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CIVIL AVIATION DIRECTIVE (CAD-OPS) 15/2020

Subject: All Weather Operations (CAT II, CAT III & LVTO Operations)

01. Because of the complex nature of aircraft operations there is a need to approach the subject of all-weather operations with a total system concept. The major subsystem is the ground and airborne equipment. The ground elements consist of facilities, services and obstacles, those relate, in principal, to the state of aerodrome. The airborne elements consist of the aircraft and its system, flight crew capabilities and flight procedures under the jurisdiction of the state of the operator/state of registry. ICAO doc 9345 – Manual of all-weather operations requires additional criteria to be met prior to granting authorization to conduct Category II, Category III and low visibility take off (LVTO) operations
02. This Directive is for better illustration to CAAB inspectors as well as to operators for the implementation of the airborne of all-weather operations to CAT II, CAT III and LVTO.
03. The intention of this Directive is to provide instructions in respect of Maintenance and Operation of the aircraft in Category II and Category III weather conditions and for the conduct of low visibility take offs.
04. This Directive assumes that the Operator is certified as a Category I operator prior to being evaluated as a Category II or Category III operator. Therefore, this Directive confines only to additional requirement of Low Visibility Operations (LVO) which the operators shall comply with.
05. All CAAB inspectors with the responsibility of certifying Operators for Low Visibility Operations (LVO) shall comply with all provisions in this Directive during the certification process. Any interpretation regarding the contents of this Directive by CAAB shall be considered final.
06. Existing ANO (OPS) C1 issued on 14-08-2011 on All Weather Operations Procedures shall cease to be effective from the issue date of this directive.
07. Hence, in exercise of the power conferred by Civil Aviation Act 2017, Section 14, Chairman, Civil Aviation Authority of Bangladesh (CAAB) for the purpose of implantation of safe and efficient aircraft operations directs below:

“ALL WEATHER OPERATIONS: CAT I, CATII, CATIII AND LOW VISIBILITY TAKE OFF PROCEDURE” (LVTO).

ALL WEATHER OPERATIONS: CAT I, CATII, CATIII AND LOW VISIBILITY TAKE OFF PROCEDURE (LVTO).

SECTION- 1

General

1.1 Scope

The requirements contained in this directive are applicable to all Bangladeshi operators intending to carry out low visibility takeoff and Cat-II, Cat-III/A/B operations. Before operating flights to foreign airports, the operators shall file their operating minima and other relevant documents required by the Aviation Authority of that country and seek their approval for conducting low visibility takeoff and Cat-II, Cat-III/A/B operations after obtaining approval from Chairman, CAAB for the same.

1.2 Definitions

In this Directive, unless there is anything repugnant in the subject or context-

1.2.1 Aero plane approach categories - all weather operations

- (a) "Classification of aero planes" means the criteria taken into for the classification of aeroplanes by categories is the indicated airspeed at threshold (VAT) which is equal to the stalling speed (VSO) multiplied by 1.3 or the one -G stall speed (VS1G) multiplied by 1.23 in the landing configuration at the maximum certificated landing mass. If both VSO and VS1G are available, the higher resulting VAT shall be used. The aero plane categories corresponding to VAT values are in the Table below:

Aero plane Category	VAT
A	Less than 169km/h (91 kts) IAS
B	169 km/h (91kt) or more but less than 224km/h (121 kt) IAS
C	224 km/h (121kt) or more but less than 261km/h (141 kt) IAS
D	261 km/h (141kt) or more but less than 307 km/h (166 kt) IAS
E	307 km/h (166kt) or more but less than 391 (211kt) IAS

The landing configuration which is to be taken into consideration shall be defined by the operator or by the aero plane manufacturer.

(b) Permanent change of category (maximum landing mass) means

- (i) An operator may impose a permanent, lower, landing mass, and use this mass for determining the VAT if approved by the Authority.
- (ii) The category defined for a given aeroplane shall be a permanent value and thus independent of the changing conditions of day to day operations.

