

# **CONTINUING AIRWORTHINESS REQUIREMENTS**

## **CAR-ML**

CONTINUING AIRWORTHINESS REQUIREMENTS

Index		
Description		Page No.
CAR ML		
Foreword		
Record of revision		
GENERAL		
ML.1 General		
ML.2 Objective		
ML.3 Entry Into Force		
SECTION A TECHNICAL REQUIREMENTS		
SUBPART A GENERAL		
ML.A.101	Scope	
Subpart B ACCOUNTABILITY		
ML.A.201	Responsibilities	
	GM1 ML.A.201 Responsibilities	
	GM 1 ML.A.201(e) Responsibilities	
	GM ML.A.201(f) Responsibilities	
	GM ML.A.201(h) Responsibilities	
ML.A.202	Occurrence Reporting	
	AMC ML.A.202 Occurrence Reporting	
Subpart C CONTINUING AIRWORTHINESS TASKs		
ML.A.301	Continuing Airworthiness Tasks	
	GM 1 ML.A.301 (f) Continuing Airworthiness Tasks	
ML.A.302	Aircraft Maintenance Programme	
	AMC1 ML.A.302 Aircraft Maintenance Programme	
	AMC1 ML.A.302 (c)(9) Aircraft Maintenance Programme	
	AMC2 ML.A.302 Aircraft Maintenance Programme	
	GM1 ML.A.302 Aircraft Maintenance Programme	
	GM2 ML.A.302 Aircraft Maintenance Programme	
	AMC1 ML.A.302 (c) Aircraft Maintenance Programme	
	GM1 ML.A.302 (c)(2)(b) Aircraft Maintenance Programme	
	GM2 ML.A.302 (c)(3) Aircraft Maintenance Programme	
	GM1 ML.A.302 (c)(4) Aircraft Maintenance Programme	

	AMC1 ML.A.302 (d) Aircraft Maintenance Programme	
	GM1 ML.A.302 (d)(2) Aircraft Maintenance Programme	
	GM1 ML.A.302 (d)(2)(d) Aircraft Maintenance Programme	
ML.A.303	Airworthiness Directives	
ML.A.304	Data for Modifications and Repairs	
ML.A.305	Aircraft Continuing Airworthiness Record System	
	AMC1 ML.A.305 Aircraft Continuing Airworthiness Record System	
ML.A.306	Reserved	
ML.A.307	Transfer of Aircraft Continuing Airworthiness Records	
<b>Subpart D MAINTENANCE STANDARDS</b>		
ML.A.401	Maintenance Data	
	GM1 ML.A.401(b) Maintenance Data	
ML.A.402	Performance of Maintenance	
	AMC1 ML.A.402 Performance of Maintenance	
	AMC1 ML.A.402(b) (7) Performance of Maintenance	
	AMC1 ML.A.402(b) (8) Performance of Maintenance	
	AMC2 ML.A.402(b) (8) Performance of Maintenance	
ML.A.403	Aircraft defects	
	AMC1 ML.A.403 Aircraft defects	
	GM1 ML.A.403 Aircraft defects	
	AMC1 ML.A.403 (d) Aircraft defects	
<b>Subpart E COMPONENTS</b>		
ML.A.501	Classification and installation	
	AMC1 ML.A.501 (a) (ii) Classification and installation	
	AMC1 ML.A.501 (e) Classification and installation	
ML.A.502	Component maintenance	
	GM1 ML.A.502 Component maintenance	
ML.A.503	Service Life Limited Components	
ML.A.504	Control of Unserviceable Components	
<b>Subpart H CERTIFICATE OF RELEASE TO SERVICE – CRS</b>		
ML.A.801	Aircraft Certificate of Release to Service	
	AMC1 ML.A.801 - Reserved	
	AMC1 ML.A.801 (e) Aircraft Certificate of Release to Service	
	AMC ML.A.801 (f) Aircraft Certificate of Release to	

	Service	
ML.A.802	Component Certificate of Release to Service	
ML.A.803	Pilot-Owner Authorization	
	AMC1 ML.A.803 Pilot-Owner Authorization	
<b>Subpart I   AIRWORTHINESS REVIEW CERTIFICATE</b>		
ML.A.901	Aircraft Airworthiness Review	
	GM1   ML.A.901   Aircraft Airworthiness Review	
ML.A.902	Validity of the   Airworthiness Review Certificate	
ML.A.903	Reserved	
	AMC ML.A.903 (h)   Reserved	
ML.A.904	Reserved	
	GM1 ML.A.904 (c) (d)   Reserved	
ML.A.905	Reserved	
ML.A.906	Airworthiness Review of Aircraft Imported into India	
ML.A.907	Findings	

<b>APPENDICES to CAR ML</b>		
Appendix I	Continuing airworthiness management contract.	
Appendix II	Limited Pilot-Owner Maintenance	
	AMC1 to Appendix II to CAR-ML	
Appendix III	Complex Maintenance Tasks	
Appendix IV	Airworthiness Review Certificate- CA Form 15 (c)	

# CAR- ML

## FOREWORD

Rule 50A of the Aircraft Rules 1937 stipulates the conditions necessary for a Certificate of Airworthiness to remaining in force i.e. to keep the aircraft in a state of continued airworthiness. This is ensured by issuing certificates of Airworthiness to an aircraft and subjecting the aircraft to annual airworthiness review certificates (ARC).

CAR-145 and CAR-M contains regulations related to maintenance and continuing airworthiness management of certain aircraft. In the interest of proportionality, it is necessary to adapt regulations by introducing simplified requirements corresponding to the lower risks associated with light aircraft in general aviation, which is not listed in the Air Operator Certificate (AOC) / Non-Scheduled Operator Permit (NSOP) of an air operator. To that end, a new set of requirements ensuring the airworthiness of such aircraft should be introduced. Those requirements should be less stringent than the current requirements in aircraft maintenance programmes, and deferment of defects. Such maintenance requirements will be applicable to other than complex motor-powered aircraft, the owner of such aircraft may contract maintenance tasks to maintenance organisation approved in accordance with CAR-145 or Subpart F of CAR-M or CAR-CAO.

This CAR-ML establishes the common technical standards and guidelines for continuing airworthiness management of aircraft and components for installation on aircraft, where such aircraft are not classified as complex motor-powered aircraft and are not listed in the air operator certificate (AOC) / Non-Schedule operator Permit (NSOP) of an air operator.

This CAR is harmonised with EASA Part-ML requirements and is issued under the provisions of Rule 133A of the Aircraft Rules 1937.

**RECORD OF REVISIONS**

## GENERAL

### ML.1

- (a) CAR-ML is applicable to the following other than complex motor-powered aircraft not listed in the Air Operator Certificate (AOC) / Non-Scheduled Operator Permit (NSOP) of an air operator:
  - 1) aeroplanes of 2 730 kg maximum take-off mass (MTOM) or less;
  - 2) rotorcraft of 1 200 kg MTOM or less, certified for a maximum of up to 4 occupants;
  - 3) other Category 2 “Light Aircraft”
- (b) For the purpose of this CAR, the competent authority shall be DGCA.
- (c) For the purpose of this CAR, the following definitions shall apply:
  - (1) 'independent certifying staff' means certifying staff who does not work on behalf of an approved maintenance organisation and who complies with, alternatively the requirements of CAR-66.
  - (2) 'maintenance organisation' means an organisation holding an approval issued in accordance with, alternatively :
    - (i) Subpart F of CAR-M;
    - (ii) Section A of CAR-145;
    - (iii) Section A of CAR-CAO.
  - (3) 'owner' means the person responsible for the continuing airworthiness of the aircraft, including, alternatively:
    - (i) the registered owner of the aircraft; or
    - (ii) the lessee in the case of a leasing contract; or
    - (iii) the operator
  - (4) “maintenance check flight (MCF)” means a flight carried out to provide reassurance of the aircraft’s performance or to establish the correct functioning of a system or equipment that cannot be fully established during ground checks:
    - (a) as required by the aircraft maintenance manual (AMM) or any other maintenance data issued by a design approval holder being responsible for the continuing airworthiness of the aircraft; or
    - (b) after maintenance, as required by the operator or proposed by the continuing airworthiness management organisation; or
    - (c) as requested by the maintenance organisation for verification of a successful defect rectification; or
    - (d) to assist with fault isolation or troubleshooting.’

(5) For the purpose of this CAR Category 1 “Light Aircraft” means the following aircrafts

- i an aeroplane, sailplane or powered sailplane with a Maximum Take-off Mass (MTOM) less than 1200 kg that is not classified as complex motor-powered aircraft;
- ii a balloon with a maximum design lifting gas or hot air volume of not more than 3400 m<sup>3</sup> for hot air balloons, 1050 m<sup>3</sup> for gas balloons, 300 m<sup>3</sup> for tethered gas balloons;
- iii an airship designed for not more than four occupants and a maximum design lifting gas or hot air volume of not more than 3 400 m<sup>3</sup> for hot air airships and 1000 m<sup>3</sup> for gas airships

(6) For the purpose of this CAR Category 2 “Light Aircraft means the following aircraft

- (i) an aeroplane with a Maximum Take-off Mass (MTOM) of 2 000 kg or less that is not classified as complex motor-powered aircraft;
- (ii) a sailplane or powered sailplane of 2 000 kg MTOM or less;
- (iii) a balloon;
- (iv) a hot air ship;
- (v) a gas airship complying with all of the following characteristics:
  - 3 % maximum static heaviness,
  - non-vectored thrust (except reverse thrust),
  - conventional and simple design of structure, control system and ballonet system, and
  - non-power assisted controls;
- (vi) a very light rotorcraft.

## **ML.2 Objective**

This CAR establishes common technical requirements and administrative procedures for ensuring the continuing airworthiness of aircraft as detailed in ML-1, including any component for installation thereto, which are:

- (a) Registered in India; or
- (b) Registered in a foreign country and used by an Indian operator for which India ensures oversight of operations.

## **ML.3 Entry into Force**

This CAR entered into force with effect from \_\_\_\_\_.



# SECTION A

## TECHNICAL REQUIREMENTS

### SUBPART A

#### *GENERAL*

#### **ML.A.101 Scope**

This Section establishes the measures to be taken in order to ensure that the aircraft is airworthy. It also specifies the conditions to be met by the persons or organisations involved in the activities related to the airworthiness of the aircraft.

## SUBPART B

### ACCOUNTABILITY

#### ML.A.201 Responsibilities

- (a) The owner of the aircraft shall be responsible for the continuing airworthiness of the aircraft and shall ensure that no flight takes place unless all of the following requirements are met:
  - (1) the aircraft is maintained in an airworthy condition;
  - (2) any operational and emergency equipment fitted is correctly installed and serviceable or clearly identified as unserviceable;
  - (3) the airworthiness certificate is valid;
  - (4) the maintenance of the aircraft is performed in accordance with the Aircraft Maintenance Program ('AMP') specified in point ML.A.302.
- (b) By derogation from point (a), where the aircraft is leased, the responsibilities set out in point (a) shall apply to the lessee, if the lessee is identified either in the registration document of the aircraft or in the leasing contract.
- (c) Any person or organisation performing maintenance of aircraft and components shall be responsible for the maintenance tasks being performed.
- (d) The pilot-in-command of the aircraft shall be responsible for the satisfactory accomplishment of the pre flight inspection. That inspection shall be carried out by the pilot or another qualified person but need not be carried out by an approved maintenance organisation or by certifying staff.
- (e) For aircraft operated by commercial Approved Training Organisations ('ATO') or in case of balloon, sailplanes used for commercial operation, the operator shall:
  - (1) be approved as a CAMO or as a CAO for the management of the continuing airworthiness of its aircraft in accordance with CAR-CAMO or CAR-CAO or Subpart G of CAR-M or contract such an organisation using the contract set out in Appendix I to this CAR;
  - (2) ensure that all maintenance is performed by maintenance organisations approved in accordance with point (c)(2) of point ML.1.;
  - (3) ensure that the requirements of point (a) are satisfied.
- (f) For aircraft not included in point (e), in order to satisfy the requirements of point (a), the owner of the aircraft may contract the tasks associated with continuing airworthiness management to an organisation approved as a CAMO or CAO in accordance with CAR-CAMO, Subpart G of CAR-M or CAR-CAO. In that case, the contracted organisation shall assume responsibility for the proper performance of those tasks and a written contract shall be concluded in accordance with Appendix I to this CAR. If the owner does not contract such an organisation, the owner is responsible for the proper performance of the tasks associated with the continuing airworthiness management

- (g) The owner shall grant the DGCA access to the aircraft and the aircraft records, in order for the DGCA to determine whether the aircraft complies with the requirements of this CAR.
- (h) In the case of an aircraft included in an air operator certificate is used for non-commercial or specialised operations, the operator shall ensure that the tasks associated with continuing airworthiness are performed by the CAMO approved in accordance with CAR-CAMO or Subpart G of CAR-M or the combined airworthiness organisation (“CAO”) approved in accordance with CAR-CAO, whichever applicable, of the air operator certificate holder.

**GM1 ML.A.201 Responsibilities**

The following tables provide a summary of CAR-ML main provisions and alleviations established in ML.A.201, ML.A.302, ML.A.801 and ML.A.901.

In the tables, the term ‘CAO(-CAM)’ designate a CAO with continuing airworthiness management privileges

	Balloon		
	Commercial operation	commercial ATO	Private aircraft
<b>Contract with CAMO/CAO (CAM) required?</b>	yes	yes	no*
<b>Aircraft maintenance programme (AMP)</b>	AMP and its amendments shall be approved by DGCA		
<b>Maintenance</b>	By a maintenance organisation		By a maintenance organisation or by independent certifying staff or the pilot-owner**
<b>Airworthiness review (AR) and airworthiness review certificate (ARC)</b>	by the DGCA		

	Sailplane		
	Commercial operation	commercial ATO	Private aircraft
<b>Contract with CAMO/CAO (CAM) required?</b>	yes	yes	no*
<b>Aircraft maintenance programme (AMP)</b>	AMP and its amendments shall be approved by DGCA		
<b>Maintenance</b>		By a maintenance organisation	By a maintenance organisation or by independent certifying staff or the pilot-owner**
<b>Airworthiness review (AR) and airworthiness review certificate (ARC)</b>	by the DGCA		

	Aircraft (other than balloons and sailplanes)		
	Commercial operation	commercial ATO/DTO	Private aircraft
<b>Contract with CAMO/CAO (CAM) required?</b>	yes	yes	no*
<b>Aircraft maintenance programme (AMP)</b>	AMP and its amendments shall be approved by DGCA		
<b>Maintenance</b>		By a maintenance organisation	By a maintenance organisation or by independent certifying staff or the pilot-owner**
<b>Airworthiness review (AR) and airworthiness review certificate (ARC)</b>	by the DGCA		

**GM1 ML.A.201(e) Responsibilities****COMMERCIAL ATO**

According to industry practice, the following are examples of aircraft not considered to be operated by a commercial ATO:

- (a) Aircraft operated by an organisation holding an ATO certificate, created with the aim of promoting aerial sport or leisure aviation, on the conditions that:
  - (1) the aircraft is operated by the organisation on the basis of ownership or dry lease;
  - (2) the ATO is a non-profit organisation; and
  - (3). Reserved
- (b) Reserved
- (c) Aircraft used for very limited training flights due to the specific configuration of the aircraft and limited need for such flights.

**GM1 ML.A.201(f) Responsibilities**

If an owner (see definition in point ML.1(c)(3)) decides not to make a contract with a CAMO or CAO, the owner is fully responsible for the proper accomplishment of the corresponding continuing airworthiness management tasks. As a consequence, it is expected that the owner properly and realistically self-assesses his or her own competence to accomplish those tasks or otherwise seek the necessary expertise.

**GM1 ML.A.201(h) Responsibilities****USE OF AIRCRAFT INCLUDED IN AN AOC FOR NON-COMMERCIAL OPERATIONS OR SPECIALISED OPERATIONS**

As point (h) is not a derogation, points ML.A.201 (e) and (f) are still applicable. Therefore, the management of continuing airworthiness of the aircraft by the CAMO or CAO of the AOC holder means that the other operator has established a written contract as per Appendix I to CAR-ML with this CAMO or CAO

**ML.A.202 Occurrence reporting**

- (a) Without prejudice to the reporting requirements set out in CAR-145 and CAR-CAMO, any person or organisation responsible in accordance with point ML.A.201 shall report any identified condition of an aircraft or component which endangers flight safety to:
  - (1) the DGCA,;
  - (2) the organisation responsible for the type design or supplemental type design.
- (b) The reports referred to in point (a) shall be made in a manner determined by the DGCA and shall contain all pertinent information about the condition known to the person or organisation making the report.
- (c) Where the maintenance of the aircraft is carried out on the basis of a written contract, the person or the organisation responsible for those activities shall also report any

condition referred to in point (a) to the owner of the aircraft and, when different, to the CAMO or CAO concerned.

- (d) The person or organisation shall submit the reports referred to in points (a) and (c) as soon as possible, but no later than 72 hours from the moment when the person or organisation identified the condition to which the report relates, unless exceptional circumstances prevent this.

### **AMC1 ML.A.202 Occurrence reporting**

Accountable persons or organisations should ensure that the design approval holder (DAH) receives adequate reports of occurrences for that aircraft or component, to enable the DAH to issue appropriate service instructions and recommendations to all owners or operators.

