(g) Required Actions
   Except as specified by paragraph (h) of this AD: At the applicable times specified in the “Compliance” paragraph of Boeing Special Attention Requirements Bulletin 747–25–3725 RB, dated October 27, 2020, do all applicable actions identified in, and in accordance with, the Accomplishment Instructions of Boeing Special Attention Requirements Bulletin 747–25–3725 RB, dated October 27, 2020.

   Note 1 to paragraph (g): Guidance for accomplishing the actions required by this AD can be found in Boeing Special Attention Service Bulletin 747–25–3725, dated October 27, 2020, which is referred to in Boeing Special Attention Requirements Bulletin 747–25–3725 RB, dated October 27, 2020.

   (h) Exception to Service Information Specifications

   Where Boeing Special Attention Requirements Bulletin 747–25–3725 RB, dated October 27, 2020, uses the phrase “after the Original Issue date of Requirements Bulletin 747–25–3725 RB,” this AD requires using “the effective date of this AD.”

   (i) Alternative Methods of Compliance (AMOCs)

   (1) The Manager, Seattle ACO 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 responsible Flight Standards Office, as appropriate. If sending information directly to the manager of the certification office, send it to the attention of the person identified in paragraph (j) of this AD. Information may be emailed to: 9-AMN-Seattle-ACO-AMOC-Requests@faa.gov.

   (2) Before using any approved AMOC, notify your appropriate principal inspector, or lacking a principal inspector, the manager of the responsible Flight Standards Office.

   (3) An AMOC that provides an acceptable level of safety may be used for any repair, modification, or alteration required by this AD if it is approved by the Boeing Company Organization Designation Authorization (ODA) that has been authorized by the Manager, Seattle ACO Branch, FAA, to make those findings. To be approved, the repair method, modification deviation, or alteration deviation must meet the certification basis of the airplane, and the approval must specifically refer to this AD.

   (j) Related Information

   (1) For more information about this AD, contact Julie Linn, Aerospace Engineer, Cabin Safety and Environmental Systems Section, FAA, Seattle ACO Branch, 2200 South 216th St., Des Moines, WA 98198; phone and fax: 206–231–3584; email: julie.linn@faa.gov.

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

   (k) 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.


   (ii) [Reserved]


   (4) You may view this service information at the FAA, Airworthiness Products Section, Operational Safety Branch, 2200 South 216th St., Des Moines, WA. For information on the availability of this material at the FAA, call 206–231–3195.

   (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 June 25, 2021.

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

   [FR Doc. 2021–15027 Filed 7–14–21; 8:45 am]

   BILLING CODE 4910–13–P

DEPARTMENT OF TRANSPORTATION

Federal Aviation Administration

14 CFR Part 39


RIN 2120–AA64

Airworthiness Directives; Rolls-Royce Deutschland Ltd & Co KG (Type Certificate Previously Held by BMW Rolls-Royce GmbH and BMW Rolls-Royce Aero Engines) Turbofan Engines

AGENCY: Federal Aviation Administration (FAA), DOT.

ACTION: Final rule.

SUMMARY: The FAA is adopting a new airworthiness directive (AD) for certain Rolls-Royce Deutschland Ltd. & Co KG (RRD) BR700–715A1–30, BR700–715B1–30, and BR700–715C1–30 model turbofan engines. This AD was prompted by reports of HPT stage 1 blades failing in service due to sulphidation and subsequent crack initiation, due to contamination of the blade shank passing by the blade damper. In the NPRM, the FAA proposed to require removal and replacement of the HPT stage 1 blade and HPT stage 1 blade damper. The FAA is issuing this AD to address the unsafe condition on these products.

DATES: This AD is effective August 19, 2021.

The Director of the Federal Register approved the incorporation by reference of a certain publication listed in this AD as of August 19, 2021.

ADDRESSES: For service information identified in this final rule, contact Rolls-Royce Deutschland Ltd. & Co KG, Eschenweg 11, 15827 Blankenfelde-Mahlow, Germany; phone: +49 (0) 33 708 6 0; email: rrd.techhelp@rolls-royce; website: https://www.rolls-royce.com/contact-us.aspx. 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 at https://www.regulations.gov by searching for and locating Docket No. FAA–2020–1025.

