[4910-13-P]

DEPARTMENT OF TRANSPORTATION

Federal Aviation Administration

14 CFR Part 39

[Docket No. FAA-2017-0967; Project Identifier 2017-NE-35-AD; Amendment 39-21167; AD 2020-15-04]

RIN 2120-AA64

Airworthiness Directives; GE Aviation Czech s.r.o. Turboprop Engines (Type Certificate previously held by WALTER Engines a.s., Walter a.s., and MOTORLET a.s.)

AGENCY: Federal Aviation Administration (FAA), DOT.

ACTION: Final rule.

SUMMARY: The FAA is adopting a new airworthiness directive (AD) for all GE Aviation Czech s.r.o. M601D-11, M601E-11, M601E-11A, M601E-11AS, M601E-11S, M601F, H80, H80-100, H80-200, H75-100, H75-200, H85-100, and H85-200 model turboprop engines. This AD was prompted by a review by the manufacturer that identified the possibility of a power turbine (PT) rotor overspeed and the uncontained release of PT blades. This AD requires installing a modified engine outlet system. The FAA is issuing this AD to address the unsafe condition on these products.

DATES: This AD is effective [INSERT DATE 35 DAYS AFTER DATE OF PUBLICATION IN THE FEDERAL REGISTER].

The Director of the Federal Register approved the incorporation by reference of a certain publication listed in this AD as of [INSERT DATE 35 DAYS AFTER DATE OF PUBLICATION IN THE FEDERAL REGISTER].

ADDRESSES: For service information identified in this final rule, contact GE Aviation Czech s.r.o., Beranových 65, 199 02 Praha 9 – Letňany, Czech Republic; phone: +420 222 538 111; fax: +420 222 538 222. You may view this service information at the FAA,

Airworthiness Products Section, Operational Safety Branch, 1200 District Avenue, Burlington, MA, 01803. For information on the availability of this material at the FAA, call 781-238-7759. It is also available on the internet at https://www.regulations.gov by searching for and locating Docket No. FAA-2017-0967.

Examining the AD Docket

You may examine the AD docket on the Internet at https://www.regulations.gov by searching for and locating Docket No. FAA-2017-0967; or in person at Docket Operations between 9 a.m. and 5 p.m., Monday through Friday, except Federal holidays. The AD docket contains this final rule, the mandatory continuing airworthiness information (MCAI), the regulatory evaluation, any comments received, and other information. The address for Docket Operations is U.S. Department of Transportation, Docket Operations, M-30, West Building Ground Floor, Room W12-140, 1200 New Jersey Avenue SE., Washington, DC, 20590.

FOR FURTHER INFORMATION CONTACT: Barbara Caufield, Aerospace Engineer, ECO Branch, FAA, 1200 District Avenue, Burlington, MA 01803; phone: 781-238-7146; fax: 781-238-7199; email: barbara.caufield@faa.gov.

SUPPLEMENTARY INFORMATION:

Discussion

The FAA issued a supplemental notice of proposed rulemaking (SNPRM) to amend 14 CFR part 39 by adding an AD that would apply to all GE Aviation Czech s.r.o. M601D-11, M601E-11, M601E-11A, M601E-11AS, M601E-11S, M601F, H80, H80-100, H80-200, H75-100, H75-200, H85-100, and H85-200 model turboprop engines. The SNPRM published in the *Federal Register* on February 4, 2020 (85 FR 6110) ("the SNPRM"). The FAA preceded the SNPRM with a notice of proposed rulemaking (NPRM) that published in the *Federal Register* on January 24, 2018 (83 FR 3287) ("the NPRM"). The NPRM proposed to require installing a modified engine outlet system. The NPRM was prompted by a review by the manufacturer that identified the possibility of a

PT rotor overspeed and the uncontained release of PT blades. The FAA is issuing this AD to address the unsafe condition on these products.

