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## **DEPARTMENT OF TRANSPORTATION**

### **Federal Aviation Administration**

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

**[Docket No. FAA-2018-0704; Product Identifier 2018-NM-066-AD; Amendment 39-19601; AD 2019-06-03]**

**RIN 2120-AA64**

#### **Airworthiness Directives; Airbus SAS Airplanes**

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

**ACTION:** Final rule.

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**SUMMARY:** We are adopting a new airworthiness directive (AD) for all Airbus SAS Model A330-200 Freighter, -200, and -300 series airplanes; and Airbus SAS Model A340-200, -300, -500, and -600 series airplanes. This AD was prompted by reports of depressurization of hydraulic reservoirs caused by air leakage from the pressure relief valve (PRV) of the hydraulic reservoir (HR) due to the extrusion of the O-ring seal from certain HR PRVs. This AD requires replacing affected PRVs and re-identifying affected HRs. We are issuing this AD to address the unsafe condition on these products.

**DATES:** This AD is effective May 9, 2019.

The Director of the Federal Register approved the incorporation by reference of certain publications listed in this AD as of May 9, 2019.

**ADDRESSES:** For Airbus service information identified in this final rule, contact Airbus SAS, Airworthiness Office–EAL, Rond Point Emile Dewoitine No: 2, 31700 Blagnac Cedex, France; telephone: +33 5 61 93 36 96; fax: +33 5 61 93 45 80; email: [airworthiness.A330-A340@airbus.com](mailto:airworthiness.A330-A340@airbus.com); internet <http://www.airbus.com>. For Safran service information identified in this final rule, contact Safran Aero Boosters, 121 Route de Liers, 4041 Milmort (Herstal), Belgium; telephone: +32 4 278 8111; fax: +32 4 278 52 07; internet <https://www.safran-aero-boosters.com>, or <https://www.safran-group.com/company/safran-aero-boosters>. You may view this service information at the FAA, Transport Standards 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 <http://www.regulations.gov> by searching for and locating Docket No. FAA-2018-0704.

## Examining the AD Docket

You may examine the AD docket on the internet at <http://www.regulations.gov> by searching for and locating Docket No. FAA-2018-0704; 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, the regulatory evaluation, any comments received, and other information. The address for Docket Operations (phone: 800-647-5527) 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:** Vladimir Ulyanov, Aerospace Engineer, International Section, Transport Standards Branch, FAA, 2200 South 216th St., Des Moines, WA 98198; telephone and fax: 206-231-3229.

### **SUPPLEMENTARY INFORMATION:** **Discussion**

We issued a notice of proposed rulemaking (NPRM) to amend 14 CFR part 39 by adding an AD that would apply to all Airbus SAS Model A330-200 Freighter, -200, and -300 series airplanes; and Airbus SAS Model A340-200, -300, -500, and -600 series airplanes. The NPRM published in the Federal Register on August 3, 2018 (83 FR 38088). The NPRM was prompted by reports of depressurization of HRs caused by air leakage from the PRV of the HR due to the extrusion of the O-ring seal from certain HR PRVs. The NPRM proposed to require identifying the part number of the HR, and replacing and re-identifying affected HR PRVs. We are issuing this AD to address air leakage from the HR PRV, which could lead to the loss of one or more hydraulic systems, with the possible loss of control of the airplane.

The European Aviation Safety Agency (EASA), which is the Technical Agent for the Member States of the European Union, has issued EASA AD 2018-0064, dated March 23, 2018 (referred to after this as the Mandatory Continuing Airworthiness Information, or “the MCAI”), to correct an unsafe condition for all Airbus SAS Model A330-200 Freighter, -200, and -300 series airplanes; and Airbus SAS Model A340-200, -300, -500, and -600 series airplanes. The MCAI states:

Some events of depressurisation of hydraulic reservoirs have been reported, due to air leakage from the HR PRV [hydraulic reservoir pressure relief valve]. The results of the investigations revealed that the air leakage was due to the extrusion of the O-ring seal from the HR PRV. This may have happened during HR maintenance, testing or during flight, if HR over-filling was performed, as a result of which hydraulic fluid could pass through the PRV, causing [the] PRV seal to migrate from its nominal position, leading to loss of HR pressurisation.

