**4910-13**

**DEPARTMENT OF TRANSPORTATION**

**Federal Aviation Administration**

**Aviation Rulemaking Advisory Committee Meeting on**

**Transport Airplane and Engine Issues**

**AGENCY:** Federal Aviation Administration (FAA), DOT.

**ACTION:** Notice of public meeting.

**SUMMARY:** This notice announces a public meeting of the FAA's Aviation Rulemaking Advisory Committee (ARAC) to discuss transport airplane and engine (TAE) issues.

**DATES:** The meeting is scheduled for Wednesday, April 13, 2011, starting at 9:00 a.m. Pacific Daylight Time. Arrange for oral presentations by March 30, 2011.

**ADDRESS:** FAA - Northwest Mountain Region, Transport Standards Staff conference room, 1601 Lind Ave. SW, Renton, WA 98057.

**FOR FURTHER INFORMATION CONTACT:** Ralen Gao, Office of Rulemaking, ARM-209, FAA, 800 Independence Avenue, S.W., Washington, D.C. 20591, Telephone (202) 267-3168, Fax (202) 267-5075, or e-mail at ralen.gao@faa.gov.

**SUPPLEMENTARY INFORMATION:** Pursuant to Section 10(a)(2) of the Federal Advisory Committee Act (Pub. L. 92-463; 5 U.S.C. app. III), notice is given of an ARAC meeting to be held April 13, 2011.

The agenda for the meeting is as follows:

- Opening Remarks, Review Agenda and Minutes
- FAA Report
- Executive Committee Report

- Transport Canada Report
- Avionics Harmonization Working Group Report
- Materials Flammability Working Group Report
- Action Item Review

Attendance is open to the public, but will be limited to the availability of meeting room space. Please confirm your attendance with the person listed in the FOR FURTHER INFORMATION CONTACT section no later than March 30, 2011. Please provide the following information: Full legal name, country of citizenship, and name of your industry association, or applicable affiliation. If you are attending as a public citizen, please indicate so.

For persons participating by telephone, PLEASE CONTACT Ralen Gao by email or phone for the teleconference call-in number and passcode. Anyone calling from outside the Renton, WA, metropolitan area will be responsible for paying long-distance charges.

The public must make arrangements by March 30, 2011, to present oral statements at the meeting. Written statements may be presented to the ARAC at any time by providing 25 copies to the person listed in the FOR FURTHER INFORMATION CONTACT section or by providing copies at the meeting. Copies of the documents to be presented to ARAC may be made available by contacting the person listed in the FOR FURTHER INFORMATION CONTACT section.

If you need assistance or require a reasonable accommodation for the meeting or meeting documents, please contact the person listed in the FOR FURTHER INFORMATION CONTACT section. Sign and oral interpretation, as well as a listening device, can be made available if requested 10 calendar days before the meeting.

Issued in Washington, DC on March 10, 2011.

Pamela Hamilton-Powell

Director, Office of Rulemaking

**Aviation Rulemaking Advisory Committee (ARAC)**
**Transport Airplane and Engine (TAE) Issues Area**

**Meeting Minutes**

**Date:** April 13, 2011
**Time:** 9:00 AM
**Location:** 1601 Lind St., SW,
Renton, WA

## Call to Order /Administrative Reporting

Mr. Mike Kaszycki read the public meeting announcement at 9:03 AM.

Mr. Craig Bolt discussed October 06, 2010 meeting action items.

| Item | October 06, 2010 TAEIG Meeting Action Items | Status |
|---|---|---|
| 1. | Suzanne Masterson to provide list of FAA outstanding rulemakings. | CLOSED |
| 2. | AAWG to send outstanding issues it would like to dialogue with EASA in the effort to harmonize the Aging Aircraft rule. | OPEN |
| 3. | Craig Bolt to send letter to Pam Hamilton regarding Aging Aircraft harmonization effort between FAA/EASA. | CLOSED |
| 4. | Craig Bolt to send letter regarding ASHWG response to Boeing's comment to AC/AMC 25-11A. | CLOSED |
| 5. | Craig Bolt to provide updated HUD materials. | CLOSED |

## FAA Report

Ms. Suzanne Masterson presented the FAA Report. Please see Handout #1.

Mr. Kaszycki stated the FAA recognizes it has some harmonization /rulemaking backlog to deal with, and will start them as time and resources permits.

Mr. Kaszycki commented that the FAA recognized that – having removed lavatory oxygen canisters from US-registered aircraft in January 2010 – a Working Group is needed quickly to discuss how to restore oxygen as soon as possible. As a result, the FAA set up an ARC (unlike ARAC, ARC meetings are not open to public) to discuss this issue, which is on-going as of the date of this meeting. An ARC is usually called when sensitive issues and information are involved; however, this ARC was called solely because ARC setup process is faster than ARAC.

Mr. Boulay and Mr. Kaszycki discussed the differences between the FAA and EASA regarding the definition "sensitive" information. Mr. Kaszycki reiterated an ARC was used simply because it has a more rapid set-up process.

Mr. Kaszycki stated that the FAA is making an active effort to link the publication of relevant ACs to rulemakings. New standard to strive for: an AC should publish 3 working days after the publication of the rulemaking. Mr. Bolt commented that he has noticed that ACs have been published closer to the rulemaking's publication.

Ms. Masterson distributed the TAD rulemaking backlog list. See Handout #2.

Mr. Kaszycki stated that TAD is changing its delegated rulemaking process in response to a memo from FAA Administrator. This has lead to the setting up of "expedited rulemakings," which consists of non-significant harmonization rulemakings, which now goes through a more streamlined rulemaking process. This should help with clearing up the backlog.

**EXCOM Report**

Mr. Bolt stated that industry comments to Rudder Reversals Tasking (see Handout #3) are primarily concerned with the FAA's approach to establish a working group for the Rudder Reversal tasking. Mr. Kaszycki stated that the quickest way to get things done is to set up an existing Working Group (Flight Controls) as lead and have other Groups to help, rather than setting up a brand new Working Group. Mr. Robert Park stated that this model is working very well.

Mr. Boulay stated that Dassault planned to send 2 candidates for the Rudder Reversal Tasking.

Mr. Oliver Rusch stated that TCCA also has 2 candidates for the Rudder Reversal Tasking, as well. Mr. Kaszycki stated that, where there are multiple candidates from one organization, please delegate the primary participant.

Mr. Boulay stated that Dassault wanted to know whether assistants could participate in the Working Group in addition to experts. Mr. Kaszycki stated that, from experience, small Working Groups are more effective.. Although no one is excluded from attending the meetings, they should not do so in official capacity.

Mr. Bolt presented the EXCOM Report. Please see Handout #4a, 4b, 4c.

Mr. Kaszycki asked Ms. Ralen Gao about how the proposed ARAC restructuring impacts the rulemaking process. Ms. Gao responded that an updated Committees Manual is in the works, and will answer some of Mr. Kaszycki's questions.

Mr. Bolt further stated that most of the EXCOM meeting discussions were with the 20-25 members provision, and how to select these members.

Mr. Peters questioned why TAE Issues Group will be converted into a regular Working Group. Mr. Bolt answered that the purpose of restructuring was to streamline ARAC. TAEIG currently has many non-participatory members and inactive Working Groups, or Working Groups with only one tasking. FAA Legal is also concerned that some Working Group recommendations are being transmitted to the FAA without having review by the full ARAC.

Mr. Peters further questioned the provision of having the full ARAC vote each Working Group recommendation. Mr. Bolt stated that there needs to be further discussions and working out of details regarding how this is handled in the restructured ARAC.

Mr. Kaszycki asked whether the prioritization process, that is a new tasking to EXCOM, will be binding upon FAA rulemaking. Mr. Bolt stated that it will be a recommendation.

Mr. Hollanda inquired about the provision of the need for more meetings. Mr. Bolt answered that this provision follows the proposal of only the full ARAC could approve of Working Group recommendations, that its current semi-annual meeting would hold up the rulemaking process. This does not refer to Working Group meetings.

**Transport Canada Report**

Mr. Oliver Rusch presented this report. See Handout #5.

Mr. Kaszycki asked whether the Aging Aircraft NPA has a retro-fit provision. Mr. Rusch stated that the rulemaking is generally harmonized with FAA Aging Aircraft rule; although Canadian rulemaking cannot use the term “retro-fit,” the general intent is to have that requirement. Mr. Kasczycki further asked about the cut-in period and the grandfather clause cut-off time frame. Mr. Rusch promises to get back to Mr. Kaszycki regarding these two questions.

**Materials Flammability WG Report**

Mr. Jim Davis presented this WebEx.

The WG submitted a working plan, and received comments questioning whether the working plan follows the original tasking. Mr. Davis reviewed the Federal Register tasking point by point.

The Working Group believed that the more pointed it could present from the industry’s perspective where the regulations could be improved, clarified and simplified, the more it could help eliminate unnecessary testing while still maintaining safety.

The Working Group further realizes that its discussions are moving toward items which are not currently covered by FARs or advisory materials, so they might eventually

recommend new materials to cover these items, and the FAA seems to be moving in this direction as well.

The Working Group struggled with the requirement that they must present an idea of what it intends to do, before it knows precisely what it intends to do. The result is it will present a work plan, but much of the details will be in the eventual recommendation.

The Working Group questioned whether the intent of the tasking was simply to answer the original 6 questions in the tasking. Mr. Kaszycki stated that the Working Group's original understanding is correct, that the tasking covered more than the 6 questions.

Mr. Davis further questioned the ARAC Manual requirement that full Working Group consensus is required before it could proceed to next steps of discussions. The question presented is possible next steps: proceed, or provide more information before proceeding, or completely change direction and start-over. Mr. Bolt stated that this is not the case, that the Working Group should be able to proceed but that if there is not consensus they need to document the minority opinion. .

Mr. Kaszycki asked Ms. DeMarco what was Boeing's concern regarding the Working Group's planned direction, that his understanding was that Boeing should embrace the broadness of this tasking. Mr. Davis stated that the Working Group understands Boeing's concerns that it might range too far from the tasking, but believes it is going along with the intent of the tasking. Mr. Kaszycki stated that the FAA's perspective is always for safety—while the tasking is intended to be broad, and the FAA is open to complete review of the regulation, as well as lower-costs as result, costs are not the main purpose of the tasking. Mr. Davis stated that the Working Group understands this.

