# SERVICE MER RUISER BULLETIN STERN DRIVES and ENGINES STERN DRIVES and ENGINES

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CIRCULATE TO:

SERVICE MGR.

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**MECHANICS** 

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# A. II-TR TRANSMISSION TESTING and MOUNT BOLT TORQUE

(Attach Bulletin Reference Sticker to P. 6E-1 of Your Service Manual.)

1. To check II-TR transmission oil pressure, install elbow C-22-54035 in control valve housing, as shown in Figure 1. Coat threads with Loctite Hydraulic Sealant (C-92-69917-1). Tighten elbow to face-up position.

Install any pressure gauge that is adaptable. Oil pressure at 750 RPM should be 80 to 105 psi (5.62 to 7.38kg/cm<sup>2</sup>) and should not vary more than 5 psi (.35kg/cm<sup>2</sup>) between forward, neutral and reverse after pressure is stabilized in each gear (until needle on gauge is steady). After test is completed, install plug (which was removed from control valve housing) into elbow. Coat threads with Loctite Hydraulic Sealant to prevent leaks.

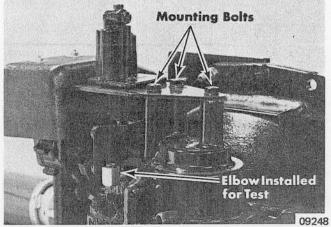


Figure 1. Elbow Installed in Control Valve Housing

2. Mounting bolts, shown in Figure 1, must be torqued to 125-135 in. lbs. (144-156kg-cm). If shift bracket bolts become loose, shifting will be affected and possible transmission failure may occur.

#### B. DRIVE UNIT and DRIVE SHAFT HOUSING ASSEMBLY GEAR RATIO IDENTIFICATION

(Attach Bulletin Reference Sticker to PP 8-26 and 8-27 of Your Service Manual.)

To determine the gear ratio of a drive unit or drive shaft housing assembly when no decals are present, inspect the universal joint shaft at end of the splined area for identification stamping, as shown in chart, following.

M/C 120-140	Stamped "B"	20 to 24 Teeth Ratio
M/C 165	Stamped "C"	24 to 24 Teeth Ratio
M/C 888	Stamped "188"	20 to 22 Teeth Ratio
M/C 233	Stamped "188" "3"	20 to 16 Teeth Ratio

### C. MCM 233 HIGH TENSION (H.T.) LEAD

(Attach Bulletin Reference Sticker to P. 3B-11 of Your Service Manual.)

A few MCM 233 engines were built with the wrong distributor to coil high tension lead (lead too short to allow wire to seat properly in coil tower). The following MCM 233 Stern Drive Engines require a new high tension lead (B-84-65796):

Engine Serial No. 4466370 thru 4466389 4474706 thru 4475143

## D. NEW OIL RECOMMENDATIONS for POWER TRIM SYSTEMS

(Attach Bulletin Reference Sticker to P. 7A-9 of Your Service Manual.)

Oil recommendations in Power Trim Systems have been revised with SAE 5W-30 replacing SAE 20W oil to improve Power Trim performance in cold weather operation. SAE 5W-30 will be used in all future production and is compatible with SAE 20W and SAE 20.

When adding oil for cold weather operation, a complete refill of the system with SAE 5W-30 should be made.

Many customers have questioned our recommendation of "SE" grade crankcase oil for use in Power Trim hydraulic systems because the oil used as factory fill may be different in color from the customer's crankcase oil. There is no relation between the color of an oil and its performance.

Some oil companies use dyes or colored additives to give a uniform dark color to the oil. Others do not, and their products may vary in color from honey yellow to dark green or brown. "SE" quality grade is based on performance of the oil in engines and other equipment under operating conditions. All oils of this category also are compatible.

Mercury Marine's recommendation of 5W-30 oil in Power Trim systems is based on experience in cold weather operation. SAE 20 or 20W oils may continue to be used where cold weather is not a problem. Transmission fluids (normally dyed red) should not be used.

# E. V-BELT TENSION REQUIREMENTS - 1976 MODEL MERCRUISER ENGINES

(Attach Bulletin Reference Sticker to PP 3C-6, 7B-10 and 7D-10 of Your Service Manual.)

Model 1976 MerCruiser engines have stamped steel pulleys for both the Sea Pump (B-73798) and the Power Steering Pump (B-73873). Because of the stamped steel pulley configuration, it is imperative that the V-belt tension must be adjusted to 75-95 ft. lbs. (10.37-13.14mkg).