

# **PRO-DRIVE**

SHALLOW WATER OUTBOARDS

## **OWNERS MANUAL**



**[www.prodriveoutboards.com](http://www.prodriveoutboards.com)**

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## **TO THE OWNER**

**Thank you for purchasing a “Pro-Drive Shallow Water Outboard”.  
Your unit is designed for long life, dependability, ease of operation,  
safety, and top performance that you deserve and expect.**

**Take time now to read this manual and the safety precautions.**

**Everyone who operates this unit must read and understand this manual.  
The time you take now will prolong your units life and prepare you for  
its safe operation.**

**Thanks again and enjoy.**

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# Safety Instructions

## **IMPORTANT**

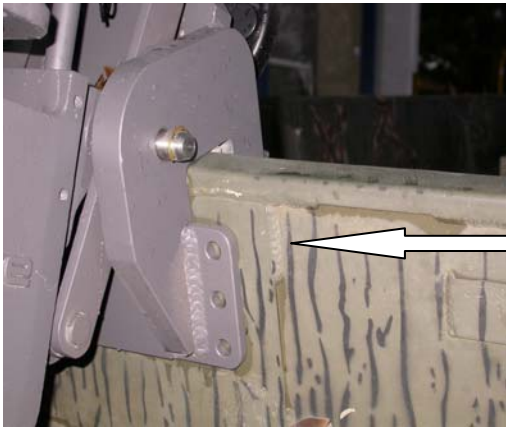
**Read and understand these instructions. They are for your safety. Failure to follow these instructions may result in property damage, personal injury, or death.**

- **Read and understand engine manufacturer's owners manual.**
- **Attach safety kill switch lanyard to you before starting the engine.**  
*(Attaching the safety kill switch is a suggestion only. Know your risks and situation before electing to use or not to use.)*
- **Do not engage clutch while running engine out of water. Personal injury can occur if prop is spinning in open air.**
- **Keep legs and body clear from under tiller handle.**
- **Engage clutch to forward at idle only.**
- **Always disconnect the battery before servicing the engine.**
- **Never touch or attempt to remove the propeller, until the battery is disconnected.**
- **Remember to follow all boating regulations and wear your personal flotation device while on the water.**
- **Never use this unit when under the influence of alcohol or any other drug.**

