



## DEPARTMENT OF TRANSPORTATION

### Federal Aviation Administration

#### 14 CFR Part 39

[Docket No. FAA-2021-0781; Project Identifier AD-2021-00775-E]

RIN 2120-AA64

#### Airworthiness Directives; Austro Engine GmbH Engines

**AGENCY:** Federal Aviation Administration (FAA), DOT.

**ACTION:** Notice of proposed rulemaking (NPRM).

**SUMMARY:** The FAA proposes to supersede Airworthiness Directive (AD) 2021-09-04, which applies to all Austro Engine GmbH E4 and E4P model diesel piston engines. AD 2021-09-04 requires replacing a certain oil pump as well as the oil filter and engine oil. Since the FAA issued AD 2021-09-04, the FAA determined that the requirement to replace the oil pump should be limited to only Austro Engine E4 and E4P model diesel piston engines with a certain oil pump, identified by part number (P/N) and serial number (S/N), installed. This proposed AD would require replacing a certain oil pump, the oil filter, and the engine oil installed on Austro Engine GmbH E4 and E4P model diesel piston engines. The FAA is proposing this AD to address the unsafe condition on these products.

**DATES:** The FAA must receive comments on this proposed AD by [INSERT DATE 30 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 <https://www.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.

For service information identified in this NPRM, contact Austro Engine GmbH, Rudolf-Diesel-Strasse 11, 2700 Weiner Neustadt, Austria; phone: +43 2622 23000; website: [www.austroengine.at](http://www.austroengine.at). You may view this service information at the Airworthiness Products Section, Operational Safety Branch, FAA, 1200 District Avenue, Burlington, MA 01803. For information on the availability of this material at the FAA, call (781) 238-7759.

### **Examining the AD Docket**

You may examine the AD docket at <https://www.regulations.gov> by searching for and locating Docket No. FAA-2021-0781; 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 NPRM, any comments received, and other information. The street address for Docket Operations is listed above.

**FOR FURTHER INFORMATION CONTACT:** Wego Wang, Aviation Safety Engineer, ECO Branch, FAA, 1200 District Avenue, Burlington, MA 01803; phone: (781) 238-7134; fax: (781) 238-7199; email: [wego.wang@faa.gov](mailto:wego.wang@faa.gov).

### **SUPPLEMENTARY INFORMATION:**

#### **Comments Invited**

The FAA invites you to send any written relevant data, views, or arguments about this proposal. Send your comments to an address listed under ADDRESSES. Include “Docket No. FAA-2021-0781; Project Identifier AD-2021-00775-E” at the beginning of your comments. The most helpful comments reference a specific portion of the proposal, 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 the proposal 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 <https://www.regulations.gov>, including any

personal information you provide. The agency will also post a report summarizing each substantive verbal contact we receive about this proposed AD.

### **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 NPRM 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 NPRM, 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 NPRM. Submissions containing CBI should be sent to Wego Wang, Aviation Safety Engineer, ECO Branch, FAA, 1200 District Avenue, Burlington, MA 01803. 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 FAA issued AD 2021-09-04, Amendment 39-21517 (86 FR 21637, April 23, 2021), (AD 2021-09-04), for all Austro Engine GmbH E4 and E4P model diesel piston engines. AD 2021-09-04 was prompted by reports of an oil pump blockage on E4 model diesel piston engines. AD 2021-09-04 requires replacing a certain oil pump as well as the oil filter and engine oil. The agency issued AD 2021-09-04 to prevent failure of the engine lubrication system.

### **Actions Since AD 2021-09-04 Was Issued**

Since the FAA issued AD 2021-09-04, the FAA determined that the requirement to replace the oil pump should be limited to only Austro Engine E4 and E4P model diesel piston engines with a certain oil pump installed, identified by P/N and S/N in Austro Engine GmbH Mandatory Service Bulletin No. MSB-E4-030/4, Revision No. 4, dated March 30, 2021.

## **FAA's Determination**

The FAA is issuing this NPRM after determining that the unsafe condition described previously is likely to exist or develop on other products of the same type design.

