

NOTICE

U.S. DEPARTMENT OF TRANSPORTATION
FEDERAL AVIATION ADMINISTRATION

N 8900.570

National Policy

Effective Date:
11/18/20

Cancellation Date:
11/18/21

SUBJ: Boeing 737-8 and 737-9 Airplanes: Return to Service

- 1. Purpose of This Notice.** This notice provides policy, information, and direction to certain Federal Aviation Administration (FAA) employees regarding the maintenance actions required for operators to complete prior to returning the Boeing Company Model 737-8 and 737-9 (referred to collectively as the 737 MAX) airplanes to service. The FAA has identified the required return-to-service activities for operators of the 737 MAX and heightened surveillance and tracking of those related activities for aviation safety inspectors (ASI).
- 2. Audience.** The primary audience for this notice is principal inspectors (PI), ASIs, and other Flight Standards (FS) personnel who are responsible for the oversight of certificate holders operating or maintaining 737 MAX airplanes under Title 14 of the Code of Federal Regulations (14 CFR) parts 91, 121, 125, and 129. The secondary audience includes the FS Safety Standards and Foundational Business offices.
- 3. Where You Can Find This Notice.** You can find this notice on the MyFAA employee website at https://employees.faa.gov/tools_resources/orders_notices. Inspectors can access this notice through the Flight Standards Information Management System (FSIMS) at <https://fsims.avs.faa.gov>. Operators can find this notice on the FAA's website at <https://fsims.faa.gov>. This notice is available to the public at https://www.faa.gov/regulations_policies/orders_notices.
- 4. Applicability.** This notice applies only to 737 MAX airplanes that received FAA Airworthiness Certificates and export Certificates of Airworthiness prior to the date of issuance of the Rescission of Emergency Order of Prohibition (November 18, 2020).
- 5. Background.**
 - a. Accidents.**

(1) On October 29, 2018, a Boeing 737-8 airplane operated by Lion Air (Lion Air Flight 610) was involved in an accident after takeoff from Soekarno-Hatta International Airport in Jakarta, Indonesia, resulting in 189 fatalities. Investigation of the accident has been completed by the Indonesian authorities (Komite Nasional Keselamatan Transportasi (KNKT)) with assistance from the National Transportation Safety Board (NTSB) and the FAA of the United States, the manufacturer, and the operator. Reports from the accident investigation indicate that

the airplane's flight control system generated repeated airplane nose-down horizontal stabilizer trim commands, contributing to the accident.¹

(2) On March 10, 2019, a Boeing 737-8 airplane operated by Ethiopian Airlines (Ethiopian Airlines Flight 302) was involved in an accident after takeoff from Addis Ababa Bole International Airport in Addis Ababa, Ethiopia, resulting in 157 fatalities. The accident is under investigation by the Ethiopian Accident Investigation Bureau (EAIB) with assistance from the NTSB and the FAA of the United States, the French Bureau of Enquiry and Analysis for Civil Aviation Safety (BEA), the European Union Aviation Safety Agency (EASA), the manufacturer, the operator, and the Ethiopian Civil Aviation Authority (ECAA).²

(3) The data from the flight data recorders, as summarized in reports of the Ethiopian Airlines Flight 302 accident and the Lion Air Flight 610 accident, indicated that if a single erroneously high angle of attack (AOA) sensor input is received by the flight control system, the Maneuvering Characteristics Augmentation System (MCAS) can command repeated airplane nose-down trim of the horizontal stabilizer. This unsafe condition, if not addressed, could cause the flightcrew to have difficulty controlling the airplane and lead to excessive airplane nose-down attitude, significant altitude loss, and impact with terrain.

6. Airworthiness Directives (AD).

a. AD 2020-24-02. AD 2020-24-02 requires installing new flight control computer (FCC) software, revising the existing Airplane Flight Manual (AFM) to incorporate new and revised flightcrew procedures, installing new MAX display system (MDS) software, changing the horizontal stabilizer trim wire routing installations, completing an AOA sensor system test, and performing an operational readiness flight. This AD also allows operation (dispatch) of an airplane with certain inoperative systems only if certain, more restrictive provisions are incorporated in the operator's existing FAA-approved minimum equipment list (MEL).

b. Other Applicable ADs. In addition, during the time since the FAA issued the Emergency Order of Prohibition that grounded the Boeing 737 MAX airplanes, the FAA has issued a number of other ADs affecting the fleet of which responsible ASIs should be aware. All ADs affecting 737 MAX airplanes can be found at <https://rgl.faa.gov/>.

