Rudder control operated by hand

Part designations see MM diagram 2a

In the following text the changes to those sections of the maintenance manual which are effected by the installation of the manual rudder control will be given.

Section 1.3 Rudder control

new subsection

1.3.7 Rudder control operated by hand

1.3.7.1 General

System see diagram 2a for **ser. No. 10-265**, resp. diagram 2b **from ser. No. 10-283 on**.

Position of placards see diagram 12a.

To enable handicapped pilots to operate the DG-1000 an optional hand operated rudder control system for left hand operation has been developed. This system is only available for the front seat.

The normal rudder control system will not be waived to allow normal operation of the DG-1000 too. The handle must not and can't be removed for normal operation.

1.3.7.2 Adjustment

With the hand operated rudder control the rudder cable system is no more an open circuit, so the tensions of the cables must be adjusted, see section 4.12.

Section 2 Inspections

2.1 Daily inspection

- With optional hand operated rudder control: Check especially the rudder control for slack in the cable system. If the cables are not tensioned full rudder displacements via the manual control are not possible (see section 4.12).

Section 3 Maintenance

3.3 Greasing and oiling

B

Apply "Molykote BR2 Plus" to part 10St130. No other grease or oil is permitted.

Caution: If 10St130 was greased inadvertently you have to disassemble parts 10St130 and 10St131, clean them completely with Acetone and apply "Molykote BR2 Plus" to 10St130 again.

Section 4 Detailed instructions for assembly and servicing work

New subsection

4.12 Servicing the hand operated rudder control

4.12.1 Rudder cables

Check rudder deflections, if full deflection is not reached increase the cable tension: Dismount cables at rudder and twist cables counter-clockwise (maximum 10 turns). Check if rudder deflection is symmetrical.

Caution: Never twist cables clockwise!

Only **from ser. No. 10-283 on**:
Should more than 10 turns be necessary for alignment, the cable between the rear rudder pedals may be tightened, see section 4.12.2. In case the adjustment range is not sufficient exchange the cables between rudder and rear rudder pedals against new shorter cables.

4.12.2 Connection between right and left rudder cables

Ser.No. 10-256: Connecting cables are installed between front rudder pedals and bell-crank 10St141
The length of these cables was determined during factory installation. When exchanging these cables produce cables with the same length as the existing cables.
Note: When rudder cables have elongated this problem may be rectified by producing shorter connection cables or installation of new shorter cables between rear pedals and rudder.

From ser.No. 10-283 on: A connecting cable is installed between the rear rudder pedals and may be tightened.
To accomplish tightening loosen the counter-nuts at the adjustment screw R79/3 located at the rear rudder pedal at the connection to the upper cable. Remove the adjustment screw. Remove the old Loctite. Apply new Loctite 243 to the screw R79/3 and reassemble the unit. Tighten the cable via R79/3 and the counter nuts, all items must be performed as long as the Loctite is still liquid.

Section 8 Parts list

New Subsection

8.5 Parts for the manual rudder control

For all ser.No.:

10St130	Guide rod for handle
10St131	Handle
10St132	Pushrod
10St133	Linear guide cylinder
10St143	Airbrake guide plate (with notches)
10St144	Bushes
10St145	Linear guide piston
	Special grease Molykote BR2 Plus

Only for ser.No. 10-256:

10St139	Reinforcement pedal guide tubes
10St140	Modification Pedal block
10St141	Bell-crank
10St142	Modification rudder pedals

From ser.No. 10-283 on:

R73/1	Pulley 2 pieces
R79/3	Adjustment screw
	Fork end S 6x24 DIN 71751
	Fork end S 6x12 DIN 71751 left hand thread
	2 pieces bolt 6H11 16x13,5 DIN 1434 St
	2 piece split pin 1,6 DIN 94 Zn
	2 piece washer DIN 125 6,3 StZn
	Special grease Molykote BR2 Plus
	Loctite 243

Attachments to enclosure 1

Diagram		issued
2a	Rudder control operated by hand, supplement to diagram 2 for **ser.No. 10-265**	January 2019
2b	dto. **from ser.No. 10-283 on**	February 2023
12a	Placards with rudder control operated by hand	August 2018