

# Advisory Circular AC21–8

# Design Changes—Supplemental Type Certificate

26 April 2016

#### General

Civil Aviation Authority Advisory Circulars contain information about standards, practices, and procedures that the Director has found to be an **Acceptable Means** of **Compliance (AMC)** with the associated rule.

An AMC is not intended to be the only means of compliance with a rule, and consideration will be given to other methods of compliance that may be presented to the Director. When new standards, practices, or procedures are found to be acceptable they will be added to the appropriate Advisory Circular.

An Advisory Circular may also include **guidance material (GM)** to facilitate compliance with the rule requirements. Guidance material must not be regarded as an acceptable means of compliance.

#### Purpose

This Advisory Circular provides an acceptable means to the Director for showing compliance with Part 21 in order to gain a supplemental type certificate (**STC**).

## **Related Rules**

This Advisory Circular relates specifically to Civil Aviation Rule Part 21, Subpart E – Supplemental Type Certificates.

## Change Notice

Subject to "Memorandum for Technical Cooperation" between the CAA of Mongolia and New Zealand on mutual cooperation in implementation of Assembly Resolution A29-3: Global Rule Harmonization, 29<sup>th</sup> ICAO Assembly, 1992, which urges States to promote global harmonization of national rules, dated 6<sup>th</sup> of May, 1999, Mongolian Civil Aviation Safety Regulation has been reconciled to the Civil Aviation Regulation of New Zealand.

Amendment 164 of Annex 1 to the Chicago Convention on International Civil Aviation urges flight crew members, ATC personnel and aircraft maintenance engineers to comply with the language proficiency requirements; and

Under Article 14 of the Civil Aviation Law of Mongolia 1999, "Use of foreign language in civil aviation" the AC has been released in English version only, in order to prevent any mistranslation and misuse of the aviation safety related documents.

This AC21-8 was developed based on NZ AC21-8, dated on 05 February 2009.

# **Table of Contents**

Introduction	4
STC Approval Process Flowchart	5
Section 1. Compliance Blanning Bhase	e
1.1 Application	6
1.2 STC Holder Posponsibilities	0 7
1.3 CAA Project Management	7
1.4 Project Specific Certification Plan (PSCP)	' 7
1.5 Familiarisation Certification Board (CB) Meeting	ά
1.6 STC Issue Paper	0
1 7 Airworthiness Requirements	0
1.8 Operation and Maintenance of a Product Modified by an STC	1
	•
Section 2 Implementation Phase1	3
2.1 STC Data Requirements1	3
2.2 Interim Certification Board (CB) Meeting1	4
2.3 Conformity Inspections1	4
2.4 Compliance Testing1	6
2.5 Compliance Inspections1	7
2.6 Flight Testing1	8
2.7 Compliance by Similarity2	0
2.8 Deviations and Changes2	0
Section 3 Completion Phase	1
3.1 Submission of final data2	1
3.2 Final Certification Board (CB) Meeting2	1
3.3 Issue of STC	1
3.4 Foreign Acceptance/Validation of CAA STCs2	1
3.5 Embodiment of STC2	2
Appendix A – Project Specific Certification Plan Template2	3
Appendix B – Sample CAA FORM 8130-9 Statement of Conformity2	7
Project Specific Certification Plan2	9

# Introduction

A supplemental type certificate (**STC**) approves a design change to a type certificated aircraft, engine, or propeller, when the change is not so extensive as to require a new type certificate (**TC**). In general an STC would cover—

- A major design change which is not a repair.
- Any other design change where the applicant wishes to obtain an STC for commercial reasons, i.e. for sale to a second party or for acceptance by a foreign regulatory authority.

An STC can be applied to multiple aircraft of the same make and model if the descriptive data is of sufficient detail to allow accurate reproduction.

For the issue or amendment of an STC the applicant should submit a statement of compliance prepared by an aircraft design organisation certificated in accordance with Part 146 (**aircraft design organisation**). As such, an applicant should seek advice from an aircraft design organisation when first considering a major design change.

In order to avoid delays and minimise rework it is important that the applicant, the aircraft design organisation, and the Aircraft Certification Unit (**ACU**) work together throughout the project. This is particularly important with large projects where an STC must be issued before a prototype aircraft can be certified for release to service in accordance with Part 43.

Where reference is made to an FAA document the current version of the applicable document is to be used for information purposes only.

## **STC Approval Process Flowchart**



# Section 1 Compliance Planning Phase

# 1.1 Application

At the earliest opportunity the applicant should notify the Director of a proposed new STC project, or an amendment to an existing STC by contacting the Manager of the Aircraft Certification Unit (**ACU**). Early contact with the ACU provides the applicant with an opportunity to develop an understanding of the certification process as it applies to their design.

- New STC Application. For all new designs, or where significant changes are made to an existing STC design, the applicant should submit CAA Form 24021/09 and tick the "New" box in Section B. The Director will notify the applicant if it is determined that a new TC would be more appropriate because of significant implications to the design, operation, or continued airworthiness of the product.
- **STC Amendment.** Where the holder wishes to make changes to the design data of an existing STC, the holder should submit CAA Form <u>24021/09</u> and tick the "Amendment" box in Section B. In this case a new STC certificate will not normally be issued as each STC certificate covers any later amendment of the design data approved by the Director. The Director will notify the applicant if it is determined that a new STC will be required where there are significant changes to the original STC.
- **Transfer of Certificate.** An STC holder may apply to the Director to transfer an STC to another person or organisation in accordance with rule 21.121, by writing to the Manager of the Aircraft Certification Unit. The Director requires a new STC holder to show that they satisfy the responsibilities of a certificate holder as specified in rule 21.123.

An STC may be applicable to a range of aircraft types and type certificates if it is the type of design change that is not significantly affected by the basic aircraft type. An STC may also be issued against an aircraft model that has not been type accepted in Mongolia.

As a statement of compliance is required for every STC design change, the applicant should make contact with an aircraft design organisation at an early stage to provide design and certification advice.

An STC application should be accompanied by a draft Project Specific Certification Plan (refer to 1.4 below). This is a top level document which sets out the key aspects of the STC approval process.

# 1.2 STC Holder Responsibilities

Under rule 21.117(3) a new applicant must submit further information to satisfy the Director that they are capable of holding an STC in accordance with rule 21.123. For existing STC holders, a new STC application may simply involve re-affirmation of their responsibilities under this rule part.

