

ATSRAC Recommendations 2005

ATSRAC Recommendation No. \ Letter	Recommendation	FAA Response	Action Plan
<p>Recommendation 10</p> <p>January 21, 2005 ATSRAC letter by Kent V. Hollinger to the FAA, Nicholas A. Sabatini.</p>	<p>The FAA should consider guidance to developers of future MMELs to consider that damaged wiring may be the cause of system failures, and to consider (along with standard maintenance practices) if it is advisable to electrically isolate failed systems prior to dispatch under the MMEL. The intent is to preclude potentially damaged wiring associated with an inoperable system being able to produce damage to the aircraft.</p>	<p><u>FAA does</u> <input checked="" type="checkbox"/> Accept <input type="checkbox"/> Not Accept <input type="checkbox"/> Other*</p> <p><u>FAA Priority:</u> <input type="checkbox"/> High <input checked="" type="checkbox"/> Medium <input type="checkbox"/> Low</p>	<p>Background/Action: FAA will consider this recommendation by:</p> <ol style="list-style-type: none"> 1. A study of the service history be conducted to determine the effects of aircraft wiring problems on MMEL and visa versa. (This study may be conducted using manufacturers’/operators’ service data on electrical wiring failures as relate to MMEL). 2. Based on the data, if necessary, FAA will identify an appropriate action to preclude the potentially damaged wiring systems being able to cause damage to the aircraft.
<p>Recommendation 11</p> <p>January 21, 2005 ATSRAC letter by Kent V. Hollinger to the FAA, Nicholas A. Sabatini.</p>	<p>The FAA should pursue the creation of wiring standards Advisory Circulars for all categories of aircraft, not just FAR Part 25.</p>	<p><u>FAA does</u> <input checked="" type="checkbox"/> Accept <input type="checkbox"/> Not Accept <input type="checkbox"/> Other*</p> <p><u>FAA Priority:</u> <input checked="" type="checkbox"/> High <input type="checkbox"/> Medium <input type="checkbox"/> Low</p>	<p>Background/Action: As part of the Enhanced Airworthiness Program for Airplane Systems (EAPAS), FAA is in process of developing a standard for creation of wires for aircraft use. In addition to its use in part 25 applications, the standard may be used in applications outside the Part 25 certifications, where appropriate.</p>

<p>Recommendation 12</p> <p>January 21, 2005 ATSRAC letter by Kent V. Hollinger to the FAA, Nicholas A. Sabatini.</p>	<p>FAA should form a new industry-wide body to identify, review, screen, transfer and implement technologies and knowledge that enhance the safety and continued airworthiness of aircraft systems. The scope of this body would include procedures, equipment and systems to design, monitor, analyze, inspect, test and maintain aircraft systems. This body should be in place by October 2005 so that it may commence upon the completion of ATSRAC HWG#12's tasking.</p>	<p><u>FAA does</u> <input type="checkbox"/> Accept <input type="checkbox"/> Not Accept <input checked="" type="checkbox"/> Other*</p> <p>*: An evaluation should be conducted to determine the benefits.</p> <p><u>FAA Priority:</u> <input type="checkbox"/> High <input checked="" type="checkbox"/> Medium <input type="checkbox"/> Low</p>	<p>Background/Action: The purpose and benefits of the recommended "body" are not clear. This recommendation will be evaluated to determine the benefits of the recommended approach. Other approaches such as using workshops and industry forums to introduce, evaluate, and promote the new technologies for enhancing safety will be also considered.</p>
<p>Recommendation 13.1</p> <p>January 21, 2005 ATSRAC letter by Kent V. Hollinger to the FAA, Nicholas A. Sabatini.</p>	<p>All personnel performing maintenance to EWIS should have received recurrent training as recommended in draft Advisory Circular 120-YY. Training should also be given to personnel who perform maintenance in the vicinity of the EWIS. (It is recognized that this is in conflict with the HWG#11 Final Report, but HWG#12 firmly believes that this training is essential). Training records should be kept.</p>	<p><u>FAA does</u> <input checked="" type="checkbox"/> Accept <input type="checkbox"/> Not Accept <input type="checkbox"/> Other*</p> <p><u>FAA Priority:</u> <input checked="" type="checkbox"/> High <input type="checkbox"/> Medium <input type="checkbox"/> Low</p>	<p>Background/Action: As part of EPAS rulemaking FAA will publish the Advisory Circular 120-YY in its entirety. The existing federal regulations (§121.375) require that certificate holders or persons performing maintenance have a training program to ensure that persons determining the adequacy of such work are fully informed about the procedures and techniques involved and are competent to perform them.</p>

