European Aviation Safety Agency

EASA

TYPE-CERTIFICATE DATA SHEET

EASA.A.060

Ae 270

Type Certificate Holder:

AIRCRAFT INTEGRATED SOLUTIONS LTD
International House
12 Constance Street
London
E16 2DQ
United Kingdom

0.I. Table of Content

A.I. General

Data Sheet No.: EASA.A.060	Issue: 04	Date: 17 April 2018
1. a) Type: b) Variant:	Ae 270 -	
2. Airworthiness Category:	Normal	
3. Type Certificate Holder:	Aircraft Integrated Solutions Ltd International House, 12 Constance Street E16 2DQ, London UNITED KINGDOM	
4. Contracted DOA Holder: See Note 2.	S4A, SOLUTIONS FOR AVIATION S.L. C/Corazon de Maria 48B 28002 Madrid SPAIN	
5. Manufacturer:	AERO Vodochody AEROSPACE a.s. U letiště 374 250 70 Odolena Voda CZECH REPUBLIC	
6. Certification Application Date: a. To CAA CZ b. To FAA c. To EASA	 13.11.1998; last update 15.12.2004 08.06.1998; last update 15.12.2004 N/A	
7. EASA Type Certification Date:	12 December 2005	

A.II. Certification Basis

1. Reference Date for determining the applicable requirements:	FAA: CRI G-1 Stage 4, issued 3.6.2005 CAA CZ: CRI A-1 Stage 6, issued 14.6.2004
2. (Reserved)	
3. (Reserved)	
4. Certification Basis:	14 CFR 23 Amdt. 23-55, Eff. 3/1/2002 14 CFR 34 Amdt. 34-3, Eff. 2/3/1999 14 CFR 36 Amdt. 36-24, Eff. 8/7/2002 Special Condition to 14 CFR 23.137 FAA ELOS to 14 CFR 23.145(b)(2) FAA ELOS to 14 CFR 23.145(b)(4)
5. Airworthiness Requirements:	14 CFR 23 Amdt. 23-55, Eff. 3/1/2002
6. Requirements elected to comply:	None
7. EASA Special Conditions:	HIRF
8. EASA Exemptions:	None
9. EASA Equivalent Safety Findings:	None
10. EASA Environmental Standards:	14 CFR 36 Amdt. 36-24, Eff. 8/7/2002 ICAO Annex 16, Chapter 10

A.III. Technical Characteristics and Operational Limitations

1. Type Design Definition

BT0463EN - Ae 270 Technical Specification
BPOH01CZ - Ae 270 Flight Manual;
BMAI01CZ - Ae 270 Maintenance Manual
BT0674CZ - The List of Valid Drawings

2. Description: Single-engine turboprop, ten seats (including the crew), low-wing airplane, all-metal construction

3. Equipment: Equipment list Doc. No. BEQL01CZ / BEQL01EN appended to the POH, Doc. No. BPOH01CZ / BPOH01EN

4. Dimensions:

Wing Span	14.130 m
Total Length	12.230 m
Maximum Height	4.783 m
Wing Area	21.00 m²

5. Engine:

No.	1
Manufacturer:	Pratt & Whitney Canada
Model:	PT6A-66A
Certification basis:	14 CFR 33, Amdt. 33-10

Type Certificate:
- Transport of Canada Type Certificate TCDS E21
- FAA Type Certificate TCDS E26NE
- EASA Type Certificate TCDS IM.E.008

5.1 Engine Limits:

Power Setting	Power	M_K [1]	n_g	n_p	Max. ITT	Oil Pressure [2]	Oil Temperature [4]
	[SHP (kW)]	[lb ft]	[%]	[RPM]	[˚C]	[psi]	[˚C]
Takeoff	850 (634) [9]	2,230	104	2,000	800	100 to 135	0 to 104
Max. Continuous					800 [8]		
Max. Climb	850 (634) [10]				785 [7]		10 to 104
Max. Cruise							
Ground Idle			65 [3]		785	min. 60	–40 to 110
Flight Idle			73 [3]				
Starting					1000 max. 5 s	max. 200	min. –40
Transient		2,750 max. 20 s	104	2,205 [6]	870 max. 20 s	40 to 200 max. 20 s	0 to 110 [5]
Max. Reverse	800 (597)			1900	780	100 to 135	0 to 104

[1] For propeller speed below 1,600 RPM, the torque is limited to 1,100 lb ft.

