

SUBJECT : DG-400 powerplant, noise absorbing fairing

EFFECTIVITY : DG-400, all serial no's.

ACCOMPLISHMENT : none, optional

REASON : The noise absorbing fairing which has been developed for the DG-800 may also be utilized with the DG-400.

INSTRUCTIONS : 1. Installation of the noise absorbing fairing to the engine and of intake air filters to the carburetors, exchange of the cover of the wing flap control according to working instructions No. 1 for TN 826/29.  
2. Modification of the DG-400 maintenance manual.  
Exchange the following pages:

0.2	33
1	34
2	46b
32	53

MATERIAL : Instruction 1: Retrofit Kit see working instructions No. 1  
Instruction 2: Manual pages see above

WEIGHT AND BALANCE : Additional weight of fairing etc. 1.5 kg (3.3 lbs) at 990 mm (38.98 in.) aft of the datum (wing leading edge). A new weight and balance report must be produced by calculation or with a new measurement.

REMARKS : Instructions No. 1 must be executed by the manufacturer or by a licensed work-shop and be inspected and entered in the aircraft logs by a licensed inspector.

Bruchsal 4, date

Dec. 01, 1994

Author: 

Dipl.-Ing. W. Dirks

LBA - approved:

The German original of this TN has been approved by the LBA under the date of Dec.07,94 and is signed by Mr. Fendt. The translation into English has been done by best knowledge and judgement.

Type certification inspector:

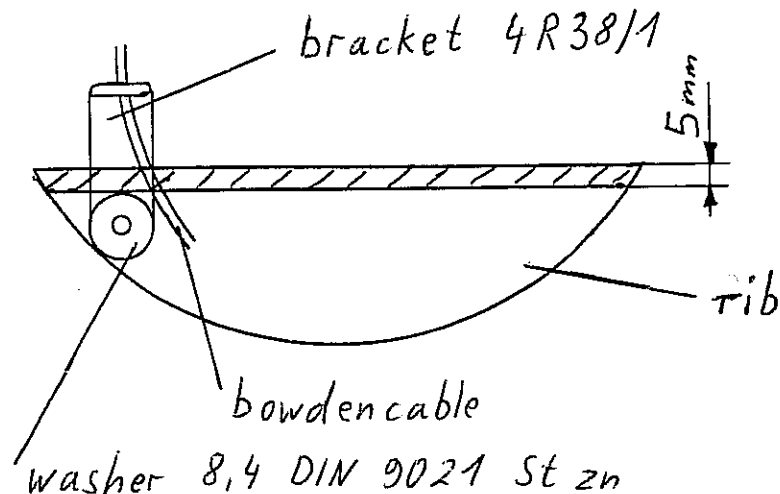
Dipl.-Ing. A. Lange



Working instruction no.1 for TN 826-29  
Installation of a noise absorbing engine fairing

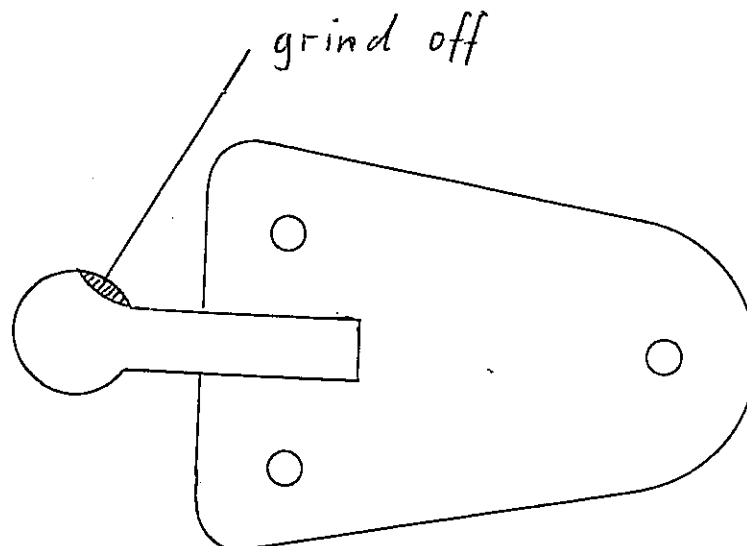
1. Remove the cover of the wing flap control and replace it by the new modified part 4Ru16/1 see sketch 3.  
Don't re-install the bungee guide "eye" again.
2. Remove 5mm (.2 in.) of the upper end of the small bulkhead, which holds the spindle drive, see sketch 1.