# Installation Instructions



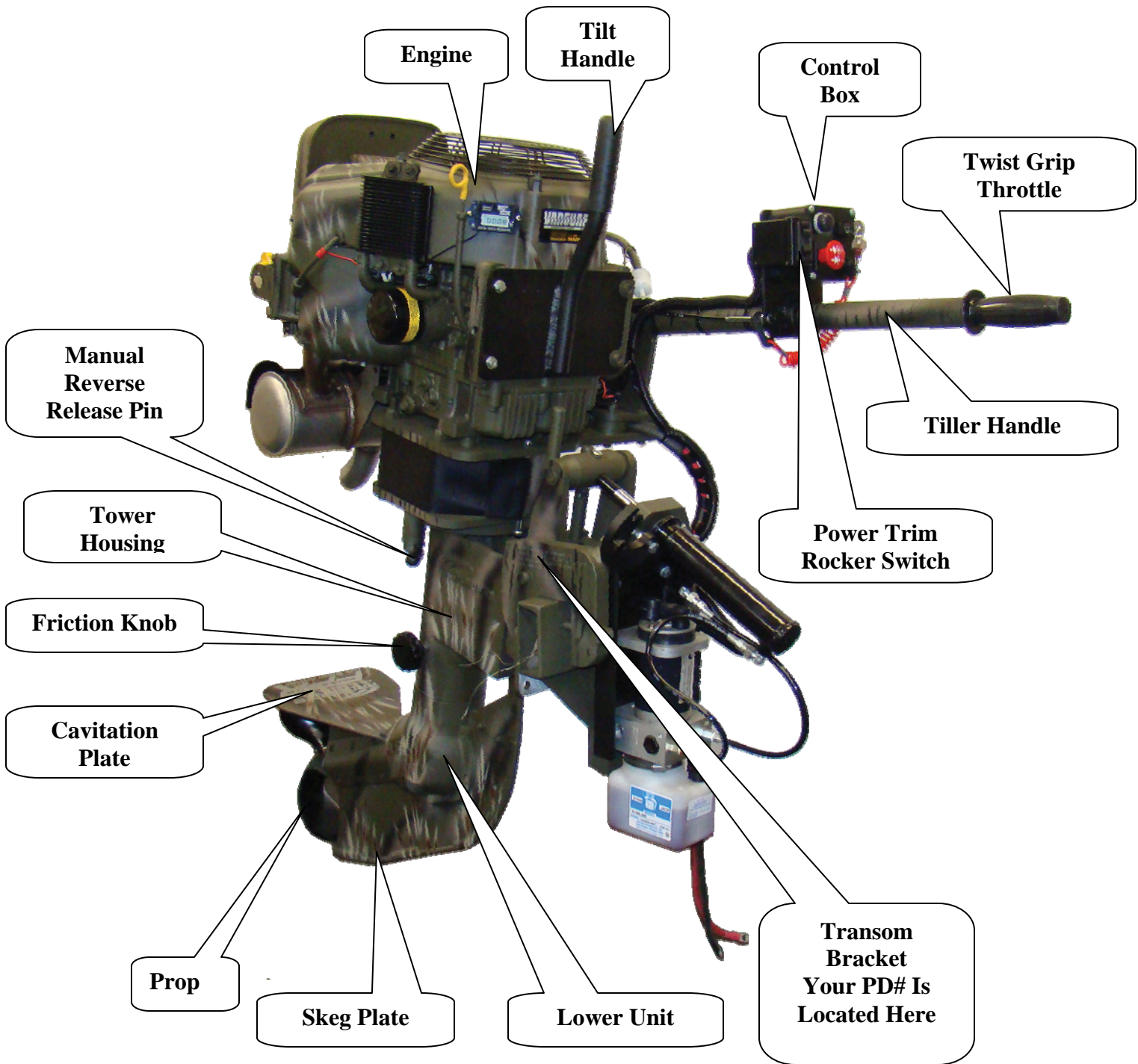
After installing your motor on the boat transom use the aluminum transom saver plate supplied with the unit, torque the bolts to 25 ft. Lbs. Of torque.



Located on the back of the transom bracket there are three sets of holes on each side. Drill a 7/16" hole through the transom. One on each side in the hole most suited for your boat. Use the 3/8" bolts and nuts supplied with your unit to secure the bracket in the holes drilled.

**\*Note:** Use 1/4" fuel line and fittings with hose clamps to connect your engine fuel line to your tank.

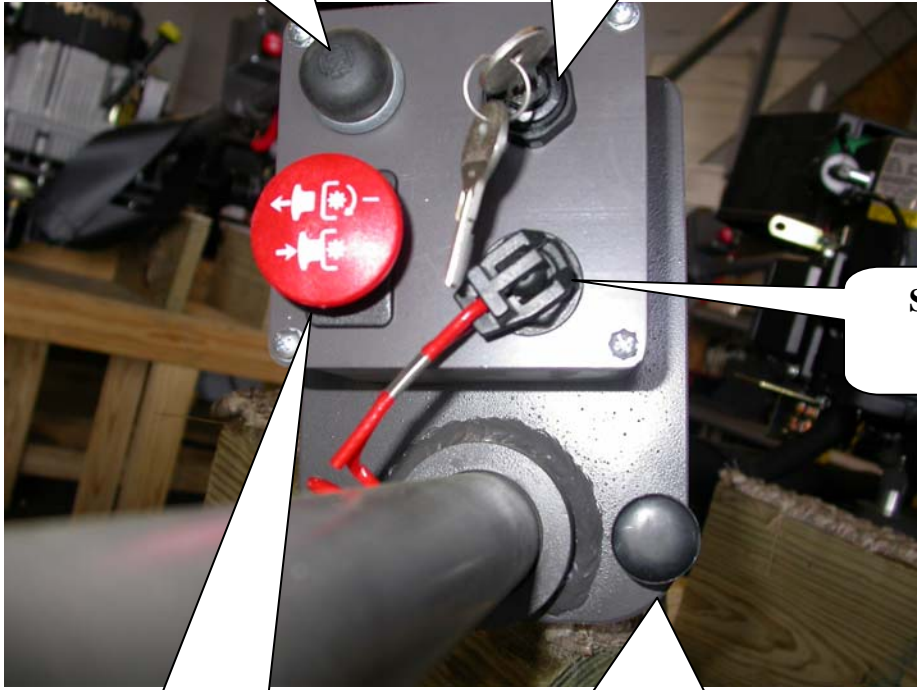
# Unit Component And Control Feature Identification