Instructions for continuing airworthiness should be included as part of the technical data of any STC, although the extent of these will be consistent with the type of STC involved. In accordance with rule 146.61, the applicant is required to have a system of collecting and analysing defects in the design produced by the applicant. Typically procedures should be established that provide the ability to—

- Collect defect information from STC users.
- Notify users of the STC of any airworthiness issues that arise during the life of the STC.
- Provide service information to users (usually Service Information Letters).
- Provide modification instructions to users (usually a Service Bulletin).

Upon the Director's request the applicant should show evidence of appropriate liaison with the product type certificate holder. This may be necessary where certain aspects of the design or the method of showing compliance rely on OEM data.

In accordance with rule 21.117(3) an applicant will need to demonstrate that all records will be of a legible and permanent nature and, except if Director permits records to be kept for a lesser period, retained for 2 years from the date that the last example of the product type is permanently withdrawn from service, as required by rule 21.123(a)(3). Where the applicant does not already have systems in place as the holder of a Part 146 or Part 148 organisation certificate (in accordance with rule 146.63(b)(6) or 148.63(b)(5)), specific procedures will need to be developed and implemented to meet this requirement.

## **1.3 CAA Project Management**

A CAA Project Engineer will be assigned to each STC application to act as the point of contact during a project. Other CAA staff may be involved with the review of technical data, certification tests or inspections as required.

# 1.4 Project Specific Certification Plan (PSCP)

For the issue or amendment of all STCs the applicant should prepare a Project Specific Certification Plan (**PSCP**), and keep it current throughout the project. The purpose of this document is to provide an overview of the project and to identify key technical aspects such as the certification basis, means of compliance, and testing.

Appendix A to this advisory circular includes a PSCP template, however an applicant may use any document provided the same basic information is listed. The Project Specific Certification Plan should include the following information—

- Identification of the product to which the STC applies and the original certification basis, including any Issue Papers (FAA) or Certification Review Items (EASA) applicable to the product which are affected by the design change, and a description of the design change including any unusual or unique design features.
- 2) The name and contact details of the applicant and a project manager nominated by the applicant.
- 3) The name and contact details of the contracted aircraft design organisation and the nominated project design engineer.
- 4) The proposed certification basis for the STC including any special conditions. If the applicant wishes to show compliance with airworthiness requirements NOT effective at the date of the application a justification for doing so should be included. See section 1.7 for more information.
- 5) A compliance checklist listing all the applicable airworthiness requirements, including the amendment status and proposed method of showing compliance with each requirement (ground test, flight test, analysis, similarity etc).
- 6) A request for specific certification board meetings and the proposed date. See section 1.5, 2.2, 2.5, and 3.2.
- 7) A brief summary of the project schedule including key milestones. Notes
  - a. The schedule may be subject to change during the project, however minimum notice periods for activities involving CAA staff or the contracted aircraft design organisation apply. Refer to Section 1.4-2.
  - b. The schedule should be realistic. Overly optimistic schedules that may result in undue pressure on those involved in the design, installation or certification of the STC, and so create a safety or compliance risk, will not be accepted by the Director.
- 8) Details of how STC design data changes and/or production deviations during the STC project will be addressed.
- 9) Details of any proposed foreign regulatory technical assistance requirements.
- 10) If computer models are to be used for substantiation, details of the validation of those models should be included.
- 11) Details of any planned compliance tests or compliance inspections. Include a summary of the test plan with information on conformity inspections, test witnesses etc. Applicants or the ACU may request/recommend functions be delegated to organisations and/or individuals.
- 12) Details of proposed flight tests. Include a summary of the test plan with information on test aircraft and equipment, conformity inspections, flight test

personnel etc.

- 13) An applicant/ACU sign-off block for each revision of the PSCP.
- 14) Instructions for the amendment and agreement of revisions to the PSCP (if required).

The CAA Project Engineer will notify the applicant of any changes required before the initial PSCP is finalised. Depending on the scope of the proposed STC project, the ACU may request a Familiarisation Certification Board meeting (refer to 1.5 below). Any significant technical issues which arise at this, or any other stage of the project will be documented and tracked with an "STC Issue Paper" (refer to 1.6 below).

The PSCP is to be agreed and signed by the CAA Project Engineer and the applicant prior to commencing certification activities.

**1.4.1 Changes to the PSCP.** It is important to note that the PSCP is a working document and should be kept up-to-date during the STC project. Significant changes to the project such as a change to the certification basis, means of compliance, compliance tests or inspections, or major changes to the STC design or project schedule should be agreed in a formal revision signed by the applicant and the ACU.

The applicant and the ACU may agree to changes in certain sections of the PSCP via alternative methods, however the scope of permissible changes and the process to do so should be detailed in the PSCP.

**1.4.2 Minimum Notice Periods.** As major project schedules may be subject to change, exact dates for compliance or conformity inspections may be revised during the course of a project. In addition, deviations during embodiment will require compliance to be re- established for the final design configuration. Any such delays will affect the STC issue date. In order to allow sufficient time for the ACU or contracted aircraft design organisation to review data and prepare documentation, the following minimum notice periods apply—

- For conformity or compliance inspections the applicant should advise the proposed inspection date to all parties involved at least 5 working days prior to any inspection.
- For compliance tests or inspections the finalised test/inspection plan should be submitted to the ACU at least 10 working days prior to any test/inspection.
- When draft substantiating data has been supplied and accepted, and the STC issue date has been agreed, final technical data and a signed statement of compliance should be submitted to the ACU no less than 24 hours prior to the issue of an STC.

## 1.5 Familiarisation Certification Board (CB) Meeting

The CAA may require a certification board (**CB**) to be formed which will include the CAA Project Engineer and any other CAA staff as required, the applicant's Project Manager, Project Design Engineer and other technical or management staff involved

with the STC project.

The purpose of the CB is to identify and resolve significant problems, establish milestones and schedules for the overall accomplishment of the project and ensure all outstanding certification issues are resolved. When a CB is not necessary, the certification team manages the project and performs any functions of the CB to the degree necessary.

A familiarisation CB meeting will generally be required for large STC projects which require significant coordination, where a design change employs new or novel design features or to address technical issues with respect to the certification basis. The ACU or the applicant may request a familiarisation CB meeting, as detailed in the PSCP.

## 1.6 STC Issue Paper

An issue paper provides a means for identifying and resolving significant technical, regulatory, and administrative issues occurring during the certification process. Issue papers are primarily intended to provide an overview of significant issues, a means of determining the status of issues, and a basis for a post-certification summary statement on how issues were resolved.

Issue papers will be prepared by the ACU and will normally require the inclusion of a written response from the applicant detailing their position or proposed solution.