Examining the AD Docket

You may examine the AD docket at https://www.regulations.gov by searching for and locating Docket No. FAA–2020–1025, 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, 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, Aviation Safety 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:

Background

The FAA issued a notice of proposed rulemaking (NPRM) to amend 14 CFR part 39 by adding an AD that would apply to certain RRD BR700–715A1–30, BR700–715B1–30, and BR700–715C1–30 model turbofan engines. The NPRM published in the Federal Register on November 13, 2020 (85 FR 72608). The NPRM was prompted by reports of HPT stage 1 blades failing in service due to sulphidation and subsequent crack initiation, due to contamination of the blade shank passing by the blade damper. In the NPRM, the FAA proposed to require removal and replacement of the HPT stage 1 blade and HPT stage 1 blade damper. The
FAA is issuing this AD to address the unsafe condition on these products.

The European Aviation Safety Agency (EASA), which is the Technical Agent for the Member States of the European Community, has issued EASA AD 2018–0194, dated September 4, 2018 (referred to after this as “the MCAI”), to address the unsafe condition on these products. The MCAI states:

Occurrences have been reported on RRD BR700–715 engines where certain HP turbine stage 1 blades failed in service. Investigation of these events showed that these were caused by sulphidation and subsequent crack initiation, due to contamination of the blade shank passing by the blade damper.

This condition, if not corrected, could lead to further HP turbine stage 1 blade failures, possibly resulting in engine in-flight shut-down and consequent reduced control of the aeroplane. To address this potential unsafe condition, RRD published the NMSB to provide instructions to replace the affected assembly.

For the reasons described above, this [EASA] AD requires determination of the engine configuration and, depending on findings, removal of the engine from service to replace the affected assembly.

You may obtain further information by examining the MCAI in the AD docket at https://www.regulations.gov by searching for and locating Docket No. FAA–2020–1025.

Discussion of Final Airworthiness Directive

Comments

The FAA received comments from one commenter. The commenter was Delta Airlines (Delta). The following presents the comments received on the NPRM and the FAA’s response to each comment.

Request To Revise Definition of “Parts Eligible for Installation”

Delta requested that the FAA revise the definition of “parts eligible for installation” to avoid the necessity of an alternate method of compliance (AMOC) request each time Rolls-Royce introduces a new part number for the HPT stage 1 blade or HPT stage 1 damper.

The FAA agrees and revised the definition of “parts eligible for installation” to allow installation of HPT stage 1 blades and HPT stage 1 dampers approved as eligible for installation in accordance with certain RRD service information.

Request To Clarify Compliance Time Language

Delta requested that the FAA revise paragraph (g)(1)(i) in the Required Actions section of this AD to refer to “flight cycles since new” instead of “flight cycles since first installation,” as proposed in the NPRM. Delta noted that the proposed language could be misinterpreted as referring to any affected HPT stage 1 blade, regardless of whether the affected HPT stage 1 blade is currently installed on an engine.

The FAA partially agrees. The FAA agrees to update this reference to avoid possible misinterpretation, but disagrees with the specific language proposed by the commenter. The FAA has updated paragraph (g)(1)(i) of this AD to read: “Before an affected HPT stage 1 blade exceeds 10,000 flight cycles (FCs) since first installation . . . “

Conclusion

The FAA reviewed the relevant data, considered any comments received, and determined that air safety requires adopting this AD as proposed. Accordingly, the FAA is issuing this AD to address the unsafe condition on these products. Except for minor editorial changes and any other changes described previously, this AD is adopted as proposed in the NPRM. None of the changes will increase the economic burden on any operator.

Related Service Information Under 1 CFR Part 51

The FAA reviewed RRD BR700 Series Alert Non-Modification Service Bulletin (NMSB) SB–BR700–72–A900640, Revision 1, dated August 31, 2018. The Alert NMSB describes procedures for removing and replacing the HPT stage 1 blade and HPT stage 1 blade damper. 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 ADDRESSES.

Other Related Service Information


Costs of Compliance

The FAA estimates that this AD affects 222 engines installed on airplanes of U.S. registry. The agency estimates that the service life of both the HPT stage 1 blade and HPT stage 1 blade damper is 5.5 years. Based on life estimate, the agency is providing an estimated annual cost to replace these parts.

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

<table>
<thead>
<tr>
<th>Action</th>
<th>Labor cost</th>
<th>Parts cost</th>
<th>Cost per product</th>
<th>Annualized cost on U.S. operators</th>
</tr>
</thead>
<tbody>
<tr>
<td>Replace HPT stage 1 blade and HPT stage 1 blade damper.</td>
<td>20 work-hours × $85 per hour = $1,700</td>
<td>$692,000</td>
<td>$693,700</td>
<td>$28,000,524</td>
</tr>
</tbody>
</table>

The FAA has included all known costs in its cost estimate. According to the manufacturer, however, all of the costs of this AD may be covered under warranty, thereby reducing the cost impact on affected individuals.