# Identifying The Controls And Control Box

**Momentary Engagement Button**  
Push In (Forward)  
Release (Neutral)

**Ignition Switch**  
(Off / Clockwise On)  
Continue Clockwise Engages Starter



**Safety Kill**

**Clutch Switch**  
Push In (Neutral)  
Pull Out (Forward)

**Choke Switch**  
Pull Out (Engaged)  
Push In (Disengage)

## **START UP**

**\*Note: your engine is shipped without oil. Oil must be added before starting your engine. See the engine manual. (Check before adding oil. Do not overfill)**

- Visually check unit for any loose, damaged or missing parts.
- Attach safety lanyard if electing to do so.
- Check engine according to the engine owners / operators manual.
- Make sure clutch is depressed (neutral position). \*note engine will not start if clutch is engaged.
- Pull out choke and turn ignition key clockwise to the start position.
- Once engine has started push the choke back in and allow engine to warm up.
- After warm up, engage the clutch and accelerate by using the twist grip throttle on the tiller handle and your on your way.
- Remember only engage the clutch at idle. You may disengage the clutch at any time. Engaging the clutch at high rpm against a log or blunt object can damage the clutch and void the clutch warranty.
- Momentary clutch engagement (forward) may be used by depressing the black button while the clutch button (red button) is pushed in (disengaged)

# Operation Instructions

## Regular Operation

- **Make sure engine ignition is off.**
- **Check engine oil.**
- **Attach safety kill switch. (If electing to do so.)**
- **Make sure clutch button is pushed in ensuring it is in neutral. (*Note: Engine will not start while the clutch button is pulled out.*)**
- **Pull choke as needed and start engine. Allow engine to warm up.**
- **Set trim wheel allowing the engine to be slightly above level with the boat.**
- **Pull out the red button to engage the clutch to go forward.**  
**Note: only engage the clutch button while the engine is at idle. Engaging the clutch at high rpm's can damage the clutch and void the clutch warranty.**
- **While on step, adjust trim wheel at best performance for your boat. Once your trim is set, there is no need to adjust it at any time, even while starting and stopping in normal running conditions. *Note: Do not try and submerge your prop or cavitation plate while on step. Doing so will decrease performance. Your prop is designed to run at the surface. (half of the prop is out of the water while on step)***

**Footnotes:** a) Tiller handle torque and slow speed indicates that the trim is set too far down.  
b) Extremely light tiller handle torque and speed loss indicates that the trim is too high up.



### **Running In Grass, Hydrilla & Lillies With Water Underneath.**

- While your boat is on step and running, no trim wheel adjustment is needed.
- Under extremely heavy conditions, you may need to trim down slightly, and clear the prop by raising the engine while getting on step. (Clearing the prop may need to be done more than once in heavy vegetation while getting on step.) Once on step, trim to normal running position.

**Footnote: Raising the engine is done by pushing down on the tiller handle. If needed, the tilt handle can also be pulled on simultaneously.**

### **Running In Shallow Water To No Water On Soft Mud.**

- While your boat is on step and running no trim wheel adjustment is needed.
- To take off from a dry stop in these conditions, you will need to trim your motor down to near maximum depth.
- Engage the clutch and open the throttle fully.
- Using your tiller handle, work the engine from left to right pushing mud until your boat is moving at about walking speed.
- Once you are at walking speed, trim up as you would under normal conditions.
- You will now be able to slow your throttle down to your desired speed.

