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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| **Issue No./** **Rev No. :** | <00X>/ | **Issue Date :** | <DD/MM/YYYY> |
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| **Airworthiness Certification Plan (ACP) for Integration of Store / System on Aircraft**  | < Project/System Name> |
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**Disclaimer:**

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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**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 |  |  |
|  |  | Static Load Test |  |  |
|  |  | Random Vibration |  |  |
|  |  | Shock Test |  |  |
|  |  | 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-7743dtd 30 Apr 1993 | “Testing Store Suspension and Release Equipment, General Specification For” |
| 3 | MIL-STD-810Dtd 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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