

# KUBIČEK

issues

## SERVICE INSTRUCTION no. 2024/02

### Replacing of FDS Tri-Lite vent panel

**Cause:** Replacing of FDS Tri-Lite vent panel

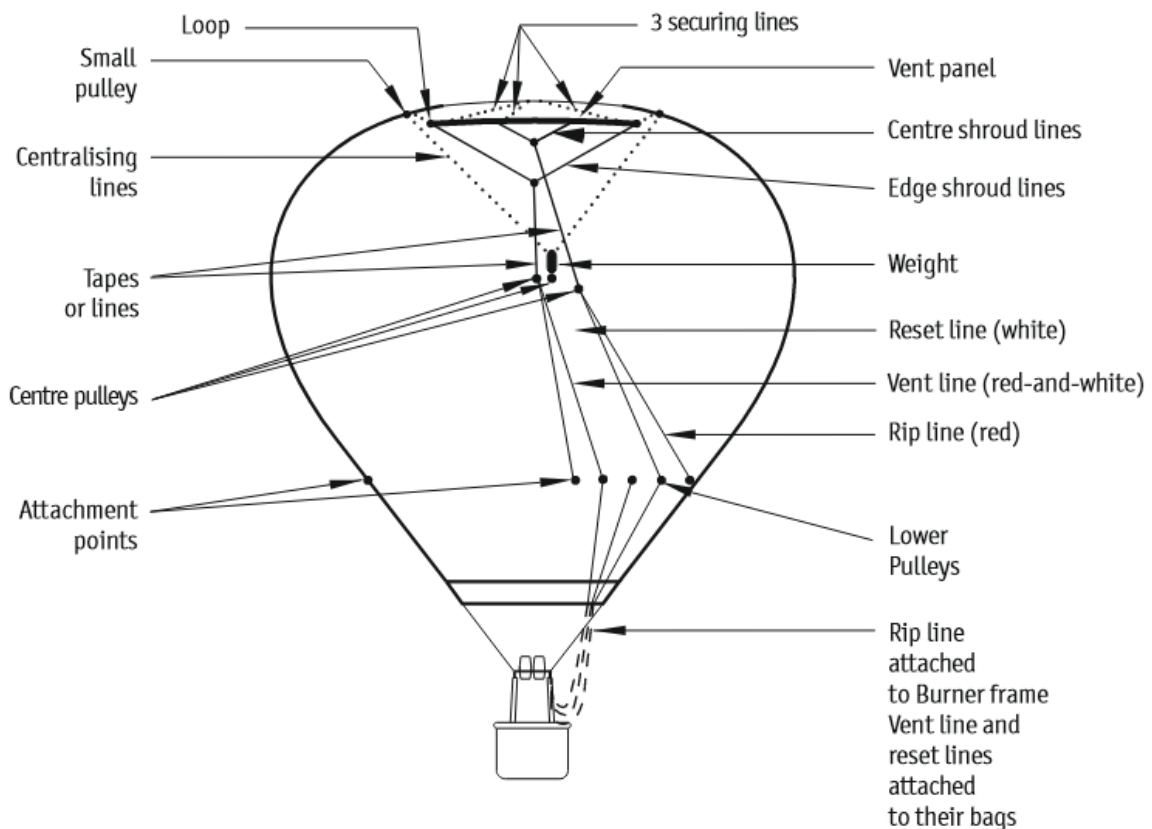
**With reference to:** Any envelope fitted with FDS Tri-Lite (or modified 3-contol line Slide Vent)

**Note.:** The vent panel is a spare part that comes sewn, hemmed, with all loops and carabiners and with pre-prepared centralising and shroud lines in the exact length. Therefore, it is necessary to order the spare part for that specific part number of the envelope.

**CAUTION:** According to Kubiček Factory Maintenance Manual the vent panel replacement is classified as category C maintenance (B.3202/B3205, chap. 1.3.3).

