[4910-13-P]

DEPARTMENT OF TRANSPORTATION

Federal Aviation Administration

14 CFR Part 39

[Docket No. FAA-2016-2042; Directorate Identifier 2016-NE-02-AD]

RIN 2120-AA64

Airworthiness Directives; BRP-Powertrain GmbH & Co KG Reciprocating Engines

AGENCY: Federal Aviation Administration (FAA), DOT.

ACTION: Notice of proposed rulemaking (NPRM).

SUMMARY: We propose to adopt a new airworthiness directive (AD) for certain BRP-Powertrain GmbH & Co KG Rotax 912 F2, 912 F3, 912 F4, 912 S2, 912 S3, 912 S4, 914 F2, 914 F3, and 914 F4 reciprocating engines. This proposed AD was prompted by a design change introduced by the manufacturer that relocated the engine cylinder head temperature sensor to a different location and converted it to a coolant temperature sensor. This proposed AD would require re-identification of the engine model and concurrent modification of the aircraft to indicate the maximum coolant temperature limit. We are proposing this AD to prevent exceeding engine coolant temperature limits, which could result in loss of engine coolant, damage to the engine, and loss of control of the airplane.

DATES: We must receive comments on this proposed AD by [INSERT DATE 60 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.
- Mail: Docket Management Facility, U.S. Department of Transportation, 1200 New Jersey Avenue SE., West Building Ground Floor, Room W12-140, Washington, DC 20590-0001.
- Hand Delivery: Deliver to Mail address above between 9 a.m. and 5 p.m., Monday through Friday, except Federal holidays.
- Fax: 202-493-2251.

For service information identified in this NPRM, contact BRP-Powertrain GmbH & Co KG, Rotaxstrasse 1, A-4623 Gunskirchen, Austria; Internet: http://www.FLYROTAX.com. You may view this service information at the FAA, Engine & Propeller Directorate, 1200 District Avenue, Burlington, MA. For information on the availability of this material at the FAA, call 781-238-7125.

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-2016-2042; or in person at the Docket Operations office between 9 a.m. and 5 p.m., Monday through Friday, except Federal holidays. The AD docket contains this proposed AD, the mandatory continuing airworthiness information (MCAI), the regulatory evaluation, any comments received, and other information. The address for the Docket Office (phone: 800-647-5527) is in the ADDRESSES section. Comments will be available in the AD docket shortly after receipt.

FOR FURTHER INFORMATION CONTACT: Robert Green, Aerospace Engineer, Engine Certification Office, FAA, Engine & Propeller Directorate, 1200 District Avenue, Burlington, MA 01803; phone: 781-238-7754; fax: 781-238-7199; email: robert.green@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-2016-2042; Directorate Identifier 2016-NE-02-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 based on those comments.

We will post all comments we receive, without change, to http://www.regulations.gov, including any personal information you provide. We will also post a report summarizing each substantive verbal contact with FAA personnel concerning 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 EASA AD 2015-0240, dated December 18, 2015 (referred to hereinafter as "the MCAI"), to correct an unsafe condition for the specified products. The MCAI states:

> A design change of the engine cylinder heads was introduced by BRP-Powertrain in March 2013 which modifies the engine/aircraft interfaces by substituting the previous cylinder head temperature (CHT) measurement (limit temperature 135 °C/150 °C) with a coolant temperature (CT) measurement (limit temperature 120 °C).
>
> The design change was communicated on 15 May 2013 by BRP-Powertrain Service Instruction (SI) 912-020R7/914-022R7 (single document) but was not identified by a change of the engine model designation or of the engine P/N but only through the cylinder head P/N and the position of the temperature sensor.
>
> Consequently, engines with the new cylinder heads (installed during production or replaced in-service during maintenance) may be installed on an aircraft without concurrent modification of that aircraft, instructions for which should be provided by the type certificate (TC) holder or the supplemental type certificate (STC) holder, as applicable. In this case, the coolant temperature with a maximum engine operating limit of 120 °C (valid for engines operated with water diluted glycol coolant) is displayed on a CHT indicator with a typical limit marking (red radial/range) of more than 120 °C.