The European Union Aviation Safety Agency (EASA), which is the Technical Agent for the Member States of the European Community, has issued EASA AD 2017-0151, dated August 18, 2017 (referred to after this as "the MCAI"), to address the unsafe condition on these products. The MCAI states:

> A recent design review identified the possibility of failure of the power turbine (PT) or quill shaft splines.
>
> This condition, if not corrected, could lead to a PT rotor overspeed, with consequent release of PT blade(s), possibly resulting in high energy debris and damage to, and/or reduced control of, the aeroplane.
>
> To address this potential unsafe condition, GE Aviation Czech (GEAC) designed a modification (mod) of the engine outlet system and issued Alert Service Bulletins (ASB) ASB-M601E-72-00-00-0070, ASB-M601D-72-00-00-0053, ASB-M601F-72-00-00-0036, ASB-M601T-72-00-00-0029, ASB-M601Z-72-00-00-0039, ASB-H75-72-00-00-0011, ASB-H80-72-00-00-0025 and ASB-H85-72-00-00-0007 (single document, hereafter referred to as "the ASB" in this AD), providing instructions for modification of engines in service.
>
> For the reason described above, this AD requires modification of the affected engines, and prohibits installation of pre-mod parts.

You may obtain further information by examining the MCAI in the AD docket on the internet at https://www.regulations.gov by searching for and locating Docket No. FAA-2017-0967.

Comments

The FAA gave the public the opportunity to participate in developing this final rule. The FAA received no comments on the SNPRM, on the determination of the cost to the public, or the impact of the proposed rule on small entities.

Conclusion

The FAA reviewed the relevant data and determined that air safety and the public interest require adopting this final rule as proposed.

Related Service Information under 1 CFR Part 51

The FAA reviewed GE Aviation ASB ASB-M601E-72-00-00-0070[03], ASB-M601D-72-00-00-0053[03], ASB-M601F-72-00-00-0036[03], ASB-M601T-72-00-00-0029[03], ASB-M601Z-72-00-00-0039[03], ASB-H75-72-00-00-0011[03], ASB-H80-72-00-00-0025[03], and ASB-H85-72-00-00-0007[03] (single document; formatted as service bulletin identifier[revision number]), dated July 24, 2018. The ASB describes procedures for removal and replacement of the engine outlet system hardware. 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.

Costs of Compliance

The FAA estimates that this AD affects 42 engines installed on airplanes of U.S. registry.

The FAA estimates the following costs to comply with this AD:

Estimated Costs

Action	Labor cost	Parts cost	Cost per product	Cost on U.S. operators
Replace exhaust system parts	64 work-hours x $85 per hour = $5,440	$63,000	$68,440	$2,874,480

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.

The FAA is 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 Flexibility Determination

The Regulatory Flexibility Act of 1980 (Pub. L. 96-354, codified as amended at 5 USC §§ 601-612) (RFA) establishes "as a principle of regulatory issuance that agencies shall endeavor, consistent with the objectives of the rule and of applicable statutes, to fit regulatory and informational requirements to the scale of the businesses, organizations, and governmental jurisdictions subject to regulation. To achieve this principle, agencies are required to solicit and consider flexible regulatory proposals and to explain the rationale for their actions to assure that such proposals are given serious consideration." Pub. L. 96-354, § 2(b), Sept. 19, 1980. The RFA covers a wide-range of small entities, including small businesses, not-for-profit organizations, and small governmental jurisdictions. Agencies must perform a review to determine whether a rule will have a significant economic impact on a substantial number of small entities. If the agency determines that it will, the agency must prepare a regulatory flexibility analysis as described in the RFA.

The FAA published an Initial Regulatory Flexibility Analysis (IRFA) in the proposed rule to aid the public in commenting on the potential impacts to small entities. The FAA considered the public comments in developing the final rule and this Final Regulatory Flexibility Analysis (FRFA). A FRFA must contain the following:

(1) A statement of the need for, and objectives of, the rule;

(2) A statement of the significant issues raised by the public comments in response to the IRFA, a statement of the assessment of the agency of such issues, and a statement of any changes made in the proposed rule as a result of such comments;

(3) The response of the agency to any comments filed by the Chief Counsel for Advocacy of the Small Business Administration (SBA) in response to the proposed rule, and a detailed statement of any change made to the proposed rule in the final rule as a result of the comments;

(4) A description of and an estimate of the number of small entities to which the rule will apply or an explanation of why no such estimate is available;

(5) A description of the projected reporting, recordkeeping, and other compliance requirements of the proposed rule, including an estimate of the classes of small entities which will be subject to the requirement and the type of professional skills necessary for preparation of the report or record;

(6) A description of the steps the agency has taken to minimize the significant economic impact on small entities consistent with the stated objectives of applicable statutes, including a statement of the factual, policy, and legal reasons for selecting the alternative adopted in the final rule and why each of the other significant alternatives to the rule considered by the agency which affect the impact on small entities was rejected.

