



WELLINGTON NEW ZEALAND

PURSUANT to Section 28 of the Civil Aviation Act 1990

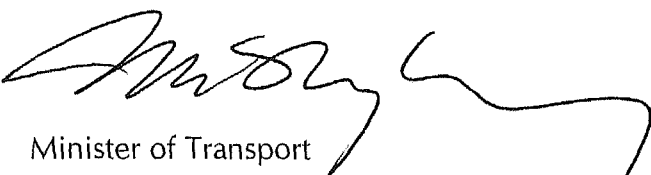
I, JENNIFER MARY SHIPLEY, Minister of Transport,

HEREBY MAKE the following ordinary rules.

SIGNED AT Wellington

This *tenth* day of *February* 1997

by **JENNIFER MARY SHIPLEY**


Minister of Transport

Civil Aviation Rules

Part 135 Amendment No.2

**Air Transport Operations — Helicopters and Small
Aeroplanes**

Docket Nr. 1100

**Civil Aviation Rules
Part 135 Amendment No.2**

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Small Aeroplanes**

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Part 135 Amendment No.2**

**Air Transport Operations — Helicopters and
Small Aeroplanes**

RULE OBJECTIVE, EXTENT OF CONSULTATION AND COMMENCEMENT

The objective of Amendment No.2 to Part 135 is to prescribe rules for air transport operations performed by aeroplanes having a passenger seating configuration of 30 seats or less, or a payload capacity of 3410 kg or less, or by helicopters.

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. The Register was identified as the Regulatory Review Consultative Group.

A draft of Amendment No.2 to Part 135 was developed by the rules rewrite team in consultation with members of the consultative group. An informal draft was published and distributed on 10 July 1995 and a period of informal consultation followed. This culminated in the issue of Notice of Proposed Rulemaking 95-8 under Docket 1100 on 13 December 1995.

The publication of this notice was advertised in the daily newspapers in the five main provincial centres on 6 December 1995. The notice was mailed to members of the Regulatory Review Consultative Group and to other parties, including overseas Aviation Authorities and organisations, who were considered likely to have an interest in the proposal.

A period of 90 days was allowed for comment on the proposed rule.

The submissions and verbal comments were considered and where appropriate the proposed rules amended to take account of the comments made.

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

Amendment No.2 to Part 135 comes into force on 1 April 1997.

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Part 135 Amendments

List of Rules

Part 135 is amended by revoking the list of rules.

New Subpart A — J

Part 135 is amended by revoking Subpart A and Subparts B—J, and inserting before Subpart K, the following:

“Subpart A — General

135.1 *Applicability*

This Part prescribes rules, in addition to those prescribed in any other Part, governing the operation of—

- (1) aeroplanes having a passenger seating configuration of 30 seats or less, excluding any required crew member seat, or a payload capacity of 3410 kg or less, performing air transport operations; and
- (2) helicopters performing air transport operations.

135.3 *Definitions*

In this Part—

Exposition, unless used with reference to another source, means a record of the information required by 119.81 or 119.125:

Net take-off flight path, take-off flight path, take-off distance, and take-off run have the same meaning as prescribed in the rules under which the aeroplane was certificated:

Threshold means that point where a 5% obstacle-free approach surface intersects the runway surface.

135.5 *Laws, regulations, and procedures*

Each holder of an air operator certificate issued under Part 119 shall ensure that all persons employed, engaged, or contracted, by the certificate holder are familiar with the appropriate sections of the Act, Civil Aviation Rules, and procedures specified in the certificate holder's exposition.

135.7 *Procedure compliance*

Each person performing an air transport operation shall conform with the applicable procedures specified in the exposition of the holder of the air operator certificate that authorises the operation.

135.9 Carriage of firearms

(a) Except as provided in paragraph (b), each person performing an air transport operation shall ensure that no person carries a firearm in an aircraft unless the firearm is—

- (1) disabled; and
- (2) where possible, stowed in a place that is inaccessible to any person other than a crew member.

(b) Any person lawfully entitled to carry firearms on their person in the course of their duties may be in possession of a firearm in an aircraft if that person—

- (1) is in the course of their lawful duties; and
- (2) holds an authorisation issued by the Director in accordance with 19.301.

135.11 Exemptions

The Director may exempt the holder of an air operator certificate from any requirement in this Part in accordance with the procedures in Part 11 and with section 37 of the Act.

Subpart B — Flight Operations

135.51 *Applicability*

This Subpart prescribes the rules governing air transport operations performed under this Part.

135.53 *Aircraft airworthiness*

Each holder of an air operator certificate shall ensure that each aircraft operated by the holder has a current standard category airworthiness certificate.

135.55 *Common language*

Each holder of an air operator certificate shall ensure that—

- (1) all crew members can communicate in a common language with at least one flight crew member being able to communicate in the English language; and
- (2) all operations personnel are able to understand the language in which the applicable parts of the certificate holder's exposition are written.

135.57 *Flight preparation*

(a) Each holder of an air operator certificate shall ensure that an operational flight plan is prepared for each air transport operation and, if not prepared by the pilot-in-command, the pilot-in-command is advised of its contents before the intended operation.

(b) The certificate holder shall ensure for each air transport operation that sufficient information is available to the pilot-in-command to complete the preparation for the intended operation.

(c) Except as provided in paragraph (d), the certificate holder shall ensure that a flight plan is submitted to an appropriate ATS prior to each air transport operation.

(d) Notwithstanding 91.409(a)(1) and 91.307(a), the certificate holder may, instead of the pilot-in-command, submit the flight plan to an appropriate ATS.

(e) Under VFR conditions a flight plan is not required for non-stop flights departing from, remaining within 25 nm of, and returning to, the same aerodrome.

135.59 Emergency and survival equipment information

(a) Each holder of an air operator certificate shall have available, for immediate communication to rescue co-ordination centres, information on the emergency and survival equipment carried on board each of its aircraft.

(b) For air transport operations in excess of 50 nm from shore the information required by paragraph (a) shall include—

- (1) the number, colour, and type of life rafts; and
- (2) whether pyrotechnics are carried; and
- (3) details of emergency medical supplies and water supplies; and
- (4) the type and operating frequencies of any emergency portable radio equipment.

135.61 Fuel

(a) Each holder of an air operator certificate shall establish a fuel policy for the purpose of flight planning, and inflight replanning, to ensure that each aircraft carries sufficient fuel for the planned operation, including reserves to cover deviations from the planned flight.

(b) The fuel policy shall ensure that the planning of fuel requirements is based upon—

- (1) procedures, tables, and graphs, that are contained in, or derived from, the manufacturer's manuals and that conform to the parameters contained in the aircraft's type certificate; and
- (2) the operating conditions under which the flight is to be conducted, including—
 - (i) normal aircraft fuel consumption data; and
 - (ii) anticipated weights; and
 - (iii) expected meteorological conditions; and
 - (iv) ATS requirements and restrictions; and
 - (v) the geographic location of the destination aerodrome; and
 - (vi) the effect on fuel consumption of identified contingencies.

(c) Except as provided in paragraph (d) the certificate holder shall ensure that the calculation of usable fuel required for a flight takes into account the following factors—

- (1) taxi fuel; and

- (2) trip fuel; and
- (3) reserve fuel, consisting of—
 - (i) contingency fuel; and
 - (ii) alternate fuel, if an alternate aerodrome is required; and
 - (iii) final reserve fuel; and
 - (iv) additional fuel, if required by the type of operation.

(d) The certificate holder may vary the factors required to be taken into account in paragraph (c) to accommodate en-route re-planning procedures if the variation is provided for in the certificate holder's exposition.

135.63 Cockpit check list

(a) Each holder of an air operator certificate shall, for each air transport operation, ensure that flight crew members have available for use a cockpit checklist covering the normal, non normal, and emergency procedures for the operation.

(b) Each person performing an air transport operation shall use a cockpit checklist covering the normal, non normal, and emergency procedures for the operation of the aircraft in accordance with the aircraft flight manual.

135.65 Passenger safety

Each person performing an air transport operation shall ensure that—

- (1) passengers are seated where, in the event of an emergency evacuation, they will not hinder evacuation from the aircraft; and
- (2) any passenger who appears to be under the influence of alcohol or drugs or exhibits behavioural characteristics, to the extent where the safety of the aircraft or its occupants is likely to be endangered, is refused embarkation or, where appropriate, removed from the aircraft; and
- (3) disabled passengers are appropriately cared for, including allocation of appropriate seating positions and handling assistance in the event of an emergency; and
- (4) escorted passengers do not constitute a safety hazard to other passengers or to the aircraft, and that prior arrangements for their carriage have been made in accordance with procedures in the certificate holder's exposition; and
- (5) the pilot-in-command is notified when a disabled or escorted person is to be carried on board the aircraft.

135.67 Flight compartment admission

(a) Each person performing an air transport operation shall ensure that no person, other than the flight crew members assigned to the flight, is admitted to, or carried in, the flight compartment, or occupies a pilot seat, unless that person is permitted by the pilot-in-command, and is—

- (1) a crew member; or
- (2) an authorised representative of the Director; or
- (3) permitted by the holder of the air operator certificate in accordance with procedures specified in the certificate holder's exposition.

(b) Each person performing an air transport operation shall ensure that all persons admitted to the flight compartment or occupying a pilot seat are familiarised with the appropriate safety procedures specified in the certificate holder's exposition.

135.69 Manipulation of controls

(a) Each holder of an air operator certificate shall ensure that no person is permitted to manipulate the flight controls of each of its aircraft performing an air transport operation, unless the person is—

- (1) a flight crew member qualified in accordance with 135.503 and authorised by the certificate holder; or
- (2) an authorised representative of the Director, qualified in accordance with 135.503, who—
 - (i) has the permission of the certificate holder and the pilot-in-command; and
 - (ii) is performing a required duty.

(b) No person shall manipulate the controls of an aircraft performing an air transport operation, unless the person is authorised in accordance with paragraph (a)(1) or (2).

135.71 Flight recorder requirements

(a) Each flight crew member shall ensure that, when an approved **cockpit-voice recorder** is required by 135.367—

- (1) it is operated continuously from the start of the checklist commenced before engine start until the completion of the final checklist at the termination of flight; and

- (2) if the aircraft is equipped to record the uninterrupted audio signals received from a boom or a mask microphone, boom microphones are used below 10 000 feet altitude; and
 - (3) if an erasure feature is used in the cockpit-voice recorder, only information recorded more than 30 minutes earlier than the last record is erased or otherwise obliterated.
- (b) Each flight crew member shall ensure that, when an approved **flight data recorder** is required by 135.369—
- (1) it is operated continuously from the instant the aircraft begins the take-off until it has completed the landing; and
 - (2) all recorded data is kept until the aeroplane has been operated for at least 25 hours, or for a helicopter at least 10 hours, after each operating cycle; and
 - (3) no more than 1 hour of recorded data is erased for the purpose of testing the flight recorder or the flight recorder system; and
 - (4) any erasure made in accordance with paragraph (b)(3) is—
 - (i) of the oldest recorded data accumulated at the time of testing; and
 - (ii) recorded in the appropriate maintenance documentation.

135.73 Refuelling and defuelling operations

- (a) Each holder of an air operator certificate shall ensure that no aircraft is refuelled or defuelled with Class 3(a) fuel when passengers are embarking, on board, or disembarking the aircraft, or when one or more propulsion engines are running.
- (b) Each person performing an air transport operation may permit an aircraft to be refuelled or defuelled with Class 3(b) fuel when passengers are embarking, on board, or disembarking the aircraft, provided the person ensures that safety and aircraft evacuation precautions are taken in accordance with procedures specified in the certificate holder's exposition.
- (c) Each person performing an air transport operation may permit an aircraft to be refuelled or defuelled an aircraft with Class 3(b) fuel with one or more propulsion engines running, provided that—
- (1) all passengers are disembarked under supervision and clear of the immediate area prior to fuelling commencing; and
 - (2) the pilot-in-command is responsible for all aspects of the fuelling operation.

(d) Each holder of an air operator certificate shall ensure that fuelling does not take place where undue risk or hazard exists for any third party.

135.75 Fuel spillage

(a) Each person performing an air transport operation shall ensure that, where fuel is spilled onto an impermeable surface while fuelling an aircraft—

- (1) fuelling is stopped; and
- (2) immediate action is taken to cover the fuel with sand, sawdust, dry earth, or an agent such as foam or dry chemical extinguisher powder, to reduce the fire hazard; and
- (3) the aircraft is then moved clear of the contaminated area before any engine is started.

135.77 Use of aerodromes

(a) Each holder of an air operator certificate shall ensure that any aerodrome to be used in its operations has physical characteristics, obstacle limitation surfaces, and visual aids that meet the requirements of—

- (1) the characteristics of the aeroplane being used; and
- (2) the lowest meteorological minima to be used.

(b) The certificate holder shall ensure that any heliport to be used in its operations meets the requirements of Part 91.

(c) The certificate holder shall, where its aeroplanes use an aerodrome not promulgated in the NZAIP, maintain a register containing—

- (1) the aerodrome data; and
- (2) procedures for ensuring that the condition of the aerodrome is safe for that operation; and
- (3) procedures for ensuring that the condition of any required equipment, including safety equipment, is safe for that operation; and
- (4) any limitations on the use of the aerodrome.

(d) The certificate holder shall ensure that any aeroplane at or below 5700 kg MCTOW operating VFR by day does not use any place for the purpose of landing or taking-off unless—

- (1) the width of the runway used—
 - (i) is at least twice the outer main gear span in width; and

- (ii) has a surface without irregularities and of sufficient strength for take-off and landing for the aircraft being used; and
 - (2) the width of the runway strip of the runway being used is at least two and a half times the wing span of the aeroplane, or 30 m, whichever is greater.
- (e) The certificate holder shall ensure that each aeroplane it operates, that is not operating in accordance with paragraph (d), does not use any place for the purpose of landing or taking-off unless—
- (1) the aerodrome reference code of the aeroplane being used is determined by reference to Table 1 of Appendix C; and
 - (2) the runway width is at least that width determined by reference to the aeroplane code number in Table 2 of Appendix C; and
 - (3) the minimum runway strip width for the runway used is determined by reference to Table 3 of Appendix C.
- (f) Notwithstanding paragraphs (d) and (e), the certificate holder may use a lesser minimum runway width than that prescribed in paragraph (d) or (e) for an aeroplane type if—
- (1) a lesser minimum runway width determined by certificated flight testing is prescribed in the aeroplane's flight manual; or
 - (2) a lesser minimum runway width was prescribed for the aeroplane in the certificate holder's air service certificate, issued under regulation 136 of the Civil Aviation Regulations 1953, before 6 January 1993.

135.79 Night operations

Each person performing a VFR air transport operation at night, with a single-engine aircraft, shall not fly beyond a distance of 5 nm from an aerodrome that is equipped with operative lighting, appropriate to that type of aircraft, and ensure that the lighting is activated.

135.81 Operations of single-engine aircraft

- (a) Each person performing an air transport operation with a single-engine aircraft under VFR shall ensure that the aircraft can carry out a safe forced landing in the event of engine failure.
- (b) Each person performing an air transport operation with a single-engine aircraft may operate over water to a distance of not more than 10 nm greater than the gliding distance from shore provided that the aircraft can carry out a safe forced landing in the event of engine failure.

