EASA

TYPE-CERTIFICATE
DATA SHEET

Number : P.016
Issue : 1
Date : 23 October 2006
Type : Avia Propeller Ltd.
AV-843 series propellers

Variants
AV-843-1

List of effective Pages:

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</table>
I. General

1. Type/Variants:

   AV-843 / AV-843-1

2. Type Certificate Holder:

   Avia Propeller Ltd.
   Beranovych 85/866
   199 00 Praha 9 – Letnany
   Czech Republic

3. Manufacturer:

   Avia Propeller Ltd.
   Beranovych 85/866
   199 00 Praha 9 – Letnany
   Czech Republic

4. EASA Certification Application Date:

<table>
<thead>
<tr>
<th>AV-843-1</th>
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<td>04 September 2003</td>
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Note: Application was made to CAA Czech Republic before EASA had been established. The reference date for determining the applicable airworthiness standards has been agreed as: 23 October 2003.

5. EASA Certification Date:

<table>
<thead>
<tr>
<th>AV-842-1</th>
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<tbody>
<tr>
<td>23 October 2006</td>
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II. Certification Basis

1. EASA Certification Basis:

   1.1 Airworthiness Standards:
       JAR-P Change 7 dated 22 October 1987 as modified by Amendment P/96/1 of August 8, 1996

   1.2 Special Conditions (SC): None

   1.3 Exemptions: None

   1.4 Equivalent Safety Findings (ESF): None
III. Technical Characteristics

1. Type Design Definition:

The AV-843-1 propeller model covers the following design configurations, which mainly have a different mechanical design of the blade pitch change mechanism, and each one of the design configuration optionally may have different versions of the hub flange. Each design configuration is defined by a main assembly drawing and an appropriate parts list.

AV-843-1-(*1) and AV-843-1-(*1)-C
Design Configuration “Constant Speed”
Drawing No. 101-0000 dated January 2, 2005 (*2)
Parts List No. R-101-0000 dated January 2, 2005 (*2)

Note:

(*1) optionally different versions of hub flange available
B = AS-127-D, SAE No.2 mod., ½ inch bolts
C = SAE No. 2 mod., 7/16 Inch - 20 UNF bolts
D = ARP 502

(*2) effective is the declared issue or a later approved revision

2. Description:

3-blade variable pitch propeller with a hydraulically operated blade pitch change mechanism providing the operation modes “Constant Speed”. The hub and blades are milled out of aluminum alloy. Optionally the propeller may have installed a spinner and ice protection equipment.

3. Equipment:

Spinner: according to Avia Propeller Service Bulletin No. 2
Governor: according to Avia Propeller Service Bulletin No. 3
Ice Protection: according to Avia Propeller Service Bulletin No. 4

4. Dimensions:

Propeller-Diameter: max. 214 cm

5. Weights:

Propeller-Design Configuration “Constant Speed”: approx. 35 kg

6. Hub/Blade-Combinations:

<table>
<thead>
<tr>
<th>Hub</th>
<th>Blade-Type</th>
</tr>
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<tbody>
<tr>
<td>AV-843-1</td>
<td>-410</td>
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</table>
7. Control System:

Hydraulically operating governors corresponding to the data of Avia Propeller Service Bulletin No. 3.

8. Adaptation to Engine:

Hub flanges corresponding to the particular letter in the propeller designation (see chapter VI.4.).

9. Sense of Rotation:

Sense of rotation (viewed in flight direction) corresponding to the particular letter in the propeller designation (see chapter VI.4.).

IV. Operational Limitations

1. Propeller Speed:

max. 2700 min\(^{-1}\)

2. Driving Power:

max. 224 kW for a propeller-diameter/speed of max. 214 cm / 2700 min\(^{-1}\)

3. Propeller Pitch Angle:

from +10° to +40°

V. Operating and Service Instructions

| Operation and Installation Manual for hydraulically controlled variable pitch propeller | No. EN-1368  
Issue May 15, 2006 (*) |
|-------------------------------------------------------------------------------------------------|------------------------|
| Overhaul Manual and Parts List for hydraulically controlled variable pitch propeller          | No. EN-1367  
Issue December 3, 2004 (*) |
| Service Bulletins                                                                              | as noted in the current List of Service Bulletins |

(*) effective is the declared issue or a later approved revision

VI. Notes

1. The suitability of a propeller for a certain aircraft/engine-combination must be demonstrated within the scope of the type certification of the aircraft.

2. Propeller/engine/aircraft-combinations that have been demonstrated to comply with the requirements of JAR-P60(b), 160(b), 190 and 220 are listed in Avia Propeller Service Bulletin No. 5.

3. The overhaul intervals recommended by the manufacturer are listed in Avia Propeller Service Bulletin No. 1.
4. Propeller designation system

<table>
<thead>
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<th>Hub</th>
<th>Blade</th>
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<tr>
<td>AV - 843 - 1</td>
<td>B () () () / () () 214 - 410 ()</td>
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<tr>
<td>1 2 3 4 5 6 7 8 9 10 11 1 2 3 4 5</td>
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Hub

1. Avia Propeller (manufacturer)
2. V - Variable Pitch Propeller
3. Blade Root Type
4. Number of Blade
5. No. of variant of the propeller model

6. code letter for flange type
   B = AS-127-D, SAE No.2 mod., ½ inch - 20 UNF bolts
   C = SAE No. 2 mod., 7/16 inch - 20 UNF bolts
   D = ARP 562

7. code letter for counterweights
   blank = no or small counterweights for pitch change forces to decrease pitch
   C = counterweights for pitch change forces to increase pitch

8. code letter for feather provision
   blank = no feather position possible
   F = feather position installed

9. code letter for reverse provision
   blank = no reverse position possible
   R = reverse position installed

10. code letter for reverse system

11. code letter for design changes
    small letter for changes which do not affect interchangeability
    capital letter for changes which restrict or exclude interchangeability
Blade

1  code letter for position of pitch change pin
   Blank = pitch change pin position for pitch change forces to decrease pitch
   C     = pitch change pin position for pitch change forces to increase pitch
   CF    = pitch change pin position for feather provision; pitch change forces to increase pitch
   CR    = pitch change pin position for reverse provision; pitch change forces to increase pitch
   CFR   = pitch change pin position for feather and reverse provision; pitch change forces to increase pitch

2  code letter for blade design and installation
   blank = right-hand tractor
   RD    = right-hand pusher
   L     = left-hand tractor
   LD    = left-hand pusher

3  propeller diameter in cm

4  No. of blade type (contains design configuration and aerodynamic data) according to the certified hub/blade – combinations

5  code letter for design changes
   small letter for changes which do not affect interchangeability of blade set
   capital letter for changes which restrict or exclude interchangeability of blade set