**[4910-13-P]**

**DEPARTMENT OF TRANSPORTATION**

**Federal Aviation Administration**

**14 CFR Part 39**

**[Docket No. FAA-2015-3629; Directorate Identifier 2015-NM-011-AD; Amendment 39-18662; AD 2016-19-13]**

**RIN 2120-AA64**

**Airworthiness Directives;** Dassault Aviation Airplanes

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

**ACTION:** Final rule.

**SUMMARY:** We are adopting a new airworthiness directive (AD) for certain Dassault Aviation Model MYSTERE-FALCON 50, MYSTERE-FALCON 900, FALCON 900EX, FALCON 2000, and FALCON 2000EX airplanes. This AD was prompted by a report of an in-flight lightning strike to the WHELEN anti-collision light located on the top of the vertical fin tip that caused severe damage and resulted in the loss of some airplane functions. This AD requires modification of the anti-collision light bonding. We are issuing this AD to prevent loss of electrical power and essential airplane functions, and possible reduced control of the airplane.

**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 Airplane Directorate, 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-2015-3629.

**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-2015-3629; 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 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, ANM-116, Transport Airplane Directorate, FAA, 1601 Lind Avenue SW., Renton, WA 98057-3356; telephone 425-227-1137; fax 425-227-1139.

**SUPPLEMENTARY INFORMATION:**

**Discussion**

We issued a supplemental notice of proposed rulemaking (SNPRM) to amend 14 CFR part 39 by adding an AD that would apply to certain Dassault Aviation Model MYSTERE-FALCON 50, MYSTERE-FALCON 900, FALCON 900EX, FALCON 2000, and FALCON 2000EX airplanes. The SNPRM published in the Federal Register on June 17, 2016 (81 FR 39597) ("the SNPRM"). We preceded the SNPRM with a notice of proposed rulemaking (NPRM) that published in the Federal Register on September 24, 2015 (80 FR 57545) ("the NPRM"). The NPRM proposed to require modification of the anti-collision light bonding. The NPRM was prompted by a report of an in-flight lightning strike to the WHELEN anti-collision light located on the top of the vertical fin tip that caused severe damage and induced the loss of some airplane functions. The SNPRM proposed to clarify the applicability. We are issuing this AD to prevent loss of electrical power and essential airplane functions, and possible reduced 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 Airworthiness Directive 2015-0006, dated January 15, 2015 (referred to after this as the Mandatory Continuing Airworthiness Information, or "the MCAI"), to correct an unsafe condition for certain Dassault Aviation Model MYSTERE-FALCON 50, MYSTERE-FALCON 900, FALCON 900EX, FALCON 2000, and FALCON 2000EX airplanes. The MCAI states:

> An occurrence was reported where a Falcon 2000 aeroplane experienced an in-flight lightning strike, which caused

> severe damage and induced the loss of some aeroplane functions. The investigation results revealed that the entering point of the lightning was at the WHELEN anti-collision light located on the top of the vertical fin tip.
>
> When the lightning strike hit the anti-collision light, an electric arc occurred between the aeroplane structure and the anti-collision light and created a conductive path by which the lightning current entered inside the aeroplane. Further analysis has determined that the electrical bonding between the WHELEN anti-collision light, Part Number (P/N) 01-0790044-09, and the fin tip fairing or the No. 2 engine air intake cover is insufficient to withstand a lightning strike.
>
> In case of severe lightning, this condition, if not corrected, could lead to an unsafe condition (loss of electrical power and/or of essential functions) possibly resulting in reduced control of the aeroplane.
>
> To address this potential unsafe condition, Dassault Aviation developed a modification (mod) to improve the WHELEN anti-collision light bonding when the anti-collision light is located on top of the vertical fin tip or on No. 2 engine air intake cover, and issued several Service Bulletins (SB) to modify all affected aeroplanes in service.
>
> For the reasons described above, this [EASA] AD requires modification of the anti-collision light bonding.

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-2015-3629.

**Comments**

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

**Conclusion**

We reviewed the relevant 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 SNPRM for correcting the unsafe condition; and
- Do not add any additional burden upon the public than was already proposed in the SNPRM.

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

We reviewed the following service information.

