

PRO-DRIVE

SHALLOW WATER OUTBOARDS

OWNERS MANUAL



www.prodriveoutboards.com

2006

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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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IMPORTANT

**READ INSTALLATION INSTRUCTIONS ON PAGE 4 BEFORE
INSTALLING YOUR PRO-DRIVE. FAILURE TO FOLLOW
THIS PROCEDURE COULD VOID YOUR WARRANTY**

SAFETY INSTRUCTIONS

IMPORTANT

READ AND UNDERSTAND THESE INSTRUCTIONS BECAUSE THEY DEAL WITH 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 ONLY AT IDLE.**
- **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 FLOATION DEVICE WHILE ON THE WATER.**
- **NEVER USE THIS UNIT WHEN UNDER THE INFLUENCE OF ALCOHOL OR ANY OTHER DRUG.**

INSTALLATION INSTRUCTIONS

**FAILURE TO FOLLOW THESE INSTRUCTIONS
MAY CAUSE TRANSOM BRACKET FAILURE NOT
WARRANTED BY PRO-DRIVE.**



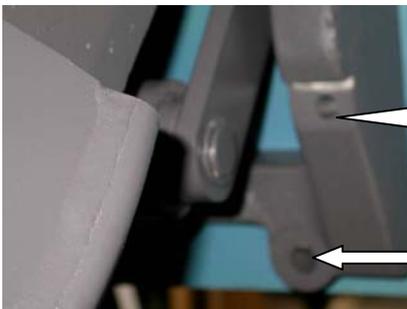
AFTER INSTALLING YOUR MOTOR ON THE BOAT TRANSOM USING THE ALUMINUM SAVER PLATE SUPPLIED WITH THE UNIT, TORQUE THE TRANSOM BOLTS TO 15 FT. LBS. OF TORQUE.

YOUR UNIT COMES WITH ALL THREAD BOLTS COMPLETE WITH SELF LOCKING NUTS AND WASHERS. DRILL THROUGH TRANSOM AND INSTALL THESE. 15 FT. LBS OF TORQUE IS REQUIRED FOR THESE ALSO. IF A TORQUE WRENCH IS NOT AVAILABLE USE A 6" ADJUSTABLE WRENCH. USE A 7/16" DRILL BIT.

