



PURSUANT to Sections 28 and 30 of the Civil Aviation Act 1990
I, HARRY JAMES DUYNHOVEN, Minister for Transport Safety,
HEREBY MAKE the following ordinary rules.

SIGNED AT Wellington

This *22nd* day of *November* 2006

by **HARRY JAMES DUYNHOVEN**

A handwritten signature in black ink, appearing to read 'Harry James Duynhoven', is written over the printed name. The signature is fluid and cursive, with a long horizontal stroke at the end.

Minister for Transport Safety

Civil Aviation Rules

Part 145, Amendment 7

Aircraft Maintenance Organisations - Certification

Docket 1/CAR/1357

Contents

Rule objective	3
Extent of consultation.....	3
New Zealand Transport Strategy.....	4
Summary of submissions	5
Examination of submissions.....	6
Insertion of Amendments	6
Effective date of rule.....	6
Availability of rules.....	6
Part 145 Amendments	7
145.1 Purpose	7
145.11 Privileges of certificate holder.....	7
145.52 Maintenance personnel duty time limitations	8
145.59 Maintenance control procedures.....	9
145.60 Authorisation procedures.....	11
145.63 Records.....	14
145.67 Maintenance organisation exposition	15
145.105 Changes to certificate holder's organisation	18
Appendix A – Transitional Arrangements	19
Consultation Details	20
Comments arising from the NPRM.....	20

Rule objective

The objective of amendment 7 to Part 145 is to require the maintenance organisation to be responsible for the duty limitations for maintenance personnel instead of the air operator, and to update various rules to provide for the maintenance of new aircraft types, and to be consistent with changes that are being made to Parts 43 and 91 regarding aircraft maintenance.

Amendment 7 to Part 145 is associated with the following amendments to other Parts:

- Amendment 32 to Part 1
- Amendment 5 to Part 43
- Amendment 15 to Part 91

Extent of consultation

In 1999 the Civil Aviation Industry Rules Advisory Group (CIRAG) Executive established a Technical Study Group (TSG) to participate in a rule making project to amend and update various rules relating to the airworthiness and maintenance requirements for aircraft. A number of the issues to be addressed arose from an investigation carried out by the CAA in 1997 into the concerns about maintenance standards and practices for aircraft less than 5,700 kg maximum certified take-off weight (MCTOW). Other issues to be addressed arose from various petitions for amendments to be made to airworthiness and maintenance rules.

The TSG was made up of representatives from general aviation (fixed wing operators), aircraft maintenance organisations, helicopter operators, and the Aircraft Owners and Pilots Association. The TSG met 4 times and concluded its work in early 2002. The CAA continued to refine the draft rule proposals during 2002 and 2003 and released the draft rules to a representative industry group for comment before they were published for public consultation.

A Notice of Proposed Rulemaking, NPRM 05-04, containing the proposed rule amendments to Parts 1, 43, 91, and 145 was issued for public consultation under Docket 1/CAR/1357 on 5 May 2005.

Two other associated Notices of Proposed Rulemaking, NPRM 05-05 dealing with amendments to Parts 21, 26, 39, 146, and 148, and NPRM 05-06 dealing with amendments to Parts 119, 103, 104, 121, 125, 135, and 137, were also issued for public consultation under Docket 1/CAR/1357 on 5 May 2005.

The publication of these NPRMs was notified in the Gazette on 5 May 2005 and advertised in the daily newspapers in the five main provincial centres on 7 May 2005. The NPRMs were published on the CAA web site and mailed to identified stakeholders including representative organisations who were considered likely to have an interest in the proposal.

A period of 46 days was initially allowed for comment on the proposed amendments to the rules and this was extended upon industry request for a further 10 days.

New Zealand Transport Strategy

The development of the NPRM and the proposed rule changes took into account the objectives of the New Zealand Transport Strategy (NZTS) and the provisions of the Civil Aviation Amendment Act (No 2) 2004.