#### 1.7 Airworthiness Requirements

**1.7.1 Certification Basis.** During type certification a product is shown to comply with certain airworthiness design requirements which are defined on the product's Type Certificate Data Sheet (**TCDS**). In accordance with rule 21.117 an applicant is required to show that the changed product continues to comply with these requirements, however design standards are routinely up-dated to improve the safety of aircraft.

So which version of the airworthiness requirements do you have to comply with?

In-line with international standards, the Director encourages applicants to show compliance with the version of airworthiness requirements that are <u>effective at the</u> <u>date of</u> <u>the application</u>. This requirement is commonly referred to as the "changed product" rule.

For example, a new STC installing external fuel tanks on a Boeing 747-400 (type certified to FAR 25 at amendment 59), would need to be compliant with the FAR 25 requirements at the latest amendment. There are two important exceptions to this—

- When it would be impractical to show compliance with the latest version of the applicable airworthiness requirements.
- When compliance with the latest version of the airworthiness requirements would not contribute materially to the level of safety of the changed product.

In these cases an applicant may be permitted to use an earlier version of the

airworthiness requirements however this may not precede the version listed on the TCDS for the product. The ACU should be consulted if it is proposed that the latest requirements are not to be met.

An applicant is only required to show compliance with those sections that are affected by the design change (in the 747 fuel tank example the applicant would not need to re- establish compliance with "cockpit door" requirements). For those airworthiness requirements that are relevant to the design change, but not actually affected, a "Not Affected" statement should be made in the compliance checklist.

The certification basis should include the applicable aircraft noise and/or engine emission standards if the proposed design change will affect compliance with these requirements. Where the applicable airworthiness requirements are the Federal Aviation Regulation issued by the FAA, the Director finds it acceptable to adopt the policy detailed in FAR 21.93(b) and (c) for the classification of an "acoustical" or "emissions" change.

For new STCs, and amendments to existing STCs, applicable to FAR 25 turbine transport category airplanes the applicant should demonstrate compliance with FAR 26 Subpart E requirements concerning the damage tolerance of fatigue critical structures. Unless compliance is shown to FAR 25 post amendment 25-123, the applicant should demonstrate compliance to FAR 26 Subpart B regarding electrical wiring interconnection systems required under rule 21.117.

**1.7.2 Special Conditions.** Special conditions are rules of particular applicability that are developed for a specific project due to its unique design features. The Director and/or applicant may determine that the airworthiness requirements specified in the STC certification basis are not adequate to provide a sufficient level of safety for the changed product. In this case a special condition may be raised which specifies additional airworthiness or design requirements. Special conditions that are used on one certification project may apply to other projects using the same design feature. The basis and content of special conditions are generally developed via the STC Issue Paper process.

# 1.8 Operation and Maintenance of a Product Modified by an STC

CAA staff will review how the design change will affect aircraft operation and maintenance after the STC is complete. CAA operations and maintenance specialists will attend CB meetings as required and may advise applicants of applicable operational and maintenance requirements during the certification process. Additional CB meetings may be called with operations and maintenance specialists to review and accept ICA and revised MMEL documents as required.

**1.8.1 Instructions for Continued Airworthiness (ICA).** In accordance with rule 21.505(a)(4), and the applicable airworthiness requirements, the applicant must submit ICAs as part of the STC descriptive data, to describe the maintenance requirements necessary to maintain product airworthiness. ICAs should be

developed in consultation with maintenance personnel to ensure instructions are accurate, can be carried out as documented, and do not conflict with existing OEM or operator maintenance requirements. ICAs should address—

- Changes to the applicable aircraft maintenance schedule.
- Maintenance manual revisions (or supplement) that provide a description of the installation, removal / installation instructions, test, adjustment, and troubleshooting instructions.
- Parts listing in a format that ensures only STC approved parts are used for maintenance.
- Aircraft specific wiring diagrams.

The ICA need only address continued airworthiness of the design change for which application was made, as well as parts or areas affected by the design change. The Director considers FAA Order 8110.54 an acceptable reference for developing "Instructions for Continued Airworthiness".

In accordance with rule 21.123, the STC holder is also responsible for continuing airworthiness support throughout the life of the STC (refer to Section 1.2). If any change to the STC design data, including ICAs, is necessary because of an unsafe condition the STC holder will be responsible for making that information available to all parties who have received the design data.

**1.8.2 Weight and Balance Data.** The STC applicant should determine the weight and balance effects of the design change on the aircraft and verify that the aircraft is within the limits defined by the TC holder. The recording of weight and balance data and determining that each aircraft is operating within the approved limits is an operator responsibility. The STC holder is responsible for ensuring that the weight and balance data is provided to all operators of aircraft which have the STC embodied.

During the development of the STC, the aircraft design organisation should calculate the effects of the weight and balance changes due to the design change. The aircraft design organisation should still calculate weight and balance changes even if the aircraft is to be weighed before its next flight (the aircraft re-weigh should be considered as validating the calculated change).

When the STC is for the installation of role equipment (equipment intended for installation and removal without modifying the aircraft), the associated flight manual supplement should identify the weight and balance effects with the role equipment fitted and with it removed.

**1.8.3 Electrical Load Analysis.** The STC applicant should determine the changes to the aircraft electrical load. The aircraft Electrical Load Analysis should be updated to reflect the changes and to verify that under all operating conditions, including load shed and emergency conditions, the electrical system is operating within the limits defined by the TC holder and is compliant with all applicable requirements.

In accordance with 21.33 the STC holder is responsible for providing the data defining

the changes in the aircraft electrical load. In accordance with rule 43.53 it is the responsibility of the person performing maintenance (i.e. embodying an STC design change) to update the electrical load records for the aircraft and to ensure that the electrical load for each aircraft is within the defined limits.

# Section 2 Implementation Phase

This phase includes the submission of design data to the Director for review and all compliance finding activities including conformity inspections, compliance tests, compliance inspections etc.

# 2.1 STC Data Requirements

The purpose of technical data is to define the design change and to provide supporting evidence which shows that the changed product continues to comply with the applicable airworthiness requirements.

Refer to AC 43-9 for a description of data required to support a design change. Chapter 5 of FAA AC 21-40 is another useful reference on design data. Further information applicable to STC projects is included below for the two categories of design data, *descriptive data* and *substantiating data*:

All design data should be identified on a master document list which identifies each document, its revision status and date. This will form the top document which will be referenced on the STC certificate. The master document list should list substantiating data separately. As substantiating data is proprietary information, it is not normally included as part of the STC data package.

