



CAMEROON CIVIL AVIATION AUTHORITY – DIRECTION OF AVIATION SAFETY		
MANUAL	REF	DSA.AOC.MAN.001
AIR OPERATOR CERTIFICATION AND SURVEILLANCE MANUAL	ED	02 DU 01/04/2015
	REV	00 DU 01/04/2015

## CHAPTER 6 AIRWORTHINESS INSPECTION AND DEMONSTRATION PHASE

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### 6.1 GENERAL

**6.1.1** The applicant is required to demonstrate to CCAA that an organization, with the necessary qualified staff, equipment and facilities, is set-up and will be responsible for ensuring that the aircraft remain in an airworthy condition for the duration of their operational life.

**6.1.2** Demonstrations will include actual performance of airworthiness and maintenance related activities while being observed by inspectors of the certification team. CCAA inspectors will carry out on-site inspections of aircraft maintenance and support facilities, assessment of maintenance control and planning systems and inspection of aircraft.

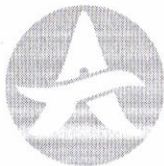
**6.1.3** It is understood that as new operator there will not be any data to evaluate. During these demonstrations and inspections, the CCAA evaluates the policies, methods, procedures and instructions as described in the manuals and other documents developed by the applicant are in place for the commencement of operations. This will include interviews with personnel to ensure that the procedures and instructions have been properly transmitted and understood.

**6.1.4** The airworthiness inspector (AWI) will inform the applicant of all deficiencies observed during the demonstration in writing and ensure that all corrective actions taken to correct the deficiencies are satisfactorily accepted by CCAA before the AOC can be issued.

### 6.2 REFERENCES

The following references applies to this procedure:

- a) regulations
- b) Other corresponding State Regulations / standards / requirements



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### 6.3 AIRWORTHINESS AND MAINTENANCE RELATED INSPECTIONS

**6.3.1** The AWI will conduct on-site inspections to validate the procedures and processes described in the applicant's documents. This would require the applicant to demonstrate, to the satisfaction of the AWI, that it is capable of conducting the described activities effectively and efficiently. These would include the following:

- a) Maintenance control manual;
- b) Maintenance programme (including reliability programme);
- c) Maintenance arrangements (including maintenance contract)

**6.3.2** The AWI will also conduct inspection of the aircraft the applicant intends to operate. The detailed inspections is to verify that the equipment and documentation on board the aircraft complies with CCAA requirements and the maintenance status of the aircraft in relation to the maintenance programme.

### 6.4 ADMINISTRATIVE PROCEDURES

**6.4.1** The assigned airworthiness inspector (AWI) shall complete the appropriate checklist.

**6.4.2** The assigned AWI shall inform the applicant, in writing, of all discrepancies that will require follow-up. Discrepancies should be noted and forwarded to the applicant together with a cover letter.

**6.4.3** All discrepancies must be addressed or actioned by the applicant to the satisfaction of the assigned AWI.

**6.4.4** The assigned AWI, upon the applicant satisfactorily demonstrating and meeting all requirements, will inform the certification team leader in writing to recommend the issuance of the AOC.

**6.4.5** The completed job aid, all completed discrepancy reports, any correspondence with the applicant and any relevant documents submitted in conjunction with the application should be appropriately filed.



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## CHAPTER 7 AIRWORTHINESS COORDINATION OF OPERATIONS APPROVAL

### 7.1 GENERAL

7.1.1 There is need for coordination between operations and airworthiness to work together to approve the following documents and special operations:

- a) Minimum equipment list (MEL)
- b) Performance based navigation (PBN)
- c) Reduced vertical separation minima (RVSM)
- d) Low visibility, Category II and Category III approach
- e) Extended diversion time operation (EDTO)

7.1.2 Flight operations inspector (FOI) is the primary CCAA official responsible for the overall process of administering, evaluating, and approving these documents and special operations. It is essential that the FOI work coordinates closely with the airworthiness inspector (AWI), on airworthiness matters, and other individuals or groups involved in this process prior to the approval of the documents and special operations.

7.1.3 The AWI will inform the designated FOI when the airworthiness evaluation for the respective special operations is satisfactory.

### 7.2 MINIMUM EQUIPMENT LIST (MEL)

Note: The complete MEL approval procedure is described in Volume 2, Chapter 3

#### 7.2.1 General

7.2.1.1 Regulations states that a Master Minimum Equipment List (MMEL) issued by the organization responsible for the type design of an aircraft and approved by the State of Design shall be accepted as the basis for the development of a minimum equipment list (MEL). "Arrêté N°00606/MINT, Chapter 6" requires the MEL to be approved for each aircraft type operated by the operator.





