



Advisory Circular

AC21-2

Product Certification - Airworthiness Certificates in the Standard and Restricted Category

Issue 1

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GENERAL

Civil Aviation Authority Advisory Circulars (AC) 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.

This Advisory Circular also includes Explanatory Material (EM) where it has been shown that further explanation is required. Explanatory Material must not be regarded as an acceptable means of compliance.

PURPOSE

This Advisory Circular provides methods, acceptable to the Director, for showing compliance with the standard and restricted category airworthiness certification rules set out in Part 21 Subpart D.

RELATED CAR

This AC relates specifically to Civil Aviation Rule Part 21.

CHANGE NOTICE

This AC replaces Initial Issue dated 1 July 2002

APPROVAL

This AC has been approved for publication by the Director of Civil Aviation.

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EM General

Except where the operation of an aircraft is for the purpose of demonstrating the eligibility of the aircraft for the issue, renewal, or reinstatement of an airworthiness certificate, to be eligible to operate in Papua New Guinea, rule 91.101 requires all aircraft to have a current airworthiness certificate.

Rule Part 21 Subpart D prescribes the requirements for issue of airworthiness certificates to aircraft in one of three categories—

- standard
- restricted
- special

This advisory circular provides information to applicants for airworthiness certificates in the standard or restricted category only.

EM Requirement for Certificate

Rule 91.101 requires all aircraft to have an airworthiness certificate and be in an airworthy condition.

In addition, aircraft conducting air operations under Parts 121 and 125 are required to have a standard category airworthiness certificate and aircraft conducting air operations under Part 135 are required to have a standard or restricted category airworthiness certificate.

EM 21.35 Certificate Categories

An aircraft will be eligible for an airworthiness certificate in the category identified on the type acceptance certificate, either —

- standard; or
- restricted.

A certificate may be issued in both the standard and restricted categories if—

- the aircraft meets the certification requirements for each category when in the configuration for that category; and
- the aircraft can be converted from one configuration to the other by removing or adding equipment by simple mechanical means.

Rule 21.35(b) states that the Director may prescribe purposes on an airworthiness certificate. If an application has been made for an airworthiness certificate for a specific operation or purpose, this purpose will be prescribed on the airworthiness certificate.

EM Standard Category Certificates

The issue of a standard category airworthiness certificate indicates the acceptability of the aircraft for all types of operations, subject to any operational rule requirements.

EM Restricted Category Certificates

An aircraft that is otherwise eligible for standard category may have its airworthiness certificate classified in the restricted category when—

- the design approval for any modifications incorporated in the aircraft limits the aircraft to the

restricted category, including—

- special purpose operations, such as agricultural operations
- long-range ferry flights
- the certification information able to be provided by the applicant is inadequate to support the granting of a standard category certificate, (for example, an imported aircraft for which the exporting state issued the equivalent of a restricted airworthiness certificate).

For the issue of a restricted category airworthiness certificate, the applicant should identify the types of operations to be undertaken. These types of operation will be those prescribed during type acceptance.

The types of operation will be prescribed on the airworthiness certificate and may be amended if design changes are incorporated on the aircraft.

For an aircraft issued with a type acceptance certificate in the standard category, but only accepted for a restricted category airworthiness certificate, the CASA will prescribe appropriate purposes on the certificate taking into account—

- the airworthiness standards complied with
- any limitations imposed by design change approvals

There may be situations where the effect of design changes on a particular type of operation has not previously been fully assessed. The CASA should be contacted if the applicant is in doubt.

Agricultural Operations

An aeroplane that is to be used to conduct agricultural operations under Part 137 using internal dispensing equipment requires a restricted airworthiness certificate.

Long Distance Ferry Flights

A restricted category airworthiness certificate may be issued for the purpose of conducting a long distance ferry flight, including—

- where the aircraft is to operate at weights above the maximum certificated take-off weight or maximum zero fuel weight, or both
- where a design change is installed that does not fully meet the airworthiness standards applicable for the standard category, such as a temporary ferry fuel tank system.

The granting of a restricted category airworthiness certificate for the purpose of a ferry flight will be subject to compliance with an approved design change for any modification. The design change will be required to meet standards accepted by the Director as providing an adequate level of safety for the operation.

Before flying an aircraft having a restricted airworthiness certificate in or over a foreign country, the operator should determine whether operating requirements may be imposed by that country, and any other country on the route of flight, because of the condition of the aircraft.