DO NOT OVER TORQUE BOLTS



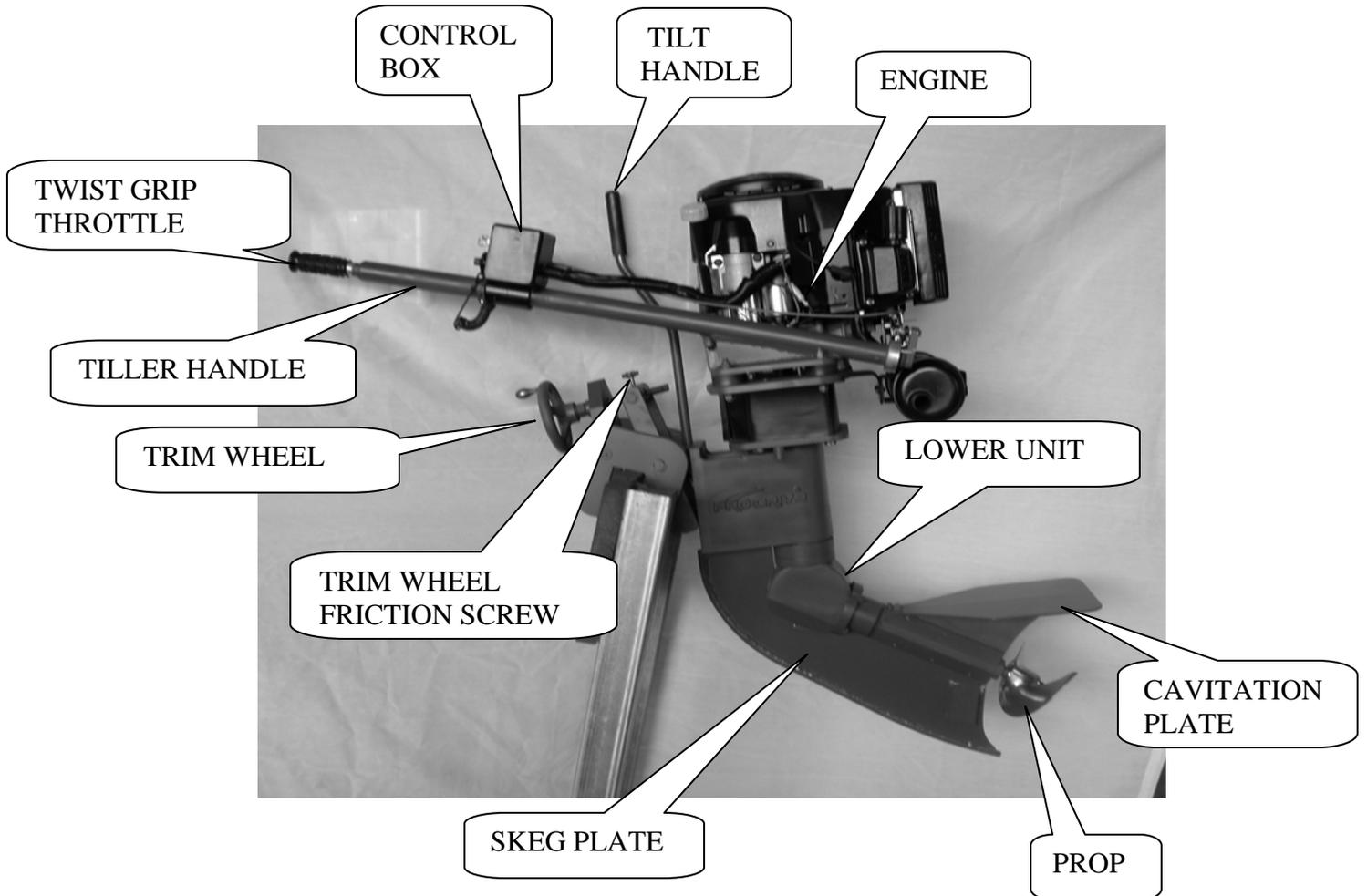
THIS PICTURE OF A UNIT CRATED FOR SHIPMENT SHOWS THE ALL THREAD INSTALLED THROUGH THE TRANSOM SAVER PLATE.



THE TOP HOLE LOCATED HERE IS A REAR VIEW OF WHERE THE ALL THREAD IS TO BE INSTALLED. THERE ARE TWO ON EACH SIDE

THE BOTTOM TRANSOM HOLES (THERE ARE ALSO TWO) ARE LOCATED HERE. USING A 7/16" BIT DRILL THROUGH TRANSOM AND INSTALL 3/8" BOLTS WITH FLAT WASHERS. USE SILICONE WHEN INSTALLING THESE

