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## **DEPARTMENT OF TRANSPORTATION**

### **Federal Aviation Administration**

#### **14 CFR Part 39**

**[Docket No. FAA-2014-0568; Directorate Identifier 2014-NM-075-AD; Amendment 39-18166; AD 2015-11-03]**

**RIN 2120-AA64**

#### **Airworthiness Directives; ATR-GIE Avions de Transport Régional Airplanes**

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

**ACTION:** Final rule.

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**SUMMARY:** We are adopting a new airworthiness directive (AD) for certain ATR-GIE Avions de Transport Régional Model ATR42 and ATR72 airplanes. This AD was prompted by reports of fuel quantity indication malfunctions caused by fuel probe failure. This AD requires identifying the part number and serial number of the fuel probes, and replacing the fuel probes if necessary. We are issuing this AD to prevent fuel probe failure, which could lead to undetected fuel starvation and consequent dual engine in-flight flame-out.

**DATES:** This AD becomes effective July 14, 2015.

The Director of the Federal Register approved the incorporation by reference of a certain publication listed in this AD as of July 14, 2015.

**ADDRESSES:** You may examine the AD docket on the Internet at <http://www.regulations.gov/#!docketDetail;D=FAA-2014-0568> or in person at the Docket Management Facility, U.S. Department of Transportation, Docket Operations, M-30, West Building Ground Floor, Room W12-140, 1200 New Jersey Avenue SE., Washington, DC.

For service information identified in this AD, contact Zodiac Aerospace, Technical Publication Department, 61 Rue Pierre Curie—CS20001, 78373 Plaisir Cedex, France; phone: +33 (0)1 61 34 19 24; fax: +33 (0)1 61 34 21 13; email: [yann.laine@zodiac aerospace.com](mailto:yann.laine@zodiac aerospace.com); Internet: <http://www.zodiac aerospace.com>.

You may view this referenced service information at the FAA, Transport Airplane Directorate, 1601 Lind Avenue SW., Renton, WA. For information on the availability of this material at the FAA, call 425-227-1221. You can find this information at <http://www.regulations.gov> by searching for and locating Docket No. FAA-2014-0568.

**FOR FURTHER INFORMATION CONTACT:** Tom Rodriguez, Aerospace Engineer, International Branch, ANM-116, Transport Airplane Directorate, FAA, 1601 Lind Avenue SW., Renton, WA 98057-3356; telephone 425-227-1137; fax 425-227-1149.

## **SUPPLEMENTARY INFORMATION:**

### **Discussion**

We issued a notice of proposed rulemaking (NPRM) to amend 14 CFR part 39 by adding an AD that would apply to certain ATR-GIE Avions de Transport Régional Model ATR42 and ATR72 airplanes. The NPRM published in the Federal Register on August 15, 2014 (79 FR 48107). The NPRM was prompted by reports of fuel quantity indication malfunctions caused by fuel probe failure. The NPRM proposed to require identifying the part number and serial number of the fuel probes, and replacing the probes if necessary. We are issuing this AD to prevent fuel probe failure, which could lead to undetected fuel starvation and consequent dual engine in-flight flame-out.

The European Aviation Safety Agency (EASA), which is the Technical Agent for the Member States of the European Union, has issued EASA Airworthiness Directive 2014-0075R1, dated April 24, 2014 (referred to after this as the Mandatory Continuing Airworthiness Information, or "the MCAI"), to correct an unsafe condition on certain ATR-GIE Avions de Transport Régional Model ATR42 and ATR72 airplanes. The MCAI states:

A significant number of fuel probes installed on ATR aeroplanes failed during production tests and several occurrences of fuel quantity indication malfunctions were recently reported on in-service aeroplanes.

The subsequent investigation, conducted on the failed parts, confirmed a loss of ground connection on the terminal block of the fuel probe, due to an incorrect application of wiring instructions in production during fuel probe manufacturing between June 2011 and August 2013. The investigation identified a batch of parts, suspected to be affected by this manufacturing defect. Some of these probes were delivered as spares, and operators may have installed these probes on their in-service aeroplanes.

