Template No.

CEMILAC\_ACGP\_ACP\_02

**Issue/Rev No: 01/00**

**Date of Release: 8 Feb 2025**

**Airworthiness Certification Plan (ACP) for Integration of Store / System on Aircraft**

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| <DESIGN  AGENCY  LOGO> | | **Document No.** |  | | | |
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| **Title:** | | | | | **Project/System :** | |
| **Airworthiness Certification Plan (ACP) for Integration of Store / System on Aircraft** | | | | | < Project/System Name> | |
| **LRU/System Part No.** | |
| <No.> | |
| **Critical Level** | |
| <A/B/C/D/E> | |
|  | **Name & Designation** | | | | **Signature** | |
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| **<Design Firm Name & Address>** | | | | | | |

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This document is a guidance document. Applicable section / table rows may be considered. Any additional details may be added. Any not applicable section/ table rows may be deleted. The template is very general and vary with process to process followed by Development Agency. The document may be fine-tuned with the TAA for finalization.

**ACP Document shall be prepared by Main Contractor duly approved by CEMILAC/RCMAs**

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| **Reference No:** |  | | | |
| **Submitted to:** |  | |  |
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| Approved by | CEMILAC/RCMA |  |  |  |

**PART A: Generic Requirement**

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**PART-B AIRCRAFT INTEGRATION**

**Activities & Documents Linked to Aircraft Integration**

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| **Sl No.** | **Major Activity** | | **Compliance Status** | **Remarks** |
| 1. | Scanning, Model Generation, Geometric & Aerodynamic Validation of Aircraft Model | |  |  |
|  | Feasibility Study (Mechanical & Electrical/Avionics/Software) | |  |  |
| 2. | Proposed Aircraft Modification / Role Equipment Modification | |  |  |
| 3. | Experimental / Developmental Drawings (Mechanical & Electrical/Avionics etc) | |  |  |
| 4. | Documents Technical Specification of Store (if any)/ Pylon | |  |  |
|  | 4.1. Technical Specification of Store | |  |  |
|  | 4.2. Technical Specification of Pylon | |  |  |
| 5. | Preliminary Design Document | |  |  |
| 6. | Failure, Modes, Effects & Criticality Analysis / Fault tree Analysis | |  |  |
| 7. | System Safety Analysis (SSA) | |  |  |
| 8. | Weight & Balance Analysis | |  |  |
| 9. | Aerodynamic Loads Analysis | |  |  |
| 11. | Inertial Loads Analysis (MIL-STD-8591) | |  |  |
| 12. | Stability & Control Analysis | |  |  |
| 13. | Jettison Analysis | |  |  |
| 14. | Safety of Flight Test Plan (SOFTP) / Limited Qualification Test Plan (LQTP) | |  |  |
| 15. | LQT Plan | |  |  |
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|  |  | Random Vibration |  |  |
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|  |  | Pit Drop Test |  |  |
|  |  | GVT Test Plan |  |  |
| 17. | GVT Based Flutter Analysis | |  |  |
| 18. | Qualification Test Plan (QTP) | |  |  |
| 19. | Electrical loads Analysis | |  |  |
| 20. | Integration Design Review (IDR) | |  |  |
|  | Safe Separation Analysis Report with results of Pit Drop Tests and Jettison Analysis | |  |  |
| 22. | Aircraft Integration Drawings | |  |  |
| 23. | Instrumentation and Photogrammetry Scheme | |  |  |
| 24. | Flight Readiness Review Board (FRRB) | |  |  |
| 25. | Captive Carriage FCC | |  |  |
| 26. | Post Flight Analysis (PFA) after C&H Trials | |  |  |
| 27. | Software Integration and certification on Test Rig | |  |  |
| 22. | Avionics Flights FCC | |  |  |
| 24. | Post Flight Analysis (PFA) after Avionics Flights Trials | |  |  |
| 25. | Dummy Release FCC | |  |  |
| 27. | Flight Safety Review Board (FSRB) | |  |  |
| 28. | Live Release FCC | |  |  |
| 29. | Post Flight Analysis Repot after Live Release followed with PFA meeting | |  |  |
| 30. | Project Timelines | |  |  |
| 31. | Conclusion | |  |  |

1. **References (Documents referred for certification)**

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| --- | --- | --- |
| **Sl No** | **Document** | **Description** |
| 1 | MIL-STD-8591  dtd 12 Dec 2005 | Department of Defense Design Criteria Standard  “Airborne Stores, Suspension Equipment And Aircraft-Store Interface (Carriage Phase)” |
| 2 | MIL-T-7743  dtd 30 Apr 1993 | “Testing Store Suspension and Release Equipment, General Specification For” |
| 3 | MIL-STD-810  Dtd 01 Jan 2000 | Department Of Defense Test Method Standard “Environmental Engineering Considerations and Laboratory Tests For” |
| 4 | MIL-A-8870 (AS) dated 25.03.1993 | Airplane Strength and Rigidity, Vibration, Flutter and Divergence. |
| 5 | IMAP-23 | Indian Military Airworthiness Procedures 2023 |
| 6 | MIL-STD-461 | Requirements for the Control of Electromagnetic Interference Characteristics of Subsystems and Equipment |
| 7 | MIL-STD-704 | Aircraft Electronic Power Characteristics |
| 8 | MIL-STD-1289 |  |
| 9 | MIL-STD-1760 |  |
| 10 | MIL-HDBK-1763 |  |
| 11 | DO-178C |  |

1. **List of Abbreviations**

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| **Abbreviation** | **Description** |
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