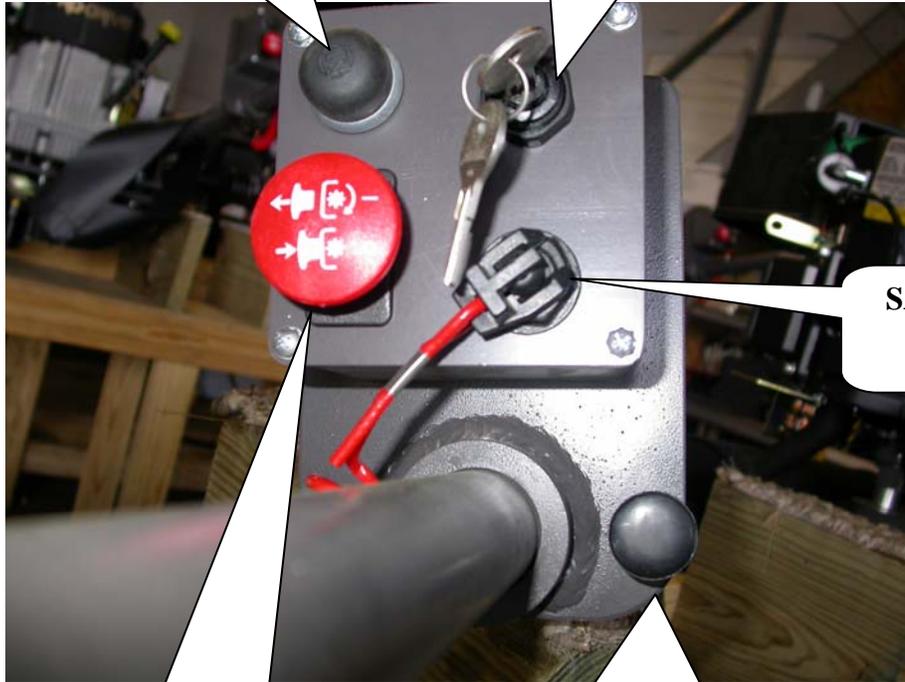
UNIT COMPONENT AND CONTROL FEATURE IDENTIFICATION



IDENTIFYING THE CONTROLS AND CONTROL BOX

MOMENTARY RELEASE 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**

- **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 POSITON.**
- **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 RASING 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 HANDWHEEL UNTIL THE ENGINE IS RUNNING NORMALLY AGAIN

LOWER 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
- LOWER UNIT OIL SHOULD BE REPLACED ONCE A YEAR OR EVERY 100 HOURS. (SEE DIAGRAM #B)

DIAGRAM A – CHECKING THE OIL (*Every 25 Hours or once a month*)

STEP #1
REMOVE THE TOP OUTER PLUG
WITH 3/8" ALLEN WRENCH

STEP #2
REMOVE INNER PLUG WITH 1/4" ALLEN
WRENCH. FILL WITH SQUIRK OIL CAN
UNTIL OVERFLOW.

STEP #3
REPLACE INNER PLUG WITH TEFLON TAPE AND REPLACE OUTER PLUG.



DIAGRAM B – REPLACING OIL (*Once a Year or every 200 hours*)

STEP #1 REMOVE BOTTOM PLUG USING A 3/16" 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 USING THE FILLER HOSE SUPPLIED IN YOUR OWNERS PACKET. CONTINUE FILLING UNTIL OIL IS FLOWING OUT OF THE TOP PLUG. (DO NOT OVER FILL. OVER FILLING CAN CAUSE SEAL FAILURE)

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



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.



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.

**HOLE
STOP**



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 SECURE THE PROP IN A VISE AS SHOWN BELOW. USING A PUNCH OR CHISEL TAP DOWN ON THE BUSHING ABOUT A ¼" WAY FROM THE SPLIT. AFTER A COUPLE OF HITS YOU SHOULD BE ABLE TO REMOVE BY HAND.

UNDER EXTREME CONDITIONS HEAT UP THE TAPER BUSHING AND IMMEDIATELY SUBMERGE ENTIRE PROP IN COLD WATER. AS SOON AS REMOVED FROM WATER TAP PROP DOWN ON METAL TABLE OR OTHER HARD SURFACE . DO THIS AT AN ANGLE TO ALLOW THE TAPER BUSHING TO POP OUT.



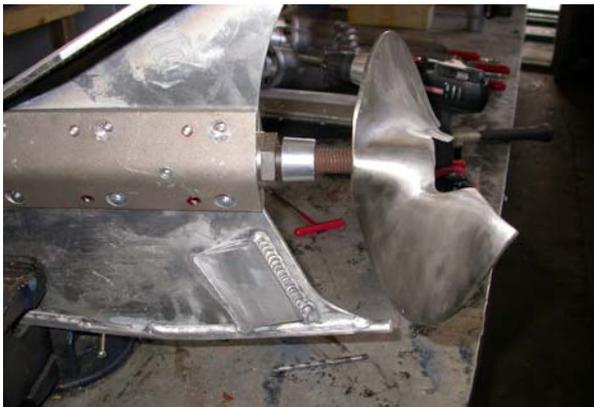
PROPELLER RE-INSTALLATION



USING LOCKTITE MARINE GRADE ANT-SEIZE OR NEVER SEIZE COAT THE ENTIRE SHAFT.

