DEPARTMENT OF TRANSPORTATION

Federal Aviation Administration

14 CFR Part 39

[Docket No. FAA–2022–0462; Project Identifier MCAI–2021–00647–T; Amendment 39–22104; AD 2022–13–18]

RIN 2120–AA64

Airworthiness Directives; The Boeing Company Airplanes

AGENCY: Federal Aviation Administration (FAA), Department of Transportation (DOT).

ACTION: Final rule.

SUMMARY: The FAA is adopting a new airworthiness directive (AD) for certain The Boeing Company Model 737–700, 737–800, 747–400, 747–8, 767–400ER, and 777–200 airplanes. This AD was prompted by a report that there is the potential for electrical current to pass through low pressure (LP) oxygen flex-hoses in the gaseous passenger oxygen system. This AD requires replacing each conductive oxygen flex-hose installed on LP gaseous passenger oxygen systems with a serviceable non-conductive oxygen flex-hose. This AD also prohibits installation of a conductive oxygen flex-hose on LP gaseous passenger oxygen systems. The FAA is issuing this AD to address the unsafe condition on these products.

DATES: This AD is effective September 15, 2022.

The Director of the Federal Register approved the incorporation by reference of certain publications listed in this AD as of September 15, 2022.

ADDRESSES: For service information identified in this final rule, contact Lufthansa Technik AG, Weg beim Jäger 193 22335 Hamburg, Germany; telephone 49–40–5070–67428; internet *www.lufthansa-technik.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 on the internet at *www.regulations.gov* by searching for and locating Docket No. FAA–2022–0462.

Examining the AD Docket

You may examine the AD docket on the internet at *www.regulations.gov* by searching for and locating Docket No. FAA–2022–0462; 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: Chirayu Gupta, Aerospace Engineer, Mechanical Systems and Administrative Services Section, FAA, New York ACO Branch, 1600 Stewart Avenue, Suite 410, Westbury, NY 11590; telephone 516–228–7300; email *9-avs-nyaco-cos@faa.gov.*

SUPPLEMENTARY INFORMATION:

Background

The European Union Aviation Safety Agency (EASA), which is the Technical Agent for the Member States of the European Union, has issued EASA AD 2021–0135, dated June 2, 2021 (EASA AD 2021–0135) (also referred to as the Mandatory Continuing Airworthiness Information, or the MCAI), to correct an unsafe condition for certain The Boeing Company Model 737–700, 737–800, 747–400, 747–8, 767–400ER, and 777–200 airplanes with certain Lufthansa Technik AG supplemental type certificates (STCs), which resulted in the installation of conductive oxygen flex-hoses. You may examine the MCAI in the AD docket on the internet at *www.regulations.gov* by searching for and locating Docket No. FAA–2022–0462.

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 737–700, 737–800, 747–400, 747–8, 767–400ER, and 777–200 airplanes. The NPRM published in the **Federal Register** on April 22, 2022 (87 FR 24073). The NPRM was prompted by a report that there is the potential for electrical current to pass through LP oxygen flex-hoses in the gaseous passenger oxygen system. Exposure to electrical faults, such as unintended short circuits, can result in localized electrical heating of the LP oxygen flex-hoses. The NPRM proposed to require replacing each conductive oxygen flex-hose installed on LP gaseous passenger oxygen systems with a serviceable non-conductive oxygen flex-hose. The FAA is issuing this AD to address the possibility of electrical current passing through the LP oxygen flex-hoses in the gaseous passenger oxygen system, which could cause the flex-hoses to melt or burn and result in an oxygen-fed fire in the passenger cabin. See the MCAI for additional background information.

Discussion of Final Airworthiness Directive

Comments

The FAA received a comment from Boeing who supported the NPRM without change. The FAA also received a comment from United Airlines who stated that the NPRM does not apply to any of its airplanes.