Accountable persons or organisations should establish a liaison with the DAH to determine whether published or proposed service information will resolve the problem or to obtain a solution to a particular problem.

## SUBPART C

### CONTINUING AIRWORTHINESS

#### ML.A.301 Continuing airworthiness tasks

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

- (a) the accomplishment of pre-flight inspections;
- (b) the rectification of any defect and damage affecting safe operation in accordance with data specified in points ML.A.304 and ML.A.401, as applicable, while taking into account the minimum equipment list ('MEL') and configuration deviation list, when they exist;
- (c) the accomplishment of all maintenance in accordance with the AMP referred to in point ML.A.302;
- (d) the accomplishment of any applicable:
  - (1) airworthiness directive ('AD');
  - (2) operational directive with a continuing-airworthiness impact;
  - (3) continuing-airworthiness requirement established by the DGCA;
  - (4) measure required by the DGCA as an immediate reaction to a safety problem;
- (e) the accomplishment of modifications and repairs in accordance with point ML.A.304;
- (f) maintenance check flights, when necessary.

#### GM1 ML.A.301(f) Continuing airworthiness tasks

#### MAINTENANCE CHECK FLIGHTS (MCFs)

- (a) The Maintenance Check Flight (MCFs) are carried out under the control and responsibility of the aircraft operator. During the flight preparation, the flight and the post-flight activities as well as for the aircraft handover, the processes requiring the involvement of maintenance personnel or organisations should be agreed in advance with the operator. The operator should consult as necessary with the person or organisation in charge of the airworthiness of the aircraft.
- (b) Depending on the aircraft defect and the status of the maintenance activity performed before the flight, different scenarios are possible and are described below:
  - (1) The aircraft maintenance manual (AMM), or any other maintenance data issued by the DAH, requires that an MCF be performed before completion of the maintenance ordered. In this scenario, a certificate after incomplete maintenance, when in compliance with ML.A.801(f) or 145.A.50(e), should be issued and the aircraft can be flown for this purpose under its airworthiness certificate.

*Note 1:- In case C of A / ARC of an aircraft is not valid, a Special flight permit in accordance with CAR Section-2 Series F Part-VII is required to be issued by DGCA before release of aircraft for MCFs*

*Note-2 :- Further requirements for test flight is detailed in CAR Section-2 Series T Part-II*

Due to incomplete maintenance, it is advisable to open a new entry into the ML.A.305 aircraft logbook, to identify the need for a MCF. This new entry should contain or refer to, as necessary, data relevant to perform the MCF, such as aircraft limitations and any potential effect on operational and emergency equipment due to incomplete maintenance, maintenance data reference and maintenance actions to be performed after the flight.

After a successful MCF, the maintenance records should be completed, the remaining maintenance actions finalised and a certificate of release to service (CRS) issued.

- (2) Based on its own experience and for reliability considerations and/or quality assurance, an operator, owner, CAO or CAMO may wish to perform an MCF after the aircraft has undergone certain maintenance while maintenance data does not call for such a flight. Therefore, after the maintenance has been properly carried out, a CRS is issued and the aircraft airworthiness certificate remains valid for this flight.
- (3) After troubleshooting of a system on the ground, an MCF is proposed by the maintenance personnel or organisation as confirmation that the solution applied has restored the normal system operation. During the maintenance performed, the maintenance instructions are followed for the complete restoration of the system and therefore a CRS is issued before the flight. The airworthiness certificate is valid for the flight. An open entry requesting this flight may be recorded in the aircraft logbook.
- (4) An aircraft system has been found to fail, the dispatch of the aircraft is not possible in accordance with the maintenance data, and the satisfactory diagnosis of the cause of the fault can only be made in flight. The process for this troubleshooting is not described in the maintenance data and therefore scenario (1) does not apply. Since the aircraft cannot fly under its airworthiness certificate because it has not been released to service after maintenance, a Special flight permit in accordance with CAR Section-2 Series F Part-VII is required to be issued..

After the flight and the corresponding maintenance work, the aircraft can be released to service and continue to operate under its original certificate of airworthiness.

- (c) For certain MCFs, the data obtained or verified in flight will be necessary for assessment or consideration after the flight by the maintenance personnel or organisation prior to issuing the maintenance release. For this purpose, when the maintenance staff cannot perform these functions in flight, it may rely on the crew performing the flight to complete this data or to make statements about in-flight verifications. In this case, the maintenance staff should appoint the crew personnel to play such a role on their behalf and, before the flight, brief the appointed crew personnel on the scope, functions and the detailed process to be followed, including required reporting information after the flight and reporting means, in support of the final release to service to be issued by the certifying staff.

## **ML.A.302 Aircraft Maintenance Programme (AMP)**

- (a) The maintenance of each aircraft shall be organised in accordance with an AMP.
- (b) The AMP and any subsequent amendments shall be approved by DGCA ,



## (c) The AMP:

- (1) shall clearly identify the owner of the aircraft and the aircraft to which it relates, including any installed engine and propeller, as applicable;
- (2) shall include, alternatively:
  - (a) the tasks or inspections contained in the applicable minimum inspection programme ('MIP') referred to in point (d);
  - (b) the instructions for continuing airworthiness ('ICA') issued by the design approval holder ('DAH');
- (3) may include additional maintenance actions to those referred to in point (c)(2) or maintenance actions alternative to those referred to in point (c)(2)(b) at the proposal of the owner, CAMO or CAO, once approved in accordance with point (b). Alternative maintenance actions to those referred to in point (c)(2)(b) shall not be less restrictive than those set out in the applicable MIP;
- (4) shall include all the mandatory continuing airworthiness information, such as repetitive ADs, the airworthiness limitation section ('ALS') of the ICAs, and specific maintenance requirements contained in the type certificate data sheet ('TCDS');
- (5) shall identify any additional maintenance tasks to be performed because of the specific aircraft type, aircraft configuration and type and specificity of operation, whereas the following elements shall be taken into consideration as a minimum:
  - (a) specific installed equipment and modifications of the aircraft;
  - (b) repairs carried out in the aircraft;
  - (c) life-limited components and flight-safety-critical components;
  - (d) maintenance recommendations, such as time between overhaul ('TBO') intervals, issued through service bulletins, service letters, and other non-mandatory service information;
  - (e) applicable operational directives or requirements related to the periodic inspection of certain equipment;
  - (f) special operational approvals;
  - (g) use of the aircraft and operational environment;
- (6) shall identify whether the Pilot-owners are authorised to perform maintenance;
- (7) Reserved :
- (8) the CAMO or CAO, shall retain records with the justification for any deviation introduced to the DAH's recommendations;
- (9) shall be reviewed at least annually in order to assess its effectiveness, and this review shall be performed performed by the CAMO or CAO managing the continuing airworthiness of the aircraft.

If the review shows deficiencies of the aircraft linked with deficiencies in the content of the AMP, the AMP shall be amended accordingly. In this case the person performing the review shall inform the DGCA, if he does not agree with the measures amending the AMP taken by the owner, CAMO or CAO. The DGCA shall decide which

amendments to the AMP are necessary, raising the corresponding findings and, if necessary, suspend the ARC on reasonable grounds in the case of a potential safety threat

(d) A MIP:

(1) shall contain the following inspection intervals:

- (a) for aeroplanes, touring motor gliders ('TMGs') and balloons, every annual or 100-h interval, whichever comes first, to which a tolerance of 1 month or 10 h may be applied. The next interval shall be calculated as from the time the inspection takes place;
- (b) for sailplanes and powered sailplanes other than TMG, every annual interval to which a tolerance of 1 month may be applied. The next interval shall be calculated as from the time the inspection takes place;

(2) shall contain the following, as applicable to the aircraft type:

- (a) servicing tasks as required by the DAH's requirements;
- (b) inspection of markings;
- (c) review of weighing records and weighing in accordance with CAR Section-2 Series X Part II;
- (d) operational test of transponder (if installed);
- (e) functional test of the pitot-static system;
- (f) in the case of aeroplanes:
  - (i) operational tests for power and revolutions per minute (rpm), magnetos, fuel and oil pressure, engine temperatures;
  - (ii) for engines equipped with automated engine control, the published run-up procedure;
  - (iii) for dry-sump engines, engines with turbochargers and liquid-cooled engines, an operational test for signs of disturbed fluid circulation;
- (g) inspection of the condition and attachment of the structural items, systems and components corresponding to the following areas:
  - (i) for aeroplanes:
 

airframe, cabin and cockpit, landing gear, wing and centre section, flight controls, empennage, avionics and electrics, power plant, clutches and gearboxes, propeller and miscellaneous systems, such as the ballistic rescue system;
  - (ii) for sailplanes and powered sailplanes:
 

airframe, cabin and cockpit, landing gear, wing and centre section, empennage, avionics and electrics, power plant (for powered sailplanes) and miscellaneous systems, such as removable ballast and/or drag chute and controls, as well as water ballast system;
  - (iii) for hot-air balloons:
 

envelope, burner, basket, fuel containers, equipment and instruments;

(iv) for gas balloons:

envelope, basket, equipment and instruments.

As long as this CAR does not specify an MIP for airships and rotorcraft, their AMP shall be based on the ICA issued by the DAH, as referred to in point (c)(2)(b).

e) Reserved:

f) Reserved

### **AMC1 ML.A.302 Aircraft maintenance programme**

- (a) The aircraft should only be maintained according to one maintenance programme at a given point in time. Where an owner wishes to change from one programme to another (e.g. from an AMP based on minimum inspection programme (MIP) to an AMP based on DAH's data), certain additional maintenance may need to be carried out on the aircraft to implement this transition.
- (b) The maintenance programme may take the format of the standard template provided in AMC2 ML.A.302 (CA Form AMP). This maintenance programme may include several aircraft registrations as long as the maintenance requirements for each registration are clearly identified.

### **AMC1 ML.A.302(c)(9) Aircraft maintenance programme ANNUAL REVIEW OF THE AMP**

- (a) During the annual review of the maintenance programme, as required by point ML.A.302(c)(9), the following should be taken into consideration:
  - (1) the results of the maintenance performed during that year, which may reveal that the current maintenance programme is not adequate;
  - (2) revisions introduced on the documents affecting the programme basis, such as the ML.A.302(d) MIP or the DAH's data;
  - (3) changes in the aircraft configuration, and type and specificity of operation;
  - (4) changes in the list of pilot-owners; and
  - (5) applicable mandatory requirements for compliance with CAR 21, such as airworthiness directives (ADs), airworthiness limitations, certification maintenance

requirements and specific maintenance requirements contained in the type certificate data sheet (TCDS).

- (b) When reviewing the effectiveness of the AMP, the CAMO/CAO staff may need to review the maintenance carried out during the last 12 months, including unscheduled maintenance. To this end, he or she should receive the records of all the maintenance performed during that year from the owner/CAMO/CAO.
- (c) When reviewing the results of the maintenance performed during that year attention should be paid as to whether the defects found could have been prevented by introducing in the maintenance programme certain DAH's recommendations, which were initially disregarded by the owner, CAMO or CAO.

DRAFT

AMC2 ML.A.302 Aircraft maintenance programme  
CA FORM AMP

Following CA Form AMP may be used to produce the AMP: **CAR-ML aircraft maintenance programme (AMP)**

CAR-ML aircraft maintenance programme (AMP)			
Aircraft identification			
1	Registration(s):	Type:	Serial no(s):
	Owner:		
Basis for the maintenance programme			
2	Design approval holder (DAH) instructions for continued airworthiness (ICA)	Minimum inspection programme (MIP) as detailed in the latest revision of AMC ML.A.302(d) Other MIP complying with ML.A.302(d) (List the tasks in Appendix A)	
Design approval holder (DAH) instructions for continuing airworthiness (ICA)			
3	Equipment manufacturer and type	Applicable ICA reference (revision/date not required assuming the latest revision will always be used)	
For aircraft other than balloons			
3a	Aircraft (other than balloons)		
3b	Engine (if applicable)		
3c	Propeller (if applicable)		
For balloons			
3d	Envelope (only for balloons)		
3e	Basket(s) (only for balloons)		
3f	Burner(s) (only for balloons)		
3g	Fuel cylinders (only for balloons)		
Additional maintenance requirements to the DAH' ICA or to the MIP (applicable to all AMPs)			
4	Indicate if any of the following types of repetitive maintenance are included in the AMP (when replying 'YES', list the specific requirements in Appendix B)	Yes	No
	Maintenance due to specific equipment and modifications		
	Maintenance due to repairs		
	Maintenance due to life-limited components (this should be only if the MIP is used. Otherwise, this data is already part of the DAH's data used as a basis for the AMP		

	Maintenance due to mandatory continuing airworthiness information (airworthiness limitations (ALIs), certification maintenance requirements (CMRs), specific requirements in the TCDS, etc.)		
	Maintenance recommendations, such as time between overhaul (TBO) intervals, issued through service bulletins, service letters, and other non-mandatory service information		
	Maintenance due to repetitive ADs		
	Maintenance due to specific operational/airspace directives/requirements (altimeter, compass, transponder, etc.)		
	Maintenance due to the type of operation or operational approvals		
	Other		
<b>Maintenance tasks alternative to the DAH's ICA (not less restrictive than the MIP)</b>			
5	Indicate if there is any maintenance task alternative to the DAH's ICA (when 'YES', list the specific alternative maintenance tasks in Appendix C	Yes	No
<b>Pilot-owner maintenance (only for balloons, or sailplanes) not operated for commercial operation</b> Remark: pilot-owner maintenance is not allowed for aircraft operated by a commercial ATO			
6	<b>Does the pilot-owner perform pilot-owner maintenance (ref. ML.A.803)?</b> If yes, enter the name of the pilot-owner(s) authorised to perform such maintenance: Pilot-owner name:_(NOTE)_____Licence number: (NOTE)_____ Signature: _____Date: _____  NOTE: It is possible to refer to a list in the case of jointly owned aircraft.	Yes	No
<b>Approval/declaration of the maintenance programme (select the appropriate option)</b>			
7	Declaration by the owner: N/A <input type="checkbox"/>	Approval by the DGCA <input checked="" type="checkbox"/>	
	<b>Reserve</b>  Signature/name/date:	Approval reference no of the DGCA <input type="checkbox"/>  Signature/name/date:	
<b>Certification statement</b>			
8	<b><i>'I will ensure that the aircraft is maintained in accordance with this maintenance programme and that the maintenance programme will be reviewed and updated as required.'</i></b>		

	<p>Signed by the person/organisation responsible for the continuing airworthiness of the aircraft according to ML.A.201:</p> <p>Owner/Lessee/operator CAMO/CAO Name of owner/lessee/operator or CAMO/CAO approval number: Address: Telephone/fax: Email: Signature/date:</p>								
9	<p>Appendices attached:</p> <table><tr><td>— Appendix A YES <input type="checkbox"/></td><td><input type="checkbox"/> NO</td></tr><tr><td>— Appendix B YES <input type="checkbox"/></td><td><input type="checkbox"/> NO</td></tr><tr><td>— Appendix C YES <input type="checkbox"/></td><td><input type="checkbox"/> NO</td></tr><tr><td>— Appendix D YES <input type="checkbox"/></td><td><input type="checkbox"/> NO</td></tr></table>	— Appendix A YES <input type="checkbox"/>	<input type="checkbox"/> NO	— Appendix B YES <input type="checkbox"/>	<input type="checkbox"/> NO	— Appendix C YES <input type="checkbox"/>	<input type="checkbox"/> NO	— Appendix D YES <input type="checkbox"/>	<input type="checkbox"/> NO
— Appendix A YES <input type="checkbox"/>	<input type="checkbox"/> NO								
— Appendix B YES <input type="checkbox"/>	<input type="checkbox"/> NO								
— Appendix C YES <input type="checkbox"/>	<input type="checkbox"/> NO								
— Appendix D YES <input type="checkbox"/>	<input type="checkbox"/> NO								

<b>Appendix A — Minimum inspection programme (MIP) (only applicable if a MIP different from the one described in AMC1 ML.A.302(d) is used — see Section 2 above)</b>		
<i>Detail the tasks and inspections contained in the MIP being used.</i>		
<b>Appendix B — Additional maintenance requirements (include only if necessary — see Section 4 above)</b>		
<i>This appendix is supposed to include only the tasks which are included in the AMP, either at the recommended interval or at a different one.</i>		
<i>(All repetitive maintenance tasks not included here, or the interval differences should be kept by the CAMO/CAO (when contracted) in their files with their corresponding justifications. Appendix D may optionally be used. Nevertheless, the owner/CAMO/CAO is responsible for taking into account all instructions, even if they are not adopted and listed here.</i>		
Task description	References	Interval (tick box if the selected interval differs from that required in the referenced document)
<b>Maintenance due to specific equipment and modifications</b>		
		<input type="checkbox"/>
		<input type="checkbox"/>
<b>Maintenance due to repairs</b>		
		<input type="checkbox"/>
		<input type="checkbox"/>
<b>Maintenance due to life-limited components (This should be only if the MIP is used. Otherwise, this data is already part of the DAH's data used as the basis for the AMP.)</b>		
		<input type="checkbox"/>
		<input type="checkbox"/>

