

**0 General****0.1 Manual amendments**

No.	Page	Description	Date
1	0.3, 0.6, 0.10, 1.22, 1.23, diagram 15a	TN1000/09	October 2006
2	0.5, 0.6, 8.2, diagram 15a	ÄM1000-1-07	December 2006
3	0.0, 0.3-0.6, 0.12, 1.1, 3.3, 4.2, 4.16, 4.17, 4.21, 4.28, 8.1, 8.4 diagrams 5, 6, 8 - 10, 12, 15, 15a, 5EP50, 5V18, 10FW2, encl. 2 page 1	TN1000/10 Manual revision	January 2007
4	0.1, 0.6, diagram 14	TN1000/11 Manual revision	October 2007
5	0.3, 0.4, 0.6, 0.10, 1.9, 1.10, 4.7-4.9, diagrams 17, 18	landing gear positive locking device TN1000/13	February 2008
6	0.3, 0.4, 0.6, 0.10, 1.19, 2.1, diagram 19, enclosure 3	TN1000/15 Throttle handle in rear Cockpit Option	March 2008
7	0.3, 0.6, 0.10, 1.14 diagram 6a	ÄM1000-02 Fin ballast tank valve and handle	March 2008
8	0.4, 0.5, 0.6, 1.31, 2.6, 4.18, 6.2, 8.3, diagram 16, enclosure 2 pages 2 and 3	Manual revision TM1000/16	May 2008
9	0.3, 0.4, 0.6, 0.10, 4.8, 4.9, diagram 7a	ÄM1000-04 Production version of the positive locking device	Oct. 2008
10	0.3, 0.6, 0.10, diagrams 20-22, drawing 10E4, enclosure 4	Electrically operated main landing gear TN1000/14	November 2008
11	0.6 and 0.10, diagram 21, Encl. 4 pages 2, 2a and 7. drawing 10E4 issue E	Electrically operated landing gear, device to provide higher current for resetting the emergency extension gas strut TN1000/19	October 2010

Maintenance Manual DG-1000T

**0.2 List of effective pages (continued)**

diagram	issued	replaced/	replaced/	replaced/
1	May 2004			
2	Nov. 2001			
3	June 2005			
4	Nov. 2001			
5	Nov. 2001	January 2007		
6	Nov. 2001	January 2007	March 2008	Not valid for 10-101, and from 10-128 on
6a	March 2008			
7	Nov. 2004			
7a	Oct. 2008			
8	Nov. 2001	January 2007		
9	June 2005	January 2007		
10	May. 2005	January 2007		
11	June 2005			
12	Sept. 2003	January 2007		
13	June 2005			
14	June 2005	October 2007		
15	June 2005	January 2007		
15a	Oct. 2006	Dec. 2006	January 2007	
16	June 2005	May 2008		
17	Febr. 2008			
18	Febr. 2008			
19	March 2008			
20	Nov. 2008			
21	Nov. 2008	Oct. 2010		
22	Nov. 2008			
5EP34	25.01.90			
5EP50	17.12.98			
5V18	14.10.94			
10FW2	05.10.99			
10E4	20.10.08			
10E4 issue E	8.10.10			
10E102	14.09.05			
10E103	24.06.05			
Encl. 1	June 2005			
Encl. 2	June 2005	Page 1 January 2007	Pages 2, 3 May 2008	
Encl. 3	March 2008			
Encl. 4	Nov. 2008	Page 2, 2a , 7 Oct. 2010		

diagrams

- 1 Elevator control, trim
- 2 Rudder control
- 3 Aileron and spoiler controls in the fuselage
- 4 Aileron and spoiler controls in the wings
- 5 Tow releases
- 6 Water ballast system
- 6a Waterballast system 10-101, from 10-128 on
- 7 Landing gear, hydraulic wheel brake (Version without nose wheel)  
up to ser. No. 10-132
- 7a Landing gear, hydraulic wheel brake (Version without nose wheel)  
from ser. No. 10-133 on
- 8 Landing gear, hydraulic wheel brake (Version with nose wheel)
- 9 Landing gear, non retractable
- 10 Systems for static and total pressure
- 11 Placards
- 12 Landing gear control (Version without nose wheel)
- 13 Powerplant
- 14 Extension/retraction mechanism
- 15 Fuel system
- 15a Fuel system with automatic fuel cock
- 16 Powerplant retaining cables
- 17 Landing gear positive locking device TN1000/13  
no more valid from ser. No. 10-133 on
- 18 Actuation unit LG locking device, differences to diagr. 12  
for TN1000/13 and from ser. no. 10-133 on
- 19 Throttle handle in front and rear Cockpit TN1000/15
- 20 Electrically operated main landing gear (in landing gear box)
- 21 Electrically operated main landing gear (outside landing gear box)
- 22 Placards electrically operated main landing gear
- 5EP34 Installation plan Dräger oxygen system
- 5EP50 Installation plan ELT ACK
- 5V18 Tool for airbrake adjustment
- 10FW2 Spring leg (landing gear)
- 10E4 Wiring plan electrically operated main landing gear TN1000/14
- 10E4 Wiring plan electrically operated main landing gear TN1000/19
- Issue E
- 10E102 Wiring plan DINA1 (in aircraft log)
- 10E103 Wiring scheme
- Encl. 1 Download instructions for flightlog and service data from the DEI-NT
- Encl. 2 Instructions for transponder installation
- Encl. 3 Service Throttle handle in front and rear Cockpit TN1000/15
- Encl. 4 Electrically operated main landing gear

