



**GOVERNMENT OF INDIA
OFFICE OF DIRECTOR GENERAL OF CIVIL AVIATION**

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AIRWORTHINESS ADVISORY CIRCULAR

Subject: Guidance for Approval of Combined Airworthiness Organization for Vertical Take-Off and Landing Capable Aircraft (CAO-VCA)

1. Introduction

1.1 This guidance material aims to provide comprehensive CAO/MRO requirement including the essential maintenance criteria for CAO-VCA.

1.2 Rule 133B of the Aircraft Rules, 1937 and CAR CAO to be referred.

2. Applicability and Scope

2.1 This maintenance requirements applies to :

- (a) non-pressurized, electric Vertical Take-off and landing (VTOL) capable aircraft with pilot onboard.
- (b) With a maximum take-off weight upto 5700kg, a passenger seating configuration of 9 or less and
- (c) Intended to be used for Advanced Air Mobility (AAM).

3. Definition

(a) Advanced Air Mobility (AAM) is a concept of air transportation that uses electric or hybrid propulsion, often with vertical takeoff and landing (eVTOL) capabilities, to transport people and cargo between places. AAM aims to be more efficient, sustainable, and equitable than current aviation systems;

(b) 'Certifying staff' means the personnel responsible for the certification of maintenance upon its completion;

(c) 'Component' means any engine, propeller or part of the VTOL Capable Aircraft (VCA), or any element of the Control and Monitoring Unit;

(d) 'Continuing Airworthiness' means all of the processes ensuring that, at any time in its operating life, the VTOL Capable Aircraft (VCA) system complies with the applicable airworthiness requirements and is in a condition for safe operation;

(e) 'Control and Monitoring Unit' – means the equipment to control VTOL capable aircraft remotely' includes any instrument, equipment, mechanism, apparatus, appurtenance, software or accessory that is necessary for the safe operation of a VTOL Capable Aircraft (VCA), which is not a part, and which is not carried on board of that VTOL capable aircraft;

(f) 'Control and Monitoring Unit installation' means the process to integrate the Control and Monitoring Unit's elements in a physical environment that is eligible for that purpose according to a set of installation and testing instructions, such that the installed control and monitoring unit may be used to operate a VTOL Capable Aircraft (VCA).

(g) 'Critical Maintenance Task' means a maintenance task that involves the assembly or any disturbance of a system or any component on a VTOL capable aircraft (VCA) system, propulsion system that, if an error occurred during its performance, could directly endanger the flight safety;

(h) 'Maintenance' means any one or a combination of the following activities: overhaul, repair, inspection, replacement, modification or defect rectification of a VTOL Capable Aircraft (VCA) system or component, with the exception of pre-flight inspection;

(i) Minor damage-means any damage to the aircraft which does not necessitate any 'major repair' as per Subpart M of CAR 21.

(j) 'Pre-flight inspection' means the inspection carried out before flight to ensure that the VTOL Capable Aircraft (VCA) is fit for the intended flight;

(k) Serious injury-is an injury sustained by a person in an accident and which: requires hospitalization for more than 48 hours, commencing within 48 hours from the date when the injury was received; or results in a fracture of any bone (except simple fractures of fingers, toes, or nose or; involves lacerations.

(l) 'VCA' means a heavier-than-air aircraft, other than aeroplane or helicopter, capable of performing vertical take-off and landing by means of more than two lift/ thrust units that are used to provide lift during take-off and landing, and its Control and Monitoring Unit;

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4.1 CAO.VCA.1 General

For the purposes of this Circular:

- (a) 'Competent authority' shall be DGCA.;
- (b) 'Owner' means the person responsible for the continuing airworthiness of the VCA aircraft, including the following persons:
 - (i) The registered owner of the VCA aircraft; or
 - (ii) The lessee in the case of a leasing contract; or
 - (iii) The operator

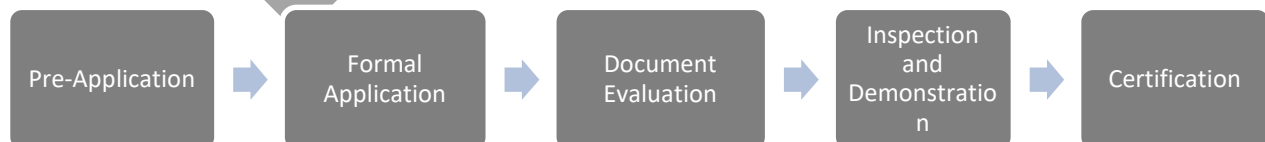
4.2 CAO.VCA.010 Scope

This Circular establishes the requirements/guidance to be met by a combined airworthiness organisation (CAO) in order to be issued, upon application, an approval for the maintenance and continuing airworthiness management of aircraft and components for installation thereon, and to continue carrying out those activities, where such aircraft **are classified as VTOL/VCA**.

4.3 CAO.VCA.015 Application

The organisation shall apply for the issue of, or a change to, a VCA-CAO approval to the DGCA in a form and manner established by that DGCA.

The initial approval is a Five-phase procedure as mentioned below:



The detailed procedures for processing approval are laid down in the **Annexure-1** of this circular.

4.4 CAO.VCA.020 Scope of work and terms of approval

(a) For each of the privileges sought, the organisation shall specify the scope of work in its organisation manual (CAE), as provided for in point CAO.VCA.025. The scope of work shall be an accurate description of the work performed by the organisation.

(b) For VCA and CMU maintenance, the scope of work shall include:

- (i) the type or manufacturer of the VCA and the CMU;
- (ii) the type and extent of maintenance work, including specialized tasks and methods, if any.

(c) For CMU installation, the scope of work shall include the type or manufacturer of the CMU.

(d) For continuing airworthiness management, the scope of work shall include:

- (i) the type or manufacturer of the VCA and the CMU;
- (ii) the identification of the VCA and the CMU managed;
- (iii) the specification of which VCA is used with which CMU.

(e) For the maintenance of components other than complete engines, the scope of work shall be established in accordance with the following classification:)- **RESERVED**

- (i) C1: VCA (air conditioning and pressurization
- (ii) C2: VCA auto flight;
- (iii) C3: VCA communications and navigation;
- (iv) C4: VCA doors and hatches;
- (v) C5: VCA electrical power and lights;
- (vi) C6: VCA equipment;
- (vii) C7: VCA Lift/Trust System;
- (viii) C8: VCA flight controls;
- (ix) C9: VCA Energy systems;
- (x) C10: VCA rotors and tiltrotor;
- (xi) C11: VCA transmission;
- (xii) C12: VCA hydraulic power;
- (xiii) C13: VCA indicating and recording system;
- (xiv) C14: VCA landing gear;
- (xv) C15: VCA oxygen;
- (xvi) C16: VCA propellers;
- (xvii) C17: VCA pneumatic and vacuum systems;
- (xviii) C18: VCA protection from ice/rain/fire;
- (xix) C19: VCA windows;
- (xx) C20: VCA structural;
- (xxi) C21: VCA water ballast;
- (xxii) C22: VCA propulsion augmentation;
- (xxiii) C23: other VCA components;
- (xxiv) C24: CMU components.

(f) For the maintenance of propulsion system, the scope of work shall include the type or manufacturer of the propulsion system.

(g) For the Non-Destructive Testing ('NDT') privilege, when it forms part of the class 'specialised services', the scope of work shall include the NDT methods.