- 1.2.2 "Alert Height (AH)" means a height defined for operational use by pilots (100ft. or less above the highest elevation in the touchdown zone) above which a CAT III approach would be discontinued and a missed approach initiated if a failure occurred in one of the required redundant operational systems in the airplane or in the

- 1.2.13 "Head-up guidance landing system (HUGLS)" means the total airborne system, which provides head-up guidance to the pilot during the approach and landing and/or go-around. It includes all sensors, computers, power supplies, indications and controls. A HUDLS is typically used for primary approach guidance to decision heights of 50 ft.
- 1.2.14 "Hybrid head-up display landing system (hybrid HUDLS) means a system, which consists of a primary fail-passive automatic landing system and a secondary independent HUD/HUDLS enabling the pilot to complete a landing manually after failure of the primary system.
- (i) Typically, the secondary independent HUD/HUDLS provides guidance which normally takes the form of command information, but it may alternatively be situation (or deviation) information.
- 1.2.15 "ILS critical area" means an area of defined dimensions about the localizer and glide path antennas where vehicles, including aircraft, are excluded during all ILS operations. The critical area is protected because the presence of vehicles and / or aircraft inside the boundaries will cause unacceptable disturbance to the ILS signal in space.
- 1.2.16 "ILS sensitive area" means an area extending beyond the critical area where the parking and /or movement of vehicles, including aircraft, is controlled to prevent the possibility of unacceptable interference to the ILS signal during ILS operations. The sensitive area is protected to protection against interference caused by large moving objects outside the critical area but still normally within the airfield boundary.
- 1.2.17 "Instrument approach and landing operations" means instrument approach and landing operations using instrument approach procedures are classified as follows:
- (i) "Non-precision approach and landing operations" means an instrument approach and landing which does not utilize electronic glide path guidance.
- (ii) "Precision approach and landing operations" means an instrument approach and landing using precision azimuth and glide path guidance with minima as determined by the category of operation.
- (iii) Categories of precision approach and landing operations (ICAO definition)
- (a) "Category I (Cat I) operation" means precision instrument approach and landing with a decision height not lower than 60 M (200 ft) and with either a visibility not less than 800 M, or a runway visual range not less than 550 M.
- (b) "Category II (Cat II) operation" means precision instrument approach and landing with a decision height lower than 60 M (200 ft) but not lower than 30 M (100 ft), and a runway visual range not less than 300 M.
- (c) "Category III A (Cat III A) operation means a precision instrument approach and landing with:
- (i) A decision height lower than 30 M (100 ft), or no decision height; and
- (ii) A runway visual range not less than 175 M
- (d) "Category IIIB (Cat IIIB) operation" means a precision instrument approach and landing with:
- (e) A decision height lower than 15 M (50 ft), or no decision height; and

SECTION- 2

Introduction and Certification

2.1 LOW VISIBILITY OPERATIONS

- 2.1.1 In this document, Low visibility operations means all procedures applied for the purpose of ensuring safe aircraft operations during Category II, III approaches and low visibility take-offs.
- 2.1.2 Certification of aerodromes, aircraft systems and crews for low visibility operations by CAAB shall be as per criteria contained in this document.
- 2.1.3 All certifying staff of CAAB shall comply with provisions in this document when certifying operators to conduct "Low visibility operations".
- 2.1.4 Any questions not covered herein, or any point of apparent conflict requiring resolution, should be referred to CAAB.

2.2 LOW VISIBILITY OPERATIONS - GENERAL OPERATING RULES

- 2.2.1 An operator shall not conduct Category II or Category III operations unless:
 - (i) Each aero plane concerned is certificated by a regulatory authority of a contracting state for operations with decision heights below 200ft, or no decision height, and accepted by CAAB for such operations as per paragraph 3.1.1 of this document.
 - (ii) A suitable system for recording approach and/or automatic landing success and failure is established and maintained to monitor the overall safety of the operation;
 - (iii) The operations are approved by CAAB.
 - (iv) The flight crew consists of at least two pilots;
 - (v) Decision height is determined by means of a radio altimeter.
 - (vi) Only RVR values are used for low visibility operations.
- 2.2.2 An operator shall not conduct low visibility take-offs in less than 150m RVR (Category A, B and C aero planes) or 200 m RVR (Category D aero planes) unless approved by the CAAB.

