



**FLIGHT OPERATIONS DIVISION
SPECIAL APPROVAL – LVO APPROVAL
LOW VISIBILITY OPERATION (LVO) APPROVAL APPLICATION FORM**

Application for an initial issue of an AOC - Submit at least 90 days before the date of intended operation
 Formal Application for an initial issuance of an AOC shall be valid for 180 calendar days starting from the date of application
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SECTION A – ORGANISATION

1. Organisation Details

a. Company Details	
i.	Registered name
ii.	Trading name if different
iii.	Mailing address
iv.	Telephone
v.	Fax
vi.	E-mail

b. Principal Place of Business	
i.	Mailing address:
ii.	Telephone:
iii.	Fax:
vi.	E-mail:

c. Proposed Start Date	
i.	Start

d. AOC Certification /Variation Focal Point		
Name	Telephone	Email

2. Nominated Post Holder Details

No	Title	Name	Telephone No	Email
a.	Accountable Manager			
b.	Director of Flight Operations			
c.	Chief Pilot Operations			
d.	Chief Pilot Training			
e.	Maintenance Manager			
f.	SMS Manager			
g.	Security Manager			
h.	Quality Manager			

SECTION B. OPERATIONS

3. Proposed / Approved Type Of Operations

<input type="checkbox"/> Schedule	<input type="checkbox"/> Non-Schedule	<input type="checkbox"/> Passenger	<input type="checkbox"/> Cargo
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4. Proposed / Approved Aircraft Type

AIRCRAFT DETAILS	
Aircraft Manufacturer information	
Aircraft Type/Mark/Series	
Manufacturers Serial/Construction N°(s)	
Aircraft Registration(s)	
Aircraft Category (A, B, C, D)	
Date Airworthiness Approval(s) Issued	
Expiry Date of requested LVO Approval(s) (if applicable or required)	
Remarks:	

5. LVO Application

LVO		YES	NO	RVR (m)	DH (feet)
Take-off (LVTO)					
Approach & Landing	CAT I				
	CAT II				
	CAT III A				
	CAT III B				
	CAT III C				
	Utilising EVS				

6. LVO Equipment Details

Give details of LVO equipment on board of the aircraft



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7. Operational Demonstration (CAT II / CAT III)

1) Airplanes	
(a) General	
(1) The purpose of the operational demonstration should be to determine or validate the use and effectiveness of the applicable aircraft flight guidance systems, including HUDLS if appropriate, training, flight crew procedures, maintenance programme, and manuals applicable to the CAT II / CAT III programme being approved.	
(i) At least 30 approaches and landings should be accomplished in operations using the CAT II/III systems installed in each aircraft type if the requested DH is 50 ft or higher. If the DH is less than 50 ft, at least 100 approaches and landings should be accomplished.	
(ii) If the operator has different variants of the same type of aircraft utilising the same basic flight control and display systems, or different basic flight control and display systems on the same type of aircraft, the operator should show that the various variants have satisfactory performance, but need not conduct a full operational demonstration for each variant. The number of approaches and landings may be based on credit given for the experience gained by another operator, using the same aeroplane type or variant and procedures.	
(iii) If the number of unsuccessful approaches exceeds 5 % of the total, e.g. unsatisfactory landings, system disconnects, the evaluation programme should be extended in steps of at least 10 approaches and landings until the overall failure rate does not exceed 5 %.	
(2) The operator should establish a data collection method to record approach and landing performance. The resulting data and a summary of the demonstration data should be made available to the CAAM for evaluation.	
(3) Unsatisfactory approaches and/or automatic landings should be documented and analysed.	
(b) Demonstrations	
(1) Demonstrations may be conducted in line operations or any other flight where the operator's procedures are being used.	
(2) 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.	



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Sufficient information should be collected to determine the cause of any unsatisfactory performance (e.g. sensitive area was not protected).	
(3) If the operator has different variants of the same type of aircraft utilising 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.	
(4) Not more than 30 % of the demonstration flights should be made on the same runway.	
(c) Data collection for operational demonstrations	
(1) Data should be collected whenever an approach and landing is attempted utilising the CAT II/III system, regardless of whether the approach is abandoned, unsatisfactory, or is concluded successfully.	
(2) The data should, as a minimum, include the following information:	
(i) Inability to initiate an approach. Identify deficiencies related to airborne equipment that preclude initiation of a CAT II/III approach.	
(ii) Abandoned approaches. Give the reasons and altitude above the runway at which approach was discontinued or the automatic landing system was disengaged.	
(iii) 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 manual intervention by the pilot to ensure a safe touchdown or touchdown and rollout, as appropriate.	
(d) Data analysis	
Unsuccessful approaches due to the following factors may be excluded from the analysis:	
(1) ATS factors. Examples include situations in which a flight is vectored too close to the final approach fix/point for adequate localiser and glide slope capture, lack of protection of ILS sensitive areas, or ATS requests the flight to discontinue the approach.	
(2) Faulty Navaid signals. Navaid (e.g. ILS localiser) irregularities, such as those caused by other aircraft taxiing, over-flying the Navaid (antenna).	
(3) Other factors. Any other specific factors that could affect the success of CAT II/ III operations that are clearly discernible to the flight crew should be reported.	



