EASA
European Union Aviation Safety Agency

TYPE-CERTIFICATE DATA SHEET

No. E.083

for
Limbach L 2000 series engines

Type Certificate Holder
Limbach Flugmotoren GmbH

Kotthausener Str. 5
D-53639 Königswinter
APDOA EASA.AP509

For Models:

L 2000 DA
L 2000 E0
L 2000 EA
L 2000 EB
L 2000 EC

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I. General

1. Type/ Model
Muster/Baureihe:

L 2000 / L 2000 DA, E0, EA, EB, EC

2. Type Certificate Holder
Halter der Musterzulassung:

Limbach Flugmotoren GmbH
Kotthausener Str. 5
D-53639 Königswinter
APDOA EASA.AP509

3. Manufacturer
Hersteller:

Limbach Flugmotoren GmbH

4. Date of Application
Datum des Antrages für EASA-Musterzulassung:

L 2000 DA	L 2000 E0	L 2000 EA	L 2000 EB	L 2000 EC	
9 March 1988	9 Jan. 1980	9 Jan. 1980	9 Jan. 1980	9 Jan. 1980	

Note: Application for L 2000 DA, E0, EA, EB, EC was made to LBA before EASA has been established.

Bemerkung: Der Antrag für L 2000 DA, E0, EA, EB, EC wurde an das LBA gestellt bevor die EASA eingerichtet war.

5. EASA Type Certification Date
Datum der EASA-Musterzulassung:

L 2000 DA	L 2000 E0	L 2000 EA	L 2000 EB	L 2000 EC	
20 Jan. 1989	13 June 1980	13 June 1980	13 June 1980	13 June 1980	

Note: L 2000 DA, E0, EA, EB, EC had been certified by LBA Germany (TC/TCDS 4597).
This TCDS replaces LBA TCDS No 4597.
Transfer date to EASA Type Certificate: 04 August 2006

Bemerkung: L 2000 DA, E0, EA, EB, EC wurden vom LBA zugelassen (Musterzulassungsschein/Kennblatt Nr. 4597).
Dieses Kennblatt ersetzt das LBA Kennblatt Nr. 4597.
Überführung in die EASA Musterzulassung: 04. August 2006

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II. Certification Basis

Zulassungsbasis

1. EASA Certification Basis

1.1. Airworthiness Standards

Lufttüchtigkeitsforderungen:

L 2000 E0 up to S/N 1325, L 2000 EA up to S/N 1349, L 2000 EB up to S/N 1540,
L 2000 EC up to S/N 1055: Anhang D LFSM, dated 23 October 1975
bis Seriennr.

L 2000 DA up to S/N 1061: JAR-22 H, dated 18 May 1981

L 2000 DA from S/N 1062 onwards, L 2000 E0 from S/N 1326 onwards,
L 2000 EA from S/N 1350 onwards, L 2000 EB from S/N 1541 onwards,
L 2000 EC from S/N 1056 onwards: JAR-22 H, Change 5, dated 28 October 1995
von Seriennr. .... . an aufwärts

1.2. Special Conditions (SC)

Sonderforderungen:

none

1.3. Equivalent Safety Findings

Nachweise gleichwertiger Sicherheit

none

1.4. Deviations

Abweichungen

none

1.5. Environmental Protection

Umweltschutzforderungen

None (not required for piston engines)
(nicht gefordert für Kolbentriebwerke)

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III. Technical Characteristics

Technische Merkmale

1. Type Design Definition

Musterdefinition

As defined by the parts list "Strukturstückliste" of the particular model.
Durch die Strukturstückliste der jeweiligen Variante definiert.

2. Description

Beschreibung

The L 2000 engine is a four cylinder, four stroke spark ignited air cooled flat piston engine equipped with one carburettor (L 2000 EB: two carburettors) and a single magneto (L 2000 DA: two magnetos).
Der L 2000 ist ein luftgekühlter Vierzylinder-Viertakt-Boxer-Ottomotor, ausgerüstet mit einem Vergaser (L 2000 EB: zwei Vergaser) und einer Einzelmagnetzündung (L 2000 DA: zwei Magneten).

