

Sofema Aviation Services Competence Discussion Document

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Introduction – Purpose – To implement Enhanced Competence Assessment Program

Background

In order to establish a process to ensure effective management of competence relevant to all affected persons within the business. This means we need to identify – who can assess – how they will assess and to what standard they will assess. Additionally, who will monitor the assessment process and measure the effectiveness of the process – Quality Control (QC) finally how Quality Assurance (QA) Audit the process.

A significant consideration is to focus on the delivery of an “evidenced-based” real and effective system for managing competence across the business

Introduction

The competence of personnel involved in aircraft maintenance process shall be able to cover basic requirements specific to job roles. The assessors will conduct the process in such a way to determine individual’s skills and knowledge in accordance with EASA 145.A.30(e) with the final scope of confirming that personnel can competently perform their duties unsupervised.

Competence Assessment Process

Competence means possession of the required level of knowledge, skills, experience and where required, proficiency in English, to permit the safe performance of the required tasks. Competence assessment, as the measurement of an employee’s performance against an agreed set of standards, must include at least the following:

- § the knowledge and understanding required to carry out a task;
- § the performance indicators to be looked for;
- § the variety of situations across which an employee is expected to perform; and
- § any documented evidence for fulfilling requirements prior authorisation issue.

In addition to the necessary expertise related to the job function, competence must include an understanding of the application of human factors and human performance issues related to the job function.

145.A.30 Personnel requirements

(e) The organisation shall establish and control the competence of personnel involved in any maintenance, development of maintenance programmes,

airworthiness reviews, management and/or quality audits in accordance with a procedure and to a standard agreed by the competent authority.

Authors Note – To agree a “standard” essentially requires such standard to be documented, controlled, managed, and subject to audit

In addition to the necessary expertise related to the job function, competence must include an understanding of the application of human factors and human performance issues appropriate to that person’s function in the organisation.

Authors Note – Human Factors appropriate to the role and responsibility within the organisation – how is this demonstrated for Supervisors & Managers?

‘Human factors’ means principles which apply to aeronautical design, certification, training, operations and maintenance and which seek safe interface between the human and other system components by proper consideration of human performance. ‘Human performance’ means human capabilities and limitations which have an impact on the safety and efficiency of aeronautical operations.

AMC1 145.A.30(e) Personnel requirements

Competence should be defined as a measurable skill or standard of performance, knowledge and understanding, taking into consideration attitude and behaviour.

The referenced procedure requires amongst others that planners, mechanics, specialised services staff, supervisors, certifying staff and support staff, whether employed or contracted, are assessed for competency before unsupervised work commences and competence is controlled on a continuous basis.

Authors Note – Competence is an assessment of 3 primary attributes namely – Knowledge – Skill & Attitude

(f) The organisation shall ensure that personnel who carry out or control a continued-airworthiness non-destructive test of aircraft structures or components, or both, are appropriately qualified for the particular nondestructive test in accordance with the European or equivalent standard recognised by the Agency.

Personnel who carry out any other specialised task shall be appropriately qualified in accordance with officially recognised standards. By derogation from this point, personnel referred to in point (g), points (h)(1) and (h)(2), qualified in category B1, B3 or L in accordance with Annex III (Part-66), may carry out and/or control colour contrast dye penetrant tests.

Competence Assessment Checklist

- a) Identification and Management of personnel to be assessed
- b) Assessment Procedures
- c) Evaluation system
- d) Training Process Driven from Competency Assessment

- e) Management of Qualifications
- f) Ongoing Supervision of the Competence Assessment Process
- g) Selection and Approval of Assessors
- h) Effective Implementation
- i) Examination
- j) Overall Management of the Competency System
- k) Review of Assessment Records for completeness and conformity
- l) Review of all Documentation used to Manage Competence

Competency Assessment Road Map

- 1/ Do you have a Competency Assessment Procedure which is Documented and approved by the Regulator.?
- 2/ Is the Competency Assessment Procedure distributed and available throughout the organisation?
- 3/ Have you identified all the positions within your organisation which require to be competency assessed.?
- 4/ Have Job Descriptions been created for all assessed positions?
- 5/ Is your Assessment Procedure Sufficiently Robust?
 - a) Does it cover all the applicable areas. ? Personal / Current Status / Training Needs.
 - b) Do you have sufficient assessors for your company?
 - c) Are the assessors provided with training and standards guidance?
 - d) Is the standards guidance material, actively managed for effectiveness?
 - e) Is there an Evaluation System to monitor the effectiveness of the Competency Assessment Process
- 6/ Are all records of Competency assessment available and managed effectively?
- 7/ Has the Quality System audited the Competency Assessment Process – Review Findings!
- 8/ Does the (Competency) procedure require to be modified or updated?

