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GENERAL

LEGISLATION MATTERS

At a recent meeting of CARCOM, its members in terms of regulation 11.03.2(7) of the Civil Aviation Regulations, 1997 recommended that the Commissioner for Civil Aviation issue certain amendments to Documents SA-CATS-OPS 121 and SA-CATS-OPS 135. The Commissioner for Civil Aviation has in terms of regulation 11.04.5 of the said Regulations accepted the said recommendations as it would be in the interests of aviation safety. The above-mentioned amendments are therefore being issued as amendments to the existing SA-CATS document.

SCHEDULE 1

1. AMENDMENT OF DOCUMENT SA-CATS-OPS 121 (AIR TRANSPORT OPERATIONS – LARGE AEROPLANES)

Technical Standard 121.03.6 (Recurrent Training and Checking) are herewith amended by -

- (a) *the amendment of Section 1 ‘Flight crew resource management training’; by its substitution of the following new Section 1; and*
- (b) *the insertion of the following new Section 2 ‘Six-monthly proficiency checks’:*

***1. Flight crew resource management training**

- (1) *The flight crew resource management training (CRM), referred to in sub-regulation 121.03.6(8) of CAR, is the flight crew management training contemplated in Section 1 of technical standard 121.03.5.*
- (2) *CRM shall be conducted by an aviation training organization with the appropriate approval and by instructors trained to provide Line-Orientated Simulation (LOS) and skilled in the facilitation of crew member debriefing. CRM may be conducted in a suitable flight simulator or flight training device.*
- (3) *Initial CRM aspects shall be presented in dedicated CRM classes by appropriately skilled CRM facilitators. Recurrent CRM training shall include a review of one or more CRM aspect (s) in a dedicated CRM class by an appropriately skilled CRM facilitator or LOS instructor.*
- (4) *CRM training / evaluation shall be an ongoing process in all sessions conducted in full flight simulators or flight training devices.*

***2. Six-monthly proficiency checks**

- (1) *The six-monthly flight crew proficiency check referred to in paragraph (e) of sub regulation 121.03.6(1) of the CAR, in respect of aeroplanes with a certificated mass in excess of 5700 kg or a maximum approved passenger seating configuration in excess of 19 passengers, shall be carried out at least once every twelve months in a flight simulator, approved for the purpose.*
- (2) *Where a flight simulator, as contemplated in paragraph (1) above, is not reasonably or timeously available, the Commissioner may under exceptional circumstances exempt an operator from this particular requirement for a particular type of aeroplane for a period not exceeding twelve months: Provided the operator demonstrates a satisfactory equivalent level of proficiency by other means. Such exemption shall be published in an AIC.*
- (3) *Where it can be proven by the operator-*

- (a) *that no flight simulator exists for the particular aeroplane in which the contemplated abnormal and emergency procedures can be simulated; or*
- (b) *that relevant abnormal or emergency procedures can be safely carried out in the aircraft or in a similar type of aircraft.*

The Commissioner may, on application, by means of an amendment to the operator's operations manual, exempt the operator from the requirement prescribed in paragraph (1). Such exemption shall be reviewed annually and will be withdrawn when a suitable device becomes available within the Republic.

- (4) *For the purpose of this technical standard, the expression 'approved flight simulator' shall include any flight training device suitable for the checking of flight crew proficiency in the particular abnormal or emergency procedures. Such device shall comply with minimum specifications published by the commissioner.*
- (5) *The six-monthly flight crew proficiency check shall be conducted by an appropriately rated and approved Grade I or Grade II flight instructor (aeroplane). When the proficiency check includes an instrument rating proficiency check, such check shall be conducted by an appropriately rated Designated Flight Examiner. When the proficiency check is conducted in a flight simulator, the examiner shall be the holder of the appropriate flight instructor rating and be familiar with the operation of and checking in a type-specific simulator. In the event that the Designated Examiner is not instructor type rated and / or familiar with the operation of and checking in a type-specific simulator, the examiner shall be assisted by a manning simulator instructor.*
- (6) *When conducting a proficiency check, the examiner shall check whether the flight crew member meets the prescribed standards in respect of his theoretical knowledge in the following subjects:*
 - (a) *Aircraft systems*
 - (b) *Applicable Parts of the CAR and their associated technical standards*
 - (c) *Applicable NOTAMS and AICs*
 - (d) *Operations Manual and the operator's procedures*
 - (e) *The following topics shall be trained and checked in accordance with the methods and the agreed cycle contained within the operator's approved recurrent training scheme:*
 - (i) *All-Weather Operations (AWOPS)*
 - (ii) *Windshear*
 - (iii) *Extended-range Operations (EROPS)*
 - (iv) *Extended Twin-engine Operations (ETOPS)*
 - (v) *Cold-Weather Operations*
 - (vi) *Hot-Weather Operations*
 - (vii) *Adverse Weather Avoidance and the use of WX radar systems*
 - (viii) *Turbulence penetration*
 - (ix) *Controlled Flight into Terrain Avoidance (CFIT)*
 - (x) *Approach and Landing Accident Reductions issues (ALAR)*
 - (xi) *Airborne Collision Avoidance Systems (ACAS)*
 - (xii) *Communication failures*
 - (xiii) *Navigation systems (including GNNS): usage and failure; RNP Operations*
 - (xiv) *Crew incapacitation*
 - (xv) *Operations from contaminated runways*
 - (xvi) *Class A / B / C / D aeroplane performance requirements, as appropriate*
 - (xvii) *Flight planning*
 - (xviii) *Mass and Balance*
 - (xix) *Any other applicable operations or future operational developments, such as RVSM.*

