

**JAA/FAA/TCCA**  
**International MRB Policy Board**  
**Issue Paper**

**Date 24/05/2005**  
**IMRBPB # 80**

<b>Title:</b>	Lightning/HIRF MSG-3 analysis process revision
<b>Submitter:</b>	The Boeing Company
<b>Issue:</b>	The current Lightning/HIRF MSG-3 analysis process 1) is limited to electrical and electronic equipment protection 2) does not include protection test or in-service data as part of the analysis 3) does not adequately address the use of Zonal Inspections Program for finding degradation of Lightning/HIRF protection.
<b>Problem:</b>	When applied to a new aircraft design, the current MSG-3 analysis process only selects maintenance for: 1) Level A electrical and electronic systems based on ED/AD analysis and are covered by zonal maintenance if a zonal inspection task is applicable and effective 2) Level B electrical and electronic systems based on similarity to existing aircraft and are covered by zonal maintenance if a zonal inspection task is applicable and effective. This methodology may result in an incomplete maintenance program and inappropriately rely on zonal inspections.
<b>Recommendation:</b>	An improved MSG-3 methodology for Lightning/HIRF has been recommended by the ATA Lightning/HIRF Task Force assembled in Seattle on July 19-21, 2005 with representation by FAA and TCCA, 6 manufacturers and 5 operators. Agreement was reached on a common approach (attached) with acceptance by all representatives on the Task Force. The new methodology 1) is inclusive of both electrical and non-electrical Lightning/HIRF protection 2) allows Zonal Inspections for protection with potential hazardous failure condition but not for Catastrophic 3) includes assembly of experience and test data (if available) for Lightning/HIRF components to identify either “no maintenance required” or applicable and effective maintenance recommendations.

**IMRBPB Position:**

**October 20<sup>th</sup>, 2005**

The board is in favour for the working group to continue the work as launched with participation of all authorities.

However the following should be considered:

- Use of the terms catastrophic / hazardous to be reviewed
- Use of an assurance plan to be well defined and specified with goals and deliverables.

This IP remains open waiting the result of the industry work to be implemented in a revision to this IP

**Status: Open**

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**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)