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Airworthiness Inspectorate

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Aircraft Maintenance Programme Development and Approval (CMPA and Other-Than-CMPA falling under Part-M)

Contents Page

Contents Page	2
Revision Highlights	3
Introduction	4
AMP Development responsibilities.....	4
Indirect Approvals and Transfer of Responsibilities	6
 SECTION A – COMPLEX MOTOR-POWERED AIRCRAFT	 7
1. General Principles	7
2. Maintenance Programme Content.....	8
4. Variations and Extensions (Tolerances)	9
5. Engine Health Monitoring	9
7. Corrosion Prevention & Control Programme	10
8. Aircraft Storage Programme	10
9. Flight Recorders	11
10. Indirect Approval of Aircraft Maintenance Programmes	11
11. Review of the AMP	12
12. Maintenance Programme Effectiveness	12
13. Reliability Programmes.....	12
14. Escalations	13
15. TM Civil Aviation Directorate additional requirements and policy	14
16. Administrative Provisions	18
 SECTION B – OTHER-THAN-COMPLEX MOTOR POWERED Aircraft not falling under Part-ML	 19
2. General Principles	19
3. Permitted Variations To Maintenance Periods	20
4. TM Civil Aviation Directorate additional requirements and policy	21
5. Administrative Provisions	24
Appendix 1 – Extract from EASA SIB 2011-15	25

Revision Highlights

Date	Revision	Comments
24/04/2020	Issue 1	Revision of IAN 03A to cover CMPA and other-than-CMPA under Regulation (EU) 1321/2014 Annex I Part-M only. This IAN supersedes IAN 03 Issue 10, provides AMP development responsibilities guidance as per Part-M, tolerances and escalations of maintenance intervals as well as minor changes in the National requirements table 1 and 2.

Introduction

This Notice is issued to identify the Transport Malta Civil Aviation Directorate (TM CAD) interpretation of the requirements of M.A.302 and the respective means of compliance and to provide some further clarifications and guidance in complying with the requirements and establish national requirements.

These interpretations, clarifications and instructions shall be referred to by owners, operators, Continuing Airworthiness Management Organisations and Maintenance Organisations when developing and presenting for TM CAD approval specific maintenance programmes.

Section A of this Notice, covers the requirements for 'Complex motor Powered Aircraft'.

Section B covers the requirements for Other-than-Complex Motor-Powered Aircraft not falling under Part-ML.

NOTE: for aircraft subject to Regulation (EU) 1321/2014 Annex Vb (Part-ML) refer to Information advisory Notice (IAN) No. 03B

Regulation (EU) No [1321/2014](#) Annex I (Part-M) M.A.302 requires that Aircraft Maintenance Programmes (AMP's), must establish compliance with the instructions issued by the competent authority and the instructions for continuing airworthiness issued by the holders of Type Certificate (TC), Restricted Type Certificate (RTC), supplementary type certificate (STC), major repair design approval, ETSO authorisation or any other relevant approval issued under Regulation (EU) No [748/2012](#) and its Annex (Part-21).

It also requires that AMP's and any amendments shall be approved by the competent authority. AMC to M.A.302 describes the acceptable means which may be used by aircraft owners/operators in order to achieve compliance with the requirements of M.A.302.

Commission Regulation (EU) No [965/2012](#) Part-CAT.GEN.MPA and its AMCs include provisions for scheduled inspections and checks for operational equipment installed on aircraft operated for Commercial Air Transport.

AMP Development responsibilities

For CMPA and other-than-CMPA being operated by:

- an air carrier licensed in accordance with Regulation (EC) No 1008/2008,

the operator's CAMO is responsible for the AMP. The AMP development may be contracted to another organization under the control of the operator's CAMO.

For CMPA used

- for commercial specialised operations;
- for CAT operations other than those performed by air carriers licensed in accordance with Regulation (EC) No 1008/2008; or
- by commercial Approved Training Organisations ('ATO') and Declared Training Organisations ('DTO') referred to in Article 10a of Regulation (EU) No 1178/2011,

The operator shall ensure that the tasks associated with continuing airworthiness are performed by a CAMO approved in accordance with Annex Vc (Part-CAMO) or Part-M Subpart G;

This means that the operator's Part-CAMO/Part-M Subpart G is responsible for the AMP. The AMP development may be contracted to another organization under the control of the operator's Part-CAMO/Part-M Subpart G.

When the operator is not approved in accordance with Annex Vc (Part-CAMO) or Part-M Subpart G, it shall conclude a written contract as regards the performance of those tasks in accordance with Appendix I to Part-M (Annex I) with an organisation approved in accordance with Annex Vc (Part-CAMO) or Part-M Subpart G (CAMO) .

The CAM tasks here above include the responsibility for the AMP and AMP development.

For **CMPA** operated in accordance with Annex VI to Regulation (EU) No 965/2012 **Part-NCC** the owner shall ensure that the tasks associated with continuing airworthiness are performed by a CAMO approved in accordance with Annex Vc (Part-CAMO) or Part-M Subpart G;

This means that the owner Part-CAMO/Part-M Subpart G is responsible for the AMP.

When the owner is not approved in accordance with Annex Vc (Part-CAMO) or Part-M Subpart G, it shall conclude a written contract as regards the performance of those tasks in accordance with **Appendix I to Part M** with an organisation approved in accordance with Annex Vc (Part-CAMO) or Subpart G of this Annex (Part-M);

This means that the AMP development may be contracted by the owner to another Part-CAMO/Part-M Subpart G.

For other-than-CMPA used:

- for commercial specialised operations or
- for CAT operations other than those performed by air carriers licensed in accordance with Regulation (EC) No 1008/2008, or
- by commercial ATOs and commercial DTOs referred to in Article 10a of Regulation (EU) No 1178/2011 the tasks associated with continuing airworthiness are performed by a CAMO approved in accordance with Annex Vc (Part-CAMO) or
- Part-M Subpart G, or a combined airworthiness organisation ('CAO') approved in accordance with Annex Vd (Part-CAO);

This means that the operator's Part-CAMO/Part-M Subpart G is responsible for the AMP.