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2) Helicopters	
(a) The operator should comply with the provisions prescribed below when introducing into CAT II or III service a helicopter type.	
(1) Operational reliability The CAT II and III success rate should not be less than that required by CS-AWO or equivalent.	
(2) Criteria for a successful approach An approach is regarded as successful if: (i) the criteria are as specified in CS-AWO or equivalent are met; and (ii) no relevant helicopter system failure occurs. For helicopter types already used for CAT II or III operations in another State, the in-service proving programme in (e) should be used instead.	
(b) Data collection during airborne system demonstration – general	
(1) The operator should establish a reporting system to enable checks and periodic reviews to be made during the operational evaluation period before the operator is approved to conduct CAT II or III operations. The reporting system should cover all successful and unsuccessful approaches, with reasons for the latter, and include a record of system component failures. This reporting system should be based upon flight crew reports and automatic recordings as prescribed in (c) and (d) below.	
(2) The recordings of approaches may be made during normal line flights or during other flights performed by the operator.	
(c) Data collection during airborne system demonstration – operations with DH not less than 50 ft	
(1) For operations with DH not less than 50 ft, data should be recorded and evaluated by the operator and evaluated by the competent authority when necessary.	
(2) It is sufficient for the following data to be recorded by the flight crew: (i) FATO and runway used; (ii) weather conditions; (iii) time; (iv) reason for failure leading to an aborted approach; (v) adequacy of speed control; (vi) trim at time of automatic flight control system disengagement; (vii) compatibility of automatic flight control system, flight director and raw data; (viii) an indication of the position of the helicopter relative to the ILS, MLS centre line when descending through 30 m (100 ft); and (ix) touchdown position.	
(3) The number of approaches made during the initial evaluation should be sufficient to demonstrate that the performance of the system in actual airline service is such that a 90 % confidence and a 95 % approach success will result.	
(d) Data collection during airborne system demonstration – operations with DH less than 50 feet or no DH	
(1) For operations with DH less than 50 ft or no DH, a flight data recorder (FDR), or other equipment giving the appropriate information, should be used in addition to the flight crew reports to confirm that the system performs as designed in actual airline service. The following data should be recorded:	



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(i) distribution of ILS, MLS deviations at 30 m (100 ft), at touchdown and, if appropriate, at disconnection of the rollout control system and the maximum values of the deviations between those points; and	
(ii) sink rate at touchdown.	
(2) Any landing irregularity should be fully investigated using all available data to determine its cause.	
(e) In-service proving The operator fulfilling the provisions of (f) above should be deemed to have met the in-service proving contained in this subparagraph.	
(1) The system should demonstrate reliability and performance in line operations consistent with the operational concepts. A sufficient number of successful landings should be accomplished in line operations, including training flights, using the auto-land and rollout system installed in each helicopter type.	
(2) The demonstration should be accomplished using a CAT II or CAT III ILS. Demonstrations may be made on other ILS or MLS facilities if sufficient data are recorded to determine the cause of unsatisfactory performance.	
(3) If the operator has different variants of the same type of helicopter utilising the same basic flight control and display systems, or different basic flight control and display systems on the same type of helicopter, the operator should show that the variants comply with the basic system performance criteria, but the operator need not conduct a full operational demonstration for each variant.	
(4) Where the operator introduces a helicopter type that has already been approved by the competent authority of any Member State for CAT II and/or CAT III operations, a reduced proving programme may be acceptable.	

8. Transitional Periods for CAT II and CAT III Operations

1) Operators with no previous CAT II or CAT III experience	Months
Minimum experience of CAT I operations on the aircraft type.	
Minimum experience of CAT II or IIIA operations on the aircraft type.	
2) Operators with previous CAT II or CAT III experience	Months
CAT II or CAT III experience previously gained and maintained on the aircraft type.	
Operational demonstrations for CAT II or III operations using auto-coupled approach procedures, with or without auto-land.	

