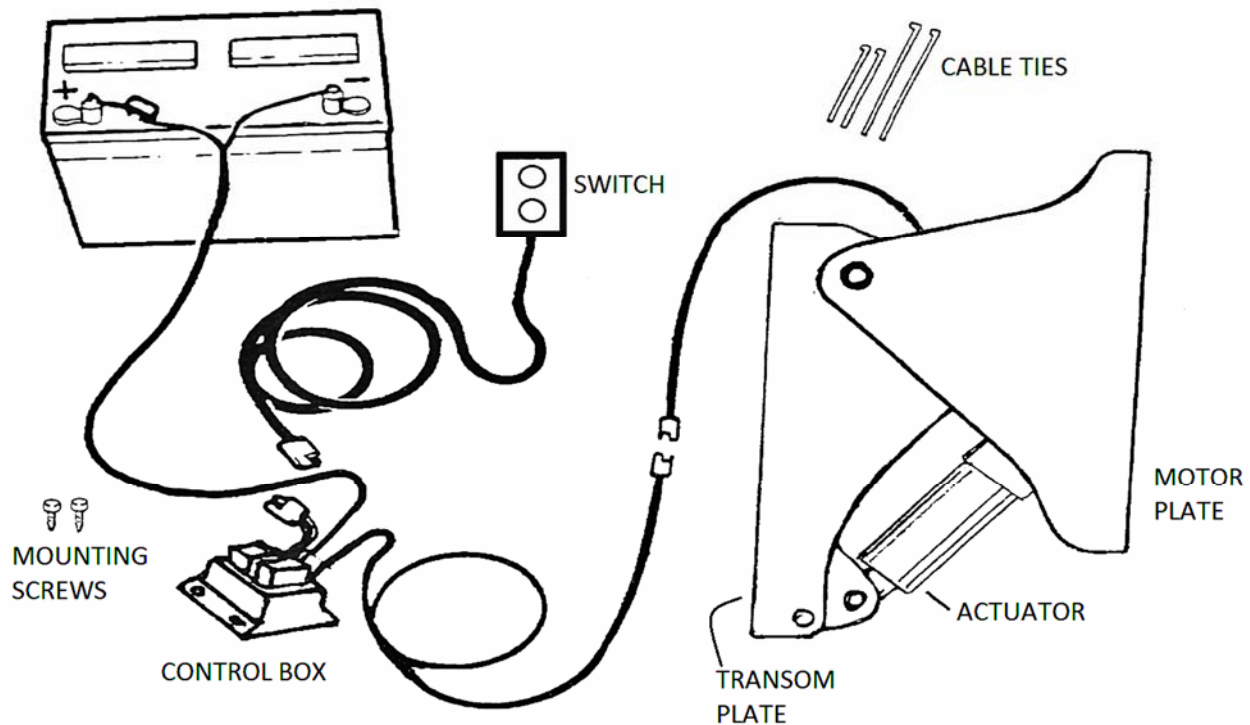


If your motor does not have a hood, cover or cowling [this is often the case on large electric outboard motors], you must still be certain that the breather tube is fixed in a position where water cannot get into it. You should look for a closed compartment in the rear of the boat somewhere, and you may need to drill a hole to get the tube inside. Extending the breather tube with an additional section of similar size tubing may be necessary to reach a good location.

At no time should you operate your trim/tilt with the breather tube in a position where it could fall in the water or is exposed to the open air.

ELECTRICAL CONNECTIONS

This unit is designed to operate off of a standard 12 volt battery and is generally connected to the boat's main starting battery. Follow the illustration and instructions below:

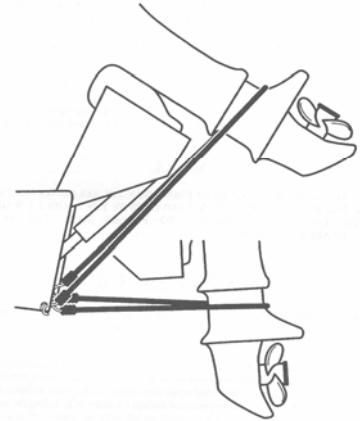
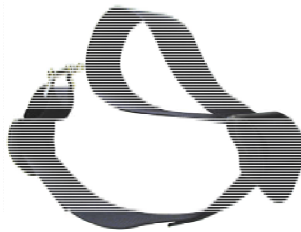


1. Mount the electrical control box inside the boat using the two ½" screws provided.
2. The push button switch can be mounted in any convenient location. For tiller operated motors, the switch can be strapped to the tiller arm with cable ties.
3. Run the three pronged switch lead to the control box and the two pronged lead from the control box to the bracket.
4. Apply a small amount of dielectric grease to each of the connectors and plug them together. (It is also recommended that these connections be wrapped with a waterproof tape or shrink tube applied.)
5. After all connections are made, connect the ring terminal leads to the battery. Connect the red lead to the positive (+) terminal and the black lead to the negative (-) terminal.
6. Test the unit by running it up and down to make sure that there is adequate slack in the leads. Then using the cable ties supplied, secure all of the wiring to make sure it does not get pinched during operation.

