



بِسْمِ اللّٰهِ الرَّحْمٰنِ الرَّحِیْمِ

## DEPARTMENT OF CIVIL AVIATION

Male'

Republic of Maldives

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# MALDIVIAN AIRWORTHINESS REQUIREMENTS

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### ***Subject:- AIRWORTHINESS FLIGHT TESTS***

#### **1. Introduction**

- 1.1 Civil Aviation Regulation, Maldives 1992 Part 5 prescribes the requirements in respect of operation of an aircraft without a valid Certificate of Airworthiness. The conditions for approval and conduct of such flights, known as 'A' conditions are given at Appendix I.

#### **2. Applicability**

- 2.1 This MAR prescribes the conditions for flight testing of an air craft under 'A' Condition flights, the Certification before and on completion and the minimum checks required during such flights.

#### **3. Definitions**

**Flight Test:** means the flying of an aircraft without any passenger on board, for the purpose of assessing -

- (i) the satisfactory completion of maintenance and/or
- (ii) the deterioration in performance

**Approved:** means approved by Director of Civil Aviation

#### **4. Airworthiness Flight Tests**

- 4.1 An aircraft shall be flight tested under circumstances mentioned below -
- (a) Prior to the issue of a Maldivian Certificate of Airworthiness

- (b) Annually at the time of renewal of Certificate of Airworthiness of aircraft or as defined by a fleet test programme agreed between the Director of Civil Aviation and the operator.
  - (c) Subsequent to maintenance, repair or modification which is likely to affect operational or flight characteristics of the aircraft.
  - (d) Subsequent to change of an engine on a single or a twin engine aircraft.
  - (e) On a three or four engine aircraft, a test flight after one engine change may not be carried out provided satisfactory ground testing procedure acceptable to DCA is evolved prior to availing of this relaxation. However, if 2 or more than 2 engine are changed, a test flight is necessary.
- 4.2 Notwithstanding the circumstances mentioned in para 4.1 above, DCA may require any aircraft or any type of aircraft to undergo such flight testing and at such frequency as considered necessary.
- 4.3 Operator of an aircraft shall, for each type of aircraft operated by him, specify in his Engineering Exposition and/or Maintenance Schedule, the circumstances under which a flight test is to be performed. This shall not only include the circumstances laid down in para 4.1 above, but also any other latest requirements issued by the manufacturer.

## **5. Certification before Flight Tests**

- 5.1 Before an airworthiness flight test is carried out, the aircraft, engines and equipment shall be inspected by an appropriately licensed AME(s)/by a person(s) approved by the DCA for the purpose to determine whether it is fit for flight. Upon completion of the inspection and the documentation/worksheets in all respects, a certificate as specified in para 5.2 shall be issued in duplicate. One copy shall be delivered to the pilot test flying the aircraft and the other copy shall be retained by the operator separately from the aircraft.
- 5.2 The format of Certificate of Fitness for Flight shall include the following
- (i) A certificate to the effect that the aircraft, engines and equipment has been inspected and is fit for flight provided the aircraft is satisfactorily loaded in accordance with the approved Weight and Centre of Gravity Schedule.
  - (ii) The approved data and schedules etc. are used for the inspection.
  - (iii) A statement of the period of validity of the certificate and that it shall cease to be valid if the airworthiness condition of the aircraft is altered.
  - (iv) The name(s), licence or approval designation of the person(s) making the certificate in accordance with the terms of the approval and the date of certification.

- 5.3 The licensed/Approved individual who signs the pretest flight certification documents shall also ensure that the documents shows the purpose of the test flight and the information required to be observed/recorded during the test flight by the flight crew. The pilot test flying the aircraft shall also be briefed on these aspects.
- 5.4 The validity of this certificate shall not exceed 48 hours. The aircraft, however shall be re-inspected and re-certified if the airworthiness condition of the aircraft is affected during the period of the validity.

## 6. **Flight Test Schedule**

6.1 Operators shall, for each type of aircraft operated by them, prepare a flight test schedule which must be acceptable to the Director of Civil Aviation and shall contain, as a minimum, the following checks to ensure:

- (i) that the performance of the aircraft has not deteriorated.
- (ii) that the handling characteristics are satisfactory and have not deteriorated with time. These tests will take into account of the flying characteristics of the aircraft revealed during type certification and the subsequent history of the aircraft.
- (iii) a qualitative assessment of the take-off and that “that all engine operating climb performance” is within acceptable limits as specified by the manufacturers/DCA.
- (iv) satisfactory assessment of the trim of the aircraft and the effectiveness of the primary flight controls and trimmers, in steady flight.
- (v) satisfactory hover manoeuvres for helicopters.
- (vi) that the stalling speed has not increased beyond the figure specified by the manufacturers.

*Note:* The stalling characteristics of the aircraft if required to be checked, must be checked **at a safe altitude**

- (vii) a qualitative assessment of the landing.
- (viii) that through normal operating range of the aircraft no abnormal vibrations exist.
- (ix) satisfactory functioning of the aircraft equipment in flight.

