

DEPARTMENT OF TRANSPORTATION
FEDERAL AVIATION ADMINISTRATION

E-162
Revision 13
CONTINENTAL
W670-6A (R-670-3, -5)
W670-6N (R-670-4)
W670-16 (R-670-8, -11, -11A)
W670-K
W670-M
W670-23
W670-24

September 7, 2011

TYPE CERTIFICATE DATA SHEET NO. E-162

Engines of models described herein conformation with this data sheet (which is part of Type Certificate No. 162) and other approved data on file with the Federal Aviation Administration, meet the minimum standards for use in certificate 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 Air Repair, Inc.
 920 Airport Service Road
 Cleveland, MS 38732

Type Certificate Holder Record Teledyne-Continental Motors
(Previous TC Holder) Transferred TC 162 to Air Repair, Inc.
 on August 25, 2011

Model W670	-6A	-6N	-16	-K	-M	-23	-24
Type	7RA	--	--	--	--	--	--
Rating							
Max. continuous, hp., r.p.m. sea level pressure altitude	220-2075-S.L.	--	--	225-2175-S.L.	240-2200-S.L.	--	220-2075-S.L.
Takeoff, h.p. r.p.m.	220-2075	--	--	225-2175	240-2200	--	220-2075
Fuel (min. grade aviation gasoline)	65	--	--	--	80/87	--	65
Lubricating Oil							
Ambient air temperature	Oil Grade SAE 50	--	--	--	--	--	--
Above 40°F.	SAE 30	--	--	--	--	--	--
Below 40°F.							
Bore and stroke, in.	5.125 x 4.625	--	--	--	--	--	--
Displacement, cu. in.	668	--	--	--	--	--	--
Compression ratio	5.4:1	--	--	--	6.1:1	--	5.4:1
Weight (dry), lb.	470	479	486	450	455	519	492
Propeller shaft. SAE No.	20	--	--	--	--	--	--
Carburetion	Bendix- Stromberg NA-R6, -R6D with 1-15/16 in. venturi	--	Bendix- Stromberg NA-R6G with 1-15/16 in. venturi	Bendix- Stromberg NA-R6D with 1-15/16 in. venturi	--	Bendix- Stromberg NA-R6G with 2-1/16 in. venturi	Bendix- Stromberg NA-R6G with 1-15/16 in. venturi

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Model W670	-6A	-6N	-16	-K	-M	-23	-24
Ignition, dual	Scintilla VMN7-DF magnetos or WL7A battery ignition, or magneto and battery combination	Scintilla SF7R-1 magnetos	--	Scintilla MN7- DF magnetos or WL7A battery ignition, or magneto and battery combination	--	Scintilla VMN7-DFA magnetos or WL7A battery ignition or magneto and battery combination	--
Ignition timing, °BTC (No. 1 cyl.)							
Right magneto	32	--	--	--	--	--	--
Left magneto	29	--	--	--	--	--	--
Battery distributor	5	Ä	Ä	5	--	--	--
Spark Plugs	See NOTE 7	--	--	--	--	--	--
NOTES	1,2,3,4,7	1,3,4,7	1,3,4,7	1,2,4,7	1,2,4,7	1,2,5,7	1,2,4,6,7

“--” indicates “same as preceding model”.

“Ä” indicates “does not apply”.

Certification basis Aeronautics Bulletin 7-A effective as amended to 10/1/34; Civil Air Regulation Part 13 effective 8/1/41. Type Certificate No. 162 issued.

Production basis Production Certificate No. 7.

NOTE 1. Maximum permissible cylinder head, barrel, and oil inlet temperatures, 550°F., 325°F., and 210°F., respectively.

NOTE 2. Combination magneto and battery ignition, and battery ignition (only), entail weight increase of approximately 10 lb. and 3 lb., respectively.

NOTE 3. Military engines models R-670-3, -4, -5, -8, and -11 are eligible at a dry weight of 486 lb. with the same ratings as the W670-6A, -6N, and -16. The engines are all basically similar, but differ mainly as follows:

<u>Military Model</u>	<u>Corresponding Certificated Model</u>	<u>Carburetor Model</u>	<u>Magneto Models</u>	<u>Miscellaneous</u>
R-670-3	W670-6A	NA-R6	VMN7-DF or MN7-DF	-3 model, early type oil pump, crankcases, accessory case, and cylinders.
R-670-4	W670-6N	NA-R6 or -R6D	SF7RN-1 or SF7R-1	-4 identical to W670-6N.
R-670-5	W670-6A	NA-R6 or -R6D	VMN7-DF	-5 identical to W670-6A.
R-670-11, -8, -11A	W670-16	NA-R6G	SF7RN-1	-11 identical to W670-16. -8 and -11A same except have 7th order torsional damper.
	W670-6N	NA-R6D	SF7R-1 or SF7RN-1	Late type engine with latest type crankcase, accessories section, etc. differs mainly from -6A in accessories section.

The corresponding certificated model designation of military engines and T.C. No. 162 should be included on the engine designation plate when installed in certificated aircraft.

NOTE 4. These engines are eligible with facilities for two position propeller control valves at a weight increase of approximately 2 lb.

NOTE 5. The W670-23 engine incorporates AN standard propeller governor pad for mounting and driving a constant speed propeller governor on the nose section of the crankcase, clockwise rotation at 1-1/7 crankshaft speed.

NOTE 6. Approval of the following model has expired: No engines of this model manufactured after the date shown or with serial numbers above those listed below are eligible for use in certificated aircraft.

<u>Model</u>	<u>Date</u>	<u>Serial No.</u>
W670-24	8-20-47	911050

NOTE 7. The following spark plugs are approved for use on these engines:

AC	SR83IR, HSR83IR, SR83P, HSR83P, SR87, HSR87, A88, HS88, HSR88, S88, S88D, SR88, SR88D, HSR93, SR93
Auto Lite	18-A1, SH2K, SH2M, SH15, SH15R, SH20, SH20A, SH150, SH200A
BG	4B2, 4B2S, 417S, RB485S, SU485, SU485S, 706S, 706SR, 919SR5, RB955S
Champion	M26, C27, C27S, REM38P, RHM38P, REM38W, RHM38W, REM40E, RHM40E, D41N, ED41N, EM41E, EM41N, M41N, HM41E, EM42E, M42E
Red Seal	SE190, SJ190, SE230, SJ230

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