When the operator is not approved either in accordance with Annex Vc (Part-CAMO) or Annex I (Part-M Subpart G), or approved in accordance with Annex Vd (Part-CAO), it shall conclude a written contract in accordance with Appendix I to Part M with an Annex Vc (Part-CAMO) or Annex I (Part-M Subpart G) organisation, or a CAO approved in accordance with Annex Vd (Part-CAO);

This means that the AMP development may be contracted by the owner to another Part-CAMO/Part-M Subpart G/ Part-CAO.

For **other-than CMPA** operated in accordance with Annex VI to Regulation (EU) No 965/2012 **Part-NCC**, or used for limited operations, the owner shall attribute the continuing airworthiness tasks referred to in point M.A.301 to a CAMO or CAO through a written contract concluded in accordance with **Appendix I to Part M** which includes the development of the AMP;

When the owner takes responsibility for the CAM of the aircraft he **shall** (still) contract the tasks of the development of and the processing of the approval of the AMP, only if those tasks are performed by a CAMO or CAO through a limited contract concluded in accordance with point M.A.302.

Indirect Approvals and Transfer of Responsibilities

When the continuing airworthiness of aircraft is managed by a CAMO or CAO, or when there is a limited contract between the owner and a CAMO or CAO, the AMP and its amendments may be approved through an indirect approval procedure.

In that case, the indirect approval procedure shall be established by the CAMO or CAO concerned as part of the continuing airworthiness management exposition ('CAME') referred to in point CAMO.A.300 of Annex Vc or point Part-M.A.704 or as part of the combined airworthiness exposition ('CAE') referred to in point CAO.A.025 of Annex Vd and shall be approved by the competent authority responsible for that CAMO or CAO.

The indirect approval procedure shall only be used when the CAMO or CAO concerned is under the oversight of TM CAD, unless a written contract has been concluded in accordance with point 3 of point M.1 transferring responsibility for the approval of the aircraft maintenance programme to the competent authority responsible for the CAMO or CAO.

SECTION A – COMPLEX MOTOR-POWERED AIRCRAFT

1. General Principles

Type Certificate and RTC holders of the aircraft, engines and propellers are legally bound to issue Instructions for Continuing Airworthiness (ICA) for their products. The ICA issued by the aircraft manufacturer will normally cover all installed systems and equipment which are standard part of the aircraft. In case of modifications involving the Supplemental Type Certification process, the same requirements apply for the STC holders. The maintenance programmes developed and presented for TM CAD approval shall be based on the ICA issued by the respective TC, RTC and STC holders, ALI's, ETSO authorization, or Part-21 Design Organisation Approvals as appropriate. In some cases, specific maintenance tasks may not be covered by the ICA, Maintenance Review Board Report (MRBR) or Maintenance Planning Document (MPD) issued by the TC or STC holders. In absence of specific recommendations issued by the TC or STC holder or other equipment manufacturer with regard to aircraft system or component, the instructions identified in **Appendix 1 (Table 1)** of this IAN constitute the TM CAD Requirements. These maintenance tasks should be integrated in the complete maintenance programme and can be included within the scheduled maintenance checks (e.g. as part of the annual inspection) or as out of phase maintenance at the specified intervals.

Other modifications (not involving the STC process) and some repairs may also necessitate development of maintenance tasks to be integrated in the maintenance programme.

Competent authorities may issue mandatory information in the form of Airworthiness Directives or Operating Directives, which in some cases may necessitate introduction of certain maintenance tasks in the AMP affected by the associated AD or OD.

EASA also issues Service Information Bulletins (SIB) related to maintenance tasks and recommendations which may be mandated by the TM CAD.

Any aircraft should only be maintained to one maintenance programme at a given point in time. In case an owner/operator or a CAMO wishes to change from one approved programme to another, a bridging check or inspection may need to be performed in order to implement the change. This may also be the case when developing and approving a maintenance programme when importing used aircraft into Malta.

New or modified applicable mandatory requirements on which the programme is based (e.g. TC/STC holders MRB report, MPD, ATA AMM Chapter 05, ALI's, life limitations, Overhaul Service Bulletins and Letters, ICA and competent authority instructions, including ones introduced through Airworthiness Directives) should be incorporated in the programme as soon as possible. In any case, the maintenance programme details should be reviewed at least annually with, as a minimum, a review of all of the documents on which the programme is based.

For aircraft used for commercial air transport, the programme should also be monitored for its effectiveness in accordance with approved procedures in the CAME. The system principles should be briefly described in the maintenance programme's introduction section with more detailed description to be provided in the associated Continuing Airworthiness Management Exposition (CAME).

In developing the maintenance programme, owners/operators/CAMO should take into account the aircraft anticipated utilisation and nature of operation, e.g. VFR or IFR flights, low

flying, saline or sandy conditions, anticipated flight hours to flight cycles ratio, predominant weather conditions at the place the aircraft will be based and/or operated, specific airspace requirements (e.g. RVSM, ETOPS, AWO, PBN approvals etc.) or airport conditions. In cases whereby manufacturer recommendations are developed assuming specific aircraft annual utilisation and substantially different utilisation is anticipated for the aircraft to which the programme applies, the programme tasks should be assessed and intervals modified as appropriate.

2. Maintenance Programme Content

M.A.302(d) requires that the maintenance programme shall contain details, including frequency, of all maintenance to be carried out, including any specific tasks linked to specific operations. This means that all maintenance tasks to which the aircraft, its engine(s), propeller(s), systems and equipment should be subjected during its whole operational life should be listed, together with their brief description and intervals (frequencies) at which they should be performed. AMC M.A.302 points 4, 5, 6 and Appendix 1 provide description and details about the maintenance programme content.