Mr. Davis proceeded with the Working Group's intended next steps. All Working Group documents will be on SharePoint (online document sharing system), and the Working Group may grant access upon request.

Mr. Bolt stated that TAEIG agrees with the Working Group's understanding of the tasking, and for it to proceed as planned.

**Avionics Systems HWG**

Mr. Clark Badie presented this report. Please see Handout #6a.

Mr. Badie stated that the Working Group could answer all questions in the Low Speed Alerting tasking, but at this time could not produce a clear definition for "timeliness" without further research. The Working Group seeks approval from TAEIG to submit Phase I report to the FAA.

Mr. Bolt motioned to submit Phase I report to the FAA.
(AYE: Boeing, Airbus, TCCA, Embraer, Ray Hollanda, ALPA)
Result: TAEIG agrees for ASHWG to submit Phase I report to the FAA.

Mr. Kaszycki stated that he is disappointed with the draft Report, as it is less useful than the FAA had anticipated, and that it maybe that the FAA needs to improve the wording of its future taskings. Mr. Badie stated that the Report contained more information, but was then taken out because it was more than what the tasking required, and that it may be included if the tasking is updated.

Mr. Kaszycki stated that his impression of the report is that—although no clearly stated—the conclusion is no new rulemaking is needed, and Mr. Badie agreed. Mr. Kaszycki stated that this was not how the FAA anticipated as the result of the tasking; and if this is so, is there a purpose to proceed to Phase II? Mr. Badie answered that Phase II tasking will produce results regarding legacy airplanes, and this additional data will help derive more clarity on what to do with the information.

Please see Handout #6b.

**AAWG Report**

Mr. Steven Chisholm presented the report regarding WFD implementation. Please see Handout #7.

Regarding non-harmonized element of FAA/EASA Aging Airplane Rules, there seem to be differences between the anticipated rulemaking lists from these two agencies. The way the agencies intend to interpret and/or implement the rules seem somewhat different. In the absence of new rulemaking from EASA, there seem currently to be lack of uniformity in EASA regarding this rule.

Mr. Kaszycki stated that he had envisioned a more high-level, generalized tasking for WFD, whereas the current proposal has numerous overlap in the 3 taskings, and has very specific language. He was also hesitant to move forward with the proposal to change finalized ACs, etc. He believed the proposed tasks could be handled with different interpretation of existing taskings, without written such that new taskings need be created, which would take time and is also unnecessary. Mr. Chisholm stated that he understood and agreed, that he will discuss with the Working Group towards more generalized language with broad scope for interpretation.

Mr. Kaszycki also stated that he is not convinced that some of the proposed changes are warranted, as the existing rules and advisory materials are sufficient. Mr. Chisholm stated that the Working Group was seeking an opportunity to dialogue with the FAA regarding WFD, but concedes Mr. Kaszycki's position that this language was not necessary in its proposal.

TAEIG reviewed the original AAWG tasking to see if it could be used towards WFD. Mr. Kaszycki stated that the original tasking language clearly intended for the AAWG to help with the implementation of WFD, which covers the proposed plan presented today, so no new tasking is needed. Further, this effort would involved primarily the same

representation, which further supports that WFD implementation is the continuation of AAWG original tasking. Therefore, no further action needed.

Mr. Kaszycki further stated that FAA Flight Standards branch should be involved in this process.

**Action Item Review/Any Other Business**

| Item | April 13, 2011 Meeting Action Items | Status |
|---|---|---|
| 1 | Craig Bolt to send TAEIG the Process Improvement Working Group Recommendation Report. | Closed |
| 2 | Craig Bolt to email Steve Chisholm regarding WFD implementation. | |
| 3 | | |
| 4 | | |
| 5 | | |

**Future TAEIG Meetings**
The meeting after that will be held on Wednesday, October 5, 2011, in Washington, DC, at Boeing.

**Public Notification**
The *Federal Register* published a notice of this meeting on March 03, 2011.

**Approval**
I certify the minutes are accurate.

/s/

Craig R. Bolt
Assistant Chair, ARAC

| NAME | ORGANIZATION | EMAIL | TELEPHONE |
|---|---|---|---|
| Suzanne Masterson | FAA | | |
| Craig Bolt | Pratt & Whitney | | |
| Ralen Gao | FAA | | |
| Edmond Boulay | US CREST /GIFAS | | |
| Rod Lalley | Airbus | | |
| Mike Kaszycki | FAA | | |
| Cesar ____ | Brazil Aviation (*check email*) | | |
| Oliver Rusch | TCCA | | |
| Jill DeMarco | Boeing | | |
| Ray Hollanda | NADA | | |
| Robert Park | Boeing | | |
| Tom Peter | Embraer | | |
| Jim Davis | Accufleet | | |
| John Stift | ALPA | | |
| Jeff Gardlin | FAA | | |
| Steve Chisholm | Boeing | | |
| Walt Sippel | FAA | | |
| Keith Barnett | Bombardier | | |
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# April 2011
# FAA Status Update

## Transport Airplane and Engine Issues Group

Federal Aviation Administration

Presented to: TAEIG

By: Suzanne Masterson, Acting Manager, Safety Management Branch, Transport Standards Staff

Date: April 13, 2011

# April 2011 TAEIG Meeting

**Topics:**

- **Rulemaking project status**
- **Non-rulemaking project status**

# April 2011 TAEIG Meeting

## Rulemaking Project Status *(since Oct 2010)*

- **Part 25/26 related Final Rules**
  - Flightcrew Alerting (25.1322), Amdt. 25-131
    - Issued November 2, 2010; effective January 3, 2011
  - Widespread Fatigue Damage, Amdt 25-132
    - Issued November 15, 2010; effective January 15, 2011

# April 2011 TAEIG Meeting

## Rulemaking Project Status *(since Oct 2010)*

- **Part 25/26 Notices of Proposed Rulemaking**
  - Notice No. 10-17: Harmonization of Various Airworthiness Standards for Transport Category Airplanes--Flight Rules, issued November 5, 2010
    - Comment period closed February 17, 2011
  - Notice No. 10-19: Harmonization of Airworthiness Standards for Transport Category Airplanes--Landing Gear Retracting Mechanisms and Pilot Compartment View, issued January 5, 2011
    - Comment period closed April 5, 2011

# April 2011 TAEIG Meeting

## Rulemaking Project Status *(since Oct 2010)*

- **Part 25/26 Notices of Proposed Rulemaking**
  - Notice No. 11-02: Installed Systems and Equipment for Use by the Flightcrew, issued February 3, 2011
    - Comment period closed April 5, 2011
  - Notice No. 10-19: Harmonization of Airworthiness Standards for Transport Category Airplanes--Landing Gear Retracting Mechanisms and Pilot Compartment View, issued January 5, 2011
    - Comment period closed April 4, 2011

# April 2011 TAEIG Meeting

## Rulemaking Project Status *(since Oct 2010)*

- **Part 33/35 related Final Rules**
  - None

- **Part 33/35 Notices of Proposed Rule Making**
  - None

# April 2011 TAEIG Meeting

## Rulemaking Project Status *(since Oct 2010)*

**Final Rules (FR)**

- **FRs in OMB/OST:**
  - 1 part 121 project related to part 25
- **FRs in Headquarters (HQ) for coordination:**
  - None
- **FRs in directorate coordination:**
  - 1 part 25 project
  - 1 part 33 project
- **FRs in development:**
  - 3 part 25 projects

# April 2011 TAEIG Meeting

## Rulemaking Project Status *(since Oct 2010)*

**Notices of Proposed Rulemaking**

- **NPRMs open for comment**
  - None
- **NPRMs in OST/OMB:**
  - None
- **NPRMs in HQ for coordination:**
  - None
- **NPRMs in Directorate for coordination:**
  - 1 part 33 project

# April 2011 TAEIG Meeting

## Rulemaking Project Status *(since Oct 2010)*

### Notices of Proposed Rulemaking

- **NPRMs in Development**
  - 1 part 25 project
  - 1 part 33 project
  - 1 part 121 project related to part 25

# April 2011 TAEIG Meeting

## Rulemaking Project Status *(since Oct 2010)*

**New Tasking**

- **Low Airspeed Alerting**
  - Phase I task complete Feb 2011; draft report in review
  - Phase II tasking statement published March 3, 2011

- **Materials Flammability**
  - Working group work plan submitted for review January 2011
  - Comments on the work plan from TAIEG?
  - ECD Feb 2012

# April 2011 TAEIG Meeting

## Rulemaking Project Status *(since Oct 2010)*

**New Tasking**

- **Rudder pedal sensitivity and rudder reversals**
  - Tasking published March 28, 2011
  - Flight Controls Harmonization Working Group to be re-formed to work tasking
- **Lavatory Oxygen Installation Requirements**
  - Tasking published April 1, 2011

# April 2011 TAEIG Meeting

## Rulemaking Project Status *(since Oct 2010)*

**New Tasking**

- **Unleaded AvGas Transition ARC**
  - Charter approved and issued January 31, 2011

# April 2011 TAEIG Meeting

## Non-Rulemaking Project Status *(since Oct 2010)*

- **Part 25 Final Advisory Circulars (AC's):**
  - AC 25.1322 Flightcrew Alerting
    - Issued December 13, 2010
  - AC 120-104 Establishing and Implementing Limit of Validity to Prevent Widespread Fatigue Damage.
    - Issued January 10, 2011

# April 2011 TAEIG Meeting

## Non-Rulemaking Project Status *(since Oct 2010)*

- **Part 25 Final Advisory Circulars:**
  - AC 25.571-1D Damage Tolerance and Fatigue Evaluation of Structure
    - Issued January 13, 2010

# April 2011 TAEIG Meeting

## Non-Rulemaking Project Status *(since Oct 2010)*

- **Part 25 Draft Advisory Circulars:**
  - AC 25-7A, Change 2, Flight Test Guide for Certification of Transport Category Airplanes
    - Public comment closed: February 17, 2011
  - AC 25-19X, Certification Maintenance Requirements
    - Public comment closed: March 25, 2011

# April 2011 TAEIG Meeting

## Non-Rulemaking Project Status *(since Oct 2010)*

- **Part 25 Draft Advisory Circulars:**
  - AC 25.1302, Installed Systems and Equipment for Flightcrew Use
    - Public comment closed: April 4, 2011
  - AC 25.729-X Transport Airplane Landing Gear Retracting Mechanism
    - Public comment closed: April 5, 2011