<p>Recommendation 13.2</p> <p>January 21, 2005 ATSRAC letter by Kent V. Hollinger to the FAA, Nicholas A. Sabatini.</p>	<p>FAA should support the development of portable electrical test equipment that could facilitate the identification and location of areas of compromised electrical wiring on the aircraft.</p>	<p><u>FAA does</u> <input checked="" type="checkbox"/> Accept <input type="checkbox"/> Not Accept <input type="checkbox"/> Other*.</p> <p><u>FAA Priority:</u> <input type="checkbox"/> High <input checked="" type="checkbox"/> Medium <input type="checkbox"/> Low</p>	<p>Background/Action: FAA is directly involved with development and evaluation of various wiring test equipment currently under development. Such equipment will be vital for precisely and efficiently isolating a fault in aircraft wiring. FAA will continue its role in development and promoting new techniques such as portable wiring test equipment, which enhances safety of the aircraft wiring.</p>
<p>Recommendation 13.3</p> <p>January 21, 2005 ATSRAC letter by Kent V. Hollinger to the FAA, Nicholas A. Sabatini.</p>	<p>FAA should support development of an improved shield terminator to better seal the shield/pigtail interface.</p>	<p><u>FAA does</u> <input type="checkbox"/> Accept <input checked="" type="checkbox"/> Not Accept <input type="checkbox"/> Other*</p> <p>*: This recommendation should be forwarded to the SAE.</p> <p><u>FAA Priority:</u> N/A <input type="checkbox"/> High <input type="checkbox"/> Medium <input type="checkbox"/> Low</p>	<p>Background/Action: The FAA would be happy to support the aviation industry in their efforts to find a solution. However this seems to be a very specific issue of product development.</p>

<p>Recommendation 14.1</p> <p>January 21, 2005 ATSRAC letter by Kent V. Hollinger to the FAA, Nicholas A. Sabatini.</p>	<p>AFCB Strategies for Retrofit</p>	<p><u>FAA does</u> <input checked="" type="checkbox"/> Accept <input type="checkbox"/> Not Accept <input type="checkbox"/> Other*</p> <p><u>FAA Priority:</u> <input checked="" type="checkbox"/> High <input type="checkbox"/> Medium <input type="checkbox"/> Low</p>	<p>Background/Action: See 14.6</p>
<p>Recommendation 14.2</p> <p>January 21, 2005 ATSRAC letter by Kent V. Hollinger to the FAA, Nicholas A. Sabatini.</p>	<p>AFCB Operational and Maintenance Considerations</p>	<p><u>FAA does</u> <input checked="" type="checkbox"/> Accept <input type="checkbox"/> Not Accept <input type="checkbox"/> Other*.</p> <p><u>FAA Priority:</u> <input checked="" type="checkbox"/> High <input type="checkbox"/> Medium <input type="checkbox"/> Low</p>	<p>Background/Action: See 14.6</p>
<p>Recommendation 14.3</p> <p>January 21, 2005 ATSRAC letter by Kent V. Hollinger to the FAA, Nicholas A. Sabatini.</p>	<p>AFCB Operational and Maintenance Training Areas</p>	<p><u>FAA does</u> <input checked="" type="checkbox"/> Accept <input type="checkbox"/> Not Accept <input type="checkbox"/> Other*.</p> <p><u>FAA Priority:</u> <input checked="" type="checkbox"/> High <input type="checkbox"/> Medium <input type="checkbox"/> Low</p>	<p>Background/Action: As part of EPAS FAA is in process of developing training for all FAA personnel involved in certification and maintained of the aircraft electrical wiring. To ensure a greater success, the training will also include personnel from international authorities and industry, including both aircraft manufacturers and operators. In addition, FAA is planning to offer the training at large industry gatherings such as</p>