(c) In this rule a safe forced landing can be carried out if, on consideration of the weather conditions, the route taken, the aircraft type, the survival equipment on board the aircraft, and the accessibility of the aircraft to rescue, it is reasonably likely that the occupants of the aircraft will not suffer serious injury as a result.

(d) Except where otherwise approved by the Director, no person shall perform an air transport operation, carrying passengers, with a single-engine aircraft under IFR.

135.83 Restriction or suspension of operations

Each holder of an air operator certificate shall, on becoming aware of any condition that is a hazard to safe operations, restrict or suspend operations as necessary until the hazard is removed.

135.85 Minimum height for VFR flights

Part 91.311(c) shall not apply to a pilot-in-command operating under this Part.

135.87 Flights over water – multi-engined aircraft

(a) Each person performing an air transport operation with a multi-engined aircraft that is incapable of maintaining a height of 1000 feet with one engine inoperative may operate over water to a distance of not more than 10 nm greater than the gliding distance from shore with all engines inoperative provided that the aircraft can carry out a safe forced landing, as described in 135.81(c), in the event of engine failure.

(b) Each person performing an air transport operation with a multi-engined aircraft to a point more than 100 nm from shore shall conduct the flight under IFR.

135.89 VFR en route – multi-engined aeroplanes

Notwithstanding 135.217, each person performing an air transport operation with an aeroplane with 2 or more engines that cannot comply with 135.217 shall comply with 135.81(a) and (c).

135.91 Emergency situation action plans

(a) Each holder of an air operator certificate shall ensure action plans are developed for handling in-air and on-ground emergency situations and minimising risk of injury to persons.

(b) The certificate holder's emergency situation action plan shall be based upon data including but not restricted to—

- (1) type and length of routes over which operations are carried out; and

- (2) aerodrome ground facilities; and
 - (3) local emergency services; and
 - (4) ATC facilities; and
 - (5) type, seating configuration, and payload of the aircraft likely to be involved.
- (c) The certificate holder's in-air emergency plan shall include the following—
- (1) if management personnel become aware of an emergency situation arising on an aircraft during flight that requires immediate decision and action, procedures to be followed by those personnel to ensure that—
 - (i) the pilot-in-command is advised of the emergency; and
 - (ii) the decision of the pilot-in-command is ascertained; and
 - (iii) the decision is recorded.
 - (2) If management personnel are unable to communicate with the pilot-in-command in accordance with paragraph (c)(1), procedures to be followed by those personnel to ensure that—
 - (i) an emergency is declared; and
 - (ii) any action considered necessary under the circumstances is taken.

The certificate holder shall ensure appropriate staff are trained and competent to perform during emergencies in accordance with the emergency situation action plan.

Subpart C — Operating Limitations and Weather Requirements

135.151 Applicability

This Subpart prescribes the rules governing VFR and IFR operations, and associated weather requirements.

135.153 Meteorological information

(a) Each person performing an air transport operation shall plan, perform, and control flights using meteorological information provided for aviation purposes by the holder of an aviation meteorological service organisation certificate issued under Part 174.

(b) A pilot-in-command may, for each flight that originates and terminates within New Zealand, use a basic weather report that is provided in accordance with 174.6 to perform an approach and landing.

135.155 Meteorological conditions – VFR flight

(a) Each person performing an air transport operation shall ensure a VFR flight is not commenced unless current meteorological reports, or a combination of current reports and forecasts, indicate VFR minima prescribed in Part 91 and in paragraph (b) can be complied with along the route, or that part of the route to be flown under VFR.

(b) A pilot-in-command performing a VFR air transport operation in an aeroplane outside controlled airspace shall fly—

- (1) in meteorological conditions of not less than a ceiling of 1000 feet and a flight visibility of 5 km; and
- (2) if the use is by night, of less than 16 km visibility and 3000 feet ceiling.

(c) Except as provided in paragraph (d), a pilot-in-command performing a VFR air transport operation in an aircraft outside controlled airspace shall fly—

- (1) beneath the ceiling, remaining clear of cloud, and in continuous sight of the ground or water; and
- (2) above not more than scattered cloud; and

(d) A pilot-in-command may operate a helicopter outside controlled airspace where there is a ceiling of 600 feet and visibility 1500 metres by day, or a ceiling of 2000 feet and visibility of 5 km by night, if the pilot-in-command manoeuvres so as at all times to observe other traffic and any obstructions in time to avoid collision.

(e) A pilot-in-command shall not carry out an air transport operation under VFR in a multi-engined aircraft above more than scattered cloud unless—

- (1) the aircraft is authorised for IFR flight and the required minimum flight crew for IFR operation, holding current instrument rating qualifications, is at the controls; and
- (2) the instruments and equipment, including radio navigation equipment, required for IFR flight are operative; and
- (3) the aircraft is capable, with one engine inoperative, of maintaining a net flight path that has a positive slope at 1000 feet above the cloud; and
- (4) the aircraft carries radio navigation equipment enabling it to be navigated by IFR to an aerodrome where an instrument approach procedure may be carried out for landing; and
- (5) the aircraft carries sufficient fuel and fuel reserves to proceed by IFR to an aerodrome where an instrument approach procedure may be carried out for landing.

(f) A pilot-in-command shall not perform an air transport operation under VFR in a single engined aircraft above more than scattered cloud.

135.157 Meteorological conditions – IFR flight

Each pilot-in-command performing an air transport operation shall not commence an IFR flight operation unless current meteorological reports, or a combination of current reports and forecasts, indicate that conditions will, at the estimated time of arrival, be at or above the minimum prescribed under Part 97 for the instrument procedure likely to be used at the applicable destination aerodrome.

[Until Part 97 comes into force, instrument approach procedures are prescribed under Part 19]

135.159 Aerodrome operating minima – IFR flight

(a) A pilot-in-command shall not continue an instrument approach to an aerodrome past the final approach fix or, where a final approach fix is not used, the final approach segment of the instrument approach procedure if, prior to passing the final approach fix or the final approach segment, current meteorological information indicates the visibility at the aerodrome is less than the visibility prescribed under Part 97 for the instrument approach procedure being used.

(b) For the purpose of this rule, the final approach segment begins—

- (1) at the final approach fix or facility prescribed in the instrument approach procedure; or
- (2) when a final approach fix is not prescribed for a procedure that includes a procedure turn, at the point where the procedure turn is completed and the aeroplane is established on the final approach course within the distance prescribed in the procedure.

[Until Part 97 comes into force, instrument approach procedures are prescribed under Part 19]

135.161 IFR departure limitations

(a) Each person performing an air transport operation shall ensure an IFR flight from an aerodrome is not commenced when weather conditions are at or below minima prescribed under 91.407 and are below authorised IFR landing minima, unless there is an appropriate aerodrome—

- (1) for a two engined aircraft, within a maximum of 1 hour flying time, in still air at one engine inoperative cruising speed, of the aerodrome of departure; or
- (2) for an aircraft having three or more engines, within a maximum of 2 hours flying time, in still air at one engine inoperative cruising speed, of the aerodrome of departure.

135.163 Reduced take-off minima

(a) Each holder of an air operator certificate may operate an aircraft at lower take-off minima than that prescribed in 91.413(g) provided the certificate holder ensures that the operation is conducted in accordance with the reduced minima take-off procedure specified in the certificate holder's exposition.

(b) The reduced take-off minima procedure shall ensure that—

- (1) each flight crew member is qualified for reduced minima take-offs; and
- (2) the runway to be used has centre-line marking or centre-line lighting; and
- (3) Part 97 authorises reduced take-off minima on the runway to be used; and
- (4) if the aircraft is a two-engine propeller-driven aeroplane, the aircraft is equipped with an operative auto-feather or auto-course system; and
- (5) the runway visibility is established using RVR; and

- (6) the method for observing and confirming that the required visibility exists for that take-off is acceptable to the Director.

[Until Part 97 comes into force, instrument approach procedures are prescribed under Part 19]

135.165 IFR procedures

(a) Each pilot-in-command shall conduct IFR air transport operations on routes prescribed under Part 95 except when—

- (1) it is necessary to avoid potentially hazardous conditions; or
- (2) operating under radar control from an ATS; or
- (3) operating under an off-route clearance obtained from an ATC unit; or
- (4) otherwise specified in the exposition of the holder of the air operator certificate that authorises the operation.

(b) Unless a clearance has been obtained from the appropriate ATC unit, in controlled airspace, each pilot-in-command shall comply with any IFR departure and approach procedures prescribed under Part 97 for the appropriate aerodrome.

(c) In uncontrolled airspace each pilot-in-command shall comply with any IFR departure and approach procedures prescribed under Part 97 for the appropriate aerodrome.

[Until Part 97 comes into force, instrument approach procedures are prescribed under Part 19]

Subpart D — Performance

135.201 *Applicability*

(a) Except as provided in paragraphs (b), (c), and (d) this Subpart prescribes aeroplane performance operating limitations applicable to aeroplanes used in performing operations under this Part.

(b) Rules 135.229 through to and including 135.235 do not apply to propeller-powered aeroplanes, certificated to—

- (1) FAR Part 23 normal category or equivalent airworthiness standards; or
- (2) SFAR 23 airworthiness standards or equivalent standards.

(c) Rules 135.209, 135.213, 135.223, and 135.225 do not apply to propeller-powered aeroplanes, certificated to—

- (1) SFAR 41 standards or equivalent airworthiness standards; or
- (2) FAR Part 23 commuter category airworthiness standards or equivalent airworthiness standards; or
- (3) FAR Part 135 Appendix A airworthiness standards.

(d) Aeroplanes that cannot fully comply with the requirements of this Subpart may be approved to operate under alternative performance operating limitations.

135.203 *[Reserved]*

135.205 *Part 121 Subpart D compliance*

Each holder of an air operator certificate shall ensure that each aeroplane it operates that is certificated to FAR Part 25 airworthiness standards or equivalent airworthiness standards, complies with the aeroplane performance operating limitations prescribed in Subpart D of Part 121.

135.207 *General aeroplane performance*

Each holder of an air operator certificate shall ensure that, for each aeroplane it operates—

- (1) the take-off weight at the start of its take-off is not greater than the weight permitted under this Subpart for the flight to be undertaken allowing for the expected reductions in weight as the flight proceeds; and
- (2) the performance data used to determine compliance with the performance requirements of this Subpart is—

- (i) contained in the aeroplane flight manual; or
- (ii) in the case of contaminated landing distance data, provided by the aeroplane manufacturer and acceptable to the Director.

135.209 Take-off distance

(a) Each holder of an air operator certificate shall ensure that, for each aeroplane it operates—

- (1) the take-off weight does not exceed the maximum take-off weight specified in the flight manual; and
- (2) the take-off distance required does not exceed 85% of the take-off run available.

(b) When calculating the take-off weight and distance to determine compliance with paragraph (a), the certificate holder shall take account of—

- (1) the take-off run available; and
- (2) the weight of the aeroplane at the commencement of the take-off run; and
- (3) the pressure altitude of the aerodrome; and
- (4) ambient temperature at the aerodrome; and
- (5) the type of runway surface and the runway surface condition; and
- (6) the runway slope in the direction of take-off; and
- (7) not more than 50% of the reported headwind component or not less than 150% of the reported tailwind component.

135.211 Runway surface and slope correction factors

Each holder of an air operator certificate shall ensure that, unless performance data is available that authorises an alternative, the take-off distance calculated for a runway surface type under 135.209(b)(5) or 135.229(c)(4) and the landing distance calculated under 135.223(c)(3) and 135.233(c)(3)—

- (1) are corrected for use of other runway surface types by applying the factors in Table 1; and
- (2) are corrected for runway slope by—
 - (i) increasing the take-off distance by 5% for each 1% of uphill slope up to a maximum of 3% upslope; or

- (ii) decreasing the landing distance by 5% for each 1% of uphill slope up to a maximum of 3% upslope; or
- (iii) decreasing the take-off distance by 5% for each 1% downslope up to a maximum of 3% downslope; or
- (iv) increasing the landing distance by 5% for each 1% downslope up to a maximum of 3% downslope.

Table 1

Surface Type	Take-off distance Factor	Accelerate Stop Distance Factor	Landing Distance Factor
Paved	x 1.00	x 1.00	x 1.00
Coral	x 1.00	x 1.03	x 1.05
Metal	x 1.05	x 1.06	x 1.08
Rolled earth	x 1.08	x 1.14	x 1.16
Grass	x 1.14	x 1.20	x 1.18

135.213 Net take-off flight path – aeroplanes under IFR

(a) Each holder of an air operator certificate shall ensure that, for each aeroplane it operates under IFR and, in the case of an aeroplane with two or more engines, assuming that the critical engine is inoperative, all obstacles within the net take-off flight path are cleared vertically by at least 50 feet.

(b) For the purpose of paragraph (a), an obstacle shall be deemed to be within the net take-off flight path if the lateral distance from the obstacle to the intended line of flight does not exceed—

- (1) where the intended flight path does not require a track change exceeding 15°—
 - (i) 45 m plus 0.10D, to a maximum of 600 m or, if the certificate holder has established visual or radio navigation track guidance procedures for the pilot, to a maximum of 300 m; or
 - (ii) for day operations in VMC, 30 m plus 0.10D to a maximum of 600 m or, if the certificate holder has established visual or radio navigation track guidance procedures for the pilot, to a maximum of 300 m.
- (2) where the intended flight path requires a track change exceeding 15°—

- (i) 45 m plus 0.10D, to a maximum of 900 m or, if the certificate holder has established visual or radio navigation track guidance procedures for the pilot, to a maximum of 600 m; or
 - (ii) for day operations in VMC, 30 m plus 0.10D to a maximum of 600 m or, if the certificate holder has established visual or radio navigation track guidance procedures for the pilot, to a maximum of 300 m.
- (c) For the purpose of paragraph (b), D is the horizontal distance the aeroplane will travel from the end of the take-off distance available.
- (d) When calculating the net take-off flight path in accordance with paragraph (a), the certificate holder shall ensure that—
- (1) the following factors are taken into account—
 - (i) take-off weight at the commencement of the take-off run; and
 - (ii) aerodrome elevation; and
 - (iii) pressure altitude at the aerodrome when the atmospheric pressure varies by more than 1% from the International Standard Atmosphere; and
 - (iv) ambient temperature at the aerodrome; and
 - (v) not more than 50% of the reported headwind component or not less than 150% of the reported tailwind component; and
 - (2) a track change is not made before a height of 50 feet above the take-off surface has been achieved; and
 - (3) unless otherwise authorised by the Director—
 - (i) a bank angle exceeding 15° is not made before a height of 50 feet above the take-off surface has been achieved; and
 - (ii) the bank angle up to and including a height of 400 feet above the take-off surface does not exceed 20°; and
 - (iii) the bank angle above a height of 400 feet above the take-off surface does not exceed 25°; and
 - (4) allowance is made for—
 - (i) the effect of the bank angle on operating speeds and flight path; and
 - (ii) distance increments resulting from increased operating speeds; and

- (iii) retention of stall margin and loss of climb gradient in accordance with 135.215.