Amendment 7 to Part 145 has been assessed as follows against the NZTS:

Assisting Economic Development— the rule amendment is unlikely to affect economic development:

Assisting safety and personal security— a number of the rule amendments are aimed at maintaining and enhancing aviation safety requirements. The clarification of various rule requirements is aimed at ensuring that the required safety standard is maintained and other rule amendments such as the fire protection requirements for cargo and baggage compartments are aimed at raising standards:

Improving access and mobility—the rule amendment is unlikely to affect access and mobility issues:

Protecting and promoting public health— the rule amendment is unlikely to affect public health:

Ensuring environmental sustainability—the rule amendment is unlikely to affect environmental sustainability.

Summary of submissions

Eighty written submissions were received on the 3 NPRMs. Five submissions related to the proposed amendments to Part 145. These submissions and comments have been considered and as a result the following significant changes have been made to the rules proposed in amendment 7 to Part 145:

- provision included in 145.60 for a limited authorisation to be issued to an engineer who does not meet the full requirements for a type rating to allow the engineer to certify an aircraft for release-to-service following limited maintenance activities.
- provision included in 145.60 for authorisations to be issued to persons who carry out “pilot” type maintenance in accordance with rule 43.51(b) and Appendix A.1 of Part 43:
- deleted requirement in 145.60 regarding examinations and competence regarding NDT and welding for persons certifying aircraft for release-to-service after such maintenance activities.

Some editorial and other minor changes have also been made in the final rules to address other minor issues from the submissions and to clarify the rule requirements.

The rule as amended was then referred to Parliament’s Regulations Review Committee before being signed by the Minister for Transport Safety.

As a consequence of the Regulations Review Committee comments about a potential duplication of the Director’s discretion under section 9 of the Act in the proposed amendments to rules 119.81(b) and 119.125(b) in amendment 7 to Part 119, rule 145.67(c) has been amended to be consistent with the changes made to the rules in Part 119.

Examination of submissions

Submissions may be examined by application to the Docket Clerk at the Civil Aviation Authority between 8:30 am and 4:30 pm on weekdays, except statutory holidays.

Insertion of Amendments

The amendments to the rules in this Part are reflected by revocation of existing rules and replacement with new rules, and insertion of new rules.

Effective date of rule

Amendment 7 to Part 145 comes into force on 1 March 2007.

Availability of rules

Civil Aviation Rules are available from–

CAA web site: <http://www.caa.govt.nz/>

Freephone: 0800 GET RULES (0800 438 785)

Part 145 Amendments

Rule 145.1 is revoked and replaced by the following new rule:

145.1 Purpose

This Part prescribes rules governing the certification and operation of aircraft maintenance organisations.

Rule 145.11 is revoked and replaced by the following new rule:

145.11 Privileges of certificate holder

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

- (1) A1 for the maintenance of aircraft with a MCTOW of more than 13 610 kg as detailed in the organisation's exposition:
- (2) A2 for the maintenance of aircraft with a MCTOW of more than 5700 kg but not exceeding 13 610 kg as detailed in the organisation's exposition:
- (3) A3 for the maintenance of aircraft with a MCTOW of 5700 kg or less and a maximum certificated passenger seating configuration, excluding any required crew member seat, of 10 seats or more:
- (4) A4 for the maintenance of aircraft with a MCTOW of 5700 kg or less and a maximum certificated passenger seating configuration, excluding any required crew member seat, of 9 seats or less:
- (5) C1 for the maintenance of aircraft engines and propellers as detailed in the organisation's exposition:
- (6) C2 for the maintenance of components as detailed in the organisation's exposition:
- (7) C3 for the maintenance of aircraft electrical equipment as detailed in the organisation's exposition:

- (8) C4 for the maintenance of aircraft instrument equipment as detailed in the organisation's exposition:
 - (9) C5 for the maintenance of aircraft radio equipment as detailed in the organisation's exposition:
 - (10) E1 for the conduct of aircraft maintenance engineer training as detailed in the organisation's exposition:
 - (11) F1 for the maintenance of foreign aircraft and components for foreign aircraft as detailed in the organisation's exposition and in accordance with a technical arrangement with the State of registry of the aircraft:
 - (12) P1 for the maintenance of aircraft and components involving processing not otherwise included in any of the above ratings and as detailed in the organisation's exposition.
- (b) Subject to rule 145.60, the holder of a maintenance organisation certificate may authorise a person to maintain any aircraft or component for which the holder is certificated.
- (c) Subject to rule 145.60, the holder of a maintenance organisation certificate may authorise a person to certify for release-to-service any aircraft or component for which the holder is certificated.