(h) The organisation shall comply with the terms of approval attached to the organisation certificate issued by the competent authority, and with the scope of work specified in the organisation manual.

4.5 CAO.VCA.025 Organisation manual/ Combined Airworthiness Exposition (CAE)

(a) The organisation shall establish and maintain a manual that specifies the necessary information and procedures for its personnel to perform their duties and for the organisation to show how it complies with this Regulation.

(b) The manual shall include directly or by reference at least the following informations:

- (i) A statement signed by the Accountable Manager confirming that the organisation will at all times work in accordance with the requirements of this circular and the organisation manual;
- (ii) The detailed scope of work of the organisation for each privilege;
- (iii) An organisation chart identifying the title(s) and name(s) of the person(s) referred to in points (a), (b) and (c) of point CAO.VCA.035, and showing the lines of responsibility between these persons;
- (iv) A general description and location of the facilities;
- (v) The manual amendment procedure, as specified in point CAO.VCA.105(b), and where the organisation intends to perform the activities mentioned in the following points;
- (vi) The scope of and procedures for work performed at a location other than the approved facilities;
- (vii) A list of certifying staff with their scope of authorization;
- (viii) A list of staff responsible for the preparation of the VCA maintenance programme;
- (ix) The scope of and procedures for the maintenance on VCA performed and certified remotely from the CMU.

(c) The initial issue and amendments of the manual/CAE shall be approved by the competent authority.

4.6 CAO.VCA.030 Facilities and storage

The Organization shall ensure that all necessary facilities, including adequate office accommodation are provided for it to be able to carry out all the planned work.

In addition, where the scope of approval of the organisation includes maintenance activities, the CAO shall ensure that:

(a) Specialised workshops, hangars and bays provide adequate protection from contamination and the environment;

(i) Where a hangar is not owned by the organisation, it may be necessary to establish proof of tenancy. In addition, sufficiency of hangar space to carry out planned maintenance should be demonstrated by the preparation of a projected aircraft hangar visit plan relative to the AMP.

(ii) Subject to agreement by the DGCA, the organisation may use alternative suitable facilities other than a hangar at the approved location for certain aircraft maintenance tasks, provided that adequate protection from contamination and environment are ensured for the particular work package.

(iii) Protection from the weather elements relates to the normal prevailing local weather elements that are expected throughout any 12-month period. Aircraft hangar and aircraft component workshop floors should be sealed to minimize dust generation.

(iv) Aircraft maintenance staff should be provided with an area where they may study maintenance instructions and complete continuing airworthiness records in a proper manner.]

(b) Secure storage facilities are provided for components, equipment, tools and material, under conditions ensuring that unserviceable components and materials are segregated from all other components, material, equipment and tools, that the manufacturer's instructions for storage are complied with and that access to the storage facilities is restricted to authorised personnel.

(i) Storage facilities for serviceable aircraft components should be clean, well-ventilated and maintained at an even dry temperature to minimize the effects of condensation. The manufacturer's storage recommendations should be followed for those aircraft components identified in such published recommendations.

(ii) Adequate storage racks should be provided and strong enough to hold aircraft components and provide sufficient support for large aircraft components such that the component is not damaged during storage.

(iii) All aircraft components, wherever practicable, should remain packaged in their protective material to minimize damage and corrosion during storage. A shelf-life control system should be utilized and identity tags used to identify components.

(iv) 'Segregation' refers to storing unserviceable components in a separate secured location from serviceable components.

(v) Segregation and management of any unserviceable component should be ensured according to the pertinent procedure approved to that organisation.

4.7 CAO.VCA.035 Personnel requirements

(a) The organisation shall appoint an Accountable Manager, who shall have an authority for ensuring that all activities of the organisation can be financed so that those activities are carried out in accordance with this circular.

(b) The accountable manager shall nominate a person or group of persons with the responsibility to ensure that the continuing airworthiness activities and maintenance are performed in accordance with the approved organisation manual.

(c) The accountable manager shall nominate a **compliance monitoring manager** with the responsibility to manage the compliance monitoring function referred to in point CAO.VCA.100.

(d) The persons nominated in accordance with points (b) and (c) shall have a responsibility to the accountable manager and direct access to him/her. They shall be able to demonstrate appropriate knowledge, background and experience to discharge their responsibilities.

- Persons or group of persons nominated should have:
 - Practical experience and expertise in the application of aviation safety standards and safe operating practices;
 - Comprehensive knowledge of:
 - ✓ This circular and any associated requirements and procedures; and
 - ✓ the organization Continuing Airworthiness Exposition;

- Knowledge of a relevant sample of the type(s) of aircraft or components (Level 1 General Familiarization, and could be by the manufacturer or by any other organisation accepted by the DGCA) that are within the scope of work. This knowledge may be demonstrated by documented evidence or by an assessment performed by the DGCA.

(e) The organisation shall ensure that all personnel involved in continuing airworthiness activities have the appropriate knowledge, background and experience, and remain competent for the work intended to be performed.

(f) The organisation shall have sufficient and appropriately qualified staff to allow it to perform the planned work.

(g) The organisation shall establish initial training for its maintenance staff to ensure they will perform the intended maintenance safely.

(h) Personnel that perform specialised tasks, such as welding, heat treatment or non-destructive testing (NDT) inspection other than colour-contrast inspections, shall be qualified in accordance with an officially recognized standard.

- **QUALIFICATION ASSESSMENT**

- Personnel involved in maintenance and continuing airworthiness management should be assessed for competence by 'on-the-job' evaluation and/or by examination relevant to their particular job role within the organisation before unsupervised work is permitted.
- Adequate initial and recurrent training should be provided and recorded to ensure continued competence.

4.8 CAO.VCA.040 Certifying staff

(a) In order to certify the maintenance on VCA, CMU and components, or to certify CMU installation, the organisation shall authorize relevant certifying staff for that purpose. Before issue of such authorization CAO. VCA ensure that certifying staff complies with the requirements of **Annexure 2** (regarding Certifying Staff).

- Certifying staff shall only exercise their privileges to release maintenance if the CAO has ensured:
 - That these certifying staff meet the requirements as in **Annexure-2** of this circular;
 - that these certifying staff have an adequate understanding of the relevant aircraft or aircraft component(s) to be maintained, or both, as well as of the organisation procedures required to perform such maintenance.

(b) Certifying staff that are intended to certify the maintenance on VCA and CMU, or to certify CMU installation, shall receive training relevant to the particular VCA and CMU to be stated in the authorization.

(c) The organisation shall ensure that certifying staff periodically receive sufficient and adequate recurrent training to ensure that they have up-to-date knowledge of relevant technologies, organisation procedures, and human factors issues.

(d) The CAO shall record the details concerning certifying staff and maintain an up-to-date list of all certifying staff, together with details on their scope of approval, as part of the organisation's exposition.

4.9 CAO.VCA.045 Airworthiness review staff

Reserved

4.10 CAO.VCA.050 Components, equipment and tools

(a) The organisation shall have, or shall have access to, equipment and tools (as specified in the maintenance data provided by the OEM) that are adequate to discharge its responsibilities.

(b) The organisation shall ensure that the equipment and tools it uses are controlled and calibrated to an officially recognised standard. It shall keep records of such calibrations and the standards used.

