



VFR GENERAL AVIATION FLIGHT OPERATION

1. Introduction

The general aviation flight operation is the operation of an aircraft other than a commercial air transport operation.

The commercial air transport flight operation is the flight operation involving the transport of passengers, cargo or mail for remuneration or hire.

1.1. Duties of pilot-in-command

The pilot-in-command shall be responsible for the operation, safety and security of the aeroplane and the safety of all crew members, passengers and cargo on board.

2. Flight operation

The pilot-in-command shall ensure that a flight will not commence unless it has been ascertained by every reasonable means available that the ground (or water), including radio communication or navigation aids available are adequate for the type of operation under which the flight is to be conducted.

2.1. Aerodrome operating minima

The pilot-in-command shall not operate to or from an aerodrome using operating minima lower than those which may be established for that aerodrome by the state in which it is located (except specific approval).

2.2. Flight preparation

A flight shall not be commenced until the pilot-in-command is satisfied that:

- Aircraft is registered with the appropriate certificates (*not applicable in IVAO*)
- The instruments and equipment installed are appropriate taking into account the expected flight conditions
- Any necessary maintenance has been performed (*not applicable in IVAO*)
- The mass of the airplane and centre of gravity location are such that the flight can be conducted safely
- Any load carried is properly distributed and safely secured (*not applicable in IVAO*)
- The aeroplane operating limitations, contained in the flight manual, will not be exceeded.

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2.3. Flight planning

Before starting a flight, the pilot-in-command shall be familiar with all available meteorological information appropriate to the intended flight.

Preparation for a flight away from the vicinity of the place of departure shall include:

- A study of available current weather reports and forecast
- The planning of an alternative course of action to provide for the eventuality that the flight cannot be completed as planned because of weather conditions.

2.4. Weather conditions using visual flight rules

A flight to be conducted in accordance with the visual flight rules (VFR) shall not be commenced unless current meteorological reports and forecasts indicate that the meteorological conditions along the route or that part of the route to be flown under visual flight rules will be such as to render compliance with these rules.

2.5. Fuel and oil supply for VFR flights

A flight shall not be commenced unless taking into account both meteorological conditions and any delays that are expected in flight, and the aeroplane carries sufficient fuel and oil to ensure that it can safely complete the flight.

When the flight is conducted in accordance with the visual flight rules, the amount of fuel to be carried must permit:

- For VFR flight during day time, the flight to the aerodrome of intended landing with an additional flight time for at least 30 minutes at normal cruising altitude
- For VFR flight during night time, the flight to the aerodrome of intended landing with an additional flight time for at least 45 minutes at normal cruising altitude

2.6. Non applicable subject for IVAO

The regulation also takes into account subjects like:

- Re-fuelling with passengers on board
- Oxygen supply
- Passenger safety equipment
- Incapacitated flight crew members or passenger injury.

The documentation will not consider these items as they are not used in the IVAO network.

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3. Large and turbojet aeroplanes

The following operation chapter shall be subject to the international general aviation operation with:

- Aircraft with a maximum certificated take-off weight exceeding 5700kg (M>5700kg)
- Aircraft equipped with one or more turbojet engines

All information given in the previous chapter is also applicable for large and turbojet aeroplanes.

3.1. Checklists

Checklists shall be used by flight crews during all phases of operations, and in emergencies, to ensure compliance with the operating procedures contained in the aircraft operating manual.

3.2. Take-off alternate aerodrome

A take-off alternate aerodrome shall be selected and specified in the flight plan if the weather conditions at the aerodrome of departure are at or below the applicable aerodrome operating minima or it would not be possible to return to the aerodrome of departure for other reasons.

The take-off alternate aerodrome when required shall be located within the following distance from the aerodrome of departure:

- For aeroplanes having 2 engines, not more than a distance equivalent to a flight time of 1 hour at single-engine cruise speed
- For aeroplanes having 3 or more engines, not more than a distance equivalent to a flight time of 2 hours at one-engine inoperative cruise speed

4. Aeroplane performance operating limitations

An aeroplane shall be operated in compliance with its certification approved documents and within the operating limitations prescribed by the certifying authority.

The pilot-in-command shall determine that aeroplane performance will permit the take-off and departure to be carried out safely.

5. Aeroplane equipment

Note that in this section, we will not describe all the inboard equipment that is not applicable for IVAO (life jackets, oxygen, flight recorders, microphone, fire extinguisher, data link recorders and emergency locator system...)

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5.1. VFR flight

All aeroplanes when operating VFR shall be equipped with a means of measuring and/or displaying:

- Magnetic heading
- Pressure altitude
- Indicated airspeed
- Equipment displaying time in hours minutes and seconds
- Additional equipment which may be prescribed by local authority

Regulation recommends that VFR flights which are operated as controlled flights should be equipped in accordance with IFR operation.

5.2. Night VFR flight

All aeroplanes when operating night VFR shall be equipped with a means of measuring and/or displaying:

- Magnetic heading (standby compass)
- Pressure altitude
- Indicated airspeed with a means of preventing malfunctioning due to either condensation or icing
- Turn and slip
- Aircraft altitude
- Stabilized aircraft heading
- Supply of power to the gyroscopic instruments is adequate
- Outside air temperature
- Rate-of-climb and descent
- Equipment displaying time in hours minutes and seconds
- Additional equipment which may be prescribed by local authority

In addition to these requirements, aircraft with a maximum certificated take-off weight exceeding 5700kg or aircraft equipped with one or more turbojet engines shall be equipped with 2 independent altitudes measuring and display systems.

In addition, an aeroplane shall be equipped with:

- The lights required in flight and on the movement area of an aerodrome
- A landing light
- Illumination for all flight instruments and equipment

5.3. Ground proximity warning systems - GPWS

All turbine-engined aeroplanes with a maximum certificated take-of mass greater than 5700kg shall be equipped with a ground proximity warning system which has a forward looking terrain avoidance function.

5.4. Emergency power supply

Aeroplanes of a maximum certificated take-off mass of over 5700kg (after 1/1/1975), shall be fitted with an emergency power supply independent of the main electrical generating system, for the purpose of operating and illuminating for a minimum period of 30 minutes, an attitude indicating instrument (artificial horizon). This emergency power system shall be automatically operative after the total failure of the main electrical generating system.

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5.5. Airborne collision avoidance system (ACAS)

All turbine-engined aeroplanes with a maximum take-off mass in excess of 15000kg or authorized to carry more than 30 passengers shall be equipped with airborne collision avoidance system (ACAS II) and airworthiness certificate was first issued after 1/1/2007.

Regulation recommends ACAS II for all turbine-engined aeroplanes greater than 5700kg.

In IVAO, the IvAp interface gives the opportunity to activate a TCAS system which can be considered to be the required ACAS.

6. Aeroplane communication and navigation equipment

6.1. Communication equipment

An aeroplane to be operated using visual flight rules (VFR) in controlled flights shall be provided with radio communication equipment capable of conducting two-way communication at any time during flight with air traffic controller.

The radio communication equipment shall also provide for communication on the aeronautical emergency frequency 121.500MHz.

In IVAO, the radio communication is given by the IvAp interface using text communication or via Teamspeak using voice communication. Only VHF frequencies are simulated including 121.500MHz (Guard frequency).

6.2. Navigation equipment

An aeroplane shall be provided with navigation equipment which will enable it to proceed:

- In accordance with the flight plan
- In accordance with the requirement of air traffic services

Navigation for flights under visual flight rules is accomplished by visual reference to landmarks.

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