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TC-n°.:EASA.BA.025
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Flight Manual Supplement

Balóny Kubíček bottom ends

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(iii) Content

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1.Operational limitations

1.1. Fuel, fuel pressure, high and low

Kubíček Ignis :

- Maximum admissible fuel pressure: 12 bar

- Minimum admissible fuel pressure: 3 bar

Kubíček Komet:

- Maximum admissible fuel pressure: 12 bar

- Minimum admissible fuel pressure: 2.8 bar

1.2. Admissible damage to the burner

No damage is permitted to the burner or fuel system, to the load tapes or to any load bearing part of the envelope or basket suspension system.

Any damage to the fabric below the first horizontal load tape above the Nomex is permitted. Elsewhere unrepaired tears or damage of the maximum size 5mm are permitted.

1.3 Approved configurations of TOMI balloons with Balóny Kubíček components

Envelope	Burner	Load frame	Basket	Cylinder
TOMI AX-6	Komet duo	Fixed/vario frame basic, K25P	Notheisz: K.NB.10 Kubicek: K12	Worthington: 10gal Aluminium Cameron: CB599, CB497,CB426, CB2900,CB2901, CB2385S,CB2380S, CB2990, CB2088, CB2902,CB2903, CB2387S Schroeder: VA50, VA70 Thunder & Colt: V20, V30 Lindstrand: V20, V30, V40 MOFÉM: 50ltr
	Ignis double			
TOMI AX-7	Komet duo	Fixed/vario frame basic, K25P	Notheisz: K.NB.11 Kubicek: K12	
	Ignis double			
TOMI AX-8	Komet duo	Fixed/vario frame basic, K25P	Notheisz: K.NB.11, K.NB.12	
	Ignis double			
TOMI AX-9	Komet duo	Fixed/vario frame basic , K25P	Notheisz: K.NB.13, K.NB.14 Kubicek: K18, K50	
	Komet trio			
	Ignis double			
	Ignis triple			
TOMI AX-10	Komet trio	Fixed/vario frame basic, K25P	Notheisz: K.NB.14, K.NB.15, K.NB.16 Kubicek: K50	
	Ignis double			
	Ignis triple			

1.4 Instrument marking

Instrument markings and color code meaning are tabulated below.

Table of Manometer Indicated Overpressure:

Red Radial Line	Yellow Arc	Green Arc	Yellow Arc	Red Radial Line
Minimum Limit	Caution Range	Normal Operating	Caution Range	Maximum Limit
3 bar	3-4 bar	4-11 bar	11-12 bar	12 bar

2. Emergency procedures

2.1 Fire on the ground

Cylinders Turn them off.

Basket area Clear the area of everyone not involved in fighting the fire.

Fire Put out the fire using the fire extinguisher or fire blanket.

Escape If the balloon was inflated then the pilot most pull the rip line so that the balloon does not become airborne while the passengers exit. The pilot should exit the basket last, with the rip line in his hand, so that the balloon does not become airborne.

2.2 Non-standard landings

2.2.1 Hard landing

A landing with a descent speed of 4 m/s or greater.

Passengers Brief them to adopt the correct landing position, holding on the rope handles, face into the basket with their legs only slightly bent and brace against vertical compression. Stow away all loose items. Be prepared for a hard landing.

Basket By means of the rotation vent (if fitted) turn the balloon so that it lands on the longer side of the basket.

Retrieve crew Warn them that you are making a hard landing.

Cylinders Turn them off and vent the fuel hoses before touching the ground.

Red line Have it in your hand open the deflation fully close to the ground.