<b>Maintenance due to mandatory continuing airworthiness instructions (ALIs, CMRs, specific requirements in the TCDS, etc.)</b>			
			<input type="checkbox"/>
			<input type="checkbox"/>
<b>Maintenance recommendations, such as TBO intervals, issued through service bulletins, service letters, and other non-mandatory service information</b>			
			<input type="checkbox"/>
Emergency locator transmitters and personal locator beacon — annual testing	-	1 Year	<input type="checkbox"/>
(if not using MIP or equivalent ICA task) Transponder test		2 Years	<input type="checkbox"/>
<b>Maintenance due to repetitive ADs</b>			
			<input type="checkbox"/>
			<input type="checkbox"/>
<b>Maintenance due to specific operational/airspace directives/requirements (altimeter, compass, transponder, etc.)</b>			
			<input type="checkbox"/>
<b>Maintenance due to the type of operation or operational approvals</b>			
			<input type="checkbox"/>
			<input type="checkbox"/>
<b>Other</b>			
			<input type="checkbox"/>
			<input type="checkbox"/>

<b>Appendix C — Maintenance tasks alternative to the DAH’s ICA (not less restrictive than the MIP) (include only if necessary — see Sections 5 above)</b>			
<b>Task description</b>	<b>Recommended interval</b>	<b>Alternative inspection/task</b>	<b>Amended interval</b>
<i>When the DAH’s ICA are used as the basis for the AMP, this appendix is used to include the tasks alternative to the DAH’s ICA, which are included in the AMP.</i>			
<i>(When a CAMO/CAO is contracted, all elements justifying the deviations from the DAH’s ICA should be kept by the CAMO/CAO and the organisation should provide a copy of these justifications to the owner)</i>			

<b>Appendix D — Additional information (optional)</b>			
<i>This appendix may optionally be used to provide additional information, such as the complete list of AMP tasks or the list of documents (e.g. service bulletins) considered during the development of the AMP.</i>			



## **GM1 ML.A.302 Aircraft maintenance programme**

The responsibilities associated with maintenance programmes developed in accordance with ML.A.302 are the following:

- (a) If the owner has contracted a CAMO or CAO in order to manage the continuing airworthiness of the aircraft, this organisation is responsible for developing and presenting the maintenance programme to the DGCA for approval which:
  - (1) indicates whether this programme is based on data from the DAH or on the MIP described in ML.A.302(d);
  - (2) identifies the owner and the specific aircraft, engine, and propeller (as applicable);
  - (3) includes all mandatory continuing airworthiness information and any additional tasks derived from the assessment of the DAH's instructions;
  - (4) justifies any deviations from the DAH's instructions; when the DAH's instructions are the basis for the AMP development, these deviations should not fall below the requirements of the MIP; and
  - (5) is customised to the particular aircraft type, configuration and operation, in accordance with ML.A.302(c)(5).
- (b) If the owner has not contracted a CAMO or CAO in order to manage the continuing airworthiness of the aircraft, then the owner is responsible for developing and presenting the maintenance programme to the DGCA for approval, assuming full responsibility for its content, and for any deviations from the DAH's instructions (ref. ML.A.201(f)). The maintenance programme needs to comply with the requirements contained in ML.A.302(c), in particular with the obligation to not fall below the requirements of the MIP and to comply with the mandatory continuing airworthiness information.
- (c) This maintenance programme is the basis for adequate planning of maintenance, and the aircraft continuing airworthiness monitoring (ACAM) inspections. The maintenance programme will be subject to periodic reviews and, in case of discrepancies, linked with deficiencies in the content of the maintenance programme.
- (d) Reserved
- (e) Reserved
- (f) Since the maintenance programme has to identify the alternative tasks to the DAH's instructions, ACAM inspections can place emphasis on the inspection of the areas affected by those deviations in order to make sure that the maintenance programme is effective.
- (g) Reserved

## GM2 ML.A.302 Aircraft maintenance programme

The following table provides a summary of the provisions contained in ML.A.302 in relation to the content of the maintenance programme, its approval.

	<b>OPTION 1</b>	<b>OPTION 2</b>
<b>Responsibility for developing the AMP</b>	Contracted CAMO or CAO	Owner (if allowed under ML.A.201(f))
<b>Presenting the maintenance programme for approval to DGCA</b>	CAMO or CAO,	Owner
<b>Basis for the maintenance programme</b>	MIP (not applicable to rotorcraft and airships) or ICA issued by the DAH	
<b>Deviations from the DAH's ICA</b>	Deviations from the DAH's instructions are justified. The CAMO/CAO keeps a record of the justifications and provides a copy of them to the owner	Deviations need to be justified. The owner keeps a record of the justifications.
<b>AMP annual review</b>	by the CAMO or CAO.	

## AMC1 ML.A.302(c) Aircraft maintenance programme

When evaluating an alternative to a maintenance task issued or recommended by the DAH, such as the extension of TBO intervals, or when considering not to include a maintenance task issued or recommended by the DAH, a risk-based approach should be taken, considering aspects such as the operation of aircraft, type of aircraft, hours and years in service, maintenance of the aircraft, compensating measures, redundancy of components, etc.

The following table provides more details of aspects that should be considered:

	<b>Examples</b>
<b>OPS approval</b>	HIGHER RISK: commercial operation, commercial flight training MEDIUM RISK: flight training by an association, non-commercial specialised operations (SPO) LOWER RISK: private
<b>Flight rules</b>	HIGHER RISK: instrument flight rules (IFR) MEDIUM RISK: visual flight rules (VFR) at night LOWER RISK: VFR by day
<b>Aircraft weight</b>	HIGHER RISK: Other than Category 1 Light Aircraft

	MEDIUM RISK: Category 1 Light Aircraft other than light sport aeroplanes (LSA), very light aircraft (VLA), sailplanes and powered sailplanes LOWER RISK: LSA, VLA, sailplanes and powered sailplanes
<b>Who manages the airworthiness of the aircraft?</b>	HIGHER RISK: owner LOWER RISK: CAMO/CAO
<b>Who maintains the aircraft?</b>	HIGHER RISK: pilot-owner MEDIUM RISK: independent certifying staff LOWER RISK: maintenance organisation
<b>Time in service (flight hours, years)</b>	HIGHER RISK: very high number of hours or years MEDIUM RISK: medium number of hours or years LOWER RISK: low number of hours or years
<b>Aircraft utilisation</b>	HIGHER RISK: less than 50 h per year MEDIUM RISK: around 200 h per year LOWER RISK: more than 400 h per year
<b>ACAM findings</b>	HIGHER RISK: numerous findings in ACAM or ramp inspections MEDIUM RISK: few findings in ACAM inspections LOWER RISK: rare findings in ACAM inspections
<b>System redundancy (for components such as engine/propeller)</b>	HIGHER RISK: single-engined aircraft LOWER RISK: multi-engined aircraft
<b>Supplementary maintenance measures</b>	HIGHER RISK: no supplementary measures LOWER RISK: supplementary measures (such as oil analysis, engine data monitoring, boroscope inspections, corrosion inspections, etc.)
<b>Risk factor of the component failure</b>	HIGHER RISK: engine failure on a helicopter MEDIUM RISK: engine failure on an aeroplane LOWER RISK: sailplane, or powered sailplane

The above information may be useful for CAMOs and CAOs when developing and presenting maintenance programmes for approval to DGCA. It may also be useful for the owner in order to take an informed decision before introducing deviations from the DAH's recommendations.

**GM1 ML.A.302(c)(2)(b) Aircraft maintenance programme**

'DAH' refers to the holder of a type certificate (TC), restricted type certificate, supplemental type certificate (STC), Technical Standard Order (TSO) authorisation, repair or change to the type design.

The 'instructions for continuing airworthiness ('ICA') issued by the design approval holder ('DAH') do not include the data issued by other original equipment manufacturer (OEM), except when the DAH's ICA makes clear reference to such OEM data.

**GM1 ML.A.302(c)(3) Aircraft maintenance programme  
ALTERNATIVE MAINTENANCE ACTIONS**

'Maintenance actions alternative to those referred to in point (c)(2)(b)' refer to when the DAH's ICA are used as the basis for the AMP development and the CAMO, CAO or owner (as applicable), when developing the AMP, decides to deviate from certain of these DAH's instructions, introducing, for example, a less frequent interval or a different task type (inspection instead of check) than the one established by the ICA.

These alternative maintenance actions shall not be less restrictive than those set out in the applicable MIP. This means that the extent of the maintenance to be covered by the deviating task cannot be less than the extent of the corresponding task in the MIP in terms of frequency and task type.

Examples of alternative maintenance actions:

ICA task	AMP proposed alternative	MIP task	Alternative acceptable Yes/No
Inspection XX 6 months interval	Inspection XX 12 months interval	Inspection XX 12 months interval	Yes
Inspection XX 12 months interval	Inspection XX 24 months interval	Inspection XX 12 months interval	No
Inspection XX 24 months interval	Inspection XX 36 months interval	Inspection XX 12 months interval	No (24 months to be kept)
Functional test system XX	Operational test system XX (same interval) or general visual inspection system XX (same interval)	Functional test system XX (same interval)	No*
Operational test system XX	Functional test system XX (same interval)	Operational test system XX (same interval)	Yes*
Inspection XX	Inspection XX 36 months	None relevant	Yes

24 months interval			
Functional test	General visual inspection	None relevant	Yes

\*A functional test is considered more restrictive than an operational test.

Remark: the above does not apply to one-time interval extensions, for which ML.A.302(d)(1) provides 1-month or 10-h tolerance (i.e. permitted variation) for aeroplanes, touring motor gliders (TMGs) and balloons and 1-month tolerance for sailplanes and powered sailplanes other than TMGs.\

### **GM1 ML.A.302(c)(4) Aircraft maintenance programme MANDATORY CONTINUING AIRWORTHINESS INFORMATION OTHER THAN ADS**

‘Mandatory continuing airworthiness information’ other than ADs may be different from one aircraft to another, depending on the type certification basis used. The aircraft may have been certified before the term ‘ALS (Airworthiness Limitations Section)’ was introduced in the certification specification (or airworthiness code). However, the intent is that the AMP (whether based on MIP or not) includes all mandatory scheduled maintenance requirements identified during the initial airworthiness activity, by the TC holder, STC holder and, if applicable, engine TC holder. These requirements may be identified under a variety of designations such as:

- Airworthiness limitations or Airworthiness limitation items (ALI)
- Certification maintenance requirements (CMR)
- Safe life items or safe life limits or safe life limitations
- Life-limited parts (LLP)
- Time limits
- Retirements life
- Mandatory Inspections or Mandatory Airworthiness Inspections
- Fuel airworthiness limitations or Fuel tank safety limitations

In case of doubt, it is advised to check the TCDS or contact the DAH.

The intervals of the mandatory continuing airworthiness information cannot be extended by a CAMO/CAO. The escalation of such tasks is to be approved by the DGCA

**AMC1 ML.A.302(d) Aircraft maintenance programme**

This AMC contains an acceptable MIP for aeroplanes of 2 730 kg maximum take-off mass (MTOM) and below, and for Category 2 Light Aircraft other than rotorcraft or airships, grouped in the following categories:

- aeroplanes of 2 730 kg MTOM and below;
- Category 2 sailplanes and Category 2 powered sailplanes; and
- Category 2 balloons.

These MIPs already comply with the requirements of ML.A.302(d) and may be used in order to define the basic information for the maintenance programme as required by ML.A.302(c)(2)(a). However, the maintenance programme must be customised as required by ML.A.302(c)(5), which may be achieved by using the standard template contained in AMC ML.A.302.

It should be noted that using the 1-month tolerance permitted by ML.A.302(d)(1) for the annual inspection may result in an expired ARC.

**MIP for aeroplanes of 2 730 kg MTOM and below**

To be performed at every annual/100-h interval, whichever comes first.

A tolerance of 1 month or 10 h may be applied. The next interval shall be calculated from the time the inspection takes place.

Note 1: Use the manufacturer's maintenance manual to accomplish each task/inspection.

Note 2: Proper operation of backup or secondary systems and components should be performed wherever a check for improper installation/operation is carried out.

<b>Aeroplanes of 2 730 kg MTOM and below</b>	
<b>System/component/area</b>	<b>Task and inspection detail</b>
<b>GENERAL</b>	
General	Remove or open all necessary inspection plates, access doors, fairings, and cowlings. Clean the aircraft and aircraft engine as required.
Lubrication/servicing	Lubricate and replenish fluids in accordance with the manufacturer's requirements.

Markings	Check that side and under wing registration markings are correct. If applicable, check that an exemption for alternate display is approved. Identification plate for registered aircraft is present, as well as other identification markings on fuselage in accordance with local (national) rules.
Weighing	Review weighing record to establish accuracy against installed equipment. Weigh the aircraft as required, as required..
Service life limits	Check the records that the service life limits and airworthiness limits are within the life time limits of the maintenance programme.
Software	Check for updated software/firmware status and databases for engine and equipment.
<b>AIRFRAME</b>	
Fabric and skin	Inspect for deterioration, distortion, other evidence of failure, and defective or insecure attachment of fittings. <i>NOTE: When checking composite structures, check for signs of impact or pressure damage that may indicate underlying damage.</i>
Fuselage structure	Check frames, formers, tubular structure, braces, and attachments. Inspect for signs of corrosion and cracks.
Systems and components	Inspect for improper installation, apparent defects, and unsatisfactory operation.
Pitot-static system	Inspect for security, damage, cleanliness, and condition. Drain any water from condensation drains.
General	Inspect for lack of cleanliness and loose equipment that may foul the controls.
Tow hooks	Inspect for condition of moving parts and wear. Check service life. Carry out operational test.
<b>CABIN AND COCKPIT</b>	
Seats, safety belts and harnesses	Inspect for poor condition and apparent defects. Check for service life.
Windows, canopies and windshields	Inspect for deterioration and damage, and for function of emergency jettison.
Instrument panel assemblies	Inspect for poor condition, mounting, marking, and (where practicable) improper operation. Check markings of instruments in accordance with the flight manual.
Flight and engine controls	Inspect for improper installation and improper operation.
Speed/weight/manoeuvre placard	Check that the placard is correct and legible, and accurately reflects the status of the aircraft.
All systems	Inspect for improper installation, poor general condition, apparent and obvious defects, and insecurity of attachment.
<b>LANDING GEAR</b>	

Shock-absorbing devices	Inspect for improper oleo fluid level. Inspect for wear and deformation of rubber pads, bungees, and springs.
All units	Inspect for poor condition and insecurity of attachment, including the related structure.
Retracting and locking mechanism	Inspect mechanism. Operational check.
Linkages, trusses and members	Inspect for undue or excessive wear fatigue and distortion.
Steering	Inspect the nose/tail wheel steering for proper function and wear.
Hydraulic lines	Inspect for leakage. Check condition and replace if necessary.
Electrical system	Inspect for chafing. Operational check of switches.
Wheels	Inspect for cracks, defects, and condition of bearings.
Tires	Inspect for wear and cuts.
Brakes	Inspect for improper adjustment and wear. Carry out operational test.
Floats and skis	Inspect for insecure attachment and apparent defects.
<b>WING AND CENTRE SECTION</b>	
All components	Inspect all components of the wing and centre section assembly for poor general condition, fabric or skin deterioration, distortion, evidence of failure and insecurity of attachment.
Connections	Inspect main connections (e.g. between wings, fuselage, wing tips) for proper fit, play within tolerances, wear or corrosion on bolts and bushings
<b>FLIGHT CONTROLS</b>	
Control circuit/stops	Inspect control rods and cables. Check that the control primary stops are secure and make contact.
Control surfaces	Inspect aileron, flap, elevator, air brake and rudder assemblies, hinges, control connections, springs/bungees, tapes and seals. Check full range of motion and free play.
Trim systems	Inspect trim surfaces, controls, and connections. Check full range of motion.
<b>EMPENNAGE</b>	
All components and systems	Inspect all components and systems that make up the complete empennage assembly for poor general condition, fabric or skin deterioration, distortion, evidence of failure, insecure attachment, improper component installation, and improper component operation
<b>AVIONICS AND ELECTRICS</b>	



Batteries	Inspect for improper installation, improper charge, spillage and corrosion.
Radio and electronic equipment	Inspect for improper installation and insecure mounting. Carry out ground function test.
Wiring and conduits	Inspect for improper routing, insecure mounting, and obvious defects.
Bonding and shielding	Inspect for improper installation, poor condition, chafing and wear of insulation.
Antennas	Inspect for poor condition, insecure mounting, and improper operation.
Lights	Operational check of the interior, exterior and instrument lighting
<b>POWER PLANT (OTHER THAN TURBOPROP ENGINE)</b>	
Engine section	Inspect for visual evidence of oil, fuel or hydraulic leaks and sources of such leaks.
Studs and nuts	Inspect for looseness, signs of rotation and obvious defects.
Internal engine	Inspect for proper cylinder compression (record measures for each cylinder) and for metal particles or foreign matter in oil filter, screens and sump drain plugs.
Engine mounts	Inspect for cracks, looseness of mounting, and looseness of the engine to the engine-mount attachment.
Flexible vibration dampeners	Inspect for poor condition and deterioration.
Engine controls	Inspect for defects, improper travel, and improper safe tying.
Lines, hoses and clamps	Inspect for leaks, improper condition, and looseness.
Exhaust stacks	Inspect for cracks, defects, and improper attachment.
Turbocharger and intercooler	Inspect for leaks, improper condition, and looseness of connections and fittings. Check MP controller or density controller for leakage and free movement of controls. Check waste gate or overpressure relief valve for free movements.
Heating	Inspect cabin heating heat exchanger for improper condition and function. For exhaust heat exchanger, check CO (Carbon Monoxide) concentration.
Liquid cooling systems	Inspect for leaks and proper fluid level.
Electronic engine control	Inspect for signs of chafing, and proper electronics and sensor installation.
Accessories	Inspect for apparent defects in security of mounting.
All systems	Inspect for improper installation, poor general condition, defects and insecure attachment.
Cowling	Inspect for cracks and defects. Check cowling flaps.
Cooling baffles and seals	Inspect for defects, improper attachment, and wear.

