



OWNERS MANUAL



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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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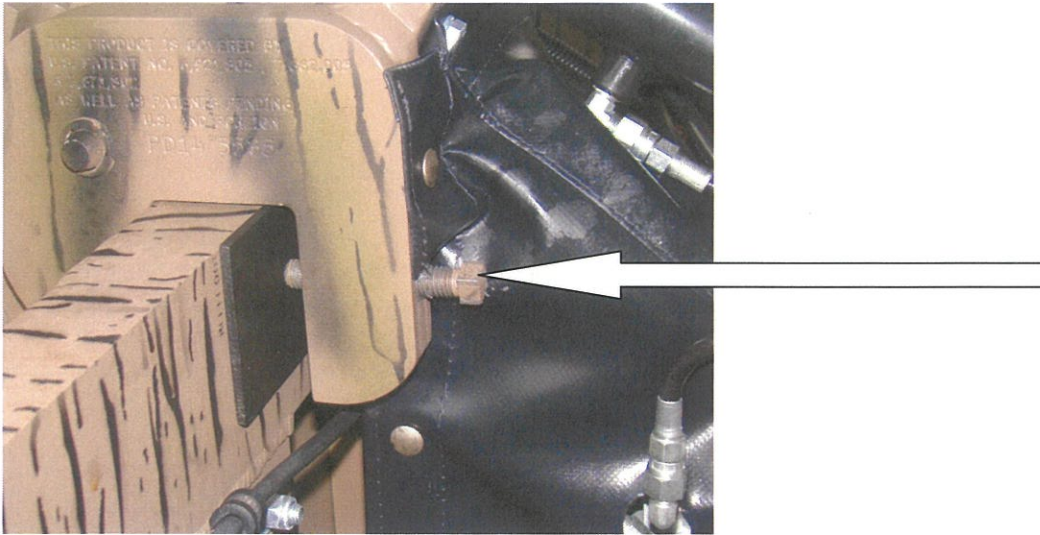
Safety Instructions

IMPORTANT

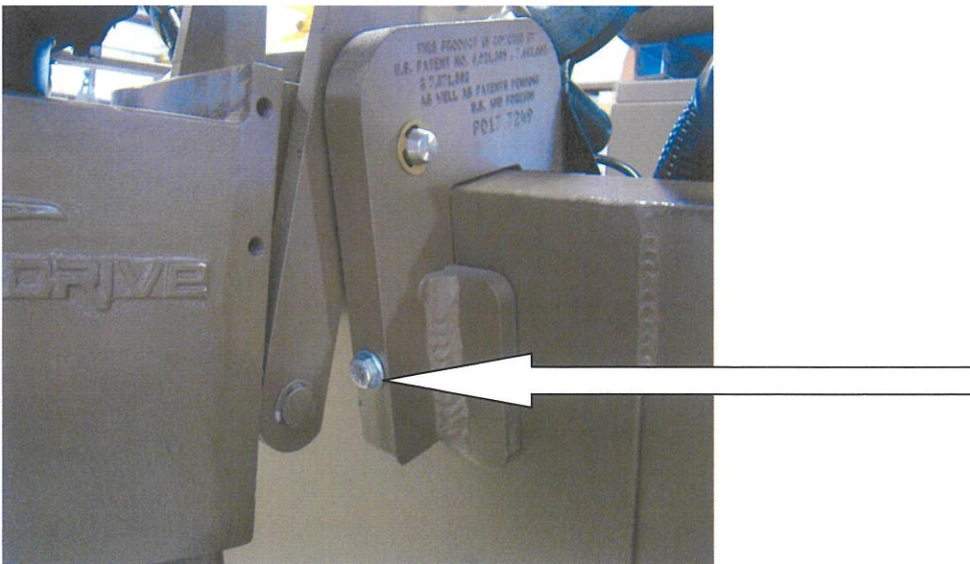
Read and understand these instructions. They are for your safety. Failure to follow these instructions may result in property damage, personal injury, or death.