2.2.2 Fast landing

A landing in the wind speed is higher than 7.5 m/s

Passengers	Stow loose objects. Adopt the correct landing position. Holding on to the rope handles and face away from the direction of travel. Adopt a low position with legs well bent and backs and shoulders pressed against the leading edge of the basket. Heads should be level with the basket edge. Be prepared for a hard landing with the basket tipping over and travelling along the ground at speed. Do not leave the basket until it comes to a stop and on the instruction of the pilot only.
Basket	By means of the rotation vent (if fitted) turn the balloon so that it lands on the longer side of the basket.
Field	Select a large landing field, or an area with an upslope, without power lines on the overshoot.
Retrieve crew	Warn them that you are making a fast landing.
Descent	Gentle.
Cylinders	Turn them off and vent the fuel hoses before touching the ground.
Red line	Open the deflection system completely close to the ground.

2.3. Deflation system malfunction in a strong wind

Passengers	Brief them to adopt the correct landing position as detailed in fast landing above. Stow away all loose items. Be prepared for a long drag landing. The passengers may not leave the basket until it comes to a stop.
Basket	By means of the rotation vent (if fitted) turn the balloon so that it lands on the longer side of the basket.
Retrieve crew	Warn them that you are landing and that the deflation system has malfunctioned.
Descent	Gentle, using both rotation vents together (if fitted) to dump air.
Field	Select a large landing field or an area with an upslope, without power lines on the overshoot.
Cylinders	Turn them off and Vent the fuel hoses before touching the ground.
Venting	Keep trying to operate the deflation system during the drag landing and open both the rotation vents.

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2.4 Burner failure

Burner	If a burner will not work then check the fuel quantity and pressure, hose connections and the cylinder valve. If one burner malfunctions then transfer to another burner or, in the case of a single burner, transfer to the other fuel supply.
Cylinder	Turn off the cylinder valve, vent the fuel hose and use the other burner.
Landing	Land as soon as possible.

Fuel system freezing

If a fuel hose, regulator or blast valve shows signs of freezing then the most probably cause is a restriction in the fuel supply. Check that all valves that relate to the frozen area are either fully open or fully closed as appropriate and that hose connections are fully tightened. Only when this has been done, and if the problem has not been cured, should you take the following action:

Burner	Transfer control to the other burner.
Cylinder	*Vent the affected fuel hose. Connect to a fresh full fuel cylinder.*

2.5 Impossibility to turn off the main blast valve

Valve lever	*Push the lever from the lower side. If it remains blocked proceed as follows:*
Cylinder	*Turn off the fuel supply valve.*
Heating	*Use another burner unit for heating* or control heating by the cylinder valve.
Landing	*Land as soon as possible*.

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3. Normal procedures

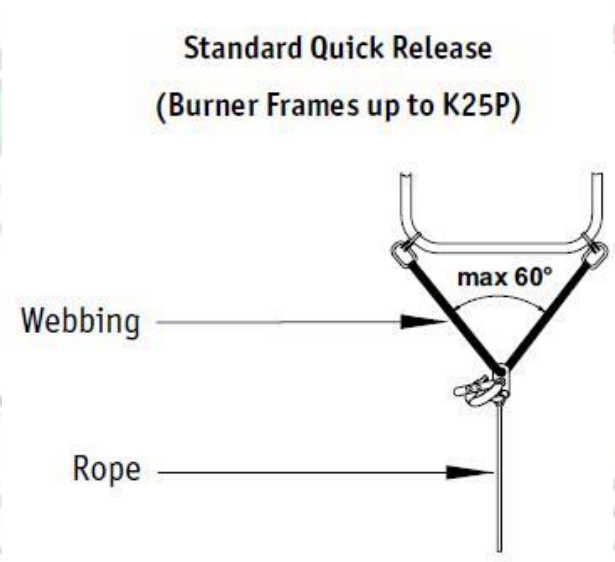
3.1 Assembling the balloon

Fuel hoses may never be bent sharply, the smallest bend radius allowed is 90 mm (3 ½").

3.2 Quick release

Standard Quick Release (baskets up to K25P)

On these quick releases the webbing yoke should be attached to either to the envelope karabiners or the attachment lugs(if fitted) on the upwind side of the burner frame. During inflation a loop at the end of a short restraint line is fitted into the jaw of the quick release which is locked by a securing pin. The other end of this restraint line is fixed to an anchor point either on the ground or on the front of a heavy vehicle.



