DEPARTMENT OF TRANSPORTATION

Federal Aviation Administration

14 CFR Part 39

[Docket No. FAA-2013-1032; Directorate Identifier 2012-NM-121-AD; Amendment 39-18122; AD 2015-06-04]

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) 2011-13-07 for all Dassault Aviation Model FALCON 7X airplanes. AD 2011-13-07 requires revising the airplane flight manual (AFM) to include a procedure to power off a radio-altimeter or revert to the correct radio-altimeter output. This new AD requires revising the AFM to include a simpler procedure to revert to the correct radio-altimeter output. This AD was prompted by an analysis which showed that AFM procedures could be simplified. We are issuing this AD to ensure that the flightcrew has procedures in the event of a radio-altimeter lock-up, which inhibits the display of warnings along with certain abnormal conditions, during the switch into landing mode during altitude cruise. If not corrected, this could result in the flightcrew being unaware of possible system failures that require immediate action by the flightcrew, leading to possible loss of control of the airplane.

DATES: This AD becomes effective May 1, 2015.

The Director of the Federal Register approved the incorporation by reference of a certain publication listed in this AD as of May 1, 2015.

ADDRESSES: You may examine the AD docket on the Internet at http://www.regulations.gov/#!docketDetail;D=FAA-2013-1032; or in person at the 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.

For service information identified in this AD, contact Dassault Falcon Jet, 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-2013-1032.
SUPPLEMENTARY INFORMATION:

Discussion

We issued a notice of proposed rulemaking (NPRM) to amend 14 CFR part 39 to supersede AD 2011-13-07, Amendment 39-16730 (76 FR 36283, June 22, 2011). AD 2011-13-07 applied to all Dassault Aviation Model FALCON 7X airplanes. The NPRM published in the Federal Register on December 26, 2013 (78 FR 78292). The NPRM was prompted by an analysis which showed that AFM procedures could be simplified. The NPRM proposed to continue to require revising the AFM to include a procedure to power off a radio-altimeter or revert to the correct radio-altimeter output. The NPRM also proposed to require revising the AFM to include a simpler procedure to revert to the correct radio-altimeter output.

The European Aviation Safety Agency (EASA), which is the Technical Agent for the Member States of the European Union, has issued EASA Airworthiness Directive 2009-0208R2, dated May 22, 2012 (referred to after this as the Mandatory Continuing Airworthiness Information, or “the MCAI”), to correct an unsafe condition on all Dassault Aviation Model FALCON 7X airplanes. The MCAI states:

Several occurrences of untimely radio-altimeter lock-up have been reported, where the failed radio-altimeter (RA) indicated a negative distance to the ground despite the aircraft was flying at medium or high altitude.

A locked RA #1 leads to untimely inhibition of warnings that could be displayed along with certain abnormal conditions while the avionic system switches into landing mode during altitude cruise.

This condition, if not corrected, may cause the flight crew to be unaware of possible system failures that could require immediate actions, which could ultimately lead to loss of control of the aeroplane.

To address this unsafe condition, Dassault Aviation developed an Airplane Flight Manual (AFM) operational procedure that, in case of RA #1 lock-up, allows the crew to restore the system warning performance by depowering the RA #1. EASA issued AD 2009-0208 [http://ad.easa.europa.eu/ad/2009-0208R3] to require application of that new abnormal procedure when RA #1 lock-up occurs. That EASA AD also prohibited dispatch of the aeroplane with any radio-altimeter inoperative.

Since issuance of EASA AD 2009-0208, Dassault Aviation developed Easy avionics load 10 which is embodied through Dassault Aviation production modification M0566 or in-service through Service Bulletin (SB) Falcon 7X n°100. This modification provides new features to display a "RA miscompare" flag on both Primary Display Units (PDU) and allows a commanded system reversion to the correct RA output.

Prompted by this modification, EASA issued AD 2009-0208R1 [http://ad.easa.europa.eu/ad/2009-0208R3], to allow not deactivating RA #1 in case lock-up conditions occurred in flight, for aeroplanes on which M0566 or SB Falcon 7X n°100 was embodied.
Since issuance of EASA AD 2009-0208R1, further analysis shows that, for aeroplanes with M0566 applied in production, or SB Falcon 7X n°100 applied in service, the RA#2 lock-up occurrence should be addressed through a commanded system reversion, now only contained in a simplified Falcon 7X AFM procedure 3-140-70A.

For the reasons described above, this [EASA] AD revises EASA AD 2009-0208R1 to reduce the requirement to amend the AFM by deleting the reference to procedure 3-140-65B. In addition, Dassault Aviation have confirmed that all Falcon 7X have been or are being modified with Mod M0566 applied in production, or SB Falcon 7X n°100 applied in service. For this reason, paragraph (1) of this [EASA] AD has been deleted. Finally, many editorial changes have been made to align the writing of the AD with the current writing standards.