2.3 APPLICATION FOR LOW VISIBILITY OPERATIONS

- 2.3.1 These instructions are intended for application to aerodromes situated in Bangladesh or in any foreign territory and for the aircraft registered under CAAB which are flying for the purpose of commercial air transport.
- 2.3.2 In no case, Category II/III certification shall be given in the case of a single pilot operation.
- 2.3.3 Conformity with these instructions will be prerequisite for an operator intending to include Category II/III operations in the AOC / Operations Specifications.
- 2.3.4 Commercial operators of foreign registry, who operate a scheduled or regular service into Bangladesh and whose aircraft, equipment and crews meet or exceed the criteria described in this document, may apply to CAAB for authority to conduct Category II/III operations into Bangladesh aerodromes deemed suitable.
- 2.3.5 In all such cases, approval for Category II/III operations in the state of registry shall be a prior condition for approval to conduct Category II/III operations in CAAB.

2.5.1.4 Demonstrations

- (i) Demonstrations may be conducted in line operations or any other flight where the operator's procedures are being used.
- (ii) In unique situations where the completion of 100 successful landings could take an unreasonably long period of time and equivalent reliability assurance can be achieved, a reduction in the required number of landings may be considered on a case by case basis. Reduction of the number of landings to be demonstrated requires a justification for the reduction. This justification should take into account factors such as a small number of aircraft in the fleet, limited opportunity to use runways having CAT II/III procedures or the inability to obtain ATS sensitive area protection during good weather conditions. However, at the operator's option, demonstrations may be made on other runways and facilities. Sufficient information should be collected to determine the cause of any unsatisfactory performance (e.g. sensitive area was not protected).
- (iii) If the operator has different variants of the same type of aircraft utilizing the same basic flight control and display systems, or different basic flight control and display systems on the same type or class of aircraft, the operator should show that the various variants have satisfactory performance, but need not conduct a full operational demonstration for each variant.
- (iv) Not more than 30% of the demonstration flights should be made on the same runway.

2.5.5 Data collection for operational demonstrations

- (i) Data should be collected whenever an approach and landing is attempted utilizing the CAT II/III system, regardless of whether the approach is abandoned, unsatisfactory, or is concluded successfully.
- (ii) The data should, as a minimum, include the following information:
 - (a) Inability to initiate an approach. Identify deficiencies related to airborne equipment that preclude initiation of a CAT II/III approach.
 - (b) Abandoned approaches. Give the reasons and altitude above the runway at which approach was discontinued or the automatic landing system was disengaged.
 - (c) Touchdown or touchdown and rollout performance. Describe whether or not the aircraft landed satisfactorily within the desired touchdown area with lateral velocity or cross track error that could be corrected by the pilot or automatic system so as to remain within the lateral confines of the runway without unusual pilot skill or technique. The approximate lateral and longitudinal position of the actual touchdown point in relation to the runway Centre line and the runway threshold, respectively, should be indicated in the report. This report should also include any CAT II/III system abnormalities that required document intervention by the pilot to ensure a safe touchdown or touchdown and rollout, as appropriate.

2.6 TRANSITIONAL PERIODS

2.6.1 Operators with no previous Category II or III experience

- (i) An operator without previous Category II or III operational experience may be approved for Category II operations having gained minimum experience of six months of Category I operations on the aero plane a type.

