

**COMANDO DA AERONÁUTICA
DEPARTAMENTO DE PESQUISAS E DESENVOLVIMENTO
CENTRO TÉCNICO AEROESPACIAL**

TYPE CERTIFICATE DATA SHEET Nº EH-9407

Type Certificate Holder:

AVIA PROPELLER Ltd.
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CZECH REPUBLIC

EH-9407-02

Sheet 01

AVIA PROPELLER

V510
V510 AG

April 2004

Propellers of models described herein conforming with this data sheet, which is part of Type Certificate No. 9407, meet the minimum standards for use in certificated aircraft in accordance with pertinent aircraft data sheets and applicable portions of the Brazilian Aeronautical Regulations provided they are installed, operated, and maintained as prescribed by the approved manufacturer's manuals and other instructions.

TYPE	V510 and V510 AG For VJ8-510 (see note 13)
ENGINE SHAFT	Diameter: 107.95 mm (4.25") bolt circle.
HUB MATERIAL	Forged Steel (see next table for hub designations)
BLADE MATERIAL	Aluminum Alloy (Duralumin, forging)
NUMBER OF BLADES	5 (five)
HUB ELIGIBLE	V510 and V510 AG

Blade Eligible (See Notes 2)	Max. Continuous Power hp (rpm)	Takeoff power hp (rpm)	Diameter Limits m (in)	Approx. Max. Weight Compl. Kg (lb)
<u>Hub Model 068-2000</u>				
068-1100	777.2 (2 080)	777.2 (2 080)	2.3 (90.5)	81.7 (83.7) 180 (184.4)
<u>Hub Model 083-2000.7</u>				
068-1100	777.2 (2 080)	777.2 (2 080)	2.3 (90.5)	81.7 (83.7) 180 (184.4)

CERTIFICATION BASIS Brazilian Type Certificate N° 9407-02 based on the RBHA 35 (Brazilian Requirements for Aeronautical Certification), which endorses the FAR 35 effective 01 February 1965, including amendments 1 through 6.

TYPE CERTIFICATION	<u>Model</u>	<u>Application</u>	<u>Issued TC</u>
	V510	08 January 2002	25 January 2002
	V510 AG	22 December 2003	06 April 2004

PRODUCTION BASIS Not Applicable

IMPORT REQUIREMENTS Each propeller imported separately and/or spare parts must be accompanied by an Airworthiness Certificate for Export and/or an Airworthiness Approval Tag, respectively, issued by CAA Czech, attesting that the particular propeller and/or parts were submitted to the governmental quality control before delivery and are in conformity with the CTA approved type design.

NOTES

NOTE 1 Hub model Designation
068-2000 Propeller V510
068-2000.1 Propeller V510 (28VDC de-icing)
083-2000.7 Propeller V510AG

NOTE 1 Blade model Designation
(a) 90A – Basic blade model designation, blade drawing PN 068-1100, clockwise rotation (propeller diameter 90.5 in.)
(b) 90A/A – P/N 079-1000 – blade without de-icer for versions: V510, V510 AG
(c) 90A/B – P/N 068-1000.2 – blade with de-icer for version V510 (28V DC)
(d) 90A/C – P/N 068-1000.1 – blade with de-icer for version: V510 (3 ph 200VAC)

NOTE 3 The complete propeller designation is a combination of propeller hub, propeller blade and additional specifications as shown below:

Propeller Model Designation V510 T /90 A /A, where:

V510: Propeller type

T: Hub version (model)

Blank - denotes basic version

T - denotes trainer operation

AG - denotes agricultural operation

/90: Propeller diameter in inches

A: Blade version (model)

/A: Additional specification

A - denotes without de-icing

B - denotes de-icing 28V DC

C - denotes de-icing 3ph 200VAC

NOTE 4 Pitch control: Single acting and hydraulically actuated . The propellers are approved for flight operations with propeller speed governor P/N LUN 7816 and overspeed limiter P/N 065-2600.

NOTE 5 Feathering: Allowed when propeller incorporates the same equipments as above. See Installation & Maintenance Manual P/N 068-8912.7-1 for V510 and P/N 083-8912.7 for V510 AG.

NOTE 6 Reversing: Allowed when propeller incorporates reversing feature. See Installation & Maintenance Manual P/N 068-8912.7-1 for V510 and P/N 083-8912.7 for V510 AG.

NOTE 7 Right hand rotation variant: The approved propellers are right hand rotation when viewed from the pilot seat.

NOTE 8 Interchangeable blades: Not applicable.

NOTE 9 Accessories:

The propeller is approved for flight operations with the following accessories:

- (1) Propeller speed governor (see Note 4)
- (2) Propeller overspeed governor (see Note 4)
- (3) Electro-hydraulic actuator: LUN 7880.1 – for versions V510, V510 AG
- (4) Auxiliary Pump: LUN 7840 – for versions V510, V510 AG
- (5) Pressure Switch: LUN 1492-04 for 0.7 s – for versions V510, V510 AG
- (6) Time Relay: LUN 2601 - for versions V510, V510 AG
- (7) Cycle Switch: LUN 3193 – for version V510 (3ph 200V AC)
Cycle Switch: BF Goodrich 3E2565-01 – for version V510 (28V DC)
- (8) Brush block LUN 7850 - for version V510 (3ph 200VAC)

Pin 068-5320 – for version V510 (28V DC)

De-icing : The electrical installation of the de-icing elements on propeller blade assembly is described in the following drawing:

Hydraulic Propeller Hub P/N	Propeller Blade Assembly P/N	Type	BF Goodrich De-icing Element P/N
068.0000	068-1000.1	115 VAC	6079
068.0000.1	068-1000.2	28 VDC	7172

Propeller Spinner: It's a part of propeller and the weight is included in the propeller weight

NOTE 10 Limitations:

Life limited components of the AVIA V510 propeller are listed in chapter 061 of the Airworthiness Limitations Section of the AVIA Maintenance Manual, 068-8912.7.

Life limited components of AVIA V510 AG propeller are listed in chapter 061 of the Airworthiness Limitations Section of AVIA Maintenance Manual 083-8912.7.

Time between Overhauls (TBOs) – TBOs have also been defined by AVIA in these Maintenance Manuals specifically for each model, and repair intervals must be adhered to for continued airworthiness of the propeller.

NOTE 11 Operating and Service Instructions: for AVIA V510 Series Propellers.

Instructions for continued airworthiness are listed in these documents:

Version (model)	Overhaul Manual P/N	Operator's, Installation and Maintenance Manual P/N	Maintenance Requirements Manual P/N	V510 Series Parts Catalogue P/N
V510	068-8952.7	068-8912.7	068-8942.7	068-8922.7
V510 AG		083-8912.7		

NOTE 12 Special Notes:

Propeller installation must be approved as part of the aircraft Type Certificate and demonstrate compliance with the applicable aircraft airworthiness requirements.

NOTE 13 The VJ8-510 propeller system was originally approved under the certificate number 9407. It is defined by master drawing number 068.0000 as stated in Report V.35-260-01. A designation change was proposed by AVIA and was accepted by the original Czech Civil Aviation Authority and reflected in the release 6 of the CAA Czech TOLZ 89-04.

The propeller system VJ8-510 corresponds to the V510 propeller unit and accessories.

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