



MERC[UISE]R SERVICE BULLETIN

Section: XI (Bulletins)

Number: 78369-13

Date : 11/20/69 X

- A. Pinion Gear Shimming Tool - MerCr. 90-120-140-160-165 (Sec. IX)
- B. Engine Alignment Shaft Assembly (Section IX)

A. PINION GEAR SHIMMING TOOL - MerCruiser 90-120-140-160-165 Models (For Drive Unit Section IX)

The Pinion Gear Shimming Tool for MerCruiser 90-120-140-160-165 models (Figure 1) accurately positions pinion gear in gear housing and eliminates misalignment of gear mesh (not clearance) between pinion gear and forward and reverse gears.

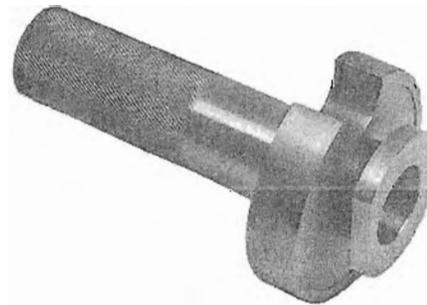


Figure 1. Pinion Gear Shimming Tool

Select from the following descriptions:

- | | |
|------------|---|
| C-91-56050 | Pinion Shimming Tool - MerCr. 90 |
| C-91-56048 | Pinion Shimming Tool - MerCr. 120-140-160-165 |

NOTES: (1) Shimming tool for MerCr. 120-140-160-165 model gear housings may be used in earlier gear housings which have a late pinion gear (B-43-55812) installed.
(2) MerCr. 90 shimming tool may be used in MerCr. 80 gear housings which have pinion gear B-43-55425 installed. Late pinion gears have a ground, flat surface on tips of gear teeth.

NEW SHIMMING PROCEDURE for GEAR HOUSING PINION GEAR

1. Install pinion gear on drive shaft in gear housing.
2. Position shimming tool in gear housing.
3. Check for .025" (.635mm) between gear and tool while applying inward pressure on drive shaft to seat its roller bearing. (Figure 2)
4. If clearance is incorrect, remove pinion gear and drive shaft. Remove bearing

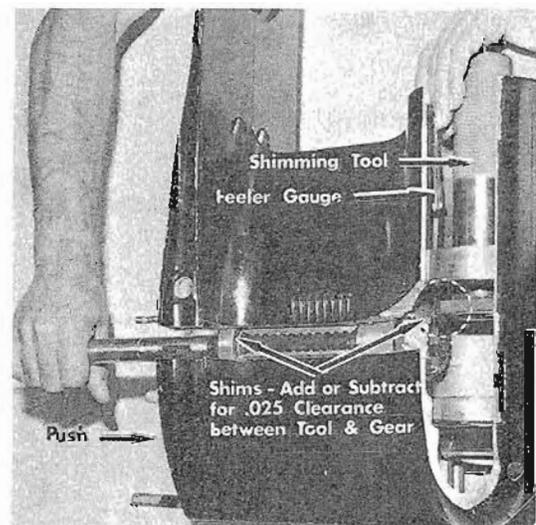


Figure 2. Shimming Procedure

(OVER)

cup from housing and add or subtract shims to obtain .025"; i.e., if over .025", remove shims from under bearing cup, if under .025", and shims under bearing cup.

5. If clearance is correct, reassemble gear housing by following procedures outlined in Section IX-A of the Service Manual.

B. ENGINE ALIGNMENT SHAFT - MerCr. 6 and 8-Cyl. Models

(For Installation Section II)

This new Alignment Shaft Assembly (C-91-57797A1) will align 8-cylinder MerCruiser 215-250-270-325 and 390 models and MerCruiser 110-120-140-150-160 and 165 models. (Figure 3)

The tool fits thru the gimbal housing assembly for positive alignment of engine coupling to drive unit shaft.

This alignment shaft assembly may be used in place of Alignment Shaft C-91-48247, which is designed only for MerCruiser 110-120-140-150-160 and 165 model engines.

Because of the price difference, Alignment Shaft C-91-48247 will continue to be available. Order from the following descriptions:

C-91-57797A1	Engine Alignment Shaft Assembly		
C-91-48247	Engine Alignment Shaft	\$ 9.75	Net U.S.

IMPORTANT: The use of the engine alignment rod should be discontinued. Use Engine Alignment Shaft Assembly C-91-57797A1.

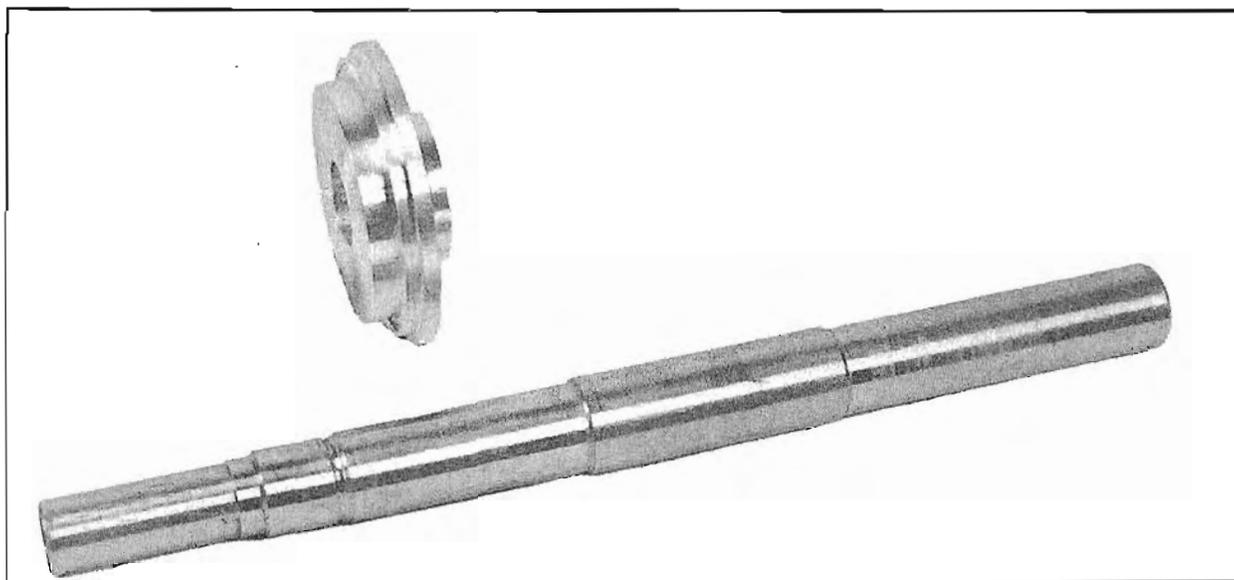


Figure 3. Engine Alignment Shaft C-91-57797A1