2.8 LOW VISIBILITY OPERATIONS - CERTIFICATION STANDARDS

2.8.1 Following are the certification standards for;

- (i) Precision approach - Category II
- (ii) Precision approach - Category III
- (iii) Low visibility takes - off (LVTO)

2.9 PRECISION APPROACH — CATEGORY II OPERATIONS

2.9.1 A Category II operation is a precision instrument approach and landing using ILS or MLS with:

- (i) A decision height below 200 ft but not lower than 100 ft; and
- (ii) A runway visual range of not less than 300 m.

2.9.2 Decision Height.

An operator must ensure that the decision height for a Category II operation is not lower than:

- (i) The minimum decision height specified in the AFM, if stated;
- (ii) The minimum height to which the precision approach aid can be used without the required visual reference;
- (iii) The OCH for the category of aero plane;
- (iv) The decision height to which the flight crew is authorized to operate; or
- (v) 100 ft.

2.9.3 Visual reference.

- (i) a pilot may not continue an approach below the Category II decision height determined in accordance with sub paragraph 1.9.2 above unless visual reference containing a segment of at least three consecutive lights being the center line of the approach lights, or touchdown zone lights, or runway center line lights, or runway edge lights, or a combination of these is attained and can be maintained. This visual reference must include a lateral element of the ground pattern, i.e. an approach lighting crossbar or the landing threshold.

- (ii) Required RVR.

- (iii) The lowest minima to be used by an operator for Category II operations are available in the following table 1:

Table 1: RVR FOR CATEGORY II APPROACH Vs DH

Category II minima		
DH (Feet)	Auto coupled (Note 1)	
	RVR Aero plane category A,B,C	RVR Aero plane category D
100 - 120	300M	300 / 350M (Note 2)
121 - 140	400M	400M
141 and above	450	450M
Note 1: This means continued use of the automatic flight control system or the HUDLS down to a height of 80 % of the DH.		
Note 2: An RVR of 300 m may be used for a category D aircraft conducting an auto-land.		

unless a visual reference containing a segment of at least three consecutive lights being the centerline of the approach lights, or touchdown zone lights, or runway center line lights, or runway end lights or a combination of these is attained and can be maintained.

- (ii) For Category IIIB operations conducted either with fail - operational flight control systems or with a fail operational hybrid landing system using a decision height, a pilot may not continue an approach below the Decision Height, determined in accordance with subparagraph 2.10.5, above, unless a visual reference containing at least one centerline light is attained and can be maintained.

2.10.7 Required RVR

The lowest minima to be used by an operator for Category III operations are in table 2:

Table 2 : RVR for Cat III operations v. DH and roll-out control/guidance system

Category III minima			
Category	Decision height (DH)	Roll out control / Guidance system	RVR (M)
IIIA	Less than 30m (100 ft)	Not required	175m
IIIB	Less than 30m (100 ft)	Fail passive	150m
IIIB	Less than 15m (50 ft)	Fail passive	125m
IIIB	Less than 15m (50 ft) or no decision height (DH)	Fail operational	75m

Note: The fail operational system referred to may consist of a fail-operational hybrid system

2.11 CERTIFICATION FOR LOW VISIBILITY OPERATIONS

2.11.1 An authorization for Category II / III operations will not be included in an AOC/ Operations Specifications, until the applicant has;

- (i) Demonstrated that his flight crews have carried out an approved program of training as per Chapter 4 of this document;
- (ii) Laid down detailed procedures and instructions for crew in the operations document for the operation of the aircraft in low visibility operations as per Chapter 3 of this document;
- (iii) Laid down detailed procedures and instructions for Pilot in Command and flight operations officers (if required as per the operator Operations Specifications) in respect of flight dispatch in low visibility operations as per the Chapter 4 of this document;
- (iv) Demonstrated that his aero plane and its equipment, maintenance program including qualifications of maintenance staff meet requirements of Chapter 32 of this document.
- (v) The operator and his personnel has completed satisfactorily all evaluations as required in this document.

- (ii) FAA AC 120-28D, Criteria for Approval of Category III Landing Weather Minima, or 120-29A, Criteria for Approving Category I and Category II Landing Minima

3.1.3 All procedures as required by the contracting state (refer to paragraph 3.1.1) for the conduct of Category II and Category III flight operations and maintenance shall be adopted by CAAB.

