



TYPE-CERTIFICATE DATA SHEET

No. P.029

for

V 510 series propellers

Type Certificate Holder

Avia Propeller Ltd.

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

For Models:

V 510

V 510AG

V 510T



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I. General

1. Type/ Model

V 510, V 510AG, V 510T

2. Manufacturer

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

3. Date of Application

V 510	V 510T	V 510AG
12.12.1984	18.05.1992	21.11.1995

4. EASA Type 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. State of Design Authority Certification Basis

Czech Republic

2. Reference Date for determining the applicable airworthiness requirements

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

3. EASA Certification Basis

3.1. 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.

3.2. Special Conditions

None



3.3. Equivalent Safety Findings

None

3.4. Deviations

None

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()	-90A, -90B



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. Operating Limitations

1. Maximum Take Off Power and Speed

635 kW
2080 RPM

2. Maximum Continuous Power and Speed

635 kW
2080 RPM

3. 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	P/N E-1461 Date of Latest Issue/Revision Issue 1, March 17, 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.029 replace CAA - Czech Republic Type Certificate and Type Certificate Data Sheet No.89-04, Rev.No. 7.

4. Propeller designation system:

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

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



SECTION: ADMINISTRATIVE

I. Acronyms and Abbreviations

CAA	Civil Aviation Authority
EASA	European Union Aviation Safety Agency
FAR 33	Federal Aviation Regulation - Part 33 - Airworthiness standards: Aircraft engines

II. Type Certificate Holder Record

Avia Propeller Ltd.

III. Change Record

TCDS Issue	Date	Changes	TC issue
Issue 01	06 May 2009	Initial Issue	Initial Issue, 06 May 2009
Issue 02	08 June 2011	Increasing of Max. Take-off Power and Max. Continuous Power up to 597 kW as defined in document: "Propeller type series V 510 - Certification Program", doc.No.E-1701. (EASA Major Change Approval 10035227)	
Issue 03	18 December 2012	Increasing of Max. Take-off Power and Max. Continuous Power up to 635 kW as defined in document: "Propeller type series V 510 - Certification Program", doc.No.E-1701. (EASA Major Change Approval 10042726)	
Issue 04	02 February 2021	Change to new TCDS template format. Correction of an error on blade designation (-90) during the transcription of Czech TCDS 89-04 into TCDS EASA in 2009. Add blade 90B into prop V 510 series (EASA Major Change Approval 10075471)	
Issue 05	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 10080690)	

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