DEPARTMENT OF TRANSPORTATION
FEDERAL AVIATION ADMINISTRATION

E00017AT
Revision 2
CONTINENTAL MOTORS, INC.
TD-300-B, TD-300-C
April 20, 2015

TYPE CERTIFICATE DATA SHEET NO. E00017AT

Engines of models described herein conforming with this data sheet (which is part of Type Certificate No. E00017AT) 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, operate, and maintained as prescribed by the approved manufacturer's manuals and other approved instructions.

Type Certificate Holder — Continental Motors Inc.
2039 South Broad Street
Mobile, Alabama 36615

Model	TD-300-B	TD-300-C
Type	4HOA	- -
Rating, ICAO or ARDC Standard Atmosphere at Sea Level Pressure Altitude		
Max Continuous HP	230	- -
Max Continuous RPM	2200	- -
Max Continuous Critical Altitude, feet (m)	0 (0)	9,800 (2987)
Max Altitude, feet (m)	12,500 (3810)	20,000 (6096)
Fuel	JET A-1 DEF STAN 91-91 (NATO F-35), JET A-1 (ASTM D1655-14) JET A (ASTM D1655-14), Jet Fuel No. 3 per GB 6537-2006 See Note 3, Note 7, and Note 18 Use anti-icing additive for fuel temperature < 32 °F (0 °C) See Note 7 and Note 18 Pre-filter with mesh size 300 micron to be used for fuel inlet	- -
Lubricating Oil	100% synthetic a. Standard: ACEA E4 / API CF / MIL L 2104E b. Viscosity: 10W-40 (See Note 3 and Note 7)	- -
Bore and Stroke, in. (mm)	4.961 (126) x 3.937 (100)	- -
Displacement, in^3 (cm^3)	304.36 (4987.6)	- -
Compression ratio	17:1	- -
Weight (dry) pounds (kg),	426.4 (193.4) Refer to Installation Manual, OI-30, for definition of engine dry weight	440.1 (199.6) Refer to Installation Manual, OI-30, for definition of engine dry weight
Oil Sump Capacity, Qts.(L) total	6.86 (6.5) Usable: 20° Nose Up 3.43 (3.25) Usable: 12° Nose Down 3.43 (3.25)	- - - - - -

Model	TD-300-B	TD-300-C
Principal Dimensions		
Length, in (mm)	32.3 (820)	- -
Width, in (mm)	36.6 (930)	- -
Height, in (mm)	30.9 (785)	37.58
Center of Gravity (Basic Engine)		
Aft of propeller flange, in (mm)	15.5 (393.7)	14.42 (366.2)
Beside crankshaft centerline toward the 3-4 side	0.2 (5.08)	0.14 (3.55)
Below Crankshaft Centerline, in (mm)	2.0 (50.8)	2.50 (63.5)
Propeller Shaft	AS127D (SAE 6) with five long bushings engaging the propeller and one short bushing in line with the right front cylinder when the #1 piston is at TDC.	- -
Fuel Injection	In-line high pressure pump-line-nozzle system (CMI PN 969038) Injection Timing BTDC 20.5° ± 0.5° as defined in the Maintenance Manual (M-30)	- -
Control System	Single channel electronic engine control system with manual backup. The S/W of the engine control system has been developed and tested per DO178B, Level C.	- -
Applicable Notes	1 through 19, 21	1 through 21

"- -" indicates "same as previous model"
"—" indicates "does not apply"

Certification basis	TD-300-B – 14 CFR 33 through Amendment 30 effective November 2, 2009 TD-300-C – 14 CFR 33 through Amendment 33 effective September 20, 2012
Production Basis	None, before original airworthiness certification of each aircraft, an FAA representative must perform a detailed inspection for workmanship, materials, conformity with the approved technical data, and a check of the flight characteristics. In the event of an application for a standard airworthiness certificate or, if an applicant intends to produce a new aircraft under 14 CFR § 21.183(d), and the applicant is manufacturing, building, or assembling to another person's type certificate, the applicant must provide written evidence of permission from the type certificate holder. Conduct of such activity without written evidence of permission may be a violation of 49 U.S.C. § 44704 a)(3).

Note 1. Engine ratings are based on a calibrated test stand with sea level static standard day inlet conditions (29.92 inHg, 59°F, and no water vapor), all accessory drives unloaded (no external power extraction), and fuel with a minimum cetane number of 36 per ASTM D613.

