



[4910-13-P]

DEPARTMENT OF TRANSPORTATION

Federal Aviation Administration

14 CFR Part 39

[Docket No. FAA-2017-1078; Product Identifier 2017-CE-038-AD]

RIN 2120-AA64

Airworthiness Directives; Various Aircraft Equipped with BRP-Rotax GmbH & Co KG 912 A Series Engine

AGENCY: Federal Aviation Administration (FAA), Department of Transportation (DOT).

ACTION: Notice of proposed rulemaking (NPRM).

SUMMARY: We propose to adopt a new airworthiness directive (AD) for various aircraft equipped with a BRP-Rotax GmbH & Co. KG (formerly BRP-Powertrain GmbH & Co. KG; Bombardier-Rotax GmbH & Co. KG; Bombardier-Rotax GmbH) 912 A series engine. This proposed AD results from mandatory continuing airworthiness information (MCAI) originated by an aviation authority of another country to identify and correct an unsafe condition on an aviation product. The MCAI describes the unsafe condition as defective valve push-rod assemblies manufactured from June 8, 2016, through October 2, 2017. We are issuing this proposed AD to require actions to address the unsafe condition on these products.

DATES: We 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 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: U.S. Department of Transportation, Docket Operations, M-30, West Building Ground Floor, Room W12-140, 1200 New Jersey Avenue, SE, Washington, DC 20590, between 9 a.m. and 5 p.m., Monday through Friday, except Federal holidays.

For service information identified in this proposed AD, contact BRP-Rotax GmbH & Co. KG, Rotaxstrasse 1, A-4623 Gunskirchen, Austria; phone: +43 7246 601 0; fax: +43 7246 6370; Internet: <http://www.flyrotax.com>. You may review this referenced service information at the FAA, Policy and Innovation Division, 901 Locust, Kansas City, Missouri 64106. For information on the availability of this material at the FAA, call (816) 329-4148.

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-2017-1078; or in person at the Docket Management Facility between 9 a.m. and 5 p.m., Monday through Friday, except Federal holidays. The AD docket contains this proposed AD, the regulatory evaluation, any comments received, and other information. The street address for the Docket Office (telephone (800) 647-5527) is in the ADDRESSES section. Comments will be available in the AD docket shortly after receipt.

FOR FURTHER INFORMATION CONTACT: Jim Rutherford, Aerospace Engineer, FAA, Small Airplane Standards Branch, 901 Locust, Room 301, Kansas City, Missouri 64106; telephone: (816) 329-4165; fax: (816) 329-4090; email: jim.rutherford@faa.gov.

SUPPLEMENTARY INFORMATION:

Comments Invited

We invite 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-2017-1078; Product Identifier 2017-CE-038-AD” at the beginning of your comments. We specifically invite comments on the overall regulatory, economic, environmental, and energy aspects of this proposed AD. We will consider all comments received by the closing date and may amend this proposed AD because of those comments.

We will post all comments we receive, without change, to <http://regulations.gov>, including any personal information you provide. We will also post a report summarizing each substantive verbal contact we receive about this proposed AD.

Discussion

The European Aviation Safety Agency (EASA), which is the Technical Agent for the Member States of the European Community, has issued AD No. 2017-0208, dated October 13, 2017 (referred to after this as “the MCAI”), to correct an unsafe condition for the specified products. The MCAI states:

Power loss and engine RPM drop have been reported on Rotax 912/914 engines in service. It has been determined that, due to a quality control deficiency in the manufacturing process of certain valve push-rod assemblies, manufactured between 08 June 2016 and 02 October 2017 inclusive, partial wear on the rocker arm ball socket may occur, which may lead to malfunction of the valve train.

This condition, if not detected and corrected, may lead to rough engine operation and loss of power, possibly resulting in a forced landing, with consequent damage to the aeroplane and injury to occupants.

To address this potential unsafe condition, BRP-Rotax issued Service Bulletin (SB) SB-912 i-008 / SB-912-070 / SB-914-052 (single document), providing applicable instructions.

