



TYPE-CERTIFICATE DATA SHEET

No. P.026

for
V 503 series propellers

Type Certificate Holder
Avia Propeller Ltd.

Beranových 65/666
199 00 Praha 9 - Letňany
Czech Republic

For Models:

V 503
V 503P
V 503A
V 503AP



Intentionally left blank



TABLE OF CONTENTS

I.	General	4
1.	Type / Model	4
2.	Manufacturer	4
3.	Date of Application.....	4
4.	EASA Type Certification Date	4
II.	Certification Basis	4
1.	State of Design Authority Certification Basis	4
2.	Reference Date for determining the applicable airworthiness requirements.....	4
3.	EASA Certification Basis.....	4
3.1.	Airworthiness Standards	4
3.2.	Special Conditions	5
3.3.	Equivalent Safety Findings.....	5
3.4.	Deviations	5
III.	Technical Characteristics	5
1.	Type Design Definition	5
2.	Description	5
3.	Equipment	5
4.	Dimensions	5
5.	Weight	5
6.	Hub / Blade-Combinations	5
7.	Control System	6
8.	Adaptation to Engine.....	6
9.	Direction of Rotation	6
IV.	Operating Limitations	6
1.	Maximum Take Off Power and Speed.....	6
2.	Maximum Continuous Power and Speed.....	6
3.	Propeller Pitch Angle	6
VI.	Notes	7
SECTION: ADMINISTRATIVE.....		7
I.	Acronyms and Abbreviations	7
II.	Type Certificate Holder Record	7
III.	Change Record	7



I. General

1. Type / Model

V 503 / V 503P / V 503A / V503AP

2. Manufacturer

Avia Propeller Ltd.
Beranových 65/666
199 00 Praha 9 - Letňany
Czech Republic

3. Date of Application

V 503	V 503P	V 503A	V 503AP
26.03.1964	26.03.1964	25.04.1969	31.03.1998

4. EASA Type Certification Date

V 503	V 503P	V 503A	V 503AP
12.10.1964	12.10.1964	21.05.1969	08.06.1998

Type certification of the V 503 series propeller model has been covered previously by Czech Republic Type Certificate No.64 002, Amendment 1 incl. and partly by No.69-02 and No.98-08.

II. Certification Basis

1. State of Design Authority Certification Basis

Czech Republic

2. Reference Date for determining the applicable airworthiness requirements

26 March 1964 (for later updated amendments 25 April 1969 and 31 March 1998 were used).

3. EASA Certification Basis

3.1. Airworthiness Standards

Initially §9 of the Civil Aviation Law No.47/1956, dated 1 October 1956 (Czechoslovakia) and ICAO Standards.

Later compliance with FAR Part 35-6 dated August 18, 1989 had been shown.

Note:

Application was made to CAA - Czech Republic (former Czechoslovakia) before EASA was established. The applicable airworthiness standards were established in accordance with the rule in Czech Republic (former Czechoslovakia) at the time of application.



3.2. Special Conditions

None

3.3. Equivalent Safety Findings

None

3.4. Deviations

None

III. Technical Characteristics

1. Type Design Definition

The V 503 propeller model covers the following design configuration. Design configuration is defined by a main assembly drawing and an appropriate parts list.

V 503, V503P, V503A

Design Configuration "Automatic"

Drawing No. 053-0000 dated June 25, 2009 (*1)

Parts List No. R-053-0000 dated June 25, 2009 (*1)

V 503AP

Design Configuration "Automatic"

Drawing No. 073-0000 dated June 24, 2009 (*1)

Parts List No. R-073-0000 dated June 24, 2009 (*1)

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

2. Description

2-blade automatic variable pitch propeller with an hydraulically operated blade pitch change mechanism. The hub is milled out of steel and blades are milled out of aluminum alloy.

3. Equipment

n/a

4. Dimensions

Propeller diameter: max. 200 cm

5. Weight

Propeller-Design Configuration

V 503 / V 503P / V 503A: approx. 26 kg

V 503AP: approx. 32 kg

6. Hub / Blade-Combinations

Hub	Blade-Type
V 503()	-1850, -1900, -1905, -1950, -2000



7. Control System

Hydraulic - Automatic

8. Adaptation to Engine

V 503 / V 503P / V 503A - flange, bolt spacing diameter 120 mm

V 503AP - AS-127-D, SAE No.2 mod., ½ inch - 20 UNF bolts

- SAE No.2 mod., 7/16 inch - 20 UNF bolts

9. Direction of Rotation

V503 / V503A - left-hand tractor (viewed in flight direction)

V503P / V503AP - right-hand tractor (viewed in flight direction)

IV. Operating Limitations

1. Maximum Take Off Power and Speed

164 kW at 2750 min⁻¹ - for V 503, V 503P and V 503A propellers - diameter 200 cm

120 kW at 2750 min⁻¹ - for V 503AP propeller - diameter 190,5 cm

2. Maximum Continuous Power and Speed

164 kW at 2750 min⁻¹ - for V 503, V 503P and V 503A propellers - diameter 200 cm

120 kW at 2750 min⁻¹ - for V 503AP propeller - diameter 190,5 cm

3. Propeller Pitch Angle

From +12° to +31° measured at reference station

V. Operating and Service Instructions

Operation and Installation Manual	P/N E-1651 Date of Latest Issue/Revision Issue 1, June 25, 2009 (*)
Overhaul Manual	P/N E-1650 Date of Latest Issue/Revision Issue 1, June 25, 2009 (*)
Overhaul Manual for Metal Blades	P/N EN-1370 Date of Latest Issue/Revision Issue 2, March 17, 2009 (*)
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 the propeller for a given 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.

The EASA approved Airworthiness Limitations Section of the Instructions for Continued Airworthiness is published in the applicable "Propeller Operation and Installation Manual" document, chapter "Airworthiness Limitations".

3. EASA Type Certificate and Type Certificate Data Sheet No.P.026 replace CAA - Czech Republic Type Certificate and Type Certificate Data Sheet No.64 002 Amendment 1 incl., No.69-02 and No.98-08.

SECTION: ADMINISTRATIVE

I. Acronyms and Abbreviations

n/a

II. Type Certificate Holder Record

n/a

III. Change Record

TCDS Issue	Date	Changes	TC issue
Issue 01	30 June 2009	Initial Issue	Initial Issue, 30 June 2009
Issue 02	15 December 2022	Addition of a sentence to Note 2 in Chapter VI. Notes: The EASA approved Airworthiness Limitations Section of the Instructions for Continued Airworthiness is published in the applicable „Propeller Operation and Installation Manual“ document, chapter Airworthiness Limitations. (Major Change Approval 10080699)	

-END-

