

service bulletin

M78-3

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FAA-DER Approved

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TO: Distributors, Dealers, Engine Overhaul Facilities, Owners and Operators of Teledyne Continental Motors' Aircraft Engines.

SUBJECT: GOVERNOR OIL TRANSFER COLLAR SLEEVES, RETAINING CLIPS AND CLEARANCES

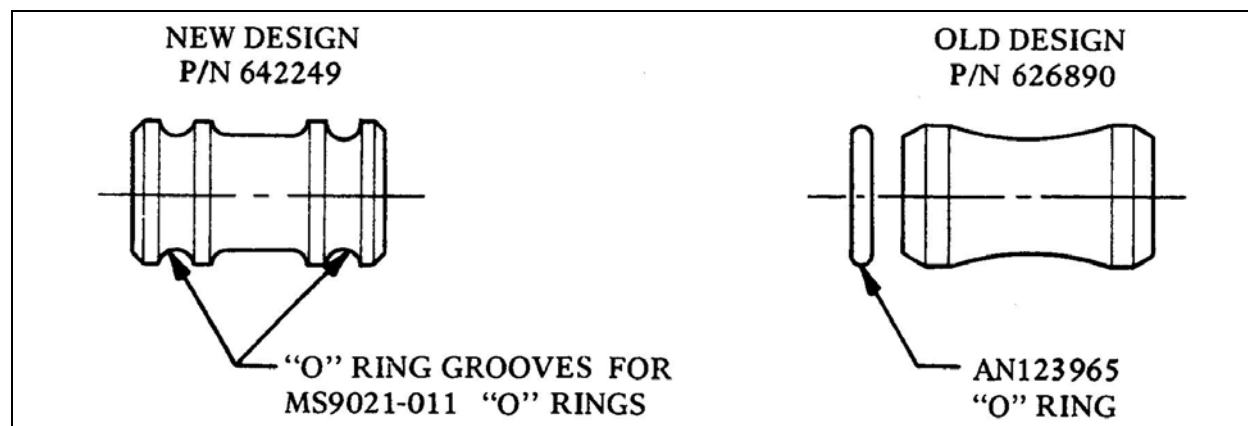
MODELS

AFFECTED: O-470, IO-470, TSIO-470, IO-520 and TSIO-520 Engines which incorporate Oil Transfer Collar Assembly TCM Part Number 626739

Gentlemen:

The Teledyne Continental Motors Aircraft Service Department is pleased to announce the availability of an improved governor oil transfer sleeve TCM part number 642249 to be used with two (2) each MS9021-011 "O" rings (as shown in Figure 1) in all of the above mentioned model engines which incorporate TCM part number 626739 governor oil transfer collar assembly. These parts replace transfer sleeve part number 626890 and "O" ring part number AN123695.

Installation of the new sleeve and "O" ring assembly is recommended at the next overhaul period to reduce the possibility of governor oil leakage between the crankcase and transfer collar assembly.

**FIGURE 1**

On those engines which incorporate the flat governor oil transfer clip, it is recommended that TCM part number 642250 clip be used in place of the earlier clip TCM part number 637678. Both flat clips are similar in overall dimensions except for thickness.

TCM part number 642250 clip is .0269" to .0329" thick. TCM part number 637678 clip is .036" to .040" thick.

CAUTION: Early design crankcases which incorporate the 90 degree transfer collar spring clip TCM part number 626990 as shown in Figure 2 must continue to use that clip with the following caution:

If the transfer collar spring clip is assembled to the crankcase in an excessively raised position, it can cause loading of the transfer collar into the crankshaft resulting in collar scoring and loss of governor control.

To provide a means of assuring flatness of this clip to the crankcase at assembly, inspect and maintain the tolerance as shown in Figure 2. If the required tolerance cannot be attained by tapping the clip with a plastic hammer, discard the clip and select another.