<b>TURBOPROP ENGINE</b>	
Incoming power check	Perform in accordance with the graphs found in the engine maintenance manual (EMM).
Inertial separator	Functional check
Engine cowling	Remove, inspect for damage.
General condition	Inspect for oil, fuel, bleed-air or other leaks.
1st stage compressor blades	Remove screen, check for foreign object debris (FOD) or other damage.
P3 filter	Replace
Oil filter	Inspection and cleaning
Fuel low pressure filter	Replace
Fuel high pressure filter	Inspection and cleaning
Oil scavenge filter	Inspection and cleaning
Chip detector	Inspection and cleaning
Exhaust duct	Inspection
Starter/generator brushes	Inspection for proper length
Ignitor/glow plugs	Functional check
Overspeed governor	Inspect for oil leaks.
Governor and beta-valve	Inspect for oil leaks or binding of controls.
Propeller	Inspect blades for damage and hub leaks.
(if installed) fire detector loop or sense module	Functional check
Engine cowling	Install
Power check	Perform in accordance with the graphs found in the EMM, record values.
Oil level	Check within 10 minutes after shutdown.
<b>FUEL</b>	
Fuel tanks	Inspect for leaks and improper installation and connection. Verify proper sealing and function of tank drains.
<b>CLUTCHES AND GEARBOXES</b>	
Filters, screens, and chip detectors	Inspect for metal particles and foreign matter.
Exterior	Inspect for oil leaks.
Output shaft	Inspect for excessive bearings' play and condition
<b>PROPELLER</b>	
Propeller assembly	Inspect for cracks, nicks, binds, and oil leakage.
Propeller bolts	Inspect for proper installation, looseness, signs of rotation, and lack of safe tying.
Propeller control mechanism	Inspect for improper operation, insecure mounting, and restricted travel.
Anti-icing devices	Inspect for improper operation and obvious defects.
<b>MISCELLANEOUS</b>	

Ballistic rescue system	Inspect for proper installation, unbroken activation mechanism, proper securing while on ground, validity of inspection periods of pyrotechnic devices, and parachute-packing intervals.
Other miscellaneous items	Inspect installed miscellaneous items that are not otherwise covered by this listing for improper installation and improper operation
<b>OPERATIONAL AND FUNCTIONAL CHECKS</b>	
Power and revolutions per minute (rpm)	Check that power output, static and idle rpm are within published limits.
Magnetos	Check for normal function.
Fuel and oil pressure	Check that they are within normal values. Check fuel pumps for proper operation.
Engine temperatures	Check that they are within normal values.
Engine	For engines equipped with automated engine control (e.g. FADEC), perform the published run-up procedure and check for discrepancies.
Engine	For dry-sump engines, engines with turbochargers and liquid-cooled engines, check for signs of disturbed fluid circulation.
Pitot-static system	Perform functional check.
Transponder	Perform operational check.
Ice protection	Perform operational check of ice protection system.
Fuel quantity indication	Check the fuel quantity indication for proper indication.
Caution and warning	Operational check of cautions and warnings lights.

### **MIP for Category 2 sailplanes and Category 2 powered sailplanes**

To be performed:

- every 100-h/annual interval (for TMGs), whichever comes first; or
- every annual interval (for the rest).

A tolerance of 1 month or 10 h, as applicable, may be applied. The next interval shall be calculated from the time the inspection takes place.

*Note 1: Use the manufacturer's maintenance manual to accomplish each task/inspection.*

*Note 2: In the case of TMGs, it is acceptable to control the hours of use of the aircraft, engine and propeller as separate entities. Any maintenance check to be carried out between two consecutive 100-h/annual inspections may be performed separately on the aircraft, engine and propeller, depending on when each element reaches the corresponding hours. However, at the time of the 100-h/annual, all the elements must be covered.*

*Note 3: Proper operation of backup or secondary systems and components should be carried out wherever a check for improper installation/operation is performed*

<b>Category 2 sailplanes and Category 2 powered sailplane</b>	
<b>System/component/area</b>	<b>Task and inspection detail</b>
<b>GENERAL</b>	
General — all tasks	The aircraft must be clean prior to inspection. Inspect for security, damage, wear, integrity, whether drain/vent holes are clear, for signs of overheating, leaks, chafing, cleanliness and condition, as appropriate to the particular task. Whilst checking composite structures, check for signs of impact or pressure damage that may indicate underlying damage
Lubrication/servicing	Lubricate and replenish fluids in accordance with the manufacturer's requirements.
Markings	Check that side and under wing registration markings are correct. If applicable, check that an exemption for alternate display is approved. Identification plate for registered aircraft is present, as well as other identification markings on fuselage in accordance with local (national) rules.
Weighing	Review weighing record to establish accuracy against installed equipment. Weigh the aircraft as required, as required by the relevant Regulation for air operations. ..
<b>AIRFRAME</b>	
Fuselage paint/gel coat	Inspect external surface and fairings, gel coat, fabric covering or metal skin, and paintwork
Fuselage structure	Check frames, formers, tubular structure, skin, and attachments. Inspect for signs of corrosion on tubular framework
Nose fairing	Inspect for evidence of impact with ground or objects.
Release hook(s)	Inspect nose and centre of gravity, release hooks and controls. Check operational life. Carry out operational test. If more than one release hook or control is fitted, check operation of all release hooks from all positions.
Pitot/ventilator	Check alignment of probe, check operation of ventilator.
Pitot-static system	Inspect pitot probes, static ports, and all tubing (as accessible) for security, damage, cleanliness, and condition. Drain any water from condensate drains.
Bonding/vents drains	Check all bonding leads and straps. Check that all vents and drains are clear from debris
<b>CABIN AND COCKPIT</b>	

Cleanliness/loose articles	Check under cockpit floor/seat pan and in rear fuselage for debris and foreign items.
Canopy, locks and jettison	Inspect canopy, canopy frame and transparencies for cracks, unacceptable distortion, and discolouration. Check operation of all locks and catches. Carry out an operational test of the canopy jettison system from all positions.
Seat/cockpit floor	Inspect seat(s). Check that all loose cushions are correctly installed and, as appropriate, that energy-absorbing foam cushions are fitted correctly. Ensure that all seat adjusters fit and lock correctly.
Harness(es)	Inspect all harnesses for condition, and wear of all fastenings, webbing, and fittings. Check operation of release and adjustments.
Rudder pedal assemblies	Inspect rudder pedal assemblies and adjusters. Inspect cables for wear and damage.
Instrument panel assemblies	Inspect instrument panel and all instruments/equipment. Check if instrument readings are consistent with ambient conditions. Check marking of all switches, circuit breakers, and fuses. Check operation of all installed equipment, as possible in accordance with the manufacturer's instructions.  Check markings of instruments in accordance with the aircraft flight manual (AFM).
Oxygen system	Inspect oxygen system. Check bottle hydrostatic-test date expiry in accordance with the manufacturer's recommendations. Ensure that oxygen installation is recorded on weight and centre-of-gravity schedule. <b>CAUTION: OBSERVE ALL SAFETY PRECAUTIONS.</b>
Colour-coding of controls	Ensure that controls are colour-coded in accordance with the AFM and in good condition.
Placards	Check that the placards are correct and legible, and accurately reflect the status of the aircraft in accordance with the AFM.
<b>LANDING GEAR</b>	
Front skid/nose wheel and mounts	Inspect for evidence of hard/heavy landings. Check skid wear. Inspect wheel, tyre, and wheel box. Check tyre pressure.
Main wheel and brake assembly	Check for integrity of hydraulic seals and leaks in pipe work. Check life of hydraulic hoses and components, if specified by the manufacturer. Remove brake drums, check brake lining wear. Check disk/drum wear. Refit drum. Check brake adjustment. <b>CAUTION: BRAKE DUST MAY CONTAIN ASBESTOS.</b>

	Check operation of brake. Check level of brake fluid and replenish, if necessary. Check tyre pressure. <b>CAUTION: CHECK TYPE OF BRAKE FLUID USED AND OBSERVE SAFETY PRECAUTIONS</b>
Undercarriage suspension	Check springs, bungees, shock absorbers, and attachments. Check for signs of damage. Service strut, if applicable.
Undercarriage retract system and doors	Check retraction mechanism and controls, warning system if fitted, gas struts, doors and linkages/springs, over-centre/locking device. Perform retraction test.
Tail skid/wheel	Inspect for evidence of hard/heavy landings. Check skid wear. Inspect wheel, tyre, and wheel box. Check bond of bonded skids. Check tyre pressure.
Wheel brake control circuit	Inspect wheel brake control rods/cables. If combined with air brake, ensure correct rigging relationship. Check parking-brake operation, if fitted
<b>WING AND CENTRE SECTION</b>	
Centre section	Inspect wing centre section including fairings for security, damage, and condition.
Wing attachments	Inspect the structural attachments of the wing. Check for damage, wear, and security. Check for rigging damage. Check condition of wing attachment pins and wing main bolts.
Winglet/wing extensions	Inspect the structural attachments of winglet and wing attachments. Check for damage, wear, and security.
Aileron control circuit/stops	Inspect aileron control rods/cables. Check that control stops are secure and make contact. Inspect connecting control devices for security, damage, free play and secure mounting.
Air brake control circuit	Inspect air brake control rods/cables. Check friction/locking device (if fitted). Inspect connecting control devices for security, damage, free play and secure mounting. Inspect air brake locking for proper adjustment and positive locking.
Wing struts/wires	Inspect struts for damage and internal corrosion. Re-inhibit struts internally every 3 years or in accordance with the manufacturer's instructions.
Wings including underside registration markings	Check main plane structure externally and internally, as far as possible. Check gel coat, fabric covering, or metal skin.
Ailerons and controls	Inspect aileron and flaperon assemblies, hinges, control connections, springs/bungees, tapes, and seals. Ensure that seals do not impair the full range of movement.
Air brakes/spoilers	Inspect air brake/spoiler panel(s) operating rods, closure springs, and friction devices, as fitted.
Flaps	Check flap system and control. Inspect connecting control devices.

Control deflections and free play, and record them on worksheets	Check and record range of movements and cable tensions, if specified, and check free play
<b>EMPENNAGE</b>	
Tailplane and elevator	With tailplane de-rigged, check tailplane and attachments, self-connecting and manual control connections. Check gel coat, fabric covering, or metal skin.
Rudder	Check rudder assembly, hinges, attachments, balance weights.
Rudder control circuit/stops	Inspect rudder control rods/cables. Check that control stops are secure and make contact. Pay particular attention to wear and security of liners and cables in 'S' tubes.
Elevator control circuit/stops	Inspect elevator control rods/cables. Check that control stops are secure and make contact. Inspect self-connecting control devices.
Trimmer control circuit	Inspect trimmer control rods/cables. Check friction/locking device. Inspect trim indication for proper adjustment and function.
Control deflections and free play, and record them on worksheets	Check and record range of movements and cable tensions, if specified, and check free play.
<b>AVIONICS AND ELECTRICS</b>	
Electrical installation/fuses	Check all electrical wiring for condition. Check for signs of overheating and poor connections. Check fuses/trips for condition and correct rating.
Battery security and corrosion	Check battery mounting for security and operation of clamp. Check for evidence of electrolyte spillage and corrosion. Check that battery has correct main fuse fitted. It is recommended to carry out battery capacity test on gliders equipped with radio, used for cross-country, controlled airspace, or competition flying.
Radio installations and placards	Check radio installation, microphones, speakers and intercom, if fitted. Check that a call sign placard is installed. Carry out ground function test. Record radio type fitted.
Air speed indicator	Carry out a pitot static leak check and functional check of the airspeed indicator. In case of indications of malfunctions, carry out an airspeed indicator calibration check.
Altimeter datum	Check barometric subscale by altimeter QNH reading.
Pitot-static system	Perform pitot static leak check, inspect hoses for condition, operational check.
Transponder	Perform operational check
<b>MISCELLANEOUS</b>	

Removable ballast	Check removable ballast mountings and securing devices (including fin ballast, if applicable) for condition. Check that ballast weights are painted with conspicuous colour. Check that provision for the ballast is made on the loading placard.
Drag chute and controls	Inspect chute, packing and release mechanism. Check packing intervals.
Water ballast system	Check water ballast system, wing and tail tanks, as fitted. Check filling points, level indicators, vents, dump and frost drains for operation and leakage. If loose bladders are used, check for leakage and expiry date, as applicable
<b>POWER PLANT</b> (when applicable) <i>NOTE: In the case of sailplanes with electrical or jet engines, follow the maintenance instructions and recommendations of the DAH.</i>	
Engine pylons and mountings	Inspect engine and pylon installation. Check engine compartment and fire sealing.
Gas strut	Check gas strut.
Pylon/engine stops	Check limit stops on retractable pylons. Check restraint cables.
Electric actuator	Inspect electric actuator, motor, spindle drive, and mountings.
Electrical wiring	Inspect all electrical wiring. Pay special attention to wiring that is subject to bending during extension and retraction of engine/pylon
Limit switches	Check operation of all limit switches and strike plates. Make sure that they are not damaged by impact.
Fuel tank(s)	Check fuel tank mountings and tank integrity. Check fuel quantity indication system, if fitted.
Fuel pipes and vents	Check all fuel pipes, especially those subject to bending during extension and retraction of engine/pylon. Check that vents are clear. Make sure that overboard drains do not drain into engine compartment. Check self-sealing.
Fuel cock or shut-off valve	Check operation of fuel cock or shut-off valve and indications.
Fuel pumps and filters	Clean or replace filters, as recommended by manufacturer. Check operation of fuel pumps for engine supply or tank replenishment. Check fuel pump controls and indications.
Decompression valve	Inspect decompression valve and operating control.
Ignition	Inspect ignition system including spark plugs, distributor and cables for condition and damage. Inspect low-tension and high-tension wiring, connectors, spark plug caps. Check magneto-to-engine timing.
Propeller	Inspect propeller, hub, folding mechanism, brake, pitch change mechanism, stow sensors. Inspect propeller control for function and condition.



Doors	Check engine compartment doors, operating cables, rods, and cams.
Safety springs	Check all safety and counterbalance springs.
Extension and retraction	Check that extension and retraction operation times are within the limits specified by the manufacturer. Check light indications and interlocks for correct operation.
Exhaust	Inspect exhaust system, silencer, shock mounts, and links.
Engine installation	Inspect engine and all accessories. Carry out compression test and record results (for piston engines). Compression test results: No 1 (left/front); and No 2 (right/rear).
Lubrication	Change engine oil and filter. Replenish oil and additive tanks.
Engine instruments	Inspect all engine instruments and controls. Check control unit, mounts, bonding and connections. Carry out internal self-test, if fitted.
Engine battery	If separate from airframe battery, inspect battery and mountings. If main fuse is fitted, check rating and condition.
Engine battery capacity test	Carry out capacity test. Refer to appropriate manual or guidance.
Placards	Check that all placards are in accordance with the AFM and legible.
Oil and fuel leaks	With the engine fully serviced, check the fuel and oil system for leaks

#### **MIP for Category 2 hot-air balloons**

To be performed at every 100-h/annual interval, whichever comes first.

A tolerance of 1 month or 10 h may be applied. The next interval shall be calculated from the time the inspection takes place.

*Note 1: Use the manufacturer's maintenance manual to accomplish each task/inspection.*

*Note 2: Proper operation of backup or secondary systems and components should be carried out wherever a check for improper installation/operation is performed.*

<b>MIP for Category 2 hot-air balloons</b>	
<b>(a) Envelope</b>	
<b>System/component/area</b>	<b>Task and inspection detail</b>
Identification (type/serial number/registration plate)	Check for presence.
Crown ring	Inspect for damage/corrosion.