135.215 Engine inoperative – gradient and stall corrections

Each holder of an air operator certificate shall, unless performance data is available that authorises an alternative, for compliance with 135.213(d)(4)(iii), retain stall margin and calculate loss of climb gradient by applying the factors in Table 2.

Table 2

Bank angle	Speed correction	Gradient correction
15° to 19°	V_2	1 x Aeroplane flight manual 15° gradient loss
20° to 24°	$V_2 + 5$ knots	2 x Aeroplane flight manual 15° gradient loss
25°	$V_2 + 19$ knots	3 x Aeroplane flight manual 15° gradient loss

135.217 En-route – critical engine inoperative

(a) Each holder of an air operator certificate shall ensure that, for each aeroplane it operates having two or more engines, the aeroplane is capable of continuing flight at a positive slope at or above the relevant minimum safe altitudes, to a point 1000 feet above an aerodrome at which the performance requirements can be met under the following conditions—

- (1) in the forecasted meteorological conditions expected for the flight; and
- (2) with the critical engine inoperative; and
- (3) with the remaining engines operating within the maximum continuous power conditions specified.

(b) When calculating the en-route limitations in accordance with paragraph (a), the certificate holder shall ensure—

- (1) the aeroplane is not assumed to be flying at an altitude exceeding that at which the rate of climb is not less than 300 feet per minute with all engines operating within the maximum continuous power conditions specified in the aeroplane flight manual; and
- (2) the assumed en-route gradient with one engine inoperative is the gross-gradient-minus-0.5% gradient.

135.219 En-route – 90 minute limitation

(a) Each holder of an air operator certificate shall ensure that each aeroplane it operates with two engines is not more than 90 minutes away from an

aerodrome at which the performance requirements specified in the aeroplane flight manual applicable at the expected landing weight are met.

(b) Except as provided in paragraph (c), the certificate holder shall ensure that each aeroplane it operates with three or more engines is not more than 90 minutes away from an aerodrome at which the performance requirements specified in the aeroplane flight manual applicable at the expected landing weight are met.

(c) The certificate holder may operate an aircraft with three or more engines more than 90 minutes away from an aerodrome at which the performance requirements specified in the aeroplane flight manual applicable at the expected landing weight are met, provided that—

- (1) the two engine inoperative en-route flight path data permits the aeroplane to continue the flight, in the expected meteorological conditions, from the point where two engines are assumed to fail simultaneously, to an aerodrome at which it is possible to land using the prescribed procedure for a landing with two engines inoperative; and
- (2) the net flight path, taking into account the effect of icing protection systems if the meteorological conditions require their operation—
 - (i) has a positive slope at the minimum safe altitude of the route to be flown; or
 - (ii) based on the gross-gradient-minus-0.5% gradient and failure of the two engines at the most critical en-route point, clears all terrain and obstructions within, except as otherwise provided in paragraph (d), 10 nm of the intended track by at least 2000 feet vertically; and
- (3) the net flight path has a positive slope at an altitude of 1500 feet above the aerodrome where the landing is assumed to be made after the failure of two engines; and
- (4) the expected weight of the aeroplane at the point where the two engines are assumed to fail shall be not less than that which would include sufficient fuel to proceed to an aerodrome where the landing is assumed to be made, and to arrive there at an altitude of at least 1500 feet directly over the aerodrome and thereafter to fly level for at least 15 minutes.

(d) If the pilot is able, by the use of radio navigation aids, to maintain the intended track by a margin of 5 nm the distance of 10 nm required by paragraph (c)(2)(ii) may be reduced to 5 nm.

(e) When calculating compliance with paragraph (c), the certificate holder shall assume the two engines fail at the most critical point of that portion of the route where the aeroplane is more than 90 minutes, at the all engines long range cruising speed at standard temperature and still air, away from an aerodrome at which the performance requirements applicable at the expected landing weight are met.

135.221 Landing-climb – destination and alternate aerodromes

Each holder of an air operator certificate shall ensure that, for each aeroplane it operates—

- (1) the landing weight of the aeroplane does not exceed the maximum approach and landing-climb weight, taking into account the altitude and the ambient temperature expected for the estimated time of landing at a destination and alternate aerodrome; and
- (2) for instrument approaches with decision heights below 200 feet, the approach weight of the aeroplane, taking into account the take-off weight and the fuel expected to be consumed in flight, allows a missed approach net-climb-gradient, assuming that the critical engine is inoperative in the approach configuration, of—
 - (i) at least 2.5%; or
 - (ii) at least the net-climb gradient required to clear any obstacles in the missed approach flight path in accordance with 135.213.

135.223 Landing distance – dry runway

(a) Each holder of an air operator certificate shall ensure that, for each aeroplane it operates, the landing weight for the estimated time of landing will not exceed the landing weight specified in the aeroplane flight manual.

(b) Each holder of an air operator certificate shall ensure that, for each aeroplane it operates, the landing weight of the aeroplane for the estimated time of landing at the destination aerodrome and at any alternate aerodrome allows a full-stop landing from 50 feet above the threshold within—

- (1) for aeroplanes at or below 5700 kg MCTOW, 85% of landing distance available; and
- (2) for aeroplanes above 5700 kg MCTOW, 70% of the landing distance available.

(c) When calculating the landing weight in accordance with paragraph (b), the certificate holder shall take account of—

- (1) aerodrome elevation; and
 - (2) ambient temperature at the aerodrome; and
 - (3) the type of runway surface and the runway surface condition ; and
 - (4) the runway slope in the direction of landing; and
 - (5) not more than 50% of the reported headwind component or not less than 150% of the reported tailwind component.
- (d) For dispatch of an aeroplane to land in accordance with paragraphs (b) and (c), it shall be assumed that the aeroplane will land on the most favourable runway taking into account—
- (1) the forecast meteorological conditions; and
 - (2) surrounding terrain; and
 - (3) approach and landing aids; and
 - (4) critical obstacles within the missed approach flight path.
- (e) If the certificate holder is unable to comply with paragraph (d) for the destination aerodrome, the aeroplane may be dispatched if an alternate aerodrome is designated that permits compliance with paragraphs (a), (b), and (c).

135.225 Landing distance – wet and contaminated runways

- (a) Each holder of an air operator certificate shall ensure that, for each aeroplane it operates—
- (1) when the appropriate weather reports or forecasts, or a combination of them, indicate that the runway at the estimated time of arrival of the aeroplane may be wet, the landing distance available is at least 115% of the landing distance required by 135.223; and
 - (2) when the appropriate weather reports or forecasts, or a combination of them, indicate that the runway at the estimated time of arrival of the aeroplane may be contaminated, the landing distance available is at least—
 - (i) the landing distance required by paragraph (a)(1); or
 - (ii) the landing distance determined in accordance with contaminated landing distance data.
- (b) A landing distance on a wet runway shorter than that required by paragraph (a)(1), but not less than that required by 135.223, may be used if data specifies a shorter landing distance on wet runways.

135.227 Steep approach and short landing techniques

Each holder of an air operator certificate may perform steep approach procedures using approach slope angles of 4.5° , or more, and with screen heights of less than 50 feet but not less than 35 feet, providing—

- (1) the aeroplane flight manual states the maximum approved approach slope angle, any other limitations, normal, abnormal, or emergency procedures for the steep approach, as well as amendments for the field length data when using steep approach criteria; and
- (2) for IFR operations, an approach slope indicator system comprising of at least a visual approach slope indicating system is available at each aerodrome at which steep approach procedures are to be conducted; and
- (3) for IFR operations, weather minima are specified and approved for each runway to be used with a steep approach; and
- (4) for IFR operations, consideration is given to—
 - (i) critical obstacles; and
 - (ii) the type of approach slope indicator reference and runway guidance such as visual aids, MLS, 3D-NAV, GPS, ILS, LLZ, VOR, or NDB; and
 - (iii) the minimum visual reference to be required at DH and MDA; and
 - (iv) usable airborne equipment; and
 - (v) pilot qualification and special aerodrome familiarisation; and
 - (vi) aeroplane flight manual limitation and procedures; and
 - (vii) missed approach criteria.

FAR Part 23 commuter category and SFAR41 aeroplanes**135.229 Take-off distance**

(a) Each holder of an air operator certificate shall ensure that the take-off weight does not exceed the maximum take-off weight specified in the aeroplane flight manual.

(b) When calculating the maximum take-off weight to determine compliance with paragraph (a), the certificate holder shall, assuming that the critical engine fails at V_{EF} and using a single V_1 , ensure that—

- (1) the required accelerate-stop distance does not exceed the accelerate-stop or accelerate slow distance available; and
 - (2) the take-off distance required does not exceed the take-off distance available; and
 - (3) any clearway forming part of the take-off distance available shall not exceed half the length of the take-off run available; and
 - (4) the take-off run does not exceed the take-off run available, using V_1 for the rejected and continued take-off.
- (c) When calculating the maximum take-off weight in accordance with paragraph (b), the certificate holder shall take account of—
- (1) aerodrome elevation; and
 - (2) pressure altitude of the aerodrome when the atmospheric pressure varies by more than 1% from the International Standard Atmosphere; and
 - (3) ambient temperature at the aerodrome; and
 - (4) the type of runway surface and the runway surface condition ; and
 - (5) the runway slope in the direction of take-off; and
 - (6) not more than 50% of the reported headwind component or not less than 150% of the reported tailwind component.

135.231 Net take-off flight path

- (a) Each holder of an air operator certificate shall ensure that, for each aeroplane it operates assuming that the critical engine is inoperative, all obstacles within the net take-off flight path are cleared vertically by at least—
- (1) 35 feet in the case of a take-off performed by an aeroplane that is intended to use a bank angle not exceeding 15° ; and
 - (2) 50 feet in the case of a take-off performed by an aeroplane that is intended to use a bank angle exceeding 15° .
- (b) For the purpose of paragraph (a), an obstacle shall be deemed to be within the net take-off flight path if the lateral distance from the obstacle to the intended line of flight does not exceed—
- (1) where the intended flight path does not require a track change exceeding 15° —

- (i) 45 m plus 0.10D, to a maximum of 600 m or, if the certificate holder has established visual or radio navigation track guidance procedures for the pilot, to a maximum of 300 m; or
 - (ii) for day operations in VMC, 30 m plus 0.10D to a maximum of 600 m or, if the certificate holder has established visual or radio navigation track guidance procedures for the pilot, to a maximum of 300 m.
- (2) where the intended flight path requires a track change exceeding 15°—
- (i) 45 m plus 0.10D, to a maximum of 900 m or, if the certificate holder has established visual or radio navigation track guidance procedures for the pilot, to a maximum of 600 m; or
 - (ii) for day operations in VMC, 30 m plus 0.10D to a maximum of 600 m or, if the certificate holder has established visual or radio navigation track guidance procedures for the pilot, to a maximum of 300 m.
- (c) For the purpose of paragraph (b), D is the horizontal distance the aeroplane will travel from the end of the take-off distance available.
- (d) When calculating the net take-off flight path in accordance with paragraph (a), the certificate holder shall ensure—
- (1) the following factors are taken into account—
 - (i) take-off weight at the commencement of the take-off run; and
 - (ii) aerodrome elevation; and
 - (iii) pressure altitude at the aerodrome when the atmospheric pressure varies by more than 1% from the International Standard Atmosphere; and
 - (iv) ambient temperature at the aerodrome; and
 - (v) not more than 50% of the reported headwind component or not less than 150% of the reported tailwind component; and
 - (2) a track change is not made before a height of 50 feet above the take-off surface has been achieved; and
 - (3) unless otherwise authorised by the Director—
 - (i) a bank angle exceeding 15° is not made before a height of 50 feet above the take-off surface has been achieved; and

- (ii) the bank angle up to and including a height of 400 feet above the take-off surface does not exceed 20°; and
 - (iii) the bank angle above a height of 400 feet above the take-off surface does not exceed 25°; and
- (4) adequate allowance is made for—
- (i) the effect of the bank angle on operating speeds and flight path; and
 - (ii) distance increments resulting from increased operating speeds; and
 - (iii) retention of stall margin and loss of climb gradient in accordance with 135.215.

135.233 Landing distance – dry runway

(a) Each holder of an air operator certificate shall ensure that, for each aeroplane it operates, the landing weight for the estimated time of landing will not exceed the landing weight specified in the aeroplane flight manual.

(b) Each holder of an air operator certificate shall ensure that, for each aeroplane it operates, the landing weight of the aeroplane for the estimated time of landing at the destination aerodrome and at any alternate aerodrome allows a full-stop landing from 50 feet above the threshold within 70% of the landing distance available assuming that the aeroplane is landed.

(c) When calculating the landing weight in accordance with paragraph (b), the certificate holder shall take account of—

- (1) aerodrome elevation; and
- (2) ambient temperature at the aerodrome; and
- (3) the type of runway surface and the runway surface condition ; and
- (4) the runway slope in the direction of landing; and
- (5) not more than 50% of the reported headwind component or not less than 150% of the reported tailwind component.

(d) For dispatch of an aeroplane to land in accordance with paragraphs (b) and (c), it shall be assumed that the aeroplane will land on the most favourable runway taking into account—

- (1) the forecast meteorological conditions; and
- (2) surrounding terrain; and
- (3) approach and landing aids; and

(4) critical obstacles within the missed approach flight path.

(e) If the certificate holder is unable to comply with paragraph (d) for the destination aerodrome, the aeroplane may be dispatched if an alternate aerodrome is designated that permits compliance with paragraphs (a), (b), and (c).

135.235 Landing distance – wet and contaminated runway

Each holder of an air operator certificate shall ensure that, for each aeroplane it operates, when the appropriate weather reports or forecasts, or a combination of them, indicate that the runway at the estimated time of arrival of its aeroplane may be wet or contaminated, the landing distance available is at least 115% of the landing distance required by 135.233.

Subpart E — Weight and Balance

135.301 *Applicability*

This Subpart prescribes the rules governing the control of loading and weight and balance on an aircraft.

135.303 *Goods, passenger, and baggage weights*

(a) Each holder of an air operator certificate shall establish the weights of goods and passengers and their carry-on and checked baggage.

(b) The certificate holder shall establish the actual weights of goods and checked baggage.

(c) The certificate holder shall establish the weights of passengers and their carry-on baggage, by using their—

- (1) actual weights; or
- (2) standard weights established in accordance with a programme specified in the certificate holder's exposition—

except that the use of actual weights and the use of standard weights, in accordance with paragraph (c), shall not occur on the same air transport operation.

(d) As an alternative to paragraph (c)(2), the certificate holder may use the standard passenger weights specified in paragraph (f) provided they are not used—

- (1) in conjunction with actual passenger weights on the same flight; or
- (2) when the passenger load will consist entirely, or almost entirely, of persons whose weights are expected to fall outside the standard passenger weight.

(e) When standard passenger weights are used, the certificate holder shall ensure that—

- (1) the person responsible for the loading of the aircraft has been furnished with written instructions detailing the—
 - (i) seating and loading schedule, including any fuel load or other limitations, for the particular aircraft; and
 - (ii) conditions under which the schedule may be used with standard passenger weights; and
- (2) each item of baggage and goods, excluding carry-on baggage, is weighed.

