

## **Supplement B – Steerable tailwheel**

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### B0.1 Record of revisions

Any revision of the present manual must be recorded in the following table and, in case of approved sections, must be 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 margin, and the Revision No. and the date will be shown at the bottom of the page.

#### Record of revisions

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### B0.2 List of effective pages

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approved	B.4	00	approved	B.8	00

## **B.1 General**

### **B1.1 Introduction**

The present supplement B “Steerable tailwheel” presents additional information, specifications and limitations to the basic aircraft flight manual. The supplement has the same effectivity as the basic manual. Therefore, all limitations and remarks presented in this appendix must be fully observed by the pilot and/or the owner.

### **B1.2 Description and technical data**

The aircraft is equipped with a steerable tailwheel instead of the standard fixed tailwheel. The conversion from one variant to the other can be carried out by the pilot/owner.

## **B.2 Operating limitations and data**

Unless otherwise presented in the following sub-sections, the limitations presented in the basic manual remains unchanged valid.

The operating limitations and data in the basic manual remain unchanged valid.

## **B.3 Emergency procedures**

The emergency procedures in the basic manual remain unchanged valid.

## **B.4 Normal operating procedures**

In addition to the normal operating procedures in the basic manual, the following procedures apply.

### **B4.1 Daily inspection**

During the daily inspection, the following additional check have to be performed:

- Check the steerable tailwheel for correct installation and damages.
- Check condition of tire. The inflation check omits as the tire of the steerable tailwheel is foamed.

### **B4.2 Normal procedures**

#### **B4.2.1 Self-launch**

With the steerable tailwheel installed, it is easy to control the direction of the aircraft by deflecting the rudder during ground roll.

#### **B4.2.2 Winch launch**

If the steerable tailwheel is installed, the direction is controlled during ground roll by rudder deflection. Therefore, with the steerable tailwheel installed, keep the rudder neutral before launching to prevent the aircraft from breaking out of direction.

#### **B4.2.3 Aerotow**

With the steerable tailwheel installed, it is easy to control the direction of the aircraft by deflecting the rudder during ground roll.

#### **B4.2.4 Landing**

With the steerable tail wheel installed, it is easy to control the direction of the aircraft after touchdown while ground roll by deflecting the rudder. In case of strong crosswind set the rudder neutral immediately before touchdown to prevent the aircraft from breaking out of direction.

## B.5 Performance

The performance data in the basic manual remains unchanged valid.

## B.6 Mass (weight) and balance, C.G. position

In addition to the mass (weight) and balance, C.G. position data in the basic manual, the following data apply.

### B6.1 Introduction

The steerable tailwheel becomes part of the defined basic configuration, in which the aircraft is weighted and for which the mass and balance form is calculated. This results in the following basic configurations with steerable tailwheel, depending on whether the engine is installed or not.

<b>Power-plant installed</b>	<b>Power-plant removed</b>
Aircraft including instruments and equipment according latest equipment list	Aircraft including instruments and equipment according latest equipment list
Power-plant unit, power electronics in fuselage and high-voltage battery in wing	Backrest and seat cushion
Backrest and seat cushion	Logbook and flight manual
Logbook and flight manual	Avionic battery below footrest
Engine battery below footrest	Steerable tailwheel
Avionic battery below footrest	
Steerable tailwheel	

## B6.2 Additional masses (weight) in the fuselage

### **Steerable tailwheel**

The aircraft can be operated with either a fixed or steerable tailwheel, see also section B7.1.

The configuration with fixed tailwheel is 0.8 kg (1.76 lbs) lighter than the configuration with steerable tailwheel. The lever arm of this mass is  $x = 4189$  mm (164.92 in.).

If changing the configuration to fixed tailwheel, the minimum cockpit load will be decreased. Compliance with the prescribed in-flight C.G. can be checked with the calculation sheet presented in aircraft flight manual section 6.5 or can be estimated by the following ratio.

By installing the fixed tailwheel instead of the steerable one, the minimum load in the cockpit seat is decreased by 6.5 kg (14.33 lbs).

## **B.7 Description of the sailplane, its systems and equipment**

In addition to the system descriptions in the basic manual, the following system description apply.

### B7.1 Steerable tailwheel

The aircraft can be optionally equipped with a steerable tailwheel (according drawing 340-29-9002-00). This is mounted in the same wheel housing instead of the fixed tailwheel and is connected to the rudder via a connecting plate and springs. The tail wheel thus makes the same movements as the rudder and allows the aircraft to be steered on ground roll.

#### **Installation of the steerable tailwheel**

The conversion from the standard fixed tailwheel to the steerable tailwheel is to be carried out as described below.

