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NATIONAL TRANSPORTATION SAFETY BOARD

Washington, D.C.

Attachment 13 – Kubicek Emergency Procedures

(4 Pages)

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1.0 Emergency Procedures - General

SECTION 3 - EMERGENCY PROCEDURES

3.1 INTRODUCTION

This section provides checklists and procedures for dealing with emergencies. With proper pre-flight planning and properly maintained balloons emergency situations are extremely rare. Should an emergency arise, the guidelines in this section are to be followed.

If an emergency does occur, the pilot must remember that his or her reaction time should be appropriate to the prevailing conditions.

Figure 1: Kubicek general emergency procedures. (Source: Kubicek Flight Manual, page 3-1)

2.0 Avoidance of Dangerous Obstacles

3.2 AVOIDANCE OF DANGEROUS OBSTACLES

When confronted with an obstacle at low level the pilot must decide whether or not there is time to climb over the obstacle.

If there is time to climb away then the pilot must make sure that the maximum amount of fuel is passed to the burners. On a single burner open the main blast valve from one fuel supply and the quiet burner from the second fuel supply. On a double, triple or quad burner each burner should use its own fuel supply. Do not use the cross-flow (if one is fitted) or run two or more burners from a single fuel supply if it is possible to use separate fuel supplies.

If the pilot believes that he can not avoid a major obstruction on his flight path then he should take the following action:

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 impact. Do not leave the basket until it comes to a stop and on the instruction of the pilot only.
Venting	Vent so that the balloon will not fly on after contact with the obstruction.
Cylinders	Turn them off and empty the fuel hoses if time permits.
Basket	Once the balloon has stopped moving, secure it to the obstruction using the handling/drop line if this is appropriate.
Basket evacuation	Evacuate the basket only when it is safe to do so and on the instruction of the pilot.

When making an emergency landing the Parachute, Smart Vent or Lite Vent may be partially opened at heights below 15 m (50 ft).

Figure 2: Avoidance of Dangerous Obstacles. (Source: Kubicek Flight Manual, page 3-1)

3.0 Contact with Electrical Power Lines

3.3 CONTACT WITH ELECTRIC POWER LINES

If the pilot considers that contact with power lines is unavoidable then he should take the following action:

Passengers	Assume the correct landing position using the basket edge away from the power lines. Hold on to the rope handles and avoid contact with the cylinders and other metal objects, keep low in the basket with heads below the basket edge. Prepare for a hard landing.
Venting	Vent so that it will be the envelope and not the basket or flying cables that hit the power lines.
Cylinders	Turn them off and empty the fuel hoses if time permits.
Leaving the basket	Evacuate the basket only when it is safe to do so and on the instruction of the pilot. If the basket is suspended from power wires then stay in the basket and away from the wires until rescue arrives.
Equipment recovery	Stay clear of anything attached to the power lines and do not attempt to remove any equipment until the Electricity authorities have confirmed that it is safe to do so.

Figure 3: Contact with power lines and fire in the air. (Source: Kubicek Flight Manual, page 3-2)

4.0 Fire in the Air

3.4 FIRE IN THE AIR

Cylinders	Turn off the affected hoses and vent them.
Burner	Turn off the pilot lights.
Fire	Use the fire extinguisher and fire blanket to put out or smother the fire if the above doesn't extinguishes the fire.
Landing	Identify the cause of the fire and decide if it is safe to relight the burner. If it is not safe to do so then the procedure for a hard landing is to be followed (see section 3.8).
Escape	Prevent anybody from leaving the basket until you are sure that the balloon will not become airborne again.

CAUTION:

The fire extinguisher must always be used in the vertical position. Be aware that it will only last for a few seconds.

If a dry powder extinguishing is used to fight the fire then all traces of the powder must be removed as soon as possible after landing because the powder, when exposed to the air, is extremely corrosive.

Figure 4: Fire in the air. (Source: Kubicek Flight Manual, page 3-2)

5.0 Fast Landing

3.8.2 Fast Landing.

A landing when the wind speed is higher than 7.5 m/s (14.5 kts).

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 powerlines downwind.
Ground crew	Warn them that you are making a fast landing.
Descent	Slowly, then level with the ground before landing.
Cylinders	Turn them off and Vent the fuel hoses before touching the ground if time permits.
Red line	Open the deflation system completely when close to the ground.

Figure 5: Fast Landing. (Source: Kubicek Flight Manual, page 3-4)