



**WELLINGTON NEW ZEALAND**

**PURSUANT** to Section 28 of the Civil Aviation Act 1990

**I, MAURICE WILLIAMSON, Minister of Transport,**

**HEREBY MAKE** the following ordinary rules.

**SIGNED AT** Wellington

This *19* day of *December* 1994

by **MAURICE WILLIAMSON**

*Maurice Williamson*  
Minister of Transport

**Civil Aviation Rules**

**Part 21**

**Certification of Products and Parts**

*Docket Nr. 1003 and 1017*

**Civil Aviation Rules  
Part 21**

**Certification of Products and Parts**

## **RULE OBJECTIVE, EXTENT OF CONSULTATION, AND COMMENCEMENT**

The objective of Part 21, Subparts A, B and H is to provide a regulatory safety boundary for the type certification of aircraft, aircraft engines and propellers, the airworthiness certification of aircraft and to ensure that aircraft comply with standards providing an adequate level of safety.

In May 1990 the Air Transport Division of the Ministry of Transport published a notice of intention to carry out a complete review of the aviation regulatory system. This notice, in Civil Aviation Information Circular Air 3, listed the areas in which rules would be made and invited interested parties to register their wish to be part of the consultative process. This register was identified as the Regulatory Review Consultative Group. Sixty seven organisations and individuals registered their wish to be consulted in the development of airworthiness rules.

Draft documents of Subparts B and H were developed by the rules rewrite team and distributed to the members of the consultative group. An informal draft of Subpart B was published and distributed in June 1991. Four comments were received. An informal draft of Subpart H was published and distributed in February 1992. Two comments were received.

A period of informal consultation followed. This informal consultative process culminated in the issue of Notice of Proposed Rule Making (NPRM) for Subpart B under Docket Number 1017 NR on 10 July 1991 and the issue of Notice of Proposed Rule Making (NPRM) 93-1 for Subpart H under Docket Number 1003 NR on 17 February 1993.

The publication of the notice for Subpart B was advertised in the daily newspapers in the five main provincial centres on 11 July 1991. The publication of the notice for Subpart H was advertised in the daily newspapers in the five main provincial centres on Monday 17 February 1993. The notices were mailed to all members of the Regulatory Review Consultative Group and other parties, including overseas Aviation Authorities and organisations who were considered likely to have an interest in the proposal.

A period of eighty-two days was allowed for comment on the proposed rules for Subpart B. Eleven written submissions were received in response to this notice. A period of seventy days was allowed for comment on the proposed rules for Subpart H. Five written submissions were received in response to this notice.

These submissions were considered and where appropriate the proposed rules amended to take account of the concerns raised. The amendments also take into account some changes made to the Federal Aviation Regulations (FAR), the draft European Joint Aviation Requirements (JAR) on which some of the rules were based and those changes considered necessary to simplify the rules, to make the rules

clearer and more flexible and to cover the aviation and legal differences in New Zealand.

Subpart A was formed from parts of Subparts B and H and deals with general matters from these rules.

The rules as amended were then referred to and signed by the Minister of Transport.

Part 21, Subparts A, B, and H come into force on 1 July 1995.

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## Subpart A — General

### 21.1 *Applicability*

This Part prescribes rules governing—

- (1) the type certification of aircraft, aircraft engines and propellers to be manufactured in New Zealand; and
- (2) the type acceptance certification of aircraft types to be imported into New Zealand; and
- (3) the operating requirements for the holder of a type certificate; and
- (4) the airworthiness certification of aircraft.

### 21.3 *Definitions*

In this Part:

**Product** means an aircraft, aircraft engine, or propeller:

**Type certificate** includes—

- (1) the type design; and
- (2) the operating limitations; and
- (3) the type certificate data sheet; and
- (4) the applicable airworthiness design standards specified in Appendix C; and
- (5) for an aircraft type, the flight manual; and
- (6) any other conditions or limitations prescribed for the product type under this Part.

### 21.5 *[Reserved]*

### 21.7 *[Reserved]*

### 21.8 *Required Design Changes*

Where the Director issues an airworthiness directive for a product under Part 39, the holder of the type certificate for the product type shall—

- (1) if the Director determines that design changes are necessary to correct the unsafe condition of the product, submit appropriate design changes to the Director for approval, upon the Director's request; and
- (2) upon approval of the design changes, make the descriptive data covering the changes available to all operators of the product.

*[Until Part 39 comes into force, airworthiness directives are issued under regulation 173 of the Civil Aviation Regulations 1953]*

## **Subpart B — Type Certificates and Type Acceptance Certificates**

### **21.11 Applicability**

This Subpart prescribes rules governing—

- (1) the type certification of aircraft, aircraft engines and propellers to be manufactured in New Zealand; and
- (2) the type acceptance certification of aircraft types to be imported into New Zealand; and
- (3) the operating requirements for the holder of a type certificate.

### **21.13 Certificate Categories**

- (a) The following type certificates are granted under this Subpart:
  - (1) standard category type certificate for a product type to be manufactured in New Zealand;
  - (2) restricted category type certificate for an aircraft type to be manufactured in New Zealand.
- (b) The following type acceptance certificates are granted under this Subpart:
  - (1) standard category type acceptance certificate for an aircraft type to be imported into New Zealand;
  - (2) restricted category type acceptance certificate for an aircraft type to be imported into New Zealand.
- (c) A type certificate or a type acceptance certificate may be granted in both the standard and restricted categories if the certification requirements for each category are met.



(d) A restricted category type certificate or restricted category type acceptance certificate shall specify the operational purposes for which the aircraft type is certificated.

### **21.15 Eligibility**

A person may only apply for the grant of a type certificate for a product type if they are the holder of an applicable design organisation certificate issued under Subpart J.

*[Until Part 21, Subpart J comes into force, a design organisation certificate is a certificate of approval for design issued under regulation 176 of the Civil Aviation Regulations 1953]*

### **21.17 Application for Certificates**

(a) An application for the grant of a type certificate for a product type shall be made on form CAA 24021/01 and submitted to the Director with the following:

- (1) for an aircraft type, a three-view drawing of that aircraft type and available preliminary basic data;
- (2) for an aircraft engine type or propeller type, a description of the design features, the operating characteristics, and the proposed operating limitations.

(b) An application for the grant of a type certificate for a product type shall be effective for 3 years except—

- (1) for an aeroplane type with an MCTOW exceeding 5700 kg, where it is effective for 5 years; or
- (2) for a rotorcraft type with an MCTOW exceeding 2730 kg, where it is effective for 5 years; or
- (3) where the Director approves a longer period.

(c) An application for the grant of a type acceptance certificate for an aircraft type shall be made on form CAA 24021/02 and submitted to the Director.

### **21.19 Issue of Certificates**

(a) An applicant is entitled to a type certificate for a product type or a type acceptance certificate for an aircraft type if—

- (1) the applicant pays any applicable fees or charges prescribed by regulations made under the Act; and

- (2) the applicant meets the applicable certification requirements in 21.31 to 21.43 in a manner acceptable to the Director; and
  - (3) the granting of the certificate is not contrary to the interests of aviation safety; and
  - (4) for a type certificate, inspection and test of the product type confirms that the product type meets the applicable airworthiness design requirements.
- (b) Where a type certificate will not be granted within the time limit in 21.17(b), the applicant may—
- (1) submit a new application and comply with all the provisions of paragraph (a) applicable to an original application; or
  - (2) submit an application to extend the original application, and comply with the applicable airworthiness design standards specified in Appendix C, effective on a date selected by the applicant. The effective date shall precede the date of issue of the type certificate by a period no greater than the period established under 21.17(b) for the original application.