You may examine the MCAI in the AD docket on the Internet at http://www.regulations.gov/#!documentDetail;D=FAA-2013-1032-0002.

Comments

We gave the public the opportunity to participate in developing this AD. The following presents the comments received on the NPRM (78 FR 78292, December 26, 2013) and the FAA's response to each comment.

Request To Remove Paragraph (g) of the Proposed AD (78 FR 78292, December 26, 2013)

Dassault requested that paragraph (g) of the proposed AD (78 FR 78292, December 26, 2013) be removed if it is meant to be a retained action. Dassault stated that paragraph (g) of the proposed AD addresses the lock-up of the radio-altimeter #1 and paragraph (h) of the proposed AD addresses the radio-altimeter miscompare condition. Dassault noted that any significant discrepancy, such as a lock-up condition, will raise a miscompare flag. Dassault also stated that since paragraph (h) of the proposed AD generalizes the issue to encompass both radio-altimeters, paragraph (g) becomes superfluous and procedure 3-140-65 (Figure 1 to paragraph (g) of the proposed AD) no longer exists.

We do not agree to remove paragraph (g) of this AD. Paragraph (g) of this AD is necessary to address the identified unsafe condition until the requirements of paragraph (h) of this AD are accomplished. Operators who complete the requirements of paragraph (h) of this AD do not need to complete the requirements of paragraph (g) of this AD. We have not revised this AD in this regard.

Request To Revise a Figure To Allow Dispatch in Certain Configuration Conditions

Dassault requested that figure 2 of paragraph (h) of the proposed AD (78 FR 78292, December 26, 2013) be revised to allow dispatch with a failed radio-altimeter. Dassault noted that the FAA issued an alternative method of compliance (AMOC), which allows dispatch with one failed radio-altimeter if the airplane is equipped with the newer radio-altimeter having part number 066-01153-5001. Dassault proposed to limit the dispatch prohibition in figure 2 of paragraph (h) of the proposed AD only to those airplanes that are fitted with an older radio-altimeter design having part number 066-01153-4001, which it stated is more prone to lock-ups. Dassault reasoned that the change would bring consistency with the AMOC letter and eliminate a need for future AMOCs as the radio-altimeter design is revised.

We do not agree to revise figure 2 of paragraph (h) of this AD. This type of operational relief is only allowed through the master minimum equipment list (MMEL) which is not an aspect we provide in an AD. However, a global AMOC letter has been issued to allow dispatch of airplanes equipped with the newer radio-altimeter with part number 066-01153-5001 through the MMEL. As provided
by paragraph (i)(1)(ii) of this AD, this AMOC is valid for all operators affected by this AD. Therefore, there is no need to revise this final rule to provide this relief.

**Request To Refer to a Later Revision of Service Information**

Dassault requested that the NPRM (78 FR 78292, December 26, 2013) be revised to refer to the latest revision of the Dassault Falcon 7X Airplane Flight Manual.

We agree. We have revised paragraph (h)(2) of this AD to refer to Dassault Falcon 7X Airplane Flight Manual, DGT105608, Revision 18, dated November 15, 2013, as an additional method of compliance.

"Contacting the Manufacturer" Paragraph in This AD

Since late 2006, we have included a standard paragraph titled "Airworthy Product" in all MCAI ADs in which the FAA develops an AD based on a foreign authority's AD.

The MCAI or referenced service information in an FAA AD often directs the owner/operator to contact the manufacturer for corrective actions, such as a repair. Briefly, the Airworthy Product paragraph allowed owners/operators to use corrective actions provided by the manufacturer if those actions were FAA-approved. In addition, the paragraph stated that any actions approved by the State of Design Authority (or its delegated agent) are considered to be FAA-approved.

In the NPRM (78 FR 78292, December 26, 2013), we proposed to prevent the use of repairs that were not specifically developed to correct the unsafe condition, by requiring that the repair approval provided by the State of Design Authority or its delegated agent specifically refer to this FAA AD. This change was intended to clarify the method of compliance and to provide operators with better visibility of repairs that are specifically developed and approved to correct the unsafe condition. In addition, we proposed to change the phrase "its delegated agent" to include a design approval holder (DAH) with State of Design Authority design organization approval (DOA), as applicable, to refer to a DAH authorized to approve required repairs for the proposed AD.

No comments were provided to the NPRM (78 FR 78292, December 26, 2013) about these proposed changes. However, a comment was provided for an NPRM having Directorate Identifier 2012-NM-101-AD (78 FR 78285, December 26, 2013). The commenter stated the following: "The proposed wording, being specific to repairs, eliminates the interpretation that Airbus messages are acceptable for approving minor deviations (corrective actions) needed during accomplishment of an AD-mandated Airbus service bulletin."

