



MANDATORY BULLETIN No. L 13/052

Sheet No.: 1
Sheets: 10

Effectivity: Stabilizer end ribs of the L 13 Blaník sailplanes.

Reason: Eight L 13 Blaník sailplanes operated in the USA were reported to have cracks in the radii of stabilizer end ribs at outer elevator hinge attachments.

Description: Inspect and, if necessary, repair stabilizer as instructed in this Bulletin.

Compliance: Inspection to be carried out immediately after the receipt of this Bulletin. Work procedure as well as time limits for repair are given in para. A of this Bulletin.

Work to be carried out by the Operator.

Material required to accomplish this Bulletin will be supplied by OMNIPOL FTC, Washingtonova 11, Praha 1.

Cost will be covered by the Operator.

The Bulletin is valid when received by the Operator.

Čáslavský

Manufacturer's
Representative

Ing. Olšan

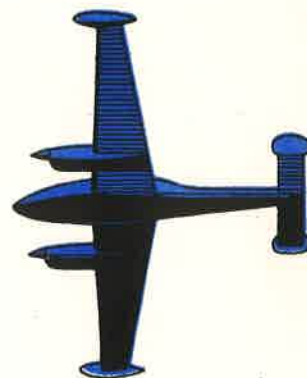
State Aviation
Inspection

Ing. Šácha

Customer's
Representative

Houdek

Omnipol



Accomplishment Instructions

A. Inspection

- 1) Tear off fabric cover patch of the access hole in the elevator leading section at outer hinge attachment.
- 2) Remove cotter pin and outer hinge pin.
- 3) Tilt out elevator in the bearing or inner stabilizer hinge attachment.
- 4) Inspect end rib radii on both LH and RH side stabilizers for cracks using magnifying glass. See Fig. 1, view "P", areas marked by arrows. In case that no cracks are found, re-install elevator (using a new cotter pin) and stick on a new fabric patch.

Material Information

Qty	Description	Dwg. No. -Std (Dimensions-mm)	Material	Note
2	Cotter pin	1,6x15 ČSN 021781.09-K	ČSN 411320.30 Steel, cadmium plated	
2	Blinding patch	L13.303-09.09 ND (70x100)	ČSN 804596 Aircraft fabric	

Should any cracks be found, reinforce stabilizer end rib as instructed in para B. below.

Caution: Should the cracks be longer than 10 mm a warning must be given in the aircraft logbook to replace the stabilizer end rib during next overhaul according to para. C of this Bulletin.

Stabilizer end ribs shall be inspected after every 250 flying hours.

B. Reinforcement of stabilizer end rib

- 1) Cut off strings or cables (on sailplanes certified by the AR9) at trim tab levers and remove elevator by sliding it out of the bearing of inner stabilizer hinge attachment.
- 2) Carefully drill off original rivets pos. 3 and 5 using a 2.5 mm dia. drill and rivets pos. 4 and 6 using a 3 mm dia. drill. See Fig. 1, view "P".
- 3) Drill holes at the ends of cracks using a 2 mm dia. drill and clean off the holes carefully.
- 4) Locate angle pieces pos. 1 and 2 on the rib - see Fig. 1, view "P". Thorough original rivet holes mark-off and centre-punch holes on angle pieces. Drill holes dia 3.1 mm for rivets pos. 4, 5 and 6. Holes for rivets pos. 3 to be drilled using a 2.7 mm dia. drill and dimpled. Redrill holes for rivets pos. 5 in the spar boom to the diameter of 3.1 mm.
- 5) Deburr carefully drilled holes in the angle pieces and the stabilizer.
- 6) Locate angle pieces in correct position and rivet on.

7) Reinstall elevator (using a new cotter pin) and stick on a new fabric patch.

