

**CONTINENTAL MOTORS® AIRCRAFT ENGINE**  
**SERVICE INFORMATION LETTER**

**CATEGORY 5**  
**SIL98-9E**

Contains Useful Information Pertaining To Your Aircraft Engine

**Supersedes SIL98-9D**  
**TECHNICAL PORTIONS**  
**FAA APPROVED**

**SUBJECT:** Time Between Overhaul (TBO) 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 Continental Motors (CM) aviation gasoline (AvGas) engines.

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**I. GENERAL INFORMATION**

Continental Motors (CM) provides operational limitations and instructions for your engine along with the requirements for continued airworthiness as specified in the engine Operator Manuals, Maintenance Manuals, Overhaul Manuals, and Service Documents. 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 CM 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 CM engines beginning in the 1960s. Since that time, CM has made significant engineering improvements to virtually all major engine components. CM has refined manufacturing processes and implemented computer numerical controlled (CNC) machining tools enabling CM factory engines to meet higher standards than possible when CM engines were originally granted FAA Type Certificates. These improvements have enabled CM to increase TBO limits for many of our new and rebuilt engines.

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

1. Environmental corrosion occurs internally and externally on an engine. This naturally occurring process can affect continued airworthiness of the engine and engine mounted components or accessories. Regardless if the engine has been operated regularly or has been in storage; gaskets, seals, and synthetic and natural rubber goods deteriorate over time. Replace or overhaul the engine no later than the operating hours or number of years for the engine model listed in Table 1 on page 3.
2. For engines used in aerial spraying, TBO is 1200 hours or twelve (12) years whichever occurs first.

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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, (ICA) accepted by the FAA, specified in the engine Maintenance Manual, Overhaul Manual, and Service Documents, and operated within the limitations published in the engine operating instructions or the aircraft manufacturer's Aircraft Flight Manual / Pilot's Operating Handbook (AFM / POH).
5. Continental Motors does not provide a TBO for engines that have been:
  - Assembled with parts not supplied by CM
  - Assembled with parts that do not conform to the original FAA approved type design for the engine
  - Modified from the original type certificate configuration
  - Overhauled or repaired in a manner that is inconsistent with the specifications, limits, and instructions provided in the CM Instructions for Continued Airworthiness (ICA) and FAA Airworthiness Directives (AD)
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 CM 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.

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## II. ENGINE MODEL TIME BETWEEN OVERHAUL

TABLE 1. Engine Time Between Overhaul (TBO)

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

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**TABLE 1. Engine Time Between Overhaul (TBO)**

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

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 include an additional 200 hours to TBO (as noted in Table 1, column 3).
3. Applies to: new and rebuilt O-470U Model Specifications 11, 12, 13, 14, 17, 18, and subsequent numbers manufactured, new or rebuilt, or overhauled (2002 or later).
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, CM 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).