สำนักงานการบินพลเรือนแห่งประเทศไทย
The Civil Aviation Authority of Thailand

Acceptable Means of Compliance and Guidance Material to TCAR AIR Part Continuing Airworthiness (AMC/GM to TCAR AIR Part - ML)

AMC/GM to TCAR AIR Part - ML

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Date 22 August 2025

Approved by

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Deputy Director General Acting Director General

The Civil Aviation Authority of Thailand

THAILAND CIVIL AVIATION REGULATION (TCAR)

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RECORD OF REVISIONS

Revision No.	Date (DD-MMM-YYYY)	Subject	Insert By (Department)
Issue 01 Rev. 00	15 NOV 2024	Initial Issue	AIR
Issue 02 Rev. 00	22 AUG 2025	**GM1 ML.A.201** Add commercial ATOs or commercial DTOs Remove “CAAT” for airworthiness review of Non-NCO and commercial ATO / DTO aircraft **GM1 ML.A.901** Revise text to mandatory the ARR must be issued by CAMO or CAO who managing continuing airworthiness of the aircraft.	AIR

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LIST OF EFFECTIVE PAGES

Change and amendment bar is placed against each paragraph affected.

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Introduction section

The acceptable means of compliance and guidance material to be used for the continuing airworthiness of aircraft and aeronautical products, parts and appliances in accordance with TCAR AIR Part-ML are those laid down in this document.

Acceptable Means of Compliance (AMC) are non-binding. The AMC serves as a means by which the requirements contained in the Basic Regulation, and the **Implementing Rules** (IR), can be met. However, applicants may decide to show compliance with the requirements using other means. Organisations may propose alternative means of compliance. 'Alternative Means of Compliance' are those that propose an alternative to an existing AMC. Those Alternative Means of Compliance proposals must be accompanied by evidence of their ability to meet the intent of the IR. Use of an existing AMC gives the user the benefit of compliance with the IR.

Guidance Material (GM) is non-binding explanatory and interpretation material on how to achieve the requirements contained in the Basic Regulation, the IRs, the AMCs and the **Certification Specifications** (CS). It contains information, including examples, to assist the user in the interpretation and application of the Basic Regulation, its IRs, AMCs and the CSs.

Any instructions other than the AMC and GM, including user guides and dedicated guidance material, forms, and templates, that are published by the CAAT and provide specific details relevant to the provisions outlined in this document should be acknowledged as an essential and integral part of this document. These associated instructions provide supplementary information and guidance that serve to enhance the comprehension and implementation of the provisions, ensuring compliance with relevant regulations.

AMC AND GM TO TCAR AIR PART-ML

SUBPART A — GENERAL

- Reserved -

SUBPART B — ACCOUNTABILITY

GM1 ML.A.201 Responsibilities

The following tables provide a summary of Part-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.

<table>
<tr><th></th><th colspan="3">Balloon</th></tr>
<tr><td rowspan="2"></td><td rowspan="2">Part-BOP Subpart ADD</td><td colspan="2">Part-BOP non Subpart ADD</td></tr>
<tr><td>Commercial ATO /Commercial DTO</td><td>Other than commercial ATO / commercial DTO</td></tr>
<tr><td>Contract with CAMO/CAO (CAM)required?</td><td>yes</td><td>yes</td><td>no*</td></tr>
<tr><td rowspan="3">Aircraft maintenance programme (AMP)</td><td colspan="2" rowspan="2">The AMP document must be approved by the contracted CAMO/CAO(-CAM)</td><td>If there is no CAMO/CAO(-CAM), the AMP must be declared by the owner.</td></tr>
<tr><td>If there is a contracted CAMO/CAO(-CAM), the AMP must be approved by the CAMO/CAO(-CAM).</td></tr>
<tr><td colspan="3">If ML.A.302(e) conditions are met, producing an AMP document is not required.</td></tr>
<tr><td>Maintenance</td><td colspan="2">By a maintenance organisation</td><td>By a maintenance organisation or by independent certifying staff or the pilot-owner**</td></tr>
<tr><td>Airworthiness review (AR) and airworthiness review report</td><td colspan="2">By a maintenance organisation*** or by the contracted CAMO/CAO(-CAM)</td><td>By a maintenance organisation*** or by the CAMO/CAO(-CAM) (if contracted) or by CAAT</td></tr>
</table>

<table>
<tr><th></th><th colspan="3">Sailplane</th></tr>
<tr><td rowspan="2"></td><td rowspan="2">Part-SAO Subpart-DEC</td><td colspan="2">Part-SAO non-Subpart-DEC</td></tr>
<tr><td>Commercial ATO /Commercial DTO</td><td>Other than commercial ATO / commercial DTO</td></tr>
<tr><td>Contract with CAMO/CAO (CAM)required?</td><td>yes</td><td>yes</td><td>no*</td></tr>
<tr><td rowspan="3">AMP</td><td colspan="2" rowspan="2">The AMP document must be approved by the contracted CAMO/CAO(-CAM)</td><td>If there is no CAMO/CAO(-CAM), the AMP must be declared by the owner.</td></tr>
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</table>