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**7.2.1.2** An MEL is developed with procedures to allow the continued operation of an aircraft with specific items of equipment inoperative under certain circumstances. It is based mainly on the MMEL established for the aircraft type. Equipment allowed to be inoperative for flight in the MEL cannot be less restrictive than those established in the MMEL for the aircraft type.

**7.2.1.3** The MEL needs to be available to flight crew, maintenance personnel and personnel responsible for operational control. The MEL also needs to include instructions for its use, including defects entry, categories, and actions to be taken (maintenance or operation) and placarding.

#### **7.2.2 Approval of MEL (airworthiness aspects)**

**7.2.2.1** In the application for the approval of a MEL, the operator's MEL should:

- a) identify the minimum equipment and conditions for an aircraft to maintain conformity with the standards of airworthiness and to meet the operating rules for the type of operation;
- b) define operational procedures necessary to maintain the required level of safety and to deal with inoperative equipment; and
- c) define maintenance procedures necessary to maintain the required level of safety and procedures necessary to secure any inoperative equipment.

**7.2.2.2** The MEL should also contain a description of how and when the MEL is to be used including procedures for:

- a) Repair interval categories application
- b) Repair interval extensions
- c) Deferral of items
- d) Placarding of unserviceable items
- e) Dispatch of aircraft



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**7.2.2.3** The MEL is customized from the MMEL to the operator's specific aircraft, aircraft equipment, modifications and operating environment and may be dependent upon the route structure, geographic location, and number of airports where spares and maintenance capability are available.

Where the MMEL cannot address some of the variables, it uses a standard terms such as "As required by Regulations". The operator is required the applicable CCAA regulations to develop operations and/or maintenance procedures to be meet the requirements.

**7.2.2.4** The operator shall submit a training programme for maintenance personnel on the appropriate policies and procedures in using a MEL.

Note: The AWI will use the same checklist of the OPS Inspector, DSA.AOC.CHKL.077, to evaluate the airworthiness aspects of MEL

### **7.3 REDUCED VERTICAL SEPARATION MINIMA (RVSM)**

Note: The complete RVSM approval procedure is described in Volume 2, Chapter 20

**7.3.1** General regulations requires that operators obtain authorization prior to conducting flights operation of an aircraft within RVSM airspace. Airworthiness inspectors shall ensure the aircraft is approved as meeting the requirements for operation in RVSM airspace and that the aircraft altimetry and height-keeping equipment is maintained in accordance with approved procedures and servicing schedules.

**7.3.2** Approval of RVSM operations (airworthiness aspects)

**7.3.2.1** The applicant shall provide documentation to confirm that each aircraft is certificated for RVSM operations.

**7.3.2.2** The operator shall submit a configuration list detailing the equipment used for the RVSM operation.

**7.3.2.3** All equipment required for RVSM operations shall be identified in the maintenance programme. Similarly, these equipments shall also be identified in the MEL.



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**7.3.2.4** A list of inspections and functional checks, together with their intervals, required for the continued altitude monitoring of the RVSM approved aircraft to be included into the maintenance programme. These RVSM maintenance requirements can usually found in the maintenance manual of aircraft type.

**7.3.2.5** The operator should provide procedures for configuration control to ensure that the aircraft is appropriately equipped for RVSM operations.

**7.3.2.6** The operator shall submit a training programme for maintenance personnel on the appropriate policies and procedures for RVSM operations.

Note: The AWI will use the same checklist of the OPS Inspector, DSA.AOC.CHKL.080, to evaluate the airworthiness aspects of RVSM

## **7.4 PERFORMANCE BASED NAVIGATION (PBN)**

Note: The complete PBN approval procedure is described in Volume 2, Chapter 16

**7.4.1** General regulations require an operator to obtain authorization for the conduct of PBN operations. The airworthiness inspector should ensure that each item of the radio-navigation equipment installed is of a type and design appropriate to its intended function and that the installation functions properly.

### **7.4.2 Approval of PBN operations (airworthiness aspects)**

**7.4.2.1** An aircraft is eligible for a particular PBN application provided there is clear statement in:

- a) the TC; or
- b) the STC; or
- c) the associated documentation — Aircraft flight manual or equivalent document;  
or
- d) a compliance statement from the manufacturer, which has been approved by the State of Design.

**7.4.2.2** The operator shall submit a configuration list detailing the pertinent hardware and software components and equipment used for the PBN operation.





