



**適航指令發布單**  
**Airworthiness Directive Issuance Form**

民航局 AD 編號 AD number	CAA-2022-02-008	發布日期 Date issued	2022/2/23												
適用之航空產品 Applied to (models, serial numbers or part numbers, as applicable)	CFM International, S.A. CFM56-3 and CFM56-7B model turbofan engines equipped with an accessory gearbox assembly with the following part numbers (P/Ns): (1) For CFM56-3, CFM56-3B, and CFM56-3C model turbofan engines, AGB P/N: 335-300-103-0, 335-300-105-0, 335-300-106-0, 335-300-107-0, 335-300-108-0, 335-300-109-0, or 335-300-110-0, installed. (2) For CFM56-7B20, CFM56-7B20/2, CFM56-7B20/3, CFM56-7B22, CFM56-7B22/2, CFM56-7B22/3, CFM56-7B22/3B1, CFM56-7B22/B1, CFM56-7B24, CFM56-7B24/2, CFM56-7B24/3, CFM56-7B24/3B1, CFM56-7B24/B1, CFM56-7B26, CFM56-7B26/2, CFM56-7B26/3, CFM56-7B26/3B1, CFM56-7B26/3B2, CFM56-7B26/3B2F, CFM56-7B26/3F, CFM56-7B26/B1, CFM56-7B26/B2, CFM56-7B27, CFM56-7B27/2, CFM56-7B27/3, CFM56-7B27/3B1, CFM56-7B27/3B1F, CFM56-7B27/3B3, CFM56-7B27/3F, CFM56-7B27/B1, and CFM56-7B27/B3 model turbofan engines, AGB P/N: 340-046-503-0, 340-046-504-0, or 340-046-505-0, installed. (3) For CFM56-7B27A, CFM56-7B27A/3, or CFM56-7B27AE model turbofan engines, AGB P/N: 340-188-601-0, 340-188-603-0, or 340-188-605-0, installed.														
主旨摘要 Subject	AD 2013-26-01(CAA-2014-02-006) required an independent inspection to verify re-installation of the handcranking pad cover after removal of the pad cover for maintenance. This AD requires independent inspection to verify re-installation of the AGB handcranking pad cover after maintenance. and also requires the replacement of the affected AGB as a terminating action to the inspection requirement.														
民航局 CAA <input type="checkbox"/> 本國產品 Native product  <input type="checkbox"/> 其他個案 Other	設計國民航主管機構 Original Authority <table border="0" style="width: 100%;"><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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<input type="checkbox"/> DGAC	<input type="checkbox"/> CAA of Israel														
	<input type="checkbox"/> Other _____														
	設計國 AD 編號 Original AD number	2022-02-03													

	<p>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) _</p> <p>a. 生效日期另訂為(Re-specify the effective date as) : _____</p> <p>b. 執行時限另訂為(Re-specify the compliance time or period as) : _____</p> <p>2. 使用人是否需要將 AD 執行結果向民航局提出報告?(Do Users need to report the status of compliance to the CAA?)  <input type="checkbox"/>是(Yes) <input checked="" type="checkbox"/>否(No)</p>
<p>備註 Note</p>	<p>This AD replaces AD 2013-26-01(CAA-2014-02-006)</p>
<p>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)2349-6330 / 6332, Fax：(02)2545-8464, e-mail：  <a href="mailto:adcaa@mail.caa.gov.tw">adcaa@mail.caa.gov.tw</a></p> <p>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)2349-6330 / 6332, Fax：  (02)2545-8464, e-mail：<a href="mailto:adcaa@mail.caa.gov.tw">adcaa@mail.caa.gov.tw</a></p>	

[Federal Register Volume 87, Number 31 (Tuesday, February 15, 2022)]

[Rules and Regulations]

[Pages 8402-8406]

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[FR Doc No: 2022-03039]

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## **DEPARTMENT OF TRANSPORTATION**