Managing the Training requirements for Competence Assessors and Managers.

As with any organizational process, this one too needs to follow the same guidelines:

1/ Effective Management

- a) Effective Documentation of Procedures
- b) Effective Control
- c) Effective Oversight

2/ Who is going to deliver this requirement?

- a) Supervisors?
- b) Managers?
- c) Full-Time Assessors?

3/ What procedures do we want them to follow?

- a) Company Guidance
- b) Standards
- c) Procedures

4/ Who is going to own the Competence Assessment Process?

- a) HR Manager?
- b) Training Management?
- c) Quality Manager?

Effective Process Delivery for Assessors

- 1/ Receive Guidance and Training as appropriate
- 2/ Observe Competence Assessment
- 3/ Perform Competence Assessment under Supervision
- 4/ Nominated as Assessor
- 5/ Periodic Standards Assessment
- 6/ Periodic Audits Quality Control and Quality Assurance?

Additional Factors

For a proper competence assessment of its personnel, the organisation should consider that:

- 1. In accordance with the job function, adequate initial and recurrent training should be provided and recorded to ensure continued competence so that it is maintained throughout the duration of employment/contract.
- 2. All staff should be able to demonstrate knowledge of and compliance with the maintenance organisation procedures, as applicable to their duties.

3. All staff should be able to demonstrate an understanding of human factors and human performance issues in relation to their job function and be trained as per AMC2 145.A.30(e).

4. To assist in the assessment of competence and to establish the training needs analysis, job descriptions are recommended for each job function in the organisation. Job descriptions should contain sufficient criteria to enable the required competency assessment.

Authors Note – Detailed Job Descriptions should be developed for all positions and should show the different criteria by which Mechanics, Certifying Staff, Supervisors & Managers.

5. Criteria should allow the assessment to establish that, among others (titles might be different in each organisation):

— Managers are able to properly manage the work output, processes, resources and priorities described in their assigned duties and responsibilities in a safe compliant manner in accordance with regulations and organisation procedures.

— Planners are able to interpret maintenance requirements into maintenance tasks and have an understanding that they have no authority to deviate from the maintenance data.

— Supervisors are able to ensure that all required maintenance tasks are carried out and, where not completed or where it is evident that a particular maintenance task cannot be carried out to the maintenance data, then such problems will be reported to the 145.A.30(c) person for appropriate action.

In addition, for those supervisors, who also carry out maintenance tasks, that they understand such tasks should not be undertaken when incompatible with their management responsibilities.

— Mechanics are able to carry out maintenance tasks to any standard specified in the maintenance data and will notify supervisors of defects or mistakes requiring rectification to re-establish required maintenance standards.

— Specialised services staff are able to carry out specialised maintenance tasks to the standard specified in the maintenance data.

They should be able to communicate with supervisors and report accurately when necessary.

— Support staff are able to determine that relevant tasks or inspections have been carried out to the required standard.

— Certifying staff are able to determine when the aircraft or aircraft component is ready to release to service and when it should not be released to service.

— Quality audit staff are able to monitor compliance with Part-145 identifying noncompliance in an effective and timely manner so that the organisation may remain in compliance with Part-145.

Competence assessment should be based upon the procedure specified in GM2 145.A.30(e).

Action to Develop a Baseline Checklist against which Competencies may be assessed with specific guidance provided for each Element

1. Knowledge of Human factors, human performance and limitation

- Demonstrate and provide some examples of HF concepts such as the “dirty dozen” in your area of work.

2. Knowledge of relevant parts of the maintenance organization exposition and procedures

- Have you completed the MOE Self Study Examination? – refer to MOE self-study exam on Bulletin Board

3. Knowledge of safety risks linked to the working environment

- Based on your department’s evaluation of hazards and risk assessment, give examples of

your department’s limitations and risk mitigation plan/program.

4. Knowledge of CDCCL when relevant

- Have you attended and passed either Phase 1 (awareness) or Phase 2 (aircraft & fuel system components) initial and continuation training for fuel tank safety? Please provide an example of CDCCL relevant to your area of work.

5. Knowledge of EWIS when relevant

- Have you attended and passed the EWIS training? Briefly explain what is EWIS?

6. Understanding of professional integrity, behaviours, and attitude towards safety

- Demonstrate your level of awareness to where you have personally had to exercise your professional integrity, behaviours, and attitudes towards safety in your work environment with such tools like occurrence reporting, confidential reporting, and SMS to name a few.

7. Understanding of his/her own human performance and limitations

- Give examples of where you have exercised your personal understanding of your human performance and limitation in your work environment (i.e. repetitive tasks/complacency, hearing, attention perception, situational awareness, workload management, fatigue, motivation etc.).