### **21.21 Changes Requiring New Type Certificate**

Each person who applies under Subpart D to change a product type issued with a type certificate shall make a new application for a type certificate where—

- (1) the Director determines that the proposed change in the design, configuration, power, power limitations for engines, speed limitations for engines, or weight, is so extensive that a substantially complete investigation of compliance with the airworthiness design requirements is required; or
- (2) for an aircraft type, the proposed change is to—
  - (i) the number of engines or rotors; or
  - (ii) engines or rotors using different principles of propulsion; or
  - (iii) rotors using different principles of operation; or
- (3) for an aircraft engine type, the proposed change is in the principle of operation; or
- (4) for a propeller type, the proposed change is in—
  - (i) the number of blades; or
  - (ii) the principle of pitch change operation; or

- (iii) the blade material.

*[Until Part 21, Subpart D comes into force, the application shall be made under section E.1 of the New Zealand Civil Airworthiness Requirements]*

### **21.23 Special Conditions**

The Director may prescribe special conditions for a product to establish a level of safety equivalent to the airworthiness design standards specified in Appendix C if the Director determines that the airworthiness standards do not contain adequate or appropriate safety levels because—

- (1) the product has novel or unusual design features relative to the design practices on which the applicable airworthiness design standards are based; or
- (2) the intended use of the product is unconventional.

### **21.25 Duration of Certificate**

- (a) A type certificate or a type acceptance certificate shall remain in force until it is suspended or revoked.
- (b) The holder of a type certificate or a type acceptance certificate that is revoked shall forthwith surrender the certificate to the Director.
- (c) The holder of a type certificate or a type acceptance certificate that is suspended shall forthwith produce the certificate to the Director for appropriate endorsement.

### **21.27 Transfer of Certificate**

- (a) The holder of a type certificate shall not transfer the certificate to a person other than the holder of a design organisation certificate issued under Subpart J, acceptable to the Director.
- (b) The holder of a type certificate shall, before transferring the certificate—
  - (1) notify the Director in writing, of the name and address of the transferee; and
  - (2) produce the certificate to the Director for amendment.

*[Until Part 21, Subpart J comes into force, a design organisation certificate is a certificate of approval for design issued under regulation 176 of the Civil Aviation Regulations 1953]*

## Type Certification Requirements

### 21.31 *Airworthiness Design Requirements*

(a) Each applicant for the grant of a type certificate for a product type shall provide the Director with evidence that—

- (1) the product type complies with the applicable airworthiness design standards specified in Appendix C effective at the date of application and any later amendment selected by the applicant; and
- (2) the product type complies with any special conditions prescribed by the Director under 21.23; and
- (3) any airworthiness design requirements not complied with are compensated for by factors providing an equivalent level of safety; and
- (4) for an aircraft type, no feature or characteristic makes it unsafe for the intended use.

(b) Where an applicant selects a later amendment under subparagraph (a)(1), the applicant shall provide evidence that the product type complies with any other amendment that the Director determines is directly related.

### 21.33 *Type Design*

Each applicant for the grant of a type certificate for a product type shall—

- (1) provide the Director with a type design which consists of—
  - (i) the drawings and specifications necessary to define the configuration and the design features of the product type which have been shown to comply with the applicable airworthiness design requirements; and
  - (ii) a list of those drawings and specifications specified in subparagraph (i); and
  - (iii) the information on dimensions, materials, and processes necessary to define the structural strength of the product type; and
  - (iv) the Airworthiness Limitations section of the Instructions for Continued Airworthiness, specified in the applicable airworthiness design standards specified in Appendix C; and

- (v) any other data necessary to allow, by comparison, the determination of the airworthiness of later products of the same type; and
- (2) identify each type design and each variant within the type design.

### **21.35 Inspections and Tests**

(a) Each applicant for the grant of a type certificate for a product type shall inspect and test a product of the type to ensure that—

- (1) the product complies with the applicable airworthiness requirements; and
- (2) the materials and product conform to the specifications in the type design; and
- (3) all parts of the product conform to the drawings in the type design; and
- (4) the manufacturing processes, construction and assembly conform to those specified in the type design.

(b) The applicant shall, after making the inspections and tests required under paragraph (a)—

- (1) permit the Director to perform any inspection and flight and ground testing that the Director may require; and
- (2) provide evidence that the product meets the requirements in subparagraphs (a)(2), (3) and (4); and
- (3) ensure that the product remains unchanged between the time that the product is shown to meet the requirements in subparagraphs (a)(2), (3) and (4) and presentation to the Director for testing.

### **21.37 Statements of Conformity**

(a) Each applicant for the grant of a type certificate presenting a product to the Director for tests under 21.35(b) shall provide the Director with a statement of conformity stating that the applicant has complied with the requirements of 21.35(b)(2) and (3).

(b) Each applicant for the grant of a type certificate for a product type shall provide the Director with a statement of conformity stating that the product meets the applicable type design.

### **21.39 Flight Tests**

(a) Subject to paragraphs (b) and (c), each applicant for the grant of a type certificate for an aircraft type shall make such flight tests as the Director may require to determine whether—

- (1) the aircraft type complies with the applicable airworthiness design requirements; and
- (2) the aircraft type and the aircraft components and equipment are reliable and function properly.

(b) The applicant shall ensure that, before making any tests required under paragraph (a)—

- (1) the aircraft complies with the structural requirements of the applicable airworthiness design standards specified in Appendix C; and
- (2) the aircraft has undergone the necessary ground inspections and tests; and
- (3) the aircraft conforms to the type design.

(c) Any tests required under paragraph (a) shall be conducted in accordance with procedures acceptable to the Director.

## **Type Acceptance Certification Requirements**

### **21.41 Airworthiness Design Requirements**

Each applicant for the grant of a type acceptance certificate for an aircraft type shall provide the Director with evidence that—

- (1) the aircraft type meets the applicable airworthiness design standards specified in Appendix C, effective at the date assigned in the foreign type certificate or an equivalent document, unless another date is specified by the Director; and
- (2) the aircraft type meets any special conditions imposed under the foreign type certification or prescribed by the Director under 21.23; and
- (3) any airworthiness design requirements not complied with are compensated for by factors providing an equivalent level of safety; and
- (4) no feature or characteristic of the aircraft type makes it unsafe for the intended use.

**21.43 Data Requirements**

- (a) Each applicant for the grant of a type acceptance certificate for an aircraft type shall provide the Director with—
- (1) evidence that the type design has been approved by a Contracting State by the issue of a type certificate or an equivalent document; and
  - (2) details of the airworthiness design requirements complied with, for the issue of the type certificate prescribed in subparagraph (1), including—
    - (i) the airworthiness design standards; and
    - (ii) the effective date of the standards; and
    - (iii) any special conditions imposed under the foreign type certification; and
    - (iv) any requirements not complied with and any compensating factors providing an equivalent level of safety; and
    - (v) any airworthiness limitations; and
  - (3) a list identifying the data submitted for the issue of the type certificate prescribed in subparagraph (1), showing compliance with the applicable airworthiness standards; and
  - (4) a copy of the flight manual approved under a foreign type certificate or, if the applicable design standards do not require a flight manual to be provided, a flight manual meeting the standards prescribed in Appendix C(c); and
  - (5) the illustrated parts catalogue; and
  - (6) where required by the Director—
    - (i) the maintenance manual for the aircraft type; and
    - (ii) all current service information issued by the manufacturers of the aircraft, aircraft engine and propeller; and
  - (7) evidence that the manufacturer has agreed to provide the Director with a copy of all amendments and re-issues of the documents prescribed in subparagraphs (4), (5) and (6).
- (b) The Director may specify the range of serial numbers or models of aircraft to which the application relates or redefine the applicability of the certificate if 21.41 and 21.43 are satisfied for any additional product.