### **Federal Aviation Administration**

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

**[Docket No. FAA-2021-0259; Project Identifier AD-2020-01128-E; Amendment 39-21900; AD 2022-02-03]**

**RIN 2120-AA64**

#### **Airworthiness Directives; CFM International, S.A. Turbofan Engines**

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

**ACTION:** Final rule.

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**SUMMARY:** The FAA is superseding Airworthiness Directive (AD) 2013-26-01 for all CFM International, S.A. (CFM) CFM56-3 and CFM56-7B model turbofan engines with a certain accessory gearbox assembly (AGB) not equipped with a dynamic oil seal assembly in the handcranking pad. AD 2013-26-01 required an independent inspection to verify re-installation of the handcranking pad cover after removal of the pad cover for maintenance. This AD was prompted by a dual engine loss of oil event and 42 prior events of total loss of engine oil during flight. This AD requires independent inspection to verify re-installation of the AGB handcranking pad cover after maintenance. This AD also requires the replacement of the affected AGB as a terminating action to the inspection requirement. The FAA is issuing this AD to address the unsafe condition on these products.

**DATES:** This AD is effective March 22, 2022.

**ADDRESSES:** For service information identified in this final rule, contact CFM International, S.A., Aviation Operations Center, 1 Neumann Way, M/D Room 285, Cincinnati, OH 45125; phone: (877) 432-3272; email: [fleetsupport@ge.com](mailto:fleetsupport@ge.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 (817) 222-5110. It is also available at <https://www.regulations.gov> by searching for and locating Docket No. FAA-2021-0259.

#### **Examining the AD Docket**

You may examine the AD docket at <https://www.regulations.gov> by searching for and locating Docket No. FAA-2021-0259; 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:** Kevin Clark, Aviation Safety Engineer, ECO Branch, FAA, 1200 District Avenue, Burlington, MA 01803; phone: (781) 238-7088; fax: (781) 238-7199; email: kevin.m.clark@faa.gov.

## **SUPPLEMENTARY INFORMATION:**

### **Background**

The FAA issued a notice of proposed rulemaking (NPRM) to amend 14 CFR part 39 to supersede AD 2013-26-01, Amendment 39-17710 (78 FR 79295, December 30, 2013), (AD 2013-26-01). AD 2013-26-01 applied to all CFM CFM56-3 and CFM56-7B series turbofan engines with certain AGBs not equipped with a dynamic oil seal in the handcranking pad assembly. The NPRM published in the Federal Register on May 3, 2021 (86 FR 23301). The NPRM was prompted by a dual engine loss of oil event and 42 prior events of total loss of engine oil during flight. In the NPRM, the FAA proposed to retain certain requirements of AD 2013-26-01. The NPRM proposed to require the performance of an independent inspection to verify re-installation of the AGB handcranking pad cover after maintenance. Alternatively, the NPRM proposed to require the insertion of an independent inspection as a required inspection item in the approved continuous airworthiness maintenance program for the aircraft not later than the next time the AGB handcranking pad cover is removed for maintenance.

The NPRM also proposed to remove the optional terminating action in AD 2013-26-01 and add a mandatory terminating action for certain model turbofan engines, requiring the removal and replacement of an affected AGB with an AGB that incorporates the dynamic oil seal in the handcranking pad cover assembly. For all CFM56-3 and the majority of CFM56-7B turbofan engine models, the NPRM proposed to require replacement of the AGB as a mandatory terminating action to the inspection requirement. The NPRM does not require this terminating action for CFM56-7B27A, CFM56-7B27A/3 and CFM56-7B27AE model turbofan engines because these model engines, which are installed only in military airplanes, do not have a replacement AGB eligible for installation. The FAA is issuing this AD to address the unsafe condition on these products.

### **Discussion of Final Airworthiness Directive**

#### **Comments**

The FAA received comments from seven commenters. The commenters were Alaska Airlines, Inc. (Alaska), American Airlines (American), Air Line Pilot Association, International (ALPA), CFM, Delta Air Lines, Inc. (Delta), Jet Engine Technology Corporation (Jet Engine Technology), and United Airlines (United). The following presents the comments received on the NPRM and the FAA's response to each comment.