- 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. Know the boating laws in your state.)*
- 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.
- 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, injury, or death, which occurs from continued operation will not be covered by this warranty and Pro-Drive will NOT be liable.** You should contact your authorized Pro-Drive dealer immediately so that repairs can be made in a timely manner.

Installation Instructions

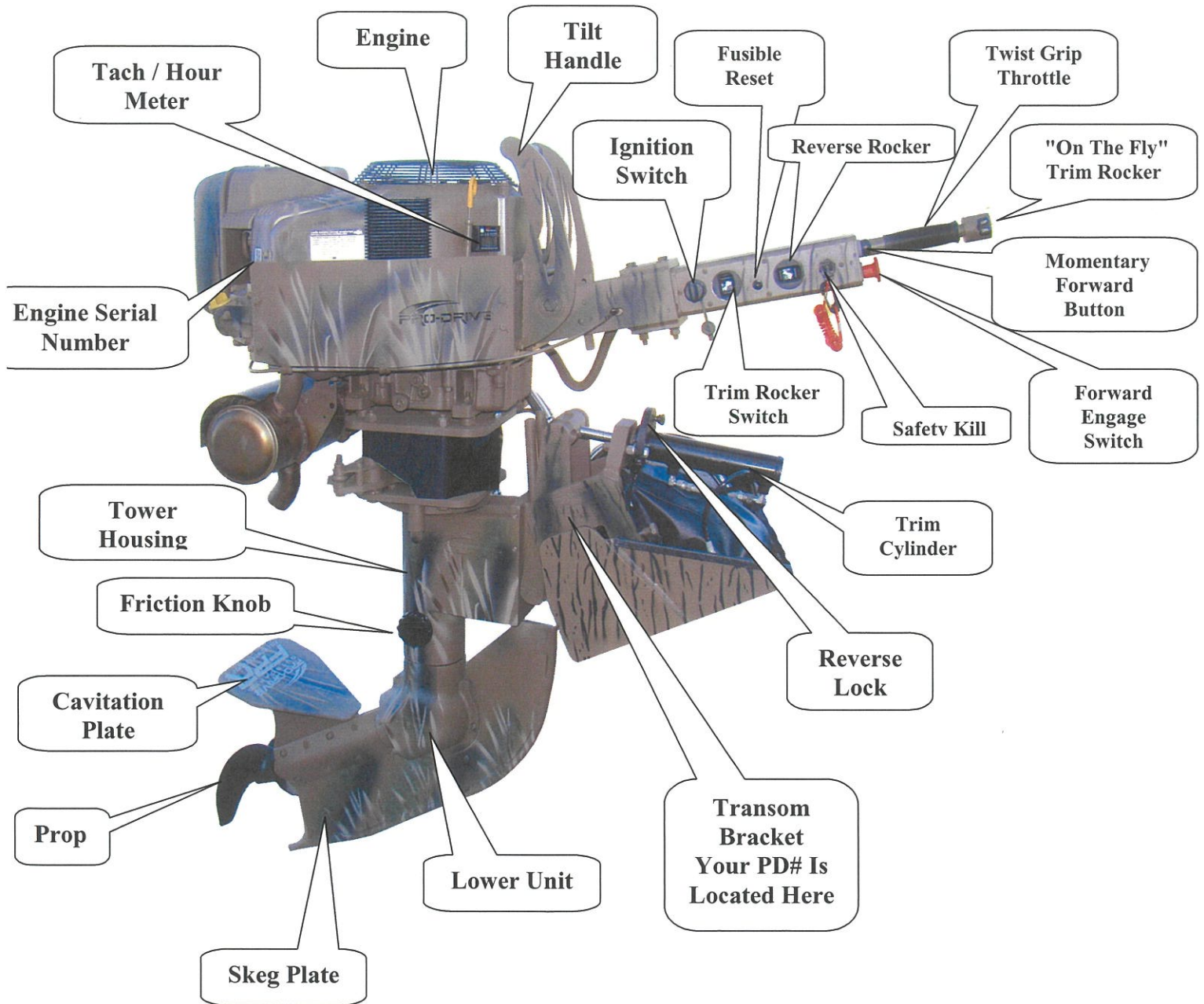


After installing your motor on the boat transom use the aluminum transom saver plate supplied with the unit, torque the bolts to 25 ft. Lbs. of torque.

