CONTINENTAL MOTORS® AIRCRAFT ENGINE

SERVICE INFORMATION LETTER

Contains Useful Information Pertaining To Your Aircraft Engine

CATEGORY 5

SIL98-9C

Supersedes SIL98-9B

Technical Portions

FAA APPROVED

SUBJECT: Time Between Overhaul Periods

REASON FOR REVISION: Incorporate new type certified engine specifications and revise TBO limits

PURPOSE: Provides time limits between major overhauls

COMPLIANCE: See contents

MODELS AFFECTED: ALL

General Information

Continental Motors Inc.(CMI) provides 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 document applies 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/or unscheduled maintenance events. Noncompliance with CMI instructions for continued airworthiness, operational and/or environmental factors may necessitate repair or replacement of the engine, engine components and accessories earlier than the published TBO.

TBO periods were established on most CMI engines beginning in the 1960s. Since that time, CMI has made significant engineering improvements to virtually all major engine components. CMI has refined manufacturing processes and implemented computer numerical controlled (CNC) machining tools enabling CMI factory engines to meet higher standards than possible when CMI engines were originally granted FAA Type Certificates. These improvements have enabled CMI to increase TBO limits for many of our new and rebuilt engines.

CMI recommends the following factors be used, along with the engine's published TBO, to determine the engine's continued airworthiness:

1. Whether the engine has been operated regularly or has been in storage, as gaskets, seals and synthetic and natural rubber goods deteriorate over time. Environmental corrosion can occur internally and externally on the engine. This naturally occurring process can affect continued airworthiness of the engine and engine mounted components and accessories. Replace or overhaul the engine no later than twelve (12) years from date placed in service, or on accumulation of the operating hours listed in Table 1 for the engine model.

2. For engines used in aerial spraying, TBO is 1200 hours or twelve (12) years whichever occurs first.
3. Engines used in parachute jumping, glider towing, banner towing, blimp propulsion, or other unusually stressful applications may require more frequent overhauls than listed.
4. The quality of parts, accessories and workmanship utilized during routine maintenance, engine top overhaul and major overhaul has a direct effect on the service life of the engine. Also, the maintenance and condition of engine-related components - including, but not limited to, propeller, propeller governor, vacuum pump, gear driven alternator, mount, baffles, instrumentation, and controls has a direct effect on engine durability. The TBO periods listed are predicated on the engine having been maintained according to the Instructions for Continued Airworthiness, accepted by the FAA, specified in the engine Maintenance Manual, Overhaul Manual, and Service Bulletins and operated within the limitations published in CMI Engine Operators Manual and the aircraft manufacturer's Aircraft Flight Manual / Pilots Operating Handbook (AFM / POH).
5. CMI does not provide a TBO for engines that:
   - Have been assembled with parts not supplied by CMI
   - Have been assembled with parts that do not conform to the original FAA approved 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 CMI Instructions for Continued Airworthiness and FAA Airworthiness Directives
6. The "Hobbs Meter" is commonly used by the aviation industry as an acceptable device to record time elapsed while electrical power is applied to the device. The conditions under which the Hobbs Meter records operation vary widely within the aviation industry. Continental Motors does not specify a method to record engine operating hours, rather CMI defers to the end application installer.

NOTE: The TBO periods specified in this document are only estimates and do not reflect warranty periods. For engine warranty coverage, refer to the official Continental Motors Aircraft Engine Warranty received with the engine.

Engine Model Time Between Overhaul

TABLE 1. Engine Time Between Overhaul

Engine Model	SEE NOTE	HOURS		YEARS
		ENGINE S/N BEFORE 1006000	ENGINE S/N 1006000 AND LATER	
A65, A75 and C75, C85, C90 Series	1	1800	N/A	12
O-200-A, B	1, 2	1800	2000	12
O-200-D	1	2000	2000	12
IO-240-A, B	1, 2	2000	2200	12
IOF-240-B	1, 2	2000	2200	12
IO-346-A	1	1500	N/A	12
C125, C145 Series and O-300-A, B, C, D	1	1800	N/A	12
GO-300-A, C, D, E	1	1200	N/A	12
IO-360-A, AB, B, C, D, G, H, J, K	1	1500	1500	12
IO-360-CB, DB, GB, HB, JB	1, 2	1500	1700	12
IO-360-ES, KB	1, 2	2000	2200	12
TSIO-360-A, AB, B, C, D, E, F, H	1	1400	1400	12
LTSIO-360-E	1	1400	1400	12
TSIO-360-CB, DB, HB, JB	1, 2	1400	1600	12
L/TSIO-360-EB, FB, GB, KB, LB, MB, RB, SB	1, 2	1800	2000	12
E165, E185, E225 Series	1	1500	N/A	12
O-470-A, B, E, G, N, P	1	1500	N/A	12
O-470-J, K, L, M, R, S, U	1, 2	1500	1700	12
O-470-U	1, 2, 3	2000	2200	12
IO-470-C, D, E, F, G, H, J, K, L, M, N, P, R, S, U, V, VO	1, 2	1500	1700	12
TSIO-470-B, C, D	1	1400	N/A	12
IO-520-B, BA, C, M	1	1700	1700	12
IO-520-A, BB, CB, D, E, F, J, K, L, MB	1, 2	1700	1900	12
L/IO-520-P	1, 2	2000	2200	12
GTSIO-520-C, D, F, H, K	1	1200	N/A	12
GTSIO-520-C, D, H	1, 4	1600	N/A	12
GTSIO-520-L, M, N	1	1600	1600	12
TSIO-520-B, D, E, J, K, L, N, NB	1	1400	1400	12
TSIO-520-BB, C, DB, EB, G, H, JB, KB, LB, M, P, R, T	1, 2	1400	1600	12
TSIO-520-NB	1, 2,	1600	1800	12
TSIO-520-M, P, R	1, 2, 5	1600	1800	12
TSIO-520-AF, CE, UB, VB, WB	1, 2	1600	1800	12