- Dassault Service Bulletin F50-481, Revision 1 (also referred to as 481-R1), dated January 26, 2015.
- Dassault Service Bulletin F900-372, Revision 1 (also referred to as 372-R1), dated January 26, 2015.
- Dassault Service Bulletin F900-378, Revision 1 (also referred to as 378-R1), dated January 26, 2015.
- Dassault Service Bulletin F900EX-285, Revision 1 (also referred to as 285-R1), dated January 26, 2015.
- Dassault Service Bulletin F900EX-305, Revision 1 (also referred to as 305-R1), dated January 26, 2015.
- Dassault Service Bulletin F2000-337, Revision 1 (also referred to as 337-R1), dated January 26, 2015.
- Dassault Service Bulletin F2000EX-108, Revision 1 (also referred to as 108-R1), dated January 26, 2015.

The service information describes procedures for modifying the anti-collision light bonding. These documents are distinct since they apply to different airplane models

in different configurations. 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 778 airplanes of U.S. registry.

We also estimate that it would take about 12 work-hours per product to comply with the basic requirements of this AD. The average labor rate is $85 per work-hour. Required parts would cost about $801 per product. Based on these figures, we estimate the cost of this AD on U.S. operators to be $1,416,738, or $1,821 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.

**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):

**2016-19-13 Dassault Aviation:** Amendment 39-18662; Docket No. FAA-2015-3629; Directorate Identifier 2015-NM-011-AD.

**(a) Effective Date**

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

**(b) Affected ADs**

None.

**(c) Applicability**

This AD applies to Dassault Aviation airplanes, certificated in any category, identified in figure 1 to paragraph (c) of this AD.

**Figure 1 to Paragraph (c) of this AD –** *Applicability*

| **Airplanes** | **Configuration** | **[1]Except Airplanes Modified Through:** | |
|---|---|---|---|
| | | **Dassault Modification Embodied in Production** | **Service Bulletin in Service** |
| Dassault Aviation Model MYSTERE-FALCON 50 airplanes | M1853 has been embodied in production or in service through Dassault Service Bulletin F50-241 | [2]M2083 or M3094 | Dassault Service Bulletin F50-257 |

| Airplanes | Configuration | [1]Except Airplanes Modified Through: | |
|---|---|---|---|
| | | **Dassault Modification Embodied in Production** | **Service Bulletin in Service** |
| Dassault Aviation Model MYSTERE-FALCON 900 airplanes | [3]Group 1: M1682 has been embodied in production or in service through Dassault Service Bulletin F900-182 | M5381 | Not applicable |
| | [4]Group 2: M1682 has been embodied in production or in service through Dassault Service Bulletin F900-182 and Modification M1947 is embodied in production or in service through Dassault Service Bulletin F900-176 | M5386 | Not applicable |
| Dassault Aviation Model FALCON 900EX airplanes | [3]Group 1: M1682 has been embodied in production or in service through Dassault Service Bulletin F900EX-025 | M5381 | Not applicable |
| | [4]Group 2: M1682 has been embodied in production or in service through Dassault Service Bulletin F900EX-025 and Modification M1947 is embodied in production or in service through Dassault Service Bulletin F900EX-19 | M5103 or M5386 | Not applicable |
| Dassault Aviation Model FALCON 2000 airplanes | M331 has been embodied in production or in service through Dassault Service Bulletin F2000-44 | M810 or M1061 or M2778 | Dassault Service Bulletin F2000-111 |
| Dassault Aviation Model FALCON 2000EX airplanes | M1802 has been embodied in production. | M810 or M1061 or M2778 | Not applicable |

[1]The excluded airplanes, as specified in figure 1 to paragraph (c) of this AD – Applicability, embody either one modification in production or one service bulletin in service, as applicable.

[2]Modification M2083, Dassault Service Bulletin F50-257, Modification M1947, Dassault Service Bulletin F900-176, Dassault Service Bulletin F900EX-19, Modification M5103, as applicable, introduce fin tip SATCOM fairing, in production or in service.

[3]Group 1: Airplanes with WHELEN anti-collision light located on top of the vertical fin tip.

[4]Group 2: Airplanes with WHELEN anti-collision light located on top of the engine No. 2 air intake cover.

**(d) Subject**

Air Transport Association (ATA) of America Code 33, Lights.

**(e) Reason**

This AD was prompted by a report of an in-flight lightning strike to the WHELEN anti-collision light located on the top of the vertical fin tip that caused severe damage and resulted in the loss of some airplane functions. We are issuing this AD to prevent loss of electrical power and essential airplane functions, and possible reduced control of the airplane.

**(f) Compliance**

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

**(g) Modification**

Within 24 months after the effective date of this AD, modify the anti-collision light bonding, in accordance with the Accomplishment Instructions of the applicable service information specified in paragraphs (g)(1) through (g)(7) of this AD.

