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CIRCULATE TO:
 SERVICE MANAGER
 PARTS MANAGER
 MECHANICS

A. HEAT EXCHANGER END CAP SCREW TORQUE

When reinstalling the end cap(s) on heat exchangers, after cleaning, re-torque the end cap screw as follows:

3" (76.2 mm) diameter exchanger tank: 24-60 lb. in. (2.7-6.7 N.m.)

4" (101.6 mm) and 5" (127.0 mm) diameter exchanger tank: 36-72 lb. in. (4.1 - 8.1 N.m.)

B. ENGINE RECIRCULATING WATER PUMP IMPELLER TORQUE - MCM 470/485 and MIE 470

If the engine water pump impeller is held onto the camshaft with a 1/2"-20 nut, the torque for that nut is 40 lbs. ft. (54.2 N.m.) If the impeller is held onto the camshaft with a 5/16 x 18 cap screw, the torque is 15 lbs. ft. (20.3 N.m.)

C. INTERNAL ENGINE SPECIFICATIONS - MCM 485

All MCM 485 internal engine specifications are the same as MCM 470 specifications with these exceptions:

Camshaft:	lobe lift (Max.)	intake .287 (7.289 mm) Max.
		exhaust .310 (7.874 mm) Max.
Valve System:	face angle	intake 29.5°
		exhaust 44.5° (same as 470)
	seat angle	intake 30°
		exhaust 45° (same as 470)
	Valve Diameter	intake 2.24 (56.896 mm)
		exhaust 1.71 (43.434 mm)

The rocker arms, valve springs, retainer and baffle of a MCM 485 are different than a MCM 470. The valve springs on the MCM 485 are identical on both intake and exhaust valves.

D. MERCURISER II-TR TRANSMISSION INPUT SHAFT (B-77448A1)

When installing input shaft B-77448A1 in transmissions equipped with output shaft B-62754, the output shaft MUST also be replaced with output shaft B-67993A2. Input shaft B-77448A1 CANNOT be installed with output shaft B-62754. Refer to Figure 1 for output shaft identification.

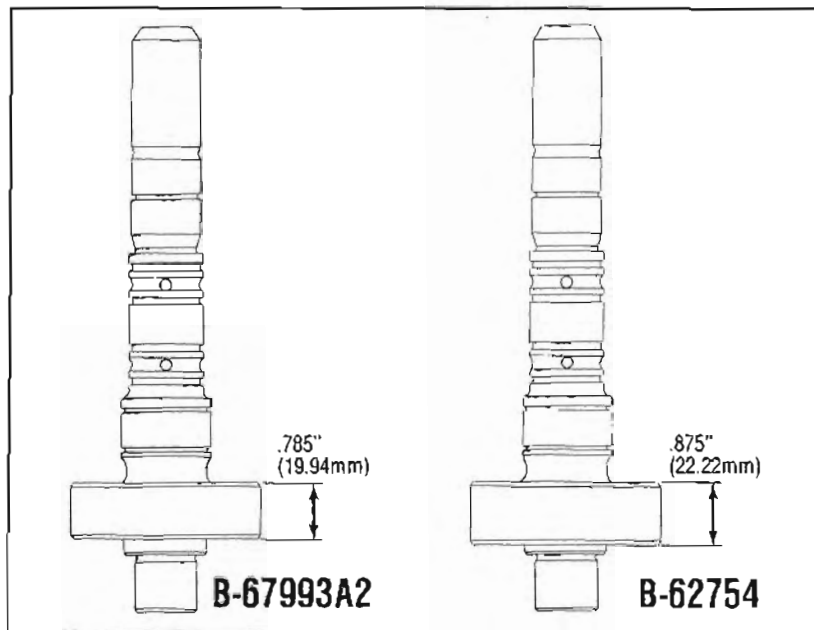


FIGURE 1. OUTPUT SHAFT IDENTIFICATION

E. POWER STEERING PUMP PULLEY REMOVAL

Kent-Moore Tool (part #J-25034) **MUST BE USED** to remove the pressed on pulleys used on power steering pumps. This tool has an end on it that will not mushroom the end of the pump shaft. **DO NOT USE** Kent-Moore Tool (part #J-21239) to remove these pulleys. This tool has a tapered end and will damage the shaft.

F. MERCURISER SPECIAL SERVICE TOOLS NOT STOCKED BY MERCURY MARINE.

When repairing MerCruiser engines, several special tools are suggested to aid in the repair. Tools that are not stocked by Mercury Marine can be ordered directly from these respective tool manufacturers as follows:

All "J" Prefix special tools may be purchased from:

U.S.A.

Kent-Moore Tools, Inc.
29784 Little Mack
Roseville, MI 48066
Tel: (313) 774-9500

CANADA

Kent-Moore Canada, Ltd.
5466 Timberlea Blvd.
Unit #2
Mississauga, Ontario L4W 2T7
Tel: (416) 624-6295

All "T" Prefix special tools may be purchased from:

U.S.A.

Owatonna Tools, Inc.
2013 Fourth Street, NW
Industrial Park Warehouse
Owatonna, MN 55060
Tel: (507) 455-2626

CANADA

Jobborn Mfg. "1975" Ltd.
97 Frid St.
Hamilton, Ontario L8P 4M3
Tel: (416) 522-5223

G. EARLY STYLE ADDRESSOGRAPH DATA IMPRINTERS

Addressograph (model 12-40-1) data imprinters have date wheels that cannot be adjusted to show years later than 1979. If you have one of these, you may fill in the date with a pen on any document processed through the imprinter. While we will not require you to purchase one, new date wheel assemblies can be obtained through your area from Addressograph-Multigraph sales office by ordering their part number 11-1200-2. The approximate cost is \$10.00.