In case an affected fuel probe is installed on each wing of an aeroplane, being not equipped with an independent fuel low level measurement system or an aeroplane operated in accordance with ETOPS [extended range twin operations] rules, the defected fuel probes could indicate a higher fuel quantity value than the real quantity of the on-board fuel.

This condition, if not detected and corrected, could lead to an undetected fuel starvation and consequent dual engine in-flight flame out.

For the reasons described above, this [EASA] AD requires the identification and replacement of the affected fuel probes.

This [EASA] AD is revised to correct typographical errors.

You may examine the MCAI in the AD docket on the Internet at <http://www.regulations.gov/#!documentDetail;D=FAA-2014-0568-0002>.

## **Comments**

We gave the public the opportunity to participate in developing this AD. The following presents the comment received on the NPRM (79 FR 48107, August 15, 2014) and the FAA's response to the comment.

### **Request To Use the Latest Service Information**

Empire Airlines requested that we revise the NPRM (79 FR 48107, August 15, 2014) to include revised service information. Zodiac Aerospace issued Service Bulletin 766983-28-002, Revision 1, dated March 24, 2014, to correct certain part numbers. Empire stated that this change will negate the necessity for an alternative method of compliance request.

We agree to include the latest service information in this AD, although the correct part numbers were identified in table 1 to paragraph (g) in the NPRM (79 FR 48107, August 15, 2014), which will remain in this AD. We have also added new paragraph (k) in this AD to allow the use, before the effective date of this AD, of Zodiac Aerospace Service Bulletin 766983-28-002, dated October 15, 2013, for identifying part numbers to define serviceable parts. We have redesignated subsequent paragraphs accordingly.

### **Additional Changes to This AD**

We have revised the NPRM (79 FR 48107, August 15, 2014) to include the most updated contact information for the service information required by this AD, which is: Zodiac Aerospace, Technical Publication Department, 61 Rue Pierre Curie–CS20001, 78373 Plaisir Cedex, France; phone: +33 (0)1 61 34 19 24; fax: +33 (0)1 61 34 21 13; email: [yann.laine@zodiac aerospace.com](mailto:yann.laine@zodiac aerospace.com); Internet: <http://www.zodiac aerospace.com>.

We have revised the NPRM (79 FR 48107, August 15, 2014) by removing "Services Europe" from the service information citations, which does not need to be included in the service information citations in this AD.

## **Conclusion**

We reviewed the relevant data, considered the comment received, and determined that air safety and the public interest require adopting this AD with the changes described previously and minor editorial changes. We have determined that these minor changes:

- Are consistent with the intent that was proposed in the NPRM (79 FR 48107, August 15, 2014) for correcting the unsafe condition; and
- Do not add any additional burden upon the public than was already proposed in the NPRM (79 FR 48107, August 15, 2014).

We also determined that these changes will not increase the economic burden on any operator or increase the scope of this AD.

### **Related Service Information Under 1 CFR Part 51**

Zodiac Aerospace has issued Service Bulletin 766983-28-002, Revision 1, dated March 24, 2014. The service information describes procedures for an inspection for a potential splice conductor soldering defect, and installing a new splice conductor. The actions described in this service information are intended to correct the unsafe condition identified in the MCAI. 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 AD.

## **Costs of Compliance**

We estimate that this AD affects 81 airplanes of U.S. registry.

We also estimate that it will take about 2 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 \$0 per product. Based on these figures, we estimate the cost of this AD on U.S. operators to be \$13,770, or \$170 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 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.

## **Examining the AD Docket**

You may examine the AD docket on the Internet at <http://www.regulations.gov/#!docketDetail;D=FAA-2014-0568>; 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 Operations office (telephone 800-647-5527) is in the ADDRESSES section.

## **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 airworthiness directive (AD):



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**2015-11-03 ATR-GIE Avions de Transport Régional:** Amendment 39-18166. Docket No. FAA-2014-0568; Directorate Identifier 2014-NM-075-AD.

**(a) Effective Date**

This AD becomes effective July 14, 2015.

