European Aviation Safety Agency

EASA

TYPE-CERTIFICATE
DATA SHEET

Number : P.029
Issue : 03
Date : 18.12.2012
Type : Avia Propeller Ltd.
V 510 series propellers

Models
V 510
V 510T
V 510AG

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I. General

1. Type/Models

V 510/V 510T/V 510AG

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 510	V 510T	V 510AG
12.12.1984	18.05.1992	21.11.1995

5. Reference Date for determination of the applicable requirements

12 December 1984 (for later updated amendments 02 February 1989 and 18 May 1992 was used)

6. Certification Date

V 510	V 510T	V 510AG
28.11.1985	30.05.1994	22.12.1995

Type certification of the V 510 series propeller models has been covered previously by Czech Republic Type certificate No.89-04, Rev.No. 7 and partly by No. 85-02.

II. Certification Basis

1. Airworthiness Standards

Initially NLGS-2, dated 1974, Amendment 1 to 6 including.

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 510 propeller model covers the following design configurations. Each design configuration is defined by a main assembly drawing and an appropriate parts list.

V 510, V 510T, V 510AG
Design Configuration “Constant Speed, Feather, Reverse (System Walter)”
Drawing No. 068-0000 dated April 30, 2009 (*1)
Parts List No. R-068-0000 dated April 30, 2009 (*1)

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

2. Description

5-blade variable pitch propeller with a hydraulically operated blade pitch change mechanism providing the operation modes “Constant Speed”, “Feather”, and “Reverse”. The hub is milled out of steel 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.230 cm

5. Weight

Propeller-Design Configuration
"Constant Speed, Feather, Reverse": approx. 83,7 kg

6. Hub/Blade-Combinations

Hub	Blade-Type
V 510( )	-90

7. Control System

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

8. Adaptation to Engine

Flange, bolt spacing diameter 107,95 mm

9. Direction of Rotation

Right-hand tractor (viewed in flight direction).

IV. Operational Limits

1. Propeller Speed:

max. 2080 min^{-1}

2. Max.Take-Off Power:

635 kW

3. Max. Continuous Power:

635 kW

4. Propeller Pitch Angle:

From -24° to +79,5° measured at 75% radius station

V. Operating and Service Instructions

Operation and Installation Manual	P/N E-1500 Date of Latest Issue/Revision Issue 1, March 17, 2009 (*)
Overhaul Manual Overhaul Manual for Metal Blades	P/N E-1461 Date of Latest Issue/Revision Issue 1, March 17, 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.029 replace CAA - Czech Republic Type Certificate and Type Certificate Data Sheet No.89-04, Rev.No. 7.

4. Propeller designation system:

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  Hub       / Blade
V 510 ( )   / 90  A /  A
1       2       1   2    3
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Hub

1 - Propeller model V510

2 - code letter for hub model

blank = basic model
T = used at trainer operation
AG = used at agricultural aircraft

Blade

1 - propeller diameter in inches

2 - code letter for blade type (contains design configuration and aerodynamic data) according to the certified hub/blade – combinations

3 - code letter for de-icing

A = without de-icing
B = 28 VDC, dual element
C = 3x200 VAC, dual element
