TYPE-CERTIFICATE DATA SHEET

No. IM.E.169

for
Continental IO-240 series engines

Type Certificate Holder
Continental Aerospace Technologies, Inc..
2039 Broad Street,
Mobile, Alabama 36615, USA

For Models:

Continental IO-240-B
Continental IOF-240-B

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I. General

1. Type/ Model

Continental IO-240 / Continental IO-240-B
IOF-240-B

2. Type Certificate Holder

Continental Aerospace Technologies, Inc.
2039 South Broad Street
Mobile, Alabama 36615, USA

(from 05 July 2013 to 03 September 2020, Continental Motors, Inc.)
(until 05 July 2013, Teledyne Continental Motors)

3. Manufacturer

Continental Aerospace Technologies, Inc.

(from 05 July 2013 to 03 September 2020, Continental Motors, Inc.)
(until 05 July 2013, Teledyne Continental Motors)

4. Date of Application

IO-240-B	IOF-240-B			
02 April 1998	17 May 2005			

Note: Application for IO-240-B was made to LBA Germany before EASA had been established.

5. EASA Type Certification Date

IO-240-B	IOF-240-B			
24 July 1998	10 May 2007			

Note: IO-240-B had been validated in the past by LBA Germany (TC/TCDS 4625).

II. Certification Basis

1. State of Design Authority Certification Basis

See FAA TCDS E7SO

2. Reference Date for determining the applicable airworthiness requirements

14 January 1992

3. EASA Certification Basis

3.1. Airworthiness Standards

JAR-E Change 8 dated May 4, 1990 incl. Amendment E/91/1 dated May 27, 1991

3.2. Special Conditions (SC)

none

3.3. Equivalent Safety Findings

none

3.4. Deviations

none

3.5. Environmental Protection

none (not required for piston engines)

III. Technical Characteristics

1. Type Design Definition

As defined by CONTINENTAL engine stocklist.

2. Description

The Continental IO-240 engine is a fuel injected, naturally aspirated, horizontally opposed, four cylinder, four stroke, spark ignited, aircooled, wet sump engine incorporating a top induction system, bottom exhaust, and provisions for front and rear mounted accessories.
Displacement: 3.930 dm^3 (240 cu. in.)
Bore x stroke: 112.7 mm x 98.4 mm (4.438 in. x 3.875 in.)
Compression ratio: 8.5 : 1
Gear ratio: N/A

3. Equipment

Magnetos (for IO-240 B only): Two CONTINENTAL S4LSC-21 or two Slick 4301
Spark plugs: Champion REM38E, REM38P, RHM38E, RHM38P

4. Dimensions

Overall Length	756.9 mm	29.8 in.
Overall Height	596.9 mm	23.5 in.
Width	797.6 mm	31.4 in.

5. Dry Weight

IO-240-B	IOF-240-B	
111.58 kg	115.67 kg	
(246 lbs)	(255 lbs)	

6. Ratings

Rating		IO-240-B, IOF-240-B		
Power, kW (HP)	Take-off, 5 min., full throttle at sea level pressure altitude	93 (125) at 2800 rpm		
	Max. Continuous at sea level pressure altitude	93 (125) at 2800 rpm		

Note : the performance values specified above correspond to minimum values defined under the conditions of ICAO or ARDC standard atmosphere.

7. Control System

The CONTINENTAL IO-240-B engine is equipped with a mechanical CONTINENTAL fuel injection system and a dual magneto ignition system.
The CONTINENTAL IOF-240-B engine is equipped with an electronic control system (FADEC) to control the ignition and fuel injection function.