(c) As regards maintenance, the organisation shall inspect, classify and appropriately segregate all incoming components received in accordance with procedure mentioned below:

(i) Unless otherwise specified in this circular, a component may be fitted to an VCA only if all the following conditions are met:

- It is in a satisfactory condition;
- It has been appropriately released to service using an DGCA/EASA Form 1/FAA 8130 or equivalent (acceptable to DGCA);

(ii) Prior to the installation of a component on a VCA, the maintenance organisation shall ensure that the particular component is eligible to be fitted taking into account the VCA configuration and any applicable ADs/SBs.

(iii) Standard parts shall be fitted to an VCA or to a component only when the maintenance data specifies those particular standard parts, when accompanied by evidence of conformity to the applicable standard, and when they have appropriate traceability.

(iv) Raw or consumable materials shall only be used on an UA or a component provided that:

- The aircraft or component manufacturer allows for the use of such raw or consumable materials in relevant maintenance data;
- Such materials meet the required material specifications and have appropriate traceability;
- Such materials are accompanied by documentation that clearly relates to those particular materials and contains a statement of conformity to applicable specifications, and also the manufacturing and supplier source.

(v) Unserviceable and unsalvageable components shall be segregated from serviceable components, standards parts, and materials.

(vi) A component shall be considered unserviceable in any of the following circumstances:

- Upon reaching the component's limitation as defined in the VCA maintenance programme;
- Non-compliance with applicable ADs and other continuing airworthiness requirements mandated by the DGCA;
- Absence of the necessary information to determine the airworthiness status of the component or its eligibility for installation;
- Evidence of component defects or malfunctions;
- Involvement of the component in an incident or accident that has likely affected its serviceability.

(vii) Components which have reached their certified life limits or contain a non-repairable defect or malfunction shall be classified as unsalvageable and shall not be permitted to re-enter the component supply system unless their certified life limits have been extended.

4.11 CAO.VCA.055 Maintenance data and work orders

(a) The organisation shall hold and use applicable current specified maintenance data which is necessary for the performance of maintenance.

Maintenance data: - For the purposes of this circular, 'applicable maintenance data' means any of the following:

- (i) Any applicable requirement, procedure, standard or information issued by the competent authority or the DGCA;
- (ii) Any applicable AD;
- (iii) The applicable ICAs and other maintenance instructions issued by the type-certificate holder, supplementary type-certificate holder and any other organisation that publishes such data in accordance with AEAC NO. 01 of 2024;
- (iv) For components approved for installation by the design approval holder ('DAH'), the applicable maintenance instructions published by the component manufacturer and acceptable to the DAH.

(b) Before maintenance commences, a written work order shall be agreed between the organisation and the person or organisation requesting the maintenance, in a manner that establishes the maintenance to be performed.

4.12 CAO.VCA.060 Maintenance standards

(a) All maintenance shall be performed in accordance with the requirements for Maintenance standards specified in the **Annexure 3** of this circular.

(b) When performing maintenance, the organisation shall comply with the following requirements:

- (i) Ensure that the area where maintenance is performed is well-organized and clean (free of dirt and contaminants);
- (ii) Use the methods, techniques, standards and instructions specified in the maintenance data and work orders referred to in point CAO.VCA.055;
- (iii) Use the tools, equipment and materials specified in point CAO.VCA.050;
- (iv) Ensure that maintenance is performed in accordance with any environmental limitations specified in the maintenance data referred to in point CAO.VCA.055;

- (v) Ensure that proper facilities are used in case of inclement weather or lengthy maintenance;
- (vi) Ensure that the risk of errors during maintenance is minimized, in particular the risk of errors repeated in identical maintenance tasks;
- (vii) Ensure that an error-capturing method is implemented after the performance of any critical maintenance task;
- (viii) Perform a general verification after the completion of maintenance in order to ensure that the VCA, the CMU or the component is clear of all tools, equipment and any extraneous parts and materials, and that all access panels removed have been refitted.

4.13 CAO.VCA.065 Certification of VCA maintenance

Upon completion of the maintenance performed on an VCA in accordance with this circular, the organisation shall certify such maintenance in accordance with requirement specified in Annex 3 for Certificate of Release to Service (CRS).

4.14 CAO.VCA.070 Certification of component maintenance

- (a) Upon completion of the maintenance carried out on VCA components in accordance with this Regulation, the organisation shall certify such maintenance in accordance with requirement specified in Annex 3 for Certification of VCA component maintenance.
- (b) Upon completion of the maintenance performed, in accordance with this circular, on CMU components referred to in the Annex 3 about Installation and maintenance of CMU components, the organisation shall certify such maintenance in accordance with requirement/guidance specified in Annex 3 for Certification of UA component maintenance.

4.15 CAO.VCA.071 Certification of CMU maintenance

Upon **completion of the maintenance** performed on the CMU in accordance with this circular, the organisation shall certify such maintenance in accordance with point specified in **Annexure 3** about Certification of CMU maintenance.

4.16 CAO.VCA.072 Certification of CMU installation

Upon **completion of the installation** of the CMU in accordance with this circular, if so prescribed by the design approval holder, the organisation shall certify such installation in accordance with point specified in Annex 3 about Certification of CMU maintenance.

4.17 CAO.VCA.075 Continuing Airworthiness Management

- (a) All continuing airworthiness management tasks shall be performed in accordance with the requirements of continuing airworthiness laid down in **Annexure -4**.
- (b) For every VCA managed, the organization shall:
 - (i) Develop and control the VCA maintenance programme, and approve the initial issue and its amendments from DGCA; deviations pursuant to VCA maintenance programme shall be performed in accordance with a procedure approved by the DGCA.
 - (ii) Make that VCA maintenance programme available to the owner of the VCA;

- (iii) Ensure that modifications and repairs comply with Modifications and repairs procedure;
- (iv) Ensure that all maintenance is certified in accordance with certificate of release to service-CRS procedure;
- (v) Ensure that all applicable ADs and all operational requirements with a continuing airworthiness impact are applied;
- (vi) Ensure that all defects are rectified by an appropriately approved maintenance organisation;
- (vii) Ensure that the VCA is made available for maintenance to an appropriately approved maintenance organisation, in accordance with the VCA maintenance programme and whenever necessary;
- (viii) Coordinate the scheduled maintenance and the application of ADs in order to ensure the work is performed properly;
- (ix) Manage and archive all continuing airworthiness records;
- (x) Ensure that the mass-and-balance statement reflects the current configuration of the VCA, when such information is provided by the VCA manufacturer.

4.18 CAO.VCA.080 Continuing airworthiness management data

- (a) The organisation shall have access to and use applicable current continuing airworthiness management data which is necessary for the performance of continuing airworthiness management tasks.
- (b) That data is:
 - (i) Any applicable requirement, procedure, standard or information issued by the competent authority or DGCA;
 - (ii) Any applicable AD;
 - (iii) The applicable ICAs and other maintenance instructions issued by the type-certificate holder, supplementary type-certificate holder and any other organisation that publishes such data in accordance with to AEAC NO. 01 of 2024.
 - (iv) For components approved for installation by the design approval holder ('DAH'), the applicable maintenance instructions published by the component manufacturer and acceptable to the DAH.

4.19 CAO.VCA.085 RESERVED

4.20 CAO.VCA.090 Record-keeping

- (a) The organisation shall retain the following records as applicable to the privileges it holds:
 - (i) Maintenance records :
Certificates of release to service ('CRS') together with all supporting documents necessary to demonstrate that all maintenance requirements have been met; the organization shall also provide the CRS to the person or organisation requesting the maintenance, together with any record, such as specific repair or modification data, necessary to ensure compliance with requirement laid down in circular for continuing airworthiness record system.
 - (ii) CMU installation records
CRS together with all supporting documents necessary to demonstrate that all installation requirements have been met; the organisation shall also provide the CRS to the person or organisation requesting the installation, together with any specific installation data.

