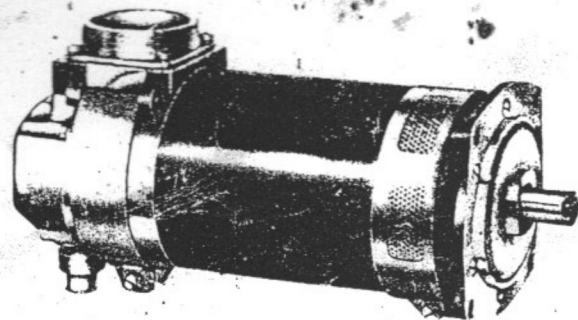


B1804



**SUBJECT:** Generators: 150 watt,  
330 watt and 500 watt  
output.

**TYPE:** B.1801 to B.1806 and B.1809 to B.1820 inclusive.

**DATA:** See overleaf.

## Description

This leaflet supersedes the existing leaflet T.L.3, dated May 1950, and is extended to cover the present range of Type B.1800 generators. The following notes, except where otherwise stated, are applicable to all types, main differences being quoted overleaf.

Commutation is obtained by two brushes, diametrically opposite, the pigtails of which are connected to the G<sub>+</sub> and G<sub>-</sub> terminal pillars. The brush boxes, terminals and brush springs are compactly arranged, the terminal posts being used as mountings for the brush springs.

Where a high output/weight ratio is required, blast cooling is employed.

The generators are completely screened to prevent interference with radio reception, all terminals being enclosed in the recess of the commutator end frame. Access to the terminals is obtained by removing the metal cover.

The generators are secured by four  $\frac{1}{4}$ -in. diameter studs, equally spaced on a pitch circle diameter of 4 in.

Coupling to the engine is by means of the six splines on the end of the armature shaft.

The size of the shallow splines on the B.1801 to 06 and B.1809 to 12 inclusive, is 0.625" nominal diameter, to B.S. 46, Part 2, Table XIII U.Q. Fit. The size of the shallow splines on the B.1813 to B.1820 inclusive is 0.625 in. nominal diameter, to B.S. A.20, Table No. 4 close sliding fit.

### Oil seals

Generators B.1813 to B.1820 inclusive are fitted with an oil seal at the drive-end which must be adequately lubricated.

### DSGAviation

[www.dsgaviation.co.uk](http://www.dsgaviation.co.uk)

[mail@dsgaviation.co.uk](mailto:mail@dsgaviation.co.uk)

## Operation

Initial excitation of the field assembly is in the form of residual magnetism in the pole pieces. With the generator connected to its respective control box (See Data) its voltage will "build-up" to a figure dependent on the voltage regulator setting.

Used in conjunction with its control box, each generator will maintain the maximum output over its full range of speeds.

Carbon pile regulators may be fitted to these generators, but in all cases minimum full load speeds are thereby raised approximately 300 r.p.m. Before fitting carbon pile regulators reference should be made to the Service Department of Rotax Limited.

"Information contained in this leaflet affecting safe operation and maintenance has been verified and approved by the Air Registration Board in accordance with Chapter A.6-2, of British Civil Airworthiness Requirements. 9/6/52."

REVISED FEBRUARY 1952

## DATA

	B.1801, B.1802, B.1813 & B.1814	B.1803, B.1804, B.1809, B.1810, B.1815 & B.1816	B.1805, B.1806, B.1811 B.1812, B.1817 & B.1818	B.1819 & B.1820
Voltage (regulated) .. ..	14 volts.	28 volts.	28 volts.	14 volts.
Maximum continuous output ..	23 amps.	17.5 amps.	5.5 amps.	10.5 amps.
Overload capacity for 5 mins. ..	40%	40%	40%	40%
Overload capacity for 10 mins. ..	30%	30%	30%	30%
Overload capacity for 30 mins. ..	20%	20%	20%	20%
Cooling .. .. .	Blast cooled with a pressure drop across the generator equal to a 3.5" head of water	Blast cooled with a pressure drop across the generator equal to a 4.5" head of water	Fan	Fan
Electrical connection .. ..	Terminal	Terminal	Terminal	Terminal
Regulator and cut-out .. ..	F.0511	F.0406	F.0405	F.0407
Speed range .. .. .	3,500—7,000 r.p.m.	4,300—7,000 r.p.m.	3,300—7,000 r.p.m.	3,000—7,000 r.p.m.
Weight .. .. .	11 lb. 4 oz.	11 lb. 4 oz.	11 lb. 4 oz.	11 lb. 4 oz.
Mounting .. .. .	Four .265" diameter holes on a pitch circle diameter of 4"			
Moment of armature inertia ..	.007 lb.ft. <sup>2</sup>	.007 lb.ft. <sup>2</sup>	.007 lb.ft. <sup>2</sup>	.007 lb.ft. <sup>2</sup>
Torque required to drive armature at full load at 5,000 r.p.m.	0.85 lb.ft.	1.15 lb.ft.	0.5 lb.ft.	0.5 lb.ft.
Clockwise rotation .. ..	B.1801, B.1803, B.1805, B.1809, B.1811, B.1813, B.1815, B.1817 and B.1819			
Anti-clockwise rotation .. ..	B.1802, B.1804, B.1806, B.1810, B.1812, B.1814, B.1816, B.1818 and B.1820			

**DSG Aviation**  
[www.dsgaviation.co.uk](http://www.dsgaviation.co.uk)  
[mail@dsgaviation.co.uk](mailto:mail@dsgaviation.co.uk)

## Servicing

If generator testing equipment is not available no attempt should be made to overhaul the generators. In cases where test equipment is available apply for Rotax Service Leaflet No. S.L. 4.

Address all enquiries to:—

### THE SERVICE DEPARTMENT

ROTAX LIMITED  
WILLESDEN JUNCTION  
LONDON, N.W. 10  
ENGLAND

Telephone: ELGAR 7777

LUCAS-ROTAX (AUST.) PTY. LTD  
BOUVIERIE STREET  
MELBOURNE, N. 3  
AUSTRALIA

Telephone: F.J. 4867

LUCAS-ROTAX LIMITED  
MONTREAL AIRPORT  
DORVAL, P.Q.  
CANADA

Telephone: WALNUT 3435

