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## **I - General**

**1. Type / Models:** Continental TSIO-550 / Continental TSIO 550-A, TSIO-550-B, TSIO-550-C  
Continental TSIO 550-E, TSIO-550-G, TSIO-550-K

**2. Type Certificate Holder:** Continental Motors, Inc.  
(formerly Teledyne Continental Motors)  
2039 Broad Street, Mobile, Alabama 36615

**3. Manufacturer :** Continental Motors, Inc.  
(formerly Teledyne Continental Motors)

### **4. EASA Certification Application Date:**

TSIO-550-A	TSIO-550-B	TSIO-550-C	TSIO-550-E	TSIO-550-G	TSIO-550-K
27 Jan 1997	27 Jan 1997	27 Jan 1997	27 Jan 1997	13 Oct 2009	13 Oct 2009

### **5. EASA Certification Date:**

TSIO-550-A	TSIO-550-B	TSIO-550-C	TSIO-550-E	TSIO-550-G	TSIO-550-K
29 Jan 1998	29 Jan 1998	29 Jan 1998	29 Jan 1998	21 June 2010	21 June 2010

EASA Type-Certification for the TSIO-550-A, -B, -C and -E engine models is granted, in accordance with Article 2 paragraph 3(a)(i) of EU Commission Regulation EC 1702/2003, based on the respective EU Member States approvals prior to 28 September 2003.

## **II - Certification Basis**

### **1. Airworthiness Standards:**

TSIO-550-A: FAR 33 through Amendment 9 effective October 14, 1980  
TSIO-550-B: FAR 33 through Amendment 12 effective September 2, 1988  
TSIO-550-C: FAR 33 through Amendment 13 effective August 18, 1990  
TSIO-550-E: FAR 33 through Amendment 13 effective August 18, 1990  
TSIO-550-G: CS-E Initial Issue  
TSIO-550-K: CS-E Amendment 1

**2. Special Conditions (SC):** none

**3. Equivalent Safety Findings (ESF):** none

**4. Deviations:** none

**5. Environmental Standards:** none (not required for piston engines)

### III - Technical Characteristics

#### 1. Type Design Definition:

As defined by TCM stocklist MBM6300.

#### 2. Description:

The Continental TSIO-550 engine is a fuel injected, turbocharged, horizontally opposed, six 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: 9.046 dm<sup>3</sup> (552 cu. in.)  
Bore x stroke: 133.4 mm x 108.0 mm (5.25 in. x 4.25 in.)  
Compression ratio: 7.5 : 1  
Gear ratio: N/A

#### 3. Equipment:

Magnetos: Slick Electro 6220 (both sides) or TCM S6RN-201 and S6RN-205, or TCM S6RSC-25P pressurized with appropriate pressurization system and ignition harness..

Spark Plugs: Ref. TCM Service Information Letter SIL03-2 or latest FAA approved revision

Alternators: The engine is provided with a gear driven alternator, optional provisions for a front mounted, belt-driven alternator, and for a belt-driven freon compressor are available. The compatibility of these options must be accomplished by the installer

#### 4. Dimensions:

Model	TSIO-550-A	TSIO-550-B	TSIO-550-C	TSIO-550-E
Overall Length	1082 mm (42.6 in)	1035 mm (40.75 in)	1082 mm (42.6 in)	1023 mm (40.26 in)
Overall Height	851 mm (33.5 in)	831 mm (32.7 in)	851 mm (33.5 in)	832 mm (32.76 in)
Width	1072 mm (42.5 in)	1072 mm (42.2 in)	1080 mm (42.5 in)	1072 mm (42.20 in)

Model	TSIO-550-G	TSIO-550-K		
Overall Length	1022 mm (40.3 in)	1268 mm (49.9 in)		
Overall Height	900 mm (35.4 in)	864 mm (34 in)		
Width	912 mm (39.9 in)	1077 mm (42.4 in)		

#### 5. Dry Weight:

Model	TSIO-550-A	TSIO-550-B	TSIO-550-C	TSIO-550-E
Weight	200 kg (442 lbs)	259 kg (571 lbs)	237 kg (522 lbs)	257 kg (566 lbs)

Model	TSIO-550-G	TSIO-550-K		
Weight	251 kg (554 lbs)	237 kg (522 lbs)		

Note: The weight listed above represent a minimum runnable engine and include the turbochargers.