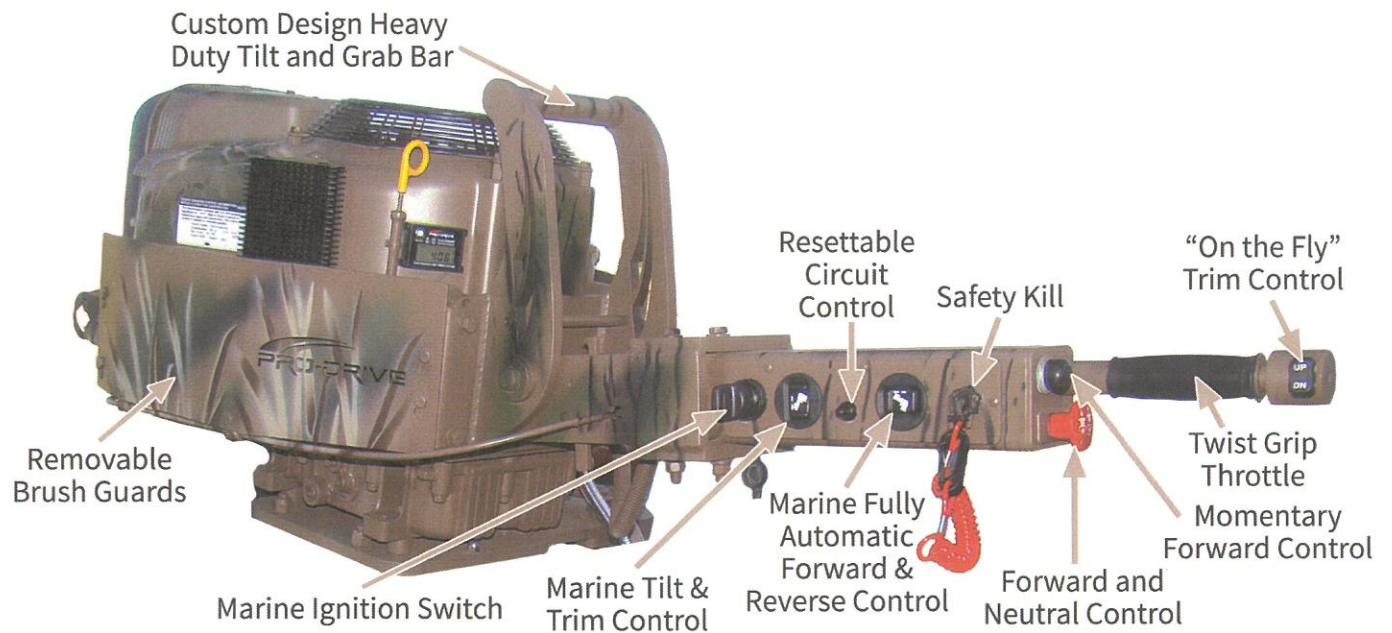


Located on the back of the transom bracket there are three sets of holes on each side. Drill a 3/8" hole through the transom. One on each side in the holes on the bracket. Use the 3/8" bolts and nuts supplied with your unit to secure the bracket in the holes drilled.

