

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

Initial Date : 26/April/2012
IP Number: 119
Revision 2 / Date: 21/ April /2015

Title: CPCP – corrosion level definition

Applies To:	
Vol 1:	
Vol 2:	
Both:	X

Submitter: Joel Maisonnobe, Dassault Aviation for Rev 1
Chiara Mancini, Airbus for Rev 2

Issue: The definition of “Corrosion Level 1” is not identical between MSG-3 and the Airworthiness Authority regulations (EASA AMC20-20 or former NPRM 02-16 FAA).

Problem: For an unidentified reason, the definition of level 1 corrosion in the MSG-3 is more restrictive than the one adopted by the EASA in AMC20-20 (Continuing Structural Integrity Programme) or the one that was originally proposed by the FAA in the NPRM 02-16 (67 FR 62142).

It may be noted that the FAA NPRM was later cancelled as the FAA considered that the existing transport category airplanes CPCP programs developed through the MSG-3 were compliant with the intent of the NPRM.

MSG-3	EASA AMC 20-20	FAA NPRM
Corrosion damage that does not require structural reinforcement or replacement. Or Corrosion occurring between successive inspections exceeds allowable limit but is local and can be attributed to an event not typical of operator usage of other aircraft in the same fleet (e.g. mercury spill).	(1) Corrosion, occurring between successive corrosion inspection tasks that is local and can be reworked or blended out within the allowable limit; or (2) Corrosion damage that is local and exceeds the allowable limit, but can be attributed to an event not typical of operator’s usage of other aircraft in the same fleet (e.g. mercury spill); or (3) Operator experience has demonstrated only light corrosion between each successive corrosion inspection task inspection; and, the latest corrosion inspection task results in rework or blend out that exceeds the allowable limit.	(1) corrosion damage occurring between successive inspections that is local and can be reworked/ blended-out within allowable limits as defined by the manufacturer or the FAA; (2) corrosion damage that is local but exceeds allowable limits and can be attributed to an event not typical of the operator’s usage of other airplanes in the same fleet; Or (3) corrosion damage that operator experience over several years has demonstrated to be only light corrosion between successive prior inspections but that the latest inspection shows that cumulative blend-outs now exceed the allowable limits.

It is clear from this table that the third statement that was in the initial FAA and in the actual EASA regulatory material is missing in the MSG-3 definition. This statement is totally in line with the CPCP philosophy and the continued airworthiness required by the MSG-3 as it allows a continuous monitoring of the corrosion. The required tasks are clearly degradation detection tasks and rectification of defects until time when allowable damage is reached. There is no reason why the MSG-3 would be more restrictive than the EASA or FAA regs.

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Preventing successive blend-out of corrosion to be considered as Level 1 would only increase the cost of maintaining the structure of the airplane without any demonstrated increase in safety.

Recommendation (including Implementation):

We propose that the MSG-3 definition for Level 1 is completed as per existing AMC20-20

Affected section: Appendix A Glossary

Corrosion Level 1:

Corrosion damage that does not require structural reinforcement or replacement;

Or

Corrosion occurring between successive inspections exceeds allowable limit but is local and can be attributed to an event not typical of operator usage of other aircraft in the same fleet;

Or

Light corrosion occurring repeatedly between inspections that eventually leads to rework or blend out that exceeds allowable limit.

Revision 2:

Subsequent to this decision, on December 2013, the Airworthiness Assurance Working Group (AAWG), that is tasked to define recommendations to be included in the Regulatory materials, agreed on a new definition for corrosion level 1, as follows and as documented by the attached letter from the AAWG Co-Chairs to MPIG.

Level 1 corrosion definition recommended by AAWG:

- Damage occurring between successive inspections that is within allowable damage limits; or
- Damage occurring between successive inspections that does not require structural reinforcement, replacement or new damage tolerance based inspections; or
- Corrosion occurring between successive inspections that exceeds allowable limits but can be attributed to an event not typical of operator usage of other aircraft in the same fleet; or
- Light corrosion occurring repeatedly between inspections that eventually requires structural reinforcement, replacement or new damage tolerance based inspections.

We propose that the MSG-3 definition for Level 1 is amended as recommended by AAWG.

