MAINTENANCE MANUAL
14SF-5

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# VARIABLE PITCH AIRCRAFT PROPELLER

## MODEL NUMBER:

## 14SF-5



## PROPELLER SYSTEM MAINTENANCE MANUAL

### AIRWORTHINESS LIMITATIONS SECTION - FAA APPROVED
### REMAINDER OF MANUAL - FAA ACCEPTED

# AIRWORTHINESS LIMITATIONS

## 1. General

A. The Airworthiness Limitations section is FAA approved and specifies maintenance required under §§ 43.16 and 91.403 of the Federal Aviation Regulations unless an alternative program has been FAA approved.

## 2. Major Inspection Intervals

A. Refer to the CHECK Section of Component Maintenance Manual 61-13-02 for instructions on how to do a Major Inspection (MI).

B. The Major Inspection intervals are listed in Table AL-1. It is the responsibility of the operator to monitor flight hours for each component listed in Table AL-1 and to make sure no component remains in service beyond its listed inspection interval time.

C. In addition to the published operating time limits for blades and hubs, the requirement for repetitive MI of these components will be no later than seven (7) years (or 84 months) since the Date Since Installation (DSI). The DSI will begin upon the initial installation after the most recent MI or initial installation after production.

D. Propeller blades and hubs must now be subjected to MI based on published operating time limits for the component or 7 years from the DSI, whichever comes first.

Table AL-1. Major Inspection Intervals

| ITEM | PART NUMBER | INSPECTION INTERVAL (FLIGHT HOURS) | INSPECTION INTERVAL (CALENDAR TIME) |
|---|---|---|---|
| Blade and Pin Assembly | SFA13G1R0A, SFA13M1R0A, SFA13M1P0A, SFA13U1R0A, SFA13U1P0A | 10,000 | 7 Years |
| Hub | 782701-5, 782701-4 | 10,000 | 7 Years |
| Outer Bearing Race* | 782301-1 | 10,000 | Not Applicable |
| Inner Bearing Race (Two-Piece) | 782303-1 | 10,000 | Not Applicable |
| Actuator Assembly | 790180-2, 790180-3 | 10,000 | Not Applicable |
| * **>>DCC<<** The outer bearing race must be removed, discarded, and replaced at each inspection interval (see the CHECK Section of Component Maintenance Manual 61-13-02). It is permissible to use the propeller hub time to track the total time of the outer bearing race. | | | |

## 3. Critical Part Inspections

A. The components listed in Table AL-2 require inspection to assure continued airworthiness. Component assemblies must be removed from service and subjected to the required inspections.

B. Critical Part Inspections accomplished in accordance with the CHECK section of the applicable Component Maintenance Manual, at the intervals given in Table AL-2, satisfy the requirements of Airworthiness Directive (AD) 96-25-20 as an alternate method of compliance as approved by letter from the manager, FAA Boston Aircraft Certification Office, on June 3, 1999.

C. It is the responsibility of the operator to monitor the flight hours for each component listed in Table AL-2.

Table AL-2. Propeller Components With Mandatory Inspections

| ITEM | PART NO. | INSPECTION INTERVAL (FLIGHT HOURS) |
|---|---|---|
| Actuator Assembly* | 790180-2, 790180-3 | Maximum 10,500 hour intervals |
| Oil Transfer Tube and Retainer* | 814829-1<br>782515-1 | Initial Inspection*** within 6000 hours or three years after the effective date of AD 96-25-20 (February 7, 1997)<br><br>Repeat Inspection - Maximum 10,500 hour intervals |
| Propeller Control Unit** (PCU) | 782490-6, A6, -11, A11, -18, A18, -29, A29, -40, A40, -51, A51 | Initial Inspection*** within 6000 hours or three years after the effective date of AD 96-25-20 (February 7, 1997)<br><br>Repeat Inspection - Maximum 10,500 hour intervals |

* Do the inspections for these components in accordance with Component Maintenance Manual 61-13-02. The tube may be inspected using this Maintenance Manual.

** Do the inspections for these components in accordance with Component Maintenance Manual 61-21-07.

*** Parts manufactured after the effectivity of date of AD 96-25-20 (February 7, 1997) have met the initial inspection requirement (paragraph 2.(a)) by an alternate method of compliance as approved by letter from the manager, FAA Boston Aircraft Certification Office, on June 3, 1999.

## 4. Ballscrew Spline Inspection

A. The internal spline of the ballscrew in the PCUs listed in Table AL-3 requires inspection to assure continued airworthiness. Component assemblies must be removed from service and be subjected to the required inspections at intervals established in AD 95-22-12. The intervals are based on the time since new or time since last inspection. Do the inspection in accordance with the CHECK section of Chapter 61-22-00 (Propeller Control and Adapter).

B. It is the responsibility of the operator to monitor the flight hours for the PCU.

Table AL-3. Propeller Control Unit Components With Mandatory Inspections

| ITEM | PART NUMBER | INSPECTION INTERVAL (FLIGHT HOURS) |
|---|---|---|
| Propeller Control Unit (PCU) (Without Quill Damper, and without Secondary Drive Quill) | 782490-6, A6, -11, A11, -18, A18 | See Airworthiness Directive 95-22-12 |
| Propeller Control Unit (PCU) (With Quill Damper, and without Secondary Drive Quill) | 782490-29, A29 and PCUs with the marking "SB14SF-61-67" on the Identification Plate | See Airworthiness Directive 95-22-12 |

## 5. PCU Primary Quill Torque Check

A. The PCU Part Numbers listed in Table AL-4 are equipped with a secondary drive quill and require an inspection to assure continued airworthiness. Component assemblies must be subjected to the required inspection at intervals established in AD 95-22-12. The intervals are based on the time since new or time since last inspection. Do the inspection in accordance with the CHECK section of Chapter 61-22-00 (Propeller Control and Adapter).

B. It is the responsibility of the operator to monitor the flight hours for the PCU.

Table AL-4. Propeller Control Unit Components With Mandatory Inspections

| ITEM | PART NUMBER | INSPECTION INTERVAL (FLIGHT HOURS) |
|---|---|---|
| Propeller Control Unit (PCU) | 782490-40, A40, -51, A51 | See Airworthiness Directive 95-22-12 |

## 6. Special Instructions

A. If there is evidence of overspeed, foreign object damage, lightning damage, or overtorque, do the inspection procedures in paragraphs 6., 7., 8., and 9. in Chapter 61-10-00, CHECK, in this manual. Complete the appropriate form (Figure 502, Figure 504, or Figure 505) and send a copy to the Hamilton Sundstrand address specified on it. Also, if necessary, make sure that a report of the incident is provided to the Federal Aviation Administration (FAA) in accordance with FAR 21.3 requirements.

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