

# Civil Aviation Rules



## **Part 148**

### **CAA Consolidation**

**10 March 2017**

### **Aircraft Manufacturing Organisations - Certification**

## **DESCRIPTION**

Part 148 prescribes rules governing the certification and operation of an organisation manufacturing aircraft, products, components, parts, and materials.

**This document is the current consolidated version of Part 148 produced by the Civil Aviation Authority, and serves as a reference only. It is compiled from the official ordinary rules that have been signed into law by the Minister of Transport. Copies of the official rule and amendments as signed by the Minister of Transport may be obtained from the Civil Aviation Authority or may be downloaded from the official web site at: [www.caa.govt.nz](http://www.caa.govt.nz)**

**Bulletin**

This Part first came into force on 15 February 1996 and now incorporates the following amendments:

<b>Amendment</b>	<b>Effective Date</b>
Amendment 1	25 December 1997
Amendment 2	1 March 2007
Amendment 3	25 March 2010
Amendment 4	1 February 2016
Amendment 5	10 March 2017

***Summary of amendments:***

Amendment 1 (Dockets 1253 & 1259)	Rules 148.3, 148.11 and 148.101 are amended, rules 148.5, 148.7, 148.9, 148.17, Subpart B, and 148.105 are revoked and substituted, rule 148.107 is revoked, and Appendix B is inserted.
Amendment 2 (1/CAR/1357)	Rules 148.1, 148.3, 148.9, 148.11, 148.15, 148.53, 148.57, 148.59, 148.61, 148.63, 148.67, 148.101, 148.103, 148.105, Appendix A, are revoked and substituted, and Appendix B is revoked.
Amendment 3 (9/CAR/1)	Rule 148.7 is revoked and replaced
Amendment 4 (8/CAR/1)	Rules 148.51, 148.65, 148.67 and 148.105 are revoked and replaced; Appendix A is revoked and rules 148.151 and 148.153 are inserted.
Amendment 5 (16/CAR/1)	Amending rule 148.51(aa) to correct an incorrect paragraph reference;  Amending rule 148.151 (the Safety Management transition rule) to clarify matters to do with the timing and submission of implementation plans and to correct references to applicants and to remove paragraph (f) of the existing rule.

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## Subpart A — General

### 148.1 Purpose

This Part prescribes rules governing the certification and operation of an organisation manufacturing aircraft, products, components, parts, and materials.

### 148.3 Definitions

Definitions relating to this Part are contained in Part 1.

### 148.5 Requirement for certificate

(a) No person shall exercise the privileges in 148.11 except under the authority of and in accordance with the provisions of a manufacturing organisation certificate issued under this Part.

(b) Paragraph (a) does not apply to amateur built aircraft.

### 148.7 Application for certificate

An applicant for the grant of a manufacturing organisation certificate must complete form CAA 24148/01 and submit it to the Director with—

- (1) the applicant's exposition required under rule 148.67; and
- (2) if applicable, a payment of the appropriate application fee prescribed by regulations made under the Act.

### 148.9 Issue of certificate

The Director must, in accordance with section 9 of the Act, grant a manufacturing organisation certificate to an applicant if the Director is satisfied that—

- (1) the applicant meets the requirements of Subpart B; and
- (2) the applicant and the senior person or senior persons required under rule 148.51(a) are fit and proper persons; and
- (3) the granting of the certificate is not contrary to the interests of aviation safety.

### **148.11 Privileges of certificate holder**

(a) A manufacturing organisation certificate specifies 1 or more of the following manufacturing ratings for which the certificate is issued:

- (1) M1 for the manufacture of aircraft, aircraft engines, or propellers, as detailed in the organisation's exposition:
- (2) M2 for the manufacture of components for aircraft, aircraft engines, or propellers, as detailed in the organisation's exposition:
- (3) M3 for the manufacture of parts or appliances, as detailed in the organisation's exposition:
- (4) M4 for the manufacture of materials as detailed in the organisation's exposition.

(b) A holder of a manufacturing organisation certificate may manufacture any item in accordance with the scope of the manufacturing rating specified in the certificate.

