Deutscher Ultraleichtflugverband e. V.

Lufttüchtigkeitsanweisung (LTA) Nr. 2024-001

Datum der Bekanntgabe: 07.05.2024

Luftsportgeräte-Muster:	**Maßnahmen einer anderen Stelle:**
Prime BS100	Keine
Gerätekennblatt-Nr.:	**Technische Mitteilungen des Herstellers:**
883-12 1; 883-12 2; 883-12 3	BPU-SB-2024-02 Rev. 1 (siehe Anlage)

Betroffenes Luftfahrtgerät:

Prime BS100 (alle zugelassenen Baureihen)

Anlass:

Ein Unfall mit einer **BK 160TR** aus dem Hause Blackshape S.p.A deutet auf Probleme der Tankentlüftung hin. Das zugelassene Muster Prime BS100 vom selben Hersteller wird vom Hersteller in die Maßnahmen dieses Service Bulletins mit eingeschlossen.

Maßnahmen:

Im Ultraleichtflugzeug BS100 ist eine Entlüftung installiert. Jedoch könnten unter bestimmten Umweltbedingungen und bei einer Verstopfung der Entlüftungsleitung Druckverhältnisse im Treibstofftank entstehen, die die Sicherheit des UL gefährden können.

Das Service Bulletin (SB) sieht Folgendes vor:

- eine visuelle Inspektion der linken und rechten Tragflächen, um eventuelle Strukturschäden zu erkennen
- eine ausführliche Inspektion der linken und rechten Treibstoffentlüftungsleitung einschließlich des Entlüftungsventils
- eine Modifikation der linken und rechten Treibstoffeinfüllstutzen, um bei einer Verstopfung der Treibstoffentlüftung einen Überdruck im Treibstofftank zu verhindern
- zusätzliche Betriebsbeschränkungen im Flugzeugflughandbuch

Maßgeblich sind die Anweisungen des Service Bulletins. Diese sind vorläufig, bis eine endgültige Lösung bereitgestellt wird.

Fristen

Sofort (ab 07.05.2024).

Begründung:

Im Interesse der Sicherheit des Luftverkehrs, das in diesem Fall das Interesse des Adressaten am Aufschub der angeordneten Maßnahmen überwiegt, ist es erforderlich, den Sofort-Vollzug dieser Lufttüchtigkeitsanweisung anzuordnen.

gez.: Jo Konrad
Vorsitzender DUL

Rechtsbehelfsbelehrung:

Gegen diese Verfügung kann innerhalb eines Monats nach Bekanntgabe Widerspruch eingelegt werden. Der Widerspruch ist schriftlich oder zur Niederschrift beim Deutschen Ultraleichtflugverband e.V., Mühlweg 9, 71577 Großerlach-Morbach einzulegen.

Ein eventueller Widerspruch hat keine aufschiebende Wirkung. Das Verwaltungsgericht Stuttgart, Augustenstr. 5, 70178 Stuttgart, kann auf Antrag nach § 80 Abs. 5 VwGO die aufschiebende Wirkung jedoch ganz oder teilweise wiederherstellen bzw. anordnen.

SERVICE BULLETIN

CATEGORY:
☐ **Recommended**
☐ **Optional**
☒ **Mandatory**
☐ **Emergency**

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Title: **Measures for preventing Fuel Tank overpressure**

Effectivity: ***BS100 all Models and S/Ns***

Record of amendments

Rev	Date	Description
0	09/04/2024	Original issue
1	03/05/2024	Revision 1

The Service Bulletin BPU-SB-2024-02 supersedes and replaces the Service Bulletin BPU-SB-2024-01

1. Reason

A fatal accident occurred to BK 160TR aircraft focused the attention on the fuel system venting potential issue.
Although BK 160TR certified model is completely different from the ultralight BS100 in terms of airframe and powerplant system design, the issue subject of this SB seems to have character of generality and applicable to most types of aircraft, including BS100 all Models and S/Ns.
On that basis BK has considered necessary to address this potential issue of undetected obstruction of fuel vent.

2. Description

An adequate venting is installed on the Aircraft BS100. However, in case of obstruction of the vent line and in certain environmental conditions, the fuel tank pressure could reach levels that could endanger the aircraft.

