

International Maintenance Review Board Policy Board (IMRBPB)

Issue Paper (IP)

IP Number: CIP IND 2020-05 (V2)

Initial Date: 05/Feb/2020

Revision / Date: 01/ 08/DEC/2021

Effective Date:

Retroactivity (Y/N):

Title:	Recognition of the VTOL Aircraft
Submitter:	RMPIG & MPIG

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

Issue:

The MSG-3 methodology can also be applicable to VTOL aircraft.

The application of the MSG-3 to VTOL aircraft is advantageous for manufacturers and the VTOL aircraft later demonstration of compliance with airworthiness and safety requirements to regulatory authorities.

(EASA) recently published a special condition for certification of small electric and hybrid vertical take-off and landing (VTOL) aircraft ([SC-VTOL-01](#)).

EASA's Special Condition is the first set of certification standards for VTOL aircraft published by an aviation authority.

To date, the FAA has taken a more individual approach to VTOL aircraft, evaluating each project uniquely in advance of establishing industry-wide certification standards.

Problem:

Type certification of vertical take-off and landing (VTOL) aircraft, is differ from conventional rotorcraft or fixed-wing aircraft. The distinction from conventional aeroplanes is based on the VTOL capability of the aircraft while the distinction from conventional rotorcraft is based on the use of distributed propulsion, specifically when more than two lift/thrust units are used to provide lift during vertical take-off or landing.

SC-VTOL-01 provides guidelines for Instructions for Continued Airworthiness in section VTOL.2625.

In order to establish first steps to use MSG-3 methodology to provide ICA for these kinds of aircraft, RMPIG would like to recommend update in IMPS in order to allow the TCHs to use MSG-3 and MRB/MTB process for VTOL aircraft scheduled maintenance programs development.

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Recommendation (including Implementation):

IMPS section 3.0 General Application Rules,

Update the text as follows:

3.2 MRB Applicability - The MRB process is recommended for:

- (1) Transport category airplanes having a maximum weight of 33,000 lb. or more, (use MSG-3 Volume 1)
- (2) Transport category helicopters certificated to carry 10 or more people or having a maximum weight of 20,000 lb. or more, (use MSG-3 Volume 2), or
- (3) Powered-lift aircraft (use MSG-3 Volume 2).

3.3 MTB Applicability - The Maintenance Type Board (MTB) process is recommended for all other transport category aircraft (airplanes less than 33,000lbs or helicopters certificated to carry less than 10 people or less than 20,000lbs). The MRB process may be used for these aircraft, at the applicant's option.

3.4 ~~Neither the MRB nor the MTB processes are expected for the remaining aircraft (Part 23 Airplanes, or Part 27 helicopters) however, these processes may be used for these aircraft, at the applicant's option.~~ Type Certificate Holders of Part 23 airplanes and Part 27 helicopters may also apply for MRB or MTB processes at their own discretion.

Type Certificate Holders of electric or hybrid VTOL aircrafts may also apply for MRB or MTB processes consideration on a case-by-case basis.

Since the Regulatory Authorities' rulemaking processes on dedicated certification standards are currently in the development stage, existing MRB/MTB processes and MSG-3 methodology could be adapted to suit the specific needs.

NOTE: The original CIP proposal was submitted by Bell and Airbus

IMRBPB Position:

Date:

Position:

Recommendation for Implementation:

Status of the Issue Paper:

<input checked="" type="checkbox"/>	Active
<input checked="" type="checkbox"/>	Incorporated in MSG-3 / IMPS (with details)
<input checked="" type="checkbox"/>	Archived