

**MODELS:** Avco Lycoming R-680-B4 Series, R-680-4 and Military R-680-5, -7, -8, -11, -17

**T.C. NUMBER:** T.C. 108

Model - Lycoming	R-680-4 and B4	R-680-B4B
Type	9RA	--
Rating:		
Maximum continuous, hp, rpm, at S.L. press. alt.	225-2100-S.I.	--
Take-off, hp, rpm, at full throttle	225-2100	--
Fuel (minimum octane aviation gasoline)	65	--
Bore and stroke, in.	4.625 x 4.5	--
Displacement, cu. in.	680.4	--
Compression ratio	5.5:1	--
Weight (dry), lbs.	471	495
Propeller shaft, SAE No.	20	--
Carburetion	Stromberg NA-R7A carburetor with 2.0625 in. venturi	Stromberg NA-R7B carburetor with 2.0625 in. venturi
Ignition, dual	Scintilla SC-A or SC-A2 magneto	Scintilla DF or DFN magneto
Ignition timing, deg. BTC	Front 30, Rear 30	Front 34, Rear 30
Certification basis	Type Certificate No. 108 (See NOTE 4)	
NCIES	1, 2, 4	1, 3, 4

NCIE 1. Maximum permissible cylinder head, barrel, and oil inlet temperatures, 525 degrees F., 300 degrees F., and 200 degrees F., respectively.

NOTE 2. R-680-B4 engines were formerly designated R-680-4. Serial Nos. 2-751 and 2-752 engines of these models are eligible at 215 hp at 2000 rpm for all operations. The R-680-4 or R-680-B4 may be converted to the R-680-B6 which makes it eligible for use with a controllable pitch propeller.

NOTE 3. Military model R-680-5 is identical to model R-680-B4B. Models R-689-B4C, R-680-B4D and R-680-B4E are similar to model R-680-B4B, the differences being noted below. The corresponding military models are indicated in parenthesis.

Model	Difference
R-680-B4C (R-680-7)	Includes automatic valve gear lubrication.
R-680-B4D (R-680-8, -11)	490 lbs. (dry) weight includes automatic valve gear lubrication and AN type accessory drives.
R-680-B4E (R-680-17)	512 lbs. (dry) weight includes automatic valve gear lubrication, AN type accessory drive, a redesigned crankshaft and steel link rods.

When a military engine is incorporated in certificated aircraft, its name-plate should be revised to include the pertinent civil model designation and TC No.

NOTE 4. Approval expired 11/2/50. No engines of these models manufactured after the dates shown below or with serial numbers above those indicated, are eligible for use in certification aircraft:

Model	Serial No.	Date
R-680-4 and R-680-B4 and R-680-B4B	8-1619	3/14/39
R-680-B4C	2552	7/15/41
R-680-B4D	3935	12/31/41
R-680-B4E	1015483	3/30/44