(c) A holder of a manufacturing organisation certificate may issue a *CAA Form One – authorised release certificate* for a manufactured item indicating that the item conforms to the type design for the item and is in a condition for safe operation.

### **148.13 Duration of certificate**

(a) A manufacturing organisation certificate may be granted or renewed for a period of up to five years.

(b) A manufacturing organisation certificate remains in force until it expires or is suspended or revoked by the Director.

(c) The holder of a manufacturing organisation certificate that expires or is revoked shall forthwith surrender the certificate to the Director.

(d) The holder of a manufacturing organisation certificate that is suspended, shall forthwith produce the certificate to the Director for appropriate endorsement.

**148.15 Notification of ceasing manufacturing**

- (a) A holder of a manufacturing organisation certificate who ceases to exercise the privileges of the certificate must notify the Director in writing within 30 days of the date of cessation.
- (b) The notification must include a request for the manufacturing organisation certificate to be revoked.

**148.17 Renewal of certificate**

- (a) An application for the renewal of a manufacturing organisation certificate shall be made by the holder of a manufacturing organisation certificate on form CAA 24148/01.
- (b) The application shall be submitted to the Director by the application renewal date specified on the certificate or, if no such date is specified, not less than 30 days before the certificate expires.

**Subpart B — Certification Requirements****148.51 Personnel requirements**

- (a) An applicant for the grant of a manufacturing organisation certificate must employ, contract, or otherwise engage—
- (1) a senior person identified as the chief executive who has the authority within the applicant's organisation to ensure that all activities undertaken by the organisation can be financed and carried out in accordance with the requirements prescribed by this Part; and
  - (2) a senior person or persons who is or are responsible for ensuring that the applicant's organisation complies with the requirements and standards prescribed by this Part. Such nominated person or persons must be ultimately responsible to the chief executive for the following functions:
    - (i) supply:
    - (ii) production:
    - (iii) inspection and test:



- (iv) the system for safety management; and
  - (3) sufficient personnel to plan, perform, supervise, inspect, and certify the manufacturing activities listed in the applicant's exposition.
- (aa) The senior person required by paragraph (a)(2)(iv) must be able to demonstrate competency and experience relevant to the management of safety management systems and the activities of the certificate holder.
- (b) The applicant must—
- (1) establish a procedure for initially assessing and for maintaining, the competence of personnel involved in planning, performing, supervising, inspecting, or certifying the manufacturing activities listed in the applicant's exposition; and
  - (2) provide those personnel with written evidence of the scope of their authorisation.

### **148.53 Facility requirements**

- (a) An applicant for the grant of a manufacturing organisation certificate must provide facilities that are appropriate to the manufacturing activity performed by the applicant's organisation.
- (b) The facilities required under paragraph (a) must include the following:
- (1) office accommodation for the administration of the organisation's manufacturing activities;
  - (2) manufacturing facilities that include—
    - (i) if applicable, protection from the elements of the weather; and
    - (ii) appropriate segregation of specialised work areas to prevent environmental and work area contamination;
  - (3) storage facilities for manufactured items, equipment, and tools that include—

- (i) security for serviceable items; and
  - (ii) segregation of serviceable items from unserviceable items; and
  - (iii) controls to prevent deterioration of, and damage to, stored items:
- (4) environmental conditions that are appropriate for the tasks to be performed and, in particular, that meet any special environmental requirement specified in the process specification that is applicable to the task.

#### **148.55 Equipment, tools, and material**

Each applicant for the grant of a manufacturing organisation certificate shall—

- (1) have access to the equipment, tools, and material necessary for all manufacturing activities performed by the applicant's organisation; and
- (2) establish a procedure to control the equipment, tools, and material including the calibration of tools, jigs, process equipment, and test equipment.