**Footnote: Should your engine load up (lose power) while trimmed down in the Above conditions, trim up using the hand wheel until the engine is running normally again.**

# Reverse Operating Procedure

The concept is explained by comparing it to the same way a common ratchet and socket set in your tool set works.

Below are some diagrams with explanations on how this system works.

First, you will have to adjust your friction knob by tightening it. This just like when tightening a nut and bolt with a ratchet, some friction is needed to make the ratchet mechanism work,



**Step 1. While sitting, push your tiller handle with your right hand away from your seated position. This will position your unit for reverse and allow you to access the release pin.**



**Step 2. Pull the reverse release pin down. Pull the tiller toward you slightly, then release the pin and continue pulling the tiller toward you until you here the unit click. (Once you release the pin you will not have to pull the pin again until you are ready to go back into the forward position.) Push the tiller handle away from you again like in step 1 and repeat. When your reverse clicks for the fourth time your pin will locate in the reversed locked position.**



**The pictures below show the unit rotating to reverse**



**This picture shows the release lever lock for units with hydraulic power trim in the unlock position.**



**Step 3. Once the unit is in reverse, lock the trim down with the lever loc.**  
**\*Note: the reverse lever must not be locked when running in forward gear.**



**Repeat the above procedure to return to forward gear.**

## **Important**

**While in reverse in deep water, (anything over 10 inches), reverse gear should only be used at idle speeds. Full throttle in deep water conditions could cause your boat to become swamped.**

# Unit Maintenance

- Lower unit oil should be checked every 25 hours or once a month. Use only SAE 80W-90 gear lubricant API service GL-5 (A synthetic gear oil such as Royal Purple may be used.)
- Lower unit oil should be replaced once a year or every 50 hours. (See diagram #B)

## **Diagram A – Checking the Oil** *(Every 25 Hours or once a month)*

### **Step #1**

**Remove the top outer plug with 1/4" allen wrench. Oil should flow out or you should be able to see it. Top off if needed  
Replace the plug using teflon tape. Do not over tighten.**



## **NEW MAINTANCE INSERT FOR PRO-DRIVE MOTORS BUILT AFTER SEPTEMBER 2010**

**PRO-DRIVE LOWER UNITS RECEIVED A MODIFICATION UPGRADE TO IT'S LUBRICATION SYSTEM. THE GEAR SYSTEM IS STILL FILLED WITH OIL, HOWEVER THE PROP SHAFT NEEDLE BEARING AND SEAL CHAMBER IS NOW FILLED WITH GREASE.**

**\* AN EP (EXTREME PRESSURE) GREASE IS RECOMMENDED. WE USE CHEVON BLACK PEARL GREASE EP (NLGI 2)**

**SEE THE ILLUSTRATION BELOW FOR DIRECTIONS.**



**REMOVE ANY GRASS OR FOREIGN DEBRIS FROM THE PROP SHAFT BETWEEN THE PROP AND LOWER UNIT HOUSING. PUMP GREASE INTO THIS GREASE FITTING EVERY 25 HOURS OR 6 MONTHS. WHATEVER COMES FIRST.**



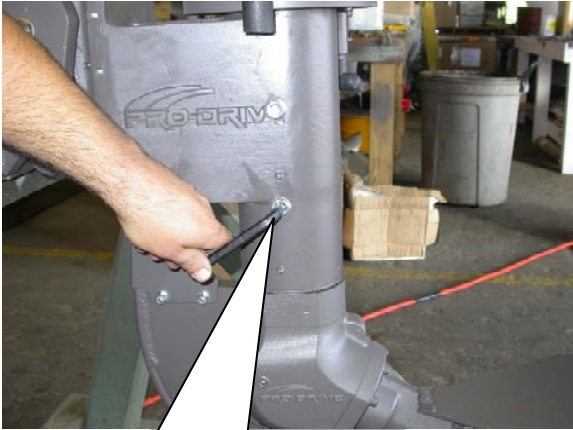
**GREASE WILL APPEAR FROM SEAL NUT IN FRONT OF THE PROP WHEN FULL. THIS IS THE AREA WHERE THE DEBRIS IS CLEARED.**