The maximum angle between webbing arms is limited to 60 or 90 degrees for preventing overstressing of the burner frame. For 60 degrees the lengths of the webbing arms are to be at least the same as the distance between their attachment points - envelope karabiners or attachment lugs.

For verifying the 90 degrees the pilot can use any suitable rectangular object e.g. map folder, flight log etc.

The fixed point for attaching the quick release rope must be able to carry the following load: MTOW of the respective balloon +800 kg

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4. Description of Burners

4.1 Ignis

The Ignis burner is available as double, triple or quad burner.

The main burners are fitted with blast valves that are operated by squeezing the control lever towards the hand grip. The blast valves handles are arranged so that pairs of burners may be operated together by using one hand.

The whisper burner is operated by a silver lever that is rotated downwards to open the valve.

The Ignis burner is fitted with either a vapour or liquid pilot flame. The red pilot light lever covers the pilot light igniter when it is in the closed position. The pilot light lever is rotated downwards through 0 degrees to open the pilot light flame.

Ignis Burner

4.2 Komet Duo and Komet

The Komet Duo burner was procuded in two variants:

- Burners up to serial number 104 are fitted with the crossflow valve and smaller vaporizing coil.

- Burners of serial number 105 and higher don't have the crossflow valve. The vaporizing coil is grater for higher heat output and modified controls enable for operating both burner units with only one hand. Burners of these serial numbers were also assembled in Komet Trio version.

Komet burners are fed by two hoses of vapour and liquid phase. The amount of pilot flame is regulated by the valve on the fuel cylinder.

Note:

Burners Komet Duo up to serial number 104 are fitted with crossflow valve. With the cross flow valve open the fuel is supplied from one fuel cylinder when both main blast valves are operated at the same time.

4.3 Cleaning and care

Burner

After each flight clean carbon deposits from the burner. Check that the movable parts on the frame, frame suspensions and hose fittings are free of dirt and mud. Clean and lubricate with silicone oil as required.

Check periodically that the burner valves move smoothly. Lubricate the valves, as described in the Kubicek Balloons Maintenance Manual, if they are becoming stiff.

5. Table of baskets

Basket model	Basket description	Typical basket weight	Applicable burner frames
K.NB.10	1,05 x 1,05 m	80 kg	K25P, KÖGÁZ II, KÖGÁZ III.2.1.
K.NB.11	1,05 x 1,4 m	85 kg	K25P ,KÖGÁZ II, KÖGÁZ III.2.1.
K.NB.12	1,2 x 1,4 m	100 kg	K25P, KÖGÁZ II, KÖGÁZ III.2.1.
K.NB.13	1,2 x 1,6 m	110 kg	K25P, KÖGÁZ II, KÖGÁZ III.2.1.
K.NB.14	1,35 x 2,1 m	140 kg	K25P, KÖGÁZ III.2.1.
K.NB.15	1,55 x 2,6 m	210 kg	K25P, KÖGÁZ III.2.1., KÖGÁZ III.4.1
K.NB.16	1,65 x 2,8 m	250 kg	K25P, KÖGÁZ III.4.1

6. Airworthiness Limitations

6.1 Life time limited items

When a lifetime limiteditem has reached the end of its life it must be replaced and the original item discarded. All items replaced because they have reached the end of their life must be recorded in the balloon's logbook. Other items are to be replaced when worn or damaged.

Item	Part no.	Limit
All burner fuel hoses	53102.XX*, 53103.XX*	10 years
Fuel cylinders	According to instructions of the respective manufacturer	---

The Instructions for Continued Airworthiness (ICA) for Balóny Kubíček components shall be used as available by Balóny Kubíček in its latest version (see: www.kubicekballoons.eu/).