



AGÊNCIA NACIONAL DE AVIAÇÃO CIVIL - BRASIL

**TYPE CERTIFICATE DATA SHEET Nº EM-9101**

Type Certificate Holder:

**TELEDYNE CONTINENTAL MOTORS**  
P.O. Box 90  
Mobile, Alabama 36601  
**USA**

EM-9101-03  
Sheet 01  
CONTINENTAL  
IO-550-A, -B, -C, -D, -E,  
-F, -G, -L, -N, -P, -R  
  
22 June 2009

Engines of models described herein conforming with this data sheet, which is part of Type Certificate No. 9101, meet the minimum standards for use in certificated aircraft in accordance with pertinent aircraft data sheets and applicable portions of the Brazilian Aeronautical Regulations provided they are installed, operated, and maintained as prescribed by the approved manufacturer's manuals and other instructions.

<b>MODEL</b>	IO-550-A, IO-550-B, IO550-C, IO-550-D, IO-550-E (See Note 6)					
<b>TYPE</b>	Six cylinders horizontally opposed, four strokes, fuel injected, spark ignition, direct drive, air-cooled engine incorporating a wet sump, bottom exhaust.					
<b>RATINGS</b>		IO-550-A	IO-550-B	IO-550-C	IO-550-D	IO-550-E
	Max. continuous, hp (rpm) full throttle at:					
	Sea level pressure altitude:	300 (2 700)	--	--	--	--
	Takeoff, hp (rpm) full throttle at:					
	Sea level pressure altitude:	300 (2 700)	--	--	--	--

Legend: “-” = same as preceding; “#” = not applicable

		IO-550-A	IO-550-B	IO-550-C	IO-550-D	IO-550-E
<b>FUEL</b>	Minimum grade aviation gasoline	100, 100LL	--	--	--	--
<b>OIL, LUBRICATION</b>	TCM Specification MHS # 24	--	--	--	--	--
<b>OIL SUMP CAPACITY</b>	Total (qts)	12.0	--	--	--	--
	Usable at nose up attitude (qts)	6.1 (26.0°)	10.0 (18°)	7.0 (20°)	7.0 (20°)	7.8 (20°)
	Usable at nose down attitude (qts)	6.1 (13.5°)	10.0 (14°)	7.0 (15°)	6.0 (10°)	6.7 (10°)
<b>BORE &amp; STROKE</b>	(in.)	5.25 x 4.25	--	--	--	--
<b>DISPLACEMENT</b>	(cu. in.)	552	--	--	--	--
<b>COMPRESSION</b>		8.5 : 1	--	--	--	--
<b>WEIGHT (dry)</b>	Kg (lb)	195.37 (430.72)	191.24 (421.61)	196.50 (433.20)	198.27 (437.10)	204.35 (450.50)
<b>C.G. LOCATION</b> (basic engine)	Forward of rear face acc. case (in)	12.20	12.42	12.00	11.29	11.29
	Below crankshaft centerline (in)	0.54	1.22	0.94	0.54	0.54
	Beside crankshaft centerline, toward 1-3-5 side (in)	025	0.12	0.40	0.24	0.22
<b>PROPELLER SHAFT</b>	ARP-502, Type I flange 4-7/8 in O.D. with six 1/2 in bolts holes in 4 in. diameter circle	--	--	--	--	--
<b>FUEL INJECTION</b>	TCM Injector	--	--	--	--	--
<b>SPARK PLUGS</b>	AC 271, 273, 281, 281IR, 283, 283R, 291, 293	--	--	--	--	--
	Auto Lite PL350, SO350	--	--	--	--	--
	Champion RHB32E, RHB32N, RHB32P, RHB32W, RHB33E, RHB36P, RHB36W	--	--	--	--	--
<b>TIMING</b>	°BTC	22	--	--	--	--

