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STATUTORY INSTRUMENTS

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**2016 No. 765**

**The Air Navigation Order 2016**

**PART 5**

Operations

CHAPTER 2

Operational rules for [<sup>F1</sup>Non-Part-21] aircraft

**Textual Amendments**

- F1** Word in Pt. 5 Ch. 2 heading substituted (31.12.2020) by [The Aviation Safety \(Amendment etc.\) \(EU Exit\) Regulations 2019](#) (S.I. 2019/645), reg. 1, **Sch. 1 para. 21** (with Sch. 3) (as amended by S.I. 2019/1098, regs. 1(3), 12); 2020 c. 1, Sch. 5 para. 1(1)

*SECTION 1*

*Crew required to be carried*

**Flight crew required by aircraft registered elsewhere than in the United Kingdom**

- 66.**—(1) This article applies to an aircraft registered in a country other than the United Kingdom.  
(2) An aircraft must not fly unless it carries a flight crew of the number and description required by the law of the country in which it is registered.

**Flight crew required by aircraft registered in the United Kingdom**

- 67.**—(1) An aircraft registered in the United Kingdom must carry a flight crew adequate in number and description to ensure the safety of the aircraft.  
(2) An aircraft—  
(a) which has a flight manual, must carry a flight crew of at least the number and description specified in that flight manual;  
(b) which does not currently have a flight manual but has done in the past, must carry a flight crew of at least the number and description specified in that flight manual.

*SECTION 2*

*Duties of Pilot in Command*

**Responsibilities and authority of pilot in command**

- 68.** The pilot in command of an aircraft is responsible—

- (a) before every flight, for defining the roles and duties of each crew member;
- (b) for the operation and safety of the aircraft and for the initiation, continuation, termination or diversion of a flight in the interest of safety; and
- (c) during aircraft operations, for ensuring the safety of all crew members, passengers and cargo on board.

### **Obligations of pilot in command**

**69.**—(1) The pilot in command must only use aerodromes and operating sites that are adequate for the type of aircraft and operation concerned.

#### *Flight preparation*

- [<sup>F2</sup>(2) Before commencing a flight the pilot in command must be satisfied that—
- (a) the flight can be made safely, taking into account the latest information available as to the route and aerodrome to be used; and
  - (b) the ground and water facilities, including any required communication and navigation facilities, are adequate for the intended flight.]

#### *Operating procedures*

- (3) The pilot in command must ensure that—
- (a) the flight is performed in such a way that the operating procedures specified in the flight manual, or where required the operations manual, for the preparation and execution of the flight are followed; and
  - (b) procedures are established and followed for any reasonably foreseeable emergency situation.

#### *Meteorological conditions*

- (4) The pilot in command must only commence or continue—
- (a) a Visual Flight Rules flight if—
    - (i) the latest available meteorological information indicates that the weather conditions along the route and at the intended destination aerodrome at the estimated time of use will be at or above the applicable Visual Flight Rules operating minima; and
    - (ii) the pilot in command has planned an alternative course of action to provide for the eventuality that the flight cannot be completed as planned because of weather conditions;
  - (b) a flight under Instrument Flight Rules towards the planned destination aerodrome if the latest available meteorological information indicates that, at the estimated time of arrival, the weather conditions at the destination or at least one destination alternate aerodrome are at or above the applicable aerodrome operating minima notified, prescribed or otherwise designated by the relevant competent authority.

#### *Selection of destination alternate aerodrome*

(5) If, according to the information available, an aircraft would be required to be flown in accordance with the Instrument Flight Rules at the aerodrome of intended landing, the pilot in command of the aircraft must select before take-off a destination alternate aerodrome unless no aerodrome suitable for that purpose is available.

(6) A flight to be conducted in accordance with the Instrument Flight Rules to an aerodrome when no suitable destination alternate aerodrome is available must not be commenced by the pilot in command unless—

- (a) an instrument approach procedure notified, prescribed or otherwise designated by the relevant competent authority is available for the aerodrome of intended landing; and
- (b) available current meteorological information indicates that visual meteorological conditions will exist at the aerodrome of intended landing from two hours before until two hours after the estimated time of arrival.

*Navigation and landing during loss of navigational capability*

(7) The pilot in command must ensure that sufficient means are available to navigate and land at the destination aerodrome or at any destination alternate aerodrome in the case of loss of navigational capability for the intended approach and landing operation.