The following new rule is inserted after rule 145.51:

145.52 Maintenance personnel duty time limitations

An applicant for the grant of a maintenance organisation certificate must establish procedures to ensure that a person who is authorised under rule 145.60 to perform or supervise maintenance, or to certify release-to-service, or to certify conformity to acceptable data is relieved from duty for—

- (1) a period of at least 8 consecutive hours in the 24-hour period immediately before exercising the authorisation; and
- (2) at least 4 periods of at least 24 consecutive hours each in the 30-day period immediately before exercising the authorisation.

Rule 145.59 is revoked and replaced by the following new rule:

145.59 Maintenance control procedures

(a) An applicant for the grant of a maintenance organisation certificate must hold copies of maintenance procedures manuals, facility manuals, engineering drawings, specifications, technical standards and practices, and any other documentation that is necessary for the provision of the maintenance activities detailed in the applicant's exposition.

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

- (1) the inspection of raw materials, parts, and assemblies purchased or maintained by subsidiary maintenance organisations, including methods to ensure the acceptable quality of parts and assemblies that cannot be completely inspected on delivery to the organisation; and
- (2) dealing with materials, parts, and assemblies that do not conform to the type design or specifications, including the recording of decisions and the disposal of rejected materials, parts, and assemblies; and
- (3) the performance of the maintenance activities detailed in the applicant's exposition, including methods to ensure—
 - (i) the use of acceptable maintenance techniques and practices; and
 - (ii) the compliance with contractual maintenance obligations with aircraft operators; and
 - (iii) maintenance at locations other than those specified in the applicant's exposition is limited to scheduled maintenance specifically identified in the applicant's exposition or maintenance arising solely from unserviceability of the aircraft; and
- (4) ensuring that each maintenance 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
- (5) the identification, handling, storage, and packing of materials, parts, and assemblies; and
- (6) a person authorised in accordance with rule 145.60 to certify an aircraft or component for release-to-service, and the maintenance of a list of the persons who hold such authorisations to certify a release-to-service; and
- (7) a person authorised in accordance with rule 145.60 to issue a *CAA Form One – authorised release certificate*, and the maintenance of a list of the persons who hold such authorisations to issue a *CAA Form One – authorised release certificate*; and
- (8) controlling the documentation required by paragraph (a) to ensure that—
- (i) the documentation is reviewed and authorised by appropriate personnel before issue; and
 - (ii) current issues of relevant documentation are available to personnel at every location where they need access to such documentation to perform the maintenance activities detailed in the applicant's exposition; and
 - (iii) obsolete documentation is promptly removed from every point of issue or use; and
 - (iv) changes to documentation are 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

- (9) maintenance information, engineering drawings, technical standards and practices, and inspection records are made available to the Director on the Director's request.

Rule 145.60 is revoked and replaced by the following new rule:

145.60 Authorisation procedures

(a) Subject to paragraphs (b), (c), (d), (e), (f), and (g), an applicant for the grant of a maintenance organisation certificate must establish procedures for authorising a person to perform the following types of maintenance activities under the authority of the maintenance organisation certificate:

- (1) perform and supervise maintenance on aircraft or components as specified in the authorisation:
- (2) certify aircraft or components as specified in the authorisation for release-to-service after maintenance has been performed:
- (3) certify the conformity of major modifications and major repairs to aircraft and components to acceptable technical data.