This condition, if not detected and corrected, could lead to the loss of one or more hydraulic systems, possibly resulting in loss of control of the aeroplane.

To address this potential unsafe condition, Airbus issued the AOT [Alert Operators Transmission (AOT) A29L005-16, dated June 28, 2016] to provide instructions to inspect the HR fluid level of each hydraulic circuit and to provide instructions for certain actions when servicing with hydraulic fluid is accomplished on an HR. Consequently, EASA published AD 2016-0107 [corresponding to FAA AD 2017-01-08, Amendment 39-18775 (82 FR 1593, January 6, 2017) (“2017-01-08”)] to require accomplishment of these actions for aeroplanes in service.

Since that [EASA] AD was issued, it was determined that the detected air leakage was due to the extrusion of the O-ring seal from a specific batch of HR PRV. Airbus published the applicable inspection SB [service bulletin] to inspect the HR of each hydraulic circuit and to provide instructions to identify the affected parts, and the Modification SB to provide instructions for replacement of each affected part fitted on an affected HR.

For the reasons described above, this [EASA] AD retains the requirements of EASA AD 2016-0107, which is superseded, and requires the [identification and] replacement [and re-identification] of the affected parts.

You may examine the MCAI in the AD docket on the internet at <http://www.regulations.gov> by searching for and locating Docket No. FAA-2018-0704.

## **Comments**

We gave the public the opportunity to participate in developing this final rule. The following presents the comments received on the NPRM and the FAA's response to each comment.

### **Request To Clarify Definitions Section**

Delta Air Lines (DAL) asked that certain language related to parts identified in paragraphs (g)(2) through (g)(4) of the proposed AD be clarified. DAL recommended that all PRVs having part number (P/N) 42F0026 and a serial number (S/N) identified in Safran Vendor Service Bulletin 42-29-005, Revision 01, dated September 26, 2017; and Safran Vendor Service Bulletin 42-29-006, Revision 01, dated September 27, 2017; be replaced with P/N 42F0029, or re-identified as P/N 42F0030, regardless of the HR they are installed on. DAL stated that the proposed AD does not adequately address PRVs having P/N 42F0026 listed in the referenced Safran service information, and installed on unaffected HRs. DAL added that it has had PRV and HR failures and has removed PRVs and HRs from other locations for replacement; therefore, an operator could do the proposed inspections and modification, but negate AD compliance by removing a PRV listed in the referenced Safran service information and installing it on an affected HR, or removing an HR and installing an affected HR on an airplane with a PRV listed in the referenced Safran service information.

We agree with the commenter's request to clarify certain language in paragraphs (g)(2) through (g)(4) of this AD for the reasons provided. Affected PRVs with a part number and serial number identified in Safran Vendor Service Bulletin 42-29-005, Revision 01, dated September 26, 2017; or Safran Vendor Service Bulletin 42-29-006, Revision 01, dated September 27, 2017; could be installed on an unaffected HR. Therefore, we have clarified the language in paragraphs (g)(2) through (g)(4) of this AD as suggested.

### **Request To Clarify Terminating Action**

DAL asked that the terminating action specified in paragraph (k) of the proposed AD be broken out into paragraphs for Groups 1 and 2 airplanes for clarification of the terminating actions for the requirements of AD 2017-01-08. DAL stated that paragraph (k) of the proposed AD does not address PRVs installed on affected HRs having P/N 42F0026 (units re-identified as P/N 42F0030). DAL noted that as a result of this, it could be interpreted that PRVs re-identified as P/N 42F0030 are still affected by the requirements in AD 2017-01-08. DAL added that this does not seem to be the intent of the proposed AD.

We agree to clarify. As stated previously, we have revised paragraph (g)(2) of this AD to clarify the definition of an affected part. As specified in paragraph (g)(4) of this AD, Group 2 airplanes do not have an affected part.

We note that all affected parts must be replaced and re-identified. Therefore, we have clarified the terminating action specified in paragraph (j) of this AD (paragraph (k) of the proposed AD) to specify that replacing all affected parts, as required by paragraph (h) of this AD (paragraph (i) of the proposed AD), terminates the requirements of AD 2017-01-08.