3.1.4 Category II and Category III approval shall be made by an appropriate document included in the aircraft flight document. This document may include any additional requirements of CAAB.

3.2 CERTIFICATION BY CAAB FOR LOW VISIBILITY OPERATIONS

3.2.1 Any request for the initial certification of an aircraft to conduct Category II and Category III operations shall be considered by CAAB on a case by case basis.

3.2.2 For all initial Certification of Category II and Category III operations CAAB shall publish requirements in conformity to ICAO Doc 9365 – Document of All-weather operations for compliance.

3.3 MAINTENANCE OF CATEGORY II, CATEGORY III AND LVTO EQUIPMENT.

3.3.1 Maintenance instructions for the on-board guidance systems must be established by the operator, in liaison with the manufacturer, and included in the operator's aero plane maintenance program which must be approved by CAAB.

3.3.2 The maintenance program must ensure that the airborne equipment necessary for low visibility operations continues to operate in service to the required performance level and should cover following areas and any other requirement specified by CAAB:

- (i) maintenance procedures
- (ii) maintenance and calibration of test equipment
- (iii) initial and recurrent training of maintenance staff
- (iv) recording and analysis of airborne equipment failures

3.4 CONTINUOUS MONITORING

3.4.1 After obtaining the initial authorization, the operations must be continuously monitored by the operator to detect any undesirable trends before they become hazardous. Flight crew reports may be used to achieve this.

3.4.2 The following information must be retained for a period of 12 months:

- (i) the total number of approaches, by aeroplane type, where the airborne Category II or III equipment was utilized to make satisfactory, actual or practice, approaches to the applicable Category II or III minima; and
- (ii) reports of unsatisfactory approaches and/or automatic landings, by aerodrome and aero plane registration, in the following categories:

approach in the Operations Document. Particular emphasis must be placed on flight crew responsibilities during transition from non-visual conditions to visual conditions, and on the procedures to be used in deteriorating visibility or when failures occur. Special attention must be paid to the distribution of flight deck duties so as to ensure that the workload of the pilot making the decision to land or execute a missed approach enables him to devote himself to supervision and the decision-making process.

4.2.3

An operator must specify the detailed operating procedures and instructions in the Operations Document. The instructions must be compatible with the limitations and mandatory procedures contained in the Aero plane Flight Document and cover the following items in particular:

- (i) checks for the satisfactory functioning of the aero plane equipment, both before departure and in flight;
- (ii) effect on minima caused by changes in the status of the ground installations and airborne equipment (or may be set by CAAB for compliance);
- (iii) procedures for the take-off, approach, flare, landing, roll-out and missed approach;
- (iv) procedures to be followed in the event of failures, such as engines, electrical system, hydraulics and flight control system.
- (v) pilot assessment of aircraft position and monitoring of the automatic flight control system, the effects of the failures of any required portion of the flight control system or instrument used with the system, and action to be taken in the event of inadequate performance or failure of any portion of either the system or the associated instruments warnings (to include HUD/HUDLS/EVS and other non-normal situations);
- (vi) the minimum visual reference required;
- (vii) the importance of correct seating and eye position;
- (viii) action which may be necessary arising from a deterioration of the visual reference;
- (ix) allocation of crew duties in the carrying out of the procedures according to subparagraphs (a) to (d) and (f) above, to allow the PIC to devote himself mainly to supervision and decision making;
- (x) the pilot in command shall be the pilot flying (PF) during all low visibility operations. He shall take the decision to land or carry out a missed approach during Category II / III approach. The other crew member (PM) has the task of monitoring the approach and make appropriate call outs as tabulated in standard operating procedures.
- (xi) the requirement for all height calls below 200 ft to be based on the radio altimeter and for one pilot to continue to monitor the aero plane instruments until the landing is completed;
- (xii) the requirement for the Localizer Sensitive Area to be protected;