(b) Except as provided in paragraph (c), a person must not be authorised to certify an aircraft or component for release-to-service after maintenance unless the person—

- (1) holds a current aircraft maintenance engineer licence with an appropriate rating, issued in accordance with Part 66; or
- (2) holds a current aircraft maintenance engineer licence in an appropriate category issued in accordance with Part 66 and meets a standard at least equal to that required by subpart C of Part 66 for the grant of an aircraft maintenance engineer rating; or
- (3) holds an appropriate current aircraft maintenance engineer licence with an appropriate rating issued by the Civil Aviation Safety Authority of Australia, and has had that

licence registered by the Director in New Zealand under the Trans Tasman Mutual Recognition Act 1997; or

- (4) holds a current certificate of maintenance approval, with appropriate endorsement, issued in accordance with Part 66; or
 - (5) for maintenance performed outside of New Zealand—
 - (i) holds an appropriate current maintenance engineer document that is issued under the authority of an ICAO Contracting State, acceptable to the Director, for the type of aircraft or component for which the authorisation is intended; or
 - (ii) holds an equivalent authorisation that is issued by an organisation that is certificated to perform maintenance by an ICAO Contracting State, acceptable to the Director, for the type of aircraft or component for which the authorisation is intended; or
 - (6) for a limited authorisation to certify an aircraft for release-to-service following limited maintenance activities as specified in the procedure, holds a current and appropriate aircraft maintenance engineer licence issued in accordance with Part 66 and has training and experience acceptable to the Director appropriate to the limitations in the authorisation; or
 - (7) for maintenance specified in appendix A.1 of Part 43, meets the requirement of rule 43.51(b) and is appropriately trained to perform the maintenance and certify the release-to-service for the aircraft type for which the authorisation is intended.
- (c) A person may be authorised to certify a component for release-to-service after maintenance if the person has—
- (1) successfully completed a course of training relevant to the component for which the authorisation is intended, or passed an examination acceptable to the Director relevant to the component for which the authorisation is intended; and

- (2) 36 months of practical aviation related experience with the procedures, practices, materials, tools, machine tools, and equipment generally used in constructing, maintaining, or modifying airframes, powerplants, or avionic equipment; and
 - (3) 6 months of supervised experience directly relevant to the component for which authorisation is sought.
- (d) The course of training specified in paragraph (c)(1) must be—
- (1) conducted by the holder of a maintenance organisation certificate issued in accordance with Part 145 with an E1 rating for the training of the organisation's staff; or
 - (2) conducted by the holder of an aviation training organisation certificate issued in accordance with Part 141 if the training organisation certificate authorises such a course; or
 - (3) conducted by the manufacturer of the applicable component; or
 - (4) approved by the aviation authority of an ICAO contracting State acceptable to the Director.
- (e) A person must not be authorised to—
- (1) certify an aircraft or component for release-to-service after maintenance unless the person has been examined by an appropriate senior person for—
 - (i) familiarity with the maintenance control procedures required by rule 145.59(b); and
 - (ii) technical competence in respect of the authorisation to be held; or
 - (2) certify the conformity of major modifications and major repairs to aircraft and components to acceptable technical data unless the person—
 - (i) is the holder of an authorisation to certify the aircraft or component for release-to-service; and

- (ii) has completed a course of training relevant to modification and repair conformity; and
 - (iii) has passed an examination acceptable to the Director relevant to modification and repair conformity.
- (f) A person holding an authorisation issued under paragraph (a) must not exercise the privileges of the authorisation unless that person satisfies the applicable recent experience requirements prescribed in rules 66.57 and 66.207 irrespective of whether the person holds an aircraft maintenance engineer licence issued in accordance with Part 66.
- (g) An authorisation issued under paragraph (a) to a person who meets the requirements of paragraphs (b) or (c) may not confer greater privileges than those conferred by an equivalent rating issued under subpart C of Part 66, or an equivalent certificate of maintenance approval issued in accordance with subpart D of Part 66.

