



[4910-13-P]

**DEPARTMENT OF TRANSPORTATION**

**Federal Aviation Administration**

**14 CFR Part 39**

**[Docket No. FAA-2018-0505; Product Identifier 2017-NM-178-AD]**

**RIN 2120-AA64**

**Airworthiness Directives; Airbus Airplanes**

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

**ACTION:** Notice of proposed rulemaking (NPRM).

**SUMMARY:** We propose to adopt a new airworthiness directive (AD) for all Airbus Model A350-941 airplanes. This proposed AD was prompted by a report of an overheat failure mode of the hydraulic engine-driven pump, which could cause a fast temperature rise of the hydraulic fluid. This proposed AD would require modifying the hydraulic monitoring and control application (HMCA) software. We are proposing this AD to address the unsafe condition on these products.

**DATES:** We must receive comments on this proposed AD by [INSERT DATE 45 DAYS AFTER DATE OF PUBLICATION IN THE FEDERAL REGISTER].

**ADDRESSES:** You may send comments, using the procedures found in 14 CFR 11.43 and 11.45, 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: Deliver to Mail address above between 9 a.m. and 5 p.m., Monday through Friday, except Federal holidays.

For service information identified in this NPRM, contact Airbus SAS, Airworthiness Office – EAL, 1 Rond Point Maurice Bellonte, 31707 Blagnac Cedex, France; telephone +33 5 61 93 36 96; fax +33 5 61 93 45 80; email continued-airworthiness.a350@airbus.com; Internet <http://www.airbus.com>. 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.

### **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-2018-0505; 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 NPRM, the regulatory evaluation, any comments received, and other information. The street address for the Docket Operations 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:** Kathleen Arrigotti, Aerospace Engineer, International Section, Transport Standards Branch, FAA, 2200 South 216th St.,

Des Moines, WA 98198; telephone and fax 206-231-3218.

## **SUPPLEMENTARY INFORMATION:**

### **Comments Invited**

We invite you to send any written relevant data, views, or arguments about this proposal. Send your comments to an address listed under the ADDRESSES section. Include “Docket No. FAA-2018-0505; Product Identifier 2017-NM-178-AD” at the beginning of your comments. We specifically invite comments on the overall regulatory, economic, environmental, and energy aspects of this NPRM. We will consider all comments received by the closing date and may amend this NPRM based on 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 NPRM.

### **Discussion**

The European Aviation Safety Agency (EASA), which is the Technical Agent for the Member States of the European Union, has issued EASA AD 2017-0200, dated October 10, 2017 (referred to after this as the Mandatory Continuing Airworthiness Information, or “the MCAI”), to correct an unsafe condition for all Airbus Model A350-941 airplanes. The MCAI states:

In the Airbus A350 design, the hydraulic fluid cooling system is located in the fuel tanks. Recently, an overheat failure mode of the hydraulic engine-driven pump (EDP) was found. Such EDP failure may cause a fast temperature

rise of the hydraulic fluid.

This condition, if not detected and corrected, combined with an inoperative fuel tank inerting system, could lead to an uncontrolled overheat of the hydraulic fluid, possibly resulting in ignition of the fuel-air mixture in the affected fuel tank.

To address this potential unsafe condition, Airbus issued a Major Event Revision (MER) of the A350 Master Minimum Equipment List (MMEL) that incorporates restrictions to avoid an uncontrolled overheat of the hydraulic system. Consequently, EASA issued Emergency AD 2017-0154-E to require implementation of these dispatch restrictions.

Since EASA Emergency AD 2017-0154-E was issued, following further investigation, Airbus issued another MER of the A350 MMEL that expands the number of restricted MMEL items. At the same time, Airbus revised Flight Operation Transmission (FOT) 999.0068/17, to inform all operators about the latest MMEL restrictions. Consequently, EASA issued AD 2017-0180, retaining the requirements of EASA Emergency AD 2017-0154-E, which was superseded, and requiring implementation of the new Airbus A350 MMEL MER and, consequently, restrictions for aeroplane dispatch.

Since EASA AD 2017-0180 was issued, Airbus developed a software (SW) update of the Hydraulic Monitoring and Control Application (HMCA) SW S4.2, introduction of which avoids uncontrolled overheat of the hydraulic system. HMCA SW S4.2 is embodied in production through Airbus modification (mod) 112090, and introduced in service through Airbus Service Bulletin (SB) A350-29-P012.

For the reasons described above, this [EASA] AD retains the requirements of EASA AD 2017-0180, which is superseded, and requires modification of the aeroplane by installing HMCA SW S4.2.

This [EASA] AD is still considered to be an interim action and further AD action may follow.

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-2018-0505.

**Related Service Information under 1 CFR part 51**

Airbus has issued Service Bulletin A350-29-P012, dated October 6, 2017. The service information describes procedures for modifying the HMCA software by installing HMCA software S4.2 upgrades. 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.

**FAA’s Determination and Requirements of this Proposed AD**

This product has been approved by the aviation authority of another country, and is approved for operation in the United States. Pursuant to our bilateral agreement with the State of Design Authority, we have been notified of the unsafe condition described in the MCAI and service information referenced above. We are proposing this AD because we evaluated all pertinent information and determined an unsafe condition exists and is likely to exist or develop on other products of the same type design.