## **Type Certificate Holder Requirements**

### **21.51 Availability**

Each holder of a type certificate shall make the certificate available to the Director for examination, upon the Director's request.

### **21.53 Records**

Each holder of a type certificate shall—

- (1) retain all relevant design information, drawings, test reports and inspection records for the product type for 2 years after the last example of the product type has been permanently withdrawn from service; and
- (2) make the design information, drawings, test reports and inspection records available to the Director, upon the Director's request.

### **21.55 Instructions for Continued Airworthiness**

Each holder of a type certificate shall—

- (1) provide at least one set of Instructions for Continued Airworthiness, prepared in accordance with the applicable airworthiness design standards specified in Appendix C, to each purchaser of the product, upon its delivery, or upon the grant of the first standard airworthiness certificate for the affected aircraft, whichever occurs later; and
- (2) make those Instructions, and any changes to the Instructions, available to any other person required by any CAR to comply with those Instructions; and
- (3) inform each owner of a product of the same type of the details of the system developed in accordance with 21.57.

### **21.57 System for Continued Airworthiness**

Each holder of a type certificate shall develop and maintain a system for receiving and analysing information relating to defects in the product type.

## **Subparts C - G [Reserved]**



## Subpart H — Airworthiness Certificates

### **21.171** *Applicability*

This Subpart prescribes rules governing the airworthiness certification of aircraft.

### **21.173** *Certificate Categories*

- (a) The following certificates are granted under this Subpart:
- (1) standard category airworthiness certificate:
  - (2) restricted category airworthiness certificate:
  - (3) special category airworthiness certificate:
    - (i) experimental certificate:
    - (ii) special flight permit.
- (b) The Director may prescribe operating conditions and limitations, and purposes on an airworthiness certificate.
- (c) An airworthiness certificate may be granted in both the standard and restricted categories if—
- (1) the aircraft meets the certification requirements for each category when in the configuration for that category; and
  - (2) the aircraft can be converted from one configuration to the other by removing or adding equipment by simple mechanical means.
- (d) An aircraft that is internally equipped for dispensing substances on agricultural aircraft operations to an extent which makes it inappropriate for use in air transport operations, shall only be granted a restricted category airworthiness certificate for the purpose of agricultural aircraft operations.

### **21.175** *Application for Certificates*

- (a) An application for the grant of a standard or restricted airworthiness certificate shall be made on form CAA 24021/05 and submitted to the Director.
- (b) An application for the grant of an experimental certificate shall be made on form CAA 24021/06 and submitted to the Director.
- (c) An application for the grant of a special flight permit shall be made—
- (1) on form CAA 24021/06 and submitted to the Director; or

- (2) by another means of application acceptable to the Director.

### **21.177 Issue of Certificates**

An applicant is entitled to an airworthiness certificate for an aircraft if—

- (1) the applicant pays any applicable fees or charges prescribed by regulations made under the Act; and
- (2) the applicant meets the applicable certification requirements in 21.191 to 21.195 in a manner acceptable to the Director; and
- (3) the granting of the certificate is not contrary to the interests of aviation safety; and
- (4) for a special category airworthiness certificate, the level of safety is adequate for the purposes for which the aircraft is to be used.

### **21.179 Duration of Certificate**

(a) An airworthiness certificate remains in force until it expires, if an expiry date has been prescribed by the Director, or until it is suspended or revoked, provided that—

- (1) the aircraft remains a New Zealand registered aircraft; and
- (2) for aircraft with a standard or restricted category airworthiness certificate, maintenance is performed in accordance with Part 91 and Part 43.

(b) The holder of an airworthiness certificate that is revoked shall forthwith surrender the certificate to the Director.

(c) The holder of an airworthiness certificate that is suspended shall forthwith produce the certificate to the Director for appropriate endorsement.

*[Until Part 91 comes into force, the requirements for maintenance are prescribed in Part VII of the Civil Aviation Regulations 1953 and Volume 1 of the New Zealand Civil Airworthiness Requirements]*

### **21.181 Transfer of Certificate**

Standard or restricted category airworthiness certificates and experimental certificates are transferred with the aircraft.

## Certification Requirements

### **21.191 Standard and Restricted Category Requirements**

- (a) Each applicant for the grant of a standard or restricted category airworthiness certificate for an aircraft shall provide the Director with evidence that—
- (1) for a new aircraft type manufactured by the holder of a manufacturing certificate issued under Subpart G—
    - (i) the applicant is the manufacturer; and
    - (ii) a statement of conformity has been issued by that manufacturing organisation; or
  - (2) for an imported aircraft—
    - (i) a standard or restricted category type acceptance certificate has been issued for the aircraft type under Subpart B; and
    - (ii) a statement of conformity has been issued by, or in accordance with the rules of, the airworthiness authority of the exporting country.
- (b) The applicant shall, in addition to paragraph (a), provide the Director with evidence that—
- (1) the aircraft conforms to an applicable type certificate, or type acceptance certificate, issued under Subpart B; and
  - (2) any modification to the aircraft conforms to design changes approved for the type; and
  - (3) the aircraft complies with any applicable airworthiness directives issued under Part 39; and
  - (4) the aircraft is issued with the appropriate flight manual, and any logbooks, repair and alteration forms, and documents, that the Director may require; and
  - (5) the aircraft is a New Zealand registered aircraft and displays nationality and registration marks in accordance with Part 47; and
  - (6) the aircraft is identified in accordance with Subpart Q; and
  - (7) the aircraft conforms with any applicable additional airworthiness requirements prescribed in Part 26; and

- (8) the aircraft has, within 60 days prior to application, undergone an annual or 100-hour inspection in accordance with Part 43 or an equivalent inspection acceptable to the Director; and
- (9) the aircraft is in a condition for safe operation.

*[Until Part 39 comes into force, airworthiness directives are issued under regulation 173 of the Civil Aviation Regulations 1953.]*

*Until Part 47 comes into force, aircraft markings are prescribed in regulations 156 to 160 of the Civil Aviation Regulations 1953.*

*Until Part 21, Subpart Q comes into force, the identification requirements are prescribed in section C.4 of Volume 1 of the New Zealand Civil Airworthiness Requirements.*

*Until Part 26 comes into force, the additional airworthiness requirements are prescribed in the Civil Aviation Regulations 1953 and section C4 of the New Zealand Civil Airworthiness Requirements]*

### **21.193 Experimental Certificate Requirements**

(a) Each applicant for the grant of an experimental certificate for an aircraft shall provide the Director with—

- (1) a statement specifying the purpose for which the aircraft is to be used; and
- (2) sufficient data to identify the aircraft; and
- (3) any information that the Director may require to safeguard the public; and
- (4) flight manuals, maintenance manuals and such documents relating to the operation of the aircraft as the Director may require; and
- (5) evidence that—
  - (i) the aircraft complies with any design changes necessary for the safe operation of the aircraft that the Director may require; and
  - (ii) the aircraft is a New Zealand registered aircraft and displays nationality and registration marks in accordance with Part 47; and
  - (iii) the aircraft is identified in accordance with Subpart Q.

*[Until Part 47 comes into force, aircraft markings are prescribed in regulations 156 to 160 of the Civil Aviation Regulations 1953.]*

*Until Part 21, Subpart Q comes into force, the identification requirements are prescribed in section C.4 of Volume 1 of the New Zealand Civil Airworthiness Requirements]*

(b) Each applicant for the grant of an experimental certificate for an aircraft to be used for the purpose of research and development or showing compliance with rules shall, in addition to paragraph (a), provide the Director with—

- (1) the purpose of the test; and
- (2) the estimated time or number of flights required for the test; and
- (3) details of the areas over which the test will be conducted; and
- (4) except for aircraft converted from a previously certificated type without appreciable change in the external configuration, three-view drawings or three-view dimensional photographs of the aircraft.