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 Findings

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) Will not affect intrastate aviation in Alaska, 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.

List of Subjects in 14 CFR Part 39

Air transportation, Aircraft, Aviation safety, Incorporation by reference, Safety.

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:


(a) Effective Date

This airworthiness directive (AD) is effective August 19, 2021.

(b) Affected ADs

None.

(c) Applicability

This AD applies to all Rolls-Royce Deutschland Ltd. & Co KG (Type Certificate previously held by BMW Rolls-Royce GmbH and BMW Rolls-Royce Aero Engines) (RRD) BR700–715A1–30, BR700–715B1–30, and BR700–715SCI–30 model turbofan engines with high-pressure turbine (HPT) stage 1 blade, part number (P/N) BRH17133, BRH19984, BRH20011, BRH20237, BRH20351, FW35594, FW45914, FW64379, or FW75735, and with HPT stage 1 blade damper, P/N BRH10943, BRH20353, or FW45770, installed.

(d) Subject

Joint Aircraft System Component (JASC) Code 7250, Turbine Section.

(e) Unsafe Condition

This AD was prompted by reports of HPT stage 1 blades failing in service due to sulphidation and subsequent crack initiation. The FAA is issuing this AD to prevent failure of the HPT stage 1 blade. The unsafe condition, if not addressed, could result in the release of the HPT stage 1 blade, failure of the engine, in-flight shutdown, and loss of the airplane.

(f) Compliance

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

(g) Required Actions

(1) For affected engines that have not operated exclusively under the Hawaiian Flight Mission:

(i) Before an affected HPT stage 1 blade exceeds 10,000 flight cycles (FCs) since first installation of that affected HPT stage 1 blade, or within 50 FCs after the effective date of this AD, whichever occurs later, remove the affected HPT stage 1 blade and the affected HPT stage 1 blade damper from service and replace with parts eligible for installation using the Accomplishment Instructions, paragraph 3.R. through T., of RRD Alert Non-Modification Service Bulletin (NMSB) SB–BR700–72–A900640, Revision 1, dated August 31, 2018 (NMSB SB–BR700–72–A900640).

(ii) If an HPT stage 1 blade has been cleaned and examined before the effective date of this AD using RRD NMSB SB–BR700–72–900118, dated June 6, 2017, within 1,500 FCs from the last cleaning and examination, or within 10 FCs after the effective date of this AD, whichever occurs later, remove the affected HPT stage 1 blade and replace with parts eligible for installation using Accomplishment Instructions, paragraph 3.R. through T., of RRD NMSB SB–BR700–72–A900640.

(2) For affected engines operated exclusively under the Hawaiian Flight Mission:

(i) At the next change of the flight mission after the effective date of this AD, replace the affected HPT stage 1 blade and affected HPT stage 1 blade damper in accordance with paragraphs (g)(1)(i) and (ii) of this AD.

(ii) [Reserved]

(h) Installation Prohibition

After the effective date of this AD, do not install any HPT stage 1 blade, P/N BRH17133, BRH19984, BRH20011, BRH20237, BRH20351, FW35594, FW45914, FW64379, or FW75735, with any HPT stage 1 blade damper, P/N BRH10943, BRH20353, or FW45770, in any engine.

(i) Definitions

(1) For the purpose of this AD, “parts eligible for installation” are an HPT stage 1 blade, P/N FW75735, or a P/N approved for installation in accordance with paragraph 2.C of RRD NMSB SB–BR700–72–A900640, installed with HPT stage 1 blade damper, P/N KH82098, or a P/N approved for installation in accordance with paragraph 2.C of RRD NMSB SB–BR700–72–A900640.

(2) For the purpose of this AD, the “Hawaiian Flight Mission” are flights operated by Hawaiian Airlines.

(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 certification office, send it to the attention of the person identified in Related Information. 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) Barbara Caufield, Aviation Safety 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 Aviation Safety Agency (EASA) AD 2018–0194, dated September 4, 2018, for more information. You may examine the EASA AD in the AD docket at https://www.regulations.gov by searching for and locating it in Docket No. FAA–2020–1025.

(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.


