



[4910-13-P]

**DEPARTMENT OF TRANSPORTATION**

**Federal Aviation Administration**

**14 CFR Part 39**

**[Docket No. FAA-2012-0672; Directorate Identifier 2011-NM-261-AD; Amendment 39-17276; AD 2012-24-06]**

**RIN 2120-AA64**

**Airworthiness Directives; Saab AB, Saab Aerosystems Airplanes**

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

**ACTION:** Final rule.

**SUMMARY:** We are adopting a new airworthiness directive (AD) for certain Saab AB, Saab Aerosystems Model 340A (SAAB/SF340A) and SAAB 340B airplanes. This AD was prompted by reports of stall events during icing conditions where the natural stall warning (buffet) was not identified. This AD requires replacing the stall warning computer (SWC) with a new SWC, which provides an artificial stall warning in icing conditions, and modifying the airplane for the replacement of the SWC. We are issuing this AD to prevent natural stall events when operating in icing conditions, which, if not corrected, could result in loss of control of the airplane.

**DATES:** This AD becomes effective [INSERT DATE 35 DAYS AFTER DATE OF PUBLICATION IN THE FEDERAL REGISTER].

The Director of the Federal Register approved the incorporation by reference of certain publications listed in this AD as of [INSERT DATE 35 DAYS AFTER DATE OF PUBLICATION IN THE FEDERAL REGISTER].

**ADDRESSES:** You may examine the AD docket on the Internet at

<http://www.regulations.gov> or in person at the U.S. Department of Transportation, Docket Operations, M-30, West Building Ground Floor, Room W12-140, 1200 New Jersey Avenue SE., Washington, DC.

**FOR FURTHER INFORMATION CONTACT:** Shahram Daneshmandi, Aerospace Engineer, International Branch, ANM-116, Transport Airplane Directorate, FAA, 1601 Lind Avenue SW., Renton, Washington 98057-3356; telephone (425) 227-1112; fax (425) 227-1149.

**SUPPLEMENTARY INFORMATION:**

**Discussion**

We issued a notice of proposed rulemaking (NPRM) to amend 14 CFR part 39 to include an AD that would apply to the specified products. That NPRM was published in the Federal Register on June 27, 2012 (77 FR 38224). That NPRM proposed to correct an unsafe condition for the specified products. The Mandatory Continuing Airworthiness Information (MCAI) states:

A few natural stall events, specifically when operating in icing conditions, have been experienced on SAAB 340 series aeroplanes, without receiving a prior stall warning. This condition, if not corrected, could result in loss of control of the aeroplane.

To address this potential unsafe condition, a modified stall warning system, incorporating improved stall warning logic, has been developed.

SAAB have issued Service Bulletin (SB) 340-27-098 and SB 340-27-099, which include instructions to replace the present Stall Warning Computer (SWC) with a new SWC, and instructions to activate the new SWC. The new system includes stall warning curves optimized for operation in icing conditions, which are activated by selection of Engine Anti-Ice.

For the reasons described above, this [European Aviation Safety Agency (EASA)] AD requires the replacement of the SWC, by installing new SWC Part Number (P/N) 0020AK6 on aeroplanes with basic wing tip, and installing a new SWC P/N 0020AK7 on aeroplanes with extended wing tip, as applicable to aeroplane configuration.

You may obtain further information by examining the MCAI in the AD docket.

### **Comments**

We gave the public the opportunity to participate in developing this AD. We considered the comments received. The National Transportation Safety Board stated that it supports the NPRM (77 FR 38224, June 27, 2012).

### **Request to Revise Company Name and Email Address**

Saab AB (the commenter) requested that we revise the NPRM (77 FR 38224, June 27, 2012) throughout to change the name of the Saab company referenced in the NPRM from “Saab AB, Saab Aerosystems” to the new company name, “Saab AB, Aeronautics.” The commenter also requested to change the company email address referenced in the NPRM from “saab2000techsupport@saabgroup.com” to “saab340techsupport@saabgroup.com.”

We agree with the intent of the commenter's request. The FAA is in the process of changing the type certificate data sheet (TCDS) to reflect the name change. We will use the name identified in the current TCDS so as not to delay issuance of the final rule. Once the TCDS has been changed, we will use the new name in subsequent ADs. We changed the email address appropriately in paragraph (m) of this AD.

**Request to Revise Text in Summary Section and Paragraph (e) of the NPRM (77 FR 38224, June 27, 2012)**

Saab AB requested that we revise the second and third sentences in the Summary section and a related sentence in paragraph (e) of the NPRM (77 FR 38224, June 27, 2012). In the Summary section, the commenter requested that we revise the following text to clarify that the airplane had been certified with natural buffet—as the stall warning—in icing conditions, and explained that replacement of the SWC would increase the safety level by introducing an artificial stall warning for icing conditions.

