

	<b>XtremeAir GmbH, Harzstr.2, D-39444 Hecklingen</b> Tel: +49 39267 60999 0, Fax: +49 39267 60999 20 www.xtremeair.de info@xtremeair.de	Document No. <b>SB-2012-004</b>
		Issue: A.02
DOA-Nr.: EASA.21J.360	<b>Service Bulletin SB-2012-004</b>	Date: 16.07.2013

## Information only

Subject:	Tailwheel lock (TWL)
Aircraft type affected:	XA41 & XA42
Serial numbers affected:	01-06 and 101-114
Compliance:	Optional
Time of Compliance:	At operator's discretion
Purpose:	To notify owners of the option to install a tail wheel lock.
Background:	The tail wheel lock will offer an improved directional control during taxi and landing roll. This present service bulletin describes the measure to install this tail wheel lock.
Manpower:	It is estimated approximately six (6) to eight (8) man-hours will be required to accomplish this bulletin.
Materials:	The following parts kit should be ordered through <a href="mailto:spares@xtremeair.de">spares@xtremeair.de</a> :  (1) Kit AM-2011-066 (1) Aircraft Flight Manual Supplement
	The following consumables are required:  - Inspection lacquer, e.g. "Torque Seal" - Araldite 2022 adhesive
Weight and Balance:	weight: 885 g (1.95 lbs.) Arm: XA41: 3470 mm (136.61") XA42: 3720 mm (146.46")

### Accomplishment Instructions:

1. Replace existing Tail Wheel Assembly XA42-3230-051 with P/N XA42-3260-001: (see Figure 1)
  - a. Remove AN4-14 A bolt at Tail Wheel Mounting Bracket on the Fuselage Rear Spar and withdraw the Tail Wheel Assembly.
  - b. Place the new assembly into the Mounting Bracket.

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- c. Insert AN4-14A bolt from left to right, torque using a new MS24044N4 Nut and seal thread with inspection lacquer.
2. Remove the Rear Seat from the cockpit.
3. Bond the Cable Mounting Bases on the fuselage floor and smoke tank (see Figure 2) using Araldite 2022.
4. Insert the preassembled Bowden Cable through the Fuselage Rear Spar and fix it to the Cable Mounting Bases with Tie Wraps.
5. Install the Tail wheel Lock Control Assembly XA42-3261-001 on Seat Spar and Elevator Bell Crank XA42-2730-100, see Figure 3 to Figure 7:
  - a. Position TWL Cable Bracket XA 42-3261-100 at seat spar as shown on Figure 4. Drill 2 holes, diameter 4,8mm, and attach the bracket with 2 ea. Bolt AN3-3A, Washer AN960-10 and Lock Nut MS21044N3.
  - b. Insert 2 ea. TWL Idler Bushings XA42-3261-206 into Elevator Bell Crank XA42-2730-100.
  - c. Install TWL Slider Bushing XA42-3261-205 and TWL Slotted Link XA42-3261-204 from the left hand side to the TWL Idler Bushings using Bolt AN3-15, Washer AN 960-10, castle nut AN310-03, and Cotter Pin, see Figure 4 and 5.
  - d. Drill 4,8 mm diameter holes through the L/H and R/H seat spars as shown on Figure 4.
  - e. Install TWL Spring Retainer XA42-3261-203 using 2 ea. AN3-5A Bolts and AN960-10L Washers. Seal bolt heads with inspection lacquer.
  - f. Install TWL Tension Spring XA42-3261-207 between the small hole in the TWL Slotted Link and the TWL Spring Retainer.
  - g. Install Bowden Cable Holder XA42-3260-216 on TWL Cable Bracket using Nut M6 and insert the Bowden Cable.
  - h. Lift the elevator leading edge 90mm and temporarily fix it in this position, see Figure 8.
  - i. Insert the forward end of Bowden Inner Cable into TWL Clamp Shell XA42-3261-208 and fix with Screw XA42-6110-205. Secure with safety wire.
  - j. Install TWL Clamp Shell from the L/H side in the 6 mm hole of TWL Slotted Link XA42-3261-204 using Castle Nut AN310-03 and Cotter pin.
6. Perform functional test:
  - a. Push control stick forward. The lock should disconnect and leave the tail wheel swiveling freely when the control stick is approximately 25 mm / 1 in. aft of the forward stop.

