DEPARTMENT OF TRANSPORTATION
FEDERAL AVIATION ADMINISTRATION

A64EU
Revision 2
Lovaux Ltd
OA7 Optica Series 300
March 1, 2012

TYPE CERTIFICATE DATA SHEET NO. A64EU

This data sheet which is part of Type Certificate No. A64EU prescribes conditions and limitations under which the product for which the type certificate was issued, meets the airworthiness requirements of the Federal Aviation Regulations.

Type Certificate Holder. FLS Aerospace (Lovaux) Ltd.
Bournemouth International Airport
Christenchurch
Dorset BH23 6NW
United Kingdom

Type Certificate Ownership Record

(1) This TC was considered not valid by the state of design on June 28, 2007, and has been replaced by European Aviation Safety Agency (EASA) Specific Airworthiness Specification (SAS) number EASA.SAS.A.073, issued June 28, 2007. Only standard airworthiness certificates issued prior to March 1, 2012 are valid.

(2) Future unsafe conditions existing in the aircraft may result in the revocation of the airworthiness certificates of the aircraft if there is no entity to comply with 14 CFR § 21.99(a), "Required design changes."

(3) Replacement parts may not be available in the future.

I. OA7 Optica Series 300 (Normal Category), approved December 3, 1991.

Engine. Avco Lycoming IO-540-V4A5D

Fuel. Aviation Gasoline, Grade 100 LL. (Blue)

Oil.

Average Ambient Air Temperature	MIL-L-6802 Grades	Ashless Dispersant Grades
All temperatures	-	SAE 15W50 or 20W50
Above 80ºF	SAE 60	SAE 60
Above 60ºF	SAE 50	SAE 40 or 50
30ºF to 90ºF	SAE 40	SAE 40
0ºF to 70ºF	SAE 30	SAE 40 or SAE 30 or 20W40
Below 10ºF	SAE 20	SAE 30 or 20W30

Engine Limits.

Conditions	% Power	Engine RPM	Max CHT
Max for all operations	100%	2700 (260 HP)	500ºF (260ºC)
Max Continuous (Ground operations)		2200	(220ºC)
Min. Engine Speed		2500	

at Full Throttle at
start of Take-Off run.
Max oil pressure 100 psi
Minimum Oil Pressure 60 psi (Normal Range), 25 psi (Idling)
Maximum Exhaust Gas Temperature 1560ºF (850ºC)
Maximum Oil Temperature (118ºC)
Minimum Oil Temperature (continuous operation) 60ºC

Propeller and Propeller Limits.

Hoffman HO-E 315/122EW or 122EZ

No. of Blades	:	5
Pitch	:	Fixed
Diameter (no cut off allowed)	:	47.71 inches
Max. RPM	:	2700
Direction of Rotation	:	Clockwise (viewed from rear)

Airspeed Limits. (CAS)

V_{NE} (Never Exceed Speed)	:	140 knots
V_{NO} (Max Structural Operating	:	110 knots
V_{FE} (Flaps Extended Speed)		
From 1º to 10º	:	120 knots
From 11º to 50º	:	85 knots
V_A (Manoeuvering Speed)	:	113 knots
Maximum speed with D.V. window open	:	90 knots

Center of Gravity Range.

Datum	:	Leading Edge of Wing
Forward Limit	:	20% SMC, 10.4 inches aft of datum at all weights
Aft Limit	:	32% SMC, 16.6 inches aft of datum at 2400 lb (1088 kg) and below.
		and
	:	30% SMC, 15.6 inches aft of datum at 2900 lb

Straight line variation of aft limit between points given above.

Empty Weight C.G. Range.

None.

Leveling Means.

The aircraft is leveled by placing a clinometer on the tailbooms with 4º up indicated.

Maximum Weights.

Max. Take-Off and Landing: 2900 lb
Max. Zero Fuel Weight : 2734 lb

Minimum Crew.

1 pilot (Minimum seat load 170 lb)

Number of Seats.

3 persons (but shall not exceed the number of seats available).

Equipment & Baggage Weights.

Maximum combined total load on the three seats is 510 lb (ie. three people weighing 170 lb each.)

Maximum total variable cabin load (totals of seat load and baggage load) is 512 lb

Maximum load on baggage tray 66 lb.

Fuel Capacity.

Usable fuel per tank : 33 U.S. Gal.
Total usable fuel (2 tanks) : 66 U.S. Gal.
Total 67.6 U.S. Gals (33.8 U.S. Gals each wing tank)
(.8 U.S. Gals. unusable)
(1.6 U.S. Gals unusable)
(See NOTE 1)

Oil Capacity.

Engine Sump - Normal : 8 U.S. quarts
- Minimum : 2 U.S. quarts
(See NOTE 1)

Maximum Operating Altitude.

13,000 feet.

Control Surface Movements

Control	Movement		Tolerance
Flaps	Up	0°	+1°, -0°
	Down	50°	
Ailerons	Neutral	0°	+1°, -0°
	Up	22°	
	Down	12°	
Rudder	Neutral	0°	+2°, -0°
	Left	25°	
	Right	25°	
Elevator	Neutral	0°	+2°, -0°
	Up	26.5°	
	Down	19°	
Elevator Trim Tab	Up	20°	
	Down	28°	+2°, -0°

Serial Nos. Eligible.

Each individual aircraft manufactured under this type certificate must be accompanied by a Certificate of Airworthiness as noted below under "Import Requirements") when an application for a U.S. airworthiness certificate is made.