[2] Normal oil pressure with gas generator speed above 72 %. At normal oil temperature between 60 to 70º C and torque below 2,000 lb ft the minimum oil pressure is 60 psi. Oil pressures under 90 psi are undesirable. Under emergency conditions, to complete a flight, a lower oil pressure limit of 60 psi is permissible at reduced power level not exceeding 1,100 lb ft torque. If oil

pressure drops below 60 psi, shutdown the engine or make a precautionary landing, using minimum power required to sustain flight.

During an extremely cold weather start, oil pressure may reach 200 psi.

3 Valid for the (Bleed Air) **ECS** switch in the position **OFF**.

4 For increased oil service life, an oil temperature below 80º C is recommended. A minimum oil temperature of 55º C is recommended for fuel heater operation at take-off power.

5 Oil temperature limits are –40 to 104º C with limited periods of 10 min at 104 to 110 º C.

6 May be employed in an emergency condition, at all ratings, to complete a flight.

7 Climb power may be set by using nominal ITT of 735º C.

8 Max. continuous power may be set by using nominal ITT of 750º C.

9 Take-off power is limited to 5 minutes. 850 SHP (634 kW) up to 50.1º C OAT.

10 850 SHP (634 kW) up to 44.5º C OAT.

6. Propeller:

No.	1
Manufacturer:	HARTZELL PROPELLER Inc.
Model:	HC-E4N-3P/D9511FASK/D-630-3
Type Certificate	TCDS P10NE
Number of blades	4

6.1. Sense of Rotation	clockwise
6.2. Diameter:	2438 mm
6.3. Pitch:	

Pitch Angle on the radius r=30 in (762 mm):

- fine pitch	21.5+/- 0.1º
- reverse angle	-12.8+/- 0.5º
- feather	86.1+/-0.5º

7. Fluids:

7.1 Fuel:

For approved fuel grades and approved additives refer to the latest valid revision of the Pratt & Whitney Canada Service Bulletin No. 14004, including:	Jet A–50	ASTM–D1655
	Jet A	ASTM–D1655
	Jet B	ASTM–D1655
	Jet A–1	ASTM–D1655
	Jet A–2	ASTM–D1655
	JP–4	MIL–PRF–5624
	JP–5	MIL–PRF–5624
	JP–8	MIL–DTL–83133
	JP–8+100	MIL–DTL–83133

7.2. Oil:

For approved oil grades refer to the latest valid revision of the Pratt & Whitney Canada Service Bulletin No. 14001, including:	Aero Shell Turbine Oil 500 Royco Turbine Oil 500 Mobil Jet Oil II Castrol 5000 Exxon Turbo Oil 2380 Turbonycoil 525–2A

7.3 Coolant: Not applicable

8. Fluid capacities:

9.1 Fuel:

Total Fuel Tanks Capacity:	Both Tanks	1152 l	(304.4 U.S. Gal)
	Each Tank	576 l	(152.2 U.S. Gal)
Max. Allowable Fuel:	Both Tanks	700 l	(185.0 U.S. Gal)
	Each Tank	350 l	(92.5 U.S. Gal)
Usable Fuel:	Both Tanks On	653.0 l	(172.6 U.S. Gal)
	Single Tank On	326.5 l	(86.3 U.S. Gal)
Unusable Fuel:	Both Tanks On	47.0 l	(12.4 U.S. Gal)
	Single Tank On	23.5 l	(6.2 U.S. Gal)
Maximum Allowable Fuel Unbalance		45 l	(12 U.S. Gal)

8.2 Oil:

Total Capacity:	14.0 l	(14.8 U.S. Quarts)
Drain Quantity:	13.7 l	(14.5 U.S. Quarts)
Operating Range:	1.50 l	(1.6 U.S. Quarts)

9. Air Speeds:

V_{MO} (maximum operating speed) - up to 16400 ft			205 KIAS
M_{MO} (maximum operating speed) - above 16400 ft			0.42
V_A (Manoeuvring Speed at 3800 kg)			154 KIAS
V_{FE} (Maximum Flap Extended Speed)			
	flaps 20°	V_{FE20}	148 KIAS
	flaps 36°	V_{FE36}	125 KIAS
V_{LO} (Maximum landing gear operating speed)			132 KIAS
V_{LE} (Maximum landing gear extended speed)			132 KIAS