A request for permission to operate over or within the foreign country should include a statement describing the deviations from the standard category airworthiness certificate standards. Such deviations, in effect, would also be deviations from the airworthiness standards of Annex 8 to the Convention on International Civil Aviation (ICAO).

The following is an example of the statement that would be made on a restricted category airworthiness certificate describing the deviations from standard category airworthiness certificate requirements:—

This aircraft does not comply with the International Airworthiness Standards of Annex 8 to the Convention on International Civil Aviation when operated at a weight in excess of its maximum certificated take-off weight and at a weight in excess of its maximum zero fuel weight because of the additional fuel, fuel carrying facilities, associated equipment, and navigation equipment installed in the aircraft.

EM 21.37 Application for Certificate

EM General

An application for an airworthiness certificate in the standard or restricted category is to be made on Form CA21/02. This form is available from the CASA Airworthiness Authority.

The completed application form, together with the prescribed application fee, must be submitted to the CASA—

- for aircraft with acceptable evidence of conformity, not less than 28 days prior to the date requested for the inspection of the aircraft
- for aircraft without acceptable evidence of conformity, immediately the aircraft is imported, or the decision is taken to rebuild, restore, and return the aircraft to service

All charges associated with the issue of the airworthiness certificate will normally be invoiced to the aircraft's registered owner. The CASA will invoice another client if it receives a written request and that client has agreed in writing to accept the charges.

If any required information is not available, this should be advised separately, with reasons, in a covering letter with the application.

EM Aircraft Description

The applicant should ensure correct model designations are used.

The data plate should be checked to ensure that the information corresponds to references in the aircraft's documentation. If differences are found then the reasons for them should be determined and the CASA advised.

Many aircraft have popular names that are sometimes incorrectly quoted as the model designation. Examples are of this are Cessna Skymaster (correct model designation T337G) and Piper Tomahawk (correct model designation PA-38-112).

EM Evidence of Conformity

A copy of the statement of conformity as defined earlier in this AC should be supplied.

For aircraft that do not have acceptable evidence of conformity all information that will assist the eligibility investigation should be supplied. This is discussed earlier in this AC. For further advice the Airworthiness Authority of the CASA should be contacted.

EM Design Changes

All modifications that have been carried out should conform with design changes approved for the type. The applicant will be required to provide evidence of the approval of the design changes.

Evidence that design changes were approved by the exporting State's Airworthiness Authority against the applicable type certification standards will be acceptable for the issue of an Airworthiness Certificate. A foreign authority's approval may be shown by—

- the issue of an Export Certificate of Airworthiness or equivalent

- copies of the applicable approval certificates

Temporary alterations made for an import ferry flight should be removed before inspection of the aircraft. Such alterations may be listed in the Export Certificate of Airworthiness. Any design changes made after the issue of the Export Certificate of Airworthiness should be identified as such and separate evidence of the relevant approval provided.

The issue of an airworthiness certificate for an imported aircraft will accept any listed design changes that have not otherwise been approved. The acceptance will be limited to that individual aircraft but will normally only apply to modifications installed overseas for which there are certified entries in the aircraft's maintenance records. In all cases there must be sufficient evidence the modification meets the applicable airworthiness requirements.

EM Maintenance Records

Maintenance records should consist of logbooks or equivalent documentation that show the maintenance history of the airframe, engines, propellers and all installed equipment.

Compliance with the applicable airworthiness directives issued under Part 39 should be recorded in the maintenance records and certified.

For an imported aircraft issued with an Export Certificate of Airworthiness, the maintenance records for the aircraft will usually show that the airworthiness directives of the exporting country have been complied with. The applicant should confirm this. The applicant should also determine if any additional airworthiness directives, applicable to the aircraft model and serial number, or its equipment, have been issued by the Papua New Guinea CASA and whether they have been complied with.

EM Additional Airworthiness Requirements

The additional airworthiness requirements of Part 26 are required to be met.

EM Maintenance Inspection

Within the prior 60 days, the aircraft should have undergone an inspection meeting the minimum requirements of Part 43, or an equivalent inspection accepted by the CASA. An equivalent inspection could be an annual or 100-hour inspection performed under the Federal Aviation Administration FAR 43. Other types of inspections may be accepted if there is evidence that they provide an assurance of the condition of the aircraft and a level of inspection equivalent to Part 43.

EM Flight Manual

The flight manual should be the one accepted by the CASA for the aircraft model. This flight manual may differ from the one carried in the aircraft, either by revision state or origin. The Airworthiness Authority of the CASA will advise the correct manual at the time of the application.