The SB requires:

- a visual inspection of LH and RH wing to detect any structural damages.
- a check of the LH and RH fuel vent line for any obstruction.
- a modification to the LH and RH fuel filler caps to include small opening for venting purpose.
- AFM additional operating limitations.

The instructions of the SB are temporary until terminating solution is provided.

3. Safety Intent

Preventing fuel tank overpressure

4. Time of Compliance

Immediate

5. Publications affected

The SB integrates the applicable AFM and AMM.

6. Reporting

a. The owner/operator is requested to inform Blackshape of any difficulties in the full accomplishment of this Service Bulletin.

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b. The owner/operator is requested to provide confirmation to Blackshape of the full accomplishment of this Service Bulletin.

Note:
For aircraft registered in Italy as VDS Avanzato,
Notification of the positive accomplishment
will be provided to the Aero Club d'Italia,
for restoring the qualification of ***VDS Avanzato.***

7. Accomplishment Instructions:

A. <u>Wing skin inspections</u>

1. Perform visual inspection on the external surface of LH and RH wings, checking along the bonding lines of the wing skin to the forward spar and on the leading edge of the wing, in correspondence of the bonding line between upper and lower skins, for presence of deformations, cracks, or any other signs of damages of the external surface. See Figure 1 for the identification of the bonding lines.

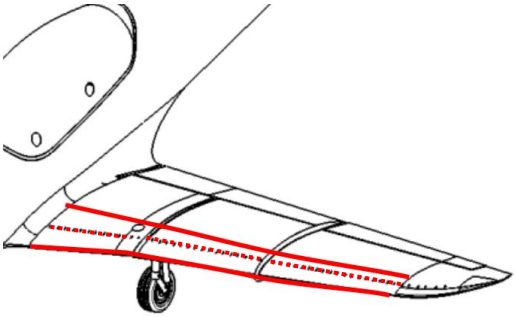

Figure 1 – Bonding lines (the dotted line refers to the bonding line of the lower skin to the forward spar)

2. In case of deformations, cracks, or any other signs of damages of the external surface, stop any flying activity and contact aftersales:
aftersales@blackshapeaircraft.com

Otherwise proceed to step B.

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B. <u>Check of the fuel vent line</u>

The AMM foresees to carry out *every 100 FH* a check of the *air vent for proper operation and securing.*
The SB requires to carry out the following check of the venting for detecting presence of obstruction before next flight and every 50 FH, according to the following procedure:

1. Set the aircraft in safety condition.
2. Drain both fuel tanks completely.
3. Remove the filler cap on both LH and RH sides. Proceed to step 4 onwards for both LH and RH sides.
4. Blow air inside the fuel filler cap hole (on both LH and RH sides) and check that the air goes out through the vent port (on both LH and RH sides).
5. Blow air from the vent port (on both LH and RH sides) and check that the air goes out through the fuel filler cap hole (on both LH and RH sides).

If obstruction is detected, proceed to carry out the checks of point C, otherwise to point D.

C. <u>Rollover Cleaning</u>

1. Remove wing inspection door highlighted in Figure 2

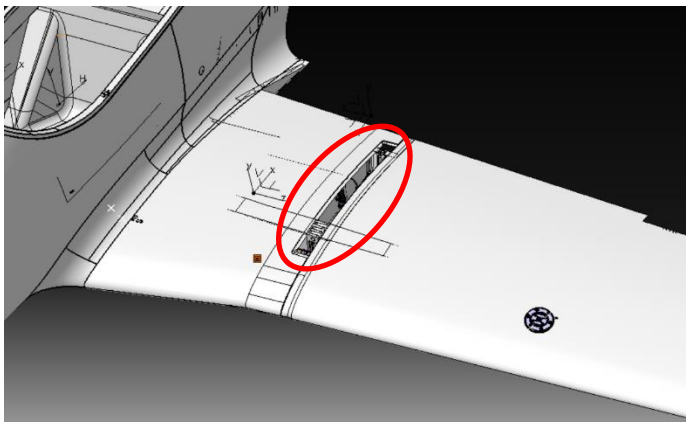

Figure 2 – Wing inspection door.