(c) Each applicant for the grant of an experimental certificate for an aircraft to be used for a purpose other than those prescribed in paragraph (b), shall, in addition to paragraph (a), provide the Director with evidence that—

- (1) a period of flight evaluation has been completed showing—
  - (i) the aircraft is controllable throughout its normal range of speeds and throughout all the manoeuvres to be executed; and
  - (ii) the aircraft has no hazardous operating characteristics or design features; or
- (2) the aircraft conforms to a type design that has been shown to provide an acceptable level of safety for the purpose by—
  - (i) showing compliance with an appropriate airworthiness design standard; or
  - (ii) providing information concerning the airworthiness history of aircraft that conform to the type design.

### **21.195 Special Flight Permit Requirements**

Each applicant for the grant of a special flight permit for an aircraft shall provide the Director with a statement containing—

- (1) the purpose of the flight; and
- (2) the proposed itinerary; and
- (3) the crew required to operate the aircraft and its equipment; and

- (4) details of any non-compliance with any applicable airworthiness requirements; and
- (5) any restriction the applicant determines necessary for the safe operation of the aircraft; and
- (6) any other information the Director may require for the purpose of prescribing operating limitations.

### **21.197 Special Flight Permits—Continuing Authorisation**

A special flight permit with a continuing authorisation may be granted to—

- (1) the holder of an air operator certificate issued under Part 119, for the purpose of flying aircraft to a base where maintenance or alterations are to be performed; and
- (2) the holder of a manufacturing organisation certificate issued under Subpart G, for the purpose of flight testing new production aircraft manufactured by the certificate holder.

*[Until Part 119 comes into force, the holder of an air operator certificate is the holder of an air service certificate issued under regulation 136 of the Civil Aviation Regulations 1953.]*

*Until Part 21, Subpart G comes into force, the holder of a manufacturing organisation certificate is the holder of a certificate of approval for the purpose of construction issued under regulation 176 of the Civil Aviation Regulations 1953]*

## **Subparts I - Q [Reserved]**

## Appendix A — Transitional Arrangements

- (a) A certificate of type approval issued for a standard category aircraft under regulation 163 of the Civil Aviation Regulations 1953 before Subpart B came into force shall be deemed a standard category type certificate for the purpose of the CAR.
- (b) A certificate of type approval issued for an agricultural or restricted category aircraft under regulation 163 of the Civil Aviation Regulations 1953 before Subpart B came into force shall be deemed a restricted category type certificate for the purpose of the CAR.
- (c) Where approved by the Director, aircraft of a type and model, issued with a certificate of airworthiness under regulation 161 of the Civil Aviation Regulations 1953 before Subpart B came into force shall be deemed to have a type acceptance certificate in the same category for the purpose of the CAR.
- (d) A standard category certificate of airworthiness for an aircraft issued under regulation 161 of the Civil Aviation Regulations 1953, before Subpart H came into force, shall be—
- (1) deemed a standard category airworthiness certificate for the purpose of the CAR; and
  - (2) subject to the same conditions and limitations prescribed on the original certificate.
- (e) An agricultural or restricted category certificate of airworthiness for an aircraft issued under regulation 161 of the Civil Aviation Regulations 1953, before Subpart H came into force, shall be—
- (1) deemed a restricted category airworthiness certificate for the purpose of the CAR; and
  - (2) subject to the same conditions and limitations prescribed on the original certificate.
- (f) A permit to fly issued for an amateur-built aircraft under regulation 161A of the Civil Aviation Regulations 1953, before Subpart H came into force, shall be—
- (1) deemed an experimental certificate for the purpose of the CAR; and
  - (2) subject to the same conditions and limitations prescribed on the original certificate.

## Appendix B [Reserved]

## Appendix C — Airworthiness Design Standards

(a) Subject to paragraph (c), the standard category airworthiness design standards are—

- (1) any of the following Federal Aviation Regulations issued by the Federal Aviation Administration of the United States of America:
  - (i) Part 23 — Airworthiness Standards: Normal, Utility, Acrobatic, and Commuter Category Airplanes (dated 10 May 1993), except 23.785 and 23.807;
  - (ii) Part 25 — Airworthiness Standards: Transport Category Airplanes (dated 29 March 1993);
  - (iii) Part 27 — Airworthiness Standards: Normal Category Rotorcraft (dated 16 September 1991);
  - (iv) Part 29 — Airworthiness Standards: Transport Category Rotorcraft (dated 16 September 1991);
  - (v) Part 31 — Airworthiness Standards: Manned Free Balloons (dated 18 August 1990);
  - (vi) Part 33 — Airworthiness Standards: Aircraft Engines (dated 16 August 1993);
  - (vii) Part 35 — Airworthiness Standards: Propellers (dated 18 August 1990); or
- (2) a set of airworthiness design standards that the Director determines—
  - (i) comply with Annex 8 to the Convention; and
  - (ii) provide equivalent levels of safety to those airworthiness design standards prescribed in subparagraph (1).

(b) Subject to paragraphs (c) and (d), the restricted category airworthiness design standards are—

- (1) any of the Federal Aviation Regulations prescribed in subparagraph (a)(1), excluding those requirements that the Director determines inappropriate for the purpose for which the aircraft is to be used; or
- (2) a set of airworthiness design standards that the Director determines appropriate for the purpose for which the aircraft is to be used.

(c) Airworthiness design standards for aircraft which, on the effective date, do not require a flight manual to be provided, shall include a flight manual containing—



- (1) the operating limitations and information required to be provided by the applicable airworthiness design standard, in the form of a manual, markings or placards; and
  - (2) for aeroplanes and rotorcraft, the maximum ambient atmospheric temperatures for which engine cooling was demonstrated, in the performance information section of the flight manual.
- (d) Airworthiness design standards for aeroplanes to be certificated in the restricted category for the purpose of agricultural aircraft operations shall include—
- (1) the crew protection requirements prescribed in Section .35 of Appendix B of the United States of America Civil Aeronautics Manual 8 (dated 1 February 1965); and
  - (2) for an aeroplane fitted with internal dispensing equipment, a placard indicating representative dump times, in full view of the pilot; and
  - (3) for an aeroplane fitted with internal dispensing equipment, equipment capable of jettisoning not less than 80% of the aeroplane's maximum load of agricultural material within 5 seconds when configured for dispensing superphosphate or similar material.

## CONSULTATION DETAILS

*(This statement does not form part of the rules contained in Part 21, Subparts A, B, and H. It provides details of the consultation undertaken in making the rules.)*

### **Background to the Rules**

In April 1988 the Swedavia - McGregor Report on Civil Aviation Regulation in New Zealand was completed. This report concluded that aviation safety should be a joint responsibility of both the Civil Aviation Authority and the participants in the civil aviation system. There was widespread agreement that a complete overhaul of the civil aviation regulatory system was necessary. As a result, the Government enacted the Civil Aviation Act 1990 to implement the first stage of the report's recommendations. To implement the remaining recommendations of the report the Civil Aviation Authority is undertaking a complete review and rewrite of all existing secondary civil aviation legislation.

Considerable research was carried out to determine the format for the new legislation. The Authority decided that the most suitable legislative framework should incorporate the advantages from the system being developed by the European Joint Aviation Authorities (JAA) and from the existing United States of America Federal Aviation Administration (FAA) system. The European Joint Aviation Requirements (JAR) are being structured in a manner similar to the Federal Aviation Regulations (FAR) of the FAA and aim to achieve maximum harmonisation while allowing for national variations.

