



DEPARTMENT OF TRANSPORTATION

Federal Aviation Administration

14 CFR Part 39

[Docket No. FAA-2025-3432; Project Identifier MCAI-2024-00743-E; Amendment 39-23171; AD 2025-20-18]

RIN 2120-AA64

Airworthiness Directives; Continental Aerospace Technologies GmbH Engines

AGENCY: Federal Aviation Administration (FAA), DOT.

ACTION: Final rule; request for comments.

SUMMARY: The FAA is adopting a new airworthiness directive (AD) for all Continental Aerospace Technologies GmbH (Continental) Model TAE 125-02-125 engines. This AD was prompted by multiple reports of cracks in the cylinder heads, which can cause engine coolant to leak into the combustion chamber. This AD requires a one-time inspection of the engine coolant for contamination and, depending on the inspection results, replacement of the coolant and replacement of the cylinder heads. This AD also prohibits installing a cylinder head on any engine unless it is a serviceable part. The FAA is issuing this AD to address the unsafe condition on these products.

DATES: This AD is effective [INSERT DATE 15 DAYS AFTER DATE OF PUBLICATION IN THE FEDERAL REGISTER].

The Director of the Federal Register approved the incorporation by reference of a certain publication listed in this AD as of [INSERT DATE 15 DAYS AFTER DATE OF PUBLICATION IN THE FEDERAL REGISTER].

The FAA must receive comments on this AD by [INSERT DATE 45 DAYS AFTER DATE OF PUBLICATION IN THE FEDERAL REGISTER].

ADDRESSES: You may send comments, using the procedures found in 14 CFR 11.43 and 11.45, by any of the following methods:

- Federal eRulemaking Portal: Go to regulations.gov. Follow the instructions for submitting comments.

- Fax: (202) 493-2251.

- Mail: U.S. Department of Transportation, Docket Operations, M-30, West Building Ground Floor, Room W12-140, 1200 New Jersey Avenue SE, Washington, DC 20590.

- Hand Delivery: Deliver to Mail address above between 9 a.m. and 5 p.m., Monday through Friday, except Federal holidays.

AD Docket: You may examine the AD docket at regulations.gov under Docket No. FAA-2025-3432; or in person at Docket Operations between 9 a.m. and 5 p.m., Monday through Friday, except Federal holidays. The AD docket contains this final rule, the mandatory continuing airworthiness information (MCAI), any comments received, and other information. The street address for Docket Operations is listed above.

Material Incorporated by Reference:

- For Continental material identified in this AD, contact Continental, Platanenstrasse 14, 09356 Sankt Egidien, Germany; phone: +49 37204 696 0; email: support@continentaldiesel.com; website: continentaldiesel.com.

- You may view this material at the FAA, Operational Safety Branch, 1200 District Avenue, Burlington, MA 01803. For information on the availability of this material at the FAA, call (817) 222-5110. It is also available at regulations.gov under Docket No. FAA-2025-3432.

FOR FURTHER INFORMATION CONTACT: Rawle Thomas, Aviation Safety Engineer, FAA, 1600 Stewart Avenue, Suite 410, Westbury, NY 11590; phone: (404) 474-5576; email: rawle.f.thomas@faa.gov.

SUPPLEMENTARY INFORMATION:

Comments Invited

The FAA invites you to send any written data, views, or arguments about this final rule. Send your comments using a method listed under the ADDRESSES section. Include “Docket No. FAA-2025-3432; Project Identifier MCAI-2024-00743-E” at the beginning of your comments. The most helpful comments reference a specific portion of the final rule, explain the reason for any recommended change, and include supporting data. The FAA will consider all comments received by the closing date and may amend this final rule because of those comments.

Except for Confidential Business Information (CBI) as described in the following paragraph, and other information as described in 14 CFR 11.35, the FAA will post all comments received, without change, to regulations.gov, including any personal information you provide. The agency will also post a report summarizing each substantive verbal contact received about this final rule.

