

## **What's New in Part M – Considering Critical Tasks**

Do not forget the dual aspect of Part M

Means for small private aircraft it is what we do

For large Commercial Aircraft it is what we have to ensure happens (oversight & compliance) Means we need to look at the EASA Part 145 organisations process and procedures to ensure it is fully compliant with all regulatory requirements.

AMC M.A.402(g) Performance of maintenance

(a) To minimise the risk of multiple errors and to prevent omissions, the person or organisation performing maintenance should ensure that:

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

***SAS - Note concerning authorised persons ? – who are they and how are they managed in your organisation ?***

(b) To minimise the possibility of an error being repeated in identical tasks that involve removal/installation or assembly/disassembly of several components of the same type fitted to more than one system, whose failure could have an impact on safety, the person or organisation performing maintenance should plan different persons to perform identical tasks in different systems.

***SAS – Note – Maintenance Planning /Production Planning task – How to ensure this happens HF Considerations ?***

However, when only one person is available, then this person should perform reinspection of the tasks as described in AMC2 M.A.402(h).'

AMC1 M.A.402(h) Performance of maintenance **CRITICAL MAINTENANCE TASKS**  
The following maintenance tasks should primarily be reviewed to assess their impact on safety:

(a) tasks that may affect the control of the aircraft, flight path and attitude, such as installation, rigging and adjustments of flight controls;

(b) aircraft stability control systems (autopilot, fuel transfer);

(c) tasks that may affect the propulsive force of the aircraft, including installation of aircraft engines, propellers and rotors; and (d) overhaul, calibration or rigging of engines, propellers, transmissions and gearboxes.'

#### AMC2 M.A.402(h) Performance of maintenance INDEPENDENT INSPECTION

(a) What is an independent inspection Independent inspection is one possible error-capturing method. It consists of an inspection performed by an 'independent qualified person' of a task carried out by an 'authorised person', taking into account that:

(1) the 'authorised person' is the person who performs the task or supervises the task and assumes the full responsibility for the completion of the task in accordance with the applicable maintenance data;

(2) the 'independent qualified person' is the person who performs the independent inspection and attests the satisfactory completion of the task and that no deficiencies have been found.

The 'independent qualified person' does not issue a certificate of release to service, therefore he/she is not required to hold certification privileges;

#### ***SAS – Note – How will you manage and control the competence of Independent Qualified Persons?***

(3) the certificate of release to service is issued by the 'authorised person' after the independent inspection has been carried out satisfactorily;

(4) the work card system should record the identification of each person, the date and the details of the independent inspection, as necessary, before the certificate of release to service is issued.

#### **(b) Qualifications of personnel performing independent inspections**

(1) When the work is performed by a Part-M Subpart F organisation, then the organisation should have procedures to demonstrate that the 'independent qualified person' has been trained and has gained experience in the specific control systems to be inspected. This training and experience could be demonstrated, for example, by:

(i) holding a Part-66 licence in the same subcategory as the licence subcategory or equivalent necessary to release or sign off the critical maintenance task;

(ii) holding a Part-66 licence in the same category and specific training in the task to be inspected;

or (iii) having received appropriate training and having gained relevant experience in the specific task to be inspected.

***SAS Note How will this be measured and managed within a Part M subpart F organisation ?***

(2) When the work is performed outside a Part-M Subpart F organisation:

(i) the 'independent qualified person' should hold:

(A) a Part-66 licence in any category or an equivalent national qualification when national regulations apply; or

(B) a valid pilot licence for the aircraft type issued in accordance with European Union regulations or an equivalent national qualification when national regulations apply;

(ii) additionally, the 'authorised person' should assess the qualifications and experience of the 'independent qualified person' taking into account that the 'independent qualified person' should have received training and have experience in the particular task.

It should not be acceptable that the 'authorised person' shows to the 'independent qualified person' how to perform the inspection once work has been already finalised.

**(c) How should independent inspection be performed**

Independent inspection should ensure for example correct assembly, locking and sense of operation.

When inspecting control systems that have undergone maintenance, the 'independent qualified person' should consider the following points independently:

(1) all those parts of the system that have actually been disconnected or disturbed should be inspected for correct assembly and locking;

(2) the system as a whole should be inspected for full and free movement over the complete range;

(3) cables should be tensioned correctly with adequate clearance at secondary stops;

(4) the operation of the control system as a whole should be observed to ensure that the controls are operating in the correct sense;

(5) if different control systems are interconnected so that they affect each other, all the interactions should be checked through the full range of the applicable controls; and

(6) software that is part of the critical maintenance task should be checked, for example version and compatibility with the aircraft configuration.

**(d) What to do in unforeseen cases when only one person is available**

(1) Reinspection is subject to the same conditions as the independent inspection is, except that the 'authorised person' performing the maintenance task is also acting as 'independent qualified person' and performs the inspection.

(2) For critical maintenance tasks, reinspection should only be used in unforeseen circumstances when only one person is available to carry out the task and perform the independent inspection. The circumstances cannot be considered unforeseen if the person or organisation has not assigned a suitable 'independent qualified person' to that particular task.

(3) The certificate of release to service is issued by the 'authorised person' after the reinspection has been performed satisfactorily.

(4) The work card system should record the identification of the 'authorised person' and the date and the details of the re inspection, as necessary, before the certificate of release to service is issued.'

GM M.A.402(h) Performance of maintenance Several data sources may be used for the identification of critical maintenance tasks, such as: — information from the design approval holder; — accident reports; — investigation and follow-up of incidents; — occurrence reporting; — flight data analysis; — results of audits; — normal operations monitoring schemes; — feedback from training; and — information exchange systems.'