

**0 Manual Contents****0.1 Log of Revisions**

Any revision of the present manual, except actual weighing data, must be recorded in the following table and in case of approved Sections endorsed by the responsible airworthiness authority.

The new or amended text in the revised page will be indicated by a black vertical line in the right hand margin, and the revision No. and the date will be shown on the bottom left hand of the page.

Rev. No.	Pages affected	Description	Date	LBA Approval
1	0-2, 0-3, 1-1, 2-3, 2-4, 2-5, 2-6, 2-8, 3-4, 4-2, 4-3, 4-4, 4-5, 4-8, 4-9, 4-12, 5-3, 6-1, 6-2, 8-3	TN8011 removal of tail fin battery may be used for trimming	Dec. 2001	25.01.2002
Rev. No.	Pages affected	Description	Date	EASA Approval
2	0-2, 0-3, 4-7, 4-13, 4-14, 7-2	TN8019 wheel brake actuated by airbrake handle	Feb. 2011	13.10.2011
3	0-2, 0-3, 4-3, 4-9	TN8020, retrofit of a 5" landing gear	Sept. 2011	14.10.2011

0.2 List of Effective Pages

Chapter	Page	Date	Chapter	Page	Date
0	Title page	July 1999	4	4-14	February 2011
	0-1	July 1999		4-15	July 1999
	0-2	September 2011		4-16	July 1999
	0-3	September 2011		4-17	July 1999
	0-4	July 1999			
1	1-1	Dec. 2001	5	5-1	July 1999
	1-2	July 1999		5-2	July 1999
				5-3	Dec. 2001
2	2-1	July 1999	6	6-1	Dec. 2001
	2-2	July 1999		6-2	Dec. 2001
	2-3	Dec. 2001	7	7-1	July 1999
	2-4	Dec. 2001		7-2	February 2011
	2-5	Dec. 2001		7-3	July 1999
	2-6	Dec. 2001		7-4	July 1999
	2-7	July 1999		7-5	July 1999
	2-8	Dec. 2001		7-6	July 1999
3	3-1	July 1999	8	8-1	July 1999
	3-2	July 1999		8-2	July 1999
	3-3	July 1999		8-3	Dec. 2001
	3-4	Dec. 2001		8-4	July 1999
	3-5	July 1999		8-5	July 1999
	3-6	July 1999		8-6	July 1999
4	4-1	July 1999	9	9-1	July 1999
	4-2	Dec. 2001			
	4-3	September 2011			
	4-4	Dec. 2001			
	4-5	Dec. 2001			
	4-6	July 1999			
	4-7	February 2011			
	4-8	Dec. 2001			
	4-9	September 2011			
	4-10	July 1999			
	4-11	July 1999			
	4-12	Dec. 2001			
	4-13	February 2011			

4.2 Rigging and De-Rigging continuedInstallation of 15 m (49 ft) or 18 m (59 ft) Winglets

1. Insert winglet until securing nut starts catching thread; when aileron pins at 18 m (59 ft) version are not correctly aligned, installation is impossible.
2. Turn nut in direction that it pulls winglet into position.
3. Lock nut until tip is free from play: zero play is reached, when force increases considerably during turning of nut with supplied key. Turn not further than next notch catching ratchet.
4. Tape wing tip intersection.

De-Rigging

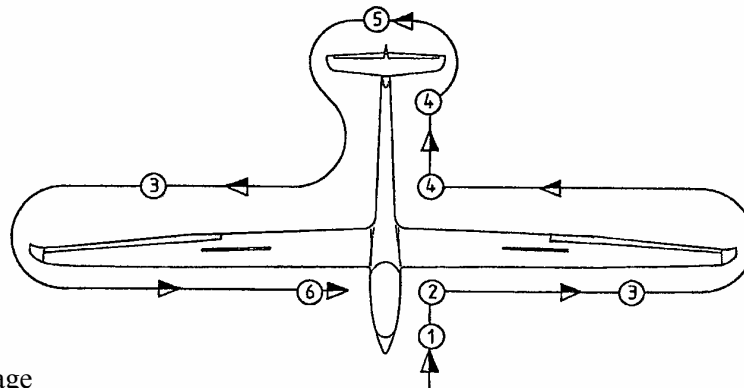
- (1) Reverse **assembly** sequence.
- (2) 15m (49 ft) winglets may be stored in cockpit when using some padding.
- (3) Air brake system should be unlocked to avoid permanent pressure on flexible covers and resulting possible deformations (overcenter in wing).