Sketch 1



3. Move the bracket 4R38/1 (which holds the bowdencable) far enough to the side so that the washer 8.4 DIN 9021 St zn just fits into the edge, see sketch 1.
4. Grind away an edge from the left ball which opens the engine door see sketch 2.

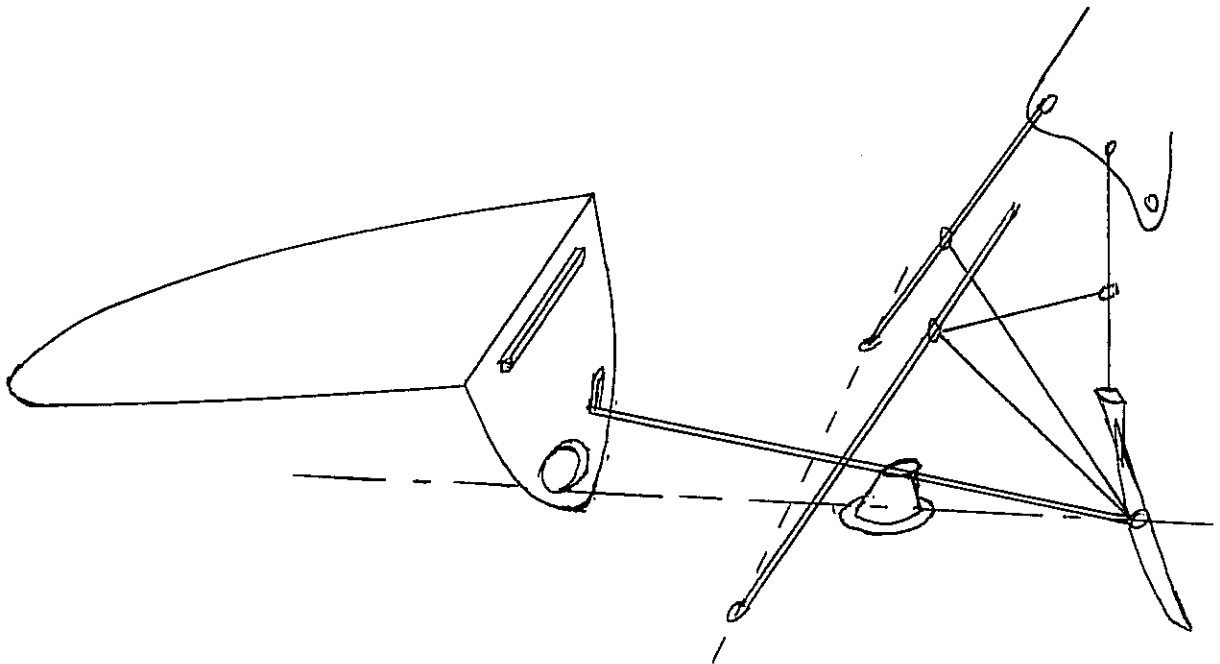
Sketch 2



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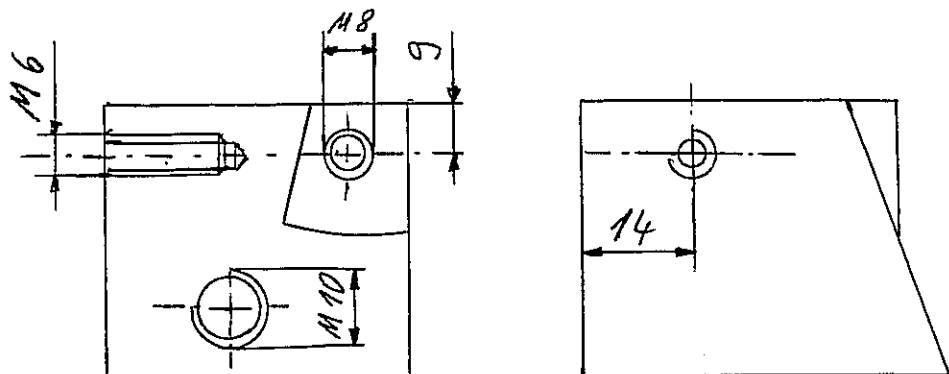
5. Fix the propellerbrake bowdwencable with 6 Ty-Raps to the right engine retaining cable. Distance between ty-raps 70mm (2.8in.). Install a dia. 2mm bungee to the engine retaining cable and to the cable of the rear engine door as shown in sketch 3. The bungee is intended to pull the cables towards the centre to prevent the left cable being jammed between the engine fairing and the cover of the wingflap control.

