



適航指令發布單
Airworthiness Directive Issuance Form

民航局 AD 編號 AD number	CAA-2021-03-010	發布日期 Date issued	2021/3/29												
適用之航空產品 Applied to (models, serial numbers or part numbers, as applicable)	International Aero Engines - V2500-A1, V2522-A5, V2524-A5, V2525-D5, V2527-A5, V2527E-A5, V2527M-A5, V2528-D5, V2530-A5, V2531-E5, and V2533-A5 model turbofan engines.														
主旨摘要	This AD requires an initial BSI of the M-flange and, if it fails the inspection, repetitive BSIs of the M-flange until <input type="checkbox"/> replacement of the diffuser case M-flange.														
民航局 CAA <input type="checkbox"/> 本國產品 Native products <input type="checkbox"/> 其他個案 Other	設計國民航主管機構 Original Authorities <table border="0"><tr><td><input checked="" type="checkbox"/> FAA</td><td><input type="checkbox"/> Germany LBA</td></tr><tr><td><input type="checkbox"/> EASA</td><td><input type="checkbox"/> CAA-NL</td></tr><tr><td><input type="checkbox"/> Brazil</td><td><input type="checkbox"/> UK CAA</td></tr><tr><td><input type="checkbox"/> Transport Canada Civil Aviation</td><td><input type="checkbox"/> Japan CAB</td></tr><tr><td><input type="checkbox"/> DGAC</td><td><input type="checkbox"/> CAA of Israel</td></tr><tr><td></td><td><input type="checkbox"/> Other _____</td></tr></table>			<input checked="" type="checkbox"/> FAA	<input type="checkbox"/> Germany LBA	<input type="checkbox"/> EASA	<input type="checkbox"/> CAA-NL	<input type="checkbox"/> Brazil	<input type="checkbox"/> UK CAA	<input type="checkbox"/> Transport Canada Civil Aviation	<input type="checkbox"/> Japan CAB	<input type="checkbox"/> DGAC	<input type="checkbox"/> CAA of Israel		<input type="checkbox"/> Other _____
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	設計國 AD 編號 Original AD number	2021-05-18													
	1. 直接採用原 AD 之內容?(Is the original AD directly adopted?) <input checked="" type="checkbox"/> 是(Yes) <input type="checkbox"/> 否(No) _ a. 生效日期另訂為(Re-specify the effective <input type="checkbox"/> date as) : _____ b. 執行時限另訂為(Re-specify the compliance <input type="checkbox"/> time or period as) : _____ <input type="checkbox"/> 2. 使用人是否需要將 AD 執行結果向民航局提出報告?(Do <input type="checkbox"/> Users need to report the status of compliance to the CAA?) <input type="checkbox"/> 是(Yes) <input checked="" type="checkbox"/> 否(No)														
備註 Note	This supersede AD 2019-06-06(CAA-2019-03-020)														
註： 1. AD 內容後附。 2. 航空器產品使用人得向民航局提出豁免、替代符合方法、執行時限之展延之申請。 3. 如有任何問題，請聯絡交通部民用航空局初始適航科。Tel：(02)2349-6331~3, Fax：(02)2545-8464, e-mail： adcaa@mail.caa.gov.tw Note： 1. The AD text is enclosed. 2. Exemption, an alternative method of compliance or adjustment of the compliance time may be proposed to the CAA for approval. 3. For further information, please contact Civil Aeronautics Administration on Tel：(02)2349-6331~3, Fax：(02)2545-8464, e-mail： adcaa@mail.caa.gov.tw															

[Federal Register Volume 86, Number 56 (Thursday, March 25, 2021)]

[Rules and Regulations]

[Pages 15791-15795]

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[FR Doc No: 2021-06139]

DEPARTMENT OF TRANSPORTATION

Federal Aviation Administration

14 CFR Part 39

[Docket No. FAA-2020-0700; Project Identifier AD-2020-00238-E; Amendment 39-21461; AD 2021-05-18]

RIN 2120-AA64

Airworthiness Directives; International Aero Engines AG Turbofan Engines

AGENCY: Federal Aviation Administration (FAA), DOT.

ACTION: Final rule.