	Aircraft (other than balloons and sailplanes)		
	non Part-NCO	Part-NCO	
		Commercial ATO /Commercial DTO	Other than commercial ATO / commercial DTO
Contract with CAMO/CAO (CAM) required?	yes	yes	no*
AMP	The AMP document must be approved by the contracted CAMO/CAO(-CAM)		If there is no CAMO/CAO(-CAM), the AMP must be declared by the owner.
			If there is a contracted CAMO/CAO(-CAM), the AMP must be approved by the CAMO/CAO(-CAM).
	If ML.A.302(e) conditions are met, producing an AMP document is not required.		
Maintenance	By a maintenance organisation		By a maintenance organisation or by independent certifying staff or the pilot-owner**
AR and ARR	By a maintenance organisation*** or by the contracted CAMO/CAO(-CAM)		By a maintenance organisation*** or by the CAMO/CAO(-CAM) (if contracted) or by CAAT

*: A CAMO/CAO(-CAM) is not required but the owner may decide to contract a CAMO/CAO (-CAM).

**: in the limit of their privileges

***: together with the 100-h/annual inspection

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 their 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 Part-ML with this CAMO or CAO.

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

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

MAINTENANCE CHECK FLIGHTS (MCFs)

(a) The definition of and operational requirements for MCFs are laid down in TCAR OPS and 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.

Due to incomplete maintenance, it is advisable to open a new entry into the ML.A.305 aircraft logbook, to identify the need for an 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 issued in accordance with CAAT requirements.

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.

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 (CAAT Form AMP). This maintenance programme may include several aircraft registrations as long as the maintenance requirements for each registration are clearly identified.

AMC2 ML.A.302 Aircraft maintenance programme

CAAT FORM AMP

The following CAAT Form AMP may be used to produce the AMP:

Part-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 AMC1 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				

Maintenance tasks alternative to the DAH's ICA (not less restrictive than the MIP)			
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
Pilot-owner maintenance (only for non commercial balloons, or non commercial sailplanes, or other aircraft operated non commercial) Remark: pilot-owner maintenance is not allowed for aircraft operated by a ATO			
6	Does the pilot-owner perform pilot-owner maintenance (ref. ML.A.803)? 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
Approval/declaration of the maintenance programme (select the appropriate option)			
7	Declaration by the owner: ☐	Approval by the contracted CAMO/CAO: ☐	
	'I hereby declare that this is the maintenance programme applicable to the aircraft referred to in block 1, and I am fully responsible for its content and, in particular, for any alternatives tasks to the DAH's data.'	Approval reference no of the CAMO/CAO: Signature/name/date:	
Certification statement			
8	'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.' Signed by the person/organisation responsible for the continuing airworthiness of the aircraft according to ML.A.201: Owner/Lessee/operator ☐ CAMO/CAO ☐ Name of owner/lessee/operator or CAMO/CAO approval number: Address: Telephone/fax: Email: Signature/date:		
9	Appendices attached: (when replying 'YES', list the specific requirements in Appendix B)	Yes	No
	Appendix A		
	Appendix B		
	Appendix C		
	Appendix D		

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)
Detail the tasks and inspections contained in the MIP being used.

Appendix B — Additional maintenance requirements (include only if necessary — see Section 4 above)		
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. *(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. The person performing the AR, if reviewing the AMP, is not responsible for the completeness of this appendix, but may do some sampling as part of the investigations and the findings discovered during the physical review).*		
Task description	References	Interval (tick box if the selected interval differs from that required in the referenced document)

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 the basis for the AMP.)		
		☐
		☐
Maintenance due to mandatory continuing airworthiness instructions (ALIs, CMRs, specific requirements in the TCDS, etc.)		
		☐
		☐
Maintenance recommendations, such as TBO intervals, issued through service bulletins, service letters, and other non-mandatory service information		
Emergency locator transmitters and personal locator beacon — annual testing		☐
(if not using MIP or equivalent ICA task) Transponder test		☐
		☐
		☐
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		
		☐
		☐

Appendix C — Maintenance tasks alternative to the DAH's ICA (not less restrictive than the MIP) (include only if necessary — see Sections 5 above)			
Task description	Recommended interval	Alternative inspection/task	Amended interval
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. *(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)*			

Appendix D — Additional information (optional)
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.

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 approving a maintenance programme 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 declaring the maintenance programme, assuming full responsibility for its content, and for any deviations from the DAH's instructions (ref. ML.A.201(f) and ML.A.302(c)(7)) and the possible consequences of such deviations. In this case, these deviations do not need to be justified, but are to be identified in the AMP. However, the maintenance programme still 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) The content of the owner-declared maintenance programme cannot be challenged up front either by CAAT or by the contracted maintenance organisation. This declared maintenance programme is the basis for adequate planning of maintenance, as well as for the ARs and the aircraft continuing airworthiness monitoring (ACAM) inspections. Nevertheless, the maintenance programme will be subject to periodic reviews at the occasion of the AR and, in case of discrepancies, linked with deficiencies in the content of the maintenance programme, the owner shall amend the maintenance programme accordingly, as required by ML.A.302(c)(9).