		IO-550-A	IO-550-B	IO-550-C	IO-550-D	IO-550-E
<b>IGNITION</b>	TCM / Bendix Scintilla S6RN-201 and S6RN-205	one each	one each	one each	one each	#
	S6RN-1201 and S6RN-1205	one each	one each	one each	one each	one each
	S6RN-25	two	two	two	two	#
	S6RN-1225	two	two	two	two	two
	S6RSC-25	two	two	two	two	#
	Slick Electro model 6210	two	two	two	two	#
	Slick Electro model 6310	two	two	two	two	#
<b>TEMPERATURE LIMITS</b>	Cylinder head bayonet thermocouple °C (°F)	238 (460)	--	--	--	--
	Oil inlet °C (°F)	116 (240)	--	--	--	--
<b>PRESSURE LIMITS</b>	Fuel pressure (psig)					
	Inlet to injection pump, min.	-3.5	--	--	--	--
	max.	+6.0	--	--	--	--
	Outlet to upper return line, max.	+3.5	--	--	--	--
	Oil pressure limits (psig) 2-4-6 side,					
	Normal	30 ~ 60	--	--	--	--
Idle	10	--	--	--	--	
Maximum (cold oil)	100	--	--	--	--	
<b>MODEL</b>	IO-550-F, IO-550-G, IO-550-L, IO-550-N, IO-550-P (See Note 6)					
<b>TYPE</b>	Six cylinders horizontally opposed, four strokes, fuel injected, spark ignition, direct drive, air-cooled engine incorporating a wet sump, bottom exhaust.					
<b>RATINGS</b>		IO-550-F	IO-550-G	IO-550-L	IO-550-N	IO-550-P
	Max. continuous, hp (rpm) full throttle at:					
	Sea level pressure altitude:	300 (2 700)	280 (2 500)	300 (2 700)	310 (2 700)	--
	Takeoff, hp (rpm) full throttle at:					
Sea level pressure altitude:	300 (2 700)	280 (2 500)	300 (2 700)	310 (2 700)	--	
		IO-550-F	IO-550-G	IO-550-L	IO-550-N	IO-550-P

<b>FUEL</b>	Minimum grade aviation gasoline	100, 100LL	--	--	--	--
<b>OIL, LUBRICATION</b>	TCM Specification MHS # 24	--	--	--	--	--
<b>OIL SUMP CAPACITY</b>	Total (qts)	12.0	8.0	10.0	8.0	10.0
	Usable at nose up attitude (qts)	7.0 (20.0°)	5.0 (16°)	7.8 (20°)	5.0 (16°)	7.8 (20°)
	Usable at nose down attitude (qts)	6.0 (10.0°)	4.5 (10°)	6.7 (10°)	4.5 (10°)	6.7 (10°)
<b>BORE &amp; STROKE</b>	(in.)	5.25 x 4.25	--	--	--	--
<b>DISPLACEMENT</b>	(cu. in.)	552	--	--	--	--
<b>COMPRESSION</b>		8.5 : 1	--	--	--	--
<b>WEIGHT (dry)</b>	Kg (lb)	198.27 (437.10)	194.58 (428.97)	198.90 (438.50)	194.58 (428.97)	194.60 (429.0)
<b>C.G. location (basic engine)</b>	Forward of rear face accessory case (in)	11.29	12.76	11.29	12.76	12.66
	Below crankshaft centerline (in)	0.54	0.21	0.54	0.21	--
	Beside crankshaft centerline, toward 1-3-5 side (in)	0.24	0.23	0.24	0.23	0.23 toward 2-4-6 side
<b>PROPELLER SHAFT</b>	ARP-502, Type I flange 4-7/8 in. O.D. with six 1/2 in. bolts holes in 4 in. diameter circle	--	--	--	--	--
<b>FUEL INJECTION</b>	TCM Injector	--	--	--	--	--
<b>TIMING</b>	°BTC	22	--	--	--	--
<b>SPARK PLUGS</b>	AC 271, 273, 281, 281IR, 283, 283R, 291, 293	--	--	--	--	--
	Auto Lite PL350, URHB32E	--	--	--	--	--
	Champion RHB32E, RHB32S, RHB36S	--	--	--	--	--

