inspection of the fan hub rim area, using the Accomplishment Instructions, Part A.—For Fan Hubs at LPC Module Assembly Level, paragraphs 1.B., 1.C., and 1.E., of EA Turbojet Engine ASB EAGP7—A72—389, Revision No. 7, dated October 8, 2021 (EAGP7—A72—389, Revision No. 7).

- (ii) For engine fan hub assemblies at the piece part level, perform an ECI of the engine fan hub blade slot bottom and blade slot front edge, and perform a UT inspection of the fan hub rim area, using the Accomplishment Instructions, Part B—For Fan Hubs at Piece Part Level, paragraphs 1.B., 1.C., and 1.E., of EAGP7—A72—389, Revision No. 7.
- (iii) For engine fan hub assemblies installed in an engine (on-wing or off-wing), perform an ECI of the engine fan hub blade slot bottom and blade slot front edge, and perform a UT inspection of the fan hub rim area, using the Accomplishment Instructions, Part C—For Fan Hubs Installed in an Engine, paragraphs 3.B., 3.C., and 3.E., of EAGP7—A72—389, Revision No. 7.
- (2) Thereafter, at intervals not exceeding 290 FCs since the previous ECI and UT inspection, repeat the ECI of the engine fan hub blade slot bottom, ECI of the blade slot front edge, and UT inspection of the fan hub rim area required by paragraphs (g)(1)(i) through (iii) of this AD.
- (3) If, during any ECI or UT inspection required by paragraphs (g)(1) through (g)(2) of this AD, a rejectable indication is found, before further flight, remove the engine fan hub assembly from service and replace with a part that is eligible for installation.
- (4) For all GP7270 and GP7277 model turbofan engines, after the effective date of this AD:
- (i) At the next disassembly of the engine fan hub blade lock assembly, visually inspect the fan hub fan blade lock groove area (also known as the fan hub lock ring contact area) for damage.
- (ii) At the next reassembly of the engine fan hub blade lock assembly, visually inspect the following areas of the engine fan hub for damage:
 - (A) The fan hub scallop areas;
- (B) The fan hub bore area behind the balance flange;
- (C) The fan hub fan blade lock retention hooks;
 - (D) The fan hub rim face; and
 - (E) The clinch nut holes.
- (iii) After any reassembly of the fan hub blade lock assembly, before further flight, perform an independent inspection for damage of the areas of the engine fan hub identified in paragraph (g)(4)(ii) of this AD.
- (iv) Thereafter, repeat the inspections required by paragraphs (g)(4)(i) through (iii) of this AD at each disassembly and reassembly of the engine fan hub blade lock assembly, as applicable.
- (v) As an optional terminating action to the inspection and independent inspection requirements of paragraphs (g)(4)(i) through (iv) of this AD, insert the requirements for the visual inspections and independent inspections required by paragraphs (g)(4)(i) through (iv) as Required Inspection Items in the existing approved continuous airworthiness maintenance program for the airplane.

- (vi) If damage is found that exceeds serviceable limits during the inspections required by paragraphs (g)(4)(i) through (iv) of this AD, before further flight, remove the engine fan hub assembly from service and replace it with a part eligible for installation.
- (5) For GP7270 and GP7277 model turbofan engines with engine serial numbers P550101 through P550706, inclusive, within 200 FCs from August 1, 2020 or before further flight, whichever occurs later, remove the engine fan hub blade lock assembly, P/N 5700451, and replace it with a part eligible for installation.

Note 1 to paragraph (g)(5): EA Turbojet Engines ASB EAGP7–A72–418, Revision No. 1, dated January 11, 2019, contains guidance on replacement of the engine fan hub blade lock assembly.

(h) Credit for Previous Actions

You may take credit for the ECI inspections required by paragraph (g)(1)(i) through (iii) of this AD if you performed the ECI inspections before the effective date of this AD using EA ASB EAGP7–A72–389, Revision No. 6, dated November 21, 2019, or an earlier version.