#### **148.57 Type certificates and design approvals**

(a) An applicant for the grant of a manufacturing organisation certificate must, for each product to be manufactured,—

- (1) hold, or have applied for, a type certificate issued in accordance with Part 21, Subpart B for the product; or
- (2) hold, or have applied for, a supplemental type certificate issued in accordance with Part 21, Subpart E for the product; or
- (3) have an arrangement acceptable to the Director, with the holder of, or applicant for—
  - (i) a type certificate for the product issued in accordance with Part 21, Subpart B; or

- (ii) a supplemental type certificate for the product issued in accordance with Part 21, Subpart E.
- (b) An applicant for the grant of a manufacturing organisation certificate must, for each item to be manufactured that is not a product,—
  - (1) hold, or have applied for, a design approval for the item; or
  - (2) have an arrangement acceptable to the Director, with the holder of, or applicant for, a design approval for the item.

### **148.59 Production control procedures**

- (a) An applicant for the grant of a manufacturing organisation certificate must hold a copy of manufacturing procedures manuals, facility manuals, engineering drawings, specifications, technical standards and practices, and any other documentation that is necessary for the provision of the manufacturing activities detailed in the applicant's exposition.
- (b) An applicant for the grant of a manufacturing organisation certificate must establish procedures for—
  - (1) the inspection of a raw material, part, and assembly, purchased or produced by a subsidiary manufacturer, including methods to ensure the acceptable quality of a part or assembly that cannot be completely inspected upon delivery to the organisation; and
  - (2) the inspection of an individual part and a complete assembly during manufacture, including the identification of any special manufacturing process involved, and the means used to control the process; and
  - (3) ensuring that each manufacturing activity to be performed on behalf of the applicant's organisation by a subcontractor—
    - (i) is identified in the applicant's exposition; and
    - (ii) complies with the systems, procedures, and specifications detailed in the applicant's exposition; and
  - (4) dealing with a material, part, or assembly not conforming to the type design or specification, including the recording of a

- decision and the disposing of a rejected material, part, and assembly; and
- (5) the final test of complete manufactured items including—
    - (i) for an aircraft, the production flight test procedures and check list; and
    - (ii) for an engine, the engine test cell procedures and check list; and
    - (iii) for a controllable propeller, the propeller functional test procedures; and
  - (6) the identification, handling, storage, and packing of complete manufactured items; and
  - (7) the issue of *CAA Form One – authorised release certificate* and statements of compliance for manufactured items; and
  - (8) the maintenance of a list of staff who are authorised to issue a *CAA Form One – authorised release certificate* or a statement of compliance; and
  - (9) controlling the documentation required by paragraph (a) to ensure that—
    - (i) the documentation is reviewed and authorised by appropriate personnel before issue; and
    - (ii) a current issue of relevant documentation is available to personnel at every location where they need access to the documentation for the provision of the manufacturing activities detailed in the applicant's exposition; and
    - (iii) obsolete documentation is promptly removed from every point of issue or use; and
    - (iv) a change to the documentation is reviewed and authorised by appropriate personnel; and

- (v) the current version of each item of documentation can be identified to ensure that out-of-date documentation is not used; and
- (10) manufacturing information, engineering drawings, test reports, and inspection records to be made available to the Director upon request.

#### **148.61 Continued airworthiness**

(a) An applicant for the grant of a manufacturing organisation certificate must establish procedures for—

- (1) collecting, investigating, and analysing information relating to a defect in an item manufactured by the applicant's organisation and for distributing the information to—
  - (i) every purchaser of an item manufactured to the same design as that item; and
  - (ii) the applicable type certificate holder; and
- (2) providing defect incident information to the Authority in accordance with Part 12.

(b) An applicant for the grant of a manufacturing organisation certificate must establish procedures in addition to the procedures required in paragraph (a) for any type certificated product that it manufactures to—

- (1) assist the type certificate holder with any continuing airworthiness action that is related to the manufacture of the product; and
- (2) provide at least 1 set of instructions for continued airworthiness, prepared in accordance with the applicable airworthiness design standards specified in Appendix C of Part 21 to each purchaser of the product upon its delivery; and
- (3) make the instructions for continued airworthiness required in paragraph (b)(2), and any changes to those instructions, available to any other person who is required by a rule to comply with those instructions; and

- (4) inform each owner of a product of the same type of the details of the procedures required in paragraph (a), for the collection of information of any defect relating to the product.