			next Aging Aircraft Conference, in March 2006. EAPAS training will include instillation and maintenance of the AFCBs.
<p>Recommendation 14.4</p> <p>January 21, 2005 ATSRAC letter by Kent V. Hollinger to the FAA, Nicholas A. Sabatini.</p>	Further study is needed on acceptable wire and collateral damage limits when protected by AFCB	<p><u>FAA does</u> <input checked="" type="checkbox"/> Accept <input type="checkbox"/> Not Accept <input type="checkbox"/> Other*</p> <p><u>FAA Priority:</u> <input checked="" type="checkbox"/> High <input type="checkbox"/> Medium <input type="checkbox"/> Low</p>	<p>Background/Action: The FAA continues to work in this area such as “Arc Ignition and Mitigation techniques”. Additional research is planned for FY05 and FY06.</p>
<p>Recommendation 14.5</p> <p>January 21, 2005 ATSRAC letter by Kent V. Hollinger to the FAA, Nicholas A. Sabatini.</p>	Continued research into portable test equipment is needed to assist in troubleshooting arc faults	<p><u>FAA does</u> <input checked="" type="checkbox"/> Accept <input type="checkbox"/> Not Accept <input type="checkbox"/> Other*</p> <p><u>FAA Priority:</u> <input type="checkbox"/> High <input checked="" type="checkbox"/> Medium <input type="checkbox"/> Low</p>	<p>Background/Action: See 13.2</p>
<p>Recommendation 14.6</p> <p>January 21, 2005 ATSRAC letter by Kent V. Hollinger to the FAA,</p>	Further study is needed to quantify the costs and benefits of AFCB implementation	<p><u>FAA does</u> <input checked="" type="checkbox"/> Accept <input type="checkbox"/> Not Accept <input type="checkbox"/> Other*</p> <p><u>FAA Priority:</u> <input checked="" type="checkbox"/> High</p>	<p>Background/Action: Arc fault technology has been successfully incorporated into some single-phase aircraft circuit breakers with about 200,000 operating hours accumulated. We would like to obtain considerably more operational data on these devices to completely evaluate the benefits of</p>

<p>Nicholas A. Sabatini.</p>		<p><input type="checkbox"/> Medium <input type="checkbox"/> Low</p>	<p>the technology and the logistics of installing these devices on the aging fleet. The FAA currently is in process of establishing a program with the following objectives:</p> <ol style="list-style-type: none"> 1. Obtain approximately 1 million operation hours of data on Arc Fault technology 2. Develop an implementation plan to minimize the risk of a new technology being introduced to the aging fleet 3. Develop and analyze data to provide a cost benefit analysis on Arc Fault Technology. <p>The evaluation will focus in the following areas:</p> <ol style="list-style-type: none"> 1. Safety benefits of arc fault protection vs. non-arc fault protection. 2. Cost benefits of arc fault protection vs. non-arc fault protection. 3. Nuisance Trips 4. Installation Cost 5. Effects of arc fault protection on operators' maintenance procedures.
<p>Recommendation 15.1 24-Jan-2005 HWG#13</p>	<p>Include "EWIS training" as part of the training requirements for Part 145 repair stations.</p>	<p><u>FAA does</u> <input checked="" type="checkbox"/> Accept <input type="checkbox"/> Not Accept <input type="checkbox"/> Other*</p>	<p>Background/Action: As part of EPAS rulemaking FAA will publish the Advisory Circular 120-YY in its entirety. The exiting federal regulations (§121.375) require that certificate holders or persons</p>

Final Report.		<u>FAA Priority:</u> <input checked="" type="checkbox"/> High <input type="checkbox"/> Medium <input type="checkbox"/> Low	performing maintenance have a training program to ensure that persons determining the adequacy of such work are fully informed about the procedures and techniques involved and are competent to perform them.
Recommendation 15.2 24-Jan-2005 HWG#13 Final Report.	Incorporate EWIS training as part of FAA Safety Training Programs (I.A. renewal) maintenance seminars & conferences	<u>FAA does</u> <input checked="" type="checkbox"/> Accept <input type="checkbox"/> Not Accept <input type="checkbox"/> Other* <u>FAA Priority:</u> <input checked="" type="checkbox"/> High <input type="checkbox"/> Medium <input type="checkbox"/> Low	Background/Action: FAA has developed an aircraft wiring practice training. In addition to both internal and external trainings, in past the FAA has provided this training for annual renewal requirements to industry maintenance personnel. (e.g., NBAA Conference, 2003). Similar renewal trainings can be offered at seminars and conferences, where possible and necessary.
Recommendation 15.3 24-Jan-2005 HWG#13 Final Report.	The FAA should write formally to STA OEMs requesting they resolve "GAP" EWIS concepts and/or definitions in their Instructions for Continuing Airworthiness and Standard Practice Manuals	<u>FAA does</u> <input type="checkbox"/> Accept <input checked="" type="checkbox"/> Not Accept <input type="checkbox"/> Other* Any letter without supporting regulation may not be effective. <u>FAA Priority:</u> N/A <input type="checkbox"/> High	Background/Action: <ul style="list-style-type: none"> • FAA is currently working on regulation to capture EWIS concepts." • One of the primary exercises during the Working Group #13 meetings was to review the aircraft ICA's/Maintenance Manuals and identify "Gaps" or "Deficiencies" in these documents in comparison to the HWG-10 findings. • During this exercise, it was determined that a high percentage of the HWG-10 findings would not have been a problem with the