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IMRBPB Position:

Date: April 24, 2015

Position: IMRBPB has accepted the new Level 1 definition and IP 119 rev 2.

Status of Issue Paper (when closed state the closure date): April 24, 2015

Recommendation for implementation: Implementation into next revision of MSG-3.

Retroactive: Y

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

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structure during repeat scheduled inspections. In order for the FAA to have some measurable quantity by which to gauge the effectiveness of an individual operator's CPCP, the following definition applies:

Level 1 Corrosion is (1) corrosion damage occurring between successive inspections that is local and can be re-worked/blended-out within allowable limits as defined by the manufacturer or the FAA; (2) corrosion damage that is local but exceeds allowable limits and can be attributed to an event not typical of the operator's usage of other airplanes in the same fleet; or (3) corrosion damage that operator experience over several years has demonstrated to be only light corrosion between successive prior inspections but that the latest inspection shows that cumulative blend-outs now exceed the allowable limits. Level 2 and 3 corrosion along with specific procedures to be followed when Level 1 is exceeded will be included in the draft AC that will be available when this proposal is published.

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AMC 20-20 Effective: 26/12/2007

Annex V to ED Decision 2007/019/R of 19/12/2007

Level 1 in any area or zone. A CPCP consists of a basic corrosion inspection task, task areas, defined corrosion levels, and compliance times (implementation thresholds and repeat intervals). The CPCP also includes procedures to notify the competent authority of the findings and data associated with Level 2 and Level 3 corrosion and the actions taken to reduce future findings to Level 1.

- **Implementation Threshold (IT).** The *implementation threshold* is the aircraft age associated with the first time the basic corrosion inspection task should be accomplished in an area or zone.
- **Level 1 Corrosion.** *Level 1 corrosion* is:
 - (1) Corrosion, occurring between successive corrosion inspection tasks that is local and can be reworked or blended out within the allowable limit; or
 - (2) Corrosion damage that is local and exceeds the allowable limit, but can be attributed to an event not typical of operator's usage of other aircraft in the same fleet (e.g. mercury spill); or
 - (3) Operator experience has demonstrated only light corrosion between each successive corrosion inspection task inspection; and, the latest corrosion inspection task results in rework or blend out that exceeds the allowable limit.

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Corrosion level 1 definition from AAWG; December 2013.

From: The Airworthiness Assurance Working Group

To: Maintenance Programs Industry Group

Tony Harbottle MPIG Chair

Ron Little MPIG Vice Chair

Paul Conn MPIG Secretary

Mark Lopez MPIG A4A Liaison

Monday, April 13, 2015

MPIG, Airlines for America (A4A) and International Maintenance Review Board Policy Board (IMRBPB)
Leaders:

In April 2013, the Airworthiness Assurance Working Group received a request from MPIG to recommend an industry definition of Level 1 corrosion. The experienced group, consisting of:

4 Regulators (ANAC, FAA, EASA, Transport Canada)

4 Manufacturers

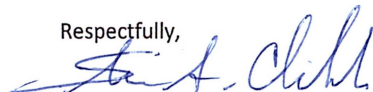
13 Airlines

concluded that level 1 corrosion would be defined as follows:

- Damage occurring between successive inspections that is within allowable damage limits; or
- Damage occurring between successive inspections that does not require structural reinforcement, replacement or new damage tolerance based inspections; or
- Corrosion occurring between successive inspections that exceeds allowable limits but can be attributed to an event not typical of operator usage of other aircraft in the same fleet; or
- Light corrosion occurring repeatedly between inspections that eventually requires structural reinforcement, replacement or new damage tolerance based inspections.

As with many topics within the aviation industry, arriving at a concise and timely conclusion was a challenge, and the AAWG received input both before and after the submission deadline. During the April 2015 meeting, the AAWG members reaffirmed the importance of providing timely review and input and also the importance of being flexible if a significant finding was brought to the group's attention. With respect to the Level 1 Corrosion definition, the AAWG co-chairs reviewed all comments and confirm that the above stated definition will remain unaltered. Furthermore, the AAWG will recommend that this definition be harmonized to the greatest extent possible.

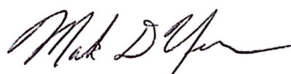
Respectfully,



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