*Airworthiness, equipment, baggage and cargo*

(8) The pilot in command must ensure that—

- (a) the aircraft is airworthy;
- (b) instruments and equipment required for the execution of the flight are installed in the aircraft and are operative, unless operation with inoperative or missing equipment is permitted by <sup>F3</sup>... the CAA;
- (c) all equipment, baggage and cargo are properly loaded and secured and that an emergency evacuation of the aircraft remains possible.

*Mass and balance requirements*

(9) The pilot in command must ensure that during any phase of operation, the loading, the mass and, except for balloons, the centre of gravity position of the aircraft comply with any limitation specified in the flight manual, the weight schedule required by article 43, or equivalent document.

*Fuel, oil and ballast*

(10) The pilot in command must ensure that—

- (a) in the case of a flying machine or airship, sufficient fuel, oil and engine coolant (if required) are carried for the intended flight, and that a safe margin has been allowed for contingencies;
- (b) in the case of a public transport flight, the instructions in the operations manual relating to fuel, oil and engine coolant have been complied with; and
- (c) in the case of an airship or balloon, sufficient ballast is carried for the intended flight.

*Performance based navigation*

(11) The pilot in command must ensure that when performance based navigation is required for the route or procedure to be flown—

- (a) the relevant performance based navigation specification is stated in the flight manual or other document that has been approved by the CAA or another competent authority;
- (b) any navigational database required for performance based navigation is suitable and current; and
- (c) the aircraft is operated in conformity with the relevant navigation specification and limitations in the flight manual or other document mentioned in sub-paragraph (a).

#### Textual Amendments

- F2** Art. 69(2) substituted (14.12.2017) by [The Air Navigation \(Amendment\) Order 2017 \(S.I. 2017/1112\)](#), arts. 1, **17(a)**
- F3** Words in art. 69(8)(b) omitted (14.12.2017) by virtue of [The Air Navigation \(Amendment\) Order 2017 \(S.I. 2017/1112\)](#), arts. 1, **17(b)**

#### Pilot to remain at controls and be secured in seat

**70.**—(1) During flight, the pilot in command must—

- (a) keep any safety belt fastened while at the pilot's station; and
- (b) remain at the controls of the aircraft at all times except if another pilot is taking the controls.

(2) If the aircraft is required by or under this Order to carry two pilots, the pilot in command must cause both pilots to remain at the controls during take-off and landing.

(3) If the aircraft carries two or more pilots (whether or not it is required to do so) and is flying on a flight for the purpose of the public transport of passengers, the pilot in command must remain at the controls during take-off and landing.

(4) An operator must not permit a helicopter rotor to be turned under power for the purpose of making a flight unless there is a person at the controls entitled in accordance with article [<sup>F4</sup>137] to act as pilot in command of the helicopter.

#### Textual Amendments

- F4** Word in art. 70(4) substituted (14.12.2017) by [The Air Navigation \(Amendment\) Order 2017 \(S.I. 2017/1112\)](#), arts. 1, **18**

#### Passengers to be seated and properly secured

**71.** The pilot in command of an aircraft other than a balloon must ensure that—

- (a) prior to and during taxiing, take-off and landing; and
- (b) whenever deemed necessary in the interest of safety,

each passenger on board occupies a seat or berth and has their safety belt or restraint device properly secured.

#### Survival equipment

**72.**—(1) This article applies to any aircraft registered in the United Kingdom.

(2) The pilot in command must be satisfied on reasonable grounds before take-off that the aircraft carries such additional equipment as the pilot in command reasonably considers necessary for the purposes of facilitating the survival of the persons carried in the aircraft.

(3) In complying with paragraph (2) the pilot in command must have regard to the circumstances of the intended flight, including in particular the likelihood of ditching and the availability of search and rescue facilities.

(4) The pilot in command must determine the risks to survival of the occupants of the aircraft in the event of a ditching when deciding if life-jackets must be worn by all occupants.

### **Passenger briefings**

73.—(1) The pilot in command must ensure that before or, where appropriate, during the flight, passengers are given a briefing on emergency equipment and procedures.

(2) This article does not apply to the pilot in command of an aircraft registered in the United Kingdom in relation to a flight under and in accordance with the terms of a police air operator's certificate.

### **Demonstration and use of oxygen**

74.—(1) The pilot in command must ensure that—

- (a) before or, where appropriate, during the flight, passengers are given a briefing on use of supplemental oxygen where it is proposed that during the flight the cabin altitude will exceed 13,000 feet;
- (b) the pilot and flight crew members engaged in performing duties essential to the safe operation of an aircraft in flight use supplemental oxygen continuously whenever the cabin altitude exceeds—
  - (i) 10,000 feet for a period of more than 30 minutes; or
  - (ii) 13,000 feet; and
- (c) whenever the cabin altitude exceeds 13,000 feet, all passengers are recommended to use supplemental oxygen.