#### **Request To Revise Service Bulletin (SB) References To Allow On-Wing Procedure**

Alaska requested that the FAA revise the definition in paragraph (i)(3)(ii) of this AD to include an affected AGB that has been reworked and reidentified to a part number (P/N) eligible for installation, as applicable to the removed P/N, in accordance with an FAA approved CFM International SB. Alaska also commented that CFM expects to release CFM56-7B S/B 72-1023 in September 2021 and this SB would allow for introduction of AGB part number 340-046-528-0. Alaska also noted that CFM plans to release Revision 9 of CFM International CFM56-7B S/B 72-0564 to allow on-wing installation of the dynamic oil seal in the handcranking pad cover assembly.

American also requested that the FAA revise the definition in paragraph (i)(3)(ii) of this AD to include procedures from future FAA approved revisions of CFM SBs. American noted that CFM plans to release Revision 9 of CFM International CFM56-7B S/B 72-0564 to allow on-wing installation of the dynamic oil seal in the handcranking pad cover assembly. American also requested that the FAA incorporate the maintenance procedures from Revision 9 of CFM International SB CFM56-7B S/B 72-0564 and CFM International SB CFM56-7B S/B 72-1071 into the proposed AD. American noted the advantage that Revision 9 of CFM International SB CFM56-7B S/B 72-0564 would allow the AGBs to be modified on-wing.

Delta requested that the FAA urge CFM to make an on-wing procedure available to operators. Delta further requested that the FAA modify the definition of an affected AGB that has been re-worked and re-identified to a part number eligible for installation in paragraph (i)(3)(ii) of the NPRM by removing the specific revision numbers and effective dates from the SBs in this paragraph. Delta commented that Revision 7 is the current revision for CFM International SB CFM56-7B S/B 72-0879, however, AD 2013-26-01 does not list a revision number for an AGB that is eligible for installation in the terminating action. Further, Delta stated that European Union Aviation Safety Agency (EASA) AD 2020-0261 allows for the modification and re-identification of an affected AGB using future revisions of CFM International SB CFM56-7B S/B 72-0564.

In response to the comments from Alaska, American, and Delta, the FAA changed the definition of a part eligible for installation in paragraph (i)(3)(ii) of this AD to “An affected AGB that, using an FAA-approved procedure, has been re-worked with a dynamic oil seal in the starter drive pad and re-identified with a new part number not listed in paragraph (i)(3)(i) of this AD.” This change allows operators to use procedures in service bulletins that contain an FAA-approved method for installing the dynamic oil seal in the handcranking pad cover assembly.

### **Request To Update the Definition of an Engine Shop Visit**

American requested that the FAA update the definition of an engine shop visit by adding the following additional exceptions to the definition in paragraph (i)(1) of this AD:

“(iii) The removal of the fan disk or the fan disk and booster spool as an assembly.

(iv) Accomplishment of a top/bottom case by removal of the HPC forward and aft stator cases.”

The FAA disagrees with revising the definition as proposed by American. The removal of the fan, which includes the fan disk and booster major module, is excluded from the definition of an engine shop visit in paragraph (i)(1)(ii) of this AD. Regarding the addition of an exception to the definition of an engine shop visit to include accomplishment of a top/bottom case by removal of the high-pressure compressor (HPC) forward and aft stator cases, American did not provide rationale for this requested change. The FAA finds that incorporating this requested exception by the commenter would unnecessarily delay the accomplishment of the required actions of this AD.

### **Request To Update the Definition of a Part Eligible for Installation**

Delta requested that the FAA remove the term “using” from the following sentence in paragraph (i)(3)(ii): “An affected AGB that has been reworked and reidentified to a part number eligible for installation using, as applicable, CFM SB 72-0879, Revision 6, dated March 1, 2018, or SB 72-0564 Revision 8, dated May 6, 2020.” Delta reasoned that the cited service information does not specify which steps or paragraphs are required for compliance.

