JAA/FAA/TCCA
International MRB Policy Board
Issue Paper

Date: 16-July-04
IMRBPB # 066

Title:	Enhance MSG-3 to Incorporate SFAR 88 Aspects Now Being Considered by the FAA in Policy Statement PS-ANM100-2004-10029
Submitter:	Air Transport Association (ATA) of America
Issue:	ATA is seeking concurrence from the IMRBPB regulatory authorities to modify the MSG-3 document section 2-3-1.2.., "MSI Selection, Step 2." Such incorporation will ensure that the maintenance programs developed with the use of MSG-3 (Revision 2005.1, and subsequent) for future type designs incorporate the most current FAA policy regarding design features that may result in the development of ignition sources in the fuel tank system. NOTE: These features, flowing down the "no unsafe condition" side of the SFAR 88 decision logic, would have to be systematically considered during MDI selection and analysis.
Problem:	Without IMRBPB approval of this Issue Paper, the proposed 2005.1 Revision of MSG-3 will not incorporate the most current FAA policy.
Recommendation:	IMRBPB should approve the attached revision for MSG-3, section 2-3-1.2., "MSI Selection, Step 2."

IMRBPB Position:

Discussion proceeded with the common idea being that MSG-3 already fills this function with further action not being required. ATA stated that they are trying to be proactive to meet the requirements of the FAA Policy Statement by issuing SFAR 88 guidance with the next MSG revision. It was agreed to close this issue paper, but remove FAA only reference including the reference to the Policy Statement and SFAR 88 and replace statement "regulatory policy developed for fuel tank safety ICA….".

Issue Paper #66 accepted and closed by Industry Working Group with changes incorporated.

Important Note: The IMRBPB positions are not policy. Positions become policy only when the policy is issued formally by the appropriate National Aviation Authority. (JAA, FAA or TCCA)

2-3. Aircraft Systems/Powerplant Analysis Procedure

The method for determining the scheduled maintenance tasks and intervals for systems/powerplant, including components and APU's, uses a progressive logic diagram. A glossary of terms and definitions used in the logic diagram is listed in Appendix A. This logic is the basis of an evaluation technique applied to each maintenance significant item (system, sub-system, module, component, accessory, unit, part, etc.), using the technical data available. Principally, the evaluations are based on the item's functional failures and failure causes.

2-3-1. MSI Selection

Before the actual MSG-3 logic can be applied to an item, the aircraft's significant systems and components must be identified.

Maintenance Significant Items (MSIs) are items fulfilling defined selection criteria (see Step 3., below) for which MSI analyses are established at the highest manageable level.

This process of identifying Maintenance Significant Items is a conservative process (using engineering judgment) based on the anticipated consequences of failure. The top-down approach is a process of identifying the significant items on the aircraft at the highest manageable level.

The MSI selection process is outlined below:

1. Step 1.

The manufacturer partitions the aircraft into major functional areas; ATA Systems and Subsystems. This process continues until all on-aircraft replaceable components have been identified.

NOTE:	Items within the Structural ATA Chapters (51-57) that lend themselves to System analysis (e.g., fuselage drains, door mechanisms, etc.) should be included in this step. In addition, all safety/emergency systems or equipment should also be included.

2. Step 2.

Using a top-down approach, the manufacturer establishes the list of items to which the MSI selection questions will be applied.

NOTE:	FAA Policy Statement PS-ANM100-2004-10029, developed for SFAR 88-related Instructions for Continued Airworthiness (ICA), requires the identification of design features that may result in development of ignition sources in the fuel tank systems; e.g., the bonding subsystem to carry electrical current generated in the event of lightning, and the wire harnesses in and around fuel tanks that maintain separation to prevent wire contact/chafing. These design features are to be included in MSI selection and analysis.

3. Step 3