# 2.1.1 Descriptive Data.

- Multiple installation STC the descriptive data package should completely and accurately describe the fabrication, assembly, and installation of all parts of the design change. The descriptive data should be adequate for reproduction of parts and/or installation on other examples of the same type-certificated product. Where the data package includes a number of engineering drawings, a drawing list should be supplied to identify each drawing and its revision status.
- Single installation STC if a data package applies to a single installation, a limited data package may be provided including marked-up photographs, sketches, written descriptions etc as the design is not required for reproduction. The data should be of sufficient quality to define the design and to verify conformity with the design.
- Check before submitting descriptive data to the Director, all data should be checked by someone other than the person who prepared it. Where an applicant has prepared the data themselves this may be performed by the contracted aircraft design organisation, or in accordance with company procedures if the aircraft design organisation has prepared it.

#### 2.1.2 Substantiating Data.

- In general, substantiating/compliance data is intended to show compliance with the applicable regulations. This data may include analyses, test plans and reports etc.
- The top document for presenting substantiating data is the compliance checklist. A draft compliance checklist is to be included in the PSCP which identifies the proposed means of showing compliance, however this will be up-dated later to include the specific statement or document which demonstrates compliance.
- A statement of compliance, signed by the contracted aircraft design organisation, should be submitted with the final substantiating data.

## 2.2 Interim Certification Board (CB) Meeting

An Interim CB meeting may be held at any time during the Implementation Phase to communicate and address any technical issues, or to discuss and agree changes to the PSCP such as the means of showing compliance etc. The applicant or ACU may request an Interim CB meeting as required. Refer to section 1.5 for CB participants.

If the PSCP is amended as a result of an Interim CB meeting an updated copy is to be signed and dated by the CAA Project Engineer and the applicant's Project Manager.

#### 2.3 Conformity Inspections

In accordance with rules 21.117 and 21.35, an applicant for an STC must perform the necessary inspections, and provide evidence, to ensure the materials, parts, manufacturing processes, assembly and installation conform to those defined in the STC design data.

The Director may also choose to conduct inspections as required. Details of required conformity inspections are to be included in the PSCP. Conformity inspections are required for the following reasons:

**2.3.1 Prior to compliance tests or inspections.** These inspections physically compare aspects of the STC design to the descriptive data and should be completed before any official compliance tests or inspections are conducted. If conformity with the descriptive data is not confirmed the findings of compliance may not be valid and the actual STC design may not comply.

- For all compliance test or compliance inspection articles forming part of a design change that is <u>not major</u>, a CAA Form 8130-9 "Statement of Conformity" (Appendix B), or an alternative document specified in the PSCP, should be signed by a person authorised to certify the release-to-service of the changed product, or as specified in the PSCP.
- For all compliance test or compliance inspection articles forming part of a <u>major</u> design change, a CAA Form 8130-9 "Statement of Conformity" (Appendix B), or an alternative document specified in the PSCP, should be signed by a person authorised to certify the conformity of a major modification or repair, or as

specified in the PSCP.

- All prototype modification parts forming part of the test or inspection article require a CAA Form One, or an alternative document specified in the PSCP in accordance with rule 21.303. Documents issued in accordance with the requirements of a foreign Regulatory Authority (as identified in AC00-1) may be acceptable, as agreed in the PSCP.
- For compliance tests, individuals within the aircraft design organisation authorised to make a finding of compliance should verify that the test set-up conforms to the applicable test plan and include a statement to this effect in the test report, in addition to the CAA Form 8130-9 provided by maintenance personnel.
- Where compliance tests are to be carried out on foreign soil, the Director may request a conformity inspection to be carried out a by representative of the National Aviation Authority for the state in which the test is to take place, on CAA From 8120-10 "Request for Conformity". The results will be recorded by the NAA representative on CAA Form 8100-1 "Conformity Inspection Record". Both forms are internal CAA documents.

If deviations are made which do not reflect the STC descriptive data, or subsequent maintenance or modifications are carried out, a statement of conformity cannot be issued for the test article. Once a statement of conformity has been issued the aircraft configuration should be tightly controlled to ensure that any subsequent changes are documented and accounted for in the finding of compliance.

If it is necessary to carry out conformity inspections while an installation is in progress (usually due to lack of access when the installation is complete), the following conditions apply—

- All work to the point that the inspection is carried out should be complete and signed off.
- The installation records have been reviewed and all materials records (Forms One, Release Notes, etc) are complete and correct.
- The installation and the associated records are reviewed by a person authorised in the PSCP to ensure that the installation conforms to the STC descriptive data.
- When the partial conformity inspection has been completed, the installation records should be annotated that the partial conformity inspection has been completed and that there are no changes permitted to the installation without the direct involvement of the relevant aircraft design organisation.
- The installer should have a process in place to ensure that installations that have been inspected for conformity are not changed prior to the completion of the installation.

**2.3.2 Initial STC modification.** A conformity inspection of the first STC installation may be necessary to verify that manufacturing instructions are accurate, to ensure that maintenance instructions for continuing airworthiness can be carried out, and to

ensure the design change can be replicated using the STC descriptive data. A CAA Form 8130-9 "Statement of Conformity" (Appendix B), or an alternative document specified in the PSCP, may be signed by the following authorised person—

- For a design change that is not major, a person authorised to certify the releaseto- service of the changed product, or as specified in the PSCP.
- For a major design change a person authorised to certify the conformity of a major modification or repair, or as specified in the PSCP.

All prototype modification parts installed in the first STC installation must meet the requirements of rule 21.303.

It is important to note that conformity inspections described above are required as part of the STC approval process and *do not* replace or supersede the normal maintenance release- to-service requirements of Part 43.

The results of conformity inspections carried out by the ACU will be recorded on CAA Form 8100-1 "Conformity Inspection Record". The CAA Project Engineer will liaise with the applicant to arrange these inspections if required.

# 2.4 Compliance Testing

In accordance with rules 21.117 and 21.35, an applicant for an STC must perform the necessary tests, and provide evidence to ensure the changed product complies with the applicable airworthiness requirements. The ACU, on behalf of the Director, may also choose to witness certain tests or have additional tests conducted as specified in the PSCP. Compliance tests may include—

- Component Tests to verify that certain detail parts, components, or subassemblies meet the applicable airworthiness requirements.
- *Ground Tests* to verify the complete installation or final assembly meets the applicable airworthiness requirements such as electromagnetic interference (EMI), environmental, fuel flow, or structural requirements.
- *Flight Tests* to verify the effect of the design change on the aircraft's performance, flight characteristics, operation, noise signature and/or overall handling qualities. (Refer to section 2.6 for specific flight test requirements.)

The PSCP will include details of all compliance tests planned during the STC project, including the designated test witness. The applicant may conduct research and development tests to provide a level of design confidence without including this test data in the final substantiation.