The FAA has changed the definition in paragraph (i)(3)(ii) of this AD to allow the use of FAA-approved methods for installing the dynamic oil seal in the handcranking pad cover assembly rather than mandating specific procedures.

## **Request To Incorporate FAA Advisory Circular (AC) Into CFM SBs**

American requested that CFM incorporate FAA AC 20-176A into its SBs to distinguish which steps in an SB will have a direct effect on detecting, preventing, resolving, or eliminating the unsafe condition identified in an AD. American commented further that the application of AC 20-176A to previous CFM SBs was successful in reducing global requests for alternative methods of compliance (AMOCs) and streamlining the accomplishment of key tasks while meeting strict regulatory compliance.

Delta requested that the FAA urge CFM to incorporate FAA AC 20-176A into its SBs. Delta commented that paragraph (i)(3)(ii) defines an affected AGB that has been reworked and reidentified to a part number eligible for installation using, as applicable, CFM International SB CFM56-7B S/B 72-0879, Revision 6, dated March 1, 2018, or CFM International SB CFM56-7B S/B 72-0564, Revision 8, dated May 6, 2020. This definition does not specify which steps or paragraphs are required for compliance. Delta requested the FAA urge CFM to revise these SBs to incorporate AC 20-176A to distinguish which steps in an SB will have a direct effect on detecting, preventing, resolving, or eliminating the unsafe condition identified in an AD.

In response to these comments from Delta and American, the FAA has changed the definition of an AGB eligible for installation in paragraph (i)(3)(ii) of this AD to allow the use of FAA-approved methods for installing the dynamic oil seal in the handcranking pad cover assembly rather than mandating specific procedures. Since the SBs noted by the commenters are not required for compliance within this AD, the FAA does not find it necessary to recommend that the manufacturer incorporate sections from the guidance contained in AC 20-176A in the referenced SBs.

## **Request To Revise SB References**

CFM requested that the FAA revise the specified service information in paragraph (i)(3)(ii) of the NPRM by referencing Revision 7 of CFM International SB CFM56-7B S/B 72-0879, dated February 10, 2021. CFM also requested that the FAA change the date of CFM International SB CFM56-7B S/B 72-1129 from May 5, 2020 to May 6, 2020.

In response to this comment, the FAA has revised paragraph (i)(3)(ii) by adding a Note, which refers to Revision 7 of CFM International SB CFM 56-7B S/B 72-0879, dated February 10, 2021. The FAA is not requiring use of CFM International SB CFM 56-7B S/B 72-0879 to rework the dynamic oil seal in the handcranking pad cover assembly. The addition of Note 2 to paragraph (i)(3)(ii) of this AD includes reference to procedures to install a dynamic oil seal in the handcranking pad cover assembly, which can be found in CFM International SB CFM56-3 S/B 72-1129, Revision 7, dated May 6, 2020. The FAA also updated the publication date of CFM International CFM56-7B S/B 72-1129 to May 6, 2020.

## **Request To Revise Reference to Engine Models**

CFM requested that the FAA update the AD to replace references to “CFM56-3B” model turbofan engines with “CFM56-3” when referring to all CFM56-3, CFM56-3B and CFM56-3C model turbofan engines.

The FAA notes the reference to “CFM56-3B” that existed in the preamble of the NPRM has been updated to “CFM56-3” in the preamble of this final rule.

## **Request To Clarify the Mandatory Terminating Action**

CFM and United requested that the FAA clarify if paragraph (h), Mandatory Terminating Action, requires removal and replacement of the AGB or if the AGB can be re-worked and re-identified. The commenters indicated that there is an on-wing re-work procedure that is being developed to install the dynamic oil seal in the handcranking pad cover assembly, and using only the

term “replace” may prevent the use of this re-work for compliance. United also requested that the FAA clarify whether compliance with the mandatory terminating action can be achieved only by removing and replacing the AGB, or if re-working and re-identifying the AGB, per the instructions in CFM International CFM56-7B S/B 72-0564 and CFM International SB CFM56-7B S/B 72-0879 for the CFM56-7B engine fleet is acceptable.