(f) Standard passenger weights, including carry-on baggage, referred to in paragraph (d), are—

- (1) 77kg for an adult male or female; and
- (2) 46kg for a child aged 4 to 14 years; and
- (3) 15kg for a child under 4 years.

135.305 Aircraft load limitations

Each holder of an air operator certificate shall ensure that—

- (1) the limitations contained in the aircraft flight manual, or other approved document, relating to the weight and balance of an aircraft are complied with; and
- (2) maximum allowable weights are not exceeded for zero fuel, manoeuvre, take-off, and landing; and
- (3) the aircraft's centre of gravity is within the limits referred to in subparagraph (1) at departure, and will remain within those limits throughout the air transport operation.

135.307 Load manifest

(a) Each holder of an air operator certificate shall ensure that—

- (1) except as provided in paragraph (b), a load manifest has been completed prior to each air transport operation; and
- (2) the load manifest is certified by the pilot-in-command; and
- (3) the following details are recorded on the load manifest—
 - (i) name of pilot-in-command, except where this is recorded by the certificate holder in another document; and
 - (ii) date of the operation; and
 - (iii) aircraft type and registration; and
 - (iv) aerodromes of departure and destination; and
 - (v) flight number or estimated time of departure; and
 - (vi) surnames and initial of all crew and passengers, except where this is recorded by the certificate holder in another document; and

- (vii) the total of the aircraft empty weight, the weight of any removable equipment, consumables, unusable oil, unusable fuel, and the weight of crew; and
 - (viii) the weights of passengers, goods, baggage, usable oil, and usable fuel; and
 - (ix) loaded aircraft weight; and
 - (x) evidence that the centre of gravity is within the specified limits, except where this is recorded by the certificate holder in another document; and
 - (xi) the maximum allowable weights for the operation, including zero fuel weight, take-off weight, and landing weight for the operation.
- (b) The certificate holder is not required to complete a load manifest for a non-stop flight operation that will be performed under VFR conditions and will depart from, remain within 25 nm of, and return to, the same aerodrome.

Subpart F — Instruments and Equipment

135.351 *Applicability*

This Subpart prescribes the instruments and equipment required for aircraft.

135.353 *General*

Each holder of an air operator certificate shall ensure that an air transport operation does not commence unless—

- (1) the aircraft is equipped—
 - (i) with the type of instruments and equipment required by Part 91 and this Subpart; and
 - (ii) with the number of instruments and equipment to ensure that the failure of any independent system required for either communication or navigation purposes, or both, will not result in the inability to communicate and navigate safely as required for the route being flown; and
- (2) the instruments and equipment installed in the aircraft comply with the specifications and airworthiness design standards listed in—
 - (i) Appendix B to this Part; or
 - (ii) Appendix C to Part 21; or
 - (iii) Part 26; or
 - (iv) alternative specifications or standards acceptable to the Director; and
- (3) the instruments and equipment have been installed in accordance with the aircraft manufacturer's instructions or other instructions acceptable to the Director; and
- (4) except as may be provided by a MEL approved under 91.539 for use for that aircraft, the instruments and equipment installed in the aircraft are in operable condition.

135.355 *Seating and restraints*

Each holder of an air operator certificate shall ensure that each of its aircraft is equipped with a shoulder harness for each crew seat.

135.357 *Additional instruments*

Each holder of an air operator certificate shall ensure that each of its aircraft is equipped with—

- (1) the powerplant instruments required by the airworthiness design standards in paragraph (a)(1)(i) or (iv) of Appendix C of Part 21; and
- (2) a means of indicating for each reversible propeller, actuated by the propeller blade angle or be directly responsive to it, that the propeller is in beta range or reverse pitch.

135.359 Night flight

Each holder of an air operator certificate shall ensure that each of its aircraft operated at night is equipped with—

- (1) a landing light; and
- (2) a light in each passenger compartment.

135.361 Instrument flight rules

(a) Each holder of an air operator certificate shall ensure that each of its aircraft operated under IFR is equipped with—

- (1) additional, and independent, means of indicating—
 - (i) airspeed, calibrated in knots, with a means of preventing malfunctioning due to either condensation or icing; and
 - (ii) sensitive pressure altitude, calibrated in feet; and
- (2) spare bulbs for cockpit instrument illumination; and
- (3) spare fuses.

(b) Notwithstanding paragraph (a)(1)(i), the certificate holder may fit an additional attitude indicator powered by a separate power source.

135.363 Emergency equipment

Each holder of an air operator certificate shall ensure that—

- (1) notwithstanding the seat breaks in 91.523(a) and (b), each of its aircraft is equipped with the emergency equipment referred to in 91.523; and
- (2) the requirements in 91.523(d) and (e) are met for the equipment required by subparagraph (1).

135.365 Public address and crew-member intercom systems

A holder of an air operator certificate shall ensure that each of its aircraft having a certificated seating capacity, excluding any pilot seat, of 10 seats or more is equipped with—

- (1) a public address system; and
- (2) a crew-member intercom system.

135.367 Cockpit-voice recorder

Each holder of an air operator certificate shall ensure each of its aircraft is equipped with a cockpit voice recorder if that—

- (1) aircraft's flight manual requires 2 or more flight crew members; and
- (2) aircraft has a certificated seating capacity, excluding any pilot seat, of 10 seats or more.

135.369 Flight data recorder

Each holder of an air operator certificate shall ensure each of its aircraft is equipped with a flight data recorder in accordance with B.4 of Appendix B if that aircraft—

- (1) is multi-engine turbine powered; and
- (2) has a certificated seating capacity, excluding any pilot seat, of 10 seats or more.

135.371 Additional attitude indicator

Each holder of an air operator certificate shall ensure that each of its turbojet powered aircraft is equipped with a third presentation of attitude.

135.373 Weather radar

Each holder of an air operator certificate shall ensure that each of its turbine powered aircraft in excess of 5700 kg MCTOW operating under IFR is equipped with a weather radar.

135.375 Ground proximity warning system

Each holder of an air operator certificate shall ensure that each of its turbine powered aircraft operating under IFR is equipped with a GPWS no later than 1 January 1999 if that aircraft has—

- (1) a MCTOW in excess of 5700 kg; or
- (2) a certificated seating capacity, excluding any pilot seat, of 10 seats or more.

Subpart G — Maintenance

135.401 Applicability

- (a) This Subpart prescribes rules for maintenance, under—
- (1) 135.403, for each aircraft operated under this Part; and
 - (2) 135.405 to 135.415, for each aircraft operated under this Part that has a certificated seating capacity of 10 seats or more excluding any pilot seat.
- (b) Each holder of an air operator certificate that operates an aircraft under this Part that has a certificated seating capacity of 9 seats or less excluding any pilot seat may elect to comply with all the requirements contained in 135.405 to 135.415 for that aircraft.

135.403 Responsibility for airworthiness

- (a) Each holder of an air operator certificate is responsible for the airworthiness of its aircraft, including airframes, aircraft engines, propellers, rotors, appliances, emergency equipment, and parts.
- (b) The certificate holder shall have a maintenance programme for each aircraft, aircraft engine, propeller, rotor, appliance, emergency equipment item, and part.
- (c) The maintenance programme required by paragraph (b) shall contain standards at least equivalent to Part 91, Subpart G and the manufacturer's recommended maintenance programme.
- (d) The certificate holder shall ensure that any maintenance that is performed by the certificate holder, or by any other organisation with whom the certificate holder arranges for the performance of that maintenance, is performed in accordance with its maintenance programme.

135.405 Maintenance organisation

Each holder of an air operator certificate shall—

- (1) be certificated under Part 145 and perform the maintenance of its aircraft, including airframe, aircraft engines, propellers, rotors, appliances, emergency equipment, and parts in accordance with its exposition and this Part; or
- (2) contract with another person certificated under Part 145 for the performance of maintenance.

135.407 Training and information programme

Each holder of an air operator certificate that performs any of its own maintenance, and each other person with whom each certificate holder arranges for the performance of that maintenance, shall have a training and information programme that ensures each person who certifies a release to service—

- (1) is fully informed about procedures, techniques, and new equipment in use; and
- (2) is competent to perform that certification.

135.409 Persons certifying maintenance

(a) The holder of an air operator certificate shall only use a person appropriately trained, qualified, and authorised to certify a release to service.

(b) The Director may accept procedures for the completion of an airworthiness directive inspection of any item by a pilot when no other qualified person is available, provided—

- (1) the pilot is—
 - (i) employed by the holder of the air operator certificate; and
 - (ii) authorised to perform the inspection by the holder of the air operator certificate; and
 - (iii) appropriately trained and qualified; and
- (2) the procedures require—
 - (i) the inspection to be carried out after each flight until the item has been inspected by an appropriately trained, qualified, and authorised maintenance person; and
 - (ii) each flight control system that is inspected is flight tested in accordance with Part 91, Subpart G and re-inspected before the aircraft is released to service; and
 - (iii) the aircraft to be released to service in accordance with Part 43.

135.411 Supervising personnel

Each holder of an air operator certificate that performs any of its own maintenance, and each other organisation with whom each certificate holder arranges for the performance of that maintenance, shall ensure that each person who is supervising maintenance, or making decisions on rectification action, is

authorised by the maintenance organisation certificate holder in accordance with its exposition required by Part 145.

135.413 Maintenance personnel duty time limitations

Each holder of an air operator certificate that performs any of its own maintenance, and each other organisation with whom each certificate holder arranges for the performance of that maintenance, shall relieve each person certifying releases to service from duty for—

- (1) if the person certifying the release to service is scheduled for more than 16 hours of duty in 24 consecutive hours, a period of at least 8 hours at or before the end of the 16 hours of duty; and
- (2) a period of at least 24 consecutive hours during any seven consecutive days or the equivalent thereof within any one calendar month.

135.415 Maintenance review

(a) Each holder of an air operator certificate shall ensure that—

- (1) it does not operate an aeroplane unless a maintenance review of the aeroplane has been carried out within the previous 12 months; and
- (2) each maintenance review that is carried out is certified as having been carried out.

(b) The certificate holder shall, before certifying that a maintenance review for an aircraft has been carried out, ensure—

- (1) all maintenance specified in the maintenance programme for the aircraft has been completed within the time periods specified; and
- (2) all applicable airworthiness directives have been complied with; and
- (3) all defects entered in the maintenance records required by Part 43 have been rectified or properly deferred in accordance with the procedures in the certificate holder's exposition; and
- (4) all certifications of release to service required by Part 43.103 have been made in accordance with Part 43.

(c) The certificate holder may certify a maintenance review on the basis of continuing compliance with an internal quality assurance programme acceptable to the Director provided—

- (1) the programme samples all the requirements of paragraph (b) during the review period; and

-
- (2) the maintenance review is individually certified for each of the certificate holder's aircraft.
- (d) The certificate holder shall ensure that the maintenance review—
- (1) is certified by an authorised person with experience in respect of that type of aircraft, that is at least equal to the experience required for the grant of an aircraft maintenance engineer licence rating; and
 - (2) contains the certifying person's signature, licence or approval number, and the date of entry; and
 - (3) contains the following statement:
The maintenance review of this aircraft and such of its equipment as is necessary for its continued airworthiness has been carried out in accordance with the requirements of the Civil Aviation Rules for the time being in force.

Subpart H — Crew Member Requirements

135.501 Applicability

This Subpart prescribes the rules governing the use of flight crew.

135.503 Assignment of flight crew duties

(a) Each holder of an air operator certificate shall ensure that any person carrying out functions as a flight crew member on an air transport operation performed under this Part—

- (1) holds a current licence and rating that are appropriate to the task assigned; and
- (2) holds a current medical certificate appropriate to the licence held; and
- (3) meets all requirements for the assigned flight-crew duty; and
- (4) meets all route and aerodrome qualification requirements for the operation intended.

(b) The certificate holder shall designate, for each period of an air transport operation—

- (1) a pilot-in-command; and
- (2) a second-in-command when two or more pilots are required; and
- (3) any other flight crew member that may be required by the type of operation to be performed.

(c) The certificate holder shall, for each aircraft type operated, assign in writing, to all required flight crew members, the necessary functions they are to perform.

(d) The certificate holder shall not require any flight crew member to perform any duties during ground operations, take-off, approach, and landing except those duties required for the safe operation of the aircraft.

135.505 Pilot-in-command type experience requirements

(a) Each holder of an air operator certificate shall ensure that any person acting as a pilot-in-command of an aircraft on an air transport operation has completed, prior to designation as pilot-in-command, on that make and basic model aircraft, the following operating experience—

- (1) for single engine aircraft, 5 hours and 5 take-offs and landings:

- (2) for multiengine aircraft, reciprocating or turbine engine powered, 10 hours and 8 take-offs and landings:
 - (3) for turbojet or turbofan aeroplanes, 15 hours and 10 take-offs and landings.
- (b) The experience required by paragraph (a) shall be acquired as follows—
- (1) after satisfactory completion of the appropriate ground and flight training for the aircraft; and
 - (2) in flight during air transport operations performed under this Part, except that flight time and take-off and landing experience may be accrued in a flight simulator approved for this purpose; and
 - (3) in the case of an aircraft not previously used by the certificate holder in operations performed under this Part, operating experience acquired in the aircraft type during proving flights or ferry flights may be used to meet this requirement; and
 - (4) while performing the duties of a pilot-in-command under the supervision of a designated pilot-in-command.
- (c) Paragraph (b) shall not apply when the aircraft is a single-reciprocating or single-turbine engine powered aircraft.

135.507 Pilot-in-command VFR experience requirements

A holder of an air operator certificate shall not use a person as pilot-in-command of an aircraft with a seating configuration, excluding pilot seats, of 10 seats or more in an air transport operation performed under VFR unless that person—

- (1) has at least 500 hours of flight time as a pilot, including at least 100 hours of cross-country flight time; and
- (2) for night operations, has at least 25 hours of night flight experience.

135.509 Pilot-in-command IFR experience requirements

A holder of an air operator certificate shall not use a person as pilot-in-command of an aircraft with a seating configuration, excluding pilot seats, of 10 seats or more in an air transport operation performed under IFR unless that person has at least—

- (1) 1200 hours of flight time as a pilot, including 500 hours of cross-country flight time; and
- (2) 75 hours of actual or simulated instrument time of which 25 hours can be in a flight simulator approved for this purpose; and

- (3) for night operations, 50 hours of night flight time.

135.511 Minimum flight crew – IFR

(a) Each holder of an air operator certificate shall ensure that an aircraft with a seating configuration, excluding pilot seats, of 10 seats or more, and operated under IFR, is operated with 2 pilots.

(b) Notwithstanding paragraph (a), the certificate holder may operate an aircraft with a seating configuration, excluding pilot seats, of 14 seats or less under IFR with one-pilot if—

- (1) the aircraft flight manual does not require the aircraft to be operated by 2 pilots; and
- (2) the aircraft is equipped with an operative autopilot or stabilisation system capable of operating the aircraft controls to maintain flight and manoeuvre the aircraft about the roll and pitch axes with an automatic heading and altitude hold; and
- (3) the aircraft is fitted with a headset that includes a boom microphone and facility for control column transmit-receive switching at the pilot-in-command station; and
- (4) the pilot-in-command has met the other applicable requirements of this Part.