## *SECTION 3*

### *Take-off and landing conditions*

#### **Take-off and landing conditions**

75.—(1) Before commencing take-off, the pilot in command—

- (a) of a balloon must be satisfied that, according to the information available, the weather at the operating site or aerodrome would not prevent a safe take-off and departure;
- (b) of all other aircraft must be satisfied that—
  - (i) according to the information available, the weather at the aerodrome or operating site and the condition of the runway or final approach and take-off area intended to be used would not prevent a safe take-off and departure; and
  - (ii) aerodrome operating minima notified, prescribed or otherwise designated by the relevant competent authority will be complied with.

(2) Before commencing an approach to land, the pilot in command must be satisfied that, according to the information available, the weather at the aerodrome or the operating site and the condition of the runway or final approach and take-off area intended to be used would not prevent a safe approach, landing or missed approach.

<sup>F5</sup>(3) .....

#### **Textual Amendments**

**F5** Art. 75(3) omitted (14.12.2017) by virtue of [The Air Navigation \(Amendment\) Order 2017 \(S.I. 2017/1112\)](#), arts. 1, 19

### **Aerodrome operating minima**

76.—(1) The pilot in command must use the departure and approach procedures notified, prescribed or otherwise designated by the relevant competent authority for the runway or final approach and take-off area to be used.

(2) The pilot in command may deviate from a departure route, arrival route or approach procedure—

- (a) provided obstacle clearance criteria can be observed, full account is taken of the operating conditions and any air traffic control clearance is adhered to; or
- (b) when being radar-vectored by an air traffic control unit.

#### *Operating minima*

(3) For flights under Instrument Flight Rules, the pilot in command must select and use aerodrome operating minima for each departure, destination and destination alternate aerodrome which—

- (a) must not be lower than those notified, prescribed or otherwise designated by the relevant competent authority;
- (b) when undertaking low visibility operations, have been approved by the CAA or the law of the country in which the aircraft is registered.

(4) The pilot in command may commence an instrument approach regardless of the reported runway visual range or visibility.

(5) If the reported runway visual range or visibility is less than the applicable minimum notified, prescribed or otherwise designated by the relevant competent authority, the pilot in command must not continue the approach—

- (a) below 1,000 feet above the aerodrome; or
- (b) into the final approach segment in the case where the decision height or the minimum descent height is more than 1,000 feet above the aerodrome.

(6) If, after passing 1,000 feet above the aerodrome, the reported runway visual range or visibility falls below the applicable minimum notified, prescribed or otherwise designated by the relevant competent authority, the pilot in command may continue the approach to the decision height or the minimum descent height.

(7) The pilot in command may continue the approach below the decision height or the minimum descent height and the landing may be completed provided that the visual reference adequate for the type of approach operation and for the intended runway is established at the decision height or the minimum descent height and is maintained.

(8) Where the runway visual range is not available, the pilot in command may derive the runway visual range values by converting the reported visibility.

## *SECTION 4*

### *Equipment of aircraft*

#### **Equipment of aircraft**

77.—(1) An aircraft must not fly unless it is equipped with equipment which—

- (a) complies with the law of the country in which the aircraft is registered or the State of the operator; and
- (b) enables communications to be made and the aircraft to be navigated, in accordance with—
  - (i) the provisions of this Order and any regulations made under this Order; or

(ii) any notified airspace requirements.

(2) Paragraphs (3) and (4) apply to any aircraft registered in the United Kingdom [<sup>F6</sup>other than when flying for public transport].

(3) An aircraft to which this paragraph applies must not fly unless it is so equipped and marked in accordance with Schedule 5 (aircraft equipment).

(4) The equipment in Schedule 5 must be—

- (a) of a type approved by <sup>F7</sup>... the CAA either generally or in relation to a class of aircraft or in relation to that aircraft, unless it is equipment listed in paragraph 1(2) of that Schedule; and
- (b) installed in a manner approved by <sup>F7</sup>... the CAA.

(5) The equipment carried in compliance with this article must be installed or stowed and kept stowed, maintained and adjusted, so as to be readily accessible and capable of being used by the person for whose use it is intended.

(6) The position of equipment provided for emergency use must be indicated by clear markings in or on the aircraft.

