[4910-13-P]

DEPARTMENT OF TRANSPORTATION

Federal Aviation Administration

14 CFR Part 39

[Docket No. FAA-2019-0664; Product Identifier 2018-NE-03-AD]

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) 2018-07-16 which applies to all Austro Engine GmbH model E4 and E4P diesel piston engines. AD 2018-07-16 requires initial and repetitive replacement of the waste gate controller and the control rod circlip. Since the FAA issued AD 2018-07-16, Austro Engine GmbH developed a modification of the waste gate control-rod fail-safe bridge and spring-loaded circlip that terminates the need for repetitive replacement of the waste gate controller and the control rod circlip. This proposed AD would retain the requirements of AD 2018-07-16 and requires engine modification by installing a waste gate control-rod fail-safe bridge and new spring-loaded circlip that terminates the initial and repetitive replacement requirements of AD 2018-07-16. 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 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 http://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, A-2700 Weiner Neustadt, Austria; phone: +43 2622 23000; fax: +43 2622 23000-2711; internet: www.austroengine.at. You may view this service information at the FAA, Engine and Propeller Standards Branch, 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 on the Internet at http://www.regulations.gov by searching for and locating Docket No. FAA-2019-0664; 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, the mandatory continuing airworthiness information (MCAI), the regulatory evaluation, any comments received, and other information. The street address for Docket Operations is listed above. Comments will be available in the AD docket shortly after receipt.

FOR FURTHER INFORMATION CONTACT: Barbara Caufield, Aerospace Engineer, ECO Branch, FAA, 1200 District Avenue, Burlington, MA, 01803; phone: 781-238-7146; fax: 781-238-7199; email: barbara.caufield@faa.gov.

SUPPLEMENTARY INFORMATION:

Comments Invited

The FAA invites you to send any written relevant data, views, or arguments about this proposed AD. Send your comments to an address listed under the ADDRESSES section. Include "Docket No. FAA-2019-0664; Product Identifier 2018-NE-03-AD" at the beginning of your comments. The FAA specifically invites comments on the overall regulatory, economic, environmental, and energy aspects of this NPRM. The FAA will consider all comments received by the closing date and may amend this NPRM because of those comments.

The FAA will post all comments received, without change, to http://www.regulations.gov, including any personal information you provide. The FAA will also post a report summarizing each substantive verbal contact it receives about this proposed AD.

Discussion

The FAA issued AD 2018-07-16, Amendment 39-19247 (83 FR 15733, April 12, 2018), ("AD 2018-07-16"), for all Austro Engine GmbH model E4 and E4P diesel piston engines. AD 2018-07-16 requires initial and repetive replacement of the waste gate controller and the control rod circlip. AD 2018-07-16 resulted from reports of broken or disconnected turbocharger waste gate control rods on some engines. The FAA issued AD 2018-07-16 to prevent failure of the turbocharger waste gate control rod.

Actions Since AD 2018-07-16 Was Issued

Since the FAA issued AD 2018-07-16, Austro Engine GmbH developed a modification of the waste gate control-rod by adding a fail-safe bridge and spring-loaded circlip. Also since the FAA issued AD 2018-07-16, the European Union Aviation Safety Agency (EASA), which is the Technical Agent for the Member States of the European

Community, has issued AD 2018-0125, dated June 6, 2018, (referred to after this as "the MCAI"), to address the unsafe condition on these products. The MCAI states:

> Occurrences were reported where, on some engines, turbocharger waste gate control rods were found broken and/or disconnected. Investigation results indicate that these failures were due to insufficient fatigue life or improper handling of the waste gate control rod and improper installation of the non-spring-loaded circlip.
>
> These conditions, if not corrected, could lead to improper operation of the waste gate with consequent engine power loss, possibly resulting in reduced control of the aeroplane.
>
> To address this potential unsafe condition, Austro Engine designed a new spring loaded circlip and published MSB-E4-022 (later revised), introducing a life limit for the affected waste gate controllers and circlips. Consequently, EASA issued AD 2017-0250, requiring implementation of those life limits, and prohibiting reinstallation of non-spring-loaded circlips.
>
> Since that AD was issued, Austro Engine developed a modification, which allows replacing the waste gate controller and the circlip on condition, and issued the MSB accordingly.
>
> For the reason stated above, this AD retains the requirements of EASA AD 2017-0250, which is superseded, and requires an engine modification by installing a waste-gate control-rod fail-safe bridge and a new circlip, which cancels the life limitations.

You may obtain further information by examining the MCAI in the AD docket on the Internet at http://www.regulations.gov by searching for and locating Docket No. FAA-2019-0664.

Related Service Information under 1 CFR Part 51

The FAA reviewed Austro Engine Mandatory Service Bulletin (MSB) No. MSB-E4-022, Rev. No. 3, April 16, 2018. The MSB describes procedures for initial and repetitive replacement of the waste gate controller and the control rod circlip. The MSB also describes procedures for the installation of the waste gate control-rod fail-safe bridge and new spring-loaded circlip as terminating action for the initial and repetitive replacement procedures of the MSB. 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 the ADDRESSES section.

FAA's Determination

The FAA is proposing this AD because it evaluated all the relevant information and determined the unsafe condition described previously is likely to exist or develop in other products of the same type design.

Proposed AD Requirements

This proposed AD would retain all the requirements of AD 2018-07-16. This proposed AD would also require engine modification by installing the waste gate control rod fail-safe bridge and new spring-loaded circlip as terminating action for the initial and repetitive replacement requirements of this proposed AD.