Note 2. Maximum permissible temperatures

Maximum cylinder head temperature	420°F (216°C)
Maximum turbine inlet temperature	1346°F (730°C) (-B); 1400°F (760°C) (-C)
Maximum oil temperature	248°F (120°C) (-B); 240°F (115.6°C) (-C)
Maximum intake air temperature (at intake manifold inlet)	150°F (65.6°C)
Maximum fuel temperature (at low pressure pump inlet)	149°F (65°C)
Minimum permissible temperatures	
Minimum oil temperature for power up/maximum power	150°F (65.6°C)
Minimum oil temperature for starting	20°F (-7°C) (see Note 17)
Minimum fuel temperature without use of anti-ice additive	32°F (0°C) (see Note 7)

Note 3. Fuel Pressure Limits

Minimum absolute pressure (at low pressure pump inlet)	8.7 psia (60 kPa)

Oil Pressure (gauge pressure) Limits

Maximum, cold engine	174 psig (1200 kPa)
Nominal	46.4 to 80 psig (320 to 552 kPa)
Minimum at idle	14.5 psig (100 kPa)

Note 4. The following accessory drive or mounting provisions are available for the TD-300 series engines.

Accessory-Drive	Direction of Rotation*	Drive Ratio to Crankshaft (RPM) **	Maximum Torque In. lb. (Nm) or Power	Max Overhang Moment In. Lbs (Nm)	Drive
Propeller Governor	CCW	1.231:1	212 (24)	26 (3)	AND 20010
AND20000 Accessories	CW	1.177:1	93 (10.5)	26 (3)	AND 20000
Alternator	CCW	***	4 kW	48.75 (5.5)	Belt ISO 9982
A/C compressor or 2nd Alternator	CCW	***	4 kW	79.8 (9)	Belt ISO 9982

* CCW = counterclockwise, CW = Clockwise. The rotation direction of the power drives for the accessories is indicated looking at the drive from the outside or from the front of the engine for accessories driven from the front pulley of the engine.

** The speed of rotation for the accessory power drives is indicated for a reference engine speed of 2200 rpm.

*** Driving pulley speed. Accessory rotation speed dependent on accessory pulley ratio.

Note 5. The TD-300-C is similar to the TD-300-B except for the turbocharger and turbocharger subsystem. The turbocharger subsystem was replaced to provide higher critical altitude and ceiling.

Note 6. Turbocharger Speed Limits

TD-300-B	146,000 rpm
TD-300-C	136,000 rpm

Note 7. Approved oil specifications are listed in the Installation & Operation Manual (OI-30)
Approved fuel additives:

- MIL-DTL-85470 (DiEGME), Type: Anti-Ice Additive, in a concentration of 0.1 to 0.15 percent by volume.
- T1301 (SH0396-92), Type: Anti-Ice Additive, in a concentration of 0.1 to 0.15 percent by volume.
- Prist Hi-Flash (MIL-DTL-85470; ASTM D4171), Type: Anti-Ice Additive, in a concentration of 0.1 to 0.15 percent by volume.

Note 8. The engine is approved for installation in Normal and Utility aircraft categories only where the engine is in the horizontal tractor configuration

Note 9. The list of propellers that are approved for use with the engine are published in the Installation & Operation Manual (OI-30)

Note 10. Engine models are only available as 24 Volt systems

Note 11. The electronic control system for the TD-300 series 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. The following electronic control unit has been approved for use with the corresponding engines (CMI part numbers below):

Engine Model	ECU	ECU software		
		OTP	Control	Cartography
TD-300-B	995001	965016	995134	995135
TD-300-C	995001	965016	995134	995136

Note 12. The electronic control unit must not be installed in a dedicated fire zone

Note 13. Installation and evaluation of fault lamps is subject to the requirements established by the certification basis of the aircraft

Note 14. Dispatch Limitations: All engine systems and equipment must be functional prior to aircraft take-off. Any detected engine system or equipment failure must be corrected before next flight. Takeoff is prohibited in mechanical back-up mode. Takeoff is prohibited with annunciated faults showing on the fault lamps.

Note 15. Engine model numbers may include a suffix to define minor specification changes and/or accessory packages. Example: TD-300-B (10).

Note 16. See Installation & Operation Manual (OI-30) for maximum manifold air pressure relative to atmospheric conditions.

Note 17. The operating envelope is provided in the Installation & Operation Manual (OI-30)

Note 18. Fuel cetane number of 36 per ASTM D613 has been demonstrated

Note 19. See Maintenance Manual (M-30) for Airworthiness Limitations / Life Limited Component(s)

Note 20. Alternative marketing / sales name for the TD-300-C is *CD-230*

Note 21. Instructions for Continued Airworthiness (ICA) are incomplete. The aircraft with the engine installed is eligible for delivery when the ICAs are complete and accepted.

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