- (v) the aircraft is properly certified and all required equipment are serviceable for the intended low visibility take-off or a Category II or III approach (refer to paragraph 3.4)

4.4 LOW VISIBILITY OPERATIONS — MINIMUM EQUIPMENT

- 4.4.1 An operator must include in the Operations Document the minimum equipment that has to be serviceable at the commencement of a low visibility take-off, an approach utilizing EVS, or a Category II or III approach in accordance with the AFM or other approved document.
- 4.4.2 The operator shall have procedures to indicate to the flight crew/Flight operations officer the status of the aero plane when the aero plane is upgraded/degraded due to any un serviceability as per paragraph 4.4.1 or any other reason.
- 4.4.3 The PIC shall satisfy himself the status of the aero plane and of the relevant airborne systems is appropriate for the specific operation to be conducted prior to departure.

4.5 PILOT QUALIFICATIONS

- 4.5.1 The operator must ensure that each flight crew member completes training and a Check as required by this directive before being authorized to conduct Category II or III operations.
- 4.5.2 The flight crew qualifications as per above paragraph 4.5.1 are specific to the operator and the type of aero plane in which the qualification obtained.

4.6 TYPE AND COMMAND EXPERIENCE.

- 4.6.1 Before commencing Category II operations, the following additional requirements are applicable to commanders, who are new to the aero plane type/class:
 - (i) 100 hours as pilot in command or 20 sectors on the type, including line flying under supervision; and
 - (ii) 100 meters must be added to the applicable Category II RVR minima when the operation requires a Category II document landing or use of HUDLS to touchdown until:
 - (a) A total of additional 100 hours or 20 sectors after obtaining Category II qualification, including P1(u/s) has been achieved on the type; or
 - (b) A total of additional 50 hours or 10 sectors after obtaining Category II qualifications, including P1 (u/s) has been achieved on the type where the flight crew member has been previously qualified for Category II document landing operations with an operator acceptable to the CAAB.
- 4.6.2 Before commencing Category III operations, the following additional requirements are applicable to commanders, who are new to the aero plane type:

- (iii) the operation, capabilities and limitations of the airborne systems (e.g. the automatic flight control systems, monitoring and warning devices, flight instruments – including altimetry system, the means the pilot has to assess the position of the aero plane during the approach, touchdown and roll out) and to include HUD symbology and EVS characteristics if appropriate;
- (iv) approach, including missed approach procedures and techniques including description of the factors affecting height loss during missed approach in normal and abnormal aeroplane configurations.
- (v) the use and limitation of RVR, including the applicability of RVR readings from different positions of the runway, the different methods of measuring and assessing RVR, and the limitations associated with each method.
- (vi) the basic understanding of obstacle limitation and the obstacle free zone, including missed approach design criteria and of obstacle clearance for Category II and III operations.
- (vii) the effects of precipitation, ice accretion, low level wind shear, turbulence and characteristic of fog;
- (viii) the pilot task at decision height, procedures and techniques for transition from instrument to visual flight in low RVR conditions, including the geometry of eye, wheel and antenna positions with reference to ILS reference datum height.
- (ix) action to be taken if the visual reference becomes inadequate when the aeroplane is below the decision height and the technique to be adopted for transition from visual instrument flight should a go around become necessary at these low heights.
- (x) action to be taken in the event of failure of approach and landing equipment above and below decision height.
- (xi) recognition of and action to be taken in the event of failure of ground equipment.
- (xii) significant factors in the determination of decision height, the effect of terrain profile in the approach area on radio altimeter readings and on the automatic approach/landing systems;
- (xiii) the importance and significance of alert height if applicable and the action in the event of any failure above and below the alert height;
- (xix) effect of specific aeroplane malfunctions (e.g. engine failure) on auto throttle, auto pilot performance etc.;
- (xx) procedures and precautions to be followed while taxiing during low visibility operations;
- (xxi) additional procedures required for take-off in conditions below 150 m (200 m for Category D aeroplanes);
- (xxii) the importance of correct seating and eye position;

