EASA
European Aviation Safety Agency

Scan to verify version & source of information

EASA.IM.E.100

Description:	E.100 (IM) Continental Motors Inc. IO-550 series engines
Language:	English
TCDS:	EASA.IM.E.100
Product type:	Engine (CS-E)
Manufacturer/TC Holder:	Continental Motors, Inc.

European Aviation Safety Agency

EASA

TYPE-CERTIFICATE DATA SHEET

Number : IM.E.100
Issue : 02
Date : 05 July 2013
Type : Continental Motors, Inc.
Continental IO-550 series engines

Models
Continental IO-550-B
Continental IO-550-C
Continental IO-550-D
Continental IO-550-F
Continental IO-550-G
Continental IO-550-N

List of effective Pages:

Page	1	2	3	4	5	6												
Issue	2	2	2	2	2	2												

Intentionally left blank

I - General

1. Type / Models : Continental IO-550 / Continental IO-550-B, IO-550-C, IO-550-D, IO-550-F, IO-550-G, IO-550-N

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/Validation Application Date:

IO-550-B	IO-550-C	IO-550-D	IO-550-G	IO-550-N
10 Nov. 1983	11 Nov. 1983	11 Nov. 1997	3 Aug. 1994	8 Nov. 2004

Note: Application for IO-550-B, IO-550-C, IO-550-D and IO-550-G was made to LBA Germany before EASA had been established.
Application for IO-550-F was made to CAA UK before EASA had been established.
Certification Reference Date for IO-550-N: 10 August 1990

5. EASA Certification/Validation Date:

IO-550-B	IO-550-C	IO-550-D	IO-550-F	IO-550-G	IO-550-N
17 Sep. 1984	17 Sep. 1984	10 Dec. 1998	07 May 1992	20 Mar. 1995	2005

Note: IO-550-B, IO-550-C, IO-550-D and IO-550-G had been validated by LBA Germany (TC/TCDS 4606).
IO-550-F had been validated by CAA UK (Airworthiness Approval Note 23415 - Cessna U206G)

II - Certification Basis

1. FAA Certification Basis: See FAA TCDS E3SO

2. EASA Certification Basis:

2.1. Airworthiness Standards:

FAR 33 Amdt. 8 effective May 2, 1977	IO-550-B, IO-550-C, IO-550-D, IO-550-F
FAR 33 Amdt. 11 effective April 24, 1986	IO-550-G
JAR-E Change 9 dated May 4, 1990	IO-550-N

2.2. Special Conditions (SC):

none

2.3. Equivalent Safety Findings (ESF):

none

2.4. Exemptions:

none

2.5. Environmental Standards:

none (not required for piston engines)

III - Technical Characteristics

1. Type Design Definition:

As defined by TCM engine stocklist.

2. Description:

The Continental IO-550 engine is a fuel injected, naturally aspirated, 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^3 (552 cu. in.)
Bore x stroke: 133.4 mm x 108.0 mm (5.25 in. x 4.25 in.)
Compression ratio: 8.5 : 1
Gear ratio: N/A

3. Equipment:

Magnetos: TCM/Bendix S6RN-201/S6RN-205 (L/R, not for IO-550-G, -N);
TCM/Bendix S6RN-1201/S6RN-1205 (L/R, not for IO-550-G, -N);
TCM/Bendix S6RN-25(L/R), TCM/Bendix S6RN-1225(L/R, not for IO-550-G, -N)
Bendix S6RSC-25 (L/R), Slick Electro Model 6210 (L/R, not for IO-550-G, -N)
Slick Electro Model 6310 (L/R, not for IO-550-G, -N)
Spark plugs: AC 271, 273, 281, 281IR, 283, 283R, 291, 293
Auto Lite PL350, SO350
Champion RHB32E, RHB32N, RHB32P, RHB32W, RHB33E, RHB36P, RHB36W
Alternators: TCM 60AMP, TCM 100AMP, Prestolite 50 AMP, Prestolite 70 AMP

4. Dimensions:

Overall Length	976.1 mm	38.43 in.
Overall Height	518.4 mm	20.41 in.
Width	864.6 mm	34.04 in.

5. Dry Weight:

IO-550-B	IO-550-C	IO-550-D, -F	IO-550-G	IO-550-N
191.24 kg	196.50 kg	198.27 kg	194.58 kg	194.58 kg
(421.61 lbs)	(433.20 lbs)	(437.1 lbs)	(428.97 lbs)	(428.97 lbs)

6. Ratings:

Rating		IO-550-B, -C; -D, -F	IO-550-G	IO-550-N
Power, kW (HP)	Take-off, 5 min., full throttle at sea level pressure altitude	224 (300) at 2700 rpm	209 (280) at 2500 rpm	231 (310) at 2700 rpm
	Maximum Continuous, full throttle at sea level pressure altitude	224 (300) at 2700 rpm	209 (280) at 2500 rpm	231 (310) at 2700 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 engine is equipped with a mechanical TCM fuel injection system.

8. Fluids (Fuel/Oil/Additives):

Fuel: Aviation Gasoline, minimum grade 100LL, 100 or B95/130 CIS

Oil: see TCM 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)
Propeller governor [1)]	CW	1 : 1	3.28 (29)	93.21 (825)	5.65 (50)
Tachometer [2)]	CCW	0.5:1	0.79 (7)	5.65 (50)	2.82 (25)
Generator, gear driven (IO-550-B, -C, -G, -N)	CCW	3:1	11.30 (100)	56.49 (500)	16.95 (150)
Generator, belt driven (IO-550-D, -F)	CCW	2:1	14.12 (125)	N/A	N/A
Accessory Drive (2) [3)]	CW	1.5:1	11.30 (100)	90.39 (800)	4.52 (40)

Notes : - CW - clockwise; CCW – counter clockwise (viewing drive pad)
[1)] Modified AND 20010 pad
[2)] AND 20005 pad for IO-550-B, -C, -G, -N; AS-24 pad for IO-550-D, -F
[3)] One drive is eligible at 18.08 Nm (160 in. lbs) continuous torque load provided the other does not exceed 11.30 Nm (100 in. lbs) continuous torque load.

IV - Operational Limitations

1. Temperature limits, °C

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

2. Pressure Limits:

2.1 Fuel Pressure:

Inlet to injection pump, minimum:	- 24.1 kPa (-3.5 psig)
maximum:	+ 41.4 kPa (+6.0 psig)
Outlet to upper return line, max.:	+ 24.1 kPa (+3.5 psig)

2.2 Oil Pressure Limits 2-4-6 side:

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

V - Operational and Service Instructions

Installation and Operation Manual (IO-550-B, -C, -G, -N)	X30565A
Installation and Operation Manual (IO-550-D, -F)	X30565
Maintenance Manual (IO-550-B, -C, -G, -N)	X305634A
Service Bulletins and Service Letters	As issued

VI - Notes

Note 1: All models incorporate a crankshaft with one 4^{th}, one 5^{th} and two 6^{th} order dampers.

Note 2: Engine model numbers may include a suffix to define minor specification changes. Example: IO-550-B(1B)

Note 3: These models of engines are eligible for installation of the freon compressor drive system,
TCM equipment no. EQ6576 or EQ6580 - IO-550-B, -C, -G, -N
TCM equipment no. EQ6563 - IO-550-D, -F and/or
an auxiliary alternator EQ6562 - IO-550-D, -F