Unit Component and Control Feature Identification



Identifying the Controls and Control Box



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 local laws.)
- 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.
- Turn ignition key clockwise to the start position.
- 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)

***Note: Use ¼" fuel line and fittings with hose clamps to connect your engine fuel line to your tank.**

****Note: Due to new EPA Regulations on marine gas tanks, manufacturers are required to design their tank vents to hold approx. 6 lbs of pressure before venting. This poses a problem as most carburetor valves only hold 3 lbs. We recommend you install quick disconnects at the tank and remove when traveling or not in use.**

Operation Instructions

Regular Operation

- Make sure engine ignition is off.
- Check engine oil.
- Attach safety kill switch. (If electing to do so. Check local laws.)
- Make sure clutch button is pushed in ensuring it is in neutral. *(Note: Engine will not start while the clutch button is pulled out.)*
- Set trim allowing the engine to be slightly above level with the boat.
- Pull out the red or yellow 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 to the 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 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 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 until the engine is running normally again.

This picture shows the release lever lock 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

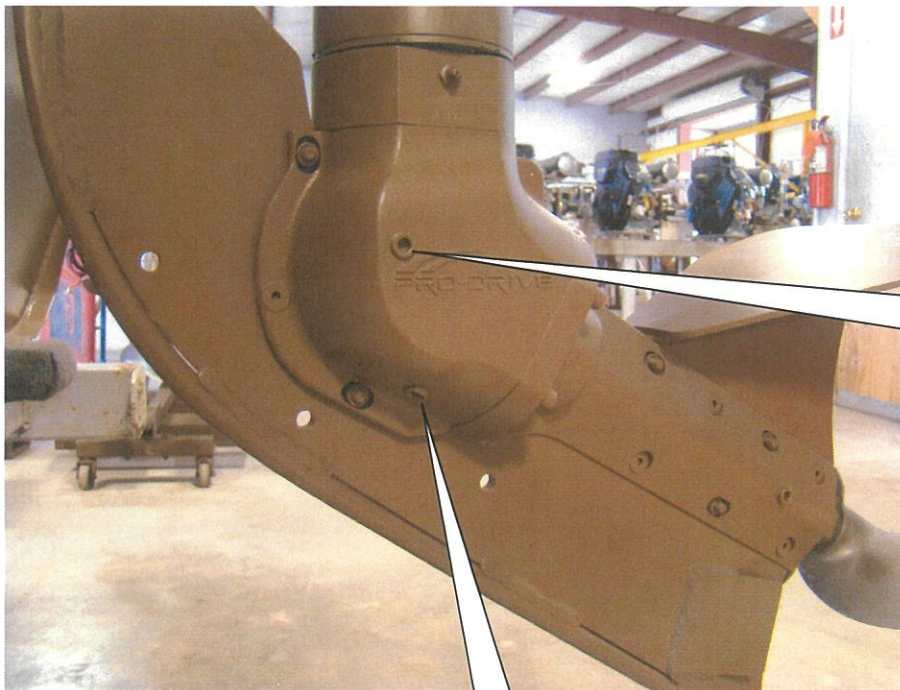
While in reverse in deep water, (anything over 10 inches), reverse gear should only be used at idle speeds. Full throttle in deep water conditions could cause your boat to become swamped.

Unit Maintenance

- Lower unit oil should be checked every 20 hours . Use only SAE 80W-90 or 75W-90 gear lubricant API service GL-5 (A synthetic gear oil or any high grade outboard lower unit oil may be used.)
- Lower unit oil should be replaced once a year or every 100 hours or if oil becomes dark or milky.

Diagram A – Checking the Oil (Every 20 Hours)

With motor level 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.