OA7 Optica Series 300: 020 and subsequent.

Only those aircraft serials holding a standard airworthiness certificate issued prior to March 1, 2012 are eligible..

Import Requirements.

None eligible after of March 1, 2012.

Previous to this date:

Country of Manufacturer: A U.S. airworthiness certificate may be issued on the basis of an Export Certificate of Airworthiness approved by an authorized representative of the (CAA UK) including the following statement: "The aircraft covered by this certificate has been examined, tested, and found to conform to 14 CFR Part 23 approved under U.S. Type Certificate A64EU and is in a condition for safe operation."

Country other than Manufacturer (U.S. bilateral agreement and the original Export Certificate of Airworthiness issued by the country of manufacture must exist):
A U.S. airworthiness certificate may be issued on the basis of a log book certifying statement endorsed by an authorized representative of the civil aviation authority of the exporting country. It is incumbent upon the exporting civil aviation authority to

determine that the certifying statement includes evidence of acceptable service history and modification deviations and the following statement:
"The aircraft covered by this certificate has been examined, tested, inspected in accordance with the provisions of FAR 21.183(d) or its equivalent, and found to conform to the type design approved under Type Certificate A64EU and is in a condition for safe operation."

Service Information

Each of the documents listed below must state that it is approved by the European Aviation Safety Agency (EASA) or – for approvals made before September 28, 2003 – by the United Kingdom CAA.

- Service bulletins,
- Structural repair manuals,
- Vender manuals,
- Aircraft flight manuals, and
- Overhaul and maintenance manuals.

The FAA accepts such documents and considers the FAA-approved unless on of the following conditions exits:

- The documents change the limitations, performance, or procedures of the FAA approved manuals: or
- The documents make an acoustical or emissions change to this product's U. S. type certificate as defined in 14 CFR 21.93.

The FAA uses the post type validation procedures to approve these documents. The FAA may delegate on case-by-case to EASEA to approve on Behalf of the FAA for the U.S. type certificate. If this is the case it will be noted on the document.

Certification Basis.

FAR 23 effective February 1, 1965, as amended through Amendment 23-32 effective December 12, 1985; FAR 36 effective December 1, 1969, as amended through Amendment 36-15 effective May 6, 1988.

The United Kingdom CAA originally type certificated this aircraft under is type certificate Number BA21. The FAA validated this product under U.S. Type Certificate number A64EU. Effective September 28, 2003, the European Aviation Safety Agency (EASA) began oversight of this product on behalf of the United Kingdom CAA.

Validation Basis.

Type Certificate A64EU was issued pursuant to FAR 21.29 in validation of a Civil Aviation Authority, United Kingdom certification of compliance with the aforementioned certification basis, and in accordance with the standard airworthiness certificate provisions of FAR 21.183(c).

NOTE: The airworthiness provisions of FAR 21.183(d) may be cited as the basis for issuance of standard airworthiness certificates for aircraft imported from a country other than the country of manufacture.

Equipment.

The basic required equipment as prescribed in the applicable airworthiness regulations (see Certification Basis) must be installed in the aircraft for airworthiness certification. In addition, the following items of equipment are required:

Model OA7 Series 300 Optica - CAA approved (for the FAA) Pilot's Operating Handbook and FAA Approved Airplane Flight Manual, Ref. Lovaux Ltd. Document No. OA7/TP/15, Issue 1, dated October 1991, or later CAA approved revision.

NOTES.

NOTE 1. A current weight and balance report including list of equipment in certificated empty weight, and

loading instructions, must be provided with each aircraft at the time of original airworthiness certification, and at all times thereafter.

The certificated empty weight and the corresponding center of gravity location must include full oil (15 lbs at + 49.57 inches), and unusable fuel (11.52 lbs at + 6.73 inches).

NOTE 2. Placards (Refer to Manufacturer's Specifications for a complete listing): All required placards as listed in the approved Airplane Flight Manual must be installed in the appropriate locations.

(1) The following placard must be displayed in clear view of the pilot:
"THE MARKINGS AND PLACARDS INSTALLED IN THIS AIRPLANE CONTAIN OPERATING LIMITATIONS WHICH MUST BE COMPLIED WITH WHEN OPERATING THIS AIRPLANE IN THE NORMAL CATEGORY. OTHER OPERATING LIMITATIONS WHICH MUST BE COMPLIED WITH WHEN OPERATING THIS AIRPLANE IN THIS CATEGORY ARE CONTAINED IN THE AIRPLANE FLIGHT MANUAL."

(2) Refer to the Airplane Flight Manual, Section 2, Limitations for a listing of other required placards.

NOTE 3. Instructions for Continued Airworthiness and Service Life Limits of components are contained in the OA7 Optica Maintenance Manual. Revisions to Airworthiness Limitations must be FAA approved.

All manufacturer's service bulletins (and other manual material) which contain a statement that the document is approved by the exporting airworthiness authority (CAA) may be interpreted as FAA Approved. These approvals pertain to the type design only.

All service bulletins classified as Mandatory by the UK Civil Aviation Authority are identified to that effect and are subject to an Airworthiness Directive issued by the FAA.

Service documents required:
1. OA7 Optica Maintenance Manual
2. OA7 Optica Illustrated Parts Catalog
3. OA7 Optica Service Bulletins
4. Avco Lycoming Overhaul Manual for Direct Drive Engines
5. Avco Lycoming Service Table of Limits and Torque Value Recommendations - Direct Drive Engines
6. Bendix King radio manuals as applicable.

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