Sketch 3



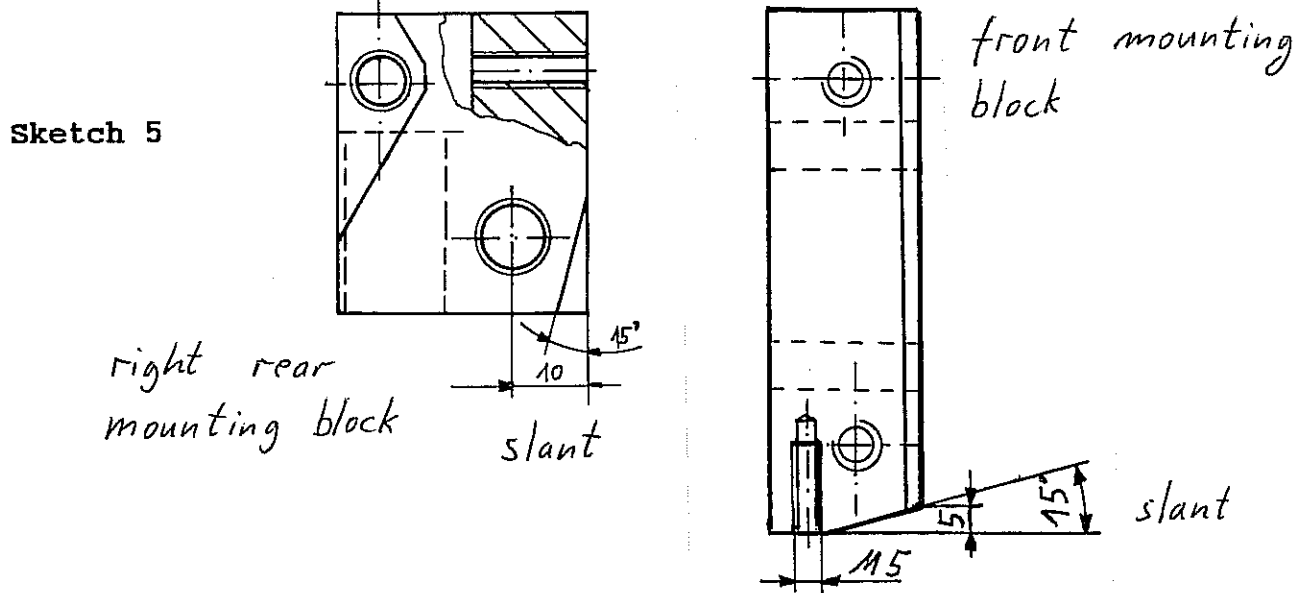
6. Produce a thread M6 in the left rear mounting block for the propeller mounting plate, see sketch 4.