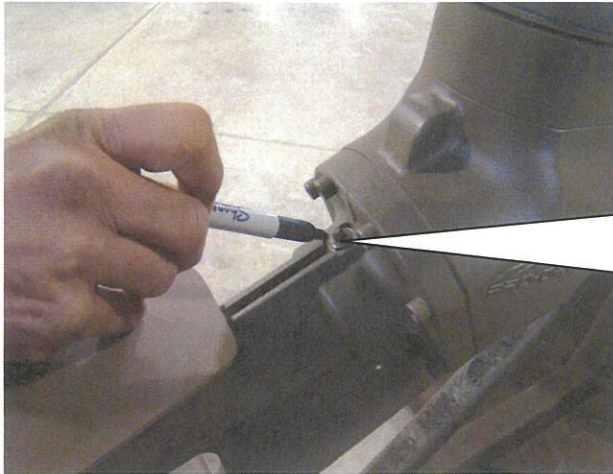
**Oil Level and
add Oil
Plug**

**Oil
Drain
Plug**

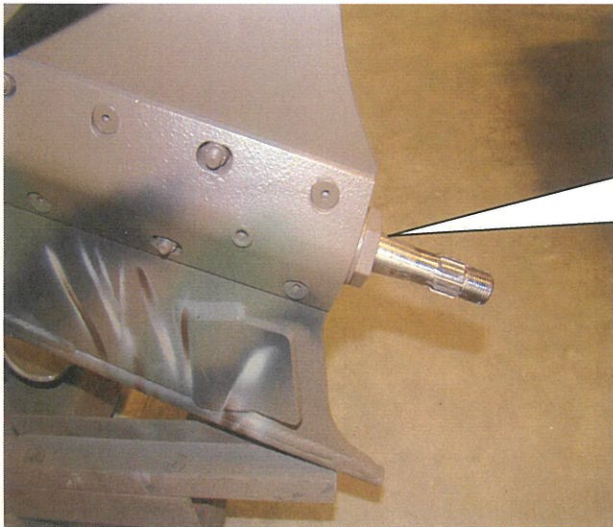
PRO-DRIVE LOWER UNITS RECEIVED A MODIFICATION UPGRADE TO IT'S LUBRICATION SYSTEM. THE GEAR SYSTEM IS STILL FILLED WITH OIL, HOWEVER THE PROP SHAFT NEEDLE BEARING AND SEAL CHAMBER IS NOW FILLED WITH GREASE.

*** AN EP (EXTREME PRESSURE) GREASE IS RECOMMENDED. (WE USE CHEVON BLACK PEARL GREASE EP NLGI 2. LUCAS RED N TACKY IS ALSO ANOTHER EP GREASE)**

SEE THE ILLUSTRATION BELOW FOR DIRECTIONS.

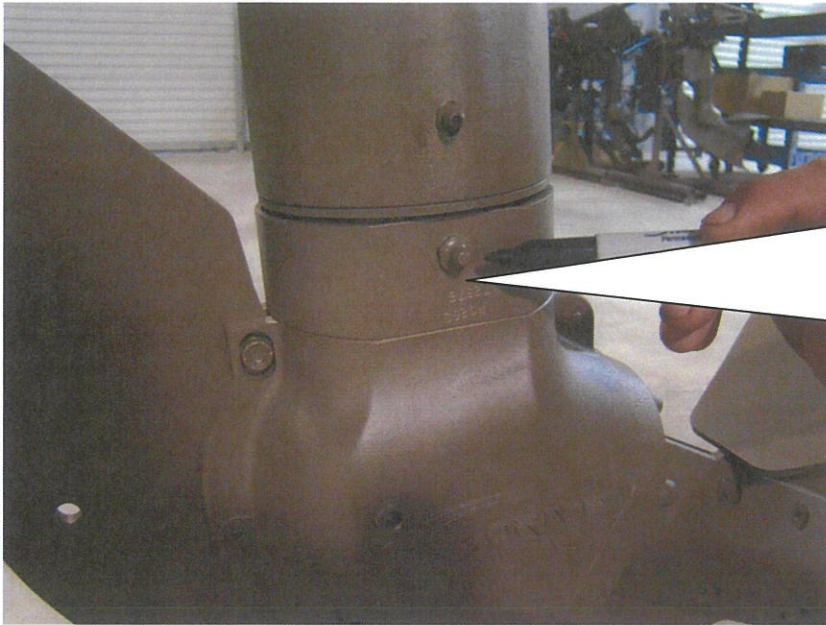


REMOVE ANY GRASS OR FOREIGN DEBRIS FROM THE PROP SHAFT BETWEEN THE PROP AND LOWER UNIT HOUSING. PUMP GREASE INTO THIS GREASE FITTING EVERY 15 to 20 HOURS



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.



