



!IMPORTANT!

To avoid accidental engine starting while servicing propeller, it is recommended to set the gear selector to neutral and to disconnect all spark plug wires before any propeller service procedure. Refer to Engine Owner's Manual for important safety precautions when installing propeller.

1. Remove old propeller and hardware. Use block of wood between gearcase and propeller to hold propeller during propeller nut removal, if necessary. The propeller shaft taper (A) must be visible. If the propeller shaft taper is not visible, the forward thrust washer may still be in place. If the forward thrust washer is difficult to remove, lightly tap with dead blow hammer or rubber mallet to loosen. Rock forward thrust washer back and forth to remove. Clean propeller shaft with shop rag and inspect propeller shaft seal for cracks or leaks. Consult owner's manual if service is required.
2. Apply marine grease to propeller shaft to aid future removal of propeller and hardware.
3. Install supplied forward thrust washer (B). The taper of the thrust washer must nest with the taper on the propeller shaft and should slide into place with little effort. *The thrust washer part number should be clearly visible at this point when thrust washer is correctly installed.* NEVER INSTALL A PROPELLER WITHOUT A FORWARD THRUST WASHER. SEVERE DAMAGE CAN OCCUR TO ENGINE GEARCASE AND/OR PROPELLER.
4. Insert cushion hub (C) into propeller bushing cavity. Cushion hub is tapered and will only fit one way. The cushion hub should drop into propeller bushing cavity leaving no more than approximately 0.375" (3/8 inch) exposed and, in some cases, will drop into bushing cavity completely. Press firmly or gently tap as required with dead blow hammer or rubber mallet until forward end of cushion hub is slightly below forward end of bushing cavity. This will help to guide the forward thrust washer into location during final assembly.
5. Install aft drive adapter (D) through small hole in aft end of propeller and align with slots in cushion hub. Firmly press drive adapter into cushion hub.
6. Slide propeller, cushion hub, and drive adapter assembly onto propeller shaft while simultaneously rotating assembly until the drive adapter splines mesh with the propeller shaft spline. Slide assembly forward until it contacts forward thrust washer.
7. Install washer and propeller nut as indicated above. Use block of wood between gearcase and propeller and torque propeller nut (consult engine owner's manual for proper torque specification). Secure nut by bending locking tabs into drive adapter slots or installing cotter pin.
8. Inspect installation. Propeller must spin freely and not rub gearcase. Propeller should be securely held between forward thrust washer (B) and aft drive adapter (D) when properly installed.
9. Reconnect spark plug wires.
10. Check propeller for tightness every 20 hours of operation.

Limited Warranty

Michigan Wheel warrants to the original consumer purchaser and original motor fitted, that for a period of one year from the date of purchase, the body of the Michigan Match®, Vortex®, Apollo® or Ballistic® propeller will be free of any defect in material or workmanship that results in blade or hub fracture or failure under normal pleasure boat usage. Michigan Wheel also warrants to the original consumer purchaser, under the same parameters of use described above, that the propeller bushing, including XHS®/XHS II® hub kit components, will be free from any defect in material or workmanship for a period of one year from the date of purchase. Proof of purchase required for all warranty claims.

Some surface discoloration of propellers and hardware is unavoidable, and will not be covered by this warranty. This warranty also does not cover normal wear, accidental damage, modification, improper installation, improper maintenance, or other circumstances that are not the direct result of a defect in the material or workmanship of the propeller.

The sole obligation of Michigan Wheel under this warranty is to repair or replace the propeller, in the sole discretion of Michigan Wheel, and at its expense. In order to make a replacement claim, please contact the Michigan Wheel Customer Service Department, at (616) 452-6941, for a "Return Materials Authorization" number (RMA#), and shipping instructions. The RMA# is to be indicated along with our given address on the label, and the shipping carton should include your return shipping address, your phone number, and a copy of your original purchase receipt. The warranty will not cover any expense of propeller removal, shipping, or reinstallation of the propeller.

The above warranty is Michigan Wheel's sole warranty for the Michigan Match®, Vortex®, Apollo® or Ballistic® propellers as well as XHS®/XHS II® hub kits. Michigan Wheel expressly disclaims all other warranties, expressed or implied, including, without limitation, the warranties of merchantability and fitness for a particular purpose and excludes all liability for incidental or consequential damages, loss of use of the propeller, costs, and expenses.

Any actions arising out of this warranty and the sale of this product shall be governed by Michigan law and may only be brought, heard and decided in Kent County Circuit Court, in the State of Michigan, U.S.A., or in the United States District Court for the Western District of Michigan.

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