

# Maintenance Manual DG-800S

## 0 General

### 0.1 Manual amendments

No.	Page	Description	Date
0.1	all	Combination of the initial Maintenance Manuals of the Variants DG-800S and DG-808S, new standardized format	December 2009
0.2	0.8, 1.5, 1.6, 1.8, 1.9, 1.11, 1.12, 2.1, 2.3, 2.6, 4.2, 4.3, 4.7, 4.9, 5.1, 6.1 - 6.3	Miscellaneous changes to the contents of the latest amendments of the initial maintenance manuals	December 2009
1	0.1, 0.3, 1.2, 1.3	TN800/50 adjustment of elevator free play	December 2023

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## 0.2 List of effective pages

Section	page	issued	replaced/	replaced/	replaced/
0	0.0	December 2009			
	0.1	see manual amendments			
	0.2	"			
	0.3	"			
	0.4	"			
	0.5	"			
	0.6	"			
	0.7	December 2009			
	0.8	"			
	0.9	"			
1	1.1	December 2009			
	1.2	"	December 23		
	1.3	"	December 23		
	1.4	"			
	1.5	"			
	1.6	"			
	1.7	"			
	1.8	"			
	1.9	"			
	1.10.	"			
	1.11	"			
	1.12	"			
	1.13	"			
	1.14	"			
2	2.1	December 2009			
	2.2	"			
	2.3	"			
	2.4	"			
	2.5	"			
	2.6	"			
	2.7	"			

## 1.2 Elevator control and trim system

### 1.2.1 Control system

see diagram 1

### 1.2.2 Elevator deflections and tolerances

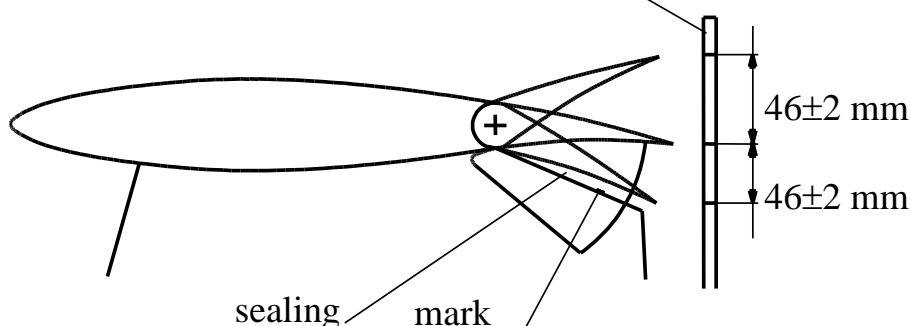
up:	46 $\pm$ 2 mm	1.81 $\pm$ 0.08 in.
down:	46 $\pm$ 2 mm	1.81 $\pm$ 0.08 in.

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.

measuring stick one end on the floor



### 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.

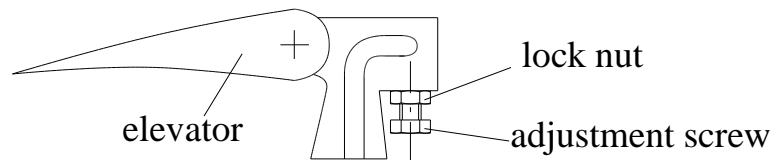
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To accomplish this, remove the complete rod end with the roller or remove the roller from the rod end and stick it on an 8 mm f7 pin and move the roller in the funnel. Prior to removal of the rod end mark its position.

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.



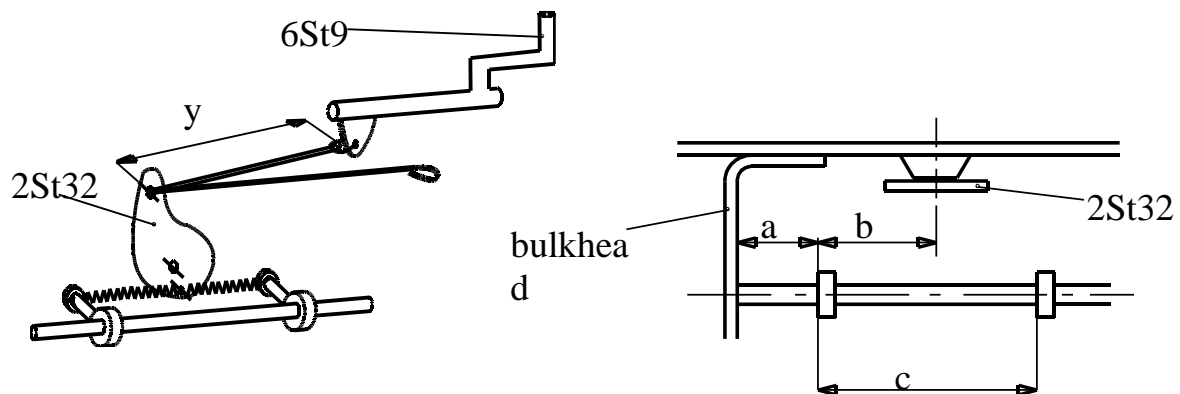
After completion of this work check the elevator displacements and adjust if necessary.

### 1.2.5 Trim

The automatic trim mechanism should be adjusted according to the sketch below. The measures 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.).



The 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.