We note that re-identifying all unaffected parts is not required by this AD because re-identification of unaffected parts is only recommended for traceability purposes. Operators can choose to re-identify unaffected parts for their own tracking purposes, but because these parts are unaffected, we do not require re-identification in this AD. This AD only specifies terminating action for AD 2017-01-08 for airplanes on which actions in this AD are done. For any action other than the replacement required by this AD, operators can request an AMOC to AD 2017-01-08 in accordance with the procedures specified in paragraph (l)(1) of AD 2017-01-08. We have not changed this AD in either regard.

### **Request To Clarify Parts Re-Identification Requirement**

DAL asked that the parts re-identification specified in paragraph (j)(2) of the proposed AD be clarified. DAL stated that paragraph (j)(2) of the proposed AD specifies re-identifying the part numbers of affected PRVs and HRs for Group 2 airplanes; however, paragraph (g)(4) of the proposed AD specifies that Group 2 airplanes do not have affected PRVs. DAL added that as a result of this, paragraphs (g)(2) and (j)(4) of the proposed AD are contradictory.

We agree with the commenter's request. Since Group 2 airplanes by definition do not have affected PRVs installed, there is no need to re-identify the part numbers. We have deleted paragraph (j)(2) of the proposed AD from this final rule. We have also redesignated paragraph (j)(1) of the proposed AD as paragraph (i) of this AD.

### **Additional Changes Made to This Final Rule**

We have removed paragraph (h), "Part Number Inspection," of the proposed AD from this final rule. That action is included in the procedure for the part re-identification required by paragraph (i) of this AD (paragraph (j) of the proposed AD). We have redesignated subsequent paragraphs of this AD accordingly.

We have also changed "PRV" to "part" in paragraphs (g), (h), and (k) of this AD (paragraphs (g), (i), and (l) of the proposed AD).

### **Conclusion**

We reviewed the relevant data, considered the comments received, and determined that air safety and the public interest require adopting this final rule with the changes described previously and minor editorial changes. We have determined that these minor changes:

- Are consistent with the intent that was proposed in the NPRM for addressing the unsafe condition; and
- Do not add any additional burden upon the public than was already proposed in the NPRM.

We also determined that these changes will not increase the economic burden on any operator or increase the scope of this final rule.

### **Related Service Information Under 1 CFR Part 51**

Airbus has issued the following service information, which describes procedures for replacing affected PRVs and re-identifying affected HRs. These documents are distinct since they apply to different airplane models.

- Service Bulletin A330-29-3131, dated August 11, 2017.

- Service Bulletin A330-29-3132, dated August 11, 2017.
- Service Bulletin A330-29-3133, dated August 11, 2017.
- Service Bulletin A340-29-4099, dated August 11, 2017.
- Service Bulletin A340-29-4100, dated August 11, 2017.
- Service Bulletin A340-29-4101, dated August 11, 2017.
- Service Bulletin A340-29-5026, dated August 11, 2017.

Safran has issued Vendor Service Bulletin 42-29-005, Revision 01, dated September 26, 2017; and Vendor Service Bulletin 42-29-006, Revision 01, dated September 27, 2017. This service information describes procedures for replacing affected PRVs, including the serial numbers of those PRVs. These documents are distinct since they apply to different airplane models.

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**

We estimate that this AD affects 103 airplanes of U.S. registry. We estimate the following costs to comply with this AD:

	Estimated Costs		
U.S. operators	Labor cost	Parts cost	Cost per product
	Up to 6 work-hours x \$85 per hour = Up to \$510.	\$3,390	Up to \$3,900..... Up to \$401,700.

**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.

This AD is issued in accordance with authority delegated by the Executive Director, Aircraft Certification Service, as authorized by FAA Order 8000.51C. In accordance with that order, issuance of ADs is normally a function of the Compliance and Airworthiness Division, but during this transition period, the Executive Director has delegated the authority to issue ADs applicable to transport category airplanes and associated appliances to the Director of the System Oversight Division.

**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) Is not a “significant rule” under the DOT Regulatory Policies and Procedures (44 FR 11034, February 26, 1979),
- (3) Will not affect intrastate aviation in Alaska, and
- (4) 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.

### **Adoption of 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 (AD):



**CORRECTED:** The first version of this AD that we posted to our site was missing Table 1.

**2019-06-03 Airbus SAS:** Amendment 39-19601; Docket No. FAA-2018-0704; Product Identifier 2018-NM-066-AD.

**(a) Effective Date**

This AD is effective May 9, 2019.

