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## **1 INTRODUCTION**

a) The Commander of an aircraft is responsible for the safety and well-being of his passengers and the law requires a pre-flight safety briefing in **any** UK registered aircraft. This applies to **ALL** aircraft, including gliders, balloons, microlights and helicopters, as well as 'conventional' aeroplanes.

b) Article 44 of the Air Navigation Order (ANO) 2000 requires the Commander of an aircraft registered in the UK to take all reasonable steps to ensure that before take-off all passengers are familiar with the position and method of use of emergency exits, safety belts and harnesses, lifejackets and other emergency equipment. He/ she must also ensure that passengers are instructed on the actions to take in an emergency.

c) Although the guidance in this Leaflet is comprehensive and too long to be used on every flight, it is up to the pilot to decide what is appropriate on each occasion. He/she should use **simple** language, as some words (e.g. leading edge, trailing edge, port and starboard)

may not be understood by all passengers. Remember, three quarters of the UK population have never flown.

d) Passengers in light aircraft may find it helpful to have a pre-flight discussion on the differences from larger aircraft (see para 6).

## **2 PRE-FLIGHT PREPARATION**

The pilot must:

a) Comply with any airworthiness requirements such as having controls removed from passenger seats. Even if not required, consider this if permitted. While not a requirement, it is useful to place sick bags in easily accessible places without making it obvious to the passengers.

b) Ensure luggage is **not** so heavy that it adversely affects the weight and balance. The same applies to the passengers themselves. A set of scales (checked for accuracy) are useful to have available- many people are unsure of their weight and often under-estimate it. See *SafetySense leaflet 9.*

c) Check that luggage is properly secured and does **not** contain hazardous items, such as:

- flammable liquids and solids, e.g. matches, fire-lighters, paint
- explosives, e.g. fireworks, toy gun caps
- magnetic materials, e.g. loudspeakers
- corrosives, e.g. acids, alkalis, car batteries.
- compressed gases, e.g. camping gas, aqualung cylinders
- active mobile telephones or other electronic devices



d) Advise passengers of the restrictions on smoking in or near the aircraft.

e) Suggest that passengers wear sensible shoes and clothing. Bare limbs are at risk and thin nylon melts if there is a fire. In winter, warm clothing should be available in case of heater failure, diversion or forced landing; walking down a Scottish hillside in winter would be no fun in shirt-sleeves and sandals!

f) Tell passengers it is best not to fly if they are unwell or even recovering from a cold.

g) **NOT** take passengers who are under the influence of alcohol (or anything worse). They could hazard the flight. Drunkenness in an aircraft is an offence under ANO Art 65.

h) Tell passengers not to distract the pilot at critical times when he/ she is busy, by asking questions in the middle of radio calls, when carrying out the Vital Actions or by interrupting the pilot's navigation/ monitoring of the flight. (Don't be distracted by an airsick or frightened passenger. **FLY THE AIRCRAFT.**)

### 3 **BEFORE BOARDING**

a) Check **personally** that external baggage doors are closed and locked, don't leave it to others.

b) Escort passengers when going to and from the aircraft.

c) Point out that propellers and helicopter rotors are extremely hazardous and should be avoided at all times, even when stationary. Rotating propellers and rotors (particularly helicopter tail rotors) may be hard to see, especially from the side or at night. The hazard may not be noticed if nearby aircraft have engines running.

d) **Always** shut down the engine(s) when passengers are boarding or leaving, avoid 'running changes', or passengers approaching the aircraft while a propeller/rotor is turning, **unless they are escorted by properly briefed helpers.**

e) Advise passengers that when going to and from a propeller-driven aeroplane, they must approach/depart from **behind** the wing. The only exceptions are a small number of types with pusher propellers or entry doors forward of the wing. With these aeroplanes the engine(s) must **always** be stopped when passengers are boarding or leaving.

f) Ensure that even if the engine is stopped passengers do not step forward off the wing leading edge towards a propeller.

