

**Agging Transport Systems Rulemaking Advisory Committee (ATSRAC)
Meeting Minutes**

Date: January 21-22, 2004

Place: Airbus Industrie Miami Training Center
Miami, Florida

Administrative

Mr. Kent Hollinger (the ATSRAC Chair) called the meeting to order at 9:00 AM. Mr. Charles Huber (the ATSRAC Executive Director) then read the advisory committee briefing statement. Mr. Hollinger then invited Mr. Patrick Glapa (the Airbus representative) to make administrative and housekeeping remarks. Mr. Hollinger thanked Mr. Glapa for hosting the meeting, and then informed the Committee that several individuals would not be able to attend the ATSRAC meeting because of scheduling difficulties. Mr. Hollinger then began the introductions of the meeting attendees.

Mr. Hollinger read through the agenda for the meeting. He commented that Mr. Massoud Sadeghi had been scheduled to give the Committee a report on the FAA Tiger Team, and that, at present, Mr. Sadeghi and Mr. Fred Sobeck were attending meetings related to the Tiger Team at the FAA's Washington DC Headquarters. Mr. Hollinger informed the Committee that since Mr. Sadeghi couldn't attend, other arrangements would be made for addressing the progress of the FAA Tiger Team. Mr. Glapa asked for a timetable for the Committee to be able to review the FAA Tiger Team results, and Mr. Huber commented that, due to delays in the progress of the Tiger Team, hopefully a comprehensive report would be available by the next meeting of the ATSRAC Committee.

Approval of October 2003 Meeting Minutes

Mr. Hollinger opened the floor for comments on the meeting minutes from the October 2003 meeting of the ATSRAC committee. There was some discussion regarding the clarification of a sentence, as suggested via email by Ms. Sarah Knife, and also for some minor typographical corrections. The Committee then voted unanimously to accept the meeting minutes with the agreed-upon changes.

Electrical Wiring in Relation to the MMEL (Handout #1)

Mr. Vic Card (EASA/JAA) presented a report entitled "Electrical Wiring in Relation to the MMEL". He commented on the purpose of the MMEL and also the definition of the MMEL/MEL, as indicated by the JAR. Mr. Card emphasized that the MMEL/MEL does not indicate a distinct difference between dispatch of an aircraft with equipment removed, with equipment failed, or with equipment malfunctioning intermittently. He also commented that the MMEL/MEL does not consistently specify that power to the component must be removed. Mr. Card discussed recent incidents in the UK in which the MMEL was used to defer maintenance of electrical components. He then commented that wiring faults, as the possible cause of a malfunction of a deferred component, may have inherent risks beyond the loss of equipment function. He concluded by proposing to the Committee three questions: should dispatch with a known wiring fault be deemed to be outside the normal MEL dispatch allowance; should the MMEL/MEL requirements be

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modified to clarify this point; and, lastly, should ATSRAC recommend that FAA consider this issue further.

Discussion

Following comments about the use and basis of MMEL usage from Mr. Hollinger and Mr. Johan Kala (Continental Airlines), Mr. Don Andersen (Boeing) and Mr. Ken Elias (ALPA) mentioned the inequities of using the MEL to defer components that were inoperative due to an electrical fault. Mr. Hollinger suggested adding a requirement for the user to pull the circuit breaker to the inoperative equipment, to which Mr. Jon Haag (Altria Corporate Services) indicated that in some places the user is directed to pull a circuit breaker. Mr. Hollinger began a discussion involving changes to the Dispatch Deviation Guide, which gives instruction on how to implement the MMEL. Mr. Elias mentioned that the inappropriate deferral of inoperative equipment using the MEL appears to have a direct correlation to the financial health of the industry and of the airline. The Committee discussed how widespread the problem is and how the problem should be addressed. Ms. Christine Negroni (NADA/F) asked if the issue was appropriately presented to ATSRAC, and if each of Mr. Card's questions should be addressed individually. The Committee then unanimously agreed that, in reference to the first and the third of Mr. Card's concluding questions (...should dispatch with a known wiring fault be deemed to be outside the normal MEL dispatch allowance; and, should ATSRAC recommend that the FAA consider this issue further?) a decision on the matter would be tabled until the next ATSRAC meeting. The Committee unanimously agreed that the OEM representatives (Mr. Dominique Bellon from Dassault Aviation, Mr. Andersen from Boeing Commercial Aircraft Group, and Mr. Glapa from Airbus) would present a report at the next ATSRAC meeting in which the following issues are addressed:

- 1) Should dispatch with a known wiring fault be deemed to be outside the normal MEL dispatch allowance;
- 2) Should the MMEL/MEL requirements be modified to clarify this point; and,
- 3) Should physical failures of wiring be considered in the dispatch instructions in support of the MMEL/MEL.