YOUR LOWER UNIT TOP BEARING IS LUBED BY GREASE AND NEEDS TO BE GREASED AT 15 TO 20 HOURS. THE GREASE FITTING IS LOCATED HERE. NOTE: 10 OR 12 PUMPS ARE NEEDED AND YOU WILL NOT SEE RETURNS.

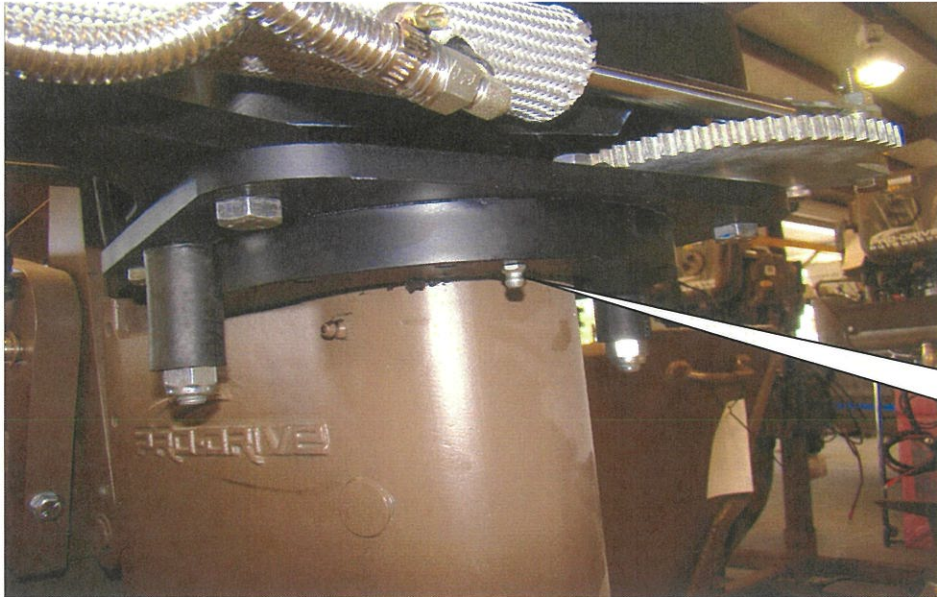
The diagram below shows the tower housing sleeve grease fittings. Pump two to three shots of grease here at 15 to 20 hours.