g) If flying a helicopter, refer to Leaflet No 17 'Helicopter Airmanship', para 4.2, covering safe conduct of passengers with rotors running.

h) Arrange that someone is in charge of children, particularly small ones, both in flight and when going to and from the aircraft. It is safest to hold their hands.

i) Ensure everyone is aware of hazards under the wings of high-winged aircraft, e.g. struts, pitot tubes.

j) Show passengers the location of any steps or handholds, if there are wing walk-ways, show passengers where they can step to prevent holed fabric or dented skin.

k) Help passengers with external door catches and locks. A door, caught by a gust of wind, can injure passengers or pilots and cause damage to the door hinges.

l) For balloons, gliders, microlights etc explain any additional specific instructions.

#### **4 ON BOARD BEFORE STARTING ENGINE(S)**

The pilot must brief passengers so that they:

- know how to adjust and lock their seats/ seat backs securely in position.
- know how to fasten, unfasten and adjust seat belts/harnesses. Strongly suggest they keep them fastened through the flight in case of unexpected turbulence etc.
- know how to unlock and open doors or canopy noting that some aircraft have a double locking system. Locks and handles should be left alone once the doors are closed. **Personally** supervise the closure and locking of doors etc, don't be rushed.



- do not obstruct the controls with objects such as cameras, handbags, knees or feet.
- do not put metallic or magnetic objects near the compass.
- switch OFF all mobile telephones and electronic devices before flight.
- do not interfere with the controls in flight.
- know how to use the headsets.
- can use the intercom, if fitted, and know how to communicate if there is no intercom.
- know where to find the sick- bags.
- know the emergency procedures detailed below.

#### **5 EMERGENCIES**

a) Before flight, the pilot **must** brief passengers on how to brace themselves if a forced landing or ditching appears likely. There are two main reasons for this:

- to reduce injury due to striking objects inside the aircraft.
- to reduce 'flailing' of the body.

b) Passengers in forward facing seats **WITHOUT** a control wheel/ stick in front of them should, if possible, be briefed to adopt the 'brace' position. The upper body should be bent forward as far as possible with the chest close to the thighs and knees and the head touching the back of the seat in front. The hands should be placed one on top of the other on top of the head with the forearms tucked in against the side of the face. Fingers should **NOT** be interlocked. The lower legs should be inclined aft of the vertical with the feet flat on the floor. The seat belt should be as tight as possible and low on the torso.



c) Check that front seat occupants have got their belt and upper torso restraint as tight as possible prior to impact.

d) Tell passengers to kick or force out a window if the doors or canopy cannot be opened or if the aircraft has overturned.

e) Remind rear seat passengers how to operate the seat-back release on the front seats (thus allowing rear seat passengers to vacate the aircraft).

f) Agree the order in which the aircraft should be evacuated.

g) Remind passengers that harnesses and belts should be as tight as possible and at the last minute headsets removed, unplugged and stowed.

h) Brief passengers to unlock, but not unfasten, the cabin doors/emergency exits just before landing (or ditching).

i) Make it clear that seat belts/harnesses must be kept fastened until the aircraft has stopped, undo belts, open doors and get out fast.

j) Explain that you must not leave a helicopter until the main rotor has stopped.

k) Explain the position, release method and how to use the fire extinguisher as well as the location of the first aid kit.

## 6 EXTRA PRECAUTIONS OVER WATER

### a) Lifejackets

- Before flying over water in a single-engined aircraft, make sure that passengers are **wearing** lifejackets, know how to inflate them and how to use any ancillary items, e.g. light, whistle.
- If the aircraft is twin-engined, point out the location of lifejackets and how to put them on. If one engine stops, consider asking the passengers to put on their lifejackets - it's now a single-engined aircraft!
- Impress on your passengers that lifejackets must **NOT** be inflated until **outside** the aircraft.



