

*Initial Date: 27/04/2012*

*IP Number: 124*

*Revision / Date: Rev 2 / 07 Feb 2012*

**Title:** **MSG-3 analysis of emergency/backup equipment having evident functional failure(s).**

**Submitter:** COMAC (Wan Rong)

**Issue:** MSG-3 Rev 2001.1 introduced text in Para 2.3.4.3 to force FEC8 analysis, in certain cases, when addressing hidden functions of safety/emergency systems or equipment. The current MSG-3 document does not provide clear guidance on handling emergency and back-up equipment whose failure is evident

**Problem:** Specific guidance is provided in Para 2-3-5.3 relating to the analysis of hidden safety/emergency functions and the need to 'force' FEC8 when answering Q3 but no equivalent wording has been provided in Para 2-3-5.2 in the analysis of evident safety/emergency functions when answering Q2. The absence of this guidance may confuse new users of MSG-3 who could understand that there is a similar need to 'force' FEC5 for safety/emergency functions.

**Recommendation (including Implementation):**

A Note should be added in MSG-3 document Para 2-3-5.2 to clarify that FEC 5 is only applicable where a single failure has a direct adverse effect on operating safety and there is no situation where FEC5 has to be forced.

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[MSG-3 Rev 2011 – Para 2-3-5.2:](#)

**2. Direct Adverse Effect on Safety**

<p><b>QUESTION 2: DOES THE FUNCTIONAL FAILURE OR SECONDARY DAMAGE RESULTING FROM THE FUNCTIONAL FAILURE HAVE A DIRECT ADVERSE EFFECT ON OPERATING SAFETY?</b></p>
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For a "YES" answer the functional failure must have a direct adverse effect on operating safety.

<p><b>Note:</b> <a href="#">Contrary to the guidance in Para 2-3-5.3 that requires selection of FEC 8 in specific circumstances, FEC 5 is only selected if the failure cause has a direct adverse effect on safety; no additional failure/event needs to be considered.</a></p>
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Direct: To be direct the functional failure or resulting secondary damage must achieve its effect by itself, not in combination with other functional failures (no redundancy exists and it is a primary dispatch item).

Adverse Effect on Safety: Safety shall be considered as adversely affected if the consequences of the failure condition would prevent the continued safe flight and landing of the aircraft and/or might cause serious or fatal injury to human occupants.

Operating: This is defined as the time interval during which passengers and crew are on board for the purpose of flight.

A "YES" answer indicates that this functional failure must be treated within the Safety Effects category and task(s) must be developed in accordance with [\[Heading 2-3-6.1\]](#).

A "NO" answer indicates the effect is either operational or economic and Question 4 (Ref. [\[Heading 2-3-5.4\]](#)) must be asked.

**IMRBPB Position:**

**Date: April 27, 2012**

**Position:**

**During the CIP presentation it was clarified that the purpose of the CIP was to introduce a note for new users of MSG-3 in order to ensure a better understanding of MSG-3 Paragraph 2-3-5.2 so that a FEC5 was not forced during the analysis.**

**With this understanding, the IMRBPB confirmed that there would be no impact on the existing application of MSG-3 and would avoid potential misinterpretation in the future.**

**The IMRBPB accepts the CIP and it is closed by IP124.**

**Status of Issue Paper (when closed state the closure date): April 27, 2012**

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

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**Recommendation for implementation:**

**Incorporation into MSG-3 on next revision.**

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