Subpart I — Training

135.551 Applicability

This Subpart prescribes rules governing the establishment and operation of a training programme for crew members.

135.553 General

- (a) Each holder of an air operator certificate shall establish a training programme to ensure that each of its crew members are trained and competent to perform their assigned duties.
- (b) The certificate holder shall ensure that each crew member is trained in accordance with the training programme contained in the certificate holder's exposition.
- (c) The certificate holder shall ensure that its training programme is controlled by the certificate holder.
- (d) The certificate holder may—
 - (1) conduct the training programme; or
 - (2) contract with the holder of an aviation training organisation certificate issued under Part 141, to conduct the training programme where the Part 141 certificate authorises the holder to conduct that training; or
 - (3) for a training programme conducted outside New Zealand, contract with an organisation that meets an equivalent standard specified by Part 141.

135.555 Training records

Each holder of an air operator certificate shall maintain records of all required training undertaken by its crew members.

135.557 Initial training for crew members

- (a) Each holder of an air operator certificate shall ensure that each of its crew members, who has not qualified and served as a crew member on an aircraft, complete initial training conducted—
 - (1) in a structured and realistic manner; and
 - (2) in accordance with a syllabus that includes training applicable to—
 - (i) the aeroplane type to be used, including special equipment fitted for the intended operation; and

- (ii) the routes and aerodromes appropriate to the intended operation; and
 - (iii) crew member assignments, functions, and responsibilities; and
 - (iv) location and operation of emergency equipment available for use by crew members; and
 - (v) location and use of oxygen equipment; and
 - (vi) location and use of all normal and emergency exits, including evacuation slides and escape ropes; and
 - (vii) the certificate holders policies and procedures appropriate to its air transport operations.
- (b) The certificate holder may vary the syllabus for individual crew members if—
- (1) the variation is recorded in the crew member's record of training; and
 - (2) the certificate holder certifies the variation made and the reasons for such variation in the crew member's record of training.

135.559 Transition training for crew members

- (a) Each holder of an air operator certificate shall ensure that each of its crew members already qualified and serving as a crew member on an air transport operation authorised by the certificate holders certificate, completes an appropriate transition training course if—
- (1) the crew member is changing from one aeroplane type or variant to another type or variant; or
 - (2) new procedures or equipment are introduced on an existing aeroplane type or variant.
- (b) The transition training course shall address—
- (1) the use of all safety and emergency equipment and procedures applicable to the aeroplane type or variant; and
 - (2) new procedures or equipment introduced on the existing aeroplane type or variant.

135.561 Recurrent training for crew members

Each holder of an air operator certificate shall ensure that each of its crew members are adequately trained, current, and proficient for each aircraft, crew member position, and type of operation, in which the crew member serves.

135.563 Flight attendant training programme

(a) Each holder of an air operator certificate shall, where a flight attendant is used, establish a flight attendant training programme.

(b) The certificate holder shall ensure that its flight attendant training programme addresses, as appropriate—

- (1) the authority structure of the aircraft crew; and
- (2) crew member assignments, functions, and responsibilities during emergencies; and
- (3) normal, non normal, and emergency passenger handling, including procedures to be followed in dealing with special classes of passengers according to the certificate holder's exposition; and
- (4) briefing of passengers; and
- (5) location and operation of emergency equipment available for use by cabin or other crew members; and
- (6) proper use of cabin equipment and controls; and
- (7) location and use of oxygen equipment; and
- (8) location and use of all normal and emergency exits, including evacuation slides and escape ropes.

(c) The certificate holder shall ensure that each person performing the functions of a flight attendant on an air transport operation performed under this Part has satisfactorily completed the appropriate ground and flight training for the aeroplane type and crew member position.

135.565 Flight crew training programme

(a) Each holder of an air operator certificate shall establish a flight crew training programme.

(b) The certificate holder shall ensure that its flight crew training programme includes initial, transition, and recurrent training requirements applicable to—

- (1) the aircraft type to be used, including special equipment fitted for the intended operation; and

- (2) the routes and aerodromes appropriate to the intended operation; and
 - (3) the certificate holder's policies and procedures appropriate to its operations.
- (c) The training programme shall include, where appropriate, both ground and flight instruction utilising aircraft or an approved flight simulator.
- (d) The training shall be conducted by a flight crew member instructor who meets the requirements of 135.567.
- (e) The certificate holder shall record each separate qualification of each flight crew member and inform the crew member involved in writing of the qualification gained.

135.567 *Flight crew member instructor qualifications*

Each holder of an air operator certificate shall ensure that any person carrying out functions as an instructor in its flight crew member training programme established under this Part—

- (1) has satisfactorily completed the training required by this Subpart to serve as pilot-in-command in operations ; and
- (2) holds a Category A, B, or D, flight instructor rating; and
- (3) completes initial and recurrent training requirements applicable to the instruction carried out.

Subpart J — Crew Member Competency Requirements

135.601 *Applicability*

This Subpart prescribes the rules governing the operational competency assessment of flight crew members and crew members.

135.603 *General*

(a) Each holder of an air operator certificate shall establish an operational competency assessment programme in accordance with this Subpart that is controlled by the certificate holder.

(b) The certificate holder may—

- (1) conduct the operational competency assessment programme; or
- (2) contract with an organisation that holds a certificate issued under Part 141, to provide the operational competency assessment programme where the certificate authorises the holder to conduct that programme; or
- (3) for an operational competency assessment programme conducted outside New Zealand, contract with an organisation that meets an equivalent standard specified by Part 141 to provide the operational competency assessment programme.

135.605 *Flight examiner qualifications*

(a) Except as provided in paragraph (b), each holder of an air operator certificate shall ensure that each person performing the functions of a flight examiner in its operational competency assessment programme established under this Part—

- (1) has satisfactorily completed the appropriate competency checks required by 135.607 to serve as pilot-in-command in operations performed under this Part; and
- (2) has an appropriate current flight examiner rating; and
- (3) completes initial and recurrent training requirements applicable to the testing carried out.

(b) Where the operational competency assessment referred to in paragraph (a) is carried out in a flight simulator, the person who is performing the functions of a flight examiner shall—

- (1) have satisfactorily completed a competency check as pilot-in-command in a type of operation to which this Part applies; and

- (2) have an appropriate flight examiner rating; and
- (3) complete initial and recurrent training requirements applicable to the testing carried out.

135.607 Flight crew competency checks

Each holder of an air operator certificate shall ensure—

- (1) **for each pilot acting as pilot-in-command**, within the immediately preceding 12 months, the pilot has passed a check of route and aerodrome proficiency, conducted by a flight examiner, that—
 - (i) consists of at least one flight over one route segment and one or more landings at aerodromes representative of the operations to be flown; and
 - (ii) establishes that the pilot can satisfactorily perform the duties and responsibilities of a pilot-in-command in operations appropriate to this Part; and
- (2) **for each pilot conducting VFR operations**, within the immediately preceding 12 months, the pilot has successfully completed a competency check, conducted by a flight examiner, that shall cover normal, non normal, and emergency procedures in an aircraft type normally used by the pilot in the operation; and
- (3) **for each pilot crew member of an aircraft conducting IFR operations**, within the immediately preceding 6 months, the pilot has passed a check conducted by a flight examiner, that—
 - (i) covers normal, non normal, and emergency procedures appropriate to the equipment fitted to the aircraft and to the type of operations to which the pilot is assigned by the certificate holder; and
 - (ii) is conducted in each aircraft type flown by the pilot in the operations unless the aircraft has a seating configuration, excluding any pilot seat, of 9 seats or less, in which case the check may be taken by rotation in each aircraft type with one in each six-month period; and
- (4) **for each pilot**, within the immediately preceding 12 months, the pilot has successfully completed a written or oral test of the pilot's knowledge in—
 - (i) the provisions of the appropriate Civil Aviation Rules and the certificate holder's operations specifications and exposition; and

- (ii) for each aircraft type normally flown by the flight crew member, the aircraft systems, performance, and operating procedures, and the content of the approved flight manual; and
 - (iii) navigation, ATC, and meteorology; and
 - (iv) special flight operations as appropriate to the type of operation; and
 - (v) new equipment, procedures, and techniques; and
- (5) an entry is made, and certified, by the flight examiner in the pilot training record for each check carried out, whether satisfactorily or otherwise; and
 - (6) flight crew competency checks are carried out in an aircraft or flight simulator approved for this purpose.

135.609 *Flight attendant competency checks*

A holder of an air operator certificate shall not use a flight attendant, and a person shall not serve as a flight-attendant, unless, within the immediately preceding 12 months, the certificate holder has determined by appropriate initial and recurrent assessment that the person has adequate knowledge and is competent in the following areas as appropriate to assigned duties and responsibilities—

- (1) authority of the pilot-in-command; and
- (2) passenger handling, including procedures to be followed in handling persons whose conduct might jeopardise safety; and
- (3) crew member assignments, functions, and responsibilities during emergencies, including evacuation of persons who may need assistance; and
- (4) briefing of passengers; and
- (5) use of cabin equipment and controls; and
- (6) location and operation of items of emergency equipment; and
- (7) location and operation of oxygen equipment; and
- (8) location and operation of all normal and emergency exits, including evacuation chutes and escape ropes; and
- (9) seating of persons who may need assistance; and
- (10) first aid.

135.611 Crew member – grace provisions

If a crew member who is required to take a test or a flight check completes the test or flight check within one calendar month of the day on which it is required, that crew member shall be deemed to have completed the test or check on the date it is required to be completed.

135.613 Competency and testing records

Each holder of an air operator certificate shall maintain records of all competency assessments and testing of its crew members.”.

New Subpart L and Appendices A, B, and C

Part 135 is amended by inserting after Subpart K, the following:

“Subpart L — Manuals, Logs, and Records

135.851 Applicability

This Subpart prescribes the rules governing the use and retention of the manuals, logs, and records required for operations performed under this Part.

135.853 Operating information

Each holder of an air operator certificate, other than a restricted air operator certificate, shall ensure that the parts of the certificate holder's exposition relevant to the duties of each crew member are current and are accessible to the crew member.

135.855 Documents to be carried

(a) Each holder of an air operator certificate shall ensure that the following documents are carried on each individual flight—

- (1) details of the operational flight plan; and
- (2) NOTAM and aeronautical information service briefing documentation appropriate to the operation; and
- (3) meteorological information appropriate to the operation; and
- (4) the load manifest; and
- (5) notification of dangerous goods; and
- (6) copies of the relevant flight guide charts and plates; and
- (7) in the case of regular air transport service, a route guide covering each route flown and alternate aerodromes that may be used.

(b) The certificate holder shall ensure that separate copies of the documents referred to in paragraph (a)(6) are available for each operating pilot.

135.857 Operation record

(a) Each holder of an air operator certificate shall, for each air transport operation that it conducts, record—

- (1) the planned aspects of the operation; and
- (2) the actual accomplishment of the operation.

(b) The record shall be of a permanent nature.

135.859 Retention period

(a) Each holder of an air operator certificate shall ensure that the following information is retained for 12 months from the date it was completed:

- (1) operation record:
- (2) load manifest:
- (3) notification of dangerous goods.

(b) The certificate holder shall ensure that its flight crew records of flight and duty time is retained for 12 months from the date of entry of the record.

(c) The certificate holder shall ensure that its records of training, checking, and qualifications of each crew member is retained until 12 months after the crew member has left the certificate holder's employment.

Appendix A — Transitional Arrangements

The commencement of the rules contained in 135.365, 135.367, and 135.369 are suspended until they are applied by notice in the Gazette, such application being no sooner than a period of 2 years from the date that Part 135 comes into force.

Appendix B — Instruments and Equipment Airworthiness Design Standards

Instruments and equipment required by Subpart F shall meet the following specifications and requirements:

B.1 Public address system

(a) A public address system shall—

- (1) except for handsets, headsets, microphones, selector switches, and signalling devices, be capable of operation independent of the crew member intercom system required by 135.365(2); and
- (2) be accessible for immediate use from each of two flight crew member stations in the cockpit; and
- (3) for each required floor-level passenger emergency exit that has an adjacent flight attendant seat, have a microphone which is readily accessible to the seated flight attendant; and
- (4) be capable of operation within 10 seconds by a flight attendant at each of those stations in the passenger compartment from which its use is accessible; and
- (5) be understandably audible at all times at all passenger seats, lavatories, flight attendant seats, and work stations.

(b) Notwithstanding paragraph (a)(3) one microphone may serve more than one exit, provided the proximity of the exits allows unassisted verbal communication between seated flight attendants.

B.2 Crew member intercom system

A crew-member intercom system shall—

- (1) except for handsets, headsets, microphones, selector switches, and signalling devices, be capable of operation independent of the public address system required by 135.365(1); and
- (2) provide a means of two-way communication between all members of the flight crew; and
- (3) provide a means of two-way communication between the cockpit and each passenger compartment; and
- (4) be accessible for immediate use from each of two flight crew member stations in the cockpit; and

- (5) be accessible for use from at least one normal flight-attendant station in each passenger compartment; and
- (6) be capable of operation within 10 seconds by a flight attendant at each of those stations in each passenger compartment from which its use is accessible; and
- (7) be accessible for use at enough flight attendant stations so that all floor-level emergency exits in each passenger compartment are observable from a station so equipped; and
- (8) have an alerting system that—
 - (i) incorporates aural or visual signals for use by any crew member; and
 - (ii) has a means for the recipient of a call to determine whether it is a normal call or an emergency call; and
- (9) provide a means of two-way communication between ground personnel and any two flight crew members in the cockpit—
 - (i) when the aircraft is on the ground; and
 - (ii) from a location that avoids visible detection from within the aircraft during the operation of the ground personnel interphone system station.

B.3 Cockpit voice recorder

Cockpit voice recorders shall—

- (1) meet the requirements of the TSO C84 series or the TSO C123 series; and
- (2) be fitted with an underwater locating device that meets the requirements of the TSO C121 series; and
- (3) have a minimum capacity of 30 minutes continuous recording time before any erasure.

B.4 Flight data recorder

Flight data recorders shall—

- (1) meet the requirements of the TSO C124 series; and
- (2) be fitted with an underwater locating device that meets the requirements of the TSO C121 series; and
- (3) be of a non-ejectable type and capable of recording and storing 8 hours of data in a digital form; and

- (4) record the parameters as detailed in Figure 1 and Table 1 of Appendix B.

B.5 *Additional attitude indicator*

The third presentation of attitude shall be—

- (1) operated independently of any other attitude indicating system; and
- (2) powered from a source independent of the electrical generating system; and
- (3) capable of continuous reliable operation for 30 minutes after total failure of the electrical generating system; and
- (4) operative without selection after total failure of the electrical generating system; and
- (5) appropriately lighted during all phases of operation.

B.6 *Weather radar*

Weather radar shall meet the requirements of the TSO C63 series.

B.7 *Ground proximity warning system*

GPWS shall meet the requirements of the TSO C92 series.

