UK CIVIL AVIATION AUTHORITY
PROPELLER TYPE CERTIFICATE DATA SHEET NO. 114

Issue 6
9 April 2001

1. CERTIFICATION

Propellers of types detailed below are approved for use on civil aircraft classified in the Transport Category (Passenger) listed in item 4 of this data sheet when they are installed, operated and maintained in accordance with the approved manufacturer's manual and other approved instructions.

2. CONSTRUCTOR

Dowty Aerospace Propellers
Cheltenham Road
GLOUCESTER
GL2 9QH

3. TYPE NUMBER

(c) R 381/6-123-F/5

4. APPROVED INSTALLATION

4.1 Installations

Propeller Model	Aircraft	Engine
(c)R381/6-123-F/5	SAAB 2000 Max. T.O. weight 22999 Kg (50703 lb)	Allison AE 2100A Max. take-off power 4152 SHP Max. take-off torque 1471 lbft at 1100 propeller rpm

5. CERTIFICATION BASIS

JAR-P Change 7 and special requirements of CAA letter of 12 April 1991

6. PROPELLER PARTICULARS

6.1 Build Standard

Specified in List of Parts 697035001-040 or later approved issues.

6.2. Description

Variable pitch, constant speeding, feathering, reversing, using hydraulic control and counterweights. Beta control provides manual pitch selection for aircraft braking and ground manoeuvring. Fully integrated, full authority, engine/propeller electronic control system, provided by engine manufacturer. The electronic control software meets the "critical" standard of RTCADO-178A.

6.3 Number and Description of Blades

Six blades of composite glass and carbon reinforced plastic construction, polyurethane coated and fitted with nickel leading edge sheath for erosion protection with electric de-icing overshoes.

6.4 Diameter

150 inches (3.8 metres).

6.5 Rotation

Rotation is right hand tractor (clockwise when viewed from rear)

6.6 Engine Shaft Mounting

Special flange with 15 bolts and 3 dowels, all at 8.5 inches P.C.D.

6.7 Weight

Propeller complete with spinner - 500lb approximate (reference only)

6.8 Equipment

The Standard of the associated equipment approved for use with this propeller is defined by the propeller equipment set drawing 697031100 Iss. 17 or subsequent approved issue and published in AMM 1089. The equipment set comprises the propeller plus the following units.

Spinner

Feathering Pump

Overspeed Governor

BETA Tube Assembly

Pitch Control Unit

De-Icing Equipment
- Brush Block Bracket
- Timer Monitor Control Unit

FADEC Software Standard See note 8.3

7. LIMITATIONS

7.1 Crosswind and Tailwind Restrictions.

7.1.1. Maintenance Ground Running.

All ground running with the aircraft static, wind velocity in excess of 10 kts and power lever above 60° in any mode to be conducted with the aircraft pointed into wind ± 45°.

7.1.2. Flight Operations- Take-off.

For Take-off with the aircraft static, wind velocity in excess of 15kt and aircraft not pointed into wind ± 45°, the power lever is not to be advanced above 60° until the brakes have been released.

7.2 The following declared limitations and ratings shall apply:

Maximum Take-off Power	4152 SHP (111%)
Maximum Take-off Engine Torque	1471 lbft (111%)
Maximum Take-off Propeller Speed	1100 ± 1 rev/min (100%)
Maximum Continuous Power	3738 SHP (100%)
Maximum Continuous Engine Torque	1329 lbft (100%)
Maximum Propeller Overspeed	1166 rev/min (106%)
Maximum Permitted Transient Engine Torque	1710 lbft (130%)

8. NOTES

8.1 The approval does not show that compliance with the aircraft de-icing requirements has been achieved

8.2 Drawings and Specifications

General Arrangement Drawing	697035101
Installation Drawing	697035001
Design Specification	90.DS.0586

8.3 FADEC Software Standard GP21AU15A

The equipment may be used with later approved FADEC software standards controlled in accordance with Allison Engine Company documents as follows:

TITLE	**REPORT NO**	**RTCA DO178A DOC. NO.**
Software Quality Assurance Plan	EDR 15657C	5B
Software Configuration Management	EDR 15625C	5A
Plan for Software Aspects of Certification	EDR 15005	14

9. MANUALS

	CMM	**AMM Publication No.**
Brush Block Bracket Unit	30-60-01	1089
Timer/Monitor Control Unit	30-60-02	1089
Propeller	61-10-41	1089
Spinner	61-10-42	1089
Feathering Pump	61-20-26	1089
Overspeed Governor	61-20-37	1089
Beta Tubes	61-20-38	1089
Pitch Control Unit	61-20-39	1089