(1) For Model MYSTERE-FALCON 50 airplanes: Dassault Service Bulletin F50-481, Revision 1 (also referred to as 481-R1), dated January 26, 2015.

(2) For Model MYSTERE-FALCON 900 airplanes with the WHELEN system installed on the vertical fin tip: Dassault Service Bulletin F900-372, Revision 1 (also referred to as 372-R1), dated January 26, 2015.

(3) For Model MYSTERE-FALCON 900 airplanes with the WHELEN system installed on the S-duct cowl: Dassault Service Bulletin F900-378, Revision 1 (also referred to as 378-R1), dated January 26, 2015.

(4) For Model FALCON 900EX airplanes with the WHELEN system installed on the vertical fin tip: Dassault Service Bulletin F900EX-285, Revision 1 (also referred to as 285-R1), dated January 26, 2015.

(5) For Model FALCON 900EX airplanes with the WHELEN system installed on the S-duct cowl: Dassault Service Bulletin F900EX-305, Revision 1 (also referred to as 305-R1), dated January 26, 2015.

(6) For Model FALCON 2000 airplanes: Dassault Service Bulletin F2000-337, Revision 1 (also referred to as 337-R1), dated January 26, 2015.

(7) For Model FALCON 2000EX airplanes: Dassault Service Bulletin F2000EX-108, Revision 1 (also referred to as 108-R1), dated January 26, 2015.

**(h) Credit for Previous Actions**

This paragraph provides credit for actions required by paragraph (g) of this AD, if those actions were performed before the effective date of this AD using the applicable service information identified in paragraphs (h)(1) through (h)(7) of this AD.

(1) For Model MYSTERE-FALCON 50 airplanes: Dassault Service Bulletin F50-481, dated August 22, 2007.

(2) For Model MYSTERE-FALCON 900 airplanes with the WHELEN system installed on the vertical fin tip: Dassault Service Bulletin F900-372, dated August 22, 2007.

(3) For Model MYSTERE-FALCON 900 airplanes with the WHELEN system installed on the S-duct cowl: Dassault Service Bulletin F900-378, dated September 19, 2007.

(4) For Model FALCON 900EX airplanes with the WHELEN system installed on the vertical fin tip: Dassault Service Bulletin F900EX-285, dated July 18, 2007.

(5) For Model FALCON 900EX airplanes with the WHELEN system installed on the S-duct cowl: Dassault Service Bulletin F900EX-305, dated September 19, 2007.

(6) For Model FALCON 2000 airplanes: Dassault Service Bulletin F2000-337, dated July 25, 2007.

(7) For Model FALCON 2000EX airplanes: Dassault Service Bulletin F2000EX-108, dated July 25, 2007.

**(i) Other FAA AD Provisions**

The following provisions also apply to this AD:

**(1) Alternative Methods of Compliance (AMOCs):** Refer to Mandatory Continuing Airworthiness Information (MCAI) EASA Airworthiness Directive 2015-0006, dated January 15, 2015, 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-2015-3629.

**(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 Branch, ANM-116, Transport Airplane Directorate, FAA; or the 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) EASA Airworthiness Directive 2015-0006, dated January 15, 2015, 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-2015-3629.

(2) Service information identified in this AD that is not incorporated by reference is available at the addresses specified in paragraphs (k)(3) and (k)(4) of this AD.

**(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 Service Bulletin F50-481, Revision 1 (also referred to as 481-R1), dated January 26, 2015.

(ii) Dassault Service Bulletin F900-372, Revision 1 (also referred to as 372-R1), dated January 26, 2015.

(iii) Dassault Service Bulletin F900-378, Revision 1 (also referred to as 378-R1), dated January 26, 2015.

(iv) Dassault Service Bulletin F900EX-285, Revision 1 (also referred to as 285-R1), dated January 26, 2015.

(v) Dassault Service Bulletin F900EX-305, Revision 1 (also referred to as 305-R1), dated January 26, 2015.

(vi) Dassault Service Bulletin F2000-337, Revision 1 (also referred to as 337-R1), dated January 26, 2015.

(vii) Dassault Service Bulletin F2000EX-108, Revision 1 (also referred to as 108-R1), dated January 26, 2015.

(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.

(4) You may view this 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 September 14, 2016.

Michael Kaszycki,
Acting Manager,
Transport Airplane Directorate,
Aircraft Certification Service.

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