**THIS MODIFICATION WAS MADE TO INCREASE REAR SEAL LIFE IN EXTREME CONDITIONS TO PREVENT OIL CONTAMINATION.**

## Important

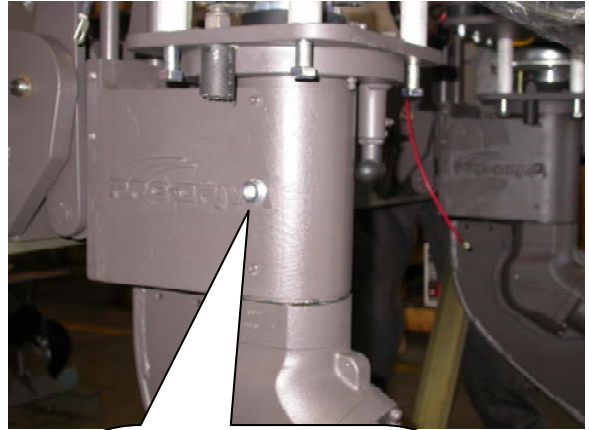
Added maintenance procedure for 2008 model lower units  
Your unit is already serviced new. This is for after 25 hours.

Long Shank

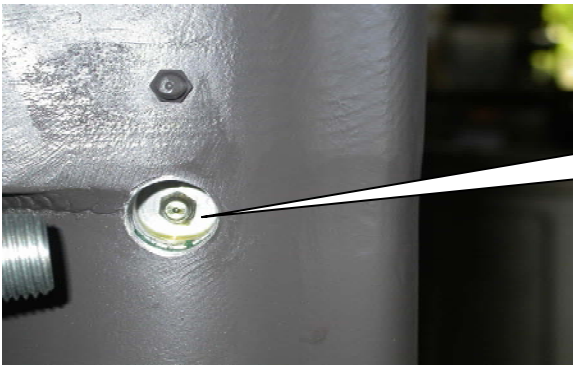


Remove pipe plug  
using 3/8" allen  
wrench

Short Shank



Remove pipe plug  
using 3/8" allen  
wrench



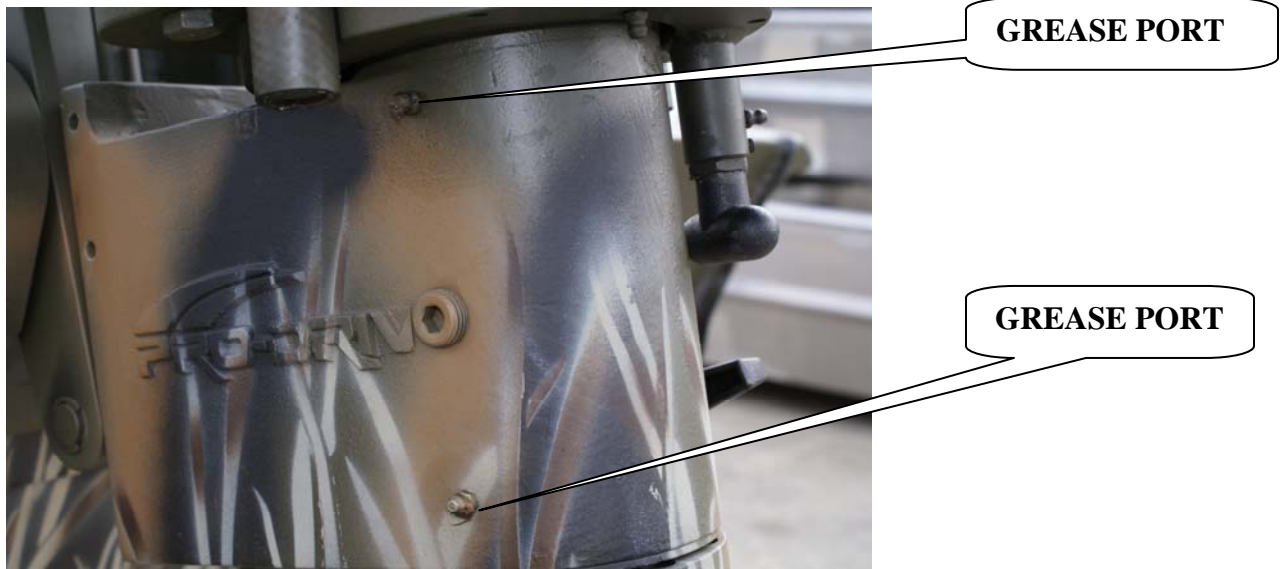
With motor turned  
completely straight  
locate grease fitting.

