



Rolls-Royce Griffon 69 (2-stage 2-speed)

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Model	Griffon 69 (RG 4 SM).	
Type	12 cylinders, vec 60 degrees, pressure liquid cooled, geared drive, supercharged, 4-cycle.	
Construction	2-piece aluminum alloy crankcase. 2 aluminum alloy cylinder blocks with a detachable head for each block. Steel cylinder liners, 2 inlet valves and 2 exhaust valves (sodium cooled) per cylinder actuated by overhead camshaft. 6-throw 1-piece counterbalanced crankshaft supported in 7 plain bearings. Spur reduction gear, ratio 0.451:1. Provision for Rotol constant speed propeller, and Rotol remote drive accessory gear box.	
Supercharger	Gear-driven 2-stage 2-speed supercharger, ratios 5.84:1 and 7.58:1. Automatic gear change. Air-cooled inter-stage passages. Liquid-cooled intercooler.	
Carburetion	1 Rolls-Royce Bendix-Stromberg 9T-40-1 3-barrel updraft injection type carburetor, with injection through 8 nozzles into eye of first-stage supercharger impeller. Automatic mixture control and progressive boost control.	
Ignition	1 B.T.H. CSH12-12S/4 dual magneto. 2 14-mm short reach spark plugs per cylinder. Shielded ignition system.	
Lubrication	Pressure feed, 45-60 lb./sq.in. (3.2-4.2 kg/cm ²). Main bearings lubricated by crankshaft end-to-end system. Dry sump.	
Starter	Plessey Coffman L5 cartridge.	
Bore	6.00 in.	152 mm
Stroke	6.60 in.	168 mm
Displacement	2,240 cu.in.	36.7 lit
Compression ratio	6.0:1	6.0:1
Width	29.5 in.	750 mm
Height	46.0 in.	1 168 mm
Length	81.0 in.	2 057 mm
Frontal area	7.9 sq.ft.	0.73 m ²
Weight	2,075 lb.	941 kg
Weight/horsepower	1.03 lb./h.p.	0.47 kg/hp
Fuel consumption (cr.)	0.50 lb./h.p./hr.	225 g/hp/hr
Oil consumption (cr.)	0.016 lb./h.p./hr.	7 g/hp/hr
Gasoline grade	100/130 (D.E.D. 2475)	100/130 grade
Oil grade (viscosity)	100 S.U. (D.E.D. 2472B)	20.5 cs
Output/displacement	0.90 h.p./cu.in.	54.5 hp/lit
Output/piston area	5.89 h.p./sq.in.	0.91 hp/cm ²
Piston speed (max.)	3,025 ft./min.	15.4 m/sec
B.m.e.p. (max.)	256 lb./sq.in.	18.0 kg/cm ²
Rating (take-off)	1,900 h.p./2,750 r.p.m./72.6 in. (1 844 mm) + 21.0 lb.	
Rating (military, low)	2,000 h.p./2,750 r.p.m./6,750 ft. (2 100 m)	
Rating (military, high)	1,810 h.p./2,750 r.p.m./21,000 ft. (6 400 m)	
Rating (normal, low)	1,480 h.p./2,600 r.p.m./13,500 ft. (4 100 m)	
Rating (normal, high)	1,350 h.p./2,600 r.p.m./26,000 ft. (7 900 m)	
Rating (cruising, low)	1,305 h.p./2,400 r.p.m./12,250 ft. (3 700 m)	
Rating (cruising, high)	1,215 h.p./2,400 r.p.m./25,000 ft. (7 600 m)	

This engine also has military ratings of 2,300 h.p./2,750 r.p.m./500 ft. (150 m) and 2,060 h.p./2,750 r.p.m./15,750 ft. (4 800 m), with 80.8 in. (2 052 mm) + 25.0 lb. boost and 100/150 grade gasoline.

Griffon 64, 67 (RG 4 SM): Same as Griffon 69.

Griffon 81, 83, 87, 88, 89 (RG 4 SM): Similar to Griffon 69. Reduction gear ratio 0.442:1. 2 co-axial contra-rotating propeller shafts.

Other models of Rolls-Royce Griffon (2-stage) engines will be found on page 205.