Crown line	Inspect for damage, wear, security of attachment. Check correct length.
Vertical-/horizontal-load tapes	Inspect joints with the crown ring, top of the envelope and wires. Inspect that all load tapes are undamaged along their entire length. Inspect base horizontal tape and edge of the envelope top. Inspect joint between base horizontal-load tape and vertical-load tapes.
Envelope fabric	Inspect the envelope fabric panels (including parachute and rotation vents, if fitted) for damage, porosity overheating or weakness. Unrepaired damage is within tolerance provided for by the manufacturer. If substantial fabric porosity is suspected, a flight test should be performed, but only after a grab test has demonstrated that the balloon is safe to fly. Perform grab test in accordance with the manufacturer's instructions
Flying cables	Inspect for damage (particularly heat damage).
Karabiners	Inspect for damage/corrosion. Operational check of karabiner lock.
Melting link and 'tempilabel'	Check and record maximum temperature indication (flag/tempilabel).
Control lines and attachments	Inspect for damage wear, security of knots. Check proper length. Check lines attachments for damage, wear, security.
Envelope pulleys/guide rings	Inspect for damage, wear, free running, contamination, security of attachment

**(b) Burner**

<b>System/component/area</b>	<b>Task and inspection detail</b>
Identification (type/serial number)	Check for presence and verify type/serial number installed.
Burner frame	Inspect welds for cracking.
	Inspect tubes for distortion/deformation/cuts/gouges.
	Inspect frame for security of fasteners (heat shields, flexi-corners).
	Inspect frame lugs for wear and cracking.
	Inspect general condition (corrosion, heat shields).
Gimballing	Operational check of stiffness and security of fasteners.
Leak check	Perform leak check of the burner.
Fuel hoses including manifolds	Inspect all hoses for wear, damage, leakage and service life limitations. Inspect O-ring seals, lubricate/replace as required.
Pressure gauges	Check that the pressure gauge reads correctly, and that lens is present.
Pilot valves/flame	Check shut-off, free movement, correct function, and lubricate if necessary.

Whisper valves/flame	Check shut-off, free movement, correct function, and lubricate if necessary
Main valves/flame	Check shut-off, free movement, correct function, and lubricate if necessary.
Coils	Check for damage, distortion, security of fasteners. Inspect welds for cracking. Check security of jets. Tighten or replace, as necessary.

<b>( c ) Basket</b>	
<b>System/component/area</b>	<b>Task and inspection detail</b>
Identification (type/serial number)	Check for presence.
Basket walls	Check the general condition of the basket walls. Inspect weave for damage, cracks/holes. Check for no sharp objects inside the basket.
Basket wires	Inspect for damage, check swaging and eye rings (thimbles).
Karabiners	Inspect for damage/corrosion. Operational check of karabiner lock.
Basket floor	Inspect for damage and cracks.
Runners	Inspect for damage, security of attachment.
Rawhide	Inspect for damage, wear and attachments to the floor.
Rope handles	Inspect for damage, security of attachment.
Cylinder straps	Inspect for damage, deterioration, approved type fitted.
Padded basket edge trim	Inspect for damage and wear.
Burner support rods	Inspect for damage, wear and cracking.
Padded burner support rod covers	Inspect for damage and wear.
Basket equipment	Check presence and functionality.
Pilot restraint and anchor	Inspect for security and condition.
Fire extinguisher	Check expiration date and protection cover.
First aid kit	Check for completeness and expiration date.
<b>(d) Fuel cylinders</b>	
<b>System/component/area</b>	<b>Task and inspection detail</b>
Identification (type/serial number)	Check for presence.
Cylinder	Check if periodic inspections for each cylinder are valid (date) (e.g. 10 years' inspection).
Cylinder body	Inspect for damage, corrosion
Liquid valve	Inspect for damage, corrosion, correct operation.

	Inspect O-ring seals, lubricate/replace as required
Fixed liquid Level gauge	Inspect for damage, corrosion, correct operation.
Contents Gauge	Inspect for damage, corrosion, freedom of movement.
Vapour valve	Inspect for damage, corrosion, correct operation (including regulator).
	Check quick-release coupling for correct operation, sealing
Padded cover	Inspect for damage. Check for correct thickness.
Pressure relief valve	Inspect for contamination, corrosion. Check service life limit.
Assembly	Inspect, and test for leaks all pressure-holding joints using leak detector.
	Perform functional test
<b>e) Additional equipment</b>	
<b>System/component/area</b>	<b>Task and inspection detail</b>
Instruments	Perform functional check.
Quick release	Perform functional check and inspect the condition of the latch, bridle and ropes for wear and deterioration. Check that the karabiners are undamaged and operate correctly.
Communication/navigation equipment (radio)	Perform operational check.
Transponder	Perform operational check

### **GM1 ML.A.302(d)(2) Aircraft maintenance programme OPERATIONAL TEST AND FUNCTIONAL TEST**

An operational test (or operational check) is a task used to determine that an item is operating normally. It does not require quantitative tolerances.

A functional test (or functional check) is a quantitative check to determine if one or more functions of an item performs within the limits specified in the appropriate maintenance data. The measured parameter should be recorded

### **GM1 ML.A.302(d)(2)(d) Aircraft maintenance programme OPERATIONAL TEST OF TRANSPONDER**

A transponder test that is carried out in accordance with applicable regulation is considered to include the MIP task described in ML.A.302(d)(2)(d).

### **ML.A.303 Airworthiness directives**

Any applicable AD must be carried out within the requirements of that AD unless otherwise specified by the DGCA.

**ML.A.304 Data for modifications and repairs**

A person or organisation repairing an aircraft or a component shall assess any damage. Modifications and repairs shall be carried out using, as appropriate, the following data:

- (a) approved by the DGCA;
- (b) approved by a design organisation complying with CAR 21
- (c) Reserved

*Note:- Procedure for modification and repairs is detailed in Airworthiness Advisory Circular (AAC) No. 1 of 2017*

**ML.A.305 Aircraft continuing airworthiness record system**

- (a) At the completion of any maintenance, the certificate of release to service (CRS) required by point ML.A.801 shall be entered in the aircraft continuing airworthiness record system. Each entry shall be made as soon as possible but not later than 30 days after the day of the completion of the maintenance task.
- (b) The aircraft continuing airworthiness records shall consist of an aircraft logbook, engine logbook(s) or engine module log cards, propeller logbook(s) and log cards, for any service-life-limited component, as appropriate.
- (c) The aircraft type and registration mark, the date together with the total flight time and flight cycles and landings, shall be entered in the aircraft logbooks.
- (d) The aircraft continuing airworthiness records shall contain:
  - (1) the current status of ADs and measures mandated by the DGCA in immediate reaction to a safety problem;
  - (2) the current status of modifications, repairs and other DAH maintenance recommendations;
  - (3) the current status of compliance with the AMP;
  - (4) the current status of service-life-limited components;
  - (5) the current mass and balance report;
  - (6) the current list of deferred maintenance.
- (e) In addition to the authorised release document, CA Form 1, as set out in Appendix II of CAR-M, or equivalent, the following information relevant to any component installed, such as engine, propeller, engine module or service-life-limited component, shall be entered in the appropriate engine or propeller logbook, engine module or service-life-limited component log card:
  - (1) the identification of the component;
  - (2) the type, serial number and registration, as appropriate, of the aircraft, engine, propeller, engine module or service-life-limited component to which the

- particular component has been fitted, along with the reference to the installation and removal of the component;
- (3) the date together with the component's accumulated total flight time, flight cycles, landings and calendar time, as relevant to the particular component;
  - (4) the current information referred to in point (d), applicable to the component.
- (f) The person or organisation responsible for the management of continuing airworthiness and tasks pursuant to point ML.A.201, shall control the records as detailed in point ML.A.305 and present the records to the DGCA upon request.
- (g) All entries made in the aircraft 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.
- (h) An owner shall ensure that a system has been established to keep the following records for the periods specified:
- (1) all detailed maintenance records in respect of the aircraft and any service-life-limited component fitted thereto, until such time as the information contained therein is superseded by new information equivalent in scope and detail but no less than 36 months after the aircraft or component has been released to service;
  - (2) the total time in service, this is to say hours, calendar time, cycles and landings, of the aircraft and all service-life-limited components, for at least 12 months after the aircraft or component has been permanently withdrawn from service;
  - (3) the time in service, this is to say hours, calendar time, cycles and landings, as appropriate, since the last scheduled maintenance of the component subjected to a service life limit, at least until the component scheduled maintenance has been superseded by another scheduled maintenance of equivalent work scope and detail;
  - (4) the current status of compliance with the AMP at least until the scheduled maintenance of the aircraft or component has been superseded by another scheduled maintenance of equivalent work scope and detail;
  - (5) the current status of ADs applicable to the aircraft and components, at least 12 months after the aircraft or component has been permanently withdrawn from service;
  - (6) details of current modifications and repairs to the aircraft, engine(s), propeller(s) and any other component vital to flight safety, at least 12 months after they have been permanently withdrawn from service.

**AMC1 ML.A.305 Aircraft continuing-airworthiness record system**

- (a) Any other forms different from a logbook/log card of keeping the below information could be acceptable. For example, that could be in paper form, a spreadsheet or an IT system.
- (b) A log card and status for components other than propeller and engines could be combined in a single document.
- (c) If the AD is generally applicable to the aircraft or component type but is not applicable to the particular aircraft, engine, propeller or component, then this should be identified as well as the reason why it is not applicable. There is no need to list those ADs that are superseded or cancelled.
- (d) The current status of ADs should be sufficiently detailed to identify the complied AD and/or the due limit.
- (e) If the IT system is the only record-keeping system, it should have at least one backup system, which should be regularly updated. Each terminal should contain programme safeguards against the probability of unauthorised personnel altering the database

**ML.A.307 Transfer of aircraft continuing-airworthiness records**

- (a) When an aircraft is permanently transferred from one owner to another, the transferring owner shall ensure that the continuing airworthiness records referred to in point ML.A.305 are also transferred.
- (b) When the owner contracts the continuing airworthiness management tasks to a CAMO or CAO the owner shall ensure that the continuing airworthiness records referred to in point ML.A.305 are transferred to the contracted organisation.
- (c) The time periods for the retention of records set out in point (h) of point ML.A.305 shall continue to apply to the new owner, CAMO or CAO.

## SUBPART D

### MAINTENANCE STANDARDS

#### **ML.A.401 Maintenance data**

- (a) The person or organisation maintaining an aircraft shall only use applicable maintenance data during the performance of maintenance.
- (b) For the purposes of this CAR, 'applicable maintenance' data means:
  - (1) any applicable requirement, procedure, standard or information issued by the DGCA;
  - (2) any applicable AD;
  - (3) Applicable ICA issued by type certificate holders, supplementary type certificate holders and any other organisation that publishes such data in accordance with CAR-21
  - (4) any applicable data issued in accordance with point (d) of point 145.A.45.

#### **GM1 ML.A.401(b) Maintenance data**

Similar provisions to those in GM1 M.A.401(b)(3) and (b)(4) and GM1 M.A.401(b)(4) apply.

#### **ML.A.402 Performance of maintenance**

- (a) Maintenance performed by approved maintenance organisations shall be in accordance with Subpart F of CAR-M, CAR-145 or CAR-CAO , as applicable.
- (b) For maintenance not performed in accordance with point (a), the person performing maintenance shall:
  - (1) be qualified for the tasks performed, as required by this CAR;
  - (2) ensure that the area in which maintenance is carried out is well organised and clean with no dirt or contamination;
  - (3) use the methods, techniques, standards and instructions specified in the maintenance data referred to in point ML.A.401;
  - (4) use the tools, equipment and material specified in the maintenance data referred to in point ML.A.401. If necessary, tools and equipment shall be controlled and calibrated to an officially recognised standard;
  - (5) ensure that maintenance is performed within any environmental limitations specified in the maintenance data referred to in point ML.A.401;



- (6) ensure that proper facilities are used in case of inclement weather or lengthy maintenance;
- (7) ensure that the risk of multiple errors during maintenance and the risk of errors being repeated in identical maintenance tasks are minimised;
- (8) ensure that an error-capturing method is implemented after the performance of any critical maintenance task;
- (9) perform a general verification after completion of maintenance to ensure that the aircraft or component is clear of all tools, equipment and any extraneous parts and material, and that all access panels removed have been refitted;
- (10) ensure that all maintenance performed is properly recorded and documented.

#### **AMC1 ML.A.402 Performance of maintenance**

- (a) Examples of acceptable methods to record and document the maintenance performed are the following:
  - a copy of the 100-h/annual inspection checklist with ticks and signature; and
  - a copy of the release to service indicating the tasks performed.
- (b) Airborne contamination (e.g. dust, precipitation, paint particles, filings) should be kept to a minimum to ensure aircraft/components surfaces are not contaminated. If this is not possible, all susceptible systems should be sealed until acceptable conditions are re-established.

#### **AMC1 ML.A.402(b)(7) Performance of maintenance**

To minimise the risk of errors and to prevent omissions, the person performing maintenance should ensure that:

- (a) every maintenance task is signed off only after completion;
- (c) the grouping of tasks for the purpose of sign-off allows critical steps to be clearly identified; and
- (c) any work performed by personnel under supervision (i.e. temporary staff, trainees) is checked and signed off by an authorised person

## **AMC1 ML.A.402(b)(8) Performance of maintenance CRITICAL MAINTENANCE TASKS**

The following maintenance tasks should primarily be reviewed to assess their impact on safety:

- (a) tasks that may affect the control of the aircraft's flight path and attitude, such as the installation, rigging and adjustments of flight controls;
- (b) tasks that may affect aircraft stability control systems (autopilots, fuel transfer);
- (c) tasks that may affect the propulsive force of the aircraft, including the installation of aircraft engines, propellers and rotors; and
- (d) the overhaul, calibration or rigging of engines, propellers, transmissions and gearboxes.

## **AMC2 ML.A.402(b)(8) Performance of maintenance ERROR-CAPTURING METHODS**

Re-inspection, when only one person is available to carry out the task, or independent inspection, are possible error-capturing methods

### **ML.A.403 Aircraft defects**

- (a) Any aircraft 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 it accordingly:
  - (1) the pilot in respect of defects affecting non-required aircraft equipment;
  - (2) the pilot, when using the minimum equipment list, in respect of defects affecting required aircraft equipment — otherwise, these defects may only be deferred by authorised certifying staff;
  - (3) the pilot in respect of defects other than those referred to in points (b)(1) and (b)(2) if all the following conditions are met: the defect is with the agreement of the aircraft owner or, if applicable, of the contracted CAMO or CAO
    - (i) the aircraft is operated under non-commercial ( private) operation
    - (ii) The pilot defers the defect with the agreement of the aircraft owner or, if applicable, of the contracted CAMO or CAO;
  - (4) the appropriately qualified certifying staff in respect of other defects than those referred to in points (b)(1) and (b)(2), where the conditions referred to in point 3(i) and (ii) are not met.

- (c) Any aircraft defect that does not seriously hazard flight safety shall be rectified as soon as practicable from the date on which the defect was first identified and within the limits specified in the maintenance data.
- (d) Any defect not rectified before flight shall be recorded in the aircraft continuing airworthiness record system referred to in point ML.A.305 and a record shall be available to the pilot.

### **AMC1 ML.A.403 Aircraft defects**

Aircraft equipment should be declared to be defective if the pilot observed a malfunction during the flight, or if considered as faulty after inspection/test referred to in the maintenance data. This does not prevent the pilot from recording observations and comments on the performance of the aircraft equipment where this is not considered to constitute a defect.

### **GM1 ML.A.403 Aircraft defects**

If appropriate certifying staff is readily available for consultation, the pilot should consider consultation with them before deferring any defect.

For balloons, sailplanes or other aircraft not operated for commercial operation, the pilot may defer required equipment, regardless of whether or not a CAMO or CAO is contracted. However, if doing so, he or she has the obligation to receive the agreement of the owner, or the contracted CAMO or CAO.

The term 'required' refers to equipment that is required by the applicable airworthiness code (certification specification) or required by the relevant regulations for air operations or the applicable rules of the air or as required by air traffic management (e.g. a transponder in certain controlled airspace).

### **AMC1 ML.A.403(d) Aircraft defects**

All deferred defects should be made known to the pilot/flight crew, whenever possible, prior to their arrival at the aircraft.

Deferred defects should be listed on the current list of deferred maintenance (ML.A.305(d)(6)) and rectified at the next appropriate maintenance event and within the limit specified in the maintenance data. Any deferred defect that is not rectified during the next maintenance event, should be re-entered on the list of deferred maintenance and the original date of the defect should be retained.

## SUBPART E

### COMPONENTS

#### **ML.A.501 Classification and installation**

- (a) Unless otherwise specified in Subpart F of CAR-M, CAR-145, CAR-CAO and CAR-21, component may be fitted only if all of the following conditions are met:
  - (i) it is in a satisfactory condition;
  - (ii) has been appropriately released to service using an CA Form 1 as set out in CAR-M or equivalent;
  - (iii) has been marked in accordance with Subpart Q of CAR-21.
- (b) Prior to the installation of a component on an aircraft, the person or approved maintenance organisation shall ensure that the particular component is eligible to be fitted if different modifications or AD configurations are applicable.
- (c) Standard parts shall only be fitted to an aircraft or component when the maintenance data specifies those particular standard parts. Standard parts shall only be fitted when accompanied by evidence of conformity to the applicable standard and has appropriate traceability.
- (d) Raw or consumable material shall only be used on an aircraft or component provided that:
  - (i) the aircraft or component manufacturer allows for the use of raw or consumable material in relevant maintenance data or as specified in Subpart F of CAR-M, CAR-145 or CAR-CAO.
  - (ii) such material meets the required material specification and has appropriate traceability.
  - (iii) such material is accompanied by documentation clearly relating to the particular material and containing a conformity-to-specification statement as well as the manufacturing and supplier source.
- (e) In case of balloons, where different combinations of baskets, burners and fuel cylinders are possible for a particular envelope, the person installing them shall ensure that:
  - (1) the basket, burner and/or fuel cylinders are eligible for installation according to the TCDS or other documents referred to in the TCDS;

- (2) the basket, burner and/or fuel cylinders are in serviceable condition and have the appropriate maintenance records.