Displacement: 1.994 dm^3
Hubraum:

Bore x stroke: 90 mm x 78.4 mm
Bohrung x Hub:

Compression ratio: 8.4 : 1 (L 2000 E0, EB, EC)
Verdichtungsverhältnis: 8.5 : 1 (L 2000 DA)
8.6 : 1 (L 2000 EA)

Gear ratio: N/A
Übersetzungsverhältnis:

3. Equipment

Ausrüstung

See Operation and Maintenance Manual
Siehe Betriebs- und Wartungshandbuch

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4. Dimensions
Abmessungen:

Model		L 2000 DA	L 2000 E0, EC	L 2000 EA	L 2000 EB
Overall Length Gesamtlänge	mm	686	627	600	672
Overall Height Gesamthöhe	mm	448	415	463	373
Width Breite	mm	775			

5. Dry Weight
Trockenmasse:

Model		L 2000 DA	L 2000 E0, EC	L 2000 EA	L 2000 EB
Mass Masse	kg	74.5	70	69	71.5

6. Ratings:
Leistungen:

Rating		L 2000 DA	L 2000 E0, EA, EC	L 2000 EB
Power	Take-off Startleistung	55 kW at 3200 rpm	59 kW at 3400 rpm	59 kW at 3400 rpm
	Max. Continuous Max. Dauerleistung	51 kW at 3000 rpm	51 kW at 3000 rpm	53 kW at 3000 rpm

Note : The performance values specified above correspond to minimum values defined under the conditions of ICAO or ARDC standard atmosphere.
Bemerkung: Die Leistungsangaben entsprechen den Minimalwerten, die unter den Bedingungen der ICAO oder ARDC Standardatmosphäre ermittelt wurden.

7. Control System
Regelsystem

All engines are equipped with carburettors and a magneto ignition system.
Alle Motoren sind mit Vergasern und Magnetzündanlage ausgerüstet.

8. Fluids (Fuel, Oil, Coolant, Additives)
Betriebsstoffe (Kraftstoff/Öl/Additive):

See Operation and Maintenance Manual for approved fluids.
Siehe Betriebs- und Wartungshandbuch für zugelassene Betriebsstoffe

9. Aircraft Accessory Drives
Hilfsgeräteantriebe:

There are no provisions for customer/aircraft furnished equipment.
Es gibt keine Antriebe für vom Kunden oder Flugzeughersteller beigestellte Ausrüstung.

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IV. Operating Limitations

Betriebsgrenzen

1. Temperature Limits

Temperaturbegrenzungen:

Cylinder head: 250 °C
Zylinderkopf:

Oil inlet: 120 °C
Öleintritt:

2. Speed Limits

Drehzahlbegrenzungen:

Minimum Continuous Speed: 2300 rpm
Mindestdauerdrehzahl:

Maximum Engine Speed: 3400 rpm
Höchstzulässige Drehzahl:

3. Pressure Limits

Druckbegrenzungen:

Oil Pressure: 1.0...4.0 bar
Öldruck:

V. Operating and Service Instructions

Betriebs- und Instandhaltungsanweisungen

Manuals	in German language in deutscher Sprache	in English language in englischer Sprache
Installation Manual for all models	-	P/N 905.170.010.000
Operating Manual for all models Betriebshandbuch für alle Baureihen	P/N 201.253.900.000	P/N 201.253.905.000

Instructions for Continued Airworthiness (ICA)	in German language in deutscher Sprache	in English language in englischer Sprache
Maintenance Manual Wartungshandbuch	P/N 201.253.900.000	P/N 201.253.905.000
Repair Manual Reparaturhandbuch	-	P/N 905.170.020.000
Service Bulletins Technische Mitteilungen	as required	as required

Note: The ICA do not contain an Airworthiness Limitation Section.
Bemerkung: Die Anweisungen für die Erhaltung der Lufttüchtigkeit enthalten keine Angaben zur Beschränkung der Lufttüchtigkeit.

