mercruiser
STERN DRIVES & INBOARDS

service bulletin

TO: SERVICE MANAGER ☐ MECHANICS ☐
PARTS MANAGER ☐

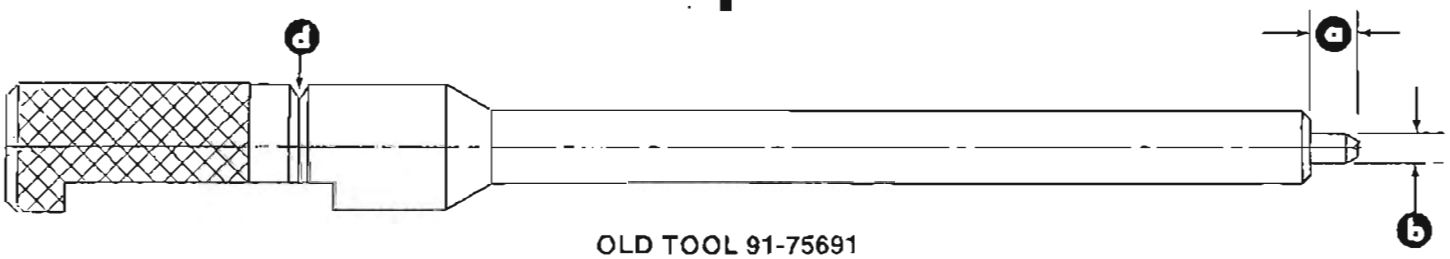
No. 86-5

A. 170/190 Oil Pump Alignment Tool Modification
B. Changes to the 90-95693 Service Manual

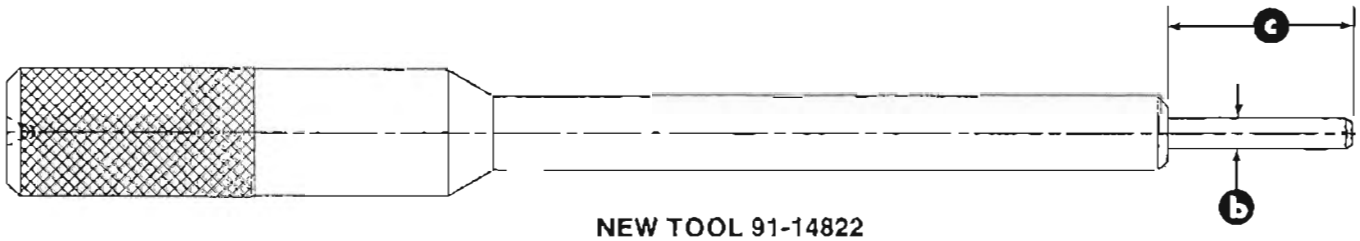
A. 170/190 Oil Pump Alignment Tool Modification

Later model MCM 170/190 engines will have a new design cast iron oil pump in place of the old style aluminum pump. The cast iron oil pump will need a new pump alignment tool as shown in Figure 1. This tool must be used with the cast iron pumps and may also be used with the aluminum pumps. The original pump alignment tool can be modified to work with the cast iron pumps using the dimensions shown in Figure 1.

NOTE: The depth groove is being removed from the new tool as it was not used for field service.



OLD TOOL 91-75691



NEW TOOL 91-14822

a - .48" (12.19mm)
b - .313" Dia. (7.95mm)
c - 1.87" (47.49mm)
d - Depth Groove - Removed on New Tool

Figure 1.

B. CHANGES TO THE 90-95693 SERVICE MANUAL

There are some minor errors that should be corrected in the new MerCruiser engine service manual, part number 90-95693. Because this is a bound manual new pages cannot be issued. Please make these corrections yourself.

Page 1B-8	Spark Plug Gap (.9m) change to (.9mm)
Page 1B-9	Spark Plug Gap (.9m) change to (.9mm)
Page 1B-10	Spark Plug Gap (.9m) change to (.9mm)
Page 1B-11	Spark Plug Gap (.9m) change to (.9mm)
Page 1B-12	Spark Plug Gap (.9m) change to (.9mm)
Page 1B-13	Spark Plug Gap (.9m) change to (.9mm)
Page 1B-14	Spark Plug Gap (.9m) change to (.9mm)
Page 1B-15	Spark Plug Gap (.9m) change to (.9mm)
Page 1B-16	Spark Plug Gap (.9m) change to (.9mm)
Page 1B-17	Spark Plug Gap (.9m) change to (.9mm)
Page 3B-20	Under "Example" change 2400 RPM to 2900 RPM in two places
Page 3B-30	Under "Example" change 2400 RPM to 2900 RPM in two places
Page 3C-2	Following the "Warning" add — **IMPORTANT: Alternators are equipped with an excitation circuit. This circuit will have approximately a 7 milli amp draw on the battery with the ignition key in the off position. This draw is normal.**
Page 3C-19	Change Motorola in chart to Delco
Page 3C-48	Change Section 6 Part C to Section 6 Part B under Removal/Installation
Page 6A-1	Torque specifications - Add thermostat cover 20 lbs. ft. (27 N.m)
Page 6B-4	Under Owatonna Special Tools change T71P-6513A to T71P-6513B
Page 6C-5 & 6C-6	Change 454 CID Hi-Performance to 454/482 CID Hi-Performance
Page 7A-1	Add (V-8 engines) behind thermostat cover. Add new line - thermostat cover 120/140/165 20 lbs. ft. (27 N.m)
Page 7C-1	In Torque Specification Chart add thermostat cover 120/140/165 20 lbs. ft. (27 N.m)