



Subject: **Extension of operation limits**
 New edition of Flight Manual
 Installation of additional equipment

- TM 1078-9/1 Installation of air safety equipment for flights under controlled VFR (CVFR) including VFR-flights by night (NVFR).
- TM 1078-9/2 Extension of operation limits up to spinning
- TM 1078-9/3 New edition of Flight Manual (Issue 2)
- TM 1078-9/4 Reliable installation of a new pitot static system
- TM 1078-9/5 Reliable installation of an alternate static system
- TM 1078-9/6 Reliable installation of a new fuel cock
- TM 1078-9/7 Reliable installation of a new heating system

Concerning: G 115 •TM 1078-9/1 up to 1078-9/3
 all s/n as of 8007
 •TM 1078-9/4 up to 1078-9/7
 s/n 8007 to 8088

Urgency: - TM 1078-9/3 should be carried out immediately as no revisions belonging to issue 1 of the Flight Manual will be published.
 - All others are on an optional basis.

Procedure: See detailed description

Actions: See detailed description

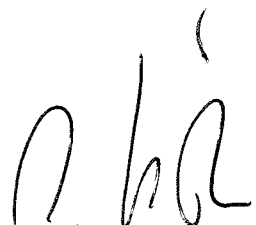
Weight and Balance: See detailed description

Remarks: See detailed description

Mattsies, 24.October 1989

LBA approved

The German original of this service bulletin has been approved by the LBA on the 26.Oct. 1989 and is signed by Mr. K. Flatter. The translation has been accomplished to our best knowledge and judgement. In case of doubt, the German original is authoritative.


signed i.A. R. Rischer
(Airworthiness engineer
certification staff)

P.S.: If in the meanwhile you have sold your glider, we would ask that you kindly pass this information directly to the new owner and forward his address and aircraft s/n to us.

Datum
24.Oct. 89

ersetzt Ausgabe
vom

Bearbeitung
J. Altmann

Musterprüfer

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Subject: TM 1078-9/1
Installation of air safety equipment for flights under controlled VFR (CVFR) including VFR-flights by night (NVFR).

Procedure: By means of additional antenna- and EMV measurements it was substantiated that the G 115 can be certified for flights under controlled VFR (CVFR), if the equipment listed under 1 is installed.
The certification for the controlled VFR includes the certification for VFR-flights above cloud layers and VFR-flights by night.

Actions: According to German regulations and with reference to the valid airworthiness regulations (FAR PART 23) the following equipment respectively additional installations is/are necessary:

1. **Controlled VFR**
 - VHF communication system
 - directional gyroscope
 - turn and blank indicator and artificial horizon
 - variometer
 - clock (on board or independent of board) with seconds indicator and stop control
 - VOR navigation receiving device
 - transponder is recommended
2. **VFR-flights above closed cloud layers**
 - VHF communication system
 - ADF or VOR installation
3. **VFR-flights by night**
 - VHF communication system
 - ADF or VOR installation
 - position lights
 - beacon
 - cover plate on beacon
 - illumination of instruments and cockpit according to reequipment-plan for TM 1078-9/1
 - landing light recommended

Material: On inquiry the required modification set will be compiled and offered by the aircraft manufacturer.

Weight and Balance: A new weight and balance record will be required after installation.

Remarks: The execution of the modification is to be certified into logbook by an authorized avionic inspector.

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24.Oct. 89

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Subject: TM 1078-9/2
Extension of operation limits up to spinning

Procedure: By a comprehensive series of tests it was proven that the GROB G 115 is very suitable for spinning instruction.

Actions: The following conditions should be noted:
1. No inverted spinning is allowed
2. Spin only with flap setting at 0°
3. Aileron-turbolator installed
4. Wheel fairings installed
5. Deflections of rudder and elevator within narrow limits:
rudder: 290 ± 10 mm (without pressure)
elevator: 64 ± 5 mm (down)
Plotting of a new adjusting report
6. Required spin equipment:
• spinning fin 115-2960
• tail skid 115-2950
7. Supplement for Flight Manual

Material: On inquiry the required modification set according to item 6 will be compiled and offered by the aircraft manufacturer.