### **148.63 Records**

(a) An applicant for the grant of a manufacturing organisation certificate must establish procedures to identify, collect, index, store, maintain, and dispose of the records that are necessary to ensure that every item the organisation manufactures conforms to the applicable design data and is in a condition for safe operation.

(b) An applicant for the grant of a manufacturing organisation certificate must establish procedures to—

- (1) record details of the experience, qualifications, training, and current authorisations of each person who exercises certification privileges on the certificate holder's behalf; and
- (2) record every item that is manufactured by the certificate holder's organisation including a description of the work performed; and
- (3) record the date, and person certifying, that each item conforms to the applicable design data and is in a condition for safe operation; and
- (4) record every calibration on equipment and tools as required under rule 148.55, including the standards used for the calibrations; and
- (5) ensure that—
  - (i) each record is accurate, legible and of a permanent nature; and
  - (ii) except as provided in paragraph (c), the records required by paragraphs (b)(1) to (4) are retained for a period of 2 years from the date the last example of the item type is permanently withdrawn from service; and
- (6) make records required by paragraphs (b)(1) to (4) available to the Director upon request.

(c) The Director may permit records to be retained for a shorter period than that required by paragraph (b)(5)(ii).

### **148.65 Safety management**

An applicant for the grant of a manufacturing organisation certificate must establish, implement, and maintain a system for safety management in accordance with rule 100.3.

### **148.67 Manufacturing organisation exposition**

(a) An applicant for the grant of a manufacturing organisation certificate must provide the Director with an exposition that contains—

- (1) a statement signed by the chief executive on behalf of the applicant's organisation confirming that the exposition and any included manuals—
  - (i) define the manufacturing organisation and demonstrate the organisation's means and methods for ensuring ongoing compliance with this Part; and
  - (ii) are to be complied with at all times by the organisation's personnel; and
- (1A) in relation to the system for safety management required by rule 148.65,—
  - (i) all of the documentation required by rule 100.3(b); and
  - (ii) for an applicant that is not applying for a renewal of a manufacturing organisation certificate, an implementation plan that describes how the system for safety management will be implemented; and
- (2) the titles and names of the senior person or persons required by rules 148.51(a)(1) and (2); and
- (3) the duties and responsibilities of the senior person or persons required by rules 148.51(a)(1) and (2), including—

- (i) matters for which they have a responsibility to deal directly with the Director or the Authority on behalf of the organisation; and
  - (ii) responsibilities for safety management; and
- (4) an organisation chart showing lines of responsibility of the senior person or persons required by rules 148.51(a)(1) and (2); and
- (4A) information identifying the lines of safety responsibility within the organisation; and
- (5) details of every location where the applicant's organisation carries out manufacturing activities and the facilities at those locations; and
- (6) details of the applicant's organisation staffing structure at each of the locations required to be detailed under paragraph (a)(5); and
- (7) a detailed description of the scope of work undertaken by the applicant's organisation; and
- (8) details of the applicant's facilities required by—
- (i) rule 148.53(b)(3) regarding the provision of satisfactory storage and segregation of parts; and
  - (ii) rule 148.53(b)(4) regarding the provision of appropriate environmental conditions; and
- (9) a list of every priority part manufactured or supplied by external subcontractors or suppliers; and
- (10) evidence that the applicant's organisation holds or has applied for a type certificate or supplemental type certificate or has entered into an arrangement, as required by rule 148.57; and
- (11) details of any authorisations made by the applicant's organisation to subsidiary manufacturers; and