1. Remove the stickers on the fuselage covering the M8 screw and the corresponding nut of the fixed tailwheel.
2. Remove the M8 screw and remove the fixed tailwheel downwards.
3. Store all components of the fixed tailwheel safely for later reinstallation.
4. Provide all components of the steerable tailwheel from safe storage.
5. Insert the steerable tailwheel unit with the tailwheel removed into the wheel housing. Thread the front plate onto the two M6 stud bolts in the wheel housing.
6. Use special M8 bolt (P/N 340-29-0002-00) to mount the steerable tailwheel unit in the wheel housing, use new self-locking nut if necessary, tightening torque 16 Nm (12 ft·lb).
7. Screw the front plate of the steerable tailwheel unit into the wheel housing using washers and M6 self-locking nuts (use new ones if necessary), tightening torque 6.4 Nm (4.7 ft·lb).
8. Mount the connecting plate including the pre-assembled connecting springs to the rudder using M6 screws and toothed lock washers (use new ones if necessary), tightening torque 6.4 Nm (4.7 ft·lb). Secure the screw connection with medium-strength threadlocker.
9. Attach the cover of the steerable tailwheel to the fuselage from below and mount it to the central M8 screw (P/N 340-29-0002-00) using M4 countersunk screws. Secure the screw connection with medium-strength threadlocker, tightening torque 1.8 Nm (1.3 ft·lb).
10. Tape the edge of the fairing against the fuselage.
11. Mount the tailwheel in the wheel fork of the steerable tailwheel unit using the M8 bolt, use a new self-locking nut if necessary, tightening torque 16 Nm (12 ft·lb).
12. Connect the steerable tailwheel unit to the connecting plate on the rudder. To do this, mount the clevises of the cable connection with the appropriate attachment points on the wheel fork using the corresponding spring hinge pins.
13. Carry out points of the daily inspection of the tailwheel, see section B4.1 of this supplement.

### **Installation of the fixed tailwheel**

The conversion from the steerable tailwheel to the standard fixed tailwheel is carried out in the same steps but in reverse order. Then carry out the points of the daily inspection of the tailwheel, see aircraft flight manual Section 4.3.

## **B.8 Aircraft handling, care and maintenance**

The explanations in the basic manual remains unchanged valid.



## **Supplement B – Steerable tailwheel**

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### B0.2 List of effective pages

Section	Page	Revision	Section	Page	Revision
	B.1	00		B.4	00
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## **B.1 Description and specification**

### **B1.1 Introduction**

The present supplement B “Steerable tailwheel” presents additional information, specifications and limitations to the basic aircraft maintenance manual. The supplement has the same effectivity as the basic manual. Therefore, all limitations and remarks presented in this appendix must be fully observed by the pilot and/or the owner.

### **B1.2 Description and technical data**

The aircraft is equipped with a steerable tailwheel instead of the standard fixed tailwheel. The conversion from one variant to the other can be carried out by the pilot/owner.

## **B.2 Description of control systems, equipment and power-plant**

In addition to the system descriptions in the basic manual, the following system description apply.

### **B2.1 Landing gear**

#### **B2.1.1 Steerable tailwheel**

The aircraft is optionally equipped with a steerable tailwheel. The following wheel has to be used.

TOST wheel Mini 150 F, Axle Ø12 mm  
TOST P/N: 031582

This tailwheel uses a 150x30 tire, which is foamed according to the manufacturer's specifications.

### **B.3 Rigging angles and deflection of control surfaces**

The instructions in the basic manual remains unchanged valid.

### **B.4 Airworthiness limitations**

The instructions in the basic manual remains unchanged valid.

### **B.5 Control surface masses and tail-heavy moments**

In addition to the instructions for control surface masses and tail-heavy moments in the basic manual, the following instructions apply.

The control surface mass and the tail-heavy moment of the rudder must be determined with the connecting plate of the steerable tailwheel installed. The limits in section 5.2 of the maintenance manual remain unchanged valid.

### **B.6 Mass (weight) and balance**

In addition to the instructions for mass (weight) and balance in the basic manual, the following instructions apply.

#### **B6.1 Weighing procedures**

The weighing is carried out as described in the maintenance manual, section 6.2. The condition of the aircraft for weighing must also be prepared as described in the Maintenance Manual. In addition, the steerable tailwheel must be installed.

## **B.7 Inspections and service life limitations**

In addition to the instructions for inspections and service life limitations in the basic manual, the following instructions apply.

### **B7.1 Scheduled maintenance of the airframe**

During the annual inspection, the following additional check has to be performed.

- Check steerable tailwheel including tire as well as the mounting points on the aircraft structure for condition, damage and proper function.

### **B7.2 Special inspection procedures of the airframe**

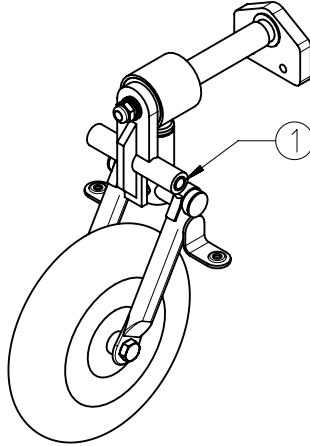
After hard landings, ground loops or after landings in high crops or high grass the following inspection must be carried out:

- Check steerable tailwheel including tire as well as the mounting points on the aircraft structure for condition, damage and proper function.

## **B.8 Lubrication scheme**

In addition to the instructions for the lubrication scheme in the basic manual, the following instructions apply.

The brass bushing of the central screw of the steerable tailwheel unit (position 1 of the following illustration) must be lubricated in accordance with the section “Hinges with brass bushings” in chapter 8 of the maintenance manual.



### **B.9 Placards, labels and markings**

The instructions in the basic manual remains unchanged valid.

### **B.10 Repairs, removal and re-assembly of components, tightening torques**

The instructions in the basic manual remains unchanged valid.

### **B.11 Modifications of the sailplane**

The instructions in the basic manual remains unchanged valid.

### **B.12 Repairs, removal and re-assembly of components, tightening torques**

The instructions in the basic manual remains unchanged valid.