New Zealand's revised requirements will be published in several parts as Civil Aviation Rules (CAR). Each Part will set out a series of individual rules that relate to a particular aviation activity.

Accompanying each Part of the CAR will be at least one associated Advisory Circular (AC). These will expand, in an informative way, specific requirements of the CAR Part and show an acceptable means of compliance. For example, an AC will contain the minimum acceptable practice or practices that will be necessary to meet the rules.

The CAR numbering system is based on the FAR Part numbering system. As a general principle the subject matter of a CAR Part will harmonise with the FAR, although the title may differ to suit New Zealand terminology. Where a proposed CAR Part does not readily equate with a FAR number code, a number has been selected that does not conflict with any existing FAR Part.

The FAR has been used as the start point for the development of many of the CAR, but there are likely to be significant differences in the content of each Part of the rules. The structure and content of Part 21 Subparts A, B and H follow that

of the FAR. Changes have been made to conform to New Zealand legal practices and terminology.

The objective of the new rules system is to strike a balance of responsibility between the State Authority and those who provide services and exercise privileges in the civil aviation system. This balance must enable the State Authority to maintain continuing regulatory control and supervision while providing the maximum flexibility for participants to develop their own means of compliance.

Section 7 of the Civil Aviation Act 1990 (the Act) allows the Civil Aviation Rules to require participants to hold an aviation document to carry out particular activities. Section 12 of the Act requires the holders of documents to carry out their activities safely, and in accordance with the relevant prescribed safety standards and practices.

### ***Notice of Proposed Rule Making***

The Authority issued Notice of Proposed Rule Making under Docket Number 1017 NR on 10 July 1991 for Subpart B, and Docket Number 1003 NR on 17 February 1993 for Subpart H to provide public notice of, and the opportunity for comment on, the proposed new rules. These Notices proposed the introduction of Civil Aviation Rules Part 21, Subparts B and H to provide a regulatory safety boundary for the issue of airworthiness certificates, and type certificates for aircraft, aircraft engines and propellers.

### ***Supplementary Information***

All comments made on the Notice of Proposed Rule Making (NPRM) are available in the Rules Docket for examination by interested persons. A report summarising each substantive contact with the Civil Aviation Authority contact person concerning this rule making has been filed in the docket.

### ***Availability of the Document***

Any person may view a copy of these rules at Aviation House, 1 Market Grove, Lower Hutt. Copies may be obtained from the Civil Aviation Authority of New Zealand, PO Box 31-441, Lower Hutt 6315.

## **Summary of Comments on Docket Number 1017 NPRM**

### **1. General Comments on the NPRM**

Eleven written submissions and one telephoned submission were received. Four of the submissions fully accepted the proposed rule and another offered no comments. Four submissions supported the rule or did not object to it but addressed a single issue. Three submissions covered a range of subjects.

#### **1.1. Components**

One commenter considered that coverage should include components, in addition to engines and propellers. The commenter considered that the term "aircraft" means essentially the structure and ancillary parts and does not include components and that the title should be "Type Certification of Aircraft and Aircraft Components". The commenter stated that the definition of components should be the same as the definition in FAR Part 145.

**CAA response:** The CAA considers this unnecessary as a type certificate issued for an aircraft, aircraft engine or propeller is consistent with the Swedavia - McGregor proposal of adopting the FAR system. Subparts K, O and P will provide for the design approval of materials, parts and appliances as in the FAR Part 21 and the proposed JAR Part 21.

Components are included in the aircraft type design requirements and must comply with the applicable airworthiness design standards. For example, the engines, control systems, flight instruments, and other components of an aeroplane must comply with the applicable airworthiness design standards for the issue of a type certificate. These are a necessary part of the type design requirements.

#### **1.2 Multiple Certificates**

One commenter stated that it is not necessary to have separate type certificates where certificates are to be issued in both categories and that the FAA provide for the dual category certificate on the same type certificate and type certificate data sheet.

**CAA response:** The CAA agrees that the rules should allow for the issue of dual certificates and this has been incorporated in 21.13(b).

#### **1.3 Relationship with foreign rules**

The following is a summary of comments made by one commenter concerning the relationship between the New Zealand and foreign rules:

"It appears that an attempt is being made to select or delete specific paragraphs from either FAR, British Civil Airworthiness Requirements (BCAR) and JAR in order to meet existing New Zealand requirements and/or New Zealand legal practice and terminology. In the interest of New Zealand aviation which has in the past been beset with differing requirements taken from foreign rules, why not keep it as simple as possible and adopt the following without changes thus:

- (1) for simplification, all aircraft of American and British origin to comply with the FAR and BCAR respectively:
- (2) for aircraft from other countries, the design must be certified in accordance with FAR or BCAR by the country of origin:
- (3) US manufactured aircraft imported from Britain that have been changed to comply with BCAR to be deemed to be of British origin and operated in New Zealand under BCAR rules:
- (4) the design of New Zealand manufactured products to be in accordance with the FAR:
- (5) where deemed necessary the addition of JAR to be incorporated:
- (6) it is considered that the existing FAR are the most comprehensive set of rules in existence and should not be interfered with in any way whatsoever:
- (7) it is recommended that the CAR be changed to accept both FAR and BCAR without alteration whatsoever.

Any attempt to alter specific paragraphs or rules to suit New Zealand legal requirements usually results in confusion."

**CAA response:** This Subpart follows the substance of the FAR rules and adopts the FAR airworthiness design standards proposed by the Swedavia - McGregor Report. It does not specifically mention the British design standards but states that design standards equivalent to the FAR may be accepted and lists examples in the Advisory Circular.

The CAA does not consider that the design standards applicable for aircraft exported from Britain must be those of the BCAR and that New Zealand manufactured aircraft and aircraft exported from the USA must comply with the FAR standards. A principle applied for developing the rules was to make them as flexible as possible. The commenter's proposals would make them less flexible. Both the US and British design authorities accept foreign design standards for imported aircraft. The commenter's proposal could make it virtually impossible to accept some aircraft exported from Britain and the USA that had previously been imported into those countries.

The CAA considers that the rules should not prevent the acceptance of New Zealand manufactured aircraft that comply with design standards other than the FAR standards. This is to allow for the issue of type certificates for aircraft manufactured in New Zealand that were previously type certified in foreign countries to design standards that are accepted as FAR equivalents.

Rule 21.51(a)(1) allows the Director to accept the design standards effective at the date assigned in the foreign certificate. A significant number of aircraft types that were manufactured in New Zealand were accepted on this basis under the previous rules. If this was changed, the cost and time involved for the issue of type certificates for some aircraft could increase so much that their manufacture in New Zealand might not be feasible. However, for aircraft that are to be initially type certificated in New Zealand, the Director will encourage designers to use the FAR standards.

The CAA considers it inevitable that there will be changes to the format of the FAR and JAR to suit New Zealand's legal requirements as the CAR have been created within the boundary of the Civil Aviation Act 1990. The FAR and JAR are made up of various styles and formats, while the CAR are being developed along consistent guidelines and formats to ensure that they conform to the requirements of the Act.

#### 1.4 Authority

One commenter states that the word "Authority" should be more clearly defined and related to one responsible person only. The reason for this was that decisions made by individual members of the Civil Aviation Authority have regularly conflicted with previous staff's decisions. This lead to confusion and frustration at all levels in the industry.

**CAA response:** The term "Authority" is defined in section 2 of the Civil Aviation Act 1990 as "the Civil Aviation Authority of New Zealand established by section 72A of [the] Act".

#### 1.5 Numbering Format

A commenter suggested that a pure numbering format be used, for example, 21.115.01.01.03 should replace 21.115(d)(1)(iii).

