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Competence Assessment of Continuing Airworthiness Management Organisations (CAMO) Personnel

1. Introduction

With the amendment of Regulation (EU) No 1321/2014 with the publication of Regulation EU Regulation (EU) 2020/270 which entered into force on 24 March 2020, Part-CAMO applicants and approval holders shall tackle competency assessment for CAMO personnel pursuant to Part-CAMO.A.305(g), which states:

The organisation shall establish and control the competency of personnel involved in compliance monitoring, safety management, continuing airworthiness management, airworthiness reviews or recommendations, and, if applicable, issuing permits to fly, in accordance with a procedure and to a standard agreed by the competent authority. In addition to the necessary expertise related to the job function, competency must include an understanding of safety management and human factors principles appropriate to the person's function and responsibilities in the organisation.

Competency and Training Related AMCs

Acceptable Means of Compliance (AMC) and Guidance Material (GM) to Annex Vc (Part-CAMO) to Commission Regulation (EU) No 1321/2014 Issue 1 dated 13 March 2020 provide the main means of compliance and guidance on this topic.

The following are the main AMC and GM to be taken into consideration:

AMC1 CAMO.A.305(g) Personnel requirements delineates the COMPETENCY ASSESSMENT OBJECTIVES of the procedure referred to in Part-CAMO.A.305 (g)

GM3 CAMO.A,.305(g) contains the competency standard of the Safety Manager who is the nominated person responsible for the safety management of the CAMO.

Knowledge background experience of nominated persons is found in **AMC1 CAMO.A.305(c).**

AMC1 CAMO.A.310(a) Airworthiness review staff qualifications include the general considerations related to the qualification of ARS to satisfy the requirements of CAMO.A.310(a) for ARS qualification,

It is to be noted that competence assessment requirements are also covered directly in Regulation (EU) No 1321/2014 **Part-145.A.30(e)** and its AMC, as well as **AMC Appendix III to Part-66 Evaluation of the competence: assessment and assessors.**

2. Scope

The scope of this notice is to provide guidance to CAMO organisations subject to the oversight of TM-CAD (Airworthiness Inspectorate) to formulate competence assessment procedures as part of the Continuing Airworthiness Management Exposition (CAME) to an acceptable standard. This notice should be read in conjunction with the requirements set by EASA regulations and Decisions in particular, in determining the basic or specialised knowledge and experience requirements to be able to perform certain tasks or occupy certain technical and managerial positions within a CAMO.

3. Competence assessment

AMC1 145.A.30(e) states the competence should be defined as a measurable skill or standard of performance, knowledge and understanding, taking into consideration attitude and behaviour.

Appendix II to AMC 66 states that assessment should aim at measuring the competence by evaluating three major factors associated to the learning objectives:

- **Knowledge**
- **Skills**
- **Attitude**

4. Related Definitions

Assessment:
The process of ensuring that individuals are competent to undertake their job roles in accordance with an agreed Standard.

Assessor:
An Assessor judges an individual's performance and evidence against a relevant Standard(s).

Competence:
The ability to perform activities within an occupation to the standards expected within employment. Individuals must provide evidence that they have the required experience, technical skills, knowledge, understanding and behaviour to perform a job role/function and that they apply them consistently, safely and in accordance with procedures and standards.

Knowledge:
Theoretical or practical understanding of a subject.

Experience:
Demonstration of the application of knowledge over a period of time.

Skills:
Proficiency, facility, or dexterity that is acquired or developed through training or experience.

Aptitude:
The individual's inherent ability or tendency in performing certain tasks.

Attitude:
Behaviour towards execution of tasks.

5. CAMO Assessment Procedure

AMC2 CAMO.A.305(g) states:

(a) The organisation should develop a procedure that describes the process for conducting competency assessment of personnel. The procedure should specify:

(1) the persons who are responsible for this process;
(2) when the assessment should take place;
(3) how to give credit from previous assessments;
(4) how to validate qualification records;
(5) the means and methods to be used for the initial assessment;
(6) the means and methods to be used for the continuous control of competency, including to gather feedback on the performance of personnel;
(7) the aspects of competencies to be observed during the assessment in relation to each job function;
(8) the actions to be taken if the assessment is not satisfactory; and
(9) how to record assessment results.

Considerations

An organisation should perform an analysis of the tasks to be performed within a CAMO and the way in which it intends to divide and/or combine these tasks. It should also indicate how it intends to assign responsibilities with the CAMO and also establish the number of man/hours and qualifications needed to perform the tasks.

A way of assigning responsibilities is by first defining a job description or terms of reference for every role/ position and then through the issue of company authorisations.