For the reason described above, this [EASA] AD requires a one-time inspection and, depending on findings, replacement of affected parts. This [EASA] AD also prohibits installation of affected parts on an engine.

You may examine the MCAI on the Internet at <http://www.regulations.gov> by searching for and locating Docket No. FAA-2017-1078.

Related Service Information under 1 CFR part 51

BRP-Rotax GmbH & Co KG has issued Rotax Aircraft Engines BRP Service Bulletin SB-912 i-008 R1/SB-912-070 R1/SB-914-052 R1 (co-published as one document), Revision 1, dated October 12, 2017. The service information describes procedures for inspecting and, if necessary, replacing the valve push-rod assembly on the left and/or right rocker arms. 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 of this NPRM.

FAA's Determination and Requirements of this proposed AD

This product has been approved by the aviation authority of another country, and is approved for operation in the United States. Pursuant to our bilateral agreement with this State of Design Authority, they have notified us of the unsafe condition described in the MCAI and service information referenced above. We are proposing this AD because we evaluated all information and determined the unsafe condition exists and is likely to exist or develop on other products of the same type design.

Costs of Compliance

We estimate that this proposed AD will affect 63 products of U.S. registry. We also estimate that it would take about 1 work-hour per product to comply with the basic inspection requirement of this proposed AD. The average labor rate is \$85 per work-hour. Required parts would cost about \$70 per product.

Based on these figures, we estimate the cost of this proposed AD on U.S. operators to be \$9,765, or \$155 per product.

In addition, we estimate that any necessary follow-on actions would take about 2 work-hours to replace all 8 valve push-rod assemblies and associated parts on all 4 cylinders and require parts costing \$3,093, for a cost of \$3,263 per product. We have no way of determining the number of products that may need these actions.

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.

We are 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 small airplanes, gliders, and domestic business jet transport airplanes to the Director of the Policy and Innovation Division.

Regulatory Findings

We 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 this proposed regulation:

- (1) Is not a “significant regulatory action” under Executive Order 12866,
- (2) Is not a “significant rule” under the DOT Regulatory Policies and Procedures (44 FR 11034, February 26, 1979),
- (3) Will not affect intrastate aviation in Alaska, and
- (4) 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 adding the following new AD:

Various Aircraft: Docket No. FAA-2017-1078; Product Identifier 2017-CE-038-AD.

a) Comments Due Date

We must receive comments by [INSERT DATE 45 DAYS AFTER DATE OF PUBLICATION IN THE FEDERAL REGISTER].

(b) Affected ADs

None.

(c) Applicability

This AD applies to all serial numbers of the airplanes listed in table 1 to paragraph (c) of this AD, that are:

(1) equipped with a BRP-Rotax GmbH & Co. KG (formerly BRP-Powertrain GmbH & Co. KG; Bombardier-Rotax GmbH & Co. KG; Bombardier-Rotax GmbH) 912 A series engine (Rotax 912 A series engine) with a serial number (S/N) listed in table 2 of paragraph (c) to this AD; or

(2) equipped with a Rotax 912 A series engine with any S/N that has had a part number (P/N) 854861 valve push-rod assembly replaced in-service (e.g., during engine repair, maintenance, or general overhaul) during the time frame of June 8, 2016, to the effective date of this AD; and

(3) certificated in any category.

Table 1 to Paragraph (c) – Affected Airplanes

Type Certificate Holder	Aircraft Model	Engine Model
Aeromot-Indústria Mecânico-Metalúrgica Ltda	AMT-200	912 A2
Diamond Aircraft Industries	HK 36 R “SUPER DIMONA”	912 A
DIAMOND AIRCRAFT INDUSTRIES GmbH	HK 36 TS and HK 36 TC	912 A3
Diamond Aircraft Industries Inc.	DA20-A1	912 A3
HOAC-Austria	DV 20 KATANA	912 A3
Iniziativa Industriali Italiane S.p.A.	Sky Arrow 650 TC	912 A2
SCHEIBE-Flugzeugbau GmbH	SF 25C	912 A2, 912 A3

Table 2 to Paragraph (c) – Affected Engine Serial Numbers (S/N)

Engine	Affected S/N
912 A series	4 411 126 through 4 411 146 and 4 411 401 through 4 411 492

(d) Subject

Air Transport Association of America (ATA) Code 85: Reciprocating Engine.