The FAA agrees that re-working and re-identifying the AGB on-wing to install a dynamic oil seal in the handcranking pad cover assembly resolves the unsafe condition. The FAA has revised paragraph (i)(2)(ii) in this final rule to allow re-work and re-identification of the affected AGB to a part eligible for installation.

### **Request To Modify Compliance Time for Mandatory Terminating Action**

Delta requested that the FAA modify the compliance time for AGB replacement in Mandatory Terminating Action, paragraph (h)(2), of the proposed AD for affected CFM56-7B model turbofan engines to be consistent with the requirement for CFM56-3 model turbofan engines. Delta noted that both engine models are subject to the same unsafe condition.

The FAA disagrees with modifying the mandatory terminating action compliance time in paragraph (h)(2) for CFM56-7B model turbofan engines to be consistent with the mandatory terminating action compliance time for CFM56-3 model turbofan engines. The fleets using these engine models have differences in utilization and logistics that require different compliance end dates to address the unsafe condition.

### **Request for Alternative Procedure for Compliance**

Jet Engine Technology commented that it has attempted to purchase the dynamic oil seal, part number 333-089-185-000, listed in CFM International SB CFM56-7B S/B 72-1129, Revision 7, but was informed it was out of stock as of May 26, 2021. According to Jet Engine Technology, there was a 360-day lead time to obtain this part. Jet Engine Technology indicated that due to the unavailability of the parts and because the AD is mandating the terminating action at next shop visit after the effective date of the AD, it will not be possible for an FAA-certified repair station to return the engine back to service. Jet Engine Technology requested information pertaining to other types of procedures that can be done to return the engine to service after a shop visit.

CFM has confirmed to the FAA that parts will be available to suppliers, operators, and repair stations to install an AGB with the dynamic oil seal in the handcranking cover pad assembly.

### **Request To Delay Publication of This AD**

United and CFM requested that the FAA delay publication of this AD. United requested that the FAA wait until after CFM has made on-wing instructions available for accomplishing the AGB re-work and re-identification because CFM International CFM56-7B SB 72-0564, Revision 8, dated May 6, 2020, and CFM International CFM56-7B S/B 72-0879, Revision 6, dated March 1, 2018 do not contain instructions for on-wing accomplishment. CFM requested that the FAA delay publication until Revision 9 of CFM International CFM56-7B S/B 72-0564 and the initial version of CFM International CFM56-7B S/B 72-1071 are published as these SBs will provide instructions for the on-wing modification to install the dynamic oil seal in the handcranking pad cover assembly.

The FAA disagrees with delaying publication of this AD based on the anticipated issuance of CFM service information. Publication of this AD at this time is necessary to address the unsafe condition. However, the FAA has updated this AD, in response to similar comments, to allow for any FAA approved method, including an on-wing procedure, to install an AGB with a dynamic oil seal in the handcranking pad cover assembly.

## Request for Clarification on Compliant AGB Part Numbers

United requested that the FAA clarify whether CFM engines that have compliant AGB part numbers installed (whether by removal and replacement or by re-working and re-identifying the AGB) are required to have the independent inspection of the AGB handcranking pad cover performed to verify re-installation after maintenance.

As set forth in paragraph (h), Mandatory Terminating Action, the requirements of paragraph (g) of this AD are terminated after the accomplishment of the mandatory terminating action. Further, paragraph (f) of this AD mandates compliance with the required actions, unless already done.

## Support for the NPRM

ALPA supported the NPRM without change.