Competence is a broad term and the concept embodies the ability to transfer skills and knowledge to perform roles within an organisation to an expected standard.

Ideally the assessment should start with a selfassessment by the individual where the individual compiles the evidence of the skills and knowledge to perform the job. The nominated assessor will then review the evidence and the review should also take into account the individual's attitude and aptitude in performing the job. When technical assessments are performed by supervisors, such assessments shall be reviewed by the manager.

Some popular assessment methods include:
- Observation over time through the monitoring of the daily tasks,
- Simulation of tasks,
- Questioning & Testing.

Performance standard and conditions to determine competency and learning objectives of the training should be the basis of competency assessment.

The competency assessment procedure should require that Continuing Airworthiness Manager, Compliance Manager, CAMO technical personnel, airworthiness review staff (ARS) and compliance auditors whether employed or sub-contracted (except for ARS) are assessed for competence. In the case of technical personnel undergoing training, competence shall be assessed on a continuous basis before unsupervised work

commences. Management personnel must take responsibility for maintaining, monitoring and improving the competence of those who directly report to them.

Competency assessments would usually result in a gap analysis identifying and recording training needs as well as on-the-job learning. Thus, an initial and continuation **training plan** should be drawn up giving realistic target dates of what the individual should achieve before the authorisation is issued to perform the job.

Recording of Competency assessment should be kept according to the needs of an organisation and performed on a recurrent basis. Records shall include copies of all documents that attest to qualifications and experience, a competence assessment form and authorisations granted.

As a minimum all staff should be able to demonstrate knowledge of and compliance with the CAMO procedures, as applicable to their duties.

All staff should be able to demonstrate:

- knowledge of, and compliance with, the CAMO procedures, as applicable to their duties.
- an understanding of safety management principles including HF, related to their job function and be trained as per AMC3 CAMO.A.305(g).

The competence assessment should establish that:

(1) Managers are able to properly manage processes, resources and priorities described in their assigned duties, accountabilities and responsibilities in accordance with the safety policy and objectives and in compliance with the applicable requirements and procedures.

(2) Maintenance programme engineers are able to interpret source data (norms, data issued by the holder of a design approval or by the competent authority, etc.) and use them to develop the aircraft maintenance programme.

(3) Engineering staff are able to interpret source data (norms, data issued by the holder of a design approval or by the competent authority, etc.) and use them as needed (e.g. to make work cards). They should also be aware of the operational approvals acquired by the company so that tasks related to a specific approval can be performed accordingly. Eg ETOPS

(4) Planners are able to organise maintenance activities in an effective and timely manner

(5) Compliance monitoring staff are able to monitor compliance with the applicable Regulation and to identify non-compliances in an effective and timely manner so that the organisation may remain in compliance with the applicable Regulation.

(6) Staff who have been designated safety management responsibilities are familiar with the relevant processes in terms of hazard identification, risk management, and the monitoring of safety performance.

(7) All staff are familiar with the safety policy and the procedures and tools that can be used for internal safety reporting.

6. Who Should Assess

All management personnel such as the CAM and Compliance Manager or a group of managerial personnel (e.g. large organisations) should be responsible for the competency assessments of their personnel, i.e. people performing CAMO duties as well as people performing audits. They may rely on appointed supervisors/assessors reports within the organisation as deemed appropriate.

The roles of the Compliance Manager and the Continuing Airworthiness Manager should be self assessed and verified by the Accountable Manager who can determine their performance based on how well the department is running.

7. Training

The competence assessment and training of personnel are complimentary.

AMC4 CAMO.A.305(g) refers to training requirements originating from AMC 20-20 and 22 with regards to EWIS, Ageing aircraft, CDCCL and Fuel Tank Safety**. (IAN 08 and IAN 19 cover these topics and their applicability)**

Personnel involved in AMP development and reliability programmes should have knowledge of or be trained on statistical analysis and reliability method and the applicable methodology used in developing, as part of the instructions for continuing airworthiness (ICA), the manufacturer recommended maintenance programme (such as maintenance steering group logic).

Guidance on Fuel Tank Safety training is provided in **Appendix III to AMC4 CAMO.A.305(g). (IAN 08 covers this topic and its applicability)**

AMC4 CAMO.A.305(g) also covers training of compliance monitoring personnel:
Those responsible for managing the compliance monitoring function should receive training on this task. Such training should cover the requirements of compliance monitoring, manuals and procedures related to the task, audit techniques, reporting, and recording.

GM1 CAMO.A.305(g) covers safety training including HF to CAMO technical personnel including ARS, managers and contracted staff.

