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DEPARTMENT OF TRANSPORTATION

Federal Aviation Administration

14 CFR Part 39

[Docket No. FAA-2012-0001; Directorate Identifier 2011-CE-041-AD; Amendment 39-16912; AD 2012-01-01]

RIN 2120-AA64

Airworthiness Directives; Various Aircraft Equipped With Rotax Aircraft Engines 912 A Series Engine

AGENCY: Federal Aviation Administration (FAA), DOT.

ACTION: Final rule; request for comments.

SUMMARY: We are adopting a new airworthiness directive (AD) for various aircraft equipped with Rotax Aircraft Engines 912 A series engine. This AD results from mandatory continuing airworthiness information (MCAI) issued by the aviation authority of another country to identify and correct an unsafe condition on an aviation product. The MCAI describes the unsafe condition as a deviation in the manufacturing process of certain part number 888164 crankshafts that may cause cracks on the surface of the crankshaft on the power take off side, which could lead to failure of the crankshaft support bearing and possibly result in an in-flight engine shutdown and forced landing. We are issuing this AD to require actions to address the unsafe condition on these products.

DATES: This AD is effective January 26, 2012.

The Director of the Federal Register approved the incorporation by reference of a certain publication listed in the AD as of January 26, 2012.

We must receive comments on this AD by February 27, 2012.

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 AD, contact BRP-Powertrain GmbH & Co. KG, Welser Strasse 32, A-4623 Gunskirchen, Austria; phone: +43 7246 601 0; fax: +43 7246 601 9130; Internet: <http://www.rotax-aircraft-engines.com>. You may review copies of the referenced service information at the FAA, Small Airplane Directorate, 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>; 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 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: Sarjapur Nagarajan, Aerospace Engineer, FAA, Small Airplane Directorate, 901 Locust, Room 301, Kansas City, Missouri 64106; telephone: (816) 329-4145; fax: (816) 329-4090; email: sarjapur.nagarajan@faa.gov.

SUPPLEMENTARY INFORMATION:

Discussion

The European Aviation Safety Agency (EASA), which is the Technical Agent for the Member States of the European Community, has issued EASA AD 2011-0224-E, dated November 24, 2011 (referred to after this as "the MCAI"), to correct an unsafe condition for the specified products. The MCAI states:

During a production process review, a deviation (double side straightening) in the manufacturing process of certain Part Number (P/N) 888164 crankshafts has been detected, which may have resulted in cracks on the surface of the crankshaft. Only a few crankshafts are suspected to have received this double side straightening treatment, but it has been impossible to identify these by individual serial number (s/n). To address this safety concern, BRP-Powertrain issued Alert Service Bulletin ASB-912-059 and ASB-914-042 (single document) with instructions to identify and inspect the entire batch of crankshafts that could be affected. These crankshafts have been installed on a limited number of engines, but some crankshaft sets have also been shipped as spare parts.

This condition, if not detected and corrected, could lead to crack propagation on the power take off side of the crankshaft journal, possibly resulting in failure of the crankshaft support bearing, in-flight engine shutdown and forced landing, damage to the aeroplane and injury to occupants.

To correct this potential unsafe condition, EASA issued Emergency AD 2011-022-E to require the identification and inspection for cracks of all affected crankshafts, and depending on findings, corrective action.

Since that AD was issued, it has been determined that there are additional affected crankshafts, currently known to be installed in the 'UL' (i.e. non-certified) versions of the affected engines.

For the reason described above, this AD retains the requirements of EASA AD 2011-0222-E, which is superseded, and expands the group of s/n of affected crankshafts,

listed in Table 1 of this AD. A records check can be acceptable to determine the s/n of the crankshaft installed on the engine. This AD also prohibits installation of any affected crankshaft on an engine, or installation of an aeroplane of an engine with an affected crankshaft installed, unless the crankshaft has passed the inspection as required by this AD.

You may obtain further information by examining the MCAI in the AD docket.

Relevant Service Information

Rotax Aircraft Engines BRP has issued Alert Service Bulletin ASB-912-059 and ASB-914-042 (single document), dated November 15, 2011. The actions described in this service information are intended to correct the unsafe condition identified in the MCAI.

FAA's Determination and Requirements of the 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 issuing this AD because we evaluated all information provided by the State of Design Authority and determined the unsafe condition exists and is likely to exist or develop on other products of the same type design.

FAA's Determination of the Effective Date

An unsafe condition exists that requires the immediate adoption of this AD. The FAA has found that the risk to the flying public justifies waiving notice and comment prior to adoption of this rule because of the short compliance time of 4 hours time-in-service, and the risk to single-engine airplanes affected. Therefore, we determined that notice and opportunity for public comment before issuing this AD are impracticable and that good cause exists for making this amendment effective in fewer than 30 days.

Comments Invited

This AD is a final rule that involves requirements affecting flight safety, and we did not precede it by notice and opportunity for public comment. We invite you to send any written relevant data, views, or arguments about this AD. Send your comments to an address listed under the ADDRESSES section. Include "Docket No. FAA-2012-0001; Directorate Identifier 2011-CE-041-AD" at the beginning of your comments. We specifically invite comments on the overall regulatory, economic, environmental, and energy aspects of this AD. We will consider all comments received by the closing date and may amend this AD because of 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 we receive about this AD.

Costs of Compliance

We estimate that this AD will affect 112 products of U.S. registry. We also estimate that it will take about 31 work-hours per product to comply with the basic requirements of this AD. The average labor rate is \$85 per work-hour. Required parts will cost about \$5,400 per product.