- (12) details of the applicant's procedures required by—
- (i) rule 148.51(b) regarding the competence assessment of personnel; and
  - (ii) rule 148.51(b) regarding the maintenance of personnel competence; and
  - (iii) rule 148.55(2) regarding the control and calibration of tools, jigs, process equipment, and test equipment; and
  - (iv) rule 148.59(b)(1) regarding an inspection of a raw material, parts, and assemblies; and
  - (v) rule 148.59(b)(2) regarding inspection of an individual part and complete assembly during manufacture; and
  - (vi) rule 148.59(b)(3) regarding the subcontracting of manufacturing activities; and
  - (vii) rule 148.59(b)(4) regarding a non-conforming material and part; and
  - (viii) rule 148.59(b)(5) regarding a final test including, if applicable, the procedures required for the application of a special flight permit with a continuing authorisation granted under rule 21.197; and
  - (ix) rule 148.59(b)(6) regarding the identification, handling, storage, and packing of an item that it manufactures; and
  - (x) rules 148.59(b)(7) and (8) regarding the issue of CAA Form One and a statement of compliance; and
  - (xi) rule 148.59(b)(9) regarding control and distribution of documentation; and
  - (xii) rule 148.61(b) regarding the continued airworthiness of the items that it manufactures; and

- (xiii) rule 148.63 regarding the identification, collection, indexing, storage, maintenance, and disposal of a record; and
  - (xiv) [*revoked*]
- (13) procedures to control, amend, and distribute the exposition.
- (b) The applicant's exposition must be acceptable to the Director.

## Subpart C — Operating Requirements

### 148.101 Continued compliance

A holder of a manufacturing organisation certificate must—

- (1) hold at least 1 complete and current copy of the organisation's exposition at each work location listed in the exposition; and
- (2) comply with every procedure and system detailed in the exposition; and
- (3) make each applicable part of the exposition available to personnel who require those parts to carry out their duties; and
- (4) continue to meet the standards and comply with the requirements prescribed in Subpart B for certification under this Part; and
- (5) determine that each item released by it conforms to the applicable design data, has no unsafe features, and is in a condition for safe operation.

### 148.103 Identification of manufactured items

A holder of a manufacturing organisation certificate must identify each item that the manufacturing organisation manufactures, in accordance with the requirements of Subpart Q of Part 21.

### 148.105 Changes to certificate holder's organisation

(a) A holder of a manufacturing organisation certificate must ensure that the exposition required by rule 148.67 is amended so that it remains a current description of the organisation.

- (b) The certificate holder must—
- (1) ensure that any amendment made to its exposition meets the applicable requirements of this Part; and
  - (2) complies with the amendment procedures contained in its exposition.
- (c) Subject to paragraph (d), the certificate holder must forward to the Director for retention a copy of each amendment to its exposition as soon as practicable after the amendment is incorporated into its exposition.
- (d) Before a certificate holder changes any of the following, prior acceptance by the Director is required:
- (1) the chief executive:
  - (2) the listed senior persons:
  - (3) the manufacturing ratings:
  - (4) the supply arrangements for priority parts:
  - (5) the procedures for changing the scope within a rating:
  - (6) the final testing activities for which the holder utilises a special flight permit with a continuing authorisation:
  - (7) the locations at which the manufacturing activities are carried out:
  - (8) the system for safety management, if the change is a material change.
- (e) The Director may impose conditions under which a certificate holder must operate during or following any of the changes specified in paragraph (d).
- (f) The certificate holder must comply with any condition imposed by the Director under paragraph (e).

(g) If any change referred to in this rule requires an amendment to the manufacturing organisation certificate, the certificate holder must forward the certificate to the Director for endorsement of the change as soon as practicable.

(h) The certificate holder must make such amendments to its exposition as the Director may consider necessary in the interests of aviation safety.

## Subpart D — Transitional Provisions

### 148.151 Transition for manufacturing organisation certificate holders and applicants

(a) This rule applies to each—

- (1) holder of a manufacturing organisation certificate:
- (2) applicant for the grant of a manufacturing organisation certificate.

(b) Before the date for implementation set in accordance with subparagraph (e)(2), an organisation to which this rule applies is not required to comply with—

- (1) rule 148.51(a)(2)(iv), if instead of a senior person responsible for the system for safety management, the organisation has a senior person responsible for internal quality assurance:
- (2) rule 148.65, if instead of establishing, implementing, and maintaining the system for safety management, the organisation has established an internal quality assurance system that complies with rule 148.153:
- (3) rule 148.67(a)(1A)(i):
- (4) rule 148.67(a)(3)(ii):
- (5) rule 148.67(a)(4A).