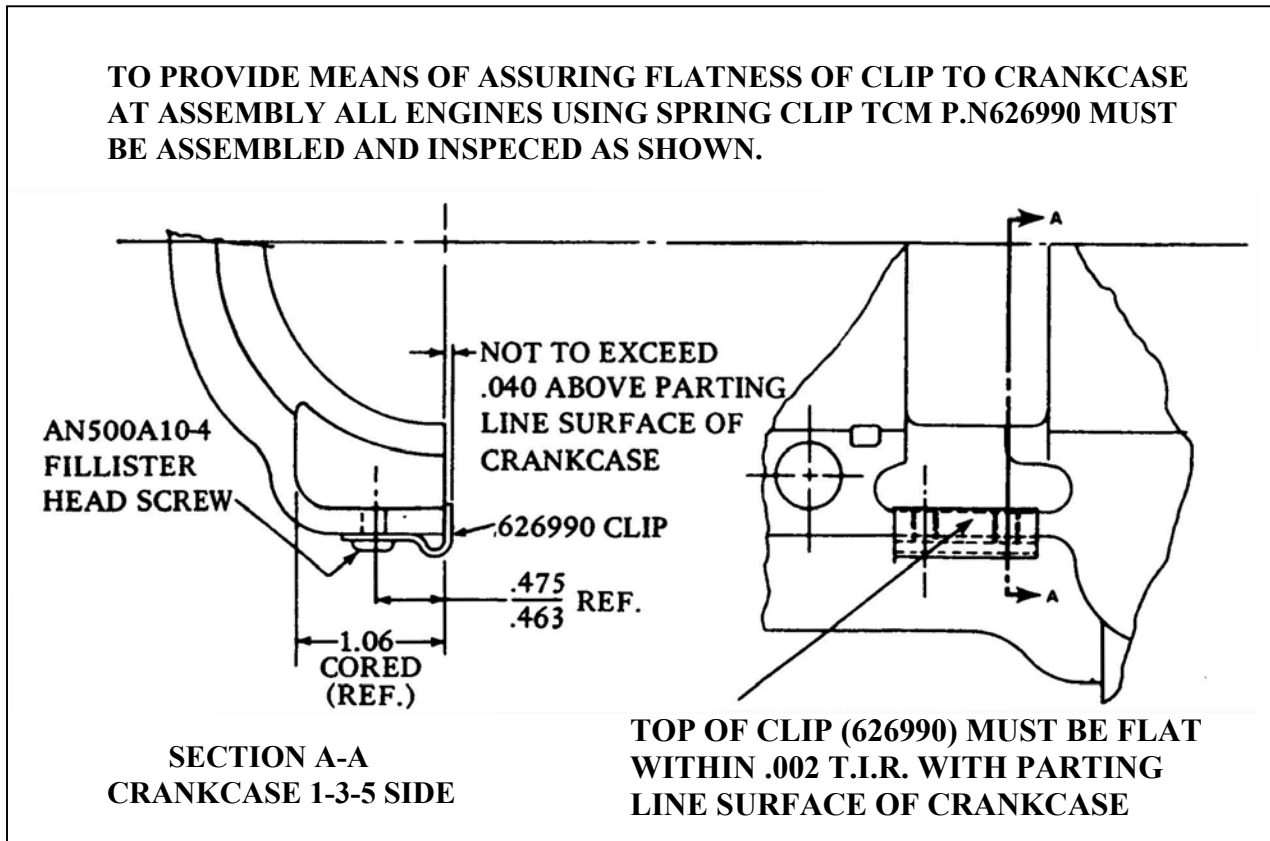


FIGURE 2

Care must also be taken in assembling the collar to the crankshaft because of the close running fit involved.

Pre-lubricate the collar and adjacent portion of the crankshaft liberally with grade 30 Aviation Lubricating Oil during assembly.

Tighten nuts alternately in 20" lbs. increments to 75-85" lbs.

It should rotate freely as any binding or loading can result in "localized frictional heating and pickup" leading to more serious consequences.

The collar to crankshaft clearances are as follows:

SERVICE LIMIT	NEW PARTS	
	MIN.	MAX.
.0018	.0006L	.0013L