(e) Reason

This AD was prompted by mandatory continuing airworthiness information (MCAI) originated by an aviation authority of another country to identify and correct an unsafe condition on an aviation product. The MCAI describes the unsafe condition as defective valve push-rod assemblies manufactured from June 8, 2016, through October 2, 2017. We are issuing this AD to prevent rough engine operation, which could cause loss of power and result in loss of control.

(f) Actions and Compliance

Unless already done, do the following actions:

(1) For aircraft with engines that have 160 hours time-in-service (TIS) or less since first installed: Before exceeding 170 hours TIS on the engine since first installed or within the next 3 months after the effective date of this AD, whichever occurs first, visually inspect the valve push-rod ball sockets of each valve push-rod using the Accomplishment Instructions in Rotax Aircraft Engines BRP Service Bulletin SB-912 i-008 R1/SB-912-070 R1/SB-914-052 R1 (co-published as one document), Revision 1, dated October 12, 2017 (Rotax SB SB-912 i-008 R1/SB-912-070 R1/SB-914-052 R1).

(2) For airplanes with engines that have 160 hours TIS or more since first installed: Within the next 10 hours TIS after the effective date of this AD or within the next 3 months after the effective date of this AD, whichever occurs first, visually inspect the valve push-rod ball sockets of each valve push-rod using the Accomplishment Instructions in Rotax SB SB-912 i-008 R1/SB-912-070 R1/SB-914-052 R1.

(3) For all affected airplanes: If a valve push-rod with a black surface is found during the inspection required in paragraph (f)(1) or (f)(2) of this AD, before further flight, replace the valve push-rod and its affected parts with airworthy parts using the Accomplishment Instructions in Rotax SB SB-912 i-008 R1/SB-912-070 R1/SB-914-052 R1.

(4) For all affected airplanes: As of the effective date of this AD, do not install a valve push-rod that was manufactured from June 8, 2016, through October 2, 2017.

(g) Other FAA AD Provisions

The following provisions also apply to this AD:

(1) *Alternative Methods of Compliance (AMOCs)*: The Manager, Small Airplane Standards Branch, FAA, has the authority to approve AMOCs for this AD, if requested using the procedures found in 14 CFR 39.19. Send information to ATTN: Jim Rutherford, Aerospace Engineer, FAA, Small Airplane Standards Branch, 901 Locust, Room 301, Kansas City, Missouri 64106; telephone: (816) 329-4165; fax: (816) 329-4090; email: jim.rutherford@faa.gov. Before using any approved AMOC on any airplane to which the AMOC applies, notify your appropriate principal inspector (PI) in the FAA Flight Standards District Office (FSDO), or lacking a PI, your local FSDO.

(2) *Contacting the Manufacturer*: For any requirement in this AD to obtain corrective actions from a manufacturer, the action must be accomplished using a method approved by the Manager, Small Airplane Standards Branch, FAA; or the European Aviation Safety Agency (EASA).

(h) Related Information

Refer to MCAI EASA AD No. 2017-0208, dated October 13, 2017, for related information. You may examine the MCAI on the Internet at <http://www.regulations.gov> by searching for and locating Docket No. FAA-2017-1078. For service information related to this AD, contact BRP-Rotax GmbH & Co. KG, Rotaxstrasse 1, A-4623 Gunskirchen, Austria; phone: +43 7246 601 0; fax: +43 7246 6370; Internet: <http://www.flyrotax.com>. You may review this referenced service information at the FAA, Policy and Innovation Division, 901 Locust, Kansas City, Missouri 64106. For information on the availability of this material at the FAA, call (816) 329-4148. Issued in Kansas City, Missouri, on November 9, 2017.

Pat Mullen,

Acting Deputy Director, Policy & Innovation Division
Aircraft Certification

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Service