Rule 145.63 is revoked and replaced by the following new rule:

145.63 Records

- (a) An applicant for the grant of a maintenance organisation certificate must establish procedures to identify, collect, index, store, and maintain accurate records that are necessary to ensure that each product or component is fit for release-to-service.
- (b) An applicant for the grant of a maintenance organisation certificate must establish procedures to—
- (1) record details of the experience, qualifications, training, and current authorisations of each person who exercises certification privileges under the authority of the maintenance organisation certificate; and
 - (2) record every aircraft and component that is maintained by the holder including a description of the work performed; and
 - (3) record every calibration of equipment and tools that is required under rule 145.55(2) and the standards used for the calibration; and

- (4) ensure that—
 - (i) every record is legible and of a permanent nature; and
 - (ii) every record for an aircraft is available to the operator of the aircraft; and
 - (iii) the records required by paragraph (b) are retained for a period of at least 5 years; and
 - (iv) the records required by paragraph (b) are made available to the Director on the Director's request.

Rule 145.67 is revoked and replaced by the following new rule:

145.67 Maintenance organisation exposition

- (a) An applicant for the grant of a maintenance organisation certificate must provide the Director with an exposition that contains—
 - (1) a statement signed by the applicant's chief executive on behalf of the applicant confirming that the exposition and any included manuals—
 - (i) define the maintenance organisation and demonstrate its means and methods for ensuring ongoing compliance with this Part; and
 - (ii) are required to be complied with by its personnel; and
 - (2) the titles and names of the senior person or persons required by rules 145.51(a)(1) and (2); and
 - (3) the duties and responsibilities of the person or persons specified in paragraph (a)(2) including matters for which they have responsibility to deal directly with the Director on behalf of the maintenance organisation; and
 - (4) an organisation chart showing lines of responsibility of the senior person or persons specified in paragraph (a)(2); and

- (5) except as provided in paragraph (b), details of every location where the applicant performs maintenance and details of the facilities at those locations; and
- (6) details of the applicant's staffing structure at each of the locations listed under paragraph (a)(5); and
- (7) a detailed description of the scope of work undertaken by the applicant; and
- (8) details of the applicant's procedures required by—
 - (i) rule 145.51(b) regarding the assessment of competence of personnel; and
 - (ii) rule 145.51(b) regarding on-going training to maintain the competence of personnel; and
 - (iii) rule 145.52 regarding maintenance personnel duty time limitations; and
 - (iv) rule 145.55(2) regarding the control and calibration of tools, jigs, maintenance equipment, and test equipment; and
 - (v) rule 145.59(b)(1) regarding inspections of raw materials, parts, and assemblies; and
 - (vi) rule 145.59(b)(2) regarding non-conforming materials and parts; and
 - (vii) rule 145.59(b)(3) regarding the performance of maintenance activities; and
 - (viii) rule 145.59(b)(4) regarding the subcontracting of maintenance activities; and
 - (ix) rule 145.59(b)(5) regarding the identification, handling, storage, and packing of materials, parts, and assemblies; and

- (x) rule 145.59(b)(6) regarding the certification of aircraft and components for release-to-service; and
 - (xi) rule 145.59(b)(7) regarding the issue of *CAA Form One – authorised release certificates*; and
 - (xii) rule 145.59(b)(8) regarding the control and distribution of documentation; and
 - (xiii) rule 145.60 regarding the issue of authorisations to appropriate persons; and
 - (xiv) rule 145.61 regarding the collection and provision of information for the continued airworthiness of the aircraft and components that the applicant maintains; and
 - (xv) rule 145.63(a) regarding the identification, collection, indexing, storage, and maintenance of records; and
 - (xvi) rule 145.63(b) regarding the recording of personnel experience, qualifications and training; and
- (9) details of the facilities required by rule 145.53(b)(3) for the storage and segregation of parts; and
 - (10) details of the means to provide appropriate environmental conditions required by rule 145.53(c); and
 - (11) details of the internal quality assurance system required by rule 145.65; and
 - (12) procedures to control, amend and distribute the exposition; and
 - (13) procedures at least equivalent to those required by subpart D of Part 141 for conducting training under the E1 rating; and
 - (14) procedures for changing the scope within a rating.