*Note:* Controls, systems and equipment which are used regularly may be considered, for the purpose of this MAR, to have been checked on the basis of normal usage.

## 7. **Flight Test Results**

7.1 The flight test results, appropriate to the flight test performed, shall be completed by the Pilot-in-Command and submitted to the DCA for acceptance except those made in accordance with paragraph 4.1 (c) and (d) above.

7.2 A flight test report and record of defects and adjustment shall be made in the flight Technical log of the aircraft or other equivalent documents approved by the DCA.

7.3 A copy of all flight test reports shall be retained by the operator with the aircraft records.

## **8. Certification after Flight Test**

8.1 The flight test results shall include a certificate, in a proforma given at Appendix II which shall be signed by the Pilot-in-Command who conducted the test.

## **9. Flight Test Personnel and Facilities**

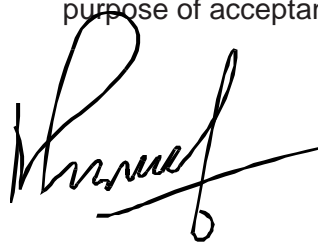
9.1 The qualification and experience of the flying staff and other persons engaged in flight tests, together with the facilities and the equipment provided for the flight tests shall be acceptable to the Director of Civil Aviation.

## **10. Evaluation of Flight Test Results**

10.1 The "Rate of climb" figure read off the aircraft instrument, during the climbing phase of the test flight, is related to test conditions, viz mean altitude, mean temperature and mean weight. This will be termed as "Observed Actual Climb Performance" figure.

10.2 The "Expected Climb Performance" figure corresponding to test conditions (mean altitude, mean temperature and mean weight) shall be obtained from the relevant manual of the aircraft like flight manual/operation manual/Pilot's notes.

10.3 The "Observed Actual Climb Performance" figure (in para 10.1 shall in no case be lower than that recommended limit by the manufacturers, failing which not lower by more than 3% (in terms of feet/per minute) of the "Expected Climb Performance" figure (para 10.2) for the purpose of acceptance of flight test report.



Mohamed Shareef  
**DIRECTOR OF CIVIL AVIATION**

**'A' CONDITIONS**

1. The aircraft shall be either an aircraft in respect of which a Certificate of Airworthiness or validation has previously been in force under the regulations, or an aircraft identical in design with an aircraft in respect of which such a certificate is or has been in force.
2. The aircraft shall fly only for the purpose of enabling it to;
  - (a) qualify for the issue or renewal of the C of A or of the validation thereof or the approval of a modification of the aircraft, after an application has been made for such issue, renewal, validation or approval as the case may be;
  - (b) proceed to or from a place at which any inspection, approval, test or weighing of, or the installation of the equipment in, the aircraft is to take place for a purpose referred to in sub-paragraph (a) above, after such an inspection has been made, or at which the installation of furnishings in, or the painting of, the aircraft is to be undertaken; or
  - (c) proceed to or from a place at which the aircraft is to be or has been stored.
3. The aircraft shall carry the minimum flight crew specified in the C of A or validation, which has previously been in force in respect of the aircraft, or is or has previously been in force in respect of any other aircraft of identical design.
4. The aircraft shall not carry any persons or cargo except persons performing duties in the aircraft in connection with the flight or persons who are carried in the aircraft to perform duties in connection with a purpose referred to in paragraph 2 above .
5. The aircraft shall not fly any inhabited island in the Maldives or any congested area of a city, town or settlement except to the extent that it is necessary to do so in order to take-off from or land at an aerodrome, in accordance with normal aviation practice.
6. Without prejudice to the provisions of the regulations, the aircraft shall carry such flight crew as may be necessary to ensure the safety of the aircraft.

## FLIGHT TEST CERTIFICATE

Aircraft Type: \_\_\_\_\_

Registration: \_\_\_\_\_

Constructor's No. \_\_\_\_\_

I CERTIFY that I have tested the above aircraft to Airworthiness Flight Test  
Schedule reference \_\_\_\_\_

The following deficiencies and satisfactory features were revealed by the flight  
test or noted at other times during the flight(s) and I CONSIDER that those  
annotated "R" and/or "FT" should be dealt with as follows:

- a) Those annotated "R" should be rectified prior to the renewal of the Certificate of Airworthiness or flight for hire or reward, whichever occurs first.
- b) Those annotated "FT" re-assessed in flight, following remedial action, before the defect can be considered to be rectified.

1. \_\_\_\_\_

2. \_\_\_\_\_

3. \_\_\_\_\_

4. (etc.) \_\_\_\_\_

The above have been transcribed to \_\_\_\_\_ for rectification  
and clearance.

Pilot \_\_\_\_\_

Signed \_\_\_\_\_

Date \_\_\_\_\_

Licence No. \_\_\_\_\_