

2020-16-11 CONTINENTAL AEROSPACE TECHNOLOGIES, INC. (TYPE CERTIFICATE PREVIOUSLY HELD BY CONTINENTAL MOTORS, INC.):
Amendment 39-21195; Docket No. FAA-2020-0222;
Project Identifier AD-2019-00116-E.

(a) EFFECTIVE DATE

This AD is effective September 21, 2020.

(b) AFFECTED ADS

None.

(c) APPLICABILITY

This AD applies to Continental Aerospace Technologies, Inc. (Type Certificate previously held by Continental Motors, Inc.) model GTSIO-520-C, GTSIO-520-D, GTSIO-520-H, GTSIO-520-K, GTSIO-520-L, GTSIO-520-M, GTSIO-520-N, IO-550-G, IO-550-N, IO-550-P, IO-550-R, IOF-550-N, IOF-550-P, IOF-550-R, TSIO-520-BE, TSIO-550-A, TSIO-550-B, TSIO-550-C, TSIO-550-E, TSIO-550-G, TSIO-550-K, TSIO-550-N, TSIOF-550-D, TSIOF-550-J, TSIOF-550-K, and TSIOF-550-P reciprocating aviation gasoline (AvGas) engines, originally manufactured, rebuilt, or modified with a cross-flow cylinder assembly replacement, on or after November 1, 2014, and with a cross-flow cylinder assembly, part number (P/N) 658538, 658540, 658542, 658591, 658595, 658613, 658624, 658539, 658541, 658590, 658594, 658603, 658623, or 658630, installed.

(d) SUBJECT

Joint Aircraft System Component (JASC) Code 8530, Reciprocating Cylinder Section.

(e) UNSAFE CONDITION

This AD was prompted by reports of in-flight engine failures due to fractured cross-flow cylinder assemblies. The FAA is issuing this AD to prevent failure of the engine. The unsafe condition, if not addressed, could result in failure of the engine, in-flight shutdown, and forced landing.

(f) COMPLIANCE

Comply with this AD within the compliance times specified, unless already done.

(g) REQUIRED ACTIONS

- (1) If the engine has fewer than 500 engine operating hours on the effective date of this AD, no later than the next scheduled 100-hour inspection or next scheduled annual inspection after the effective date of this AD, whichever is applicable based on the type of aircraft operation, perform a visual inspection of the cross-flow cylinder assembly using paragraphs III.1 through III.3, Action Required, of Continental Aerospace Technologies, Inc. Mandatory Service Bulletin (MSB) 18-08, Revision B, dated January 13, 2020 ("Continental Aerospace Technologies MSB18-08B").
- (i) If the radius corner angle of the cross-flow cylinder assembly shows casting flash build-up or a sharp radius edge, modify the cross-flow cylinder assembly using paragraphs III.4 through III.8, Action Required, of Continental Aerospace Technologies MSB 18-08B; or
- (ii) If a fissure, crack or physical damage is identified, remove the cross-flow cylinder assembly and replace with a part eligible for installation.

(2) If the engine has 500 engine operating hours or greater on the effective date of this AD, at the next maintenance event after the effective date of this AD, not to exceed 50 engine operating hours after the effective date of this AD, perform a visual inspection of the cross-flow cylinder assembly using paragraphs III.1 through III.3, Action Required, of Continental Aerospace Technologies MSB18-08B.

(i) If the radius corner angle of the cross-flow cylinder assembly shows casting flash build-up or a sharp radius edge, modify the cross-flow cylinder assembly using paragraphs III.4 through III.8, Action Required, of Continental Aerospace Technologies MSB 18-08B; or

(ii) If a fissure, crack or physical damage is identified, remove the cross-flow cylinder assembly and replace with a part eligible for installation.

(h) INSTALLATION PROHIBITION

After the effective date of this AD, do not install any cross-flow cylinder assembly having a P/N identified in paragraph (c) of this AD on any affected engine unless the cross-flow cylinder assembly has been visually inspected and modified using paragraph III, Action Required, of Continental Aerospace Technologies MSB18-08B.

(i) NO REPORTING REQUIREMENT

The reporting requirement in paragraph III, Action Required, of Continental Aerospace Technologies MSB18-08B is not required by this AD.

(j) DEFINITIONS

(1) For the purpose of this AD, "the next maintenance event" is the next scheduled 100-hour/annual inspection, overhaul, or the next time the airplane enters maintenance for a non-engine issue, whichever occurs first.

(2) For the purpose of this AD, "modify the cross-flow cylinder assembly" is the removal of the casting material build-up by blending the cross-flow cylinder assembly radius corner.

(k) CREDIT FOR PREVIOUS ACTIONS

You may take credit for the visual inspection and modification that is required by paragraph (g) of this AD, if the inspection or modification was performed before the effective date of this AD using Continental Motors Aircraft Engine Service Bulletin 18-08 Revision A, dated January 11, 2019.

(l) ALTERNATIVE METHODS OF COMPLIANCE (AMOCs)

(1) The Manager, Atlanta ACO Branch, FAA, has the authority to approve AMOCs for this AD, if requested using the procedures found in 14 CFR 39.19. In accordance with 14 CFR 39.19, send your request to your principal inspector or local Flight Standards District Office, as appropriate. If sending information directly to the manager of the certification office, send it to the attention of the person identified in paragraph (m) of this AD.

(2) Before using any approved AMOC, notify your appropriate principal inspector, or lacking a principal inspector, the manager of the local flight standards district office/certificate holding district office.

(m) RELATED INFORMATION

For more information about this AD, contact Boyce Jones, Aerospace

Engineer, Atlanta ACO Branch, FAA, 1701 Columbia Avenue, College Park, Georgia 30337; phone: 404-474-5535; fax: 404-474-5606; email: boyce.jones@faa.gov.

(n) MATERIAL INCORPORATED BY REFERENCE

- (1) The Director of the Federal Register approved the incorporation by reference (IBR) of the service information listed in this paragraph under 5 U.S.C. 552(a) and 1 CFR part 51.
- (2) You must use this service information as applicable to do the actions required by this AD, unless the AD specifies otherwise.
- (i) Continental Aerospace Technologies, Inc. Mandatory Service Bulletin 18-08, Revision B, dated January 13, 2020.
- (ii) [Reserved]
- (3) For Continental Aerospace Technologies, Inc. service information identified in this AD, contact Continental Aerospace Technologies, Inc., 2039 South Broad Street, Mobile, Alabama 36615; phone: 251-436-8299; website: <http://www.continentalmotors.aero>.
- (4) You may view this service information at FAA, Airworthiness Products Section, Operational Safety Branch, 1200 District Avenue, Burlington, MA 01803. For information on the availability of this material at the FAA, call 781-238-7759.
- (5) You may view this service information that is incorporated by reference at the National Archives and Records Administration (NARA). For information on the availability of this material at NARA, email: fedreg.legal@nara.gov, or go to: <https://www.archives.gov/federal-register/cfr/ibr-locations.html>.

Issued on August 4, 2020. Lance T. Gant, Director, Compliance & Airworthiness Division, Aircraft Certification Service.

FOR FURTHER INFORMATION CONTACT: Boyce Jones, Aerospace Engineer, Atlanta ACO Branch, FAA, 1701 Columbia Avenue, College Park, Georgia 30337; phone: 404-474-5535; fax: 404-474-5606; email: boyce.jones@faa.gov.