**Action:** -

**Description:** Fast Deflation System Tri-Lite (or modified 3-contol line Slide Vent)  
- for further information refer to Flight manual B.3102 (chap. 6.4.4).



A "safety turnback knot" is used for all cords that need to be re-tied during vent panel replacement. Each cord has a mark about 25 cm from the end that marks the top of the loop – see photo.

# KUBICEK



## Procedure:

**CAUTION** – Replacing the vent panel will take an experienced worker approximately one hour, during which time the cold air inflated envelope must be kept securely on the ground. This must be taken into account when planning - taking into account the weather (especially wind speed and gusts) and the number of helpers.

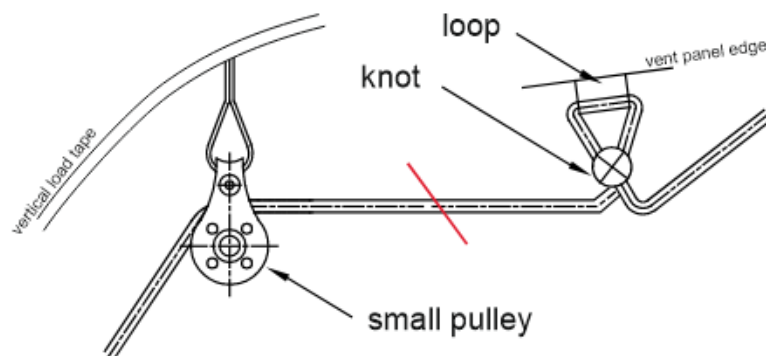
1. Prepare the balloon for cold air inflation according to Flight Manual B.3102, chap. 4.3.5.
2. Cut the 3 securing lines leading from the rings on the load tapes to the loops on the edge of the vent panel.
3. Inflate the envelope with cold air so that it is possible to enter and work inside the envelope, but still easily reach all the velcros of the vent panel. At this stage it is not necessary to have the original vent panel attached to the envelope velcros.
4. Lay out your control lines (red, white and red/white) so that they are not tangled with each other, around the weight or with the RV cords. Align the shroud and centralising cords as well.

**CAUTION** – it is necessary to make sure that the order of the control lines does not change and that the lines are not crossed after the vent panel replacement is finished.

5. Lay out a new vent panel inside the envelope.

**CAUTION** – New shroud and centralising lines and tapes/ropes (for attaching the cone of lines to the centre pulleys of the control lines) are tied to the vent panel. These tapes/ropes are attached to the vent panel at specific locations (the number on the vent panel seam is important) that correspond to the numbers of the load tapes to which the shroud and/or centralising lines are attached, between which the strap/rope passes (e.g. If the tape/rope is tied at position 13, it passes between the centralising/shroud lines at load tapes numbers 13 and 14). Do not untie the straps/ropes before you go to work with them.

6. Begin to gradually cut the centralising lines of the original vent panel (at the point indicated by the red line - see picture) and pull them out of the small upper pulleys. Leave the vent panel lying on the ground near the vent hole so that it does not get in the way, but also helps to hold the positions of the control lines that are at this point still attached to it..



