

AGING TRANSPORT SYSTEMS RULEMAKING ADVISORY COMMITTEE (ATSRAC)

Task 9 Harmonization Working Group - Report to ATSRAC Committee

DATE: January 23, 2002 Items in RED indicate changes since last update report dated 12/04/2001.

Task 9 HWG Membership		<u>Co-Chairs:</u> <u>US Airline Co-Chair</u> Randy Boren, Northwest Airlines <u>European Airline Co-Chair</u> Vacant * * Martin Cheshire, Virgin Atlantic Airways, withdrew as European Co-Chair after September 11.	
<u>Name</u>	<u>Organization</u>	<u>Name</u>	<u>Organization</u>
Les Blades	Goodrich (Alternate)	Tony Heather	CAA/JAA
Rollin Brown	Goodrich	Tim Herdon	Delta Airlines
Armin Bruning	Lectromec	Stefan Heutmann	Lufthansa Technik
Alex Brytak	Bombardier	Thomas Laxar	Austrian Airlines
Martin Cheshire	Virgin Atlantic	Gil Palafox	Boeing
Nick Drivas	AirTran	Roy Patzke	FAA
Henry Dyck	Transport Canada	Fred Sobeck	FAA
Tony Harbottle	Airbus	Hank Zuberer	United

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<u>T9HWG Meeting Schedule</u>	<u>Date</u>	<u>Location</u>	<u>Host</u>
Past Meetings:	May 22, 2001 (Planning)	Atlanta, GA	Northwest
	June 26 – 27, 2001	London - Gatwick	CAA/JAA
	October 2–3, 2001 CANCELLED	Burlington, VT	Goodrich
	November 13-14, 2001	Atlanta, GA	Northwest
Future Meetings:	January 7 – 11, 2002	Toulouse, France	Airbus
	April 8 – 12, 2002	Orlando, FL	AirTran
	June 18 – 19, 2002	Frankfurt, Germany	Lufthansa

Task 9 Overview

Task 9 HWG has the responsibility to define general criteria for maintenance and inspection activities that maintenance programs should exhibit to address aging systems issues.

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<u>Sub-Tasks</u>	<u>Description</u>	<u>Estimated Completion</u>	<u>Status:</u>
Task 9.1	Establish a Harmonization Work Group	May 2001	Green - Complete
Task 9.2	Development Coordination with other ATSRAC HWG's	June 2001	Green - Complete
Task 9.3	Develop Guidance Material for Enhanced Maintenance Criteria for Systems	January 2002	Yellow
Task 9.4	Assist in Development of a SFAR for Performance of the Enhanced Zonal Analysis Procedure (EZAP)	April 2002	Yellow
Task 9.5	Recommend Wire System Instructions for Continued Airworthiness	June 2002	Yellow

Sub-Tasks 9.3, 9.4, and 9.5 moved to yellow status due to substantial portion of November 2001 meeting in ATL spent on Task 9.3, review and comment on draft 120-xxx A.C. This resulted in deferral of discussion of Tasks 9.4 and 9.5 to next meeting in January 2002 in TLS. January meeting in TLS extended to 5 days to recover tasking schedule.

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Sub-Task 9.1	Establish a Harmonization Working Group (HWG).
<p>Concept: To assist the FAA in formulating appropriate rulemaking and guidance pertaining to the enhancement of transport airplane maintenance program for systems, ATSRAC is tasked to identify and appoint an Enhanced Maintenance Practices (HWG).</p>	
<p><u>Work Plan - Task 9.1</u></p> <ol style="list-style-type: none">1. Solicit nominations for HWG Co-Chairs and members2. Select Co-Chairs and members based on qualifications.3. Schedule first meeting.	
<p>Deliverables: T9HWG.</p>	
<p><u>Status - Task 9.1</u></p> <p>Work Plan Items 1, 2, 3: Complete. T9HWG established, first meeting held June 26-27, 2001, and work on tasking is in progress.</p>	

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Roadblocks: N/A
Assistance Needed: N/A

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Sub-Task 9.2	Coordination with other ATSRAC HWGs
<p>Concept: Develop a process for coordination between T9HWG and the HWGs addressing Tasks 6, 7, and 8.</p>	
<p><u>Work Plan - Task 9.2</u></p> <p>Coordinate with other HWGs through Integration Team, facilitated by Mike Nancarrow.</p>	
<p><u>Status - Task 9.2</u></p> <p>On-Going</p>	
<p>Roadblocks: N/A</p>	
<p>Assistance Needed: N/A</p>	

