ENHANCED

PROJECT SPECIFIC CERTIFICATION PLAN (ePSCP)

GUIDE

FIRST EDITION **MARCH 2021**

This Guide compliments the Certification Process Guide, Third Edition, May 2017 and is intended to be used with the associated enhanced PSCP template.

Prepared by AIA, AEA, GAMA, and the FAA Aircraft Certification Service and Flight Standards Service

Prologue

Over the past few years, the certification process guide (CPG), formerly the Certification Process Improvement (CPI) guide) has garnered more attention as its use is considered to benefit both the FAA and industry Applicants. In 2017, FAA and Industry representatives formed a team to help implement the CPG. Part of this effort was to conduct workshops at locations across the country.

Feedback from several CPG workshops has yielded an interest to assemble all relevant Project Specific Certification plan (PSCP) guidance in one document and promote its use on a national scale. Early identification of requirements, increased schedule predictability, shorter review times, fewer revision cycles, are just some of the potential benefits. Standardized, consistent and complete PSCPs will help both the Applicant and FAA simultaneously ensure safe and compliant products are approved.

This document is a guide and is intended as an aid to help define content and format when drafting a PSCP for a type certificate (TC), amended type certificate (ATC), supplemental type certificate (STC) or amended supplemental type certificate (ASTC) project for non-organization designation authorization (ODA) holders. The use of this guide is not mandatory; however, its use is strongly encouraged to streamline the certification process. This guide has been created using the principles of the Certification Process Guide (CPG) and is the result of a collaborative effort between the FAA and Industry. This guide should be used in conjunction with the associated enhanced PSCP (ePSCP) template. The ePSCP template can be found at: www.faacpg.com along with a copy of this guide and other CPG Tools.

The ePSCP template is intended to be scalable and used to develop PSCPs that may be very simple or quite complex. Individual sections within the document highlight specific topics that are optional vs. those that are required. In the case of any conflict between this guide and any FAA regulation, order, or policy, the FAA regulation, order, or policy is the governing document.

Organization Designation Authorization (ODA) Holders may use this guide to improve their procedures manual. Changes to ODA templates should be coordinated with the FAA Organizational Management Team. Additional requirements for ODAs and PSCP content is included in FAA Order 8100.15C, change 3 (Appendix D for TC and STC ODAs and Chapter 13 for parts manufacturer approval (PMA) ODAs) and ODA Procedures Manual. Additional elements and information may also be required for a Military Certification Office (MCO) project conducted in accordance with FAA Order 8110.101.

The following bullets detail the formatting of this document and further understanding of the guide:

- **Bold Text are considered 'firm' requirements that are found in Order 8110.4C[1].**
- *Best Practices will be in italicized text centered in the page and separated by horizontal bars before and after the text.*

For elements that are not applicable to your project, do not delete the paragraphs or section headers, but provide a short explanation as to why those particular sections are not applicable to your project. Text within brackets [ ] should be edited as necessary for each project. For additional policy and guidance, refer to Order 8110.4, Advisory Circular (AC) 21-40, AC 21-101-1, and Order 8110.115.

[1] This template was generated using the requirements from FAA Order 8110.4C, including Changes 1-6. Later revisions to orders may not be included or specific references to paragraphs may change.

PROJECT SPECIFIC CERTIFICATION PLAN

[PROJECT TITLE]

[INSERT APPLICANT DOCUMENT NUMBER], REVISION [IR]

BETWEEN

[INSERT THE NAME OF THE APPLICANT/COMPANY]

AND

[INSERT NAME OF ACO BRANCH] ACO BRANCH

[INSERT ADDRESS OF ACO BRANCH]

[FAA PROJECT NUMBER]

For FAA Project Number (leave blank until number assigned by the FAA), include the Applicant Project Number (If applicable)

List of Revisions:

The Applicant will sign the PSCP to show that the document has been released through their document control process. The FAA will concur with the PSCP, which may be in writing or otherwise agreed to procedure.

Revision Number	Revision Description	Applicant Name and Title Signature	Date

Best Practices:

- *Use of revision bars to identify changes from previous versions are highly encouraged.*
- *Signing documents using electronic signatures are highly encouraged and can be easily accomplished using standard software tools. Electronic signatures eliminate the hassle of manually routing paper and they can dramatically speed up the signature and approval process. They function as an electronic form of a handwritten signature, and can be applied to agreements, acknowledgements, approvals, consent, etc. where authentication and validation are required for the parties involved. Use of FAA Order 1370.121 should be reviewed for the FAA's electronic signature policy.*

Designee Signatures

Revision Number	Name of Designee Technical Discipline	Signature	Date
IR	Designee Name Chart A – Structures	Designee Signature	3/30/2021
IR	Designee Name Chart C2 – Electrical Systems	Designee Signature	3/27/2021
IR	Designee Name Chart A – Structures, Interior Arrangements	Designee Signature	3/29/2021

Best Practices:

- *The Applicant should maintain evidence of Designee concurrence to the PSCP, Compliance Checklist (CCL) and Conformity Inspection Plan (CIP) (if applicable) to include revisions.*
- *We encourage designees to review and coordinate on certification documents submitted to the FAA. In these cases, designees may use their designee number and title to indicate that they reviewed the documents as an FAA representative. In limited circumstances, depending on the scope of the change, it may not be necessary to gain concurrence from all designees for subsequent PSCP changes. If the managing office requests specific concurrence from all or specific designees, the Applicant will comply with the request.*
- *If signatures are maintained separately, the Applicant should provide evidence of designee concurrence upon request.*
- *Seeking designee concurrence is not required, but highly advisable.*

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1.0 GENERAL INFORMATION/PROJECT SCOPE

This section is used to provide the details of the purpose of the certification project. Include the reason for the design change or new project. Also describe how the design change(s) will be implemented (e.g., production and in the field). Specify if the project is dependent upon preceding and/or other simultaneous completion of other active FAA projects.

The purpose of this Project Specific Certification Plan (PSCP) is to define and document the requirements and tasks required for this proposed:

☐	Type Certificate	
☐	Amended Type Certificate	[Insert Type Certificate Datasheet (TCDS) Number]
☐	Supplemental Type Certificate	
☐	Amended Supplemental Type Certificate	[Insert STC Number]

Best Practice:

Use of a table is optional, as long as the information is presented within the PSCP. Other project types may be proposed *by the Applicant (e.g. service bulletin, Part Manufacturer Approval (PMA), Technical Standard Order (TSO) Authorization, special project, etc.); however, these approvals/documents are outside the scope of this guide.*

If you have a partnership for safety plan (PSP) and/or a memorandum of agreement (MOA) with the Managing ACO Branch it should be identified that: This PSCP has been developed following the information in the PSP/MOA. Any deviations from the PSP/MOA should be identified.

This PSCP will be managed and maintained jointly by the [Insert Name of FAA Managing Office] Branch of the Federal Aviation Administration and [insert Applicant name].

The [Insert Name of FAA Managing Office] Branch will document concurrence of the PSCP using standard correspondence practices as agreed to between the Applicant and the FAA. Once the FAA concurs with the PSCP, it is documentation of the commitment between the Applicant and the FAA. Once the PSCP has been concurred with, if errors and/or omissions are identified, [Applicant name] will revise the PSCP promptly or notify the ACO Branch of the error/omission in a manner agreed to between the ACO Branch and Applicant. Project changes (e.g., changes to the scope, designees, proposed means of compliance, schedule, required compliance documents, etc.) will require revisions to the PSCP by the Applicant and concurrence by the FAA. The ACO Branch will document their concurrence or non-concurrence with the changes in a manner agreed to by both parties. The Applicant will write the PSCP as completely as possible at the outset of the project. Once the FAA concurs with the PSCP, FAA resources will be planned and committed for its completion.

Best Practice:

There may be certain changes to the PSCP that may not require concurrence by the FAA. These may include, but not limited to, updating the PSCP to include the names of FAA personnel identified by the FAA for involvement in project or inclusion of the FAA project number. If not included within a PSP/agreement, it is helpful to outline the scope of changes that can be made by the Applicant without resubmittal of the PSCP to the FAA for concurrence.

The Applicant may submit an incomplete PSCP; however, **the PSCP must be completed (see FAA Order 8110.4C, paragraph 2-5d) and include the information in paragraph 2-3d of the order before entering the implementation phase.**

This PSCP becomes effective upon approval by the Applicant or the Applicant's representative and concurrence by the FAA. It will continue in effect throughout all phases of the certification project and any changes in the PSCP will be documented in a manner agreed to between the ACO Branch and the Applicant, or at the end of the project in the Summary of PSCP Deviations (See Section 11.0). Any change in the provisions of this PSCP will be approved by the Applicant and concurred with by the FAA. FAA concurrence with this PSCP does not constitute a binding contract obligating the FAA to issue an approval. In the case of any conflict between this PSCP and any FAA regulation, order, or policy, the FAA regulation, order, or policy is the governing document.

Best Practice:

Gaining concurrence by each designee proposed for the project ensures each stakeholder understands their role and responsibility within the project and agrees with the applicable requirements and methods of compliance. This also ensures that the designees have reviewed and contributed to the plan and agree to their participation in meeting the certification requirements associated with the PSCP.

1.1 Project Information Summary:

Provide a high-level summary of the project information in the Table below.

Applicant Name	
Agent's Name [If not using an agent, list N/A]	
Project Number (if known)	
Application Date [Include copy of application within or with the PSCP]	
Type of Project	

Project Description[2]	
Model-Series Designation	
List of applicable aircraft serial numbers and Identification of which S/N will be used as the prototype	
Managing Aircraft Certification Office Branch	
Applicable MIDO Section	
Applicable AED Office	
Foreign Civil Airworthiness Authority (FCAA) Validation Required (Yes/No)[3]	
FCAA Notification Required (Yes/No)	
Project Classification" (i.e., significant or not significant)[4]	
Project Requires Certificate Management ACO Branch Coordination[5] (Yes/No)	
Simultaneous Dependent Projects	

[2] Project description defined here should be commensurate with the type of description used for input into the Certification Project Notification (CPN). See FAA Order 8110.115.

[3] See Section 10.2 if FCAA Notification/Validation will be required.