		<input type="checkbox"/> Medium <input type="checkbox"/> Low	<p>existing ICA's/Maintenance Manuals.</p> <ul style="list-style-type: none"> • Where "gaps" did exist, the OEM's reported to the HWG-13 team that future ICA's/Maintenance Manuals would capture these findings and revisions to existing documents would begin to fill in these "gaps" as well. • Based on these reports and statements by the major OEM's participating in the Working Group, it is not clear as to what value may exist in the FAA writing a letter to many of these same OEM's.
<p>Recommendation 15.4 24-Jan-2005 HWG#13 Final Report.</p>	<p>The FAA should write formally to STA OEMs requesting them to enhance the ICAs with EWIS information (<i>no consensus - 8 "For" votes, 7 "Against" votes, and 1 Abstention</i>)</p>	<p><u>FAA does</u> <input type="checkbox"/> Accept <input checked="" type="checkbox"/> Not Accept <input type="checkbox"/> Other*</p> <p>Any letter without supporting regulation may not be effective.</p> <p><u>FAA Priority:</u> N/A <input type="checkbox"/> High <input type="checkbox"/> Medium <input type="checkbox"/> Low</p>	<p>Background/Action: See 15.3</p>

<p>Recommendation 15.5</p> <p>24-Jan-2005 HWG#13 Final Report.</p>	<p>The FAA should write formally to the STA industry requesting that it continues its EWIS awareness and training programs</p>	<p><u>FAA does</u> <input type="checkbox"/> Accept <input type="checkbox"/> Not Accept <input checked="" type="checkbox"/> Other*</p> <p>*: Letter is not necessary, See 15.1.</p> <p><u>FAA Priority:</u> <input checked="" type="checkbox"/> High <input type="checkbox"/> Medium <input type="checkbox"/> Low</p>	<p>Background/Action: See 15.1</p>
<p>Recommendation 15.6</p> <p>24-Jan-2005 HWG#13 Final Report.</p>	<p>The FAA should write formally to STA OEMs requesting them to include EWIS training (i.e. ICA and SPM) into initial and recurrent factory approved training curriculums</p>	<p><u>FAA does</u> <input type="checkbox"/> Accept <input type="checkbox"/> Not Accept <input checked="" type="checkbox"/> Other*</p> <p>*: Letter is not necessary, See 15.1.</p> <p><u>FAA Priority:</u> <input checked="" type="checkbox"/> High <input type="checkbox"/> Medium <input type="checkbox"/> Low</p>	<p>Background/Action: See 15.1</p>

<p>Recommendation 15.7</p> <p>24-Jan-2005 HWG#13 Final Report.</p>	<p>FAA to revise AC 43.13-1B Chapter 11 to include the "gap" items from the proposed EWIS definition</p>	<p><u>FAA does</u> <input checked="" type="checkbox"/> Accept <input type="checkbox"/> Not Accept <input type="checkbox"/> Other*</p> <p><u>FAA Priority:</u> <input type="checkbox"/> High <input checked="" type="checkbox"/> Medium <input type="checkbox"/> Low</p>	<p>Background/Action: Currently FAA is planning to develop an advisory circular for wiring maintenance using chapter 11 of AC 43.13.1B. Proper distinctions will be made between procedures for pressurized and non-pressurized applications, as necessary. The current plan is to devolve the AC for the part 25 applications. However, due to the commonality in wiring applications, the AC might also be adopted for part 23 applications.</p>
<p>Recommendation 15.8</p> <p>24-Jan-2005 HWG#13 Final Report.</p>	<p>FAA to remove or clarify when the "non-pressurized" statement is appropriate in the use of the document. i.e. structural repairs, etc.</p>	<p><u>FAA does</u> <input checked="" type="checkbox"/> Accept <input type="checkbox"/> Not Accept <input type="checkbox"/> Other*</p> <p><u>FAA Priority:</u> <input type="checkbox"/> High <input checked="" type="checkbox"/> Medium <input type="checkbox"/> Low</p>	<p>Background/Action: See 15.7</p>