8) Removal and installation of elevator trim tab controls:

- Remove upholstered side section in the cockpit at trim tab rear lever.
- On sailplanes from 18th series onward there are no turnbuckles at trim tab rear ^{lever} and it is difficult to connect strings at special connection pieces. It is, therefore, recommended to remove complete controls (i.e. strings) between trim tab rear lever and trim tabs) and to replace them by new ones.
- On sailplanes up to 17th series and sailplanes-certified by the ARB it is sufficient to remove strings or cables (on sailplanes certified by the ARB) between connection pieces and trim tabs by disconnecting turnbuckles at trim tab rear lever in the cockpit and disconnecting strings or cables from connection pieces. The connection pieces are accessible from the inside of cockpit through access hole in the fuselage located between frames No. 13 and 14 on sailplanes up to 17th series, or through access hole in the fuselage between frames No. 6 and 7.
- Span new strings (or cables) in the fuselage. Connect them to the connection pieces and fix to trim tab rear lever in the fuselage. Turnbuckle eyes at the rear lever to be screwed in turnbuckle nuts so that two threads be seen beyond the nut.

Warning: When connecting new strings (cables) both the levers in the cockpit and the trim tabs shall be in neutral position.

- Stretch strings (cables) by hand by pulling on their ends and fix them to the levers on trim tabs.

Typical connection of strings is shown on Fig. 3, connection of cables on Fig.4.

- Tie the ends of cable with locking wire and solder.
- Adjust trim tab deflections to $12^{\circ} + 1^{\circ}$ up and $35^{\circ} \pm 1^{\circ}$ down by means of turnbuckles between frames No. 14 and 15.
- Stretch the whole control cable system, if necessary, by means of turnbuckles at trim tab rear lever in the cockpit.
- Reinstall upholstered side section.

Material Information

Pos. Qty	Description	Dwg.No. - Std (Dimensions - mm)	Material	Note
1	2	SK-L13.276-01	CSN 424253.61	a
2	2	SK-L13.276-02 (Sh.0.8;31x43)	Duralumin, tensile strength after hardening 392 MPa (40 kp/mm ²) (anodized)	
3	4	2.6x6 CSN 022320.5	CSN 424208.7	a
4	4	3x7 CSN 022320.5	Duralumin, shear strength 245 MPa (25 kp/mm ²) CSN	
5	4	3x6 CSN 022302.5		
6	4	3x8 CSN 022302.5		
-	2	1.6x15 CSN 021781.09K	CSN 411320.30	
-	2	L13.303-09.09 ND (70x100)	Steel (cadmium plated) CSN 804596	
-	2	1.6 CSN 024311.35 (L.3500)	Aircraft fabric Steel, single strand, 19 wires, construction 1+6+12, nominal breaking load 1900 N (192 kp)	b
-	2	L13.406-07 (dia.1; L.5200)	CSN 426450.26	c
-	4	L13.406-05.22 ND (dia.1; L.1800)	Steel wire, patented; tensile strength 2450 to 2744 MPa (250 to 280 kp/mm ²); Young's modulus 205800 MPa (21 000 kp/mm ²); modulus of rigidity 80360 MPa (8200 kp/mm ²)	
-	4	L13.406-05.06 ND (dia.1; L.5500)		
-	8	L13.406-05.05 ND (tu. 4x1; L.10)	CSN 411353.1	
-	4	- " -	Steel, tensile strength 343 to 441 MPa (35 to 45 kp/mm ²) (galvanized)	d

Notes:

- (a) Applies to all L 13 sailplanes.
- (b) Applies to L 13 sailplanes certified by the ARB.
- (c) Applies to L 13 sailplanes from 18 th series (except those certified by the ARB).
- (d) Applies to L 13 sailplanes up to 17 th series (except those certified by the ARB).

Angle pieces pos. 1 and 2 can also be workshop - made according to Fig. 5.