### 1.6.5.2 Adjustment / limit switches

With the electrically operated landing gear only the limit switches have to be adjusted

#### a) Limit switch landing gear extended

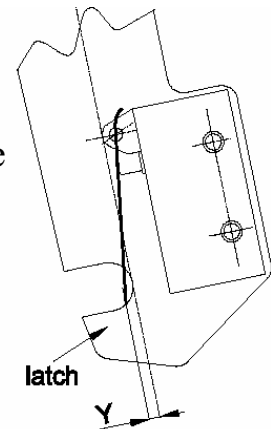
1. Extend the landing gear electrically and check if the drag struts 10FW102 and the struts of the rear fork 10FW91 touch each other at their joint hinge point.
2. Apply a force of 100 N (2 lbs.) to the hinge point perpendicular to the centre line of the struts in upward direction. The system should be so stiff that you can move the hinge point no more than 2 mm (0.08 in.) out of line.
3. If it is possible to move the hinge point more than 2 mm, the limit switch must be adjusted. To accomplish this you have to bend the arm of the switch accordingly. The limit switch is mounted on the landing gear box and is activated by the lever 10FW108.
4. Retract the landing gear a small amount, extend again and check if the lower green control light starts shining. If not, the arm was bent too far.
5. If the adjustment is correct, retract the landing gear and extend via the emergency system. Check if the lower green control light starts shining. If not, the arm was bent too far. After adjustment repeat the check according to item 2.

#### b) Limit switch landing gear retracted

The spindle drive must be shut off in the retracted position when the bolt at the left drag strut 10FW102 engages in the notch of the left latch on shaft 10FW109 and activates the limit switch which is mounted to the latch.

Check: Activate the limit switch. The distance Y shall be 3 - 3 mm (0.08 - 0.12 in.) when the switch switches.

If necessary adjust the switch by bending it's arm.



#### c) Limit switch gas strut (emergency extension system)

This switch (position 12 in diagram 21) is mounted to the upper end of the gas-strut at bracket 10FW120. When resetting the gas strut the spindle drive must be stopped by the limit switch when the distance X in diagram 21 (from counter nut up to gas strut body) is 17 - 20 mm (0.67 - 0.8 in.). If necessary loosen the mounting screws and rotate the switch for adjustment.

**d) Switch emergency extension system (optional with TN1000/19, standard from ser.no. 10-157 on)**

This switch (position 20 in diagram 21) activates higher current for the spindle drive via the LG control unit to reset the gas-strut as long as one of the emergency extension handles is pulled. The switch is mounted to a bracket 10FW143 which is mounted to the bracket 10FW120 see item c). The switch is activated by the deblocking lever in the upper gas-strut end. In case the spindle drive has not enough power to reset the gas-strut check the function of the switch. To accomplish this disconnect the 2 wires from the switch. With one of the emergency extension handles pulled the resistance between these 2 terminals must be zero. If necessary adjust the switch by bending it's arm.

1.16.5.3 Free play

Free play between bell crank 10FW108 and shaft 10FW91 is not allowed. If there is any free play tighten the two bolts M6x40 inside the landing gear box with a 10 mm open-end wrench. If there is still some free play, the bolts should be removed and the holes drilled out and reamed to diameter 8 H7. M 8 x 40 LN 9037 bolts should then be installed.