**CAA response:** The CAA does not agree with this proposal. The CAR follow the FAR and JAR numbering systems and this format is consistent with the Swedavia - McGregor proposal.

## 1.6 Special Conditions

A commenter asked whether there should be specific procedures for aircraft that have been subject to "special conditions" in a third country.

**CAA response:** The CAA considers that special conditions applied by the original certificating country will normally be automatically accepted. The effect of special conditions imposed by other countries could be accepted by approving modifications, if these modifications did not conflict with the airworthiness design standards, including special conditions, for type certification in New Zealand. Alternatively a separate type acceptance certificate could be issued for an aircraft imported from a third country. This subject will be addressed in an AC.

## 1.7 Agricultural Aircraft

The Guild of Air Pilots and Air Navigators noted that comment was made in the background section of the NPRM for Subpart H about changes in the agricultural aviation area. Having made submissions on this subject in response to NPRM 92-7, Part 137, the Guild awaits the publication of both Part 21, Subpart B and Part 137 with interest.

**CAA response:** The CAA has made the proposed changes to Part 21, Subpart B relating to agricultural aircraft and has taken the Guild's submissions into account.

## 2. Specific comments on Rules proposed in the NPRM.

### 2.1 21.12 Definitions

One commenter suggested that the use of the term "product" was confusing and that it would be preferable to replace it with the words of the definition "aircraft, aircraft engine or propeller".

**CAA response:** The CAA considers that the term "product" should be retained. The term, as defined in Subpart A, is used approximately thirty times in this Subpart and over 200 times in Part 21 itself. The use of the term is the same as in Subpart B of the FAR Part 21 and the proposed JAR Part 21. One of the principles being applied is to follow the wording of the FAR and JAR where possible and the single word simplifies the wording by replacing five words.

### 2.2 21.16 Special Conditions

One commenter asked what rule or guidance the Director will use to establish a safety standard in 21.16(c) that allows the Director to apply design standards beyond those specifically defined in Subpart B. The commenter states that this is not acceptable as all rules must be contained within these rules.

**CAA response:** The CAA considers that the Director must have the discretion to apply additional design standards where this is necessary to ensure an adequate level of safety.

Appendix C(c) has been added which will reduce the need to apply special conditions. It makes flight manuals an airworthiness requirement for all aircraft even if the effective date of the applicable design standards is prior to the date when flight manuals were required by the standards. In the NPRM, flight manuals would probably have been required to be provided under special conditions when not required by the design standards. The Civil Aviation Regulations 1953 require all aircraft to have flight manuals.

### 2.3 21.17 Designation of Applicable Requirements

2.3.1 One commenter asks what rule or guidance the Director will use to establish a safety standard for 21.17(a)(2) that allows the Director to apply design standards beyond those specifically defined in Subpart B. The commenter states that this is not acceptable as all rules must be contained within these rules.

**CAA response:** The CAA considers it must have the discretion to apply additional design standards where this is necessary to ensure an adequate level of safety. Therefore in this instance, it is necessary to allow the Director to apply later effective dates for the standards than those which were assigned for the original type certification of imported aircraft. It is anticipated that this will only be applied when the system of the importing country is not consistent with that of the New Zealand rules.

2.3.2 One commenter states that in Rule 21.17(d)(2) "airworthiness requirements" should read "airworthiness standards".

**CAA response:** Although the term "requirements" follows the FAR and proposed JAR wording, the CAA agrees with the commenter and has made the suggested change in order to make it consistent with the wording of other parts of the Rule.

### 2.4 21.29 Issue of Type Acceptance Certificate for Imported Aircraft

2.4.1 One commenter stated that the type acceptance requirements are excessive and ambiguous and that we should have a system similar to Australia's for automatic acceptance of direct imports from designated countries of manufacture and procedures for the remainder.

**CAA response:** The CAA considers that the introduction of the type acceptance certificate in the place of the present First of Type certification process will facilitate the import of aircraft. The new process will allow an applicant, either a



foreign manufacturer, their New Zealand representative, or an individual importer to apply for a type acceptance certificate prior to bringing an aircraft to New Zealand. An applicant for a type acceptance certificate will be required to present evidence, as detailed in the rule, that a type certificate has been granted by a Contracting State.

The new process greatly reduces the documentation required to be submitted to support the application in comparison with the present process. Once the type acceptance certificate is granted an aircraft covered by the certificate can be presented to the CAA with confidence that, provided it conforms to the type acceptance certificate, it will be granted an Airworthiness Certificate.

The Australian Civil Aviation Orders allow the Australian CAA to send technical teams overseas to evaluate compliance with the Australian requirements for the issue of first of type certificates of airworthiness. This was done recently in respect of a New Zealand aircraft type to be exported to Australia. The New Zealand CAA has not sent teams overseas for this purpose since the early 1960s. It only intends to do so under the new rules in exceptional circumstances. Bilateral agreements with foreign aviation authorities may be able to provide for the automatic issue of type acceptance certificates where those authorities fully certify compliance with the New Zealand Rules.

**2.4.2** A commenter questions whether inspections are to be conducted by the CAA prior to the issue of a type acceptance certificate and states that, if the inspection was to determine what the type acceptance standard should be, that process is unacceptable.

**CAA response:** It is not intended to conduct inspections prior to the issue of a type acceptance certificate. There is no requirement for an aircraft to be presented during the process. The type acceptance certificate will be granted on the basis of an audit of the documents submitted and the process that led to the issue of the foreign type certificate.

Once an application is made for the issue of an Airworthiness Certificate then the aircraft must be presented. The Director will require an inspection to ensure that the particular aircraft conforms to the type acceptance certificate, and by implication with the original type certificate, and is in a safe condition for operation.

**2.4.3** Another statement made by a commenter is that the procedures presume aircraft are imported from the country of manufacture. Often this is not the case and thus foreign special conditions applied by the airworthiness authority of the exporting country will be incorporated in the aircraft. These changes will not be under the control of the original manufacturer or the authority of the country of manufacture.

**CAA response:** The CAA agrees that the procedures were restricting and they have been amended. Rule 21.51 requires that the aircraft meets the applicable airworthiness design standards including airworthiness design standards acceptable to the Director, while rule 21.53 requires that a foreign type certificate or equivalent document has been issued by a Contracting State. No mention is made of whether it is from the manufacturing country or country of importation.

## 2.5 21.26 Airworthiness Design Standards for Restricted Type Certificate

One commenter made the following statements:

"In the US (and many other countries) agricultural aircraft may operate in the restricted category and for this category of aircraft, alternative certification standards are permitted. Historically, the most common alternative certification standard has been Civil Aeronautics Manual 8 (CAM 8) and a substantial number of US agricultural types have been certified against this requirement. It is important that an alternative means of certifying the agricultural category aircraft be made available. A rule having the character and intent of FAR 21.25 would serve this project well."

**CAA response:** The CAA agrees with the commenter. The NPRM for Part 21, Subpart H, proposed changes to Part 21, Subpart B regarding the type certification of aeroplanes to be used on agricultural operations. One proposal was that agricultural aeroplanes adopt the USA standards of CAM 8, which prescribe crew and aircraft protection standards and the jettison requirements contained in AC21-16 of Subpart B.

A proposal was also made that the airworthiness design standards for agricultural aircraft would be prescribed in Subpart B rather than in associated AC's and these changes have now been incorporated in the Rule.

## 3. Advisory Circulars

### 3.1 AC21-16

A commenter stated that, although AC21-16 Special Conditions—Type Certification was for standard category classification, it contains special conditions for agricultural aircraft. This is at variance with the NPRM statement that agricultural aircraft will have restricted category classification.