- (c) A completed CAA form and implementation plan must be submitted to the Director—
- (1) after 1 February 2016 for an applicant for the grant of a manufacturing organisation certificate under subparagraph (a)(2); and
  - (2) by 30 July 2018 for a holder of a manufacturing organisation certificate under subparagraph (a)(1).
- (d) The implementation plan referred to in paragraph (c) must—
- (1) include a proposed date for implementation of the system for safety management; and
  - (2) outline how the organisation plans to implement the system for safety management required under rule 148.65.
- (e) The Director will, if acceptable—
- (1) approve the organisation's implementation plan; and
  - (2) set the date for implementation of the system for safety management.
- (f) In setting the date under rule subparagraph (e)(2), the Director must have regard to the following:
- (1) the capability of the organisation:
  - (2) the complexity of the organisation:
  - (3) the risks inherent in the activities of the organisation:
  - (4) the date of any certificate renewal:
  - (5) any resource or scheduling impacts on the organisation or the authority or both:
  - (6) the date for implementation must not be later than 1 February 2021.

(g) A holder of a manufacturing organisation certificate under subparagraph (a)(1) does not have to submit an implementation plan with its certificate renewal application.

(h) This rule expires on 1 February 2021.

### **148.153 Transitional internal quality assurance for manufacturing organisation certificate holders and applicants**

(a) The internal quality assurance system required by rule 148.151(b)(1)(ii) must be established to ensure the organisation's compliance with, and the adequacy of, the procedures required by this Part.

(b) The internal quality assurance system must include—

- (1) a safety policy and safety policy procedures that are relevant to the applicant's organisational goals and the expectations and needs of its customers; and
- (2) a procedure to ensure quality indicators, including defect and incident reports, and personnel and customer feedback, are monitored to identify existing problems or potential causes of problems within the system; and
- (3) a procedure for corrective action to ensure that existing problems that have been identified within the system are corrected; and
- (4) a procedure for preventive action to ensure that potential causes of problems that have been identified within the system are remedied; and
- (5) an internal audit programme to audit the applicant's organisation for conformity with its safety policy; and
- (6) management review procedures to ensure the continuing suitability and effectiveness of the internal quality assurance system in satisfying the requirements of this Part.

(c) The safety policy procedures must ensure that the safety policy is understood, implemented, and maintained at all levels of the organisation.

(d) The procedure for corrective action must specify how—

- (1) existing problems are corrected; and
  - (2) corrective action is followed up to ensure the action is effective; and
  - (3) any procedure required for this Part is amended as a result of corrective action; and
  - (4) management will review the effectiveness of any corrective action taken.
- (e) The procedure for preventive action must specify how—
- (1) potential problems are corrected; and
  - (2) preventive action is followed up to ensure the action is effective; and
  - (3) any procedure required for this Part is amended as a result of preventive action; and
  - (4) management will review the effectiveness of any preventive action taken.
- (f) The internal quality audit programme must—
- (1) specify the frequency and location of the audits taking into account the nature of the activity to be audited; and
  - (2) ensure audits are performed by trained auditing personnel who are independent of those having direct responsibility for the activity being audited; and
  - (3) ensure the results of audits are reported to the personnel responsible for the activity being audited and the manager responsible for internal audits; and
  - (4) require preventive or corrective action to be taken by the personnel responsible for the activity being audited if problems are found by the audit; and

- (5) ensure follow up audits to review the effectiveness of any preventive or corrective action taken.
- (g) The procedure for management review must—
  - (1) specify the frequency of management reviews of the quality assurance system taking into account the need for the continuing effectiveness of the system; and
  - (2) identify the manager who is responsible for the review of the quality assurance system; and
  - (3) ensure the results of the review are evaluated and recorded.
- (h) The senior person who has the responsibility for internal quality assurance must have direct access to the chief executive on matters affecting safety.
- (i) This rule expires on 1 February 2021.

## **Appendix A — Revoked**

## **Appendix B — Revoked**