(iii) Continuing airworthiness management records
The records required by Annexure -4 point 4.5.

(iv) Reserved.

(b) The organisation shall retain personnel records and authorisations that are necessary to demonstrate the qualification of its personnel. It shall retain the records that are relevant to certifying staff for a period of at least 2 years after that staff has left the organisation, or after the authorisation issued to that staff has been withdrawn.

(c) The organisation shall, upon staff request, grant them access to their personnel records as specified in point (b), and duplicate and provide these records to them when they leave the organisation.

(d) The organisation shall retain the records:

(i) All records pertaining to Continuing airworthiness management and maintenance are to be maintained and preserved for a minimum period of THREE years.

(ii) Records pertaining to VCA and CMU, for a period of 3 years after the VCA or/and CMU has been permanently withdrawn from service,

(e) Compliance monitoring records shall be kept for a minimum period of 3 years.

(f) All records shall be stored in a manner that ensures protection from damage, alteration, and theft.

(g) Where the continuing airworthiness management of an VCA is transferred to another organization or person, all the records retained under points (a)(2) to (a)(5) shall be transferred to that organization or person. If the transfer is made to another approved CAO-VCA organization, point (d) shall apply to that organization from the moment of the transfer.

(h) When the CAO-VCA organization terminates its operations, all retained records shall be transferred the owner or customer of the respective VCA or component, or shall be stored as specified by the competent authority;

4.21 CAO.VCA.095 Privileges of the organization

In accordance with the organization manual, the organization shall be granted with one or more of the following privileges:

(a) Maintenance

(i) Maintain VCA, CMU or components specified in the scope of work and at the locations specified in the organization manual.

(ii) Arrange for the performance of specialized services (for ex NDT, heat treatment) by an appropriately qualified subcontracted organization under the control of the approved CAO.VCA organization, in accordance with the appropriate procedures specified in the organization manual.

(iii) Maintain any VCA or component for which it is approved at any location, where the need of such maintenance arises either from the unserviceability of the aircraft or the need for supporting occasional maintenance, in accordance with the conditions specified in the CAE.

(iv) Issue CRS in accordance with points CAO.VCA.065, CAO.VCA.070 or CAO.VCA.071.

(b) CMU installation

An organisation approved for CMU maintenance may perform the installation of a CMU and certify such installation in accordance with point CAO.VCA.072.

(c) Continuing airworthiness management

(i) Manage the continuing airworthiness of any VCA specified in the scope of work.

(ii) Arrange for the performance of limited continuing airworthiness tasks by a subcontracted organization subject to the compliance monitoring function of the CAO.VCA organization, as listed in the organization approval certificate.

4.22 CAO.VCA.100 Compliance monitoring and organizational review

(a) To ensure that the CAO continuously meets the requirements of this Circular, the organization shall establish a compliance monitoring function.

(b) That function shall independently monitor:

(i) The compliance of the organization manual with this circular;

(ii) The compliance of the organization's activities with the organization manual.

(c) The function shall also monitor the compliance of contracted maintenance with the contract or work orders.

(d) The organization may replace the compliance monitoring function by regular organizational reviews not requiring independence, provided that all the following conditions are met and subject to the approval by the competent authority:

(i) The organisation's staff does not exceed 10 full-time equivalents involved in maintenance;

(ii) The organisation's staff does not exceed 5 full-time equivalents involved in continuing airworthiness management.

In that case, the organisation shall not subcontract continuing airworthiness management tasks to other parties.

4.23 CAO.VCA.102 Protection of information and communication systems and data

(a) The organisation shall protect information and communication technology systems and data used for continuing airworthiness activities, including relevant software and hardware, and network connections.

(b) Without prejudice to point CAO.VCA.120, the organisation shall ensure that any information security incident or vulnerability, which may represent a significant risk to aviation safety, is reported to its competent authority.

In addition:

(i) When such an incident or vulnerability affects an aircraft or associated system or component, the organisation shall also report it to the design approval holder;

(ii) When such an incident or vulnerability affects a system or constituent used by the organisation, the organisation shall report it to the organisation responsible for the design of the system or constituent.

(c) The reporting referred to in point (b) shall be made as soon as possible, but not exceeding 72 hours from the time the condition has been known to the organisation, unless exceptional circumstances prevent this.

4.24 CAO.VCA.105 Changes to the organisation

(a) The following changes to the organisation shall require prior approval by the competent authority:

- (i) Changes to the certificate, including the terms of approval of the organisation;
- (ii) Changes of the persons referred to in points (a) to (c) of point CAO.VCA.035;
- (iii) Changes to the procedure specified in point (b).

(b) Any other changes shall be managed by the organisation and notified to the competent authority in accordance with a procedure specified in the organisation manual. The organisation shall submit the description of the changes and the corresponding amendment of the organisation manual to the DGCA within 15 days from the day on which the changes took place.

4.25 CAO.VCA.110 Continued validity of an approval certificate

(a) An approval shall be issued for a maximum period of five years unless otherwise specified. It shall remain valid subject to:

- (i) The organisation remaining in compliance with the requirements of this Circular, in particular how the findings are handled in accordance with point CAO.VCA.115;
- (ii) The DGCA being granted access to the organisation to determine continued compliance with the requirements of this Circular;
- (iii) The DGCA not having surrendered or revoked the approval.

(b) Upon surrender or revocation of the approval, the organisation shall return the approval certificate to the DGCA.

4.26 CAO.VCA.112 Access

For the purpose of verifying compliance with the relevant requirements of this Circular, the organisation shall ensure that access to any facility, VCAS, document, record, data, procedure or to any other material relevant to its activities subject to certification is granted to any person authorized by the DGCA.

4.27 CAO.VCA.115 Findings and observations

- (a) A Level 1 finding is any significant non-compliance with CAO.VCA requirements which lowers the safety standard and seriously hazards flight safety.
- (b) A Level 2 finding is any non-compliance with the CAO.VCA requirements which may lower the safety standard and possibly hazard flight safety.
- (c) After receiving a notification of a finding, the CAO shall adopt a corrective action plan and demonstrate to the satisfaction of the DGCA that it has taken the necessary corrective action to address the finding within the time period set by that DGCA.

4.28 CAO.VCA.120 Occurrence reporting

- (a) The organisation shall establish and maintain an occurrence-reporting system, including mandatory and voluntary reporting.
- (b) the organisation shall report to competent authority and to the design approval holder of the VCA or component any safety-related event or condition of an VCA or component identified by the organisation which endangers or, if not corrected or addressed, could endanger an VCA or any other person, and in particular any accident or serious incident.
- (c) When the organisation is contracted for maintenance, the organisation shall also report any such event or condition that affects a VCA to the organisation responsible for the continuing airworthiness management of that VCA in accordance with ML.VCA. For events or conditions that affect components, the organisation shall report to the person or organisation that requested the maintenance.
- (d) When the organisation is contracted to perform continuing airworthiness management tasks, it shall also report any such event or condition that affects a VCA to the owner that has contracted the another approved CAO.VCA organisation.

