
PL 98-01-08 Teledyne Continental Motors with STC SE8594SW: Priority Letter issued on December 23, 1997. Docket No. 97-ANE-48-AD.

{New-98-1}

This priority letter Airworthiness Directive (AD) is applicable to Teledyne Continental Motors (TCM) IO-520 series, TSIO-520 series, O-470 series, and IO-550 series reciprocating engines, with Performance Engineering exhaust roller rocker arms, Part Number (P/N) PE92E, installed, in accordance with Supplemental Type Certificate (STC) SE8594SW. This AD is prompted by reports of broken exhaust roller rocker arms. The investigation revealed that these exhaust roller rocker arms had failed due to oil galleries drilled off center during manufacturing, too close to the outside edge. In addition, tests disclosed that the compositional requirements of the exhaust roller rocker arms did not meet hardness specifications. This condition, if not corrected, could result in exhaust roller rocker arm failure, which can result in bent push rods, ruptured rocker arm covers, loss of engine oil, engine power loss and roughness, and possible engine failure.

Since an unsafe condition has been identified that is likely to exist or develop on other engines of this same type design, this AD requires, within 25 hours time in service (TIS) after receipt of this priority letter AD, removal from service of all affected exhaust roller rocker arms. The correct location of the oil gallery holes cannot be visually determined, so the FAA has determined that all affected parts must be removed from service. The STC owner is no longer in business producing new parts, therefore all replacement parts must be from TCM.

This rule is issued under 49 U.S.C. Section 44701 (formerly section 601 of the Federal Aviation Act of 1958) pursuant to the authority delegated to me by the Administrator, and is effective immediately upon receipt of this priority letter.

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Applicability: Teledyne Continental Motors (TCM) IO-520-A, -B {IO-520-B}, -BA {IO-520-BA}, -C {IO-520-C}, -CB {IO-520-CB}, -D {IO-520-D}, -E {IO-520-E}, -F {IO-520-F}, -K {IO-520-K}, -L {IO-520-L}, -M {IO-520-M}, -MB {IO-520-MB}, -J {IO-520-J}; TSIO-520-A, -B {TSIO-520-B}, -D {TSIO-520-D}, -E {TSIO-520-E}, -F {TSIO-520-F}, -G {TSIO-520-G}, -H {TSIO-520-H}, -J {TSIO-520-J}, -K {TSIO-520-K}, -L {TSIO-520-L}, -M {TSIO-520-M}, -N {TSIO-520-N}, -P {TSIO-520-P}, -R {TSIO-520-R}, -T {TSIO-520-T}, -U {TSIO-520-U}, -UB {TSIO-520-UB}, -AF {TSIO-520-AF}, -CE {TSIO-520-CE}, -VB {TSIO-520-VB}, -WB {TSIO-520-WB}, -NB {TSIO-520-NB}, -LB {TSIO-520-LB}, -KB {TSIO-520-KB}, -JB {TSIO-520-JB}, -EB {TSIO-520-EB}, -DB {TSIO-520-DB}, -BB {TSIO-520-BB}; O-470-B, -G {O-470-G}, -K {O-470-K}, -L {O-470-L}, -M {O-470-M}, -P {O-470-P}, -R {O-470-R}, -S {O-470-S}, -U {O-470-U}; IO-470-C, -D {IO-470-D}, -E {IO-470-E}, -F {IO-470-F}, -G {IO-470-G}, -H {IO-470-H}, -L {IO-470-L}, -M {IO-470-M}, -N {IO-470-N}, -P {IO-470-P}, -R {IO-470-R}, -S {IO-470-S}, -U {IO-470-U}, -V {IO-470-V}; and IO-550-B, -C {IO-550-C}, and -G {IO-550-G} series reciprocating engines, with Performance Engineering exhaust roller rocker arms, Part Number (P/N) PE92E, installed, in accordance with Supplemental Type Certificate (STC) SE8594SW. These engines are installed on but not limited to Cessna 180, 182, 185, 206, 207, 210, 310, 335, 340, 401, 402, 414; Raytheon (Beech) 33, 35, 36, 55, 58; Bellanca 17-30; New Piper PA-46;

Fletcher FU-24A aircraft.

Note 1: This airworthiness directive (AD) applies to each engine identified in the preceding applicability provision, regardless of whether it has been modified, altered, or repaired in the area subject to the requirements of this AD. For engines that have been modified, altered, or repaired so that the performance of the requirements of this AD is affected, the owner/operator must request approval for an alternative method of compliance in accordance with paragraph (b) of this AD. The request should include an assessment of the effect of the modification, alteration, or repair on the unsafe condition addressed by this AD; and, if the unsafe condition has not been eliminated, the request should include specific proposed actions to address it.

Compliance: Required as indicated, unless accomplished previously.

To prevent exhaust roller rocker arm failure, which can result in bent push rods, ruptured rocker arm covers, loss of engine oil, engine power loss and roughness, and possible engine failure, accomplish the following:

(a) Within 25 hours time in service after the effective date of this AD, remove from service all Performance Engineering exhaust roller rocker arms, P/N PE92E, and replace with serviceable parts, as follows:

(1) For IO-520, TSIO-520, O-470, IO-470, and all IO-550 series engines except the IO-550-G, replace with serviceable TCM exhaust roller rocker arms, P/N 652130.

(2) For IO-550-G series engines, replace with serviceable TCM exhaust roller rocker arms, P/N 652966.

(b) An alternative method of compliance or adjustment of the compliance time that provides an acceptable level of safety may be used if approved by the Manager, Special Certification Office. Operators shall submit their requests through an appropriate FAA Principal Maintenance Inspector, who may add comments and then send it to the Manager, Special Certification Office.

Note 2: Information concerning the existence of approved alternative methods of compliance with this airworthiness directive, if any, may be obtained from the Special Certification Office.

(c) Special flight permits may be issued in accordance with sections 21.197 and 21.199 of the Federal Aviation Regulations (14 CFR 21.197 and 21.199) to operate the aircraft to a location where the requirements of this AD can be accomplished.

(d) Priority Letter AD 98-01-08, issued December 23, 1997, becomes effective upon receipt.

FOR FURTHER INFORMATION CONTACT: Richard D. Karanian, Aerospace Engineer, Special Certification Office, FAA, Rotorcraft Directorate, 2601 Meacham Blvd., Ft. Worth, TX 76137-4298; telephone (817) 222-5195, fax (817) 222-5785.