## **Related Service Information under 1 CFR Part 51**

The FAA reviewed Austro Engine GmbH Mandatory Service Bulletin No. MSB-E4-030/4, Revision No. 4, dated March 30, 2021 (the MSB). This service information specifies procedures for replacing the affected oil pumps installed on E4 and E4P model diesel piston engines. This service information also specifies procedures for replacing the oil filter and engine oil installed on these engines. In addition, this service information identifies the applicable S/Ns of affected E4 and E4P model diesel piston engines, the affected oil pumps requiring replacement, and an additional oil pump replacement option. The Director of the Federal Register previously approved the MSB for incorporation by reference on May 10, 2021 (86 FR 21637, April 23, 2021). This service information is reasonably available because the interested parties have access to it through their normal course of business or by the means identified in ADDRESSES.

## **Proposed AD Requirements in this NPRM**

This proposed AD would retain certain requirements of AD 2021-09-04. This proposed AD would require replacement of an affected oil pump, identified by P/N and S/N in the MSB. This proposed AD would also require replacement of the oil filter and engine oil.

## **Differences Between this Proposed AD and the Service Information**

The MSB specifies that the removed oil pump must be returned to Austro Engine GmbH. The MSB specifies that information, including the engine flight hours (FHs) recorded at the time of the oil pump replacement, must be sent to Austro Engine GmbH. This proposed AD would not mandate sending the removed oil pump or information, including the engine FHs recorded at the time of oil pump replacement, to Austro Engine GmbH.

The MSB also specifies that for all engines with 10 FHs or less, to replace the affected oil pump, oil filter, and engine oil before the next flight. Whereas, this proposed

AD would require, for Group 1 and Group 2 engines with 10 FHs or less, replacement of a certain oil pump, oil filter, and engine oil within 30 days, before accumulating 10 FHs, or during the next scheduled maintenance, whichever occurs first after the effective date of this proposed AD.

### **Costs of Compliance**

The FAA estimates that this AD, if adopted as proposed, would affect 55 engines installed on airplanes of U.S. registry.

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

#### **Estimated costs**

<b>Action</b>	<b>Labor Cost</b>	<b>Parts Cost</b>	<b>Cost per product</b>	<b>Cost on U.S. operators</b>
Remove and replace the oil pump, oil filter, and engine oil	16 work-hours x \$85 per hour = \$1,360	\$1,488	\$2,848	\$156,640

The FAA has included all known costs in its cost estimate. According to the manufacturer, however, some of the costs of this proposed AD may be covered under warranty, thereby reducing the cost impact on affected individuals.

### **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**

The FAA determined that this proposed AD would not have federalism implications under Executive Order 13132. This proposed AD would 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 the proposed regulation:

- (1) Is not a “significant regulatory action” under Executive Order 12866,
- (2) Would not affect intrastate aviation in Alaska, and
- (3) Would not have a significant economic impact, positive or negative, on a substantial number of small entities under the criteria of the Regulatory Flexibility Act.

## **List of Subjects in 14 CFR Part 39**

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

## **The Proposed Amendment**

Accordingly, under the authority delegated to me by the Administrator, the FAA proposes to amend 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:
  - a. Removing Airworthiness Directive 2021-09-04, Amendment 39-21517 (86 FR 21637, April 23, 2021); and
  - b. Adding the following new airworthiness directive:

**Austro Engine GmbH:** Docket No. FAA-2021-0781; Project Identifier AD-2021-00775-E.

#### **(a) Comments Due Date**

The FAA must receive comments on this airworthiness directive (AD) action by [INSERT DATE 30 DAYS AFTER DATE OF PUBLICATION IN THE FEDERAL REGISTER].

**(b) Affected ADs**

This AD replaces AD 2021-09-04, Amendment 39-21517 (86 FR 21637, April 23, 2021).

**(c) Applicability**

This AD applies to all Austro Engine GmbH E4 and E4P model diesel piston engines.

**(d) Subject**

Joint Aircraft System Component (JASC) Code 8550, Reciprocating Engine Oil System.

**(e) Unsafe Condition**

This AD was prompted by reports of an oil pump blockage on the E4 model diesel piston engines. The FAA is issuing this AD to prevent failure of the engine lubrication system. The unsafe condition, if not addressed, could result in failure of the engine, in-flight shutdown, and loss of the airplane.