HWG 12: Electrical Wiring Interconnection Systems (EWIS) Research and Development (R&D) Technology Transfer HWG (Handout #2)

Mr. Kent Hollinger made a presentation detailing the progress of HWG 12. He commented on the HWG membership and the status of individual working group sub-tasks. He then provided the Committee with recommendations that had been reached by HWG 12.

Discussion

Mr. Anderson asked the Committee if the issues raised in HWG 12's presentation were addressed in any FAA advisory material (other than an Advisory Circular), and Mr. Huber said that it had, in its Best Practices document. Mr. Glapa asked if compliance is required, and Mr. Huber indicated that it was advisory in nature. Mr. David Harper asked if the study was limited to thermally driven, mechanical circuit breakers, and if the recommendation from ATSRAC should limit applicability to certain types of circuit

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breakers. Mr. Ric Peri (Aircraft Electronics Association) indicated that the procedures are already prescribed in Advisory Circular 43.13, to which Mr. Elias asked if operators were already complying with the Advisory Circular. Mr. Harper asked the working group for more information about why they chose the 36-month cycling interval. Mr. Mike Romanowski (AIA) suggested that the group clarify its recommendation, and Mr. Kala indicated that the recommendation ought to be published in the form of an FSAW (Flight Standards Airworthiness Bulletin). Mr. Hollinger then indicated that the working group intended for the recommendation to be advisory in nature, and that if the Committee wanted to make a change in a regulation, that the basis for issuance should be evaluated further. Mr. Anderson and Mr. Kirk Thornburg (NWA) commented that the recommendation should be advisory and not a regulation. Mr. Elias suggested that manufacturers of circuit breakers had advised the airframers that the circuit breaker should be cycled but that the recommendation had not been forwarded to the airlines. Mr. Rob Pappas (FAA) asserted that the function of the circuit breaker is to be a “primary line of defense” for the electrical system and that the working group had established a performance benefit for cycling of circuit breakers. He emphasized that the working group’s recommendation was rational and reasonable. Mr. Cliff Neudorf (TCCA) suggested that the manufacturers of circuit breakers may need to have input on the nature of how the information about the cycling of circuit breakers is transmitted.

Mr. Hollinger proposed that the Committee vote on several action items related to the working group’s recommendation. The Committee voted unanimously that Dassault, Boeing, and Airbus would provide information regarding HWG 12 recommendations 1 (concerning cycling of circuit breakers) to determine agreement. In regard to recommendation 2, the Committee also voted unanimously that the FAA would provide information to the Committee on how the recommendation of HWG 12 (concerning cycling of circuit breakers) will be made available to the FAA workforce.

Mr. Hollinger then presented the working group’s recommendations based upon visual observation of aircraft wiring. After some discussion, Mr. Hollinger emphasized that the working group reviews reports that are lengthy and detailed, and that completely reiterating each report is not practical at a full ATSRAC meeting. ATSRAC formed HWG 12 to summarize the information and recommendations, and as such the Committee should not question intricate details of each report, but have trust that the HWG experts thoroughly examined all issues. He presented a recommendation that the Committee advise the FAA to amend the Advisory Circular 120.XX to ensure that the EZAP logic prescribe a Detailed Visual Inspection of all circuit breaker panels. Mr. Tony Heather (EASA/JAA/CAA) asked if it was not appropriate to include the EZAP logic into the Advisory Circular. The Committee then discussed whether the DVI (Detailed Visual Inspection) or GVI (General Visual Inspection) was the most appropriate recommendation from the Committee. Mr. Hollinger then recommended tabling the discussion to amend Advisory Circular 120.XX.

Mr. Hollinger presented the working group’s recommendation to have the FAA amend Section 9 of the proposed Advisory Circular regarding the development of electrical standard wiring practices documentation. Mr. Haag recommended removing any

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language cautioning the technician not to cross-thread screws in the circuit breaker because such wording would not be practical. Mr. Anderson and Mr. Glapa suggested that the working group revise their recommendation to make it less specific. Mr. Card suggested that the recommendations be given to the OEMs for consideration. After rewording the recommendation, it was unanimously approved by the Committee.

Mr. Hollinger then proposed a letter from the ATSRAC committee to the Society of Automotive Engineers (SAE) containing recommendations to the SAE regarding circuit breakers (**Handout #3**). The Committee discussed changes to the letter, and Mr. Hollinger called for a vote on those changes. The Committee voted unanimously on issuing the letter with the changes.

Lastly, Mr. Hollinger presented recommendation #5 of WG 12. The recommendation involved the integration of SAE data into an FAA wiring policy letter. After some discussion and modification of the recommendation, it was accepted unanimously by the Committee.