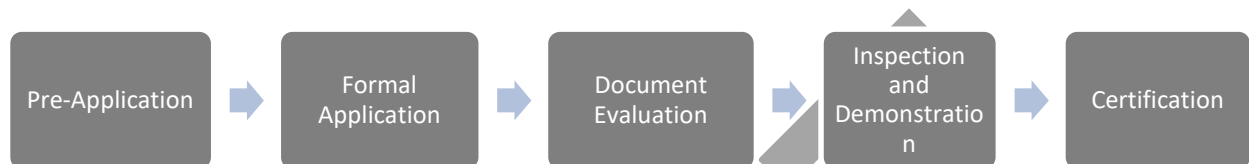
Annexure-1

(Refers to CAO-VCA

AAC No. 0X of 2025 dated XX November 2025)

Issue of CAO-VCA : Combined Airworthiness Organisation for VTOL Capable Aircraft (VCA) approval process

The approval is a five Phase process:



Phase-1 (Pre-Application)	
Applicant	• Makes an initial inquiry to the DGCA (DAW) regarding regulatory requirements and procedures for obtaining approval. • The applicant should be represented by the Accountable Manager and the designated Quality Manager at a minimum. • Appoints a designated focal point, preferably a senior technical member or Quality Manager, to coordinate the certification process.
DGCA	• Provides information on regulatory requirements, processes, timelines, and associated requirements (data, tools, staff, training, etc.). • Clarifies the need for a Continuing Airworthiness Exposition (CAE) and its specific requirements. • Informs the applicant about the need to submit a formal application with required documents to DGCA Headquarters (DAW). • Shall specify the need for appointing a focal point.
Note	• The designated focal point will be responsible for coordinating with DGCA and ensuring timely response to findings issued by the DGCA are directed to, and properly addressed by the appropriate personnel within the organisation. • During any meeting with the applicant, minutes should be kept and recorded in the relevant files.

Phase-2 (Formal Application)	
Applicant	Application Form: The applicant must submit CA Form 2 along with the Combined Airworthiness Exposition (CAE), prepared in accordance with circular CAO.VCA.025 to DGCA Headquarters (DAW). Supporting Documents: • Resumes for post holders. • Applicable fees (if applicable) along with the certificate by the proposed Accountable Manager. • Para-wise compliance report of this circular i.e. CAO.VCA with evidence. • Maintenance Manual/Associated Procedure Manual.

	• Evidence of registered organization name as mentioned in CA Form 2. • Schedule of Events describing the list of activities, and/or facility acquisitions, which must be accomplished or made ready, including the dates on which they will be ready for the DGCA to inspect. The schedule should be realistic and contains sufficient flexibility to allow for unforeseen contingencies. Scope of Approval: The intended scope of approval, including class and ratings, should be clearly specified.
DGCA	• Scrutiny: DGCA will scrutinize the application for eligibility and completeness as per this circular. Incomplete applications will be rejected, and the applicant will be notified.
Note	While submitting the application, the applicant should provide evidence of compliance with the following requirements: - a) Personnel Requirements: Compliance of regulation as stated in VCA.CAO. A.035 Personnel requirements. The persons nominated in accordance with CAR CAO.A.035 to function as Accountable Manager, Base Maintenance Manager, Line Maintenance Manager, Workshop Manager and Quality Manager, as applicable. b) Facility Requirements: Compliance of regulation as stated in CAO.A.030

(Allocation of Investigation Team)	
Applicant	NO action required
DGCA	Upon receipt of the application at DGCA and prior to the Formal Application Meeting, a "Certification Team nominated by Director of Airworthiness" is assigned to oversee the CAO Approval process.
Note	Scheduling of Formal Application meeting with the objective of : a) Introduce the Organization's Management personnel to the DGCA Certification Team. b) Assure that the applicant's maintenance team understands the CAO certification process. c) Resolve the queries raised by the Applicant, if any. d) Provide an initial comment on the parawise compliance report of this circular provided by the applicant. e) Discuss and agree upon the target dates for the various phases outlined in the Schedule of Events. Schedule of Events will be scrutinised for realistic timelines which will be mutually agreed.
Phase-3(Document Evaluation)	
Applicant	The organization must possess adequate and appropriate aircraft rated certifying staff and support staff, as detailed in the CAE.
DGCA	The DGCA will evaluate the application and supporting documents against an internal checklist. The evaluation and assessment shall consist of following items: • Evaluation and acceptance of Post holders and other personnel. • Review of Para wise Circular compliance of CAO.VCA. • Review of CAE and associated procedures. Evaluation and acceptance of Post holders and other personnel and completion of CA Form 4 The Accountable Manger should demonstrate to DGCA that he has a reasonable understanding of applicable regulations and of his role within the approved organisation,

	but also that he has all necessary means, in particular financial, to fulfill the Accountable Manager's duties as detailed in the CAE. The Accountable Manager is accepted via approval of the MOE containing the Accountable Manager's commitment statement. All necessary means, in particular financial, to fulfill the Accountable Manager's duties as detailed in the MOE. The Accountable Manager is accepted via approval of the MOE containing the Accountable Manager's commitment statement.
Note	

Phase-4(Inspection and Demonstration)	
Applicant's Role	Internal Audit: Once the DGCA- Certification Team confirms the draft Combined Airworthiness Organisation Exposition (CAOE) and post holder as being acceptable, the maintenance organization's Quality Department conducts a comprehensive internal audit. This audit ensures compliance with: • The organization's own CAE. • The CAO.VCA Circular and its amendments. • Relevant regulations and guidance for specific technical areas, such as certifying staff, line maintenance, and composite repairs. Quality Manager's Statement and Audit Report: Before the DGCA's on-site inspection, the organization's Quality Manager must provide a signed statement to the DGCA. This statement confirms that all processes, facilities, documentation, tools, equipment, materials, components, and personnel subject to the application have been reviewed and audited showing compliance with requirements/guidance of this circular. It also signifies that all findings from the internal audit have been addressed with appropriate corrective actions. The maintenance organization must submit the relevant internal audit report(s) including the associated corrective actions along with the Quality Manager's statement to the DGCA.
DGCA's Role	On-Site Inspection: • An opening meeting is held with the maintenance organization's management and, if possible, the Accountable Manager. • The DGCA Certification Team conducts an on-site inspection to evaluate facilities, services, procedures, tools, and equipment. Recommendation: • If the maintenance organization demonstrates compliance with CAO.VCA and all findings are closed, the Certification Team recommends issuing the CAO.VCA approval. • This recommendation includes approval of the CAE, associated documents, and management personnel. • For initial approval, all findings must be corrected before issuing the approval.
Remark	

Phase-5(Certification)	
Applicant's Role	

DGCA's Role	Review and Approval: 1. Document Review: The recommendation package, including the on-site audit report and closure of findings, will be reviewed for accuracy and compliance. 2. Quality Review: A quality review of the Recommendation audit report form and Internal Checklist will be conducted by the Competent Authority at DGCA(DAW) to ensure the appropriate categorization of finding levels and closure actions. Satisfactory review of the audit form should be indicated by a signature on the audit form. Issuance of Approval: Once the review process is complete and satisfactory, the following documents will be issued to the applicant: • CAO-VCA: Approval Certificate • Approval Letter for the CAE and its associated documents • Acceptance letter for nominated personnel.
Remark	

CAO-VCA Form 2

Application for		
DGCA	CAO-VCA Approval	Initial Grant
		Change
1. Registered name of applicant: 2. Trading name (if different): 3. Address requiring approval: 4. Tel..... Fax..... E-mail..... 5. Scope of approval relevant to this application: 6. Position and name of the (proposed*) Accountable Manager: 7. Signature of the (proposed*) Accountable Manager: 8. Place: 9. Date: Note(1): This duly filled Application Form along with supporting documents and fees should be forwarded DGCA Headquarters (DAW), New Delhi. Note(2): Necessary fees is to be paid as per Rule 133B of The Aircraft Rules, 1937.		