(b) The applicant's exposition need not contain details of those locations where the applicant conducts maintenance in accordance with procedures required by rule 145.59(b)(3)(iii).

(c) The exposition must remain acceptable to the Director.

Rule 145.105 is revoked and replaced by the following new rule:

145.105 Changes to certificate holder's organisation

(a) Subject to paragraphs (d) and (f), the holder of a maintenance organisation certificate must amend the details in the holder's exposition required under rule 145.67 to ensure that the exposition provides a current description of the organisation.

(b) The certificate holder must—

- (1) ensure that each amendment to its exposition meets the applicable requirements of this Part and any other relevant Part; and
- (2) comply with the amendment procedures contained in its exposition.

(c) The certificate holder must provide the Director with a copy of each amendment to its exposition as soon as practicable after the amendment has been incorporated into the certificate holder's exposition.

(d) A certificate holder proposing to change any of the following, must apply to and obtain the prior acceptance of the Director:

- (1) the chief executive;
- (2) the listed senior persons;
- (3) the maintenance ratings;
- (4) the procedures for changing the scope within a rating;
- (5) the locations at which maintenance is carried out;
- (6) the procedure for authorising persons to certify maintenance.

(e) The Director may specify conditions under which a certificate holder must operate during or following any of the changes listed in paragraph (d), to ensure continued compliance with the requirements of this Part.

(f) A certificate holder must comply with any conditions specified under paragraph (e).

(g) If any change referred to in this rule requires an amendment to the certificate, the certificate holder must forward the certificate to the Director immediately.

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

Appendix A is revoked and replaced by the following new Appendix A:

Appendix A – Transitional Arrangements

The holder of a maintenance organisation certificate that was current on 28 February 2007 may continue to operate in accordance with their exposition that was current on 28 February 2007 and the requirements of Part 145 up to and including amendment 6 until 1 September 2007. After 1 September 2007 the certificate holder must ensure that their procedures and exposition comply with the requirements of Part 145 up to and including amendment 7.

Consultation Details

(This statement does not form part of the rules contained in Part 145. It provides details of the consultation undertaken in making the rules.)

A review of the continuing airworthiness and maintenance requirements for New Zealand aircraft has been under development since 1998 following a review of the state of aircraft maintenance that was carried out in 1997. The changes to Part 43 are the central part of a package of changes that update rules relating to the maintenance of aircraft. The package was developed under docket 1/CAR/1357 and published in May 2005 as 3 separate Notices of Proposed Rule Making, NPRM 05-04 dealing with Part 43 and related rule Parts 91, and 145, NPRM 05-05 dealing with Part 21 and related Parts 26, 39,146, and 148, and NPRM 05-06 dealing with Part 119 and related Parts 103, 104, 121, 125, 135, and 137. The changes to the various rules are based on the 1997 review of aircraft maintenance and proposals arising from a CAA-Industry Technical Study Group set up in 1999.

The 3 Notices of Proposed Rulemaking, NPRM 05-04 Part 43 General Maintenance Rules, NPRM 05-05 Part 21 Certification of Products and Parts, and NPRM 05-06 Part 119 Air Operator – Certification, containing the proposed rules were issued for public consultation under Docket 1/CAR/1357 on 5 May 2005.

Comments arising from the NPRM

A total of 80 written submissions were received on the 3 NPRMs, mostly in relation to the Part 43 and 91 changes but 5 related to the proposed amendments to Part 145. The CAA has worked through these submissions and as a result has amended the rules where appropriate.

The structure of some rules has been amended and editorial changes have been made to provide clarity and, in some cases, to maintain consistency in the terminology used.

The consultation details relating to amendment 7 to Part 145 are contained in the consultation details of amendment 5 to Part 43. The submissions and all background material used in developing the rules are held on the docket file and are available for public inspection at Aviation House, 10 Hutt Road Petone. Persons wishing to view the

docket should contact the Docket Clerk on Phone +64 560 9603 and ask for docket 1/CAR/1357.