(d) When CAAT is notified of deficiencies linked with the content of the declared maintenance programme for a particular aircraft (in case no agreement is reached between the owner and the AR staff about the changes required in the maintenance programme), CAAT may contact the owner, request a copy of the maintenance programme, decide which amendment to the AMP is necessary and raise the associated finding (ref. ML.A.302(c)(9)). Based on the information received, the reported deficiencies and the identified risks, CAAT may in addition adapt the ACAM programme accordingly.

(e) Although there is no requirement for the owner to send a copy of the maintenance programme to CAAT, this does not prevent CAAT from requesting at any time the owner to send information about, or a copy of the AMP.

(f) Since the maintenance programme has to identify the alternatives tasks to the DAH's instructions, the ARs and 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) Since CAAT is not responsible for the content of a declared maintenance programme, CAAT does not authorise the accomplishment of the scheduled maintenance to deviate from the AMP content (other than the tolerances provided for in ML.A.302(d)(1)). In such cases, the owner may declare an amended AMP.

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 and its link with the AR:

	OPTION 1	OPTION 2
Responsibility for developing the AMP	Contracted CAMO or CAO	Owner (if allowed under ML.A.201(f))
Approval/declaration of the maintenance programme	Approved by the CAMO or CAO, or none required in case of compliance with ML.A.302(e)	Declaration by the owner or none required in case of compliance with ML.A.302(e)
Basis for the maintenance programme	MIP (not applicable to rotorcraft and airships) or ICA issued by the DAH	
Deviations from the DAH's ICA	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 do not need to be justified.
AMP annual review	In conjunction with the AR, by the AR staff or, if not performed in conjunction with the AR, 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:

	Examples
OPS approval	HIGHER RISK: commercial operation, commercial flight training MEDIUM RISK: flight training by an association, non-commercial specialized operations LOWER RISK: private
Flight rules	HIGHER RISK: instrument flight rules (IFR) MEDIUM RISK: visual flight rules (VFR) at night LOWER RISK: VFR by day
Aircraft weight	HIGHER RISK: Other than ELA1 MEDIUM RISK: LA1 aircraft other than, very light aircraft (VLA), sailplanes and powered sailplanes LOWER RISK: VLA, sailplanes and powered sailplanes
Who manages the airworthiness of aircraft?	HIGHER RISK: owner LOWER RISK: CAMO/CAO

	Examples
Who maintains the aircraft?	HIGHER RISK: pilot-owner MEDIUM RISK: independent certifying staff LOWER RISK: maintenance organisation
Time in service (flight hours, years)	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
Aircraft utilisation	HIGHER RISK: less than 50 h per year MEDIUM RISK: around 200 h per year LOWER RISK: more than 400 h per year
ACAM findings	HIGHER RISK: numerous findings in ACAM or ramp inspections MEDIUM RISK: few findings in ACAM inspections LOWER RISK: rare findings in ACAM inspections
System redundancy (for components such as engine/propeller)	HIGHER RISK: single-engined aircraft LOWER RISK: multi-engined aircraft
Supplementary maintenance measures	HIGHER RISK: no supplementary measures LOWER RISK: supplementary measures (such as oil analysis, engine data monitoring, borescope inspections, corrosion inspections, etc.)
Risk factor of the component failure	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 approving maintenance programmes, and for the AR staff performing ARs and reviewing the effectiveness of the declared maintenance programme. It may also be useful for the owner in order to take an informed decision before introducing deviations from the DAH's recommendations. Nevertheless, as allowed by ML.A.302(c)(7) and explained in GM ML.A.302, when the owner issues a declaration for the maintenance programme, they do not need to justify such deviations.

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) the results of the AR performed on the aircraft, which may reveal that the current maintenance programme is not adequate;

(3) revisions introduced on the documents affecting the programme basis, such as the ML.A.302(d) MIP or the DAH's data;

(4) changes in the aircraft configuration, and type and specificity of operation;

(5) changes in the list of pilot-owners; and

(6) applicable mandatory requirements for compliance with CAAT requirements, such as airworthiness directives, 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 AR staff (or the CAMO/CAO staff if the review of the AMP is not performed in conjunction with an AR) may need to review the maintenance carried out during the last 12 months, including unscheduled maintenance. To this end, they 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 and the results of the AR, 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.

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

'DAH' refers to the holder of a Type Certificate, restricted Type Certificate, Supplemental Type Certificate, Technical Standard Order (TSO) authorisation, repair or change to the type design accepted by CAAT in accordance with TCAR AIR Part-21.

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.

Tasks or intervals (e.g. escalations) alternative to those of the DAH's ICA and selected by the CAMO or CAO for the AMP do not need to be approved by CAAT. Justification of these deviations are to be kept by the CAMO or CAO.

