TYPE-CERTIFICATE
DATA SHEET

No. P. 019

for
AV-803 PROPELLER

Type Certificate Holder
Avia Propeller Limited

Beranovych 65/666
199 00 Praha 9 – Letnany
Czech Republic

For Models:
AV-803-1
TABLE OF CONTENTS

I. General ......................................................................................................................... 4
   1. Type/Variants: ........................................................................................................... 4
   2. Type Certificate Holder: .......................................................................................... 4
   3. Manufacturer: .......................................................................................................... 4
   4. EASA Certification Application Date: ....................................................................... 4
   5. EASA Certification Date: ......................................................................................... 4
II. Certification Basis ........................................................................................................ 4
   1. EASA Certification Basis: ........................................................................................ 4
      1.1 Airworthiness Standards: ..................................................................................... 4
      1.2 Special Conditions (SC): None .............................................................................. 4
      1.3 Exemptions: None .................................................................................................. 5
      1.4 Equivalent Safety Findings (ESF): None ............................................................... 5
III. Technical Characteristics .......................................................................................... 5
   1. Type Design Definition: ............................................................................................ 5
   2. Description: ............................................................................................................... 5
   3. Equipment: ............................................................................................................... 5
   4. Dimensions: ............................................................................................................. 6
   5. Weights: ................................................................................................................... 6
   6. Hub/Blade-Combinations: ....................................................................................... 6
   7. Control System: ....................................................................................................... 6
   8. Adaptation to Engine: ............................................................................................ 6
   9. Sense of Rotation: ................................................................................................... 6
IV. Operational Limitations ............................................................................................. 6
   1. Propeller Speed: ....................................................................................................... 6
   2. Driving Power: ......................................................................................................... 6
   3. Propeller Pitch Angle: ............................................................................................ 6
V. Operating and Service Instructions ............................................................................ 7
VI. Notes ............................................................................................................................ 7
I. General

1. Type/Variants:

AV-803 / AV-803-1

2. Type Certificate Holder:

Avia Propeller Ltd.
Beranovych 65/666
199 00 Praha 9 – Letnany
Czech Republic

Design Organisation Approval No: EASA.21J.072

3. Manufacturer:

Avia Propeller Ltd.
Beranovych 65/666
199 00 Praha 9 – Letnany
Czech Republic

4. EASA Certification Application Date:

<table>
<thead>
<tr>
<th>Type</th>
<th>Application Date</th>
</tr>
</thead>
<tbody>
<tr>
<td>AV-803-1</td>
<td>19 April 2004</td>
</tr>
</tbody>
</table>

Note: Application was made to CAA Czech Republic before Czech Republic had become EU member. The reference date for determining the applicable airworthiness standards has been agreed as: 23 October 2003.

5. EASA Certification Date:

<table>
<thead>
<tr>
<th>Type</th>
<th>Certification Date</th>
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</thead>
<tbody>
<tr>
<td>AV-803-1</td>
<td>27 March 2007</td>
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</tbody>
</table>

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-803-1 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-803-1-(*1) and AV-803-1-(*1)-C
Design Configuration “Constant Speed”
Drawing No. 106-0000 (hub flange B, D) dated February 9, 2007 (*2)
106-0003 (hub flange K) dated February 9, 2007 (*2)
Parts List No. R-106-0000 (hub flange B, D) dated February 9, 2007 (*2)
R-106-0003 (hub flange K) dated February 9, 2007 (*2)

AV-803-1-(*1)-C-F-R(W)
Design Configuration “Constant Speed, Feather, Reverse (System Walter)”
Drawing No.106-0001 (hub flange E) dated February 9, 2007 (*2)
Parts List No. R-106-0001 (hub flange E) dated February 9, 2007 (*2)

Note:

(*1) optionally different versions of hub flange available
B = AS-127-D, SAE No.2 mod., ½ inch bolts
D = ARP 502
E = ARP 880
K = M14 Flange

(*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”, “Reverse” and “Feather”. 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. 270 cm

5. Weights:

Propeller-Design Configuration
“Constant Speed”:
“Constant Speed, Reverse, Feather”: approx. 65 kg
approx. 64 kg

6. Hub/Blade-Combinations:

<table>
<thead>
<tr>
<th>Hub</th>
<th>Blade-Type</th>
</tr>
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<tbody>
<tr>
<td>AV-803-1</td>
<td>-412, -420, -422, -423</td>
</tr>
</tbody>
</table>

7. Control System:

Propeller governors as listed in Avia Propeller Service Bulletin No. 3.

8. Adaptation to Engine:

Hub flanges as identified by a letter in the propeller designation (refer to note VI.3).

9. Sense of Rotation:

Sense of rotation (viewed in flight direction) as identified by a letter in the propeller designation (refer to note VI.3).

IV. Operational Limitations

1. Propeller Speed:

max. 2080 min⁻¹

2. Driving Power:

Turbine Version – max. 635 kW for a propeller-diameter/speed of max 270 cm / 2080 min⁻¹
Piston Version - max. 269 kW for a propeller-diameter/speed of max. 270 cm / 1941 min⁻¹

3. Propeller Pitch Angle:

from -21° up to +82° measured at 75% radius station
V. Operating and Service Instructions

| Operation and Installation Manual for hydraulically controlled variable pitch propeller | No. EN-1366  
Date of Latest Issue/Revision  
December 12, 2006 (*) |
| --- | --- |
| Operation and Installation Manual for reversible hydraulically controlled variable pitch propeller; Reverse-Systems (G), (P), (W) | No. EN-1320  
Date of Latest Issue/Revision  
December 12, 2006 (*) |
| Overhaul Manual and Parts List for hydraulically controlled variable pitch propeller | No. EN-1367  
Date of Latest Issue/Revision  
December 12, 2006 (*) |
| Overhaul Manual and Parts List for reversible hydraulically controlled variable pitch propeller; Reverse-Systems (G), (P), (W) | No. EN-1291  
Date of Latest Issue/Revision  
December 12, 2006 (*) |
| Overhaul Manual for Metal Blades (AV Series Blade) | No. EN-1370  
Date of Latest Issue/Revision  
December 12, 2006 (*) |
| 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. The overhaul intervals recommended by the manufacturer are listed in Avia Propeller Service Bulletin No. 1.

3. Propeller designation system

```
Hub / Blade
AV - 803 - 1 - E - ( ) - ( ) - ( ) - ( ) - ( ) 270 – 412 ( )
1 2 3 4 5 6 7 8 9 10 11 1 2 3 4 5
```

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
   D = ARP 502
   E = ARP 880
   K = M14 Flange

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
    (W) = System Walter

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

VII. Change Record

<table>
<thead>
<tr>
<th>Issue</th>
<th>Date</th>
<th>Changes</th>
<th>TC Issue</th>
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<tbody>
<tr>
<td>Issue 01</td>
<td>27 March 2007</td>
<td>Initial Issue</td>
<td>Initial Issue, 27 March 2007</td>
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<tr>
<td>Issue 02</td>
<td>20.07.2016</td>
<td>Increasing of max. driving power to 635kW</td>
<td>20.07.2016</td>
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