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## **DEPARTMENT OF TRANSPORTATION**

### **Federal Aviation Administration**

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

**[Docket No. FAA-2010-0029; Directorate Identifier 2009-NM-262-AD; Amendment 39-16179; AD 2009-21-10 R1]**

**RIN 2120-AA64**

### **Airworthiness Directives; AVOX Systems and B/E Aerospace Oxygen Cylinder Assemblies, as Installed on Various Transport Airplanes**

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

**ACTION:** Final rule; request for comments.

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**SUMMARY:** The FAA is revising an existing airworthiness directive (AD), which applies to certain AVOX Systems and B/E Aerospace oxygen cylinder assemblies, as installed on various transport airplanes. That AD currently requires removing certain oxygen cylinder assemblies from the airplane. This AD removes certain oxygen cylinder part numbers from the applicability. This AD was prompted by the reported rupture of a high-pressure gaseous oxygen cylinder, which had insufficient strength characteristics due to improper heat treatment. We are issuing this AD to prevent an oxygen cylinder from rupturing, which, depending on the location, could result in structural damage and rapid decompression of the airplane, damage to adjacent essential flight equipment, deprivation of the necessary oxygen supply for the flightcrew, and injury to cabin occupants or maintenance or other support personnel.

**DATES:** This AD is effective February 4, 2010.

We must receive any comments on this AD by March 8, 2010.

**ADDRESSES:** You may send comments by any of the following methods:

- Federal eRulemaking Portal: Go to <http://www.regulations.gov>. Follow the instructions for submitting comments.
- Fax: 202-493-2251.
- Mail: U.S. Department of Transportation, Docket Operations, M-30, West Building Ground Floor, Room W12-140, 1200 New Jersey Avenue, SE., Washington, DC 20590.
- Hand Delivery: U.S. Department of Transportation, Docket Operations, M-30, West Building Ground Floor, Room W12-140, 1200 New Jersey Avenue, SE., Washington, DC 20590, between 9 a.m. and 5 p.m., Monday through Friday, except Federal holidays.

## **Examining the AD Docket**

You may examine the AD docket on the Internet at <http://www.regulations.gov>; or in person at the Docket Management Facility between 9 a.m. and 5 p.m., Monday through Friday, except Federal holidays. The AD docket contains this AD, the regulatory evaluation, any comments received, and other information. The street address for the Docket Office (telephone 800-647-5527) is in the ADDRESSES section. Comments will be available in the AD docket shortly after receipt.

**FOR FURTHER INFORMATION CONTACT:** Nicholas Wilson, Aerospace Engineer, Cabin Safety and Environmental Systems Branch, ANM-150S, Seattle Aircraft Certification Office, FAA, 1601 Lind Avenue, SW., Renton, Washington 98057-3356; telephone (425) 917-6476; fax (425) 917-6590.

## **SUPPLEMENTARY INFORMATION:**

### **Discussion**

On November 25, 2009, we issued AD 2009-21-10, amendment 39-16049 (74 FR 63063, December 2, 2009). That AD applies to certain AVOX Systems and B/E Aerospace oxygen cylinder assemblies, as installed on various transport airplanes. That AD requires removing certain oxygen cylinder assemblies from the airplane. That AD was prompted by the reported rupture of a high-pressure gaseous oxygen cylinder, which had insufficient strength characteristics due to improper heat treatment. The actions specified in that AD are intended to prevent an oxygen cylinder from rupturing, which, depending on the location, could result in structural damage and rapid decompression of the airplane, damage to adjacent essential flight equipment, deprivation of the necessary oxygen supply for the flightcrew, and injury to cabin occupants or maintenance or other support personnel.

### **Actions Since AD Was Issued**

Since we issued AD 2009-21-10, we have been notified that its applicability (in paragraph (c)) erroneously includes oxygen cylinder assemblies having part numbers B43570-3 and B43570-5. Those oxygen cylinder assemblies are manufactured from composite material, instead of steel, and the erroneous part numbers do not correspond to any serial numbers listed in the AD. Composite oxygen tanks are not subject to the identified unsafe condition. These part numbers have been removed from Table 1 of this AD.

We have also been notified that serial numbers K617383 through K617423 inclusive and K757064 through K757066 inclusive have been withdrawn from service. These serial numbers have been removed from Table 3 of this AD.

### **FAA's Determination and Requirements of This AD**

Certain affected airplanes have been approved by the aviation authorities of other countries, and are approved for operation in the United States.

The unsafe condition described previously is likely to exist or develop in other products of these same type designs. For this reason, we are issuing this AD to revise AD 2009-21-10. This new AD retains the requirements of the existing AD, but removes part numbers B43570-3 and B43570-5 from the applicability of this AD, and removes certain serial numbers from Table 3 of this AD.

