SPACEK s.r.o., Lesní 25, 695 01 Hodonín, Czech Republic, Tel::+420 605 409 539, e-mail:info@sdplanes.com

SAFETY BULLETIN

SB No.: **SD-1/012a**

1.1 Affected Aircraft

Type: SPACEK
Model: SD-1 Minisport of all versions
Serial Number: SN001-SN245, SN247
Applicable countries: All countries

1.2 Concurrent document

-none-

1.3 Reason

The inflight release of flaperon from the wing occurred on one SD-1 due to loss of middle and tip hinge bolts. Pilot has activated parachute rescue system and airplane descended safely into field.

To avoid misunderstanding and difficulties in interpretation, please consider the following information:

- There is significant fleet of SD-1 aircraft in service with rough estimation of minimally 40000 h fleet total time
- The tests during certification have shown that bolt in this kind of joint cannot release itself incidentally in the service
- It was the first accident of this kind in the SD-1 service history
- The middle and the end bolt position should be checked easy at the pre-flight inspection

1.4 Subject:

Action 1:

The flaperon hinges bolts torque check.

Action 2:

Optional flaperon hinge end bolts stops installation.

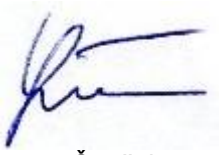
To be performed by: Owner/Operator

Cost to be covered by: Owner/Operator

Necessary material to be delivered by: In accordance to operator discretion. The material could be shipped by the manufacturer for shipping fee or could be made by owner in accordance to drawing or DXF file (see further).

Bulletin becomes effective: On the date of its issue

Total No. of pages: 3



Igor Špaček
Designer

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1.5 Compliance

Action 1:

Compliance must be demonstrated prior next flight. Inspection must be performed on all SD-1 airplanes in the service.

Action 2:

Compliance is not compulsory. Fitting of the safety flaperon end bolt stop plate is at owner decision.

1.6 Approval

Not applicable

1.7 Type of maintenance

Action 1:

Not applicable

Action 2:

Light

1.8 Release to service

Conduction of this SB (ref. 1.5 Compliance - Action 1 eventually Action 2) must be logged in the aircraft log book with the date and signature of responsible person according to the national applicable regulations for the country of registry of the aircraft.

1.9 Weight and balance

Action 1:

Not applicable

Action 2:

Minor

1.10 References

1. *Drawings:*

   SD1-20-250

2. *Documents:*

   The SD-1 Flight and Maintenance Manual SD-1

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2 INSTRUCTIONS

Action 1:

1. Remove cover of the flaperon end bolt installation hole in the bottom of wing tips if installed.
2. Progressively check if the head of middle and end hinge M5x25 DIN931 bolts are tightened fully so that they contact plastic bearing.
3. Move flaperons and check if bolts turn alongside. The check is finished when all bolts are tightened and move alongside with flaperons.
4. In case of negative test result release affected bolt. Check length of bolt and the thread condition. If the bolt is OK use Loctite 243 on the thread and install bolt again. Otherwise exchange it.
5. Repeat test of bolt tightening on following day.
6. This action should be performed as a part of pre-flight check as well final check before test flight of finished or repaired airplane.

Action 2:

1. See drawing SD1-20-250 for reference.
2. Modify shape of hole in the bottom of wing tip for end bolt installation in accordance to drawing.
3. Fabricate and bend stops in accordance to drawing.
4. Drill installation holes to the wing tip thru stop. Install stop using prescribed HW.

The stop in place before drilling:

Necessary tools: Oscillating saw, small sanding block, drill 3 mm, screwdriver, wrench 5,5 mm.

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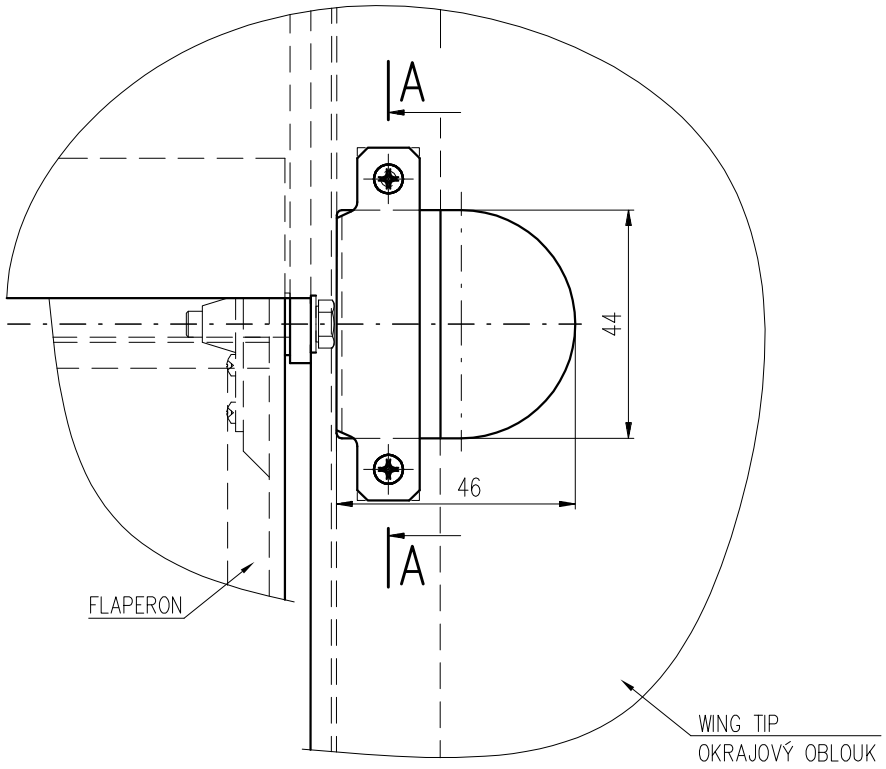