7. Action. Responsible ASIs will complete the actions as described in the applicable appendix to this notice.

- Part 91 ASIs (domestic and foreign-based), see Appendix A.
- Part 121 ASIs, see Appendix B.
- Part 125 ASIs, see Appendix C.
- Part 129 ASIs, see Appendix D.

¹ Refer to Preliminary KNKT.18.10.35.04, Aircraft Accident Investigation Report, dated November 2018, and Final KNKT.18.10.35.04, Aircraft Accident Investigation Report, dated October 2019, which can be found at <https://www.regulations.gov/document?D=FAA-2020-0686-0002>.

² Refer to Ethiopian Aircraft Accident Investigation Preliminary Report AI-01/19, dated March 2019, and the Ethiopian Interim Investigation Report of accident MAX-8-ET-AVJ, ET-302, dated March 2020, available at <https://www.regulations.gov/document?D=FAA-2020-0686-0002>.

8. Disposition. The information in this notice will not be incorporated into FAA Order 8900.1. Direct questions or comments concerning the information in this notice to the Aircraft Maintenance Division at 202-267-1675.

ORIGINAL SIGNED by

/s/ Robert C. Carty
Deputy Executive Director, Flight Standards Service

Appendix A. Part 91

- 1. Responsible Principal Inspectors (PI), Aviation Safety Inspectors (ASI), and Other Flight Standards (FS) Personnel.** Evaluate the operator's return-to-service process and procedures related to 737 MAX airplanes described in paragraph 4 of this notice. Use the appropriate Activity Recording (AR) codes to document the evaluation of the certificate holder's process and procedures for return to service of the 737 MAX airplane. When completing the AR, select "737MAX" in the "National Use" field in the Safety Assurance System (SAS).
- 2. Minimum Equipment List (MEL).** PIs, ASIs, and other FS personnel must follow the policy and direction in FAA Order 8900.1, Volume 4, Chapter 4, Section 2, MEL Requirements for 14 CFR Parts 91, 137, and 142 Operations, for review and concurrence of the operator's revised MEL. When documenting the completion of the MEL review, select "737MAX" in the "National Use" field in the AR entry.
- 3. Aircraft Maintenance Manuals (AMM).** PIs, ASIs, and other FS personnel must ensure that, when implementing the requirements of Airworthiness Directive (AD) 2020-24-02, operators use the revision of the AMM identified in any Service Bulletins (SB) required for compliance by the AD.

Appendix B. Part 121

- 1. Responsible Principal Inspectors (PI), Aviation Safety Inspectors (ASI), and Other Flight Standards (FS) Personnel.** Evaluate the certificate holder's return-to-service process and procedures related to 737 MAX airplanes described in paragraph 4 of this notice. Use the Pre-Operational Readiness Flight National/Divisional Custom Data Collection Tool (ND C DCT) and the Action Item Tracking Tool (AITT) to document the evaluation of the certificate holder's process and procedures for return to service of the 737 MAX airplane.
- 2. DCTs Related to 737 MAX Return to Service.** PIs, ASIs, and other FS personnel must enter "737MAX" (without quotations or spaces) in the "National Use" field when completing the DCTs.
- 3. Minimum Equipment List (MEL).** PIs, ASIs, and other FS personnel must follow the policy and direction in FAA Order 8900.1, Volume 4, Chapter 4, Section 3, MEL Requirements for 14 CFR Parts 91 Subpart K (Part 91K), 121, 125, 125 LODA, 129, and 135 Operations, for review and concurrence of the operator's revised MEL. When documenting the completion of the MEL review, enter "737MAX" (without quotations or spaces) in the "National Use" field of the DCT.
- 4. Aircraft Maintenance Manuals (AMM).** PIs, ASIs, and other FS personnel must ensure that, when implementing the requirements of Airworthiness Directive (AD) 2020-24-02, operators use the revision of the AMM identified in any Service Bulletins (SB) required for compliance by the AD.
- 5. Pre-Operational Readiness Flight (ORF) Audit C DCT.** PIs, ASIs, and other FS personnel should assign and verify completion of the Pre-ORF Audit C DCT prior to the certificate holder's first ORF. The FAA uses this C DCT in the evaluation of each certificate holder's return-to-service process and procedures. The C DCT should include at least the following topics:
 - a. De-preservation (AMM tasks, Chapter 10).
 - b. Software installations.
 - c. Angle of attack (AOA) system test preferred method (AMM, Task 34-21-05-730-801, 2F and 2H).
 - d. Master Minimum Equipment List (MMEL) revision (MMEL revision 2) incorporation into the air carrier's MEL.
 - e. AD 2020-24-02 compliance.
 - f. Any required scheduled and non-routine maintenance tasks completed not otherwise captured by this DCT.
 - g. Airworthiness release completed (refer to 14 CFR part 121, § 121.709).