Sketch 4

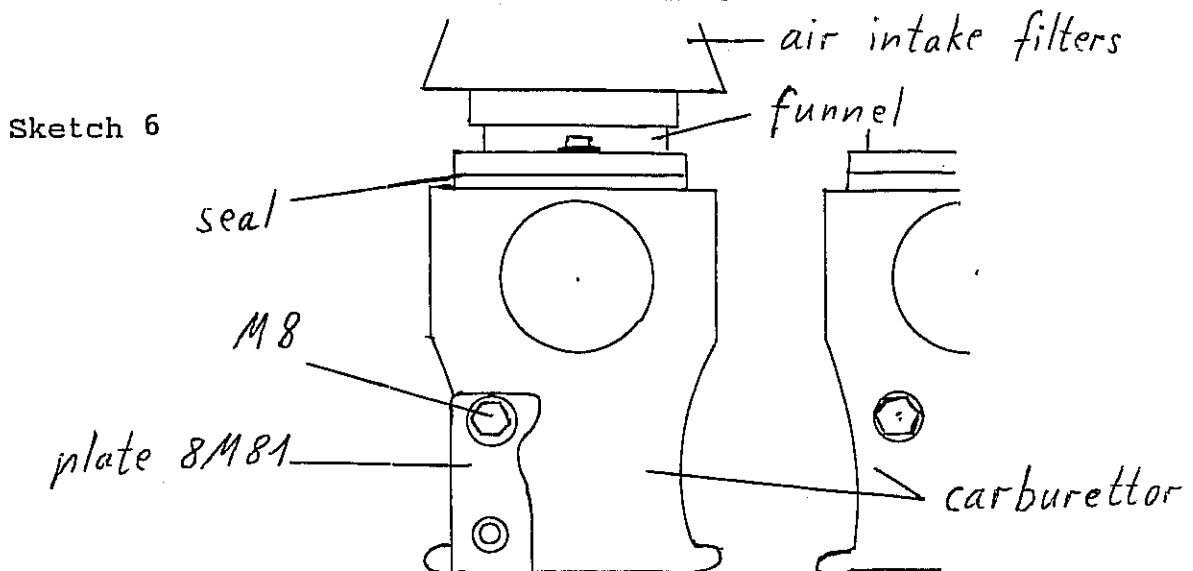


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7. Modify the front and right rear mounting blocks for the propeller mounting plates according to sketch 5.



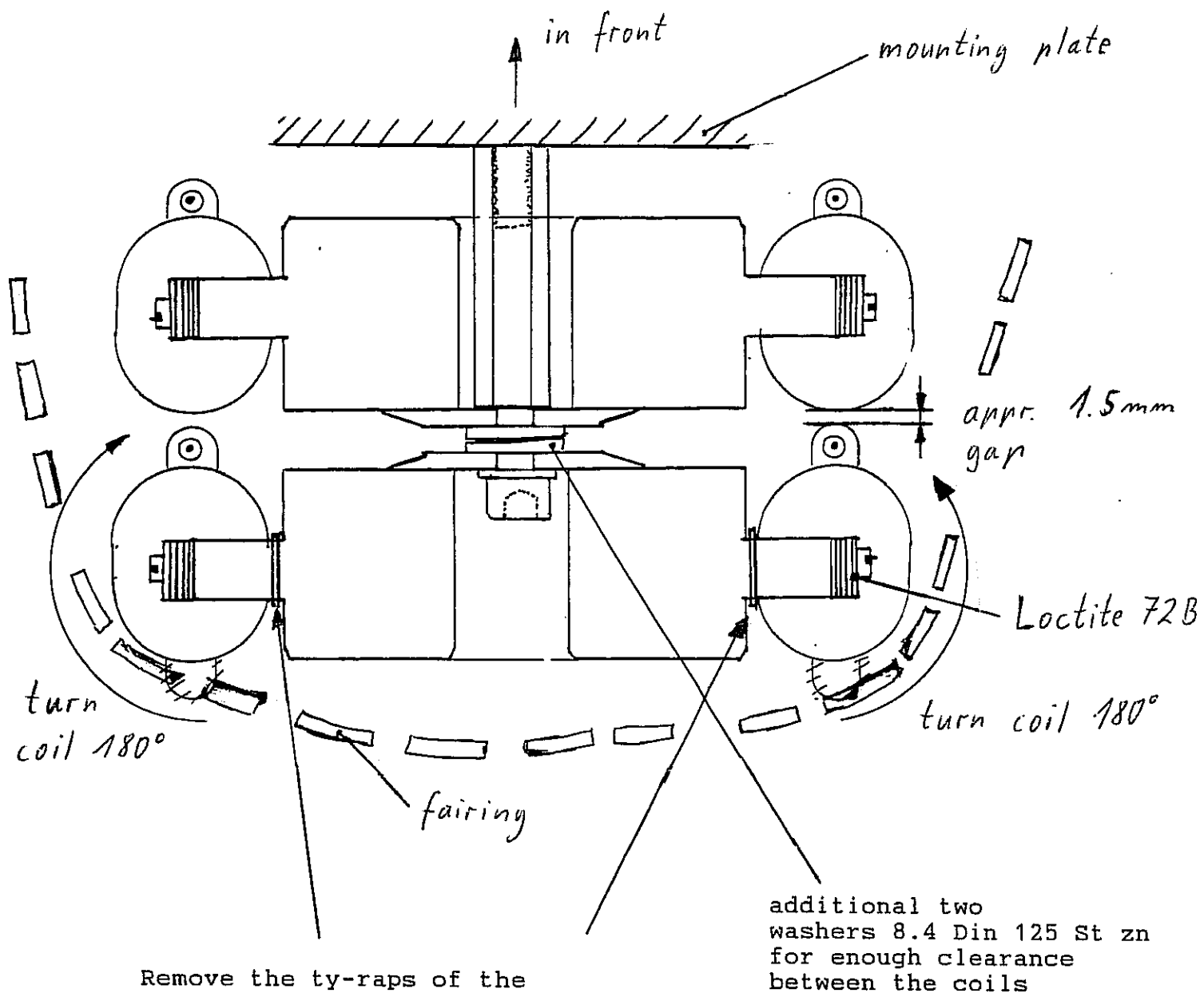
8. Remove the carburettor cover and the plastic air intake funnels. Install the new metal funnels. Use the old sealings again, if possible. Secure the bolts with Loctite 72B and mark them with red securing paint. Push the air intake filters over the funnels and fix them with the clamping screws which are part of the filters see sketch 6.
9. Install the engine fairing mounting plate 8M81 according to sketch 6. Therefore remove the M8 bolt which fixes the carburettor to the engine and fix the plate with this bolt. Secure the M8 bolt with Loctite 72B and mark with red securing paint. The torque for this bolt is 22 Nm (16 ft lb).