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**7.4.2.3** All equipment required for PBN operations shall be identified in the maintenance programme. Similarly, these equipments shall also be identified in the MEL.

**7.4.2.4** The operator should provide maintenance procedures for configuration control to ensure that the aircraft is appropriately equipped for PBN operations.

**7.4.2.5** The operator shall provide a training programme for maintenance personnel on the appropriate policies and procedures for the respective type of PBN operations.

Note: The AWI will use the same checklists of the OPS Inspector, DSA.AOC.CHKL.081, DSA.AOC.CHKL.082, DSA.AOC.CHKL.083, DSA.AOC.CHKL.084, DSA.AOC.CHKL.085, to evaluate the airworthiness aspects of PBN

## **7.5 LOW VISIBILITY OPERATIONS AND CATEGORY II AND III APPROACH**

Note: The complete low visibility operations, Category II and III approach approval procedure is described in Volume 2, Chapter 17



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### 7.5.1 General

*“Instruction N°00464/CCAA/DNA du 22 Août 2006 relative aux catégories d'avion et aux opérations tout temps”* require an operator to obtain authorization for the conduct of low-visibility operations.

### 7.5.2 Approval of low visibility operations and Category II and III approach (airworthiness aspects)

**7.5.2.1** The operator shall include in the application to the CCAA relevant pages of the aircraft flight manual, type certificate (TC), supplemental TC, TC data sheet and/or the aeroplane operations manual attesting that the aeroplane meets the relevant airworthiness requirements and performance criteria for, as applicable, low visibility operations and Category II and/or Category III operations.

**7.5.2.2** The operator shall submit a configuration list detailing the pertinent hardware and software components and equipment used for the operation applied for.





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**7.5.2.3** The operator shall submit a list of equipment/systems that must be installed and serviceable at the commencement of a low visibility operations or a Category II or III approach.

**7.5.2.4** All equipment required for low visibility operations, Category II and III approach operations shall be identified in the maintenance programme and MEL.

**7.5.2.5** The operator should provide maintenance procedures for configuration control to ensure that the aircraft is appropriately equipped for low visibility operations, Category II and III approach operations.

**7.5.2.6** The operator shall provide a training programme for maintenance personnel on the appropriate policies and procedures for the respective type of low visibility operations, Category II and III approach operations.

Note: The AWI will use the same checklists of the OPS Inspector, DSA.AOC.CHKL.122, to evaluate the airworthiness aspects of Cat II/Cat III.

## **7.6 EXTENDED DIVERSION TIME OPERATIONS (EDTO)**

Note: The complete EDTO approval procedure is described in Volume 2, Chapter 21

**7.6.1** General regulations requires an operator to obtain EDTO approval for any operation by an aeroplane with two or more turbine engines where the diversion time to an enroute alternate aerodrome is greater than the threshold time established by CCAA. The operator should ensure the required level of safety is maintained under conditions of flight for extended periods following failure of an engine and/or essential systems.

### **7.6.2 Approval of EDTO (airworthiness aspects)**

**7.6.2.1** The applicant should submit a safety risk assessment which demonstrates how an equivalent level of safety will be maintained, taking into account the following:



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- a) capabilities of the operator;
- b) overall reliability of the aeroplane;
- c) reliability of each time limited system;
- d) relevant information from the aeroplane manufacturer; and
- e) specific mitigation measures.

**7.6.2.2** For operations beyond the threshold distance, the air operator shall meet the following requirements:

- a) For all aeroplanes:
  - i. the most limiting EDTO significant system time limitation, if any indicated in the aeroplane flight manual (directly or by reference) and relevant to that particular operation is not exceeded; and
  - ii. the additional fuel required by regulations shall include the fuel necessary to comply with the EDTO critical fuel scenario as established by CCAA.
- b) For aeroplanes with two turbine engines, the aeroplane is EDTO certified and following has been verified:
  - i. reliability of the propulsion system;
  - ii. airworthiness certification for EDTO of the aeroplane type; and
  - iii. EDTO maintenance programme.

**7.6.2.3** The operator shall submit a list of EDTO significant components and systems that must be installed and serviceable for an EDTO flight.

**7.6.2.3** All equipment required for EDTO shall be identified in the maintenance programme and MEL.



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**7.6.2.4** The operator shall provide a training programme for maintenance personnel on the appropriate policies and procedures on EDTO. The operator shall also ensure that only EDTO trained maintenance personnel are authorized to perform EDTO maintenance tasks.