

**SUMMARY SHEET**  
**Airworthiness Directive Implementation Aviation Rulemaking Committee**  
*AD Development Working Group*

<b>Primary Report and Recommendation</b>	AD Compliance Review Team (Task 2), Recommendation 4, (Bullet 5)
<b>Secondary Report and Recommendation</b>	None
<b>Assigned Members</b>	Holly Thorson (AIR) (POC) Tim Dowling (Boeing) (POC) Tammy Anderson (AIR) Elizabeth Bumann (AIR) Jim Orchard (AFS) Eric Blancaneaux (Airbus) Marco Capaccio (EASA) Ross Stewart (ABX) Rafael Marques (Embraer) Oswaldo de Oliveira (ANAC) Craig Fabian (ARSA) Plamen Stoyanov (Alaska) Barry Baker (Pinnacle) Douglas Gibson (Bombardier) Tim Dulin (AIR)
<b>Links to Other Working Groups</b>	None
<b>Date Sent to AD Development WG</b>	29 September 2010
<b>Date Sent to other WGs for Review</b>	18 October 2010
<b>Date Submitted to ARC</b>	23 November 2010
<b>Date of ARC Approval</b>	16 February 2011

**WORKING GROUP REVIEW OF ISSUE/PROBLEM**

The findings and recommendations identify the AD CRT's concerns that multiple ADs affecting the same area of the airplane result in confusion, inadvertent noncompliance, and/or reversal of previous AD actions.

Changes to type certificates (i.e., type design changes) are approved in accordance with 14 CFR 21.93, 21.95, and 21.97, as appropriate. Type design changes that conflict with other approved designs should not be approved for obvious reasons. The CRT recommendation goes a step further, and recommends tracking AD-related design changes to ensure they do not conflict with other mandatory approved designs to avoid potential noncompliances.

While the Federal Aviation Administration (FAA) is responsible for ensuring that its rules are clear and unambiguous, the Design Approval Holder (DAH) is in the best position to minimize the impact of multiple ADs requiring overlapping or conflicting actions in the same area of the airplane. Both the regulatory agency and the DAH should establish procedures that identify

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previously issued ADs that could create overlapping and/or conflicting actions that could result in a non-compliance before a new AD is adopted.

When the DAH provides the results of its investigation of AD related service information in the area of the newly proposed AD action, the FAA must consider the effects of possible overlaps or conflicts to ensure that the newly proposed AD action will not lead to a non-compliance.

A prime objective of the FAA's AD-Friendly initiative, developed in collaboration with operators and DAHs, is to minimize differences between the service information provided by the DAH and the AD actions that are required to address the unsafe condition. To achieve the objectives of both the AD-Friendly initiative and Recommendation 4, Bullet 5, the effects of overlapping and/or conflicting service information must be addressed by the DAH during the SB development process and then evaluated and appropriately addressed by the FAA prior to drafting the AD.

A subteam was formed from the AD Development Working Group. The subteam consists of DAHs (Boeing, Airbus, Embraer, and Bombardier), FAA, EASA, and ANAC.

#### **REGULATIONS AND GUIDANCE IDENTIFIED FOR REVIEW**

**AD Worksheet** (domestic only)

FAA Order 8040.5, *AD Process for Mandatory Continuing Airworthiness Information (MCAI)*  
14 CFR 21.93, 21.95, and 21.97

#### **WORKING GROUP PROPOSAL TO ADDRESS THE RECOMMENDATION(S)/FINDING(S)**

The DAHs participating on the AD ARC, Boeing, Airbus, Embraer, and Bombardier, agree to implement a process for identifying overlapping and/or conflicting AD actions that may be impacted by newly proposed ADs. These DAHs will, upon notification of a Planned AD (PAD), conduct a review of existing PADs and ADs and identify those that address, affect and/or overlap the current planned action. Results of this review will be documented and maintained as a record by the DAH. The DAH will evaluate the effect of the interaction among their mandatory SBs and address any conflicts or overlaps. In addition, these results will be provided to the FAA (or appropriate civil aviation authority).