VCA MAINTENANCE LICENSING/ AUTHORIZATION TO CERTIFYING STAFF

2.1 Modalities for introduction of a new license sub-category are being worked out: RESERVED (Refer Appendix-“A”).

2.2 Eligibility Criteria for issue of Authorization to certifying staff by DGCA (Rule 61(8), Aircraft rules 1937):

Till such time new license sub-category is introduced by DGCA, Authorisation will be issued by DGCA to certifying staff for carrying out maintenance on VCA as per Rule 61(8) of The Aircraft rules 1937 to ***existing license holders*** with following eligibility.

(a) Existing licence holder [Category “B1”, “B2” or “B3”] :

The existing license holders can be qualified for the subcategory award in the license by DGCA subject to fulfilling the following criteria:

- (i) The applicant has a valid license with appropriate category included in it.
- (ii) The applicant has been provided with the type rated training^{\$} (“Theory + Examination” and “Practical + Assessment[#]”) by the OEM, maintenance training organisation appropriately approved by DGCA or, when conducted by other organisations, as directly approved by the DGCA.

(b) Category “C”:

The existing license holders can be qualified for the subcategory award in the license by DGCA subject to fulfilling the following criteria:

- (i) The applicant has a valid license with appropriate category i.e. ‘C’ included in it.
- (ii) The applicant has been provided with the type rated training^{\$} (“Theory + Examination” and “Practical + Assessment[#]”) by the OEM, maintenance training organisation appropriately approved by DGCA or, when conducted by other organisations, as directly approved by the DGCA.

(c) Authorization for category “C” from another Category (from “B1” or “B2”):

- (i) The applicant has a valid license with appropriate category included in it.
- (ii) The applicant has been provided with the type rated training^{\$} (“Theory + Examination” and “Practical + Assessment[#]”) by the OEM, maintenance training organisation appropriately approved by DGCA or, when conducted by other organisations, as directly approved by the DGCA.
- (iii) Applicant should demonstrate minimum three months experience.

Note 1: (#) Assessment is to be made by the **committee as decided by DGCA.**

Note 2: (§) Level – III type rated training by **OEM**, Maintenance Training Organisation appropriately approved by DGCA or conducted by other organisations directly approved by the DGCA.

2.3 Application

Application for issue of authorization is to be made as per Part-II, Chapter 23 of Airworthiness Procedure Manual (APM) Issue 2, Revision 44 dated February 2025 Chapter 23, with supporting documents and necessary fees forwarded through the organization.

2.4 Demonstration of Skill

An applicant for issue of authorization for Aircraft Maintenance (VCA) shall demonstrate his/her VCA aircraft maintenance skill in respect of each category or sub-category of license or specific type of aircraft or systems for which the application has been made to the Director General.

2.5 Privileges

Privileges will be restricted as defined in the Authorization issued by DGCA.

2.6 validity of the Authorization

Authorization shall be valid for the period defined in authorization unless withdrawn/ suspended by competent authority.

APPENDIX-A

(Refers to CAO-VCA

AAC No. 0X of 2025 dated XX November 2025)

VCA Maintenance licensing

*[Fresh applicant to become Certifying Staff (Not in possession of License in Cat B1, B2 or B3)]
(As of now, provisions are not available in regulations)*

CAR 66 categorizes aircraft maintenance licenses into various classes: Category L for Microlight, light sport aircraft, glider, balloon or an airship; Category A for minor scheduled line maintenance and simple defect rectification; Category B1 for mechanical systems; Category B2 for avionics; Category B3 for non-pressurized piston-engine aeroplanes; and Category C for base maintenance certification. However, specific provision for aeroplanes/VTOL Capable Aircraft (VCA) powered by Electric Propulsion Systems will be made.

A.1 In subpart B of CAR-66 (para 66.A.100) provision for VCAs will be included.

Necessary revision in CAR 66 and relevant AACs will be made.

A.2 Introduction of a new license sub-category:

(a) A new license subcategory will be introduced as B1.E., specifically for aeroplanes/VTOL Capable Aircraft (VCA), which:

- (i) Are equipped with electric power plants & powered exclusively by electric propulsion systems
- (ii) Have a maximum take-off mass (MTOM) of 5,700 kg or less

(b) The new category addresses the need for a distinct certification path to deal with the unique challenges and maintenance requirements posed by electric propulsion systems, which differ substantially from conventional piston or turbine engines.

(c) The change is a forward-looking measure designed to support the safe and sustainable integration of new air mobility solutions.

(d) Typical aircraft to be covered under the B1.E licence include light electric training aircraft, electric commuter aircraft for regional routes, and potentially certain models of eVTOL aircraft if they meet the criteria. These aircraft are generally simpler in their propulsion architecture but incorporate advanced energy management and battery systems that require dedicated training and handling procedures.

(d) Key components in addition to existing one, subject to maintenance under the B1.E licence include:

- i) High-voltage electric motors
- ii) Lithium-based or alternative battery systems
- iii) Fuel cells (if applicable, though these may be excluded if they fall into a different subcategory)
- iv) Power distribution and management systems
- v) Engine monitoring and diagnostic systems specific to electric propulsion

(e) Because of the high voltages and energy densities involved, safety protocols for B1.E engineers are notably different from those required for conventional engines. Maintenance tasks must factor in the risks of electric shock, thermal runaway, and battery degradation.

A.3 Development of New Module 18 (Electric Propulsion Systems)

A new Module 18 (Electric Propulsion Systems), covering following topics and to be delivered entirely at Level 3 will be developed. It focuses on the design, operation, maintenance, and troubleshooting of electric propulsion systems, preparing engineers to support electric and hybrid-electric aircraft technologies.

- a) 18.1 Fundamentals
- b) 18.2 Engine performance
- c) 18.3 Engine construction
- d) 18.4 Electric energy system
 - e) 18.4.1 Batteries and accessories
 - f) 18.4.2 Fuel cells and accessories
 - g) 18.4.3 Power distribution systems
 - h) 18.4.4 Electronic engine control
- i) 18.5 Engine indication systems
- j) 18.6 Power plant installation
- k) 18.7 Engine monitoring and ground operation
- l) 18.8 Engine storage and preservation

A.4 Safety and operational considerations:

Electric aircraft maintenance introduces unique safety considerations not present in traditional aircraft. High-voltage battery systems present risks such as:

- a) Arc flash incidents.
- b) Battery thermal runaway.
- c) Electrocution hazards.
- d) Chemical exposure.

The B1.E curriculum therefore includes robust safety training, including the use of personal protective equipment (PPE), isolation protocols, and emergency response procedures for battery fires or leaks.

Maintenance personnel must also be trained in interpreting data from battery management systems (BMS) and integrating software updates or firmware revisions, tasks not traditionally associated with other maintenance roles.

A.5 Development of Question Bank on Module 18 (Electric Propulsion Systems) by CEO

Adequate Question Bank on Module 18 will be developed by CEO for conduct of Exam with 76 questions & duration of 90 minutes with a pass mark of 75%.

A.6 Eligibility Criteria for License:

The applicant must fulfil the **eligibility criteria** as defined in para **66.A.15** of CAR-66.

