

Maintenance manual DG-800 B MW

**Manual amendments**

No.	Page	Description	Date
1	2, 3, 4, 25, 28, 49, 86, 91, 93, 8E101, 8E105	Manual revision TN 873/27	Nov. 2001
2	1 - 5, 43, 44, 47, 92, diagram 11	Fuel hoses TN 800/44	October 2016
3	1-6, 33,34, 44, 93, diagrams 3, 9	manual revision, coolant hoses TN800/45	July 2017
4	1-3, 5, 45-47, 47 a, 48, 49	manual revision, life time drive belt TN800/45	May 2023
5	1, 2, 8 - 10	TN800/50 adjustment of elevator free play	December 2023

Instructions for continued airworthiness  
Maintenance manual DG-800 B MW

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		6 July 17
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## 1.2 Elevator control and trim system

### 1.2.1 Control system

see diagram 1

### 1.2.2 Elevator deflections and tolerances

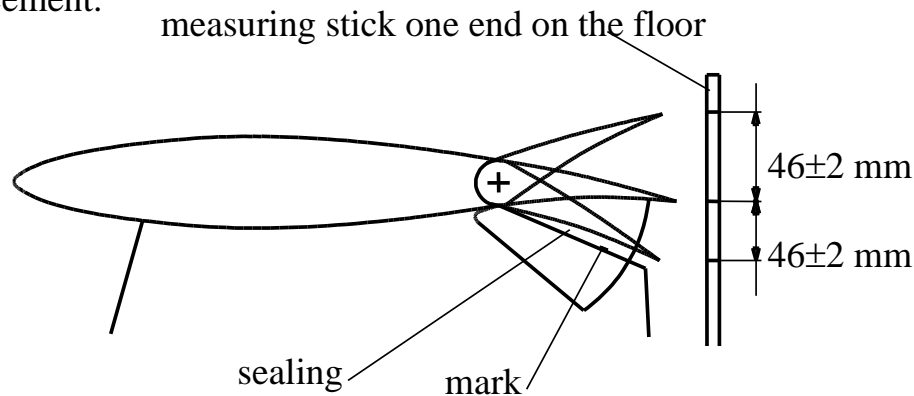
Up  $46 \pm 2$  mm  $1.81 \pm 0.08$  in.

Down  $46 \pm 2$  mm  $1.81 \pm 0.08$  in.

measured at 134 mm (5.3 in.) from hinge axis which is directly at the edge of the cut-out for the rudder.

Measurement:

Hold a measuring stick with one end on the floor. Deflect the elevator to neutral position by bringing the mark at the sealing in line with the upper end of the fin. Mark the 0-point on the stick. Then mark the up and down displacement.



### 1.2.3 Elevator stops

The elevator stops are located at the base of the control column and can be adjusted with a 10 mm open ended spanner.

### 1.2.4 Elevator control circuit free play

With the elevator held fixed in the zero position, the free play at the top of the control column can be  $\pm 1.5$  mm ( $\pm 0.06$  in.).

#### **Free play within the automatic elevator connection**

Within the automatic elevator connection there should be no free play noticeable in the zero position when the elevator is moved at its trailing edge.

Any free play can be reduced by screwing in the adjustment screw on the automatic connector funnel.

**Warning:** In case the adjustment screw was turned in too far, the roller will jam inside the funnel and can't be moved or only with larger force to the front of the funnel. Moving the horizontal tailplane backwards for rigging might not be possible or only with large effort. Each time a bending force will act on the rod end which might lead to failure of the rod end with time.

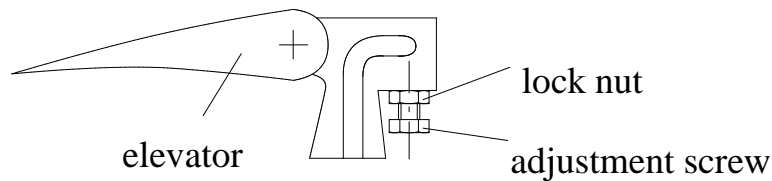
For this reason after adjusting the free play it is necessary to check if the roller can be moved without force in the funnel.

To accomplish this, remove the complete rod end with the roller or remove the roller from the rod end and stick it on an 8 mm f7 pin and move the roller in the funnel. Prior to removal of the rod end mark its position.

If the roller can't be moved without force completely to the front you must turn back the adjustment screw and bend back the sheet metal which was bent by the adjustment screw. Then adjust the free play again.

In case the roller has too much free play on the rod end or if the roller is no more round you must replace the roller by a new one 8St50/2.

In case the glider was operated for a longer time with the adjustment screw turned in too far the rod end must be replaced by a new one 8St50/1.

