

JAA/FAA/TCCA
International MRB Policy Board
Issue Paper

Date 9 July 2004
IMRBPB #072

Title: Recognition of an Evident Failure
Submitter: Bombardier Aerospace, Maintenance Programs & Planning
Issue: Reference Issue Paper #48 (TCCA 005/01)
BA does not agree nor support: "evident if annunciated before next flight"

Problem:

Evident if "annunciated at the time of failure:

- a. When assessing if a failure is evident to the crew it does not make sense to rely only on a failure annunciation and not to give credit to a crew when they recognize a failure through the use of normal physical senses. That will result in obvious failure to the crew considered as hidden, if there is no annunciation for it. That will lead us to an incorrect route, possibly to a new task that will be useless.
- b. The MRB task cannot have an appropriate interval to alleviate the failure effect concern if the failure can be found during "normal duties" of the crew associated with the routine operation of the aircraft, on a daily basis, including procedures and checks performed during aircraft operation in accordance with AFM, and recognition of abnormalities or failures through the use of normal physical senses.
That will make MRB task useless, since it will be performed long after the failure was detected and corrected. This is only a "formal" step in the direction of higher safety standards, while it actually results in ineffective MRB task (task with absolutely not effective interval.

Evident if "annunciated before next flight"

- a. This criteria also ignores the crew's capability to detect failure through the use of normal physical senses.
- b. The new evident/hidden criteria based on "annunciated before next flight" is ineffective too, but to the extent of not recognizing daily AFM checks as a failure finding tool.
Again, MRB task derived with the intention to find the failure that will be detected during daily AFM check, is not a effective task.

Evident of detected during a day

This criterion is defined in MSG3 2003.1, recently approved as accepted by FAA, JAA and TC. This criterion allows AFM pre-flight and daily checks to be used for failure detection. Also, this criterion allows a crew to recognize a failure through the use of normal physical senses, like odour, noise, vibration, temperature, visual observation of damage or failure, changes in physical input force requirement, etc. If the failure is detected during "normal duties", on a daily basis, as described above, the failure will be considered evident. If it is likely that the failure will not be found, the failure will be considered as hidden.

Recommendation:

Bombardier Aerospace Position

Bombardier position is that changing current evident/hidden criteria to "annunciated at the time of failure" or "annunciated before next flight" will be counterproductive, and will result in adding ineffective tasks.

We recommend that:

- a) Section 2-3-5, 1. Evident or Hidden Functional Failure, remain as written;
- b) The glossary definition of "Operating Crew – Normal Duties" remain as written in revision 2003.1 of the MSG-3 Document.

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IMRBPB Position:

Discussion:

It was discovered that IP #48 incorrectly states “annunciated at the time of failure” vs. “annunciated before next flight”. The issue paper will be corrected to read, “annunciated before next flight” Airbus suggested “apparent” should be used rather than “annunciated” in the IMRBPB IP #48. This was accepted by the regulatory members present.

Further discussion

Issue Paper #48 will be revised to read: “Failures can only be considered evident if apparent before the next day, otherwise the analysis must consider it a hidden failure”.

Issue Paper 72 Closed

Action to ATA to identify definition of evident in MSG-3 document

Date 23/FEB/2007

Position: previous proposed changes reviewed. Agreement not to make any changes to existing MSG 3 text (Rev 2005.1)

Status: Closed

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