## Important

Pump only two shots of multi-purpose grease in the grease fitting every 25 hours of use or once a year, whatever comes first. Replace the pipe plug.

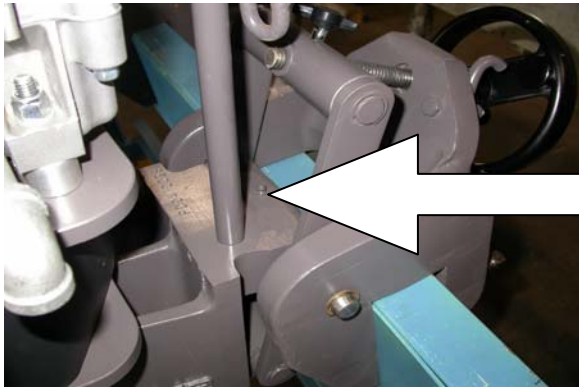


**The diagram below shows the tower housing sleeve grease fittings. Pump two to three shots of grease here at 25 hours.**



**The diagram below shows the grease ports of the reverse assembly. These needs to be greased every 25 hours or once a year. Pump two shots of grease into each. Reverse should be rotated and two shots of grease applied to grease port 1 and 2 every click of the reverse until the unit has been rotated a complete 360 degrees.**





**Grease tower housing pivot pin every 25 hours or once a season (located behind the trim wheel)**

## **Salt Water Applications**

- **After returning from trip wash complete unit with fresh water and allow to dry. Run engine.**
- **After engine cools. Spray engine and all components with Corrosion “X” or equivalent. Spray muffler with WD-40**

## **Remote Steering Rigs**

- **Check all choke cables, steering cables, and throttle cables and lube after each trip.**

**\*Note: Throttle rod inner bushing need to be lubed with silicon water based Lubricate only. Any oil or petroleum based products will ruin the bushing.**

**DIAGRAM B – REPLACING OIL** (*Once a Year or every 50 hours*)

*(This procedure is not followed for units made after Sept. 2010. The oil drain port is on the main gear box shown below)*

***\*NOTE: IF YOUR OIL IS CLEAR AND NOT CONTAMINATED AT THE INSPECTION OR DRAIN PORT, OIL DOES NOT NEED TO BE CHANGED.***

**STEP #1 REMOVE BOTTOM PLUG USING A 1/4" ALLEN WRENCH. REMOVE TOP PLUGS AS INDICATED IN DIAGRAM A. THE OIL WILL BEGIN TO DRAIN OUT OF THE BOTTOM PLUG.**

**STEP #2 ONCE OIL IS FULLY DRAINED, START FILLING FROM THE BOTTOM PLUG . CONTINUE FILLING UNTIL OIL IS FLOWING OUT OF THE TOP PLUG.**

**STEP #3 REPLACE THE BOTTOM PLUG USING TEFLON TAPE AND FINISH BY REPLACING THE TOP PLUG WITH TEFLON TAPE AS INDICATED IN DIAGRAM A.**