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Sub-Task 9.3	Description: Develop Guidance for Enhanced Maintenance Criteria for Systems
<p>Concept: To assist the FAA in formulating appropriate guidance material for defining an acceptable maintenance program for systems.</p> <p>The recommended program must consider the previous recommendations from the ATSRAC Task 3 report, and recommendations from previously submitted ATSRAC reports with a focus on those provided by the Intrusive Inspection Report.</p>	
<p><u>Work Plan - Task 9.3:</u> (Note: This task is viewed as the most labor intensive for the WG and will be afforded agenda time accordingly.)</p> <ol style="list-style-type: none">1. Determine quantity of AC/TGLs needed Based on number of Parts affected by proposed SFAR (Task 9.4).2. Determine technical content for each AC/TGL.3. Draft generic outline and format for AC/TGL using Enhanced Maintenance Criteria for Part 91, 121, 125, and 129 Operators as a prototype.4. Action FAA to utilize in-house resources to develop draft.5. Distribute draft for review / comments / changes.	

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6. Review revised draft at T9WG Meeting 2 (November 2001) - finalize changes to format and content.
7. Utilizing final draft of prototype AC for Part 91, 121, 125, and 129 Operators, replicate process for additional AC/TGLs needed. (Meetings 2 and 3)
8. Compile all AC/TGL drafts / recommendations into T9HWG Final Report (Meetings 4 and 5).

Deliverables: The T9HWG Final Report will contain draft Advisory Circulars/Technical Guidance Leaflets required to support compliance with each rule (Part) affected by the SFAR (Task 9.4). The ACs/TGLs will include use of EZAP to identify tasks necessary to address aging affects on wiring systems.

Status - Task 9.3:

Work Plan Item 1. Complete. Four AC/TGLs needed to support SFAR (Task 9.4) as follows:

- Part 21 - Single Element, Dual Load Path Devices
- Part 91, 121, 125, 129 Operators
- Part 145 Repair Stations
- Part 25.1529, Appendix H - Instructions for Continued Airworthiness

Work Plan Item 2. Complete. Key elements of technical content identified.

Work Plan Item 3. Complete. Generic outline and format for AC/TGL for Part 91, 121, 125, and 129 Operators determined during T9HWG June, 2001 meeting.

Work Plan Item 4. Complete - FAA draft AC for Part 91, 121, 125, and 129 Operators completed.

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Work Plan Item 5:

In Progress: T9HWG believes that proper development of this AC is our most important and difficult task, and have so allocated all time necessary to ensure a quality product.

The draft AC was reviewed / revised at T9HWG meeting in Toulouse, January 7-11, 2002, including incorporation of comments / issues from FAA Legal Department. Expect final changes to be complete by 1/31/2002 for distribution to industry for comment.

One key issue and time driver for the AC was T9HWG's extensive debate regarding whether an operator was required to have a dedicated Zonal Inspection Program in their Maintenance Program as a prerequisite for accomplishing EZAP (as recommended in the Task 3 Report). Recognizing that numerous operators of older designs do not currently have ZIPs in their Maintenance Program, T9HWG felt it necessary to consider if EZAP could be effectively applied to non-ZIP programs.

T9HWG concluded that EZAP could be effectively applied to non-ZIP programs, with the likely result that a large number of dedicated wiring inspection tasks would be identified for inclusion in the System/Powerplant program. It was unanimously agreed that although application of EZAP would be easier for ZIP programs, the objective to enhance maintenance programs to address degradation of wiring systems would be equally realized for non-ZIP programs.

This diversion from the Task 3 recommendation was carefully considered, and deemed necessary and justified. As a result, T9HWG accomplished a near complete rewrite of the draft AC at the last meeting, including significant changes to the EZAP Flowchart, supporting text, and example logic forms. As a result, progress on other tasking has been affected.

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Work Plan Items 6, 7, 8: Open

Roadblocks: **No roadblocks, but significant time expended on this task.**

Assistance Needed: NIL at this time.