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10. With the version with BOSCH-Elektronikboxes the two ignition coils of the rear elektronikbox must be turned according to sketch 7.

Sketch 7



Remove the ty-raps of the cables at the rear electronic box.  
Fix the cables again in the same way after turning the coils.

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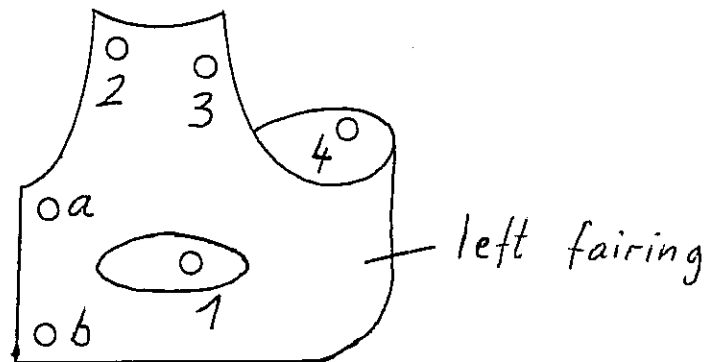
11. Install the left fairing 8Ru99. Work in the order as indicated below, see sketch 8.

Screwed joint 1-3: M6\*16 DIN 933 with washers 6.4 DIN 9021 and red fiberwashers 6\*18\*2mm, see sketch 9

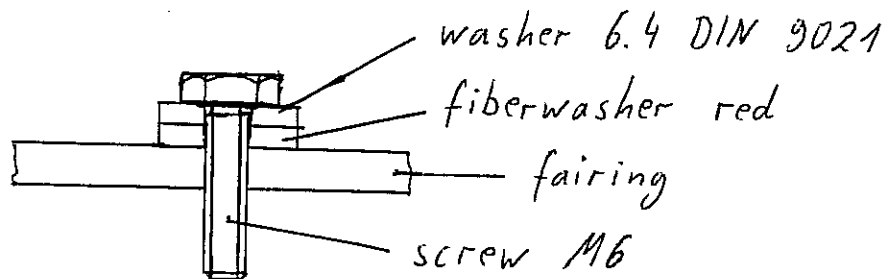
Screwed joint 4 : M6\*20 DIN 933 with washers 6.4 DIN 9021 and red fiberwashers 6\*18\*2mm, see sketch 9

Secure all screws with Loctite 72B and mark with red securing paint.