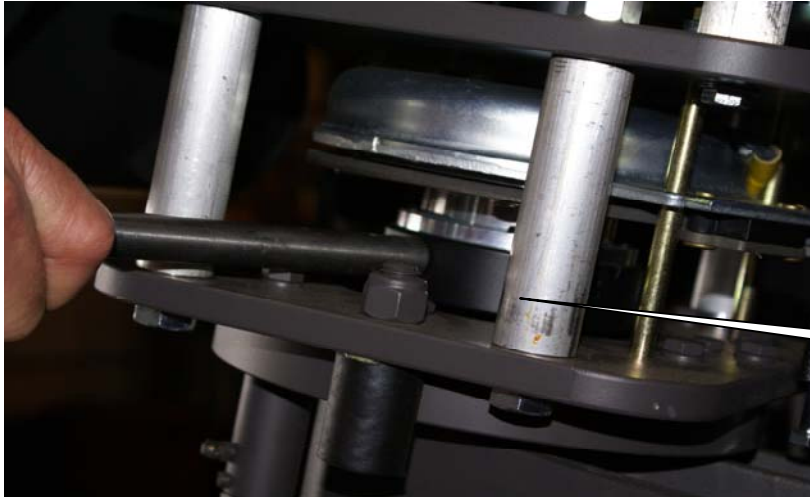


**Drain plug for  
units made after  
Sept. 2010**

## Propeller Removal

**\*Note: Do not engage the clutch to remove the prop. Doing so may damage the clutch and void clutch warranty.**

**Always disconnect to battery before attempting to remove the Propeller or any other work or service on your unit.**



**Hole Stop**

**Remove the clutch cover wrap and locate the hole stop as shown on left. Insert 1/2" bolt or prop pin into the hole stop. (the pin will push up against the plate post as back up while unscrewing the prop.) \*note: the prop unscrews to the left.**



**Remove prop nut using a 1-1/16" wrench or deep wall socket. Next, install the prop wrench as shown . Replace nut to ensure that the prop wrench will not slip off when removing prop. Turn the wrench counter clockwise until the prop is removed.**

## Removing The Prop Taper Bushing

In most cases when the prop is removed the taper bushing will remain in the prop. To remove the bushing use vise grip pliers or channel locks as shown below to compress the bushing and twist slightly



## Propeller Re-Installation

Using locktite marine grade ant-seize or never seize coat the entire shaft.



**Install the tapered bushing as shown, making sure that it is fully forward and bottoming out at the threads end. Coat the outside diameter of the bushing as in the above step.**



**Install the prop by hand using gloves and tighten thoroughly. It is not necessary to use the wrench for this step. Once the prop is on the shaft, replace the prop nut and tighten by using 1-1/16" wrench.**



## Trouble Shooting Tips

<u>PROBLEM</u>	<u>SOLUTION</u>
TILLER HANDLE TORQUE	<ul style="list-style-type: none"> <li>*Make sure you are trimmed correctly (SEE PAGE 7)</li> <li>*Make sure your weight distribution is correct (Test by running alone while empty)</li> </ul>
UNIT NOT PERFORMING	<ul style="list-style-type: none"> <li>*Check engine rpm's in natural at full throttle. Rpm's need to be at 4200. Adjust governor set screw. Your prop could also be worn. Measure from tip to tip. It should be 12-1/4" od.</li> </ul>
ENGINE WON'T START	<ul style="list-style-type: none"> <li>*Check to ensure that the clutch button is pushed in (disengaged).</li> <li>*Check ground wire attached under the tiller handle (clean and retighten it).</li> <li>*If this does not correct the problem, call your authorized dealer or Pro-Drive Outboards.</li> </ul>
ENGINE LOSING POWER OR STOPPING	<ul style="list-style-type: none"> <li>*Make sure your tank is vented.</li> <li>*Make sure your fuel lines are 1/4".</li> <li>*Make sure your fuel line connections are tight.</li> </ul>

## **IMPORTANT** **WARRANTY INFORMATION**

*\*FOR MORE WARRANTY DETAILS PLEASE REFER TO YOUR LIMITED WARRANTY INFORMATION ON THE LAST PAGE OF YOUR OWNERS MANUAL.*

**Pro-Drive Shallow Water Outboards carry a one year limited warranty, and are covered by Pro-Drive Outboards.**

**The Briggs & Stratton and Kohler engines carry a two year manufacturers warranty and are covered by the engine manufacturer. Pro-Drive can assist you should you have issues having your engine serviced.**

**Pro-Drive Shallow Water Boats carry a one year limited warranty, and are covered by Pro-Drive Outboards.**

**Boat Trailers are covered by a two year limited manufacturers warranty, and are covered by the trailer manufacturer.**

**Pro-Drive Propellers carry a one year warranty against breakage. All propellers are billed upon shipment and credit is issued after inspection of the broken prop. Amount of propeller wear will determine the amount of credit issued.**

**All above warranties do not include shipping and does not cover normal wear and tear of equipment.**



# Limited Warranty

## Introduction:

Pro-Drive is the premiere manufacturer of shallow water outboards. Thank you for your purchase! Pro-Drive Outboards provides to you, at no extra cost, warranty coverage for your new Pro-Drive as part of our commitment to quality and reliability.