EM Aircraft Inspection

All aircraft are required to be inspected by the CASA prior to the issue of an airworthiness certificate.

This inspection ensures that the aircraft—

- conforms to its approved type design
- complies with the applicable rules
- is in a condition for safe operation

The applicant should be prepared to furnish the following to the CASA inspector—

- an aircraft complete and ready to fly except for cowlings, fairings, and panels opened for

inspection

- the aircraft certificate of registration
- the logbooks for the aircraft, engine(s) and propeller(s)
- evidence that the minimum inspection requirements of Part 91 have been carried out.

The applicant should arrange for the aircraft and all required documentation to be available for inspection by the CASA in a well lit and sheltered place. This should be an aircraft hangar where there is adequate room for inspection. All work on the aircraft should have been completed. Personnel should be available to open cowlings, fairings, and panels for inspection purposes.

The CASA regards the initial inspection date specified in the application as provisional for planning purposes only. On receipt of an application the CASA will reply with a letter detailing the requirements to be met for the issue of the certificate. This letter finishes by requesting the applicant to advise the CASA in writing at least seven days in advance of a firm date requested for the inspection.

The CASA will issue airworthiness certificates outside Papua New Guinea but in addition to the normal charges all travel costs and expenses are payable by the applicant, including air fares, travel time, accommodation, meals, incidentals, and taxes.

A written agreement to meet these costs is required before the commencement of any travel.

EM 21.39 Issue of Certificate

This rule is self explanatory.

EM 21.41 Standard and Restricted Category Requirements

EM Eligibility

To be eligible for the issue of an airworthiness certificate in the standard or restricted category an applicant should provide evidence that the aircraft conforms to type acceptance certificate issued under Part 21. Specifically, the applicant should ensure that, for the aircraft—

- a type acceptance certificate has been issued
- a statement of conformity has been issued

EM Type Acceptance

Aircraft models that have been type accepted in Papua New Guinea and that are eligible for the issue of a standard or restricted category airworthiness certificate are listed in a PNG Aircraft Type Acceptance Certificate Master Index which is available on the CASA website.

If an aircraft model is not already covered by a type acceptance certificate one will have to be issued under Part 21, Subpart B. See AC21-1 for guidance on this subject.

Recent additions may not be shown in AC21-1 and the Airworthiness Authority of the CASA should be contacted if—

- the model is not listed
- the model is similar to but not identical to a model listed
- the serial number of the aircraft is outside the serial number range listed as eligible

EM Evidence of Conformity

The applicant for an airworthiness certificate is required to provide the Director with evidence of conformity of an aircraft to the type design approved by the issue of a type acceptance certificate. This evidence is required to confirm that the aircraft conforms to the applicable type design.

Documents that are accepted by the CASA as evidence of conformity for imported aircraft are—

- a statement of conformity issued by the aircraft manufacturer
- an export airworthiness certificate or equivalent document issued by the airworthiness authority of an exporting country
- a foreign domestic airworthiness certificate that—
 - includes evidence that a conformity inspection was required as part of the issue of the document
 - was issued within 60 days of the date of export
- a statement of conformity issued by a person or organisation authorised to make such a statement by the Airworthiness Authority of the exporting country

Applicants for airworthiness certification that do not possess one of the acceptable documents must provide evidence of conformity by other means. This requirement may apply to—

- an aircraft imported from a country that does not issue an acceptable document
- an aircraft that is incomplete or otherwise non-airworthy was imported from a country that will not issue an acceptable document to such aircraft
- an aircraft imported under circumstances where it was not reasonably possible to obtain an export airworthiness certificate
- a Papua New Guinea aircraft that is being returned to service after some period without an airworthiness certificate
- a Papua New Guinea aircraft that is being returned to service after some period without a certificate of registration

Acceptable documents in the case of imported aircraft provide evidence of conformity to a type design and are normally in the form of an export airworthiness certificate.

The aim of having an alternative method of providing evidence of conformity is to achieve a similar assurance as to the aircraft's conformity to its type design as is provided by an export airworthiness certificate or similar document.

A statement of conformity that is acceptable to the CASA provides this evidence. Following the issue of an acceptable statement of conformity, the aircraft would be at the same stage as an aircraft which initially possessed acceptable evidence of conformity, such as an export airworthiness certificate, and the certification process would continue in the usual manner.