C. Replacement of stabilizer end rib

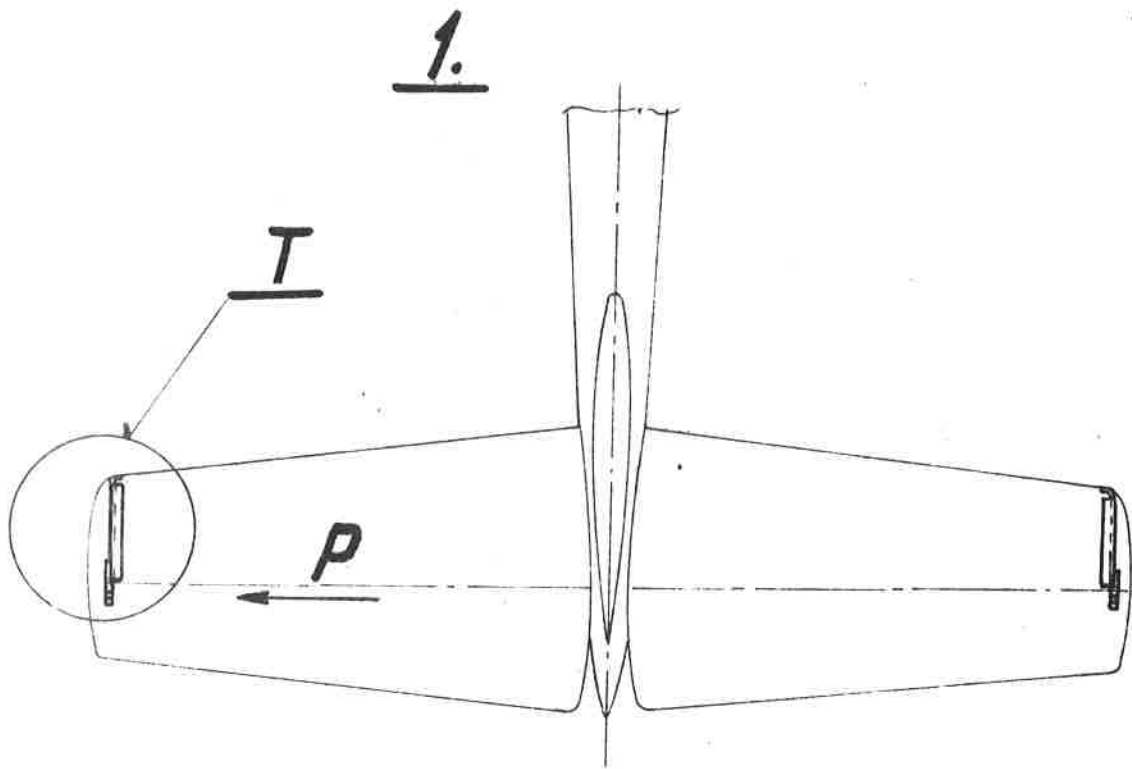
- 1) For elevator removal refer to para. A, items 1 and 2, and to para. B, items 1.
- 2) Mark off distance between inner and outer hinge attachments on the stabilizer.
- 3) Carefully drill off original rivets pos. 11 using a 2.6 mm dia. drill and rivets pos. 12 using a 3 mm dia. drill. See Fig. 2, view "T" (from Fig. 1).
- 4) Remove tip piece.
- 5) Drill off three rivets pos. 13 fastening end rib to the spar using a 2.6 mm dia. drill. Remove end rib.
- 6) Make a 35 mm dia. hole in the spar and deburr carefully. See Fig. 2, view "R".
- 7) Install new end rib pos. 10 in the stabilizer. Through original rivet holes in the spar mark-off and centre-punch holes for rivets pos. 13 on end rib. Drill holes using a 2.7 mm dia. drill. Fasten end rib to the spar using e.g. two bolts. M2. Reinstall tip piece and check the distance between hinge attachments (as marked-off before removing the original end rib). Through original rivet holes drill 2.7 mm dia. holes for rivets pos. 11 and 3.1 mm dia. holes for rivets pos. 12 in the end rib. It is necessary to keep the distance of 7 mm minimum between rivet holes and the edge of rib flange.
- 8) Remove end rib and dimple holes for countersunk rivets pos. 11 and 12.
- 9) Reinstall end rib and fasten in with three agrafes at least.
- 10) Rivet end rib on the spar using three rivets pos. 13.
- 11) Remove agrafes, reinstall tip piece and fasten it with several agrafes again.
- 12) Fasten tip piece using successively rivets pos. 11 and 12.
- 13) Refer to para. B, items 7 and 8 for installation of elevator and of elevator trim tab controls.