Video Presentation by Ric Peri on Electrical Wiring Inspections

Mr. Peri demonstrated a seminar that he is giving nationwide, counseling mechanics and repairmen on proper wiring inspections and maintenance.

AC 43.13 Applicability to HWG 10 Inspection Findings: Enhanced Electrical Wiring (Handout #4)

Mr. Ric Peri conducted a PowerPoint presentation related to WG 10's findings regarding their aircraft evaluation as related to Advisory Circular 43.13.

Discussion

Mr. Elias indicated that the emphasis for this item should be on 121 air carrier operations, since those operations involve the majority of the flying public. Mr. Peri suggested that the FAA should emphasize compliance with Advisory Circular 43 among the general aviation operators. There was discussion among the Committee and other attendees regarding the relevance of Advisory Circular 43, and Mr. Peri noted that all aircraft manuals, in particular aircraft and manufacturer maintenance manuals, should not be less restrictive as Advisory Circular 43. He indicated that the aviation industry has a culture problem in the inability to promote strict adherence to the principles outlined in Advisory Circular 43.

Day Two: 8:30 AM

Administrative (Handout #5)

Mr. Hollinger distributed copies of the January 19, 2004 issue of *Air Safety Week* that had been supplied by Mr. David Evans, Editor-In-Chief. The lead story was an article entitled "Wiring & Electrical Problems are Dominant Dangers for Regulators". He then discussed with the Committee details regarding the next ATSRAC meeting, to be held in April. He discussed the possible publication of draft technical reports that are reviewed by HWG 12 via links at the ATSRAC website. He emphasized that having these reports

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available to the other members of the Committee would allow the members to review them thoroughly ahead of time, instead of having to ask detailed questions during the full Committee meetings. Mr. Huber indicated that it was permissible for working groups to meet outside of the formal ATSRAC meeting without complying with the “public meeting” requirements. Mr. Pappas indicated that publication of working group draft technical reports is not appropriate prior to FAA technical writer review and that the reports cannot be distributed to only a limited audience. Mr. Elias contended that some of the information available to working groups from manufacturers and operators is protected and is proprietary. It was agreed that the full Committee did not need to review the technical reports prior to receiving briefings from HWG 12.

HWG 11: EAPAS Rulemaking Advisory (Handout #6)

Mr. Kala presented a report from the HWG 11. He indicated that the working group had struggled somewhat with the tasking of the working group, and Mr. Huber asked if Mr. Kala felt that he was empowered to make changes within the group. Mr. Kala responded that there was some confusion over the wording in the tasking, and that there was some difficulty with the availability of working group members. Mr. Hollinger asked if the working group required more members, and Mr. Kala responded that they did not. He asked Mr. Kala to notify him if he required any help with the committee.

HWG 13: Small Transport Airplane Enhanced Wiring Inspection (Handout #7)

Mr. Haag presented a progress report to the Committee, involving a discussion of timetables for the working group. Per Mr. Huber’s request, Mr. Haag agreed to identify gaps that the working group may find in Advisory Circular 43.

Discussion

Ms. Christine Negroni (NADA) asked which new technologies (i.e. fiber optics) are not addressed in Advisory Circular 43. Mr. Haag indicated one of the functions of the working group is to identify proper guidance material related to the new technologies. Mr. Neudorf asked that the Committee address the issue about which methodologies are being met by the OEMs. Mr. Gunnar Jancke (Jet Aviation) emphasized that the baseline for this issue is AC 43, and that the AC is also the basis of the findings of the working group.

Tiger Team Status Report (Handout #8)

Mr. Huber presented the Committee with a report on the status of the Tiger Team. He indicated that two members of the Committee, Mr. Sadeghi and Mr. Sobeck were attending Tiger Team meetings this week.

Mr. Huber began his presentation with a review of the objectives of the Tiger Team. He then outlined the rulemaking programs in progress related to aging aircraft and corrosion prevention. Mr. Huber detailed the specific activities of the Tiger Team, and commented on the effect of the Tiger Team on EAPAS.

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Discussion

Mr. Thornburg thanked Mr. Huber on behalf of Northwest Airlines for the work that the Tiger Team was accomplishing. The Committee then discussed the coverage of aircraft fuel systems with the EZAP process. Mr. Huber indicated that there may be two opinions of whether or not the fuel system is covered. Mr. Hollinger proposed that the Committee decide whether or not the fuel system is included in the EZAP process, and the Committee unanimously agreed that it is.

Future Meeting Dates and Locations

Ms. Luci Crittenden (NASA) made some comments regarding transportation and meals at the next ATSRAC meeting, scheduled for April 28-29, 2004, in Hampton, VA.