The items listed under paragraph (a) and (e) above may be checked on a 36-month cycle by means of quizzes, CBT, lecturers or in a full flight simulator or flight training device.

- (7) *When conducting a proficiency check, the examiner shall check whether the flight crew member meets the prescribed standards in respect of the following exercises. (In cases where there is a substantial difference in the operation from each seat, and the crew member is*

required to operate from both seats, proficiency shall be demonstrated from both seat positions):

- (i) Knowledge of
 - Company / Manufacturer normal procedures
 - Aircraft limitations
- (ii) Use of emergency equipment
- (iii) External and internal pre-flight inspections
- (iv) Dispatch under MEL relief
- (v) Handling of Engine Starting malfunctions
- (vi) RTO and Passenger evacuation procedures
- (vii) Low visibility take-off procedures
- (viii) Standard instrument departure
- (ix) Steep turns
- (x) Stall and recovery in landing configuration (minimum height loss)
- (xi) Knowledge of "Recall" checklist items and handling of system failures
- (xii) Integration of "Risk Management" principles into abnormal procedures
- (xiii) Engine failure in the cruise
- (xiv) Engine-inoperative maneuvering
- (xv) ACAS maneuvering
- (xvi) Windshear recovery techniques
- (xvii) Use of Auto Pilot and Flight Director systems
- (xviii) ILS approach and asymmetric go-around
- (xix) Engine failure before V1
- (xx) Engine failure after V1
- (xxi) Night operations
- (xxii) Asymmetric landing

Note 1: The above exercises, as applicable to the operation, are to be demonstrated either in an aeroplane, a flight simulator, or a flight training device, as approved by the Commissioner in the operator's operations manual.

Note 2: When a flight simulator or a flight procedures trainer is utilized for checking proficiency, exercises flown must be demonstrated within a Line Orientated Simulation/Evaluation (LOS) environment.

Note 3: Emphasis must be placed on the use of CRM principles and on correct crew interaction during abnormal and emergency situations.

Note 4: Proficiency shall be demonstrated every six months in respect of each aeroplane for which a type rating by name is required and which the flight crew member wishes to operate.

- (8) Operators shall provide syllabi for each of the items listed in paragraphs (6) and (7) above, as applicable to their operation, to the Commissioner for his or her approval and inclusion in the operator's operations manual.
- (9) After conducting a proficiency check, examiners shall complete the appropriate documentation for each flight crew member and sign each of the documents in the prescribed manner.

'3. The above-mentioned provisions are not applicable to large historic aeroplanes which are utilized for the purpose of historic flying excursions.

SCHEDULE 2

2. AMENDMENT OF DOCUMENT SA-CATS-OPS 135 (AIR TRANSPORT OPERATIONS – SMALL AEROPLANES)

Technical Standard 135.03.6 (Recurrent Training and Checking) are herewith amended by –

- (a) the amendment of Section 1 'Flight crew resource management training' by its substitution with the following new Section 1; and
- (b) the insertion of the following new Section 2 'Six-monthly proficiency checks':

'1. Flight crew resource management training

- (1) The flight crew resource management training (CRM), referred to in sub-regulation 135.03.7(8) of the CAR, is the flight crew management training contemplated in Section 1 of technical standard 135.03.7.
- (2) CRM shall be conducted by an aviation training organization with the appropriate approval and by instructors trained to provide Line-Orientated Simulation (LOS) and skilled in the facilitation of crew member debriefing. CRM may be conducted in a suitable flight simulator or flight trainer.
- (3) Initial CRM aspects shall be presented in dedicated CRM classes by appropriately skilled CRM facilitators. Recurrent CRM training shall include a review of one or more CRM aspect (s) in a dedicated CRM class by an appropriately skilled CRM facilitator or LOS instructor.
- (4) CRM training / evaluation shall be an ongoing process in all sessions conducted in full flight simulators or flight training devices.