Sketch 8



Sketch 9

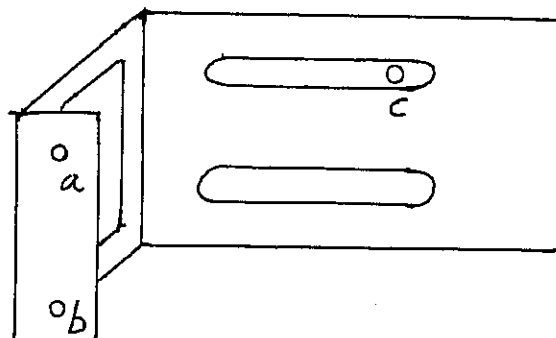


12. Install the right hand fairing 8Ru98 in the given order see sketch 10.

Screws a,b: screws with slotted head M6\*20 DIN 963 4.8 zn with rosette 15\*M6 MsNi

Screw c : bolt M6\*20 with washers 6.4 DIN 9021 and fiberwasher 6\*18\*2mm

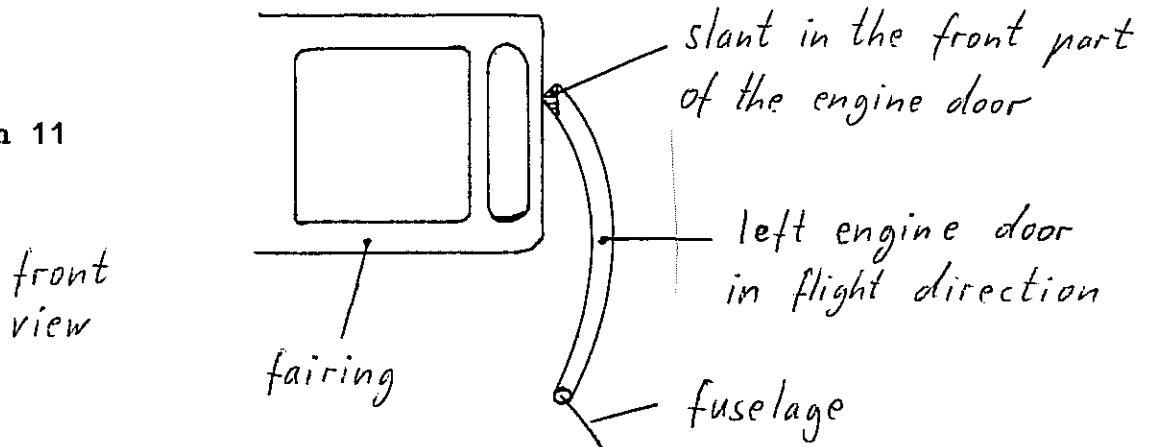
Sketch 10



Working instruction no.1 for TN 826-29  
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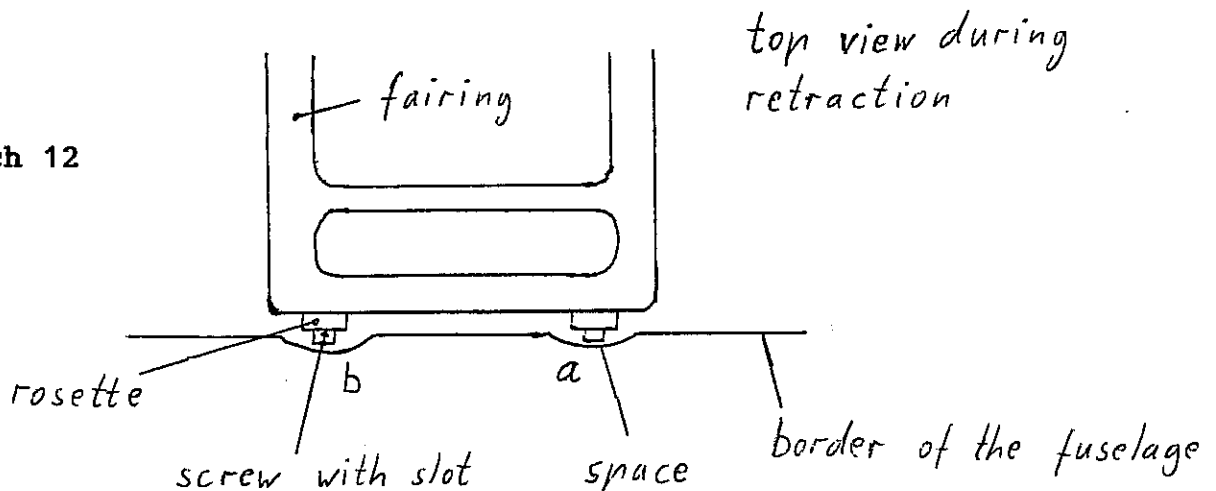
13. Scarf the left engine door according to sketch 11 to prevent the engine door from chafing at the engine fairing.