		IO-550-F	IO-550-G	IO-550-L	IO-550-N	IO-550-P
<b>IGNITION</b>	TCM / Bendix Scintilla S6RN-201 and S6RN-205	one each	#	one each	#	#
	S6RN-1201 and S6RN-1205	one each	#	one each	#	#
	S6RN-25	two	two	two	two	two
	S6RN-1225	two	#	two	#	#
	S6RSC-25	two	two	two	two	two
	Slick Electro model 6210	two	#	two	#	#
	Slick Electro model 6310	two	#	two	#	#
<b>TEMPERATURE LIMITS</b>	Cylinder head bayonet thermocouple °C (°F)	238 (460)	--	--	--	--
	Oil inlet °C (°F)	116 (240)	--	--	--	--
<b>PRESSURE LIMITS</b>	Fuel pressure (psig)					
	Inlet to injection pump, min.	-3.5	--	--	--	--
	max.	+6.0	--	--	--	--
	Outlet to upper return line, max.	+3.5	--	--	--	--
	Oil pressure limits (psig) 2-4-6 side,					
	Normal	30 ~ 60	--	--	--	--
Idle	10	--	--	--	--	
Maximum (cold oil)	100	--	--	--	--	
<b>MODEL</b>	<b>IO-550-R</b> (See Note 6)					
<b>TYPE</b>	Six cylinders horizontally opposed, four strokes, fuel injected, spark ignition, direct drive, air-cooled engine incorporating a wet sump, bottom exhaust.					
<b>RATINGS</b>		<b>IO-550-R</b>				
	Max. continuous, hp (rpm) full throttle at:					
	Sea level pressure altitude:	<b>310 (2 700)</b>				
	Takeoff, hp (rpm) full throttle at:					
Sea level pressure altitude:	<b>310 (2 700)</b>					

<b>FUEL</b>	Minimum grade aviation gasoline	IO-550-R 100, 100LL
<b>OIL, LUBRICATION</b>	TCM Specification MHS # 24	--
<b>OIL SUMP CAPACITY</b>	Total (qts)	12.0
	Usable at nose up attitude (qts)	7.5 (20.0°)
	Usable at nose down attitude (qts)	7.3 (10.0°)
<b>BORE &amp; STROKE</b>	(in.)	5.25 x 4.25
<b>DISPLACEMENT</b>	(cu. in.)	552
<b>COMPRESSION</b>		8.5 : 1
<b>WEIGHT (dry)</b>	Kg (lb)	199.35 (439.50)
<b>C.G. location (basic engine)</b>	Forward of rear face accessory case (in)	12.81
	Below crankshaft centerline (in)	0.45
	Beside crankshaft centerline, toward 2-4-6 side (in)	0.23
<b>PROPELLER SHAFT</b>	ARP-502, Type I flange 4-7/8 in. O.D. with six 1/2 in. bolts holes in 4 in. diameter circle	--
<b>FUEL INJECTION</b>	TCM Injector	--
<b>IGNITION</b>	TCM / Bendix Scintilla S6RN-201and	
	S6RN-205	#
	S6RN-1201 and	
	S6RN-1205	#
	S6RN-25	two
	S6RN-1225	#
	S6RSC-25	two
	Slick Electro model 6210	#
	Slick Electro model 6310	#

<b>TIMING</b>	°BTC	IO-550-R 22
<b>SPARK PLUGS</b>	AC 271, 273, 281, 281IR, 283, 283R, 291, 293 Auto Lite PL350, URHB32E Champion RHB32E, RHB32S, RHB36S	-- -- --
<b>TEMPERATURE LIMITS</b>	Cylinder head bayonet thermocouple °C (°F) Oil inlet °C (°F)	238 (460) 116 (240)
<b>PRESSURE LIMITS</b>	Fuel pressure (psig) Inlet to injection pump, min. max. Outlet to upper return line, max. Oil pressure limits (psig) 2-4-6 side, Normal Idle Maximum (cold oil)	-3.5 +6.0 +3.5 30 ~ 60 10 100
<b>IMPORT REQUIREMENTS</b>	Each engine imported separately and/or spare parts must be accompanied by an Airworthiness Certificate for Export and/or an Airworthiness Approval Tag, respectively, issued by FAA (USA), attesting that the particular engine and/or parts were submitted to the governmental quality control before delivery and are in conformity with the ANAC approved type design.	