Effect of Winglets on Accomplishment of the Proposed Actions

Aviation Partners Boeing stated that the installation of winglets per STC ST00830SE does not affect the accomplishment of the manufacturer's service instructions. The commenter noted that this STC is for the applicable Model 737–700 and 737–800 airplanes identified in the proposed AD and that it does not have any STCs for the other models in the proposed AD.

The FAA agrees with the commenter that STC ST00830SE does not affect the accomplishment of the manufacturer's service instructions. Therefore, the installation of STC ST00830SE does not affect the ability to accomplish the actions required by this AD. The FAA has not changed this AD in this regard.

Clarification of AD Applicability Revision

Paragraph (c) of the proposed AD referred only to FAA STC ST04127NY that the FAA has since determined only applies to a modification of a Boeing Model 747–8 airplane that included the installation of conductive oxygen flex-hoses. The FAA intended the AD applicability to not be limited to just manufacturer serial number (MSN) 37500 that was modified by STC ST04127NY, but to all MSNs identified in the proposed AD that were modified by a Lufthansa Technik AG STC, which resulted in the installation of conductive oxygen flex-hoses. Therefore, the FAA has determined that including reference to the STCs that installed the conductive oxygen flex-hoses is redundant and unnecessary. Paragraph (c) of this AD has been revised in order to clarify this AD is applicable to the MSNs identified in paragraph (c) of this AD that have conductive oxygen flex-hoses specified in paragraph (g) of this AD.

Conclusion

The FAA reviewed the relevant data, considered the comments received, and determined that air safety requires adopting this AD as proposed. Except for minor editorial changes, this AD is adopted as proposed in the NPRM. None of the changes will increase the economic burden on any operator.

Accordingly, the FAA is issuing this AD to address the unsafe condition on these products.

Related Service Information Under 1 CFR Part 51

Lufthansa Technik AG has issued the following service information.

- Lufthansa Technik Design Change Summary ASN–00–DCS–01, Revision 8, dated November 5, 2020.
- Lufthansa Technik Design Change Summary ATB–25–DCS–01, Revision 10, dated January 7, 2021.
- Lufthansa Technik Design Change Summary ATR–23–DCS–01, Revision 2, dated January 7, 2021.
- Lufthansa Technik Design Change Summary BCM–35–DCS–01, dated January 4, 2021.
- Lufthansa Technik Design Change Summary BCP–35–DCS–01, Revision 1, dated April 20, 2021.
- Lufthansa Technik Design Change Summary BCQ–35–DCS–01, Revision 1, dated April 20, 2021.
- Lufthansa Technik Design Change Summary BCR–35–DCS–01, Revision 1, dated April 20, 2021.
- Lufthansa Technik Design Change Summary BCS–35–DCS–01, dated January 5, 2021.
- Lufthansa Technik Design Change Summary BCU–35–DCS–01, dated January 5, 2021.
- Lufthansa Technik Design Change Summary BCV–35–DCS–01, dated February 4, 2021.
- Lufthansa Technik Design Change Summary BCW–35–DCS–01, dated January 4, 2021.
- Lufthansa Technik Design Change Summary BCX–35–DCS–01, Revision 1, dated February 4, 2021.

This service information describes procedures for replacing each conductive oxygen flex-hose installed on LP gaseous passenger oxygen systems with a serviceable non-conductive oxygen flex-hose. These documents are distinct since they apply to different airplane models and manufacturer serial numbers.

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 the **ADDRESSES** section.

Costs of Compliance

The FAA estimates that this AD will affect 7 airplanes of U.S. registry. The FAA estimates the following costs to comply with this AD:

ESTIMATED COSTS FOR REQUIRED ACTIONS

Labor cost	Parts cost	Cost per product	Cost on U.S. operators
Up to 17 work-hours × $85 per hour = Up to $1,445	$10,090	Up to $11,535	Up to $80,745.

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:

2022–13–18 The Boeing Company: Amendment 39–22104; Docket No. FAA–2022–0462; Project Identifier MCAI–2021–00647–T.