Weight and Balance: A new weight and balance record will be required after installation.

Remarks: The execution of the modification is to be certified into logbook by an authorized inspector.

*LBA approved on
November 24, 1989*



FEW



Subject: TM 1078-9/3
New edition of Flight Manual (Issue 2)

Procedure: During the last few years the demands and comments of the various national aviation authorities have caused several editions of our handbook to be issued. In order to clarify this situation a new issue of the handbook has been raised incorporating all this information plus additionally covering changes within this service bulletin.

Actions:

1. Exchange of all pages of the Flight Manual
2. Installation of a modified cockpit placard
3. Transfer of the pages 0-1, 6-8, 6-16 up to 6-29 from old handbook (Issue 1) into new issue

Material: The material required will be supplied directly from the aircraft manufacturer free of charge.

Weight and Balance: No impact

Remarks: The execution of action 3 is to be certified into the logbook by an authorized inspector. The company GROB will make the necessary transfer of the pages stated under action 3 free of charge if they are returned to the company.



Service Bulletin
TM 1078-9

GROB

Subject: TM 1078-9/4
Approved installation of a new pitot static system

Procedure: In order to facilitate operation and maintenance of the G 115 (drainage no longer required!), and in order to avoid the excess of moisture, a new pitot static system with a heated pitot tube beneath the left wing and a pick-up for the static pressure on the fuselage was developed and approved.

Actions: Optional exchange of pitot static system

Material: On inquiry the required modification set will be compiled and offered by the aircraft manufacturer.

Weight and Balance: A new weight and balance record will be required after installation.

Remarks: Due to the technical expertise necessary this modification may only be performed at or in consultation with the manufacturer. The execution of the modification is to be certified into the logbook by an authorized inspector.

Datum
24.Oct. 89

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Service Bulletin
TM 1078-9

GROB

Subject: TM 1078-9/5
Approved installation of an alternate static system

Procedure: In answer to the requests of many customers, the GROB company has developed and certified a alternate static system.

Actions: Optional installation of a alternate static system according to installation instructions No. 1078-9/5.

Material: On inquiry the required modification set will be compiled and offered by the aircraft manufacturer.

Weight and Balance: No impact

Remarks: The execution of the modification is to be certified into the logbook by an authorized inspector.

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Subject: TM 1078-9/6
Approved installation of a new fuel cock

Procedure: As the normally installed fuel cock is no longer available, another fuel cock has been qualified.

Actions: Optional exchange of the fuel cock according to installation instructions No. 1078-9/6.

Material: On inquiry the required modification set will be compiled and offered by the aircraft manufacturer.

Weight and Balance: No impact

Remarks: The execution of the modification is to be certified into the logbook by an authorized inspector.



Subject: TM 1078-9/7
Approved installation of a new heating system

Procedure: For an improvement in the cockpit comfort an adjustable heating system has been developed.

Actions: Optional installation of a heating system

Material: On inquiry the required modification set will be compiled and offered by the aircraft manufacturer.

Remarks: Due to the technical expertise necessary this modification may only be performed at or in consultation with the manufacturer. The execution of the modification is to be certified into the logbook by an authorized inspector.



Subject: TM 1078-9/2
Extension of operation limits up to spinning

Procedure: By a comprehensive series of tests it was proven that the GROB G 115 is very suitable for spinning instruction.

Actions: The following conditions should be noted:

1. No inverted spinning is allowed
2. Spin only with flap setting at 0°
3. Aileron-turbolator installed
4. Wheel fairings installed
5. Deflections of rudder and elevator within narrow limits:
rudder: 290 ± 10 mm (without pressure)
elevator: 64 ± 5 mm
Plotting of a new adjusting report
6. Required spin equipment:
 - spinning fin 115-2960
 - tail skid 115-2950
7. Supplement for Flight Manual

Material: On inquiry the required modification set according to item 6 will be compiled and offered by the aircraft manufacturer.

Weight and Balance: A new weight and balance record will be required after installation.

Remarks: The execution of the modification is to be certified into logbook by an authorized inspector.

*LBA approved on
November 24, 1989*



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Datum
24.Oct. 89

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