



Subject: Extension of the flight and maintenance manual and optional installation of additional equipment.

Effectivity: Motorglider GROB G 109, all serial numbers (from 6001 through 6159).

Accomplishment: Instruction 1 by December 31, 1986. Instructions 2 through 5 can be carried out optionally at a later date. Instruction 6 recommended.

Reason: The manuals are extended with additional information from the experiences in operation.

TM 817-22/1 Extension of the flight and maintenance manual.

Furthermore, the installation of the following additional equipment for special uses is admissible.

TM 817-22/2 Use of the propeller Hoffmann HO-V 62 R / L 160 BT.

TM 817-22/3 Second throttle in the instrument panel left side.

TM 817-22/4 Steps at the wing root.

TM 817-22/5 Trim weights for pilots of less than 70 kg.

TM 817-22/6 Cover for sealing root ribs.

The installation of the equipment is possible one by one.

(Example: If only the second throttle is installed and the manual is duly extended, it has to be certified in the log-book: "TM 817-22/1, 3 effected". The manual extension must of course be certified by all means "TM 817-22/1 effected.")

Notes: 1. The TM 817-22/1 "Extension of the flight and maintenance manual" considers additional equipment as well as comments and corrections in the flight and maintenance manual of the G 109.



2. Comparison measurements of various propeller types showed that the propeller HO-V 62 R/L 160 BT of the Hoffmann Co. which is successfully used at the G 109 B is an aerodynamically superior propeller with good performances. TM 817-22/1 makes the use of this propeller possible in connection with the G 109.
3. The installation of a second throttle on the instrument panel left-side (TM 817-22/3) allows the pilot an operation with the left hand. The right hand may remain on the control stick. Changing is not necessary.
4. The steps at the wing root (TM 817-22/4) make boarding from the rear via the wing possible. The subsequent installation is complicated and only advisable in exceptional cases.
5. The mounting supports for trim weights (TM 817-22/5) allow a safe attachment of changeable ballast. Lead cushions are then no longer required.
6. The covers for sealing the root ribs (TM 817-22/6) prevent at extended air brakes streaming of ram air from the wings to the fuselage which can lead to overpressure on the cabin canopy, especially at speeds around VNE. The installation of covers is therefore recommended.

Instructions:

- 1.1 The following pages have to be exchanged in the flight manual to have it at the adjustment state 01.05.86.

Page 4	replaces	issue of	02.05.83
Page 4a	replaces	issue of	02.05.83
Page 7	replaces	issue of	12.05.81
Page 9	replaces	issue of	01.03.81
Page 11	replaces	issue of	14.12.82
Page 12	replaces	issue of	01.03.81
Page 19	replaces	issue of	02.05.83
Page 26	replaces	issue of	01.03.81
Page 28	replaces	issue of	01.03.81
Page 32	replaces	issue of	01.03.81
Page 34	replaces	issue of	01.10.81
Page 41	replaces	issue of	14.12.82



1.2 The following pages have to be exchanged in the maintenance manual to have it at the adjustment state 01.05.86:

Page 4 replaces issue of 02.05.83
Page 4a replaces issue of 02.05.83
Page 7 replaces issue of 12.05.81
Page 19 replaces issue of 01.03.81
Page 23a replaces issue of 01.03.81
Page 23b replaces issue of 01.03.81
Page 23d replaces issue of 01.03.81
Page 25 replaces issue of 01.03.81
Page 26 replaces issue of 01.03.81
Page 29 replaces issue of 30.05.81
Page 40 replaces issue of 01.03.81
Page 48a new page
Page 49 replaces issue of 01.10.81
Page 50 replaces issue of 01.03.81

Note:

The manuals for USA and Canada differ from the English manuals through page numbering. The exchange of the manual pages for these issues is according to page 1, "log of revisions".

1.3 If a mounting support for the trim weight is subsequently installed, the following placard must be attached at the canopy frame:

Trim weights				
Weight of pilot incl. parachute			kg / lbs	Quantity
55	-	62,4	121,3 - 137,6	2
62,5	-	69,9	137,7 - 154	1
70	-	110	154,1 - 242,5	0
two-seated				0
1 trim weight yellow 8,6 kg				(19 lbs)

2. The installation of the propeller HO - V 62 R/L 160 BT is carried out according to the operating and maintenance manual no. 0107.72 for variable-pitch propellers HO-V-62 and HO-V 62 R, issue 6 dated August 1982 with amendment 1 dated December 1983 of Hoffmann GmbH & Co. KG, Rosenheim.



3. The installation of a second throttle in the instrument panel left side is carried out according to drawing no. 109-7050 "Gas throttle II".
4. The reinforcement of the root rib for steps is carried out according to drawing no. 109-1001/1002 "Wing left/right", modification state g. As of s/n 6110 included in the series production.
5. The installation of a mounting support for trim weights that are necessary for pilots weighing 55 kg to 70 kg is carried out according to drawing no. 109-7025 "Installation of trim weight". Attach placard as per "Maintenance manual GROB G 109", page 48a.
6. The covers no. 109-7026 and 109-7027/7028 for sealing the root rib are installed according to drawing no. 109-1041/1042 "Root rib left/right", modification state f.

Material:

The exchange pages 4, 4a, 7, 9, 11, 12, 19, 26, 28, 32, 34, 41 to the flight manual as well as the exchange pages 4, 4a, 7, 19, 23a, 23b, 23d, 25, 26, 29, 40, 48a, 49, 50 to the maintenance manual and the additional placard (Installation of trim weight) are to be procured from the manufacturer. The necessary material for executing the various instructions is to be procured from the manufacturer.

Weight and balance:

Instructions 1, 2, 5, 6 - no influence. After the execution of instruction 3 and/or 4, empty weight and empty weight center of gravity have to be determined anew.

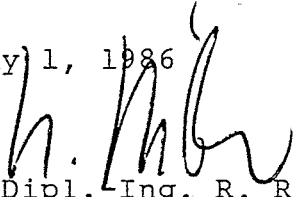
Remarks:


Instruction 1 is to be carried out by a competent person. Instructions 2 through 6 must be carried out by an authorized aviation workshop. The proper execution of the instructions has to be certified in the log-book by an authorized inspector, class 3.



Mattsies, May 1, 1986

LBA-approved on:


signed i.A. Dipl.-Ing. R. Rischer

- 2. Okt. 1986 

P.S.: In case you have sold your motorglider meanwhile, we ask you kindly to give this information immediately to the new owner and to let us know his address and serial number.

The translation has been done by best knowledge and judgement. In any case or doubt, the German original is authoritative. The German original of this Technical Information has been approved by the LBA under the date of Oct. 2, 1986 and is signed by H. Frieß.