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*

ICA task	AMP proposed alternative	MIP task	Alternative acceptable Yes/No
Inspection XX 24 months interval	Inspection XX 36 months interval	None relevant	Yes
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 Airworthiness Directives

'Mandatory continuing airworthiness information' other than Airworthiness Directive 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 Type Certificate holder, Supplemental Type Certificate holder and, if applicable, engine Type Certificate 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 Type Certificate Data Sheet 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 CAAT.

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 LA2 aircraft other than airships, grouped in the following categories:

— aeroplanes of 2 730 kg MTOM and below;

— LA2 sailplanes and LA2 powered sailplanes; and

— LA2 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 airworthiness review report.

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.

Aeroplanes of 2 730 kg MTOM and below	
System/component/area	**Task and inspection detail**
GENERAL	
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 underwing registration markings are correct. If applicable, check that an exemption for alternate display is approved. Identification plate in accordance with CAATR No.27 aircraft registration mark and identification plate.
Weighing	Review weighing record to establish accuracy against installed equipment. Weigh the aircraft as required by Part-NCO or Part-SPO, as applicable.
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.
AIRFRAME	
Fabric and skin	Inspect for deterioration, distortion, other evidence of failure, and defective or insecure attachment of fittings. NOTE: When checking composite structures, check for signs of impact or pressure damage that may indicate underlying damage.
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.
CABIN AND COCKPIT	
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.

System/component/area	Task and inspection detail
LANDING GEAR	
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.
WING AND CENTRE SECTION	
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.
FLIGHT CONTROLS	
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.
EMPENNAGE	
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.
AVIONICS AND ELECTRICS	
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 lightning
POWER PLANT (OTHER THAN TURBOPROP ENGINE)	
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.

System/component/area	Task and inspection detail
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.
TURBOPROP ENGINE	
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.
FUEL	
Fuel tanks	Inspect for leaks and improper installation and connection. Verify proper sealing and function of tank drains.
CLUTCHES AND GEARBOXES	
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.

System/component/area	Task and inspection detail
PROPELLER	
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.
MISCELLANEOUS	
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.
OPERATIONAL AND FUNCTIONAL CHECKS	
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 LA2 sailplanes and LA2 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.

LA2 sailplanes and LA2 powered sailplanes	
System/component/area	**Task and inspection detail**
GENERAL	
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 underwing registration markings are correct. If applicable, check that an exemption for alternate display is approved, if identification plate in accordance with CAATR No.27 aircraft registration mark and identification plate.
Weighing	Review weighing record to establish accuracy against installed equipment. Weigh the aircraft as required by the relevant Regulation for air operations.
AIRFRAME	
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.
CABIN AND COCKPIT	
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. CAUTION: OBSERVE ALL SAFETY PRECAUTIONS.
Colour-coding of controls	Ensure that controls are colour-coded in accordance with the AFM and in good condition.

System/component/area	Task and inspection detail
Placards	Check that the placards are correct and legible, and accurately reflect the status of the aircraft in accordance with the AFM.
LANDING GEAR	
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 pipework. 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. CAUTION: BRAKE DUST MAY CONTAIN ASBESTOS. Check operation of brake. Check level of brake fluid and replenish, if necessary. Check tyre pressure. CAUTION: CHECK TYPE OF BRAKE FLUID USED AND OBSERVE SAFETY PRECAUTIONS.
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.
WING AND CENTRE SECTION	
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 mainplane 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.

System/component/area	Task and inspection detail
EMPENNAGE	
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.
AVIONICS AND ELECTRICS	
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.
MISCELLANEOUS	
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.
POWER PLANT (when applicable) NOTE: In the case of sailplanes with electrical or jet engines, follow the maintenance instructions and recommendations of the DAH.	
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.

System/component/area	Task and inspection detail
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 LA2 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.

(a) Envelope

System/component/area	Task and inspection detail
Identification (type/serial number/registration plate)	Check for presence. Identification plate in accordance with CAATR No.27 aircraft registration mark and identification plate.
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.

System/component/area	Task and inspection detail
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

System/component/area	Task and inspection detail
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.

(c) Basket

System/component/area	Task and inspection detail
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.

System/component/area	Task and inspection detail
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.

(d) Fuel cylinders

System/component/area	Task and inspection detail
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.

(e) Additional equipment

System/component/area	Task and inspection detail
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 EASA SIP 2011-15 or US Title 14 CFR Part 43 Appendix F is considered to include the MIP task described in ML.A.302(d)(2)(d).

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 an Airworthiness Directive 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 Airworthiness Directives that are superseded or cancelled.

(d) The current status of Airworthiness Directives should be sufficiently detailed to identify the complied Airworthiness Directive 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.

SUBPART D — MAINTENANCE STANDARDS

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.

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.

(b) 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.

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 are readily available for consultation, the pilot should consider consultation with them before deferring any defect.