7. Begin to gradually (from the top) reattach the new vent panel to the velcros of the envelope.

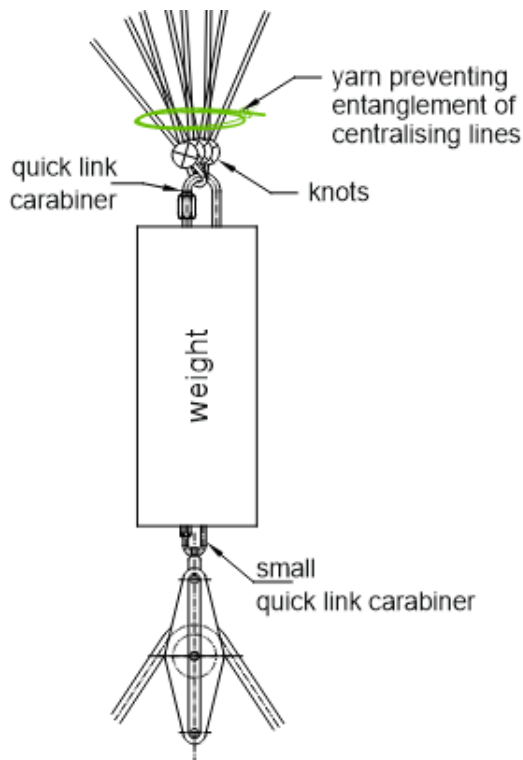
# KUBICEK

**CAUTION** – the vent panel and envelope have number-marked straps. It is necessary to make sure that the number on the load tape of the envelope corresponds to the number on the vent panel.

8. Untangle the "braid" into which the centralising lines (leading to the pulley with weight and the white line) are braided – do not untie the yarn above the carabiner (see point 9)! Untie 1 centralising line from the loop on the edge of the new vent panel, lead it through the small pulley on the envelope and tie it back into the loop on the vent panel. One at a time, untie, thread through and tie back all the centralising lines of the new panel.
9. Once all the centralising lines have been re-tied, take the quick link carabiner that the lines gather into and walk it over to the pulley and weight of the original Tri-Lite. Loosen the carabiner above the weight (e.g. using combination pliers and a wrench), disconnect the centralising lines of the original panel and attach the new ones.

The new centralising lines are tied together with a yarn above the carabiner (shown in green in the picture below) to keep the lines in the desired order. This yarn needs to be cut, but only after the new carabiner is attached to the weigh!

**WARNING** – the screw lock of the new carabiner must be sealed with Loctite 243!



10. On the edge of the new vent panel, locate the tape/rope leading from the edge shroud lines (they lead from the same loop as the centralising lines). Note the strap number where it was tied, untie it and lead it between the centralising lines on the corresponding load tapes (see step 5). Once the tape/rope is outside the cone of the centralising lines, lead it to the pulley of the red-and-white control line. Loosen the carabiner above the pulley (e.g. using combination pliers and a wrench), disconnect the original edge shroud lines and attach the new ones.

**WARNING** – the screw lock of the new carabiner must be sealed with Loctite 243!

11. On the edge of the new vent panel, locate the tape/rope leading from the centre shroud lines (they run through a pulley or loop at about 1/3 of the vent panel). Note the strap number where it was tied, untie it and lead it through both the edge shroud lines and the centralising lines on the corresponding load tapes. Once the tape/rope has been led

# KUBÍČEK

outside the cone of the edge shroud lines and the cone of the centralising lines, lead it to the pulley of the red control line. Loosen the carabiner above the pulley (e.g. using combination pliers and a wrench), disconnect the original centre shroud lines and attach the new ones.

**WARNING** – the screw lock of the new carabiner must be sealed with Loctite 243!

12. From the outside of the envelope, tie the 3 securing lines leading from the loops on the outside of the new vent panel to the rings on the load tapes.
13. Check the control lines and all shroud and centralising lines along their entire length for damage and check they are free of knots and twists.
14. Inflate the envelope with hot air according to FM chap. 4.3.8 and perform the Tri-Lite (3-control line Slide Vent) function test according to chap. 4.3.9.



## **WARNING:**

**The deflation system is one of the critical parts of the balloon and its proper functioning is essential for the safety of the flight.**


**After replacing the panel, the functionality of the whole system must be verified by a test according to Flight Manual B.3102, chap. 4.3.9 (Pre-Take-off check, section Venting / SV, SLV and LV and section Function check / LV, SLV (3-control lines)).**

Technical content of this document is approved under the authority of DOA No. EASA.21J.277.

On behalf of Kubíček Factory s.r.o.



**Kubíček  
Factory  
s.r.o.**



Ing. Petr Kubíček, technical director

Datum: **2<sup>nd</sup> August 2024**