**(b) Affected ADs**

None.

**(c) Applicability**

This AD applies to the airplanes identified in paragraphs (c)(1), (c)(2), and (c)(3) of this AD.

(1) ATR-GIE Avions de Transport Régional Model ATR42-200, -300, -320, and -500 airplanes; and Model ATR72-101, -201, -102, -202, -211, -212, and -212A airplanes; certificated in any category; all manufacturer serial numbers qualified for extended range twin operations (ETOPS) with ATR Modification 04711.

(2) ATR-GIE Avions de Transport Régional Model ATR42-200, -300, -320, and -500 airplanes; certificated in any category; except as specified in paragraph (c)(2)(i) or (c)(2)(ii) of this AD.

(i) Airplanes modified with ATR Modification 04650.

(ii) Airplanes retrofitted as specified in ATR Service Bulletin ATR42-28-0033 or ATR42-28-0034, as applicable.

(3) ATR-GIE Avions de Transport Régional Model ATR72-101, -201, -102, -202, -211, -212, and -212A airplanes; certificated in any category; all manufacturer serial numbers; except as specified in paragraph (c)(3)(i) or (c)(3)(ii) of this AD.

(i) Airplanes modified with ATR Modification 04686.

(ii) Airplanes retrofitted as specified in ATR Service Bulletin ATR72-28-1013, ATR72-28-1022, or ATR72-28-1023, as applicable.

**(d) Subject**

Air Transport Association (ATA) of America Code 28, Fuel.

**(e) Reason**

This AD was prompted by reports of fuel quantity indication malfunctions caused by fuel probe failure. We are issuing this AD to detect and correct affected fuel probes, which could lead to undetected fuel starvation and consequent dual engine in-flight flame-out.

**(f) Compliance**

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

### **(g) Part Number and Serial Number Inspection**

Within 5,000 flight hours or 24 months, whichever occurs first after the effective date of this AD: Inspect to determine if any fuel probe has any part number and serial number identified in table 1 to paragraph (g) of this AD. A review of airplane maintenance records is acceptable in lieu of this inspection if the part number and serial number of the part can be conclusively determined from that review.

**Table 1 to Paragraph (g) of This AD—Affected Fuel Probes**

<b>Airplane model</b>	<b>Part No.</b>	<b>Serial No.</b>
ATR 42	766-046-2	1046 through 1083 inclusive.
ATR 42	766-047-2	1154 through 1214 inclusive.
ATR 42	766-048-2	1150 through 1197 inclusive.
ATR 42	768-055	1156 through 1227 inclusive.
ATR 42	798-038	1150 through 1238 inclusive.
ATR 72	766-793-1	1469 through 1826 inclusive.
ATR 72	766-795-2	1661 through 2093 inclusive.
ATR 72	766-796-2	1722 through 2152 inclusive.
ATR 72	766-797-2	1663 through 2051 inclusive.
ATR 72	766-983-1	2200 through 2652 inclusive.
ATR 72	768-100	1511 through 1876 inclusive.

### **(h) Replacement**

If any fuel probe is found that has any part number and serial number specified in table 1 to paragraph (g) of this AD: Within 5,000 flight hours or 24 months, whichever occurs first after the effective date of this AD, replace the fuel probe with a serviceable fuel probe, using a method approved by the Manager, International Branch, ANM-116, Transport Airplane Directorate, FAA; or the European Aviation Safety Agency (EASA); or ATR-GIE Avions de Transport Régional's EASA Design Organization Approval (DOA). If approved by the DOA, the approval must include the DOA-authorized signature.

Note 1 to paragraph (h) of this AD: Guidance on accomplishing the replacement can be found in Job Instruction Card 28-42-72, RAI 10000-001, "Removal and Installation of Fuel Quantity or Fuel Temp/Quantity Probe" of the ATR-42 Aircraft Maintenance Manual; and Job Instruction Card 28-42-72, RAI 10000-002, "Removal and Installation of Fuel Quantity or Fuel Temp/Quantity Probe" of the ATR-72 Aircraft Maintenance Manual.