Material Information

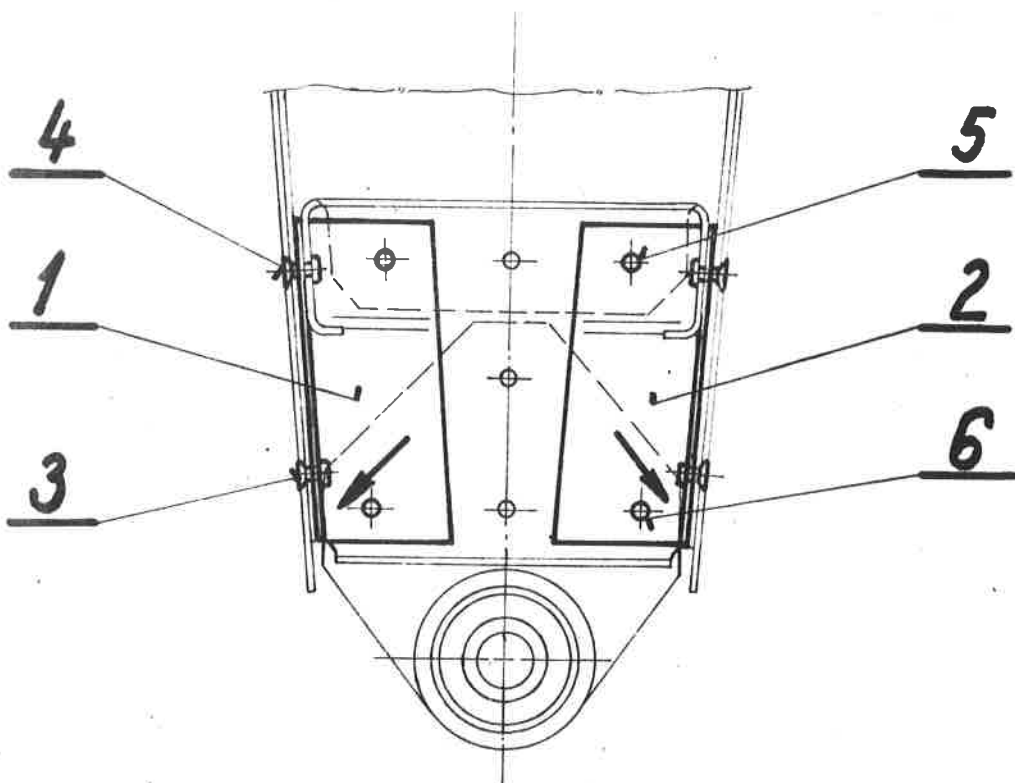
Pos.	Qty	Description	Eng.No. - Std (Dimensions - mm)	Material	Note	
10	2	End rib	L13.301-04	(assembly)	a	
11	44	Countersunk rivet	2.6x6 CSN 022320.5	CSN 42408.7		
12	4	" "	3x6 CSN 022320.5	Duralumin, shear strength 245 MPa (35 kp/mm ²)		
13	6	Button-head rivet	2.6x5 CSN 022302.5			
-	2	Cotter pi.	1.6x15 CSN 021781.09K	CSN 411320.30		
-	2	Blinding patch	L13.303-09.09 ND (70x100)	Steel (cadmium plated) CSN 804596		
-	2	Cable	1.6 CSN 024311.15 (L.3500)	Aircraft fabric Steel, single strand, 19 wires, construction 1+6+12, nominal breaking load 1900 N (192 kp)		
-	2	String, front	L13.406-07 (dia.1; L.9200)	CSN 426450.26		b
-	4	String, rear	L13.406-05.22 ND (dia.1; L.1600)	Steel wire, patented; tensile strength 2450 to 2744 MPa (250 to 280 kp/mm ²); Young's modulus 203800 MPa (21 000 kp/mm ²); modulus of rigidity 80360 MPa (8200 kp/mm ²)		
-	4	String, rear	L13.406-05.06 ND (dia.1; L.5500)			
-	8	Clamp	L13.406-05.05 ND (tu. 4x1; L.10)	CSN 411333.1		
-	4	" "	" "	Steel, tensile strength 343 to 441 MPa (35 to 45 kp/mm ²) (galvanized)		c
-	4	" "	" "			d

Notes:

- a Applies to all L 13 sailplanes.
- b Applies to L 13 sailplanes certified by the ARB.
- c Applies to L 13 sailplanes from 18 th series (except those certified by the ARB).
- d Applies to L 13 sailplanes up to 17 th series (except those certified by the ARB).