[<sup>F8</sup>(7) Any equipment installed or carried in an aircraft must be installed, carried, maintained and adjusted so that such equipment—

- (a) does not impair the airworthiness of the aircraft or the proper functioning of any other instrument or equipment necessary for the safety of the aircraft; and
- (b) is not a source of danger to the aircraft.]

**Textual Amendments**

- F6** Words in art. 77(2) inserted (14.12.2017) by [The Air Navigation \(Amendment\) Order 2017 \(S.I. 2017/1112\)](#), arts. 1, **20(a)**
- F7** Words in art. 77(4) omitted (31.12.2020) by virtue of [The Aviation Safety \(Amendment etc.\) \(EU Exit\) Regulations 2019 \(S.I. 2019/645\)](#), reg. 1, **Sch. 1 para. 22** (with Sch. 3) (as amended by S.I. 2019/1098, regs. 1(3), 12); 2020 c. 1, Sch. 5 para. 1(1)
- F8** Art. 77(7) inserted (14.12.2017) by [The Air Navigation \(Amendment\) Order 2017 \(S.I. 2017/1112\)](#), arts. 1, **20(b)**

**Minimum equipment requirements**

<sup>F9</sup>78. ....

**Textual Amendments**

- F9** Art. 78 omitted (14.12.2017) by virtue of [The Air Navigation \(Amendment\) Order 2017 \(S.I. 2017/1112\)](#), arts. 1, **21(1)**

*SECTION 5*

*Operation of radio and navigation equipment*

[<sup>F10</sup>**Carriage of equipment**

**78A.**—(1) This article applies to any aircraft registered in the United Kingdom.

(2) The CAA may permit an aircraft or class of aircraft to which this article applies to commence a flight in specified circumstances even though a specified item of equipment, which is required to be carried under articles 77 or 119 in the circumstances of the intended flight, is not carried or is not in a fit condition for use.

(3) An aircraft to which this article applies must not commence a flight if any of the equipment, which is required to be carried under articles 77 or 119 in the circumstances of the intended flight, is not carried or is not in a fit condition for use unless the aircraft does so in accordance with the terms of a permission granted to the operator under paragraph (2).]

#### Textual Amendments

**F10** Art. 78A inserted (14.12.2017) by [The Air Navigation \(Amendment\) Order 2017 \(S.I. 2017/1112\)](#), arts. 1, **21(2)**

#### Operation of radio in aircraft

**79.**—(1) A radio station in an aircraft must not be operated, whether or not the aircraft is in flight, except—

- (a) in accordance with the conditions of the licence issued for that station under the law of the country in which the aircraft is registered or the State of the operator; and
- (b) by a person duly licensed or otherwise permitted to operate the radio station under that law.

(2) The radio station in an aircraft must not be operated so as to cause interference which impairs the efficiency of aeronautical telecommunications or navigational services.

#### Operation of, and training in operation of, airborne collision avoidance system

**80.**—(1) Subject to paragraph (2), when ACAS II is used—

- (a) operational procedures and training must be in accordance with the Airborne Collision Avoidance Regulation;
- (b) the pilot in command—
  - (i) must apply the appropriate operational procedures and be adequately trained;
  - (ii) must not commence a flight unless satisfied that every member of the flight crew has had the training specified in sub-paragraph (c)(i);
- (c) every member of the flight crew—
  - (i) must apply the appropriate operational procedures and be adequately trained; and
  - (ii) must not act as a member of the flight crew on a flight unless that person has had that training.

(2) In the case of an aircraft which is registered elsewhere than in the United Kingdom, the airborne collision avoidance system must be operated in accordance with any procedures with which it is required to comply under the law of the country in which the aircraft is registered.

#### Minimum navigation performance

**81.**—(1) An aircraft registered in the United Kingdom must not fly in North Atlantic Minimum Navigation Performance Specification airspace unless it is equipped with navigation systems which enable the aircraft to maintain the prescribed navigation performance capability.

(2) The equipment required by paragraph (1) must—

- (a) be approved by <sup>F11</sup>... the CAA;



- (b) be installed in a manner approved by the CAA;
- (c) be maintained in a manner approved by the CAA; and
- (d) while the aircraft is flying in that airspace, be operated in accordance with procedures approved by the CAA.