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7. Place 1 ea. Placard XA42-1130-370 „Push control stick fully forward to unlock tail wheel” on forward and rear instrument panel.
8. Insert Aircraft Flight Manual Supplement, AFM-XA42-0040-002-S.3.01 or AFM-XA41-0040-002-S.3.01 into the AFM.
9. Update the aircraft weight & balance report and AFM para. 6.6 “Equipment List” with the following information:

Qty.: 1

Item: Tailwheel Lock

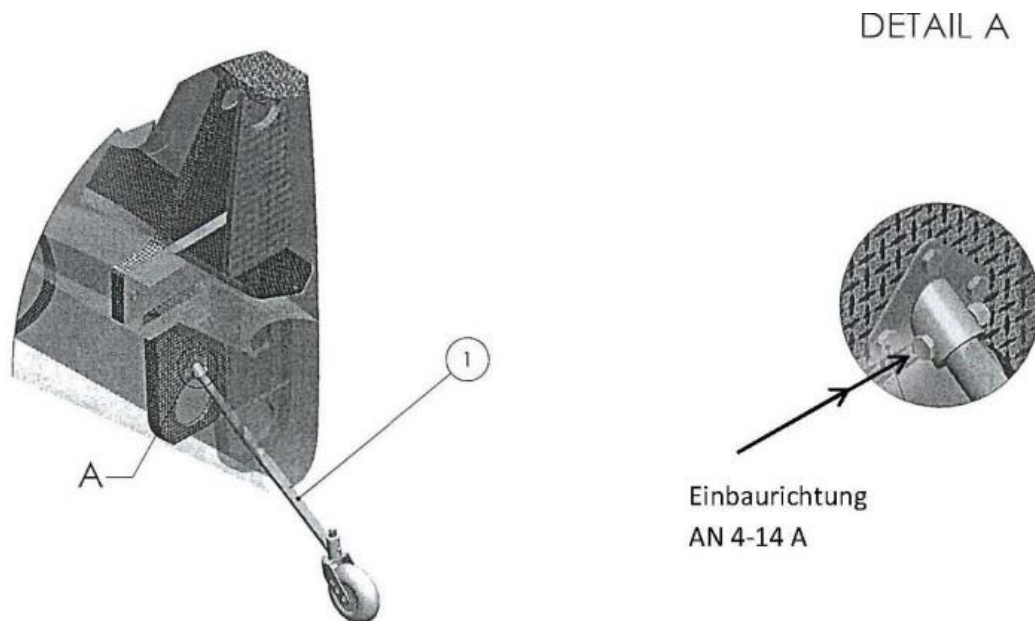
Manufacturer: XtremeAir GmbH

Reference: AM-2011-066

Weight: 885 g (1.95 lbs.)

Arm: XA41: 3470 mm / XA42: 3720 mm

10. Report accomplishment of the service bulletin via email to [schuelter@xtremeair.de](mailto:schuelter@xtremeair.de), stating aircraft serial number and registration number.



