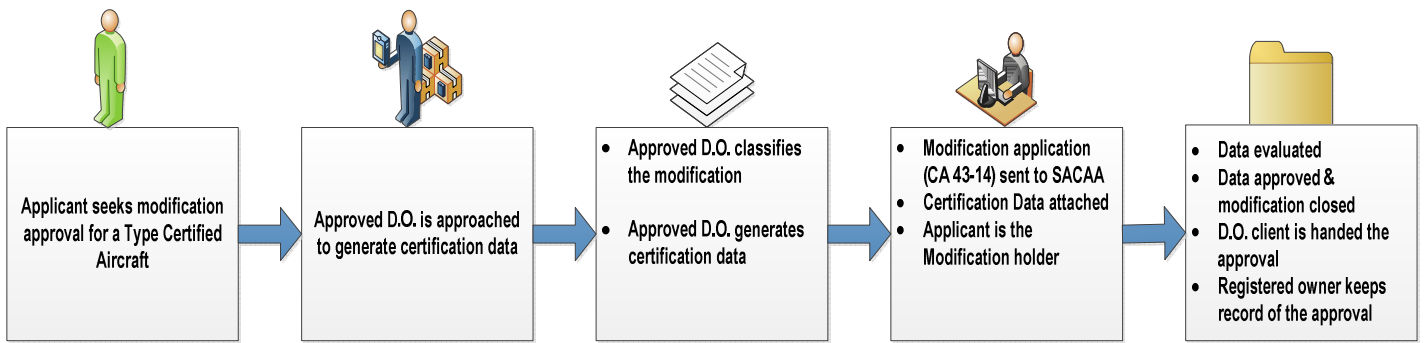


SACAA Engineering Modification Application Process



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What data is required for review?

Minimum document and requirements for Certification Data for Minor Modifications

- 1) Paid Application for Approval of Modification or Repair Form (CA43-14), note that the payment will need to be verified by the Finance department.
- 2) Compliance Check List/Certification Plan/Project Plan, detailing how compliance to the applicable airworthiness design standard will be shown. **This document, if properly completed, outlines what substantiating evidence (e.g. reports/documents) will be required to have the modification design approved (i.e. project scope)**
Certification Plan (introduction, project description, timeframes, responsible AMO for installation)
- 3) Modification description, including engineering drawings, etc. in enough detail to define the modification for configuration control purposes (e.g. Master Data List)
- 4) Engineering Drawings (for avionics these may include routing, schematic diagrams, etc.)
- 5) Maintenance Instructions
- 6) Systems Safety/Failures and Hazard analysis (impacts on safety should components/systems fail – if applicable)
- 7) Installation Instructions
- 8) Component release certificates
- 9) Test plans (Ground and Flight, if applicable)
- 10) Analysis reports (ELA, Aerodynamic, Flammability, LOPA, etc., whichever applicable)
- 11) Pilot Operating Handbook

- 12) Amended Equipment List for specific aircraft
- 13) Mass and balance report
- 14) CRMA for specific aircraft
- 15) Test results/reports (ground, flight, flammability, EMI, etc., whichever applicable)

On initial submission the Certification Plan is should comprised of documents (1 – 11), thereafter for final modification approval documents (12– 15) will be expected to close off the modification application. These do not include findings that were raised during the certification document review.

In most cases the initial document set might be sent back to the client for amendment after review by the Certification Engineer, then after acceptance the Certification Engineer will issue Conditional Approval.

The Certification Basis defines design basis for a modification and thus if the design basis is incorrect a modification cannot continue until it is corrected and failure to do so may lead to the modification application being declined.

The FAA advisory circular **AC No: 21.101-1A** may be consulted further on regarding the generation and definition of Certification Basis for design change in Type Certified products. The **FAA** and **EASA** have extensive documents and literature on their websites, Approved Design Organisations are encouraged to familiarise themselves with the relevant documents found on the sites.

The duration of the modification review and subsequent approval process is highly dependent on the quality and correctness of the Certification document design content. Due to the large volumes of submitted modification applications the Engineering department has adopted a 7day review feedback mechanism.

The Certification engineer will send an acknowledgement correspondence of the project to the applicant once a paid and verified modification application is assigned to him. Thereafter initial feedback review of document overview and discussion of project timelines will be sent to the applicant within 7 days after project acknowledgement.

For example if receipt of a project was acknowledged by the Certification Engineer assigned to a particular project on the 11th of May 2015 then the client should expect feedback by the 18th of May 2015, furthermore if the client submits amended documents for the same project then feedback will be given within 7days of receipt of those amended documents.

The review duration does not include the time that the following internal functions take:

- Finance
- Project Logging
- Project Allocation

Design Organisations are encouraged to utilise readily available material regarding document numbering and/or configuration systems for ease of filling and auditing.

List of the competencies that make up a complete minor modification design pack:

Drawing up of a complete Certification Plan

Certification Basis definition

Correct Compliance of the Airworthiness codes on the CCL

Adequate Test Plans and Procedures to fulfil compliance requirements

Complete and technically adequate Hazard Assessment/SSA

Document Configuration and Traceability