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Sub-Task 9.4	Description: Assist in Development of a Special Federal Aviation Regulation for Performance of the Enhanced Zonal Analysis Procedure.
<p>Concept: To review pertinent recommendations of the ATSRAC Task 3 working group, particularly the Enhanced Zonal Analysis Procedure (EZAP), and recommend the proposed content of an SFAR to require the enhancement of existing maintenance and inspection programs based on the EZAP logic.</p> <p>The recommendation should identify scope (aircraft effectivity) and contain appropriate timelines for aircraft type design holders to complete their application for the EZAP logic for each aircraft.</p>	
<p><u>Work Plan - Task 9.4:</u></p> <ol style="list-style-type: none">1. Review SFAR concept, gain understanding of application to Task 9. (T9HWG Meeting 1)2. Develop recommendation for SFAR scope; i.e., what aircraft types to be affected. (T9HWG Meeting 1)3. Identify FAR Parts to be affected by SFAR (T9HWG Meeting 1)4. Draft language / concepts for SFAR using SFAR 88 as model (T9HWG Meeting 3)5. Refine draft SFAR language (T9HWG Meeting 3)6. Incorporate draft SFAR into T9HWG Final Report (T9HWG Meeting 4).	

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Deliverables: The T9WG Final Report will contain recommended content and language for the proposed SFAR.

Status - Task 9.4

Work Plan Item 1. Complete.

Work Plan Item 2: Complete. T9HWG will recommend SFAR effectivity to be for turbine powered aircraft with 10 or more seats, certified after January 1, 1958. A proposed timeline for compliance will be determined at a later date.

Comments from July ATSRAC meeting indicate possible need to include aircraft weight in SFAR effectivity criteria.

Agenda item for T9HWG April 2002 meeting in Orlando, FL.

Work Plan Item 3. Complete. SFAR will affect Parts 21, 91, 121, 125, 129, and 145.

Work Plan Item 4, 5, 6: Open.

Roadblocks: NIL at this time

Assistance Needed: NIL

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Sub-Task 9.5	Description: Recommend Wire System Instructions for Continued Airworthiness.
<p>Concept: To provide comment and recommendation for the inclusion of the following items in Appendix H to part 25.1529, Instructions for Continued Airworthiness. Standard wire practice data (HWG 7), wire separation design guidelines, special identification requirements (HWG 6), electrical load analysis and enhanced zonal analysis procedure.</p>	
<p><u>Work Plan - Task 9.5</u></p> <ol style="list-style-type: none"> 1. Review FAR 25.1529, Appendix H in detail to assess present status / shortcomings with regard to requirements for Type Certificate and Supplemental Type Certificate Holders to provide Instructions for Continued Airworthiness. (T9HWG Meeting 2) 2. Obtain OEM/STC Holder comments / recommendations as to what specific changes are required. (T9HWG Meeting 4) 3. Develop draft revision to FAR 25.1529, Appendix H with consideration of OEM/STC Holder comments / recommendations. (T9HWG Meeting 3) 4. Finalize language for revision to Appendix H for inclusion in T9HWG Final Report (Meetings 4 and 5) 	
<p>Deliverables: The T9HWG Final Report will include recommended changes to FAR 25.1529, Appendix H,</p>	

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Instructions for Continued Airworthiness.
<u>Status - Task 9.5</u> Work Plan Items 1, 2, 3, 4: Open
Roadblocks: None at this time.
<p>T9HWG requested ATSRAC to provide additional guidance on the retroactivity of changes to FAR 25.1529, Appendix H, regarding reference to (new) wire separation guidelines that may be developed by Task 6. T9HWG concerned that it will be difficult to apply new wire separation requirements to existing designs.</p> <p>ATSRAC provided needed clarification at July 2001 meeting in SEA: New wire separation guidelines will not be applied retroactively to existing designs.</p>

T9HWG Issues since September 11, 2001

- Crisis management taking precedence over ATSRAC related activities, including loss of European Co-Chair and ban on travel to WG meetings for most members immediately following September 11.
- T9HWG intends to continue with existing schedule with hope that the industry will stabilize and members can resume attendance at the WG meetings.
- **Meeting attendance still affected with only 9 of 17 members at Jan-2002 meeting in Toulouse, France. No European airline members were able to attend.**

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- Next 2 meetings extended to 5 days each, and 1 additional meeting will be added to schedule if sufficient number of members can commit to attend.**