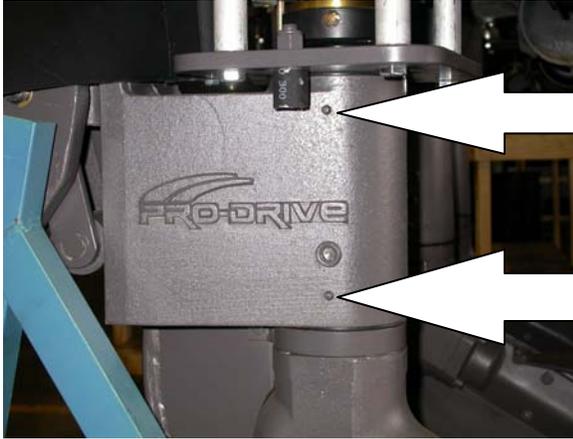


INSTALL THE TAPERED BUSHING AS SHOWN, MAKING SURE THAT IT IS FULLY FORWARD AND BOTTOMING OUT AT THE THREADS END. COAT THE OUTSIDE DIAMETER OF THE BUSHING AS IN THE ABOVE STEP.

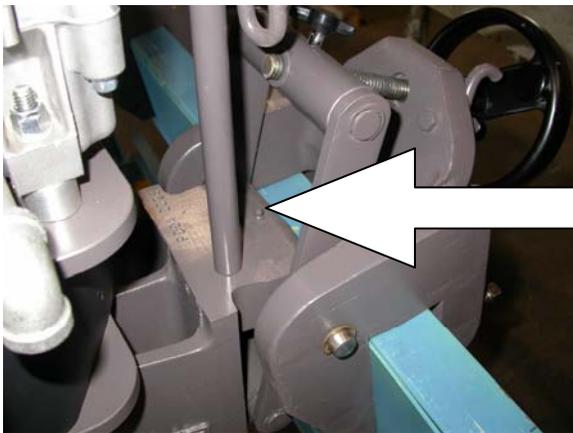


INSTALL THE PROP BY HAND USING GLOVES AND TIGHTEN THOROUGHLY. IT IS NOT NECESSARY TO USE THE WRENCH FOR THIS STEP. ONCE THE PROP IS ON THE SHAFT, REPLACE THE PROP NUT AND TIGHTEN BY USING 1-1/16" WRENCH.

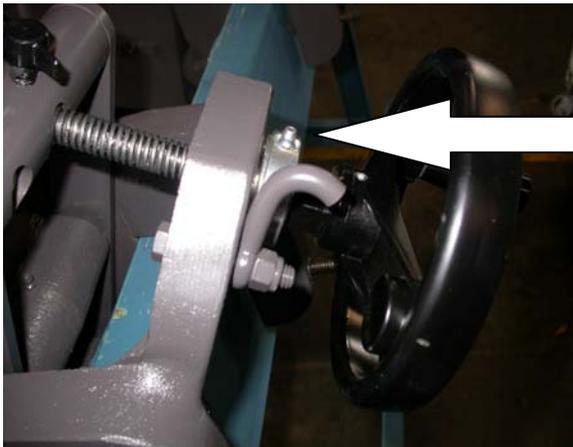
REGULAR MAINTANCE



GREASE TOWER HOUSING AREAS EVERY 50 HOURS OR ONCE A SEASON.



GREASE TOWER HOUSING PIVOT PIN EVERY 50 HOURS OR ONCE A SEASON (LOCATED BEHIND THE TRIM WHEEL)



GREASE THRUST BEARING ON TRIM WHEEL ONCE A YEAR.

SALT WATER APPLICATIONS

- **AFTER RETURNING FROM TRIP WASH COMPLETE UNIT WITH FRESH WATER AND ALLOW TO DRY. RUN ENGINE.**
- **AFTER ENGINE COOLS. SPRAY ENGINE WITH CORROSION “X” OR EQUIVALENT.**

REMOTE STEERING RIGS

- **CHECK ALL CHOKE CABLES, STEERING CABLES, AND THROTTLE CABLES AND LUBE AFTER EACH TRIP.**

TROUBLE SHOOTING TIPS

<u>PROBLEM</u>	<u>SOLUTION</u>
TILLER HANDLE TORQUE	*Make sure you are trimmed correctly (SEE PAGE 7) *Make sure your weight distribution is correct (Test by running alone while empty) *Using an adjustable wrench grab the skeg rod on the end below the torque tab and bent slightly toward the torque tab side. Run and adjust as necessary.
ENGINE BACKFIRES WHEN STOPPING	Before turning off engine, apply 1/4" throttle and kill engine.
ENGINE WON'T START	*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	*Make sure your tank is vented. *Make sure your fuel lines are 1/4". *Make sure your fuel line connections are tight.

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
- Kohler engines (warranted by Kohler)
- 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.