

DEPARTMENT OF TRANSPORTATION
FEDERAL AVIATION ADMINISTRATION

E-253
Revision 19

CONTINENTAL
C145-2, -2H, -2HP
O-300-A, -B, -C, -D, -E

November 1, 2011

TYPE CERTIFICATE DATA SHEET NO. E-253

Engines of models described herein conforming with this data sheet (which is part of Type Certificate No. 253) 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	C145-2, -2H, -2HP	O-300-A, -B, -C, -D, -E
Type	6HOA	---
Rating, ICAO or ARDC standard atmosphere		
Max. continuous hp., rpm, full throttle at sea level pressure altitude	145-2700	---
Takeoff hp., 5 min., r.p.m., full throttle at sea level pressure altitude	145-2700	---
Fuel (min. grade aviation gasoline)	80/87	---
Lubricating Oil		
Oil inlet temperature	Oil grade	
Below 120° F.	SAE 20	---
Over 120° F.	SAE 40	---
Bore and stroke, in.	4.0625 x 3.875	---
Displacement, cu. in.	301	---
Compression ratio	7.0:1	---
Weight (dry), lb.	268	---
C.G. location		
(with accessories where eligible)		
Fwd. of mounting lug rear face, in.	8.1	---
Below crankshaft, in.	1.6	---
Propeller shaft, SAE No.	See NOTE 7	---
Carburetion	Marvel-Schebler MA-3SPA P/N 530490	---
Ignition, dual, magnetos	CMI/TCM/Bendix-Scintilla SF6LN-12 or S6LN-21 or S6LSC-21 or J. I. Case Model 67 or Slick Electro 664; or 1 ea. CMI/TCM/Bendix-Scintilla S6LN-200 or -204	---
Timing, °BTC	Right 26, Left 28	---
Spark plugs	(See NOTE 8)	---
Oil sump capacity, qt.	8; 7.46 usable at 5° nose-up and 5.6 usable at 5° nose-down; 7.76 usable at 10° nose-up and 3.77 usable at 10° nose-down attitudes	---
NOTES	1,2,3,4,5,7,8	1,2,3,5,6,7,8

"---" indicates "same as preceding model"

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Certification Basis	CAR 13 Type Certificate No. 253 issued for C145-2 December 5, 1947; C145-2H added April 1, 1949; C145-2HP added January 27, 1953; O-300-A added May 12, 1954; O-300-B added September 27, 1955; O-300-C added February 24, 1959; O-300-D added June 1, 1960; O-300-E added April 3, 1963.
Production Basis	Production Certificates Nos. 7 and 508.

NOTE 1. Maximum permissible cylinder head, barrel and oil inlet temperatures, 525°F, 290°F, and 225°F, respectively.
Maximum oil inlet temperature limit is 240°F, when using Spec. MHS-24 oil SAE No. 50 above 40°F ambient and SAE No. 30 or 10W30 below 40°F ambient. Lubricating oils qualified under SAE-J1899 or J1966 are considered qualified under CMI Spec MHS-24

NOTE 2. Pressure limits for normal operation:
Fuel at carburetor inlet: For pump system: 1½ to 6 p.s.i.g.
For gravity system: Minimum 11 in. fuel head differential between carburetor fuel inlet fitting and float bowl chamber, maximum 6 p.s.i.g.

Oil 30 to 40 p.s.i.g.

NOTE 3. The following accessory drive or mounting provisions are available:

<u>Accessory</u>	<u>Type of Drive</u>	<u>Direction of Rotation*</u>	<u>Speed Ratio to Crankshaft</u>	<u>Max. Torque Cont.</u>	<u>(in.-lb.) Static</u>	<u>Maximum Overhang Moment (in.-lb.)</u>
Generator	Automotive	CC	2.035:1	60	600	100
** Starter	Automotive	C	35.77:1			
*** Starter	Automatic engagement	C	24.727:1			
**** Vacuum Pump	AND 20,000	CC	1.5451	100	800	25
Fuel Pump	Automotive diaphragm		0.500:1			
***** Governor	AND 20,010		1:1	29	825	50

* C - Clockwise viewing drive pad, CC - Counter Clockwise

** Delco-Remy gear reduction drive and starter eligible on all models except O-300-D and -E.

*** Delco-Remy starter (CMC P/N 627842) with Continental adapter P/N 628158 eligible on Model O-300-D and -E only.

**** Vacuum pump drive available on Model O-300-D and -E only.

***** Governor drive available on Model O-300-E only.

NOTE 4. Model designation suffix "H" on model C145-2 denotes the incorporation of crankcase and crankshaft provisions for use of a hydraulically controllable propeller from the engine oil pressure. Model designation suffix "P" denotes engine eligible for pusher installation as permitted by a special crankcase and front main bearing.

NOTE 5. C145 series engines equipped with dampered crankshafts are identified by suffix letter "D" following the engine serial number which denotes one each 5th and 6th order dampers. O-300 series engines are also equipped with crankshaft incorporating one each 5th and 6th order dampers.

NOTE 6. O-300-A is similar to C145-2 except parts material and ignition component substitutions. O-300-B is similar to O-300-A except incorporates crankcase and crankshaft provisions for use of a hydraulically controllable propeller from the engine oil pressure. O-300-C is identical to O-300-A except for propeller flange provision as indicated. O-300-D is similar to O-300-C except for provisions for Continental right angle automatic engagement starter drive which incorporates a vacuum pump drive. O-300-E is similar to O-300-D except for incorporation of governor drive pad and crankshaft provisions to supply governor oil to propeller.

NOTE 7. Propeller shaft
C145-2, -2H, -2HP; O-300-A, -B: SAE-AS127 No. 3 flange
O-300 C, -D, -E: ARP502 Type I flange 4-7/8 in. o.d. by .31 in. thick with six ½ bolt holes in 4 in. diameter circle. O-300-E has provisions for transfer of governor oil to propeller.

NOTE 8. The following spark plugs and/or those listed in CMI Service Information Letter SIL03-2 are approved on this engine:

AC: HSR83IR, SR83IR, SR83P, HSR83P, A88, S88, S88D, HS88, SR88, HSR88, SR88D,
Auto Lite: BR4, BR4S, BR4SB, H15, SH15, SH 15R, SH20A, SH150, SH200A
BG: RB485S, RB919SR5, RB955S, 706, 706S
Champion: C26S, RC26S, C27, C27S, REM38E, REM38P, REM38W, RHM38P, RHM38W, RED39N,
REM39N, RHD39N, RHM39N, REM40E, RHM40E, D41N, ED41N, EM41N, M41N, M42E,
E142E
Red Seal: SA190, SE190, SJ190, SE230, SJ230

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