

DEPARTMENT OF TRANSPORTATION
FEDERAL AVIATION ADMINISTRATION

E-205
Revision 16
CONTINENTAL

A-65-1, -3,-6,-6J,-7
A-65-8 (O-170-3,O-170-7), -8F-8FJ, -8J
A-65-9 (O-170-5), -9F, -9FJ, -9J
A-65-12, -12F, 12FJ, -12J
A-65-14, -14F, -14FJ, -14J

November 1, 1973

TYPE CERTIFICATE DATA SHEET NO. E-205

Engines of models described herein conforming with this data sheet (which is a part of type certificate No. E-205) and other approved data on file with the Federal Aviation Administration, meet the minimum standards for use in certificated aircraft in accordance with pertinent aircraft data sheets and applicable portions of the Federal Aviation Regulations provided they are installed, operated and maintained as prescribed by the approved manufacturer's manuals and other approved instructions.

Type Certificate Holder Teledyne Continental Motors
P.O. Box 90
Mobile, Alabama 36601

Model A-65	-1	-3, -6	-7	-8, -9	-12	-14
Type	4HOA	--	--	--	--	--
Rating, ICAO or ARDC standard atmosphere						
Max. continuous hp. r.p.m. at F.T. sea level pressure alt.	65-2350	65-2300	--	--	--	--
Takeoff hp. (5 min.) r.p.m. at full throttle	65-2350	65-2300	--	--	--	75-2675
Fuel (minimum grade aviation gasoline)	See NOTE 9	--	--	--	--	--
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	6.3:1	--	--	--	--	170
Weight (dry) lb. (See NOTE 3)	163	173, 176	163	170, 173	171	--
C.G. Location						--
Fwd. of mounting face, in.	6.8	6.2	6.8	6.2	--	--
Below prop shaft, in.	1.2	1.5	1.2	1.5	--	--
Propeller shaft (SAE No.) (See NOTE 2 for flanged type)	0 (Taper)	--	--	--	--	--
Carburetor (see NOTE 2 for injectors)	Stromberg NA-S3A1 or NA-S3B carburetor with 1-1/4 in. venturi or Marvel-Schebler MA-3PA carburetor with 1-7/32 in. venturi					

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Model A-65	-1	-3, -6	-7	-8, -9	-12	-14
Ignition	Single, Scintilla SF-4L or Eisemann AM-4, Case 47	Dual, Scintilla SF-4R, Eisemann AM-4, Case 47, Slick Electro 443	Single, Scintilla SF-4L, Eisemann AM-4 or Case 47	Dual, Scintilla S4RN -20, -21, SF-4R, S4LN-20 or S4LN-21, Eisemann LA-4 or AM-4, Case 4-CAMA, 4-CAME, 47 (with impulse coupling on Eisemann and Case magnetos retard 25°) Slick Electro 443, or 4003 (-8 Series only)	Dual Scintilla S4RN-20, -21, SF-4R, S4LN-21, Eisemann LA-4 or AM-4 (with impulse coupling retard 25°) Case 47, Slick Electro 447.	Dual, Scintilla S4N-20, -21, SF-4R, S4LN-20 or -21, Eisemann LA-4 AM-4, Case 4-CAMA, 4-CAME, 47 (with impulse coupling on Eisemann and Case magnetos retard 25°), Slick-Electro 443
Timing, °BTC	30	--	--	--	--	--
Spark plugs	See NOTE 10	--	--	--	--	--
Oil sump and capacity (qt.)	Wet - 4½	--	--	--	--	--
Exhaust port	Up	--	Down	--	--	--
NOTES	1,3,5,6,9,10,11	1,2,3,5,6,9,10,11	1,3,5,6,9,10,11	1,2,3,4,5,7,8,9,10,11	1,2,3,5,8,9,10,11	1,2,3,5,7,9,10,11

"- -" indicates "same as preceding model"

"—" indicates "not applicable"

Certification basis CAR 13
Type Certificate No. 205

Production basis Production Certificate No. 7. Production Certificate No. 508 (for all models except A-65-1, -3, -6, -6J, -7, -8F, -8FJ, -9F, -9FJ, -12F, -12FJ, -12J, -14F, -14FJ, -14J)

NOTE 1. Maximum permissible cylinder head, barrel and oil inlet temperature, 550°F., 350°F. and 220°F., respectively. Oil pressure limits: 30 to 60 p.s.i.g.

