

TELEDYNE CONTINENTAL[®] AIRCRAFT ENGINE

CATEGORY 5

SERVICE INFORMATION LETTER

Contains useful Information Pertaining to Your Aircraft Engine

SIL98-9

**TECHNICAL PORTIONS
FAA APPROVED
SUPERSEDES M91-8**

SUBJECT: TIME BETWEEN OVERHAUL PERIODS

PURPOSE: PROVIDES TIME LIMITS BETWEEN MAJOR OVERHAULS

MODELS

AFFECTED: ALL

Teledyne Continental Motors (TCM) and the aircraft manufacturers provide operational limitations and instructions for your engine along with the requirements for continued airworthiness as specified in the engine Operators, Maintenance and Overhaul Manuals and Service Bulletins. The Time Between Engine Overhaul (TBO) provided in this Service Information Letter apply only to engines that have been operated and maintained in accordance with these instructions. Engine mounted components and accessories require overhaul at the same hourly and calendar intervals as the engine, unless otherwise specified by the component or accessory manufacturer.

An engine's published TBO DOES NOT mean that every engine will operate the number of hours or years listed without requiring component replacements and unscheduled maintenance events. Non compliance with TCM's instructions for continued airworthiness, operational and environmental factors may necessitate repair or replacement of the engine, engine components and accessories.

TCM recommends that the following information be used, along with the engine's published TBO, in determining the engine's continued airworthiness:

1. Whether the engine has been operated regularly or has been in storage; gaskets, seals synthetic and natural rubber goods deteriorate over time. Environmental corrosion can occur internally and externally on the engine. This naturally occurring process can inevitably affect continued airworthiness of the engine and engine mounted components and accessories. For these reasons, overhaul the engine at least every twelve (12) years, or on accumulation of the operating hours listed for the engine model.
2. For aircraft used in aerial spraying, overhaul the engine after the accumulation of 1200 hours or twelve (12) years whichever occurs first.
3. Aircraft used in parachute jumping, glider towing, banner towing, etc., may require more frequent engine overhauls than listed for the specific engine.
4. The quality of parts, accessories and workmanship utilized during routine maintenance, engine top overhaul and major overhaul directly affect the service life of the engine. The TBO's listed are predicated on the engine having been maintained in accordance with TCM's FAA approved instructions for continued airworthiness specified in the engine Maintenance Manual, Overhaul Manual, and Service Bulletins and operated within the limitations published in TCM's Engine Operators Manual and the aircraft manufacturer's Aircraft Flight Manual / Pilots Operating Handbook (AFM / POH)
5. TCM cannot provide a TBO for engines that:
 - Have been assembled with non-TCM approved parts.

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- Have been assembled with parts that do not conform to the original type design for the engine.
- Have been modified from the original type certificate configuration.
- Have been overhauled or repaired in a manner that is inconsistent with the specifications, limits, and instructions provided in the TCM engine overhaul manuals, service bulletins, parts catalogs, and FAA Air Worthiness Directives.

NOTE: The TBO's provided in this Service Bulletin are only estimates and do not reflect warranty periods. For engine warranty coverage, refer to the official Teledyne Continental Motors aircraft engine warranty received with the engine.

Engine Time Between Overhaul (TBO)

Engine Model	SEE NOTE	HRS	YRS
A65, A75 Series.....		1800	12
C75, C85, C90 Series		1800	12
C125, C145 Series		1800	12
E165, E185, E225 Series 1		1500	12
O-200-A, -B		1800	12
O-300-A, -B, -C, -D, -E		1800	12
GO-300-A, -C, -D, -E		1200	12
O-470-A, B, E, G, J, K, L, M, N, P, R, S, U		1500	12
O-470-U	③	2000	12
W670 Series		1000	12
IO-240-A, B		2000	12
IO-346-A, B		1500	12
IO-360-A, AB, B, C, CB, D, DB, G, GB, H, HB, J, JB, K		1500	12
IO-360-ES, KB		2000	12
IO-470-C thru H, J thru N, P, R, S, U, V, VO		1500	12
IO-520-A, B, BA, BB, C, CB, D, E, F, J, K, L, M, MB		1700	12
IO-520-P		2000	12
LIO-520-P		2000	12
IO-550-A, B, C, D, E, F, L		1700	12
IO-550-G, N		2000	12
TSIO-360-EB, KB, RB		1800	12
LTSIO-360-EB, KB, RB		1800	12
TSIO-360-FB, GB, LB, MB & SB		1800	12
TSIO-360-A, AB, B, C, CB, D, DB, E, F, G, H, HB, JB		1400	12
LTSIO-360-E		1400	12
TSIO-470-B, C, D		1400	12
GIO-470-A		1000	12
TSIO-520-B, BB, C, D, DB, E, EB, G, H, J, JB, K, KB, L, LB, M, N, NB, P, R		1400	12

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Engine Time Between Overhaul (TBO)

(continued)