(i) Definitions

- (1) For the purpose of this AD, a "part eligible for installation," when referring to replacement of the engine fan hub assembly, is a part that has passed the inspections required by paragraph (g)(1) of this AD.
- (2) For the purpose of this AD, a "part eligible for installation," when referring to replacement of the engine fan hub blade lock assembly, is:
 - (i) A part that is not P/N 5700451, or
- (ii) An engine fan hub blade lock assembly that has been modified in accordance with EA ASB EAGP7–A72–418, Revision No. 1, dated January 11, 2019, or EA ASB EAGP7–A72–418, Revision No. 0, dated December 7, 2018.
- (3) For the purpose of this AD, an "independent inspection" is a second visual inspection performed by an individual qualified to perform inspections who was not involved in the original inspection of the engine fan hub assembly following disassembly and reassembly of the engine fan hub blade lock assembly.

(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. Information may be emailed 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 Stephen Elwin, Aviation Safety

Engineer, ECO Branch, FAA, 1200 District Avenue, Burlington, MA 01803; phone: (781) 238–7236; fax: (781) 238–7199; email: Stephen.L.Elwin@faa.gov.

(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) Engine Alliance (EA) Turbojet Engines Alert Service Bulletin EAGP7–A72–389, Revision No. 7, dated October 8, 2021.
 - (ii) [Reserved]
- (3) For EA service information identified in this AD, contact Engine Alliance, 411 Silver Lane, East Hartford, CT, 06118; phone: (800) 565–0140; email: help24@pw.utc.com; website: www.engineallianceportal.com.
- (4) 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.
- (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: fr.inspection@nara.gov, or go to: https://www.archives.gov/federal-register/cfr/ibr-locations.html.

Issued on December 8, 2021.

Lance T. Gant.

Director, Compliance & Airworthiness Division, Aircraft Certification Service.

[FR Doc. 2021-27981 Filed 12-27-21: 8:45 am]

BILLING CODE 4910-13-P

DEPARTMENT OF TRANSPORTATION

Federal Aviation Administration

14 CFR Part 39

[Docket No. FAA-2021-0543; Project Identifier AD-2021-00353-T; Amendment 39-21852; AD 2021-25-09]

RIN 2120-AA64

Airworthiness Directives; The Boeing Company Airplanes

AGENCY: Federal Aviation Administration (FAA), DOT.

ACTION: Final rule.

SUMMARY: The FAA is adopting a new airworthiness directive (AD) for certain The Boeing Company Model 737–200 and –200C series airplanes. This AD was prompted by reports of nuisance stick shaker activation while the airplane was accelerating to cruise speed at the top of a climb. Investigation revealed that the activation was caused when the angle of attack (AOA) (also

known as angle of airflow) sensor vanes froze and malfunctioned due to insufficient heat in certain AOA sensors to prevent ice buildup. This AD requires inspecting the AOA sensors for certain part numbers or vane shapes, and replacing any affected AOA sensor with a new or serviceable sensor. The FAA is issuing this AD to address the unsafe condition on these products.

DATES: This AD is effective February 1, 2022.

The Director of the Federal Register approved the incorporation by reference of a certain publication listed in this AD as of February 1, 2022.

ADDRESSES: For service information identified in this final rule, contact Boeing Commercial Airplanes, Attention: Contractual & Data Services (C&DS), 2600 Westminster Blvd., MC 110-SK57, Seal Beach, CA 90740-5600; telephone 562-797-1717; internet https://www.myboeingfleet.com. 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. It is also available at https:// www.regulations.gov by searching for and locating Docket No. FAA-2021-0543.

