

(a) Effective Date

This airworthiness directive (AD) is effective March 15, 2023.

(b) Affected ADs

This AD replaces AD 2023-04-08, Amendment 39-22355 (88 FR 11383, February 23, 2023).

(c) Applicability

This AD applies to Continental Aerospace Technologies, Inc. (Continental) GTSIO-520-C, -D, -H, -K, -L, -M, -N, and -S; IO-360-A, -AB, -AF, -C, -CB, -D, -DB, -E, -ES, -G, -GB, -H, -HB, -J, -JB, -K, and -KB; IO-470-A, -C, -D, -E, -F, -G, -H, -J, -K, -L, -LO, -M, -N, -P, -R, -S, -T, -U, -V, and -VO; IO-520-A, -B, -BA, -BB, -C, -CB, -D, -E, -F, -J, -K, -L, -M, and -MB; IO-550-A, -B, -C, -D, -E, -F, -G, -L, -N, -P, and -R; LTSIO-360-E, -EB, -KB, and -RB; LTSIO-520-AE; O-470-A, -B, -E, -G, -H, -J, -K, -L, -M, -N, -R, -S, -T, and -U; TSIO-360-A, -AB, -B, -BB, -C, -CB, -D, -DB, -E, -EB, -F, -FB, -G, -GB, -H, -HB, -JB, -KB, -LB, -MB, -RB, and -SB; TSIO-520-A, -AE, -AF, -B, -BB, -BE, -C, -CE, -D, -DB, -E, -EB, -G, -H, -J, -JB, -K, -KB, -L, -LB, -M, -NB, -P, -R, -T, -UB, -VB, and -WB; TSIO-550-A, -B, -C, -E, -G, -K, and -N; TSIOF-550-K; and TSIOL-550-A, -B, and -C model reciprocating engines.

(d) Subject

Joint Aircraft System Component (JASC) Code 8520, Reciprocating Engine Power Section.

(e) Unsafe Condition

This AD was prompted by a report of a quality escape involving improper installation of counterweight retaining rings in the counterweight groove during manufacture. The FAA is issuing this AD to prevent departure of counterweight and retaining hardware from the crankshaft assembly. The unsafe condition, if not addressed, could result in loss of engine oil pressure, catastrophic engine damage, engine seizure, and consequent loss of the aircraft.

(f) Compliance

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

(g) Required Action

For affected engines with an installed crankshaft assembly identified in paragraphs (g)(1) or (2) of this AD, before further flight, do the actions identified in, and in accordance with paragraph III, Action Required, of Continental Mandatory Service Bulletin MSB23-01, Revision A, dated February 16, 2023 (MSB23-01A).

(1) Crankshaft assembly having a crankshaft serial number listed in Appendix 1 of MSB23-01A; or

(2) Crankshaft assembly that was repaired or installed on or after June 1, 2021, having a part number and crankshaft serial number listed in Appendix 2 of MSB23-01A.

(h) Exception to the Service Information

Where paragraph III.1.a. of MSB23-01A specifies actions for spare crankshaft assemblies, this AD does not require those actions.

(i) Parts Installation Prohibition

After the effective date of this AD, do not install on any engine a crankshaft assembly having a crankshaft serial number identified in Appendix 1 or Appendix 2 of MSB23-01A, unless the actions required by paragraph (g) of this AD have first been accomplished for that crankshaft assembly.

(j) Credit for Previous Actions

This paragraph provides credit for the actions specified in paragraph (g) of this AD, if those actions were performed before the effective date of this AD using Continental Mandatory Service Bulletin MSB23-01, dated February 13, 2023.

(k) Special Flight Permit

Special flight permits may be issued in accordance with 14 CFR 21.197 and 21.199 to only permit a one-time, non-revenue ferry flight to operate the aircraft to a location where the maintenance actions can be performed, provided that the engine first undergoes, or has undergone within the previous five flight hours, an oil change and filter/screen replacement that was accomplished by an appropriately rated mechanic or repair station, and any material found in the spent oil and oil filter pleats or oil screen has been evaluated to assess the engine's condition.

Note 1 to paragraph (k) of this AD: Guidance for accomplishing the actions required by paragraph (k) of this AD can be found in Section 6-4.8.2 and Section 6-4.8.5.1 of Continental Aerospace Technologies Standard Practice Maintenance Manual, Revision 1, Change 3, dated January 6, 2023 (also known as M-0).

(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)(1) 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

(1) For more information about this AD, contact Nicholas Reid, Aviation Safety Engineer, Atlanta ACO Branch, FAA, 1701 Columbia Avenue, College Park, GA 30337; phone: (404) 474-5650; email: nicholas.j.reid@faa.gov.

(2) Service information identified in this AD that is not incorporated by reference is available at the addresses specified in paragraphs (n)(4) and (5) of this AD.

(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.

(3) The following service information was approved for IBR on February 23, 2023 (88 FR 11383, February 23, 2023).

(i) Continental Aerospace Technologies, Inc. Mandatory Service Bulletin MSB23-01, Revision A, dated February 16, 2023.

(ii) [Reserved]

(4) For Continental service information identified in this AD, contact Continental Aerospace Technologies, Inc., 2039 South Broad Street, Mobile, AL 36615; phone: (251) 308-9100; email: MSB23Support@continental.aero; website: continental.aero.

(5) You may view this service information at the 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 (817) 222-5110.

(6) 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: fr.inspection@nara.gov, or go to: www.archives.gov/federal-register/cfr/ibr-locations.html.