### **AMC1 ML.A.501(a)(ii) Classification and installation**

#### **CA FORM 1 OR EQUIVALENT**

For the purpose of CAR - M, a document equivalent to a CA Form 1 may be:

- a release document issued by an organisation under the terms of a bilateral agreement signed by DGCA
- EASA Form 1
- FAA Form 8130-3
- UK CAA Form 1
- Airworthiness release documents issued by the manufacturer of aircraft for new components shall be acceptable for the installation on type of aircraft for which Type Certificate is accepted by DGCA.
- Any other form acceptable to DGCA.

### **AMC1 ML.A.501(e) Classification and installation BALLOONS**

Baskets, burners and fuel cylinders are components which are often interchanged between different balloons. Furthermore, they are often removed/installed by the pilot-owner (or by other persons when such removal/installation is not considered maintenance because the task is described in the AFM).

As a consequence, an CA Form 1 does not need to be issued when these components are removed in serviceable condition from a balloon, and can be installed on another balloon as long as the person performing the installation has access to the appropriate maintenance records necessary to establish their serviceable condition. In particular, due attention should be paid to the inspection dates of the various components.

This does not supersede the requirement to release any maintenance performed on such components either on an CA Form 1 or equivalent or on the balloon maintenance log book, as applicable.

### **ML.A.502 Component maintenance**

- (a) Components accepted by the owner in accordance with point (c) of point 21.A.307 of CAR-21 shall be maintained by any person or organisation, subject to reacceptance by the owner under the conditions of point 21.A.307(c) of CAR-21.

This maintenance is not eligible for the issuance of an CA Form 1, as set out in CAR-M and shall be subject to the aircraft release requirements.

(b) Components shall be released in accordance with the following table:

	Released using an CA Form 1 (as set out in CAR-M)	Released at aircraft level per point ML.A.801 (not possible to issue an CA Form 1)
Components maintained in accordance with <u>component</u> maintenance data (data issued by the component manufacturer)		
Maintenance other than overhaul	Engine-rated (for engine) or component-rated (for other components) maintenance organisations	(i) Aircraft-rated maintenance organisations; and/or (ii) independent certifying staff
Overhaul of components other than engines and propellers	Component-rated maintenance organisations	Not possible
Overhaul of engines and propellers for Category 1 light aircraft and LSA aircraft	Engine-rated (for engine) or component-rated (for propeller) maintenance organisations	(iii) Aircraft-rated maintenance organisations; and/or (iv) independent certifying staff
Components maintained in accordance with <u>aircraft</u> maintenance data (data issued by the aircraft manufacturer)		
All components and all types of maintenance	Engine-rated (for engine) or component-rated (for other components) maintenance organisations	—Aircraft-rated maintenance organisations; and/or —independent certifying staff

## **GM1 ML.A.502 Component maintenance**

### **COMPONENT MAINTENANCE BY INDEPENDENT CERTIFYING STAFF**

The cases where the independent certifying staff can release component maintenance are only valid when the independent certifying staff is allowed, according to ML.A.201, to carry out maintenance (refer to GM1 ML.A.201) and when he or she is competent for such component maintenance

As an example, in accordance with ML.A.201(e), the independent certifying staff cannot carry out maintenance when the balloon is operated for commercial operation.

### **ML.A.503 Service-life-limited components**

- (a) The term 'service life-limited components' contains the following components:
  - (1) components subject to a certified life limit after which the components should be retired, and;
  - (2) components subject to a service life limit after which the components shall undergo maintenance to restore their serviceability.
- (b) Installed service-life-limited components shall not exceed the approved service life limit as specified in the AMP and ADs, except as provided for in point ML.A.504(c).
- (c) The approved service life is expressed in calendar time, flight hours, landings or cycles, as appropriate.
- (d) At the end of the approved service life limit, the component must be removed from the aircraft for maintenance, or for disposal in the case of components with a certified life limit.

### **ML.A.504 Control of unserviceable components**

- (a) A component shall be considered unserviceable in any of the following circumstances:
  - (1) expiry of the component's service life limit as defined in the AMP;
  - (2) non-compliance with the applicable ADs and other continued-airworthiness requirement mandated by the DGCA;
  - (3) absence of the necessary information to determine the airworthiness status of the component or its eligibility for installation;
  - (4) evidence of component defects or malfunctions;
  - (5) component involvement in an incident or accident likely to affect its serviceability.

- (b) Unserviceable components shall be identified as one of the following:
- (1) unserviceable and stored in a secure location under the control of an approved maintenance organisation or independent certifying staff until a decision is made on the future status of such components;
  - (2) unserviceable by the person or organisation that declared the component unserviceable, and its custody shall be transferred to the aircraft owner after documenting such transfer in aircraft maintenance record system referred to in point ML.A.305.
- (c) Components which have reached their certified life limit 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 certified life limits have been extended or a repair solution has been approved in accordance with point ML.A.304.
- (d) Any person or organisation responsible pursuant to point ML.A.201 shall in the case of an unsalvageable component, as provided for in point (c), take one of the following actions:
- (1) retain such component in a location referred to in point (b)(1);
  - (2) arrange for the component to be mutilated in a manner that ensures that it is beyond economic salvage or repair before relinquishing responsibility for such a component.
- (e) Notwithstanding point (d), a person or organisation responsible pursuant to point ML.A.201 may transfer responsibility of components classified as unsalvageable without mutilation to an organisation for training or research.



## SUBPART H

### CERTIFICATE OF RELEASE TO SERVICE (CRS)

#### **ML.A.801 Aircraft certificate of release to service**

- (a) A CRS shall be issued after the required maintenance has been carried out properly on an aircraft.
- (b) The CRS shall be issued, alternatively by:
  - (1) appropriate certifying staff on behalf of the approved maintenance organisation;
  - (2) independent certifying staff;
  - (3) the pilot- owner in compliance with point ML.A.803.
- (c) By derogation from point (b), in the case of unforeseen circumstances, when an aircraft is grounded at a location where no appropriately approved maintenance organisation and no appropriate certifying staff are available, the owner may authorise any person, with no less than 3 years of appropriate maintenance experience and holding the proper qualifications, to maintain the aircraft according to the standards set out in Subpart D of this CAR and release the aircraft. The owner shall in that case:
  - (1) obtain and keep in the aircraft records, details of all the work carried out and of the qualifications held by the person issuing the certification;
  - (2) ensure that any such maintenance is rechecked and released in accordance with point (b) of point ML.A.801 at the earliest opportunity and within a period not exceeding 7 days or, in the case of aircraft not operated for commercial operation, within a period not exceeding 30 days;
  - (3) notify the contracted CAMO or CAO, or the DGCA in the absence of such a contract, within 7 days of the issuance of such authorisation.
- (d) In the case of a release to service in accordance with points (b)(1) or (b)(2), the certifying staff may be assisted in performing the maintenance tasks by one or more persons subject to his direct and continuous control;
- (e) A CRS shall contain at least:
  - (1) basic details of the maintenance carried out;
  - (2) the date on which the maintenance was completed;
  - (3) the identity of the organisation or person issuing the release to service, including, alternatively:
    - (i) the approval reference of the maintenance organisation and certifying staff issuing the CRS;

- (ii) In the case of point (b)(2), the identity and, if applicable, the licence number of the independent certifying staff issuing the CRS;
- (4) the limitations to airworthiness or operations, if any.
- (f) By derogation from point (a) and notwithstanding point (g), when the required maintenance cannot be completed, a CRS may be issued within the approved aircraft limitations. In that case, the CRS shall indicate that the maintenance could not be completed, as well as indicate any applicable airworthiness or operations limitations, as part of the information required in point (e)(4).
- (g) A CRS shall not be issued in the case of any known non-compliance with the requirements of this CAR which endangers flight safety.

#### **AMC1 ML.A.801(e) Aircraft certificate of release to service**

- (a) The aircraft CRS should contain one of the following statements:
  - (1) 'certifies that the work specified, except as otherwise specified, was carried out in accordance with CAR-ML, and in respect to that work, the aircraft is considered ready for release to service.'; or
  - (2) for a pilot-owner:
 

'certifies that the limited pilot-owner maintenance specified, except as otherwise specified, was carried out in accordance with CAR-ML, and in respect to that work, the aircraft is considered ready for release to service.'
- (b) The CRS should relate to the task specified in the DAH's or operator's instruction or the AMP which itself may cross-refer to a DAH's/operator's instruction in a maintenance manual, service bulletin, etc. This should indicate the revision status of the maintenance instruction used.
- (d) The CRS should include the date when the maintenance took place relative to any life or overhaul limitation in terms of date/flying hours/cycles/ landings etc. as appropriate.
- (d) When extensive maintenance has been carried out, it is acceptable for the CRS to summarise the maintenance as long as there is a unique cross reference to the work pack containing full details of the maintenance carried out. Dimensional information should be retained in the work pack record.
- (e) The person issuing the CRS should use his or her normal signature except in the case where a computer release-to-service system is used. In this latter case, the DGCA needs to be satisfied that only this particular person may electronically issue the CRS. One such method of compliance is the use of a magnetic or optical personal card in conjunction with a personal identification number (PIN) known only to the individual, which is keyed into the computer. A certification stamp is optional.

- (e) At the completion of all maintenance, owners, certifying staff, operators and maintenance organisations should ensure they have a clear, concise and legible record of the work performed.
- (g) In the case of an ML.A.801(b)(2) CRS, the independent certifying staff should retain all records necessary to prove that all requirements have been met for the issuance of a CRS.

#### **AMC1 ML.A.801(f) Aircraft certificate of release to service**

Certain maintenance data issued by the DAH (e.g. AMM) requires that a maintenance task be performed in flight as a necessary condition to complete the maintenance ordered. Within the aircraft limitations, the person authorised to certify the maintenance per ML.A.801 should release the incomplete maintenance before this flight. GM1 ML.A.301(f) describes the relations with the aircraft operator, which retains the responsibility for the MCF. After performing the flight and any additional maintenance necessary to complete the maintenance ordered, a CRS should be issued in accordance with ML.A.801

#### **ML.A.802 Component certificate of release to service**

- (a) A component CRS shall be issued after the required maintenance has been carried out properly on an aircraft component in accordance with point ML.A.502.
- (b) The authorised release certificate identified as CA Form 1, as set out in CAR-M, constitutes the component CRS, except when such maintenance is released at aircraft level, as indicated in point ML.A.502(b).

#### **ML.A.803 Pilot-owner authorisation**

- (a) To qualify as a pilot-owner, the person must:
  - (1) hold a valid pilot licence or equivalent licence issued or validated by a DGCA for the aircraft type or class rating;
  - (2) own the aircraft, either as a sole or joint owner; that owner must be, alternatively:
    - (i) one of the natural persons on the registration form;
    - (ii) a member of a non-profit recreational legal entity, where the legal entity is specified on the registration document as owner or operator; that member must be directly involved in the decision-making process of the legal entity and designated by that legal entity to carry out Pilot-owner maintenance.
- (b) For aircraft not operated, for commercial operation, the pilot-owner may issue a CRS after limited Pilot-owner maintenance as provided for in Appendix II to this CAR.
- (c) The CRS shall be entered in the logbooks and contain basic details of the maintenance carried out, the maintenance data used, the date on which that

maintenance was completed, as well as the identity, the signature and the pilot licence (or equivalent) number of the pilot-owner issuing such a certificate.

#### **AMC1 ML.A.803 Pilot-owner authorisation**

- (a) A pilot-owner may only issue a CRS for the maintenance he or she has performed (ref. ML.A.201(c), ML.A.801 and ML.A.803).
- (b) In the case of jointly-owned aircraft, the AMP should list the names of all pilot-owners that are competent and designated to perform pilot-owner maintenance (ref. ML.A.302(c)(6)). As an alternative, the AMP may contain a procedure to ensure how such a list should be managed and kept current.
- (c) An equivalent valid pilot-owner licence may be any document attesting a pilot qualification recognised by the DGCA.
- (d) Not holding a valid medical examination does not invalidate the pilot licence (or equivalent) required under ML.A.803(a)(1) for the purpose of the pilot-owner authorisation.

## SUBPART I

### AIRWORTHINESS REVIEW CERTIFICATE ('ARC')

#### **ML.A.901 Aircraft airworthiness review**

To ensure the validity of the aircraft airworthiness certificate ('ARC'), an airworthiness review of the aircraft and its continuing airworthiness records shall be carried out periodically.

- (a) An ARC is issued in accordance with Appendix IV (CA Form 15c) to this CAR upon completion of a satisfactory airworthiness review. The ARC shall be valid for 1 year;
- (b) The airworthiness review and the issuance of the ARC shall be performed by the DGCA
- (c) To carry out the airworthiness review and issue the ARC the owner shall provide the DGCA with:
  - (1) the documentation required by the DGCA;
  - (2) suitable accommodation at the appropriate location for its personnel;
  - (3) when necessary, the support of appropriate certifying staff.

#### **GM1 ML.A.901 Aircraft airworthiness review**

Reserved

#### **ML.A.902 Validity of the airworthiness review certificate**

- (a) An ARC becomes invalid if, alternatively:
  - (1) it is suspended or revoked;
  - (2) the airworthiness certificate is suspended or revoked;
  - (3) the lease agreement of the aircraft is not valid or aircraft is not in the aircraft register of DGCA;
  - (4) the type certificate under which the airworthiness certificate was issued is suspended or revoked.
- (b) An aircraft shall not fly if the ARC is invalid or if any of the following circumstances are present:
  - (1) the continuing airworthiness of the aircraft or any component fitted to the aircraft does not meet the requirements of this CAR;

- (2) the aircraft does not remain in conformity with the type design approved / accepted by the DGCA;
  - (3) the aircraft has been operated beyond the limitations of the approved flight manual or airworthiness certificate, without appropriate action being taken;
  - (4) the aircraft has been involved in an accident or incident that affects the airworthiness of the aircraft, without subsequent appropriate action to restore airworthiness;
  - (5) a modification or repair to the aircraft or any component fitted to the aircraft is not in compliance with CAR-21.
- (c) Upon surrender or revocation, the ARC shall be returned to the DGCA.

**ML.A.903** Reserved

**ML.A.904** Reserved

**ML.A.905** Reserved

**ML.A.906 Airworthiness review of aircraft imported into the Country**

- (a) When importing an aircraft, the applicant shall:
- (1) apply to the DGCA for the issuance of a new certificate of airworthiness and ARC;
  - (2) have all maintenance carried out to comply with the approved AMP.
- (b) The owner shall allow access to the aircraft for inspection by the DGCA.
- (c) A airworthiness certificate shall be issued by the DGCA.

*Note: Further requirements related to issue of C of A and ARC is detailed in CAR Section-2, Series F Part III.*

**ML.A.907 Findings**

- (a) Findings are categorised as follows:
- (1) A Level 1 finding is any finding of significant non-compliance with the requirements of this CAR which lowers the safety standard and seriously endangers flight safety.
  - (2) A Level 2 finding is any finding of non-compliance with the requirements of this CAR which may lower the safety standard and may endanger flight safety.
- (b) After receipt of notification of findings. the person or organisation, having responsibilities pursuant to point ML.A.201, shall define and demonstrate to the

DGCA within a period agreed with this authority a corrective action plan, aimed at preventing reoccurrence of the finding and its root cause.

## **SECTION B PROCEDURES FOR DGCA**

### **Refer Airworthiness Procedures Manual**

# **APPENDICES to CAR- ML**



## Appendix I

### Continuing-airworthiness management contract

(a) When an owner contracts in accordance with point ML.A.201 a CAMO or CAO to carry out continuing airworthiness management tasks, upon request by the DGCA, a copy of the contract signed by both parties shall be sent by the owner to the DGCA.

(b) The contract shall be developed taking into account the requirements of this CAR and shall define the obligations of the signatories in relation to the continuing airworthiness of the aircraft.

(c) It shall contain, as a minimum the following information:

- (1) the aircraft registration, type and serial number;
- (2) the aircraft owner's or registered lessee's name or company details including the address;
- (3) details of the contracted CAMO or CAO, including the address;
- (4) the type of operation.

(d) It shall state the following:

'The owner entrusts the CAMO or CAO with the management of the continuing airworthiness of the aircraft, the development and approval of a maintenance programme by DGCA, and the organisation of the maintenance of the aircraft according to said maintenance programme.

According to the present contract, both signatories undertake to follow the respective obligations of this contract.

The owner declares, to the best of its knowledge, that all the information given to the CAMO or CAO concerning the continuing airworthiness of the aircraft is and will be accurate, and that the aircraft will not be altered without prior approval of the CAMO or CAO.

In case of any non-conformity with this contract, by either of the signatories, the contract will become null. In such a case, the owner will retain full responsibility for every task linked to the continuing airworthiness of the aircraft, and the owner will inform the DGCA within 2 weeks about the termination of the contract.'