'2. Six-monthly proficiency checks

- (1) The six-monthly proficiency checks of flight crew members, prescribed by Paragraph (e) of sub regulation 135.03.7(1) of the CAR shall be conducted by an appropriately rated Grade I or Grade II flight instructor (aeroplane). When the proficiency check includes an instrument rating proficiency check, such check is conducted by an appropriately rated Designated Flight Examiner. When the proficiency check is conducted in a flight simulator, the examiner shall be the holder of the appropriate flight instructor rating and be familiar with the operation of and checking in a type-specific simulator. In the event that the Designated Examiner is not instructor rated and / or familiar with the operation of and checking in a type-specific simulator, the examiner shall be assisted by a manning simulator instructor.
- (2) A flight simulator, used for the conducting of a six-monthly proficiency check, shall be a flight simulator approved for the purpose by the Commissioner and includes any flight training device suitable for the checking of flight crew proficiency in abnormal and emergency procedures for the aeroplane on which the flight crew member is checked. Such device shall comply with minimum specifications published by the Commissioner.
- (3) When conducting a proficiency check, the examiner shall check whether the flight crew member meets the prescribed standards in respect of his theoretical knowledge in the following subjects:
 - (a) Aircraft systems
 - (b) Applicable Parts of the CAR and their associated technical standards
 - (c) Applicable NOTAMS and AICs
 - (d) Operations Manual and the operator's procedures
 - (e) To the extent applicable:
 - (i) All-Weather Operations (AWOPS)
 - (ii) Windshear
 - (iii) Extended-range Operations (EROPS)
 - (iv) Extended Twin-engine Operations (ETOPS)
 - (v) Cold-Weather Operations
 - (vi) Hot-Weather Operations
 - (vii) Adverse Weather Avoidance and the use of WX radar systems
 - (viii) Turbulence penetration
 - (ix) Controlled Flight into Terrain Avoidance (CFIT)
 - (x) Approach and Landing Accident Reduction issues (ALAR)
 - (xi) Airborne Collision Avoidance System (ACAS)
 - (xii) Communication failures

- (xiii) Navigation systems (including GNNS): usage and failure; RNP Operations
- (xiv) Crew incapacitation
- (xv) Operations from contaminated runways
- (xvi) Aeroplane performance requirements
- (xvii) Class A, B, C, and D aeroplane performance requirements
- (xviii) Flight planning
- (xix) Mass and Balance
- (xx) Any other applicable operations or future operational developments, such as RVSM

The items listed under paragraphs (a) and (e) above may be checked on a 36 month cycle by means of quizzes, CBT, lectures or in a full flight simulator or flight training device.

- (4) When conducting a proficiency check, the examiner shall check whether the flight crew member meets prescribed standards in respect of the following exercises (In cases where there is a substantial difference in operation from each seat, and the crew member is required to operate from both seats, proficiency shall be demonstrated from both seat positions):

- (i) Knowledge of
 - Company / Manufacturer normal procedures
 - Aircraft limitations
- (ii) Use of emergency equipment
- (iii) External and internal pre-flight inspections
- (iv) Dispatch under MEL relief
- (v) Handling of Engine Starting malfunctions
- (vi) RTO and Passenger evacuation procedures
- (vii) Low visibility take-off procedures
- (viii) Standard instrument departure
- (ix) Steep turns
- (x) Stall and recovery in landing configuration (minimum height loss)
- (xi) Knowledge of "Recall" checklist items and handling of system failures
- (xii) Integration of "Risk Management" principles into abnormal procedures
- (xiii) Engine failure in the cruise
- (xiv) Engine-inoperative maneuvering
- (xv) ACAS maneuvering
- (xvi) Windshear recovery techniques
- (xvii) Use of Auto Pilot and Flight Director systems
- (xviii) ILS approach and asymmetric go-around
- (xix) Engine failure before V1
- (xx) Engine failure after V1
- (xxi) Night operations
- (xxii) Asymmetric landing
- (xxiii) Flapless landing
- (xxiv) Short landing

Note 1: The above exercises, as applicable to the operation, are to be demonstrated either in an aeroplane, flight simulator, or a flight training device, as approved by the Commissioner in the operator's manual.

Note 2: When a flight simulator or flight training device is utilised for checking proficiency, exercises flown must be demonstrated within a Line Orientated Simulation / Evaluation (LOS) environment.

Note 3: Emphasis must be placed on the use of CRM principles and on correct crew interaction during abnormal and emergency situations.

Note 4: Proficiency shall be demonstrated every six months in respect of each type or variant which the crew member wishes to operate.

- (5) *Operators shall provide syllabi for each of the items listed in paragraphs (3) and (4) above, as applicable to their operation, to the Commissioner for approval and inclusion in the operator's operations manual.*
- (6) *After conducting a proficiency check, examiners shall complete the appropriate documentation for each crew member and sign each of the documents in the prescribed manner.*

COMMISSIONER FOR CIVIL AVIATION