# April 2011 TAEIG Meeting

## Non-Rulemaking Project Status (*since Oct 2010)*

- **Part 25/26 Final Policy:**
  - Acceptance of Composite Specifications and Design Values Developed using the NCAMP Process
    - Issued September 20, 2010

# April 2011 TAEIG Meeting

## Non-Rulemaking Project Status (*since Oct 2010)*

- **Part 25 Draft Policy:**
  - Transport Airplane Risk Assessment Methodology (TARAM) Policy and Handbook
    - Public comment closed: February 28, 2011
  - Certification and Continued Airworthiness of Unbalanced and Mass Balanced Control Surfaces
    - Public comment closed: February 28, 2011

# April 2011 TAEIG Meeting

## Non-Rulemaking Project Status *(since Oct 2010)*

- **Part 33 Final Advisory Circulars:**
  - AC 33.91-1 Engine Component Tests:
    - Issued December 9, 2010
  - AC 33.15-2, Manufacturing Processes for Premium Quality Nickel Alloy for Engine Rotating Parts. Issued 2/4/2011.
    - Issued February 4, 2011

# April 2011 TAEIG Meeting

## Non-Rulemaking Project Status *(since Oct 2010)*

- **Part 33 Draft Advisory Circulars:**
  - None
- **Part 33 Final Policy:**
  - None
- **Part 33 Draft Policy:**
  - None

# Transport Airplane Directorate Rulemaking Projects

| ANALYST/ TEAM LEADER | Project Title | Rule Stage | ARAC WG | Current Status | Harmonization Working Method: Former number system replaced with descriptors to broaden applicability and include add'l authorities (TCCA, etc) |
|---|---|---|---|---|---|
| **Team Lead:** Robert Hettman **Analyst:** Kenna Sinclair | Supercooled Large Droplet Icing Conditions (plus Exiting Icing Conditions, part 121) | Final | IPHWG | FR in development in FAA | Collaboration |
| **Team Lead:** Robert Jones **Analyst:** Maria Delgado | Part 121 Activation of Ice Protection Systems | Final | IPHWG | FR with OST | Collaboration |
| **Team Lead**: Steve Happenny **Analyst:** Maria Delgado | Pressurization and Humidity | NPRM | MSHWG | Withdrawn from RM plan for now; will be re-started in FY12 | Cooperation - FAA lead |
| **Team Lead:** Loran Haworth **Analyst:** Michael Menkin | Flight Crew Error/Flight Crew Performance Considerations in the Flight Deck Certification Process | Final | HFHWG | Comment period of NPRM closed April 5, 2010 | Cooperation - EASA lead |
| **Team Lead**: Massoud Sadeghi **Analyst:** TBD | Fuel tank lightning protection | RPR | N/A (ARC) | Est NPRM FY12 | Reciprocal Information |
| **Team Lead**: Robert Jones **Analyst:** TBD | Main Deck Class B & F Cargo Compartments | NPRM | CSHWG | EASA issued their rule in 2009. This is a harmonization project | Reciprocal Information |
| **Team Lead:** Linh Le **Analyst: Maria** Delgado | Revised General Function and Installation Requirements for Equipment and Systems on Transport Category Airplanes | NPRM | ASAHWG | Rolled in with recommendations from SDHWG for development into new rule | Collaboration |
| **Team Lead:** Linh Le **Analyst: Maria** Delgado | Airplane-Level Safety Assessment - Specific Risk Analysis | RPR | ASAWG | ARAC recommendations received, FAA developing NPRM | Collaboration |
| **Team Lead:** D. Stimson **Analyst:** Michael Menkin | Airworthiness Standards Flight Rules, Static Lateral-directional Stability, Speed Increase and Recovery Characteristics | NPRM | FTHWG | FR in development in FAA | Reciprocal Information |
| **Team Lead:** M. Wahi **Analyst:** Michael Menkin | Landing Gear Retracting Mechanisms, Pilot Compartment View | NPRM | MSHWG | Comment period of NPRM closed April 4, 2010 | Reciprocal Information |

# Transport Airplane Directorate Rulemaking Projects

| ANALYST/ TEAM LEADER | Project Title | Rule Stage | ARAC WG | Current Status | Harmonization Working Method: Former number system replaced with descriptors to broaden applicability and include add'l authorities (TCCA, etc) |
|---|---|---|---|---|---|
| **Team Lead:** T. Martin **Analyst:** Michael Menkin | Revised Checked Pitching Manuever Requirements for Transport Category Airplanes, Ground Gust Conditions | NPRM | GSHWG | NPRM drafted, have draft AC 25.415-1 dated 9/26/00. Application for RM July 2011; NPRM est 1Q FY12 | Reciprocal Information |
| **Team Lead:** S. Clark **Analyst:** Michael Menkin | Turbine Auxiliary Power Unit (APU) Installations and New Appendix K | NPRM | PPIHWG | NPRM drafted, on hold awaiting other higher priority harmonization work | Reciprocal Information |
| **Team Lead:** M. McRae **Analyst:** Michael Menkin | Reverse Thrust and Propeller Pitch Settings Below the Flight Regime | NPRM | PPIHWG | NPRM drafted, on hold awaiting other higher priority harmonization work | Reciprocal Information |
| **Team Leads:** Many: See below **Analyst:** TBD | Miscellaneous Harmonization Projects: See below | NPRM | | ON HOLD | Reciprocal Information |
| T. Martin | Operation Tests | | GSHWG | NPRM drafted, have draft AC 25.415-1 dated 9/26/00. Application for RM July 2011; NPRM est 1Q FY12 | |
| J. Kirk Baker LA ACO | Takeoff Warning System | | ASHWG | NPRM drafted, have draft AC 25.703-24, dated April, 2000 | |
| J. Claar | Stowage Compartments | | EEIG | No draft NPRM prepared | |
| J. Claar | Passenger Information Signs | | EEIG | NPRM drafted | |
| J. Claar | Emergency Egress Assist Means | | EEIG | No draft NPRM prepared | |
| J. Claar | Emergency Egress Markings | | EEIG | No draft NPRM prepared | |
| M. McRae | Water Ingestion | | PPIHWG | No draft NPRM prepared, HWG report indicates that the JAA ACJ 25.1091(d)(2) is to be adopted | |
| J. Kirk Baker | Direction Indicator | | ASHWG | No draft NPRM prepared, but have Final Report of AVHWG, revised 8/21/00 | |
| J. Kirk Baker | Instruments Using Power Supply | | ASHWG | NPRM drafted | |
| J. Kirk Baker | Cockpit Instrument Systems | | ASHWG | NPRM drafted, have draft AC 25.1333(b)-X, dated June, 2001 | |
| Ken Frey Seattle ACO | Pressurization and Low Pressure Pneumatic Systems | | MSHWG | NPRM drafted | |
| R. Hettman | Oxygen Systems | | MSHWG | No draft NPRM prepared (ARAC WG drafted an NPRM) | |
| **Team Lead**: Todd Martin **Analyst:** Jan Thor | Interaction of Systems and Structure | NPRM | LDHWG | NPRM drafted, have draft AC 25.415-1 dated 9/26/00. Application for RM July 2011; NPRM est 1Q FY12 | Reciprocal Information |

# Transport Airplane Directorate Rulemaking Projects

| ANALYST/ TEAM LEADER | Project Title | Rule Stage | ARAC WG | Current Status | Harmonization Working Method: Former number system replaced with descriptors to broaden applicability and include add'l authorities (TCCA, etc) |
|---|---|---|---|---|---|
| **Team Lead:** Todd Martin **Analyst:** Jan Thor | Continuous Turbulence Loads | | LDHWG | NPRM drafted, have draft AC 25.415-1 dated 9/26/00. Application for RM July 2011; NPRM est 1Q FY12 | Reciprocal Information |
| **Team Lead:** Mike McRae **Analyst:** Susan Boylon | Thrust Reversing Systems, 25.933 | Alt Rulemaking | PPIHWG | On hold pending publication of the "Delegated Rulemaking Process" | Reciprocal Information |
| **Team Lead:** Todd Martin **Analyst:** | Flight Control Systems (25.671, 25.672) | Alt Rulemaking | FCHWG | NPRM drafted, have draft AC 25.415-1 dated 9/26/00. Application for RM July 2011; NPRM est 1Q FY12 | Reciprocal Information |
| **Team Lead:** Todd Martin **Analyst:** Jan Thor | Fuel Tank Access Doors (25.963(E)) | Alt Rulemaking | GSHWG | NPRM drafted, have draft AC 25.415-1 dated 9/26/00. Application for RM July 2011; NPRM est 1Q FY12 | TBD |
| **Team Lead:** Todd Martin **Analyst:** TBD | Ground Handling Conditions | Alt Rulemaking | LDHWG | NPRM drafted, have draft AC 25.415-1 dated 9/26/00. Application for RM July 2011; NPRM est 1Q FY12 | TBD |
| **Team Lead:** Todd Martin **Analyst:** TBD | Structural Integrity of Fuel Tanks | Alt Rulemaking | LDHWG | NPRM drafted, have draft AC 25.415-1 dated 9/26/00. Application for RM July 2011; NPRM est 1Q FY12 | TBD |
| **Team Lead:** Mike Dostert **Analyst:** Jan Thor | Design Requirements for Minimizing Airplane Hazards Associated with an Uncontained Engine Failure | Alt Rulemaking | PPIHWG | ON HOLD | TBD |
| **Team Lead**: Jeff Gardlin **Analyst:** Jan Thor | Emergency Evacuation Certification AC | AC | EEIG | Public comment period closes 4/18/11 | |
| | | | | | |
| **Team Lead:** Todd Martin **Analyst:** Q | Fire Protection of Structure (25.865) | AC | LDHWG | The rule (25.865) is acceptable as-is, and no changes will be made. The advisory material submitted by the ARAC working group is not sufficient to address the problem. The FAA will continue to develop advisory material in-house. This project is unscheduled. | TBD |
| **Team Lead:** Mike Dostert **Analyst:** Q | FAST TRACK HARMONIZATION PROJECT: AC 20-135X, Engine Case Burnthrough, (25.903(d)(1)) | AC | PPIHWG | ON HOLD | TBD |

