DEPARTMENT OF TRANSPORTATION
FEDERAL AVIATION ADMINISTRATION

E7SO
Revision 5
CONTINENTAL
IO-240-A, -B
IOF-240-B

November 1, 2011

TYPE CERTIFICATE DATA SHEET NO. E7SO

Engines of models described herein conforming with this data sheet (which is part of type certificate No. E7SO) and other approved data on file with the Federal Aviation Administration meet the minimum standards for use in certificated aircraft in accordance with pertinent aircraft data sheets and applicable portions of the Federal Aviation Regulations provided they are installed, operated, and maintained as prescribed by the approved manufacturer's manuals and other approved instructions.

Type Certificate Holder	Continental Motors P. O. Box 90 Mobile, Alabama 36608
Type Certificate Holder Record	Teledyne Continental Motors Ownership & name change as of April 19, 2011 (Continental Motors, Inc.)

Model	**IO-240-A**	**IO-240-B**
Type	4HOA	---
Rating ICAO or ARDC Standard Atmosphere Max. Continuous hp, RPM, FT at SL pressure altitude	125 - 2800	---
Takeoff, 5 min., hp, RPM FT at SL pressure altitude	125 - 2800	---
Fuel (min. grade aviation gas.)	100, 100LL per ASTM D910, B95/130 CIS, or RH95/130	---
Lubricating Oil	Lubricating oils qualified under SAE-J1899 or J1966 are considered qualified under CMI Spec MHS-24	---
Bore and Stroke	4.438 x 3.875	---
Displacement, cu.in.	240	---
Compression ratio	8.5:1	---
Weight (dry), lb.	246	---
C.G. location (basic engine) Aft of prop flange forward face:	14.55 in.	---
Below crankshaft centerline``	.96 in.	---
Beside crankshaft centerline toward 2-4 side:	.06 in.	---
Propeller Shaft	ARP-502, Type 1 flange; 4.875 in. OD with six 0.5 in. bolt holes in 4 in. diameter circle	---

Model	IO-240-A		IO-240-B
Fuel Injection	CMI injection system 639231A27 or latest FAA approved		CMI injection system 639231A34 or latest FAA approved
Ignition	Two CMI S4LSC-21 or Two Slick 4301		- - -
Timing, °BTC	22		26
Spark Plugs	See NOTE 6		---
Oil Sump Capacity	quarts	6.0	---
	usable oil - 10° nose up	3.0	---
	usable oil - 10° nose down	3.0	---
NOTES	1 thru 9		---

"---" indicates "same as preceding model"

Model	IOF-240-B
Type	4-cylinder, air-cooled, naturally aspirated, horizontally opposed, fuel injected, spark ignition, four-stroke, direct drive. The engine incorporates a full authority digital electronic control (FADEC) system to control the ignition and fuel injection functions.
Rating ICAO or ARDC Standard Atmosphere Max. Continuous hp, RPM, FT at SL pressure altitude	125 - 2800
Takeoff, 5 min., hp, RPM FT at SL pressure altitude	125 - 2800
Fuel (min. grade aviation gas.)	100, 100LL per ASTM D910, B95/130 CIS, or RH95/130
Lubricating Oil	Lubricating oils qualified under SAE-J1899 or J1966 are considered qualified under CMI Spec MHS-24
Bore and Stroke	4.438 x 3.875
Displacement, cu.in.	240
Compression ratio	8.5:1
Weight (dry), lb.	255
C.G. location (basic engine) Aft of prop flange forward face: Below crankshaft centerline`` Beside crankshaft centerline toward 2-4 side:	14.55 in. .96 in. .06 in.
Propeller Shaft	ARP-502, Type 1 flange; 4.875 in. OD with six 0.5 in. bolt holes in 4 in. diameter circle
Fuel Injection	CMI. FADEC
Ignition	CMI FADEC

Model	**IOF-240-B**	
Timing, °BTC	Automatic	
Spark Plugs	See NOTE 6	
Oil Sump Capacity	quarts	6.0
	usable oil - 10° nose up	3.0
	usable oil - 10° nose down	3.0
NOTES	1 thru 14	

Certification Basis: Models IO-240-A and -B, FAR 33 through Amendment 14 effective August 10, 1990. Model IOF-240-B, FAR 33 through Amendment 14 effective August 10, 1990 and FAR 33.28 (Amdt. 15).

Production Basis: Production Certificate No. 508

NOTE 1. Maximum permissible temperatures:

Cylinder head bayonet, thermocouple	460°
Oil inlet	240°

NOTE 2. Fuel Pressure Limits:

	IO-240-A,	IO-240-B	IOF-240-B
Inlet to injection pump, min.	-2.0 psig	-2.0 psig	-2.0 psig
max.	+6.0 psig	+6.0 psig	+50.0 psig
Outlet to vapor return line, max.	+3.5 psig	+3.5 psig	+3.5 psig

NOTE 3. Oil pressure limits:

Normal operation	30 - 60 psi
Idle	10 psi
Maximum (cold oil)	100 psi

NOTE 4. The following accessory drive provisions are available:

Accessory	Direction of Rotation*	Drive Ratio to Crankshaft	Max. Torque (In-lb.) Cont.	Static	Max. Overhang Moment (In-lb.)
Tachometer	OPT-CW	0.5:1	7	50	25
**Magneto	CW	1.0:1	--	--	--
Starter	CCW	24.727:1	50		
Alternator	CCW	2.035:1	30	100	100
Fuel Pump	CCW	1:1	40	800	
***Vacuum Pump	CW	1:1	25	800	25

* "CW" - Clockwise
"CCW" - Counterclockwise (viewing drive pad) and
"OPT" – Optional
** Magneto drives not used on IOF-240-B FADEC engine.
*** This drive is an AND 20000 pad modified for speed only.

NOTE 5. These engines are eligible for pusher and tractor operation.

NOTE 6. The following spark plugs and/or those listed in CMI Service Information Letter SIL03-2 are approved on this engine.
Champion REM38E, REM38P, RHM38E, RHM38P

NOTE 7. Model IOF-240-B is similar to the IO-240-B except for the FADEC fuel and ignition control system.

NOTE 8. Engine model numbers may include a suffix to define minor specification changes. Example: IO-240-B(1B)

NOTE 9. Applicable FAA approved and/or accepted manuals:

	Operation & Installation	Maintenance & Overhaul
IO-240-A,-B	OI-6	M-6
IOF-240-B	OI-22	M-22

NOTE 10. 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 6,000 lbs. maximum takeoff weight.

NOTE 11. 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.

NOTE 12. 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.

NOTE 13. Installation and evaluation of the Health Status Annunciator (HSA) display is subject to the requirements established by the certification basis of the aircraft.

NOTE 14. Takeoff is prohibited with annunciated faults shown on the Health Status Annunciator (HSA).

NOTE 15. Engine model numbers may include a suffix to define minor specification changes and/or accessory packages. Example: IO-240-A(10).

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