

International Maintenance Review Board Policy Board (IMRBPB)
Issue Paper (IP)

Initial Date: 11 Oct 2010

IP Number: CIP-IND-2010-3

Revision / Date: rev 0 version 3 / 17 Jan 2011

Title: L/HIRF protective features within LRUs

Submitter: Boeing

Issue: Current MSG-3 guidelines state that MSG-3 analysis is not required on LRU internal L/HIRF protection provided that OEMs work with LRU manufacturers to confirm maintenance philosophy. This conditional statement incorrectly suggests that necessary tasks could be established using MSG-3 logic

Problem: MSG-3 rev 2009.1, paragraph 2.6 currently states:

L/HIRF maintenance relies on adequate protection provided by both external and internal L/HIRF protection components.

1. Internal Line Replaceable Unit (LRU) L/HIRF Protection Components

L/HIRF protection features are incorporated inside the LRU. Protection devices such as filter pin connectors, discrete filter capacitors and transient protection devices (tranzorbs) are installed within LRUs on one or more of the LRU interface circuits.

In lieu of application of MSG-3 logic, for LRUs whose failure could have an adverse effect on safety, the aircraft manufacturer will work with the LRU manufacturer to confirm that the LRU manufacturer's maintenance philosophy will ensure the continued effectiveness of L/HIRF protective features. This maintenance philosophy could include specific LRU CMM procedures or other data acceptable to regulatory authorities to conclude that the L/HIRF protection devices continue to perform their intended functions.

The current wording might suggest that the requirement for the aircraft manufacturer to work with the LRU manufacturer constitutes an alternative to application of MSG-3. This is misleading.

The process for development of any necessary instructions to confirm the availability of L/HIRF protection within LRUs will be determined by the aircraft manufacturer through joint activities with the LRU manufacturer and the Regulatory's Aircraft Certification Office. These discussions will take into account the relative criticality of the protection and, where appropriate, will ensure that the CMM contains instructions to confirm its continued availability.

Recommendation (including Implementation):

Delete sentence:

In lieu of application of MSG-3 logic, for LRUs whose failure could have an adverse effect on safety, the aircraft manufacturer will work with the LRU manufacturer to confirm that the LRU manufacturer's maintenance philosophy will ensure the continued effectiveness of L/HIRF protective features.

And replace by:

Application of MSG-3 logic for internal protection features is not required. For LRUs whose failure could have an adverse effect on safety, the aircraft manufacturer will work with the LRU manufacturer to confirm that the LRU manufacturer's maintenance philosophy will ensure the continued effectiveness of L/HIRF protective features.

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IMRBPB Position:

Date:

Position:

Status of Issue Paper (when closed state the closure date):

Recommendation for implementation:

Important Note: The IMRBPB positions are not policy. Positions become policy only when the policy is issued formally by the appropriate National Aviation Authority.