



[4910-13-P]

## DEPARTMENT OF TRANSPORTATION

### Federal Aviation Administration

#### 14 CFR Part 39

[Docket No. FAA-2017-0494; Product Identifier 2016-NM-126-AD; Amendment 39-19047; AD 2017-19-17]

RIN 2120-AA64

**Airworthiness Directives;** Dassault Aviation Airplanes

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

**ACTION:** Final rule.

**SUMMARY:** We are superseding Airworthiness Directive (AD) 2016-17-02, which applied to certain Dassault Aviation Model FALCON 900EX and FALCON 2000EX airplanes. AD 2016-17-02 required revising the airplane flight manual (AFM) to include procedures to follow when an airplane is operating in icing conditions. AD 2016-17-02 also provided optional actions after which the AFM revision may be removed from the AFM. Since we issued AD 2016-17-02, we have determined additional actions are necessary to address the identified unsafe condition. This new AD retains the requirement of AD 2016-17-02, and also requires a detailed inspection of the wing anti-ice system ducting (anti-ice pipes) for the presence of a diaphragm, and replacement of ducting or re-identification of the ducting part marking. We are issuing this AD to address the unsafe condition on these products.

**DATES:** This AD is 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:** For service information identified in this final rule, contact Dassault Falcon Jet Corporation, Teterboro Airport, P.O. Box 2000, South Hackensack, NJ 07606; telephone 201-440-6700; Internet <http://www.dassaultfalcon.com>. You may view this referenced service information at the FAA, Transport Standards Branch, 1601 Lind Avenue SW., Renton, WA. For information on the availability of this material at the FAA, call 425-227-1221. It is also available on the Internet at <http://www.regulations.gov> by searching for and locating Docket No. FAA-2017-0494.

#### **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-2017-0494; 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 address for the Docket Office (telephone 800-647-5527) is Docket Management Facility, 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:** Tom Rodriguez, Aerospace Engineer, International Section, Transport Standards Branch, FAA, 1601 Lind Avenue SW., Renton, WA 98057-3356; telephone 425-227-1137; fax 425-227-1149.

**SUPPLEMENTARY INFORMATION:**

**Discussion**

We issued a notice of proposed rulemaking (NPRM) to amend 14 CFR part 39 to supersede AD 2016-17-02, Amendment 39-18615 (81 FR 55366, August 19, 2016) (“AD 2016-17-02”). AD 2016-17-02 applied to certain Dassault Aviation Model FALCON 900EX and FALCON 2000EX airplanes. The NPRM published in the Federal Register on May 30, 2017 (82 FR 24606).

The European Aviation Safety Agency (EASA), which is the Technical Agent for the Member States of the European Union, has issued EASA Emergency Airworthiness Directive 2016-0130-E, dated July 5, 2016 (referred to after this as the Mandatory Continuing Airworthiness Information, or “the MCAI”), to correct an unsafe condition for certain Dassault Aviation Model FALCON 900EX and FALCON 2000EX airplanes.

The MCAI states:

A design review of in production aeroplanes identified a manufacturing deficiency of some wing anti-ice system ducting.

This condition, if not detected and corrected, could lead to an undetected reduced performance of the wing anti-ice system, with potential ice accretion and ingestion, possibly resulting in degraded engine power and degraded handling characteristics.

The Falcon 900EX EASY and Falcon \* \* \* [2000EX] Aircraft Flight Manuals (AFM) contain a normal procedure

4-200-05A, “Operations in Icing Conditions”, addressing minimum fan speed rotation (N1) during combined operation of wing anti-ice and engine anti-ice systems. The subsequent investigation demonstrated that the wing anti-ice system performance for aeroplanes equipped with ducting affected by the manufacturing deficiency can be restored increasing N1 value. In addition, Dassault Aviation published Service Bulletin (SB) F900EX-464 (for Falcon 900EX aeroplanes) and SB F2000EX-393 (for Falcon 2000EX aeroplanes), providing instructions for wing anti-ice system ducting inspection.

For the reasons described above, this [EASA] AD requires an AFM amendment and a one-time [detailed] inspection of the wing anti-ice system ducting [and, as applicable, a check of the part number,] and, depending on findings, re-identification or replacement of the wing anti-ice system ducting.

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-2017-0494.

### **Comments**

We gave the public the opportunity to participate in developing this AD. We received no comments on the NPRM or on the determination of the cost to the public.

### **Conclusion**

We reviewed the available data and determined that air safety and the public interest require adopting this AD as proposed except for minor editorial changes. We have determined that these minor changes:

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

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

Dassault has issued Service Bulletin F900EX-464, dated June 20, 2016; and Service Bulletin F2000EX-393, dated June 20, 2016. This service information describes procedures for an inspection of the wing anti-ice system ducting and re-identification or replacement of the wing anti-ice system ducting. 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 52 airplanes of U.S. registry.

