

## Helpful Hints for a Successful Starter Adapter Installation New Style Adapters (note the absence of a friction sleeve)



### VERY-VERY- IMPORTANT INFORMATION

TCM is currently producing a new style, smooth shaft starter adapter for the engine models listed in service bulletin M92-10 (attached). These adapters include a new smooth style main shaft gear, clutch spring, worm wheel gear. They no longer utilize an adapter-housing friction sleeve. These changes eliminate spring "wind up" problems, improve the adapter's resistance to slipping during starting and increase its wear resistance.

NOTE: These new adapters will exhibit varying degrees of resistance to propeller rotation in the direction opposite of normal engine cranking rotation. This is caused by the light friction that is required to initiate clutch engagement in the cranking mode and is considered normal.

Please note that the MAIN GEAR SHAFT is secured into the adapter by a nylon tie wrap on all 0300 and 0360 series engine adapters. Be very careful when you remove the nylon strap as the main gear shaft can and will fall right out of the adapter. The adapter would then have to be completely disassembled to re-install the shaft. **Do not install this adapter** until you have very carefully inspected the needle bearing inside the back of the engine. Look for evidence of damage to the bearings and, most importantly, damage/cracking of the bearing case. Such damage can dramatically reduce the pressurized flow of lubricating oil to the starter adapter. Subsequent failure will be catastrophic!.

This is the only type of TCM starter adapter onto which you can install a light weight, permanent magnet starter with a 12 pound weight saving.

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# TELEDYNE CONTINENTAL<sup>®</sup> AIRCRAFT ENGINE service bulletin

M92-10  
Technical Portions Are  
FAA Approved

14 August 1992

**SUBJECT: STARTER ADAPTER**

**MODELS**

**AFFECTED:** Sandcast 470's, 520's, 550's, O-300-D, all 360's and all GTSIO-520's.

**COMPLIANCE:** As Required

TCM is currently producing an improved starter adapter for the engine models listed above. These adapters include a new style shaft gear, clutch spring, worm wheel gear and no longer utilize the adapter housing sleeve. These changes improve the adapters resistance to slippage during starting and increase its wear resistance.

Applicable parts catalogs are currently being revised to reflect all of the parts which will go into effect with the improved adapters. The new part numbers are ink stamped on the adapter housing and can be identified by the part numbers listed below which includes all "A" suffix numbers such as 643259A4.

BASIC PART NO.	ENGINE MODEL
643259	ALL 470's IO-520-A, D, E, F, J, K & L IO-550-D, E, F & L TSIO-520-C, G, H, M, P, R, T, AF & CE ALL GTSIO-520's
643147	TSIO-520-AE
643152	LTSIO-520-AE
646220	O-300-D IO-360-A, C, D, ES, G, H, J, JB, K & KB LTSIO-360-A, B, C, CB, D, DB, E, EB, F, FB, G, GB, H, HB, K, KB & LB
653074	TSIO-360-MB

**NOTE...** These new adapters will exhibit varying degrees of resistance to propeller rotation in the direction opposite of normal engine cranking rotation. This is caused by the light friction which is required to initiate clutch engagement in the cranking mode and is considered normal.

Contact your local TCM Distributor for the latest starter adapter assembly part number for your particular engine model and specification.