For aircraft engaged in General Aviation and non-commercial specialised operations or non-commercial balloon operations or non-commercial sailplane operations, the pilot may defer required equipment, regardless of whether or not a CAMO or CAO is contracted. However, if doing so, they have 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

GM1 ML.A.501(a) Classification and installation

The following new parts or appliances do not require a CAAT Form 1 or equivalent in order to be eligible for installation in a type-certified product:

(1) a standard part;

(2) in the case of ELA1 or ELA2, a part or appliance that is:

(i) not life limited, nor part of the primary structure, nor part of the flight controls;

(ii) identified for installation in the specific aircraft;

(iii) to be installed in an aircraft whose owner has verified compliance with the applicable conditions in (i) and (ii), and has accepted responsibility for this compliance;

(3) a part or appliance for which the consequences of a non-conformity with its approved design data has a negligible safety effect on the product and which is identified as such by the holder of the design approval in the instructions for continued airworthiness. In order to determine the safety effects of a non-conforming part or appliance, the design approval holder may establish in the instructions for continued airworthiness specific verification activities to be conducted by the installer of the part or appliance on the product;

(4) in the case of the embodiment of a standard change in accordance with CAAT requirements, a part or appliance, for which the consequences of a non-conformity with its design data have a negligible safety effect on the product, and which is identified as such in the certification specifications for standard changes and standard repairs issued in accordance CAAT requirements. In order to determine the safety effects of a non-conforming part or appliance, specific verification activities to be conducted by the person that installs the part or appliance on the product may be established in the certification specifications referred to above;

(5) -reserved-

(6) a part or appliance that is an item of a higher assembly identified in points (1) to (4).

Parts and appliances listed in first paragraph are eligible for installation in a type-certified product without being accompanied by a CAAT Form 1 or equivalent, provided that the installer holds a document issued by the person or organisation that manufactured the part or appliance, which declares the name of the part or appliance, the part number, and the conformity of the part or appliance with its design data, and which contains the issuance date.

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

CAAT FORM 1 OR EQUIVALENT

A document equivalent to a CAAT Form 1 may be:

(a) a release document issued by an organisation under the terms of a bilateral agreement signed by CAAT;

(b) For used parts, an authorised release certificate issued by an organisation approved by a competent authority acceptable to CAAT according to standards that are not lower than TCAR AIR Part-145. The list of Authorised Release Certificates acceptable to The CAAT is available in The Notification of The Civil Aviation Authority of Thailand on Acceptance of Foreign Authorised Release Certificates.

(c) For the new parts, The list of Authorised Release Certificates issued in accordance with applicable production standards and certifying that the parts have been manufactured in conformity to approved design data and are in a condition for safe operation acceptable to The CAAT is available

in The Notification of The Civil Aviation Authority of Thailand on Acceptance of Foreign Authorised Release Certificates.

(d) For new PMA Parts (Parts designed and manufactured in the United States of America under the Parts Manufacturer Approval), a FAA Form 8130-3 will be considered as equivalent only if it is a non-critical component. The mention that the part is a non-critical component shall be contained in "Remarks" block of the authorised release certificate.

Any item in storage without a CAAT Form 1 or equivalent cannot be installed on aircraft registered in the Kingdom of Thailand unless a CAAT Form 1 is issued for such item by an appropriately approved maintenance organisation in accordance with AMC M.A.613(a) or AMC1 CAO.A.070(a) or AMC2 145.A.50(d).

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, a CAAT 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 a CAAT Form 1 or equivalent or on the balloon maintenance log book, as applicable.

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 they are 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 purposes.

GM1 ML.A.502(c) Component maintenance

A 'declaration of maintenance accomplished' is a certificate prepared in any shape/form by the person or organisation that performed any maintenance on the component covered by the certificate and subject to conditions in ML.A.502(c). This person or organisation does not need an approval to perform maintenance in accordance with TCAR AIR. In order for the component to be eligible for installation with a 'declaration of maintenance accomplished', this declaration, together with other records, should allow the determination that the component was first installed as 'new', as a component referred to in ML.A.502(c). Such a component should not be installed in an aircraft if there is information on the certificate which is not readable or not understandable or states that the component is not in a satisfactory condition for operation.

SUBPART H — CERTIFICATE OF RELEASE TO SERVICE – CRS

AMC ML.A.801 Aircraft certificate of release to service after embodiment of a Standard Change or a Standard Repair (SC/SR)

1. Release to service and eligible persons

Only natural or legal persons entitled to release to service an aircraft after maintenance (see ML.A.801(b)) are considered as an eligible installer responsible for the embodiment of a SC/SR when in compliance with applicable requirements.

Since the design of the SC/SR does not require specific approval, the natural or legal person releasing the embodiment of the change or repair takes the responsibility that the applicable certification specifications (CS-STAN) within TCAR AIR Part-21 subpart D and M are fulfilled while being in compliance with TCAR AIR Part-ML /Part-CAO and/or Part-145 and not in conflict with the Type Certificate holder's data. This includes responsibility in respect of an adequate design, the selection/manufacturing of suitable parts and their identification, documenting the change or repair, generation or amendment of aircraft manuals and instructions as needed, embodiment of the change/repair, releasing the aircraft to service and record-keeping.