**2.4.1 Test Plan.** Before any compliance testing, to be witnessed by a CAA staff member or other delegated person, is carried out, a test plan should be submitted to the ACU for review and acceptance. Each test plan should include—

- A list of the airworthiness requirements for which compliance is to be shown.
- A description of how compliance is expected to be shown including a stepby-step test procedure.
- A description of the test article.

- A list of test equipment and how the equipment is to be calibrated (if required).
- Details of how the test article and test setup will be conformed to descriptive design data and the test plan.
- Defined pass/fail criteria and a description of how this will be determined.

**2.4.2 Conformity Inspections.** Before any compliance testing, a conformity inspection of the test article and test set-up should be completed against the descriptive data, and a statement of conformity issued (refer to 2.3). If there is a delay between the conformity inspection and the compliance test itself, the nominated person responsible for making the finding of compliance should ensure that the finding of compliance is valid for the design defined in the STC descriptive data.

**2.4.3 Witnessing Tests.** An authorised witness is required to verify that the test procedures described in the test plan are followed and that any data captured by test instrumentation appears to be valid data for the test in question.

- The PSCP will detail the person responsible for witnessing each certification test.
- Where compliance tests are performed on foreign soil the Director may delegate witness responsibilities to a representative of the National Aviation Authority for the state in which the test is to take place.

**2.4.4 Test Report.** A test report is to be submitted as part of the substantiating data for the STC where compliance with sections of the airworthiness requirements have been shown by test. This report is to include—

- A list of the airworthiness requirements for which compliance was shown.
- Reference to the approved test plan.
- A statement of conformity, CAA Form 8130-9 (Appendix B) or another document acceptable to the Director, certifying that the test article and the test set-up was in accordance with the STC design data and the test plan (refer to section 2.3).
- Confirmation that the test was conducted in accordance with the test plan, or if it was not, a description of the deviations and a justification for the validity of the results.
- Results of each test case including details of observations or other relevant information.

Each test report should be checked by the Project Design Engineer or another person authorised to do so in the PSCP.

# 2.5 Compliance Inspections

An engineering compliance inspection verifies compliance with airworthiness requirements and also ensures that the STC design is compatible with other installations on the product. A compliance inspection should not be confused with a conformity inspection which compares the changed product with the STC design data (refer to section 2.3). Examples of <u>compliance</u> inspections are—

 Interior Inspections – e.g. emergency placards, aisle widths, occupant protection.

- Control System Inspections e.g. ease of operation, interference etc.
- Fire Protection Inspections e.g. 25.981, flammable fluid lines etc.
- System Routing Inspections e.g. hydraulic and electrical system routing.

Again, the PSCP will include details of all compliance inspections planned during the STC project, including the designated inspector(s).

**2.5.1 Compliance Inspection Checklist.** A checklist is used to record the results of each compliance inspection, and should be submitted to the Director as part of the substantiating data. The completed compliance inspection checklist should include—

- A list of the airworthiness requirements for which compliance was shown.
- A description of the items/aircraft which were inspected.
- Name(s) of the designated inspector(s).
- A statement of conformity, CAA Form 8130-9 (Appendix B) or another document acceptable to the Director, certifying that the inspected article was found to conform with the STC design data (refer to section 2.3).
- A statement against each airworthiness requirement which confirms compliance or non-compliance, and any other relevant information.

Each compliance inspection checklist should be checked by the Project Design Engineer or another person authorised to do so in the PSCP.

#### 2.6 Flight Testing

In accordance with rule 21.39, flight tests may be required to show compliance with the applicable airworthiness requirements, or to verify correct and reliable operation of the changed product. Details of any flight testing required during an STC project will be included in the PSCP. The Director may conduct a flight test audit (refer to section 2.6-7) or request additional flight tests to verify the applicant's flight test results or to confirm compliance with airworthiness requirements.

FAA ACs 23-8, 25-7, 27-1, and 29-2 provide guidance for certification flight tests of aircraft certificated to those standards.

**2.6.1 Flight Test Plan.** The applicant is required to prepare a flight test plan which should be submitted to the ACU prior to the issue of a Special Category - Experimental airworthiness certificate (refer to section 2.6-3). The following information should be included—

- A list of the airworthiness requirements for which compliance is to be shown.
- A description of how compliance is expected to be shown including step-by-step procedures and defined pass/fail criteria.
- A description of the aircraft to be tested, the base airfield and the area of operation.
- Identify all personnel involved with the test flight(s), and their responsibilities. Only personnel necessary for the conduct of the test flight or to ensure safety

should be carried on a test flight. Include details of Test Pilot approvals (refer to section 2.6-4).

- An analysis of flight test risks and details of risk management procedures.
- A list of test equipment and how the equipment is to be calibrated (if required).
- Details of how the test aircraft will be conformed to descriptive design data.

**2.6.2 Pre-Flight Certification Board (CB) Meeting.** Depending on the scope of the design change a pre-flight CB meeting may be held, at the request of the ACU or the applicant. The requirement for a pre-flight CB meeting should be included in the PSCP. Refer to section 1.5 for CB participants. The purpose of this meeting is to—

- Discuss and clarify flight test requirements, the flight test plan, and conformity inspections.
- Confirm flight test risk management procedures.
- Discuss and plan CAA flight test audit (if required).
- Ensure the aircraft has undergone the necessary ground inspections and tests.
- Review substantiating data to ensure the aircraft is in a safe condition for the intended flight tests.

If the PSCP is amended as a result of an Interim CB meeting an updated copy is to be signed and dated by the CAA Project Engineer and the applicant's Project Manager.

**2.6.3 Issue of Experimental Airworthiness Certificate.** A Special Category - Experimental airworthiness certificate must be issued under rule 21.193 if the applicant wishes to conduct any preliminary research and development flight tests or before conducting flight tests to show compliance. A separate application should be filled out and submitted to the ACU for the issue of a Special Category - Experimental airworthiness certificate (CAA Form 24021/06, can be found on the CAA website at www.mcaa.gov.mn).

**2.6.4 Flight Test Pilot Approval.** In accordance with rule 19.405, for the purposes of experimental test flying under a Special Category - Experimental airworthiness certificate, the nominated flight test pilot must be approved in writing by the Director. The approved flight test plan will identify the name and details of the nominated test pilot. A separate application should be filled out and submitted to the ACU (CAA Form 24019/03) where the test pilot does not already hold an approval for the specific aircraft and type of testing to be conducted.

**2.6.5 Flight Test Conformity Inspection.** The ground inspection physically verifies that the aircraft submitted for flight test meets the minimum requirements for quality, conforms with the STC design, and is safe for the intended ground and flight tests. The process defined in section 2.3 is to be followed for all flight test aircraft.