## **Additional Change to AD**

We have revised this AD to identify the legal name of certain manufacturers as published in the most recent type certificate data sheet for the affected airplane models.

## **FAA's Justification and Determination of the Effective Date**

This AD addresses the consequences of the potential rupture of certain oxygen cylinder assemblies. Because of our requirement to promote safe flight of civil aircraft and thus the critical need to ensure the proper functioning of the oxygen cylinders and the short compliance time involved with this action, this AD must be issued immediately.

Because an unsafe condition exists that requires the immediate adoption of this AD, we find that notice and opportunity for prior public comment hereon are impracticable and that good cause exists for making this amendment effective in less than 30 days.

## **Comments Invited**

This AD is a final rule that involves requirements affecting flight safety, and we did not provide you with notice and an opportunity to provide your comments before it becomes effective. However, we invite you to send any written data, views, or arguments about this AD. Send your comments to an address listed under the ADDRESSES section. Include "Docket No. FAA-2010-0029; Directorate Identifier 2009-NM-262-AD" at the beginning of your comments. We specifically invite comments on the overall regulatory, economic, environmental, and energy aspects of this AD. We will consider all comments received by the closing date and may amend this AD because of those comments.

We will post all comments we receive, without change, to <http://www.regulations.gov>, including any personal information you provide. We will also post a report summarizing each substantive verbal contact we receive about this AD.

## **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.

We are 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**

We have 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 the regulation:

1. Is not a "significant regulatory action" under Executive Order 12866;
2. Is not a "significant rule" under the DOT Regulatory Policies and Procedures (44 FR 11034, February 26, 1979); 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.

We prepared a regulatory evaluation of the estimated costs to comply with this AD and placed it in the AD docket. See the ADDRESSES section for a location to examine the regulatory evaluation.

### **List of Subjects in 14 CFR Part 39**

Air transportation, Aircraft, Aviation safety, Safety.

### **Adoption of the Amendment**

Accordingly, under the authority delegated to me by the Administrator, the FAA amends part 39 of the Federal Aviation Regulations (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 removing amendment 39-16049 (74 FR 63063, December 2, 2009) and adding the following new AD:



**2009-21-10 R1 AVOX Systems and B/E Aerospace:** Amendment 39-16179. Docket No. FAA-2010-0029; Directorate Identifier 2009-NM-262-AD.

**Effective Date**

(a) This airworthiness directive (AD) is effective February 4, 2010.

**Affected ADs**

(b) This AD revises AD 2009-21-10, Amendment 39-16049.

**Applicability**

(c) This AD applies to the oxygen cylinder assemblies, approved under United States Department of Transportation Regulations for Type 3HT cylinders, identified in Table 1 of this AD. These oxygen cylinder assemblies may be installed on various transport airplanes, certificated in any category, identified in but not limited to the airplanes included in Table 2 of this AD.

**Table 1 – Affected Oxygen Cylinder Assembly Part Numbers**

<b>Manufacturer</b>	<b>Part Numbers</b>
AVOX Systems	6350A34 series*
	800112-03
	800112-10
	800112-13
	801293-03
	801307-00
	801307-01
	801307-02
	801307-03
	801307-07
	801307-09
	801307-23
	801307-24
	801365-04
	801365-14
	801375-00

	801977-05
	8915 series*
B/E Aerospace	176018-115
	176112-115
	176177-115
	176181-115
	176529-97

(\*For example, 6350A34-X-X or 8915XX-XX, where “X” denotes a part number digit)

**Table 2 – Affected Airplanes**

<b>Manufacturer</b>	<b>Model</b>
Airbus	A300 B4-620, B4-622, B4-605R, and F4-605R airplanes
	A310-203, -204, -221, -222, -304, and -324 airplanes
	A318-111 and -112 airplanes
	A319-111, -112, -113, -114, -115, -131, -132, and -133 airplanes
	A320-111, -211, -212, -214, -231, -232, and -233 airplanes
	A321-111, -112, -131, -211, and -231 airplanes
	A330-301, -321, and -322 airplanes
	A340-211 and -212 airplanes
	A340-311 and -312 airplanes
The Boeing Company	707-100 long body, -200, -100B long body, and -100B short body series airplanes; and 707-300, -300B, -300C, and -400 series airplanes
	727, 727C, 727-100, 727-100C, 727-200, and 727-200F series airplanes
	737-100, -200, -200C, -300, -400, -500, -600, -700, -700C, -800, -900, and -900ER series airplanes
	747-100, 747-100B, 747-100B SUD, 747-200B, 747-200C, 747-200F, 747-300, 747-400, 747-400D, 747-400F, 747SR, and 747SP series airplanes
	757-200, -200PF, -200CB, and -300 series airplanes
	767-200, -300, -300F, and -400ER series airplanes
	777-200, -200LR, -300, -300ER, and 777F series airplanes
	Gulfstream Aerospace Corporation