[4] The term "Significant Project" can also be used synonymous with "Directorate Involvement". See FAA Order 8110.115, Appendix B and additional information in Section 5.4 for specific projects that require involvement from the policy division.

[5] See FAA Order 8110.115, Appendix C

Best Practices:

- *Provide a high-level summary of the project information in the Table. This table format is optional (except for bold requirements from Order 8110.4C), but has proven useful in many cases. Tailor to your project, as applicable.*
- *Each product category (Small Aircraft, Transport, Engine/Propeller, and Rotorcraft) has a list of subjects/technologies/issues, which require contact with the Policy Division (AIR-600). These may be areas where there are no (or limited) standards or guidance in place yet. The location of these lists are provided in Appendix D. Projects that include subjects/technologies within the list may require additional time/involvement by the FAA.*
- *The Applicant should have evidence of authorization if they intend to authorize one or more agents to represent them during the STC certification program. A letter of authorization is acceptable and should be included with the letter that transmits the application. The authorized agent will also be identified on the application form (FAA Form 8110-12).*
- *Use of a Table such as the following may be beneficial to provide a summary of areas that are affected by the certification project. Its use is optional and should be tailored to the Applicant's project scope.*

Certification Areas	
☒ Structures	☐ Flight Manual Supplement
☒ Flammability	☒ ICA
☐ Interior Compliance	
	☒ Part Conformity
☐ Aircraft Performance/HQ	☒ Installation Conformity
☐ Icing	☒ Test Conformity
☐ Lighting/Cockpit Eval	☒ Airworthiness Cert
☒ Elect Design/ELA	☒ Ground Test/Inspection
☒ Elect Testing	☐ Flight Test/TIA
☐ Lightning	☐ Acoustical Impact/NAC/Test
☒ SSA	
☐ Software/Hardware	☒ Powerplant Design
☒ Elect Compliance Inspections	☐ Powerplant Testing
☒ Mech Design	☐ Powerplant Compl. Inspections
☐ Mech Testing	
☐ Mech Compliance Inspections	

1.2 References and Reference Documents

Provide a list of documents that are referenced within the PSCP. This may include, but not limited to, advisory circulars (ACs), Orders, Policy Memos, Title 14 of the Code of Federal Regulations (CFRs), TCDSs, Handbooks, FAA Letters, previous certification projects, policies, industry standards, and FAA/Applicant agreements. Appendix B of this document contains a list of commonly used regulatory references, orders, ACs, and policies and provides an initial starting point for commonly used reference documents.

A complete list of FAA policy and guidance materials can be found at rgl.faa.gov, FAA Orders & Notices, and the Dynamic Regulatory System.

Best Practices:

- *Ensure proper references to CFRs vs. the use of the term FARs. Ensure proper citation of the FAA's regulations. Use and reference to the Civil Air Regulations (CARs) for older certification bases is acceptable. The CARs were part of the original certification basis for aircraft first certified in the 1940s-1960s by the Civil Aeronautics Administration. As such, the CARs may still be needed as a reference for older aircraft and changes to their type design.*
- *Verifying that each of the regulations that is being proposed is also using the appropriate policy and guidance material for that regulation. The FAA has created cross-reference matrices to map each of the regulations to the associated policy/guidance information. These can be found at: Part 21 Policy Cross-reference, Part 25 Policy Cross-reference, & Part 23 Advisory Circular Cross Reference*

2.0 PROJECT DESCRIPTION

Provide a description of the proposed aircraft, engine or propeller or the proposed change to the aircraft, engine or propeller. Only include the sections that are applicable to the project.

Best Practices:

- *Describe the change at a high level and then at a detailed level for each group of changes as required. A group of changes can be a set of components, a set of installations, a particular system, a type of operation, a limitation, or associated changes (example: material change over multiple areas, co-dependent change groups across multiple systems).*
- *The use of sketches, pictorials, and 3-D representations are extremely useful. If it is an interior reconfiguration, it is useful to include the passenger layout drawings as an appendix to the PSCP.*
- *For this section, the use of multiple subsections is highly recommended for clarity. For an example of how to group changes based on dependency, refer to AC 21.101-1B.*
- *For more complex projects, it is acceptable to create a separate description document that is revision controlled and submit with the PSCP. If a separate description document is used, then it should be referenced in the PSCP. For complex projects or new TCs, it may be helpful to have multiple PSCPs (one high-level) and several individual PSCPs based on systems or product components*
- *If there are additional major changes that are planned subsequent to the completion of the project in which the completion of this project may affect, it may be helpful for the Applicant to outline their intent so the FAA team may understand the bigger picture.*
- *If the project is changing a current approved configuration, describe the current aircraft configuration and operating environment. The 'current' aircraft is the aircraft that is currently approved, along with any other changes that will be implemented between time of the subject project application and completion. Be sure to differentiate what changes are scheduled for implementation.*

2.1 New Aircraft, Engine and/or Propeller Certification

Include a complete description of the product including the following as specified in § 21.15:

- **A three-view drawing of the aircraft or product and available preliminary basic data such as pictures, sketches, schematics, and diagrams of the proposed design.**
- **For engines, a description of the engine design features, the engine operating characteristics, and the proposed engine operating limitations.**
- **For a propeller, the minimum content should include hub material, hub attachment configuration, number of blades, pitch control range/use, pitch control method, blade material, general expression of blade shape, and de-icing method.**

Additional information to include:

- Preliminary basic data including location of wings, number and type of engines, speeds, maximum weights, minimum crew, passenger seating capacity, maximum operating altitude, etc.

- A description of the aircraft structure, systems, on-board equipment, components and appliances. These aspects should cover both "hardware" and "software".
- Interior layout of passenger accommodation (LOPA) diagram(s).
- Electrical systems, avionics system, software and airborne electronic hardware, major or primary structures, mechanical systems, hydraulic systems, cabin systems, propulsion/fuel systems, flight / ground controls, and aerodynamic surfaces.
- Identify system components, equipment interconnections, system failure annunciations, design data.
- Identify data security controls and processes, as applicable.
- Flight deck design/changes, human factors issues, pilot/crew operations, flight limitations, aircraft performance, intended operation, installation limitations.
- Plans for flight tests (company and FAA) per § 21.35
- Noise and Emissions assessments.
- Maintenance/inspection requirements.
- Review the FAA's Product Issues Lists. Address issues as applicable to the new product or change. See Appendix D links to the lists.
- Engine and/or propeller certification.
- Equipment qualification plans for articles.
- Qualified and not yet qualified, e.g., technical standard order (TSO), PMA, qualification testing, standard parts, commercial parts list, etc.
- Conduct a preliminary review of all prior alterations/STCs and airworthiness directive (ADs) on the prototype aircraft to determine if any interfere; The prototype/test article configuration must be capable of showing the new type design compliant. Configuration differences, functional or physical, must be included within the PSCP to describe the extent that differences will be addressed within the substantiating data.
- Use of previously approved data, including analyses, test results, and conformity information.
- New and novel aspects of the design. See Appendix D.
- Any explanations necessary to aid in the understanding of any unique conditions of certification.
- **Intended operating environment (part 91, 121, 135, etc.).**

2.2 Changes to an Aircraft, Engine and/or Propeller Certification

Include a complete description of the change. Changes must be evaluated in accordance with section 21.93(a)(b) and 21.101.

- A high-level description of the change and then a detailed level description for each related group of changes. A related group of changes can be a set of components, a set of installations, a particular system, a type of operation, a limitation, or associated changes. Examples: a material change over multiple areas or co-dependent change groups across multiple systems. For this section, the use of multiple subsections is highly recommended for clarity. Reference AC 21.101-1B for information on how to group changes.
- Describe the baseline configuration (see AC 21.101-1B for definition of baseline product) and operating environment (part 91, 121, 135, etc.).
    - The baseline product is the aircraft that is currently approved, along with any other changes that will be approved between the time of the subject project application

and project completion. Any changes that will be approved prior to completion of the subject project need to be clearly identified.

- **Describe the <u>planned</u> aircraft configuration and operating environment (part 91, 121, 135, etc.) after the change.**
- A description of all physical changes to the aircraft structure, systems, on-board equipment, components and appliances. The physical aspects can cover both "hardware" and "software".
- Pictures, sketches, schematics, and diagrams of the proposed change, as appropriate.
- Interior layout of passenger accommodation (LOPA) diagrams for pre- and post-modification provide additional clarification for interior change projects.
- A description of the effect that the change will produce. Examples include the effect on performance, effect on handling qualities, changes in weight and balance, emergency provisions, fire protection, flammability, structural integrity, aero-elastic, and crashworthiness.
- Describe why the Applicant wants/needs to change the current design. Will the change address a field issue or a known unsafe condition (FAA or foreign Airworthiness Directive), provide a less expensive alternative for owners/operators, provide an alternative for parts that are no longer being manufactured or have been made obsolete, etc.
- Plans for flight tests (company and FAA) per § 21.35
- The change in type design must be evaluated for an acoustical change to the certified noise levels of the aircraft per § 21.93(b). A No Acoustical Change statement with a rationale for no change will be made, or that the proposed change may affect the noise levels and a description of how the noise compliance will be demonstrated must be provided, including what flight manuals will be updated for the new noise levels.
- New and novel aspects of the design change. See Appendix D.
- Any explanations necessary to aid in the understanding of any unique conditions of certification of the change.

<u>The following is a list of areas to consider, as applicable, when describing the change</u>

- Electrical systems, avionics system, software and airborne electronic hardware, major or primary structures, mechanical systems, hydraulic systems, cabin systems, propulsion / fuel systems, flight / ground controls, and aerodynamic surfaces.
    - Identify system components, equipment interconnections, system failure annunciations, design data.
    - Identify data security controls and processes, as applicable.
- Flight deck design/changes, human factors issues, pilot / crew operations, flight limitations, aircraft performance, intended operation, installation limitations.
- Maintenance or inspection requirements.
- Review the FAA's Product Issues Lists. Address issues as applicable to the new product or change. See Appendix D for links to the lists.
- Updates to the TCDS or STC (for amended TC/STC major changes).
- Engine and/or propeller certification.
- Equipment qualification plans for articles.
    - Qualified and not yet qualified, e.g., TSO, PMA, qualification testing, standard parts, commercial parts list, etc.