10. Maximum Operating Altitude 26000 ft

11. Operational VFR Day, VFR Night, IFR Flights into known icing conditions prohibited.

12. Maximum weight

Maximum Ramp Weight	3,820 kg	(8,422 lbs)
Maximum Take-off Weight	3,800 kg	(8,377 lbs)
Maximum Landing Weight	3,800 kg	(8,377 lbs)
Maximum Zero Wing Fuel Weight	3,700 kg	(8,157 lbs)

13. Centre of Gravity Range:
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Weight		Forward C.G. Limit			Aft C.G. Limit		
[lbs]	[kg]	[in]	[m]	[% b_{MAC}]	[in]	[m]	[% b_{MAC}]
6,206	2,815	212.8	5.405	21	213.4	5.421	22
7,165	3,250	212.8	5.405	21	-	-	-
7,844	3,558	-	-	-	218.3	5.547	30
8,377	3,800	213.4	5.421	22	218.3	5.547	30

14. Datum: Reference Datum is a distance of 116.5 in (2.960 m) from the firewall (bulkhead No. 1). The leading edge of the MAC is 199.8 in (5.076 m) aft of the Reference Datum and

15. Mean Aerodynamic Chord (MAC) The MAC length is 61.7 in (1.568 m).

16. Levelling Means: Refer to the "Ae 270 Maintenance Manual", Doc. No. BMAI01CZ / BMAI01EN, Chapter 8 or to the applicable Pilot´s Operating Handbook and Airplane Flight Manual, Sec. 6

17. Minimum Flight Crew: 1 (Pilot)

18. Maximum Passenger Seating Capacity: 8 passenger seats and 2 crew seats are installed in the flight deck.
Maximum of 9 passengers

19. Baggage / Cargo Compartments

Maximum Weight in Baggage Compartment	60 kg	(133 lbs)

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20. Wheels and Tyres

20.1. Nose Landing Gear Tire: Dunlop DR7730T or Mitas 6,00-6 M1TL
20.2. Main Landing Gear Tire: Dunlop DR12330T or Mitas 6,5-10 M1TL

A.IV. Operating and Service Instructions

1. Airplane Flight Manual
"Pilot's Operating Handbook and CAA CZ Approved Airplane Flight Manual", Doc. No. BPOH01CZ (Czech Version), Doc. No. BPOH01EN (English Version), approved by the CAA Cz on 12.12.2005

1. Airplane Maintenance Manual
"Ae 270 Airplane Maintenance Manual" Doc. No. BMAI01CZ (Czech Version), Doc. No. BPMAI01EN (English Version), approved by the CAA Cz on 8.11.2005

A.V. Notes

1. From 29 September 2016 to 16 April 2018, the TC holder obligations were covered by an agreement signed between new TC holder (Aircraft Integrated Solutions Ltd) and Contracted DOA Holder (AERO Vodochody AEROSPACE a.s. / EASA.21J.071).

2. Since 17 April 2018, the TC holder obligations are covered by an agreement signed between new TC holder (Aircraft Integrated Solutions Ltd) and Contracted DOA Holder (S4A, SOLUTIONS FOR AVIATION S.L. / EASA.21J.409). For Continued Airworthiness and other technical issues contact directly the Contracted DOA Holder.

ADMINISTRATIVE SECTION

I. Acronyms

N/A

II. Type Certificate Holder Record

Up to 12 May 2013

Aero Vodochody a.s.
U letiště 374
250 70 Odolena Voda
CZECH REPUBLIC

Up to 28 September 2016

AERO Vodochody AEROSPACE a.s.
U letiště 374
250 70 Odolena Voda
CZECH REPUBLIC

Since 29 September 2016

Aircraft Integrated Solutions Ltd
29 Harley Street, Suite B
W1G 9QR, London
UNITED KINGDOM

Since 17 April 2018

Aircraft Integrated Solutions Ltd
International House, 12 Constance Street
E16 2DQ, London
UNITED KINGDOM

III. Change Record

Issue	Date	Changes
01	12 December 2005	Initial issue of TCDS No. EASA.A.060
02	13 May 2013	Change of the TC holder
03	29 September 2016	Change of the TC holder and reissuance of whole document / new layout
04	17 April 2018	Change of the TC holder's address / Change of contracted DOA