BRP-Powertrain GmbH & Co KG introduced a design change that relocated the engine cylinder head temperature sensor from the top of the cylinder to a new location and converted it to a coolant temperature sensor. The coolant temperature maximum engine operating limit is now less than the cylinder head temperature maximum operating limit. 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-2016-2042.

Related Service Information under 1 CFR Part 51

BRP-Powertrain GmbH & Co KG has issued Service Bulletin (SB) SB-912-068/SB-914-049 (one document), dated April 16, 2015. The service information describes procedures for re-identification of the type plate for certain BRP-Powertrain GmbH & Co KG Rotax 912 and 914 engines. 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 Austria, and is approved for operation in the United States. Pursuant to our bilateral agreement with the European Community, EASA has 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 provided by EASA and determined the unsafe condition exists and is likely to exist or develop on other products of the same type design. This proposed AD would require re-identification of the engine model and the concurrent modification of the aircraft to indicate maximum coolant temperature limit.

Costs of Compliance

We estimate that this proposed AD affects about 40 engines installed on aircraft of U.S. registry. We also estimate that it would take about 5 hours per engine to inspect and re-identify the type plate. The average labor rate is $85 per hour. Based on these figures, we estimate the cost of this proposed AD on U.S. operators to be $17,000.

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.

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 to the extent that it justifies making a regulatory distinction, 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 airworthiness directive (AD):

BRP-Powertrain GmbH & Co KG (formerly BRP-Rotax GmbH & Co KG, Bombardier-Rotax GmbH & Co. KG, and Bombardier-Rotax GmbH): Docket No. FAA-2016-2042; Directorate Identifier 2016-NE-02-AD.

(a) Comments Due Date

We must receive comments by [INSERT DATE 60 DAYS AFTER DATE OF PUBLICATION IN THE FEDERAL REGISTER].

(b) Affected ADs

None.

(c) Applicability

This AD applies to BRP-Powertrain GmbH & Co KG Rotax model 912 F2, 912 F3, 912 F4, 912 S2, 912 S3, 912 S4, 914 F2, 914 F3, and 914 F4 reciprocating engines with a cylinder head that has a part number (P/N) listed in Figure 1 to paragraph (c) of this AD and that is installed in position 2 or 3.

Figure 1 to Paragraph (c) of this AD – Post-Modification Cylinder Head P/N

Engine Model	Cylinder Head P/N
912 F2, 912 F3, 912 F4, 914 F2, 914 F3, and 914 F4	P/N 413235 or P/N 413236
912 S2, 912 S3, and 912 S4	P/N 413185

(d) Reason

This AD was prompted by a design change introduced by the manufacturer that relocated the engine cylinder head temperature sensor to a new location and converted it to a coolant temperature sensor. We are issuing this AD to prevent exceeding coolant temperature limits, which could result in loss of engine coolant, damage to the engine, and loss of control of the airplane.

(e) Actions and Compliance

Comply with this AD within 6 months after the effective date of this AD, unless already done.

(1) For engines with cylinder heads that have a P/N listed in Figure 1 to paragraph (c) of this AD installed on both position 2 and position 3, change the engine model designation on the engine type data plate to include a "-01" suffix. Use paragraph 3.1.1 of BRP-Powertrain Service Bulletin (SB) SB-912-068/SB-914-049, dated April 16, 2015, to make this change.