This proposed AD was prompted by reports of stall events during icing conditions which were not accompanied with a prior stall warning. This proposed AD would require replacing the stall warning computer (SWC) with a new SWC, and modifying the airplane for the replacement of the SWC.

The commenter suggested the following text.

This proposed AD was prompted by reports of stall events during icing conditions where the natural stall warning (buffet) was not identified. This proposed AD would require replacing the stall warning computer (SWC) with a new SWC, which provides an artificial stall warning in icing conditions, and modifying the airplane for the replacement of the SWC.

The commenter also requested that the first sentence in paragraph (e) of the NPRM (77 FR 38224, June 27, 2012) be changed to match the new wording.

We agree with the request for the reasons provided by the commenter. Therefore, we changed the wording in the Summary section and paragraph (e) of this AD as proposed by the commenter.

**Request to Revise Text in Paragraph (i) of the NPRM (77 FR 38224, June 27, 2012)**

Saab AB requested that we revise paragraph (i) of the NPRM (77 FR 38224, June 27, 2012), which reads “As of effective date of this AD, do not install any SWC having P/N 0020AK, 0020AK1, 0020AK2, 0020AK4, or 0020AK3 MOD 1 on any airplane,” to “After modification of an airplane as required by paragraph (g) and (h) of this AD, do not install any SWC having P/N 0020AK, 0020AK1, 0020AK2, 0020AK4, or 0020AK3 MOD 1 on any airplane.” The commenter stated that this change would allow an operator, during the compliance time, to install an SWC having the same part number of the failed SWC.

We agree because there is a potential problem with availability of the new part. Therefore, we have changed the wording in paragraph (i) of this AD to match the intent of the commenter’s request.

**Conclusion**

We reviewed the available data, including the comments received, and determined that air safety and the public interest require adopting the AD with the changes described previously – except for minor editorial changes. We have determined that these changes:

- Are consistent with the intent that was proposed in the NPRM (77 FR 38224, June 27, 2012) for correcting the unsafe condition; and
- Do not add any additional burden upon the public than was already proposed in the NPRM (77 FR 38224, June 27, 2012).

### **Costs of Compliance**

We estimate that this AD will affect 162 products of U.S. registry. We also estimate that it will take about 78 work-hours per product to comply with the basic requirements of this AD. The average labor rate is \$85 per work-hour. Required parts will cost about \$33,000 per product. Where the service information lists required parts costs that are covered under warranty, we have assumed that there will be no charge for these parts. As we do not control warranty coverage for affected parties, some parties may incur costs higher than estimated here. Based on these figures, we estimate the cost of this AD to the U.S. operators to be \$6,420,060, or \$39,630 per product.

### **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 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 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.

We prepared a regulatory evaluation of the estimated costs to comply with this AD and placed it in the AD docket.

### **Examining the AD Docket**

You may examine the AD docket on the Internet at <http://www.regulations.gov>; or in person at the Docket Operations office between 9 a.m. and 5 p.m., Monday through Friday, except Federal holidays. The AD docket contains the NPRM (77 FR 38224, June 27, 2012), 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.

**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 AD:

**2012-24-06 Saab AB, Saab Aerosystems:** Amendment 39-17276. Docket No.

FAA-2012-0672; Directorate Identifier 2011-NM-261-AD.

**(a) Effective Date**

This airworthiness directive (AD) becomes effective [INSERT DATE 35 DAYS AFTER DATE OF PUBLICATION IN THE FEDERAL REGISTER].

**(b) Affected ADs**

None.

**(c) Applicability**

This AD applies to Saab AB, Saab Aerosystems Model 340A (SAAB/SF340A) and SAAB 340B airplanes, certificated in any category, as identified in paragraphs (c)(1)

and (c)(2) of this AD, except airplanes that have SAAB Modification 2650 and/or 2859 installed. This AD does not apply to airplanes with serial numbers 170, 342, 362, 363, 367, 372, 379, 385, 395, 405, 409, 431, and 455.

(1) Model 340A (SAAB/SF340A) airplanes, serial numbers 004 through 159 inclusive.

(2) Model SAAB 340B airplanes, serial numbers 160 through 459 inclusive.

**(d) Subject**

Air Transport Association (ATA) of America Code 27: Flight Controls.