**Figure 1: Installation Tail Wheel Strut (Einbaurichtung = Bolt Orientation)**



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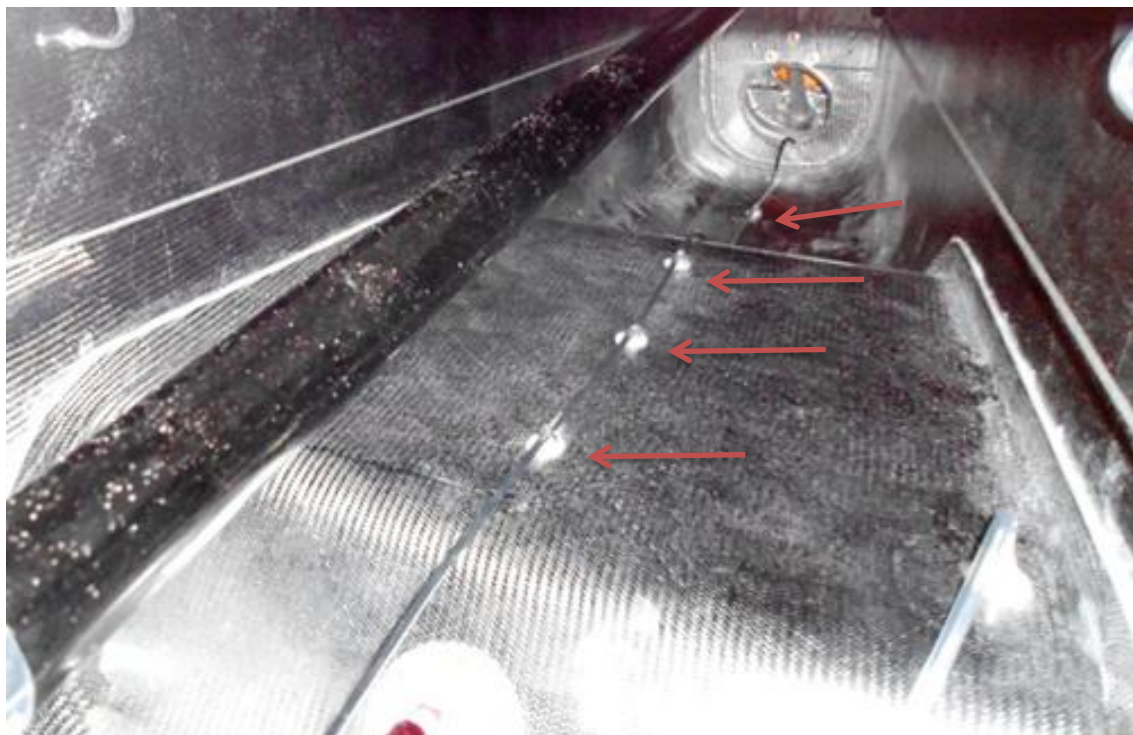