This comment has made the FAA aware that some operators have misunderstood or misinterpreted the Airworthy Product paragraph to allow the owner/operator to use messages provided by the manufacturer as approval of deviations during the accomplishment of an AD-mandated action. The Airworthy Product paragraph does not approve messages or other information provided by the manufacturer for deviations to the requirements of the AD-mandated actions. The Airworthy Product paragraph only addresses the requirement to contact the manufacturer for corrective actions for the identified unsafe condition and does not cover deviations from other AD requirements. However, deviations to AD-required actions are addressed in 14 CFR 39.17, and anyone may request the approval for an alternative method of compliance to the AD-required actions using the procedures found in 14 CFR 39.19.

To address this misunderstanding and misinterpretation of the Airworthy Product paragraph, we have changed the paragraph and retitled it "Contacting the Manufacturer." This paragraph now clarifies that for any requirement in this AD to obtain corrective actions from a manufacturer, the actions must be accomplished using a method approved by the FAA, the EASA, or Dassault Aviation's EASA Design Organization Approval (DOA).

The Contacting the Manufacturer paragraph also clarifies that, if approved by the DOA, the approval must include the DOA-authorized signature. The DOA signature indicates that the data and information contained in the document are EASA-approved, which is also FAA-approved. Messages
and other information provided by the manufacturer that do not contain the DOA-authorized
document
signature approval are not EASA-approved, unless EASA directly approves the manufacturer's
message or other information.

This clarification does not remove flexibility previously afforded by the Airworthy Product
paragraph. Consistent with long-standing FAA policy, such flexibility was never intended for
required actions. This is also consistent with the recommendation of the Airworthiness Directive
Implementation Aviation Rulemaking Committee to increase flexibility in complying with ADs by
identifying those actions in manufacturers' service instructions that are "Required for Compliance"
with ADs. We continue to work with manufacturers to implement this recommendation. But once we
determine that an action is required, any deviation from the requirement must be approved as an
alternative method of compliance.

Other commenters to the NPRM having Directorate Identifier 2012-NM-101-AD (78 FR 78285,
December 26, 2013) pointed out that in many cases the foreign manufacturer's service bulletin and
the foreign authority's MCAI might have been issued some time before the FAA AD. Therefore, the
DOA might have provided U.S. operators with an approved repair, developed with full awareness of
the unsafe condition, before the FAA AD is issued. Under these circumstances, to comply with the
FAA AD, the operator would be required to go back to the manufacturer's DOA and obtain a new
approval document, adding time and expense to the compliance process with no safety benefit.

Based on these comments, we removed the requirement that the DAH-provided repair
specifcally refer to this AD. Before adopting such a requirement, the FAA will coordinate with
affected DAHs and verify they are prepared to implement means to ensure that their repair approvals
consider the unsafe condition addressed in this AD. Any such requirements will be adopted through
the normal AD rulemaking process, including notice-and-comment procedures, when appropriate.

We also have decided not to include a generic reference to either the "delegated agent" or "DAH with State of Design Authority design organization approval," but instead we have provided the
specific delegation approval granted by the State of Design Authority for the DAH.

Related Service Information Under 1 CFR Part 51

Dassault Aviation issued Procedure 3-140-70A, "Avionics–Sensor miscompare (A/C with
M566)," Issue 2, of Section 3–Abnormal Procedures, of the Dassault Falcon 7X Airplane Flight
Sensor miscompare," Issue 4, of Section 3–Abnormal Procedures, of the Dassault Falcon 7X Airplane
Flight Manual, DGT105608, Revision 18, dated November 15, 2013. The service information
describes procedures to revert to the correct radio-altimeter output. This service information is
reasonably available; see ADDRESSES for ways to access this service information.

Conclusion

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

• Are consistent with the intent that was proposed in the NPRM (78 FR 78292, December 26,
2013) for correcting the unsafe condition; and
• Do not add any additional burden upon the public than was already proposed in the NPRM
(78 FR 78292, December 26, 2013).

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

Costs of Compliance

We estimate that this AD affects 35 airplanes of U.S. registry.
We estimate the following costs to comply with this AD:

<table>
<thead>
<tr>
<th>Action</th>
<th>Labor cost</th>
<th>Parts cost</th>
<th>Cost per product</th>
<th>Cost on U.S. operators</th>
</tr>
</thead>
<tbody>
<tr>
<td>AFM revision [retained actions from AD 2011-13-07, Amendment 39-16730 (76 FR 36283, June 22, 2011)]</td>
<td>1 work-hour × $85 per hour = $85</td>
<td>None</td>
<td>$85</td>
<td>$2,975</td>
</tr>
<tr>
<td>New AFM revision [new action]</td>
<td>1 work-hour × $85 per hour = $85</td>
<td>None</td>
<td>85</td>
<td>2,975</td>
</tr>
</tbody>
</table>

**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.

**Examining the AD Docket**

You may examine the AD docket on the Internet at http://www.regulations.gov/#/docketDetail;D=FAA-2013-1032; 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 Operations office (telephone 800-647-5527) is in the ADDRESSES section.
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) 2011-13-07, Amendment 39-16730 (76 FR 36283, June 22, 2011), and adding the following new AD:

(a) Effective Date

This AD becomes effective May 1, 2015.