A.6 Extending an existing B1.1, B1.2 or B2 licence across to a B1.E :

Considering the significant overlap in knowledge and skills between existing licence holders and those required for B1.E, a simplified pathway for engineers already holding B1.1 (turbine), B1.2 (piston), or B2 (avionics) licences is to be provided. She/He should :

- (a) Pass Module 18 (Electric Propulsion Systems) with 75% marks, and
 - (i) Type rated training ("Theory + Examination" and "Practical + Assessment#)) by the OEM, maintenance training organisation appropriately approved by DGCA or, when conducted by other organisations, as directly approved by the DGCA and
 - (ii) **Completion of TNA based OJT.
- OR
- (i) Experience logbook to be completed on relevant electric propulsion aircraft under 2000kg MTOW. For B1.1 and B1.2 only 6 months experience is required. For B2's would require 12 months experience.
- (ii) Passing DGCA Type Examination conducted by CEO and skill Test by DGCA.

A.7 Grant of B1.E License to fresh applicant (not in possession of any license):

The fresh applicant can be qualified for the B1.Ee license by DGCA subject to fulfilling the following criteria:

- (a) The applicant must have qualify the 10+2 (PCM)/ Diploma in engineering
- (b) Must have passed Basic Knowledge Module Exam as per CAR 66 as below:

The B1.E licence requires the same core modules as B1.1, but some topics are covered at a lower level. New developed "Module 18" is to be passed, additionally.

- | | | |
|-------|---|---|
| i) | Module - 3, | Electrical Fundamentals |
| ii) | Module - 4, | Electronic Fundamentals |
| iii) | Module - 5, | Digital Techniques/ Electronic Instrument Systems |
| iv) | Module - 6, | Materials and Hardware |
| v) | Module - 7(A or B), | Maintenance Practices |
| vi) | Module - 8, | Basic Aerodynamics |
| vii) | Module - 9(A or B), | Human Factor |
| viii) | Module - 10, | Aviation Legislation |
| ix) | Module - [11(A or B or C) or 12 or 13], | Aerodynamics, Structures & Systems |
| x) | # Module - 14 or (15 & 17A) or (16 & 17B), Propulsion/Gas Turbine/ Piston Engine/ Propeller | |
| xi) | Module – 18 | Electric Propulsion Systems |

(#)This module can be waved of in view of Module 18 is being compulsory for B1.E.

(c) Experience required as defined in para **66.A.30** of CAR-66.

(d) She/ He should have undergone -

(i) Type rated training (“Theory + Examination” and “Practical + Assessment#)) by the OEM, maintenance training organisation appropriately approved by DGCA or, when conducted by other organisations, as directly approved by the DGCA and

(ii) **Completion of TNA based OJT.

OR

(i) Experience logbook to be completed on relevant electric propulsion aircraft under 2000kg MTOW. For B1.1 and B1.2 only 6 months experience is required. For B2's would require 12 months experience, and

(ii) Passing DGCA Type Examination conducted by CEO and skill Test by DGCA.

(**) The endorsement of the first aircraft type rating within a given category/sub-category requires satisfactory completion of the corresponding On the Job Training, as described in **Appendix III to CAR- 66**. Additional endorsement in the same category/subcategory shall require OJT based on a training need analysis.

A.8 Application:

As defined in para **66.A.10** of CAR-66.

A.9 Privileges:

As defined in para **66.A.20** of CAR-66.

A.10 Continued validity of the aircraft maintenance engineer's licence

As defined in para **66.A.40** of CAR-66.

A.11 Endorsement with aircraft ratings

As defined in para **66.A.45** of CAR-66.

A.12 Demonstration of Skill:

An applicant for grant or extension of Aircraft Maintenance Engineer's licence shall demonstrate his/her aircraft maintenance skill in respect of each category or sub-category of license or specific type of aircraft or systems in accordance with CAR 66.A.45 for which the application has been made to the Director General.

MAINTENANCE STANDARDS

3.1 VCA defects

- (a) Any VCA defect that seriously endangers the flight safety shall be rectified before further flight.
- (b) The following persons may decide that a defect does not seriously endanger flight safety, and may defer its rectification accordingly:
 - (i) The pilot of VCA or the authorised certifying staff in respect of defects that affect non-required VCA equipment;
 - (ii) The pilot of VCA or the authorised certifying staff when using the Minimum Equipment List (MEL) or the Configuration Deviation List (CDL) (if applicable) in respect of defects that affect required VCA equipment;
 - (iii) The authorised certifying staff in respect of defects other than those referred to in points (b)(i & ii).
- (c) Any VCA defect that does not seriously endanger flight safety shall be rectified as soon as practicable from the date on which the defect was first identified and within the time limits specified in the maintenance data or the MEL (if applicable).
- (d) Any defect that is not rectified before flight shall be recorded in the VCA continuing airworthiness record system, and a record shall be made available to the VCA pilot.

3.2 Certification of VCA maintenance

- (a) When completed, the maintenance performed on an VCA shall be certified on a 'certificate of release to service' ('CRS') by a certifying staff. The CRS shall be issued when that certifying staff has verified that all the maintenance that was ordered has been properly performed taking into account the availability and use of the maintenance data specified in point CAO.VCA.055.
- (b) A CRS shall contain at least the following:
 - (i) Basic details of the VCA maintenance performed;
 - (ii) The date on which the VCA maintenance was certified;
 - (iii) The approval reference of the maintenance organisation and certifying staff issuing the CRS;
 - (iv) The limitations to airworthiness or operations, if any.
- (c) By way of derogation from point (a), when ordered maintenance cannot be completed, a CRS may be issued within the approved UA limitations. In that case, the CRS shall indicate that the maintenance could not be completed, and also indicate any applicable airworthiness or operations limitations as part of the information required in point (b)(iv).

(d) A CRS shall not be issued in the case of any known non-compliance with the requirements of this circular which endangers flight safety.

3.3 Certification of VCA component maintenance

(a) When completed, the maintenance performed on a VCA component shall be certified by a certifying staff. The certification shall be issued when that certifying staff has verified that all the maintenance that was ordered has been properly performed taking into account the availability and use of the maintenance data specified in CAO.VCA.055 and that the component is in a satisfactory condition.

(b) That certification shall be established on a DGCA/EASA Form 1/FAA 8130.

(c) The DGCA/EASA Form 1 referred to in point (b) shall be filled in accordance with the instructions provided in the CAR-M. It may be generated from a computer database.

3.4 Certification of CMU maintenance

(a) When completed, the maintenance performed on the CMU that involves any component which is critical for the VCA operation as determined by the DAH, shall be certified on a CRS by a certifying staff. The CRS shall be issued when that certifying staff has verified that all the maintenance that was ordered has been properly performed taking into account the availability and use of the maintenance data specified in point maintenance data.

(b) A CRS shall contain at least the following:

- (i) basic details of the CMU maintenance performed;
- (ii) the date on which the CMU maintenance was certified;
- (iii) the approval reference of the maintenance organisation and certifying staff issuing the CRS;
- (iv) the limitations to airworthiness or operations, if any.

(c) A CRS shall not be issued in the case of any known non-compliance with the requirements of this circular which endangers flight safety.

3.5 Certification of CMU component maintenance

(a) When completed, the maintenance performed on a CMU component by a maintenance organisation approved in accordance with this circular by a certifying staff, the certification shall be issued only when that certifying staff has verified that all the maintenance that was ordered has been properly performed taking into account the availability and use of the maintenance data specified in point maintenance data and that the component is in a satisfactory condition.