**(f) Compliance**

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

**(g) Required Actions**

For Austro Engine GmbH E4 and E4P model diesel piston engines having an oil pump, part number (P/N) E4A-50-000-BHY, with a serial number (S/N) listed in paragraph 1.2., Engines Affected, of Austro Engine GmbH Mandatory Service Bulletin No. MSB-E4-030/4, Revision No. 4, dated March 30, 2021 (the MSB), within the compliance time specified in Table 1 to paragraph (g) of this AD or before further flight, whichever occurs later:

(1) Remove the oil pump, P/N E4A-50-000-BHY, from service and replace with a part eligible for installation using the Accomplishment / Instructions, paragraph 2.2.1 or paragraph 2.2.2, of the MSB, as applicable.

(2) Replace the oil filter and engine oil using the Accomplishment / Instructions, paragraph 2.2.1 or paragraph 2.2.2, of the MSB, as applicable.

**Table 1 to Paragraph (g) – Replacement of the Oil Pump, Oil Filter, and Engine Oil**

<b>Engine Group</b>	<b>Engine Flight Hours (FHs) Since New as of May 10, 2021 (the effective date of AD 2021-09-04)</b>	<b>Compliance Time (after May 10, 2021, the effective date of AD 2021-09-04)</b>
Group 1 engines and Group 2 engines	10 FHs or less	Within 30 days or before accumulating 10 FHs, or during the next scheduled maintenance, whichever occurs first
Group 1 engines	More than 10 FHs, but less than 50 FHs	Within 3 months or before accumulating 70 FHs since new, or during the next scheduled maintenance, whichever occurs first
Group 1 engines	50 FHs or more	Within 3 months or 20 FHs, or during the next scheduled maintenance, whichever occurs first
Group 2 engines	More than 10 FHs	Within 3 months or 100 FHs, or during the next scheduled maintenance, whichever occurs first

**(h) No Reporting Requirements**

The reporting requirements in the Accomplishment / Instructions, paragraph 2.2., of the MSB, are not required by this AD.

**(i) Installation Prohibition**

After the effective date of this AD, do not install onto any engine an oil pump, P/N E4A-50-000-BHY, with an S/N listed in paragraph 1.2., Engines Affected, of the MSB.

**(j) Definitions**

For the purpose of this AD:

(1) Group 1 engines are E4 model diesel piston engines in configuration “-A” that are installed on single-engine airplanes.

(2) Group 2 engines are E4 model diesel piston engines in configuration “-B” or “-C” and E4P model diesel piston engines that are installed on twin-engine airplanes.



(3) A “part eligible for installation” is an oil pump with a P/N and S/N that is not listed in paragraph 1.2., Engines Affected, of the MSB.

**(k) Credit for Previous Actions**

You may take credit for replacing the oil pump, oil filter, and engine oil required by paragraph (g) of this AD if you performed these replacements before the effective date of this AD using the Accomplishment / Instructions, paragraph 2.2., of Austro Engine GmbH MSB No. MSB-E4-030, Original Issue, dated February 18, 2021; Revision No. 1, dated February 23, 2021; Revision No. 2, dated March 3, 2021; or Revision No. 3, dated March 18, 2021.

**(l) Alternative Methods of Compliance (AMOCs)**

(1) The Manager, ECO 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. Information may be emailed to: ANE-AD-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.

**(m) Related Information**

(1) For more information about this AD, contact Wego Wang, Aviation Safety Engineer, ECO Branch, FAA, 1200 District Avenue, Burlington, MA 01803; phone: (781) 238-7134; fax: (781) 238-7199; email: wego.wang@faa.gov.

(2) For service information identified in this AD, contact Austro Engine GmbH, Rudolf-Diesel-Strasse 11, 2700 Weiner Neustadt, Austria; phone: +43 2622 23000; website: www.austroengine.at. You may view this referenced 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 (781) 238-7759.

Issued on September 7, 2021.

Lance T. Gant, Director,  
Compliance & Airworthiness Division,  
Aircraft Certification Service.

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