"P"



L13/052

Vypracoval

Bojčera

Kontroloval

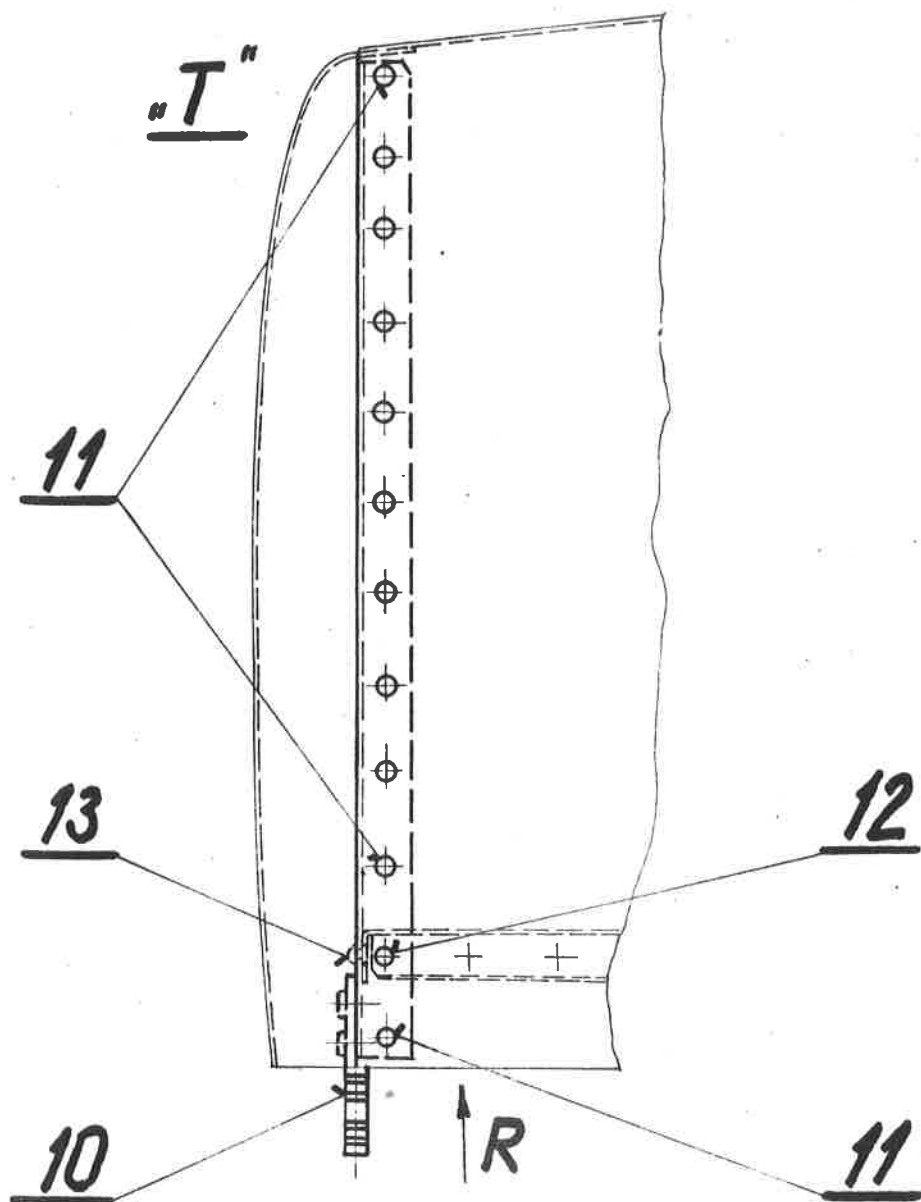
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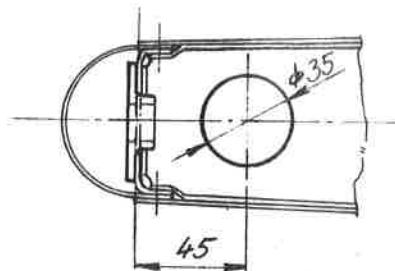
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"R"