**2.6.6 Flight Test Report.** The applicant is to provide a flight test report signed by the test pilot and any nominated test witnesses, to document the results of all certification flight tests, and to demonstrate compliance with the applicable

Advisory Circular

airworthiness requirements. The ACU will review the applicant's flight test report in order to determine conformity of the aircraft with the type design, compliance with the applicable airworthiness requirements, and to identify tests that may require reevaluation by way of an CAA flight test audit in accordance with rule 21.35(b).

**2.6.7 CAA Flight Test Audit.** Depending on the scope of the STC application the Director will determine the need for a flight test audit and the applicant will be advised if required. The purpose of a flight test audit is to verify the flight test data reported by the applicant, confirm compliance with the airworthiness requirements, and the adequacy of operational limitations, procedures, and pilot information. A CAA flight test audit may be conducted in conjunction with the applicant's flight testing or may be completed after the applicant's flight test report has been submitted.

# 2.7 Compliance by Similarity

Compliance with airworthiness requirements can be shown by comparing the current design with a similar design which has been previously approved. For example, if a certain interior material has been used in an approved STC, that same material may be eligible for a similar STC without the need for further flammability testing etc.

The applicant would need to provide evidence of the previous approval ensuring that—

- They gain permission from the approval holder,
- The extent and application of the design is exactly the same as that previously approved. i.e. The certification basis is the same as the previous approval, the design is physically the same, and the interaction with other parts of the aircraft are the same.
- Compliance is re-established where there is any difference from the previously approved configuration. Substantiating data may be submitted which demonstrates that the differences do not affect the compliance of the design.

# 2.8 Deviations and Changes

It may be necessary to modify or update the design data during an STC project for a number of reasons; a certain tolerance cannot be achieved during manufacture, a material is out of stock, or it is found that a part cannot be fitted in accordance with the installation instructions.

A production deviation (or concession) may be needed due to factors affecting the installation on one particular aircraft, or the STC design which is then applicable to a series of aircraft.

It is important to remember that if compliance is shown for a particular design, and that design then changes, it will be necessary to re-establish compliance or show that it is unaffected. This is required for changes affecting one installation or the overall STC design. The basis for compliance with the airworthiness requirements is not always obvious and it cannot be assumed that a small change is trivial.

Changes that are made prior to STC approval should be reflected in the final STC

design data. The master document list (refer to Section 2.1) can be used to identify the status of design data, however the applicant should identify and record all changes from beginning to end, that is;

recording the reason for a change  $\rightarrow$  incorporating the change in the descriptive data  $\rightarrow$  establishing that the changed design complies  $\rightarrow$  installing the change.

Details of this procedure are to be included in the PSCP.

# Section 3 Completion Phase

The completion phase of an STC project covers a review of any outstanding requirements, submission of all final documentation to the Director, certification activities, and the continuing responsibilities of an STC holder.

# 3.1 Submission of final data

The applicant and/or aircraft design organisation should submit a consolidated data set including all updated documents to reflect the final design configuration. All design data should be checked by the Project Design Engineer, or other person nominated in writing to do so, and marked as such.

The final compliance checklist, statement of compliance and master document list should be submitted with current references to descriptive and substantiating data.

# 3.2 Final Certification Board (CB) Meeting

A Final CB meeting may be required for significant STC projects, after the applicant has demonstrated compliance with all applicable airworthiness requirements, in order to review any outstanding design data or technical issues, formalise the decision to issue the STC, and discuss any post certification activities. The applicant or ACU may request a Final CB meeting as required. Refer to section 1.5 for CB participants.

# 3.3 Issue of STC

An applicant is entitled to an STC when the Director is satisfied that the requirements of rule 21.119 have been satisfied. The Director, or authorised CAA staff member will sign and seal the STC certificate and hardcopies of the STC Master Document List (**MDL**) and Flight Manual Supplement if applicable.

An applicant may request that individual drawings or documents are signed and sealed however all data is controlled by reference on the MDL. The STC certificate and one copy of the signed documents will be returned to the applicant, and one copy of all the descriptive and substantiating data will be held on file at the CAA.

# 3.4 Foreign Acceptance/Validation of CAA STCs

Current international bilateral agreements determine the acceptance, or process to accept, a CAA STC by a foreign airworthiness authority. Copies of all international agreements and arrangements can be found on the CAA website

An applicant should include details in the PSCP if they wish to obtain a foreign STC following certification. For large STC projects this may necessitate involvement of the foreign regulatory authority while compliance finding activities are being conducted.

# 3.4.1 N/A

## 3.4.2 N/A

# 3.5 Embodiment of STC

In most cases an STC <u>will</u> be major and must be certified for conformity with the design data in accordance with Part 43 Subpart E.

In some cases an STC may approve a design change that is not major, where for example, the applicant wishes to sell the design package. In this case no conformity inspection will be required for embodiment of the STC design.

The descriptive data of each STC should state whether the design change is major or not.

The STC holder should be notified immediately if any issues or difficulties are encountered during installation or embodiment of an STC design. It is important to remember that if compliance is shown for a particular design, compliance may be invalid if that design changes during installation. It cannot be assumed that a small change is trivial.

As the embodiment of an STC will probably include a revision to operating or maintenance documentation, particular attention should be paid to the incorporation of <u>all</u> design data.

Instructions for Continued Airworthiness (ICAs) should be included in the aircraft maintenance programme and any approved Flight Manual Supplement (FMS) must be included with the documents to be carried in accordance with rule 91.111(2).

# Appendix A – Project Specific Certification Plan Template

# Title....

# CAA Reference X/21E/X

## 1. SCOPE

1.0 The purpose of this PSCP is to define and document a certification programme between the Civil Aviation Authority of Mongolia (CAA) and Applicant to expedite the issue of a Supplemental Type Certificate in accordance with Mongolian CAR Part 21 Subpart E.

1.1 This PSCP shall become effective upon endorsement by the CAA and the Applicant's Project Manager in Section 9. It will continue in effect throughout all phases of the project unless it is superseded, revised, or terminated. This PSCP may be amended by mutual agreement in accordance with agreed procedures.
1.2 The CAA Work Request covering the STC project is X/21E/X.

## 2. DESIGN CHANGE DESCRIPTION

2.1 Description of type design change, identifying the product to be changed (with reference to the TC) and including any significant or unusual design features.....

## 3. PROJECT STAKEHOLDERS

3.0 The applicant for the STC is : Applicant's name Applicant's address

(CAA Client No. .....) Phone: .....

Fax: .....