#### Textual Amendments

**F11** Words in art. 81(2)(a) omitted (31.12.2020) by virtue of [The Aviation Safety \(Amendment etc.\) \(EU Exit\) Regulations 2019 \(S.I. 2019/645\)](#), reg. 1, **Sch. 1 para. 23** (with Sch. 3) (as amended by S.I. 2019/1098, regs. 1(3), 12); 2020 c. 1, Sch. 5 para. 1(1)

### Height keeping performance – aircraft registered in the United Kingdom

**82.**—(1) An aircraft registered in the United Kingdom must not fly in Reduced Vertical Separation Minimum airspace unless—

- (a) it is equipped with height keeping systems which enable the aircraft to maintain the required height keeping performance capability; or
  - (b) it is otherwise authorised by the appropriate air traffic control unit.
- (2) The equipment required by paragraph (1) must—
- (a) be approved by <sup>F12</sup>... the CAA;
  - (b) be installed in a manner approved by the CAA;
  - (c) be maintained in a manner approved by the CAA; and
  - (d) while the aircraft is flying in that airspace, be operated in accordance with procedures approved by the CAA.

#### Textual Amendments

**F12** Words in art. 82(2)(a) omitted (31.12.2020) by virtue of [The Aviation Safety \(Amendment etc.\) \(EU Exit\) Regulations 2019 \(S.I. 2019/645\)](#), reg. 1, **Sch. 1 para. 24** (with Sch. 3) (as amended by S.I. 2019/1098, regs. 1(3), 12); 2020 c. 1, Sch. 5 para. 1(1)

### Height keeping performance – aircraft registered elsewhere than in the United Kingdom

**83.**—(1) An aircraft registered elsewhere than in the United Kingdom must not fly in Reduced Vertical Separation Minimum airspace in the United Kingdom unless—

- (a) it complies with paragraph (2); or
  - (b) it is otherwise authorised by the appropriate air traffic control unit.
- (2) An aircraft complies with this paragraph if it is registered elsewhere than in the United Kingdom and—
- (a) it is so equipped with height keeping systems as to comply with the law of the country in which the aircraft is registered in so far as that law requires it to be so equipped when flying in any designated airspace; and
  - (b) the equipment is capable of being operated so as to enable the aircraft to maintain the height keeping performance notified for the airspace in which the aircraft is flying, and it is so operated.

### **Area navigation and required navigation performance capabilities – aircraft registered in the United Kingdom**

**84.**—(1) Subject to paragraph (3), an aircraft registered in the United Kingdom must not fly in Required Navigation Performance airspace unless it is equipped with area navigation equipment which enables the aircraft to maintain the navigation performance capability notified, prescribed or otherwise designated for that airspace.

- (2) The equipment required by paragraph (1) must—
- (a) be approved by <sup>F13</sup> ... the CAA;
  - (b) be installed in a manner approved by the CAA;
  - (c) be maintained in a manner approved by the CAA; and
  - (d) while the aircraft is flying in that airspace, be operated in accordance with procedures approved by the CAA.
- (3) An aircraft need not comply with the requirements of this article if—
- (a) the appropriate air traffic control unit, having been made aware of the lack of compliance, authorises the flight; and
  - (b) the aircraft complies with any instructions the air traffic control unit may give.

#### **Textual Amendments**

**F13** Words in art. 84(2)(a) omitted (31.12.2020) by virtue of [The Aviation Safety \(Amendment etc.\) \(EU Exit\) Regulations 2019](#) (S.I. 2019/645), reg. 1, **Sch. 1 para. 25** (with Sch. 3) (as amended by S.I. 2019/1098, regs. 1(3), 12); 2020 c. 1, Sch. 5 para. 1(1)

### **Area navigation and required navigation performance capabilities – aircraft registered elsewhere than in the United Kingdom**

**85.**—(1) Subject to paragraph (3), an aircraft registered elsewhere than in the United Kingdom must not fly in Required Navigation Performance airspace in the United Kingdom unless it complies with paragraph (2).

- (2) An aircraft complies with this paragraph if it is registered elsewhere than in the United Kingdom and—
- (a) it is equipped with area navigation equipment so as to comply with the law of the country in which the aircraft is registered in so far as that law requires it to be so equipped when flying within designated required navigation performance airspace; and
  - (b) the navigation equipment is capable of being operated so as to enable the aircraft to maintain the navigation performance capability notified for the airspace in which the aircraft is flying, and is so operated.
- (3) Paragraph (2) does not apply to an aircraft if—
- (a) the appropriate United Kingdom air traffic control unit, having been made aware of the lack of compliance, authorises the flight; and
  - (b) the aircraft complies with any instructions the air traffic control unit may give.

**Changes to legislation:**

There are currently no known outstanding effects for the The Air Navigation Order 2016,  
CHAPTER 2.