



## Notification of a proposal to issue an Airworthiness Directive

**PAD No.: 16-098**

**Issued: 05 July 2016**

Note: This Proposed Airworthiness Directive (PAD) is issued by EASA, acting in accordance with Regulation (EC) 216/2008 on behalf of the European Union, its Member States and of the European third countries that participate in the activities of EASA under Article 66 of that Regulation.

In accordance with the EASA Continuing Airworthiness Procedures, the Executive Director is proposing the issuance of an EASA Airworthiness Directive (AD), applicable to the aeronautical product(s) identified below.

All interested persons may send their comments, referencing the PAD Number above, to the e-mail address specified in the 'Remarks' section, prior to the consultation date indicated.

**Design Approval Holder's Name:**                      **Type/Model designation(s):**

DASSAULT AVIATION

Falcon 2000EX aeroplanes

**Effective Date:**            [TBD - standard: 14 days after AD issue date]

**TCDS Number(s):** EASA.A.008

**Foreign AD:**                Not applicable

**Supersedure:**              This AD supersedes EASA AD 2015-0102R1 dated 20 July 2015.

### ATA 30 – Ice and Rain Protection – Air Inlet Anti-Ice System – Inspection / Repair

**Manufacturer(s):**

Dassault Aviation (DA)

**Applicability:**

Falcon 2000EX aeroplanes, all manufacturer serial numbers.

**Reason:**

A quality review of recently delivered aeroplanes identified a manufacturing deficiency of some engine air inlet anti-ice "piccolo" tubes.

This condition, if not detected and corrected, could lead to reduced performance of the engine anti-ice protection system, with consequent ice accretion and ingestion, possibly resulting in dual engine power loss and reduced control of an aeroplane.

The subsequent investigation demonstrated that, for engines equipped with an air inlet affected by the manufacturing deficiency, operating an engine at or above the minimum N1 value applicable for combined wing and engine anti-ice operations provides efficient engine anti-ice performance during stand-alone engine anti-ice operation.



To address this potential unsafe condition, EASA issued EASA AD 2015-0101-E (later revised) to require amendment of the applicable Aeroplane Flight Manual (AFM) for aeroplanes having engine air inlets Part Number (P/N) 06ND71600-1 not marked NORDAM Rework Kit (or “NRK”) on the associated data plate.

Since that AD was issued, Dassault Aviation published Service Bulletin (SB) F2000EX-384 (later revised), providing instructions for a one-time inspection and applicable corrective actions, to recover the full operational capability of the aeroplanes equipped with affected parts.

For the reasons described above, this AD supersedes EASA AD 2015-0102R1, retaining its requirements, additionally requires a one-time inspection of each affected anti-ice “piccolo” tube assembly and, depending on findings, accomplishment of the applicable corrective actions. This AD also prohibits installation of an affected part on an aeroplane.

#### **Required Action(s) and Compliance Time(s):**

Required as indicated, unless accomplished previously:

For aeroplanes equipped with engine air inlet P/N 06ND71600-1:

#### **Re-statement of the requirements of EASA AD 2015-0102R1:**

- (1) Within 10 flight cycles after 10 June 2015 [the effective date of EASA AD 2015-0102-E at original issue], amend the applicable AFM as specified in Appendix 1 of this AD, inform the flight crew and, thereafter, operate the aeroplane accordingly.  
Amending the AFM may be accomplished by inserting a copy of Appendix 1 of this AD into the applicable AFM.
- (2) An aeroplane which incorporates, on both engines, an air inlet P/N 06ND71600-1 with a marking “NTR-RKFAL97” or “NTR-RKFAL98” (see Note below) on the data plate is not affected by the requirements of paragraph (1) of this AD.

Note: Engine air inlets P/N 06ND71600-1 which were already refurbished (NORDAM Rework Kit applied) comply with the design standard and are marked as “NTR-RKFAL97” or “NTR-RKFAL98” on the air inlet data plate. Examples of data plates are shown in Appendix 2 of this AD.