SUMMARY: The FAA is superseding Airworthiness Directive (AD) 2019-06-06 for all International Aero Engines AG (IAE) V2500-A1, V2522-A5, V2524-A5, V2525-D5, V2527-A5, V2527E-A5, V2527M-A5, V2528-D5, V2530-A5, and V2533-A5 model turbofan engines. AD 2019-06-06 required initial and repetitive borescope inspections (BSIs) of the M-flange and, if it fails the inspection, replacement of the diffuser case with a part eligible for installation. This AD requires an initial BSI of the M-flange and, if it fails the inspection, repetitive BSIs of the M-flange until replacement of the diffuser case M-flange. The FAA is issuing this AD to address the unsafe condition on these products.

DATES: This AD is effective April 29, 2021.

The Director of the Federal Register approved the incorporation by reference of a certain publication listed in this AD as of April 29, 2021.

ADDRESSES: For service information identified in this final rule, contact International Aero Engines AG, 400 Main Street, East Hartford, CT 06118; phone: (800) 565-0140; email: help24@pw.utc.com; website: <http://fleetcare.pw.utc.com>. 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-2020-0700.

Examining the AD Docket

You may examine the AD docket at <https://www.regulations.gov> by searching for and locating Docket No. FAA-2020-0700; 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: Nicholas Paine, Aviation Safety Engineer, ECO Branch, FAA, 1200 District Avenue, Burlington, MA 01803; phone: (781) 238-7742; fax: (781) 238-7199; email: nicholas.j.paine@faa.gov.

SUPPLEMENTARY INFORMATION:

Background

The FAA issued a notice of proposed rulemaking (NPRM) to amend 14 CFR part 39 to supersede AD 2019-06-06, Amendment 39-19604 (84 FR 11642, March 28, 2019), (AD 2019-06-06). AD 2019-06-06 applied to all IAE V2500-A1, V2522-A5, V2524-A5, V2525-D5, V2527-A5, V2527E-A5, V2527M-A5, V2528-D5, V2530-A5, and V2533-A5 model turbofan engines. The NPRM published in the Federal Register on September 9, 2020 (85 FR 55624). The NPRM was prompted by a crack found at the diffuser case M-flange during overhaul inspection. Since the FAA issued AD 2019-06-06, the manufacturer performed an updated safety risk analysis, which resulted in reducing the M-flange inspection intervals and adding the performance of a replacement of the diffuser case M-flange, which terminates the need for repetitive BSIs of the M-flange. In the NPRM, the FAA proposed to require an initial BSI of the M-flange and, if it fails the inspection, repetitive BSIs of the M-flange until replacement of the diffuser case M-flange.

Discussion of Final Airworthiness Directive

Comments

The FAA received comments from six commenters. The commenters were Air Line Pilots Association, International (ALPA); Cathay Dragon Airways (Cathay); IAE; MTU Maintenance Hannover GmbH (MTU); Willis Lease Finance Corporation (WLFC); and United Airlines (United). Five of six commenters requested changes to this AD. One commenter requested an update to Applicability. Two commenters requested clarification when cycles are unknown or cannot be determined. Three commenters requested that the FAA reference the latest service information. One commenter requested an update to terminology. Three commenters requested credit for replacement before the effective date of this AD. One commenter requested clarification to “engine shop visit.” One commenter requested an update to a Note in paragraph (g)(2) of this AD. One commenter requested an update to include diffuser case assembly part numbers (P/Ns) after modification. One commenter supported this AD as written. The following presents the comments received on the NPRM and the FAA's response to each comment.

Request To Update Applicability To Include IAE V2500-E5 Model Engines

IAE requested that the FAA update paragraph (c), Applicability, of this AD to include the IAE V2500-E5 model turbofan engine. IAE reasoned that the V2500-E5 model turbofan engine shares diffuser case assembly, P/N 2A2891-01, with IAE V2500-A1, -A5, and -D5 model turbofan engines.

The FAA agrees that the IAE V2500-E5 model turbofan engine shares an affected diffuser case assembly with other affected engines, and therefore, is susceptible to the unsafe condition of this AD. The FAA added the IAE V2531-E5 model turbofan engine to the Applicability of this AD. The IAE V2531-E5 model turbofan engine is not currently installed on any airplanes of U.S. registry. Therefore, this change to applicability does not add any additional burden on U.S. operators or increase the estimated cost of this AD.