3.1	The Design Organisation	is : Design Organisation's n	ame
Deig	n Organisation's address	(CAA Client No)	
Pho	ne:		Fax:

3.3 The CAA's nominated Project Engineer is ...... The Project Engineer is responsible for the day-to-day conduct of the certification activities on behalf of the Director. All contact on certification matters, including supply of documentation and the scheduling of visits and tests, shall be addressed through the Project Engineer. (Direct phone 976-11 282259 or e-mail at AWD@mcaa.gov.mn)

3.4 The applicant shall be responsible for—

- a) Proposing the means of compliance with the nominated airworthiness design standards.
- b) Demonstrating that the supplemental type design complies with the airworthiness design standards.
- c) Notifying the CAA Project Engineer as soon as practicable of the dates and locations of all compliance tests, including flight tests, with at least 5 days notice.
- d) Supplying to the CAA all necessary data, including the compliance checklist and all the documentation listed in paragraph 7.

# 4. CERTIFICATION SCHEDULE

4.0 The STC assessment process will follow as closely as practicable ACU Procedure 3.6 with reference to AC 21-8 and FAA Order 8110.4, as appropriate for a Supplemental Type Certificate application.

4.1 **Certification Board Meetings.** Depending on the scope of the STC project the CAA or the applicant may convene a Certification Board (CB) meeting at significant stages of the project. Refer to AC 21-8 and ACU Procedure 3.6 for a full description of CB requirements. Required CB meeting are detailed in the STC project schedule below.

4.2 The applicant and Director have agreed the following proposed schedule for the STC project:

Action	Required		Date
	Yes	No	
STC Application / Draft PSCP Submitted to the			
Director			
Familiarisation CB Meeting			
PSCP Finalised			
Preliminary Data Submitted to the Director with an			
MDL			
Interim CB Meeting			
Conformity Inspections			
Certification Tests			
Compliance Inspections			
Pre-flight CB Meeting			
Flight Tests (including Conformity Inspections)			
Final Descriptive and Substantiating Data Submitted to			
the Director			
Final CB Meeting			
STC Issue			

# 5. CERTIFICATION REQUIREMENTS

5.0 The agreed certification basis is ..... including amendments ...... through ......

5.1 The applicant has identified the following unique or unusual design characteristics which may require the application of special conditions to this STC application:.....

5.2 The applicant has applied for the following equivalent level of safety findings with respect to the certification basis of this STC: .....

## 6. METHOD OF COMPLIANCE

6.0 Include a description of how compliance will be shown against each applicable airworthiness requirements. This section may refer to the method of compliance detailed in an attached Compliance Checklist (include reference)

6.1 **Certification Tests.** For all proposed certification tests – a Test Plan detailing the proposed test method, the test requirements (i.e. loads, test cases), conformity inspections, and the criteria by which the test article will pass or fail should be supplied to the CAA Project Engineer at least ten working days prior to the test.. Refer to AC 21-8 and ACU Procedure 3.6 for a full description of Certification Test requirements. The following tests are planned to show compliance with the applicable airworthiness requirements:

Test Description (including Test Plan ref)	<u>Witness</u>	Date of Test

6.2 **Conformity Inspections.** Inspections are required to confirm— test articles conform to descriptive data;

compliance inspection articles conform to descriptive data; the design change can be replicated.

The CAA Project Engineer should be notified five working days before the scheduled inspection date:

Requirement for Conformity Inspection	<u>Signatory</u>	Date of Insp.

6.3 **Compliance Inspections.** An engineering compliance inspection should be done for any aspect of product design and installation where compliance with the certification requirements cannot be determined through the review of drawings or reports. The following Compliance Inspections are planned to show compliance with

the applicable airworthiness requirements:

Details of Compliance Inspection	<u>Signatory</u>	Date of Insp.

#### 7. CERTIFICATION DOCUMENTATION

7.0 The following list identifies all data submitted to show compliance with the applicable airworthiness requirements. Detailed information on Substantiating Data requirements are included in AC 21-8. A *separate* Master Document List is required as part of the STC data package to define all documents, and their issue status, to embody, maintain and substantiate the design change.

Document ref	<u>Revision</u>	<u>Date</u>

#### 8. CONTINUING AIRWORTHINESS RESPONSIBILITY

8.0 The applicant shall be responsible for providing continuing airworthiness support for the aircraft to all owners and all national airworthiness authorities in countries in which the aircraft is operated, in accordance with rules 21.123(a)(1) and 146.61. The applicant should make a submission to the Director to demonstrate that they have the procedures and systems in place to achieve this.

## 9. AGREEMENT OF CERTIFICATION PLAN

9.0 The ACU and Applicant agree to the provisions of this PSCP as indicated by the signature of their duly authorised representatives.

Applicant Project Manager:			
Name:	Signed:	Date:	
CAA Project Engineer:			
Name:	Signed:	Date:	

AC21-					
Appendix B – Sample CAA FORM 8130-9 Statement of Conformity					
CAA Form 813	30-9 is available on the	CAA website at—			
http://www.mcaa	.gov.mn/Forms/CAA8130-	<u></u>			
Civil Aviation	STATEMENT OF CONFO	RMITY			
Authority	CAA Form 8130-9 Rev X >	(X/XX			
of Mongolia		Work Poquest			
	· · · ·	WOIN NEQUESI.			
Section I – Airci	raft (or part thereof)				
Make:		Model:			
Serial No:		Registration No:			
Section II - Engi	ne				
Make:		Description:			
Part Number:		Serial Number:			
Section III – Pro	peller				
Make:		Description:			
Part Number:		Serial Number:			
Section IV - Cer	Section IV - Certification				
I hereby certify	that:				
Parts are in confe	ormity with	(specify	y design data,		
revision status a	nd date)	and the second s			
A. I have cor	mplied with rule 21.35(a.).				
B. The item described above conforms to its type certificate, is in a condition for safe operation, and was flight checked on(date)					
C. The engine or propeller described above, presented herewith, conforms to the type design.					
D. The engine or propeller described above conforms to its type certificate and is in a condition for safe operation. The engine or, if applicable, the variable pitch propeller was subjected by the manufacturer to a final operation check on (date)					
Deviations:					
Signature of Cert	tifier:	Title:			
Organisation:		Date:			

#### Instructions For Completing Form 8130-9

This form should be submitted to the Director under the following circumstances:

1. By the applicant for a type certificate or supplemental type certificate at the time he presents an aircraft or parts thereof to the Director for tests.

2. By the applicant for a type certificate or supplemental type certificate for each engine of propeller submitted for type certification.

This form should be completed as follows:

Section I Aircraft: Complete the pertinent part of only this section when certification covers an

aircraft or part thereof.