# Transport Airplane Directorate Rulemaking Projects

| ANALYST/ TEAM LEADER | Project Title | Rule Stage | ARAC WG | Current Status | Harmonization Working Method: Former number system replaced with descriptors to broaden applicability and include add'l authorities (TCCA, etc) |
|---|---|---|---|---|---|
| **Team Lead:** Todd Martin **Analyst:** Q | Engine Failure Loads (Transient load time history resulting from engine failures) | RPR | LDHWG | ON HOLD | TBD |
| **Team Lead:** M. McRae **Analyst:** Q | Ice Protection HWG Task 4. Propeller deicing and induction system ice protection AC 25.1093 | AC only | IPHWG | Plan is to incorporate draft ACJ25.1093(b)(1) material into Propulsion Mega AC. | TBD |
| **Team Lead:** Wahi **Analyst:** Q | Wheel Well Fire Detection | TOR | | ON HOLD | TBD |
| **Team Lead:** Claar **Analyst:** Q | Emergency Exit Access (Type III exits) | | EEIG | ON HOLD | TBD |
| **Team Lead:** Dostert **Analyst:** Q | PPIHWG Task 8: Negative acceleration, ATTCS | | PPIHWG | Placed on "do by other means" list. 4 special conditions in past 4 years. | TBD |
| **Team Lead:** M. McRae **Analyst:** Q | Fire protection of engine cowling, 25.1193(e). PPIHWG | | PPIHWG | Placed on "do by other means" list. Use of the ARAC rec as basis for an Exemption is voluntary on the part of the applicant. | TBD |
| **Team Lead:** T. Martin **Analyst:** Q | Harmonize 25.261, casting factors. GSHWG | | GSHWG | Placed on "do by other means" list. Use of the ARAC rec as basis for ESF is voluntary on the part of the applicant. | TBD |
| **Team Lead:** T. Martin **Analyst:** Q | Damage tolerance and fatigue -- harmonize 25.571. GSHWG | | GSHWG | Placed on "do by other means" list. Use of the ARAC rec as the basis for an ESF is voluntary on the part of the applicant. | TBD |
| **Team Lead:** T. Martin **Analyst:** Q | Proof of structure -- harmonize 25.307 GSHWG | | GSHWG | Placed on "do by other means" list. Use of the ARAC rec as the basis for an ESF is voluntary on the part of the applicant. | TBD |
| **Team Lead:** McRae **Analyst:** Q | Harmonize The FAR/JAR 1.1 Definitions Of Fireproof And Fire Resistant. PPIHWG | | PPIHWG | REMOVE FROM LIST -- TAD will not do rulemaking | TBD |
| **Team Lead:** Hapenny **Analyst:** Q | Cargo compartment fire extinguishing or suppression systems. MSHWG | | MSHWG | Placed on "do by other means" list. | TBD |
| **Team Lead:** T. Martin **Analyst:** Q | Pressurized compartment loads above 45K -- harmonize. GSHWG Task 13 | | GSHWG | Officially placed on "do by other means" list. WG couldn't reach consensus on implementation altitude, so nothing has been done to address this issue. To address would require rulemaking. | TBD |

# Comments & Disposition to the Life Cycle Document: Rudder Standards

**R.C. Jones**

**17 February 2011**

| # | Company | Comment | Analysis | Agree? | Disposition |
|---|---|---|---|---|---|
| 1 | Boeing<br>Airbus | We support this activity and have a strong interest in participating in it, but in consideration of the tasking feel additional working groups should be involved to ensure a comprehensive assessment is conducted and the most effective regulatory approach is determined. Boeing recommends the Flight Test, Loads, Control Systems, and Human Factors Working Groups be included in the tasking. | Believes other working groups should be involved | Partial | We agree that this is a multidisciplinary task. Reestablishing these different groups would not only be time-consuming but would be excessive with respect to personnel and resources and might impede progress of the tasks. This task has been assigned to the FCHWG. In the past, members of this group have come from various disciplines such as systems, flight test, pilots and one loads engineer. This WG will use task groups where it makes sense, such as developing a means of compliance. This issue has had a lot of publicity and discussion with various manufacturers and regulatory agencies. We believe they have had time to consider various proposals. To increase the WG size is therefore not necessary. Additionally all members will have the responsibility to coordinate with the experts from their various organizations and ensure that all worthy proposals are considered. Ultimately, the reports will be public and comments may follow from their release. |
| 2 | Boeing | Additionally, Boeing thinks the tasking should initially determine the appropriate flight envelope and pilot use/misuse of the rudder to be considered for compliance considerations. Based on this determination the ARAC working groups can then develop and propose the most appropriate regulatory and guidance approach. | Requesting additional tasks be added to determine the flight envelope to be considered and determine the misuse to be considered. | Concur. | We will add these to the tasking statement |

| # | Company | Comment | Analysis | Agree? | Disposition |
|---|---|---|---|---|---|
| 3 | Gulfstream | The assignment of the task to a resurrected Flight Controls HWG does not work unless that group is required to assemble a cross functional team. Due to the potential impact on 25.351 yaw maneuver requirements, the Aircraft Loads community (maybe some members for the inactive L&D HWG) needs to be represented. Also Human Factors experts and pilots need to be involved.<br>There was general consensus amongst the TAEIG members that a "cross functional" Working Group would be required to effectively complete this task. | Similar to comment 1 | Partial | See disposition to comment 1. |
| 4 | ARSA | Provide several clarifying comments to the draft ARAC tasking. | | | We have included all we felt were appropriate. |
| 5 | ARSA | The FAA finds it is necessary to revise the rules to ensure that airplanes are designed such that pilots will not (1) inappropriately make pedal reversals and/or (2) be capable of overloading the fin. | Felt paragraph was redundant and does not feel task is necessarily to revise rule but rather to recommend rule revisions if needed | Concur | We will incorporate this comment into the document. |
| 6 | ARSA | The only way a retrofit is going to happen is through an AD, so does the FAA believe an unsafe condition exists? | | Do not concur | There are several ways to incorporate retrofit using the SFAR process as well as operational rules. However, ADs are a possibility. The NTSB SR A-04-056 & 57 recommended the FAA develop criteria and then review existing airplanes and require improvements for those airplanes not found adequately safe. The purpose of the ARAC is to develop the new criteria. These criteria will assist the FAA in determining if any airplane in the fleet has an unsafe feature, or, if there is no unsafe feature, whether the safety benefit is enough to outweigh the cost of retrofit. |

| # | Company | Comment | Analysis | Agree? | Disposition |
|---|---|---|---|---|---|
| 7 | Airbus | The first question in the terms of reference (see page 5 of the draft tasking) indicates this:<br><br>"What types of part 25 standards can be developed to prevent unintended rudder usage or to ensure that unintended usage provides a level of safety commensurate with part 25?"<br><br>This question directly leads to the need for:<br><br>1. Defining what is the "unintended rudder usage maneuver";<br>2. Setting criteria to evaluate the design robustness against this maneuver, including either airplane capability to withstand it or design criteria to discourage pilots from making unintended pedal usage. | | Partially concur | We have added this statement in to the tasking statement questions to be answered. |
| 8 | | The Flight Test Harmonization Working Group is the most appropriate body to set these prerequisites, and to lead further cross-disciplinary discussions involving consideration of system design, loads and human factors aspects.<br><br>We therefore recommend that the task be assigned to the Flight Test Harmonization Working Group, supported as appropriate by the Flight Controls Harmonization Working Group, the Loads and Dynamics Harmonization Working Group, and the Human Factors Harmonization Working Group.<br><br>We are aware that it may be challenging to re-establish all working groups within the short time frame defined in the draft tasking. Alternatively, to support the FTHWG, establishing a network of experts in the a.m. disciplines may be discussed. | Airbus believes that FTHWG is best qualified to address unintended usage and setting criteria and that at least that part of the tasking be addressed by it. They also believe that due to the logistical issues such as schedule that setting up a network of experts to support the FTHWG could be discussed. | We do not concur | See response to comment 1. However, we may task the FTHWG to support development of criteria for compliance finding. |

| # | Company | Comment | Analysis | Agree? | Disposition |
|---|---|---|---|---|---|
| 9 | Airbus | Concerning the time frame set in the draft tasking and with regard to the need to involve additional working groups or experts, Airbus proposes to reconsider the 18 month limit. If revisions to different Part 25 requirements need to be coordinated and formally recommended to TAEIG, we expect a minimum of 24 months will be necessary. Even if using e-mail, conference calls or web conferences, the group will need to meet several times face to face. Travel expenses and resources limitations may become more an issue in a tight schedule. | Extend schedule | Do not concur | This issue has been discussed under various circumstances. The FAA has released an IP to address our concerns with rudder usage and manufacturers have considered ways to address the IP. We believe that both authorities and the public have had an opportunity to consider the appropriate criteria from their point of view. When the group starts to meet they should be prepared with proposals. We will not add 6 months to address these tasks. |
| 10 | Airbus | <u>FAA-sponsored studies on rudder use:</u><br><br>• Page 3, footnote 1: FAA rudder survey shows quite surprising answers that make its conclusions questionable. For example, not 100% of the pilots who answered declared using the rudder at take off with cross wind (table 3, page 9), whereas it is obvious that no aircraft can be controlled without using rudder inputs in such conditions.<br><br>• Page 3, it is said that "A follow-on study showed that the key parameter that results in excessive pedal use is short pedal travel". We completely disagree with this statement. We assume that this conclusion is drawn from NASA-Ames experiments. Airbus has been participating to these experiments and has highly criticized twice the methodology and the lack of representativity (see letters from Fernando Alonso, head of Flight Operations, dated October 30, 2008 and December 18, 2008).<br><br>We therefore recommend that critical review of the quoted studies be part of the working group's task. | Concern with methods and conclusions of FAA sponsored studies should be reviewed as part of the tasks | Partially Concur | Our intention is to allow review of all FAA published data including the FAA studies. However, this does not need to be included in the tasking. It will be up to individuals to review the data as they see fit. The HWG should not spend the time reviewing the reports as a group. If there are concerns such as the one raised here, the question can be addressed in the meeting or pre-coordinated to ensure the best use of time and resources.<br><br>With respect to the NASA-Ames experiments, independent of the need or the how well the tested conditions represent actual flight, the study showed that when the rudder is used in a high demand task, shorter pedal throws resulted in overcontrol regardless of pedal forces.<br><br>Therefore we are not adding these reviews to the ARAC tasking. |