Maintenance programmes should normally be based on documents such as: maintenance review board (MRB) report, where applicable; maintenance planning document (MPD); relevant ATA chapters of the maintenance manual; service manual or any other supplemental maintenance data/ICA issued by the TC/STC holder, DOA or equipment manufacturer containing maintenance scheduling.

When an aircraft is maintained in accordance with a maintenance programme based on a MRB report process, any associated programme for the continuing surveillance of the reliability, or health monitoring of the aircraft should be considered as part of the aircraft maintenance programme.

In all cases, the documents which form the basis on which the programme had been developed should be identified in the programme's introduction section together with their current revision/amendment status. Individual tasks should bear reference to the source document from which they were derived plus any additional information specific to the tasks, e.g. MRBR, MPD, Low Utilisation MPD, AMM Chapter 05, AD, ALI, CMR*, CMR**, CPCP, CDCCL, EZAP, EWIS, STC ICA, AMMS, RVSM, ETOPS, CAT II AWO, TM CAD recommendations etc.

The aircraft to which the maintenance programme relates should be identified in the introductory section by: manufacturer designation (type and series), manufacturer serial No, Registration Marks. Engine, propeller and APU types should be identified as applicable.

Tasks intervals/frequencies permitted variations, tasks escalation and adjustment procedures should be included in the programme's Introduction section.

Crew authorizations by Part-145 organisations (if applicable) and identification of tasks that can be performed by authorised crew shall be also covered.

The scope of the maintenance to be performed by the authorised crew shall be specified in the aircraft maintenance programme.

The names of all Part-145 authorised crew designated to perform maintenance tasks shall be listed in the maintenance programme.

3. Development of AMP for Aircraft under Storage or Completion

Aircraft that are undergoing storage or completion, do not need to submit an AMP that with all the scheduled maintenance listed in the MPD since they shall be following a storage programme.

They should however list the storage programme that they shall be following (as well as the tasks) for the aircraft and engines and list all repetitive ADs and LLPs. Storage should also indicate if engines and APU shall be kept on the wing or off-wing.

The AMP pre-amble should clearly state that the AMP is only valid whilst the aircraft is under completion or storage. Upon return to service a bridging programme shall be performed and a new AMP based on the bridging programme should be presented to TM-CAD.

Refer also to Heading 8 of this IAN.

4. Variations and Extensions (Tolerances)

Tolerances available in the TC holder's instructions shall be followed and rules transcribed into the AMP. These rules may be applied to the requirement listed in **Appendix 1 (Table 1)**.

5. Engine Health Monitoring

For those engines whose life limit is defined as 'On Condition' or 'condition Monitoring' an Engine Health Monitoring Programme as defined by the TC Holder / OEM should be in place.

The Maintenance Programme should define the type of recommended ECTM programme that is in place, and the method of collection of engine parameters to be followed as per manufacturer recommendations.

All mandatory parameters to be recorded should be included in the AMP considering also the different phases of flight. The frequency of the engine data collection should also be specified. The AMP should also list the manufacturer recommended parameters for the operational approval as listed on their AOC (such as ETOPS, SET-IMC...).

The maximum number of Engine EGT exceedances and in what zone before the engine is sent for overhaul should also be covered in the AMP.

6. Ageing Aircraft

The operator has the responsibility to assess and ensure a high level of structural integrity for their fleet of aircraft, especially in the case of ageing aircraft.

The operator is responsible for the incorporation of the instruction or recommendations of the Repair or Modification approval holder into the AMP.

To discharge this responsibility the operator shall consider performing an assessment/survey of existing repairs and incorporate any necessary inspection programmes. This should be done with the assistance of TC/STC Holders/DA Holders.

EASA has issued [AMC 20-20](#) *Continuing Structural Integrity Programme* which provides guidance in developing continuing structural integrity programmes including provision to preclude Widespread Fatigue Damage.

TC Holders also issue documents to guide and assist the operator in developing and updating a structural inspection programme in the AMP.

7. Corrosion Prevention & Control Programme

As per M.A.302 the Corrosion Prevention and Control Programme (CPCP) is part of the AMP. The CPCP is required for all primary aircraft structures and a baseline is developed during the MRB process. It applies to damage tolerant and safe-life structures.

For those aircraft whose maintenance schedule is not based on an MRB process this is covered in a separate document.

The Baseline Programs recognize three levels of corrosion that are used to assess CPCP effectiveness. Level 1 Corrosion found during the accomplishment of the numbered Corrosion Tasks indicates an effective program. Level 2 Corrosion indicates that program adjustments

are necessary. Level 3 Corrosion is an urgent airworthiness concern requiring expeditious action on the part of the operator to protect its entire model fleet.

Operators may either develop CPCP's tailored to their operations based on the manufacturer's Baseline Programme or adopt the manufacturer's programme in total. Early implementation, especially on older airplanes, of a CPCP is necessary to ensure that pre-existing unsafe levels of corrosion are removed from an operator's fleet.

TM-CAD shall be notified immediately through the occurrence reporting system upon determination of Level 3 Corrosion. Level 2 and Level 3 Corrosion findings must be reported to the manufacturer for evaluation and possible Baseline Program adjustment. The mechanism to report to TM CAD shall follow the guidelines detailed in IAN 01 Occurrence Reporting.

Although the CPCP is initially based on the baseline programme recommended by the TC Holder, the operator shall monitor the effectiveness of the inspection programme. Inspection findings and operating/storage conditions may dictate de-escalation/adjustment of the inspection intervals and/or more intensive inspections.

8. Aircraft Storage Programme

The AMP should make reference to an aircraft storage programme which has procedures for placing the aircraft (airframe and engines) in various levels of preservation that shall be put in place during periods of inactivity, and for de-preserving the aircraft when placing it back in service. Procedures should also be in place for documenting these actions.

Recommendations are usually found in AMM ATA10, 71 and Engine ESM.