(2) For engines with only one cylinder head having a P/N listed in Figure 1 to paragraph (c) of this AD installed in position 2 or 3, do one of the following:

(i) Replace the cylinder heads having P/Ns listed in Figure 1 to paragraph (c) of this AD with a P/N 623682 cylinder head on Rotax 912 F2, 912 F3, 912 F4, 914 F2,

914 F3, and 914 F4 engines and with a P/N 623687 cylinder head on Rotax 912 S2, 912 S3, and 912 S4 engines. If you complete the actions in paragraph (e)(2)(i), no further action is required. Or,

(ii) Install eligible cylinder heads with P/Ns identified in Figure 1 to paragraph (c) of this AD on both cylinder head positions 2 and 3 and change the engine model designation of the engine type data plate in accordance with paragraph (e)(1) of this AD.

(3) For engines re-identified in accordance with paragraph (e)(1) or (e)(2)(ii) of this AD, before further flight, modify the aircraft cockpit instrumentation and related documentation to indicate a maximum coolant temperature limit of 120 degrees Celsius using FAA-approved procedures. These re-identified engines remain eligible for installation on approved aircraft-engine combinations.

(f) Alternative Methods of Compliance (AMOCs)

The Manager, Engine Certification Office, FAA, may approve AMOCs for this AD. Use the procedures found in 14 CFR 39.19 to make your request. You may email your request to: ANE-AD-AMOC@faa.gov.

(g) Related Information

(1) For more information about this AD, contact Robert Green, Aerospace Engineer, Engine Certification Office, FAA, Engine & Propeller Directorate, 1200 District Avenue, Burlington, MA 01803; phone: 781-238-7754; fax: 781-238-7199; email: robert.green@faa.gov.

(2) For more information about the installation modifications described in paragraph (e)(3) of this AD, contact Jim Rutherford, Aerospace Engineer, FAA, Small

Airplane Directorate, 901 Locust Ave. Room 301, Kansas City, MO; phone: 816-329-4165; fax: 816-329-4090; email: Jim.Rutherford@faa.gov.

(3) Refer to MCAI European Aviation Safety Agency, AD 2015-0240, dated December 18, 2015, for more information. You may examine the MCAI in the AD docket on the Internet at http://www.regulations.gov by searching for and locating it in Docket No. FAA-2016-2042.

(4) BRP-Powertrain GmbH & Co KG Service Bulletin (SB) SB-912-068/SB-914-049 (one document), dated April 16, 2015, can be obtained from BRP-Powertrain GmbH & Co KG, using the contact information in paragraph (g)(6) of this proposed AD.

(5) The following aircraft service information contains FAA-approved procedures for complying with paragraph (e)(3) of this AD and can be obtained from BRP-Powertrain GmbH & Co. KG, using the contact information in paragraph (g)(6) of this proposed AD:

Figure 2 to Paragraph (g) of this AD – Aircraft Type/Model and Service Information

Type / Model(s)	SB
Aquila AT01	SB-AT01-029
TECNAM P92, P2002 and P2006T	SB-183-CS
TECNAM P2008 JC	SB-185-CS
Diamond H 36 “Dimona” and HK 36 “Super Dimona”	OSB 36-111
Diamond DV 20 “Katana”	OSB 20-066
Diamond (Canada) DA20-A1 “Katana”	SB Da20-72-04
M&D AVO 68 “Samburo”	TM 808-31
Scheibe SF 25 C and SF 36 R	SI_02-14

(6) For service information identified in this proposed AD, contact BRP-Powertrain GmbH & Co. KG, Rotaxstrasse 1, A-4623 Gunskirchen, Austria; phone: +43 7246 6010; fax: +43 7246 601 9130; email: airworthiness@brp.com; Internet: www.rotax-aircraft-engines.com.

(7) You may view this service information at the FAA, Engine & Propeller Directorate, 1200 District Avenue, Burlington, MA. For information on the availability of this material at the FAA, call 781-238-7125.

Issued in Burlington, Massachusetts, on March 11, 2016.

Colleen M. D'Alessandro,
Manager, Engine & Propeller Directorate,
Aircraft Certification Service.
[FR Doc. 2016-06118 Filed: 3/17/2016 8:45 am; Publication Date: 3/18/2016]