- Conduct a preliminary review of all prior alterations/STCs and AD's on the prototype aircraft to determine if any interfere; the prototype/test article configuration must be capable of showing the new type design compliant. Configuration differences, functional or physical, must be included within the PSCP to describe the extent that differences will be addressed within the substantiating data.
- Address any known or potential unsafe conditions, whether an AMOC will be requested at the end of the project or an AD needs to be revised.
    - If the Applicant is the existing certificate holder then address any known § 21.3 activities that are affected by this change.
- Use of previously approved data, including analyses, test results, and conformity information.

2.3 FAA Aircraft Evaluation Division (AED)[6] Involvement:

Address items that may require FAA AED involvement such as:

- Instructions for Continued Airworthiness (ICA) and any proposed use of commercial parts lists (CPL)
- EWIS ICA
- Airworthiness Limitations
- Certification Maintenance Requirements (CMR)
- Airplane/Rotorcraft Flight Manual (Supplement) (AFM/RFM(S))
- Configuration Deviation List (CDL)
- Master Minimum Equipment List (MMEL)
- Flight Crew Operations Manual (FCOM)
- Unique/special training requirements (Maintenance, Crew)
- Discuss plans for experimental certificates of airworthiness
- Participation in flight test to evaluate operational suitability
- Type-rating requirements.
- Manage the FSB, FOEB, and MRB (as applicable)
- Address any necessary AED issue papers for Maintenance or Operations

[6] Formerly AEG (Aircraft Evaluation Group)

Best Practices:

- Ensure early and sufficient engagement of the AED in the certification process to review operational safety requirements and oversee assessments of design features and assumptions affecting operations.
- Consider all safety requirements from type certification to pilot training, maintenance, and operational performance of the product.
- The STC Applicant or holder is the point of contact (POC) for all matters regarding relief for their STC(s). Operators desiring MEL relief must consult directly with the STC Applicant or holder for such relief. For additional information on seeking MEL relief, see Policy Letter PL-109 Revision 1, dated November 7, 2019. Submission should be made early in the certification process to allow MMEL/MEL evaluation concurrent with the certification process.

3.0 SAFETY ASSESSMENT

The purpose of this section is to discuss the safety assessment process and documents that will be used on the project. Depending on the complexity of the project or change, documents used in the safety assessment process can include, among others, the FHA, PSSA, SSA, FTA, FMEA, or CCA. Guidance for the safety assessment process can be found in SAE ARP 4761, Guidelines and Methods for Conducting the Safety Assessment Process on Civil Airborne Systems and Equipment.

For simple projects, some Applicants may choose to include elements of the safety assessment process in the PSCP. This may be in the form of a very simple FHA or a preliminary FHA. See Appendix C for an example of a simple FHA.

4.0 PROJECT SCHEDULE

[Provide an INITIAL project schedule including major milestones, such as preliminary hazard analysis submittal dates, substantiating data submittal dates, conformity and testing completion dates, and expected date of final certification. NOTE: The Applicant is responsible for meeting their milestones in the schedule contained in the certification plan. Any slippage in the milestone dates may result in a delay in the final certification.] [Project Milestones are listed below. The applicant should highlight firm dates that would have significant implications to the company if not met.]

The required amount of detail and frequency of updates needs to be agreed upon between the Applicant and FAA.

Best Practices:

- *Applicant may reference a separate schedule that will be maintained and kept up-to-date (as it is not realistic to revise a PSCP for every schedule change). The FAA and the Applicant should both have visibility to this "live" schedule and it should be reviewed together on a regular basis.*
- *The project schedule should identify milestones for known IPs that require resources to complete are necessary.*

Make every effort to establish realistic schedules. FAA office flow time to review and accept or approve data submittals is typically 21 to 45 days; however, the applicant should communicate with their FAA ACO Branch to confirm the office flow times applicable to their project. If a PSP or MOA is in place, the schedule should reflect these agreements. The Applicant should also be familiar with FAA policy and procedures for prioritizing certification projects and managing certification resources when local resources are limited. Consult with your local ACO Branch to ensure availability of FAA resources.

If the project is not public knowledge and/or is market sensitive, include the planned announcement date/event in the schedule (i.e. NBAA 20XX, Oshkosh 20XX, market driven event, etc.).

Allow for design, production, operational, and maintenance aspects. Identify all issue papers if known. Identify any hard dates/constraints in the schedule (aircraft or laboratory availability, weather windows, part lead-time, etc.). The sequence of events and dependencies should be clear. If specific activities in the process are dependent on completion of earlier activities, include those 'gates' in the schedule. For example, if a project is dependent on any TSO, engine TC, or propeller TC, then these should be included as major milestones on the schedule.
Concurrence of the PSCP typically is a gate to submitting compliance showings/findings or initiating implementation phase activities. This should be taken into account when needing to perform tests or conformity activities.

Applicants should be aware that when their schedule deviates from the schedule concurred with in the PSCP, the FAA might not be able to meet standard response times due to other resource commitments.

If any foreign validation efforts will be conducted concurrently, include those major milestones in the schedule as well (e.g., application date, expected type certification validation date). If any TSO development will be conducted concurrently, include those major milestones as well.

The Applicant Statement of Compliance (reference § 21.20) should be the final item before the FAA issues the design approval.

4.1 Typical Project Milestones

The bulleted list is provided in no specific order.

- Prelim. Kickoff/Familiarization Meeting
- PSCP Submittal
- Application Accepted
- Validation Application(s) Submitted
- Need for Special Conditions, ESF's, and/or Exemptions Identified
- PSCP Concurred with by FAA
- Issue Paper and other requirements such as Special Conditions, ESFs, and/or Exemptions Granted
- Planned Type Certification Board Meetings (TCBM) – list all
- First Flight (start developmental testing)
- Data Submittals
  - Drawings and Master data list
  - Analysis reports (i.e. structures, electrical, F&R, systems, flight test (FT), system safety reports, etc.)
  - Flight Manual Supplement
  - Instructions for Continued Airworthiness
  - Company Test Reports
- Begin Company Flight Testing
- Test Plan submittal(s) (structural, systems, FT)
- Test Plan(s) Approval
- Public/Marketing Announcement Dates
- Pre-Flight Board Meeting
- Conformity Requests
  - Parts
  - Installation
  - Test Set-ups
- Installation Compliance Inspection(s)
- Type Inspection Authorization(s) (TIA)
- Engineering Certification Test(s):
  - Flight Tests
  - Ground Tests
  - Bench Tests
  - Qualification/Environmental Tests
- Software Development Reviews
- Software Submittals
- FAA Test Report(s)
- Final Data Submitted to the FAA in accordance with Order 8110.4, Appendix 10 (final drawing, report revisions, conformity completion memo, etc.)
- FSB
  - T tests (see AC 120-53 for more guidance)
  - FSB Report
- FOEB
  - MMEL/MEL relief
- Applicant Statement of Compliance (§ 21.20)
- Instructions for Continued Airworthiness (ICA) Acceptance
- Issuance of Approved Flight Manual or Flight Manual Supplement(s)
- Issuance of Certificate/Project Approval
- AMOC request to the FAA (if applicable)
- Validation Approval(s)
- Shipment/Delivery Dates to Customers
- PMA Timeline (if applicable)
- Post Certification Data to the FAA

5.0 CERTIFICATION BASIS

The FAA will make the final determination of the certification basis by either concurring with the PSCP, or for more complex projects, with an issue paper.

The certification basis may include the following; however, the bold items must be included:

- § 21.101 change product rule explanation

- **Applicable regulatory paragraphs, subparagraphs and amendment levels for the project**. If specific regulations will be shown to a higher amendment level than required, highlight the specific regulations,
- **Exemptions to specific regulations (part 11)**
- **Special conditions (§ 21.16)**
- **Equivalent level of safety findings (§ 21.21)**
- **Part 26 (applies only to changes to transport airplanes)**
- Noise standards (part 36)
- Fuel venting and exhaust emission standards (part 34)

Best Practices:

- *If a specific section or requirement is not applicable, include a note to state why they are not applicable.*
- *Provide an explanation if any Airworthiness Directives will be affected and if any AMOCs will be required. Refer to Order 8110.4C and AC 21.101-1 for more information.*
- *If the Applicant elects to comply with a later certification basis than is required for the change, then these areas/requirements should be highlighted so they can be easily extracted to include on the certificate when it is issued.*

5.1 Certification Basis and Change Product Rule Justification

Provide a statement which identifies the proposed CFR (or CAR) Part with the appropriate amendment level(s) and date. This is a blanket statement of the Part of the certification regulations based upon the date of application, the date of original application (see § 21.101(b) for exceptions), or a combination of the two. Do not include a list of the individual regulations within this section. The list of individual regulations and amendment levels specific to the proposed certification project will be documented in the Compliance Checklist in Section 6.3.

The applicable requirements are determined using § 21.17 for new type certificate projects, and §§ 21.101 and 21.115 for changes to type certificated products. For changes to a type-certificated product, it is useful to note that the certification basis of a type-certificated product is normally documented on the TCDS under the heading of "Certification Basis". If you propose to use the certification basis of an existing type certificated product, copy the "certification basis" from the TCDS here, and rewrite the appropriate parts in the subsequent sections. The Applicant may elect to comply with a later certification basis than is required for the change.

The following are examples of a certification basis:

Example 1: For an STC classified as "not significant" (ref. § 21.101, FAA Order 8110.48A, and AC 21.101-1B), here is an example of a certification basis:

> Airworthiness & Environmental Standards are the original certification basis for the Models DC-9-81, -82, -83, MD-88 as shown on TCDS A6WE, Revision 27.

