DEPARTMENT OF TRANSPORTATION

Federal Aviation Administration

14 CFR Part 39


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 the products listed above that will supersede an existing AD. 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:

During a production process review, a deviation in hardening of certain Part Number (P/N) 944072 washers has been detected, which exceeds the hardness of the design specification. The affected washers are part of the magneto ring flywheel hub installation and have been installed on a limited number of engines. No defective washers have been shipped as spare parts.

This condition, if not corrected, could lead to cracks in the washer, loosening of the magneto flywheel hub and consequent ignition failure, possibly resulting in damage to the engine, in-flight engine shutdown and forced landing, damage to the aeroplane and injury to occupants.

This AD requires actions that are intended to address the unsafe condition described in the MCAI.

DATES: This AD becomes effective July 25, 2011.

As of June 16, 2011 (76 FR 31465, June 1, 2011), the Director of the Federal Register approved the incorporation by reference of Rotax Aircraft Engines Mandatory Service Bulletin SB–912–058 SB–914–041, dated April 15, 2011, listed in this AD.

We must receive comments on this AD by August 22, 2011.

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–Rotax 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; e-mail: sarjapur.nagarajan@faa.gov.

SUPPLEMENTARY INFORMATION:

Discussion

On May 10, 2011, we issued AD 2011–11–03, Amendment 39–16702 (76 FR 31465, June 1, 2011). That AD required actions intended to address an unsafe condition on the products listed above.

Since we issued AD 2011–11–03, we determined that we inadvertently omitted certain airplanes equipped with Rotax 912 A series engines from the Applicability section. We have also determined that we included certain airplanes in the Applicability section that are not equipped with Rotax 912 A series engines.

RELEVANT SERVICE INFORMATION

Rotax Aircraft Engines has issued Mandatory Service Bulletin SB–912–058 and SB–914–041 (same document),
dated April 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.

**Differences Between This AD and the MCAI or Service Information**

We have reviewed the MCAI and related service information and, in general, agree with their substance. But we might have found it necessary to use different words from those in the MCAI to ensure the AD is clear for U.S. operators and is enforceable. In making these changes, we do not intend to differ substantively from the information provided in the MCAI and related service information.

We might have also required different actions in this AD from those in the MCAI in order to follow FAA policies. Any such differences are described in a separate paragraph of the AD. These requirements take precedence over those copied from the MCAI.

**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 cracks in the washer of the magneto ring flywheel hub could cause loosening of the magneto flywheel hub. This failure could result in ignition failure and/or damage to the engine, causing in-flight engine shutdown leading to a forced landing. A forced landing could result in damage to the airplane and injury to the occupants. 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–2011–0714; Directorate Identifier 2011–CE–024–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](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 would take about 24 work-hours per product to comply with the basic requirements of this AD. The average labor rate is $85 per work-hour. Required parts would cost about $20 per product.

Based on these figures, we estimate the cost of the AD on U.S. operators to be $230,720, or $2,060 per product.

According to the manufacturer, some of the costs of this AD may be covered under warranty, thereby reducing the cost impact on affected individuals. We do not control warranty coverage for affected individuals. As a result, we have included all costs in our cost estimate.

**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 DOT Regulatory Policies and Procedures (44 FR 11034, February 26, 1979); 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.

We prepared a regulatory evaluation of the estimated costs to comply with this AD and placed it in the AD docket.

**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 removing Amendment 39–16702 (76 FR 31465, June 1, 2011), and adding the following new AD:


   **Effective Date**

   (a) This airworthiness directive (AD) becomes effective July 25, 2011.

   **Affected ADs**

   (b) This AD supersedes AD 2011–11–03; Amendment 39–16702.

   **Applicability**

   (c) This AD applies to all serial numbers of the following aircraft, equipped with a Rotax Aircraft Engines 912 A series engine,
Subject

(d) Air Transport Association of America (ATA) Code 74: Ignition.

Reason

(e) The mandatory continuing airworthiness information (MCAI) states:

During a production process review, a deviation in hardening of certain Part Number P/N 944072 washers has been detected, which exceeds the hardness of the design specification.

The affected washers are part of the magneto ring flywheel hub installation and have been installed on a limited number of engines. No defective washers have been shipped as spare parts.

This condition, if not corrected, could lead to cracks in the washer, loosening of the magneto flywheel hub and consequent ignition failure, possibly resulting in damage to the engine, in-flight engine shutdown and forced landing, damage to the aeroplane and injury to occupants.

For the reasons described above, this AD requires, for the affected engines, the replacement of the P/N 944072 washer and associated gasket ring P/N 950141 with serviceable parts, having the same P/N.

This AD also prohibits installation of an affected engine on an aeroplane, unless the washer on that engine has been replaced as required by this AD.