- (ii) detailed scenarios of aeroplane and equipment failures, which could affect Category II or III operations.
 - (iii) if the aeroplane system involves the use of hybrid or other special systems (such as HUD/HUDLS or enhanced vision equipment) then flight crew members must practice the use of these systems in normal and abnormal modes during the flight simulator phase of training.
- 4.8.7 Incapacitation procedures appropriate to low visibility take-offs and Category II and III operations shall be practiced.
- 4.8.8 Initial Category II and III training shall include at least the following exercises:
 - (i) approach using the appropriate flight guidance, autopilots and control systems installed in the aeroplane, to the appropriate decision height and to include transition to visual flight and landing;
 - (ii) approach with all engines operating using the appropriate flight guidance systems, autopilots, HUDLS and/or EVS and control systems installed in the aeroplane down to the appropriate decision height followed by missed approach; all without external visual reference;
 - (iii) where appropriate, approaches utilizing automatic flight systems to provide automatic flare, landing and rollout;
 - (iv) normal operation of the applicable system both with and without acquisition of visual cues at decision height.
- 4.8.9 Emergency / abnormal phases of simulator training must include at least:
 - (i) approaches with engine failure at various stages on the approach;
 - (ii) approaches with critical equipment failures (e.g. electrical systems, auto flight systems, ground and/or airborne ILS/MLS systems and status monitors);
 - (iii) approaches where failures of auto flight equipment and/or HUD/HUDLS/EVS at low level require either;
 - (iv) reversion to document flight to control flare, landing and roll out;
 - (v) reversion to document flight and the execution of a missed approach from decision height;
 - (vi) reversion to document flight or a downgraded automatic mode to control missed approaches from, below decision height including those which may result in a touchdown on the runway, such as to simulate failures or a loss of visual reference prior to touch down;

- (ii) Take off to minimum authorized RVR conditions with an engine failure between V1 and V2, or as soon as safety considerations permit; and
 - (iii) take-off in minimum authorized RVR conditions with an engine failure before V1 resulting in a rejected take-off.
- 4.10.2 LVTO training / recurrent training program shall have the approval of the CAAB and included in the Operations document.
- 4.10.3 An operator must ensure that the training required by paragraph 4.10.2 above is carried out in a flight simulator.
- 4.10.4 This training must include the use of any special procedures and equipment.

4.11 CREW TRAINING - FLIGHT CREW MEMBERS CONVERSION TRAINING

- 4.11.1 Conversion training requirements to conduct low visibility take-off, Category II/III operations by the operator's crew members on another type / class or variant aircraft may be an abbreviated program based on paragraph 4.8.
- 4.11.2 The operator shall propose a suitable abbreviated training program (based on paragraph 3.8) for the approval of the CAAB.

4.12 RECURRENT TRAINING - LOW VISIBILITY OPERATIONS

- 4.12.1 An operator shall ensure that all crew authorized for low visibility operations undergo an annual recurrent ground school training program which shall be an abbreviated training program covering requirements in paragraph 4.8.2.
- 4.12.2 An operator shall ensure that all crew authorized for low visibility operations undergo a recurrent simulator training program where applicable in the simulator prior to the certification requirement as per paragraph 4.13.
- 4.12.3 Training programs as required in paragraph 4.12.1 and 4.12.2 shall have the approval of the CAAB and included in the Operations document.

4.13 CREW CERTIFICATION FOR CATEGORY II / CATEGORY III OPERATIONS

- 4.13.1 An operator shall ensure that, prior to conducting Category II and III operations or approaches utilizing EVS and conducting low visibility take off, each flight crew member completes the checking requirements prescribed in this document.
- 4.13.2 Flight crew training
- 4.13.3 Prior to conducting initial or recurrent Category II or Category III Checks the Flight Operation Inspector / DCP must ensure that all crew (Pilot-in-Command, First officer) has completed the applicable approved Category II/III training program successfully.