Example 2: For an STC, the following is an approval with a split certification basis:

"Based on §§ 21.115 and 21.101, and the FAA policy for significant changes in FAA Order 8110.48A, here is an example of a certification basis:

a. Airworthiness & Environmental Standards for components and areas not affected by the change are the original certification basis for the Models DC-9-81, -82, -83, MD-88 as shown on TCDS A6WE, Revision 27.
b. Airworthiness & Environmental standards for components and areas affected by the change as of the date of application, April 20, 2010, is 14 CFR part 25 effective February 1, 1965 including Amendments 25-1 through 25-129, and 14 CFR part 26 effective December 10, 2007 including Amendments 26-1 through 26-4. "

Example 3: For a new TC, here is an example of a certification basis:

"14 CFR Part 25 of the Code of Federal Regulations, dated February 1, 1965, including Amendments 25-1 through 25-89"

5.2 Special Conditions

This section is necessary if the certification project will require issuance or compliance with a special condition. This is typically accomplished via the issue paper (IP) process. Under § 21.16, a special condition is issued only if the existing applicable airworthiness standards do not contain adequate or appropriate safety standards because of novel or unusual design features of the product to be certified. **For TCs and STC, special conditions must documented on the TCDS or STC as part of the certification basis.**

5.3 Equivalent Level of Safety Findings

This section is necessary if the certification project will require issuance or use of an equivalent level safety finding. This is typically accomplished under the IP process. Under § 21.21(b)(1), equivalent safety findings are made when literal compliance with a certification regulation cannot be shown and compensating factors exist which can be shown to provide an equivalent level of safety. NOTE: Equivalent Level of Safety (ELOS) and Equivalent Safety Findings (ESF) both refer to this process and are considered synonymous. **For TCs and STC, ELOSs must documented on the TCDS or STC as part of the certification basis.**

5.4 Issue Papers

The FAA and the Applicant develop issue papers when necessary as a means of resolution of significant technical, regulatory, and administrative issues that occur during the project. Additional information regarding the use of issue papers are found in FAA Order 8110.112 and AC 20-166. For transport category projects, the use of position papers may be used/developed for specific methods of compliance.

The various Project Issues Lists provide a list, but not a complete list, of issues that may require additional policy. See Appendix D for information on the location of these lists.

Best Practices:

- *The Applicant should review the applicable issue list and identify any issues that may be applicable to the project.*
- *Use the Streamlined Issue Paper Process to reduce flow-times and issue paper development requirements. See FAA Policies AIR600-18-6C0-DM106, Revision 2 and AIR600-18-AIR-6C0-DM119 for further information.*

5.5 Exemptions

The purpose of this section is to discuss if the certification project will require issuance or amendment of an exemption for relief from the requirements of a current regulation (§ 11.15). Under § 11.25 an Applicant may petition for a temporary or permanent exemption from a CFR. The process to obtain an exemption is separate from the rest of the project. Exemptions are not handled via issue paper. You will apply for the exemption by using www.regulations.gov. You should communicate the status of your exemption request with the managing ACO Branch. If the exemption is granted, a copy will be provided with this project and will be documented on the TCDS or STC as part of the certification basis.

Best Practice:

The managing ACO Branch is generally not involved in the process or the decision to grant/deny exemption requests. Providing awareness of the status or progress of your exemption request will help ensure the ACO Branch can interface with the applicable rulemaking and policy organizations.

5.6 Airworthiness Directives

The purpose of this section is to discuss if the certification project affects an area that is the subject of an airworthiness directive (AD), or the change affects an area compliant to an AD, including any project related component removals that may require an AMOC. This will require FAA coordination between the ACO Branch and the ACO Branch that issued the AD. This will facilitate the issuance of the AMOC to the AD once the design is approved. If no ADs are affected or no AMOCs will be required, provide a statement confirming such and the date the review was completed. Throughout the project, regularly conduct a review for new or superseded ADs to ensure the project does not impact AD compliance.

Reference also AC 39-10 guidance for seeking approval of an AMOC, or if, and when an AMOC is necessary.

5.7 Part 26 Compliance Requirements

Part 26 is required for transport category aircraft. The purpose of this section is to discuss if there will be compliance for part 26 compliance items or if a statement must be made that the type design will not affect a part 26 compliance item, following an electrical wiring interconnection systems (EWIS) impact assessment (reference § 26.1 and AC 25-27A). Examples of special compliance items include:

- § 26.11: EWIS maintenance program
- part 26 subpart D: Fuel Tank Flammability
- § 26.47: Damage Tolerance requirements for holder of and Applicants for a supplemental type certificate, alterations and repairs to alterations.

If a special compliance item is affected, describe briefly how compliance will be demonstrated.

If a special compliance item is applicable to the aircraft but the proposed design does not affect the special compliance item make a statement to that affect. For example, if a proposed structural change affects an aircraft defined in § 26.47(a) but the change does not affect the damage tolerance characteristics of the structure state:

> § 26.47: This design does not affect or create fatigue critical baseline structure; therefore, a specific finding to § 26.47 is not required.

6.0 SHOWING AND FINDING COMPLIANCE

Compliance is essentially a two-step process. Part 21 requires Applicants to *show* compliance to all applicable requirements identified and agreed to by the FAA in order to obtain FAA design approval. The FAA (or delegated designee) must then *find* compliance (i.e., agree that the *showing* is valid) in order to complete the compliance determination. This may be done for specific individual regulations, concurrent with the issuance of the certificate/amendment, or a combination of both.

6.1 Means of Compliance (MOCs)

The description of the means of compliance should be sufficient to determine that all necessary compliance-related data will be collected and all findings can be made. A list of all applicable regulations and their amendment levels, MOCs, and proposed individual required for finding compliance should be included in a compliance checklist (CCL). See Table 2 for example CCL.

More than one means of compliance may be required to show compliance with the applicable requirements (e.g., test, analysis, analysis supported by test, similarity, simulation, etc.).

NOTE - It is recognized there are inconsistencies with current policy and guidance regarding the terms ”means of compliance” and “methods of compliance.” For the purposes of this document, the term “means of compliance” is used consistent with § 21.20(a) “The Applicant for a type certificate, including an amended or supplemental type certificate, must—show compliance with all applicable requirements and must provide the FAA the means by which such compliance has been shown.” There are also differences in the definitions of means of compliance, which is being addressed by the FAA via future guidance. This content will be updated as appropriate at a later time

Typical means of compliance include:

6.1.1 Engineering Certification Test (T)

Engineering tests are required to validate various assumptions or when analysis techniques alone would not be sufficient to substantiate the proposed design. Engineering tests are used to demonstrate compliance with a requirement or to collect product or component data necessary for showing compliance. Some examples of engineering tests include, but are not limited to, part qualification,

equipment qualification tests (e.g., DO-160, door frangibility, material tests, etc.), system function, iron bird, fatigue, flammability, landing gear drop test, wing, fuselage, empennage tests, and ground vibration tests.

6.1.2 Flight Tests (FT) and Ground Tests (GT)

Any ground or flight test performed on the product test article that is controlled or evaluated by FAA flight test personnel (or their designees) in support of appropriately authorized official testing. Certification Flight Tests are used by the FAA to verify the flight test data reported by the Applicant or to obtain compliance data for flight testing conducted concurrently with the Applicant. These tests evaluate the aircraft's performance, flight characteristics, operational qualities, equipment operation, and EMI. They also determine operational limitations, procedures, and pilot information. Certification flight tests are conducted under the TIA and may include flight, ground, and functional and reliability testing. A certification flight test may provide both a compliance demonstration for the engineer, as well as a qualitative assessment for the pilot. Additional information on Flight Test procedures are contained in FAA Orders 8110.4C and 4040.26 for flight test risk assessment, risk mitigation, technical review boards, and safety review boards, leading up to TIA issuance.

6.1.3 Analysis (AN)

Analysis is an integral part of showing compliance. It encompasses the full range of analytical techniques consisting of quantitative or qualitative assessment to include, but is not limited to, textbook formulas, computer algorithms, computer modeling/simulation, similarity analysis, comparative analysis, electrical load analysis, or system safety assessment methods (functional hazard analysis, fault tree analysis, failure mode effective analysis, etc.)

The overall evaluation process should consider the architecture, functionality, operational capabilities, and limitations. In all cases, the evaluation process is a fundamental importance in meeting the applicable requirements for certification.

The Applicant is responsible for validating any specific analytical technique used and that the data are valid. This may involve completing testing to validate the technique and its ability to produce reliable results. This is usually applicable to computer modeling/simulation software, but not limited to such. (See AC 21-40 for examples).

6.1.4 Design Review (DR)

Engineering design review is a structured review of the engineering drawings, bill of materials, design specifications, manufacturing processes, etc., to verify the configuration and design features demonstrate compliance (or partial compliance) to the applicable airworthiness requirements. Other means of compliance (i.e., test, analysis, inspection, etc.) are often required to show full compliance to the applicable regulation(s).

6.1.5 Compliance Inspection (CI)

An engineering compliance inspection is required when necessary to observe, view, or examine a design to show compliance to the applicable certification requirements. Compliance inspections are done for any aspect of designs and installations where compliance cannot be determined through the review of drawings or reports alone. FAA engineering compliance inspections should not be confused with a

conformity inspection done by manufacturing inspectors or designees. A conformity inspection determines conformity to engineering drawings, specifications etc.

Examples of Compliance Inspections may include but are not limited to:

- Interior compliance inspections
- Control system compliance inspections
- Propulsion systems including fire protection compliance inspections
- System routing compliance inspections
- Markings/Placards for certain systems

Means of compliance is different from acceptable methods of compliance. Methods of compliance are standards or guidance documents that may be used to show compliance with the applicable regulations. Specific examples include: AC 23-17C, Systems and Equipment Guide for Certification of Part 23 Airplanes and Airships and AC 25-7D, Flight Test Guide for Certification of Transport Category Airplanes.

Best Practice:

Tables may be inserted in the PSCP or may be moved to appendices if that provides better control and presentation of the compliance plan. It is the requirement of the Applicant to show compliance to the applicable requirements and the FAA (or our designees) to find compliance.

6.2 Documentation

Provide a list of documentation that will be submitted to show compliance with the applicable certification basis, which is used by the Applicant to ensure that all showings have been made. Identify proposed compliance items retained by the FAA, delegated to designees, or that will be found in compliance by the Applicant only. Highlight documents, which are new project documents, or those that will be updated project documents.