9. Flight Recorders

Part-CAT.GEN.MPA.195 (b) covers the requirement for inspection and checking of flight recorders for **aircraft operated for CAT**.

Part-NCC.GEN.145 (b) covers the requirement for inspection and checking of flight recorders for **non-commercial air operations with complex motor powered aircraft**.

Part-SPO.GEN.145 (b) also covers requirements for checking of recorders in **complex motor-powered aircraft operated for specialised activities** (aerial work).

AMC1 CAT.GEN.MPA.195(b) has been amended by [Annex I to ED Decision 2015/021/R](#). This amendment has to be taken into consideration when developing the aircraft maintenance programme.

The requirements found in the Part-CAT AMCs to this regulation are very much in keeping with the TM CAD long-time policies on CVR and FDR testing and checking. However the operator can avail from certain exemptions from scheduled inspections of FDRs and CVRs on account of redundancy of equipment installed on the aircraft and the Flight Data Monitoring programme of the operator. The conditions found in **AMC1 CAT.GEN.MPA.195 (b)** have to be met for such exemptions.

It is to be noted that data link recording may be checked as part of CVR testing. In case of any doubts, the OEMs should be contacted for verification.

FDR and CVR malfunction occurrences, recurrent reliability issues and recording quality deficiencies should be reported to the competent authority and to the TC or STC Holder.

Dispatch with any known recording failure of the CVR or of FDR required parameter(s) should not be authorised, unless it is done in accordance with the provisions of the operator's approved Minimum Equipment List.

10. Indirect Approval of Aircraft Maintenance Programmes

Indirect approval of maintenance programmes shall be managed in accordance with approved procedures in the CAME or CAE. The procedure in the CAME/CAE should at least contain the following elements:

- Development and control of document;
- Review, assessment and checking of document (refer to AMC M.B.301(c));
- Internal approval of document;
- Authorised personnel to develop, check and approve the document;
- Training and experience requirements for the accomplishment of related tasks;
- Conditions and limitations for indirect approval;
- Interface with TM CAD.

The indirect approval procedure shall not be used when the organisation is not under the oversight of TM-CAD.

11. Review of the AMP

The aircraft maintenance programme shall be reviewed at least annually. This review of the maintenance programme shall be performed:

- by the contracted organisation managing the continuing airworthiness of the aircraft in those cases where the review of the maintenance programme is not performed in conjunction with an airworthiness review.

If the review shows discrepancies on the aircraft linked to deficiencies in the content of the maintenance programme, the person performing the review shall inform the competent authority of the Member State of registry and the owner shall amend the maintenance programme as agreed with such competent authority.

The annual review should take into consideration:

- results from performed maintenance;
- results from the airworthiness review, changes to TC Holders recommendations;
- ALLs from TC Holders;
- changes, repairs and AD's; and
- the declared operator fleet type utilisation and that actually flown. If there is more than $\pm 25\%$ delta, then the Maintenance Programme must be re-evaluated in respect of its effectiveness.

12. Maintenance Programme Effectiveness

The operator should have in place a system to monitor and assess the effectiveness of the maintenance programme based on maintenance and operational experience.

This Continuous Airworthiness Task can be subcontracted as part of the M.A.201(h) Subcontracting of Continuous airworthiness Management Tasks. The collection of data and initial assessment may be made by the sub-contracted organisation; the required actions are to be endorsed by the operator.

Where reliability monitoring is used to establish maintenance programme effectiveness, this may be provided by the sub-contracted organisation and should be specified in the relevant procedures. Reference should be made to the operators approved maintenance programme and reliability programme. Participation of the operator's personnel in reliability meetings with the sub-contracted organisation should also be specified.

13. Reliability Programmes

Part-M.A.302(g) requires that the maintenance programme includes a reliability programme when the maintenance programme is based on Maintenance Steering Group (MSG) logic or is based mainly on condition monitoring. AMC M.A.302(g) and Appendix 1 to AMC M.A.302 and provide extensive guidance on this matter.

For those operators where the fleet of same aircraft type is small, it is encouraged that the operator participates in fleet reliability programmes of the aircraft TC Holder. Reliability meetings should also be held in conjunction with the Airworthiness Inspectorate at agreed intervals, to assess this programme and evaluate the effectiveness of the maintenance programme. Escalations of

scheduled tasks shall be based on reliability programmes and shall be approved directly by TM CAD.

14. Escalations

The AMP should be the subject of periodic review by the schedule keeper/owner and by the TM CAD to ensure that it is updated in line with mandatory requirements; manufacturers recommendations, the demonstrated maintenance need (reliability/occurrence reporting) of the aircraft and its systems. During the early and mid years of the projected aircraft life, it is reasonable to expect that the operator will request escalation of his check intervals to maximise the use of the aircraft, reduce direct maintenance cost and to optimise the applied continued airworthiness tasks.

However, such requests must be based upon sound evaluation principles, data and experience on the type.

Basis for Escalation

The following is a summation of basic considerations to be applied to any escalation scheme, or process that is presented to the TM CAD.

The whole escalation process must be backed by approved and implemented organisation procedures, personnel, expertise, and sound substantiation data in the form of valid reliability data and reporting system. This must be supplemented with a scheduled maintenance check/finding analysis and continued review. This will ensure that the applied maintenance continues to be valid in light of aircraft operating experience.

Escalations should only be considered if the operator can demonstrate that (typically) in excess of 90% of the current approved check framework intervals are being utilised, on a regular basis. Any usage figure below this is not deemed adequate justification for any escalation and could trigger questions concerning the suitability of the current maintenance schedule and the declared annual utilisation it is based upon.

Fleet check findings/sample review in support of any proposed escalation must be agreed with the TM CAD. Typically this should be from no less than 15% of the aircraft fleet, covering 3 successive representative checks.

Careful consideration must be given to MRB Safety Tasks (MSG 3 Route 5 and 8), CMR tasks, airworthiness limitations, safe life items, fatigue and damage tolerant tasks, together with the aircraft modification standard in respect of Service Bulletin and Airworthiness Directive compliance.