The action required by AD 2016-17-02, and retained in this AD, takes about 1 work-hour per product, at an average labor rate of \$85 per work-hour. Based on these figures, the estimated cost of the action that is required by AD 2016-17-02 is \$85 per product.

We also estimate that it will take about 4 work-hours per product to comply with the basic requirements of this AD. The average labor rate is \$85 per work-hour. Based on these figures, we estimate the cost of this AD on U.S. operators to be \$17,680, or \$340 per product.

In addition, we estimate that any necessary follow-on actions will take about 19 work-hours and require parts costing \$24,000, for a cost of \$25,615 per product. We have no way of determining the number of aircraft that might need these actions.

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

## **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.

#### **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 removing Airworthiness Directive (AD) 2016-17-02, Amendment 39-18615 (81 FR 55366, August 19, 2016), and adding the following new AD:

**2017-19-17 Dassault Aviation:** Amendment 39-19047; Docket No. FAA-2017-0494;  
Product Identifier 2016-NM-126-AD.

**(a) Effective Date**

This AD is effective [INSERT DATE 35 DAYS AFTER DATE OF  
PUBLICATION IN THE FEDERAL REGISTER].

**(b) Affected ADs**

This AD replaces AD 2016-17-02, Amendment 39-18615 (81 FR 55366,  
August 19, 2016) (“AD 2016-17-02”).

**(c) Applicability**

This AD applies to the Dassault Aviation airplanes identified in paragraphs (c)(1)  
and (c)(2) of this AD, certificated in any category.

(1) Model FALCON 900EX airplanes, serial numbers (S/Ns) 270 through 291  
inclusive and 294.

(2) Model FALCON 2000EX airplanes, S/Ns 263 through 305 inclusive,  
307 through 313 inclusive, 315, 320, and 701 through 734 inclusive.

**(d) Subject**

Air Transport Association (ATA) of America Code 30, Ice and Rain Protection.

**(e) Reason**

This AD was prompted by a design review of in-production airplanes that  
identified a deficiency in certain wing anti-ice system ducting. We are issuing this AD to  
detect and correct a deficiency in the wing anti-ice system ducting, which could result in  
reduced performance of the wing anti-ice system with potential ice accretion and

ingestion, and could result in degraded engine power and degraded handling characteristics.

**(f) Compliance**

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

**(g) Retained Revision to the Airplane Flight Manual (AFM), with No Changes**

This paragraph restates the requirements of paragraph (g) of AD 2016-17-02, with no changes.

(1) For Model FALCON 900EX airplanes on which the actions specified in Dassault Service Bulletin F900EX-464 have not been accomplished: Within 10 flight cycles after September 6, 2016 (the effective date of AD 2016-17-02), revise Section 4-200-05A, "OPERATION IN ICING CONDITIONS," of the Model Falcon 900EX AFM to include the information in figure 1 to paragraph (g)(1) of this AD, and thereafter operate the airplane accordingly. The AFM revision may be done by inserting a copy of this AD into the AFM.

**Figure 1 to Paragraph (g)(1) of this AD – Operation in Icing Conditions**

**Wings Anti-Ice System Operation**

During in-flight operation of a wings anti-ice system (WINGS ANTI-ICE) maintain the N1 of all engines equal to or more than the values defined in Table 1, as applicable to atmospheric condition.

Table 1

New Minimum N1 values required during in-flight operation of a wings anti-ice system

Three operative engines:

TAT	– 30 to – 20 °C	– 20 to – 10 °C	– 10 to 0 °C	0 to + 10 °C
Above 20,000 ft	79%	75%	71%	66%
From 20,000 ft to 10,000 ft	76%	73%	66%	59%
Below 10,000 ft	68%	66%	61%	58%

These new values include 3% increase compared to former values (4-200-05A page 1/2).

Two operative engines:

TAT	– 30 to – 20 °C	– 20 to – 10 °C	– 10 to 0 °C	0 to + 10 °C
Above 20,000 ft	86%	82%	78%	73%
From 20,000 ft to 10,000 ft	83%	80%	73%	66%
Below 10,000 ft	75%	73%	68%	65%

These new values include 3% increase compared to former values (4-200-05A page 1/2).

**TAT** – Total Air Temperature

Note 1: Maintaining the N1 above the minimum anti-ice N1 on all engines may lead to exceedance of approach speed. Early approach or landing configuration of an airplane and/or application of airbrakes may be used to control the airspeed. In approach and landing and for a limited duration up to three minutes, selection of N1 speeds below the minimum anti-ice N1 speed is authorized. In this case it is necessary to disengage the autothrottle.

Effectivity: F900EX (LX variant) S/N 270 to 291, 294 without Dassault Aviation SB F900EX-464.