This table must include all documents/items planned to show compliance to the applicable regulations and include type design data (e.g. master data lists or equivalent, descriptive data, limitations), substantiation data (e.g., analyses, comparisons, similarity analyses, compliance inspections, manuals, tests (bench, laboratory, ground, flight), etc.), and other items that are part of the certificate (e.g., manuals).

Best Practices:

- *Include a table of these items, indicating document number, document title or document description/type. Including a cross reference to method of compliance, and delegated Designee is desirable if practicable. Each of these should be identified in Table 2 (CCL) below. Table 1 (Document Deliverables) lists some typical documents that might be submitted to the FAA during a certification project.*
- *When you submit these documents include a cover letter that describes the submittal.*
- *For projects using a systems recognition approach (e.g., Applicant showing only (ASO), compliance assurance system (CAS), etc.), the Applicant should provide a signed written statement of compliance for those regulation(s) that will use systems recognition (reference FAA memorandum AIR100-15-150-PM16, dated September 30, 2015). Applicants should reference their agreed to process for these areas (PSP, MOA, minor change agreement, etc.)*

At the end of the project, the Applicant will provide a statement certifying that the Applicant has complied with all of the applicable regulations (§ 21.20). See AC 21-51 for applicable guidance.

Document Deliverables (Substantiation documents) - A specific document/data/event that is used to SHOW compliance to specific regulations and will be reviewed for a FINDING of compliance by the FAA or a delegated designee.

Table 1 – Document Deliverables

Table 1 Document Deliverables					
Document Title	Document Number	Means of Compliance[7]	FAA/Designee (Name)	A/RA/ASO[8]	Comments
Design Drawings	1234-01 5678-02 130998-1	DR	DER – Jones DER – Smith DER – Johnson	A A A	
Master Data/Drawing List	MDL 99873-D01	DR	DER – Jones DER – Smith DER – Johnson	A A A	Each DER will approve the descriptive data consistent with the CFRs proposed in Table 2.
Process Specifications	PS6001	DR	DER - Smith	RA	
Analysis Methodology	AN7701-D13	AN	DER - Smith	A	
Static Loads Analysis	AN8301-D14	AN	DER - Smith	A	
Static Analysis	AN3412-D15	AN	Applicant Process	ASO	
Electrical Loads Analysis	AN5609-D16	AN	DER - Jones	A	
Safety Assessment(s)	SS6791-D17	AN	DER - Jones	RA	
Damage Tolerance Analysis	DT7833-D18	AN	DER - Smith	A	
Noise Report	NR4391-D19	AN/FT		RA	
Engineering Compliance Inspection	FSI8634-D11	CI	DER - Jones	A	
Conformity Request (RFC) (Inspection)	Request for conformity (RFC) FAA form 8120-10	--	DAR - Parker	--	
Conformity Report		--	FAA	--	
Compliance Report		T	DER - Jones	A	
Test Plans	TBD	T / GT / FT	DER – Jones* DER – Smith* DER – Johnson*	RA RA	*Test Plan approval not included within DER's COA.
Test Witnessing	N/A	T GT	DER – Jones DER - Smith	--	

[7] See Section 6.1 for applicable definitions

[8] A = DER Approved FAA Form 8110-3, RA = DER Recommend Approval on FAA Form 8110-3, ASO = Applicant Showing Only

Table 1 Document Deliverables					
Document Title	Document Number	Means of Compliance[7]	FAA/Designee (Name)	A/RA/ASO[8]	Comments
Test Reports	TBD	T GT / FT	DER – Jones DER - Smith	A RA	
Instructions for Continued Airworthiness (ICA)	ICA3345-D20	--	FAA (AED concurrence required)	--	No impact to AWL section
Aircraft Flight Manual (AFM) or Supplement (AFMS)	AFM2290-D30	FT	DERs - Jones, Johnson	RA	
Type Inspection Authorization	Draft	--	FAA		
TCDS or (STC)	Draft	--	FAA	--	
Project Summary Report	Draft	--	FAA	--	
§ 21.20 Applicant Statement of Compliance	See AC 21-51	--	Applicant	--	Final submittal at end of project

Best Practices:

- *Include a line for each distinct document.*
- *Ensure to include any AED items (See Section 2.3)*
- *List company documents that are used for project activities, but not necessarily used to find compliance. When listing these documents, reference the FAA and/or DER Name as "Not applicable".*
- *Documents may include STC Installation Instructions.*
- *The PSCP should include requesting for delegation for test plan, witnessing tests, and test report/documents. Unless otherwise requested for approval, Test Plans, Test Witnessing, and Test Reports will be defaulted to FAA approval.*
- *Not all DERs have test plan approval listed on their certificate of authorization (COA). If the DER does not have test plan approval (or recommend approval) on their COA, the PSCP may propose recommend approval for those DERs. The PSCP should be clear that this is a proposal outside of their COA. See FAA Order 8110.37F for additional information.*

6.3 Compliance Checklist

List all applicable regulations by paragraph/sub-para, and proposed amendment levels involved in the certification, or affected by the change. Reference section 5.1 for establishment of the certification basis. For each regulation/subparagraph, include the proposed means of compliance listed for each regulation and any applicable methods of compliance (guidance). Regulations may be repeated for different combinations of subparagraphs, means of compliance, document, Designees, etc. It is also useful to provide a short description of the regulation or the title. The table below is an example of a compliance checklist. Please include the applicable regulations from Parts 21, 23, 25, 26, 27, 29, 33, 34, and 36. The finding of compliance can be by the FAA, a designee or a showing of compliance by the Applicant only.

Table 2 – Compliance Checklist

Table 2
Compliance Checklist

Regulation	Title	Applicable Amendment	Means of Compliance	Document Name & Number	FAA / DER (Name)	Finding of Compliance (Approve or Recommend) or Applicant Showing Only	Guidance Reference & Remarks
§ 25.21	Proof of Compliance	25-140	T AN	Report 123-D22	DER – Jones	Recommend Approve	AC 20-24 Revision D, Change 1 AC 25-7 Revision D, AC 25-25 Revision A
§ 25.23	Load Distribution Limits	25-0	T AN	Report 123-D22	DER – Jones	Recommend Approve	AC 20-24 Revision D, Change 1
§ 25.25	Weight limits	25-63	T AN	Report 123-D22	DER – Jones	Recommend Approve	AC 20-24 Revision D, Change 1 AC 25-8
§ 25.27	Center of Gravity Limits	25-0	T AN	Report 123-D22	DER – Jones	Recommend Approve	AC 20-24 Revision D, Change 1

Table 2 Compliance Checklist							
Regulation	Title	Applicable Amendment	Means of Compliance	Document Name & Number	FAA / DER (Name)	Finding of Compliance (Approve or Recommend) or Applicant Showing Only	Guidance Reference & Remarks
§ 25.29	Empty weight and corresponding center of gravity	25-72	T AN	Report 123-D22	DER – Jones	Recommend Approve	AC 20-24 Revision D, Change 1
§ 25.303	Factor of Safety	25-23	AN	Loads Report 11-002	DER – Jones DER – Smith	Approve Approve	AC 20-131A, AC 20-167A, AC 25.341-1, AC 25.735-1
§ 25.305(a)(b)(c)(f)	Strength and deformation	25-86	GT	Test Report 22-003	FAA	Approve	20-107B, 20-131A, 25.341-1, 25.629-1B, 25.672-1
§ 25.365(e)(f)(g)	Pressurized compartment loads	25-87	T AN	Test Report 22-003	DER – Jones	Approve	25-8, 25-20, 25.775-1
§ 25.561	General	25-91	T	Test Report 22-002	DER – Jones	Approve	AC 25-17A
§ 25.561(d)	General	25-91	T	Test Report 22-002	DER – Smith	Approve	AC 25-17A
§ 25.601	General	25-0	DR AN	Analysis 22-001	DER – Jones DER – Smith	Approve Approve	20-73A, 20-167A, 25-16
§ 25.603	Materials	25-0	DR AN	Compliance Report 334-D88	DER – Jones DER – Smith	Approve Approve	20-73A, AC 20-107B, 20-167A, 25-16
§ 25.605	Fabrication Methods	25-46	DR AN	Compliance Report 334-D88	DER - Smith	Approve	20-73A, 20-167A, 25-16

Table 2 Compliance Checklist							
Regulation	Title	Applicable Amendment	Means of Compliance	Document Name & Number	FAA / DER (Name)	Finding of Compliance (Approve or Recommend) or Applicant Showing Only	Guidance Reference & Remarks
§ 25.607	Fasteners	25-23	DR AN	Compliance Report 334-D88	DER – Jones DER – Smith	Approve Approve	AC 20-71, AC 20-73A
§ 25.609	Protection of Structure	25-0	DR AN	Compliance Report 334-D88	DER - Smith	Approve	AC 20-107B
§ 25.611	Accessibility Provisions	25-123*	DR AN	Compliance Report 334-D88	DER - Smith	Approve	AC 20-73A
§ 25.613	Material Strength Properties and material design values	25-112*	DR AN T	Compliance Report 334-D88	DER - Smith	Approve	AC 20-73A
§ 25.785	Seats, berths, safety bests and harnesses	25-88	CI	Inspection Report 6653-D13	DER – Smith	Approve	AC 25-17A
§ 25.785(f)	Seats, berths, safety bests and harnesses	25-88	AN	Structures Report 115-D74	DER – Johnson	Approve	AC 25-17A
§ 25.831	Ventilation	25-89	FT	Test Plan/Report 4572-D12	DER - Jones	Recommend Approve	AC 25-7D
§ 25.853(a)(c)(d)	Compartment Interiors	25-116*	T	Test Plan/Report FS4569-D85	DER - Jones	Approve	Policy PS-ANM-25.853-01-R2 Aircraft Material Fire Test Handbook

Table 2 Compliance Checklist							
Regulation	Title	Applicable Amendment	Means of Compliance	Document Name & Number	FAA / DER (Name)	Finding of Compliance (Approve or Recommend) or Applicant Showing Only	Guidance Reference & Remarks
§ 25.1307	Miscellaneous equipment	25-72	DR	Drawing 14-004	---	Applicant Showing Only	AC 25-16
§ 25.1529	Instructions for continued airworthiness	25-54	--	ICA 4567-D21	FAA - AED	Accept	No Limitations
§ 26.11	Electrical Wiring Interconnection Systems	26-0	AN	EWIS Report 76-005	FAA	Approve	AC 26-1
§ 26.47	Damage tolerance for alterations	26-1	AN	DTA Report 65-006	DER - Jones	Approve	AC 26-1
§ 36.101	Noise Measurement	36-54	FT	Test Report 44-008	FAA	Approve	AC 36-4C

* - Regulation is at a higher level that the certification basis for this product. Applicant is voluntarily stepped up to a later amendment.
Note: More than one compliance finding/document may be required for specific regulatory sections or paragraphs. If necessary, include multiple line items for different individual's compliance findings/documents.