### **(i) Definition of Serviceable Fuel Probe**

For the purposes of this AD, a fuel probe is serviceable if it meets the criterion specified in paragraph (i)(1) or (i)(2) of this AD.

- (1) The fuel probe is not listed in table 1 to paragraph (g) of this AD.

(2) The fuel probe is listed in table 1 to paragraph (g) of this AD, but has control tag "C" marked on the part identification plate, as specified in Zodiac Aerospace Service Bulletin 766983-28-002, Revision 1, dated March 24, 2014.

#### **(j) Parts Installation Limitations**

As of the effective date of this AD, no person may install, on any airplane, a fuel probe having any part number and serial number identified in table 1 to paragraph (g) of this AD, unless control tag "C" is marked on the part identification plate, as specified in Zodiac Aerospace Service Bulletin 766983-28-002, Revision 1, dated March 24, 2014.

#### **(k) Credit for Previous Actions**

This paragraph provides credit for applying the definitions and limitations specified in paragraphs (i)(2) and (j) of this AD, if those provisions were applied before the effective date of this AD using Zodiac Aerospace Service Bulletin 766983-28-002, dated October 15, 2013, which is not incorporated by reference in this AD.

#### **(l) Other FAA AD Provisions**

The following provisions also apply to this AD:

(1) Alternative Methods of Compliance (AMOCs): The Manager, International Branch, ANM-116, Transport Airplane Directorate, 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 International Branch, send it to ATTN: Tom Rodriguez, Aerospace Engineer, International Branch, ANM-116, Transport Airplane Directorate, FAA, 1601 Lind Avenue SW., Renton, WA 98057-3356; telephone 425-227-1137; fax 425-227-1149. Information may be emailed to: 9-ANM-116-AMOC-REQUESTS@faa.gov. 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. The AMOC approval letter must specifically reference this AD.

(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, International Branch, ANM-116, Transport Airplane Directorate, FAA; or EASA; or ATR-GIE Avions de Transport Régional's EASA DOA. If approved by the DOA, the approval must include the DOA-authorized signature.

#### **(m) Related Information**

(1) Refer to Mandatory Continuing Airworthiness Information (MCAI) EASA Airworthiness Directive 2014-0075R1, dated April 24, 2014, for related information. This MCAI may be found in the AD docket on the Internet at <http://www.regulations.gov/#!documentDetail;D=FAA-2014-0568-0002>.

(2) Service information identified in this AD that is not incorporated by reference is available at the addresses specified in paragraphs (n)(3) and (n)(4) of this AD.

#### **(n) Material Incorporated by Reference**

(1) The Director of the Federal Register approved the incorporation by reference (IBR) of the service information listed in this paragraph under 5 U.S.C. 552(a) and 1 CFR part 51.

(2) You must use this service information as applicable to do the actions required by this AD, unless this AD specifies otherwise.

(i) Zodiac Aerospace Service Bulletin 766983-28-002, Revision 1, dated March 24, 2014.

(ii) Reserved.

(3) For service information identified in this AD, contact Zodiac Aerospace, Technical Publication Department, 61 Rue Pierre Curie–CS20001, 78373 Plaisir Cedex, France; phone: +33 (0)1 61 34 19 24; fax: +33 (0)1 61 34 21 13; email: [yann.laine@zodiacaerospace.com](mailto:yann.laine@zodiacaerospace.com); Internet: <http://www.zodiacaerospace.com>.

(4) You may view this service information at the FAA, Transport Airplane Directorate, 1601 Lind Avenue SW., Renton, WA. For information on the availability of this material at the FAA, call 425-227-1221.

(5) You may view this service information that is incorporated by reference at the National Archives and Records Administration (NARA). For information on the availability of this material at NARA, call 202-741-6030, or go to: <http://www.archives.gov/federal-register/cfr/ibr-locations.html>.

Issued in Renton, Washington, on May 18, 2015.

John P. Piccola, Jr.,  
Acting Manager, Transport Airplane Directorate,  
Aircraft Certification Service.