For domestic products, FAA processes will be changed to record on the AD worksheet the list of existing ADs affecting/overlapping the newly proposed AD actions that could lead to a non-compliance, confirm that no conflicts exist, and identify that this information was confirmed by the DAH. Since the AD worksheet applies to all domestic ADs, an FAA guidance document (likely an advisory circular or policy memo) will be prepared to explain this process to all DAHs

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and other FAA directorates. This policy will also provide best practices for identifying overlapping requirements in ADs.

For Airbus, Embraer, and Bombardier products, those DAHs will work with their respective civil aviation authorities to address any conflicts or overlaps in their ADs. For imported products, the FAA will continue to follow FAA Order 8040.5, *AD Process for Mandatory Continuing Airworthiness Information (MCAI)*, which relies on issuance of foreign ADs before drafting and issuing FAA ADs. No change to the MCAI AD worksheet is needed in this regard.

We believe our proposal meets the intent of the stated portion of Recommendation No. 4, (Bullet 5) of the AD CRT Task 2 Report.

**ALTERNATIVES CONSIDERED**

N/A

**IMPLEMENTATION PLAN**

The DAHs supporting the AD ARC (Boeing, Airbus, Embraer, and Bombardier) will develop and implement a process for identifying overlapping and/or conflicting service information that is required by ADs. FAA processes will be changed to record on the domestic AD worksheet the list of ADs affecting/overlapping the current AD action, confirm that no conflicts exist, and identify that this information was confirmed by the DAH. The new process will be used to evaluate future planned ADs (i.e., the process will not be retroactive).

The working group plans to Beta test the FAA/DAH processes described above in early 2011. The test will involve reviewing 2-3 service bulletins, identifying the overlapping ADs, confirming that no conflicts exist, and documenting the findings in a draft worksheet.

The working group will also prepare an FAA guidance document (possibly an advisory circular or AIR-140 policy memo) to explain this process to all DAHs and other FAA directorates. This notice will also provide best practices for identifying overlapping AD requirements.

The DAH and FAA actions will be completed by June 30, 2011.

**ASSUMPTIONS/CONSTRAINTS**

N/A

**FAA AND INDUSTRY TRAINING IDENTIFIED**

N/A

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**ISSUES FOR WORKING GROUP CONSIDERATION**

N/A

**ISSUES FOR ARC CONSIDERATION**

N/A

**FINDING No. 4**

The Team found systemic problems in the AD process as follows:

- Multiple ADs affecting airworthiness in the same area of the airplane resulting in overlapping and confusing mandates for air carriers. This can lead to inadvertent noncompliance or reversal of previous AD actions.
- Occasionally, the OEM's service instructions are not available when the AD NPRM is issued. In addition, copies of service instructions are not included in the Government's electronic regulatory docket system. In either case, this prevents air carriers from having the full comment period to comment on the specifics of the service document.
- ADs generally have an aggressive installation timeline. Because of the urgent nature of AD tasks and the need for planning to minimize aircraft out-of-service time, air carriers frequently accomplish service instructions ahead of the AD issuance date. This creates an exposure to noncompliance when there are changes in the final AD that differ from the originally released service document.

The Team noted that as part of a process improvement effort, in 2006 the FAA signed a working agreement with Boeing Commercial Airplanes on Agreed Principles and Practices for AD-friendly service bulletins related to the Boeing transport fleet. The agreement was developed as part of a joint effort by the FAA and an OEM to identify and implement improvements to the format and quality of service instructions and ADs. The Team acknowledged that the joint effort is a major step in improving the FAA's AD process, provided that certain recommendations in section 2.2.2 [of the CRT Report] regarding service instructions are incorporated to simplify air carrier implementation.

**RECOMMENDATION No. 4 (BULLET 5)**

For situations involving multiple structural service documents and ADs, the FAA should explore innovations in AD tracking and management (for example, a zonal approach, where tasks are compiled covering all AD requirements for a given area).

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**APPENDIXES**

N/A