7.0 CONFORMITY INSPECTION

The latest Conformity Inspection Plan template can be found on http://www.faacpg.com (click the Certification Process Guide (CPG) tab). A conformity inspection plan is not needed for projects that do not require conformities. Additionally, it is acceptable to use "Not applicable" or "N/A" for those items in the form that do not pertain to the project.

This paragraph includes **a list of test articles to be used to generate compliance data. Identify any features or attributes for which special instructions to the manufacturing inspector or designee will be necessary to ensure the test article or installation meets the requirements of the test plan**.

Item #	Article	Features-Attributes for special instructions
1	Air Filter	Dimensional measurements

[A Conformity Inspection Plan (CIP) with more details is provided as an appendix (or as a separate document). **The CIP must be concurred with by the ACO Branch and MIDO prior to issuing the first conformity request (reference FAA Order 8110.4C, Paragraph 5-5c.(3)).]**

Best Practices:

- *Include a TABLE of test articles/critical articles that are proposed to be conformed at the parts level. Alternatively, use of a standalone CIP following the latest guidance from the applicable MIDO Branch. Further details of Parts conformity, other conformity (e.g. test setups, etc.) and Installation Conformity will be inside this CIP.*

- *During the certification project, the Applicant is to propose appropriate quality requirements for conformity, test, and inspections to ensure quality production and in-service operations. These quality requirements should be based on system safety and design considerations. These quality requirements are to ensure that a repeatable product can be built, operated and maintained in a safe operation condition throughout the entire lifecycle. Some of these are reflected in the Conformity Inspection Plan. Quality requirements may be as simple as a list of documents or may be a more complex solution.*

- *Consideration should be included if activities will occur outside the US.*

The Applicant is responsible for all suppliers and their contributions. Ensure the CIP addresses each. **Review the contents of the CIP and Order 8110.4C para 5-5 for the details and planning items that must be provided.** The Applicant is responsible for 100% conformity. In addition, the Applicant is to

coordinate with and propose to DER designees (or FAA engineers) for items that the DER/FAA will affirm for FAA conformity inspection.

The following is for general awareness of the FAA conformity process.

The Applicant is responsible for:

a) identifying the test articles and test set-ups that will be used to generate compliance data,
b) conducting 100% conformity inspection of those test articles and test set-ups as required by §§ 21.33(b) and 21.35(a)(3)(c), and making a statement of conformity required by §§ 21.53 and 21.303(a)(5). Any conformity accomplished by the FAA is a verification of the Applicant's conformity. The FAA has discretion to accept none, some, or all of the Applicant's conformities and may elect to repeat certain conformities. The Applicant is responsible to provide objective evidence to the FAA that the product, part, assembly, system, appliance, or test article conforms to appropriate design data.

These inspections require that an inspector physically compare a component or modification to engineering drawings and specifications to verify a match. All FAA conformity inspections are performed by designated inspectors of the MIDO or their designees. You will need to hire and list all designees in the CIP. Since conformity inspections are difficult to conduct after a type-certificated product or modification is completely assembled, the Designated Manufacturing Inspection Representative (DMIR) or Designated Airworthiness Representative (DAR) should conduct progressive inspections at appropriate intervals during the manufacturing and/or modifications process.

For certification testing, all components require a complete conformity inspection before, or in some cases at the time, the test is started. **For certification flight testing, an FAA conformity inspection must be completed and documented before FAA flight tests are conducted**.

Conformity inspections are initiated by filling out FAA Form 8120-10 "Request for Conformity" and submitting to the engineering project manager. An automated process for generating and submitting this form is in use and is called the National Automated Conformity Inspection Process (NACIP). Anyone can use this process, but first they must register via the web, and the project must be registered in the system. The NACIP page is available at: https://av-apps.faa.gov/nacip/naciprfc.nsf/login. NACIP is not used if conformity is requested within the TIA.

8.0 CONTINUED OPERATIONAL SAFETY (COS)

The Applicant provides a description of how the continued operational safety requirements will be met after the certificate (TC/STC) is issued. If Applicant has a PSP in place and it covers COS, then state simply "See PSP for COS."

Upon issuance/amendment of the TC/STC, then the Applicant becomes the Design Approval Holder (DAH) and will assume responsibility for the integrity of the Type Design throughout the service life. In the event that non-compliances are discovered post certification, the Applicant needs to write a procedure as to how to rectify the non-compliance if it adversely affects safety (§ 21.99).

[Applicant Name] commits to the following to ensure Continued Operational Safety (COS) of the Type Design during Post-Certification activities, to include (but not be restricted to):

- Monitor the design's performance in-service with aircraft owner/operators and with Production Approval Holders (PAH) ,
- Report Safety issues in accordance with § 21.3 and FAA/Applicant COS procedures agreement (if applicable)
- Investigate service difficulties
- Remedy issues and problems with approved solutions and preventions

The Applicant may expand on these items in order to fully describe their methodology, system, and responsibilities.
The Applicant will become the Design Approval Holder (DAH) after completion of the project.

See also the https://www.faa.gov/aircraft/air_cert/continued_operation/

Best Practices:

- *Even though the information was developed specifically for Parts Manufacture Approval (PMA) holders - useful guidance for a COS system/plan can be found on the Modification and Replacement Parts Association (MARPA) website at: http://www.pmaparts.org/government/pdf/COSGuidance.pdf*
- *Guidance for the Aircraft Certification Voluntary Disclosure Reporting Program can be located in AC 00-68.*

9.0 DELEGATION AND COMMUNICATION

Both the FAA and [insert the Applicant's name] agree to foster an environment where open communications between all parties is maintained. The FAA supports the utilization of designees to the fullest extent possible to assist in the successful completion of the project in the identified timeframe.

9.1 Designees (Engineering, Manufacturing, and Maintenance)

Identification of all designees intended for use in the certification project, their names, email address, phone numbers, and their areas of authority.

Table 3 – Designees Authorized for this Project

Table 3 Designees Authorized for this Project			
Designee (Name, email, phone)	Designee Number	Designee Chart and Specialty	Delegated Function(s)/ Function Codes
Bob Jones Bob.jones@companymail.com 206-555-1213	DERT-600001-NM	Chart A – Structures General Loading Control Documents	Static Analysis Dynamic Analysis Design and Construction Structural Loading Limitations
Jim Smith Jim.Smith@companymail.com 206-555-1214	DERT-600004-CE	Chart A – Structures Interior Arrangements Interior Materials	Design and Construction Flammability
Joe Parker Joe.parker@companyemail.com 303-342-0000	DAR-F	Part conformity	Function Code 05
Herman Barker Herman.Barker@companyemail.com 843-103-2017	DAR-F	Installation Conformity	Function Codes 05, 21

9.2 Communication and Coordination Expectations

The focal points for official project communication between the FAA and the Applicant are provided in this section, unless otherwise established in a PSP (Partnership for Safety Plan) or other agreement accepted by the FAA. The following table is an example of communication channels, but can be tailored to each Applicant/FAA office relationship.

Table 4 - Accountable Positions for Official Communication

Table 4 Accountable Positions for Official Communication		
Accountable Position	FAA (Name, title, email, phone)	Company (Name, title, email, phone)
Management	XX ACO Branch Manager XX AED Office Manager XX MIDO Office Manager	Chief Executive
Focal	FAA PM (if applicable) or FAA Project Engineer	Project Manager or Project Engineer
Project Lead	Project Engineer	Certification Agent

Table 4 Accountable Positions for Official Communication		
Applicant Statement of Compliance Agent	NA	VP of Engineering

Any team member may engage or communicate with any other team member, but as a courtesy, assure that the focal points are informed of the communication. Both the FAA and the Applicant will provide to each other a listing of their project team members.

For large projects, the project focal points may conduct regularly scheduled status briefings to assure the project schedule is being maintained. As a guideline, this should occur twice monthly, and can be adjusted as agreed upon by the focal points. This briefing should include, as applicable:

- Document review cycle times
- Regular check-in schedule
- PSCP revision threshold definition
- Issues affecting project scope

9.3 Issues Resolution Process

This Section is optional depending on the scale and scope of the project. If a PSP has been established, the PSCP can simply reference the applicable PSP section.

The Applicant should describe an issues tracking and resolution process that allows proactive and collaborative resolution of specific policy and regulatory challenges at the lowest levels possible within the Applicant's and FAA's organizations.

An Applicant with a PSP will follow the agreed upon Issues Tracking and Resolution Process outlined in the PSP.

Issues are defined as disagreements between the Applicant and the FAA that may include, but not be limited to:

a. The certification process,
b. The applicable regulations,
c. Interpretation of a regulation,
d. An adequate showing of compliance, or
e. Other technical issues.

The Applicant should describe a process for addressing and resolving issues, including issue papers for specific standards staff issues, as well as an Issues Tracking Document or equivalent between the FAA and the Applicant. These will be managed by the respective focal points identified in Table 4.

Additionally, the Applicant should describe a hierarchy to elevate issues when identified, and involving the focal points identified in Table 4, to obtain an agreement.