Figure 2: Position of Bowden Cable

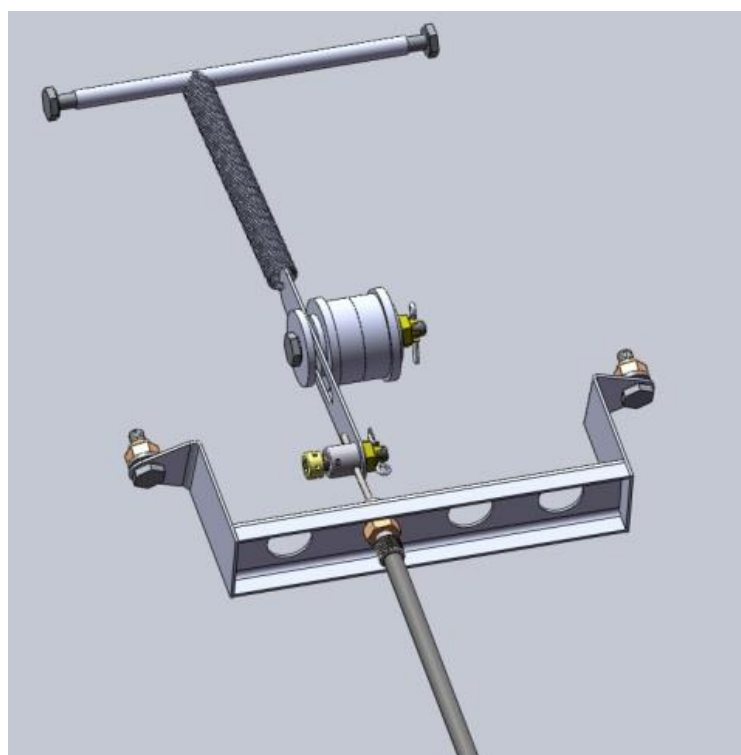


Figure 3: Principle of Control Assembly

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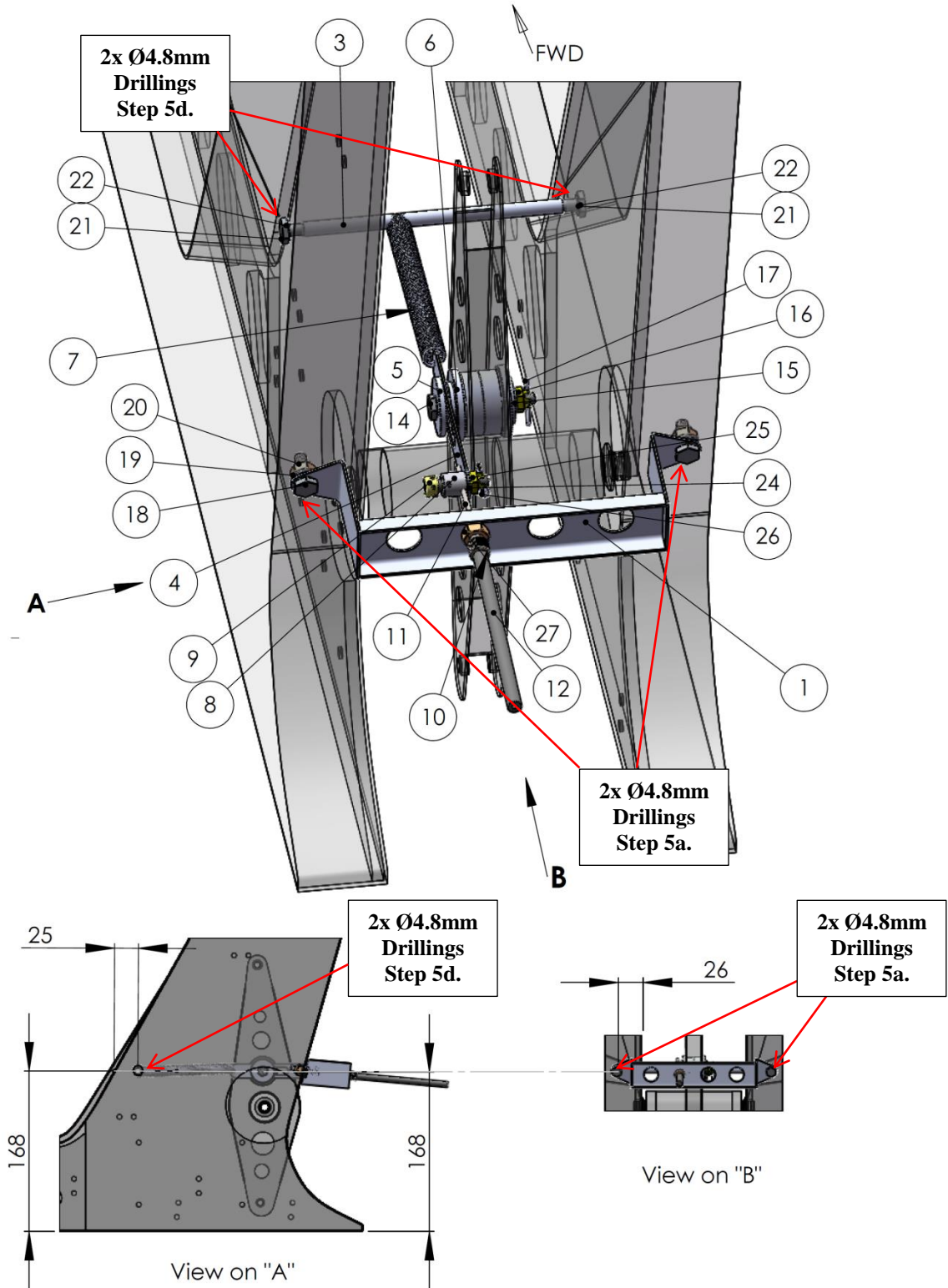