Request To Clarify Compliance Time When Cycles Are Unknown or Cannot Be Determined

Cathay and WLFC requested clarification when to perform the actions if the cycles since new (CSN) are unknown or cannot be determined. Cathay suggested adding the following note to paragraphs (g)(1)(i), (ii), and (iii) of this AD for the BSI of the M-flange to align this AD with IAE Non-Modification Alert Service Bulletin (NMASB) V2500-ENG-72-A0706, Revision 2, dated November 7, 2019 (the NMASB): “If the cycles on the diffuser case M-flange cannot be determined, you must use the total cycles on the diffuser case. If the cycles on the diffuser case cannot be determined, you must use the total engine cycles if it can be documented that the diffuser case was always with the engine.” WLFC asked for clarification on the compliance time for the diffuser case M-flange replacement.

Although the FAA disagrees with adding the note suggested by Cathay, the FAA agrees to clarify when to perform the actions if the CSN are unknown or cannot be determined. The FAA updated paragraph (g)(1)(iii) of this AD to clarify when to perform the initial BSI of the M-flange and added paragraph (g)(2)(ii) of this AD to clarify when to replace the diffuser case M-flange if the diffuser case M-flange CSN are unknown or cannot be determined.

Request To Update Service Information

IAE, MTU, and United requested that IAE Service Bulletin (SB) V2500-ENG-72-0709, Revision 1, dated February 20, 2020 (the SB), be referenced in this AD instead of the Original Issue, dated December 13, 2019. United also requested that “IAE NMASB V2500-ENG-72-A0706, Revision 2, dated November 7, 2019,” be referenced.

The FAA partially agrees. Revision 2 of the NMASB was already referenced in the NPRM and, therefore, no change is needed to this AD. The FAA agrees to reference Revision 1 to the SB, which was issued after publication of the NPRM. The SB provides guidance on performing the replacement of the diffuser case M-flange and is not required for compliance with the AD. Therefore, revising this AD to reference Revision 1 of the SB adds no additional burden on U.S. operators.

Request To Change “Diffuser Case M-Flange” References

IAE requested that the FAA change “diffuser case M-flange” to “M-flange” when referencing inspections. IAE reasoned that inspection zone 2 includes all three flanges of the M-flange: Diffuser case M-flange, nozzle guide vane support, and the high-pressure turbine (HPT) case forward flange, and all three flanges are required to be inspected.

The FAA agrees. The inspections are required on all surfaces of inspection zones 1, 2, and 3 of the M-flange. The FAA changed “diffuser case M-flange” to “M-flange” when referencing inspections throughout this AD. The FAA, however, did not change “diffuser case M-flange” when referencing replacement. Replacement of the diffuser case M-flange is the terminating action for the repetitive BSIs of the M-flange required by this AD.

Request for Credit for Diffuser Case M-Flange Replacement

Cathay, MTU, and WLFC requested credit for the replacement of the diffuser case M-flange if it was replaced before the effective date of this AD using TASK 72-42-11-300-028, Repair-028 (VRS3633), of the IAE V2500 Engine Manual (VRS3633 Repair-028). Cathay and WLFC reasoned that the replacement of the diffuser case M-flange resets the M-flange cycles to zero. Cathay and MTU cited the note to VRS3633 Repair-028 in the NMASB. Cathay also cited the note in the NMASB that fluorescent penetrant inspection (FPI) of the diffuser case M-flange bolt holes resets the cycles since the last FPI to zero.

The FAA disagrees with revising the Credit for Previous Actions section of this AD to give credit for replacement of the diffuser case M-flange using VRS3633 Repair-028. The FAA determined that it is not necessary to provide previous credit for replacement of the diffuser case M-flange because this AD does not require use of specific service information to perform this replacement. The FAA revised paragraph (i), Credit for Previous Actions, of this AD by removing references to providing credit for replacement of the diffuser case M-flange. If operators replaced the diffuser case M-flange prior to the effective date of this AD using any FAA-approved method, they meet the requirements of this AD under paragraph (f) of this AD.