The impact upon all MRB Precluded Maintenance Tasks must be considered, based upon the original interval determined by the MRB Working Group. Refer to the TC Holder MRBR.

Check interval escalation must be compatible with all lower order check intervals, such that overall control is not compromised and out of phase issues (this relates to the lower order check and task intervals being logically divisible within the higher check intervals) are minimal.

The escalation of any MRBR Zonal Task must also be very carefully evaluated. This is because many individual Systems & Powerplant tasks will be credited within the Zonal programme, such tasks are referred to as "Precluded Tasks". A check should be made against all the MRBR listed precluded tasks and intervals to ensure that they will be compatible with the new task interval.

Check interval de-escalation must also be a significant feature of any operator's scheme, such that ageing aircraft and system considerations are taken into account. This will also be applicable and appropriate; if negative in-service feedback proves that operational reliability has been significantly degrading, as a direct result of the revised check interval/framework.

The final escalated check interval must be supported and endorsed by the Manufacturer.

Any agreed check framework escalation, once approved, should be applied to the whole operator's fleet, as covered by the approved maintenance schedule. This is to ensure that the reliability data from the new intervals is very quickly available and continues to support/validate the new check intervals. Obviously, if the escalation is quite large and complex, the operator might have to approach the TM CAD to agree a transition package to transfer aircraft onto the new check intervals, over a set time scale.

15. TM Civil Aviation Directorate additional requirements and policy

In absence of specific recommendations issued by the TC or STC holder or other equipment manufacturer the maintenance tasks identified in the **Table 1** below should be used by the owners/operators and CAMO's when developing aircraft maintenance programmes.

Terminology

Inspection

A visual check performed externally or internally to detect unsatisfactory conditions/discrepancies using, where necessary, inspection aids (mirrors, torches, magnifying glasses etc.) Surface cleaning and removal of panels, covers and fabric may be required.

Check

Verification of compliance with the instructions specified in the maintenance data.

Operational Check

A test used to determine that a system or component or any function thereof is operating normally. This is usually performed by operating the system or the component on the aircraft either in normal or in test mode.

Functional Check

A detailed examination of a complete system, sub-system or component to determine if operating parameters are within limits of range of movement, rate of flow, temperature, pressure, revolutions per minute, degrees of travel, etc., as specified in the appropriate maintenance data. Parameters are usually measured and recorded. External test equipment is usually used.

Bench test

Functional check of a component off the aircraft using ground testing/laboratory equipment.

Table 1 - Maintenance tasks and intervals

Permitted tolerances to the tasks in this table are subject to the rules detailed in the TC holder's instructions and in the AMP.

No	Task	Nature of Maintenance	Interval
1	Lead-acid battery capacity test	Bench test	12 months
2	Nickel-cadmium battery capacity test	Bench Test	12 months
3	Compass swing (Note 1)	Functional check	36 months/ 24 months
4	Airspeed calibration (Note 2)	Calibration	24 months
5	Altimeter calibration (Note 2)	Calibration	24 months
6	Pitot/static system leak check	Functional check/Calibration	24 months
7	Hydrostatic test of pressure vessels (Note 3)	Inspection & bench check	60 months
8	Flexible fuel and oil hoses pressure test.	Inspection & bench check	72 months Repeat 36 months
9	Fire extinguisher content by weight	Check	12 months
10	Ground function pressurisation check	Functional check	36 months
11	Cabin heat exchanger pressure test	Check	12 months
12	First Aid Kit contents	Check	12 months
13	Over/under voltage system warnings. Load sharing.	Operational check	12 months
14	Ground operable circuits, manually operated circuit breakers.	Operational check	12 months
15	HF transceiver	Operational check	12 months
16	ADF receiver (Note 4)	Functional check	12 months
17	ILS receiver (Note 5)	Functional check	12 months
18	VOR receiver (Note 6)	Functional check	12 months
19	Marker (Note 7)	Functional check	12 months
20	DME (Note 8)	Functional check	12 months
21a	Transponder (Note 9)	Functional check	12 months
21b	Mode S Transponder (Note 15)	Functional check	24 months
22	Radio altimeter	Operational check	12 months
23	Weather radar	Operational check	12 months
24	Satellite navigation (GPS)	Operational check	12 months
25	Audio/intercom including emergency operation	Operational check	12 months

26	FDR read-out (data download) (Note 10,14,17) (operational checks and evaluations)	Check	12 months
	If the FDR records on magnetic wire or uses FM technology	Check	3 months
	If the FDR recorder is SSD or is fitted with continuous monitoring for proper operation (Note 18, 19)	Check	24 months
27	FDR system (Note 10,14)	Calibration	5 years
28	When no Aural & Visual means are available for Preflight checking of FDR for proper recording	Operational Check	7 days of operation
29	Data Link recording intelligibility check (Note 10) (operational checks and evaluations)	Check	5 years
30	FDR airspeed and altitude discrete sensors (Note 10)	Calibration	2 years
31	CVR intelligibility check (Note 10,14,17) (operational checks and evaluations)	Check	12 months
32	Emergency Locator Transmitters Verification of the beacon registration.	Verification	12 months
32A	Emergency Locator Transmitters Testing (Note 11)	Inspection & test	12 months
32B	Battery and Transmitter overhaul	ELT Manufacturers Recommendations	
33	Auto pilot/Flight director	Operational check	12 months
34	Instruments and indicators (Note 12)	Inspection & operational check	12 months
35	VHF transceiver (Note 13)	Functional check	36 months
36	HF transceiver (Note 13)	Functional check	36 months
37	Aircraft Weight & Balance (Note 16)	Aircraft weighing	4/5 years

Notes:

1. Applies for remote and stand-by magnetic compasses. For aircraft in which magnetic compass is used as means of primary navigation device – 24 months. For aircraft in which magnetic compass is used as means of supplemental navigation device - 36 months. Stand-by magnetic compass – 36 months.
2. Calibration in-situ is permitted. Includes stand-by units. For further information on Altitude Reporting Equipment and Transponder System Maintenance and inspection practices please refer also to [FAA AC 43-6D](#).
3. Including fire extinguisher vessels. Refer to [EASA SIB No: 2015-11](#)
4. Using stations of known bearing for checking accuracy. Check audio signal on all bands.
5. With a field test set, including flag warnings, accuracy, sense, course width and audio.
6. With a field test set, including flag warnings, radial resolving, RMI accuracy at 90° intervals.
7. With a field test set, including 3-tone operational check, high/low sensitivity.
8. With a field test set, including range accuracy, audio.
9. With a field test set, including frequency tolerance, side lobe suppression, mode “C”.