Depending on its nature, for certain SCs/SRs, the Certification Specification (CS STAN), TCAR AIR Part-21 subpart D and M might restrict the eligibility for the issuance of the release to service to certain persons (e.g. standard change/repair not suitable for release to service by the pilot-owner).

2. Parts and appliances to be installed as part of a SC/SR

The design of the parts and appliances to be used in a SC/SR is considered a part of the change/repair, and, therefore, there is no need for a specific design approval. However, it is possible that for a particular SC, these Certification Specifications specifically require the use of parts and appliances that meet a technical standard acceptable to CAAT. In this case, when the parts and appliances are required to be authorised as a TSO article, other articles may be recognised as equivalent by means of an international safety agreement.

Normally, a SC/SR shall not contain specifically designed parts that should be produced by a production organisation (approved in accordance with Part-21 (POA). However, in the case that the change or repair would contain such a part, it should be produced by a Production Organisation (POA), with the standards accepted under TCAR AIR Part 21 and delivered with a CAAT Form 1 or equivalent.

Eligibility for installation of parts and appliances belonging to a SC/SR is subject to compliance with the TCAR AIR Part 21 and Part-ML and maintenance organisation related provisions, and the situation varies depending on the aircraft in/on which the SC/SR is to be embodied, and who the installer is. The need for an CAAT Form 1 or equivalent is addressed in TCAR AIR Part 21 and Part-ML, while less restrictive rules may, for instance, apply for LA1 and LA2 aircraft parts and sailplane parts. Furthermore, TCAR AIR Part-CAO and Part-145 contain provisions (i.e. CAO.A.020(c) and 145.A.42(c)) that allow maintenance organisations to fabricate certain parts to be installed in/on the aircraft as part of their maintenance activities.

3. Parts and appliances identification

The parts modified or installed during the embodiment of the SC/SR need to be permanently marked in accordance with CAAT requirements or State of Manufacture requirements for such part.

4. Documenting the SC/SR and declaring compliance with the Certification Specifications

In accordance with TCAR AIR Part-ML, Part-CAO or Part-145 (e.g. ML.A.801(e),CAO.A.065 and 145.A.50(b)), the legal or natural person responsible for the embodiment of a change or a repair should compile details of the work accomplished. In the case of SCs/SRs, this includes, as necessary,

based on its complexity, an engineering file containing drawings, a list of the parts and appliances used for the change or repair, supporting analysis and the results of tests performed or any other evidence suitable to show that the design fulfils the applicable Certification Specifications within TCAR AIR Part-21 subpart D and M together with a statement of compliance and amendments to aircraft manuals, to instructions for continuing airworthiness and to other documents such as aircraft parts list, wiring diagrams, etc., as deemed necessary. CAAT Form 123 is prepared for the purpose of documenting the preparation and embodiment of the SC/SR. The aircraft logbook should contain an entry referring to CAAT Form 123; both CAAT Form 123 and the release to service required after the embodiment of the SC/SR should be signed by the same person.

CAAT Form 123 and all the records listed on it should follow elementary principles of controlled documentation, e.g. contain reference number of documents, issue dates, revision numbers, name of persons preparing/releasing the document, etc.

5. Record-keeping

The legal or natural person responsible (see paragraph 1. above) for the embodiment of the change/repair should keep the records generated with the SC/SR as required by Part-ML, Part-CAO or Part-145 and TCAR AIR Part-21 subpart D and M (CS-STAN).

In addition, ML.A.305 requires that the aircraft owner (or CAMO or CAO, if a contract i.a.w. ML.A.201 exists) keeps the status of the changes/repairs embodied in/on the aircraft in order to control the aircraft configuration and manage its continuing airworthiness.

With regard to SCs/SRs, the information provided to the owner or CAMO may be listed in CAAT Form 123 and should include, as required, a copy of any modified aircraft manual and/or instructions for continuing airworthiness. All this information should normally be consulted when the aircraft undergoes an airworthiness review, and, therefore, a clear system to record the embodiment of SCs/SRs, which is also easily traceable, would be of help during subsequent aircraft inspections.

6. Instructions for continuing airworthiness

As stipulated in M.A.302, the aircraft owner or CAMO needs to assess if the changes in the instructions for continuing airworthiness of the aircraft require the amendment of the AMP.

7. Embodiment of more than one SC

The embodiment of two or more related SCs in accordance with TCAR AIR Part-21 subpart D and M (CS-STN) is permitted as a single change (the use of one Form 123 only) as long as adequate references to and records of all SCs embodied are captured. Restrictions and limitations of the two (or more) SCs would apply. It is permitted to issue a single release to service containing adequate traceability of all the SCs embodied.