Appendix C. Part 125

- 1. Responsible Principal Inspectors (PI), Aviation Safety Inspectors (ASI), and Other Flight Standards (FS) Personnel.** Evaluate the operator's return-to-service process and procedures related to 737 MAX airplanes described in paragraph 4 of this notice. Use the appropriate Activity Recording (AR) codes to document the evaluation of the certificate holder's process and procedures for return to service of the 737 MAX airplane. When completing the AR, select "737MAX" in the "National Use" field in the Safety Assurance System (SAS).
- 2. Minimum Equipment List (MEL).** PIs, ASIs, and other FS personnel must follow the policy and direction in FAA Order 8900.1, Volume 4, Chapter 4, Section 3, MEL Requirements for 14 CFR Parts 91 Subpart K (Part 91K), 121, 125, 125 LODA, 129, and 135 Operations, for review and concurrence of the operator's revised MEL. When documenting the completion of the MEL review, select "737MAX" in the "National Use" field in the AR entry.
- 3. Aircraft Maintenance Manuals (AMM).** PIs, ASIs, and other FS personnel must ensure that, when implementing the requirements of Airworthiness Directive (AD) 2020-24-02, operators use the revision of the AMM identified in any Service Bulletins (SB) required for compliance by the AD.

Appendix D. Part 129

1. Responsible Principal Inspectors (PI), Aviation Safety Inspectors (ASI), and Other Flight Standards (FS) Personnel. This appendix identifies oversight actions to be completed by Airworthiness ASIs (including PIs) and other FS personnel who oversee 14 CFR part 129 foreign air carriers operating any 737 MAX airplanes within the U.S. National Airspace System (NAS), and/or operating U.S.-registered 737 MAX airplanes solely outside of the United States. PIs will evaluate the foreign air carrier's return-to-service process and procedures related to 737 MAX airplanes described in paragraph 4 of this notice.

2. Minimum Equipment List (MEL). PIs, ASIs, and other FS personnel must follow the policy and direction in FAA Order 8900.1, Volume 12, Chapter 4, Section 9, Configuration Deviation List, Minimum Equipment List, and Nonessential Equipment and Furnishings, for review and approval of the operator's revised MEL. PIs, ASIs, and other FS personnel must enter into Activity Recording (AR) the part 129 designator in the "Operator Designator" field and select "737MAX" in the "National Use" field.

3. Aircraft Maintenance Manuals (AMM). PIs, ASIs, and other FS personnel must ensure that, when implementing the requirements of Airworthiness Directive (AD) 2020-24-02, operators of U.S.-registered airplanes use the revision of the AMM identified in any Service Bulletins (SB) required for compliance by the AD.

4. Airworthiness Requirements. Consistent with part 129, § 129.5 and International Civil Aviation Organization (ICAO) Annex 8, Airworthiness of Aircraft, foreign air carriers may not operate any 737 MAX airplanes within the U.S. NAS, unless the airplane is in an airworthy condition and (for U.S.-registered airplanes operated by a foreign air carrier) compliant with AD 2020-24-02.

5. Heightened Surveillance AR. PIs, ASIs, and other FS personnel will document the following actions:

a. U.S.-Registered Airplanes. For the AD and applicable return-to-service task(s), accomplish 3649 and/or 5649 AR, and any other activity necessary to confirm related return-to-service tasks for U.S.-registered 737 MAX airplanes.

(1) PIs will ensure the appropriate method of compliance is recorded for AD 2020-24-02 for each U.S.-registered 737 MAX airplane identified in paragraph 1 of this appendix.

(2) Enter the part 129 designator in the "Operator Designator" field and the aircraft registration number, and select "737MAX" in the "National Use" field.

b. Foreign-Registered Airplanes. Accomplish a review of AD 2020-24-02 or requirements approved by the appropriate State of Registry that achieve an equivalent level of safety (ELOS) and document this in an AR.

(1) Accomplish 3634 and/or 5634 AR to confirm recording of AD compliance for foreign-registered 737 MAX airplanes identified in paragraph 1 of this appendix.

(2) Enter the part 129 designator in the “Operator Designator” field and the aircraft registration number, and select “737MAX” in the “National Use” field.