



SERVICE MANUAL

*Franklin*

AIRCRAFT ENGINE

Models

6A4-150-B3

6A4-165-B3

FRANKLIN ENGINE COMPANY, INC.

SYRACUSE 8, NEW YORK, U.S.A.



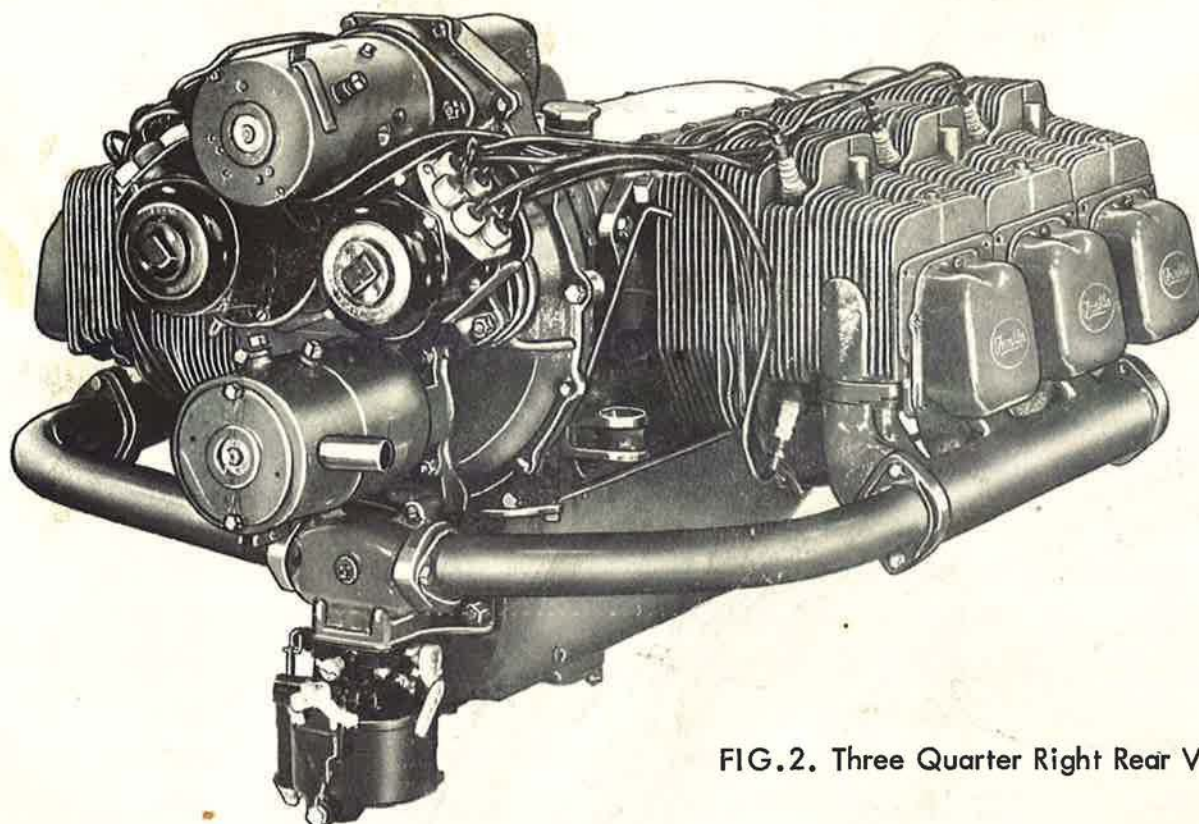


FIG.2. Three Quarter Right Rear View

## V - ENGINE SPECIFICATIONS

Model	6A4-150-B3 & B31		6A4-165-B3	
Number of Cylinders	6		6	
Bore	4.5"		4.5"	
Stroke	3.5"		3.5"	
Piston Displacement	335 cu. in.		335-cu. in.	
Compression Ratio	7:1		7:1	
Rated Speed in RPM	2600		2800	
Rated Brake Horsepower	150 HP at 2600 RPM		165 HP at 2800 RPM	
Idle Speed in RPM	500 to 600		500 to 600	
Crankshaft Rotation	Clockwise		Clockwise	
Propeller Shaft Rotation	Clockwise		Clockwise	
Propeller to Crankshaft Ratio	1:1		1:1	
Maximum Cylinder Temperature	520°F Maximum Spark Plug		520°F Maximum Spark Plug	
Maximum Oil Temperature	230°F		230°	
Oil Pressure	30 to 50 PSI Maximum		30 to 50 PSI Maximum	
Oil Pressure at Idle	10 to 20 PSI Minimum		10 to 20 PSI Minimum	
Oil Capacity	8 Quarts		8.8 Quarts	
Oil Specifications	Free Air		Free Air	
	Temperature	Viscosity	Temperature	Viscosity
	Above 40°F	SAE 40	Above 40°F	SAE 40
Heavy Duty	Below 40°F	SAE 20	Below 40°F	SAE 20
Maximum Operating Time between Oil Changes	25 Hours. More often if conditions warrant.		25 Hours. More often if conditions warrant.	
Valve Clearance with Lifters Bled Down and Engine Cold	.040"		.040"	
Firing Order	Cylinders 1-4-5-2-3-6		Cylinders 1-4-5-2-3-6	
Spark Timing	28 Degrees BTC		32 Degrees BTC	
Spark Plugs	Champion J-10		Champion J-10	
Spark Plug Gap	.014" to .018"		.014" to .018"	
Fuel Minimum Octane	80 Nonleaded Aviation		80 Nonleaded Aviation	
Fuel Pump Pressure (Bellanca Only)	7½ PSI Maximum		7½ PSI Maximum	
Starter	12 Volt		12 Volt	
Generator	15 Amp. to 25 Amp.		25 Amp.	
Magneto Breaker Point Gap	.019" to .021"		Not Specified	
Maximum Drop Single Magneto	200 RPM		200 RPM	