The Committee discussed and agreed to the following schedule for future ATSRAC meetings:

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|---------------------|----------------------------|
| April 28-29, 2004 | Hampton, VA (NASA) |
| July 7-8, 2004 | Washington, D.C. (AIA/FAA) |
| October 20-21, 2004 | Augusta, GA (Garrett) |
| January 12-13, 2005 | TBD |
| April 13-14, 2005 | TBD |
| June 29-30, 2005 | TBD |
| October 12-13, 2005 | TBD |

Other Business

Mr. Bill Schultz (GAMA) made a short presentation on ICAO Annex 8. He indicated that a proposal regarding “detection and indication to the flight crew of fire or overheating in areas of the aeroplane that contain high concentrations of wiring or equipment that are not normally accessible in flight” is unacceptable. He indicated that the proposal was overly broad and not specific, and that the proposal is not consistent with the findings and decision of ATSRAC.

Discussion

Mr. Romanowski indicated that ICAO is made of nations, and not people, and does not have a vehicle for public comment. Mr. Neudorf asked Mr. Schultz if the issue at hand was whether or not there is no public input for the proposal. Mr. Schultz responded by saying that public input wasn't the issue, but that the United States should be prompted to respond to the ICAO proposal.

Review of Open and New Action Items

All of the open action items from previous ATSRAC meetings were discussed:

Action Items Pending from October 2003

- Mr. Hollinger will post information received from Mr. Eli Cotti to the ATSRAC website.
- Mr. Hollinger will send thank-you letters to contractors who performed wire test demonstrations during the ATSRAC tour of the Sandia National Laboratories.

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Action Item Pending from April 2003

- The Committee determined that the solicitation of a European Co-chair for WG12 was progressing.

Action Item Pending from January 2003

- The Committee concluded that the assignment to advise the Committee how the FAA will harmonize the various aging rules on compliance times, (i.e., Tiger Team results), which had been tasked to Mr. Massoud Sadeghi, could not be completed at this time, since the Tiger Team had not finished its analysis.

Adjourn: 11:15 AM (January 22, 2004)

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Action Items**

- 1) Present a report at the next ATSRAC meeting in which the following issues were addressed:
 - a) Should dispatch with a known wiring fault be deemed to be outside the normal MEL dispatch allowance;
 - b) Should the MMEL/MEL requirements be modified to clarify this point; and,
 - c) Should physical failures of wiring be considered in the dispatch instructions in support of the MMEL/MEL. (Mr. Dominique Bellon from Dassault Aviation, Mr. Don Andersen from Boeing Commercial Aircraft Group, and Mr. Patrick Glapa from Airbus)
- 2) Provide information to the Committee which will describe the guidance available to operators in regard to the development and approval of MELs (Federal Aviation Administration [FAA] and Transport Canada [TCA]).
- 3) Provide information regarding HWG 12 recommendations 1 and 2 (concerning cycling of circuit breakers) to determine agreement (Mr. Bellon, Mr. Anderson, and Mr. Glapa).
- 4) Provide information on how the recommendation of HWG 12 (concerning cycling of circuit breakers) will be made available to the FAA workforce (FAA).
- 5) Provide information on whether ATA should add the recommendation of HWG 12 (concerning cycling of circuit breakers) to ATA spec 117 (Mr. Thornburg on behalf of ATA).
- 6) Process a waiver to permit the ATSRAC meeting, scheduled for April 28-29, 2004, to be held in a location other than a federal government facility (FAA).
- 7) Arrange for an appropriate conference room for the 2nd day of the July 2004 ATSRAC meeting (FAA).

KEY DECISION AND CONCLUSIONS

- The Committee voted unanimously to adopt the meeting minutes from the October 2003 ATSRAC meeting with several minor changes.
- In reference to Mr. Vic Card's presentation, "Electrical Wiring in Relation to the MMEL", the Committee voted unanimously to table the first and the third of Mr. Card's concluding questions until the next ATSRAC meeting (...should dispatch with a known wiring fault be deemed to be outside the normal MEL dispatch allowance; and, should ATSRAC recommend that the FAA consider this issue further).

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- In reference to the recommendations of HWG 12, the Committee voted unanimously to accept recommendation #4, with agreed-upon changes.
- In reference to the recommendations of HWG 12, the Committee voted unanimously to accept a proposed letter to the SAE, with agreed-upon changes.
- In reference to the recommendations of HWG 12, the Committee voted unanimously to accept recommendation #5.
- The Committee voted unanimously to include fuel tank areas of the aircraft in EZAP recommendations
- The Committee voted unanimously on the following dates for future meetings:

| | |
|---------------------|----------------------------|
| April 28-29, 2004 | Hampton, VA (NASA) |
| July 7-8, 2004 | Washington, D.C. (AIA/FAA) |
| October 20-21, 2004 | Augusta, GA (Garrett) |
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