

International Maintenance Review Board Policy Board (IMRBPB)

Issue Paper (IP)

IP Number: CIP MPIG 2023-01

Initial Date : 30/01/2023

Revision / Date): R 03 27/Mar/2025

Effective Date (DD/MMM/YYYY):

Retroactivity (Y/N): N

Title:	Use of other applicable and effective tools for visual inspections
Submitter:	MPIG

Applies To:	
MSG-3 Vol 1	X
MSG-3 Vol 2	X
IMPS	X

Issue:

Innovations in tooling design are advancing across industries. In aviation maintenance, high-resolution cameras offer significant benefits for visual inspections, reducing accidental damage, fall exposure, out-of-service time, and human error while maintaining or enhancing detection levels.

Camera configurations include handheld devices, rod-mounted units, and power-controlled options.

Operators, manufacturers, and regulators see potential in using these technologies for General Visual Inspections (GVI) in both scheduled and unscheduled maintenance. Successes include assessing lightning strikes and hail damage, with some operators gaining regulatory approval for scheduled GVI tasks via the framework of 14 CFR part 43.13(c) *“The methods, techniques and practices used by an operator with a CAMP can be different than what is prescribed in a maintenance manual by an original equipment manufacturer. Certificate holders are responsible for their maintenance program, CAMP, in its entirety”*. This has prompted operators to expect manufacturers to incorporate these procedures into their manuals. The independent efforts of both operators and manufacturers may result in diverse approaches. As an interim step to help prevent this, the FAA has directed all approvals to be coordinated through the Aircraft Maintenance Division (AFS-300) and the Aircraft Evaluation Division (AFS-100). However, that is limited to FAA-approved certificate holders with a CAMP.

The CIP may be viewed as vertically integrating the coordination step taken by the FAA up to the MRBR process level to promote standardization.

Concurrently, it is also understood that an SAE initiative (G38) has been recently launched to develop related standards. We anticipate that the results of that group may help further guide policy in the future.

Problem:

The current definition of Inspection – General Visual (GVI) in the MSG-3 document includes an example of a visual aid: “A mirror may be necessary to enhance visual access to all exposed surfaces in the inspection area”. This could be interpreted as suggesting that a mirror is the only visual aid permissible for GVIs. Expanding the range of examples for alternative visual aids is appropriate for working group consideration. Additionally, some alternative visual aids may be optional or have limitations requiring approval by the CA.

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Recommendation (including Implementation):

- A. Revise IMPS 3.7 to add guidance for the TCH to consider the use of industry standard tools in the task validation process. Add a new section 3.7.1 to provision for other criteria, conditions, and/or limitations agreed upon by the TCH and certifying authority.

3.7 The type certificate holder ~~has the responsibility to develop~~ is responsible for developing a methodology to validate the maintenance procedures ~~written to support the completion of supporting~~ MRBR tasks. The objective of ~~the this~~ validation is to ensure the maintenance procedure can be performed and that the intent of the MRBR task is ~~also complied with met~~. The validation includes any methods or tooling deemed applicable and effective by the MSG-3 analysis. The results of the validation shall be made available to the CA or VA upon request. If ~~task validation finds that the intent of~~ the MRB task cannot be met, this should be reported ~~be fed back~~ to the ISC. ~~They should for review and correction of any errors in the analysis. for possible errors and correct as required.~~

3.7.1 The TCH will identify the applicable and effective tools for the working group to consider in meeting the task's intent. The PPH may include additional criteria, conditions, and/or limitations related to tool usage as appropriate. This could involve categorizing some tools as optional and defining limits on their scope of application (e.g., zonal GVI for optional image-capturing devices) as agreed upon by the TCH and the certifying authority.

- B. Amend MSG-3 Chapter 2-1-2 as follows:

3. Method for Scheduled Maintenance Development

... This information (e.g. task purpose, accesses, tools/GSE, main steps of the procedure, estimated elapsed time/labor hour, pass/fail criteria ...) will be recorded in the MSG-3 analysis or referenced supporting documentation for tracking purposes. During task selection, working groups should evaluate the applicability and effectiveness of aerospace tooling (e.g., image-capturing devices) capable of meeting the task's intent.

- C. Amend the glossary definition for "Inspection – General Visual (GVI)" as follows:

Inspection - General Visual (GVI)

A visual examination of an interior or exterior area, installation or assembly to detect obvious damage, failure or irregularity. This level of inspection is made from within touching distance unless otherwise specified. A visual aid (e.g., mirror, image capturing device) may be ~~necessary~~ appropriate to enhance visual access to all exposed surfaces in the inspection area. This level of inspection is made under normally available lighting conditions such as daylight, hangar lighting, flashlight or drop-light and may require

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	removal or opening of access panels or doors. Stands, ladders or platforms may be required to gain proximity to the area being checked. Basic cleaning may be required to ensure appropriate visibility.
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IMRBPB Position:	
Date:	
Position:	
Recommendation for Implementation:	

Status of the Issue Paper:	<input type="checkbox"/>	Active
	<input type="checkbox"/>	Incorporated in MSG-3 / IMPS (with details)
	<input type="checkbox"/>	Archived