Costs of Compliance

The FAA estimates that this proposed AD affects 211 engines installed on airplanes of U.S. registry.

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

Estimated costs

Action	Labor cost	Parts cost	Cost per product	Cost on U.S. operators
Replace waste gate controller and control rod circlip	0.5 work-hours X $85 per hour = $42.50	$235	$277.50	$58,552.50
Install waste gate control rod fail-safe bridge and new spring-loaded circlip	0.5 work-hours X $85 per hour = $42.50	$227	$269.50	$56,864.50

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.

This AD is issued in accordance with authority delegated by the Executive Director, Aircraft Certification Service, as authorized by FAA Order 8000.51C. In accordance with that order, issuance of ADs is normally a function of the Compliance and Airworthiness Division, but during this transition period, the Executive Director has delegated the authority to issue ADs applicable to engines, propellers, and associated

appliances to the Manager, Engine and Propeller Standards Branch, Policy and Innovation Division.

Regulatory Findings

The FAA has 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) Will not affect intrastate aviation in Alaska, and

(3) Will 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 removing airworthiness directive (AD) 2018-07-16, Amendment 39-19247 (83 FR 15733, April 12, 2018), and adding the following new AD:

Austro Engine GmbH Engines: Docket No. FAA-2019-0664; Product Identifier 2018-NE-03-AD.

(a) Comments Due Date

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

(b) Affected ADs

This AD replaces AD 2018-07-16, Amendment 39-19247 (83 FR 15733, April 12, 2018).

(c) Applicability

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

(d) Subject

Joint Aircraft System Component (JASC) Code 8560, Reciprocating Engine Supercharger.

(e) Unsafe Condition

This AD was prompted by reports of broken or disconnected turbocharger waste gate control rods on some engines. The FAA is issuing this AD to prevent failure of the turbocharger waste gate control rod. The unsafe condition, if not addressed, could result in loss of engine thrust control and reduced control of the airplane.

(f) Compliance

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

(g) Required Actions

(1) Within the compliance times identified in Table 1 to paragraph (g)(1) of this AD, and thereafter at intervals not to exceed 250 flight hours (FHs), replace the waste gate controller and control rod circlip in accordance with the Accomplishment /

Instructions, Paragraph 2.1, Initial Action or Repetitive Action, of Austro Engine Mandatory Service Bulletin (MSB) No. MSB-E4-022, Rev. No. 3, dated April 16, 2018.

Table 1 to Paragraph (g)(1) – Initial Replacement Compliance Time

Group	**Compliance Time** (A, B, or C, whichever occurs later)	
1	A	Within 50 FHs after April 27, 2018 (the effective date of AD 2018-07-16)
	B	Within 250 FHs since the first installation on an engine
	C	Before further flight
2	A	Within 100 FHs after April 27, 2018 (the effective date of AD 2018-07-16)
	B	Within 250 FHs since the first installation on an engine
	C	Before further flight

(2) Within 200 FH or six months, whichever occurs first after the effective date of this AD, modify the engine by installing a waste gate control rod fail-safe bridge and a new spring-loaded circlip in accordance with the Accomplishment / Instructions, Paragraph 2.1, Terminating Action, of Austro Engine GmbH MSB No. MSB-E4-022, Rev. No. 3, dated April 16, 2018.

(h) Terminating Action

Modification of an engine by installing a waste gate control rod fail-safe bridge and a new spring-loaded circlip, in accordance with the Accomplishment / Instructions, Paragraph 2.1, Terminating Action, of Austro Engine MSB No. MSB-E4-022, Rev. No. 3, dated April 16, 2018, is terminating action for the initial and repetitive replacement requirements of paragraph (g)(1) of this AD for that engine.

(i) Definitions

For the purpose of this AD, a Group 1 engine is an Austro Engine GmbH model E4-A engine, or an Austro Engine GmbH model E4-B or E4-C engine installed on a DA 42 M-NG airplane with external containers. A Group 2 engine is any other Austro Engine GmbH model E4 and E4P engine.

(j) Credit for Previous Actions

You may take credit for initial and repetitive replacements of the waste gate controller and control rod circlip required by paragraph (g)(1) of this AD if you performed this action before the effective date of this AD using Austro Engine MSB No. MSB-E4-022, Rev. No. 2, dated November 27, 2017, or earlier versions.

(k) 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 (l)(1) of this AD. You may email your request 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.

(l) Related Information

(1) For more information about this AD, contact Barbara Caufield, Aerospace Engineer, ECO Branch, FAA, 1200 District Avenue, Burlington, MA, 01803; phone: 781-238-7146; fax: 781-238-7199; email: barbara.caufield@faa.gov.

(2) Refer to European Union Aviation Safety Agency (EASA) AD 2018-0125, dated June 6, 2018, for more information. You may examine the EASA AD in the AD docket on the Internet at http://www.regulations.gov by searching for and locating it in Docket No. FAA-2019-0664.

(3) For service information identified in this AD, contact Austro Engine GmbH, Rudolf-Diesel-Strasse 11, A-2700 Weiner Neustadt, Austria; phone: +43 2622 23000; fax: +43 2622 23000-2711; internet: www.austroengine.at. You may view this referenced

service information at the FAA, Engine and Propeller Standards Branch, 1200 District Avenue, Burlington, MA, 01803. For information on the availability of this material at the FAA, call 781-238-7759.

Issued in Burlington, Massachusetts, on October 18, 2019.

Robert J. Ganley,
Manager, Engine & Propeller Standards Branch,
Aircraft Certification Service.

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