Figure 4: TWL control assembly installation 1/2



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1	1	TWL Cable Bracket	XA42-3261-100						
3	1	TWL Spring Retainer	XA42-3261-203						
4	1	TWL Slotted Link	XA42-3261-204						
5	1	TWL Slider Bushing	XA42-3261-205						
6	2	TWL Idler Bushing	XA42-3261-206						
7	1	TWL Tension Spring	XA42-3261-207						Gutekunst BstNr. RZ-087FI
8	1	TWL Clamp Shell	XA42-3261-208			1.4548.4			
9	1	Zylinderschraube	XA42-6110-205						
10	1	Bowden Cable Holder	XA42-3260-216						
11	1	Bowden Inner Cable		7x7-1/16	Steel	DIN 71984			Length XA42 2600mm/ XA41 2530mm
12	1	Bowden Outer Housing		Diameter 6mm outer 1.6 mm inner					Length XA42 2300mm/ XA41 2230mm
14	1	Bolt		AN3-15					
15	1	Washer		AN960-10					
16	1	Castle Nut		AN310-03					
17	1	Cotter Pin		1,6X20					
18	2	Bolt		AN3-3A					
19	2	Washer		AN960-10					
20	2	Lock Nut		MS21044N3					
21	2	Bolt		AN3-5A					
22	2	Washer		AN960-10L					
23	1	Lock Nut		MS21044N3					
24	1	Washer		AN960-10L					
25	1	Castle Nut		AN310-03					
26	1	Cotter Pin		1,6X20					
27	2	Nut		M6		DIN 934			
28	4	Cable Mounting Base		20x14 Ty 361					Hellemann Tyton 151-21319
29	4	Tie Wraps							
30	1	Placard	XA42-1130-370						to be placed in cockpit area
<b>Pos.</b>	<b>Amount</b>	<b>Discription</b>	<b>Drawing. Nr.</b>	<b>Dimension</b>	<b>Material</b>	<b>Norm</b>			<b>Comment</b>