Confidential Business Information

CBI is commercial or financial information that is both customarily and actually treated as private by its owner. Under the Freedom of Information Act (FOIA) (5 U.S.C. 552), CBI is exempt from public disclosure. If your comments responsive to this AD contain commercial or financial information that is customarily treated as private, that you actually treat as private, and that is relevant or responsive to this AD, it is important that you clearly designate the submitted comments as CBI. Please mark each page of your submission containing CBI as “PROPIN.” The FAA will treat such marked submissions as confidential under the FOIA, and they will not be placed in the public docket of this AD. Submissions containing CBI should be sent to Rawle Thomas, Aviation Safety Engineer, FAA, 1600 Stewart Avenue, Suite 410, Westbury, NY 11590.

Any commentary that the FAA receives which is not specifically designated as CBI will be placed in the public docket for this rulemaking.

Background

The European Union Aviation Safety Agency (EASA), which is the Technical Agent for the Member States of the European Union, has issued EASA AD 2024-0236, dated December 10, 2024 (EASA AD 2024-0236) (also referred to as the MCAI), to correct an unsafe condition on all Continental Model TAE 125-02-125 engines. The MCAI states that several cases of cracks in cylinder heads have been reported. The MCAI further states that these cracks may cause leakage of engine coolant into the combustion chamber(s), causing loss of coolant, which could lead to engine overheat and eventual engine failure or seizure. Additionally, the MCAI states that contamination of the engine coolant, especially with potassium, triggers certain critical types of chemical corrosion, depending on the nature of such contamination. The investigation of the root cause for the cylinder head ruptures is still ongoing. Accordingly, the MCAI is considered an interim action.

This condition, if not addressed, could result in an uncommanded in-flight shutdown of the engine and a forced landing, which could result in damage to the airplane and injury to occupants.

You may examine the MCAI in the AD docket at [regulations.gov](https://www.regulations.gov) under Docket No. FAA-2025-3432.

Material Incorporated by Reference Under 1 CFR Part 51

The FAA reviewed Continental Service Bulletin (SB) CG 125-1030 P1, Revision 4, dated January 10, 2025. This material specifies procedures for a one-time inspection of the engine coolant for contamination using the minimum and maximum acceptable ranges for the two coolant types as specified in the material. This material also specifies procedures for labeling the coolant samples.

This material is reasonably available because the interested parties have access to it through their normal course of business or by the means identified in the ADDRESSES section.

FAA's Determination

These products have been approved by the civil aviation authority of another country and are approved for operation in the United States. Pursuant to the FAA's bilateral agreement with this State of Design Authority, that authority has notified the FAA of the unsafe condition described in the MCAI and material referenced above. The FAA is issuing this AD after determining that the unsafe condition described previously is likely to exist or develop on other products of the same type design.

AD Requirements

This AD requires a one-time inspection of the engine coolant for contamination and, depending on the results, replacing the cylinder heads with a serviceable part for engines in which the coolant sample has aluminum or fluoride that exceeds the acceptable range; or draining and flushing the engine cooling system and refilling it with new coolant for engines in which the coolant sample exceeds any acceptable range, except for aluminum and fluoride. This AD also prohibits installing a cylinder head on any engine unless it is a serviceable part.

Interim Action

The FAA considers this AD interim action. The unsafe condition is still under investigation by the manufacturer. If final action is later identified, the FAA might consider further rulemaking.

Justification for Immediate Adoption and Determination of the Effective Date

Section 553(b) of the Administrative Procedure Act (APA) (5 U.S.C. 551 *et seq.*) authorizes agencies to dispense with notice and comment procedures for rules when the agency, for "good cause," finds that those procedures are "impracticable, unnecessary, or

contrary to the public interest.” Under this section, an agency, upon finding good cause, may issue a final rule without providing notice and seeking comment prior to issuance. Further, section 553(d) of the APA authorizes agencies to make rules effective in less than thirty days, upon a finding of good cause.

An unsafe condition exists that requires the immediate adoption of this AD without providing an opportunity for public comments prior to adoption. The FAA has found that the risk to the flying public justifies forgoing notice and comment prior to adoption of this rule because contamination of the engine coolant can cause chemical corrosion, which could lead to cracks in the cylinder heads and allow engine coolant to leak into the combustion chamber. Additionally, cylinder heads are critical components to maintaining controlled flight. The FAA has no information pertaining to the root cause, the extent of the root cause that may currently exist in airplanes, or how quickly the root cause may propagate to failure. Additionally, the compliance time in this AD for the required actions is within 5 flight hours (FH) for engines with 50 FH or more since the last engine coolant replacement or since new, which is shorter than the time necessary for the public to comment and for publication of the final rule. Accordingly, notice and opportunity for prior public comment are impracticable and contrary to the public interest pursuant to 5 U.S.C. 553(b).