Examining the AD Docket

You may examine the AD docket at https://www.regulations.gov by searching for and locating Docket No. FAA–2021–0543; 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:

Jeffrey W. Palmer, Aerospace Engineer, Systems and Equipment Section, FAA, Los Angeles ACO Branch, 3960 Paramount Boulevard, Lakewood, CA 90712–4137; phone: 562–627–5351; email: *jeffrey.w.palmer@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 The Boeing Company Model 737-200 and -200C series airplanes. The NPRM published in the Federal Register on August 9, 2021 (86 FR 43454). The NPRM was prompted by reports of nuisance stick shaker activation while the airplane was accelerating to cruise speed at the top of a climb. Investigation revealed that the activation was caused when the AOA sensor vanes froze and malfunctioned due to insufficient heat in certain AOA sensors to prevent ice buildup. In the NPRM, the FAA proposed to require inspecting the AOA sensors for certain part numbers or vane shapes, and replacing any affected AOA sensor with a new or serviceable sensor. The FAA is issuing this AD to prevent the AOA sensor vanes from being immobilized, which could result in unreliable or inaccurate AOA sensor data being transmitted to airplane systems, and consequent loss of control of the airplane.

Discussion of Final Airworthiness Directive

Comments

The FAA received a comment from the Air Line Pilots Association, International (ALPA) who supported the NPRM without change.

The FAA received an additional comment from Boeing. The following presents the comment received on the NPRM and the FAA's response.

Request for Clarification of Affected Airplane Model

Boeing asked that clarification be added to the Summary, Background, and Unsafe Condition sections of the proposed AD to specify that the originating AOA vane immobilization report was not on a Model 737 airplane. Boeing stated that this would clarify the service history and align the text with the language used in Boeing Alert

Service Bulletin 737–27A1324, dated March 2, 2021.

The FAA agrees to provide clarification, here in the comment section instead of throughout the body of this AD. Initially, AOA vane immobilization was reported on a Model 717 airplane; the associated design issues have been addressed for that airplane model. Although no Model 737-200 airplane has experienced an inflight incident related to the identified unsafe condition, the design of the AOA sensor vanes is similar on Model 737-200 airplanes. Therefore, the FAA has determined that this AD is necessary to address the unsafe condition on these airplanes. The FAA has not changed this final rule as a result of this comment.

Conclusion

The FAA reviewed the relevant data, considered any comments received, and determined that air safety requires adopting this AD as proposed. Except for minor editorial changes, and any other change 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 Boeing Alert Service Bulletin 737–27A1324, dated March 2, 2021. This service information specifies procedures for doing a general visual inspection of the left- and -right-side AOA sensor vane shapes, or inspecting the left and right AOA sensors, to determine the part number, and replacing any affected AOA sensor with a new or serviceable sensor. 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 will affect 11 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 |
|------------|------------------------------------|------------|------------------|------------------------|
| Inspection | 1 work-hour × \$85 per hour = \$85 | \$0 | \$85 | \$935 |

The FAA estimates the following costs to do any necessary replacements

that will be required based on the results of the inspection. The agency has no way of determining the number of aircraft that might need these replacements:

ON-CONDITION COSTS

| Action | Labor cost | Parts cost | Cost per product |
|-------------|--------------------------------------|------------|------------------|
| Replacement | 3 work-hours × \$85 per hour = \$255 | \$54,000 | \$54,255 |

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:

2021-25-09 The Boeing Company:

Amendment 39–21852; Docket No. FAA–2021–0543; Project Identifier AD–2021–00353–T.

(a) Effective Date

This airworthiness directive (AD) is effective February 1, 2022.

(b) Affected ADs

None.

(c) Applicability

This AD applies to The Boeing Company Model 737–200 and –200C series airplanes, certificated in any category, as identified in Boeing Alert Service Bulletin 737–27A1324, dated March 2, 2021.

(d) Subject

Air Transport Association (ATA) of America Code 27, Flight Control System.

(e) Unsafe Condition

This AD was prompted by reports of nuisance stick shaker activation while the airplane was accelerating to cruise speed at the top of a climb. Investigation revealed that the activation was caused when the angle of attack (AOA) (also known as angle of airflow) sensor vanes froze and malfunctioned due to insufficient heat in certain AOA sensors to prevent ice buildup. The FAA is issuing this AD to prevent the AOA sensor vanes from being immobilized, which could result in unreliable or inaccurate AOA sensor data being transmitted to airplane systems, and consequent loss of control of the airplane.