(b) That certification shall be established on a DGCA/EASA Form 1.

(c) The DGCA/EASA Form 1 referred to in point (b) shall be filled in accordance with the instructions provided in the circular. It may be generated from a computer database.

3.6 Certification of CMU installation

(a) If prescribed by the DAH, the installation of the CMU, when completed, shall be certified on a 'certificate of release to service' (CRS) by a certifying staff. The CRS shall be issued only when that certifying staff has verified that all the current applicable installation and testing instructions issued by the DAH have been properly complied with, taking into account that the maintenance data specifies those components and when they are in a satisfactory condition.

(b) A CRS shall include all the following:

- (i) A reference to the CMU installation instructions;
- (ii) The date on which the CMU installation was certified;
- (iii) The approval reference of the maintenance organisation and certifying staff issuing the CRS;
- (iv) The limitations to airworthiness or operations, if any.

(c) A CRS shall not be issued in the case of any known non-compliance with the requirements of this Annex which endangers flight safety.

CONTINUING AIRWORTHINESS

4.1 Continuing Airworthiness tasks

The continuing airworthiness of the VCA and the serviceability of operational and emergency equipment shall be ensured by the following:

- (a) The accomplishment of pre-flight inspections of the VCA;
- (b) The performance of unscheduled maintenance and the rectification of defects (including damages) in accordance with the data specified in points CAO.VCA.055 and 4.4, as applicable, while taking into account the minimum equipment list ('MEL') and the configuration deviation list ('CDL'), when they exist;
- (c) The accomplishment of all scheduled maintenance in accordance with the VCA maintenance programme referred to in point 4.2;
- (d) Compliance with any applicable:
 - (i) Airworthiness directive ('AD') issued or adopted by the European Union Aviation Safety Agency or DGCA;
 - (ii) Operational requirements with a continuing airworthiness impact;
 - (iii) Continuing airworthiness requirements mandated by the DGCA;
 - (iv) Measure required by the competent authority in immediate reaction to a safety problem;
- (e) The accomplishment of modifications and repairs in accordance with point 4.4;
- (f) Maintenance check flights ('MCFs'), when necessary;
- (g) The availability of the mass and balance statement reflecting the current configuration of the VCA, when such information is produced by the VCA manufacturer.

4.2 VCA maintenance programme

- (a) The scheduled maintenance of the VCA shall be organized in accordance with an VCA maintenance programme.
- (b) The VCA maintenance programme, and any subsequent amendments to it, shall be approved by the DGCA.
- (c) The VCA maintenance programme shall comply with:
 - (i) The mandatory continuing airworthiness information, such as repetitive ADs, the airworthiness limitations section ('ALS') of the instructions for continuing airworthiness ('ICAs'), and specific maintenance requirements contained in the type-certificate data sheet ('TCDS');
 - (ii) The ICAs issued by the design approval holder (DAH);
- (d) Notwithstanding point (c)(i), by way of derogation from point (c)(ii), the VCA maintenance programme may deviate from the ICAs, based on data obtained from reviews performed in accordance with point (f).
- (e) The VCA maintenance programme shall take into account the VCA configuration, and the type and specificities of operations.

- (f) The VCA maintenance programme shall be reviewed at least annually in order to assess its effectiveness while considering new or modified ICAs.

4.3 Airworthiness directives ('ADs')

Any applicable AD must be applied according to the requirements of that AD unless otherwise specified by the DGCA.

4.4- Modifications and repairs

- (a) Any damage to a VCA or to a component for installation thereto shall be assessed before being repaired.
- (b) Carrying out modifications and repairs on the VCA or its components shall require such modifications and repairs to be either:
- (i) Approved by the DGCA; or
 - (ii) Approved by a design organisation approval holder under its privileges.

4.5-VCA continuing airworthiness record system

- (a) For each VCA, as identified by the **VCA registration** and control and monitoring unit ('CMU') (if applicable) type and serial number, a system shall be established to record continuing airworthiness information of the VCA. That system shall be used by the remote pilot and the person(s) involved in the continuing airworthiness of the VCA.
- (b) The VCA **continuing airworthiness record system** shall record the following:
- (i) The date of the entry and the corresponding total usage, in the parameter(s) relevant to the VCA (e.g. flight hours, calendar time or cycles);
 - (ii) Details of the maintenance performed on the VCA, in particular all certificates of release to service required by this circular;
 - (iii) Details of the CMU installation, in particular the certificate of release to service ('CRS') required by this circular, when such installation is prescribed by the design approval holder (DAH);
 - (iv) Evidence confirming the satisfactory accomplishment of the VCA pre-flight inspection;
 - (v) Information considered necessary to ensure continued flight safety;
 - (vi) The current mass and balance statement, when such information is produced by the UA manufacturer;
 - (vii) Any other data necessary to demonstrate compliance with point (g).
- (c) With respect to components subject to airworthiness limitations, in addition to the authorised release document (DGCA/EASA Form 1/FAA 8130), the following information shall be entered in the record system:
- (i) The designation and identification of the component(s);
 - (ii) The type, serial number and registration, as appropriate, of the VCA, the CMU or the component to which the particular component has been fitted, along with the reference to the maintenance records relevant to its installation and removal;

- (iii) The date of the entry and the corresponding component's accumulated total usage, in the parameter(s) relevant to the particular component;
- (d) Each entry shall be made as soon as possible following the completion of the task so that it provides an up-to-date status to the remote pilot.
- (e) All entries made in the VCA continuing airworthiness records shall be clear and accurate. When it is necessary to correct an entry, the correction shall be made in a manner that clearly shows the original entry.
- (f) The record system shall include **logs** for the VCA, the CMU and, as appropriate, for the components that are subject to airworthiness limitations.
- (g) The VCA continuing airworthiness record system shall be able to provide:
 - (i) The current status of ADs and measures mandated by the competent authority in immediate reaction to a safety problem;
 - (ii) The current status of modifications and repairs;
 - (iii) The current status of compliance with the VCA maintenance programme;
 - (iv) The current status of components that are subject to airworthiness limitations;
 - (v) The current list of deferred maintenance.
- (h) The records shall be kept for the periods specified below:
 - (i) For the records specified in points (b)(ii) and (b)(iii), until the time the information contained in the records is superseded by new information equivalent in scope and detail but not less than 36 months after the maintenance or, as applicable, the CMU installation, has been released;
 - (ii) For the records specified in points (b)(i), (b)(vii) and point (c), for at least 36 months after the VCA or the component has been permanently withdrawn from service;
 - (iii) For the records specified in points (b)(iv) to (b)(vi), not less than 36 months after the entry into the record system;
 - (iv) If not superseded, the records referred to in point (h)(i) shall be kept for 36 months after the VCA or the CMU has been permanently withdrawn from service.

4.6 Transfer of VCA continuing airworthiness records

- (a) When an VCA is permanently transferred from one owner to another, the relevant continuing airworthiness records referred to in point 4.5 shall also be transferred.
- (b) When the owner of the VCA contracts the continuing airworthiness management tasks to a CAO.VCA organisation, the owner of the VCA shall ensure that the continuing airworthiness records referred to in point 4.5 are transferred to the contracted organisation.
- (c) The periods for the retention of the records set out in point 4.5(h) shall continue to apply to the new owner or CAO.VCA organisation.

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