## 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

The FAA reviewed CFM International Service Bulletin (SB) CFM56-7B S/B 72-0879, Revision 7, dated February 10, 2021 (CFM SB 72-0879); CFM International SB CFM56-3 S/B 72-1129, Revision 7, dated May 6, 2020 (CFM SB 72-1129); CFM International SB CFM56-7B S/B 72-0564 Revision 9, dated December 3, 2021 (CFM SB 72-0564); and CFM56-7B S/B 72-1071, initial issue, dated December 3, 2021 (CFM SB 72-1071). CFM SB 72-1129 describes procedures for the introduction of a new starter drive pad, new handcranking cover assembly, and re-working and re-identifying an AGB installed on CFM56-3 model turbofan engines. CFM SB 72-0879, CFM SB 72-0564 and CFM SB 72-1071 describe procedures for the introduction of a new starter drive pad, new handcranking cover, and re-working and re-identifying an AGB installed on CFM56-7B model turbofan 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.

## Costs of Compliance

The FAA estimates that this AD affects 700 engines installed on airplanes of U.S. registry. The FAA estimates that the majority of operators will perform the repair and re-identification of the AGB rather than replace the AGB with a zero hour part. For the purpose of this cost estimate, the FAA estimates that 95% of AGBs will be repaired and re-identified while 5% of AGBs will be replaced with a zero hour AGB.

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
Independent Inspection	1 work-hour × \$85 per hour = \$85	\$0	\$85	\$59,500

Insert inspection item into aircraft maintenance program	1 work-hour × \$85 per hour = \$85	0	85	59,500
Re-work and re-identify AGB	4 work-hours × \$85 per hour = \$340	12,000	12,340	8,206,100
Replace AGB with zero hour AGB	4 work-hours × \$85 per hour = \$340	526,700	527,040	18,446,400

### **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 2013-26-01, Amendment 39-17710 (78 FR 79295, December 30, 2013); and
- b. Adding the following new airworthiness directive:



# **AIRWORTHINESS DIRECTIVE**

[www.faa.gov/aircraft/safety/alerts/](http://www.faa.gov/aircraft/safety/alerts/)  
[www.gpoaccess.gov/fr/advanced.html](http://www.gpoaccess.gov/fr/advanced.html)

**2022-02-03 CFM International, S.A.:** Amendment 39-21900; Docket No. FAA-2021-0259; Project Identifier AD-2020-01128-E.

## **(a) Effective Date**

This airworthiness directive (AD) is effective March 22, 2022.

## **(b) Affected ADs**

This AD replaces AD 2013-26-01, Amendment 39-17710 (78 FR 79295, December 30, 2013).

## **(c) Applicability**

This AD applies to CFM International, S.A. CFM56-3 and CFM56-7B model turbofan engines equipped with an accessory gearbox (AGB) assembly with the following part numbers (P/Ns):

(1) For CFM56-3, CFM56-3B, and CFM56-3C model turbofan engines, AGB P/N: 335-300-103-0, 335-300-105-0, 335-300-106-0, 335-300-107-0, 335-300-108-0, 335-300-109-0, or 335-300-110-0, installed.

(2) For CFM56-7B20, CFM56-7B20/2, CFM56-7B20/3, CFM56-7B22, CFM56-7B22/2, CFM56-7B22/3, CFM56-7B22/3B1, CFM56-7B22/B1, CFM56-7B24, CFM56-7B24/2, CFM56-7B24/3, CFM56-7B24/3B1, CFM56-7B24/B1, CFM56-7B26, CFM56-7B26/2, CFM56-7B26/3, CFM56-7B26/3B1, CFM56-7B26/3B2, CFM56-7B26/3B2F, CFM56-7B26/3F, CFM56-7B26/B1, CFM56-7B26/B2, CFM56-7B27, CFM56-7B27/2, CFM56-7B27/3, CFM56-7B27/3B1, CFM56-7B27/3B1F, CFM56-7B27/3B3, CFM56-7B27/3F, CFM56-7B27/B1, and CFM56-7B27/B3 model turbofan engines, AGB P/N: 340-046-503-0, 340-046-504-0, or 340-046-505-0, installed.

(3) For CFM56-7B27A, CFM56-7B27A/3, or CFM56-7B27AE model turbofan engines, AGB P/N: 340-188-601-0, 340-188-603-0, or 340-188-605-0, installed.

