PŘÍKAZ K ZACHOVÁNÍ LETOVÉ ZPŮSOBILOSTI

CAA-AD- 100/1999

Nahrazuje CAA-AD-T-053/1999

Datum vydání: 30. září 1999

MOTOR - KLIKOVÝ HŘÍDEL - KONTROLA/VÝMĚNA

Týká se: : motorů vyrobených firmou Teledyne Continental Motors (TCM) následujících sérií O-470, IO-470, TSIO-470, IO-520, TSIO-520, LTSIO-520, IO-550, TSIO-550 TSIOL-550, GTSIO-520, výrobních čísel uvedených v části Applicability FAA AD 99-19-01 (příloha tohoto PZZ).

Důvod vydání: provést prohlídky klikových hřídelů s cílem zabránit poruše zaviněné trhlinami, což může vést k úplné ztrátě výkonu motoru a popřípadě k jeho vysazení v průběhu letu.

Datum účinnosti: 2. prosince 1999.

Provést v termínech: Jak je popsáno v FAA AD 99-19-01.

Postup provedení prací: Dle pokynů v FAA AD 99-19-01.

Poznámky: Provedení tohoto PZZ musí být zapsáno do motorové knihy. Případné dotazy týkající se tohoto PZZ adresujte na ÚCL technický inspektorát - Ing. J. Beneš. Pokud to vyžaduje povaha tohoto PZZ musí být zapracováno do příslušné části dokumentace pro obsluhu, údržbu a opravy letadla. Tento PZZ byl vypracován na základě FAA AD 99-19-01, který nahrazuje FAA AD 99-09-17.

Ing. Pavel MATOUŠEK
Ředitel technického inspektorátu
Úřad pro civilní letectví

99-19-01 TELEDYNE CONTINENTAL MOTORS: Amendment 39-11290. Docket No. 99-NE-28-AD. Supersedes AD 99-09-17. Issued August 30, 1999.

Applicability: Teledyne Continental Motors (TCM) O-470, IO-470, TSIO-470, IO-520, TSIO-520, LTSIO-520, IO-550, TSIO-550, TSIOL-550, series new and rebuilt engines manufactured between January 1, 1998, and December 31, 1998, listed by serial number (S/N) in TCM Mandatory Service Bulletin (MSB) 99-3C, dated July 27, 1999. Also, GTSIO-520 series engines, listed by S/N in TCM Critical Service Bulletin (CSB) 99-6A dated July 21, 1999. This airworthiness directive (AD) is also applicable to any other TCM O-470, IO-470, TSIO-470, IO-520, TSIO-520, LTSIO-520, IO-550, TSIO-550, TSIOL-550, and GTSIO-520 series engines that were overhauled by facilities other than TCM, and that have had replacement crankshafts installed that were sold individually by TCM and were manufactured or rebuilt between January 1, 1998, and December 31, 1998.

Note 1: Engine S/Ns can be found in logbooks or other maintenance records. For those engines that were overhauled in the field with factory new crankshafts, crankshaft S/Ns should be shown in work orders, log books or other maintenance records.

Note 2: This 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 (f) 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 crankshaft failure due to crankshaft cheek cracks, which could result in total engine power loss, in-flight engine failure, and possible forced landing, accomplish the following:

(a) For those engines listed by S/N on pages 3 through 12 of TCM MSB 99-3C, dated July 27, 1999, or on pages 2 and 3 of TCM CSB 99-6A, dated July 21, 1999, with 500 hours or less time-in-service (TIS) on the effective date of this AD, perform visual and ultrasonic (UT) inspections of the crankshaft for cracks within 10 hours TIS after the effective date of this AD, in accordance with sections A and B of TCM 99-3C, dated July 27, 1999, or for the GTSIO-520 series engines, in accordance with sections A and B of TCM CSB 99-6A dated July 21, 1999. These inspections must be performed by TCM representatives. Disposition the crankshaft as follows:

Note 3: The engines and crankshafts that are the subject of this AD were manufactured or rebuilt by TCM during 1998. The dates that engines and crankshafts were delivered, however, may not coincide with their dates of manufacture. For the engines identified in paragraphs (a) and (b) of this AD, TCM has already determined which engines have either a new or rebuilt suspect crankshaft installed, and identified those engines by engine S/N. Only for those engines identified in paragraphs (c) and (d) of this AD does crankshaft serial number play a role in determining the need for visual and UT inspections.

Note 4: The engine S/Ns listed in TCM MSB 99-3C and TCM CSB 99-6A contain only the numerical portion of the S/N. Rebuilt engines will have the letter "R" at the end of the six digit numerical portion. This letter "R" should be disregarded and only the six digit numerical sequence should be used for determination of applicability. Only TCM is authorized to rebuild TCM engines and they have not approved any other agency to perform that function.

(1) If a crack is found, replace the crankshaft with a serviceable crankshaft of the same part number (P/N) prior to further flight.

(2) If no crack is found, reassemble the engine and return it to service.

(3) If inspections have been previously accomplished in accordance with earlier revision levels of TCM MSB 99-3 (previously CSB 99-3) or CSB 99-6, no further action is required.