10. Prior to the first flight of the day, the built-in test features for the flight recorders and flight data acquisition unit (FDAU), when installed, shall be monitored by manual and/or automatic checks. Refer to Eurocae Document ED-112 and [EASA SIB No 2009-28R1](#)

11. For aircraft that do not have a maintenance program based on a Maintenance Review Board (MRB) Report accomplish a self-test of Locator Beacons as required by the manual of the beacon manufacturer, In the absence of TC/STC holders Instructions for Continued Airworthiness (ICA) to address the correct functioning of the beacons at appropriate intervals an annual visual inspection of the ELT combined with a test and an inspection in accordance with the Appendix 1 of [EASA SIB 2019-09](#) shall be implemented.

Reference to the ELT installation/operations manual from the manufacturers' of the ELT an should be made. Ensure that the manufacturer's recommendations ELT test and inspections addresses the following aspects:

- ELT installation has not degraded (attachment to the aircraft structure, connectors, cables, antennas);
- absence of battery defect (absence of leak, vent, deformation, trace of heating);
- if the ELT is fitted in or attached to an article intended for floatability: absence of wear, puncture of the article fabrics that may affect the floating capability;
- g-switch operation;
- transmitted power and frequencies.
- **Please refer also to [FAA AC 91-44A Section 9](#) further information.**

12. Applies to all instruments and indicators. Check for satisfactory condition, mounting, marking and operation (on ground).

13. With a field test. Frequency tolerance is to be checked only if recommended by the equipment manufacturer.

14. In case of a DFDR/SSCVR consult with the AI if maintenance requirements diverge significantly from Tasks 26,27,28,29.

15. Refer to [EASA SIB No 2011-15](#) recommendations for ground testing and Appendix I to this IAN testing.

16. For CAT operated aircraft please refer to Air OPS Section 3 - **CAT.POL.MAB.100** Mass and balance, loading.

17. Unless the conditions of Air OPS Section 3 - **CAT.GEN.MPA.195(b)** are met.

18. In the case of an aircraft equipped with two solid-state flight data and cockpit voice combination recorders, where;

- i) The flight recorder systems are fitted with continuous monitoring for proper operation, and
- ii) The flight recorders share the same flight data acquisition,

a comprehensive inspection of the recording needs only to be performed for one flight recorder position. The inspection of the recordings should be performed alternately so that each flight recorder position is inspected at time intervals not exceeding four years.

19. Where all of the following conditions are met, the inspection of the FDR recording is not needed:

- i) The aircraft flight data are collected in the frame of a flight data monitoring (FDM) programme;
- ii) The data acquisition of mandatory flight parameters is the same for the FDR and for the recorder used for the FDM programme;
- iii) An inspection similar to the inspection of the FDR recording and covering all mandatory flight parameters is conducted on the FDM data at time intervals not exceeding two years; and
- iv) The FDR is solid-state and the FDR system is fitted with continuous monitoring for proper operation.

16. Administrative Provisions

Owners/operators and CAMO's shall submit aircraft maintenance programmes or amendments/revisions thereof for TM CAD approval accompanied by a cover letter. The cover letter should contain a statement on how compliance with the respective Part-M requirements and the provisions of this IAN was achieved. They may be requested, if found necessary, to submit copies of the respective documentation used, on which the programme development was based (electronic format may be acceptable) or to provide access to such documentation.

Following the approval of the maintenance programme, copies of the document have to be distributed as per distribution list. A copy of the document has to be submitted to the Airworthiness Inspectorate for reference.

SECTION B – OTHER-THAN-COMPLEX MOTOR POWERED Aircraft not falling under Part-ML

1. Introduction - Part-ML

Part-ML applies to the following other than complex motor powered aircraft:

- (a) aeroplanes of 2 730 kg maximum take-off mass or less;
- (b) rotorcraft of 1 200 kg maximum take-off mass or less, certified for a maximum of up to 4 occupants;
- (c) other ELA2 aircraft.

NOTE: for aircraft subject to Regulation (EU) 1321/2014 Annex Vb (Part-ML) refer to Information advisory Notice (IAN) No. 03B

Where aircraft referred to points (a), (b) and (c) of the first subparagraph are listed in the air operator certificate of an air carrier licensed in accordance with Regulation (EC) No 1008/2008, the requirements of Annex I (Part-M) shall apply. Please refer to the Introduction of this IAN 03a.

2. General Principles

Type Certificate and STC holders of the aircraft, engines and propellers are legally bound to issue Instructions for Continuing Airworthiness (ICA) for their products. The ICA issued by the aircraft manufacturer will normally cover all installed systems and equipment which are standard part of the aircraft. In case of modifications involving the Supplemental Type Certification process, the same requirements apply for the STC holders.

The maintenance programmes developed and presented for TM CAD approval shall be based on the ICA issued by the respective TC, RTC and STC holders or Part-21 Design Organisation Approvals as appropriate. In some cases, specific recommended maintenance tasks may not be issued by the TC or STC holders. In absence of specific recommendations issued by the TC or STC holder or other equipment manufacturer with regard to aircraft system or component, the instructions identified in **Table 2** of this IAN constitute the National Requirements. These maintenance tasks should be integrated in the complete maintenance programme and can be included within the scheduled maintenance checks (e.g. as part of the annual inspection) or as out of phase maintenance at the specified intervals.