NOTE 2. The following additional models of A-65 series engines are also eligible:

<u>Engine Model</u>	<u>Characteristic Component</u>	<u>Dry Weight Increase (lb.)</u>
A-65-6J, -8J, -9J	High Model A Fuel Injector or Ex-Cell-0 A-42	3 for High Model A or 4 for Ex-Cell-0 A-42
A-65-12J, -14J	Ex-Cell-0 Model A-42 Fuel Injector	4
A-65-8F, -9F, -12F, -14F	Flanged propeller shaft, 5-1/2 in. dia. with 6 equally spaced .621 dia. holes on 4.375 bolt circle	1
A-65-8FJ, -9FJ, -12FJ, -14FJ	Flanged propeller shaft, 5-1/2 in. dia. with 6 equally spaced .621 dia. holes on 4.375 bolt circle, and fuel injector as above	See above

NOTE 3. Engine S/N's lower than 340793 incorporate a crankcase for use with conical rubber shock mountings. With Scintilla SF-4R magnetos, add 5 lb. to dry weight. With Case magnetos, add 4 lb. For -1 engine with Scintilla SF-4L magneto, add 3 lb.

NOTE 4. Military models O-170-3 and O-170-5 are identical to models A-65-8 and A-65-9 respectively. Model O-170-7 same as -3 except for improved valves and valve guides, pistons and piston rings; also provisions for Annesley 75 and Beech R-002 propellers. When these military engines are installed in certificated aircraft, the appropriate civil model designation and T.C. 205 should be included on the nameplate.

NOTE 5. The following typical accessories are eligible as noted at the indicated additional weight:

<u>Starter</u>	<u>Weight (lb.)</u>
Eclipse Type 635 (Electric), for Models A-65-6 and -9, F and J only	16
Eclipse Type E-80 (Electric), for Models A-65-6 and -9, F and J only	18
Hummer Type X (Mechanical) - Models A-65-6 and -9, F and J only	14
Delco-Remy CMC No. 50309 (Electric) - Models A-65-12, F and J only	16
<u>Generator</u>	
Delco-Remy CMC No. 40435 - Models A-65-12, F and J only	10
<u>Fuel Pump (provisions optional)</u>	
AC type CP 8527	4
AC type 1523843 or 3843 (CMC No. 40585)	2
<u>Miscellaneous</u>	
Oil Filter, Fram PB-500 (CMC No. 40581)	3
Air Filter and Scoop, Nos. A-5810 or A-40522	3
Radio Shielding	3
Harrison Oil Radiator Model HE431-9 (CMC No. 40601) -Models 12, F and J only	4

NOTE 6. Approvals for Models A-65-1, -3, -6, -6J, -7 and -7J expired November 17, 1941. No engines of these models manufactured after that date or with S/N's above the following, are eligible for use in certificated aircraft:

<u>Models</u>	<u>Serial No.</u>
A-65-1	379991
A-65-3	387593
A-65-6	389096
A-65-6J	373296
A-65-7	575897

NOTE 7. Model A-65-14 differs from A-65-8 only in that it incorporates special pistons, rocker arms and exhaust valves, seats and guides.

NOTE 8. Model A-65-12 differs from A-65-8 only in that C-75-12 type crankcase and accessories section are incorporated.

NOTE 9. All models using Stromberg NA-S3A1 or NA-83B carburetors eligible for use of 73 octane grade fuel except A-65-14 model which is limited to use of 80/87 octane fuel.
All models using Marvel-Schebler MA-3PA carburetor are limited to use of 80/87 octane fuel.

NOTE 10. These models are approved for tractor or pusher operation.

NOTE 11. The following spark plugs are approved for use on these engines:

AC	A88, HS88, S88, S88D, HSR88, SR88, SR88D, HSR83P
Auto Lite	18A-1, B4, B4S, BH4S, SH2K, SH2M, H15, SH15, SH15R, SH20, SH20A, SH200A, SH260
BG	4B2, 4B2S, 417, 417S, RB485-S, 706, 706R, 706S, 706SR, RB955-S
Champion	C26, C26S, C27, C27S, M26, M31A, LM31S, RHM38P, REM40E, ED41N, D41N, EM41E, EM41N, M41N, EM42E, M42E, 62S
Decker	D-26
Red Seal	SA190, SE190, SJ190, SE230, SJ230
Safir	B-57

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