**6. Ratings:**

At propeller flange (see Note 5)

Rating	TSIO-550-A	TSIO-550-B	TSIO-550-C	TSIO-550-E
Max. Continuous	268 kW (360 HP) at 2600 RPM and 139 kPa (41 in.Hg) manifold pressure and 3658 m (12000 ft) critical altitude	261 kW (350 HP) at 2700 RPM and 129 kPa (38 in.Hg) manifold pressure and 3658 m (12000 ft) critical altitude	231 kW (310 HP) at 2600 RPM and 120 kPa (35.5 in.Hg) manifold pressure and 5486 m (18000 ft) critical altitude	268 kW (350 HP) at 2700 RPM and 130 kPa (38.5 in.Hg) manifold pressure and 5486 m (18000 ft) critical altitude

Rating	TSIO-550-G	TSIO-550-K		
Max. Continuous	231 kW (310 HP) at 2700 RPM and 115 kPa (34 in.Hg) manifold pressure and 6706 m (22000 ft) critical altitude	235 kW (315 HP) at 2500 RPM and 127 kPa (37.5 in.Hg) manifold pressure and 5486 m (18000 ft) critical altitude		

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

**7. Control System**

The TSIO-550 series engines are equipped with a mechanical TCM fuel injection system and a two magneto ignition system.

**8. Fluids (Fuel/Oil/Additives):**

Fuel: Aviation Gasoline, minimum grade 100LL, 100, RH95/130, or B95/130 CIS (see Note 5)

Oil: see TCM Spec MHS No. 24

**9. Aircraft Accessory Drives:**

Designation	Rotation direction	Speed ratio to crankshaft	Max. Torque Nm (in. lbs)		Max. Overhang moment Nm (in. lbs)
			Continuous	static	
Propeller governor <sup>1)</sup>	CW	1:1	3.28 (29)	93.21 (825)	5.65 (50)
Tachometer	CCW	0.5:1	0.79 (7)	5.65 (50)	2.82 (25)
Starter	CCW	48:1	22.60 (200)	45.19 (400)	6.78 (60)
Fuel Pump (Injection)	CW	1:1	2.82 (25)	76.83 (680)	6.78 (60)
Generator, gear driven	CW	3:1	16.95 (150)	90.39 (800)	16.95 (150)
Accessory Drive (2) <sup>2)</sup>	CW	1.5:1	11.30 (100)	90.39 (800)	4.52 (40)

Notes : - CW - clockwise; CCW – counter clockwise (viewing drive pad)

<sup>1)</sup> Modified AND 20010 pad

<sup>2)</sup> One drive is eligible at 22.60 Nm (200 in. lbs) continuous torque load provided the other does not exceed 11.30 Nm (100 in. lbs) continuous torque load.



- Note 4:** A means of controlling maximum turbocharger discharge pressure, engine manifold pressure and proper placarding shall be provided to limit manifold pressure (and TIT for the TSIO-550-G model) as outlined under »2.3 Manifold Pressure Limits« except as stated in Notes 5.
  
- Note 5:** When operating with 95/130 grade fuel, the altitude limitation for maximum continuous power and speed is 3000 m (9840 ft) and, for maximum recommended cruise power and speed, is 6000 m (19680 ft).
  
- Note 6:** The TSIO-550-G engine installation is only allowed in aircraft for which a declaration has been provided that fire proof engine attachment points according to CS-E 130(h) of CS-E Initial Issue are not required.
  
- Note 7:** The TSIO-550-K engine installation is only allowed in aircraft for which a declaration has been provided that fire proof engine attachment points according to CS-E 130(g) of CS-E Amendment 1 are not required.
  
- Note 8:** Compliance with FAA AD 2010-11-04, 2007-16-10, and 2004-08-10 (if applicable) is required for the TSIO-550-G engine.

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