Based on these figures, we estimate the cost of the AD on U.S. operators to be \$899,920, or \$8,035 per product.

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 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,
- (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.

Adoption of 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 AD:



2012-01-01 Various Aircraft: Amendment 39-16912; Docket No. FAA-2012-0001; Directorate Identifier 2011-CE-041-AD.

(a) Effective Date

This airworthiness directive (AD) becomes effective January 26, 2012.

(b) Affected ADs

None.

(c) Applicability

This AD applies to all serial numbers of the airplanes listed in table 1 of this AD, that are:
(1) Equipped with a Rotax Aircraft Engines 912 A series engine, with a part number (P/N) 888164 crankshaft installed, serial numbers 40232 through 40267, 40293 through 40374, 40408 through 40433, and 40435 through 40507; and
(2) Certificated in any category.

Table 1–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
Iniziative Industriali Italiane S.p.A.	Sky Arrow 650 TC	912 A2
SCHEIBE-Flugzeugbau GmbH	SF 25C	912 A2

(d) Subject

Air Transport Association of America (ATA) Code 72: Engine.

(e) Reason

This AD was prompted by mandatory continuing airworthiness information (MCAI) issued by the aviation authority of another country to identify and correct an unsafe condition on an aviation

product. The MCAI describes the unsafe condition as a deviation (double side straightening) in the manufacturing process of certain P/N 888164 crankshafts that may cause cracks on the surface of the crankshaft on the power take off side, which could lead to failure of the crankshaft support bearing. We are issuing this AD to prevent failure of the crankshaft support bearing, which could result in engine failure and forced landing.

(f) Actions and Compliance

Unless already done, do the following actions.

(1) Within 4 hours time-in-service after January 26, 2012 (the effective date of this AD), inspect the crankshaft for cracks. Do the inspection following the Accomplishment Instructions in Rotax Aircraft Engines BRP Alert Service Bulletin ASB-912-059 and ASB-914-042 (single document), dated November 15, 2011.

(2) If any crack is found during the inspection required in paragraph (f)(1) of this AD, before further flight, remove the crankshaft from service.

(3) As of January 26, 2012 (the effective date of this AD), do not install on any airplane an engine equipped with an affected P/N 888164 crankshaft listed in paragraph (c)(1) of this AD, unless the crankshaft is inspected as specified in paragraph (f)(1) of this AD and is found to be crack free.

(4) As of January 26, 2012 (the effective date of this AD), do not install in any engine an affected P/N 888164 crankshaft listed in paragraph (c)(1) of this AD, unless the crankshaft is inspected as specified in paragraph (f)(1) of this AD and is found to be crack free.

(g) Other FAA AD Provisions

The following provisions also apply to this AD:

(1) Alternative Methods of Compliance (AMOCs): The Manager, Standards Office, 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: Sarjapur Nagarajan, Aerospace Engineer, FAA, Small Airplane Directorate, 901 Locust, Room 301, Kansas City, Missouri 64106; telephone: (816) 329-4145; fax: (816) 329-4090; email: sarjapur.nagarajan@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) Airworthy Product: For any requirement in this AD to obtain corrective actions from a manufacturer or other source, use these actions if they are FAA-approved. Corrective actions are considered FAA-approved if they are approved by the State of Design Authority (or their delegated agent). You are required to assure the product is airworthy before it is returned to service.

(3) Reporting Requirements: For any reporting requirement in this AD, a federal agency may not conduct or sponsor, and a person is not required to respond to, nor shall a person be subject to a penalty for failure to comply with a collection of information subject to the requirements of the Paperwork Reduction Act unless that collection of information displays a current valid OMB Control Number. The OMB Control Number for this information collection is 2120-0056. Public reporting for this collection of information is estimated to be approximately 5 minutes per response, including the time for reviewing instructions, completing and reviewing the collection of information. All responses to this collection of information are mandatory. Comments concerning the accuracy of this burden and suggestions for reducing the burden should be directed to the FAA at: 800 Independence Ave. SW., Washington, DC 20591, Attn: Information Collection Clearance Officer, AES-200.

(h) Related Information

Refer to MCAI European Aviation Safety Agency (EASA) AD 2011-0224-E, dated November 24, 2011, and Rotax Aircraft Engines BRP Alert Service Bulletin ASB-912-059 and ASB-914-042 (single document), dated November 15, 2011, for related information.

(i) Material Incorporated by Reference

(1) You must use Rotax Aircraft Engines BRP Alert Service Bulletin ASB-912-059 and ASB-914-042 (single document), dated November 15, 2011, to do the actions required by this AD, unless the AD specifies otherwise. The Director of the Federal Register approved the incorporation by reference (IBR) under 5 U.S.C. 552(a) and 1 CFR part 51.

(2) For service information identified in this AD, contact BRP-Powertrain GmbH & Co. KG, Welser Strasse 32, A-4623 Gunskirchen, Austria; phone: +43 7246 601 0; fax: +43 7246 601 9130; Internet: <http://www.rotax-aircraft-engines.com>.

(3) You may review copies of the service information at the FAA, Small Airplane Directorate, 901 Locust, Kansas City, Missouri 64106. For information on the availability of this material at the FAA, call (816) 329-4148.

(4) You may also review copies of the service information that is incorporated by reference at the National Archives and Records Administration (NARA). For information on the availability of this material at an NARA facility, call (202) 741-6030, or go to http://www.archives.gov/federal_register/code_of_federal_regulations/ibr_locations.html.

Issued in Kansas City, Missouri, on January 3, 2012.

Earl Lawrence,

Manager, Small Airplane Directorate, Aircraft Certification Service.