**CAA response:** The CAA recognises the difficulty with this and the Rule has now been changed. It was originally intended that agricultural aircraft could be certificated in the standard category as in the previous system, but would be certificated in the restricted category, when the normal category weight limit was extended.

Certificates may now be issued in both the standard and restricted categories. Aircraft will now be required to be certificated in the restricted category when performing agricultural aircraft operations using internal dispensing equipment. This links all the special agricultural airworthiness standards to the restricted category. The basic airworthiness design standards for agricultural aircraft are in the Rule. The AC does not list agricultural aircraft standards as special conditions.

### 3.2 AC21-21

A commenter stated that the equivalent standards in AC21-21 should only be for type certification. Thus (a) and (c) are not necessary and should be deleted.

**CAA response:** The CAA considers that rules should not prevent the acceptance of New Zealand manufactured aircraft that comply with design standards other than the FAR standards. Aircraft to be manufactured in New Zealand that were previously issued with a type certificate in foreign countries, to other design standards, may be accepted as equivalents to the FAR standards.

British Standards (BCAR) are listed in paragraph (a) and the USA standards (CAR) are listed in paragraph (c). The Director will be able to accept foreign design standards effective on the date of original foreign certification for the issue of type certificates. Therefore the BCAR and CAR should continue to be listed as equivalent design standards.

The AC will state that listed equivalent airworthiness design standards which are no longer effective, will only be accepted if the aircraft has been certificated under those standards in that country.

### 3.3 AC21-25

3.3.1 Another comment was that AC21-25 states that the restricted category certification is not significantly lower than the standard category certification. None of the standards for one or two occupant aircraft published in AC21-25 can be construed as being a standard anything approaching FAR 23 or equivalent.

**CAA response:** The CAA considers that the design standards listed in the proposed AC are simpler than those of FAR 23. They only apply to small aircraft with limitations ensuring that the aircraft have a low level of kinetic energy. Maximum weights and stalling speed limits are well below those of FAR 23 and this ensures a level of safety not significantly below that of FAR 23. Recent changes to FAR Part 21 and associated AC confirms this.

In some cases the level of safety for special operations need to be equivalent to that for the standard category. Therefore, the wording in Appendix A(b)(2) has been amended to state that restricted type certificate standards may be design

standards that the Director finds appropriate for the purposes for which the aircraft is to be used.

**3.3.2** A commenter stated that "agricultural overload formulas" in AC21-25 are not inappropriate standards, and what they substitute for are the inappropriate standards.

**CAA response:** The CAA agrees with the commenter. The term "inappropriate standards" is used in the FAR and the CAA believes that the FAA system sometimes associates substitutes with inappropriate standards. Part 137 permits aeroplanes engaged in agricultural aircraft operations to take off at weights greater than the stated limitation in the flight manual. Therefore, the overload formula is no longer addressed as an inappropriate standard substitute.

**3.3.3** The Aviation Industry of New Zealand Inc. (AIA) stated that the Committee of the AIA's Agricultural Aviation Division considered that it would be appropriate for rules covering the overloading of agricultural aircraft to be included within Part 137. It stated that such rules are not considered appropriate for Part 21, Subpart B and should be removed from it.

**CAA response:** The CAA accepts AIA's suggestion that the operational rules for overloading should be contained in Part 137. The rule has been amended to take this into account. Part 137 now permits aeroplanes performing agricultural aircraft operations to take off at weights greater than the stated limitation in the flight manual.

#### **3.4 AC21-29**

A commenter asked whether the AC for type acceptance certificates should provide more definitive statements on what the differences are likely to be from the basic principle of accepting a foreign type certificate from major foreign manufacturing countries.

**CAA response:** The CAA is currently considering how additional and retroactive airworthiness requirements should be presented. The FAA and JAA are considering developing a new rule, Part 26, to contain additional and retroactive requirements and it is likely that New Zealand will follow this direction. Some of the existing additional requirements will, where appropriate, be placed in operational rules, such as Part 91, Part 135, or Part 121, others will be placed in the new Part 26. Until these new rules are developed the present additional and retroactive airworthiness requirements will be retained and applied prior to issue of an airworthiness certificate.

### **Summary of comments to Docket Number 1003 NPRM**

Five letters were received. One letter had no comment on Part 21 Subpart H. Seventeen issues were raised by the commenters.

#### **1. Specific comments on Rules proposed in the NPRM**

##### **1.1 21.173 Eligibility**

The **New Zealand Airline Pilots' Association (ALPA)** considered that specific reference in the Rule to the form number was unduly inhibiting. It recommended the use of FAR wording.

**CAA response:** The CAA believes that the Civil Aviation Rules should be consistent. The inclusion of the application form's number follows the precedent set by previously issued Civil Aviation Rules, so the form number has been retained.

##### **1.2 21.175 Airworthiness Certificates: Classification**

**1.2.1 ALPA** had grave doubts about the efficacy of the classifications proposed in 21.175. It doubted if the proposed terminology was in fact simpler than that of the FAR. The Association strongly recommended the adoption of the FAR' system of classification-specifically, two category of airworthiness certificates, standard and special.

**CAA response:** The CAA agrees with the difficulty of the terminology so has made a change following the FAR terminology. Experimental certificates and special flight permits are now both classified as special category airworthiness certificates. The airworthiness certificate is therefore now one overall term for all types of airworthiness flight authorisations.

**1.2.2 ALPA** was particularly concerned at the proposed creation of recreation flight permits which appeared to have no corollary in the FAR.

**CAA response:** The CAA agrees with ALPA's concerns. It has therefore adopted the more commonly used term "experimental certificate" that replaces the originally proposed recreational and experimental category flight permits.

The term "experimental certificate" is being proposed for the new Australian rules and is commonly used by New Zealand's amateur aircraft builders.

##### **1.3 21.176 Inspections and tests**

**1.3.1 ALPA** doubted that FAR 21.181(b) covered the proposed 21.176 as the latter only applied to applicants for airworthiness certificates or flight permits and

not to the owner, operator or bailee of an aircraft for the duration of the relevant document as in the FAR. It strongly recommended the insertion of a provision that required, upon request, an aircraft to be made available for inspection by the CAA for duration of the airworthiness certificate or flight permit.

**CAA response:** The CAA agrees that the Director should be able to conduct inspections or tests on aircraft issued with airworthiness certificates to determine whether aircraft are in a safe condition for flight. This is provided for in section 15 of the Civil Aviation Act 1990.

1.3.2 Air New Zealand asked the CAA to consider a change to 21.176(b) which would require inspections and tests to be conducted subject to manufacturer's design/type limitations in addition to the Director's instructions.

**CAA response:** Inspection and tests are required to be conducted in accordance with section 15 of the Act that states that:

"(1) The Director may in writing require any person who—

- (a) Holds an aviation document; or
- (b) Operates, maintains, or services, or does any other act in respect of any aircraft...—

to undergo or carry out such inspections and audits as the Director considers necessary in the interests of civil aviation safety and security."

The Director will apply such limitations as those proposed by Air New Zealand when considered appropriate. There will be some situations, however, where the Air New Zealand proposal would not be appropriate, as for the issue of experimental certificates for amateur-built aircraft. Further information regarding such testing and when the Director will apply such limitations will be provided in an Advisory Circular.

#### 1.4 21.179 Transferability

1.4.1 ALPA did not understand why a special flight permit could not be transferred and recommended that the exception be deleted.

**CAA response:** The CAA does not agree with ALPA as special flight permits may be issued with continuing authorisations that include conditions and limitations set forth in the holder's exposition. If the permit was automatically transferred, the Director would not be able to ensure that appropriate conditions or limitations were contained in the new holder's exposition. Other special flight permits will only be normally issued for single flights and in many cases the applicant's ability to conduct the flight safely will have been assessed.