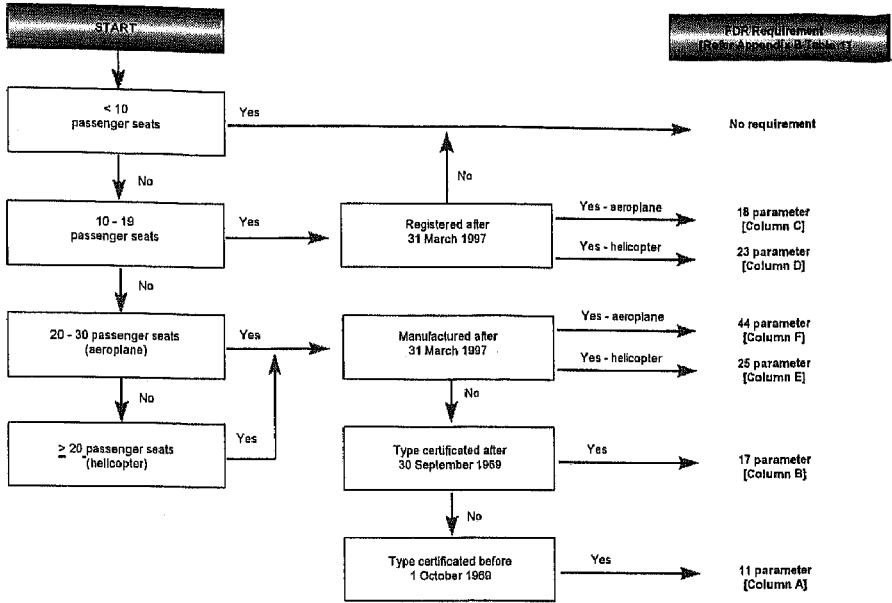


Figure 1. Flight Data Recorder Decision Chart

Table 1. Flight Data Recorder Parameters

(A) (B) (C) (D) (E) (F)

Parameter	11 Parameter	17 Parameter	18 Parameter	23 Parameter	25 Parameter	44 Parameter
1	Time	Time	Time	Time	Time	Time
2	Altitude	Altitude	Airspeed	Altitude	Altitude	Altitude
3	Airspeed	Airspeed	Altitude	Altitude	Airspeed	Airspeed
4	Vertical acceleration	Vertical acceleration	Heading	Heading	Heading	Heading
5	Heading	Heading	Vertical acceleration	Vertical acceleration	Vertical acceleration	Vertical acceleration
6	Time of radio transmission to/from ATC	Time of radio transmission to/from ATC	Longitudinal acceleration	Longitudinal acceleration	Pitch attitude	Pitch attitude
7	Pitch attitude	Pitch attitude	Pitch attitude	Pitch attitude	Roll attitude	Roll attitude
8	Roll attitude	Roll attitude	Roll attitude	Roll attitude	Radio transmitter keying	Radio transmitter keying
9	Longitudinal acceleration	Longitudinal acceleration	Stabiliser trim position OR pitch control position	Altitude rate	Power in each engine: Free power turbine speed and engine torque	Thrust/power on each engine
10	Control column OR pitch control surface position	Pitch trim position	Fan/N1 speed/EPR/cockpit indications used for aircraft certification OR prop speed and torque	Main rotor speed	Main rotor speed	Trailing edge flap OR cockpit control selection
11	Thrust of each engine	Control column OR pitch control surface position	Altitude rate	Free or power turbine for each engine	Altitude rate	Leading edge flap on OR cockpit control selection
12		Control wheel OR	Angle of attack	Engine torque for	Pilot input - primary	Thrust reverser

(A) (B) (C) (D) (E) (F)

Parameter	11 Parameter	17 Parameter	18 Parameter	23 Parameter	25 Parameter	44 Parameter
		lateral control surface position		each engine	controls	position
13		Rudder pedal OR yaw control surface position	Radio transmitter keying	Primary hydraulic pressure	Flight control hydraulic pressure low	Ground spoiler position / speed brake selection
14		Thrust of each engine	Trailing edge flaps	Secondary hydraulic pressure (if available)	Flight control hydraulic pressure selector switch position, 1 st and 2 nd stage	Marker beacon passage
15		Position of each thrust reverser	Leading edge flaps	Radio transmitter keying	AFCS mode and engagement status	Autopilot engagement
16		Trailing edge flap OR cockpit flap control position	Thrust reverser, each engine	Autopilot engaged	SAS status - engaged	Longitudinal acceleration
17		Leading edge flap OR cockpit flap control position	Spoiler/ speedbrake	SAS status - engaged	SAS fault status	Pilot input and/or surface position - primary controls
18			Autopilot engaged	SAS fault status	Main gearbox temperature low	Lateral acceleration
19				Collective	Main gearbox temperature high	Pitch trim position
20			Pedal position		Controllable stabilator position	Glide/slope deviation
21			Lateral cyclic		Longitudinal position	Localiser deviation
22			Longitudinal cyclic		Lateral acceleration	AFCS mode and

(A) (B) (C) (D) (E) (F)

Parameter	11 Parameter	17 Parameter	18 Parameter	23 Parameter	25 Parameter	44 Parameter
23				Controllable stabilator position	Master warning	engagement status Radio altitude
24					Nav 1 and Nav 2 frequency selection	Master warning
25					Outside air temperature	Main gear squat switch status
26						Angle of attack
27						Outside air temperature OR total air temperature
28						Hydraulics, each system, low pressure
29						Ground speed
30						Drift angle
31						Wind speed and direction
32						Latitude and longitude
33						Brake pressure /pedal position
34						Additional engine parameters: EPR, N ₁ , N ₂
35						Exhaust Gas Temperature

(A)

(B)

(C)

(D)

(E)

(F)

Parameter	11 Parameter	17 Parameter	18 Parameter	23 Parameter	25 Parameter	44 Parameter
36						Throttle lever position
37						Fuel flow
38						TCAS - TA
39						TCAS - RA
40						TCAS - Sensitivity level
41						Ground Proximity Warning System
42						Landing gear or gear selector position
43						DIME 1 and 2 distance
44						Nav 1 and 2 frequency selection

Appendix C — Runways

This Appendix is referred to in 135.77.

C.1 *Minimum runway widths*

To determine the minimum runway width it is necessary to ascertain the aerodrome reference code (ARC) appropriate to the aeroplane type by using Table 1. The code is composed of two elements which are related to the aeroplane performance, characteristics, and dimensions. Element 1 is a number based on the aerodrome reference field length (ARFL) and element 2 is a letter based on the aeroplane wing span and outer main gear wheel span.

C.1.1 *Determining the ARC using Table 1*

- (a) **Firstly:** Determine the ARFL of the aeroplane to be operated. The ARFL is the minimum field length for take-off at maximum certificated take-off weight, at sea level, in standard atmospheric conditions, in still air, and with zero runway slope, as derived from the aircraft flight manual;
- (b) **Secondly:** Determine the code number for element 1 applying the aeroplane's aerodrome reference field length; and
- (c) **Thirdly:** Determine the code letter of element 2 corresponding to the dimensions of the aeroplane's wing and outer main gear span. The code letter for element 2 is the code letter which corresponds to the wing span, or the outer main gear span, whichever gives the most demanding code letter. For instance, if code letter C corresponds to the aeroplane's wing span and code letter D corresponds to the aeroplane's outer main gear span, the code letter selected would be D for that aeroplane type.

Table 1

Aerodrome Reference Code (ARC)

Code Element 1		Code Element 2		
Code Number	Aeroplane Reference Field Length	Code Letter	Wing Span	Outer Main Gear Wheel span
1	Less than 800 m	A	Up to but not including 15 m	Up to but not including 4.5 m
2	800 m up to but not including 1200 m	B	15 m up to but not including 24 m	4.5 m up to but not including 6 m
3	1200 m up to but not including 1800 m	C	24 m up to but not including 36 m	6 m up to but not including 9 m
4	1800 m and over	D	36 m up to but not including 52 m	9 m up to but not including 14 m
		E	52 m up to but not including 65 m	9 m up to but not including 14 m

C.1.2 Determining the minimum runway width using Table 2

Having determined the aeroplane's ARC the runway widths are determined by entering at the applicable code number and then moving across to the value under the applicable code letter. For instance if the aeroplane ARC is 2C, the required runway width is 30 m.

Table 2. Runway widths

Code Number	Code Letter				
	A	B	C	D	E
1	18 m	18 m	23 m	-	-
2	23 m	23 m	30 m	-	-
3	30 m	30 m	30 m	45 m	-
4	-	-	45 m	45 m	45 m

C.1.3 Determining Minimum runway strip widths

The minimum runway strip width for a particular aeroplane type should be determined by reference to Table 3 below.

Table 3 Minimum Runway Strip Width		
Code Number	Runway Type	Strip Width
3 or 4	Precision instrument approach runway at an International aerodrome	300 m
3 or 4	Precision instrument approach runway	220 m
1 or 2	Precision instrument approach runway	150 m
3 and 4	Non-precision instrument approach or non-instrument approach runway	150 m
3 and 4	Non-instrument approach day only applicable to aircraft at or below 22700 kg MCTOW	90 m
1 and 2	Non-precision instrument approach runway	150 m
2	Non-instrument approach runway	80 m
1	Non-instrument approach runway	60 m

Appendix 1 and 2 Amendments

Appendix 1 of Part 135 is amended by revoking the heading of Appendix 1 and substituting it with the following:

"Appendix 1 — Transitional Rules for Subpart K".

CONSULTATION DETAILS

(This statement does not form part of the rules contained in Part 135.
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. Following the recommendations contained in that report, the Civil Aviation Authority (CAA) (formerly the Air Transport Division of the Ministry of Transport) commenced a complete review of all existing civil aviation legislation. The existing legislation that is still appropriate is being rewritten into the new *Rules* format. New legislation is being generated where necessary for the areas not presently covered.

Considerable research was carried out to determine the format for the new legislation. It was decided that the legislative framework should incorporate the advantages of the regulatory system of the Federal Aviation Administration (FAA) of United States of America and the system being developed by the European Joint Aviation Authorities and published as Joint Aviation Requirements (JAR).

The new rules are structured in a manner similar to the Federal Aviation Regulations (FAR) of the FAA, and aim to achieve maximum harmonisation whilst allowing for national variations. Close co-operation is also being maintained with the Civil Aviation Safety Authority of Australia to ensure maximum harmonisation with their regulatory code.

New Zealand's revised legislation is published as Civil Aviation Rules (CAR) which is divided into Parts. Each Part contains a series of individual rules which relate to a particular aviation activity.

Accompanying most Parts will be at least one associated Advisory Circular (AC) which will expand, in an informative way, specific requirements of the Part and acceptable means of compliance. For instance an AC may contain examples of acceptable practices or procedures which would meet the requirements of a particular rule.

The CAR numbering system is based on the FAR system. As a general principle the subject matter of a rule Part will be the same or similar to the FAR although the title may differ to suit New Zealand terminology. Where a 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 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 set standards for, and monitor performance of, aviation participants whilst providing the maximum flexibility for the participants to develop their own means of compliance.

Section 12 of the Civil Aviation Act 1990 requires participants in the aviation system to carry out their activities safely and in accordance with the relevant prescribed safety standards and practices. Section 28 of the Act allows the Minister to make ordinary rules.

Notice of Proposed Rule Making

To provide public notice of, and opportunity for comment on the proposed new rules, the Authority issued Notice of Proposed Rule Making 95-8 under Docket Number 1100, and Docket Number 1116 for maintenance, on 13 December 1995. This Notice proposed the introduction of Civil Aviation Rules Part 135 to provide a regulatory safety boundary for Air Transport Operations — Helicopters and Small Aeroplanes. The Authority issued Notice of Proposed Rule Making 96-6 under Docket Number 1101. This Notice proposed the introduction of Civil Aviation Rules Part 135 Subpart D – Performance.

Supplementary Information

All comments made on the Notice of Proposed Rule Making 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 Publishing Solutions Ltd, PO Box 983, Wellington 6015, Telephone 0800 800 359.

Summary of Comments on Docket Numbers 1100 and 1116 NPRM

General comments on the NPRM

From the 37 submissions received, a number of general comments were made in respect to the NPRM.

One commenter noted that most of the concerns he raised on the informal draft have been answered.

One commenter wrote that "the contention that the consultation process is largely regarded as a joke is grossly offensive to all the participants in the process and also an unwarranted attack on the people within CAA who are involved in the rule rewrite process.....Significant changes have occurred as a result of consultation meetings between industry and CAA personnel.....I have

not seen my submissions ignored and I do not regard the consultation process as a joke”.

One commenter stated that “I would also like to congratulate the rule writing team on bringing together the many comments already received, in what must seem like an endless task.”

One commenter commented that the rule as proposed appears to be a reasonable and workable document.

One commenter noted that “objective comment on the above rule parts is impossible without the accompanying advisory circulars (AC). We understand that each rule write group has a different technical study group. There is no apparent co-ordination between the groups. We are unhappy that this structure is apparently accepted by CAA....The rules (Part 121, 135, 119, 91) as they are proposed will in some cases undermine the economic survivability of operators, for no apparent gain in safety.”

CAA response: All the acceptable methods of compliance which are to be expanded via an AC already exist in current documents. ACs may be desirable but are not necessary for an understanding of the rules. Where a rule requires additional equipment (flight data recorders for example) or there are significant changes between current practice and a rule a suitable compliance period will be stated in the rule.

One commenter cannot support the progress of Part 135, 119, or 104 through to the final rule stage until a mechanism to cater for commercial gliding activities has been proposed in a NPRM format.

CAA response: That the proposal to develop Part 115 Adventure Aviation will address commercial gliding activities.

One commenter asked CAA to keep in mind their concern that the rule must support a high level of safety especially carriage of the general public.

One commenter was very pleased, and appreciative that the majority of the concerns held, and expressed in the earlier draft had been addressed. “The rule as it now stands should ensure good standards and we would congratulate you all on the work done.”

One commenter supports the direction of the proposed rules Part 91 and 135. They recommend that the cost benefit analysis be reviewed.

One commenter commented that as a general rule he found Parts 91, 133 and 135 acceptable.

One commenter believes that the economic analysis of the above proposed rules (91, 119, 121, 135) is flawed....” In some cases the NPRMs are incomplete

and there are no advisory circulars to show what method of compliance will be acceptable to the Director...There are significant implications in the overall comments and specific issues identified in this submission which would seem to justify some further consultation prior to release of the final rules."

CAA response: In practice there are very few ways to actually measure what the improvements in safety will be from a safety requirement. It is impossible to say exactly what will happen in New Zealand following the introduction of these rules without actually implementing the requirements. The best approach open was to take a benchmark reflecting a system with a similar level of requirements (the USA) and expect that we would move in that general direction - that is, our accident record would improve.

The issue then becomes judging whether the potential benefits (even if they go only part of the way towards the US safety record) do outweigh any expected costs. This can only be done at a broad level and the US data is the best available for this analysis. The analyses did not rely on the New Zealand system being the same as the US system in terms of actual operational characteristics.