In addition, the FAA finds that good cause exists pursuant to 5 U.S.C. 553(d) for making this amendment effective in less than 30 days, for the same reasons the FAA found good cause to forgo notice and comment.

Regulatory Flexibility Act

The requirements of the Regulatory Flexibility Act (RFA) do not apply when an agency finds good cause pursuant to 5 U.S.C. 553 to adopt a rule without prior notice and comment. Because the FAA has determined that it has good cause to adopt this rule without prior notice and comment, RFA analysis is not required.

Costs of Compliance

The FAA estimates that this AD affects 30 engines installed on airplanes of U.S. registry.

The FAA estimates the following costs to comply with this AD:

Estimated costs

Action	Labor Cost	Parts Cost	Cost per product	Cost on U.S. operators
Inspect coolant	2 work-hours x \$85 per hour = \$170	\$0	\$170	\$5,100

The FAA estimates the following costs to do any necessary actions that would be required based on the results of the inspection. The agency has no way of determining the number of engines that might need these actions:

On-condition costs

Action	Labor Cost	Parts Cost	Cost per product
Drain, flush engine cooling system, and replace coolant	4 work-hours x \$85 per hour = \$340	\$20	\$360
Replace cylinder head	16 work-hours x \$85 per hour = \$1,360	\$10,000	\$11,360

Authority for this Rulemaking

Title 49 of the United States Code specifies the FAA's authority to issue rules on aviation safety. Subtitle I, section 106, describes the authority of the FAA Administrator. Subtitle VII: Aviation Programs describes in more detail the scope of the Agency's authority.

The FAA is issuing this rulemaking under the authority described in Subtitle VII, Part A, Subpart III, Section 44701: General requirements. Under that section, Congress charges the FAA with promoting safe flight of civil aircraft in air commerce by prescribing regulations for practices, methods, and procedures the Administrator finds necessary for safety in air commerce. This regulation is within the scope of that authority

because it addresses an unsafe condition that is likely to exist or develop on products identified in this rulemaking action.

Regulatory Findings

This AD will not have federalism implications under Executive Order 13132. This AD will not have a substantial direct effect on the States, on the relationship between the national government and the States, or on the distribution of power and responsibilities among the various levels of government.

For the reasons discussed above, I certify that this AD:

- (1) Is not a “significant regulatory action” under Executive Order 12866, and
- (2) Will not affect intrastate aviation in Alaska.

List of Subjects in 14 CFR Part 39

Air transportation, Aircraft, Aviation safety, Incorporation by reference, Safety.

The Amendment

Accordingly, under the authority delegated to me by the Administrator, the FAA amends 14 CFR part 39 as follows:

PART 39 - AIRWORTHINESS DIRECTIVES

- 1. The authority citation for part 39 continues to read as follows:

Authority: 49 U.S.C. 106(g), 40113, 44701.

§ 39.13 [Amended]

- 2. The FAA amends § 39.13 by adding the following new airworthiness directive:

2025-20-18 Continental Aerospace Technologies GmbH: Amendment 39-23171;

Docket No. FAA-2025-3432; Project Identifier MCAI-2024-00743-E.

(a) Effective Date

This airworthiness directive (AD) is effective [INSERT DATE 15 DAYS AFTER DATE OF PUBLICATION IN THE FEDERAL REGISTER].

(b) Affected ADs

None.

(c) Applicability

This AD applies to Continental Aerospace Technologies GmbH (Continental) Model TAE 125-02-125 engines.

(d) Subject

Joint Aircraft System Component (JASC) Code 1240, Coolant Servicing.

(e) Unsafe Condition

This AD was prompted by multiple reports of cracks in the cylinder heads, which can cause engine coolant to leak into the combustion chamber. The root cause of this damage is unknown, and the investigation is ongoing. The FAA is issuing this AD to detect and correct contamination of the engine coolant. The unsafe condition, if not addressed, could result in an uncommanded in-flight shutdown of the engine and a forced landing, which could result in damage to the airplane and injury to occupants.