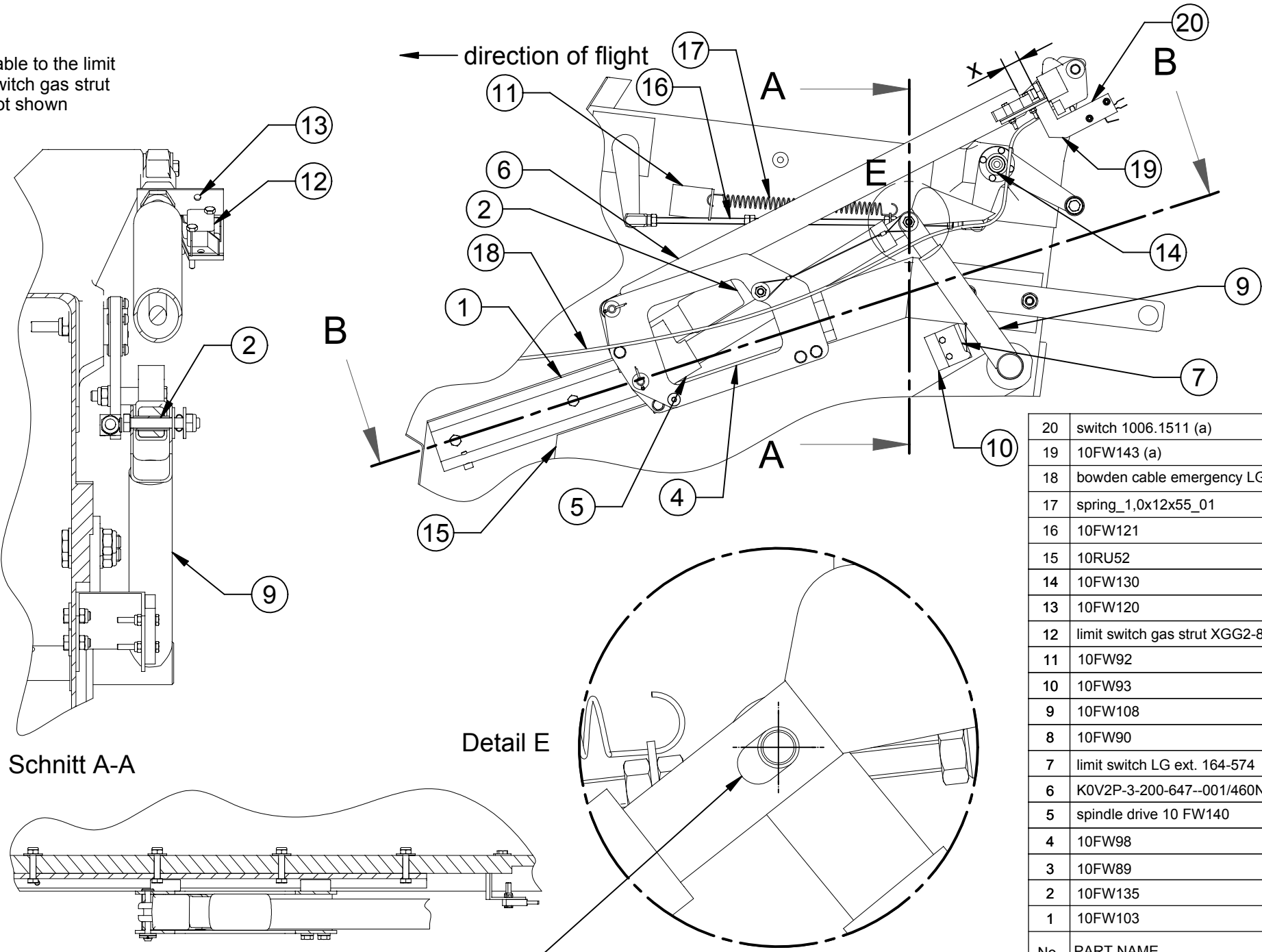
## Section 8 Partlist

new Subsection

### 8.5 Parts for the electrically operated landing gear

- 60000168 Lockable gas strut K0V2P-3-200-647-001/460N
- 41041400 Spindle drive completely assembled
- 60510463 Limit switch 164-(LG retracted)
- 60510464 Limit switch 164-574 (LG extended)
- 41040008 Limit switch XGG2-88-S20Z1 (gas strut)
- 60510484 Extension-retraction switch MTG 206 S (LG up, down)
- 60510375 Press button 12G2904 with cap 12G2910 black (LG up)
- 60510865 Switch 1006.1511 (**optional with TN1000/19, standard from ser.no. 10-157 on**)

cable to the limit switch gas strut  
not shown



20	switch 1006.1511 (a)	1
19	10FW143 (a)	1
18	bowden cable emergency LG extension	1
17	spring_1,0x12x55_01	1
16	10FW121	1
15	10RU52	1
14	10FW130	1
13	10FW120	1
12	limit switch gas strut XGG2-88-S20Z1	1
11	10FW92	1
10	10FW93	1
9	10FW108	1
8	10FW90	1
7	limit switch LG ext. 164-574	1
6	KOV2P-3-200-647--001/460N	1
5	spindle drive 10 FW140	1
4	10FW98	1
3	10FW89	1
2	10FW135	1
1	10FW103	1
No.	PART NAME	QT Y