(b) For those engines listed by S/N on pages 3 through 12 of MSB 99-3C, dated July 27, 1999, or on pages 2 and 3 of TCM CSB 99-6A dated July 21, 1999, with more than 500 hours TIS on the effective date of this AD, perform visual and UT inspections of the crankshaft for cracks at the next maintenance event, or within 50 hours TIS after the effective date of this AD, whichever comes first, in accordance with sections A and B of

TCM MSB 99-3C, dated July 27, 1999, or for the GTSIO-520 series engines, in accordance with sections A and B of TCM CSB 99-6A, dated July 21, 1999. These inspections must be performed by TCM representatives. Disposition the crankshaft as follows:

(1) If a crack is found, replace the crankshaft with a serviceable crankshaft of the same P/N prior to further flight.

(2) If no crack is found, reassemble the engine and return it to service.

(3) If inspections have been previously accomplished in accordance with earlier revision levels of TCM MSB 99-3 (previously CSB 99-3) or CSB 99-6, no further action is required.

(c) For any other engine that was overhauled at a facility other than TCM, and that has a crankshaft installed that was manufactured or rebuilt between January 1, 1998, and December 31, 1998, with 500 hours or less TIS on the effective date of this AD, perform visual and UT inspections of the crankshaft for cracks within 10 hours TIS after the effective date of this AD, in accordance with sections A and B of TCM MSB 99-3C, dated July 27, 1999, or for the GTSIO-520 series engines, in accordance with sections A and B of TCM CSB 99-6A, dated July 21, 1999. These inspections must be performed by TCM representatives. Disposition the crankshaft as follows:

(1) If a crack is found, replace the crankshaft with a serviceable crankshaft of the same P/N prior to further flight.

(2) If no crack is found, reassemble the engine and return it to service.

(3) If inspections have been previously accomplished in accordance with earlier revision levels of TCM MSB 99-3 (previously CSB 99-3) or CSB 99-6, no further action is required.

Note 5: The crankshaft manufacture date may be determined from the crankshaft serial number, which consists of eight characters, arranged as follows:

Position:	1	2,3	4,5	6,7	8
Content:	Letter A – L, representing month of manufacture	Day of month manufactured	Year of manufacture	Sequence number of crankshaft manufactured on that day	Always "N"
Example:	C	22	98	05	N

The example crankshaft, with a serial number of "C229805N", indicates a date of manufacture of March 22, 1998.

(d) For any other engine that was overhauled at a facility other than TCM, and that has a crankshaft installed that was manufactured or rebuilt between January 1, 1998, and December 31, 1998, with more than 500 hours TIS on the effective date of this AD, perform visual and UT inspections of the crankshaft for cracks at the next maintenance event, or within 50 hours TIS after the effective date of this AD, whichever comes first, in accordance with sections A and B of TCM MSB 99-3C, dated July 27, 1999, or for the GTSIO-520 series engines, in accordance with sections A and B of TCM CSB 99-6A dated July 21, 1999. These inspections must be performed by TCM representatives. Disposition the

crankshaft as follows:

(1) If a crack is found, replace the crankshaft with a serviceable crankshaft of the same P/N prior to further flight.

(2) If no crack is found, reassemble the engine and return it to service.

(3) If inspections have been previously accomplished in accordance with earlier revision levels of TCM MSB 99-3 (previously CSB 99-3) or CSB 99-6, no further action is required.

(e) After the effective date of this AD, installation of a crankshaft that was manufactured or rebuilt between January 1, 1998, and December 31, 1998, is prohibited, unless it has been inspected and reidentified in accordance with section C of TCM MSB 99-3C, dated July 27, 1999, or, for the GTSIO-520 series engines, in accordance with section C of TCM CSB 99-6A, dated July 21, 1999. These inspections must be performed by TCM.

(f) 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, Atlanta Aircraft Certification Office (ACO). Operators shall submit their requests through an appropriate FAA Principal Maintenance Inspector, who may add comments and then send it to the Manager, Atlanta ACO.

Note 6: Information concerning the existence of approved alternative methods of compliance with this airworthiness directive, if any, may be obtained from the Atlanta ACO.

(g) 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 airplane to a location where the inspection requirements of this AD can be accomplished.

(h) The actions required by this AD shall be accomplished in accordance with the following TCM SB's:

Document No.	Page	Date
MSB 99-3C	1-26	July 27, 1999
Total pages: 26.		
CSB 99-6A	1-13	July 21, 1999
Total pages: 13.		

This incorporation by reference was approved by the Director of the Federal Register in accordance with 5 U.S.C. 552(a) and 1 CFR part 51. Copies may be obtained from Teledyne Continental Motors, PO Box 90, Mobile, AL 36601; telephone toll free (888) 200-7565. Copies may be inspected at the FAA, New England Region, Office of the Regional Counsel, 12 New England Executive Park, Burlington, MA; or at the Office of the Federal Register, 800 North Capitol Street, NW, suite 700, Washington, DC.

(i) This amendment supersedes priority letter AD 99-09-17, issued April 22, 1999.

(j) This amendment becomes effective on September 30, 1999.

FOR FURTHER INFORMATION CONTACT:

Jerry Robinette, Aerospace Engineer, Atlanta Aircraft Certification Office, FAA, Small Airplane Directorate, One Crown Center, 1895 Phoenix Blvd., Suite 450, Atlanta, GA 30349; telephone (770) 703-6096, fax (770) 703-6097.