9. Eligible Aerodromes and Runways (CAT II / CAT III)

Each aircraft type/runway combination shall be verified by the successful completion of at least one approach and landing in CAT II or better conditions, prior to commencing CAT III operations.	
For runways with irregular pre-threshold terrain or other foreseeable or known deficiencies, each aircraft type/runway combination should be verified by operations in CAT I or better conditions, prior to commencing CAT I, CAT II, CAT II or CAT III operations.	



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10. LVO Operations

Details & Evidence	Yes	Document Reference	No
The LVO airworthiness approval has been obtained.	<input type="checkbox"/>		<input type="checkbox"/>
A training programme for the flight crew members involved in these operations has been established taking into account the following items: (1) flight crew qualification requirements, including FSTD training;	<input type="checkbox"/>		<input type="checkbox"/>
(2) description of initial and recurrent training, checking and syllabi.	<input type="checkbox"/>		<input type="checkbox"/>
Operating procedures have been established specifying: (1) the equipment to be carried, including its operating limitations and appropriate entries in the MEL;	<input type="checkbox"/>		<input type="checkbox"/>
(2) flight crew composition and experience requirements;	<input type="checkbox"/>		<input type="checkbox"/>
(3) flight planning;	<input type="checkbox"/>		<input type="checkbox"/>
(4) requirements and procedures for low visibility take-off (LVTO);	<input type="checkbox"/>		<input type="checkbox"/>
(5) requirements and normal procedures for CAT I / CAT II / CAT IIIA / CAT IIIB / CAT IIIC approach;	<input type="checkbox"/>		<input type="checkbox"/>
(6) requirements and procedures on the ground;	<input type="checkbox"/>		<input type="checkbox"/>
(7) procedures for abnormal situations;	<input type="checkbox"/>		<input type="checkbox"/>
(8) post-flight procedures;	<input type="checkbox"/>		<input type="checkbox"/>
(9) continuous monitoring of low visibility operations.	<input type="checkbox"/>		<input type="checkbox"/>
The operations manual or procedures manual contains the duties of flight crew members during taxiing, take-off, approach, flare, landing, rollout and missed approach operations, as appropriate.	<input type="checkbox"/>		<input type="checkbox"/>
The operations manual or procedures manual includes the minimum equipment that has to be serviceable at the commencement of an LVO in accordance with the aircraft flight manual (AFM) or other approved document, as applicable.	<input type="checkbox"/>		<input type="checkbox"/>
LVO is included in the Compliance Monitoring Program. <i>(only required for CAT, NCC and SPO operations)</i>	<input type="checkbox"/>		<input type="checkbox"/>
LVO is taken into account in the SMS (Hazard/Risk Register, Risk Assessment, Management of Change). <i>(only required for CAT, NCC and SPO operations)</i>	<input type="checkbox"/>		<input type="checkbox"/>

11. LVO Crew Experience

Give details of crew experience in LVO operations (Please provide relevant experience of proposed crew):



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SECTION C – ACCOUNTABLE MANAGER’S DECLARATION

The undersigned certify that statements and answers provided in this application form and attachments are complete and true to the best of my knowledge and agree that they are to be considered as part of the basis for issuance of LVO approval in accordance with Civil Aviation Regulations 2016 (MCAR) and Flight Operations Directives (FOD).

Name	Signature	Date

SECTION D – FOR CAAM USE ONLY

Received by FOI:		Date:	
Cash / Credit Card: Signature of CAAM's Personnel		
Fee payable:			
Receipt No.:			

¹ LVO airworthiness approval may need modification to the aircraft.

² Following documents shall be submitted with the attachment:

- (1) Certificate of Registration;
- (2) Certificate of Airworthiness;
- (3) Airworthiness Review Certificate;
- (4) Noise Certificate;
- (5) Aircraft Radio Station License;
- (6) Electronic Equipment List;
- (7) Amendments to the Operations Manual (including MEL, where applicable) or procedures manual;
- (8) Training syllabi for initial and recurrent training programmes together with other relevant material;
- (9) Aircraft Flight Manual (AFM) amendment or supplement in relation to LVO;
- (10) Copy of the manufacturer's statement, service letters STC, etc... in relation to LVO; and
- (11) Copy of the operator's engineering support attesting of the actions taken to implement the manufacturer's service bulletin, etc... (only in case there is no LVO statement of the manufacturer).