(a) only with TN1000/19 applied,  
standard from ser. no. 10-157 on

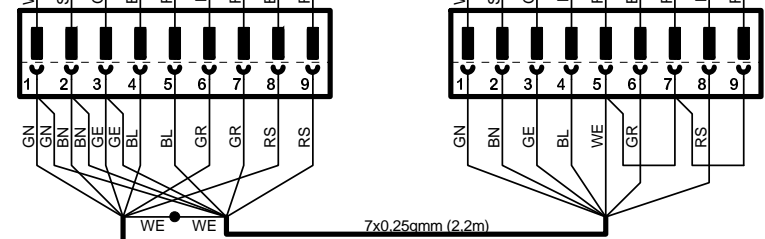
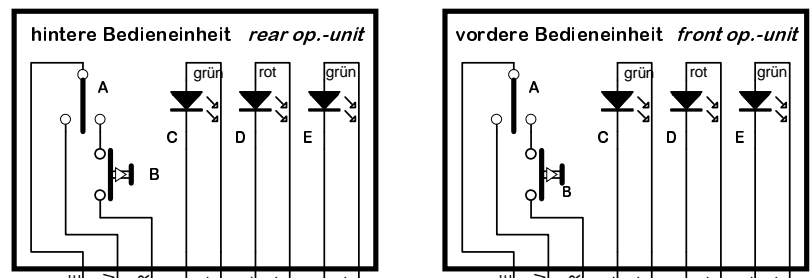
Schnitt A-A

Section B-B

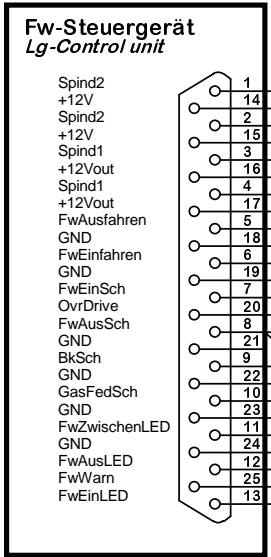
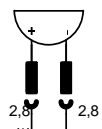
Detail E

elongated hole in head of spindle drive

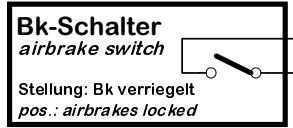
A = Kipptaster (toggle switch)  
 B = Taster (press button)  
 C = "Fahrwerk eingefahren"-LED ("gear retracted"-LED)  
 D = "Fahrwerk fährt"-LED ("gear travelling"-LED)  
 E = "Fahrwerk ausgefahren"-LED ("gear extended"-LED)



Signalgeber (nur für Segler)  
 buzzer  
 12V



Farbabkürzungen (wiring colour code):  
 RT=rot (red)  
 BL=blau (blue)  
 GN=grün (green)  
 WE=weiß (white)  
 GE=gelb (yellow)  
 BN=braun (brown)  
 GR=grau (grey)  
 RS=rosa (pink)



Alle Kabel 0,5qmm, soweit nicht anders spezifiziert  
 all wires 0,5qmm if not specified otherwise

7x0,25qmm (2,2m)

GE 1,5qmm (3,0m)

SW 1,5qmm (3,0m)

WE (0,2m)

BN (0,6m)

GR (0,6m)

WE (0,6m)

GR (0,6m)

WE (0,6m)

GR (0,6m)

RS (0,6m)

BL (0,6m)

GN (0,6m)

GN (0,6m)

GN (0,6m)

GN (0,6m)

GN (0,6m)

GN (0,6m)

GN (0,6m)

GN (0,6m)

GN (0,6m)

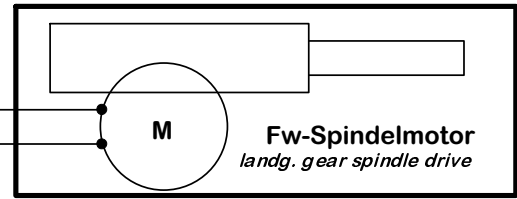
GN (0,6m)

GN (0,6m)

GN (0,6m)

bei bestehendem mech. Fw (DG1000T oder S) v. altem Fw-Schalter abziehen

DG1000T/M: Kabel Nr. 104



Änderungen zur letzten Ausgabe	Datum	Name	Schicke electronic GmbH Kanalstr. 32 D-76356 Weingarten
- Entriegelungsschalter ergänzt (10/10)	08.10.10	Utz Schicke	
<b>Verkabelung DG-1000 Fw-Steuerung</b> <b>wiring plan DG-1000 Lg control</b>			
	Ausgabe	Blatt-Nr.	Datei
	E	1 v. 1	DG1000-FwSt-Verkabelung_11.sch