#### **New requirements of this AD:**

- (3) Within 1 300 flight hours or 26 months, whichever occurs first after the effective date of this AD, inspect each anti-ice “piccolo” tube assembly of each affected engine air inlet (see Note of this AD) and, depending on findings, accomplish the applicable corrective actions, in accordance with the instructions of Dassault Aviation SB F2000EX-384.
- (4) After accomplishment of the actions as required by paragraph (3) of this AD, the AFM amendment, as required by paragraph (1) of this AD, can be removed from the applicable AFM of that aeroplane.
- (5) After accomplishment of the actions as required by paragraph (3) of this AD on an aeroplane, installation on that aeroplane of an engine air inlet P/N 06ND71600-1 is allowed, provided the



air inlet data plate shows the marking “NTR-RKFAL97” or “NTR-RKFAL98” or “F2000EX-384” or “F2000EX-384-R1”.

**Ref. Publications:**

Dassault Aviation SB F2000EX-384 original issue dated 27 January 2016, or Revision 1 dated 01 March 2016.

The use of later approved revisions of the above document is acceptable for compliance with the requirements of this AD.

**Remarks:**

1. This Proposed AD will be closed for consultation 02 August 2016.
2. Enquiries regarding this PAD should be referred to the EASA Safety Information Section, Certification Directorate. E-mail: [ADs@easa.europa.eu](mailto:ADs@easa.europa.eu).
3. For any question concerning the technical content of the requirements in this PAD, please contact your Dassault Falcon Technical Center:
  - For Europe, Middle East and Africa based operators:  
Hot Line: (33) 1 47 11 37 37 / Fax: (33) 1 47 11 89 49
  - For USA, Canada and Mexico based operators:  
Help Desk: (1) 800-2FALCON (2325266)
  - All other areas:  
(1) 201 541 4747



# F2000EX - Appendix 1 to EASA AD No.: 2016-xxx

Amendment to AFM sections 4-200-05, 4-200-05A OPERATION IN ICING CONDITIONS  
This amendment comes in additions to existing AFM procedures

## Engine Anti Ice System Operation

During in flight operation of an engine anti-ice system (ENG ANTI-ICE) maintain the N1 of both engines equal to or more then the values defined in Table 1 of this Appendix, as applicable to atmospheric condition.

Table 1

Minimum N<sub>1</sub> values required during in flight operation of an engine anti-ice system

| Z \ TAT   | -30 °C | -15 °C | 0 °C | +10 °C |
|-----------|--------|--------|------|--------|
| 31,000 ft | 72.6   | 65.6   | 50.8 | 50.8   |
| 22,000 ft | 70.4   | 61.7   | 50.8 | 50.1   |
| 3,000 ft  | 55.3   | 52.9   | 47.4 | 46.8   |
| 0 ft      | 52.9   | 52.9   | 47.4 | 46.8   |

**TAT** – Total Air Temperature

**Z** - Altitude

Note 1: Maintaining the N1 above the minimum anti-ice N1 on both 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 excessive airspeed. If, the airspeed remains higher than required, it is authorized to reduce the thrust by reducing the N1 below to values indicated in the Table 1 of this Appendix for **the last 3 minutes before touchdown**. In this case disengage Autothrottle, if previously engaged. This 3 minutes operation below the minimum N1 does not apply to any other in-flight icing situation.

Note 2: During ground operations before take-off, the engine anti ice system remains efficient when engine power levers are at idle.

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### Effectivity: F2000EX without SB F2000EX-384

This AD is not applicable to aircraft equipped with air inlets P/N 06ND71600-3 or with a “NTR-RKFAL97” or “NTR-RKFAL98” tagged on their data plates.



## Appendix 2

## Example of air inlet data plate marked with NORDAM Rework Kit (NRK)



NRK : NTR-RKFAL97



NRK : NTR-RKFAL98

