European Aviation Safety Agency

EASA

TYPE-CERTIFICATE
DATA SHEET

Number : P.026
Issue : 01
Date : 30 June 2009
Type : Avia Propeller Ltd.
V 503 series propellers

Variants
V 503
V 503P
V 503A
V 503AP

List of effective Pages:

Page	1	2	3	4	5	6											
Issue	1	1	1	1	1	1											

Intentionally left blank

I. General

1. Type/Variants

V 503/V 503P/V 503A/V 503AP

2. Type Certificate Holder

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

Design Organisation Approval No.: EASA.21J.072

3. Manufacturer

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

4. Date of Application

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

5. Reference Date for determination of the applicable requirements

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

6. 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. 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.

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

V 503, V 503A - left-hand tractor (viewed in flight direction).
V 503P, V 503AP - right-hand tractor (viewed in flight direction).

IV. Operational Limits

1. Propeller Speed:

max. 2750 min^{-1}

2. Max.Take-Off Power:

164 kW – for a V 503, V 503P and V 503A propeller – diameter/ speed of max 200 cm / 2750 min^{-1}
120 kW - for a V 503AP propeller – diameter/ speed of max 190,5 cm / 2750 min^{-1}

3. Max.Continous Power:

164 kW – for a V 503, V 503P and V 503A propeller – diameter/ speed of max 200 cm / 2750 min^{-1}
120 kW - for a V 503AP propeller – diameter/ speed of max 190,5 cm / 2750 min^{-1}

4. 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 Overhaul Manual for Metal Blades	P/N E-1650 Date of Latest Issue/Revision Issue 1, June 25, 2009 (*) 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.

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.