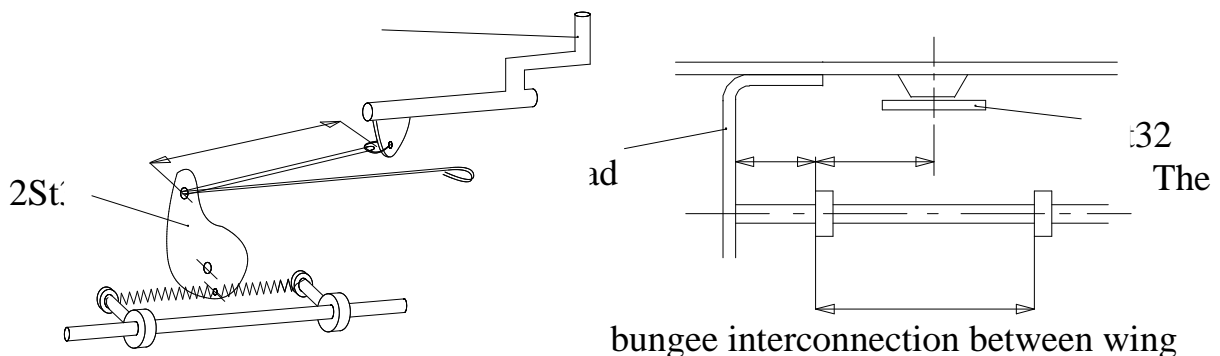


After completion of this work check the elevator displacements and adjust if necessary.

### 1.2.5 Trim

The automatic trim mechanism should be adjusted according to the sketch below. The measurements a and b are with the control stick in forward position:

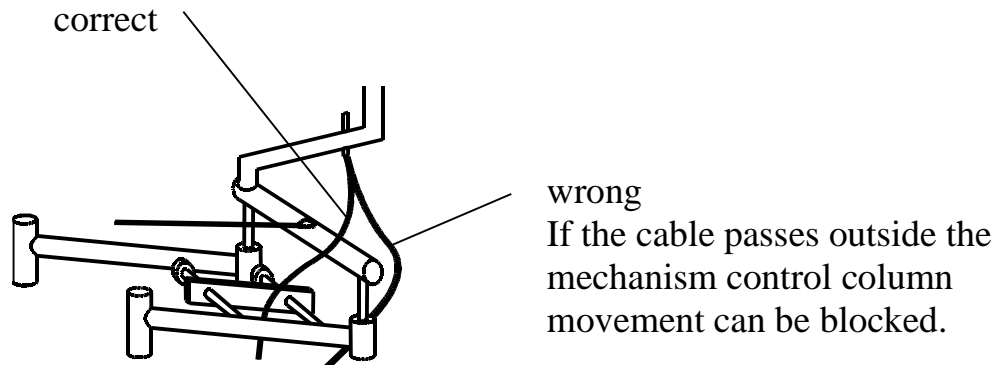
a = 30 mm (1.18 in.), b = 187 mm (7.36 in.), c = 357 mm (14.1 in.).



bungee interconnection between wing flap lever 6St9 and trim lever 2St32 is to be replaced, when worn or when elongated. The length in unstretched condition y must be 110 mm (4.3 in.). The interconnection consists of 2 mm diameter bungee wound around 3 times.

### 1.2.6 Repair of the automatic trim mechanism Bowden cable

In the event of a replacement Bowden cable being installed, it should be emphasised that the cable must pass between the two parallel arms of the Control column mechanism as shown in the sketch.



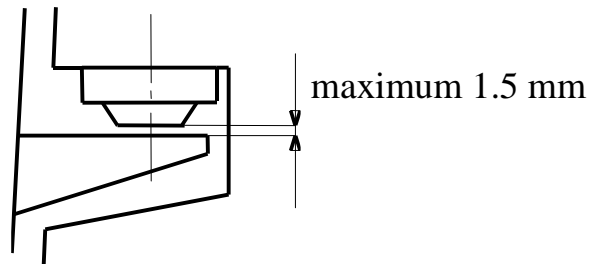
## 1.3 Rudder control

1.3.1 Rudder control circuit  
see diagram 2

1.3.2 Rudder deflections and tolerances  
165 +0, -5 mm ( $\pm 30^\circ$ ) (6.5 +0, -0.2 inch)  
measured at 318 mm (12.52 inch) from the hinge axis.

1.3.3 Rudder stops  
The rudder stops are located at the lower hinge pedestal and can be adjusted with an Allen key wrench.

1.3.4 Axial free Play  
The maximum allowable free play at the upper hinge point is 1.5 mm (0.06 inch)



1.3.5 Sealing the rudder  
The rudder is sealed on both sides. On the outside with Mylar combi-tape and inside the fin with V-sealing tapes  
These sealings are not to be removed.  
If damaged it should be replaced, see section **Fehler! Verweisquelle konnte nicht gefunden werden.**

1.3.6 Retaining spring for the pedal adjustment handle  
A spring which pulls the pedal adjustment cable tight is installed in the console below the instrument panel. If this spring is defective or not connected the handle of the pedal adjustment cable won't be pulled to the front so that it may hook into the trim release lever at the control stick with pedals in a rear position.