## 1.5 21.181 Duration

**1.5.1 Air New Zealand** asked for a change to the proposed 21.181(g) to only require airworthiness certificates and flight permits to be surrendered to the Director when requested by the Director but in all cases for them to be removed from the aircraft. The reason for suggesting the change was to permit Air New Zealand to manage the handling of major damage occurring offshore, in consultation with the CAA.

**CAA response:** Sections 17, 18 and 20 of the Act require suspended and revoked documents to be produced or surrendered to the Director. Therefore it will not be possible to cover the Air New Zealand proposal unless the Act is amended. The rule is also consistent with other Civil Aviation Rules.

**1.5.2 Air New Zealand** stated that there should be some reference within section 21.181 stating what conditions automatically invalidate an airworthiness certificate, eg. failure to comply with airworthiness directives.

**CAA response:** The CAA agrees that there must be requirements for compliance with airworthiness directives. However, some airworthiness directives are only applicable for certain operational conditions so it is not appropriate to directly relate airworthiness directives to the validity of airworthiness certificates. Compliance with airworthiness directives will be required by the rules such as Part 39 for airworthiness directives and by operating Rules.

There will be a statement on the airworthiness certificate that the aircraft is considered to be airworthy when maintained and operated in accordance with the Act and the Rules. This wording is required by Annex 8 to the Convention. Part 91 will only permit aircraft that are airworthy to be operated under airworthiness certificates.

**1.5.3 ALPA** strongly recommended that there should be provision for limited duration of airworthiness certificates or flight permits. It referred to the Swedavia - McGregor Report proposal that no non-terminating certificates of approval be issued.

**CAA response:** The CAA believes that the provision of unlimited duration is accepted by the majority of consultants. The Swedavia - McGregor proposal relates to the approval of organisations and not to the approval of products.

The CAA does not consider it appropriate to require all airworthiness certificates to be issued for a limited period as the new rules will achieve an improved level of continuing airworthiness within the aviation industry. Certificates will be issued for unlimited periods except in special circumstances, as in the FAR.

Air transport operators will be required to have acceptable maintenance programmes in place, a quality assurance system, and to be audited by the CAA

to ensure that they conform to their programmes. The auditing will include the inspection by the CAA of some of the operator's aircraft. Other aircraft will be required to have a valid annual inspection carried out by the holder of an inspection authorisation. The holders of inspection authorisations will be required to meet higher criteria than apply to holders of other maintenance approvals and will be required to attend refresher courses.

#### 1.6 21.182 Exemptions

**ALPA** considered that section 37 of the Act adequately enables exemption from any rule requirement and consequently recommended that the exemption provision be deleted.

**CAA response:** The CAA agrees that the Act provides for exemptions and the provision has been deleted.

#### 1.7 21.183 Issue of Standard Airworthiness Certificates

**1.7.1 The Guild of Air Pilots and Air Navigators** felt that the Rule is deficient in that the Director does not have the responsibility to issue certificates to the extent that the Administrator has under FAR.

**CAA response:** Rule 21.183 states that an applicant is entitled to a certificate using much the same wording as the FAR. Presumably the Guild comment results from the CAR 21.183 phrase "if the Director is satisfied". This wording is used in section 9 of the Act. Although this differs from the FAR phrase "if the Administrator finds", which is contained in FAR 21.183(d)(3) and other sections of FAR 21, it has essentially the same effect.

**1.7.2 ALPA** considered that provisions akin to the FAR requirements for noise, passenger emergency exit, fuel venting, and exhaust emission must be established.

**CAA response:** The CAA has decided to follow Draft 4 of the proposed JAR Part 21 by not requiring the environmental requirements of ICAO Annex 16 to be met for type certification or the issue of flight authorisations. Separate certification for noise and for fuel venting and exhaust emission may be provided in CAR Parts 34 and 36.

The FAR 25.807(c)(7) passenger emergency exit requirement is applied by FAR 21.181(f) for aeroplanes manufactured after 16 October 1987. This FAR requirement is applied under CAR Part 21 Subpart B involving the type certification of aircraft, the standards of which include FAR 25.807(c)(7) on the effective date. Consideration will be given to also applying it to the date of manufacture by issuing an airworthiness directive.



### 1.8 21.187 Issue of Multiple Airworthiness Certificates

ALPA considered that, unless it is intended to elsewhere stipulate the criteria on which persons may be authorised to inspect aircraft, rule 21.187(b) ought to specify such persons as may be authorised as "certified mechanics with an appropriate airframe rating".

**CAA response:** The CAA believes that inspections will not always be required under 21.187(b) when a multiple airworthiness certificated aircraft is converting to transport operations. It will depend on the safety effect of the conversion. Inspections may be performed by certified maintenance engineers but in simple cases it will be acceptable for the pilot to perform them. The airworthiness certificate will state whether inspections are required and what rating is required for persons performing the inspections. The rating for inspection persons will not therefore be specified in the Rule. This information will be provided in an Advisory Circular.

### 1.9 21.191 Recreational Flight Permits

1.9.1 ALPA recommended the inclusion of the recreation category within that of experimental certificates as in the FAR.

**CAA response:** The CAA agrees with ALPA and the recommendation has been accepted.

1.9.2 ALPA further recommended the inclusion of air racing and market surveys in the experimental certificate as in FAR 21.191(e) and (f).

**CAA response:** The CAA agrees with the addition of air racing and has amended the Rule to take this into effect.

However, the CAA considers that it would be inappropriate at this stage to add market surveys. Market surveys under experimental certificates would probably only be needed to be conducted for large aircraft before type certification. It is unlikely that large aircraft will be developed in New Zealand. This purpose could be added later when considered necessary.

1.9.3 ALPA noted that, by reason of the large divergence from the FAR standards made by the proposed Subpart, the provisions made by FAR 21.195 were omitted from the NPRM and pointed to such omission as being precisely the reason for Swedavia - McGregor's recommendation that "one total foreign system be selected as the primary design and operational airworthiness standards for New Zealand". ALPA repeated its plea for the adoption of the FAR system of airworthiness classification.

**CAA response:** The CAA has made changes that follow the FAR airworthiness classification more closely. FAR 21.195 addresses experimental certificates for

the purpose of market surveys. The market survey purpose is not considered necessary at the present time. The Swedavia - McGregor's recommendation referred to by ALPA relates to the design standards to be used for type certification or for equipment required by operational rules. This recommendation has been adopted for design standards and many of the other FAR airworthiness requirements have also been adopted.

### **Regulatory Evaluation**

Subject to any fine tuning necessary to satisfy legal requirements, the following action will occur at the time of commencement of this Part:

#### **Civil Aviation Regulations**

1. Revocation of regulations 19(2), 161, 161A, 162, 163, 164, 165, 166, & 167(1A), (2), &(3).
2. Amendments of regulations 4, 19(1), 19(3), 25(a), 26(a), 27(a), 51, 52(a), 72(1), 109(2)(e), 131A, 155(1)(a), 167(1), 167A, 168(1), 168(2)(b)(i), 169, 173, 174, 178(2), & 194.

#### **Civil Aviation Rules**

Amendments to Part 103.

#### **New Zealand Civil Airworthiness Requirements**

Revocation of sections A.1, B.1, B.8, B.9, B.10, B.12, C.1, C.2, & C.3.

### **Conclusion**

The CAA concludes from this consultation that the majority of persons and organisations involved with airworthiness are in favour of the direction and content of these new rules. Specific issues that have been identified in the comments have been addressed and, where appropriate, changes have been made to meet the concerns raised.