An example could be as follows with the lowest levels possible involved first:

a. DER and/or Applicant certification agent and FAA Specialist,
b. Applicant certification agent and FAA Project Engineer,
c. Applicant Project Manager and FAA Program Manager
d. Applicant Chief Executive and ACO Branch Manager

9.3.1 Guidelines for Resolution of Issues:

a. Once an issue is raised, pursue timely resolution,
b. Actively listen and remain open for alternatives,
c. Check and demonstrate understanding of the issue by paraphrasing and providing effective feedback,
d. Avoid blaming and address the problem,
e. Identify and understand all viewpoints,
f. Anchor the situation by agreeing on the objective facts and standards,
g. Generate alternatives,
h. Decide on a course of action,
i. All parties review NPRM, preamble material, orders, FAA written policy, and Advisory Circulars to understand the intent of the regulation identified in the issue if applicable,
j. Ensure ACO Branch, AED, and/or MIDO Section and Division specialists, as applicable, have reviewed the issue,
k. Accept, without recriminatory or retaliatory attitude, the right of any disagreeing party to request management review of an issue.

Once an issue is subject to this process, the issue will be documented and tracked by the Applicant and reported to the FAA.

9.4 Undue Pressure

If Applicant has a PSP in place and it covers Undue Pressure, then state simply “See PSP for Undue Pressure”

The Applicant will not apply undue pressure or influence, will allow each Designee to complete the pertinent delegated regulations, and associated deliverable documents effectively without undue pressure or influence from other organizational elements. Any undue pressure concerns should be brought to the attention of the FAA focal point by any person involved. Official channels do not have to be adhered to in this case.

9.5 Undue Burden

If Applicant has a PSP in place and it covers Undue Burden, then state simply “See PSP for Undue Burden”

Undue burden is a determination made by the FAA that a proposed activity outside the United States, requiring FAA support, will exceed available FAA resources.

FAA Order 8100.11, “Requirements for Finding Undue Burden and No Undue Burden under 14 CFR Part 21”, establishes requirements for determining the burden associated with certain FAA certification and oversight activities outside the United States. For further information, refer to AC 21-55, Process to

Support FAA Findings of Undue Burden or No Undue Burden for PAHs Requesting to Use a Manufacturing Facility Located Outside of the United States.

The Applicant will identify any of those activities including manufacturing at associate facilities or suppliers, inspection, conformity, or airworthiness of its product or articles outside of the United States. This information is provided by completing the CIP.

Additionally, the Applicant will identify in this section of the PSCP, that either No Undue Burden exists since there are no project activities occurring outside of the United States, and reference the CIP, if applicable; or that the Applicant intends to use an associate facility, manufacturing facility, or supplier outside of the United States as identified in the CIP and that a determination of Undue Burden may be necessary. The Applicant should consider proposing ways to reduce some or all of the burden to the FAA including the use of designees.

After the determination of Undue Burden or No Undue Burden has been made, the Applicant has the responsibility to notify the FAA of any change in the project involving manufacturing, inspection, conformity, or airworthiness of its product or articles outside the United States.

10.0 SPECIAL PROJECT CONSIDERATIONS

10.1 Foreign Notification and Validation

This section may not be applicable for all projects. Some example statements to consider are included below.

[No Foreign notification is required as the aircraft is N-registered.]

[This project will modify a foreign-registered aircraft and will require involvement from the FCAA of the state of registry. The state of registry is [Insert Country]].

[No concurrent Foreign Validation is planned.]

If a project involves a foreign-registered aircraft then foreign notification is required and details should be noted in this section.

In addition, if the Applicant intends to seek validation of an FAA certificate or authorization (TC/STC/TSOA) with a FCAA, note it here.

Best Practices:

- *For additional information on modifying foreign registered aircraft, see Chapter 4 of FAA Order 8110.4C.*
- *For additional information on validation, See FAA Order 8110.52, Type Validation and Post-type Validation Procedures and AC 21-52, Obtaining Foreign Design Approval / Acceptance of U.S. Products and Articles*
- *International Aircraft Certification information can be found on the FAA's website at https://www.faa.gov/aircraft/air_cert/international/ including individual bilateral agreements and working procedures.*

11.0 SUMMARY OF PSCP DEVIATIONS

It is common at the end of the certification project to revise the PSCP to incorporate any deviations or interim changes that occurred throughout the course of the project that may have not been incorporated into the PSCP directly. Though it is necessary to receive concurrence from the FAA for each of these changes, including these changes within a Summary of PSCP Deviation Section are permitted. This section may also commonly be referenced as a Certification Summary Section.

[There are no deviations to this PSCP]

[The following deviations have been pre-coordinated with the FAA. Each deviations is listed individually with documentation of their concurred by the FAA.]

[The following deviations have not been coordinated with the FAA. Each deviations is listed individually and requires concurrence by the FAA.]

Best Practices:

- *Simple changes to the PSCP may be coordinated with the project ACO Branch directly and updated in the PSCP at a later date. These deviations must be tracked and recorded using agreed to processes with the managing ACO Branch.*
- *Outline the types of changes that may be permitted to a PSCP without prior concurrence with the FAA by using a PSP or MOA. Alternatively, including a list of the types of changes may be included in the PSCP on a project-by-project basis.*

12.0 LESSONS LEARNED

This Section may not be applicable for all projects.

Review previous lessons learned from other projects. Prior PSCPs, self-disclosures, audit finding and service difficulty reports should be reviewed for lessons learned before initiating new certification projects.

Include an executive summary containing a high-level description of major issues and their resolution. The report will be used as a means for retaining corporate knowledge and lessons learned that could be beneficial for future type certification projects involving the same or similar type design.

Best Practice:

The executive summary report can be a significant benefit for non-concurrent validation type certification projects. It serves as a useful tool for a FCAA to learn what FAA concerns surfaced during the type certification project.

APPENDIX A – ACRONYMS

Add/remove acronyms as applicable for the project.

AC	Advisory Circular
AD	Airworthiness Directive
AED (AEG)	Aircraft Evaluation Division (formerly Aircraft Evaluation Group)
AFM	Airplane Flight Manual
AFMS	Airplane Flight Manual Supplement
AMC	Acceptable Method of Compliance
AML	Approved Model List
AMM	Aircraft Maintenance Manual
AMOC	Alternative Methods of Compliance
ASTC	Amended Supplemental Type Certificate
ATC	Amended Type Certificate
BASA	Bilateral Aviation Safety Agreement
CAA	Civil Aviation Authority
CAR	Civil Air Regulations
CCA	Common Cause Analysis
CCL	Compliance Checklist
CDL	Configuration Deviation List
CFR	Title 14 Code of Federal Regulations
CIP	Conformity Inspection Plan
CMA	Common Mode Analysis
CMO	Certificate Management Office
CMR	Certification Maintenance Requirements
COS	Continued Operational Safety
CPG	Certification Process Guide
CPL	Commercial Parts List
CPN	Certification Project Notification
CSR	Certification Summary Report
DAH	Design Approval Holder
DAR	Designated Airworthiness Representative
DER	Designated Engineering Representative
DMIR	Designated Manufacturing Inspection Representative
EASA	European Union Aviation Safety Agency
ECS	Environmental Control System
ELOS	Equivalent Level of Safety
ESF	Equivalent Safety Finding
EWIS	Electrical Wiring Interconnection Systems
FAA	Federal Aviation Administration
FC	Failure Condition
FCAA	Foreign Civil Airworthiness Authority
FCOM	Flight Crew Operations Manual
FHA	Functional Hazard Assessment
FMEA	Failure Mode and Effects Analysis
FMES	Failure Modes and Effects Summary

FOEB	Flight Operations Evaluation Board
FSB	Flight Standardization Board
FSDO	Flight Standards District Office
ICA	Instructions for Continued Airworthiness
IP	Issue Paper
IPA	Implementation Procedures for Airworthiness
LOPA	Layout of Passenger Accommodations
MIDO	Manufacturing Inspection District Office
MMEL	Master Minimum Equipment List
MOA	Memorandum of Agreement
MOC	Means of Compliance
MOU	Memorandum of Understanding
MRB	Maintenance Review Board
NACIP	National Automated Conformity Inspection Process
ODA	Organization Designation Authorization
PAH	Production Approval Holder
PC	Production Certificate
P-FHA	Preliminary Functional Hazard Assessment
PI	Principal Inspector
PMA	Parts Manufacturer Approval
PRA	Particular Risks Analysis
PSCP	Project Specific Certification Plan
PSP	Partnership for Safety Plan
PSSA	Preliminary System Safety Assessment
RFC	Request for Conformity
RFM	Rotorcraft Flight Manual
RFMS	Rotorcraft Flight Manual Supplement
RGL	Regulatory Guidance Library
RTCA	Radio Technical Commission for Aeronautics
SAE	Society of Automotive Engineers
SAIL	Small Airplane Issues List
SC	Special Condition
SSA	System Safety Analysis
STC	Supplemental Type Certificate
STIR	Supplemental Type Inspection Report
TAIL	Transport Airplane Issued List
TC	Type Certificate
TCB	Type Certification Board
TCBM	Type Certification Board Meeting
TCDS	Type Certificate Data Sheet
TIA	Type Inspection Authorization
TIR	Type Inspection Report
TSO	Technical Standard Order
TSOA	Technical Standard Order Approval
ZSA	Zonal Safety Analysis

APPENDIX B – COMMONLY USED REFERENCE DOCUMENTS

Add/remove references as applicable for the project. Use of draft guidance material is not permitted without specific discussions with and consent from the FAA. This is normally by issue paper process or as permitted in FAA Policy Memo, AIR600-18-6C0-DM106, Revision 2, dated December 3, 2019.