1. Need for and Objectives of the Rule

This AD was prompted by a review by the manufacturer that identified the possibility of a PT overspeed and the uncontained release of PT blades. The FAA is issuing this AD to prevent uncontained release of the PT blades. This AD requires installing a modified engine outlet system. The unsafe condition, if not addressed, could result in failure of the PT blades, uncontained release of the blades, damage to the engine, and damage to the airplane.

2. Significant Issues Raised in Public Comments

The FAA did not receive any public comments on the SNPRM.

3. Response to SBA Comments

The Chief Counsel for Advocacy of the Small Business Administration (SBA) did not file any comments in response to the proposed rule. Thus, the FAA did not make any changes to the proposed rule in the final rule.

4. Small Entities to Which the Rule Will Apply

This AD applies to all GE Aviation Czech s.r.o. M601D-11, M601E-11, M601E-11A, M601E-11AS, M601E-11S, M601F, H75-100, H75-200, H80, H80-100, H80-200, H85-100, and H85-200 turboprop engines. These engines are typically installed on airplanes that are owned and operated by aerial application businesses, which is a small segment of the aviation industry. These airplanes, also known as "crop-dusters," spread fertilizer, insecticides, fungicides, and weed killers.[1]

The FAA searched the 2018 Aircraft Registration database that contains the records of all U.S. Civil Aircraft maintained by the FAA's Aircraft Registration Branch and identified 42 airplanes with GE H80 series engines or equivalent turboprop engines installed. The Aircraft Registration database shows that 38 companies own these 42 airplanes, 4 companies own 2 airplanes, while the remaining 34 companies own 1 airplane each. Based on these registration records, the FAA assumes that approximately each entity or business owned one airplane.

By using the Small Business Administration (SBA)'s size standards and the North American Industry Classification System (NAICS) code classifications, the FAA is able to determine whether a business is small or not. These entities operate under NAICS code 115112, Soil Preparation, Planting, and Cultivating. The size standards for this NAICS code as provided by SBA's Size Standards Table[2] is $7.5 million in annual revenues.

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[1] "Flying Low Is Flying High As Demand for Crop-Dusters Soars", by Jonathan Welsh, updated Aug. 14, 2009: https://www.wsj.com/articles/SB125020758399330769. Accessed on July 26, 2019.

[2] https://www.sba.gov/sites/default/files/files/Size_Standards_Table.pdf Accessed on July 26, 2019.

Therefore, entities generating less than $7.5 million in annual revenues would be treated as small businesses for the purposes of this analysis.

The FAA assumes that all 38 operators above that are affected by this AD are small businesses because $700,000 annual revenue for a first-class, used turbine agricultural aviation plane[3] is a reasonable industry estimate. On average, entities operating in the aerial application industry generate approximately $700,000 each year ($700,000 x 1 crop-duster airplane), which is below $7.5 million revenue size standards for NAICS code 115112. Therefore, the FAA assumes all 38 registered company owners or operators to be small entities.

5. Projected Reporting, Recordkeeping, and Other Compliance Requirements

There are no record-keeping costs or other compliance costs associated with this final rule.

6. Significant Alternatives Considered

There is no direct safety alternative to the modification of the engine outlet system. The modification addresses a safety issue aimed at preventing an uncontained release of the PT blades. Compliance cost of this AD comes from the removal and replacement of the exhaust system parts. Estimated compliance cost per engine is identified below.

Labor cost = 64 repair hours per engine * $85 Mean Hourly Wage = $5,440.

Cost of Parts = $63,000 per engine (Source: GE Aviation Czech).

