

2009-19-07 Teledyne Continental Motors: Amendment 39-16023. Docket No. FAA-2009-0367; Directorate Identifier 2009-NE-10-AD.

Effective Date

(a) This airworthiness directive (AD) becomes effective October 7, 2009.

Affected ADs

(b) None.

Applicability

(c) This AD applies to Teledyne Continental Motors (TCM) O-470, IO-470, TSIO-470, IO-520, TSIO-520, IO-550, and IOF-550 reciprocating engine models listed in Table 1 of this AD that have one or more affected TCM cylinders installed. To identify the affected cylinders, cross reference the engine models in Table 1 of this AD with the engine serial numbers found in Tables 1, 1A, 2, and 2A of TCM Mandatory Service Bulletin (MSB) No. MSB09-1B, dated July 14, 2009. Use the tables found in MSB No. MSB09-1B, dated July 14, 2009, to also identify spare EQ3 cylinders by cylinder part number and cylinder serial number that may have been installed on these engines.

Table 1--Engine Models Affected

O-470-G, K, L, R, S, M, U
IO-470-C, D, E, F, H, L, M, N, S, U, V, VO
TSIO-470-B, C, D
IO-520-A, B, BA, BB, C, CB, D, E, F, J, K, L, M, MB
TSIO-520-AF, B, BB, C, CE, D, DB, E, EB, G, H, J, JB, K, KB, L, LB, M, N, NB, P, R, T, UB, VB, WB
IO-550-A, B, C, D, E, F, L
IOF-550-B, C, D, E, F, L

(d) These engines are installed on, but not limited to, Alexandria Aircraft LLC (formerly Bellanca) model 300 Super Viking; Beech Bonanza 33, 35 and 36 series, Beech Baron 56 and 58 series, Cessna 180, 182, 188, 205, 206, 207, 210, 303, 310, 320, 402, and 414 model series; Aero Commander 200 and 500; certain Rockwell (formerly Meyers) Windecker Eagle 200, and Navion airplanes.

Unsafe Condition

(e) This AD results from reports of 35 EQ3 cylinders found cracked. We are issuing this AD to prevent loss of engine power due to cracks in the cylinder head, possible engine failure, and fire in the engine compartment.

Compliance

(f) You are responsible for having the actions required by this AD performed within the compliance times specified unless the actions have already been done.

Identification and Initial Visual Inspection

(g) Within 20 flight hours after the effective date of this AD, identify EQ3 cylinders using Step 1 of TCM MSB No. MSB09-1B, dated July 14, 2009.

(1) Within 20 flight hours after the effective date of this AD, for EQ3 cylinders with 400 or more hours total time of operation on the effective date of this AD, perform an initial visual inspection of the cylinder for cracks using Step 2, paragraph B, of TCM MSB No. MSB09-1B, dated July 14, 2009.

(2) For EQ3 cylinders with fewer than 400 hours total time of operation on the effective date of this AD, perform an initial visual inspection of the cylinder for cracks before reaching 400 hours total time of operation, using Step 2, paragraph B, of TCM MSB No. MSB09-1B, dated July 14, 2009.

(3) Remove from service before flight, any cylinders found cracked.

Repetitive Visual Inspections

(h) Repeat the visual inspections required by this AD every 50 hours of operation. Use Step 2, paragraph B, of TCM MSB No. MSB09-1B, dated July 14, 2009, to perform the inspection.

(i) Remove from service before flight, any cylinders found cracked.

Removal of All EQ3 Cylinders From Service

(j) Within 1,300 hours total time of operation after the effective date of this AD, remove all EQ3 cylinders from service.

EQ3 Cylinder Installation Prohibition

(k) After the effective date of this AD, do not install any EQ3 cylinder onto any engine, or any EQ3 cylinder-equipped engine, onto any aircraft.

Previous Credit

(l) Initial visual inspections done before the effective date of this AD per TCM MSB No. MSB09-1A, dated March 11, 2009, comply with the initial inspection requirements specified in this AD.

Alternative Methods of Compliance

(m) The Manager, Atlanta Aircraft Certification Office, has the authority to approve alternative methods of compliance for this AD if requested using the procedures found in 14 CFR 39.19.

Special Flight Permits

(n) Under 14 CFR 39.23, we are limiting the special flight permits for this AD to engines that have no evidence of fuel or combustion staining in the cylinder crack location, and for a total special flight time of 5 hours.

Related Information

(o) Contact Anthony Holton, Engineer, Propulsion, Atlanta Aircraft Certification Office, FAA, Small Airplane Directorate, 1701 Columbia Avenue, College Park, Georgia 30337; e-mail anthony.holton@faa.gov; telephone: (404) 474-5567; fax: (404) 474- 5606, for more information about this AD.

Material Incorporated by Reference

(p) You must use Teledyne Continental Motors Mandatory Service Bulletin No. MSB09-1B, dated July 14, 2009, to perform the actions required by this AD. The Director of the Federal Register approved the incorporation by reference of this service bulletin in accordance with 5 U.S.C. 552(a) and 1 CFR part 51. Contact Teledyne Continental Motors, Inc., PO Box 90, Mobile, AL 36601; telephone (251) 438-3411, or go to: <http://tcmlink.com/servicebulletins.cfm>, for a copy of this service information. You may review copies at the FAA, New England Region, 12 New England Executive Park, Burlington, MA; or at the National Archives and Records Administration (NARA). For information on the availability of this material at NARA, call 202-741-6030, or go to: <http://www.archives.gov/federal-register/cfr/ibr-locations.html>.