(2) For Model FALCON 2000EX airplanes on which the actions specified in Dassault Service Bulletin F2000EX-393 have not been accomplished: Within 10 flight cycles after September 6, 2016 (the effective date of AD 2016-17-02), revise Section 4-200-05A, "OPERATION IN ICING CONDITIONS," of the Model Falcon 2000EX AFM to include the information in figure 2 to paragraph (g)(2) of this AD, and thereafter operate the airplane accordingly. The AFM revision may be done by inserting a copy of this AD into the AFM.

**Figure 2 to Paragraph (g)(2) of this AD – Operation in Icing Conditions**

**Wing Anti Ice System Operation**

During in-flight operation of a wing anti-ice system (WING ANTI-ICE) maintain the N1 of both engines equal to or more than the values defined in Table 1, as applicable to atmospheric condition.

Table 1

New Minimum N1 values required during in-flight operation of a wing anti-ice system

Two engines operative minimum N1:

<b>Z</b> \ <b>TAT</b>	<b>-30 °C</b>	<b>-15 °C</b>	<b>0 °C</b>	<b>+10 °C</b>
31,000 ft	74.6	67.6	52.8	52.8
22,000 ft	72.4	63.7	52.8	52.1
3,000 ft	57.3	54.9	49.4	48.8
0 ft	54.9	54.9	49.4	48.8

These new values include 2% increase compared to former values (4-200-05A page 1/2).

One engine operative or one bleed inoperative minimum N1:

<b>Z</b> \ <b>TAT</b>	<b>-30 °C</b>	<b>-15 °C</b>	<b>0 °C</b>	<b>+10 °C</b>
31,000 ft	82.4	77.0	64.0	58.0
22,000 ft	79.2	72.0	59.8	56.6
3,000 ft	71.2	66.4	59.8	49.3
0 ft	64.2	63.7	59.8	49.3

These new values include 2% increase compared to former values (4-200-05A page 1/2).

**TAT** – Total Air Temperature

**Z** - Altitude

Note 1: Maintaining the N1 above the minimum anti-ice N1 on all engines may lead to exceedance of approach speed. Early approach or landing configuration of an aeroplane and/or application of airbrakes may be used to control the airspeed. In approach and landing and for a limited duration up to three minutes, selection of N1 speeds below the minimum anti-ice N1 speed is authorized. In this case it is necessary to disengage the autothrottle.

Effectivity: F2000EX (LX/S variants) S/N 263 to 305, 307 to 313, 315, 320, 701 to 734 without Dassault Aviation SB F2000EX-393.

**(h) New Actions: Inspection, Part Replacement, Part Re-identification**

Within 9 months after the effective date of this AD: Do a detailed inspection of the wing anti-ice system ducting (anti-ice pipes) for the presence of a diaphragm, and do all applicable actions specified in paragraph (h)(1) or (h)(2) of this AD, in accordance with the Accomplishment Instructions of Dassault Service Bulletin F900EX-464, dated June 20, 2016; or Service Bulletin F2000EX-393, dated June 20, 2016; as applicable. After the applicable actions specified in paragraph (h)(1) or (h)(2) of this AD have been completed, the AFM revision required by paragraph (g) of this AD may be removed from the AFM for that airplane.

(1) If during the inspection required by the introductory text to paragraph (h) of this AD it is determined that a diaphragm is present: Before further flight, replace the wing anti-ice system ducting.

(2) If during the inspection required by the introductory text to paragraph (h) of this AD it is determined that a diaphragm is not present: Before further flight, do a check of the anti-ice pipe part number and re-identify the wing anti-ice system ducting.

**(i) 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 (j)(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 Dassault Aviation's EASA Design Organization Approval (DOA). If approved by the DOA, the approval must include the DOA-authorized signature.

**(j) Related Information**

(1) Refer to Mandatory Continuing Airworthiness Information (MCAI) Emergency AD 2016-0130-E, dated July 5, 2016, 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-2017-0494.

(2) For more information about this AD, contact Tom Rodriguez, Aerospace Engineer, International Section, Transport Standards Branch, FAA, 1601 Lind Avenue SW., Renton, WA 98057-3356; telephone 425-227-1137; fax 425-227-1149.

**(k) 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) Dassault Aviation Service Bulletin F900EX-464, dated June 20, 2016.

(ii) Dassault Aviation Service Bulletin F2000EX-393, dated June 20, 2016.

(3) For service information identified in this AD, contact Dassault Falcon Jet Corporation, Teterboro Airport, P.O. Box 2000, South Hackensack, NJ 07606; telephone 201-440-6700; Internet <http://www.dassaultfalcon.com>.

(4) You may view this service information at the FAA, Transport Standards Branch, 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 September 7, 2017.

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

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