| # | Company | Comment | Analysis | Agree? | Disposition |
|---|---|---|---|---|---|
| 11 | Airbus | Rudder usage scenarios to be considered:<br>- Page 4, it is said: "However, such control laws might only be capable of a limited number of pedal reversals prior to exceeding airframe ultimate loads, and the standard may need to consider this situation." First, we should recall that there is no "unbreakable" airframe (there are myriads of ways to break an airplane...).Second, piling up a great number of cyclic inputs at Dutch roll frequency will clearly mean flight sequences duration of tens of seconds. It would be much likely that something would stop this cyclic process at a given time (PNF action or caution, warning, excessive bank angle...).Therefore, considering an infinite succession of pedal reversals would be going unreasonably too far. | | Concur | The tasking called for ARAC to consider the possibility of using pedal reversals as an additional load/envelope protection condition. The tasking statement will be modified to indicate that only a limited number of reversals might be necessary to demonstrate safety. It should also be considered whether the use of simulation would be an acceptable means of demonstrating compliance for such a condition. However, without the ARAC deliberation we will not venture to specify the form of a new standard nor the details of what may be included in the rule of the means of compliance. In terms of load limiting and/or envelope protection, the FAA has not determined that modern systems cannot protect the airplane from an unspecified number of reversals. |
| 12 | Airbus | - Page 4, it is said: "that will ensure airplane structural capability in the presence of rudder reversals and associated buildup of sideslip angles at airspeeds up to $V_D$". We consider as well that such an extreme scenario outside the normal flight envelope (i.e. beyond usual flight operating speeds) is unreasonable. | | Concur | The ARAC was tasked to review the items provided and to make recommendations. Rather than specify to VD, we will change the task to determine the appropriate flight envelope. However, it is noted that current fin load standards consider rudder inputs to VD so the ARAC should consider the reasonableness of this too. |
| 13 | Airbus | - Page 4, it is said: "such as certain pedal characteristics that discourage pilots from making pedal reversals"; for addressing this point, we should bear in mind that during Belle Harbor accident, rudder pedal forces of around 140lb were applied ; such pedal characteristics should therefore be sufficiently deterrent in case such forces would be applied, which makes it an unrealistic goal. | We believe AI is concerned that use of rudder pedal characteristics may not be reasonable to address "pedal sensitivity" | Partially Concur | The FAA concurs that this may very well be true. It is up to the HWG to determine that it is not reasonable to specify pedal characteristics to prevent inappropriate usage. However, the FAA will not eliminate this consideration without group discussion. So we have not changed the tasking. As a side note, the FAA found that pedal forces (high or low) do not seem to be a key characteristic that predict pedal overcontrol. |

| # | Company | Comment | Analysis | Agree? | Disposition |
|---|---|---|---|---|---|
| 14 | Airbus | We therefore recommend that the working group define the rudder usage scenarios to be considered. | | Partially concur | It may be that the HWG specifies certain usage scenarios. However, it will be the HWG responsibility to determine the appropriate course to consider and to make recommendations accordingly. We have revised question 1 to consider the definition of rudder misuse. This will be used to help define scenarios. |
| 15 | Airbus | <u>Need for clarification on unintended rudder usage:</u><br><br>Page 5, it is said: "What types of part 25 standards can be developed to prevent unintended rudder usage or to ensure that unintended usage..." A few lines below, it is mentioned: "d. Control sensitivity". To our understanding, there are two kinds of rudder usage which are not as per procedure: unintentional action on rudder pedals while getting in or out of the seat, or while moving the seat..., and unnecessary voluntary action on the rudder pedals in a perceived upset condition. These two kinds of usage deserve specific attentions and may affect control sensitivity in different ways. In the first case for instance, proper selection of breakout forces is relevant. On the second case, deterrent control forces in conditions similar to Belle Harbor event cannot be compatible with acceptable required for normal use of rudder.<br><br>We therefore recommend that the meaning of "unintended" be clarified, and that the working group separately consider non-voluntary actions and unnecessary voluntary actions.<br>"unintended" be clarified, and that the working group separately considers non-voluntary actions and unnecessary voluntary actions. | This paragraph divides inappropriate and inadvertent rudder usage. It assumes that the divisions need to be treated separately. It assumes that pedal forces is the key discouraging factor for inappropriate usage. This however is not necessarily the case. The FAA has found one study that shows that pilots tendency to over control with pedals is linked more with pedal displacement than pedal force. | Partially concur | Unintended rudder usage will be divided to reflect inadvertent inputs versus inappropriate input. This will ensure that both scenarios are reviewed. However, the FAA survey of transport pilots showed that occasionally the response to an accidental input was a pedal reversal. This is a subject that the HWG should consider. |

| # | Company | Comment | Analysis | Agree? | Disposition |
|---|---|---|---|---|---|
| 16 | Airbus | Conclusion:<br><br>Airbus is ready to positively and actively contribute to the task which is assigned to ARAC on rudder reversals. However we are convinced that:<br><br>- "Control sensitivity" must be first and above all defined in order to be suitable for the intended normal use of rudder pedals. | Note this statement contradicts the airbus comment on line 19. | Concur | We will include this in the tasking statement |
| 17 | Airbus | - Defining recommendations based on experiments which do not take simulator limitations into account versus the real aircraft would lead to inappropriate rulemaking (see two appended Airbus letters). | | Do not concur | We believe the FAA studies have been misunderstood. Additionally the recommendations are also based on NTSB recommendations as well as several in-service events. HWG deliberations may consider additional data or arguments. |
| 18 | Airbus | - Unintended use of rudder pedals should include non-intentional actions potentially resulting from pilot motions not being piloting actions. | | Concur | We will break "unintended" into two parts as described above. |
| 19 | Airbus | - Level of pedal forces or gradients that would be deterring from applying inappropriate rudder pedal inputs in extreme (and stressed) situation like a perceived upset would be very high (refer to Belle Harbor event); they would be clearly conflicting with the one necessary for proper intended normal usage of rudder pedals. In our opinion, it is unrealistic to ask a working group to define control sensitivity standards preventing such unintended rudder usage. | | Do not concur | The tasking does not indicate that the use of pedal forces should be an appropriate standard. The HWG deliberations are free to consider it. However, sensitivity may be defined in several ways such as pedal displacement/Ny. The HWG will have the option to make recommendations that do not require that pedal sensitivity be addressed. |

| # | Company | Comment | Analysis | Agree? | Disposition |
|---|---|---|---|---|---|
| 20 | Airbus | Irrespective of control sensitivity characteristics, it is then worth for the ARAC to look at ways or standards aimed at improving the various designs robustness against the effects of foreseeable inappropriate rudder reversals. Nevertheless absolute protection against any inappropriate pilot action is out of reach, and the task assigned to ARAC must exclude unreasonable scenarios like speeds above usual operating speeds or too long periods of uninterrupted cyclic maneuvers. This would be in line with the mission statement made: "ARAC is tasked to recommend a performance-based requirement that allows manufacturers the flexibility to design airplanes to meet their needs while ensuring airplane safety". | | Partially Concur | We believe this is true and is in the purview of the HWG. Neither the FAA nor the HWG has determined that protection from an unspecified number of reversals is not reasonable. However, the tasking statement does not require that a recommendation include such a standard either. Therefore we have not made any change to the tasking based on this. |

# EXCOM Update For TAEIG

April 13, 2011

# EXCOM Meeting – Dec 16, 2010

- **Process Improvement WG Report Approved**
  - **ARAC Manual Update In Process**
- **ARAC Structure Review- Joe Hawkins**
- **Commercial Air Tour Maintenance WG Report Approved**
- **ARAC Charter Renewed for 2 Years**

# EXCOM Meeting – March 30, 2011

- **ARAC Structure Review**
  - **Restructure to be completed by Sept 2012**
  - **Public comments requested**
- **Most likely approach**
  - **ARAC to be 20 - 25 members**
  - **No EXCOM, “full ARAC” meets**
  - **Issue Groups to be permanent Working Groups**
  - **Working Groups to become task groups**
  - **Recommendations voted and submitted from “full ARAC” meetings**

# EXCOM Meeting – March 30, 2011

- **New ARAC tasks**
- **Rudder reversal published in Federal Register**
- **Rulemaking prioritization**
  - **Response to Future of Aviation Advisory Committee recommendation**
  - **Draft tasking available for comment**
    - **Recommend Process to include industry/public input into current and future rulemaking program**
    - **Tasking would be assigned to EXCOM**

Federal Aviation Administration

# Prioritize Rulemaking

## A New ARAC Task

Presented to: ARAC Executive Committee

By: Sherry Borener and Katie Haley

Date: March 30, 2011

# FAAC

- **Secretary LaHood established the Future of Aviation Advisory Committee (FAAC) on April 16, 2010.**

- **Phase I: Develop**
  - Provide information, advice and recommendations to ensure the competiveness of the United States aviation industry.
  - Address the evolving transportation needs, challenges, and opportunities of the United States and global economies.

# FAAC Results

- **The FAAC submitted 23 recommendations to the Secretary on December 15, 2010.**

- **Phase II: Implement**
  - The Secretary gave a two year goal to implement the majority of the recommendations.
  - The Office of Accident Investigation and Prevention (AVP) and the Office of Rulemaking (ARM) are responsible for implementing Recommendation #22.

# Recommendation #22

- **“The Secretary should quickly review the existing regulatory and safety initiative calendar provide parameters and criteria for the FAA to prioritize its current and future rulemaking program. This review should include industry, or at a minimum seek industry input, and the results should be made publicly available…”**

# Tasking ARAC

- **The FAA is proposing to task ARAC with examining FAAC Recommendation #22.**

- **The goal of the task is to provide advice and recommendations on developing a framework and methodologies to assist the FAA in assessing and sequencing potential rulemaking projects.**

# Tasking ARAC (con't)

- **The proposed task would include:**
  - Define a process to evaluate rulemaking projects.
  - Use the Commercial Aviation Safety Team (CAST) methodology, which identifies the top safety areas through the analysis of accident and incident data, as a reference to determine the drivers for rulemaking:
    - Safety
    - Environment
    - Capacity
    - Operational
    - Harmonization

# Tasking ARAC (con't)

- **Develop a model to use as a prototype.**
- **Use a subset of 10 – 12 notional issues with potential for rulemaking provided by the FAA.**
- **Provide estimates of risk classification suitable for use in an Safety Management System (SMS) context.**
- **Provide a summary of findings on the drivers of rulemaking.**

# Moving Forward

- **The FAA is asking ARAC to:**
  - Accept the task.
  - Form an ad hoc core working group,
    - Create several technical evaluation working groups that report to it.
  - Assign the task to the EXCOM for oversight.