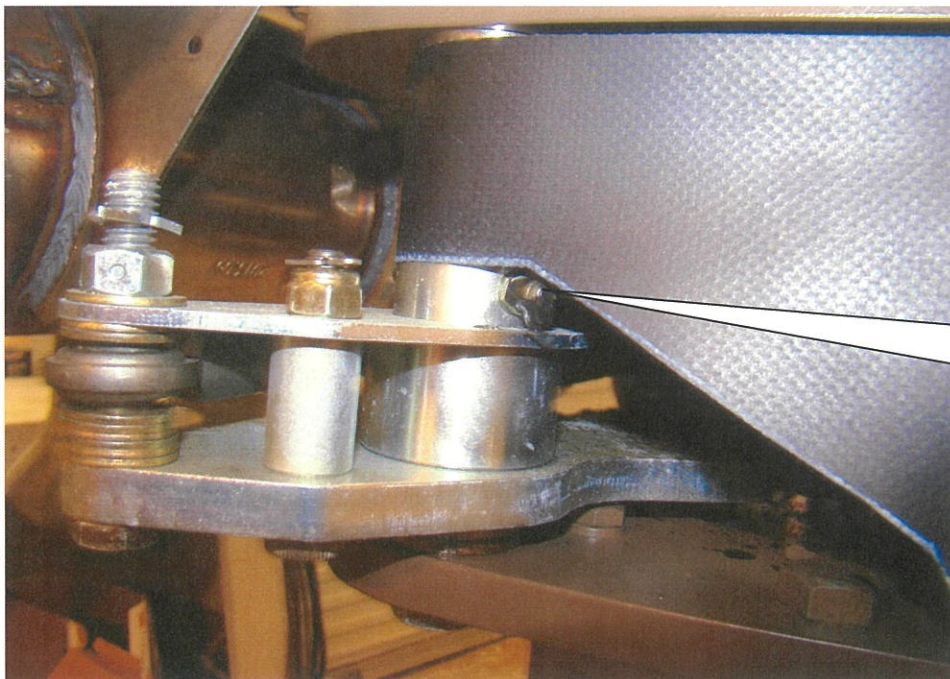
GREASE PORT

GREASE PORT

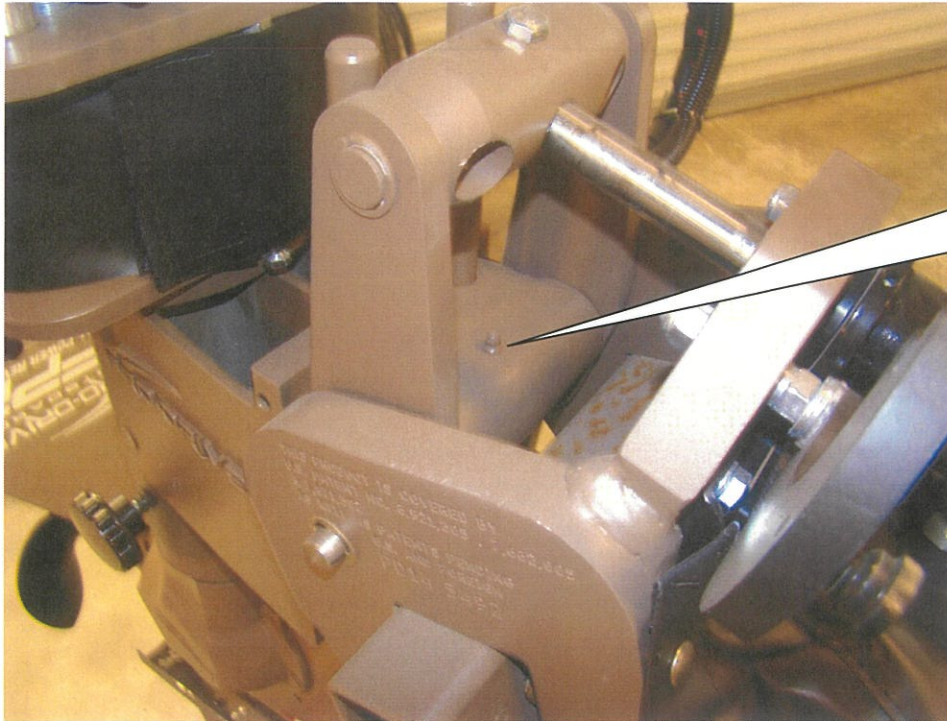
The diagram below shows the grease ports of the reverse assembly. These need to be greased every 15 to 20 hours. Pump two shots of grease into each. Reverse should be rotated and two shots of grease applied to grease port 1 and 2 every click of the reverse until the unit has been rotated a complete 360 degrees. Note: Failure to lube reverse disc will cause drying and make the reverse operation difficult sometimes not allowing rotation.