8. Acceptable form to be used to record the embodiment of SCs/SRs

CAAT Form 123 — Standard Change/Standard Repair (SC/SR) embodiment record

<table>
<tr><td colspan="2">Standard Change/Standard Repair (SC/SR) embodiment record</td><td>1. SC/SR number(s):</td></tr>
<tr><td colspan="3">2. SC/SR title & description:</td></tr>
<tr><td colspan="3">3. Applicability:</td></tr>
<tr><td colspan="3">4. List of parts (description/Part-No/Qty):</td></tr>
<tr><td colspan="3">5. Operational limitations/affected aircraft manuals. Copies of these manuals are provided to the aircraft owner:</td></tr>
<tr><td colspan="3">6. Documents used for the development and embodiment of this SC/SR:

* Copies of the documents marked with an asterisk are handed to the aircraft owner.</td></tr>
<tr><td colspan="3">7. Instructions for continuing airworthiness. Copies of these manuals are provided to the aircraft owner:</td></tr>
<tr><td colspan="3">8. Other information:</td></tr>
<tr><td colspan="3">9a. ☐ This SC complies with the criteria established in TCAR 21.A.89G (a)(2).</td></tr>
<tr><td colspan="3">9b. ☐ This SR complies with the criteria established in TCAR 21.A.430G (a)(3).</td></tr>
<tr><td colspan="2">10. Date of SC/SR embodiment:</td><td>11. Identification data and signature of the person responsible for the embodiment of the SC/SR:</td></tr>
<tr><td colspan="3">12. Signature of the aircraft owner. This signature attests that all relevant documentation is handed over from the issuer of this form to the aircraft owner, and, therefore, the latter becomes aware of any impact or limitations on operations or additional continuing airworthiness requirements which may apply to the aircraft due to the embodiment of the change/repair.</td></tr>
</table>

CAAT Form 123

Notes:

Original remains with the legal or natural person responsible for the embodiment of the SC/SR.

The aircraft owner should retain a copy of this form.

The aircraft owner should be provided with copies of the documents referenced in boxes 5 and 7 and those in box 6 marked with an asterisk '*'.

For box 12, when the aircraft owner has signed a contract i.a.w. M.A.201, it is possible that the Continuing Airworthiness Management Organisation (CAMO) representative signs box 12 and provides all relevant information to the owner before next flight.

Completion instructions:

Use English to fill in the form.

1. Identify the SC/SR with a unique number and reference this number in the aircraft logbook.
2. Specify the applicable Certification Specifications (CS) chapter including revision (e.g. CS-SCxxxy or CS-SRxxxy) & title. Provide also a short description.
3. Identify the aircraft (a/c) registration, serial number and type.
4. List the parts' numbers and description for the parts installed. Refer to an auxiliary document if necessary.
5. Identify affected aircraft manuals.
6. Refer to the documentation developed to support the SC/SR and its embodiment, including design data required by TCAR AIR Part-21 subpart D and M (CS-STAN): design definition, documents recording the showing of compliance with the Certification Specifications or any test result, etc. The documents' references should quote their revision/issue.
7. Identify instructions for continuing airworthiness that need to be considered for the aircraft maintenance programme review.
8. To be used as deemed necessary by the installer.

9a., 9b., 10. and 12. Self-explanatory.

11. Give full name details and certificate reference (of the natural or legal person) used for issuing the aircraft release to service.

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

(a) The aircraft certificate of release to service should contain the following statement:

(1) 'certifies that the work specified, except as otherwise specified, was carried out in accordance with Part-ML, and in respect to that work, the aircraft is considered ready for release to service.'; or

(2) For a Pilot-owner a certificate of release to service should contain the following statement:

'certifies that the limited pilot-owner maintenance specified, except as otherwise specified, was carried out in accordance with Part-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.

(c) 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 their normal signature except in the case where a computer release-to-service system is used. In this latter case, CAAT 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.

(f) 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

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.

AMC1 ML.A.803 Pilot-owner authorization

(a) A pilot-owner may only issue a CRS for the maintenance they have 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 CAAT.

(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

GM1 ML.A.901 Aircraft airworthiness review

If a CAMO/CAO is contracted by the owner, this organisation shall carry out the Airworthiness Review itself.

Point ML.A.901(b) gives a list of the different organisations or persons that are allowed to perform an Airworthiness Review; it does not presume that they have the obligation to accept a request to carry out an Airworthiness Review.

AMC1 ML.A.903(h) Airworthiness review

REVIEW OF AMP IN CONJUNCTION WITH AIRWORHTINESS REVIEW

This review of the maintenance programme is performed by the person who performed the Airworthiness Review, who could belong to CAAT, a CAMO, a CAO or a maintenance organisation in accordance with ML.A.901(b).

This person is not responsible for the completeness of this AMP, but may do some sampling as part of the investigations and the findings discovered during the physical review.

More details on the annual review are provided in AMC1 ML.A.302(c)(9).

AMC AND GM TO Appendix to TCAR AIR PART-ML

AMC1 to Appendix II to Part-ML – Limited pilot-owner maintenance

(a) The lists below specify 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 TCAR AIR Part-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 tasks meeting the requirements of Appendix II to TCAR AIR Part-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 Part-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.