8. Understanding of personnel authorization and limitations

- What is the scope and limitations of your personal authorization as a mandate in the company’s certification register?

- If you are not a stamp holder, what is your level of authorization and limitations in your work area?

9. Ability to use information systems

- Demonstrate your ability to use information systems such as airworthiness data etc., as specific to your area of expertise and responsibility within the operation.

10. Adequate communication and literacy skills

- Have you attained advanced or else properly assessed in English IAW TPM 1-38?
- Demonstrate proficiency in reading technical instruction and translating its meaning.

11. Knowledge of logistics processes

- Demonstrate knowledge of the logistics process as defined in TPM Section 3 (Supply Chain Mgmt), and the impact it has on your operation.

12. Knowledge of organization capabilities, privileges and limitations

- Demonstrate awareness and understanding of the elements of the MOE Section 1.9 (Scope of Work) & Appendix A (Approval & Certifications) pertaining to your area, and the necessary resources to maintain aircraft and/or components.

13. Knowledge of PART-145 and any other relevant regulations

- Have you completed a Part 145 course?
- Demonstrate mastery-level knowledge of all the relevant regulations, such as Part 145, Part M, Part 21 Sub Part (J), Part 66, and Part 147; to include knowing customer EASA requirements.

14. Ability to consider human performance and limitations

- Provide examples that demonstrate knowledge of human limitations and evidence where you acted upon such human limitations.

15. Ability to promote the safety and quality policy

- Demonstrate mastery-level knowledge of the Safety & Quality statement in the MOE and describe how you promote the concepts in your area of work.

16. Resource management and production planning skills

- Explain the different resources needed in planning and executing of a job (manpower, materials, tools, etc.). Also, briefly explain how you will ensure the availability of these resources for the job.

17. Teamwork, decision-making and leadership skills

- Have you attended any form of “Leadership or Supervisory” training?
- Briefly explain how you have applied leadership and decision-making skills in your role as a Manager and/or Supervisors while carrying out operational tasks (i.e.

communication, planning and organizing, negotiation and influencing, coaching/mentoring etc.).

Competence Assessment of Personnel

All personnel who are directly involved with EASA Part 145 maintenance of aircraft components are subjected to an initial and annual competency assessment.

Including the following roles:

- Managers
- Planners / Technical Records
- Supervisors
- Certifying Staff / Support Staff
- Mechanics
- Specialized Service Staff
- Quality Audit Staff
- Additional Staff Requiring Assessment
- Material & Logistic Staff
- Cleaning Staff who work independently

General Notes related to Competence:

- Assessment of personnel can be either scheduled or ad-hoc on request of the Technical Manager or Quality Manager whenever there is a reason to suspect that the performance is not at the required standard.
- When an assessment is scheduled, an Assessment Board is formed of a minimum of 2 members (one Quality Department representative and one approved assessor/specialist from the relevant department/ activity) who will oversee the process and perform the evaluation.
- The assessment may consist of an interview or written exam or a combination of them depending upon the proof of experience, qualifications and experience credentials.
- Under normal circumstances, the competence assessment must be performed before the evaluated person is authorised and allowed to work unsupervised.
- This evaluation must cover theoretical and practical issues depending on the category of personnel assessed. During this phase, the qualifications and experience must also be evaluated in respect to the job description requirements.

Results of the evaluation will be recorded on the Competence Assessment Form

The candidates that failed the assessment may be re-assessed after they receive re-training as recommended by the Assessment Board and presents proof of training.

The levels of performance are defined as follows:

Score 1 – Not Yet Competent – below standards – The employee's performance is obviously below standards.

Score 2 – Not Yet Competent – the need for improvement – The employee's performance is approaching the requirements, but not enough to reach the standard level.

Score 3 – Competent – The employee's performance is at a standard level.

Score 4 – Very Good – The employee's performance is remarkable and clearly outweighs the requirements.

Score 5 – Excellent – The employee's performance is impressively high above the required level.

The assessment shall be considered satisfactory if the average score is 3 points or above for each element

Responsibility of the Assessment

When an assessment is scheduled, a Board of a minimum of 2 members (one QA and one specialist from the relevant section) will be responsible for the process and will make the evaluation.

The assessment is based on an interview and, if applicable, on a written exam.

Under a normal situation, the competence assessment must be performed before a person is allowed to work unsupervised.

The assessment must cover theoretical and practical issues depending on the category of personnel assessed.

During this step, the qualification and experience must also be evaluated with respect to the job description requirements. Results of the evaluation must be recorded on the competence assessment table found in this procedure.

Assessment failure

The candidates that failed the evaluation may be re-evaluated after they received training as recommended by the assessment board and presents proof of training.

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