Request To Clarify “Major Mating Engine Flanges”

United requested that the FAA clarify the definition of “engine shop visit” and “major mating engine flange.” United asked if “major flange” aligns with the NMASB, which in Figure 1 of the NMASB, identifies the engine major flanges as H through P flanges. United also asked if the “separation of pairs of major mating engine flanges” includes the separation of H and J flanges when replacing damaged blades in HPC stages 3 through 6 during an HPC Surgical Strike Repair. If an engine shop visit includes separating flanges when performing an HPC Surgical Strike Repair, United requested that the FAA update estimated costs of this AD to include costs associated with the teardown of modules.

The FAA agrees to clarify this definition of “engine shop visit” in this AD. The FAA has revised the definition of “engine shop visit” in this AD to refer to the induction of the engine into the shop for maintenance involving the separation of pairs of major mating engine flanges, K-N. Based on this definition, separating H and J flanges during an HPC Surgical Strike Repair does not constitute an “engine shop visit.”

The FAA disagrees with updating the estimated costs of this AD. The cost analysis in AD rulemaking actions typically includes only the costs associated with complying with the AD, and does not include secondary costs. The FAA's cost estimate includes the work hours and parts costs to inspect and replace the parts.

Request To Update Note to Paragraph (g)(2)

MTU requested that the FAA update Note 1 to paragraph (g)(2)(i) of this AD to “Instructions on performing the replacement of the diffuser case M-flange can be found in the Accomplishment Instructions, paragraphs 1.A. and B., of IAE SB V2500-ENG-72-0709, Revision 1, dated February 20, 2020.” MTU reasoned that the current wording suggests that there may be alternative instructions to replace the diffuser case M-flange other than the SB. MTU suggested that there are no alternatives to using IAE SB V2500-ENG-72-0709 to replace the diffuser case M-flange. Therefore, MTU notes that the language in the NPRM may generate ambiguity.

The FAA disagrees. The SB is referenced in Note 2 to paragraph (g)(2) of this AD as guidance for performing the replacement. The FAA is not mandating the use of a specific method to replace the diffuser case M-flange in this AD. The FAA did not change this AD based on this comment, but redesignated “Note 1 to paragraph (g)(2)(i)” in the NPRM to “Note 2 to paragraph (g)(2)” in this AD based on the addition of a Note earlier in paragraph (g) of this AD.

Request To Include Diffuser Case Assembly P/Ns After Modification

IAE requested that the FAA include the diffuser case assembly P/Ns, modified by the SB that are re-identified with new P/Ns after modification, and require replacement before the M-flange accumulates 20,000 CSN.

The FAA disagrees with including the list of diffuser case assembly P/Ns. The diffuser case M-flange, regardless of P/N, must be replaced at the next engine shop visit after the effective date of this AD or before the M-flange accumulates 20,000 CSN, whichever occurs later. Thereafter, the diffuser

case M-flange must be replaced before accumulating 20,000 cycles since the previous replacement. Therefore, listing diffuser case assembly P/Ns is unnecessary.

Clarification to BSI Requirement

The FAA determined the need to clarify the instructions required by paragraph (g)(1)(iv) of the NPRM. The NPRM referenced paragraphs 2.A. through 2.G. of the NMASB to perform the BSI. However, paragraph 2.G. of the NMASB provides instructions to perform a FPI of the M-flange to confirm the indication as a crack. The FAA added a note to paragraph (g)(1)(iv) of this AD to clarify that paragraph 2.G. of the NMASB describes procedures for performing a local FPI of the M-flange if you are unable to confirm if an indication is a crack.

Support for the AD

ALPA expressed support for the AD as written.

Conclusion

The FAA reviewed the relevant data, considered any comments received, and determined that air safety requires adopting the 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 International Aero Engines NMASB V2500-ENG-72-A0706, Revision 2, dated November 7, 2019. The NMASB describes procedures for inspecting the M-flange. 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 International Aero Engines SB V2500-ENG-72-0709, Revision 1, dated February 20, 2020. The SB identifies the diffuser case assembly P/Ns and describes procedures for replacing the diffuser case M-flange.