(a) Effective Date

This airworthiness directive (AD) is effective September 15, 2022.

(b) Affected ADs

None.

(c) Applicability

This AD applies to The Boeing Company Model 737–700, 737–800, 747–400, 747–8, 767–400ER, and 777–200 airplanes, certificated in any category, manufacturer serial numbers (MSN) 28551, 28961, 29953, 30791, 30884, 32445, 32575, 32915, 32970, 32971, 33010, 33102, 33361, 33684, 34205, 37500, and 37544, with conductive oxygen flex-hose having part number specified in paragraph (g) of this AD.

(d) Subject

Air Transport Association (ATA) of America Code 35, Oxygen.

(e) Unsafe Condition

This AD was prompted by a report that there is the potential for electrical current to pass through low pressure (LP) oxygen flex-hoses in the gaseous passenger oxygen system. The FAA is issuing this AD to address this condition, which could cause the flex-hoses to melt or burn and result in an oxygen-fed fire in the passenger cabin.

(f) Compliance

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

(g) Replacement

Within 48 months after the effective date of this AD: Replace each conductive oxygen flex-hose installed on LP gaseous passenger oxygen systems with a serviceable non-

conductive oxygen flex-hose, in accordance with the Accomplishment Instructions of the applicable Lufthansa Technik Design Change Summary (TS–145 Installation Document Number) corresponding to the affected part numbers specified in figure 1 to paragraph (g) of this AD.

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Figure 1 to paragraph (g) – *Service Information*[1]

Model–	Lufthansa Technik Design Change Summary –	Prohibited Conductive Oxygen Flex-Hose Having Part Number (P/N) –	Serviceable Non-Conductive Flex-Hose Having Part Number (P/N) –
737-700 airplanes	BCP-35-DCS-01, Revision 1, dated April 20, 2021	57034-xxx (except for P/N 57034-xxNxxx, which is already a non-conductive hose)	57211Nxxx
737-800 airplanes	BCQ-35-DCS-01, Revision 1, dated April 20, 2021	38001-xxx (except for P/N 38001-6xx, which is already a non-conductive hose)	38055xxxN
			57211Nxxx
	BCR-35-DCS-01, Revision 1, dated April 20, 2021	38001-xxx (except for P/N 38001-6xx, which is already a non-conductive hose)	38055xxxN
		57034-xxx (except for P/N 57034-xxNxxx, which is already a non-conductive hose)	57211Nxxx
		57211-xxx	
	BCS-35-DCS-01, dated January 5, 2021	57034-xxx (except for P/N 57034-xxNxxx, which is already a non-conductive hose)	57211Nxxx
		38001-xxx (except for P/N 38001-6xx, which is already a non-conductive hose)	38055xxxN

Model–	Lufthansa Technik Design Change Summary –	Prohibited Conductive Oxygen Flex-Hose Having Part Number (P/N) –	Serviceable Non-Conductive Flex-Hose Having Part Number (P/N) –
747-400 airplanes	BCX-35-DCS-01, Revision 1, dated February 4, 2021	38001-xxx (except for P/N 38001-6xx, which is already a non-conductive hose)	38055xxxN
			57297Nxxx
		57034-xxx (except for P/N 57034-xxNxxx, which is already a non-conductive hose)	57211Nxxx
	BCU-35-DCS-01, dated January 5, 2021	38001-xxx (except for P/N 38001-6xx, which is already a non-conductive hose)	38055xxxN
		57034-xxx (except for P/N 57034-xxNxxx, which is already a non-conductive hose)	57211Nxxx
		55017-xxx	
		57211-xxx	
	BCV-35-DCS-01, dated February 4, 2021	38001-xxx (except for P/N 38001-6xx, which is already a non-conductive hose)	38055xxxN
			57297Nxxx
		55017-xxx	57211Nxxx
		57211-xxx	
	BCW-35-DCS-01, dated January 4, 2021	57021-xxx	57211Nxxx
		57211-xxx	
747-8 airplanes	ASN-00-DCS-01, Revision 8, dated November 5, 2020	57034-xxx (except for P/N 57034-xxNxxx, which is already a non-conductive hose)	57297Nxxx
	ATB-25-DCS-01, Revision 10, dated January 7, 2021	57034-xxx (except for P/N 57034-xxNxxx, which is already a non-conductive hose)	57297Nxxx
		57021-xxx	57211Nxxx
767-400ER airplanes	ATR-23-DCS-01, Revision 2, dated January 7, 2021	60B50060-x	57297Nxxx
777-200 airplanes	BCM-35-DCS-01, dated January 4, 2021	57034-xxx (except for P/N 57034-xxNxxx, which is already a non-conductive hose)	57297Nxxx
		57071-xxx	57211Nxxx
		57073-xxx	

