


EASA	COMMENT RESPONSE DOCUMENT
	EASA PAD No. 11-134R1 [Published on 31 May 2013 and officially closed for comments on 17 June 2013]

Commenter 1: SWISS International Air Lines Ltd. – Roland Moser – 04 June 2013
Comment # 1

I am surprised, that on the Safety Valve an AD will be released.

In the A330/A340 MRBR Rev 11 in 2008, a new task (21.31.00/09) was introduced to cover the Safety valve restoration with an interval of 50000FH or 12Y. The MSG 3 analysis came out, that the Route code 9 (Hidden function non safety effect).

Can you please explain, what the route cause is, to issue an AD?

EASA response:

The MRBR task 21.31.00/09 establishment is based on MRB process (independent from Certification process) that takes into consideration safety consequences but also operational consequences of not performing this task as well as its cost effectiveness. The restoration of the ATA 21 CPCS Safety Valves are mandated to satisfy Certification objectives. In order to meet the regulatory objectives associated to JAR/CS/14CFR 25.1309 (b), a repetitive mandatory overhaul of the Safety Valves is necessary to avoid a potential unsafe condition of the systems.

No changes have been made to the Final AD in response to this comment.

Commenter 2: Reaction of a Consortium of engineers – James Steward – 16 June 2013

With ref to your above PAD, please find attached a document containing the comments of a group of engineers and other parties with an interest in airworthiness and aircraft maintenance.

Representing these parties, I would ask that you kindly review and consider their comments during your deliberations of this subject.

COMMENTS FOLLOWING THE NOTIFICATION OF A PROPOSAL TO ISSUE AN AIRWORTHINESS DIRECTIVE – EASA PAD 11-134R1

A. COMMENTERS, THEIR OBJECTIVE AND THEIR COMMENTS:
COMMENTERS & THEIR COMMENTS

The comments in this document are a consensus of those from several engineers having many years of experience within the environment of aircraft maintenance engineering & planning, and within the domain of Instructions for Continued Airworthiness (ICA), particularly for airworthiness limitations and Certification Maintenance

Requirements (CMR), developed by Type Certificate (TC) holders. Such experience includes work in the Design, Customer Support and Airworthiness departments for aircraft manufacturers and also some years in Reliability, Maintenance Planning and Airworthiness departments of several large operators/leasing companies and Maintenance & Repair organisations.

Since March 2011, these commenters took the opportunities the Aviation Authorities have given to the public to comment different regulation material projects.

COMMENTERS' OBJECTIVE

The subject commenters have the objective to bring to the attention of these Authorities, in particular the European Aviation Safety Authority (EASA) and the Federal Aviation Administration (FAA) of the United States of America, their observations of possible gaps in the maintenance-related regulation material for large aeroplanes (e.g. the Part 21 and the Certification Specifications, CS 25 for the EASA and the Federal Aviation Regulations, FAR 21 and FAR 25 for the FAA) in attempting to fulfil the objectives of Notice of Proposed Amendments (NPA) or of a Proposal to issue an Airworthiness Directives (PAD)/Notice of Proposed RuleMaking (NPRM).

This document aims at contributing to this objective.

Engineers who contributed to this review carried out their duties with the greatest possible professional integrity and the greatest possible technical competence. Their comments and recommendations take also into account experience gained on human factors.

The commenters have chosen to report their findings through the channel of J. Stewart.

B. COMMENTS ON PAD 11-134R1:

1. INTRODUCTION

The way mandatory instructions and airworthiness limitations are promulgated sometimes complicates the activities of maintenance organisations approved under Part-145 and Continuing Airworthiness Management Organisations (CAMO) approved under Part-M. This is the case with those for the Airbus A330/A340 Cabin Pressure Control System safety valves.

The release of an AD to address new or amended mandatory instructions and/or airworthiness limitations may cause a prejudice to maintenance organisations and CAMO when possible alternatives are not implemented. The AD calls the attention of the competent authority for the oversight of the continuing airworthiness of individual aircraft to the matter (generation of emphasis) and may amplify the difficulties of CAMO/maintenance organisations, especially when the AD data are misleading.

The review of PAD 11-134R1 has to take into account the context in which the mandatory instructions and corresponding airworthiness limitations are introduced, and the rules governing this context. This is a requisite to achieve a correct introduction of mandatory directives compatible with the activities of maintenance organisations and CAMO.

The EASA stressed the impact of using ambiguous terms and the importance for providing clarity and accuracy¹. We have tried to pay particular attention to the terms used in the subject PAD and in this discussion: For example, “approved” does not mean “mandatory”, and “safety task” does not necessarily imply “mandatory compliance”.