Costs of Compliance

The FAA estimates that this AD affects 1,654 engines installed on airplanes of U.S. registry. The FAA estimates the following costs to comply with this AD:

Action	Labor cost	Parts cost	Cost per product	Cost on U.S. operators
BSI of M-flange	2 work-hours × \$85 per hour = \$170	\$0	\$170	\$281,180
Replace the diffuser case M-flange	40 work-hours × \$85 per hour = \$3,400	\$20,000	\$23,400	\$38,703,600

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

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

The FAA has 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) 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:

- a. Removing airworthiness directive 2019-06-06, Amendment 39-19604 (84 FR 11642, March 28, 2019); and
- b. Adding the following new airworthiness directive:



2021-05-18 International Aero Engines AG: Amendment 39-21461; Docket No. FAA-2020-0700; Project Identifier AD-2020-00238-E.

(a) Effective Date

This airworthiness directive (AD) is effective April 29, 2021.

(b) Affected ADs

This AD replaces AD 2019-06-06, Amendment 39-19604 (84 FR 11642, March 28, 2019).

(c) Applicability

This AD applies to all International Aero Engines AG (IAE) V2500-A1, V2522-A5, V2524-A5, V2525-D5, V2527-A5, V2527E-A5, V2527M-A5, V2528-D5, V2530-A5, V2531-E5, and V2533-A5 model turbofan engines.

(d) Subject

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

(e) Unsafe Condition

This AD was prompted by a crack found at the diffuser case M-flange during overhaul inspection. The FAA is issuing this AD to prevent failure of the diffuser case. The unsafe condition, if not addressed, could result in uncontained diffuser case rupture, 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) Borescope Inspection of M-Flange

For engines with a diffuser case assembly, part number 2A0051, 2A2081-01, 2A2581-01, 2A2883-01, 2A2885-01, 2A2889-01, 2A2891-01, 2A2896-01, 2A2897-01, or 2A3132 installed, perform an initial borescope inspection (BSI) of zones 1, 2, and 3 of the M-flange as follows:

(i) For engines with a diffuser case M-flange that has 19,000 or more cycles since new (CSN) on the effective date of this AD, perform the initial BSI of the M-flange before accumulating the "Inspect within (Cycles)" in Table 1 to paragraph (g)(1) of this AD. If the CSLFPI is unknown, use the CSN of the diffuser case M-flange.

(ii) For engines with a diffuser case M-flange that has fewer than 19,000 CSN on the effective date of this AD, perform the initial BSI of the M-flange before accumulating 20,300 CSN.

(iii) For engines with a diffuser case M-flange or diffuser case in which the CSN is unknown or cannot be determined, perform the initial BSI of the M-flange before accumulating the “Inspect within (Cycles)” in Table 1 to paragraph (g)(1) of this AD using one of the following options:

(A) If the cycles of the diffuser case M-flange are unknown or cannot be determined, use the total cycles on the diffuser case.

(B) If the cycles on the diffuser case are unknown or cannot be determined and it can be documented that the diffuser case was always installed on the engine, use total engine cycles.

(C) If neither paragraph (g)(1)(iii)(A) or (B) applies, perform the BSI of the M-flange within 250 cycles after the effective date of this AD.

(iv) Use the Accomplishment Instructions, paragraphs 2.A. through 2.G. of IAE Non-Modification Alert Service Bulletin (NMASB) V2500-ENG-72-A0706, Revision 2, dated November 7, 2019 (the NMASB), to perform the initial BSI.

Note 1 to paragraph (g)(1)(iv): Paragraph 2.G. of the NMASB describes procedures for performing a local fluorescent penetrant inspection of the M-flange if you are unable to confirm if an indication is a crack.

(v) If no crack is found as a result of the inspections required by paragraphs (g)(1)(i) through (iv) of this AD, repeat the BSI of zones 1, 2, and 3 of the M-flange at intervals not to exceed 2,100 cycles since the previous BSI.

(vi) If a crack is found as a result of the inspections required by paragraphs (g)(1)(i) through (iv) of this AD, replace the diffuser case M-flange or repeat the BSI of zones 1, 2, and 3 of the M-flange as specified by either “Table 2: Fly on Limits” or “Table 4: Fly on Limits,” in paragraph 2.H., Accomplishment Instructions, of the NMASB as appropriate for the affected the engine model.