[1] The "x" used in this figure can be any combination and number of numerals and letters.

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(h) Parts Installation Prohibition

As of the effective date of this AD, no person may install a prohibited conductive oxygen flex-hose specified in figure 1 to paragraph (g) of this AD, on LP gaseous passenger oxygen systems on any airplane.

(i) Credit for Previous Actions

This paragraph provides credit for actions required by paragraph (g) of this AD, if those actions were performed before the effective date of this AD using the service information in paragraphs (i)(1) through (6) of this AD.

(1) Lufthansa Technik Design Change Summary ASN–00–DCS–01, Revision 6, dated June 25, 2020.

(2) Lufthansa Technik Design Change Summary ASN–00–DCS–01, Revision 7, dated August 26, 2020.

(3) Lufthansa Technik Design Change Summary BCP–35–DCS–01, dated January 5, 2021.

(4) Lufthansa Technik Design Change Summary BCQ–35–DCS–01, dated January 7, 2021.

(5) Lufthansa Technik Design Change Summary BCR–35–DCS–01, dated January 7, 2021.

(6) Lufthansa Technik Design Change Summary BCX–35–DCS–01, dated January 7, 2021.

(j) Other FAA AD Provisions

The following provisions also apply to this AD:

(1) *Alternative Methods of Compliance (AMOCs):* The Manager, New York ACO Branch, FAA, has the authority to approve AMOCs for this AD, if requested using the procedures found in 14 CFR 39.19. In accordance with 14 CFR 39.19, send your request to your principal inspector or responsible Flight Standards Office, as appropriate. If sending information directly to the manager of the certification office, send it to ATTN: Program Manager, Continuing Operational Safety, FAA, New York ACO Branch, 1600 Stewart Avenue, Suite 410, Westbury, NY 11590; telephone 516–228–7300. Before using any approved AMOC, notify your appropriate principal inspector, or lacking a principal inspector, the manager of the responsible Flight Standards Office.

(2) *Contacting the Manufacturer:* For any requirement in this AD to obtain instructions from a manufacturer, the instructions must be accomplished using a method approved by the Manager, Large Aircraft Section, International Validation Branch, FAA; or the European Union Aviation Safety Agency (EASA); or Lufthansa Technik AG's EASA Design Organization Approval (DOA). If approved by the DOA, the approval must include the DOA-authorized signature.

(k) Related Information

(1) Refer to Mandatory Continuing Airworthiness Information (MCAI) EASA AD 2021–0135, dated June 2, 2021, for related information. This MCAI may be found in the AD docket on the internet at *www.regulations.gov* by searching for and locating Docket No. FAA–2022–0462.

(2) For more information about this AD, contact Chirayu Gupta, Aerospace Engineer, Mechanical Systems and Administrative Services Section, FAA, New York ACO Branch, 1600 Stewart Avenue, Suite 410, Westbury, NY 11590; telephone 516–228–7300; email *9-avs-nyaco-cos@faa.gov.*

(3) Service information identified in this AD that is not incorporated by reference is available at the addresses specified in paragraphs (l)(4) and (5) of this AD.

