
AIRWORTHINESS DIRECTIVE

For the reasons set out in the background section, the CASA delegate whose signature appears below issues the following Airworthiness Directive (AD) under subregulation 39.001(1) of CASR 1998. The AD requires that the action set out in the requirement section (being action that the delegate considers necessary to correct the unsafe condition) be taken in relation to the aircraft or aeronautical product mentioned in the applicability section: (a) in the circumstances mentioned in the requirement section; and (b) in accordance with the instructions set out in the requirement section; and (c) at the time mentioned in the compliance section.

Propellers - Variable Pitch - Hamilton Standard

AD/PHS/23

Blade Spar Corrosion

**7/2006
TX**

Applicability: Hamilton Sundstrand (formerly Hamilton Standard Division) model 14RF-9 propellers with propeller blades of the "+E" repair configuration (excludes "+E2" repair configuration) having serial numbers (SNs) below 885751.

Note 1: These propellers are installed on, but not limited to, Embraer 120 aeroplanes.

Note 2: The "+E" blade marking can be found on the blade airfoil or stamped on the blade shank, adjacent to the blade and pin assembly part number.

Note 3: If the blade is stamped with "+E2" no further action is required.

Requirement: **1. Initial Inspection of Installed Blades Not Previously Inspected**

For installed blades not previously inspected using Hamilton Sundstrand Alert Service Bulletin (ASB) No. 14RF-9-61-A143, dated 21 November 2005; or Revision 1, dated 5 December 2005; or ASB No. 14RF-9-61-A144, dated 27 February 2006; or ASB No. 14RF-9-61-A145, dated 13 April 2006; or ASB No. 14RF-9-61-146, dated 3 April 2006, perform initial visual, feeler gage, and tap test inspections for delamination in accordance with paragraph 3 of the Accomplishment Instructions of Hamilton Sundstrand ASB No. 14RF-9-61-A145.

2. 2nd Inspection of Installed Blades

For installed blades that have not been reinspected using Hamilton Sundstrand ASB No. 14RF-9-61-A143 original issue or Revision 1; or ASB No. 14RF-9-61-A144; or ASB No. 14RF-9-61-A145; or ASB No. 14RF-9-61-A146, perform a 2nd inspection of installed blades for delamination in accordance with paragraph 3 of the Accomplishment Instructions of Hamilton Sundstrand ASB No. 14RF-9-61-A145.

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AD/PHS/23 (continued)

3. Blades Placed in Service After the Effective Date of This AD

For blades being installed after the effective date of this AD that were not previously inspected using Hamilton Sundstrand ASB No. 14RF-9-61-A143 original issue or Revision 1; or ASB No. 14RF-9-61-A144; or ASB No. 14RF-9-61-A145, do the following:

- (a) Perform initial visual, feeler gage, and tap test inspections for delamination in accordance with paragraph 3 of the Accomplishment Instructions of Hamilton Sundstrand ASB No. 14RF- 9-61-A146.
- (b) Perform a 2nd inspection for delamination in accordance with paragraph 3 of the Accomplishment Instructions of Hamilton Sundstrand ASB No. 14RF-9-61-A146.

4. Blades That Fail Inspection

Remove propeller blades from service that fail inspection.

5. Blade Removal From Service

Remove from service all blades of the "+E" repair configuration having SNs below 885751.

6. "+E" repair configuration having SNs below 885751.

Do not install any blades of the "+E" repair configuration having SNs below 885751, onto any propeller.

Note 4: Hamilton Sundstrand ASB No. 14RF-9-61-A147, dated 19 April 2006, contains information on upgrading the removed blades to the "+E2" repair configuration.

7. Inspection Reporting Requirement

Record the inspection data on a copy of the data sheet. The data sheet is on page 10 of ASB No. 14RF-9-61-A145 and ASB No. 14RF-9-61-A146. Report the inspection data to Hamilton Sundstrand, fax 0011-1-800-654-5107, and CASA via the SDR reporting system.

Note 5: FAA AD 2006-10-07 Amdt 39-14591 refers.

- Compliance:
1. Within 10 flight cycles or 5 days after the effective date of this AD, whichever occurs first.
 2. After accumulating an additional 500 flight cycles or by 1 July 2006, whichever occurs first, after the effective date of this AD.

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AD/PHS/23 (continued)

3. (a) Before installing the blade.
3. (b) At least 7 days after installing the blade, but no later than 60 days after the initial inspection.
4. Before further flight, after the effective date of this AD.
5. By 1 March 2007.
6. After 1 March 2007.
7. Within 10 days after each blade inspection, unless previously accomplished.

This Airworthiness Directive becomes effective on 25 May 2006.

Background: This AD results from reports of delaminated blade fibreglass repair patches that allowed corrosion to form on the aluminium blade spar under the patch. The requirements of this AD are to prevent blade failure that could result in separation of a propeller blade and loss of control of the aeroplane.



James Coyne
Delegate of the Civil Aviation Safety Authority

22 May 2006