**Costs of Compliance**

We estimate that this proposed AD affects 7 airplanes of U.S. registry. We estimate the following costs to comply with this proposed AD:

<b>Estimated costs for required actions</b>			
<b>Labor cost</b>	<b>Parts cost</b>	<b>Cost per product</b>	<b>Cost on U.S. operators</b>
2 work-hours X \$85 per hour = \$170	\$450	\$620	\$4,340

## **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 proposed 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 to the Director of the System Oversight Division.

## **Regulatory Findings**

We determined that this proposed AD would not have federalism implications under Executive Order 13132. This proposed AD would 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 this proposed 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);
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.

**The Proposed Amendment**

Accordingly, under the authority delegated to me by the Administrator, the FAA proposes to amend 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):

**Airbus:** Docket No. FAA-2018-0505; Product Identifier 2017-NM-178-AD.

**(a) Comments Due Date**

We must receive comments by [INSERT DATE 45 DAYS AFTER DATE OF PUBLICATION IN THE FEDERAL REGISTER].

**(b) Affected ADs**

None.

**(c) Applicability**

This AD applies to all Airbus Model A350-941 airplanes, certificated in any category.

**(d) Subject**

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

**(e) Reason**

This AD was prompted by a report of an overheat failure mode of the hydraulic engine-driven pump, which could cause a fast temperature rise of the hydraulic fluid. We are issuing this AD to address high hydraulic fluid temperature combined with an inoperative fuel tank inerting system, which could result in uncontrolled overheating of the hydraulic system and consequent ignition sources inside the fuel tank, which, combined with flammable fuel vapors, could result in a fuel tank explosion and consequent loss of the airplane.

**(f) Compliance**

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

**(g) Definition of Airplane Groups**

(1) Group 1 are airplanes on which the hydraulic monitoring and control application (HMCA) software (SW) S4.2 is not installed.

(2) Group 2 are post-mod 112090 airplanes on which the HMCA SW S4.2 is installed.

**(h) Software Modification**

For Group 1 airplanes: Within 30 days after the effective date of this AD, modify the HMCA software by installing HMCA SW S4.2, in accordance with the Accomplishment Instructions of Airbus Service Bulletin A350-29-P012, dated October 6, 2017. Where paragraphs 3.C.(1)(a) and 3.C.(2)(a) of Airbus Service Bulletin A350-29-P012, dated October 6, 2017, identify “SOFTWARE-\*\*” and indicate that the “Software becomes” new software: For purposes of this AD, the new software titles/descriptions might not match exactly with the airplane and the service information; the old and new software titles/descriptions are for reference only as an aid to operators.

**(i) Parts Prohibition**

At the applicable time specified in paragraph (i)(1) or (i)(2) of this AD: No person may install an HMCA software pre-mod HMCA SW S4.2, on any airplane.

(1) For Group 1 airplanes: After accomplishment of the modification required by paragraph (h) of this AD.

(2) For Group 2 airplanes: As of the effective date of this AD.

**(j) Other Acceptable Installation Method**

Installation of an HMCA SW standard approved after the effective date of this AD is acceptable for compliance with the corresponding actions required by paragraph (h) of this AD, provided the conditions required by paragraphs (j)(1) and (j)(2) of this AD are met.

(1) The HMCA SW standard must be approved by the Manager, International Section, Transport Standards Branch, FAA; the European Aviation Safety Agency (EASA); or Airbus's EASA Design Organization Approval (DOA). If approved by the DOA, the approval must include the DOA-authorized signature.

(2) The installation must be accomplished in accordance with the modification instructions approved by the Manager, International Section, Transport Standards Branch, FAA; the EASA; or Airbus's EASA DOA. If approved by the DOA, the approval must include the DOA-authorized signature.

**(k) 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 Section, send it to the attention of the person identified in paragraph (l)(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 EASA; or Airbus's EASA DOA. If approved by the DOA, the approval must include the DOA-authorized signature.

**(1) Related Information**

(1) Refer to Mandatory Continuing Airworthiness Information (MCAI) EASA AD 2017-0200, dated October 10, 2017, for related information. You may examine the MCAI on the Internet at <http://www.regulations.gov> by searching for and locating Docket No. FAA-2018-0505.

(2) For more information about this AD, contact Kathleen Arrigotti, Aerospace Engineer, International Section, Transport Standards Branch, FAA, 2200 South 216th St., Des Moines, WA 98198; telephone and fax 206-231-3218.

(3) For service information identified in this AD, contact Airbus SAS, Airworthiness Office – EAL, 1 Rond Point Maurice Bellonte, 31707 Blagnac Cedex, France; telephone +33 5 61 93 36 96; fax +33 5 61 93 45 80; email [continued-airworthiness.a350@airbus.com](mailto:continued-airworthiness.a350@airbus.com); Internet <http://www.airbus.com>. 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.

Issued in Des Moines, Washington, on May 29, 2018.

Jeffrey E. Duven,  
Director,  
System Oversight Division,  
Aircraft Certification Service.  
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