1 Refer to the EASA Proposed CM-21A-J-001 issue 01. Refer also to the FAA Advisory Circular (AC) 20-176 “Design Approval Holder Best Practices for Service Bulletins Related to Airworthiness Directives”.

2 Refer to the paragraph 6 of the INT/POL/25-12.

2. SECTION ‘REASON’

Could the EASA specify the origin of the investigations referred to in the section ‘Reason’ (in-service occurrence, life extension programme, etc...)?

3. SECTION ‘REQUIRED ACTION(S) AND COMPLIANCE TIME(S)’

Please could the EASA provide its answers to the following questions?

☐ What justifies the issuance of an AD now, i.e. when the minimum time given to operators to show compliance is sufficiently long to release a revision of the A330 and A340 ALS Part 4 prior to the issuance of an AD?

The way chosen by Airbus, and accepted by the EASA, to publish the mandatory instructions and corresponding airworthiness limitations is a concern. It contributes to the dissemination of mandatory instructions and related airworthiness limitations within different documentations (ALS and ADs). Experience has confirmed that the lack of consolidation significantly complicates the management of continuing airworthiness.

This is a hazard that exposes the public to an unnecessary risk.

The type certification regulation (e.g. CS 25.1529, CS 25.1729, and the related CS 25 Appendix H25.4.) clearly participates in the effort to gather all mandatory instructions and airworthiness limitations in a single location, i.e. the ALS. This consolidation has also been required within the frame of the INT/POL/25-122.

This raises the question why this effort should be stopped once aeroplanes have entered service. It cannot be stressed enough that Airworthiness Directives are the **unique** tool to restore an acceptable level of safety, when evidence shows that the safety level of in-service aeroplanes may be compromised. However, the management of airworthiness issues affecting fleets and planned on a term sufficiently long (i.e. other than immediate or short term), including repetitive instructions, should be organised with the help of the ALS. The less active AD there are for a given Product, the more attention will be given to AD when they are issued. For example:

At the beginning of June 2013, the EASA publishing tool recorded approximately 380 AD for the Airbus A340-200/-300 series (for example). Amongst these 380 AD, almost 110 were cancelled or superseded. So, about 270 were effective at that time. At the same time, the EASA publishing tool recorded 70 AD for whole B777 family. 7 were not adopted, cancelled, or superseded. So, 63 were effective for this aeroplane family.

This significant difference in the number of effective AD generates an unnecessary pressure on the person or organisation accountable under Part-M that manages the continuing airworthiness of some Airbus A340-200/-300 (human factors).

Of course, not all instructions of the subject 270 AD can and should be transferred into the Airbus A340 ALS. But the generic instructions³ made mandatory by AD should be transferred into Airbus A330/A340 ALS.

3 Generic instructions are applicable to a fleet of aeroplanes/components (defined at the model, weight variant, part number or modification level) as opposed to specific instructions applicable to a limited number of aeroplanes/components (defined at the manufacturer serial number level).

So, the point is whether the EASA will require this transfer or not. This practice has already been accepted by the EASA for the Airbus A330/A340 aeroplane programme: Several AD have been superseded by one single AD that requires the compliance with an ALS revision, which incorporates the instructions (still active) of the superseded AD. It helped at identifying some long overdue ADs (to be cancelled), confusing/inaccurate instructions, and contradictions.

A special treatment for some AD applicable to a same aeroplane type/programme could confuse persons or organisations managing the continuing airworthiness of such Airbus aeroplanes. Therefore, this practice needs to be applied homogeneously (i.e. across all Parts of all ALS of an Airbus programme, e.g. Airbus A330/A340).

Some airlines operate Airbus aeroplanes of different types/programmes (e.g. both Airbus A330/A340 and A318/A319/A320/A321 aeroplanes). The question arises... "Why does the ICA/Aircraft Maintenance Programmes have to be managed differently for two aeroplane types/programmes from the same manufacturer"? This can lead to difficulties or instructions being overlooked if, for example, the same team of Planning Engineers is responsible for planning maintenance checks for different aeroplane types/programmes.

Therefore, this practice needs to be applied homogeneously across all Parts of all Airbus ALS.

The lack of consolidation is misleading and the consequences (experience: some airworthiness limitations exceeded) of this hazard may unleash their damaging potential (serious events or accidents). Although experience has proven that accidents may occur when some maintenance is not complied with at an appropriate time, this dissemination can still be observed.

Several operators have expressed the view that having the mandatory instructions and airworthiness limitations published in a separate dedicated document (the ALS) has been helpful to their planning departments and has helped ensure that no requirements have been inadvertently overlooked. It is therefore considered to be a

backward step to have some airworthiness limitations published in the ALS and others in ADs (sometimes for the same structure, systems, or components). It can also place an additional burden on Planning/Technical Records departments in maintaining their technical records systems.