(f) Compliance

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

(g) Required Actions for Group 2 Airplanes

For airplanes identified as Group 2 in Boeing Alert Service Bulletin 737–27A1324, dated March 2, 2021: Within 120 days after the effective date of this AD, inspect the AOA sensor, using a method approved in accordance with the procedures specified in paragraph (j) of this AD.

(h) Required Actions for Group 1 Airplanes

Except as specified in paragraph (i) of this AD: At the applicable times specified in

paragraph 1.E., "Compliance," of Boeing Alert Service Bulletin 737–27A1324, dated March 2, 2021, do all applicable actions identified as "RC" (required for compliance) in, and in accordance with, the Accomplishment Instructions of Boeing Alert Service Bulletin 737–27A1324, dated March 2, 2021.

(i) Exception to Service Information Specifications

Where Boeing Alert Service Bulletin 737–27A1324, dated March 2, 2021, uses the phrase "the original issue date of this service bulletin," this AD requires using "the effective date of this AD."

(j) Alternative Methods of Compliance (AMOCs)

(1) The Manager, Los Angeles 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 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. Information may be emailed to: 9-ANM-LAACO-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, Los Angeles 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.

(4) For service information that contains steps that are labeled as Required for Compliance (RC), the provisions of paragraphs (j)(4)(i) and (ii) of this AD apply.

(i) The steps labeled as RC, including substeps under an RC step and any figures identified in an RC step, must be done to comply with the AD. If a step or substep is labeled "RC Exempt," then the RC requirement is removed from that step or substep. An AMOC is required for any deviations to RC steps, including substeps and identified figures.

(ii) Steps not labeled as RC may be deviated from using accepted methods in accordance with the operator's maintenance or inspection program without obtaining approval of an AMOC, provided the RC steps, including substeps and identified figures, can still be done as specified, and the airplane can be put back in an airworthy condition.

(k) Related Information

For more information about this AD, contact Jeffrey W. Palmer, Aerospace Engineer, Systems and Equipment Section, FAA, Los Angeles ACO Branch, 3960 Paramount Boulevard, Lakewood, CA 90712–4137; phone: 562–627–5351; email: jeffrey.w.palmer@faa.gov.

(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) Boeing Alert Service Bulletin 737–27A1324, dated March 2, 2021.
 - (ii) [Reserved]
- (3) For service information identified in this AD, contact Boeing Commercial Airplanes, Attention: Contractual & Data Services (C&DS), 2600 Westminster Blvd., MC 110–SK57, Seal Beach, CA 90740–5600; telephone 562–797–1717; internet https://www.myboeingfleet.com.
- (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, fr.inspection@nara.gov, or go to: https://www.archives.gov/federal-register/cfr/ibrlocations.html.

Issued on December 2, 2021.

Lance T. Gant.

Director, Compliance & Airworthiness Division, Aircraft Certification Service.

[FR Doc. 2021–27957 Filed 12–27–21; 8:45 am]

BILLING CODE 4910-13-P

DEPARTMENT OF TRANSPORTATION

Federal Aviation Administration

14 CFR Part 97

[Docket No. 31405; Amdt. No. 3988]

Standard Instrument Approach Procedures, and Takeoff Minimums and Obstacle Departure Procedures; Miscellaneous Amendments

AGENCY: Federal Aviation Administration (FAA), DOT.

ACTION: Final rule.

SUMMARY: This rule amends, suspends, or removes Standard Instrument Approach Procedures (SIAPs) and associated Takeoff Minimums and Obstacle Departure Procedures for operations at certain airports. These regulatory actions are needed because of

the adoption of new or revised criteria, or because of changes occurring in the National Airspace System, such as the commissioning of new navigational facilities, adding new obstacles, or changing air traffic requirements. These changes are designed to provide for the safe and efficient use of the navigable airspace and to promote safe flight operations under instrument flight rules at the affected airports.