MOTOR LIFT SUPPORT CORD

The final step is installing the support stretch cord. This cord is designed to keep the motor secured and minimize the movement of the motor while it is being trailered or while running in the rough waters with the motor lift in the raised position. The cord is designed to be left permanently attached to the motor, meaning you can leave it on while the motor is in the lowered position and running. When the motor is raised, the cord will automatically tighten as illustrated to keep the motor from “bouncing” in its own bracket.

Although a motor support cord is supplied, we highly recommend our Pro Strap Kicker Tie Down Strap (Panther Part# 55-1500). As the engine is tilted, the strap tightens and secures the motor for extreme, rough water conditions. As the motor is lowered, the two inch diving belt strap stays secured and tucks to the side. This strap fits any auxiliary outboard. It comes with adjustable buckles and stainless clevis hardware.



To attach the cord, simply attach the hooks to the lower holes in the sides of the Motor Lift Bracket.

OPERATING TIPS

With proper care and usage, your Motor Lift unit will provide you with years of trouble-free use.

1. Trailering

The actuator used in your motor lift is a precision engineered electro-mechanical device that can deliver up to 5,000 lbs of force for high speed trimming. Through a unique linear ball screw gear mechanism, the actuator is designed to “park” where you put it and it should never settle.

However, as with original equipment trim and tilts, the unit is not designed to support your motor when trailering. Trailering can exert significant forces on your outboard that can cause damage to the motor lift mechanism and to the outboard itself. Therefore when trailering, **always trailer with the motor in the fully lowered position** or use a transom support bracket. (Panther offers the 55-1900 or the 55-2100 shown here)



55-2100



55-1900

2. While fishing...

Be sure to keep your motor in “tilt” mode so it can pop up if you hit an obstruction

3. Other great items from MarineTech...

If you use your auxiliary motor for trolling, consider adding a Panther Electrosteer and/or a Troll-Master for “hands off direction and speed control.”

NOTICE

DAMAGE CAUSED BY IMPROPER TRAILERING PROCEDURES OR WATER INTRUSION THROUGH THE BREATHER TUBE IS NOT COVERED BY THE WARRANTY. IT IS THE USER'S RESPONSIBILITY TO ENSURE THAT THE NECESSARY PROCEDURES ARE FOLLOWED.

MAINTENANCE

1. Electrical Connections

At least once per season be sure to check the electrical connections. As necessary, clean off all connections and reapply dielectric grease to protect the connection from corrosion

2. Use in Salt Water Area

This trim and tilt is constructed of high quality marine grade aluminum alloys and stainless steel hardware making the unit suitable for use in any marine environment. However, if this unit is to be used in salt water area it is necessary to attach a zinc anode to reduce corrosive effects. (Panther 55-9000) Anodes may be purchased through the dealer or by calling our customer service number. To prevent discoloration and corrosion it is a good practice to periodically wash down the entire unit with fresh water.



3. Adding Grease

The actuator gear case is filled with grease at the factory. It may occasionally be necessary to add more grease through the zerk. You can add grease with the unit in any position. If your Trim and Tilt receives heavy use, perhaps once a year give it a supplemental pump or two of grease. Do not over do it, and it probably isn't necessary at all unless the actuator starts to become noisy. Putting in too much grease may cause more damage than good.

4. Water Intrusion

As described on a preceding page, the breather tube must be secured inside the motor hood to prevent accidental water intrusion. Water intrusion will cause actuator failure. Periodically check the actuator tube to make sure it stays secure in a dry location.

TROUBLESHOOTING

The following are some procedures to follow before calling in for service or warranty work:

UNIT DOES NOT RUN

1. Check Battery & Connections.
2. Check Electric Motor.
Use a double lead jumper and connect the motor's two prong plug directly to a battery.
3. If the motor still does not work, disconnect the motor from the actuator (held on by two small nuts) and plug directly to the battery.
4. If the motor works when it is disconnected from the actuator, the actuator/motor assembly needs replaced.
5. If the motor does not work when disconnected from the actuator, the motor needs replaced.
6. Check Relay Control & Push Button Switch.
Unplug the three prong connector at the relay control and run a jumper wire between the red and the green wires to go down and between the red and blue wires to go up.
If the unit does not run the problem is the Relay Control.
If it does work then the problem is the Push Button Switch.

UNIT RUNS IN ONE DIRECTION ONLY

Check Relay Control & Push Button Switch

Unplug the three prong connector at the relay control and run a jumper wire between the Red and the Green wires to go down and between the Red and Blue wires to go up.
If the unit does not run the problem is the Relay Control.
If it does work then the problem is the Push Button Switch.

UNIT RUNS BUT MAKES A GRINDING NOISE AND HAS LOW POWER

Actuator low on grease. Add a couple of pumps of marine grade grease.

UNIT RUNS BUT DOES NOT MOVE

Replace Actuator.

UNIT RUNS BUT MAKES CLICKING NOISE OR JUMPS

Replace actuator.

UNIT STARTS AND RUNS ON ITS OWN

Replace relay control.

DETERMINE IF WATER IS IN ELECTRIC MOTOR

Remove through bolt that is closest to the wires and look for an indication of rust on the bolt. Rust indicates water inside of the motor housing. Motor and actuator should be replaced.