

PŘÍKAZ K ZACHOVÁNÍ LETOVÉ ZPŮSOBILOSTI

CAA-AD-1-017/98

Datum vydání: 10. března 1998

MOTOR - KLIKOVÁ HŘÍDEL - KONTROLA

Týká se: čtyřválcových pístových motorů Textron Lycoming 320 (o výkonu 160 koňských sil a větším), Textron Lycoming 360, s vrtulemi s pevnými listy ; mimo motorů: HO-360, HIO-360, LHIO-360, VO-360, IVO-360, O-320-B2C, O-360-J2A, AEIO-360-B4A, O-360-A4A, -A4G, -A4J, -A4K, -A4M, a -C4F instalovaných na vrtulnicích nebo s plnou klikovou hřídelí (plného průřezu). Dále se netýká motorů s klikovou hřídelí označenou skupinou písmen "PID" na vnějším průměru vrtulové příruby.

Důvod vydání:

1)Hlášení o trhlinách na klikové hřídeli způsobovaných důlkovou korozí vnitřního průměru.

2)Zabránit poškození klikové hřídele, které může vést k selhání motoru, oddělení vrtule, nouzovému přistání a možnému poškození letadla (zaznamenán případ, kdy letadlo s motorem Textron Lycoming O-320-D3G bylo nuceno provést nouzové přistání zaviněné poškozením klikové hřídele spojené se ztrátou vrtule).

Datum účinnosti: 30.03.1998

Provést v termínech: jak je popsáno v části "Compliance" FAA AD 98-02-08 (příloha tohoto PZZ).

Postup provedených prací: dle části "Compliance" FAA AD 98-02-08.

Poznámky: Provedení tohoto PZZ musí být zapsáno do motorové knihy. Případné dotazy týkající se tohoto PZZ adresujte na ÚCL technický inspektorát - Ing. Beneš. Pokud to vyžaduje povaha tohoto PZZ musí být zapracován do příslušné části dokumentace pro obsluhu, údržbu a opravy letadla. Tento PZZ byl vypracován na základě FAA AD 98-02-08.

Ing. Pavel MATOUŠEK

Ředitel technického inspektorátu

Úřad pro civilní letectví

98-02-08 Textron Lycoming

Amendment 39-10291. Docket 94-ANE-44.

Applicability: Textron Lycoming 320 series limited to 160 horsepower, and 360 series, four cylinder reciprocating engines with fixed pitch propellers; except for the following installed in helicopters or with solid crankshafts: HO-360 series, HIO-360 series, LHIO-360 series, VO-360 series, and IVO-360 series, and Models O-320-B2C, O-360-J2A, AEIO-

360-B4A, O-360-A4A, -A4G, -A4J, -A4K, -A4M, and -C4F. In addition, engines with crankshafts containing "PID" stamped on the outside diameter of the propeller flange are exempt from the inspection requirements of this AD. The affected engines are installed on but not limited to reciprocating engine powered aircraft manufactured by Cessna, Piper, Beech, American Aircraft Corporation, Grumman American Aviation, Mooney, Augustair Inc., Maule Aerospace Technology Corporation, Great Lakes Aircraft Co., and Commander Aircraft Co.

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 (g) 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, which can result in engine failure, propeller separation, forced landing, and possible damage to the aircraft, accomplish the following:

(a) For engines shipped new from Textron Lycoming prior to and including December 31, 1984, and that have never been overhauled, or any engine remanufactured or overhauled and that has accumulated 1,000 hours or more time in service (TIS) since remanufacture or overhaul, visually inspect the inside diameter (ID) of the crankshaft for corrosion pits within the next 100 hours TIS after the effective date of this AD, or 6 months after the effective date of this AD, whichever occurs first, in accordance with Textron Lycoming Mandatory Service Bulletin (MSB) No. 505B, dated December 1, 1997.

(1) If corrosion pits are found during this inspection, prior to further flight, accomplish the following:

(i) If the crankshaft is installed in the engine such as during an on-wing inspection, perform a fluorescent penetrant inspection (FPI) in accordance with Textron Lycoming MSB No. 505B, dated December 1, 1997.

(ii) If the crankshaft is removed from the engine at overhaul, perform a magnetic particle inspection (MPI) in accordance with Textron Lycoming MSB No. 505B, dated December 1, 1997.

(2) Within 48 hours after these inspections, report the finding of the inspection in accordance with paragraph (e) of this AD.

(b) For engines shipped new from Textron Lycoming after December 31, 1984, and that have never been overhauled, or any engine remanufactured or overhauled and that has accumulated less than 1,000 hours TIS since remanufacture or overhaul, visually inspect the ID of the crankshaft for corrosion pits, at the earliest occurrence of any event specified in subparagraph (3) of this paragraph, and in accordance with Textron Lycoming MSB No. 505B, dated December 1, 1997.