GM2 CAMO.A.305(g) contains the TRAINING SYLLABUS FOR INITIAL SAFETY TRAINING of CAMO personnel

1. General/Introduction to safety management and HF
2. Safety Culture/Organisational factors
3. Human error
4. Human performance & limitations
5. Environment
6. Procedures, information, tools and practices
7. Communication
8. Professionalism and integrity
9. Organisation's safety programme

GM3 CAMO.A.305(g) describes the competency criteria of the Safety Manager

COMPETENCY OF THE SAFETY MANAGER

The competency of a safety manager should include, but not be limited to, the following:

(a) knowledge of ICAO standards and European requirements on safety management;
(b) an understanding of management systems, including compliance monitoring systems;
(c) an understanding of risk management;
(d) an understanding of safety investigation techniques and root cause methodologies;
(e) an understanding of HF;
(f) understanding and promotion of a positive safety culture;
(g) operational experience related to the activities of the organisation;
(h) safety management experience.

8. The CAME

The CAME of the organisation shall address the requirements for qualification criteria and competence assessment in heading 2.9 CONTROL OF PERSONNEL COMPETENCY This section shall list the job descriptions including associated minimum requirements for initial and recurrent training.

The competence assessment procedure shall specify:

- Persons responsible for the assessment,
- Means and methods of competence assessment,
- The time period at which the initial assessment shall be performed,
- The frequency at which continuous control of competence including feedback on personnel performance shall be performed,
- Competences to be observed during the assessment in relation with each job function,
- Actions to be taken when assessment is not satisfactory, training gap analysis,
- Recording of training and assessment results (Competence Assessment Form template),
- Issuance of authorisations for non-managerial technical personnel (Company Authorisation Template),
- Person/s responsible for the conservation and management (including any follow-up requirements) of the competence assessment records.

Safety Training shall be covered in Heading 2.6 of Part 2 of the CAME.

9. Customisation

It is acknowledged that one size does not fit all and every organisation works in different scenarios and conditions. The degree and methodology of competency assessment depends on various elements such as:

- extent of the scope of approval of the CAMO,
- the complexity of the work performed,
- the key risk elements associated with the discharged responsibilities and tasks performed,
- The complexity of the operation and aircraft,
- The size of the organisation in terms of workforce and workload,
- The experience and maturity of the personnel,
- CAM sub-contractors and their personnel assessment,

- Management of change (scope, workload, personnel etc) within an organisation,
- Training and experience requirements in the Regulations and EASA Decisions.

Therefore, it is important that the competence assessment procedures take into account these factors to develop a balanced and effective competency assessment and training programmes of CAMO personnel.

The competency assessment process shall be perceived as a technical exercise to be conducted in a transparent, objective and no blame culture towards the personnel assessed.

Appendix I (Aid for Competency Assessment of CAMO personnel) to this IAN provides competencies criteria required for the various technical personnel in a Part-CAMO.

Appendix I - Aid for Competency Assessment of CAMO personnel

Criteria for Competence Assessment of CAMO personnel.

	Continuing Airworthiness Manager	Compliance Monitoring Manager	Safety Manager	CAMO Technical Personnel	Airworthiness Review Staff	Compliance Monitoring Staff
Knowledge						
Knowledge of applicable officially recognised standards	X	X	X	X	X	X
Knowledge of auditing techniques: planning, conducting and reporting		X	X			X
Knowledge of organisation capabilities, privileges and limitations	X	X	X	X	X	X
Knowledge of Part-M, Part-145 and any other relevant regulations	X	X	X	X	X	X
Knowledge of relevant parts of the continuing airworthiness management exposition and procedures	X	X	X	X	X	X
Knowledge of occurrence reporting system and understanding of the importance of reporting occurrences	X	X	X	X	X	X
Knowledge of safety risks linked to the working environment	X	X	X	X	X	X
Knowledge of Fuel Tank Safety when relevant	X	X		X	X	X
Knowledge of CDCCL when relevant	X	X		X	X	X
Knowledge of EWIS when relevant	X	X		X	X	X
Knowledge of Corrosion Prevention Requirements	X			X	X	X
Knowledge of Aging Aircraft Requirements	X			X	X	X
Knowledge of the embodiment policy of modifications and repairs	X			X	X	X
Knowledge of operating rules and maintenance requirements of ETOPS/LROPS if applicable	X			X		X
Knowledge of required certification of components fitted on EASA registered aircraft	X			X		X
Knowledge of maintenance methods	X	X	X		X	
Knowledge of a relevant sample of type(s) of aircraft gained through a formalised training course (at least at a level equivalent to Level 1 General Familiarisation)	X	X	X	X	X	X
Knowledge of Management and Compliance Systems	X	X	X		X	X
Comprehensive knowledge of relevant parts of operational requirements and procedures, AOC holder's operations specifications when applicable and the need for and content of the relevant parts of the AOC holder's operations manual when applicable	X	X	X			X