McDonnell Douglas Corporation	DC-8-11, DC-8-12, DC-8-21, DC-8-31, DC-8-32, DC-8-33, DC-8-41, DC-8-42, DC-8-43, DC-8-51, DC-8-52, DC-8-53, and DC-8-55 airplanes
	DC-9-11, DC-9-12, DC-9-13, DC-9-14, DC-9-15, DC-9-15F, DC-9-21, DC-9-31, DC-9-32, DC-9-32 (VC-9C), DC-9-32F, DC-9-32F (C-9A, C-9B), DC-9-33F, DC-9-34, DC-9-34F, DC-9-41, DC-9-51, DC-9-81 (MD-81), DC-9-82 (MD-82), DC-9-83 (MD-83), and DC-9-87 (MD-87) airplanes
	DC-10-10, DC-10-10F, DC-10-15, DC-10-30, DC-10-30F (KC-10A and KDC-10), and DC-10-40 airplanes
	MD-10-10F and MD-10-30F airplanes
	MD-11 and MD-11F airplanes
	MD-88 airplanes
	MD-90-30 airplanes
Short Brothers PLC	SD3-30, SD3-SHERPA, and SD3-60 SHERPA airplanes

## Subject

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

## Unsafe Condition

(e) This AD was prompted by the reported rupture of a high-pressure gaseous oxygen cylinder, which had insufficient strength characteristics due to improper heat treatment. The Federal Aviation Administration is issuing this AD to prevent an oxygen cylinder from rupturing, which, depending on the location, could result in structural damage and rapid decompression of the airplane, damage to adjacent essential flight equipment, deprivation of the necessary oxygen supply for the flightcrew, and injury to cabin occupants or maintenance or other support personnel.

## Compliance

(f) You are responsible for having the actions required by this AD performed within the compliance times specified, unless the actions have already been done.

## Restatement of Requirements of AD 2009-21-10, With Revised Serial Numbers

## Inspection

(g) Within 90 days after December 17, 2009 (the effective date of AD 2009-21-10), inspect to determine the serial number of the oxygen cylinder assemblies installed in the airplane. The serial number is stamped into the steel cylinder near the neck. A review of airplane records is acceptable in lieu of this inspection if the serial numbers of the oxygen cylinder assemblies can be conclusively determined from that review. For any oxygen cylinder assembly that has a serial number identified in Table 3 of this AD: Remove it from the airplane before further flight.

**Table 3 – Affected Oxygen Cylinder Assembly Serial Numbers**

<b>Cylinder Manufacturer</b>	<b>Affected Serial Numbers</b>
AVOX Systems	ST82307 through ST82309 inclusive
	ST82335 through ST82378 inclusive
	ST82385 through ST82506 inclusive, except for S/N ST82498, which ruptured
	ST82550 through ST82606 inclusive
	ST82617 through ST82626 inclusive
	ST83896 through ST83905 inclusive
	ST84209 through ST84218 inclusive
	ST84224 through ST84236 inclusive
	ST86138
	ST86143
	ST86145
	ST86150
	ST86169
	ST86172
ST86177	
ST86299 through ST86307 inclusive	
B/E Aerospace	K495120 through K495121 inclusive
	K629573 through K629577 inclusive
	K674451 through K674455 inclusive

### **Parts Installation**

(h) As of December 17, 2009, no person may install, on any airplane, a United States Department of Transportation Type 3HT oxygen cylinder assembly that has a part number identified in Table 1 of this AD and a serial number identified in Table 3 of this AD.

### **Alternative Methods of Compliance (AMOCs)**

(i)(1) The Manager, Seattle Aircraft Certification Office, FAA, has the authority to approve AMOCs for this AD, if requested using the procedures found in 14 CFR 39.19. Send information to Attn: Nicholas Wilson, Aerospace Engineer, Cabin Safety and Environmental Systems Branch, ANM-150S, Seattle Aircraft Certification Office, FAA, 1601 Lind Avenue, SW., Renton, Washington 98057-3356; telephone (425) 917-6476; fax (425) 917-6590. Or, e-mail information to 9-ANM-Seattle-ACO-AMOC-Requests@faa.gov.

(2) To request a different method of compliance or a different compliance time for this AD, follow the procedures in 14 CFR 39.19. Before using any approved AMOC on any airplane to which the AMOC applies, notify your principal maintenance inspector (PMI) or principal avionics inspector



(PAI), as appropriate, or lacking a principal inspector, your local Flight Standards District Office. The AMOC approval letter must specifically refer to this AD.

**Material Incorporated by Reference**

(j) None.

Issued in Renton, Washington, on January 8, 2010.  
Stephen P. Boyd,  
Acting Manager, Transport Airplane Directorate,  
Aircraft Certification Service.