(ii) [Reserved]

(3) For RRD service information identified in this AD, contact Rolls-Royce Deutschland Ltd. & Co KG, Eschenweg 11, 15827 Blankenfelde-Mahlow, Germany; phone: +49 (0) 33 78 8 0; email: rrd.techhelp@rolls-
Turbomécas, S.A. Turboshaft Engines

Helicopter Engines, S.A. (Type

Airworthiness Directives; Safran
RIN 2120–AA64
Identifier MCAI–2020–00309–E; Amendment
[Docket No. FAA–2021–0100; Project

Federal Aviation Administration
DEPARTMENT OF TRANSPORTATION
[FR Doc. 2021–15055 Filed 7–14–21; 8:45 am

SUMMARY:

The FAA is adopting a new
circular engine control (FADEC)

The FAA reviewed Safran Helicopter
Engines, S.A. (Type

AGENCY: Federal Aviation
Administration (FAA), DOT.

ACTION: Final rule.

SUMMARY: The FAA is adopting a new
airworthiness directive (AD) for all
Safran Helicopter Engines, S.A. Arriel
2C and Arriel 2S1 model turboshaft
engines. This AD was prompted by
reports of error messages on the full
authority digital engine control (FADEC)
B digital engine control unit (DECU),
caused by blistering of the varnish on
the DECU circuit board. This AD
requires the replacement of certain
FADEC B DECs. The FAA is issuing
this AD to address the unsafe condition
on these products.

DATES: This AD is effective August 19,
2021.

The Director of the Federal Register
approved the incorporation by reference
of a certain publication listed in this AD
as of August 19, 2021.

ADDRESSES: For service information
identified in this final rule, contact
Safran Helicopter Engines, S.A., Avenue
du 1er Mai, 40220 Tarnos, France;
phone: +33 (0) 5 59 74 40 00. 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.

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,
e-mail: fedreg.reg@nara.gov, or go to:
https://www.archives.gov/federal-register/cfr/
ibr-locations.html.

Issued on June 21, 2021.
Gaetano A. Sciortino,
Deputy Director for Strategic Initiatives,
Compliance & Airworthiness Division,
Aircraft Certification Service.

For Further Information Contact:
Wego Wang, Aviation Safety Engineer,
ECO Branch, FAA, 1200 District
Avenue, Burlington, MA 01803; phone:
(781) 238–7134; fax: (781) 238–7199;
email: wego.wang@faa.gov.

SUPPLEMENTARY INFORMATION:

Background

The FAA issued a notice of proposed
rulemaking (NPRM) to amend 14 CFR
part 39 by adding an AD that would apply
to all Safran Helicopter Engines, S.A. Arriel
2C and Arriel 2S1 model turboshaft engines. The NPRM
published in the Federal Register on
February 26, 2021 (86 FR 11662). The
NPRM was prompted by reports of error
messages on the FADEC B DECU,
caused by blistering of the varnish on
the DECU circuit board. In the NPRM,
the FAA proposed to require the
replacement of such DECU with
non-compliant primer is related to the
blistering effect which, in wet conditions,
can cause malfunction of the stepper motor.

This condition, if not corrected, could lead
to loss of automatic control on both engines
concurrently, possibly resulting in reduced
control of the helicopter.

To address this potentially unsafe
condition, SAFRAN issued the MSB, as
defined in this [EASA] AD, to provide
instructions for identification and
replacement of affected parts. For the reason
described above, this [EASA] AD requires
replacement of affected parts with
serviceable parts. This [EASA] AD also
prohibits (re-installation of affected parts.

You may obtain further information
by examining the MCAI in the AD
docket on at https://
www.regulations.gov by searching for
and locating Docket No. FAA–2021–
0100.

Discussion of Final Airworthiness
Directive

Comments

The FAA received no comments on
the NPRM or on the determination of
the costs.

Conclusion

The FAA reviewed the relevant data
and determined that air safety requires
adoption of this AD as proposed.
Accordingly, the FAA is issuing this AD
to address the unsafe condition on these
products. This AD is adopted as
proposed in the NPRM.

Related Service Information Under 1
CFR Part 51

The FAA reviewed Safran Helicopter
Engines Note Technical AA187866,
Version A, dated 18 October 2019
[October 18, 2019]. This service
information identifies the serial
numbers (S/Ns) of certain FADEC B
DECUs installed on Arriel 2C and Arriel
2S1 model turboshaft 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 ADDRESSES.

Other Related Service Information

The FAA reviewed Safran Helicopter
Engines Mandatory Service Bulletin
(MSB) No. 292 73 2872, Version A,
dated October 17, 2019. This MSB
describes procedures for identifying the
S/Ns of certain FADEC B DECUs and
replacing certain FADEC B DECUs on
Arriel 2C and Arriel 2S1 model
turboshaft engines.

Costs of Compliance

The FAA estimates that this AD
affects 148 engines installed on
helicopters of U.S. registry.

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