TABLE 1. Engine Time Between Overhaul

Engine Model	SEE NOTE	HOURS		YEARS
		ENGINE S/N BEFORE 1006000	ENGINE S/N 1006000 AND LATER	
L/TSIO-520-AE	1, 2	2000	2200	12
TSIO-520-BE	1, 2	2000	2200	12
IO-550-A, B, C, D, E, F, L	1, 2	1700	1900	12
IO-550-G, N, P, R	1, 2	2000	2200	12
IOF-550-N	1, 2	2000	2200	12
TSIO-550-B, E	1, 2	1600	1800	12
TSIO-550-C, G, K, N	1, 2	2000	2200	12
TSIOF-550-D, J, K	1, 2	2000	2200	12
TSIOL-550-A, B, C	1	2000	2000	12
6-285 Series	1	1200	N/A	12

1. If an engine consistently accumulates 40 or more hours per month since being placed in service, add 200 hours to recommended TBO.
2. Engines with Serial Number 1006000 or higher, add 200 hours to TBO as noted in table above.
3. Applies to: new and rebuilt O-470U Model Specifications 11, 12, 13, 14, 17, 18, and subsequent numbers.
   O-470-U engines, other than those listed above, may be made eligible for the 2000 hours TBO with the installation of new P/N 646267A2, or superseding cylinder and valve assemblies, P/N 648029 pistons, or superseding part number, P/N 649226 ring sets, or superseding part number, exhaust lifters P/N 646277, or superseding part number, oil pump with integral oil filter adapter P/N 643779, or superseding part number, oil pump gasket P/N 643749, or superseding part number, oil filter P/N 649923, or superseding part number 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 illustrated parts catalog. A log book entry is required. Update engine data plate with the correct engine model and specification number as follows: O-470U(1) converts to O-470-U(13); O-470-U(2) converts to O-470-U(14); O-470-U(3) converts to O-470-U(17); O-470-U(4) converts to O-470-U(18); O-470-U(5) converts to O-470-U(17); O-470-U(6) converts to O-470-U(18)
4. Applies to GTSIO-520-C, D, H engine models listed utilizing cylinder part number 653453, or superseding (cylinder production released APRIL 1993-verify part number on cylinder flange). Also, all parts must be replaced as directed by the applicable current service bulletins, illustrated parts catalogs, and overhaul manuals. A log book entry is required.
5. 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 superseding part number, pistons P/N 648044, or superseding part number, ring sets P/N 649227, or superseding part number, exhaust valve lifters P/N 646277, or superseding part number, throttle body P/N 649185A4, or superseding part number, CMI P/N 646957, or superseding part number, R.H. magneto, P/N 646958, or superseding part number, L.H. magneto, P/N 636951, or superseding part number, Harness, or EQ6583 pressurized magneto and harness kit, oil pump assembly P/N 643717-1, or superseding part number, P/N 643749, or superseding part number, oil pump gasket, and oil filter with integral filter adapter P/N 649923 or, superseding 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. Update engine data plate with the correct engine model and specification number as follows: TSIO-520-M(1) converts to TSIO-520-M(6); TSIO-520-M(2) converts to TSIO-520-M(7); TSIO-520-M(3) converts to TSIO-520-M(7); TSIO-520-P(1) converts to TSIO-520-P(5); TSIO-520-P(2) converts to TSIO-520-P(6); TSIO-520-P(3) converts to TSIO-520-P(6); TSIO-520-R(1) converts to TSIO-520-R(9); TSIO-520-R(3) converts to TSIO-520-R(10); TSIO-520-R(4) converts to TSIO-520-R(9); TSIO-520-R(5) converts to TSIO-520-R(10); TSIO-520-R(6) converts to TSIO-520-R(11)