Concerning the present case, the subject dissemination can be avoided: there is enough time (earliest compliance is required more than 2 years after the effective date) to revise the Airbus A330 and A340 ALS Part 4 prior to the issuance of an AD (superseding AD 2012-0020 and -0021).

☐ Why have the recommendations of Proposed CM-21A-J-001 issue 01 not been applied to this PAD?

The EASA correctly reminds in its Proposed CM-21A-J-001 issue 01 that in their SB related to AD, design organisations should “not refer to documents that simply refer to other

documents. Instead [they should] refer to the end document that provides the actual instruction”. But, why would this apply only to design organisations and their SB?

With some AD, operators and maintenance organisations are taken for a ride from a document to another (MRBR ☐ MPD ☐ AMM). This is the case with the paragraph (2).

The application of the EASA’s recommendation to ADs would (i) minimize the possibility of errors or extensive judgment, and (ii) alleviate the burden AD generate on operators (without jeopardizing safety) for aeroplanes that have been previously processed in accordance with the end document that provides the actual procedure.

It may be acceptable to take credit for the previous accomplishment of an AMM procedure for example, to demonstrate compliance with an AD. The work described in the AMM procedure may have already been accomplished at an unscheduled opportunity and/or to comply with the maintenance schedule of the approved Aircraft Maintenance Programme, when it includes the MRBR task or the MPD task.

However, some operators may have complied with MRBR/MPD tasks using maintenance procedures alternative to the ones given in the AMM, for example. It is usually not possible to review whether such alternative procedures are acceptable or not for the compliance with the AD. It is therefore inappropriate within the frame of an AD to take credit for the previous accomplishment of MRBR/MPD tasks.

In the present case, the AMM task (called by the MPD task 213100-09-1, referencing the MRBR task 21.31.00/09) controls the removal/installation of the safety valves only. It does not include or reference the shop restoration procedure, but orders to send the removed valves to the manufacturer or licenced repair shop for overhaul. It is anticipated that the manufacturer perform safety valve restoration in accordance with the basic procedure. In absence of an explicit command, other approved maintenance organisations could proceed differently...

4. WAY FORWARD

We recommended to:

- ☐ Cancel the EASA PAD 11-134R1,
- ☐ Require the publication of a revision of both Airbus A330 ALS Part 4 and Airbus A340 ALS Part 4 that will address the subject within a reasonable timeframe (e.g. before the end of 2013),
- ☐ Issue an AD requiring compliance with these Airbus ALS Part 4 revisions.

5. CONCLUSION

It is our considered opinion that the PAD 11-134R1 may contribute to the confusion and could expose the public to its potential consequences. We therefore believe that corrective action is necessary. Consequently, the engineers who have commented the PAD 11-134R1 would respectfully request if the answers to these questions could be developed by the EASA.

We would like to express in anticipation our thanks to the EASA for the consideration given to our comments and for the release of public answers.

EASA response:

EASA agrees that the safety valve overhaul / restoration maintenance task limitation should be required by the ALS part 4 rather than by an AD. In this

particular case, an AD was chosen to “catch up” safety valves that would have over-passed the restoration time and this would lead to a potential unsafe situation which justify an AD issuance.

EASA informs that this item will be introduced in the next revision of A330 & A340 ALS Part 4 and when issued a new AD's will mandate ALS part 4 and consequently supersede this AD.

No changes have been made to the Final AD in response to this comment.

Commenter 3: QANTAS - AIRBUS EIAL - Product Integrity – Gilles JANEZ – 17 June 2013

Please find enclosed comment from OPERATOR QANTAS,

We discussed this subject and we finally agree with the operator's comment

Could you add this additional mention in PAD table 1 part A

should read

‘Before the safety valve has accumulated 50 000 FH or 12 years, whichever occurs first, since its first installation on an aeroplane or since its last restoration’.

EASA response:

EASA agrees. The Final AD has been amended accordingly.

Commenter 4: LAN – C. ANTONIO CORREA AGUILERA – 17 JUNE 2013

For your information, LAN is affected by PAD to our five A340, and we have following comments:

- Our experience with removal installation of this valves, push to plan the replacement with 5MH and TAT.
- This proposed AD applies to all A340 Fleet (5) according to the instructions of SB A340 compliance of 21-4150R1 expressed in the proposal.

EASA response:

Comment is noted. 5 MH are stated in the SB for the three valves to be inspected. MH for the valves restoration are defined in the vendor SB.

No changes have been made to the Final AD in response to this comment.