**(e) Reason**

This AD was prompted by reports of stall events during icing conditions where the natural stall warning (buffet) was not identified. We are issuing this AD to prevent natural stall events when operating in icing conditions, which, if not corrected, could result in loss of control of the airplane.

**(f) Compliance**

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

**(g) Replacement**

(1) For airplanes with basic wing tips: Within 24 months after the effective date of this AD, replace all stall warning computers (SWCs) having part number (P/N) 0020AK, 0020AK1, 0020AK2, or 0020AK4, with a new SWC P/N 0020AK6, in accordance with the Accomplishment Instructions of Saab Service Bulletin 340-27-098, Revision 01, dated April 13, 2012.

(2) For airplanes with extended wing tips: Within 24 months after the effective date of this AD, replace the SWC P/N 0020AK3 MOD 1 with a new SWC P/N 0020AK7, in accordance with the Accomplishment Instructions of Saab Service Bulletin 340-27-099, Revision 01, dated April 13, 2012.

**(h) Concurrent Modification**

Before or concurrently with the accomplishment of the requirements of paragraph (g) of this AD: Modify the airplane in accordance with the Accomplishment Instructions of Saab Service Bulletin 340-27-097, Revision 03, dated April 19, 2012.

**(i) Parts Installation Prohibition**

After accomplishing the replacement required by paragraph (g) of this AD and the modification required by paragraph (h) of this AD, do not install any SWC having P/N 0020AK, 0020AK1, 0020AK2, 0020AK4, or 0020AK3 MOD 1 on any airplane.

**(j) Credit for Previous Actions**

This paragraph provides credit for actions required by paragraph (h) of this AD, if those actions were performed before the effective date of this AD using the service bulletin specified in paragraph (j)(1), (j)(2), or (j)(3) of this AD, which are not incorporated by reference in this AD.

(1) Saab Service Bulletin 340-27-097, dated September 1, 2011.

(2) Saab Service Bulletin 340-27-097, Revision 01, dated September 26, 2011.

(3) Saab Service Bulletin 340-27-097, Revision 02, dated October 7, 2011.

**(k) Other FAA AD Provisions**

The following provisions also apply to this AD:

**(1) Alternative Methods of Compliance (AMOCs):** The Manager, ANM-116, International Branch, Transport Airplane Directorate, 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 ATTN: Shahram Daneshmandi, Aerospace Engineer, International Branch, ANM-116, Transport Airplane Directorate, FAA, 1601 Lind Avenue SW., Renton, Washington 98057-3356; telephone (425) 227-1112; fax (425) 227-1149. Information may be emailed to: [9-ANM-116-AMOC-REQUESTS@faa.gov](mailto: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. The AMOC approval letter must specifically reference this AD.

**(2) Airworthy Product:** For any requirement in this AD to obtain corrective actions from a manufacturer or other source, use these actions if they are FAA-approved. Corrective actions are considered FAA-approved if they are approved by the State of Design Authority (or their delegated agent). You are required to assure the product is airworthy before it is returned to service.

**(l) Related Information**

Refer to MCAI European Aviation Safety Agency Airworthiness Directive 2011-0219, dated November 11, 2011, and the service information specified in paragraphs (l)(1) through (l)(3) of this AD, for related information.

(1) Saab Service Bulletin 340-27-097, Revision 03, dated April 19, 2012.

(2) Saab Service Bulletin 340-27-098, Revision 01, dated April 13, 2012.

(3) Saab Service Bulletin 340-27-099, Revision 01, dated April 13, 2012.

**(m) 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 the AD specifies otherwise.

(i) Saab Service Bulletin 340-27-097, Revision 03, dated April 19, 2012.

(ii) Saab Service Bulletin 340-27-098, Revision 01, dated April 13, 2012.

(iii) Saab Service Bulletin 340-27-099, Revision 01, dated April 13, 2012.

(3) For service information identified in this AD, contact Saab AB, Saab Aeronautics, SE-581 88, Linköping, Sweden; telephone +46 13 18 5591; fax +46 13 18 4874; email [saab340techsupport@saabgroup.com](mailto:saab340techsupport@saabgroup.com); Internet <http://www.saabgroup.com>.

(4) You may review copies of the service information at the FAA, Transport Airplane Directorate, 1601 Lind Avenue SW., Renton, WA. For information on the availability of this material at the FAA, call 425-227-1221.

(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, call 202-741-6030, or go to:

<http://www.archives.gov/federal-register/cfr/ibr-locations.html>.

Issued in Renton, Washington, on November 21, 2012.

Ali Bahrami,  
Manager,  
Transport Airplane Directorate,  
Aircraft Certification Service.

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