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CIRCULATE TO:  
SERVICE MANAGER   
PARTS MANAGER   
MECHANICS   
"Place In a Service  
Bulletin Binder"

## A. QUICKSILVER CHOPPER PROPELLER LIMITATIONS

Presently some boat builders and MerCruiser dealers are installing chopper propellers on stern drive powered boats, because of their availability in right and left hand versions and higher pitches. They provide excellent performance, but in most cases the applied engine horsepower exceeds the propeller drive hub slip torque capacity as well as exceeding the limits on the propeller blade strength. Chopper propellers should not be installed on stern drive installations exceeding 300 horsepower.

Failure to follow this recommendation may cause premature propeller drive hub failure and/or propeller blade breakage.

## B. QUICKSILVER LASER PROPELLER USAGE

The Laser propellers were designed for boats with higher "x dimensions" than standard stern drive installations which causes the propeller to run somewhat surfaced. Presently some Laser propellers are being installed on boats with standard stern drive heights and primarily used for water skiing. Because of the Laser propeller design, acceleration may be unsatisfactory on these applications. If in doubt whether the Laser propeller is right for the application, it is recommended that boat and propeller should be tested under actual conditions.

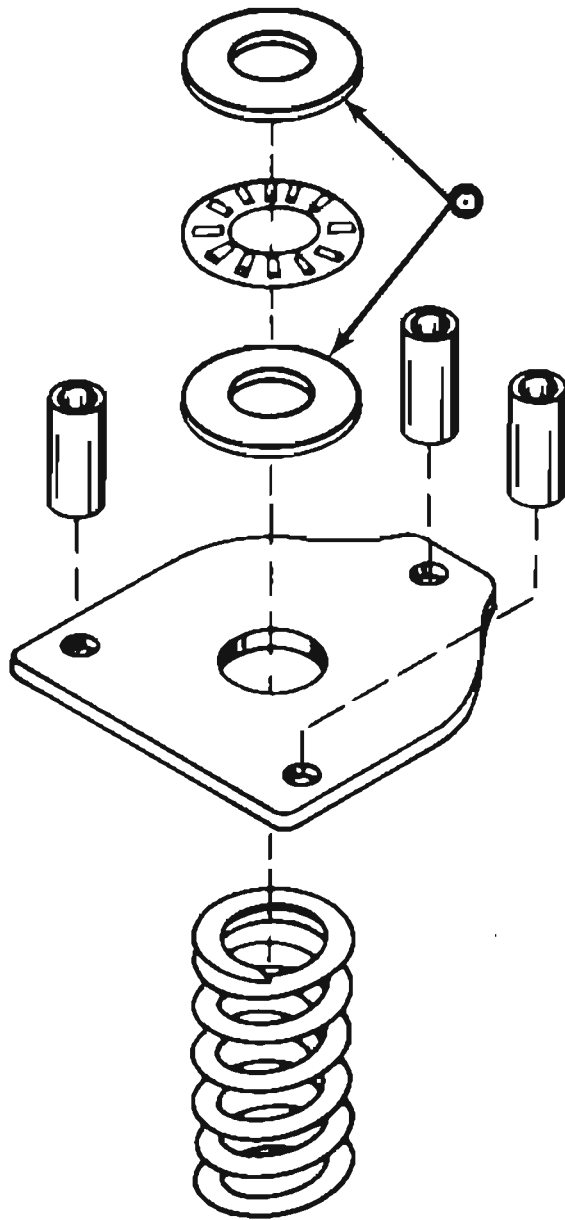
**IMPORTANT: Propeller nuts must be torqued to 55 lbs. ft. (75 N.m). Failure to do so will cause premature thrust hub wear and/or breakage. Retorque nut after first use.**

## C. MODIFICATION TO BEARING PRELOAD TOOL USED TO SERVICE THE MERCUISER MR GEAR HOUSINGS

The service department has received some complaints that the locking collar and plate contained in the (91-44307A1) bearing preload tool are galling on the surfaces where the thrust bearing contacts them. If the surfaces become galled, the gear backlash reading could be inaccurate.

To eliminate galling, order P/N 12-13382A1. It contains two thrust washers which should be installed as shown in Figure 1.

All new orders for P/N 91-44307A1 will be shipped with the thrust washers in the bearing preload tool kit.



a - Thrust Washers P/N 12-13382A1  
**Figure 1.**