One commenter noted that it is pleasing that there have been significant changes from the draft of this rule in response to industry submissions.

Two commenters suggested improved wording and other corrections to general errors in the NPRM document.

CAA response: The CAA agrees and has incorporated all the recommended changes.

One commenter suggested that design standard should not be referred to in the operating rules.

CAA response: The CAA disagrees. The design standards stated in the appendices to the operating rules relate to equipment that the operator may elect to fit to fulfil a certain task and are, therefore, directly relevant to the operating rules.

One commenter suggested that the requirements of Part 121, Subpart F should be applied to some Part 135 aircraft, particularly those over a MCTOW of 5 700 Kgs.

CAA response: The issue of standards of operation for the larger aircraft in Part 135 is being addressed in a project to examine the one level of safety proposal by the Federal Aviation Administration. If adopted this proposal will require aircraft with ten or more passenger seats to meet Part 121 standards of operation.

Specific comments on the NPRM

The main specific comments received from the submissions are discussed as follows:

135.3 Definitions

One commenter considered that **Final reserve fuel** should be “planned” to be remaining on board, on completion of a flight because “normally required” is not easily defined.

CAA response: Agrees and has reworded the definition to clarify the meaning intended.

135.5 Laws, regulations, and procedures

One commenter believed that this was too wide ranging.

CAA response: That the requirement only refers to those documents or parts there-of that are appropriate to the certificate holders operation.

135.7 Compliance with procedures

One commenter suggests that operation in foreign states be covered.

CAA response: The requirements for operations in foreign States is covered in section 4 of the Civil Aviation Act 1990.

135.55 Common language

One commenter believed that all crew should be able to communicate in the same language and in NZ that language should be English.

CAA response: The CAA does not agree and believes that it is adequate that at least one flight crew member, proficient in the English language, is sufficient provided all crew members can communicate in a common language.

135.57 Flight preparation

Four commenters argued that the requirement of 135.57(a) was not necessary or practical for on demand operations.

CAA response: The preparation of an operational flight plan was an essential part of the safe preparation of a flight and need only cover the essentials for a particular flight.

Seven commenters either wanted the elimination of the requirement to file a flight plan as required under 135.57(c) or limit it to operations beyond a particular distance.

CAA response: Disagrees with this view and believes the requirement provides an essential monitoring function for SAR purposes.

Three commenters wanted an increase of the 25 nm exemption for non-stop VFR operations as required by 135.57(d).

CAA response: The 25 nm is regarded as the minimum safe distance without utilising monitoring facilities provided by an ATS unit.

135.59 Information on emergency and survival equipment

One commenter queried whether as per 135.59(a) it was necessary for the operator to have available, for immediate communication to rescue co-ordination centres, information on the emergency and survival equipment carried on board each of its aircraft.

CAA response: While much of the information on emergency and survival equipment is contained in the flight plan this is not the case for flights where a flight plan is not required under 135.57(d) nor are the details necessarily as comprehensive as held by the operator.

135.61 Fuel

One commenter questioned the need for inclusion of 135.61(b)(2)(v) – geographic location of the destination aerodrome – in the rule.

CAA response: The geographic location of the destination aerodrome needs to be factored in the fuel calculation if factors such as altitude or surrounding terrain need to be considered.

135.63 Carriage of passengers [Final rule 135.65]

One commenter wanted the decision as to whether or not to carry a passenger to be restricted to the pilot-in-command or senior flight attendant.

CAA response: It is the responsibility of the operator as well as those persons whose duties include this requirement.

135.65 Admission to flight compartment [Final rule 135.67]

Five commenters sought clarification of admission to the flight compartment.

CAA response: The rule allows full flexibility for the operator to decide to include or exclude carriage of passengers to occupy a pilot seat. The operator sets the policy.

The change in title from flight deck to flight compartment was made to better reflect the subject matter.

135.67 Manipulation of controls [Final rule 135.69]

One commenter queried the qualification of the pilot manipulating the controls.

CAA response: The operator is constrained by Part 61 and 135.503 to using only those pilots who meet both licence type and other criteria including experience level, currency and aircraft type rating.

135.69 Use of flight recorders [Final rule 135.71]

One commenter considered the wording in 135.69(2) precluded the use of hand mikes for public address purposes.

CAA response: The wording does not preclude the use of hand mikes provided the cockpit-voice recorder (CVR) can pick up all communication in the cockpit. However if this is not the case and the CVR is equipped to record audio signals received by a boom or a mask microphone then such a boom or mask microphone must be used below 10,000 feet altitude.

135.71 Refuelling and defuelling operations [Final rule 135.73]

Five commenters requested a change to (d) to allow the operator to ensure safe fuelling procedures with respect to third parties.

CAA response: Agrees with this view.

One commenter considered this rule too complex.

CAA response: Disagrees with this view and believes the rule retains the minimum safety standards for the classes of fuel involved.

135.73 Fuel spillage [Final rule 135.75]

One commenter believed the rule was too complex and detailed.

CAA response: Disagrees with this view and notes that the rule, as per 135.71 above, prescribes the minimum actions to be taken to ensure safety. Operators can develop their own procedures which ensures compliance with this rule.

135.75 Use of aerodromes including heliports [Final rule 135.77]

One commenter believed it is not relevant to hold an aerodrome register.

CAA response: Disagrees with this view and believes it is necessary to maintain a register of aerodromes not promulgated in the AIP. Information and data must be gathered prior to the commencement of a flight conducted under this Part.

Final rule 135.77(d),(e),(f) and Appendix C are transferred from a previously existing Advisory Circular 139-01 Aerodrome Design.

135.77 Night operations [Final rule 135.79]

Eight commenters argued variously from requesting no restriction for VFR night operations to seeking a ban on all VFR night operations.

CAA response: Disagrees that the restriction for night VFR operations with aircraft with one engine should also apply to those with two or more engines.

CAA believes that night VFR operations with a single engine aircraft poses more of a safety risk than during the day and consequently that regardless of the aircraft's powerplant the 5 nm distance limitation should apply.

135.79 Operations of single-engine aircraft [Final rule 135.81]

Four commenters disagreed with the provision of 135.79(a) in respect to ensuring a safe forced landing in the event of engine failure.

CAA response: Does not accept that an air transport operation be carried out over terrain which is not conducive to a safe forced landing in the event of engine failure. Nor does CAA believe that such a rule will be unnecessarily restrictive for operators to comply with. It will however require planning and at times additional cost to ensure compliance with this rule.

Five commenters believed, in respect to 135.79(b), that either ditching was incompatible with this rule or that conversely properly equipped or configured, there should be little or no restriction to the over water distance permitted.

CAA response: Neither of these views is acceptable. CAA believes that 10 nm is the minimum necessary to enable most if not all over water flights to continue as at present but restricting such flights to conditions that meet the requirements of 135.79(c) for a safe forced landing.

135.83 Minimum altitudes for VFR flights [Final rule 135.85]

CAA notes that the minimum altitude above the surface, for a flight under this Part, remains at 500 feet and 135.85 in the final rule merely applies this condition. In other words all but 91.311(c) will apply.

135.85 Flights over water – multi-engined aircraft [Final rule 135.87]

CAA notes that in the final rule multi-engined aircraft that are not capable of maintaining a height of 1000 feet with one engine inoperative are restricted to operating no more than 10 nm greater than the gliding distance from land.

CAA also notes in the final rule that all operations to a point more than 100 nm from land shall be conducted under IFR.

135.87 VFR en-route – multi-engined aeroplanes [Final rule 135.89]

CAA notes in the final rule that aeroplanes with two or more engines which cannot comply with the provisions of 135.217 shall be operated to comply with

the provisions of 135.79(a) and(c) i.e. carry out a safe forced landing in the event of engine failure.

135.153 Meteorological information

Four commenters requested flexibility in obtaining meteorological information.

CAA response: The rule provides for the use of alternative sources to an organisation certificated under Part 174, to provide a basic weather report for the purpose of approach and landing.

135.155 Meteorological conditions – VFR flight

Seven commenters provided a variety of inputs with no clear consensus emerging.

CAA response: It was accepted that the night minima for helicopter operations in 135.155(d) should be increased. While this aspect of the rule has been amended, CAA notes that it is still less restrictive than the current regulations.

135.159 Aerodrome operating minima – IFR flight

CAA agrees to add the requirement restricting a pilot-in-command continuing beyond the final approach fix, if current meteorological information indicates the visibility at the aerodrome is less than the visibility minima prescribed for that procedure.

135.161 IFR departure limitations

CAA agrees to widen the applicability to include aircraft with more than two engines.

135.163 IFR procedures [Final rule 135.165]

CAA believes the rule as it stands makes provision for IFR flight outside routes defined in the AIP.

This Subpart Summarises Comments on Docket Number 1042 NPRM

General comments on the NPRM

From the nine submissions received, three commenters indicated agreement and made no specific comments. From the remaining three commenters one general issue was raised and is discussed as follows:

One commenter asked if the NPRM addresses such aircraft as the DC3 and those certificated to FAR Part 135 Appendix A standards.

One commenter stated that there is a need to include aircraft performance certification other than the FARs. It will be necessary to include CAR-3 issued

by the Canadian MOT and ANO 20.7.4 issued by the Australian CAA as it is not possible to schedule the aircraft performance to the proposed rules with the aeroplane flight manual data.

CAA response: CAA agrees with the two commenters that the rule needs to include FAR Part 135 Appendix A standards and to address certain aircraft that cannot, due to their airworthiness standards, comply in full with the performance requirements. 135.201 Applicability now includes aeroplanes certificated to FAR Part 135 Appendix A standards and a further provision has been added for the operation of aeroplanes that cannot fully comply with the performance requirements.

A number of the commenters commented on the values of net take-off flight path, take-off flight path, take-off distance, and take-off run in this subpart.

CAA response: CAA reviewed the use of these terms in the equivalent FAR Part 135 and found that those rules state that these terms have the same meaning as prescribed in the rules under which the aeroplane is certificated. FAR Part 23 Airworthiness standards: Normal, utility, acrobatic, and commuter category aeroplanes and the other airworthiness standards listed in 135.201 Applicability specify the likes of take-off distance and net take-off flight path in detail. Consequently, in prescribing the operational performance requirements in Part 135, there is no further specification in terms of the likes that take-off distance is to 35 feet or 50 feet as the case may be, or that the net take-off flight path extends to a certain height above the aerodrome surface. As CAR Part 21 incorporates CAR Part 23 by reference, CAA concludes that this subpart should adopt the FAR system and has deleted the values associated with these terms in this subpart and has adopted the FAR 135 definition for these terms.

Specific comments on the NPRM

Specific comments received from the 9 submissions are discussed as follows:

2.1 135.203 Definitions

One commenter asked that if it is necessary to define *clearway*, is it appropriate to define *stopway* ?

CAA response: The definition of *clearway* is included as the term is used in this Subpart whereas the term *stopway* is not used in the Subpart and therefore not defined.

One commenter stated that the definition of *threshold* is unclear as to what the runway surface includes (clearways etc.). The old CASO 4 definition refers to *that portion of the runway declared usable for landing*.

CAA response: The definition of *threshold* is applicable to this CAR only and should not be confused with the definition of *threshold* in terms of aerodrome

design. The threshold as defined in this CAR originates in the airworthiness standards in Far Part 23 requiring landing performance data to be established using this threshold.

One commenter considered that the definition of V_1 and V_2 is unsatisfactory for large aircraft and should be altered in this rule and in Part 121.

CAA response: CAA does not agree as these definitions are the same as those used in the airworthiness standards FAR Part 23 and 25 incorporated by reference under CAR Part 21. The use of these definitions in this Part is essential for compatibility with the performance data contained in the aeroplane flight manual which is produced in compliance with the airworthiness standards.

135.209 Take-off distance

One commenter considered that pressure altitude should be accounted for in this rule. There may be doubt as to whether 135.209 or 135.227 which include pressure altitude must be complied with.

CAA response: CAA agrees and has amended the rule to include pressure altitude.

One commenter suggested that the word *certificated* should be inserted between maximum and take-off in (a)(1).

CAA response: Use of the word *certificated* would be superfluous in this instance as the rule refers to *specified in the flight manual* which in essence means *certificated*.

One commenter stated that while supporting the use of factors to the all-engine take-off distance the use of a factor of 1.3 is too penalising given that the FARs do not impose any factors. It is in excess of the current factors in CASO 4 for daylight operations and would be severely limiting for some operations. The commenter recommends the use of the standard 1.15 factor in common use for all engines take-off.

CAA response: CAA reviewed the factor in response to this comment and concluded that a factor of 1.18 was appropriate as a median factor derived from CASO 4 and a study of overseas requirements for these types of aeroplanes. FAR Part 135 does not prescribe a factor but in discussion with a number of the commenters, they considered that a factor was required as the flight manual data was produced following flight tests with a brand new aeroplane flown by an experienced test pilot in ideal conditions which in effect provides little margin for the aeroplane type in service. For consistency with other performance requirements which express % or runway rather than a factor, the rule will refer to 85% of the take-off run available which is equivalent to a factor of 1.18.

One commenter asked if the term *take-off run available* in paragraph (a) (2) should be *take-off distance available*?

CAA response: CAA does not agree as the term *take-off distance available* includes the length of a clearway which is not allowed to be used by the type of aircraft required to comply with this rule. The use of the term *take-off run available* is therefore correct in the context of this rule.

135.211 Runway surface and slope correction factors

One commenter stated that the rule does not provide a means for the Director to approve values for other runway surface correction factors. The commenter suggested the table should be in an AC as an acceptable means of compliance to a basic rule which requires allowance to be made for surfaces other than paved.

CAA response: CAA does not agree as these factors were developed for CASO 4 corrections by flight test and study of overseas factors. CAA considers that the factors are still valid and therefore properly in the rule. CAA is not able to identify any other runway surfaces which might require correction factors as suggested by this commenter. If an operator encounters a different runway surface, it can be equated to one of the surfaces in this rule and that factor applied.

One commenter pointed out that paragraph (2) is not correct for landing which are opposite in terms of correction to take-off.

CAA response: CAA agrees that this is an error and has corrected this paragraph by addressing the correction factors for take-off and landings separately.

135.213 Net take-off flight path – aeroplanes under IFR

One commenter considered that the requirements could be expanded to require operators to consider the net flight path requirements of PANS OPS doc 8168 Part II IFR departure fans and the associated SIDS published in the AIP.

CAA response: CAA does not agree as the PANS OPS doc 8168 Part II IFR procedures are based on a standard 2.5% net flight path and does not consider aeroplane performance with the critical engine inoperative. While the practice of declaring the instrument departure procedure net flight path at some aerodromes is useful, the aeroplane operator must comply with this rule to ensure obstacle clearance in the event of engine failure.

One commenter asked, with reference to paragraphs (c)(2) and (d)(2), what the required navigational accuracy is.

CAA response: In response to this question, the rule is amended by replacing this requirement with a requirement for the certificate holder to establish visual or radio navigation track guidance for use of the reduced distance.

135.215 Engine inoperative – gradient and stall corrections

Two commenters said they had difficulty understanding the table. One commenter suggested that the bank angle figures are not restrictive enough and the angles of bank should be stated as the range of angles within which the corrections are required.

