Terms of Reference

for a rulemaking task

The identification of existing defences in maintenance processes to detect major configuration differences

RMT.0243 (MDM.042) — ISSUE 1 — 09/07/2013

Applicability		Process map	
Affected regulations and decisions:	Commission Regulation (EC) No 2042/2003 ED Decision 2003/19/RM	Rulemaking lead:	R4
Affected stakeholders:	Maintenance organisations CAMOs Air operators Aircraft owners Competent authorities (incl. EASA)	Concept Paper:	No
		Rulemaking group:	No
		RIA type:	Light
Driver/origin:	Safety	Technical consultation during NPA drafting:	Yes
Reference:	SIB No 2008-86 SIB No 2010-11 SR PORT-2004-005 (AK/AL/2004)	Publication date of the NPA:	2015/Q2
		Duration of NPA consultation:	3 months
		Review group:	Yes
		Focussed consultation:	Yes
		Publication date of CRD/Opinion:	2016/Q3
		Publication date of the Decision:	After the adoption of the rule by the Commission

1. Issue and reasoning for regulatory change

The continuous control of the aircraft configuration requires not only the identification by the owner/operator/CAMO of the initial configuration and of any changes introduced afterwards, but also the proper exchange of information about the current configuration status. This exchange has to take place between the owner/operator/CAMO and the person/organisation performing maintenance.

Reports of incidents/accidents show that some operators/owners may have different interpretations of what the continuous control of configuration of an aircraft should be with regard to:

— the original design definition (including the cabin lay-out);

— the status of modifications; and

— the installation of components on the particular aircraft, engine, or propeller.

Some accidents and incidents occurred which have been linked to errors and misunderstandings with regard to the eligibility of components installed on the aircraft (Part Number, SB, AD, modification status, etc.)

These errors and misunderstandings have led to hazardous situations which in some cases resulted in serious or even catastrophic events, such as:

— All engines-out landing due to fuel exhaustion (Air Transat, Airbus A330-243 marks C-GITS at Lajes, Azores, Portugal) – the final report '22/ACCID/GPIAA/2001' issued by Aviation Accidents Prevention and Investigation Department of Portugal on 18 October 2004.

— Accident involving ATR 72 aircraft marks TS-LBB ditching off the coast of Cappo Gallo (Palermo-Sicily) issued by ANSV – Agenzia Nationale per la Siccurezza del Volo, Italy on 04 December 2007.

Safety Recommendations AK/2004 and AL/2004 (SR PORT-2004-005) have been addressed to the European Aviation Safety Agency in the final report '22/ACCID/GPIAA/2001' issued by Aviation Accidents Prevention and Investigation Department of Portugal on 18 October 2004.

SR AK/AL/2004: *'It is recommended that Transport Canada, DGAC-France, CAA-UK, as well as the EASA and CAAs of other states responsible for the manufacture of aircraft and major components:*

- Review applicable airworthiness regulations and standards, as well as aircraft, engines and component maintenance manuals, to ensure that adequate defenses exist in the pre-installation, maintenance planning process to detect major configuration differences and to establish the required support resources for technicians responsible for the work (AK/2004).

- Review the adequacy of the current standards for identifying the configuration and modification status of major components to ensure that differences between major components of similar part numbers can be easily identified (AL/2004).'

In addition, Safety Information Bulletins have already been issued by EASA to draw attention on such events:

— SIB 2008-86 related to 'Uncertified aircraft configuration' on A330, resulting in severe hard landing, and

— SIB 2010-11 related to 'Component Configuration Control' on ATR 72, resulting in a shortage of fuel in flight.

M.A.301, in point 6., identifies the accomplishment of the modifications as one of the continuing airworthiness management tasks to be performed by the owner/operator. Proper control of such modifications is required to maintain the compliance status of the aircraft.

For large aircraft and those used in commercial air transport (CAT), Part-M Subpart-G requires for every aircraft managed, that the CAMO carries out a certain number of continuing airworthiness management tasks. However, in Subpart-G, M.A.708, M.A.704, and in the Appendix related to the Continuing Airworthiness Management Exposition (CAME), the requirement to manage the continuing airworthiness of the aircraft does not state clearly that there should be a continuous control of the configuration of the aircraft which has to be taken into account during the maintenance actions carried out on the aircraft.

Part-M Subpart-E requires in M.A.501(b) that 'Prior to installation of a component on an aircraft the person or the approved maintenance organisation shall ensure that the particular component is eligible to be fitted when different modification and/or airworthiness directive configuration may be applicable'. Such responsibility is put on the maintenance organisation, while the control of the configuration of the aircraft is the responsibility of the operator/owner/CAMO.

A similar requirement is included in 145.A.42(b). This indicates that Part-M and Part-145 do not clearly allocate the responsibilities for these tasks between the CAMO and the maintenance organisation.

Moreover, the case of maintenance organisations for non-large aircraft not operated in CAT is also unclear, as M.A.608 in Subpart-F does not include any requirement for the control of components similar to what is defined in 145.A.42(b).

The accidents/incidents mentioned above and the doubts arising from the reading of the regulation show that there is some room for interpretation:

— An organisation approved in accordance with Subpart-G (the CAMO) is responsible for the configuration of the aircraft and it seems that its control is not always properly carried out.

— The maintenance organisations should verify the eligibility of the component before installation, but this sole requirement is insufficient.

2. Objectives

The overall objective of this rulemaking task is to reduce the risk of further accidents and incidents that may result from different interpretation of how to ensure continuous control of the configuration of aircraft/engines/propeller by the owner/operator/CAMO.

In particular, the specific objectives of the rulemaking task RMT.0243 (MDM.042) shall be to:

— ensure proper identification of the configuration, including the modification status of aircraft/engine/propeller, by introducing changes to Commission Regulation (EC) No 2042/2003 (in particular Part-M and Part-145) and the related AMC/GM;

— introduce the concept of continuous control of aircraft configuration;

— propose clear provisions for the control of the configuration of the aircraft when maintenance is being performed;

— clarify the responsibilities related to the identification and control of aircraft configuration (continuing airworthiness management vs maintenance); and

— provide some guidance for methods of identification and control of the aircraft configuration.

3. Specific tasks and deliverables

3.1. Tasks

— Review existing regulations and AMC/GM.

— Develop RIA.

— Draft new legal text and AMC/GM based on the preferred option.

3.2. Deliverables

— Publish NPA.

— After review group and focussed consultation, publish CRD and Opinion.

— After adoption by the Commission, adopt ED Decision with AMC/GM material.

— Rules affected will be Part-M and Part-145.

3.3. Focussed consultation

Focussed consultation during the review of comments to the NPA may include:

— meetings with stakeholders;

— conferences/workshops; and/or

— RAG/TAGs and SSCC consultations (written or meeting).

4. Profile and contribution of the rulemaking group

Not applicable: Agency task.

Consultations shall be established with industry and NAAs experts during different phases of the rule development, as needed.

5. Annex I: Reference documents

5.1. Affected regulations

Commission Regulation (EC) No 2042/2003, Annex I (Part-M) and Annex II (Part-145).

5.2. Affected decisions

ED Decision 2003/19/RM (in the areas related to Part-M and Part-145)

5.3. Reference documents

EASA Safety Information Bulletin SIB 2008-86

EASA Safety Information Bulletin SIB 2010-11