Table 1 to paragraph (g)(1) – M-flange cycle inspection limits

Cycles Since Last Fluorescent Penetrant Inspection (CSLFPI)	Inspect within (Cycles)
30,000 and greater	250
20,000 to 29,999	500
15,000 to 19,999	1,000
1 to 14,999	1,300
0	2,100

(2) Replacement of the Diffuser Case M-Flange

(i) At the next engine shop visit after the effective date of this AD or before the diffuser case M-flange accumulates 20,000 CSN, whichever occurs later, replace the diffuser case M-flange.

(ii) For engines with a diffuser case M-flange or diffuser case in which the CSN is unknown or cannot be determined, perform one of the following options:

(A) If the cycles of the diffuser case M-flange are unknown or cannot be determined, at the next engine shop visit after the effective date of this AD or before the diffuser case accumulates 20,000 CSN, whichever occurs later, replace the diffuser case M-flange.

(B) If the cycles of the diffuser case are unknown or cannot be determined, and if it can be documented that the diffuser case was always installed on the engine, at the next engine shop visit

after the effective date of this AD or before the engine accumulates 20,000 CSN, whichever occurs later, replace the diffuser case M-flange.

(C) If the cycles on the diffuser case M-flange are unknown or cannot be determined based on the criteria identified in paragraphs (g)(2)(ii)(A) and (B), or it cannot be shown that the diffuser case was always installed on the engine, at the next engine shop visit after the effective date of this AD, replace the diffuser case M-flange.

Note 2 to paragraph (g)(2)(ii): Guidance on performing the replacement of the diffuser case M-flange described in paragraphs (g)(2)(i) and (ii) can be found in the Accomplishment Instructions, paragraphs 1.A. and B., of IAE SB V2500-ENG-72-0709, Revision 1, dated February 20, 2020.

(iii) Thereafter, repeat the replacement of the diffuser case M-flange before accumulating 20,000 cycles since the previous replacement.

(iv) Replacement of the diffuser case M-flange is the terminating action for the repetitive BSIs required by paragraph (g)(1) of this AD.

(h) Installation Prohibition

After the effective date of this AD, do not install a diffuser case onto any affected engine if the diffuser case M-flange has more than 20,000 CSN.

(i) Credit for Previous Actions

You may take credit for the initial BSIs that are required by paragraphs (g)(1)(i) through (iii) of this AD, if you performed those actions before the effective date of this AD using IAE NMASB V2500-ENG-72-A0706, Revision 1, dated June 28, 2019, or Original Issue, dated February 14, 2019; IAE V2500 Special Instruction (SI) No. 341F-18, dated November 19, 2018; IAE V2500 SI No. 350F-18, Rev. 1, dated December 17, 2018; IAE V2500 SI No. 356F-18, Rev. 1, dated January 9, 2019; IAE V2500 SI No. 372F-18, dated January 8, 2019; or IAE V2500 Special SI No. 04F-19, dated January 14, 2019.

(j) Definition

For the purpose of this AD, an “engine shop visit” is the induction of the engine into the shop for maintenance involving the separation of pairs of major mating engine flanges, K-N, except that the separation of engine flanges solely for the purposes of transportation without subsequent engine maintenance does not constitute an engine shop visit.

(k) 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.

(l) Related Information

For more information about this AD, contact Nicholas Paine, Aviation Safety Engineer, ECO Branch, FAA, 1200 District Avenue, Burlington, MA 01803; phone: (781) 238-7742; fax: (781) 238-7199; email: nicholas.j.paine@faa.gov.

(m) 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) International Aero Engines (IAE) Non-Modification Alert Service Bulletin V2500-ENG-72-A0706, Revision 2, dated November 7, 2019.

(ii) [Reserved]

(3) For IAE service information identified in this AD, contact International Aero Engines AG, 400 Main Street, East Hartford, CT 06118; phone: (800) 565-0140; email: help24@pw.utc.com; website: <http://fleetcare.pw.utc.com>.

(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>.

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