**(b) Affected ADs**

This AD affects AD 2017-01-08, Amendment 39-18775 (82 FR 1593, January 6, 2017) (“AD 2017-01-08”).

**(c) Applicability**

This AD applies to the airplanes identified in paragraphs (c)(1), (c)(2), (c)(3), (c)(4), (c)(5), and (c)(6) of this AD, certificated in any category, all manufacturer serial numbers.

- (1) Airbus SAS Model A330-223F and -243F airplanes.
- (2) Airbus SAS Model A330-201, -202, -203, -223, and -243 airplanes.
- (3) Airbus SAS Model A330-301, -302, -303, -321, -322, -323, -341, -342, and -343 airplanes.
- (4) Airbus SAS Model A340-211, -212, and -213 airplanes.
- (5) Airbus SAS Model A340-311, -312, and -313 airplanes.
- (6) Airbus SAS Model A340-541 and -642 airplanes.

**(d) Subject**

Air Transport Association (ATA) of America Code 29, Hydraulic power.

**(e) Reason**

This AD was prompted by reports of depressurization of hydraulic reservoirs (HRs) caused by air leakage from the pressure relief valve (PRV) of the HR due to the extrusion of the O-ring seal from certain HR PRVs. We are issuing this AD to address air leakage from the HR PRV, which could lead to the loss of one or more hydraulic systems, with the possible loss of control of the airplane.

**(f) Compliance**

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

**(g) Definitions for This AD**

- (1) Affected HRs are identified in table 1 to paragraphs (g), (h), and (i) of this AD.

(2) Affected parts are PRVs that have part number (P/N) 42F0026 and a serial number (S/N) identified in Safran Vendor Service Bulletin 42-29-005, Revision 01, dated September 26, 2017; and Safran Vendor Service Bulletin 42-29-006, Revision 01, dated September 27, 2017; as applicable.

(3) Group 1 airplanes have an affected part installed.

(4) Group 2 airplanes do not have an affected part installed. A Model A330 airplane on which Airbus SAS modifications 206863, 206864, and 206965 have been embodied in production is a Group 2 airplane, provided the airplane remains in that configuration.

(5) In table 1 to paragraphs (g), (h), and (i) of this AD: Green hydraulic circuit is (G), blue hydraulic circuit is (B), and yellow hydraulic circuit is (Y).

**Table 1 to paragraphs (g), (h), and (i) of this AD – Affected HR part numbers, re-identified HR part numbers, and compliance times**

<b>Airplanes</b>	<b>Affected HR part number</b>	<b>Compliance time</b> (after the effective date of this AD)	<b>Re-identified HR part number</b>
Model A330 (all models)	42F1005 (G)	Within 4 months	42F1008
	42F1203 (B)	Within 28 months	42F1205
	42F1304 (Y)	Within 28 months	42F1307
Model A340-200 and -300	42F1005 (G)	Within 4 months	42F1008
	42F1203 (B)	Within 28 months	42F1205
	42F1304 (Y)	Within 28 months	42F1307
Model A340-500 and -600	42F1412 (G)	Within 4 months	42F1416
	42F1512 (B)	Within 4 months	42F1516
	42F1607 (Y)	Within 4 months	42F1609

**(h) Replacement**

For Group 1 airplanes: At the applicable time specified in table 1 to paragraphs (g), (h), and (i) of this AD, replace each affected part in accordance with the applicable service information specified in paragraphs (h)(1) through (h)(7) of this AD.

- (1) Airbus Service Bulletin A330-29-3131, dated August 11, 2017.
- (2) Airbus Service Bulletin A330-29-3132, dated August 11, 2017.
- (3) Airbus Service Bulletin A330-29-3133, dated August 11, 2017.
- (4) Airbus Service Bulletin A340-29-4099, dated August 11, 2017.
- (5) Airbus Service Bulletin A340-29-4100, dated August 11, 2017.
- (6) Airbus Service Bulletin A340-29-4101, dated August 11, 2017.
- (7) Airbus Service Bulletin A340-29-5026, dated August 11, 2017.