Reverse Grease Port (15 to 20 Hours)



Addition grease fitting for auto reverse. (15 to 20 Hours)



**Grease Tower
Housing Pivot
Pin (15 to 20
Hours)**

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

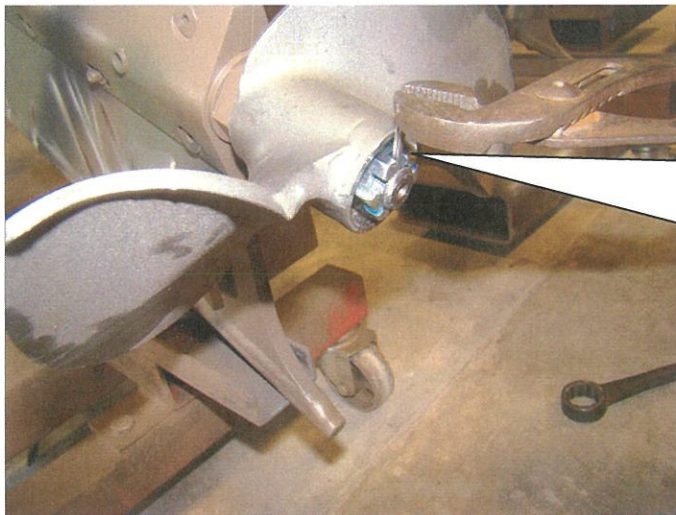
- Check all choke cables, steering cables, and throttle cables and lube after each trip.

***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.**

Propeller Removal and Installation

***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.

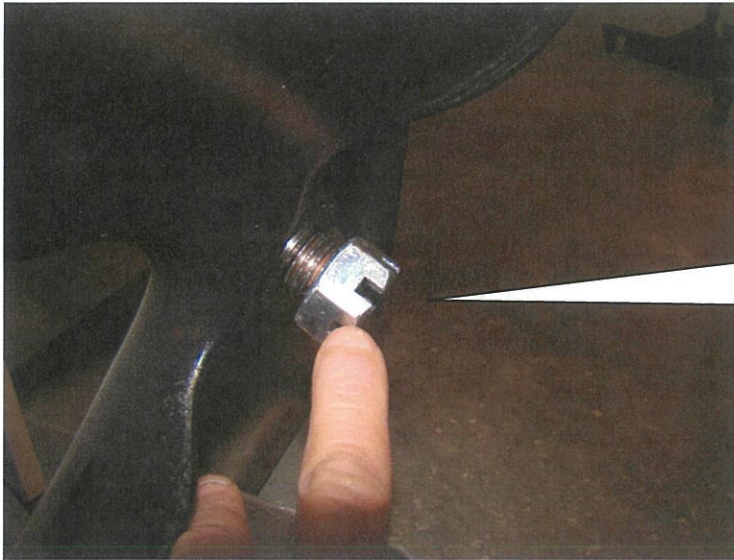


Remove the cotter pin from the prop shaft.

Using a 1-1/8" wrench and a light hammer blow unscrew the nut counter clockwise. Prop can now be slid off spline.



To install prop first apply Never Seez generously to the prop shaft.



To install the prop first coat the spline and thread with anti seize or equivalent and secure nut.



Using your 1-1/8" wrench tighten the prop. Next lightly tap the wrench to further tighten the nut to align the prop shaft hole with one of the slots in the nut. Install cotter pin.

Trouble Shooting Tips

<u>PROBLEM</u>	<u>SOLUTION</u>
TILLER HANDLE TORQUE	<ul style="list-style-type: none"> *Make sure you are trimmed correctly (SEE PAGE 7) *Make sure your weight distribution is correct (Test by running alone while empty)
UNIT NOT PERFORMING	<ul style="list-style-type: none"> *Check engine rpm's in netural at full throttle. Rpm's need to be at 4700 to 4750. Your prop could also be worn. Measure from tip to tip. It should be 12-1/4" od.
ENGINE WON'T START	<ul style="list-style-type: none"> *Check to ensure that the clutch button is pushed in (disengaged). *Check ground wire attached under the tiller handle (clean and retighten it). *If this does not correct the problem, call your authorized dealer or Pro-Drive Outboards.
ENGINE LOSING POWER OR STOPPING	<ul style="list-style-type: none"> *Make sure your tank is vented. *Make sure your fuel lines are 1/4". *Make sure your fuel line connections are tight.