- **If ARAC accepts, ARM will publish the task in the *Federal Register,* solicit working group volunteers, and establish the working group.**

# The Aviation Rulemaking Advisory Committee (ARAC):

## The Third Decade:

Presented to: **The ARAC Executive Committee**

By: **Brenda Courtney, ARM-200**

Date: **March 30, 2011**

Federal Aviation Administration

# BRIEFING OUTLINE

- **Actions Since Last EXCOM Meeting**
- **Summary of Questions/Issues**
- **FAA Proposed Responses**
- **Next Actions**

# Actions Since Last EXCOM Meeting

- FAA distributed Notional ARAC New Structure to ARAC members and requested comments by February 17, 2011.
- Detailed comments were submitted by some EXCOM members.
- FAA issued Federal Register notice offering the general public the opportunity to provide input on restructuring ARAC (comments due by April 4, 2011)

# Summary of Questions/Issues Received

- **Questions/Issues**
  - What will be the make-up of the new ARAC?
  - How will members be selected?
  - EXCOM/the proposed ARAC--Differences in responsibilities?
  - ARAC members—How much interaction with working groups?
  - Will ARAC members have technical expertise to vote intelligently on recommendations?
  - Can an ARAC member be a member of a working group?
  - How would ARAC forward recommendations to the FAA?
  - Affects on current Issue Groups?  Working Groups?
  - How would continuity and commitment in active areas be maintained if existing Working Groups are converted to task groups?

# Initial FAA Responses

## Membership/Size/Functionality

- **What will be the make-up of the new ARAC?**
  - Balanced representation of aviation community:

| | |
|---|---|
| Aircraft Owners | Maintenance |
| Operators | Pilots |
| Manufacturers | Other Crew |
| Airports | Academia |
| Government | Environmentalists |
| Equipment and Avionics Providers | Passengers |

  - Non-voting Participants from other Aviation Authorities

# Initial FAA Responses

- **How will members be selected?**
  - Selection Criteria include
    - Knowledge and expertise in one or more aviation specialties.
    - Demonstrated ability to work in cooperative forums to solve complex, controversial, and time critical technical, safety and aviation issues.
    - Demonstrated and expressed commitment to the principles, and goals and objectives embodied in the ARAC charter.

  Other Factor
    - Ability to stay engaged in long term tasks.

# Initial FAA Responses

- **How would restructured ARAC's responsibilities differ from those of current EXCOM?**
  - Representation--must actively seek input from others in their respective communities who are not ARAC members.
  - Meetings
    - More frequent to avoid impeding the progress of Working Group recommendations moving forward.
    - Provide sufficient opportunity for full committee oversight of ARAC operations.
  - Recommendations
    - All must be vetted before the full ARAC committee for approval.
    - Transmitted to the FAA under the signature of the ARAC chair.

# Initial FAA Responses

- **How much interaction will ARAC members have with working groups?**
  - Oversight
    - Extends to all ARAC activities down to the Working Group level.
    - Will require ARAC members to secure a basic understanding of all issues sent to the committee for review and approval.
  - Participation
    - ARAC members may also serve on Working Groups or Task Groups.
    - Assist the Working Group Chair in resolving issues.

# Initial FAA Responses

## Issue Groups to Permanent Working Groups

- **How would the status of current Issue Groups be affected?**
  - No change to internal functions; continue to:
    - Form task groups (formerly Working Groups).
    - Provide quality control and guidance to task group functions.
    - Conduct in-depth review of task group products and reports.
  - Meetings can be Open or Closed
  - WG recommendations will be vetted in an open ARAC meeting before the full committee for approval.
  - ARAC will submit all approved recommendations to FAA.

# Initial FAA Responses

## Working Groups to Task Groups

- **How would the status of current, ongoing Working Groups be affected?**
  - No change to internal functions, including:
    - Membership remains intact.
    - Closed Meetings.
  - Working Group (i.e. TAEIG) provides oversight
  - Products
    - Must be submitted to WG.
    - Become input to final products submitted by WG to ARAC for review and approval.

# Next Steps

- **Reach Agreement on Path Forward**
- **Consider Term Limits**
- **Address Alternates**
- **Finalize ARAC Composition; Select Additional Members**
- **Re-Charter ARAC (NLT September 2012)**
- **Issue New Guidance on Roles/Responsibilities**

# SUPPORTING MATERIAL

# Summary of Comments Received

- **General**
  - TAEIG members consider ARAC to be a valuable process and support its continuance as opposed to total reliance on ARCs.
  - TAEIG members expressed support for the overall objective of improved efficiency.
  - Given that the number of ARAC members that actually show up for an EXCOM meeting is usually just a few more than are represented on the EXCOM itself, the current ARAC membership of 55 does not appear to be an encumbrance to managing ARAC.

# Summary of Comments Received

- **Membership and Size**
  - Assuming the reduced membership size on the chart represents the major industry, professional, union and public groups in the aviation community, and each member represents their entire segment of the aviation community (not just their company or organization), then the notion has merit.
  - With limited size, it appears that ARAC would have to become a more representative body in order to give a voice to all segments of the interested public.
  - Each EXCOM member should have an officially appointed alternate that would also hold an alternate member position, raising the total non-FAA membership to 24-30.
  - The Chairman and Vice-Chairman should be appointed from among the members and would be included in the 24-30 member number.

# Summary of Comments Received

- Suggest that each member be replaced by their alternate when appropriate
- Alternates should be replaced by a new alternate, creating at least a minimal amount of turnover and new participation every 2 years.
- Rotational opportunities should be afforded interested individuals to provide wider involvement and new blood to the group.
- Consideration should be given to preserving strong and knowledgeable leadership, particularly in the very technical areas of expertise.

# Summary of Comments Received

- **Conversion of Issue Groups to Permanent Working Groups**
  - Transport Airplane and Engine Issue Group (TAEIG) should retain its current membership with a qualified ARAC member (Craig Bolt) managing the working group to (1) ensure “robust” technical discussions of the types of taskings that TAEIG currently engages, and (2) working group recommendations get an informed and competent review by the committee.
  - Air Carrier Operations Issue Group could be disbanded seeing that it has no ongoing issues.
  - The ALL Weather Operations working group could be handed over to PARC (Performance Base Operations Aviation Rulemaking Committee.

# Summary of Comments received

- Whereas the Issue Groups are comprised of individuals with time and technical depth to guide and oversee task teams and assess/approve recommendations, that will less likely be the case on the new ARAC.
- Passing approval responsibility to a new ARAC will require (1) an increased time commitment from ARAC members; (2) more and longer ARAC leadership meetings; (3) different skill sets requisite to ARAC members; and (4) adds an extra step in the recommendation approval process, thereby lengthening the time to complete a tasking.

# Summary of Comments Received

- **Conversion of Current Working Groups to Task Groups**
  - While downgrading the status of established working groups to that of task groups may not appear significant, it is important for the FAA to appreciate that it can be difficult for working group chairs to maintain an appropriate membership, particularly between tasks.
  - There could be an increase in overhead to identify leaders for each new task, have them pull together an appropriate team, and get each group to a “producing” level.
  - Some of the current ARAC working groups have up to 20 years of history, fully-developed working-together methods, reasonable continuity in membership and leadership, and a long track record of accomplishments.

MPS-750
(04/2009)

# TCCA Report

## TAEIG April 13th 2011





# CAR 521 – Current Status

- **Background**
  - CAR521 provides the requirements to design, create or modify aeronautical products in Canada and for foreign products to be used in Canada.
  - CAR 521 serves the same purpose as FAR 21 and IR 21.
- **Rulemaking**
  - An NPA to address miscellaneous issues with CAR521 was consulted and the majority of the suggested changes accepted at CARAC (Canadian Aviation Regulation Advisory Council) in November of 2010.
    - Reduce Confusion
    - Correct Errors
  - Work has commenced on the next NPA
    - Issues requiring more deliberation
- **Guidance**
  - Delivery of first piece of CAR521 guidance :
    - AC 521-001 Canadian Aviation Regulations 521: Division I—General- Table of Concordance
    - Available at:
      - http://www.tc.gc.ca/eng/civilaviation/opssvs/managementservices-referencecentre-acs-500-521-001-1197.htm





# Aging Airplane

- NPA was accepted for fuel tank safety and flammability reduction (Nov 2010 CARAC meeting):
  - Design Approval Holder rules in the proposed CAR 526 “Continued Airworthiness and Safety Improvements for Transport Category Aeroplanes”
  - Operational rules in new division V to CAR 605 “ Continued Airworthiness and Safety Improvements”
  - In the regulatory drafting process now.
- NPA under development for Widespread Fatigue Damage (WFD)
  - Plan to present at fall 2010 CARAC meeting.
- Remainder of Aging Airplane rules will be progressed in the near to mid term
  - Enhanced Airworthiness Program for Aeroplane Systems - EWIS
  - Damage Tolerance (DT)
- Canadian Standards as provided in the Airworthiness Manual are already harmonized with Part 25 Aging Airplane rules for new type designs