Actions and Compliance

(f) Unless already done, do the following actions:

(1) Replace washer, part number (P/N) 944072, and associated gasket ring, P/N 950141, on the magneto ring flywheel hub with FAA-approved serviceable parts with the same P/Ns. Do the replacements following the Accomplishment Instructions in Rotax Aircraft Engines Mandatory Service Bulletin SB–912–056 and SB–914–041 (same document), dated April 15, 2011.

(i) For Group 1 airplanes (airplanes previously affected by AD 2011–11–03): Within the next 10 hours time-in-service (TIS) after June 16, 2011 (the effective date retained from AD 2011–11–03), whichever occurs first.

(2) Do not install a Rotax Aircraft Engines 912 A series engine listed in paragraph (c) of this AD unless the washer, P/N 944072, and the gasket ring, P/N 950141, have been replaced as required in paragraph (f)(1) of this AD.

(i) For Group 1 airplanes (airplanes previously affected by AD 2011–11–03): As of June 16, 2011 (the effective date retained from AD 2011–11–03).

(ii) For Group 2 airplanes (airplanes not previously affected by AD 2011–11–03): As of July 25, 2011 (the effective date of this AD).

FAA AD Differences

Note: This AD differs from the MCAI and/or service information as follows: EASA AD 2011–0067–E, dated April 15, 2011, requires returning the removed P/N 944072 to Rotax Aircraft Engines. We are not requiring this because FAA regulation, specifically 14 CFR 43.10, already requires disposition of unworthy parts.

Other FAA AD Provisions

(g) 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. 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) in the AD. You are required to assure the product is airworthy before it is returned to service.

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 submitting 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 Clearace Officer, AES–200.

Related Information


Material Incorporated by Reference

(i) You must use Rotax Aircraft Engines Mandatory Service Bulletin SB–912–056 SB–914–041, dated April 15, 2011, to do the actions required by this AD, unless the AD specifies otherwise.

(1) On June 16, 2011 (76 FR 31465, June 1, 2011), the Director of the Federal Register previously approved the incorporation by...
We are issuing this AD to prevent rupture of a GG turbine blade, which could result in an uncommanded in-flight shutdown and an emergency autorotation landing or accident. 

**DATES:** This AD becomes effective August 12, 2011. The Director of the Federal Register approved the incorporation by reference of a certain publication listed in this AD as of August 12, 2011.

**ADDRESSES:** The Docket Operations Office is located at Docket Management Facility, U.S. Department of Transportation, 1200 New Jersey Avenue, SE., West Building Ground Floor, Room W12–140, Washington, DC 20590–0001.

For further information contact: Rose Len, Aerospace Engineer, Engine Certification Office, FAA, Engine & Propeller Directorate, 12 New England Executive Park, Burlington, MA 01803; e-mail: rose.len@faa.gov; phone: (781) 238–7772; fax (781) 238–7199.

**SUPPLEMENTARY INFORMATION:**

**Discussion:**

We issued a notice of proposed rulemaking (NPRM) to amend 14 CFR part 39 to include an AD that would apply to the specified products. That NPRM was published in the Federal Register on February 18, 2011 (76 FR 9515). That NPRM proposed to correct an unsafe condition for the specified products. The MCAI states:

Several cases of Gas Generator (GG) Turbine Blade rupture occurred in service on ARRIEL 2 twin engine applications and recently one on a single engine helicopter. For the case occurring in flight on a single engine helicopter (ARRIEL 2B1 engine), the pilot performed an emergency autorotation, landing the helicopter without further incident.

**SUMMARY:** We are adopting a new airworthiness directive (AD) for the products listed above. This AD results from mandatory continuing airworthiness information (MCAI) issued 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:

Several cases of Gas Generator (GG) Turbine Blade rupture occurred in service on ARRIEL 2 twin engine applications and recently one on a single engine helicopter. For the case occurring in flight on a single engine helicopter (ARRIEL 2B1 engine), the pilot performed an emergency autorotation, landing the helicopter without further incident.

**Comments:** We gave the public the opportunity to participate in developing this AD. We received no comments on the NPRM.

**Conclusion:** We reviewed the available data and determined that air safety and the public interest require adopting the AD as proposed.

**Costs of Compliance:**

Based on the service information, we estimate that this AD would affect about 537 products of U.S. registry. We also estimate that it would take about 60 work-hours per product to comply with this AD. The average labor rate is $85 per work-hour. Required parts would cost about $3,900 per product. Based on these figures, we estimate the cost of this AD on U.S. operators to be $4,833,000.

**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 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 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); and
3. Will not have a significant economic impact, positive or negative, on a substantial number of small entities.