Sketch 11



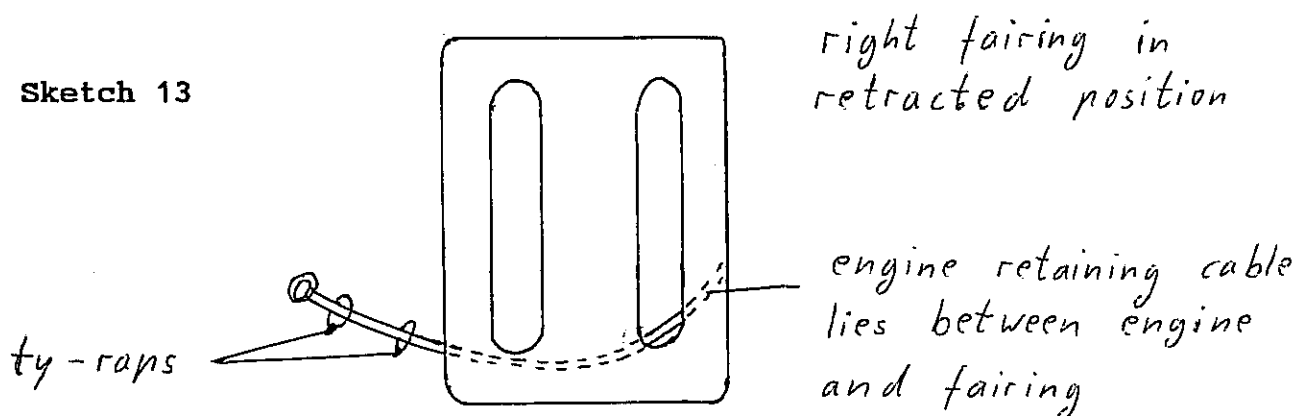
14. Now slowly retract the engine. If screws a and b interfere with the border of the fuselage, you have to grind away from the fuselage accordingly, see sketch 12..

Sketch 12



15. Extend the engine and check if the right engine retaining cable lies correctly around the fairing without jamming. If not you have to modify the spacing of the ty-raps see sketch 13.

Sketch 13



Working instruction no.1 for TN 826-29  
Installation of a noise absorbing engine fairing

16. Perform an engine testrun. Therefore rigg the wings to prevent rotating of the fuselage. Mortal danger!
17. Remove the fairing after the testrun and check fairing and powerplant for chafing marks. Check especially at the CHT-probe, at the front right ignition coil and at the front propeller mounting plate. If chafing occurs, remove from the fairing accordingly.
18. Check especially the CHT during the first flight, as the fairing will increase the CHT a little.

Part list

- left engine fairing 8Ru99
- right engine fairing 8Ru98
- bungee dia. 2mm: length 1,5m (59in.)
- 6 \* ty-raps
- cover for wingflap control 4Ru16/1
- mounting plate 8M81
- 3 \* bolts M6\*20 DIN 933-8.8 Zn
- 2 \* bolts M6\*24 DIN 933-8.8 Zn
- 2 \* screws with slot M6\*20 DIN 963-4.8 zn
- 5 \* washers 6.4 DIN 9021 St zn
- 5 \* fiberwashers red 6\*18\*2mm
- 2 \* rosette 15\*M6 Ms Ni

**with Mikuni carburettors**

- 2 \* 60500242 funnel 4M82/2 for Mikuni
- 2 \* air-filter 60500141

**withi Tillotson carburettors**

- 2 \* 60500238 funnel 4M82/1 for Tillotson
- 2 \* 60500239 sealing
- 2 \* 60500141 air-filter