

DEPARTMENT OF TRANSPORTATION  
FEDERAL AVIATION ADMINISTRATION

E-237  
Revision 11  
Jacobs-Page  
R-755A1  
R-755A2  
R-755A2M  
R-755A2M1  
R-755B1  
R-755B2  
R-755B2M  
R-755E  
  
January 2, 2002

TYPE CERTIFICATE DATA SHEET NO. E-237

Engines of models described herein conforming with this data sheet (which is a part of Type Certificate No. E-237) 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 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	Air Repair, Inc. 920 Airport Service Road Cleveland, Mississippi 38732
Type Certificate Holder Record:	Air Repair, Inc. assumed ownership of this type certificate from Jacobs Service Company, 4305 Saturn Way, Chandler, Arizona 85334 on January 2, 2002.

Model	<u>R-755A1, R-755A2, R-755A2M, R-755A2M1</u>	<u>R-755B1, R-755B2, R-755B2M</u>	<u>R-755E</u>
Type - 7RA	Direct Drive	- -	.649:1
Rating			
Max. continuous, hp, rpm, at:			
Sea level pressure altitude (ft.)	300-2200-S.L.	275-2200-S.L.	350-2500-S.L.
Takeoff (5 min.), hp, rpm at:			
Sea level pressure altitude (ft.)	300-2200	275-2200	350-2500
full throttle			
Fuel (minimum grade aviation gasoline)	80	- -	91
Bore and stroke in.	5.25 X 5.00	- -	- -
Displacement, cu. in.	757	- -	- -
Compression ratio	6:1	- -	6.5:1
Weight (dry), lb.	505 (A1), 511 (A2) 504 (A2M & A2M1)	505 (B1), 511 (B2) 504 (B2M)	600
C.G. location (dry)			
Fwd. of mounting face, in.	6:9	- -	7.4
Below propeller shaft, in.	0.2	- -	- -
Propeller shaft end, SAE No. Spline	20	- -	30
Carburetion	Stromberg NA-R7A	- -	- -
Carburetor setting	482-12	- -	482-11
Ignition, dual	Combination Scintilla VMN7-DF5 magneto and Scintilla WL7A battery ignition unit (R-755A1, R-755A2), Dual Scintilla VMN7- DF5 magnetos (R-755A2M, R-755A2M1)	Combination Scintilla VMN7-DF5 magneto and Scintilla WL7A battery ignition unit (R-755B1, B2), dual Scintilla VMN7-DF5 magnetos (B2M).	Combination Scintilla VMN7-DF5 magneto and Scintilla WL7A battery ignition unit

Page No.	1	2	3
Rev. No.	11	11	10

Ignition, timing °BTC	31	--	30
Spark plugs	See Note 7.	--	--
NOTES	1,2,3,4,5,6,7	1,2,4,5,6,7	--

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

"—" indicates "does not apply."

#### Certification Basis

Regulations & Amendments	Model	Date of Application	Date Type Certificate E-237 issued/revised
CAR 13 effective Aug 1, 1941	R-755A1, A2	May 23, 1945	August 20, 1945
	R-755E	June 28, 1947	April 1, 1949
As amended by 13-1 & 13-2	R-755B1 and B2	January 24, 1952	March 6, 1952
CAR 13 effective June 15, 1956			
As amended by 13-1, 13-2 & 13-3	R-755A2M, B2M, R-755A2M1	July 14, 1961 December 1, 1961 November 3, 2001 TC Holder transfer	July 26, 1961 July 17, 1962 January 2, 2002

Production basis The manufacturer no longer holds a production certificate for engines under this certificate as of February 20, 1957; therefore, each engine produced is subject to a detailed inspection for workmanship and conformity with the approved data by an FAA representative. In addition, the engine must have a satisfactory run-in including at least five hours at rated power and speed. Upon satisfactory completion of the above, the FAA representative shall tag the engine with Tag Form FAA-186

NOTE 1. Maximum permissible temperatures:

	Cyl. Head	Cyl. Base	Oil Inlet
All except R-755E	500°F	300°F	200°F
R-755E	460°F	300°F	190°F

NOTE 2. Pressure limits for normal operation:

Fuel inlet 2.5 to 4 p.s.i. (pressure feed)  
1.0 p.s.i. (gravity feed with carburetor setting revised for corrected float level or different size float needle and seat)

NOTE 3. Models R-755A1 and A2 eligible with aluminum rear and front crankcases and main bearing plate replacing the magnesium parts with possible weight increase of 11 lbs.

NOTE 4. Models R-755A2, otherwise similar to Model R-755A1, has provision for hydraulically operated constant speed or two position propellers.

Model R-755A2M similar to R-755A2 except for dual magneto ignition system.

Model R-755A2M1 similar to R-755A2M except has provisions for propeller governor drive and propeller governor oil transfer rings in nose case.

Model R-755B1 and B2 respectively, similar to R-755A1 and A2 except for crankcase, cylinders and oil sump strainer.

Model R-755B2M similar to R-755B2 except for dual magneto ignition system.

Model R-755E incorporates the following redesigned and new features not incorporated in the R-755A models: Heavier cylinder heads, propeller reduction gearing, silver master rod bearing, new design crankcase with 3-1/2 order torsional vibration dampers, and new ratings.

NOTE 5. Accessories such as generators, starters, fuel and vacuum pumps, etc., previously listed in NOTE 5 are satisfactory for continued use with these engines. Accessories of these types are not integral engine accessories and, therefore, are not evaluated for approval during engine certification testing. The air-worthiness of such accessories is substantiated during aircraft installation system approvals. The suitability of the accessory to the engine mounting provisions as described in NOTE 6 must be determined when processing such approvals.

NOTE 6. The following accessory drive provisions are available on all models:

Drive	Direction of Rotation	Drive Ratio	Maximum Torque (in.-lb.)		Maximum Overhang Moment (in.-lb.)
			Continuous	Static	
Starter	CC	1.5 :1	—	5500	150
Generator	CC	1.4 :1	50	300	110
Fuel pump (rear crankshaft)	C	1 :1	20	150	6
Tachometer	CC	.5 :1	—	—	—
*Vacuum pump	CC	1 :1			
		or .875:1	30	200	8
*Propeller governor	CC	1 :1	30	200	13
*Hydraulic pump	CC	1 :1			
		or .875:1	30	200	6
*Fuel pump	CC	1 :1	30	200	3
Propeller governor (R-755A2M1 model only)	C	1 :1	50	200	13

All directions of rotation are given facing engine drive flange.

\*Accessories marked with an asterisk are mounted on accessory drive unit. The total continuous torque taken off all the drives on the accessory drive unit should not exceed 70 inch-pounds.

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

AC	S-86R, SR-83P, HSR-83P
Autolite	SH-2K, SH-2M, SH-20, SH-20A, 18A-1
BG	RB485S
Champion	C27, C27S, D4IN, ED4IN, EM4IN, M4IN, RC26S, RED39N, REM39N, REM40E, RHD39N, RHM39N, RHM40E, M42E, EM42E, REM39P, RHM38P

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