It is an applicant's responsibility to provide evidence of an aircraft's conformity

EM Eligibility Inspection

An eligibility inspection is not an acceptance by the CASA of the aircraft, nor is it any guarantee that the aircraft can conform to its type certificate. The eligibility investigation will inform the applicant of whether the information provided will support the eventual issue of an airworthiness certificate. The eligibility investigation will also indicate the acceptable form of the statement of conformity that must eventually be provided.

Importers should be aware that some aircraft may not be considered eligible for the eventual issue of an airworthiness certificate. In other cases the required standard for a statement of conformity required by the CASA may be difficult to achieve by the applicant.

The eligibility investigation will provide the CASA a known starting point for the assessment of the applicant's evidence of conformity. It will also provide the applicant an indication of who will be acceptable to the CASA for certifying a statement of conformity.

EM Application for Eligibility Inspection

To initiate the eligibility inspection the application for an airworthiness certificate should be made—

- for imported aircraft, before, or as soon as practicable after, the aircraft arrives in the country
- for Papua New Guinea aircraft, before, or as soon as practicable after, the decision to rebuild or return the aircraft to service is made

In both cases the application should be made before any work on the aircraft is carried out. Failure to do this deprives the CASA of the opportunity to determine a starting point for assessing the applicant's evidence of conformity. If the application is delayed the applicant may have no acceptable means of providing the evidence of conformity.

EM Eligibility Inspection Process

The eligibility inspection has two procedures to determine the eligibility status of the aircraft. The combination of these procedures may be varied according to the amount of information provided by the applicant. For example, a complete and serviceable aircraft would normally only require an examination of the documentation and not a physical inspection.

Documentation

The documentation supplied by the applicant as part of the initial application should be as complete as possible and should include—

- evidence of why an export airworthiness certificate was not reasonably obtainable
- the aircraft logbooks and maintenance records
- the last valid domestic airworthiness certificate
- a certified history of the aircraft since it was last airworthy
- for damaged or incomplete aircraft—
 - a complete assessment by a licensed aircraft maintenance engineer of any damage to the aircraft and missing components
 - a copy of any accident report

Inspection

A physical inspection of the aircraft to provide an assurance of the condition of the aircraft at the time of import or return to service, including an opportunity to—

- inspect the aircraft against the supporting documentation to ascertain the authenticity of the documentation
- estimate the work required to return the aircraft to conformity
- determine the acceptable or approved data to be used to return the aircraft to conformity
- determine the acceptable evidence of conformity to be provided by the applicant

EM Statement of Conformity

At the completion of any required work to return the aircraft to conformity, a statement of conformity will be required. Who is acceptable to certify such a statement will be determined during the eligibility investigation.

The holder of an Inspection Authorisation issued under Part 66 who is rated on the aircraft type will be acceptable to issue a statement of conformity for an aircraft found during the eligibility investigation—

- to be complete, airworthy, and accompanied by a full maintenance history
- to be expected to be returned to conformity using manufacturer's data and acceptable methods, techniques, and practices.

A design organisation certificated under Part 146 or the manufacturer may be required to issue the statement of conformity for an aircraft found during the eligibility investigation to be unairworthy and that the deviation from type conformity was significant, or significant components were missing, or the maintenance records were incomplete.

Applicants should note that life limited parts without appropriate supporting documentation will not be acceptable and evidence of their removal and replacement would be expected to be seen in any conformity report.

Aircraft whose model or identity is uncertain, such as when a manufacturer's data plate is missing, will not be eligible for certification.

EM Airworthiness Certification

Following the issue of an acceptable statement of conformity the aircraft is now at the same point as an aircraft which initially possessed acceptable evidence of conformity, and is ready for the normal airworthiness certification process.

EM 21.49 Duration of Certificate

Airworthiness certificates in the standard or restricted category will normally be issued as non-terminating documents however an annual Aircraft Airworthiness Review every 365 days from the date of issuance of the airworthiness certificate ensures the certificate remains current. Failing to carry out the annual Aircraft Airworthiness Review within the stipulated period will automatically invalidate the Airworthiness Certificate

Certificates with an expiry date may be issued where it is appropriate for the circumstances, such as where a certificate is issued in the restricted category for a special purpose, such as an international ferry flight, that is to be of a short duration.

EM 21.51 Transfer of Certificate

Under this rule, the airworthiness certificate must remain with the aircraft when it is transferred from one owner or operator to another. There is no holder of an airworthiness certificate, it is regarded as part of the aircraft.