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VI. Notes

Note 1: Engine model numbers may include a suffix to define minor specification changes.
Die Motorbezeichnung kann einen Suffix zur Kennzeichnung von kleinen Änderungen enthalten.

Engine Designation System:
Motorkennzeichnungssystem:

L	2000	E	B	1	.	x	x
--	------	--	--	--		--	--
1	2	3	4	5		6	7

1. Company Designation
   Firmenbezeichnung

2. Cubic displacement in cm^3
   Hubraum

3. E = Single ignition Einzelzündung
   D = Double ignition Doppelzündung

4. Accessories – Basic configuration
   Konstruktionsmerkmale

   B = Tractor type engine, 2 carburettors in the back, top location, alternator in the back, starter in the back
   Zugschrauber, 2 Vergaser oben hinten, Generator hinten, Anlasser hinten
   E = Tractor type engine, 2 carburettors in the back, top location, alternator in the front, starter in the front
   Zugschrauber, 2 Vergaser oben hinten, Generator vorne, Anlasser vorne
   F = Tractor type engine, electronically controlled fuel injection and ignition system, alternator in the back, starter in the back
   Zugschrauber, elektronisch geregelte Kraftstoffeinspritz- und Zündanlage, Generator hinten, Anlasser hinten
   T = Tractor type engine, electronically controlled fuel injection and ignition system, alternator in the back, starter in the back
   Zugschrauber, elektronisch geregelte Kraftstoffeinspritz- und Zündanlage, Generator hinten, Anlasser hinten

5. Propeller flange variant
   Propellerflanschausführung

   1 = Propeller flange for variable pitch propeller
   Propellerflansch für Verstellpropeller
   2 = Propeller flange for fixed pitch propeller
   Propellerflansch für Festpropeller
   3 = Propeller flange according to SAE Std. No. 1 for fixed pitch propeller
   Propellerflansch für Festpropeller nach SAE 1

6., 7. Differences regarding installation-related changes
   Unterschiede bezüglich einbaubedingter Änderungen

   X = Engine without certification for experimental purposes
   Experimentalmotor ohne Zulassung
   AA = Engine for motor gliders GROB G 109
   AB = Engine for motor gliders VALENTIN TAIFUN
   AC = Engine for motor gliders HOFFMANN HK 36 SUPER DIMONA
   AD = Engines for motor gliders STEMME S 10

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Motor für Motorsegler ....

Note 2: The engine designation has been changed according Service Bulletin no. 17
Die Motorbezeichnung wurde entsprechend Technischer Mitteilung Nr. 17 geändert

Old designation Alte Bezeichnung	New designation Neue Bezeichnung
L 2000 E0	L 2000 E0 2
L 2000 E0 1	L 2000 E0 1
L 2000 EA	L 2000 EA 2
L 2000 EA 1	L 2000 EA 1
L 2000 EB	L 2000 EB 2
L 2000 EB 1	L 2000 EB 1
L 2000 EB 1.A	L 2000 EB 1.AA
L 2000 EB 1.B	L 2000 EB 1.AB
L 2000 EB 1.C	L 2000 EB 1.AC
L 2000 EC	L 2000 EC 2
L 2000 EC 1	L 2000 EC 1
L 2000 DA	L 2000 DA 2

Note 3: For recommended TBO see Service Bulletin no. 9.
Für die empfohlenen Überholungsintervalle siehe Technische Mitteilung Nr. 9

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SECTION: ADMINISTRATIVE

I. Acronyms and Abbreviations

n/a

II. Type Certificate Holder Record

Limbach Flugmotoren GmbH & Co. KG (until 17 August 2017)

III. Change Record

Issue	Date	Changes	TC issue
Issue 01	04 August 2006	Initial Issue	Initial Issue, 04 August 2006
Issue 02	16 April 2009	Correction of take-off rpm for L 2000 E0, EA, EC	
Issue 03	17 August 2021	Reformatting, APDOA no. added	17 August 2021

-END-

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