(f) Compliance

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

(g) Definition

(1) For the purpose of this AD, a “serviceable part” is a cylinder head which is new (never installed), or a cylinder head which was not removed in accordance with paragraph (h)(2) of this AD.

(h) Required Actions

(1) Inspect (sampling and analysis) the engine coolant for contamination in accordance with Appendix B: Instruction to take coolant sample, of Continental Service Bulletin CG 125-1030 P1, Revision 4, dated January 10, 2025 (SB CG 125-1030 P1, Rev 4), at the applicable time in paragraph (h)(1)(i) or (ii) of this AD:

(i) For engines that have accumulated 50 flight hours (FH) or more since the last engine coolant replacement or 50 FH or more since new if the coolant has never been replaced, as of the effective date of this AD, within 5 FH after the effective date of this AD.

(ii) For engines that have accumulated less than 50 FH since the last engine coolant replacement or less than 50 FH since new if the coolant has never been replaced, as of the effective date of this AD, within 5 FH after accumulating 50 FH.

(2) If, during any inspection required by paragraph (h)(1) of this AD, the coolant sample contains aluminum or fluoride that exceeds the acceptable range as specified in Table 1: Limit values for G48 coolant type or Table 2: Limit values for G40 coolant type, as applicable, in Appendix A: Material, Methods and Limits, of SB CG 125-1030 P1, Rev 4, before further flight, remove the cylinder head and replace it with a serviceable part, flush the engine cooling system, and refill the cooling system with new coolant.

(3) If, during any inspection required by paragraph (h)(1) of this AD, the coolant sample exceeds any acceptable range, except for the aluminum or fluoride ranges, as specified in Table 1: Limit values for G48 coolant type or Table 2: Limit values for G40 coolant type, as applicable, in Appendix A: Material, Methods and Limits, of SB CG 125-1030 P1, Rev 4, before further flight, drain and flush the engine cooling system and refill the cooling system with new coolant.

(i) Installation Prohibition

After the effective date of this AD, do not install on any engine a cylinder head that is not a “serviceable part,” as defined in paragraph (g)(1) of this AD.

(j) Credit for Previous Actions

This paragraph provides credit for the inspections and part replacements required by paragraph (h) of this AD, if those actions were performed before the effective date of

this AD using Continental Service Bulletin CG 125-1030 P1, Revision 3, dated September 16, 2024.

(k) Alternative Methods of Compliance (AMOCs)

(1) The Manager, International Validation 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 International Validation Branch, send it to the attention of the person identified in paragraph (l) of this AD and email to AMOC@faa.gov.

(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.

(l) Additional Information

(1) For more information about this AD, contact Rawle Thomas, Aviation Safety Engineer, FAA, 1600 Stewart Avenue, Suite 410, Westbury, NY 11590; phone: (404) 474-5576; email: rawle.f.thomas@faa.gov.

(2) For Continental material, which is not incorporated by reference in this AD, contact Continental, Platanenstrasse 14, 09356 Sankt Egidien, Germany; phone: +49 37204 696 0; email: support@continentaldiesel.com; website: continentaldiesel.com.

(m) Material Incorporated by Reference

(1) The Director of the Federal Register approved the incorporation by reference (IBR) of the material listed in this paragraph under 5 U.S.C. 552(a) and 1 CFR part 51.

(2) You must use this material as applicable to do the actions required by this AD, unless the AD specifies otherwise.

(i) Continental Aerospace Technologies GmbH (Continental) Service Bulletin CG 125-1030 P1, Revision 4, dated January 10, 2025.

(ii) [Reserved]

(3) For Continental material identified in this AD, contact Continental, Platanenstrasse 14, 09356 Sankt Egidien, Germany; phone: +49 37204 696 0; email: support@continentaldiesel.com; website: continentaldiesel.com.

(4) You may view this material at the FAA, Operational Safety Branch, 1200 District Avenue, Burlington, MA 01803. For information on the availability of this material at the FAA, call (817) 222-5110.

(5) You may view this material at the National Archives and Records Administration (NARA). For information on the availability of this material at NARA, visit www.archives.gov/federal-register/cfr/ibr-locations or email fr.inspection@nara.gov.

Issued on October 3, 2025.

Steven W. Thompson,
Acting Deputy Director, Compliance & Airworthiness Division,
Aircraft Certification Service.
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