(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 this AD specifies otherwise.

(i) Lufthansa Technik Design Change Summary ASN–00–DCS–01, Revision 8, dated November 5, 2020.

(ii) Lufthansa Technik Design Change Summary ATB–25–DCS–01, Revision 10, dated January 7, 2021.

(iii) Lufthansa Technik Design Change Summary ATR–23–DCS–01, Revision 2, dated January 7, 2021.

(iv) Lufthansa Technik Design Change Summary BCM–35–DCS–01, dated January 4, 2021.

(v) Lufthansa Technik Design Change Summary BCP–35–DCS–01, Revision 1, dated April 20, 2021.

(vi) Lufthansa Technik Design Change Summary BCQ–35–DCS–01, Revision 1, dated April 20, 2021.

(vii) Lufthansa Technik Design Change Summary BCR–35–DCS–01, Revision 1, dated April 20, 2021.

(viii) Lufthansa Technik Design Change Summary BCS–35–DCS–01, dated January 5, 2021.

(ix) Lufthansa Technik Design Change Summary BCU–35–DCS–01, dated January 5, 2021.

(x) Lufthansa Technik Design Change Summary BCV–35–DCS–01, dated February 4, 2021.

(xi) Lufthansa Technik Design Change Summary BCW–35–DCS–01, dated January 4, 2021.

(xii) Lufthansa Technik Design Change Summary BCX–35–DCS–01, Revision 1, dated February 4, 2021.

(3) For service information identified in this AD, contact Lufthansa Technik AG, Weg beim Jäger 193 22335 Hamburg, Germany; telephone 49–40–5070–67428; internet *www.lufthansa-technik.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, email *fr.inspection@nara.gov,* or go to: *www.archives.gov/federal-register/cfr/ibr-locations.html.*

Issued on June 17, 2022.

Christina Underwood,

Acting Director, Compliance & Airworthiness Division, Aircraft Certification Service.

[FR Doc. 2022–16612 Filed 8–10–22; 8:45 am]

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DEPARTMENT OF TRANSPORTATION

Federal Aviation Administration

14 CFR Part 71

[Docket No. FAA–2022–0025; Airspace Docket No. 21–ACE–2]

RIN 2120–AA66

Amendment of Multiple Air Traffic Service (ATS) Routes and Establishment of Area Navigation (RNAV) Routes in the Vicinity of Liberal, KS

Correction

In rule document 2022–13844, appearing on pages 38916–38919, in the issue of Thursday, June 30, 2022, make the following correction.

§ 71.1 [Corrected]

■ On page 38918, beginning in the third column, 2006 United States Area Navigation Routes is corrected to read as follows:

Q–176 Cimarron, NM (CIM) to OTTTO, VA [Amended]

Cimarron, NM (CIM)	VORTAC	(Lat. 36°29′29.03″ N, long. 104°52′19.20″ W)
KENTO, NM	WP	(Lat. 36°44′19.10″ N, long. 103°05′57.13″ W)
TOTOE, KS	WP	(Lat. 37°02′40.21″ N, long. 100°58′16.87″ W)
WRIGL, KS	WP	(Lat. 37°44′42.79″ N, long. 097°35′02.52″ W)
Butler, MO (BUM)	VORTAC	(Lat. 38°16′19.49″ N, long. 094°29′17.74″ W)
St Louis, MO (STL)	VORTAC	(Lat. 38°51′38.48″ N, long. 090°28′56.52″ W)
GBEES, IN	WP	(Lat. 38°41′54.72″ N, long. 085°10′13.03″ W)
BICKS, KY	WP	(Lat. 38°38′29.92″ N, long. 084°25′20.82″ W)
Henderson, WV (HNN)	DME	(Lat. 38°45′14.85″ N, long. 082°01′34.20″ W)
OTTTO, VA	WP	(Lat. 38°51′15.81″ N, long. 078°12′20.01″ W)