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 Part-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 nonstructural 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 generating system and required communication, as well as navigation system and primary flight instruments	Yes
		Bonding — replacement of broken bonding cable	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	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
27	Flight controls	Removal or reinstallation of co-pilot control column and rudder pedals where design provides for quick disconnect	Yes
28	Fuel system	Fuel filter elements — cleaning and/or replacement	Yes
30	Ice and rain protection	Windscreen wiper — replacement of wiper blade	Yes

ATA	Area	Task	Aeroplanes
31	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
32	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	Light	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

ATA	Area	Task	Aeroplanes
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 selfcontained, instrument-panel-mounted indicators that have quickrelease 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 nonstructural 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	Batteries — replacement and servicing, excluding servicing of Ni-Cd batteries and IFR operations	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	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
		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
30	Ice and rain protection	Windshield wiper replacement	Yes

ATA	Area	Task	Rotorcraft
31	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
32	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
33	Light	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	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
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

ATA	Area	Task	Rotorcraft
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 nonstructural 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, excluding those in engine controls, transmission controls and flight control systems	Yes	Yes	Yes
		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
21	Air conditioning	Replacement of flexible hoses and ducts	Yes	Yes	Yes
23	Communication	Communication devices — removal and replacement of self-contained, instrument-panel-mounted communication devices with quick-disconnect connectors	Yes	Yes	Yes

ATA	Area	Task	SP	SSPS	SLPS/TMG
24	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
25	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
		Emergency locator transmitter (ELT) — removal / reinstallation	Yes	Yes	Yes

ATA	Area	Task	SP	SSPS	SLPS/TMG
26	Fire protection	Fire warning — replacement of sensors and indicators	n/a	Yes	Yes
27	Flight controls	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
28	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
31	Instruments	Instrument panel — removal and reinstallation provided that this is a design feature with quick-disconnect connectors, 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
32	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 of elastic cords or rubber dampers	Yes	Yes	Yes
		Shock struts — replenishment of oil or air	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
		Brakes — 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

ATA	Area	Task	SP	SSPS	SLPS/TMG
33	Light	Lights — replacement of internal and external bulbs, filaments, reflectors and lenses	n/a	n/a	Yes
34	Navigation	Software — updating of self-contained, instrument panel-mounted software, excluding automated flight control systems and transponders, and including update of non-required instruments/equipment	Yes	Yes	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	Yes	Yes	Yes
		Self-contained data logger — installation, data restoration	Yes	Yes	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	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
52	Doors	Doors — removal and reinstallation	Yes	Yes	Yes
53	Fuselage	Upholstery, furnishing — minor repairs which do not require disassembly of primary structure or operating systems, or interfere with control systems	Yes	Yes	Yes
56	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
57	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

ATA	Area	Task	SP	SSPS	SLPS/TMG
71	Power plant installation	Removal or installation of power plant unit including engine and propeller	n/a	Yes	Yes
		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
(A) ENVELOPE			
(1) Fabric repairs — excluding complete panels (as defined in, and in accordance with, the Type Certificate 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) BURNER			
(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
(C) BASKET AND GONDOLA			
(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
(D) FUEL CYLINDER			
(18) Liquid valve — replacement of O-rings in the outlet	Yes	Yes	No
(E) INSTRUMENTS AND EQUIPMENT			
(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

Area and task		Hot-air airship	Hot-air balloon	Gas balloon
(F) ENGINES				
(21)	Cleaning and lubrication not requiring disassembly of other than non-structural items, such as cover plates, cowlings and fairings	Yes	n/a	n/a
(21A)	Cowling removal and refitment not requiring removal of the propeller	Yes	n/a	n/a
(22)	Fuel and oil strainers and/or filter elements — removal, cleaning and/or replacement	Yes	n/a	n/a
(23)	Batteries — replacement and servicing (excluding servicing of Ni-Cd batteries)	Yes	n/a	n/a
(24)	Propeller spinner — removal and installation for inspection	Yes	n/a	n/a
(25)	Power plant — removal or installation of power plant unit including engine and propeller	Yes	n/a	n/a
(26)	Engine chip detectors — removal, checking and replacement	Yes	n/a	n/a
(27)	Ignition spark plug — removal or installation and adjustment including gap clearance	Yes	n/a	n/a
(28)	Coolant fluid — replenishment	Yes	n/a	n/a
(29)	Engine controls — minor adjustments of non-flight or propulsion controls whose operation is not critical for any flight phase	Yes	n/a	n/a
(30)	Engine instruments — removal and replacement	Yes	n/a	n/a
(31)	Lubrication oil — changing or replenishment of engine oil and gearbox fluid	Yes	n/a	n/a
(32)	Fuel lines — replacement of prefabricated hoses with self-sealing couplings	Yes	n/a	n/a
(33)	Air filters (if installed) — removal, cleaning and replacement	Yes	n/a	n/a