A relevant engineering/Aeronautical degree or an aircraft maintenance technician qualification with additional education acceptable to the competent authority. Such qualification may be replaced by additional 5 years of experience in continuing airworthiness	X	X	X		X	
Knowledge of design status of aircraft in operation	X			X		
Knowledge of Human Factors issues	X	X	X	X	X	X
....						
Experience						
Practical experience and expertise in the application of aviation safety standards and safe operating practices	X	X	X			
Five Years Relevant Work Experience	X	X	X			
Two Years in an appropriate position in the aeronautical industry	X	X	X			
Auditing Experience		X	X			X
Five Years / Three Years experience in continuing airworthiness (depending on work scope of organisation), of which at least six months in the last 2 years					X	
Position within the approved organisation with appropriate responsibilities					X	
Conducted at least one airworthiness review in the last twelve month period					X	
Safety Management			X			
Skills						
Adequate communication and English literacy skills	X	X	X	X	X	X
Ability to properly record work accomplished	X	X	X	X	X	X
Ability to use information systems	X	X	X	X	X	X
Ability to develop and control an Aircraft Maintenance Programme (AMP)	X			X		
Understanding of Reliability Monitoring	X			X		
Ability to coordinate scheduled maintenance, application of ADs, replacement of service life limited parts and component inspections	X			X		
Ability to coordinate performance of unscheduled maintenance	X			X		
Ability to perform mass and balance calculations and ensure that the mass and balance statement reflects the current status of the aircraft	X			X		
Ability to use and understand maintenance data	X			X	X	
Ability to analyse and review Airworthiness Directives and Service Bulletins	X			X	X	
Analytical and proven auditing skills (objectivity, fairness, open-mindedness, determination,...)		X	X			X
Ability to compile reports		X	X		X	X
Ability to perform root cause analysis and formulate corrective and preventive action	X	X	X			X
Ability to understand the utilisation of MEL and defect deferral	X			X	X	
Ability to understand and verify the utilisation of ATL	X			X	X	
Understanding of conditions for ensuring continuing airworthiness of aircraft and components	X			X	X	
Understanding of personnel authorisations and limitations	X	X	X		X	X
Understanding critical maintenance tasks and ability to identify such tasks	X			X	X	

Ability to determine required qualifications for task performance	X	X		X	X	X
Ability to identify and rectify existing and potential unsafe conditions	X	X	X	X	X	X
Ability to manage sub-contracted organisations	X					
Ability to confirm proper accomplishment of tasks	X	X		X	X	X
Ability to issue work orders	X			X		
Ability to review work reports	X		X	X	X	
Ability to analyse engine health monitoring data	X			X	X	
Ability and knowledge of retention of aircraft continuing airworthiness record system	X			X	X	
Ability to perform an aircraft physical survey					X	
Ability to perform an aircraft documental survey					X	
Understanding of an understanding of management systems, including compliance monitoring systems; an understanding of risk management;	X	X	X			X
Understanding of safety investigation techniques and root cause methodologies	X	X	X			X
Understanding of HF;	X	X	X	X	X	X
Understanding and promotion of a positive safety culture;	X	X	X			X
Aptitude						
Understanding of his/her own human performance and limitations	X	X	X	X	X	X
Ability to prioritise and process the work required	X	X	X	X	X	X
Ability in resolving work-based problems	X	X	X	X	X	X
Ability to analyse statistics, figures and charts	X	X	X	X	X	X
Capacity to digest information from passages of text	X	X	X	X	X	X
Ability to apply engineering principles to problems	X	X	X	X	X	X
Ability to identify errors	X	X	X	X	X	X
Ability to promote the safety and quality policy	X	X	X			X
Ability to improve procedures and systems	X	X	X	X	X	X
...						
Attitude						
Understanding of professional integrity, behaviour and attitude towards safety	X	X	X	X	X	X
Leadership and command abilities	X	X	X			
Judgement and decision making skills	X	X	X	X	X	X
Ability to work in a Team and shows respect towards colleagues	X	X	X	X	X	X
Ability to act responsibly	X	X	X	X	X	X
Shows commitment to tasks at hand	X	X	X	X	X	X
Exhibits perseverance and determination when faced with strenuous tasks	X	X	X	X	X	X
Engages in tasks with a positive attitude and enthusiasm	X	X	X	X	X	X
Maintenance of company philosophy and spirit	X	X	X	X	X	X
Reliability in carrying out duties	X	X	X	X	X	X
...						