(b) Affected ADs

This AD replaces AD 2011-13-07, Amendment 39-16730 (76 FR 36283, June 22, 2011).

(c) Applicability

This AD applies to Dassault Aviation Model FALCON 7X airplanes, certificated in any category, all serial numbers.

(d) Subject

Air Transport Association (ATA) of America Code 34, Navigation.

(e) Reason

This AD was prompted by reports of untimely radio-altimeter lock-ups, where the failed radio-altimeter indicated a negative distance to the ground when the airplane was flying at medium or high altitude. We are issuing this AD to ensure that the flightcrew has procedures in the event of a radio-altimeter lock-up, which inhibits the display of warnings along with certain abnormal conditions, during the switch into landing mode during altitude cruise. If not corrected, this could result in the flightcrew being unaware of possible system failures that require immediate action by the flightcrew, leading to possible loss of control of the airplane.

(f) Compliance

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

(g) Retained Airplane Flight Manual (AFM) Revision

This paragraph restates the requirements of paragraph (h) of AD 2011-13-07, Amendment 39-16730 (76 FR 36283, June 22, 2011), with editorial changes. For airplanes on which M0566 or Dassault Service Bulletin Falcon 7X-100 has been accomplished: Within 14 days after July 27, 2011 (the effective date of AD 2011-13-07), revise the Limitations Section of the Dassault Falcon 7X AFM to include the statement in figure 1 to this paragraph. This may be done by inserting a copy of this AD in the AFM. When a statement identical to that in figure 1 to this paragraph has been included in the general revisions of the AFM, the general revisions may be inserted into the AFM, and the copy of this AD may be removed from the AFM. Accomplishing the revision required by paragraph (h) of this AD terminates the requirements of this paragraph, and after the revision...
required by paragraph (h) of this AD has been done, before further flight, remove the revision
required by this paragraph.

**Figure 1 to Paragraph (g) of This AD–Retained AFM Language**

If radio-altimeter #1 lock-up conditions occur in flight, revert to the correct radio-altimeter output, in accordance with the instructions of Falcon 7X AFM procedure 3-140-65B and 3-140-70A.

Dispatch of the airplane with any radio-altimeter inoperative is prohibited.

**(h) New Requirement of This AD: Revision of the AFM**

For airplanes on which M0566 or Dassault Service Bulletin Falcon 7X-100 has been accomplished: Within 30 days after the effective date of this AD, do the actions specified in paragraphs (h)(1) and (h)(2) of this AD.

(1) Revise the Limitations Section of the Dassault Falcon 7X AFM to include the statement in figure 2 to this paragraph. This may be done by inserting a copy of this AD in the AFM. Doing this revision terminates the requirements of paragraph (g) of this AD and the revision required by paragraph (g) of this AD must be removed. When a statement identical to that in figure 2 to this paragraph has been included in the general revisions of the AFM, the general revisions may be inserted into the AFM, and the copy of this AD may be removed from the AFM.

**Figure 2 to Paragraph (h)(1) of This AD–New AFM Language**

If radio-altimeter miscompare indication occurs in flight, revert to the correct radio-altimeter output, in accordance with the instructions of Falcon 7X AFM procedure 3-140-70A.

Dispatch of the airplane with any radio-altimeter inoperative is prohibited.


**(i) Other FAA AD Provisions**

The following provisions also apply to this AD:

(1) Alternative Methods of Compliance (AMOCs): The Manager, International Branch, ANM-116, 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: Tom Rodriguez, Aerospace Engineer, International Branch, ANM-116, Transport Airplane Directorate, FAA, 1601 Lind Avenue SW., Renton, WA 98057-3356; telephone 425-227-1137; fax 425-227-1149. Information may be emailed to: 9-ANM-116-AMOC-REQUESTS@faa.gov.

(i) 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.

(ii) AMOCs approved previously in accordance with AD 2011-13-07, Amendment 39-16730 (76 FR 36283, June 22, 2011), are approved as alternative methods of compliance with this AD.
(2) Contacting the Manufacturer: As of the effective date of this AD, 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 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


(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.


(3) For service information identified in this AD, contact Dassault Falcon Jet, 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 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 March 13, 2015.

Jeffrey E. Duven,
Manager, Transport Airplane Directorate,
Aircraft Certification Service.