



بِسْمِ اللَّهِ الرَّحْمَنِ الرَّحِيمِ

**CIVIL AVIATION DEPARTMENT**  
**MINISTRY OF TRANSPORT AND CIVIL AVIATION**  
Male'  
Republic of Maldives

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## **AIR SAFETY CIRCULAR**

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### **MINIMUM FUEL AND OIL IN FLIGHT FOR PUBLIC TRANSPORT AIRCRAFT**

#### **1. INTRODUCTION**

- 1.1 Civil Aviation Regulations Part 15.23 requires the manner in which the quantities of fuel and oil, to be carried by the aircraft, are to be computed taking into account the adverse circumstances enroute. For safe operation of an aircraft, it is necessary that adequate quantity of fuel and oil is available for the planned flight.

#### **2. APPLICABILITY**

- 2.1 This Air Safety Circular prescribes the guidelines for the minimum fuel and oil required to be carried on board before commencement of any flight by an operator of public transport aircraft including helicopters, in the Maldives.

#### **3. OIL**

- 3.1 Sufficient amount of oil based on manufacturers recommendations and experience of oil consumption, must be carried in the oil tanks meant for the purpose and oil tank caps properly **LOCKED AND SECURED**. The AMEs servicing the aeroplanes should certify in the Technical Log or in any other approved document, the amount of oil uplifted. The type of oil used must meet approved specification of the engine manufacturer.

#### **4. MINIMUM FUEL REQUIREMENTS - GENERAL**

- 4.1 The total amount of fuel carried on board an aircraft must be sufficient for the intended flight and must include a safe margin for contingencies like change in the meteorological conditions and any other delays that may be expected in flight. The manner in which the amount should be calculated and the records that should be made before, during and after flight must be specified by the operator in his Operations Manual.
- 4.2 Operator must ensure that his Fuel Planning Policy allows for the carriage of additional fuel reserve, wherever it is known or suspected that there may be excessive landing delays due to traffic or Air Traffic Control (ATC) problems at destination or diversion air fields.

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- 4.3 It shall be the responsibility of the commander to ensure that the aircraft carries sufficient amount of fuel for the flight as per the Fuel Planning policy, outlined in company's Operations Manual.
- 4.4 Units of weight shown in the sector record page of the Technical Log must be the same as those on fuel gauges visible to the pilot. Exceptionally where there is a difference between the units on the fuel gauges and those on the sector record page, approved fuel conversion tables may be used. To have Load Sheet fuel recorded in Kilograms, uplift in Litres and aircraft gauges calibrated in Pounds must be avoided.
- 4.5 The type of fuel used must be of an approved type specified by the manufacturers in their documents.

**5. MINIMUM FUEL REQUIREMENTS - AEROPLANES OTHER THAN FLOATPLANES OPERATION UNDER VFR**

- 5.1 The minimum quantity of fuel required to be on board before the aeroplane departs, should be calculated and recorded. Only those procedures that are specified in the Operations Manual and approved, may be used.
- 5.2 The minimum fuel carried in an aeroplane before flight shall be at least the sum of the amount of fuel as indicated below.
- (a) start-up and taxi fuel;
  - (b) sector fuel
  - (c) alternate fuel i.e. fuel for a missed approach procedure and then from overhead the intended destination airfield to a suitable alternate.
  - (d) holding fuel, i.e. fuel to hold and make an approach at the alternate airfield calculated as follows.
    - (i) in the case of propeller-driven aeroplanes, fuel to hold for 45 minutes and carry out an approach and landing;
    - (ii) in the case of turbo-jet aeroplanes, fuel to hold for 30 minutes at 1500 ft above the airfield under International Standard Atmosphere (ISA) conditions and carry out an approach and landing;
  - (e) contingency fuel i.e. not less than 5% of the sum of Sector fuel and Alternate fuel.
- Note 1:* Account should be taken also of additional amounts of fuel such as those required for power checks, lengthy standard departure and arrival procedures and to compensate for potential delays enroute such as weather avoidance.

*Note 2:* An operator is required to spell out his Fuel Planning Policy in detail in his Operations Manual before commencing air operations in the Maldives.

**6. MINIMUM FUEL REQUIREMENTS - HELICOPTERS**

- 6.1 Whilst the requirement for helicopters follow the same general rules as those for aeroplanes, the ability of the helicopter to land safely away from a helipad has been taken into account.

- 6.2 For helicopter operations in the Maldives, the minimum fuel carried before flight shall be at least the sum of the amount of fuel as indicated below.
- a) route fuel from departure point to destination and fuel to carry out a go-around;
  - b) fuel to an alternate;
  - c) contingency reserve of 10% of (a) and (b) above.
  - d) at least 30 minutes holding fuel (at loiter speed). Additional holding fuel may be required if delays are likely to occur.
- 6.3 While flying to helipads under VFR, the requirements of alternate fuel may be waived, subject to the agreement of the Department of Civil Aviation, if cloud ceiling and visibility at the intended helipad are above certain minimum.

*Note:* Individual helicopter operators may define their fuel planning formulae to be included in their Operations Manual, approved by the Department of Civil Aviation.

## 7. FUEL REQUIREMENTS FOR FLOATPLANES (VFR)

- 7.1 No person may begin a flight in a floatplane under VFR conditions unless (considering wind and forecast weather conditions) there is enough fuel to fly to the destination aerodrome and after that for at least 30 minutes at normal cruise power

## 8. FUEL MONITORING IN FLIGHT

- 8.1 In-flight fuel checks for consumption should be carried out at least once on every sector and at intervals not exceeding 30 minutes. A calculation to determine the amount of fuel remaining and to predict the amount of fuel expected to remain overhead the aerodrome of intended landing should follow every check.

## 9. EFFECTIVITY

This Issue of Air Safety Circular comes into effect on 16 July 2002.

## 10. CANCELLATION

This Issue of Air Safety Circular cancels the latest ASC OPS 09 Issue 01 which should be destroyed.



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