$5,440 labor per engine + $63,000 parts per engine = $68,440 compliance cost per engine.

To estimate the revenue impacts of the AD on these 38 small operators, the FAA used the total estimated one-time costs of compliance per each engine ($68,440) and divided it by the estimated annual revenue of each entity ($700,000). The FAA

[3] "How much does it cost?" by Bill Lavender, April 3, 2017. https://agairupdate.com/how-much-does-it-cost/ Accessed on July 26, 2019.

determined all 38 small businesses that would be affected by this AD would experience impacts of approximately 10 percent of their annual revenue during the implementation of this AD ($68,440 ÷ $700,000).

Therefore, the FAA determined that this AD rule will have a significant economic impact on a substantial number of small entities.

Regulatory Findings

The FAA determined that this AD would not have federalism implications under Executive Order 13132. This 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 AD:

(1) Is not a "significant regulatory action" under Executive Order 12866, and

(2) Will not affect intrastate aviation in Alaska.

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):

2020-15-04 **GE Aviation Czech s.r.o. (Type Certificate previously held by WALTER Engines a.s., Walter a.s., and MOTORLET a.s.):** Amendment 39-21167; Docket No. FAA-2017-0967; Project Identifier 2017-NE-35-AD.

(a) Effective Date

This AD is effective [INSERT DATE 35 DAYS AFTER DATE OF PUBLICATION IN THE FEDERAL REGISTER].

(b) Affected ADs

None.

(c) Applicability

(1) This AD applies to all GE Aviation Czech s.r.o. M601D-11, M601E-11, M601E-11A, M601E-11AS, M601E-11S, M601F, H75-100, H75-200, H80, H80-100, H80-200, H85-100, and H85-200 turboprop engines.

(2) These engines are known to be installed on, but not limited to, Thrush Aircraft, Inc. (formerly Quality, Ayres, Rockwell) S-2R, PZL "Warszawa-Okęcie" PZL-106 (Kruk), Air Tractor AT-300, AT-400 and AT-500 series, Allied Ag Cat Productions, Inc. (formerly Schweizer, Grumman American) G-164 series, RUAG (formerly Dornier) Do 28 and Aircraft Industries (formerly LET) L-410 airplanes.

(d) Subject

Joint Aircraft System Component (JASC) Code 7810, Engine Collector/Tailpipe/Nozzle.

(e) Unsafe Condition

This AD was prompted by a review by the manufacturer that identified the possibility of a power turbine (PT) overspeed and the uncontained release of PT blades. The FAA is issuing this AD to prevent uncontained release of the PT blades. The unsafe condition, if not addressed, could result in failure of the PT blades, uncontained release of the blades, damage to the engine, and damage to the airplane.

(f) Compliance

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

(g) Required Actions

(1) After the effective date of this AD, replace the parts listed in Tables 2 through 5 to paragraph (g) of this AD with the parts identified in Planning Information, Paragraph 1.5, Sections I through IV, respectively in GE Aviation Alert Service Bulletin (ASB) ASB-M601E-72-00-00-0070[03], ASB-M601D-72-00-00-0053[03], ASB-M601F-72-00-00-0036[03], ASB-M601T-72-00-00-0029[03], ASB-M601Z-72-00-00-0039[03], ASB-H75-72-00-00-0011[03], ASB-H80-72-00-00-0025[03], and ASB-H85-72-00-00-0007[03] (single document; formatted as service bulletin identifier[revision number]), dated July 24, 2018, using the criteria below, whichever occurs first:

(i) during the next engine shop visit,

(ii) within the compliance time identified in the applicable Airworthiness Limitations Section of the existing maintenance manual for the affected engine model, or

(iii) within the compliance time, in years after the effective date of this AD, shown in Table 1 of this AD.