Engine Model	SEE NOTE	HRS	YRS
TSIO-520-NB	②	1600	12
TSIO-520-M, P, R	④	1600	12
TSIO-520-AF, CE, UB, VB, WB		1600	12
TSIO/LTSIO-520-AE		2000	12
TSIO-520-BE		2000	12
TSIO-520-T		1400	12
GTSIO-520-C, D, H,	①	1600	12
GTSIO-520-L, M, N		1600	12
GTSIO-520- F, K		1200	12
GIO-550-A		1700	12
TSIO-550-B		1600	12
TSIO-550-C		2000	12
TSIO-550-E		1600	12
TSIOL-550-A, B, C		2000	12
6-285 Series		1200	12

Engine Notes

Note 1 - Applies to GTSIO-520-C, D, H engine models listed utilizing cylinder part number 653453A6 or subsequent. Also, all parts must be replaced as directed by the applicable current service bulletins, parts catalogs, and overhaul manuals. A log book entry is required.

Note 2 - Applies to:

New TSIO-520-NB engines with serial numbers 521391 thru 521399, 521400, 521405, 521406, 521411, 521419, and subsequent

Rebuilt TSIO-520-NB engines which have serial numbers 234070, 234074, and subsequent only

TSIO-520-NB engines, other than those listed above, may be made eligible for the 1600-hour TBO by the installation of new cylinder assemblies P/N 642594A1 or subsequent part number, pistons P/N 648044 or subsequent part number, and exhaust valve lifters P/N 646277 or subsequent part number. All parts must be replaced as directed by the applicable current service bulletins, parts catalogs, and overhaul manuals. A log book entry is required.

Note 3 - Applies to: new and rebuilt O-470U Spec. 11, 12, 13, 14, 17, 18, and subsequent specification numbers.

O-470-U engines, other than those listed, above may be made eligible for the 2000 hours TBO with the

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installation of new P/N 646267A2 or subsequent cylinder and valve assemblies, P/N 648029 pistons or subsequent part number, P/N 649226 ring sets or subsequent part number, exhaust lifters P/N 646277 or subsequent part number, oil pump with integral oil filter adapter P/N 643779 or subsequent part number, oil pump gasket P/N 643749 or subsequent part number, oil filter P/N 649923 (Champion P/N) and two each P/N 402129P003 studs. Piston pin P/N 539467 must be replaced with a new pin of the same P/N. Crankshaft counterweight pin and plate configuration must conform to the current parts catalog number X30587A. A log book entry is required. Install a new engine data plate with the correct engine model and specification number as noted in the following table.

Original Spec. No.	New Spec. No.	Original Spec. No.	New Spec. No.
O-470-U (1)	O-470-U (13)	O-470-U (4)	O-470-U (18)
O-470-U (2)	O-470-U (14)	O-470-U (5)	O-470-U (17)
O-470-U (3)	O-470-U (17)	O-470-U (6)	O-470-U (18)

Note 4 - Applies to:

New and rebuilt TSIO-520-M Spec. 6, 7, and 8

TSIO-520-P Spec. 5 and 6

TSIO-520-R Spec. 7, 9, 10, and 11

New and rebuilt TSIO-520-M, P, and R model engines with subsequent specification numbers.

TSIO-520-M, P, and R engines except those listed above may be eligible for a 1600 hour TBO increase by installing; new cylinder and valve assemblies P/N 646657A1 or subsequent part number, pistons P/N 648044 or subsequent part number, ring sets P/N 649227 or subsequent part number, exhaust valve lifters P/N 646277 or subsequent part number, throttle body P/N 649185A4 or subsequent part number, TCM (formerly Bendix) P/N 646957, or subsequent part number, R.H. magneto, P/N 646958, or subsequent part number, L.H. magneto, P/N 636951, or subsequent part number, Harness, or EQ6583 pressurized magneto and harness kit, oil pump assembly P/N 643717-1 or subsequent part number, P/N 643749, or subsequent part number, oil pump gasket, and oil filter with integral filter adapter P/N 649923 or subsequent part number.

To install a new oil pump, remove one each P/N 402159 and P/N 402157 stud. Replace stud P/N 401852 with stud P/N 402129P003 and install spacer P/N 646582-1.35 and P/N 646582-2.00 on existing studs after oil pump is installed. A log book entry is required. Install a new engine data plate with the correct engine model and specification number as noted in the following table.

Original Spec. No.	New Spec. No.	Original Spec. No.	New Spec. No.
TSIO-520-M (1)	TSIO-520-M (6)	TSIO-520-P (3)	TSIO-520-P (6)
TSIO-520-M (2)	TSIO-520-M (7)	TSIO-520-R(1)	TSIO-520-R(9)
TSIO-520-M (3)	TSIO-520-M (7)	TSIO-520-R (3)	TSIO-520-R (10)
TSIO-520-M (3)	TSIO-520-M (3)	TSIO-520-R (4)	TSIO-520-R (9)
TSIO-520-P (1)	TSIO-520-P (5)	TSIO-520-R (5)	TSIO-520-R (10)
TSIO-520-P (2)	TSIO-520-P (6)	TSIO-520-R (6)	TSIO-520-R (11)

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