DATES: This rule is effective December 28, 2021. The compliance date for each SIAP, associated Takeoff Minimums, and ODP is specified in the amendatory provisions.

The incorporation by reference of certain publications listed in the regulations is approved by the Director of the Federal Register as of December 28, 2021.

ADDRESSES: Availability of matter incorporated by reference in the amendment is as follows:

For Examination

- 1. U.S. Department of Transportation, Docket Ops–M30, 1200 New Jersey Avenue SE, West Bldg., Ground Floor, Washington, DC 20590–0001;
- 2. The FAA Air Traffic Organization Service Area in which the affected airport is located;
- 3. The office of Aeronautical Information Services, 6500 South MacArthur Blvd., Oklahoma City, OK 73169 or,
- 4. The National Archives and Records Administration (NARA).

For information on the availability of this material at NARA, email fr.inspection@nara.gov or go to: https://www.archives.gov/federal-register/cfr/ibr-locations.html.

Availability

All SIAPs and Takeoff Minimums and ODPs are available online free of charge. Visit the National Flight Data Center online at *nfdc.faa.gov* to register. Additionally, individual SIAP and Takeoff Minimums and ODP copies may be obtained from the FAA Air Traffic Organization Service Area in which the affected airport is located.

FOR FURTHER INFORMATION CONTACT:

Thomas J. Nichols, Flight Procedures and Airspace Group, Flight
Technologies and Procedures Division, Flight Standards Service, Federal
Aviation Administration. Mailing
Address: FAA Mike Monroney
Aeronautical Center, Flight Procedures and Airspace Group, 6500 South
MacArthur Blvd., Registry Bldg. 29,
Room 104, Oklahoma City, OK 73169.
Telephone: (405) 954–4164.

SUPPLEMENTARY INFORMATION: This rule amends 14 CFR part 97 by amending the

referenced SIAPs. The complete regulatory description of each SIAP is listed on the appropriate FAA Form 8260, as modified by the National Flight Data Center (NFDC)/Permanent Notice to Airmen (P-NOTAM), and is incorporated by reference under 5 U.S.C. 552(a), 1 CFR part 51, and 14 CFR 97.20. The large number of SIAPs, their complex nature, and the need for a special format make their verbatim publication in the Federal Register expensive and impractical. Further, airmen do not use the regulatory text of the SIAPs, but refer to their graphic depiction on charts printed by publishers of aeronautical materials. Thus, the advantages of incorporation by reference are realized and publication of the complete description of each SIAP contained on FAA form documents is unnecessary. This amendment provides the affected CFR sections, and specifies the SIAPs and Takeoff Minimums and ODPs with their applicable effective dates. This amendment also identifies the airport and its location, the procedure and the amendment number.

Availability and Summary of Material Incorporated by Reference

The material incorporated by reference is publicly available as listed in the ADDRESSES section. The material incorporated by reference describes SIAPs, Takeoff Minimums and ODPs as identified in the amendatory language for part 97 of this final rule.

The Rule

This amendment to 14 CFR part 97 is effective upon publication of each separate SIAP and Takeoff Minimums and ODP as amended in the transmittal. For safety and timeliness of change considerations, this amendment incorporates only specific changes contained for each SIAP and Takeoff Minimums and ODP as modified by FDC permanent NOTAMs.

The SIAPs and Takeoff Minimums and ODPs, as modified by FDC permanent NOTAM, and contained in this amendment are based on criteria contained in the U.S. Standard for **Terminal Instrument Procedures** (TERPS). In developing these changes to SIAPs and Takeoff Minimums and ODPs, the TERPS criteria were applied only to specific conditions existing at the affected airports. All SIAP amendments in this rule have been previously issued by the FAA in a FDC NOTAM as an emergency action of immediate flight safety relating directly to published aeronautical charts.

The circumstances that created the need for these SIAP and Takeoff