# Avionics Systems Harmonization Working Group
# Low Airspeed Alerting
# April 2011

# Discussion Topics

- Phase 1 report approval
- Phase 2 tasking status and plan

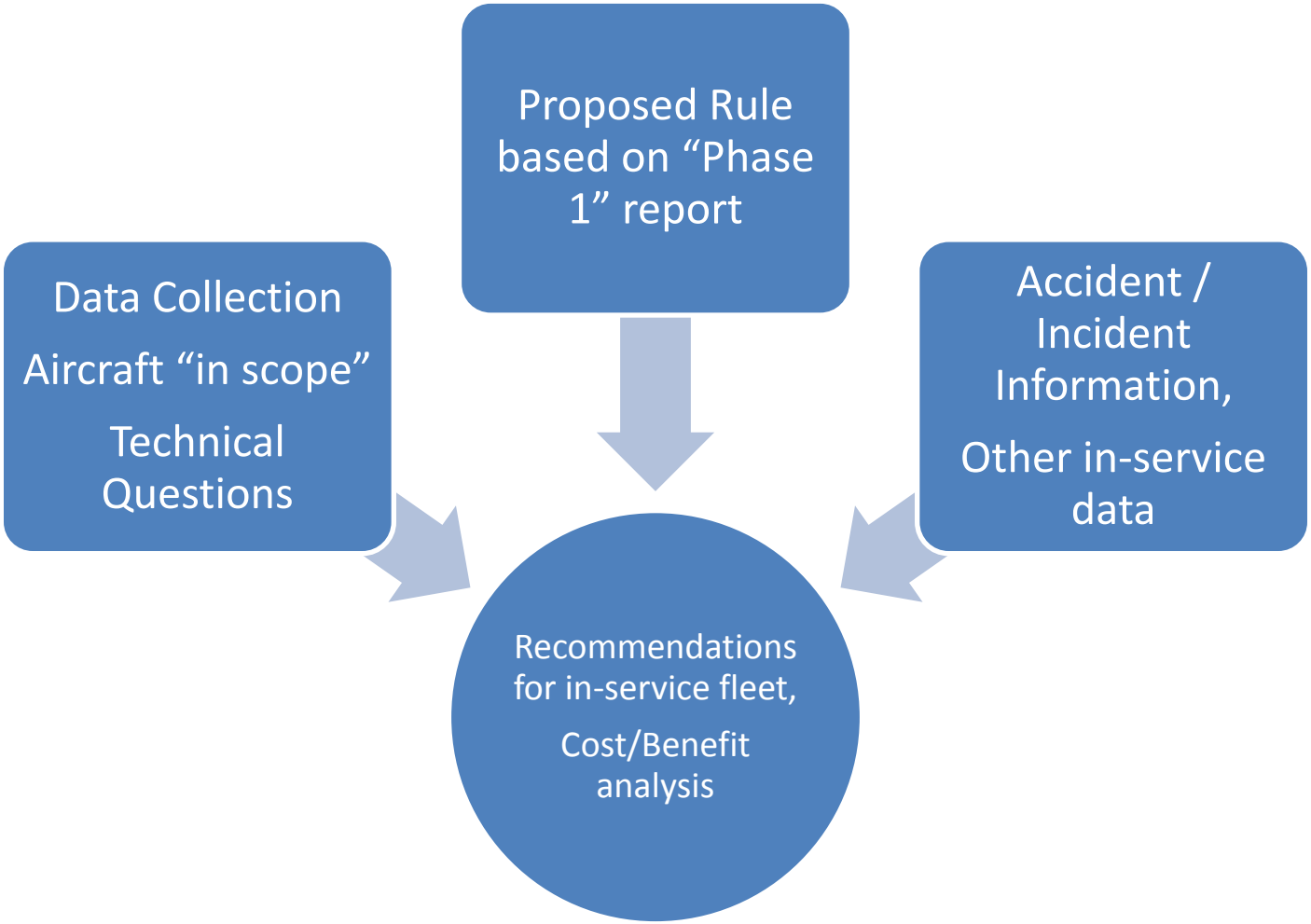
# Phase 1 Report

- Submitted to TAEIG on March 15 2011
  - Requesting approval
- High level description of the original assignment
  - Provide information that will be used to develop standards and guidance material for low speed alerting systems
  - Addresses 10 low speed alerting technical questions, relative to new aircraft designs
- “timeliness” guidance opportunity
- Data collection Appendix

# Phase 2 Task

- Provide information that could lead to standards for low speed alerting that can be satisfied with practical design approaches in existing aircraft
- This includes possible retrofit standards and guidance material for low speed alert systems
- 10 Technical Questions

# Phase 2 Work Plan



# Phase 2

- What is In Scope?
  - Defining the “fleet” (aircraft in scope, Part 25 operating under Part 121/129)
- How can we get the data?
  - Survey template defined (existing designs)
  - FOQA data (not just accidents/incidents)
- Other Key Issues
  - Practicality to implement in legacy fleets
  - cost/benefit
  - EASA and TC participation (should be resolved)

ASHWG: Work Plan for Phase 2 task: Parts 25/121/129 retrofit standards for Low Airspeed Alerting.

**Objective**

Provide information that could lead to standards for low speed alerting that can be satisfied with practical design approaches in existing aircraft. This includes possible retrofit standards and guidance material for low speed alert systems. This information may result in standards that complement existing stall warning requirements. If the recommendation for retrofit is the same as for new designs, the working group should state the rationale and not repeat the information previously.

**Scope**

Part 25 aircraft that operate in the U.S. (under Parts 121 and 129)

Recommendation is to go into a database (e.g. Airclaims – insurance database that includes operator and aircraft listings) and get a listing of all aircraft that fall into 121/129 and see which are part 25 US – do we have access to such a database? Start with a basic list for Phase 2 (completed). Phase 3 to be identified later will consider part 135 and part 91 subpart k. The objective is to try and keep the task as manageable as possible in each phase.

Applicable to aircraft built on or after the time that the FAA published their policy memo on low airspeed cueing. This was from 1996, so earlier aircraft will be in scope. NOTE: the FAA publication in 1996 already considered aircraft that had incorporated a "modern flight deck" – which was introduced in the mid 1980s, so we need to include those aircraft in our applicability.

- 3rd generation = glass cockpit / FMS equipped A/C (e.g. A310/A300-600, B737-300/400/500, B737-600/700/800 (NG), B757, B767, B747-400, B717, BAE 146, MD11, MD80, MD90, F70, F100)
- 4th generation = fly-by-wire, flight envelope protected airplanes (e.g. A318/A319/A320/A321, A330, A340-200/300, A340-500/600, B777, A380, ERJ, CRJ)

Special consideration or recommendation of designs that are no longer being produced or supported, or that have been modified by STC or are looking to upgrade their flight deck avionics. Also need to consider that certain operators will fly mixed fleet, which may impact the final results.

- 1st generation = early jet airplanes (e.g. Comet*, Caravelle*,CV880*, CV990*, B707, B720*, DC8, Trident*, VC10*) * No longer in commercial service. 1st generation are not in scope.
- 2nd generation = 2nd jet generation (e.g. A300, BAC111, B727,B737-100/200, B747-1/2/3, DC9, DC10, F28, L1011, Mercure)

We are going to answer to the "technical questions" to only the 3rd generation and 4th generation. There may be exceptions – for example, if there is a large fleet (e.g. >30 pax/freighter) of "2nd gen" aircraft we should take a look at those. Plan is to collect the superset of data first, since we can always delete specific model numbers. We also need to consider when the fleets will no longer be in service (will be phased out).

**Key Questions**

What, if any, proposed rule(s) and/or guidance material will the FAA develop based on the Phase 1 working group report? It is vital that the working group understands the proposed minimum standards for future low airspeed alerting systems in order to determine which general system types and fleets may already satisfy these standards and which may not.

- Right now the FAA is taking the phase 1 report, and will look at rulemaking options (from a general rule to a more specific rule or something in between). In the June timeframe will have something that might be shared with our group.
- Retrofit standards may or may not be the same from Part 25 standards.

What, if any, relevant results from safety investigations by the JSAT or other safety organization(s) will be provided to the working group. Such results can be used in conjunction with information from the above bullet to determine model and system combinations with either a satisfactory or an unsatisfactory safety record. Combinations with an unsatisfactory safety record may potentially be subject to retrofit requirements.

- **Get with James Wilborn from JSAT to provide a briefing to this ARAC group, in the June timeframe. Joe Jacobsen to arrange.**

What, if any, retrofit capabilities are there for identified existing fleets that may potentially be subject to possible retrofit requirements (expected to be a small subset of all existing Part 25 fleets)? This information needs to be developed by the ASHWG/FTHWG manufacturer representatives, with assistance from equipment suppliers as appropriate

- What upgrades have been performed on legacy aircraft? Are there any specific equipment changes which have been made that incorporate Low Airspeed Awareness or alerting? **Loran will look for a possible list of STCs completed that would have incorporated LAS.**

What if the data does not exist to specifically answer the technical question(s) for a specific type (or types) of airplane? For example, since current methods consider mostly subjective means of demonstrating "timely" alerts, without significant assumptions and conditions behind the data it is unlikely that we will be able to provide meaningful data to answer the first two technical questions:

- How timely is the airplane in alerting the crew of flight below the intended operating speed?
    - What is the "intended operating speed?"
- How timely relative to stall warning?

**List of Activities**

Get the superset of applicable aircraft – March 2011 (complete)

Look at the accident/incident data, and identify which of those aircraft may have been prevented with Low Airspeed Alerting, and those that had Low Airspeed Alerting but may have been ineffective in providing an alert (JSAT review) – Mid 2011

Get a good idea from the FAA of what a proposed rule/minimum standard would look like for new airplane designs (FAA) – Mid 2011

Answer the technical questions (ASHWG) – see notes below – end of October 2011

Team meeting tentatively planned for week of 14 November. Location TBD.

Based on the proposed rule/minimum standard, and safety report from JSAT, develop a recommendation for requirements applicability or guidance information for retrofit aircraft (ASHWG). This includes any recommendations on possible design approaches for those aircraft that are in scope (ASHWG). – March 2012

Develop cost input to an economic impact analysis for the cost to implement these recommendations (ASHWG) as well as a benefit estimate if these recommendations are implemented (ASHWG) – March 2012

**Help or other resources needed**

JSAT: Look at the accident/incident data, and identify which of those accidents/incidents may have been prevented with Low Airspeed Alerting, and those that had Low Airspeed Alerting but may have been ineffective in providing an alert, and why. Get a copy of their detailed analysis of these accidents/incidents to include the event sequence analysis and any recommended safety enhancements or mitigations. If there are any other conclusions/recommendations we would like to see those as well.

**Clark to send email to Joe Jacobsen for this request.**

ASHWG: Representatives from other aircraft manufacturers or a way to solicit the information we need to get all of the requested aircraft information. **Christine to work with the FTHWG representatives to broaden our search.**

FAA Flight Standards: This is an opportunity for more people in the operational world to get involved. **Clark will ask Joe if there was someone specific in mind**.

**Plan to answer the technical questions**

Airplane specific, develop a table that answers the question by airplane – also get information about the basic design by aircraft. This may include elements of LSA design that are not included in the technical questions, but we feel are important to address – administer as a survey. **Bob and Bill, working with FTHWG as needed.**

Not airplane specific, address the question in a simple paragraph – **Clark, Loran, Frank**

Part of the recommendation, need to hold off until we have the parallel tasks completed – Wait….

Technical Questions

1. How timely is the airplane in alerting the crew of flight below the intended operating speed?
2. How timely relative to stall warning?
3. Is alerting instantly recognizable, clear, and unambiguous to the flightcrew?
4. How are nuisance alerts minimized?
5. Does the alerting operate under all operating conditions, configurations, and phases of flight, including icing conditions?
6. Does the alerting operate during manual and autoflight?