- 4.14.4 Other flight crew members will be checked concurrently in the performance of their assigned duties in support of the above initial/recurrent Proficiency Check items.
- 4.14.5 The recording of the evaluation will be made on the Pilot Proficiency Check report. The authorized DH/ RVR shall be annotated in the appropriate box in the form.
- 4.14.6 The period of certification will be for six months or up to the validity period of the PPC. Renewal Check may be combined with Pilot Proficiency Check or during an approved LOFT program.
- 4.14.7 If HUDLS and / or EVS is utilized to touchdown the required approaches during evaluation shall be four (refer to paragraph 3.14.3).

4.15 CERTIFICATION OF LOW VISIBILITY TAKE OFF (LVTO)

- 4.15.1 Prior to conducting take-offs in RVRs below 400 m, the flight crew should undergo the following training:
 - (i) Normal take-off in minimum approved RVR conditions;
 - (ii) Take-off in minimum approved RVR conditions with an engine failure for aero plane between V1 and V2 (take-off safety speed), or as soon as safety considerations permit;
 - (iii) Take-off in minimum approved RVR conditions with an engine failure for aeroplanes before V1 resulting in a rejected take-off; and
- 4.15.2 An operator must ensure that a flight crew member has completed a check before conducting low visibility take offs in RVRs of less than 150 m (less than 200 m for Category D aeroplanes) if applicable.
- 4.15.3 The check shall comply with the requirements in paragraph 4.10.1 and may be combined with crew certification for Category II or III operations.
- 4.15.4 The recording of the evaluation will be made on the Pilot Proficiency Check report. The authorized RVR shall be annotated in the appropriate box in the form.
- 4.15.5 The period of certification will be for six months or up to the validity period of the PPC. Renewal Check may be combined with Pilot Proficiency Check or during an approved LOFT program.

4.16 FLIGHT CREW / AIRCRAFT REGENCY REQUIREMENTS

- 4.16.1 The operator should ensure that, in conjunction with the normal recurrent training and operator's proficiency checks, the pilot's knowledge and ability to perform the tasks associated with the particular category of operation, for which the pilot is authorized by the operator, are checked. The required number of approaches to be undertaken in the FSTD within the validity period of the operator's proficiency check should be a minimum of two, respectively four when HUDLS and/or EVS is utilized to touchdown, one of which should be a landing at the lowest approved RVR. In addition, one, respectively two for HUDLS and/or operations utilizing EVS, of these approaches may be substituted by an approach and landing in the aircraft using approved CAT II and CAT III procedures. One missed approach should be flown during the conduct of an operator proficiency check. If the operator is approved to conduct

- 4.22.2 The initial and recurrent training programs as required by paragraph 4.22.1 shall have the approval of CAAB and be included in the operations document.

SECTION-5

Operation to Foreign Aerodromes

5.1 CERTIFICATION OF FOREIGN AERODROMES

- 5.1.1 Prior to granting approval for CAAB registered aircraft to conduct Category II / III approaches in a foreign country the Flight Operations Inspector from CAAB shall ensure that;
- (i) the Air Operator is authorized by CAAB to conduct Category II/III Operations in his Air Operator Certificate using the type of aircraft requested.
 - (ii) the Air operator has obtained the approval from the civil aviation regulatory authority of the state of the aerodrome to conduct Category II and III operations at the requested aerodrome if such approval is required.
 - (iii) as a minimum the Inspector must check the documentation issued by the civil aviation regulatory authority of the State of the aerodrome certifying the requested aerodrome is authorized to Category II/III operations.
 - (iv) that the Air Operator has conducted an acceptable briefing and provide adequate guidance material (e.g. Category II/III Charts) to the Pilot in Command in respect of the requested aerodrome.
 - (v) that the Air Operator has adequately briefed the Pilot in Command in respect of, applicable aerodrome operating minima including minima for low visibility take- off.

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Chairman
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