Warning: *With wings positioned vertical in trailers with hinged cover, the air brakes may open and be damaged when closing the lid.*

Note: To avoid damage due to water, after de-rigging the water drain plug at the root rib forward edge should be removed and discharge openings on wing under side kept open for ventilation (use valve opener)

4.3 Daily Inspection

The Daily Inspection according to the following diagram and related checklist must be performed each day and is essential for flight safety.

1 Forward Fuselage

- (a) Forward static pressure ports for clogging
- (b) Function of nose hook

2 Landing Gear

- (a) Recommended tyre pressure
 

4" wheel:	3 to 3.5 bar <44 to 51 psi>
5" wheel:	3.5 bar <51 psi>
- (b) **For 4" wheel only:** When using water ballast increase up to 4 bar <58 psi>  
**Step (b) does not apply when TN8020 has been executed.**
- (c) Slip mark and tyre condition
- (d) C.G. hook manual and automatic operation working properly
- (e) Water drain orifices in front and behind landing gear box free from clogging

**4.5.10 Water Ballast**

- (a) Use clear water without any additives.
- (b) **For 4" wheel only:** Increase tyre pressure to 4 bar < 58 psi>, when using full water ballast. **Step (b) does not apply when TN8020 has been executed.**
- (c) Wing integral tanks together hold about 190 Litres <50.2 US gallons, 41.8 Imp. gallons >.
- (d) Maximum permissible water ballast depends on loading conditions, see pages 4-11 ff.
- (e) Two tanks per wing.
- (f) **Tail tank (3.8 to 5.5 Litres <1 to 1.5 US gallons, 0.84 to 1.21 Imp. gallons>)** has 2 cockpit water ballast levers: the short one opens the inner wing tanks only, both levers open both tanks; the tail tanks always opens during operation of one of these levers.  
or **Tail integral tank (12 Litres <3.2 US gallons, 2.64 Imp. gallons>)** has 1 cockpit water ballast lever operating all tanks simultaneously.

**Important Note:** When using water ballast, always fill outer wing tanks first, thereafter fill inner tanks with the remaining amount.

**Outer tanks each carry about 30 Litres <7.9 US gallons, 6.6 Imp. gallons>, inner tanks each carry about 65 Litres <17.2 US gallons, 14.3 Imp. gallons>.**

- (g) Use as clean water as possible to avoid damage of sealing rings by foreign matter.
- (h) **Filling sequence:** always tail tank first, then wing tanks.

**Warning:** *Wing water ballast always must be compensated by tail tank water according to table page 4-12.*

**4.5.10.1 Vertical Tail Fin Tank Loading Procedure**

- (a) Open dump valves by shifting lever or levers in cockpit forward.
- (b) Insert tail fin tank adapter to filling funnel tube and connect to dumping outlet just inside lower right rudder cut-out, with rudder deflected to the left.
- (c) Fill tail fin tank via funnel in relation to intended wing water amount, see table page 4-12.
- (d) **Markings correspond to 0.5 Litres <0.13 US gallons, 0.11 Imp. gallons> steps, equivalent to 0.5 kg <1.1 lbs>.**
- (e) Use water level in funnel tube relative to markings on inside of translucent right rudder gap seal to determine correct amount in relation to wing amount. Specified amount of water must be verified thus:
  - 1. Wings level
  - 2. Landing gear and tail end on ground
  - 3. Filling tube near markings
- (f) Upper red marking corresponds to maximum amount of tail fin water ballast:
  - 5,5 Litres <1.45 US gallons, 1.21 Imp. gallons>
  - 3,8 to 4,1 Litres <1.00 to 1.08 US gal., 0.84 to 0.9 Imp.gal.> for the combination of tail fin tank with tail fin battery box
  - 12 Litres <3.17 US gal., 2.64 Imp. gal.> for the integral tail fin tank.
- (g) *For trimming of heavy pilots, the combination of battery and/or water can be chosen, see also entries on page 6-1/2.*
- (h) Close dump valves by shifting single or double cockpit lever backward and remove funnel from tail. For filling of wing tanks, the cockpit levers must stay in the closed position.

**Warning:** *Mandatory tail tank filling always exactly to markings under right rudder seal and filling tube water level in correct relation to total wing water amount according to table page 4-12. Otherwise, keeping to the maximum approved rear C.G. position cannot be guaranteed.*

**Warning:** *Filling funnel meshing is mandatory to guarantee tail fin tank valve function.*