Table 1 to Paragraph (g) – Compliance Times

Date of Engine Manufacture	**Date of Release to Service after last Shop Visit**	**Compliance Time**
December 31, 2008 or before	Never subjected to engine shop visit	5 years
January 1, 2009 or later		10 years
any	February 9, 2014 or before	5 years
any	February 10, 2014 or later	10 years

Table 2 to Paragraph (g) – Exhaust Systems M601-4.2, M601-4.5, M601-4.51, M601-4.52, M601-4.61, and M601-4.62

Engine models	**Part Name**	**Part Number (P/N)**
M601E-11, M601E-11A, M601E-11AS, M601E-11S, M601F, H75-100, H75-200, H80, H80-100, H80-200, H85-100, and	Containment Ring	M601-426.5
	Insulation Cover	M601-422.3, M601-422.2
	Supporting Cone	M601-457.7, M601-457.3
	Support	M601-4512.5

H85-200		

Table 3 to Paragraph (g) – Exhaust System M601-4.1, M601-4.6, and M601-4.7

Engine models	Part Name	P/N
M601D-11, M601E-11, M601E-11A, M601E-11AS, M601E-11S	Containment Ring	M601-426.5
	Insulation Cover	M601-422.3, M601-422.2
	Support	M601-4512.5
	Supporting Cone	M601-457.7, M601-457.3
	Outlet Duct	M601-416.6

Table 4 to Paragraph (g) – Countershaft Case Complete (Reduction Gearbox Subassembly) M601-62.2, M601-62.7, M601-60.3

Engine models	Part Name	P/N
All	Bolt	M601-6170.9
	Ring	M601-6014.9

Table 5 to Paragraph (g)– Torquemeter (Reduction Gearbox Subassembly) M601-673.6, M601-667.7, M601-605.3

Engine models	Part Name	P/N
All	Torquemeter Holder	M601-643.9

(2) [Reserved]

(h) Installation Prohibition

(1) Do not install any part with a P/N listed in Tables 2 through 5 to paragraph (g) of this AD on any engine after that engine has been modified as required by paragraph (g)(1) of this AD.

(2) After the effective date of this AD, do not install a part with a P/N listed in Tables 2 through 5 of this AD on any engine manufactured on or after September 1, 2017.

(i) Definition

For the purpose of this AD, an engine shop visit is when the engine is overhauled or rebuilt, or the PT is disassembled.

(j) Alternative Methods of Compliance (AMOCs)

(1) The Manager, ECO Branch, 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 manager of the ECO Branch, send it to the attention of the person identified in paragraph (k)(1) of this AD. You may email your request to: ANE-AD-AMOC@faa.gov.

(2) 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.

(k) Related Information

(1) For more information about this AD, contact Barbara Caufield, Aerospace Engineer, ECO Branch, FAA, 1200 District Avenue, Burlington, MA 01803; phone: 781-238-7146; fax: 781-238-7199; email: barbara.caufield@faa.gov.

(2) Refer to European Union Aviation Safety Agency (EASA) AD 2017-0151R1, dated December 5, 2018, for more information. You may examine the EASA AD in the AD docket on the internet at https://www.regulations.gov by searching for and locating it in Docket No. FAA-2017-0967.

(l) 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 the AD specifies otherwise.

(i) GE Aviation Alert Service Bulletin ASB-M601E-72-00-00-0070[03], ASB-M601D-72-00-00-0053[03], ASB-M601F-72-00-00-0036[03], ASB-M601T-72-00-00-0029[03], ASB-M601Z-72-00-00-0039[03], ASB-H75-72-00-00-0011[03], ASB-H80-

72-00-00-0025[03], and ASB-H85-72-00-00-0007[03] (single document; formatted as service bulletin identifier[revision number]), dated July 24, 2018.

(ii) [Reserved]

(3) For GE Aviation Czech service information identified in this AD, contact GE Aviation Czech s.r.o., Beranových 65, 199 02 Praha 9 – Letňany, Czech Republic; phone: +420 222 538 111; fax: +420 222 538 222.

(4) You may view this service information at FAA, Airworthiness Products Section, Operational Safety Branch, 1200 District Avenue, Burlington, MA, 01803. For information on the availability of this material at the FAA, call 781-238-7759.

(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, email: fedreg.legal@nara.gov, or go to: https://www.archives.gov/federal-register/cfr/ibr-locations.html.

Issued on July 10, 2020.

Lance T. Gant, Director,
Compliance & Airworthiness Division,
Aircraft Certification Service.
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