L13/052

Vypracoval

Fojtová

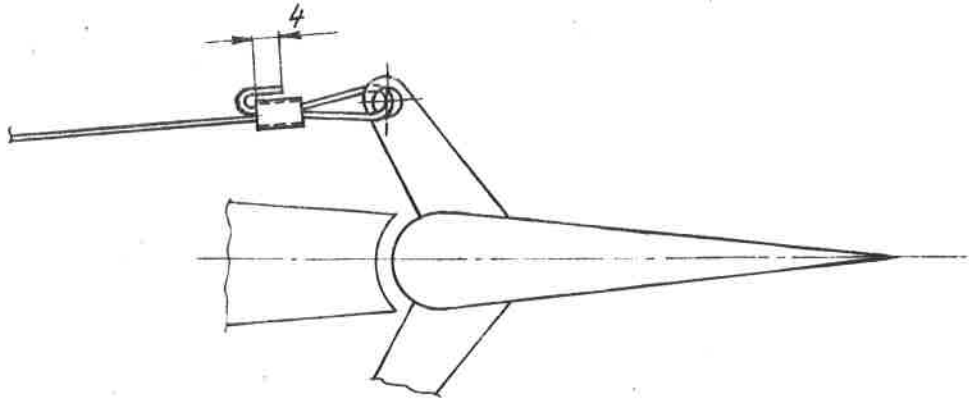
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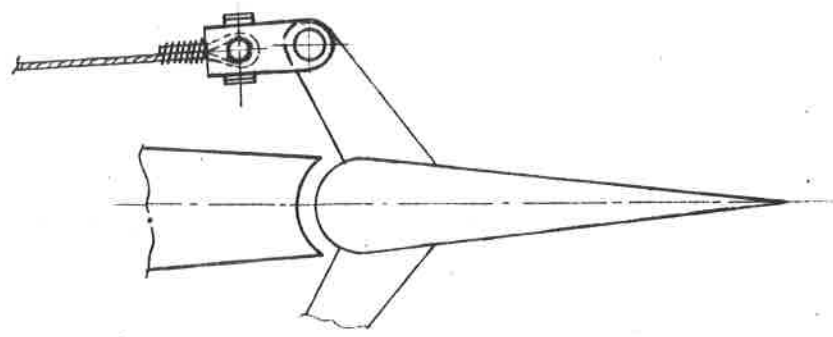
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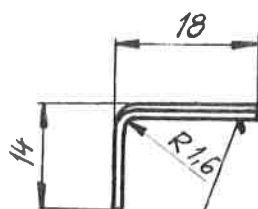
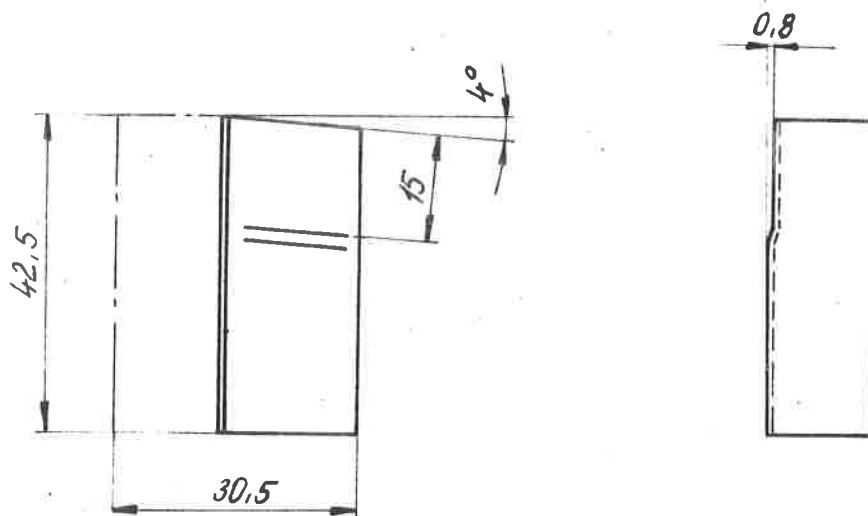


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				Lístů: 10

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SK-L13.276-01



SK-L13.276-02

L13/052

Vypracoval
Rajcova

Kontroloval

Schválil

List: 10

Listů: 10