

JAA/FAA/TCCA
International MRB Policy Board
Issue Paper

Date 9 July 2004
IMRBPB #073

Title: Analysis of hidden functions of systems operated during an emergency situation.

Submitter: Bombardier Aerospace, Maintenance Programs & Planning

Issue: IMRBPB meeting on 19 August 2003 decided that each member NAA will publish their policy on this issue.
Bombardier Aerospace would like to present our position

Problem:

Safety route imposed on complete safety/emergency MSIs.

IMRBPB position: "Any emergency and/or safety related item shall be analysed as a safety route."

This rule is not clear. It is not defined what is an "item".

If an "item" is a component, a FC (failure cause) associated with functional failure for which it is already established that it affects safety, then of course it has to be analysed under safety route.

If an "item" is the whole safety/emergency system (MSI), then imposing safety route throughout the analysis regardless if functional failures contribute to safety concerns or not, does not make sense. It means that ALL functional failures of ANY function of safety/emergency system or equipment will have to have safety route selected, ignoring MSG3 process for route selection.

The result will be that we will have to introduce tasks to address every functional failure of all functions. Many of them will not be addressing a real safety concern.

Safety route imposed on hidden functional failures of safety/emergency MSIs.

The following instruction is defined in MSG3 2003.1, recently approved as acceptable tool by FAA, JAA and TC.

"For hidden functions of safety/emergency systems or equipment, FEC 8 is to be selected".

Problem with this instruction is that ALL HIDDEN functional failures of ANY function of safety/emergency system or equipment will have to have safety route selected. This rule does not distinguish between functional failures with safety implications and those that can not affect safety. Following this rule, hidden functional failures that do not contribute to a safety will go safety route anyway.

The result is that we will have to introduce tasks that will not be addressing a real safety concern.

Recommendation:

Bombardier Aerospace position

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Based on the above, Bombardier position is that the rule indiscriminately imposes a safety route on ALL HIDDEN failures (of safety/emergency MSI's) is counterproductive, and will result in adding ineffective tasks.

We recommend the following change to the present wording, as written on page 26, question 3, 3rd paragraph:

For hidden functions of safety/emergency systems or equipment (see Glossary), the additional failure is the event for which this function of the system or equipment is designed. This applied irrespective of whether the function is required by regulation or is carried as an operator option.

IMRBPB Position:

Sept 2004
After discussion, this item closed with no action

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/EASA, FAA or TCCA)