Other modifications (not involving the STC process) and some repairs may also necessitate development of maintenance tasks to be integrated in the maintenance programme.

Competent authorities may issue mandatory information in the form of Airworthiness Directives or Operating Directives, which in some cases may necessitate introduction of certain maintenance tasks in the AMP affected by the associated AD or OD.

EASA also issues Service Information Bulletins (SIB) related to maintenance tasks and recommendations which may be mandated by the TM CAD.

Any aircraft should only be maintained to one maintenance programme at a given point in time. In case an owner/operator or a CAMO wishes to change from one approved programme to another, a bridging check or inspection may need to be performed in order to implement the change. This may

also be the case when developing and approving a maintenance programme when importing used aircraft into Malta.

New or modified applicable mandatory requirements on which the programme is based (e.g. TC/STC holders, ATA AMM Chapter 05, Service Manual, ALI's, ETSO authorization, life limitations, ICA and competent authority instructions, including ones introduced through Airworthiness Directives) should be incorporated in the programme as soon as possible. In any case, the maintenance programme details should be reviewed at least annually with, as a minimum, a review of all of the documents on which the programme is based.

For aircraft used for commercial air transport, the programme should also be monitored for its effectiveness in accordance with approved procedures in the CAME. The system principles should be briefly described in the maintenance programme's introduction section with more detailed description to be provided in the associated Continuing Airworthiness Management Exposition (CAME).

In developing the maintenance programme, operators/CAMO/CAO should take into account the aircraft anticipated utilisation and nature of operation, e.g. VFR or IFR flights, low flying, saline or sandy conditions, anticipated flight hours to flight cycles ratio, predominant weather conditions at the place the aircraft will be based and/or operated, specific airspace requirements or airport conditions. In cases whereby manufacturer recommendations are developed assuming specific aircraft annual utilisation and substantially different utilisation is anticipated for the aircraft to which the programme applies, the programme tasks should be assessed and intervals modified as appropriate.

3. Permitted Variations To Maintenance Periods

In the absence of any instructions from the TC holders the following can be implemented.

i) Items Controlled by Flying Hours

<u>Period Involved</u>	<u>Maximum Variation of the Prescribed Period</u>
All	10%

(ii) Items Controlled by Calendar Time

<u>Period Involved</u>	<u>Maximum Variation of the Prescribed Period</u>
6 month check	10% (18 days)
Annual Check	30 days

The tolerances shall be of non cumulative basis, i.e the next compliance time shall be determined from the initial due date.

These same rules may be applied to the requirements listed in **Table 2**.

Conditions

The Annual Check may be anticipated for a maximum period of 30 days however the interval between annual checks shall not exceed 12 Months. Thus, for example, where the full 30 days is invoked, the following Annual Check would become due 12 months after the completion of the Annual Check which was anticipated. The period by which the Annual Check was

anticipated and the date of the next Annual Check shall be recorded in the appropriate log book.

Items Controlled by More Than One Limit. For items controlled by more than one limit, e.g. items controlled by flying hours and calendar time, the more restricted limit shall be applied.

Variations shall be permitted only when the periods prescribed within the AMP cannot be complied with due to circumstances, which could not reasonably have been foreseen by the Operator or by the contracted Maintenance Organisation.

Particulars of every variation so made shall be entered in the appropriate Log Book(s) and also the CAMO records.

The variations permitted do not apply to those components for which an ultimate (scrap) or retirement life has been prescribed (e.g. primary structure, CMR tasks, ALI's, Airworthiness Directive , or components with limited fatigue lives and high energy rotating parts of which containment is not provided).

4. TM Civil Aviation Directorate additional requirements and policy

In absence of specific recommendations issued by the TC or STC holder or other equipment manufacturer the maintenance tasks identified in the **Table 2** below should be used by the owners/operators and CAMO's when developing aircraft maintenance programmes.

Terminology

Inspection

A visual check performed externally or internally to detect unsatisfactory conditions/discrepancies using, where necessary, inspection aids (mirrors, torches, magnifying glasses etc.) Surface cleaning and removal of panels, covers and fabric may be required.

Check

Verification of compliance with the instructions specified in the maintenance data.

Operational Check

A test used to determine that a system or component or any function thereof is operating normally. This is usually performed by operating the system or the component on the aircraft either in normal or in test mode.

Functional Check

A detailed examination of a complete system, sub-system or component to determine if operating parameters are within limits of range of movement, rate of flow, temperature, pressure, revolutions per minute, degrees of travel, etc., as specified in the appropriate maintenance data. Parameters are usually measured and recorded. External test equipment is usually used.

Bench test

Functional check of a component off the aircraft using ground testing/laboratory equipment.

Table 2 - Maintenance tasks and intervals

Permitted tolerances to the tasks in this table are subject to the rules detailed in the TC holder's instructions and in the AMP are followed.