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2. Uninstall the rollover valve seated in the wing inspection door (see Figure 3) by unscrewing the 90° fittings [1] see Figure 4

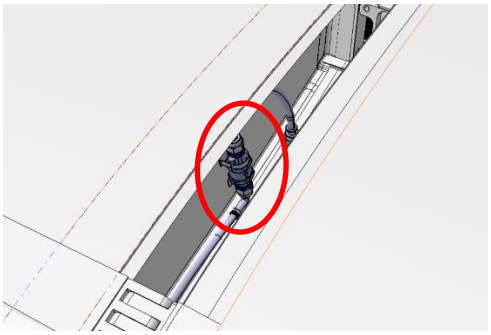

Figure 3 – Rollover valve position in wing inspection door.

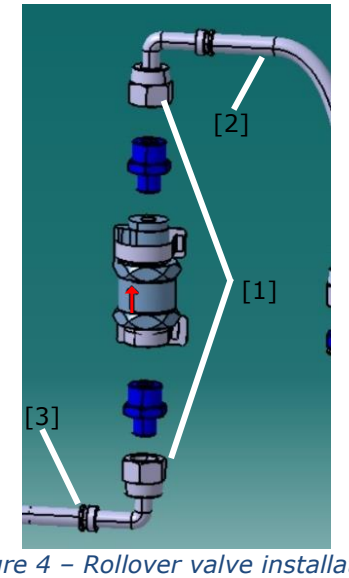

Figure 4 – Rollover valve installation.

3. Verify that the rollover valve and adjacent venting circuit components are free from obstruction by blowing air (do not use compressed air) through the following components:

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a. the rollover valve in both flow directions keeping the valve in the vertical orientation with the arrow (see Figure 4) pointing upwards and then pointing downwards.
b. the tube from the rollover valve to the vent port ([2] in Figure 4) checking that the air goes out through the vent port.
c. the tube from the rollover valve to the fuel tank ([3] in Figure 4) checking that the air goes out through the fuel filler cap hole.

D. <u>Fuel filler cap modification.</u>

1. Send both fuel filler caps to Blackshape [1] for reworking.

NOTE
The reworking performed by Blackshape consists in making a small opening of 1.5mm onto the fuel filler cap as specified in Figure 5.

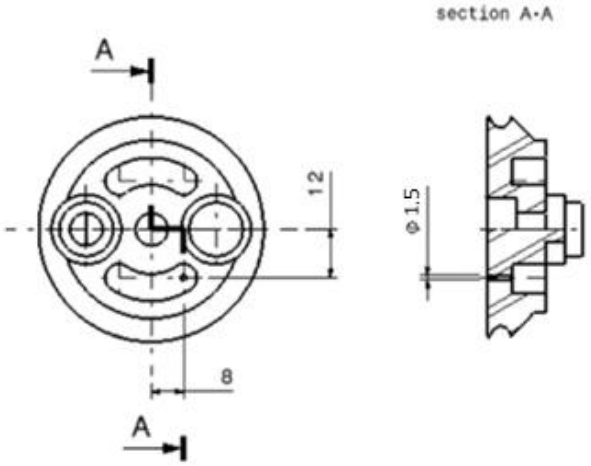

Figure 5 – Fuel filler cap small opening.

[1] Shipping Address: Blackshape, Strada Statale 16 KM 841 +900, 70043 Zona Industriale Monopoli (BA) Italy

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In case that the opening has been already carried out in accordance with the previous issuance of the SB, evidence of the reworking has to be provided to Blackshape, to confirm the accomplishment.

E. Fuel cap covers on top of fuel cap

Install a fuel cap cover on top of the fuel cap (Figure 6). The fuel cap covers are necessary to avoid contamination of the fuel tank from the fuel cap small opening. They must be used whenever the aircraft is on ground.

8. AFM

The following additional limitations and procedures are established:

- **Fuel Limitations:**
  Individual tank max fuel quantity: 30 L
- **Approved manoeuvres:**
  Avoid uncoordinated flight (slip ball out maneuver)
- **PRE-FLIGHT**
  Remove fuel cap covers as per Figure 6
- **POST-FLIGHT**
  Install fuel cap covers.

The present SB shall be included in AFM as temporary revision.

Figure 6 - Fuel Cap covers.

For example Part #: 13-21885 from aircraftspruce.com

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For any information, please contact aftersales:
aftersales@blackshapeaircraft.com