Figure 5: TWL control assembly installation part list 2/2

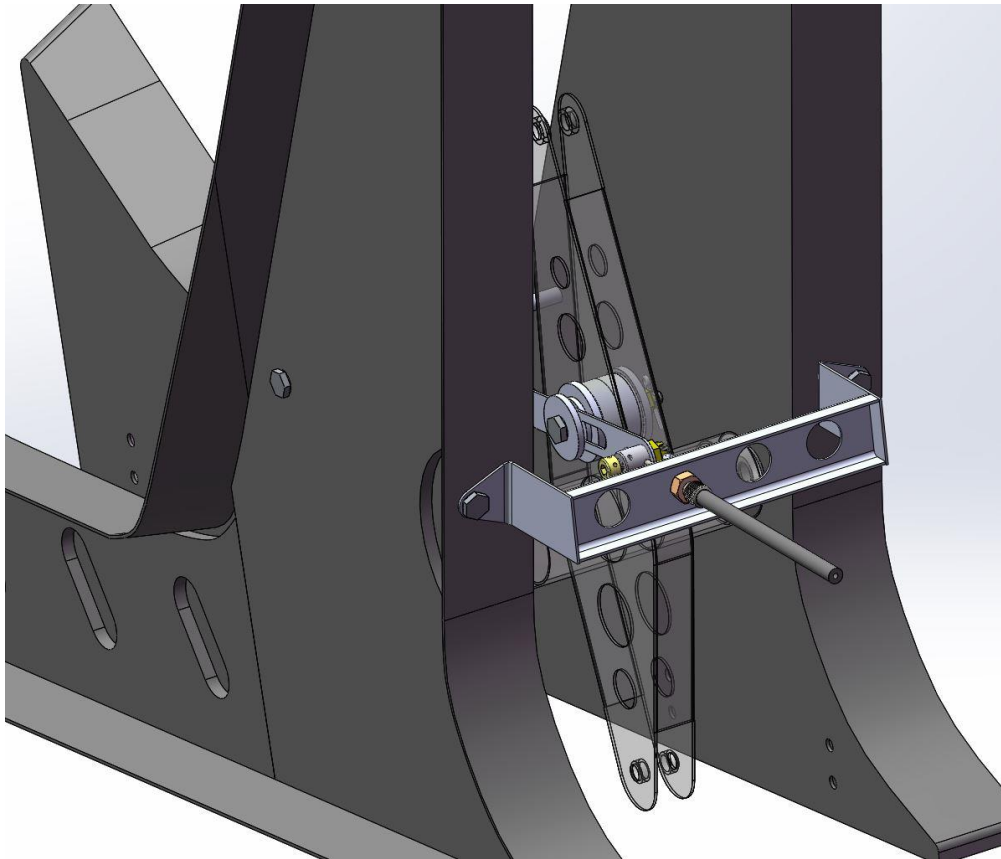


Figure 6: TWL control assembly details

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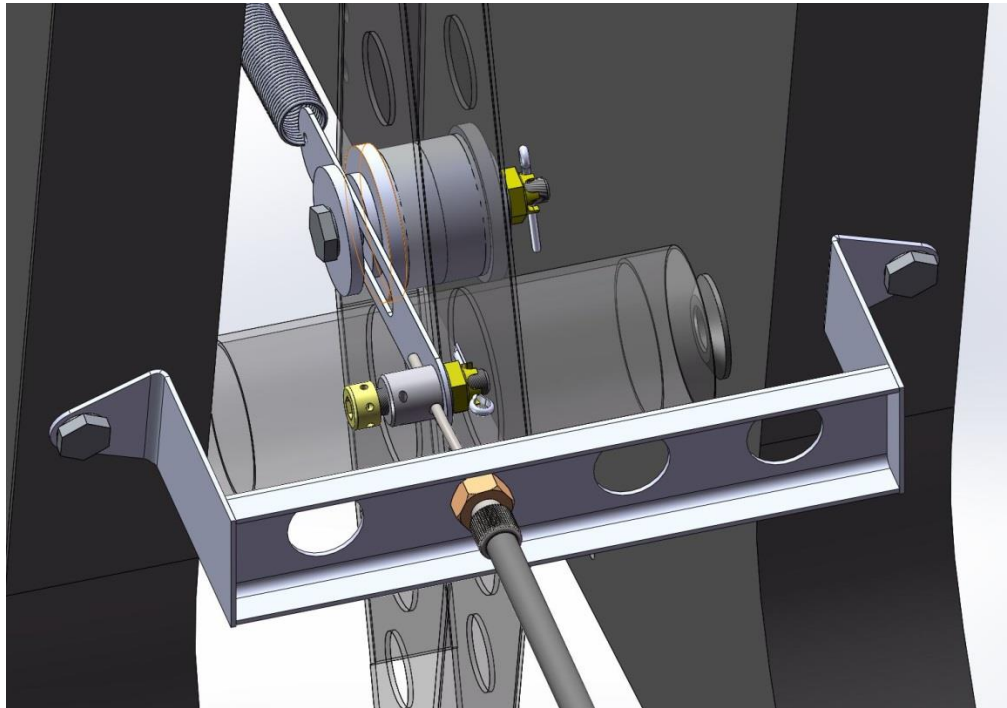


Figure 7: TWL control assembly details

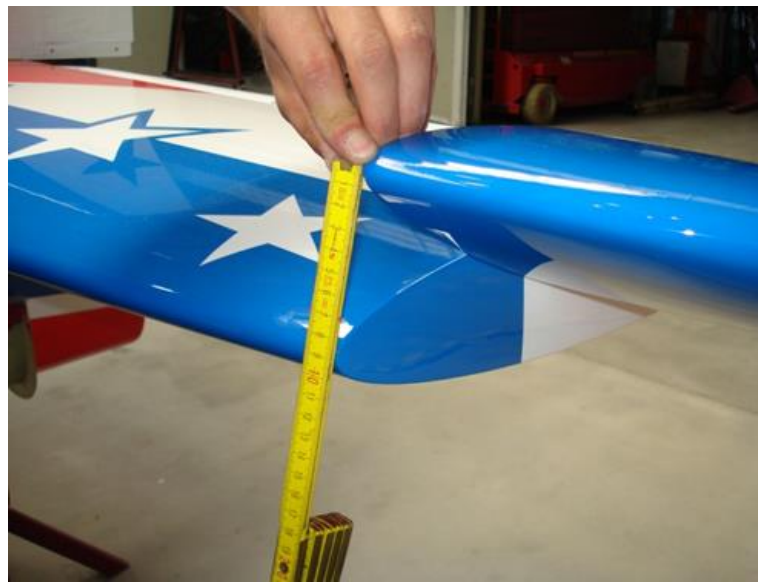


Figure 8: Elevator position

Approval:

The technical information contained in this document has been approved under the authority of EASA Design Organisation Approval no. EASA.21J.360.

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