**CERTIFICATION BASIS**

The certification basis for the engine is RBHA 33, corresponding to 14 CFR Part 33, amendments 1 through 8, effective on 02 May 1977 for IO-550-A, -B, -C, -D, -E, -F and -L; amendments 1 through 11, effective on 24 April 1986 for IO-550-G; amendments 1 through 14, effective on 10 August 1990 for IO-550-N and amendments 1 through 19, effective on 30 April 1998 for IO-550-P, -R.

Model

Application

Issued TC

IO-550-D/-E	27 August 1990	07 February 1991
IO-550-G	26 February 1997	23 September 2004
IO-550-A/-B/-C/-F/-L/-N	01 September 2004	19 April 2005
IO-550-P /-R	01 May 2009	22 June 2009

**NOTES:**

**NOTE 1**

Accessory drive or mounting provisions:

**IO-550 Series**

	Accessory	Rotation facing Drive Pad	Speed Ratio to Crankshaft	Max. Torque (in.-lb.)		Max. Overhang Moment (in.-lb)
				Cont	Static	
A, B, C, G, N, P, R	Starter	CC	48 : 1	200.0	400.0	60.0
D, E, F, L	Starter	CC	32 : 1	200.0	400.0	60.0
A, B, C, G, N, P, R	Alternator Gear Drive	CC	3 : 1	100.0	500.0	150.0
D, E, F, L	Belt Drive	CC	2 : 1	125.0	800.0	#
A, B, C, D, E, F, G, L, N, P, R	Accessory Drive (2) (*)	C	1.5 : 1	100.0	800.0	40.0
A, B, C, D, E, F, G, L, N, P, R	Tachometer	CC	.5 : 1	7.0	50.0	25.0
A, B, C, D, E, F, G, L, N, P, R	Prop. Governor	C	1 : 1	29.0	825.0	50.0
A, B, C, D, E, F, G, L, N, P, R	Magneto	CC	1.5 : 1	--	--	--
A, B, C, G, N, P, R	Fuel Pump	C	1 : 1	25.0	680.0	60.0
D, E, F, L	Fuel Pump	CC	1 : 1	25.0	680.0	60.0

(\*) One drive is eligible at 160.0 in.-lb. continuous torque load provided the other does not exceed 100 in.-lbs. continuous torque load.  
 "C" - Clockwise      "CC" - Counter Clockwise

**NOTE 2**

All models incorporate a crankshaft with one 4<sup>th</sup>, one 5<sup>th</sup> and two 6<sup>th</sup> order dampers.



**NOTE 3** The engines IO-550-A, B, C, G and N are eligible for installation of the freon compressor drive system TCM equipment no. EQ6576 or EQ6580.  
The engines IO-550-D, E, F and L are eligible for installation of the freon compressor drive system TCM equipment no. EQ6563 and/or an auxiliary alternator EQ6562.

**NOTE 4** The following alternators are eligible on these engines at the indicated weight change:

- TCM	50 Amp-24 V	+ 5.58 kg (12.31 lb)
- TCM	100 Amp-24 V	+ 7.96 kg (17.56 lb)
- Prest-O-Lite	70 Amp-24 V	+ 5.26 kg (11.60 lb)
- TCM	60 Amp-24V	+ 5.58 kg (12.30 lb)
- KAPS	85 Amp-24V	+ 4.85 kg (10.70 lb)
- KAPS	100 Amp-24V	+ 4.35 kg (9.60 lb)
- KAPS	70 Amp-24V	+ 3.17 kg (7.00 lb)
- KAPS	70 Amp-12V	+ 5.94 kg (13.10 lb)

**NOTE 5** All engine models are available as either 12V or 24V systems.

**NOTE 6** Engine model numbers may include a suffix to define minor specification changes and/or accessory packages. Example: IO-550-B(1B).

<b>NOTE 7</b>	Applicable FAA approved and/or accepted manuals:	Operation & Installation	Maintenance	Overhaul
	IO-550-A,B,C,G,N,P and R	X30565A	X305634A	X30568A
	IO-550-D,E,F and L	X30605	#	X30607A

  
**ADEMIR ANTÔNIO DA SILVA**  
 Gerente Geral, Certificação de Produto Aeronáutico  
 (Manager, Aeronautical Product Certification)