No	Task	Nature of Maintenance	Interval
1	Lead-acid battery capacity test	Bench test	12 months
2	Nickel-cadmium battery capacity test	Bench Test	12 months
3	Compass swing (Note 1)	Functional check	36 months/ 24 months (Note1)
4	Airspeed Indicator calibration (Note 2)	Calibration	24 months
5	Altimeter calibration (Note 2)	Calibration	24 months
6	Pitot/static system leak check	Functional check/Calibration	24 months
7	Hydrostatic test of pressure vessels (Note 3)	Inspection & bench check	60 months (Note 3)
8	Flexible fuel and oil hoses pressure test.	Inspection & bench check	72 months Repeat 36 months
9	Fire extinguisher content by weight	Check	12 months
10	Cabin Carbon Monoxide Detector	Check	12 months
11	First Aid Kit contents	Check	12 months
12	Over/under voltage system warnings. Load sharing.	Operational check	12 months
13	Ground operable circuits, manually operated circuit breakers.	Operational check	12 months
14	ADF receiver (Note 4)	Functional check	12 months
15	ILS receiver (Note 5)	Functional check	12 months
16	VOR receiver (Note 6)	Functional check	12 months
17	Marker (Note 7)	Functional check	12 months
18	DME (Note 8)	Functional check	12 months
19	Transponder (Note 9)	Functional check	12 months
20	Mode S Transponder (Note 13)	Operational check	24 months
21	Weather radar	Operational check	12 months
22	Satellite navigation (GPS)	Operational check	12 months
23	Audio/intercom including emergency operation	Operational check	12 months
24	Emergency Locator Transmitters Testing (Note 15)	Inspection & test	12 months
24A	ELT (Battery and Transmitter overhaul) (Note 10)	ELT Manufacturers' Recommendations Refer to Installation Manuals	

25	Auto pilot/Flight director	Operational check	12 months
26	Instruments and indicators (Note 11)	Inspection & operational check	12 months
27	VHF transceiver (Note 12)	Functional check	36 months
28	Aircraft Weight & Balance	Aircraft weighing	5 years
29	Carefully examine all cable terminal fittings that attach to all turnbuckles for corrosion and/or cracking (Note 14)	Inspection	12 Months

Notes:

1. Applies for remote and stand-by magnetic compasses. For aircraft in which magnetic compass is used as means of primary navigation device – 24 months. For aircraft in which magnetic compass is used as means of supplemental navigation device - 36 months. Stand-by magnetic compass – 36 months.
2. Calibration in-situ is permitted. Includes stand-by units. For further information on Altitude Reporting Equipment and Transponder System Maintenance and inspection practices please refer also to [FAA AC 43-6D](#).
3. Including fire extinguisher vessels. Refer to [EASA SIB No: 2015-11](#) and vendor recommendations.
4. Using stations of known bearing for checking accuracy. Check audio signal on all bands.
5. With a field test set, including flag warnings, accuracy, sense, course width and audio.
6. With a field test set, including flag warnings, radial resolving, RMI accuracy at 90° intervals.
7. With a field test set, including 3-tone operational check, high/low sensitivity.
8. With a field test set, including range accuracy, audio.
9. With a field test set, including frequency tolerance, side lobe suppression, mode “C”.
10. Reference to the ELT installation/operations manual from the manufacturers’ of the ELT should be made
11. Applies to all instruments and indicators. Check for satisfactory condition, mounting, marking and operation (on ground).
12. With a field test. Frequency tolerance is to be checked only if recommended by the equipment manufacturer.
13. Refer to [EASA SIB No 2011-15](#) or US Title 14 CFR Part 43 Appendix F - recommendations for ground testing and Appendix I to this IAN.
This is also considered to include the MIP task described in ML.A.302(d)(2)(d)
14. Refer to [EASA SIB No 2019-12](#) or US SAIB CE-19-13 – recommendations to aeroplane owners, pilots, operators and manufacturers of an airworthiness concern regarding the risks of cracking and fracturing of flight control cable terminal attachment fittings connected to turnbuckle barrels on small aeroplanes with mechanical flight control cables
15. Reference to the ELT installation/operations manual from the manufacturers’ of the ELT and [EASA SIB 2019-09](#) should be made. Ensure that the manufacturer’s recommendations ELT test and inspections addresses the following aspects:
 - ELT installation has not degraded (attachment to the aircraft structure, connectors, cables, antennas);
 - absence of battery defect (absence of leak, vent, deformation, trace of heating);
 - if the ELT is fitted in or attached to an article intended for floatability: absence of wear, puncture of the article fabrics that may affect the floating capability;
 - g-switch operation;
 - transmitted power and frequencies.

- Verification of the beacon registration.

Please refer also to [FAA AC 91-44A Section 9](#) further information.

5. Administrative Provisions

Owners/operators and CAMO's shall submit aircraft maintenance programmes or amendments/revisions thereof for TM CAD approval accompanied by a cover letter. The cover letter should contain a statement on how compliance with the respective Part-M requirements and the provisions of this IAN was achieved. They may be requested, if found necessary, to submit copies of the respective documentation used, on which the programme development was based (electronic format may be acceptable) or to provide access to such documentation. Following the approval of the maintenance programme, copies of the document have to be distributed as per distribution list. A copy of the document has to be submitted to the Airworthiness Inspectorate for reference.

Appendix 1 – Extract from EASA SIB 2011-15

Testing for correct functionality should include the following items:

- The Mode S 24-Bit aircraft address
- Altitude reporting including the check of the altitude sensor at adequate intervals from ground to the certified altitude ceiling of the aircraft
- Mode S Elementary Surveillance (ELS) & Downlink Aircraft Parameters (DAPs):
 - Aircraft Identification
 - Capability Report
 - Pressure Altitude
 - Flight Status
- Mode S Enhances Surveillance (EHS) & Downlink Aircraft Parameters (DAPs)
 - Magnetic Heading
 - Indicated Airspeed
 - Mach No.
 - Vertical Rate
 - Roll Angle
 - Track Angle Rate or True Airspeed
 - True Track Angle
 - Ground Speed
 - Selected Altitude (and Barometric Pressure Setting where appropriate)

Note 1: Care should be taken, not to disturb the operation of ATC or other aircraft when performing any transponder (or ACAS) related tests. Guidance for the ground testing of transponders can be found in Appendix 1 of this SIB.

Note 2: In case the ramp test equipment indicates an error with the transmission of the data as specified above, or indicates any other type of failure (e.g. out of frequency, power etc), the problem should be corrected prior to the next flight.

Note 3; Detailed information on EHS DAP's may be found in EASA AMC 20-13 - Certification of Mode S Transponder Systems for Enhanced Surveillance.