1. Title 14 CFR part 21, Certification Procedures for Products and Articles
2. Title 14 CFR part 23, Airworthiness Standards: Normal, Utility, Acrobatic, and Commuter Category Airplanes
3. Title 14 CFR part 25, Airworthiness Standards: Transport Category Airplanes
4. Title 14 CFR part 26, Continued Airworthiness and Safety Improvements for Transport Category Airplanes
5. Title 14 CFR part 27, Airworthiness Standards: Normal Category Rotorcraft
6. Title 14 CFR part 29, Airworthiness Standards: Transport Category Rotorcraft
7. Title 14 CFR part 31, Airworthiness Standards: Manned Free Balloons
8. Title 14 CFR part 33, Airworthiness Standards: Aircraft Engines
9. Title 14 CFR part 34, Fuel Venting and Exhaust Emission Requirements for Turbine Engine Powered Airplanes
10. Title 14 CFR part 35, Airworthiness Standards: Propellers
11. Title 14 CFR part 36, Noise Standards: Aircraft Type and Airworthiness Certification
12. Title 14 CFR part 39, Airworthiness Directives
13. Title 14 CFR part 91, General Operating and Flight Rules
14. Title 14 CFR part 121, Operating Requirements: Domestic, Flag, and Supplemental Operations
15. Title 14 CFR part 125, Certification and Operations: Airplanes Having Seating Capacity of 20 or More Passengers or a Maximum Payload Capacity of 6,000 Pounds or More; and Rules Governing Persons on Board such Aircraft
16. Title 14 CFR part 135, Operating Requirements: Commuter and On-Demand Operations and Rules Governing Persons Onboard Such Aircraft
17. FAA Type Certification Data Sheet [Datasheet Number], revision [xx], dated [MM/DD/YYY]
18. [Applicant Name]/FAA Partnership for Safety Plan, dated [MM/DD/YYY]
19. FAA Advisory Circular 00-68, Aircraft Certification Service Voluntary Disclosure Reporting Program
20. FAA Advisory Circular 00-69, Best Practices for Airborne Software Development Assurance Using EUROCAE ED-12( ) and RTCA DO-178( )
21. FAA Advisory Circular 00-74, Avionics Human Factors Considerations for Design and Evaluation
22. FAA Advisory Circular AC 120-93, Damage Tolerance Inspections for Repairs and Alterations
23. FAA Advisory Circular 20-107, Composite Aircraft Structure
24. FAA Advisory Circular 20-115, Airborne Software Development Assurance Using EUROCAE ED-12( ) and RTCA DO-178( )
25. FAA Advisory Circular 20-152, RTCA, Inc., Document RTCA/DO-254, Design Assurance Guidance for Airborne Electronic Hardware
26. FAA Advisory Circular 20-166, Issue Paper Process
27. FAA Advisory Circular 20-167, Airworthiness Approval of Enhanced Vision System, Synthetic Vision System, Combined Vision System, and Enhanced Flight Vision System Equipment
28. FAA Advisory Circular 20-174, Development of Civil Aircraft and Systems
29. FAA Advisory Circular 20-190, Aircraft Electromagnetic Compatibility Certification
30. FAA Advisory Circular 21-40, Guide for Obtaining a Supplemental Type Certificate

31. FAA Advisory Circular 21-43, Production Under 14 CFR Part 21, Subparts F, G, K, and O
32. FAA Advisory Circular 21-45, Commercial Parts
33. FAA Advisory Circular 21-46, Technical Standard Order Program
34. FAA Advisory Circular 21-48, Using Electronic Modeling Systems as Primary Type Design Data
35. FAA Advisory Circular 21-50, Installation of TSOA Articles and LODA Appliances
36. FAA Advisory Circular 21-51, Applicant's Showing of Compliance and Certifying Statement of Compliance
37. FAA Advisory Circular 21-55, Process to Support FAA Findings of Undue Burden or No Undue Burden for PAHs Requesting to Use a Manufacturing Facility Located Outside of the United States
38. FAA Advisory Circular 21.101-1, Establishing the Certification Basis of Changes Aeronautical Products
39. FAA Advisory Circular 23-8, Flight Test Guide For Certification of Part 23 Airplanes
40. FAA Advisory Circular 23-17, Systems and Equipment Guide for Certification of Part 23 Airplanes and Airships
41. FAA Advisory Circular 23-19, Airframe Guide for Certification of Part 23 Airplanes
42. FAA Advisory Circular 23.1309-1, System Safety Analysis and Assessment for Part 23 Airplanes
43. FAA Advisory Circular 23.2010-1, FAA Accepted Means of Compliance Process for 14 CFR Part 23
44. FAA Advisory Circular 25-7, Flight Test Guide For Certification Of Transport Category Airplanes
45. FAA Advisory Circular 25-16, Electrical Fault and Fire Prevention and Protection
46. FAA advisory Circular, 25-19, Certification Maintenance Requirements
47. FAA Advisory Circular 25-22, Certification of Transport Airplane Mechanical Systems
48. FAA Advisory Circular 25-26, Development of standard wiring practices documentation
49. FAA Advisory Circular 25-27, Development of Transport Category Airplane Electrical Wiring Interconnection Systems Instructions for Continued Airworthiness Using and Enhanced Zonal Analysis Procedure
50. FAA Advisory Circular 25.571-1, Damage Tolerance and Fatigue Evaluation of Structure
51. FAA Advisory Circular 25.1309-1, System Design and Analysis
52. FAA Advisory Circular 25.1529-1, Instructions for Continued Airworthiness of Structural Repairs on Transport Airplanes
53. FAA Advisory Circular 25.1581-1, Airplane Flight Manual
54. FAA Advisory Circular 25.1701-1, Certification of Electrical Wiring Interconnection Systems on Transport Category Airplanes
55. FAA Advisory Circular 26-1, Part 26, Continued airworthiness and Safety Improvements
56. FAA Advisory Circular 27-1, Certification of Normal Category Rotorcraft
57. FAA Advisory Circular 29-2, Certification of Transport Category Rotorcraft
58. FAA Advisory Circular 39-10, Alternative Methods of Compliance
59. FAA Advisory Circular, 120-53, Guidance for Conducting and Use of Flight Standardization Board Evaluations
60. FAA Order 8100.11, Requirements for Finding Undue Burden and No Undue Burden Under 14 CFR Part 21
61. FAA Order 8110.4, Type Certification
62. FAA Order 8110.42, Parts Manufacturer Approval Procedures
63. FAA Order 8110.48, How to Establish the Certification Basis for Changed Aeronautical Products
64. FAA Order 8110.49, Software Approval Guidelines
65. FAA Order 8110.51, Acceptability of Previously Approved Certification Compliance Data from Foreign Sources
66. FAA Order 8110.52, Type Validation and Post-type Validation Procedures

67. FAA Order 8110.54, Instructions for Continued Airworthiness Responsibilities, Requirements, and Contents
68. FAA Order 8110.112, Standardized Procedures for Usage of Issue Papers and Development of Equivalent Levels of Safety Memorandums
69. FAA Order 8110.115, Certification Project Initiation and Certification Project Notification
70. FAA Policy Memorandum PS-AIR-21-1901, Use of Remote Technology During the Performance of Inspections and Tests
71. FAA Policy Memorandum, AIR600-18-AIR-6C0-DM119, Revision 1, Deviation to Order 8110.112A to Facilitate a Streamlined Issue Paper Process
72. FAA Policy Memorandum, PS-AIR-21-1901, Use of Remote Technology During the Performance of Inspections and Tests, dated March 31, 2020
73. FAA Policy Memorandum, AIR-600-18-6C0-DM106, Revision 2, Approved Deviation to FAA Orders 8110.4C, 8110.112A, and 8100.16 to Remove the Requirements to Develop Issue Papers for Certain Special Conditions and Equivalent Level of Safety Findings
74. FAA Policy Memorandum, PS-ACE100-2001-004, Guidance for Reviewing Certification Plans to Address Human Factors for Certification of Part 23 Small Airplanes dated August 29, 2002
75. FAA Policy Memorandum, PS-ANM-99-2, Guidance for Reviewing Certification Plans to Address Human Factors for Certification of Transport Airplane Flight Decks, dated September 29, 1999
76. SAE ARP 4761, Guidelines and Methods for Conducting the Safety Assessment Process on Civil Airborne Systems and Equipment
77. The FAA and Industry Guide to Product Certification", Third Edition, Dated May 2017

APPENDIX C – EXAMPLE FUNCTIONAL HAZARD ANALYSIS (FHA)

The following is an example of a simple FHA.

A functional hazard assessment for this project is embedded here and shows/finds compliance to § 25.1309 at amendment 25-41. As this project is relatively simple, it is proposed that no further systems safety assessment is required.

System Description: Installation of an air filter in the recirculation system of [a transport category aircraft] by replacing the existing flexible hose air pickup with a new filter installation.

Intended function: Filter the air to a HEPA standard without impeding the airflow.

Item#	Function	Failure Condition (FC)	Phase	Effect of Failure Condition on Aircraft/Crew	Classification of FC	Notes	Verification
AIRCRAFT LEVEL							
1.1.1	Environmental control system (ECS) functions	Complete Loss of Function (Not annunciated)	ALL	Slight reduction in functional capabilities or safety margins Slight increase in work load which involve crew actions well within crew capabilities such as routine flight plan changes	Minor		Qualitative FHA in PSCP, Ground test
1.1.2	ECS functions	Complete Loss of Function (annunciated)	ALL	Slight reduction in functional capabilities or safety margins Slight increase in work load which involve crew actions well within crew capabilities such as routine flight plan changes	Minor		Qualitative FHA in PSCP, Ground test
SYSTEM LEVEL							
2.1.1	ECS function: filter recirculation Air (3x filters)	1 or 2 filters blocked (Not annunciated)	ALL	Slight reduction in functional capabilities or safety margins Slight increase in work load which involve crew actions well within crew capabilities such as routine flight plan changes	Minor		Qualitative FHA in PSCP, Ground test

Item#	Function	Failure Condition (FC)	Phase	Effect of Failure Condition on Aircraft/Crew	Classification of FC	Notes	Verification
2.1.2	ECS function: filter recirculation Air (3x filters)	1 or 2 filters blocked (annunciated)	ALL	Slight reduction in functional capabilities or safety margins Slight increase in work load which involve crew actions well within crew capabilities such as routine flight plan changes	Minor		Qualitative FHA in PSCP, Ground test

APPENDIX D – PRODUCT ISSUES LISTS

1 Small Airplane Issues List
https://www.faa.gov/aircraft/air_cert/design_approvals/small_airplanes/small_airplanes_regs/

2 Transport Airplane Issues List
https://www.faa.gov/aircraft/air_cert/design_approvals/transport/media/rpttailistforpublicweb.pdf

3 Rotorcraft Issues List
https://www.faa.gov/aircraft/air_cert/design_approvals/rotorcraft/

4. Engine and Propeller Issues List

https://www.faa.gov/aircraft/air_cert/design_approvals/engine_prop/issues_list/