Section II Engine: Complete this section when certification covers an engine. Section III Propeller: Complete this section when certification covers propeller. Section IV Certification:

- Item A. Check this block when an aircraft or part thereof is presented for flight or ground tests during type certification or supplemental type certification.
- Item B. Check this block when the holder or licensee of a type certificate only, initially transfers the ownership of an aircraft manufactured under the type certificate, or applies for the original issuance of an airworthiness certificate.
- Item C. Check this block when an engine or propeller is presented for type certification.
- Item D. Check this block when an engine or propeller is presented for an airworthiness approval and insert the date the product completed a final operational check.

The certification should be signed by an authorised person who holds a responsible position in the organisation.

# Project Specific Certification Plan Title....

# CAA Reference X/21E/X

#### 1. SCOPE

1.0 The purpose of this PSCP is to define and document a certification programme between the Civil Aviation Authority of Mongolia (CAA) and Applicant to expedite the issue of a Supplemental Type Certificate in accordance with MCAR Part 21 Subpart E.

1.1 This PSCP shall become effective upon endorsement by the CAA and the Applicant's Project Manager in Section 9. It will continue in effect throughout all phases of the project unless it is superseded, revised, or terminated. This PSCP may be amended by mutual agreement in accordance with agreed procedures.

1.2 The CAA Work Request covering the STC project is X/21E/X.

#### 2. DESIGN CHANGE DESCRIPTION

2.1 Description of type design change, identifying the product to be changed (with reference to the TC) and including any significant or unusual design features.....

#### 3. PROJECT STAKEHOLDERS

3.0	D The applicant for the STC is :	Applicant's name
	Арр	licant's address
	(CA	A Client No)
	Pho	ne: Fax:
3.1	1 The Design Organisation is : Dei (CA Pho	Design Organisation's name gn Organisation's address A Client No) ne: Fax:

3.2 The applicant's designated Project Manager is...... The Project Manager is the applicant's point of contact for all administrative matters concerning the STC. Technical issues may be dealt with directly with Project Design Engineer .....

3.3 The CAA's nominated Project Engineer is ...... The Project Engineer is responsible for the day-to-day conduct of the certification activities on behalf of the Director. All contact on certification matters, including supply of documentation and the scheduling of visits and tests, shall be addressed through the Project Engineer. (Direct phone 976-11-282259, or e-mail at AWD@mcaa.gov.mn)

- a) Proposing the means of compliance with the nominated airworthiness design standards.
- b) Demonstrating that the supplemental type design complies with the airworthiness design standards.
- c) Notifying the CAA Project Engineer as soon as practicable of the dates and locations of all compliance tests, including flight tests, with at least 5 days notice.
- d) Supplying to the CAA all necessary data, including the compliance checklist and all the documentation listed in paragraph 7.

## 4. CERTIFICATION SCHEDULE

4.0 The STC assessment process will follow as closely as practicable ACU Procedure 3.6 with reference to AC 21-8 and FAA Order 8110.4, as appropriate for a Supplemental Type Certificate application.

4.1 **Certification Board Meetings.** Depending on the scope of the STC project the CAA or the applicant may convene a Certification Board (CB) meeting at significant stages of the project. Refer to AC 21-8 and ACU Procedure 3.6 for a full description of CB requirements. Required CB meeting are detailed in the STC project schedule below.

4.2 The applicant and Director have agreed the following proposed schedule for the STC project:

Action		uired	Date
	Yes	No	
STC Application / Draft PSCP Submitted to the Director			
Familiarisation CB Meeting			
PSCP Finalised			
Preliminary Data Submitted to the Director with an MDL			
Interim CB Meeting			
Conformity Inspections			
Certification Tests			
Compliance Inspections			
Pre-flight CB Meeting			
Flight Tests (including Conformity Inspections)			
Final Descriptive and Substantiating Data Submitted to the Director			
Final CB Meeting			
STC Issue			

# 5. CERTIFICATION REQUIREMENTS

- 5.0 The agreed certification basis is ..... including amendments ...... through ......
- 5.1 The applicant has identified the following unique or unusual design characteristics which may require the application of special conditions to this STC application: .....
- 5.2 The applicant has applied for the following equivalent level of safety findings with respect to the certification basis of this STC: .....

## 6. METHOD OF COMPLIANCE

6.0 Include a description of how compliance will be shown against each applicable airworthiness requirements. This section may refer to the method of compliance detailed in an attached Compliance Checklist (include reference)

6.1 **Certification Tests.** For all proposed certification tests – a Test Plan detailing the proposed test method, the test requirements (i.e. loads, test cases), conformity inspections, and the criteria by which the test article will pass or fail should be supplied to the CAA Project Engineer at least ten working days prior to the test.. Refer to AC 21-8 and ACU Procedure 3.6 for a full description of Certification Test requirements. The following tests are planned to show compliance with the applicable airworthiness requirements:

Test Description (including Test Plan ref)	<u>Witness</u>	Date of Test

#### 6.2 **Conformity Inspections.** Inspections are required to confirm—

test articles conform to descriptive data;

compliance inspection articles conform to descriptive data;

the design change can be replicated.

The CAA Project Engineer should be notified five working days before the scheduled inspection date:

Requirement for Conformity Inspection	Signatory	Date of Insp.

6.3 **Compliance Inspections.** An engineering compliance inspection should be done for any aspect of product design and installation where compliance with the certification requirements cannot be determined through the review of drawings or reports. The following Compliance Inspections are planned to show compliance with the applicable airworthiness requirements:

Details of Compliance Inspection	Signatory	Date of Insp.

#### 7. CERTIFICATION DOCUMENTATION

7.0 The following list identifies all data submitted to show compliance with the applicable airworthiness requirements. Detailed information on Substantiating Data requirements are included in AC 21-8. A *separate* Master Document List is required as part of the STC data package to define all documents, and their issue status, to embody, maintain and substantiate the design change.

Document ref	Revision	<u>Date</u>

#### 8. CONTINUING AIRWORTHINESS RESPONSIBILITY

8.0 The applicant shall be responsible for providing continuing airworthiness support for the aircraft to all owners and all national airworthiness authorities in countries in which the aircraft is operated, in accordance with rules 21.123(a)(1) and 146.61. The applicant should make a submission to the Director to demonstrate that they have the procedures and systems in place to achieve this.

## 9. AGREEMENT OF CERTIFICATION PLAN

9.0 The ACU and Applicant agree to the provisions of this PSCP as indicated by the signature of their duly authorised representatives.

Applicant Project Manager:			
Name:	Signed:	Date:	
CAA Project Engineer:			
Name:	Signed:	Date:	