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**MPIG L/HIRF WG**  
Status update - IMRBPB

May 08<sup>th</sup> 2023

# Agenda

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- ✓ Participants
- ✓ Background
  - Task
  - Status of CIPs
- ✓ Outcome and discussion highlights

# Participants

## The MPIG L/HIRF Team

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# Background

## WG Task

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### >> Sep 2022 MPIG F2F Meeting

Launched the L/HIRF WG to work on the following CIPs:

1. EASA 2020-02 L/HIRF assurance program in MSG3 (not scope of the 2023 IMRBPB);
2. EASA 2020-05 Analysis of Bonding Devices in MSG3 (not scope of the 2023 IMRBPB);

### Summary of status: **Tasking concluded.**

- CIP EASA 2020-05: “Bonding Devices”
  - MPIG Proposed changes to EASA’s original CIP EASA 2020-05 (proposals sent Nov 23 2022):
    - Split CIP into two main topics:
      - Analysis completeness;
      - Use of redundancy;
- EASA 2020-02: “L/HIRF Assurance Program in MSG-3”;
  - Consensus was not reached on path forward - CIP paused for further analysis;
  - Feedback to author (EASA) was provided on Feb 1<sup>st</sup> 2023;
  - Review of ARP5415B and intent of ‘Assurance Program’ per the ARP.

# Background

## WG Task - Added scope

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### >> CIP EASA 2023-08 - *Removal of not MSG-3 related Steps from MSG-3*

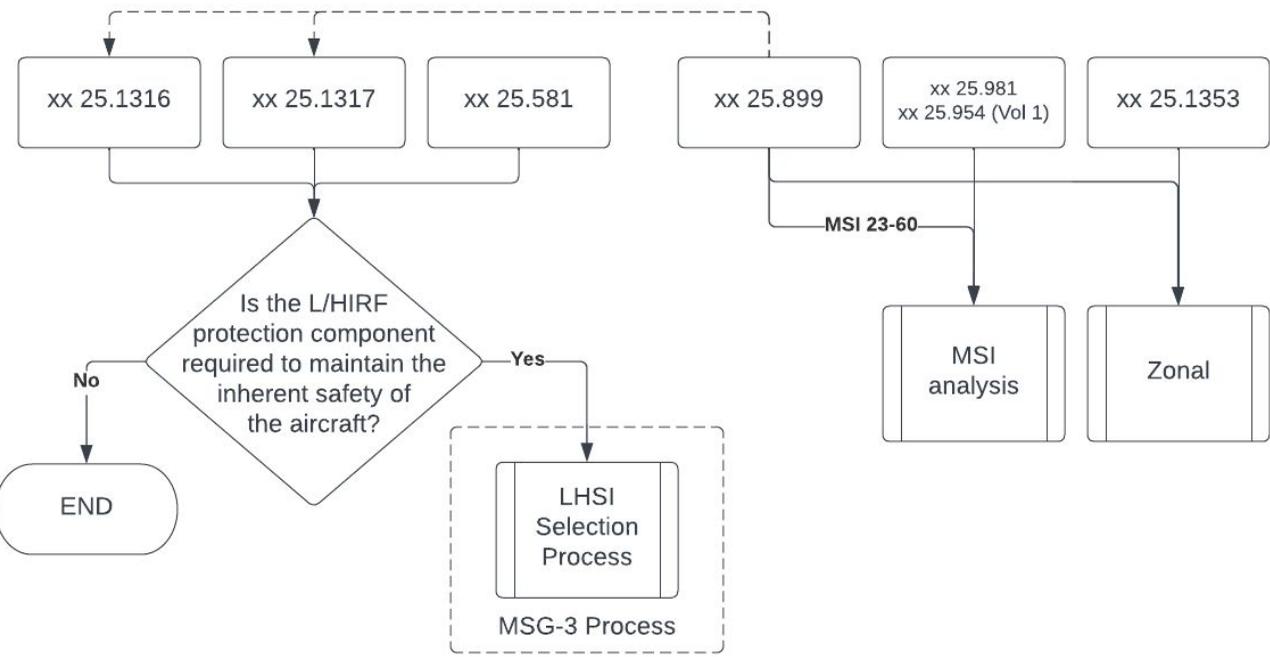
- CIP received as part of meeting package;
- MPIG L/HIRF WG industry members and other MPIG members were invited to provide comments (no regulatory involvement since we were seeking for MPIG position);

### Summary comments

- MPIG can accept the intent to remove reference of Assurance Program from the MSG-3 methodology;
- Proposal to IMPS is not considered enough guidance by the MPIG L/HIRF group;
- We've found some possible misses from the MSG-3 change recommendations;
- MPIG reached consensus on proposals to amend the EASA CIP, which will be shared during this meeting;
- The MPIG is concerned that the current CIP proposal would foment lack of harmonization with the use of validation programs for L/HIRF protection.

# Outcome & Discussions highlights

- >> **EASA new CIP 2023-08 - Removal of not MSG-3 related Steps from LHIRF analysis**
- >> **Interesting mapping of L/HIRF Analysis (using Part 25 as baseline):**
  - **Possible root cause for EASA's experience with L/HIRF analysis completeness;**



**References to regulations:**

- 25.1316 - Electrical and electronic system lightning protection
- 25.1317 - High-intensity Radiated Fields (HIRF) Protection
- 25.581 - Lightning protection
- 25.899 - Electrical bonding and protection against static electricity
- 25.981 - Fuel tank explosion prevention
- 25.954 - Fuel system lightning protection
- 25.1353 - Electrical equipment and installations

FAA regulation used as baseline.

## Next Steps

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### >> Future opportunities for improvement

Even though EASA did not add CIP EASA 2020-02 L/HIRF assurance program in MSG3 and CIP EASA 2020-05 Analysis of Bonding Devices in MSG3 to the 2023 IMRBPB scope, the following will be assessed by the MPIG L/HIRF WG:

- CIP EASA 2020-05: “Bonding Devices”
  - Verify if more guidance is required to ensure L/HIRF analysis completeness;
  - Verify if the MSG-3 methodology should consider redundant L/HIRF protection features;
- EASA 2020-02: “L/HIRF Assurance Program in MSG-3”;
  - Dependent upon CIP EASA 2023-08 discussions outcome.





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