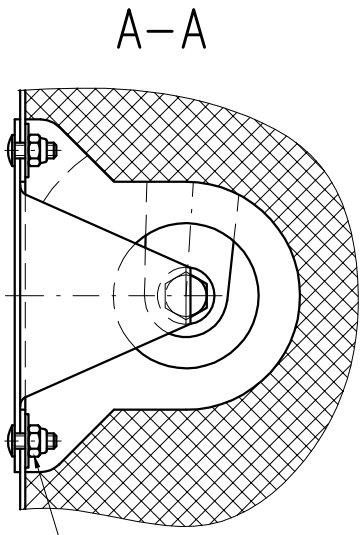

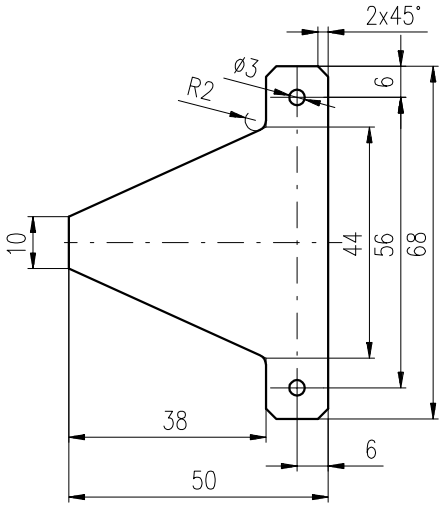

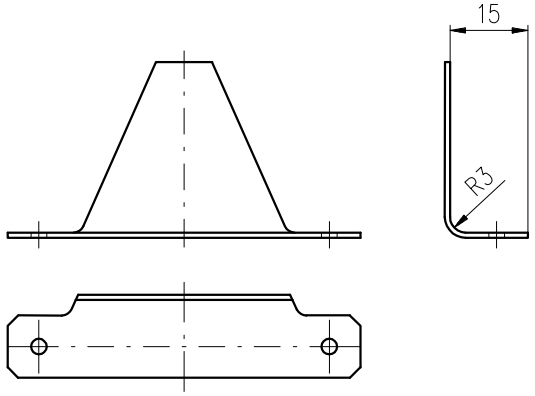

SEMI–PRODUCT: POLOTOVAR:						
MATERIAL:						
QTY: POČET KS.:	REMOVE SHARP EDGES & BURRS: HRANY SRAŽENY:					
WEIGHT: HMOTNOST: Kg.	TRACEABILITY: SLEDOVATELNOST:					
SCALE: MĚŘÍTKO: 1:1	PROJECTION PROMÍTÁNÍ	DIMENSION IN mm JEDNOTKY mm				
SURFACE TREATMENT: POVRCH. ÚPRAVA:						
TOLERANCE: UNLESS STATED OTHERWISE: NETOLEROVANÉ ROZMĚRY DLE: ISO 2768 m			ISSUE INDEX	NUMBER POČET	DRAWING CHANGE NOTE ČÍSLO ZMĚNY–POZNÁMKA	DATE DATUM / SIGNATURE PODPIS
POSITION: POZICE:	DRAWN: KRESLIL: Špaček DATE: DATUM: 1.11.2022	STRESS: STATIK: Špaček DATE: DATUM: 1.11.2022	APPROVED: SCHVÁLIL: DATE: DATUM:			

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A/C TYPE: TYP: SD–1 Minisport	MAJOR ASSY: HLAVNÍ SESTAVA:	DRG.No.: ČÍSLO VÝKRESU: SD1–20–250 / SIZE: FORMÁT: B
TITLE: NÁZEV: FLAPERON END BOLT STOP INSTALL. INSTAL. DORAZU KRAJ. ŠROUBU FLAP.		SHEET No. LIST 1 OF Z LISTŮ 1