8. Fluids (Fuel, Oil, Additives)

Fuel: Aviation Gasoline, 100 or 100LL per ASTM D910, B95/130 CIS or RH95/130
Oil: see CONTINENTAL Spec MHS No. 24

9. Aircraft Accessory Drives

Designation	Rotation direction	Speed ratio to crankshaft	Max. Torque Nm (in. lbs) Continuous	static	Max. Overhang moment Nm (in. lbs)
Tachometer 1)	OPT – CW	0.5:1	0.79 (7)	5.65 (50)	2.82 (25)
Magneto 2)	CW	1:1			
Starter	CCW	24.727:1	(50)		
Alternator	CCW	2.035:1	(30)	11.30 (100)	11.30 (100)
Fuel Pump	CCW	1:1	(40)	90.39 (800)	
Vacuum Pump 3)	CW	1:1	(25)	90.39 (800)	2.82 (25)

Notes : - CW – clockwise; CCW – counter clockwise (viewing drive pad); OPT – optional
1) optional
2) Magneto drives are not used on IOF-240-B FADEC engines.
3) This drive is an AND 20000 pad modified for speed only.

IV. Operating Limitations

1. Temperature Limits

Cylinder head bayonet thermocouple: 238 °C (460 °F)
Oil inlet: 116 °C (240 °F)

2. Speed Limits

Max. overspeed (10 seconds, Momentary overspeed): 3000 rpm
See latest revision of CONTINENTAL Standard Practice Maintenance Manual M-0, Chapter 6, for detailed information

3. Pressure Limits

3.1 Fuel Pressure

Inlet to injection pump, minimum: -13.8 kPa (-2.0 psig)
maximum: + 41.4 kPa (+6.0 psig) for IO-240-B
+ 344.7 kPa (+50.0 psig) for IOF-240-B
Outlet to vapour return line, max.: + 24.1 kPa (+3.5 psig)

3.2 Oil Pressure (2-4-6 side)

Idle: 69 kPa (10 psig)
Normal: 207…414 kPa (30...60 psig)
Maximum (cold oil) 690 kPa (100 psig)

V. Operating and Service Instructions

Manuals

	IO-240-B	IOF-240-B	
Installation and Operation Manual	X30620	OI-22	

Instructions for Continued Airworthiness

	IO-240-B	IOF-240-B	
Maintenance Manual	X30621A	M-22	
Overhaul Manual	X30622A	OH-22	
Service Bulletins and Service Letters	As issued		

VI. Notes

1: All models are eligible for pusher and tractor operation.

2: Engine model numbers may include a suffix to define minor specification changes. Example: IO-240-B(1B)

3: The electronic control system contains level "C" software which has been shown to meet the requirements for single and multi-engine aircraft of less than 2722 kg (6000 lbs.) maximum takeoff weight.

4: The electronic control system must be supplied with two isolated sources of electrical power which meet the reliability requirements set forth in the Operation and Installation Manual. One of these power sources may be the aircraft primary bus. The second power source must be isolated from the aircraft bus, and if supported by a battery, this battery cannot be the battery which is utilized for engine starting. The use of an essential bus or a dedicated backup battery is an acceptable method of providing secondary power, as long as this source has sufficient capacity to meet aircraft certification requirements.

5: If a back-up battery is used as a secondary source of electrical power for the electronic control system, the back-up battery must be replaced at the interval specified in the Operation and Installation Manual.

6: Installation and evaluation of the Health Status Annunciator (HSA) display is subject to the requirements established by the certification basis of the aircraft.

7: Takeoff is prohibited with annunciated faults shown on the Health Status Annunciator (HSA).

8: The electronic engine control system has been tested according to DO-160D for lightning protection and magnetic interference. The demonstrated levels are declared in the CONTINENTAL Detailed Model Specification Aircraft Engine Model IOF- 240-B.

SECTION: ADMINISTRATIVE

I. Acronyms and Abbreviations

n/a

II. Type Certificate Holder Record

Continental Aerospace Technologies, Inc.
(from 05 July 2013 to 03 September 2020, Continental Motors, Inc.)
(until 05 July 2013, Teledyne Continental Motors)

III. Change Record

Issue	Date	Changes	TC issue
Issue 01	10 May 2007	Initial Issue	10 May 2007
Issue 02	05 July 2013	Name Change of TC Holder and Manufacturer	05 July 2013
Issue 03	03 September 2020	Name Change of TC Holder and Manufacturer	03 September 2020

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