(e) When an owner contracts a CAMO or CAO in accordance with point ML.A.201, the obligations of each party shall be assigned as follows:

**(1) Obligations of CAMO or CAO:**

- (i) have the aircraft type included in its terms of approval;

- (ii) respect all the conditions listed below with regard to maintaining the continuing airworthiness of the aircraft:
  - (A) develop the AMP for the aircraft and present; to DGCA for approval
  - (B) once it has been approved, provide the owner with a copy of the AMP, as well as a copy of the justifications for any deviations from the DAH's recommendations;
  - (C) organise a bridging inspection using the aircraft's prior AMP;
  - (D) organise that all maintenance is carried out by an approved maintenance organisation or, if permitted, by independent certifying staff;
  - (E) organise that all applicable ADs are applied;
  - (F) organise that all defects discovered during maintenance, airworthiness reviews or reported by the owner are corrected by an approved maintenance organisation or, if permitted, by independent certifying staff;
  - (G) coordinate scheduled maintenance, the application of ADs, the replacement of service-life-limited parts, and component inspection requirements;
  - (H) inform the owner each time the aircraft must be brought to an approved maintenance organisation or, if permitted, to independent certifying staff;
  - (I) manage and archive all technical records;
- (iii) organise the approval of any modification to the aircraft in accordance CAR -21 before this modification is embodied;
- (iv) organise the approval of any repair to the aircraft in accordance with CAR - 21 before this repair is carried out;
- (v) inform the DGCA whenever the aircraft is not presented by the owner for maintenance as requested by the contracted CAMO or CAO;
- (vi) inform the DGCA whenever the present contract has not been respected;
- (vii) ensure that the airworthiness review of the aircraft is carried out, when necessary, and ensure that the ARC is issued;
- (viii) send within 10 days a copy of any ARC issued or extended to the DGCA
- (ix) carry out all occurrence reporting mandated by applicable regulations;
- (x) inform the DGCA whenever the present contract is denounced by either party.

**(2) Obligations of the owner:**

- (i) have a general understanding of the AMP;
- (ii) have a general understanding of this CAR;

- (iii) present the aircraft for maintenance as directed by the contracted CAMO or CAO;
- (iv) not modify the aircraft without first consulting the contracted CAMO or CAO;
- (v) inform the contracted CAMO or CAO of all maintenance exceptionally carried out without the knowledge and control of the contracted CAMO or CAO;
- (vi) report to the contracted CAMO or CAO through the logbook all defects found during operations;
- (vii) inform the DGCA whenever the present contract is denounced by either party;
- (viii) inform the DGCA and the contracted CAMO or CAO whenever the aircraft is sold;
- (ix) carry out all occurrence reporting mandated by applicable regulations;
- (x) inform on a regular basis the contracted CAMO or CAO about the aircraft flying-hours and any other utilisation data, as agreed with the contracted CAMO or CAO;
- (xi) enter the CRS in the logbooks, as mentioned in point ML.A.803(c), when performing pilot-owner maintenance;
- (xii) inform the contracted CAMO or CAO no later than 30 days after completion of any Pilot-owner maintenance task.

## Appendix II

### Limited pilot-owner maintenance

In addition to the requirements laid down in this CAR, the pilot-owner shall comply with the following basic principles before it carries out any maintenance task:

#### (a) Competence and responsibility

- (1) The pilot-owner shall always be responsible for any maintenance he performs.
- (2) The pilot-owner shall hold satisfactory level of competence to perform the task. It is the responsibility of a pilot-owner to familiarise himself with the standard maintenance practices for his aircraft and with the AMP.

#### (b) Tasks

The Pilot-owner may carry out simple visual inspections or operations to check the airframe, engines, systems and components for general condition, obvious damage and normal operation.

A maintenance task shall not be released by the pilot-owner if any of the following conditions occurs:

- (1) it is a critical maintenance task;
- (2) it requires the removal of major components or a major assembly;
- (3) it is carried out in compliance with an AD or an airworthiness limitation item (ALI) unless specifically allowed in the AD or the ALI;
- (4) it requires the use of special tools or calibrated tools (except for torque wrench and crimping tool);
- (5) it requires the use of test equipment or special testing (e.g. non-destructive testing (NDT), system tests or operational checks for avionics equipment);
- (6) it is composed of any unscheduled special inspections (e.g. heavy-landing check);
- (7) it affects systems essential for the instrumental flight rules (IFR) operations;
- (8) it is a complex maintenance task in accordance with Appendix III, or it is a component maintenance task in accordance with point (a) or (b) of point ML.A.502;
- (9) it is part of the 100-h/annual check

The criteria referred to in points (1) to (9) cannot be overridden by less restrictive instructions issued in accordance with the AMP referred to in point ML.A.302.

Any task described in the aircraft flight manual (or other operational manuals), for example preparing the aircraft for flight (assembling the sailplane wings, or performing

a pre flight inspection, or assembling a basket, burner, fuel cylinders and an envelope combination for a balloon, etc.), is not considered a maintenance task and, therefore, does not require a CRS. Nevertheless, the person assembling those parts is responsible for ensuring that those parts are eligible for installation and in a serviceable condition.

**(c) Performance and records of the pilot-owner maintenance tasks**

The maintenance data, as specified in point ML.A.401, must always be available during the conduct of pilot-owner maintenance and must be complied with. Details of the data referred to in the conduct of pilot-owner maintenance must be included in the CRS in accordance with point (d) of point ML.A.803.

The pilot-owner must inform the contracted CAMO or CAO (if such contract exists) about the completion of the pilot-owner maintenance tasks no later than 30 days after completion of these tasks in accordance with point (a) of point ML.A.305.

**AMC1 to Appendix II to CAR-ML — Limited pilot-owner maintenance**

- (a) The lists below specifies items that may be expected to be completed by an owner who holds a current and valid pilot licence for the aircraft type involved and who meets the competence and responsibility requirements of Appendix II to CAR-ML.
- (b) The list of tasks may not address in a detailed manner the specific needs of the various aircraft categories. In addition, the development of technology and the nature of the operations undertaken by these categories of aircraft may not always be adequately considered.
- (c) Any other task meeting the requirements of Appendix II to CAR-ML may also be performed by the pilot-owner.
- (d) Therefore, the following lists are considered to meet the representative scope of limited pilot-owner maintenance referred to in ML.A.803 and Appendix II to CAR-ML:
  - (1) Part A applies to aeroplanes;
  - (2) Part B applies to rotorcraft;
  - (3) Part C applies to sailplanes and powered sailplanes; and
  - (4) Part D applies to balloons and airships.
- (e) Inspection tasks/checks of any periodicity included in an approved maintenance programme can be carried out provided that the specified tasks are compliant with the basic principles of Appendix II to CAR-ML.

The content of periodic inspections/checks as well as their periodicity is not regulated or standardised in an aviation specification. It is the decision of the DAH to recommend a schedule for each specific type of inspection/check.

For an inspection/check with the same periodicity for different aircraft, the content may differ and in some cases, may be critically safety-related and need the use of special tools or knowledge and thus, not qualify for pilot-owner maintenance. Therefore, the maintenance carried out by the pilot-owner should not be generalised to specific inspections such as of a 50-h, 100-h or 6-month periodicity.

The inspections to be carried out are limited to those areas and tasks listed in this AMC to Appendix II; this allows flexibility in the development of the maintenance programme and does not limit the inspection to certain specific periodic inspections. A 50-h/6-month periodic inspection for a fixed-wing aeroplane as well as the 1-year inspection for a glider may normally be eligible for pilot-owner maintenance

## TABLES

Note: Tasks in Part A or Part B marked with ‘\*\*’ exclude IFR operations following pilot-owner maintenance. For these aircraft to operate under IFR, these tasks should be released by an appropriate certifying staff.

### Part A — PILOT-OWNER MAINTENANCE TASKS FOR POWERED AIRCRAFT (AEROPLANES)

ATA	Area	Task	Aeroplanes
09	Towing	Tow release unit and tow cable retraction mechanism — cleaning, lubrication and tow cable replacement (including weak links)	Yes
		Mirror — installation and replacement of mirrors	Yes
11	Placards	Placards, markings — installation and renewal of placards and markings required by the AFM and the AMM	Yes
12	Servicing	Those items not requiring a disassembly of other than non-structural items, such as cover plates, cowlings and fairings — lubrication	Yes
20	Standard practices	Safety wiring — replacement of defective safety wiring or cotter keys, excluding those in engine controls, transmission controls and flight control systems	Yes
		Simple non-structural standard fasteners — replacement and adjustment, excluding the replacement of receptacles and anchor nuts requiring riveting	Yes
21	Air conditioning	Replacement of flexible hoses and ducts	Yes
23	Communication	Communication devices — remove and replace self-contained, instrument-panel-mounted communication devices with quick-disconnect connectors, excluding IFR operations	Yes**
24	Electrical power	Batteries — replacement and servicing	Yes
		Wiring — repairing broken circuits in non-critical equipment, excluding ignition system, primary	Yes

		generating system and required communication, as well as navigation system and primary flight instruments	
		Bonding — replacement of broken bonding cable	Yes
		Fuses — replacement using the correct rating	Yes
<b>25</b>	Equipment	Safety belts — replacement of safety belts and harnesses excluding belts fitted with airbag systems	Yes
		Seats — replacement of seats or seat parts not involving disassembly of any primary structure or control system	Yes
		Non-essential instruments and/or equipment — replacement of self-contained, instrument-panel-mounted equipment with quick-disconnect connectors	Yes
		Oxygen system — replacement of portable oxygen bottles and systems in approved mountings, excluding permanently installed bottles and systems	Yes
		Emergency locator transmitter (ELT) — removal/reinstallation	Yes
<b>27</b>	Flight controls	Removal or reinstallation of co-pilot control column and rudder pedals where design provides for quick disconnect	Yes
<b>28</b>	Fuel system	Fuel filter elements — cleaning and/or replacement	Yes
<b>30</b>	Ice and rain protection	Windscreen wiper — replacement of wiper blade	Yes
<b>31</b>	Instruments	Instrument panel — removal and reinstallation provided that this is a design feature with quick-disconnect connectors, excluding IFR operations	Yes**
		Pitot-static system — simple sense and leak check, excluding IFR operations	Yes**
		Drainage — drainage of water drainage traps or filters within the pitot-static system, excluding IFR operations	Yes**
		Instruments — checking of markings for legibility and that those readings are consistent with ambient conditions	Yes
<b>32</b>	Landing gear	Wheels — removal, replacement and servicing, including replacement of wheel bearings and lubrication	Yes
		Servicing — replenishment of hydraulic fluid	Yes
		Shock absorber — replacement of elastic cords or rubber dampers	Yes
		Shock struts — replenishment of oil or air	Yes
		Skis — changing between wheel and ski landing gear	Yes
		Landing skids — replacement of landing skids and skid shoes	Yes
		Wheel fairings (spats) — removal and reinstallation	Yes
		Mechanical brakes — adjustment of simple cable-operated systems	Yes

		Brake — replacement of worn brake pads	Yes
33	Lights	Lights — replacement of internal and external bulbs, filaments, reflectors and lenses	Yes
34	Navigation	Software — updating self-contained, instrument-panel-mounted software, excluding automated flight control systems and transponders	Yes
		Navigation devices — removal and replacement of self-contained, instrument-panel-mounted navigation devices with quick-disconnect connectors, excluding automated flight control systems, transponders, primary flight control system and IFR operations	Yes**
		Self-contained data logger — installation, data restoration	Yes
51	Structure	Fabric patches — simple patches extending over no more than one rib, and not requiring rib stitching or removal of structural parts or control surfaces	Yes
		Protective coating — application of preservative material or coatings where no disassembly of any primary structure or operating system is involved	Yes
		Surface finish — minor restoration (where no disassembly of any primary structure or operating system is involved), including application of signal coatings or thin foils as well as registration markings	Yes
		Fairings — simple repairs to non-structural fairings and cover plates that do not change the contour	Yes
52	Doors and hatches	Doors — removal and reinstallation	Yes
53	Fuselage	Upholstery, furnishing — minor repairs that do not require disassembly of primary structure or operating systems, or interfere with control systems	Yes
56	Windows	Side windows — replacement if no riveting, bonding or any special process is required	Yes
61	Propeller	Spinner — removal and reinstallation	Yes
71	Power plant installation	Cowling — removal and reinstallation not requiring removal of propeller or disconnection of flight controls	Yes
		Induction system — inspection and replacement of induction air filter	Yes
72	Engine	Chip detectors — removal, checking and reinstallation provided that the chip detector is of a non-electrically-indicated self-sealing type	Yes
73	Engine fuel	Strainer or filter elements — cleaning and/or replacement	Yes
		Fuel — mixing of required oil into fuel	Yes
74	Ignition	Spark plugs — removal, cleaning, adjustment and reinstallation	Yes
75	Cooling	Coolant — replenishment of coolant fluid	Yes
77	Engine-indicating system	Engine-indicating system — removal and replacement of self-contained, instrument-panel-mounted indicators that have quick-release connectors and do not employ direct reading connections	Yes



79	Oil system	Strainer or filter elements — cleaning and/or replacement	Yes
		Oil — changing or replenishment of engine oil and gearbox fluid	Yes

### Part B — PILOT-OWNER MAINTENANCE TASKS FOR ROTORCRAFT

ATA	Area	Task	Rotorcraft
11	Placards	Placards, markings — installation and renewal of placards and markings required by the AFM and the AMM	Yes
12	Servicing	Fuel, oil, hydraulic, de-iced and windshield liquid replenishment	Yes
		Those items not requiring a disassembly of other than non-structural items, such as cover plates, cowlings and fairings — lubrication	Yes
20	Standard practices	Safety wiring — replacement of defective safety wiring or cotter keys, excluding those in engine controls, transmission controls and flight control systems	Yes
		Simple non-structural standard fasteners — replacement and adjustment, excluding latches as well as the replacement of receptacles and anchor nuts requiring riveting	Yes
21	Air conditioning	Replacement of flexible hoses and ducts	Yes
23	Communication	Communication devices — removal and replacement of self-contained, instrument-panel-mounted communication devices with quick-disconnect connectors, excluding IFR operations	Yes**
24	Electrical power	Batteries — replacement and servicing, excluding servicing of Ni-Cd batteries and IFR operations	Yes**
		Wiring — repairing broken circuits in non-critical equipment, excluding ignition system, primary generating system and required communication, navigation system and primary flight instruments	Yes
		Bonding — replacement of broken bonding cable, excluding bonding of rotating parts and flying controls	Yes
		Fuses — replacement using the correct rating	Yes
25	Equipment	Safety belts — replacement of safety belts and harnesses, excluding belts fitted with airbag systems	Yes
		Seats — replacement of seats or seat parts not involving disassembly of any primary structure or control system, excluding flight crew seats	Yes
		Removal/installation of emergency flotation gears with quick-disconnect connectors	Yes
		Non-essential instruments and/or equipment — replacement of self-contained, instrument-panel-mounted equipment with quick-disconnect connectors	Yes
		ELT — removal/reinstallation	Yes

<b>30</b>	Protection from ice and rain	Windshield wiper replacement	Yes
<b>31</b>	Instruments	Instrument panel — removal and reinstallation provided that it is a design feature with quick-disconnect connectors, excluding IFR operations	Yes**
		Pitot-static system — simple sense and leak check, excluding IFR operations	Yes**
		Drainage — drainage of water drainage traps or filters within the pitot-static system, excluding IFR operations	Yes**
		Instruments — checking of markings for legibility and that those readings are consistent with ambient conditions	Yes
<b>32</b>	Landing gear	Wheels — removal, replacement and servicing, including replacement of wheel bearings and lubrication	Yes
		Replacement of skid wear shoes	Yes
		Fitting and removal of snow landing pads	Yes
		Servicing — replenishment of hydraulic fluid	Yes
		Brake — replacement of worn brake pads	Yes
<b>33</b>	Lights	Lights — replacement of internal and external bulbs, filaments, reflectors and lenses	Yes
<b>34</b>	Navigation	Software — updating of self-contained, instrument-panel-mounted software, excluding automated flight control systems and transponders	Yes
		Navigation devices — removal and replacement of self-contained, instrument-panel-mounted navigation devices with quick-disconnect connectors, excluding automated flight control systems, transponders, primary flight control system and IFR operations	Yes**
		Self-contained data logger — installation, data restoration	Yes
<b>51</b>	Structure	Protective coating — application of preservative material or coatings where no disassembly of any primary structure or operating system is involved	Yes
		Surface finish — minor restoration (where no disassembly of any primary structure or operating system is involved, excluding intervention on main and tail rotors), including application of signal coatings or thin foils as well as registration markings	Yes
		Fairings — simple repairs to non-structural fairings and cover plates that do not change the contour	Yes
<b>52</b>	Doors	Doors — removal and reinstallation	Yes
<b>53</b>	Fuselage	Upholstery, furnishing — minor repairs that do not require disassembly of primary structure or operating systems, or interfere with control systems	Yes
<b>56</b>	Windows	Side windows — replacement if no riveting, bonding or any special process is required	Yes

62	Main rotor	Removal/installation of main-rotor blades (designed for removal where special tools are not required, excluding tail-rotor blades), limited to reinstallation of the same blades previously removed in the original position	Yes
63 65	Transmission	Chip detectors — removal, checking and replacement provided that the chip detector is of a non-electrically-indicated self-sealing type	Yes
67	Flight control	Removal or reinstallation of co-pilot cyclic and collective controls and yaw pedals where design provides for quick disconnect	Yes
71	Power plant installation	Cowlings — removal and refitment	Yes
72	Engine	Chip detectors — removal, checking and reinstallation provided that the chip detector is of a non-electrically-indicated self-sealing type	Yes
79	Oil system	Filter elements — replacement, provided that the element is of the 'spin on/off' type	Yes
		Oil — changing or replenishment of engine oil	Yes

### Part C — PILOT-OWNER MAINTENANCE TASKS FOR SAILPLANES AND POWERED SAILPLANES

Abbreviations/acronyms applicable to this Part:

— n/a not applicable for this category;

— SP sailplane;

— SSPS self-sustained powered sailplane; and

— SLPS/TMG self-launching powered sailplane/touring motor glider.