   The first six questions require data collection. We will get the data and then provide responses to each question.

7. After reviewing airworthiness, safety, cost, benefit, and other relevant factors, including recent certification and fleet experience, are there any additional considerations that should be taken into account?

   We will develop and review airworthiness, safety, cost, benefit, and other relevant factors, and provide a report including recommendations along with a related cost/benefit analysis, Perhaps there are operational considerations that need to be addressed,

8. Is coordination necessary with other harmonization working groups (e.g., Human Factors, Flight Test)? (If yes, coordinate and report on that coordination.)

   Yes. Review what we had in the Phase 1 report for applicability. Plan to get a debrief and report from JSAT.

   Need to contact the ASIAS Executive Board for data from the ASIAS data base on low airspeed and low energy flight “events” including data from ASAP reports/narratives and FOQA data. Need to identify the benefit to the system and the airlines. **Dave to provide a sample letter (complete)**.

FOQA data to include stick shaker, low airspeed alerts, etc., by airplane type. **Kathy will go get a recommended list of what might be available, so we can choose the parameters we want to get (complete)**.

9. If improvements are needed for low speed alerting in the existing fleet, should the FAA adopt a design approval holder (part 26) requirement to mandate development of design changes, or would an operational rule be sufficient?

   It will be good to collect data first as we have planned, look at data that includes not leading to an accident or an incident. Problem may be localized to particular aircraft, need to understand the data behind it.

   14 CFR Part 26 – started with flight deck doors rulemaking, a regulatory framework that allows things to happen including FAA authority for compliance deadline for DAH for an application for certification, also accompanied by part 121 so that the DAH approval can be used by the operator.

   If we recommend adoption to a Part 26 standard, we need to pay attention to any potential issues with cost, misunderstanding of the requirements, and ability to get the data from the DAH. Part 26 allows follow on products to be implemented even after the rule to be adopted.

   Do we see "continued airworthiness issues" with in-service fleet or would this be a "design enhancement?" Our Initial thought is that it may be better have an operational rule under part 121. Our research will help us define an appropriate path forward.

10. In responding, the working group should address the factors set forth in ''FAA Policy Statement: Safety—A Shared Responsibility—New Direction for Addressing Airworthiness Issues for Transport Airplanes'' (70 FR 40166, July 12, 2005). The ARAC working group should provide information that could lead to standards for low speed alerting that can be satisfied with practical design approaches

    This policy asks to consider the following factors when determining if design approval holder (DAH) requirements are needed to support the safety objective:

    • The complexity of developing data and documents to address the safety issue: Type design data analysis is necessary for the timely, efficient development of necessary data and documents.

        We have already split the aircraft fleet into categories, where we believe that the level of change to implement a low airspeed alerting system becomes significant for older model aircraft. In addition, its unclear whether existing design data will be available to identify whether a particular legacy aircraft type is designed or can be easily modified to accommodate a low airspeed alerting function. They data may be difficult to get.

• The need for FAA-approved service instructions to be available in a timely manner: We need to be confident that when the required data and documents are provided, they will be acceptable implemented by the operators to comply on large fleets of airplanes.

AEG needs to approve any written modification instructions to the aircraft to ensure that they can be implemented. Some aircraft will require very complex modifications to provide a low airspeed alert function, but clear written modification instructions should be feasible. Need to make sure we have instructions for continued airworthiness.

• Whether a number of different types of transport airplanes need similar safety improvements: Because the safety issue is common to many airplanes, we need to ensure that technical requirements and compliance process are consistent to ensure required safety level can be achieved equitably.

We need to collect the safety information for a wide variety of fleets before we can determine whether a fleet wide safety improvement is required or not. Some aircraft will not have a LAS implemented, and may never have experienced an accident or incident where lack of a LAS was a factor. Likewise, we may find that airplanes with modern LAS do have a LAS safety concern.

• The safety objective needs to be maintained for the operational life of the airplane: We need to ensure that future design changes do not degrade the achieved level of safety in the fleet.

That is difficult to tell at this point. However modern implementation of LSA should not experience a degradation of performance over the life of the airplane, unless the function is removed when a future change / upgrade is performed (unlikely)

• Additional factors relevant to the safety objective being addressed: There may be other factors that are unique to a particular safety concern that we also need to consider.

Yes there are. For example, implementing a modern LAS may require a significant change to the airplane (e.g. new flight deck displays, new sensors) which would be very costly. The development cost to implement over a small fleet of existing aircraft may also be impractical.

**Proposed AAWG Tasking RE: WFD**

**Introduction**

On November 15, 2010, the FAA released the Widespread Fatigue Damage Final Rule (14 CFR 26 Subpart C). The rule becomes effective on January 14, 2011 and requires the development of Limits of Validity (LOVs) for certain transport category airplanes. These limits of validity, together with any supporting service actions (or a binding schedule for publication of said service actions) must be presented to the FAA for approval using a schedule based on the original part 25 amendment level the airplane was certified to. Upon, approval, the LOVs will be placed in an Airworthiness Limitations Section (or equivalent) and the operators of those affected airplanes will be required to adopt those LOVs. Operation past an LOV would be prohibited unless that LOV is extended. Any required Service Actions to preclude the development of WFD identified in this process would be mandated by Airworthiness Directive.

In excess of forty-two airplane model types (not including minor models or those currently in certification) from seven Type Certificate Holders are affected by these requirements. In addition, twenty-six model types excluded from 14 CFR 26.21 have FAA defined default-LOVs.

In the rule preamble, the FAA has endorsed the Structures Task Group (STG) working together process to support the development of compliance data (see Page 69759). In this statement, the FAA has expressed belief that there is value in having an industry view of the TCH compliance activities. With this, it is recognized that there is the potential for differences in rule interpretation which, without AAWG oversight, could lead to inconsistencies amongst the various model specific STGs. In the past, the AAWG has provided oversight of STG activities and served as a resource to ensure consistency in the STG process.

Proposed tasking:

TASK 1: Review existing and proposed Advisory Material, including but not limited to AC25.571-1D, and 120-104 and 120-93 to identify and propose changes where advantageous, further harmonize WFD work with existing damage tolerance and Airworthiness Limitations guidance for Type Certificate Holders and operators.

Task 2: Review final WFD rule and propose any additional guidance necessary to clarify existing FAA requirements and harmonize with EASA regulatory and guidance material.

A. Applicants for Future STCs
B. Need guidance to define when new fatigue testing is necessary (Upper Bound LOV)
C. What structure does the LOV apply to; are components exempt from the LOV?

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Task 3: Utilize the STG process and provide oversight to support accomplishment of these tasks. Specifically:

A. Establish STG working together venues with a representative cross section of the operators of any particular fleet.

B. Oversee the STG activities that will be coordinated for each applicable airplane model by the respective TCHs and part 121 and 129 certificate holders.
C. The STG should elevate issues to the AAWG when industry standardization is necessary.

# TAEIG - AAWG tasking proposal for WFD implementation

Steve Chisholm
Chief Structures Engineer - Technical Support
Boeing Commercial Airplanes

April 13, 2011

# AAWG tasking proposal to TAEIG in support of WFD implementation.

*Discussion points*

- **Background**
- **Proposed tasks**
- **Next steps**
- **Discussion/Questions**

# AAWG tasking proposal to TAEIG in support of WFD implementation.

*Background – AAWG report to TAEIG on October 6, 2010:*

- **Even though the FAA task for AASR is completed, AAWG should continue to exist in order to provide guidance for any emerging structures rule compliance issues, and to provide oversight responsibility to STGs. With the imminent WFD rule, the preferred implementation is the STG approach.**
- **Non-harmonized elements of FAA/EASA Aging Airplane Rules, remain as a concern to DAHs and Operators**

# AAWG tasking proposal to TAEIG in support of WFD implementation.

*Background – TCH compliance activities* RMP1

- **Boeing held an all model STG meeting on February 1 & 2**
- **Boeing and the Seattle ACO have been meeting weekly to develop an understanding of compliance requirements**
- **FAA Standardization Team has developed a list of frequently asked questions addressing many of the issues raised during these discussions but some issues have broad implications that would benefit from AAWG input.**
- **The AAWG believes their input to emerging issues is beneficial to the industry and broadens the engagement of key stakeholders in the development of standardized approaches.**

## Slide 4

**RMP1** have other TCHs held any STGs and/or raised questions to the Standization team?
Roxanne Marie Pillo, 4/12/2011

# AAWG tasking proposal to TAEIG in support of WFD implementation.

*Proposed AAWG tasking – Task 1*

- **Review existing and proposed Advisory Material, including but not limited to AC25.571-1D, and 120-104 and 120-93 to:**
  - **Identify and propose changes where advantageous**
  - **Further harmonize WFD work with existing damage tolerance and Airworthiness Limitations guidance for Type Certificate Holders and operators.**

# AAWG tasking proposal to TAEIG in support of WFD implementation.

*Proposed AAWG tasking – Task 2*

- **Review final WFD rule and propose additional guidance necessary to clarify existing FAA requirements and harmonize with EASA regulatory and guidance material.**
  - **A. Applicants for future STCs**
  - **B. Develop guidance to define when new fatigue testing is necessary (limit of fatigue test evidence supporting LOV)**
  - **C. Define the structure subject to the LOV; are components exempt from the LOV?**

# AAWG tasking proposal to TAEIG in support of WFD implementation.

*Proposed AAWG tasking – Task 3*

- **Utilize the STG process and provide oversight to support the development of WFD compliance data:**
  - **Establish STG working together venues with a representative cross section of the operators of any particular fleet.**
  - **Oversee the STG activities that will be coordinated for each applicable airplane model by the respective TCHs and part 121 and 129 certificate holders.**
  - **Serve as a resource to the STGs for guidance and the development of industry standardization as necessary for technical issues related to WFD compliance activity.**

# Next steps

*AAWG meeting scheduled for April 27, 2011*

- **Preliminary agenda**
  - **Overview of WFD activity**
  - **TAEIG approved tasking**
  - **Capture AAWG AASR lessons learned & establish AAWG member responsibilities**
  - **FAA FAQs**
  - **Open issues raised during STGs and ACO discussions**
  - **Review actions associated with tasking and develop an action plan**

# Discussion

*AAWG meeting scheduled for April 27, 2011*

- **AAWG membership – maintain same representation**
- **Request endorsement of Steve Chisholm as co-chair**
- **Questions?**