*Please take a few minutes to read this Limited Warranty Guide in its entirety.* It contains the information you will need to have your Pro-Drive repaired in the unlikely event that a failure should occur. **PLEASE NOTE: It is the customer's responsibility to familiarize him/herself with the limited warranty guide.** For your records and ease of obtaining warranty work, please record the model, serial number and date of purchase of each item in the space provided. **NOTE: Warranty coverage may be different for attachments purchased at the same time with a motor.**

*Dealer's Name:* \_\_\_\_\_

*Dealer's Phone:* \_\_\_\_\_

*Purchase Date:* \_\_\_\_\_ *Invoice #:* \_\_\_\_\_

*Model:* \_\_\_\_\_

*Serial #:* \_\_\_\_\_

*Attachments:* \_\_\_\_\_

## Warranty Start Date

The warranty coverage begins on the day you purchase your new Pro-Drive.

## Pro-Drive Limited Warranty

Pro-Drive Outboards LLC will, through its authorized dealers, repair or replace any parts which are found to be defective in materials or workmanship. The defect must occur during normal use of the product and within the warranty period. The repair or replacement will be at no charge for either the part or the labor to repair or replace that part.

## Warranty Terms

The terms of this warranty shall be for one year from the warranty start date as specified above.

## Limitations

PRO-DRIVE OUTBOARDS LLC DOES NOT AUTHORIZE ANY PERSON TO CREATE FOR PRO-DRIVE ANY OBLIGATION OR LIABILITY OTHER THAN THAT STATED IN THE LIMITED WARRANTY GUIDE. UNDER NO CIRCUMSTANCES SHALL PRO-DRIVE BE LIABLE TO THE CUSTOMER OR ANY OTHER PERSON FOR ANY CONSEQUENTIAL, INCIDENTAL, ECONOMIC, DIRECT, INDIRECT, GENERAL, OR SPECIAL DAMAGES ARISING OUT OF ANY BREACH OF WARRANTY, EXPRESSED OR IMPLIED.

## Customer Responsibility

It is the customer's responsibility to maintain the equipment in accordance with the instructions provided in the Owner's Manual. Pro-Drive recommends that you keep records and receipts; you may be asked to prove that the maintenance instructions have been followed.

It is your responsibility to operate the equipment in a safe manner, and for the use in which it was designed. If a defect in materials or workmanship occurs, it is your responsibility to cease operating the equipment until repairs are made. **Damage which occurs from continued operation may not be covered by this warranty.** You should contact your authorized Pro-Drive dealer immediately so that repairs can be made in a timely manner.

## What This Warranty Covers

This warranty covers defects in materials or workmanship only.

## What This Warranty Does NOT Cover

- Failures caused by:
  - abusive operation
  - natural calamities
  - unauthorized modifications
  - unauthorized repairs
  - non-Pro-Drive parts
  - neglected maintenance
  - unapproved attachments
  - usage which is contrary to the intended purpose
- Wear or general maintenance items
- Propeller
- Engines (warranted by Engine Manufacturer)
- Pickup or delivery of the equipment
- Rental of replacement equipment during the repair period
- Overtime labor charges

## How To Obtain Warranty Service

To obtain warranty service under the terms and conditions of the Pro-Drive Limited Warranty, you must deliver the product to an authorized Pro-Drive dealer, along with proof of purchase.

**Pro-Drive recommends that you take your equipment to the dealer from whom it was purchased, for the warranty repair.** If that is inconvenient, it may be taken to any authorized Pro-Drive dealer. However, the dealer's own customers may have priority.

## Right To Make Changes

Pro-Drive reserves the right to make any changes to a Pro-Drive product at any time without incurring any obligation with respect to any product previously ordered, sold, or shipped.