(1) If corrosion pits are found during this inspection, prior to further flight perform an FPI or MPI in accordance with Textron Lycoming MSB No. 505B, dated December 1, 1997.

(2) Within 48 hours after these inspections, report the finding of the inspection in accordance with paragraph (e) of this AD.

(3) Visually inspect the ID of the crankshaft for corrosion pits at the earliest of the following:

(i) The next engine overhaul or disassembly.

(ii) Within 10 years of the original shipping date or 6 months from the effective date of this AD, whichever occurs later.

(iii) Within 1,000 hours TIS since remanufacture or overhaul, or 6 months from the effective date of this AD, whichever occurs later.

(c) Thereafter, if no corrosion pits or cracks are found on the ID of the crankshaft during the initial visual inspection, perform a visual inspection at intervals not to exceed 5 years since last inspection, or at the next engine overhaul or disassembly, whichever occurs first, in accordance with Textron Lycoming MSB No. 505B, dated December 1, 1997. If corrosion pits but no cracks are found on the ID of the crankshaft during the initial visual inspection and the ID does not exceed the maximum ID specified in Textron Lycoming MSB No. 505B, dated December 1, 1997, repeat the FPI at intervals not to exceed 100 hours TIS since last FPI or until a serviceable crankshaft is installed in the engine.

(d) Prior to further flight, remove from service and replace with a serviceable part any crankshaft found cracked during FPI or MPI performed in accordance with Textron Lycoming MSB No. 505B, dated December 1, 1997.

(e) After accomplishing the initial visual inspection and, if necessary, the FPI or MPI, required by this AD, complete Appendix 1 of this AD and submit to the Manager, New York Aircraft Certification Office, FAA, Engine and Propeller Directorate, 10 Fifth St., Valley Stream, NY 11581; fax (516) 568-2716. Reporting requirements have been approved by the Office of Management and Budget and assigned OMB control number 2120-0056.

(f) The application of Urethabond 104 to the inner bore of the crankshaft and confirmed by stamping of the letters "PID" on the outside diameter of the propeller flange in accordance with Textron Lycoming MSB No. 530, dated December 1, 1997, constitutes terminating action to the inspection requirements of this AD.

(g) 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, New York Aircraft 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, New York Aircraft 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 New York Aircraft Certification Office.

(h) 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.

(i) The actions required by this AD shall be done in accordance with the following Textron Lycoming MSB:

Document No	Pages	Date
505B	1-5	December 1, 1997
Total Pages: 5		
530	1-2	December 1, 1997
Total Pages: 2		

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 Textron Lycoming, 652 Oliver St., Williamsport, PA 17701; telephone (717) 327-7080, fax (717) 327-7100. 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.

(j) This amendment becomes effective on March 30, 1998.

FOR FURTHER INFORMATION CONTACT: Rocco Viselli or Raymond Reinhardt, Aerospace Engineers, New York Aircraft Certification Office, FAA, Engine and Propeller Directorate, 10 Fifth St., Valley Stream, NY 11581-1200; telephone (516) 256-7531, fax (516) 568-2716.

TEXTRON LYCOMING CRANKSHAFT INSPECTION SURVEY

AD DOCKET NO. 94-ANE-44

Date of Inspection _____

Inspector's Information

Name

Address

State

Zip Code

Telephone No.

Facsimile No.

Engine Model Number _____

Engine Serial Number (S/N) _____

Date of Manufacture _____ (M/D/YR) Total Time (TT) _____ hrs

Time Since Major Overhaul (SMOH) _____ hrs Crankshaft Part Number (located on prop flange)

S/N _____

Aircraft Make and Model _____

Frequency of Flights _____ per month (average)

Duration _____ hrs per Flight

How was aircraft being utilized? ____ Training, ____ Personal, ____ Banner Towing,

____ Glider Towing, ____ Agricultural, Other (please explain)

Propeller Make and Model _____

Has the aircraft ever experienced a propeller strike during service? ____ Yes ____ No

Was propeller ever removed for servicing or overhaul? _____ Yes _____ No

If yes, describe reason for removal in detail? _____

What was the condition of the crankshaft internal bore?

Corroded _____ Yes _____ No If corroded, how many pits? _____ 1 to 5, _____ 6 to 10, _____ More than 10

Was a crack found? _____ Yes _____ No. If crack was found, complete the following:

_____ Distance from crankshaft end (Inches) _____ Crack Length (Inches)

COMMENTS: