

FEDERAL AVIATION AGENCY

E-190  
Revision 7  
CONTINENTAL  
A-50-1, A-50-2, A-50-3  
A-50-4, A-50-4J  
A-50-5, A-50-5J  
A-50-6, A-50-6J  
A-50-7, A-50-7J  
A-50-8, A-50-8J  
A-50-9, A-50-9J  
  
November 2, 2011

TYPE CERTIFICATE DATA SHEET NO. E-190

Engines of models described herein conforming with this data sheet (which is a part of type certificate No. 190) and other approved data on file with the Federal Aviation Agency, meet the minimum standards for use in certificated aircraft in accordance with pertinent aircraft data sheets and applicable portions of the Civil Air 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 36601

Type Certificate Holder Record            Teledyne Continental Motors  
Ownership & name change as of April 19, 2011 (Continental Motors, Inc.)

Model A-50	-1	-2	-3	-4	-5, -6	-7	-8, -9
Type	4HOA	--	--	--	--	--	--
Rating							
Max. continuous hp. r.p.m. at sea level pressure altitude	50-1900-S.L.	--	--	--	--	--	--
Takeoff (5 min.) hp. r.p.m. at full throttle	50-1900	--	--	--	--	--	--
Fuel (minimum grade aviation gasoline)	73	--	--	--	--	--	--
Lubricating Oil, Ambient Air Temperature, °F	Oil Grade						
Below 40	SAE 20	--	--	--	--	--	--
Above 40	SAE 40	--	--	--	--	--	--
Bore and stroke, in.	3.875 x 3.625	--	--	--	--	--	--
Displacement, cu. in.	171	--	--	--	--	--	--
Compression ratio	5.4:1	--	--	--	--	--	--
Weight (dry) lb.	160	166	170	163	173, 176	160	170, 173
Propeller shaft SAE No. (Taper)	0	--	--	--	--	--	--

Carburetion (See NOTE 3 for injectors)    Stromberg NA-S3 or NA-S3A1 carburetor with 1-1/4 in. venturi or Marvel-Schebler MA-3-PA carburetor with 1-7/32 in. venturi

Ignition	Single, Scintilla SF-4L or Eisemann AM-4 magnetos	Dual, Scintilla WL-4 or Auto-Lite IGW battery	Dual, Scintilla SF-4R or Eisemann AM-4 magnetos	Single, Scintilla SF-4R or Eisemann AM-4 magnetos	Dual, Scintilla SF-4R or Eisemann AM-4 magnetos	Single, Scintilla SF-4L or Eisemann AM-4 magnetos	Dual, Scintilla SF-4R or Eisemann AM-4 magnetos or Case 4-CAMA magnetos with impulse coupling (25° retard)
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Model A-50	-1	-2	-3	-4	-5, -6	-7	-8, -9
Spark plugs	See NOTE 6	--	--	--	--	--	--
Timing, °BTC	28	24	Right 25 Left 28	28	Right 25 Left 28	28	Right 25 Left 28
Oil sump and capacity (qt.)	Dry	Dry	Dry	Wet - 4½	Wet - 4½	Wet - 4½	Wet - 4½
Exhaust port	Up	Up	Up	Up	Up	Down	Down
NOTES	1,2,4,5,6	1,2,4,5,6	1,2,4,5,6	1,2,3,4, 5,6	1,2,3,4,5,6	1,2,3,4, 5,6	1,2,3,4,6

"- -" indicates "same as preceding model"

Certification basis CAR 13  
Type Certificate No. 190

Production basis Production Certificate No. 7

NOTE 1. Maximum permissible cylinder head, barrel and oil inlet temperatures, 550°, 350° and 215° respectively.

NOTE 2. Engines Nos. 115395 and up incorporate originally a modified crankcase for rubber shock mountings which necessitates using a modified engine mount.

NOTE 3. The A-50-4J, -5J, -6J, -7J, -8J, and -9J models incorporate High Fuel Injector Model A in place of the carburetor at a weight increase of 3 lb.

NOTE 4. Accessory provisions and typical accessories are as follows:

<u>Starter</u>	<u>Added Weight (lb.)</u>
Eclipse Type 635 (Electric), for Models -6, -6J, -9, -9J only	16
Eclipse Type E-80 (Electric), for Models -6, -6J, -9, -9J only	18
Hummer Type X (Mechanical), for Models -6, -6J, -9, -9J only	14
 <u>Fuel Pump (provisions optional)</u>	
AC Diaphragm Type CP8527	4
AC Diaphragm Type 1523843 (CMC No. 4552)	2
 <u>Miscellaneous</u>	
Air Filter and Scoop, Nos. A-5810 and A-40522	3

NOTE 5. The approvals for the following models expired November 7, 1941. No engines of these models, manufactured after this date, or with Serial Nos. above those shown, are eligible for use in certificated aircraft:

<u>Models</u>	<u>Serial No.</u>
A-50-1, -2, -3, -4, -4J, -5, -5J, -6, -6J	131595
A-50-7, -7J	138197

NOTE 6. The following spark plugs are approved for use in these engines:

AC A88, S88, SR88  
Auto-Lite 18A-1, SH-2K, SH-2M  
BG 4B2, 417S, 706, 706R  
Champion C-26, C-27, M-26, M31A, LM-31S

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