**(i) Part Re-Identification**

For Group 1 airplanes: Concurrently with the replacement of the affected part required by paragraph (h) of this AD, re-identify the part numbers of affected HRs as specified in table 1 to paragraphs (g), (h), and (i) of this AD, in accordance with the applicable service information specified in paragraphs (h)(1) through (h)(7) of this AD.

**(j) Terminating Action for AD 2017-01-08**

Replacement of all affected parts on an airplane, as required by paragraph (h) of this AD, terminates all requirements of AD 2017-01-08 for that airplane.

### **(k) Parts Installation Prohibition**

(1) For Group 1 airplanes: After replacement of all affected parts as required by paragraph (h) of this AD, do not install any affected part.

(2) For Group 2 airplanes: As of the effective date of this AD, do not install any affected part.

### **(l) Other FAA AD Provisions**

The following provisions also apply to this AD:

(1) Alternative Methods of Compliance (AMOCs): The Manager, International Section, Transport Standards 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 International Branch, send it to the attention of the person identified in paragraph (m)(2) of this AD. Information may be emailed to: 9-ANM-116-AMOC-REQUESTS@faa.gov. 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.

(2) Contacting the Manufacturer: For any requirement in this AD to obtain corrective actions from a manufacturer, the action must be accomplished using a method approved by the Manager, International Section, Transport Standards Branch, FAA; or the European Aviation Safety Agency (EASA); or Airbus SAS's EASA Design Organization Approval (DOA). If approved by the DOA, the approval must include the DOA-authorized signature.

(3) Required for Compliance (RC): If any service information contains procedures or tests that are identified as RC, those procedures and tests must be done to comply with this AD; any procedures or tests that are not identified as RC are recommended. Those procedures and tests that are not identified 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 procedures and tests identified as RC can be done and the airplane can be put back in an airworthy condition. Any substitutions or changes to procedures or tests identified as RC require approval of an AMOC.

### **(m) Related Information**

(1) Refer to Mandatory Continuing Airworthiness Information (MCAI) EASA AD 2018-0064, dated March 23, 2018, for related information. This MCAI may be found in the AD docket on the internet at <http://www.regulations.gov> by searching for and locating Docket No. FAA-2018-0704.

(2) For more information about this AD, contact Vladimir Ulyanov, Aerospace Engineer, International Section, Transport Standards Branch, FAA, 2200 South 216th St., Des Moines, WA 98198; telephone and fax: 206-231-3229.

### **(n) 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) Airbus Service Bulletin A330-29-3131, dated August 11, 2017.

(ii) Airbus Service Bulletin A330-29-3132, dated August 11, 2017.

(iii) Airbus Service Bulletin A330-29-3133, dated August 11, 2017.

(iv) Airbus Service Bulletin A340-29-4099, dated August 11, 2017.

(v) Airbus Service Bulletin A340-29-4100, dated August 11, 2017.

(vi) Airbus Service Bulletin A340-29-4101, dated August 11, 2017.

(vii) Airbus Service Bulletin A340-29-5026, dated August 11, 2017.

(viii) Safran Vendor Service Bulletin 42-29-005, Revision 01, dated September 26, 2017.

(ix) Safran Vendor Service Bulletin 42-29-006, Revision 01, dated September 27, 2017.

(3) For Airbus service information identified in this AD, contact Airbus SAS, Airworthiness Office–EAL, Rond Point Emile Dewoitine No: 2, 31700 Blagnac Cedex, France; telephone: +33 5 61 93 36 96; fax: +33 5 61 93 45 80; email: airworthiness.A330-A340@airbus.com; internet <http://www.airbus.com>.

(4) For Safran service information identified in this final rule, contact Safran Aero Boosters, 121 Route de Liers, 4041 Milmort (Herstal), Belgium; telephone: +32 4 278 8111; fax: +32 4 278 52 07; internet <https://www.safran-aero-boosters.com>, or <https://www.safran-group.com/company/safran-aero-boosters>.

(5) You may view this service information at the FAA, Transport Standards Branch, 2200 South 216th St., Des Moines, WA. For information on the availability of this material at the FAA, call 206-231-3195.

(6) 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, call 202-741-6030, or go to: <http://www.archives.gov/federal-register/cfr/ibr-locations.html>.

Issued in Des Moines, Washington, on March 22, 2019.

Michael Kaszycki,  
Acting Director, System Oversight Division,  
Aircraft Certification Service.