### b) Life-rafts

- The life-raft should be **secured** such that it cannot strike people's heads during deceleration. **Make sure it is accessible in an emergency.** Assign responsibility for getting the life-raft out – it's too late when the aircraft has sunk. It may be heavy, so a strong passenger should be chosen. Do not tie the life-raft to the aircraft after ditching. Passengers should know how to inflate the life-raft and what emergency equipment it contains, e.g. fluorescein dye, flares.
- Brief passengers to swim away from the aircraft before inflating the life-raft so that it cannot be holed on anything sharp. When inflated, make sure it does not blow away, leaving some or all of the passengers still in the water.
  - c) **Above all**, impress on your passengers not to panic. There will be a lot of water flying around, perhaps through a broken windscreen, but there is usually at least a couple of minutes to get everybody out.
  - d) Safety Sense Leaflet No. 21 'Ditching' contains comprehensive advice.

## 7 PASSENGERS NEW TO FLYING IN LIGHT AIRCRAFT

Those who are more used to package holiday jets may find a light aircraft a very different experience. No one wants an early return with a sick or frightened passenger. Chat to them beforehand about:

- a) *The higher noise level:* headsets, ear defenders or cotton wool in the ears may help.
  - b) *Turbulence* – a light aircraft will be more affected. Don't fight it, relax and go with the motion.
  - c) *Pressure changes and the ears* – most light aircraft are un-pressurised and climb quite slowly so the ears automatically compensate. Plan to descend at about 300 ft per minute. However, during fast descents, holding the nose and attempting to blow with the mouth closed, will equalise the pressure. Alternatively, follow the practice of some airlines and hand out a few chewy sweets.
  - d) *Stall and other warning horns.* Mention horns and bells, the sudden unexpected noise on landing may startle nervous passengers.
  - e) *Lookout* – discuss the usefulness of extra pairs of eyes throughout the flight, particularly when joining the circuit. Agree on how passengers should attract your attention. Explain the blind spots. Tell them that high flying traffic can be ignored.
  - f) *Motion Sickness* – What to do if feeling unwell, but don't mention the word 'sick'. (Make sure there are sick bags handy.)
  - g) *Toilets* – The lack of a toilet, even in some larger twin-engined aircraft.
  - h) *Children* – Special care is needed so that they:
    - do not touch the controls, door release etc
    - keep their legs clear of the controls when sitting on a booster cushion
    - keep quiet when the pilot is talking on the radio or is very busy
    - tell the pilot if they see another aircraft (keeping their eyes outside helps prevent air sickness).
- It helps if you:
- keep talking to them during the flight pointing out landmarks etc
  - avoid turbulent or windy days so that they remember their flight with PLEASURE

## 8 CHILD RESTRAINTS

a. The ANO and some flight manuals have requirements about safety restraint if children under the age of 2 (or 3 in some cases) are on board. These can be fulfilled as follows.

- For children up to the age of 6 months, approved belt loops as used in commercial airliners must be carried.
- For children between 6 months and 2 years old, either these approved belt loops must be carried, or the child must be strapped into a suitable car-type safety seat as described below.
- For children between 2 and 3 years old, the child must be strapped into either a car-type safety seat as described below, or secured properly by adult seat belts.
- Children 3 years old or more must be restrained using the aircraft seat belts.

b. The safety seats referred to must

- have a well- defined shell
- be designed to allow quick securing and removal from the seat
- have a single point of release for the harness which the child cannot easily release
- secure at least the torso, lap and shoulders
- have straps at least 1" wide

c. The safety seat must be installed so that:-

- it is secured to the aircraft seat in the direction of flight with the aircraft seat belt or harness
- it does not interfere with the aircraft controls or exits
- the lower part of it does not extend unreasonably beyond the aircraft seat
- the aircraft seat belt buckle does not lie on any sub-frame member of the safety seat
- only one set of straps secures the child.

## 9 SUMMARY FOR PASSENGERS

Have you been told how to use:

- seats/ locking mechanism
- seat belts/ harnesses
- door and emergency exit release
- front seat- back release
- fire extinguisher
- lifejackets and life-raft if carried?

where to find the first aid kit?

and what to do:

- in a forced landing
- in a ditching?

Remember, its a LEGAL requirement for the pilot to tell you.