## **(d) Subject**

Joint Aircraft System Component (JASC) Code 7260, Turbine Engine Accessory Drive.

## **(e) Unsafe Condition**

This AD was prompted by a dual engine loss of oil event and 42 prior events of total loss of engine oil during flight. The FAA is issuing this AD to prevent loss of engine oil while in flight. The unsafe condition, if not addressed, could result in engine failure, loss of thrust control, reduced control of the aircraft, 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, after any maintenance that involves removal and re-installation of the AGB handcranking pad cover, perform an independent inspection to verify re-installation of the AGB handcranking pad cover; or

(2) Prior to the next removal of the AGB handcranking pad cover from the engine, insert the independent inspection required by paragraph (g)(1) of this AD as a required inspection item in the existing approved continuous airworthiness maintenance program for the aircraft.

## **(h) Mandatory Terminating Action**

As a mandatory terminating action to the requirements of paragraph (g) of this AD:

(1) For affected CFM56-3, CFM56-3B, and CFM56-3C model turbofan engines, at the next engine shop visit, or before December 31, 2026, whichever occurs first after the effective date of this AD, replace the affected AGB with a part eligible for installation.

(2) For affected CFM56-7B model turbofan engines, except for CFM56-7B27A, CFM56-7B27A/3 and CFM56-7B27AE model turbofan engines, at the next engine shop visit, or before December 31, 2024, whichever occurs first after the effective date of this AD, replace the affected AGB with a part eligible for installation.

## **(i) Definition**

(1) For the purpose of this AD, an “engine shop visit” is the induction of an engine into the shop for maintenance involving the separation of pairs of major mating engine case flanges, except for the following situations, which do not constitute an engine shop visit:

(i) Separation of engine flanges solely for the purposes of transportation of the engine without subsequent maintenance; or

(ii) Separation of engine flanges solely for the purpose of replacing the fan or propulsor without subsequent maintenance.

(2) For the purpose of this AD, for affected CFM56-3, CFM56-3B, and CFM56-3C model turbofan engines, a part eligible for installation is:

(i) An AGB with a P/N other than 340-046-503-0, 340-046-504-0, or 340-046-505-0; or

(ii) An AGB that, using an FAA-approved procedure, has been re-worked with a dynamic oil seal in the handcranking pad cover assembly and re-identified with a new P/N not listed in paragraph (i)(2)(i) of this AD.

Note 1 to paragraph (i)(2)(ii): Procedures to install a dynamic oil seal in the handcranking pad cover assembly can be found in CFM International SB CFM56-3 S/B 72-1129, Revision 7, dated May 6, 2020.

(3) For the purpose of this AD, for affected CFM56-7B model turbofan engines, except for CFM56-7B27A, CFM56-7B27A/3 and CFM56-7B27AE model turbofan engines, a part eligible for installation is:

(i) An AGB with a P/N other than 340-046-503-0, 340-046-504-0, or 340-046-505-0; or

(ii) An affected AGB that, using an FAA-approved procedure, has been re-worked with a dynamic oil seal in the handcranking pad cover assembly and re-identified with a new P/N not listed in paragraph (i)(3)(i) of this AD.

Note 2 to paragraph (i)(3)(ii): Procedures to install a dynamic oil seal in the handcranking pad cover assembly can be found in CFM International SB CFM56-7B S/B 72-0879, Revision 7, dated February 10, 2021, CFM56-7B S/B 72-0564, Revision 9, dated December 3, 2021, or CFM56-7B S/B 72-1071, initial issue, dated December 3, 2021.

**(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 paragraph (k) 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**

For more information about this AD, contact Kevin Clark, Aviation Safety Engineer, ECO Branch, FAA, 1200 District Avenue, Burlington, MA 01803; phone: (781) 238-7088; fax: (781) 238-7199; email: kevin.m.clark@faa.gov.

**(l) Material Incorporated by Reference**

None.

Issued on January 6, 2022.

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