ATA	Area	Task	SP	SSPS	SLPS/ TMG
08	Weighing	Recalculation, small changes of the trim plan without needing a reweighing	Yes	Yes	Yes
09	Towing	Tow release unit and tow cable retraction mechanism — cleaning, lubrication and tow cable replacement (including weak links)	Yes	Yes	Yes
		Mirror — installation and replacement of mirrors	Yes	Yes	Yes
11	Placards	Placards, markings — installation and renewal of placards and markings required by the AFM and the AMM	Yes	Yes	Yes
12	Servicing	Those items not requiring a disassembly of other than non-structural items, such as cover plates, cowlings and fairings — lubrication	Yes	Yes	Yes
20	Standard practices	Safety wiring — replacement of defective safety wiring or cotter keys,	Yes	Yes	Yes

		excluding those in engine controls, transmission controls and flight control systems			
		Simple non-structural standard fasteners — replacement and adjustment, excluding the replacement of receptacles and anchor nuts requiring riveting	Yes	Yes	Yes
		Free play — measurement of the free play in the control system and the wing-to-fuselage attachment, including minor adjustments by simple means provided by the manufacturer	Yes	Yes	Yes
<b>21</b>	Air conditioning	Replacement of flexible hoses and ducts	Yes	Yes	Yes
<b>23</b>	Communication	Communication devices — removal and replacement of self-contained, instrument-panel-mounted communication devices with quick-disconnect connectors	Yes	Yes	Yes
<b>24</b>	Electrical power	Batteries and solar panels — replacement and servicing	Yes	Yes	Yes
		Wiring — installation of simple wiring connections to the existing wiring for additional non-required equipment, such as electric variometers, flight computers, but excluding required communication, navigation systems and engine wiring	Yes	Yes	Yes
		Wiring — repairing of broken circuits in landing light and any other wiring for non-required equipment, such as electrical variometers or flight computers, excluding ignition system, primary generating system, required communication and navigation system, as well as primary flight instruments	Yes	Yes	Yes
		Bonding — replacement of broken bonding cable	Yes	Yes	Yes
		Switches — this includes soldering and crimping of non-required equipment, such as electrical variometers or flight computers, but excluding ignition system, primary generating system, required communication and navigation system, as well as primary flight instruments	Yes	Yes	Yes
		Fuses — replacement using the correct rating	Yes	Yes	Yes

<b>25</b>	Equipment	Safety belts — replacement of safety belt and harnesses	Yes	Yes	Yes
		Seats — replacement of seats or seat parts not involving disassembly of any primary structure or control system	Yes	Yes	Yes
		Non-essential instruments and/or equipment — replacement of self-contained, instrument-panel-mounted equipment with quick-disconnect connectors	Yes	Yes	Yes
		Removal and installation of non-required instruments and/or equipment	Yes	Yes	Yes
		Wing wiper, cleaner — servicing, removal and reinstallation not involving disassembly or modification of any primary structure and/or control	Yes	Yes	Yes
		Static probes — removal or reinstallation of variometer static-and-total-energy compensation probes	Yes	Yes	Yes
		Oxygen system — replacement of portable oxygen bottles and systems in approved mountings, excluding permanently installed bottles and systems	Yes	Yes	Yes
		Air brake chute — installation and servicing	Yes	Yes	Yes
		ELT — removal/reinstallation	Yes	Yes	Yes
<b>26</b>	Fire protection	Fire warning — replacement of sensors and indicators	n/a	Yes	Yes
<b>27</b>	Flight control	Gap seals — installation and servicing if no complete flight control removal is required	Yes	Yes	Yes
		Control system — measurement of the control system travel without removing the control surfaces	Yes	Yes	Yes
		Control cables — simple optical inspection for condition	Yes	Yes	Yes
		Gas dampener — replacement of gas dampener in the control or air brake system	Yes	Yes	Yes
		Co-pilot stick and pedals — removal or reinstallation where design provides for quick disconnect	Yes	Yes	Yes
<b>28</b>	Fuel system	Fuel lines — replacement of prefabricated fuel lines fitted with self-sealing couplings	n/a	Yes	No
		Fuel filter — cleaning and/or replacement	n/a	Yes	Yes

<b>31</b>	Instrument s	Instrument panel — removal and reinstallation provided that it is equipped with quick disconnect, excluding IFR operations	Yes	Yes	Yes
		Pitot-static system — simple sense and leak check	Yes	Yes	Yes
		Instrument panel vibration damper/shock absorbers — replacement	Yes	Yes	Yes
		Drainage — drainage of water drainage traps or filters within the pitot-static system	Yes	Yes	Yes
		Flexible tubes — replacement of damaged tubes	Yes	Yes	Yes
<b>32</b>	Landing gear	Wheels — removal, replacement and servicing, including replacement of wheel bearings and lubrication	Yes	Yes	Yes
		Servicing — replenishment of hydraulic fluid	Yes	Yes	Yes
		Shock absorber — replacement or servicing of elastic cords or rubber dampers	Yes	Yes	Yes
		Shock struts — replenishment of oil or air	Yes	Yes	Yes
		Landing-gear doors — removal or reinstallation and repair including operating straps	Yes	Yes	Yes
		Skis — changing between wheel and ski landing gear	Yes	Yes	Yes
		Skids — removal or reinstallation and servicing of main, wing and tail skids	Yes	Yes	Yes
		Wheel fairings (spats) — removal and reinstallation	Yes	Yes	Yes
		Mechanical brakes — adjustment of simple cable-operated systems	Yes	Yes	Yes
		Brake — replacement of worn brake pads	Yes	Yes	Yes
		Springs — replacement of worn or aged springs	Yes	Yes	Yes
		Gear warning — removal or reinstallation of simple gear-warning systems	Yes	Yes	Yes
<b>33</b>	Lights	Lights — replacement of internal and external bulbs, filaments, reflectors and lenses	n/a	n/a	Yes
<b>34</b>	Navigation	Software — updating of self-contained, instrument-panel-mounted software, excluding automated flight control systems and transponders, and	Yes	Yes	Yes

		including update of non-required instruments/equipment			
		Navigation devices — removal and replacement of self-contained, instrument-panel-mounted navigation devices with quick-disconnect connectors, excluding automated flight control systems, transponders, primary flight control system	Yes	Yes	Yes
		Self-contained data logger — installation, data restoration	Yes	Yes	Yes
<b>51</b>	Structure	Fabric patches — simple patches extending over no more than one rib, and not requiring rib stitching or removal of structural parts or control surfaces	Yes	Yes	Yes
		Protective coating — application of preservative material or coatings where no disassembly of any primary structure or operating system is involved	Yes	Yes	Yes
		Surface finish — minor restoration of paint or coating (where the underlying primary structure is not affected), including application of signal coatings or thin foils as well as registration markings	Yes	Yes	Yes
		Fairings — simple repairs to non-structural fairings and cover plates that do not change the contour	Yes	Yes	Yes
<b>52</b>	Doors	Doors — removal and reinstallation	Yes	Yes	Yes
<b>53</b>	Fuselage	Upholstery, furnishing — minor repairs which do not require disassembly of primary structure or operating systems, or interfere with control systems	Yes	Yes	Yes
<b>56</b>	Windows	Side windows — replacement if no riveting, bonding or any special process is required	Yes	Yes	Yes
		Canopies — removal and refitment	Yes	Yes	Yes
		Gas dampener — replacement of canopy gas dampener	Yes	Yes	Yes
<b>57</b>	Wings	Wing skids — removal or reinstallation and service of lower wing skids or wing roller including spring assembly	Yes	Yes	Yes
		Water ballast — removal or reinstallation of flexible tanks	Yes	Yes	Yes
		Turbulator and sealing tapes — removal or reinstallation of approved sealing tapes and turbulator tapes	Yes	Yes	Yes

61	Propeller	Spinner — removal and reinstallation	n/a	Yes	Yes
71	Power plant installation	Removal or installation of power plant unit including engine and propeller	n/a	Yes	No
		Cowling — removal and reinstallation not requiring removal of propeller or disconnection of flight controls	n/a	Yes	Yes
		Induction system — inspection and replacement of induction air filter	n/a	Yes	Yes
72	Engine	Chip detectors — removal, checking and reinstallation provided that the chip detector is of a non-electrically indicated self-sealing type	n/a	Yes	Yes
73	Engine fuel	Strainer or filter elements — cleaning and/or replacement	n/a	Yes	Yes
		Fuel — mixing of required oil into fuel	n/a	Yes	Yes
74	Ignition	Spark plugs — removal, cleaning, adjustment and reinstallation	n/a	Yes	Yes
75	Cooling	Coolant — replenishment of coolant fluid	n/a	Yes	Yes
76	Engine controls	Controls — minor adjustments of non-flight or propulsion controls whose operation is not critical for any flight phase	n/a	Yes	No
77	Engine-indicating system	Engine-indicating system — removal and replacement of self-contained instrument-panel-mounted indicators that have quick-release connectors and do not employ direct reading connections	n/a	Yes	Yes
79	Oil system	Strainer or filter elements — cleaning and/or replacement	n/a	Yes	Yes
		Oil — changing or replenishment of engine oil and gearbox fluid	n/a	Yes	Yes

## Part D — PILOT-OWNER MAINTENANCE TASKS FOR BALLOONS/AIRSHIPS

Area and task	Hot-air airship	Hot-air balloon	Gas balloon
<b>A) ENVELOPE</b>			
(1) Fabric repairs — excluding complete panels (as defined in, and in accordance with, the TC holder's instructions) not requiring load tape repair or replacement	Yes	Yes	NO



(2) Nose line — replacement	Yes	n/a	n/a
(3) Banners — fitment, replacement or repair (without sewing)	Yes	Yes	Yes
(4) Melting link (temperature flag) — replacement	Yes	Yes	n/a
(5) Temperature transmitter and temperature indication cables — removal or reinstallation	Yes	Yes	n/a
(6) Crown line — replacement (where permanently attached to the crown ring)	No	Yes	n/a
(7) Scoop or skirt — replacement or repair (including fasteners)	Yes	Yes	n/a
<b>B) BURNER</b>			
(8) Burner — cleaning and lubrication	Yes	Yes	n/a
(9) Piezo igniters — adjustment	Yes	Yes	n/a
(10) Burner jets — cleaning and replacement	Yes	Yes	n/a
(11) Burner frame corner buffers — replacement or reinstallation	Yes	Yes	n/a
(12) Burner valves — adjustment of closing valve not requiring special tools or test equipment	Yes	Yes	n/a
(13) Burner hoses — replacement of O-rings in the inlet connection	Yes	Yes	n/a
<b>(C) BASKET AND GONDOLA</b>			
14) Basket/gondola frame trim — repair or replacement	Yes	Yes	Yes
(15) Basket/gondola runners (including wheels) — repair or replacement	Yes	Yes	Yes
(16) External rope handles — repair	Yes	Yes	Yes
(17) Seat covers, upholsteries and safety belts — replacement	Yes	Yes	Yes
<b>(D) FUEL CYLINDER</b>			
(18) Liquid valve — replacement of O-rings in the outlet	Yes	Yes	No
<b>(E) INSTRUMENTS AND EQUIPMENT</b>			
(19) Batteries — replacement of batteries for self-contained instruments and communication equipment	Yes	Yes	Yes
(20) Communication, navigation devices, instruments and/or equipment — removal and replacement of self-contained, instrument-panel-mounted communication devices with quick-disconnect connectors	Yes	Yes	Yes
<b>(F) ENGINES</b>			

22) Cleaning and lubrication not requiring disassembly of other than non-structural items, such as cover plates, cowlings and fairings	Yes	n/a	n/a
(23) Cowling removal and refitment not requiring removal of the propeller	Yes	n/a	n/a
(23) Fuel and oil strainers and/or filter elements — removal, cleaning and/or replacement	Yes	n/a	n/a
(24) Batteries — replacement and servicing (excluding servicing of Ni-Cd batteries)	Yes	n/a	n/a
(25) Propeller spinner — removal and installation for inspection	Yes	n/a	n/a
(26) Power plant — removal or installation of power plant unit including engine and propeller	Yes	n/a	n/a
(27) Engine chip detectors — removal, checking and replacement	Yes	n/a	n/a
(28) Ignition spark plug — removal or installation and adjustment including gap clearance	Yes	n/a	n/a
(29) Coolant fluid — replenishment	Yes	n/a	n/a
(30) Engine controls — minor adjustments of non-flight or propulsion controls whose operation is not critical for any flight phase	Yes	n/a	n/a
(31) Engine instruments — removal and replacement	Yes	n/a	n/a
(32) Lubrication oil — changing or replenishment of engine oil and gearbox fluid	Yes	n/a	n/a
(33) Fuel lines — replacement of prefabricated hoses with self-sealing couplings	Yes	n/a	n/a
(34) Air filters (if installed) — removal, cleaning and replacement	Yes	n/a	n/a

### Appendix III

#### Complex maintenance tasks not to be released by the pilot-owner

All of the following constitutes the complex maintenance tasks which, according to Appendix II, shall not be carried out by the pilot-owner. These tasks shall be released either by CAO or by independent certifying staff:

- (a) the modification, repair or replacement by riveting, bonding, laminating, or welding of any of the following airframe parts:
  - (1) a box beam;
  - (2) a wing stringer or chord member;
  - (3) a spar;
  - (4) a spar flange;
  - (5) a member of a truss type beam;
  - (6) the web of a beam;

- (7) a keel or chine member of a flying boat hull or a float;
  - (8) a corrugated sheet compression member in a wing or tail surface;
  - (9) a wing main rib;
  - (10) a wing or tail surface brace strut;
  - (11) an engine mount;
  - (12) a fuselage longeron or frame;
  - (13) a member of a side truss, horizontal truss or bulkhead;
  - (14) a seat support brace or bracket;
  - (15) a seat rail replacement;
  - (16) a landing-gear strut or brace strut;
  - (17) an axle;
  - (18) a wheel; and
  - (19) a ski or ski pedestal, excluding the replacement of a low-friction coating;
- (b) the modification or repair of any of the following parts:
- (1) aircraft skin or the skin of an aircraft float if the work requires the use of a support, jig or fixture;
  - (2) aircraft skin that is subject to pressurisation loads if the damage to the skin measures more than 15 cm (6 in.) in any direction;
  - (3) a load-bearing part of a control system, including a control column, pedal, shaft, quadrant, bell crank, torque tube, control horn and forged or cast bracket, but excluding:
    - (i) the swaging of a repair splice or cable fitting; and
    - (ii) the replacement of a push-pull tube end fitting that is attached by riveting;
  - (4) any other structure not listed in point (a) that a manufacturer has identified as primary structure in their maintenance manual, structural repair manual or instructions for continuing airworthiness;
- (c) the performance of all of the following maintenance on a piston engine:
- (1) dismantling and subsequent reassembling of a piston engine other than:
    - (i) to obtain access to the piston/cylinder assemblies; or
    - (ii) to remove the rear accessory cover to inspect and/or replace oil pump assemblies, where such work does not involve the removal and refitment of internal gears;
  - (2) dismantling and subsequent reassembling of reduction gears;

- (3) welding and brazing of joints, other-than-minor weld repairs to exhaust units carried out by a suitably approved or authorised welder but excluding component replacement;
- (4) the disturbing of individual parts of units which are supplied as bench-tested units except for the replacement or adjustment of items normally replaceable or adjustable in service;
- (d) the balancing of a propeller, except:
  - (1) for the certification of static balancing where required by the maintenance manual; and
  - (2) dynamic balancing on installed propellers using electronic balancing equipment where permitted by the maintenance manual or other approved airworthiness data;
- (e) Any additional task that requires:
  - (1) specialised tooling, equipment or facilities; or
  - (2) significant coordination procedures because of the extensive duration of the tasks and the involvement of several persons.

## Appendix IV

## Airworthiness Review Certificate - CA Form 15c

**AIRWORTHINESS REVIEW CERTIFICATE (ARC) (for aircraft complying with (CAR-ML))**

ARC reference: .....

Pursuant to CAR-ML

DGCA India

hereby certifies that it has performed an airworthiness review in accordance with CAR-ML on the following aircraft:

Aircraft manufacturer: .....Manufacturer's designation: .....

Aircraft registration: .....Aircraft serial number: .....

and this aircraft is considered airworthy at the time of the review.

Date of issue: ..... Date of expiry: .....

Airframe flight hours (FH) at date of review (\*): .....

Signed: .....Authorisation No (if applicable): .....

1st Extension: the aircraft complies with the conditions of CAR-ML

Date of issue: ..... Date of expiry: .....

Airframe flight Hours (FH) at date of issue (\*): .....

Signed: ..... Authorisation No (if applicable): .....

2nd Extension: the aircraft complies with the conditions of CAR-ML

Date of issue: .....Date of expiry: .....

Airframe flight hours (FH) at date of issue (\*): .....

Signed: ..... Authorisation No (if applicable): .....