CAA response: CAA agrees with the suggestion of restructuring the table in terms of bank angle limitations and this should simplify the interpretation of the rule.

135.217 En route – aeroplanes with two or more engines

One commenter assumes that the 5% gross-net gradient in paragraph (b)(2) should be 0.5% though it is not too clear where this 0.5% has come from. Whatever number is used it must stand scrutiny against cost benefit criteria in absolute terms, and not just on the basis it may be less than what we have under CASO 4. Thus if FAR Part 135, for example, does not have an equivalent gross-net reduction then neither should the proposed rule unless it can be justified in a proper cost benefit analysis.

One commenter stated that the net factor of 5% is excessive. The current CASO 4 factor of 0.5% is appropriate for four engine aircraft and 0.3% for three engine aircraft with two engines inoperative. The factor for multi engine aircraft with single engine failure is significantly less than CASO 4 but the FAR values should apply.

One commenter stated that the 5% reduction is incorrect as the FAR requires 1.1% for two engine aircraft.

CAA response: The net factor of 5% was an error and the rule is corrected by changing to a factor of 0.5%. CAA considers that this factor is a valid requirement for Part 135 aircraft on the basis that it is less than the current requirement and originates from the European JAR requirements. Unlike FAR Part 135 a minimal factor is considered necessary as a protection against degradation in performance of aircraft in service. The CAA does not agree with the factors suggested by the second commenter as these are the factors applied to aircraft certificated under FAR Part 25 and are excessive for aircraft with less than 20 passenger seats operating under this Part.

One commenter considered that in paragraph (b)(1), the term “or less” should be added after the clause “equals 300 feet per minute” for clarity purposes.

CAA response: The CAA agrees and has amended the rule accordingly.

One commenter stated that the combination of aircraft with two engines and with more than two engines in (c)(1) makes for difficulty in understanding as the later requirements are based on two engines failed. The commenter suggested redrafting for clarity.

One commenter suggested that perhaps a similar format to 121.215 and 121.217 would clarify what is intended by this rule.

CAA response: The CAA agrees and has restructured these requirements into two separate rules as they are in Part 121. One rule prescribes the en-route engine inoperative requirements and the other rule prescribes the en-route 90 minute limitation for aeroplanes with two or more engines inoperative.

135.221 Landing distance – wet and contaminated runways

One commenter stated that the factor of 115% appears to be “new” for Part 135.

CAA response: While this factor was not a requirement under CASO 4, it is a requirement under FAR Part 135 for landing distances on wet and contaminated runways and no contrary comments were received to the inclusion of the requirement in this rule..

One commenter considered that the meaning of paragraph (2)(ii) is unclear. Doubt exists as to whether the 115% factor refers to the dry case or the contaminated landing distance data. Contaminated landing distance data is normally presented with the extra distance requirement incorporated.

Another commenter stated that (2)(ii) is incorrect as the aeroplane flight manual contaminated distance data does not require addition of a factor. The factor of 115% is applicable only when there is no data in the flight manual.

CAA response: The CAA agrees and has amended the rule with the corrections identified in these comments.

One commenter stated that the term *at least* is used in this rule and believes that the term the *greater of* is what is actually meant.

CAA response: This comment was valid for the rule as presented in the NPRM but in the rule as amended, the use of the term *at least* is correct.

One commenter noted that in paragraph (2)(ii) the words or other data approved by the Director is missing.

CAA response: This was removed from this rule as the data to be used throughout this subpart is now addressed in 135.207 General performance.

135.223 Steep approach and short landing techniques

One commenter stated that the references to glide path systems, weather minima and missed approach criteria are superfluous as compliance with the aeroplane flight manual is all that is required. The aeroplane flight manual will specify limitations and equipment required and the rule should not impose limitations that may or may not be appropriate to a specific aeroplane. Delete (2), (3), (4)(ii)(iii)(iv)(vi)(vii).

CAA response: The CAA does not agree as the aeroplane flight manual does not specify the operational limitations or specify the required ground based equipment. This rule is based on the requirements prescribed by other States and the CAA has no justification to require a lesser standard for New Zealand operations.

135.225 Special conditions – Wellington International Airport

One commenter considered that this requires a cost benefit analysis to continue the use of a nil head-wind credit to 11 600 m from runway 34 threshold.

One commenter considered that this rules should be deleted as the procedure was developed for the use of one specific operator. The rule does not address all the factors that need to be taken into consideration and as its application by other operators could be hazardous. The procedure at Wellington, and any other aerodrome with obstacles in the departure flight path, should be based on the net take-off flight path specified in this Subpart. This requires each operator to establish a procedure for each aeroplane type being operated at such an aerodrome.

CAA response: The CAA agrees that this rule should be deleted for the reasons given by the commenter. In circumstances such as those addressed in the special conditions Wellington International Airport, operators must establish procedures for compliance with obstacle clearance in the take-off climb flight path. The procedures required are dependant on each aircraft type's performance capabilities and may require establishing alternate flight paths or a visual departure procedures. An Advisory Circular will be available providing guidance for the construction of procedures for compliance with the performance requirements and will include circumstances such as those at Wellington International Airport.

135.227 Take-off distance

One commenter stated that aircraft that are not certificated in the commuter category will be unable to comply with this rule and other rules. Some wording will be required to allow operation to the standards of the aeroplane flight manual.

CAA response: CAA agrees and in response to an earlier general comment that some aeroplanes would not be able to fully comply with the requirements,

advised that a further provision has been added for the operation of aeroplanes that cannot fully comply with the performance requirements.

One commenter said that in paragraph (a) the aerodrome elevation and ambient temperature could be deleted as the requirements are specified in paragraph (c).

CAA response: CAA agrees and they are removed from paragraph (a).

135.231 Landing distance dry runway

One commenter considered that the percentage factor in (a)(2) is too limiting particularly for all aircraft covered by this rule. The commenter recommends that either the CASO 4 factors are retained or if rationalisation is desired that 60% be retained for SFAR 41 aircraft if this is determined as necessary for safety and a factor of 75% apply for all the FAR 23 commuter aircraft.

CAA response: CAA agrees and having reviewed the requirements has determined that a single factor of 70% is a rationalisation that is consistent with the requirements of overseas countries in providing an adequate margin for safety. The rule is therefore amended to prescribe a factor of 70%.

135.303 Passenger and baggage weights

Two commenters expressed concern about the requirement to either weigh each passenger or carry out a survey to ensure that a realistic passenger weight is used. The reasons expressed included: weighing is not an option because time is limited; the public would resist weighing; modern weighing systems are not designed to allow passenger access.

CAA response: The CAA agrees that promulgation of standard weights is useful to those operators who do not have a programme in place and is an alternative to accounting for actual passenger weights under prescribed conditions. Thus standard weights have been included in the rule as an option for operators.

However it is proposed to put out a NPRM showing revised weights in line with international practice which has shown that higher weights are warranted.

135.307 Load manifest

Three commenters argued that load manifests are either unnecessary or overly bureaucratic.

CAA response: Disagrees with this view and believes a safety issue is involved and that the calculation and preparation prior to each flight of a load manifest is an integral step in the overall establishment of a safe flying environment.

135.355 Location of instruments and equipment

CAA comment: This requirement has been moved to Part 91.

135.357 Seating and restraints [Final rule 135.355]

One commenter suggested that some occasions require crew to be seated in passenger seats and these seats do not meet the requirement to have a shoulder harness for each crew seat.

CAA response: The CAA points out that the requirement for a shoulder harness applies to crew seats and not passenger seats. Crew seats are required for all crew required by the type of operation being conducted.

One commenter suggested that the requirements for a shoulder harness in crew seats only apply to aircraft with 10 or more passenger seats.

CAA response: The CAA disagrees. FAR Part 91 requires aircraft with 9 or less seats to have shoulder harnesses. This requirement is not in CAR Part 91 but is considered appropriate for all aircraft engaged on air transport operations.

135.359 Additional equipment [Final rule 135.357]

One commenter suggested that these requirements should be removed as they are not required in the FAR and are not safety related.

CAA response: The CAA notes that the requirements are in Appendix A to FAR Part 135. The CAA accepts that the requirements seem unusual and has clarified them by referring to the appropriate airworthiness design standard. Aircraft certificated to the appropriate design standards in Appendix C to Part 21 will meet the requirements.

One commenter suggested that the requirements should be expanded to include all aircraft, not just turbine powered.

CAA response: The CAA has amended the rule to reflect the appropriate certification standards.

135.361 Engine air induction system ice prevention

CAA comment: This requirement has been removed as it forms part of the aircraft design requirements.

135.365 Instrument flight rules [Final rule 135.361]

One commenter suggested that the requirement for additional altimeters and ASIs be deleted for smaller aircraft.

CAA response: The CAA disagrees and considers the requirement appropriate for IFR air transport operations.

One commenter suggested that the requirement for additional instruments should state a total of two.

CAA response: The CAA disagrees. The requirement builds upon that required by Part 91 and this is considered appropriate.

One commenter suggested that the additional instruments required in this rule added nothing to safety.

CAA response: The CAA disagrees and considers the requirement appropriate for IFR air transport operations.

Two commenters suggested that a second attitude indicator would be more appropriate.

CAA response: The CAA agrees with the ability of an operator to meet the requirement with an attitude indicator and has amended the rule.

135.367 Emergency equipment [Final rule 135.363]

One commenter suggested that this rule be removed in its entirety as Part 91 should contain all the requirements.

CAA response: The CAA agrees and has amended the rule. A reference to the equipment in Part 91 has been retained.

Two commenters suggested that the requirement to carry an axe be removed from smaller aircraft.

CAA response: The CAA disagrees and considers the axe to be required for all air transport aircraft.

One commenter suggested that there was no way to indicate the method of operation for an axe or a first aid kit.

CAA response: The CAA agrees and has amended the rule.

One commenter suggested that the sizes of fire extinguishers able to be carried on small aircraft are not effective for putting out fires.

CAA response: The CAA has no statistical information as to the appropriateness of the size of fire extinguishers in the types of accidents referred to by the commenter. The CAA considers that fire extinguishers are important emergency equipment and should be carried on all air transport operations.

135.369 Public address and crew-member interphone systems [Final rule 135.365]

One commenter suggested that this only apply to aircraft with greater than 19 passenger seats.

CAA response: The CAA disagrees and considers the 10 seat break to be appropriate.

135.371 Cockpit voice recorder [Final rule 135.367]

Two commenters suggested that a cockpit voice recorder not be required for aircraft certificated for one pilot operations.

CAA response: The CAA agrees and has amended the rule.

One commenter suggested that the cockpit voice recorders should be applied only to aircraft with greater than 20 passenger seats or with a MCTOW greater than 5700 Kg.

CAA response: The CAA disagrees and considers the relative cost for aircraft with a certificated seating capacity greater than 9 passengers to be outweighed by the advantages to aviation safety.

Two commenters suggested that the requirement should apply to piston aircraft also.

CAA response: The CAA agrees and has amended the rule.

One commenter suggested that the requirement should apply to all sizes of aircraft.

CAA response: The CAA considers the proposed seat break to be appropriate.

One commenter suggested that the cockpit voice recorder was an accident investigation tool only and did not affect aircraft safety.

CAA response: The CAA disagrees. The recorder is important for investigation and the associated results of these investigations are applied directly to improve aviation safety.

135.373 Flight data recorder [Final rule 135.369]

One commenter suggested that the flight data recorders should be applied only to aircraft with greater than 20 passenger seats or with a MCTOW greater than 5 700 Kg.

CAA response: The CAA disagrees. Although a high cost item the CAA considers that a flight data recorder fitted to an aircraft with a certificated seating capacity greater than 9 passengers provides an investigation tool that will ultimately improve aviation safety.

Two commenters suggested that the requirement should apply to piston aircraft also.

CAA response: The CAA disagrees as the proposed aircraft types are invariably more complex and this complexity contributes to the justification for requiring the flight data recorder installation.

One commenter suggested that the requirement for a flight data recorder should be based upon the number of pilots required by the aircraft certification.

CAA response: The CAA considers that flight crew members are not a basis to apply the requirements for a flight data recorder.

One commenter suggested that the flight data recorder requirements should be independent of the number of crew.

CAA response: The CAA agrees and has amended the rule.

One commenter suggested that the requirement should apply to all sizes of aircraft.

CAA response: The CAA considers the proposed seat break to be appropriate.

One commenter suggested that the flight data recorder was an accident investigation tool only and did not affect aircraft safety. The commenter suggested that transponder plots provided effective information.

CAA response: The CAA disagrees. The recorder is important for investigation and the associated results of these investigations are applied directly to improve aviation safety. The CAA does not consider transponder plots to adequately provide the information required to ascertain the causes of aircraft accidents.

One commenter suggested that the flight data recorder requirement was too expensive for industry to adopt.

CAA response: The CAA agrees that the expense may be high but considers the advantages to aviation safety far outweigh the initial costs. This view is supported internationally where more stringent requirements are being examined.

CAA comment: The CAA is examining the latest Federal Aviation Administration proposal for a revision of the flight data recorder requirements. The proposed revision will be published as an NPRM in due course.

135.375 Additional attitude indicator [Final rule 135.371]

One commenter suggested that the requirement should also apply to other turbo-jet aircraft.

CAA response: The CAA considers the requirement to be appropriate and line with the USA Federal Aviation Administration requirements.

135.463 Persons certifying maintenance [Final rule 135.413]

One commenter suggested that Subpart E should be stated instead of just Part 91.

CAA response: The CAA agrees and has amended the rule.

One commenter suggested that the pilot may be the holder of the air operator certificate and as such the wording needs clarifying as they are not employed by the air operator certificate holder.

CAA response: The CAA considers the wording to be appropriate. If the pilot is the holder of the air operator certificate they are employed by themselves.

One commenter suggested that the rule should require the pilot to record the information in the technical log.

CAA response: The CAA agrees and has amended the rule but has not stipulated the technical log. The release to service is required to be made in accordance with Part 43.

One commenter suggested that the exemption for helicopters should apply to fixed wing also.

CAA response: The CAA agrees and has amended the rule.

CAA comment: The CAA has reworded the rule to better reflect what inspections were being permitted. The rule is intended to address those inspections that have been required by an airworthiness directive. These inspections generally occur when the air operator certificate holder has not otherwise been able to plan their completion.

135.465 Supervising personnel [Final rule 135.415]

One commenter suggested that if this was the maintenance controller, the requirement was opposed.

CAA response: The rule is not intended to refer to the maintenance controller or the senior person for the control and direction of maintenance.

135.467 Maintenance personnel duty times [Final rule 135.417]

Two commenters stated that the requirement did not make sense as written.

CAA response: The CAA disagrees but has clarified the requirement by adding a daily duty time limit.

One commenter agreed with the requirement and suggested improvements to better reflect the intent. The commenter suggested that the time should be stated on a daily basis such as 16 hours maximum duty time and 9 hours minimum rest time.

CAA response: The CAA agrees. The NPRM wording is the same as the FAR requirements but the CAA considers that the daily limits proposed by the commenter are also appropriate. The rule has been amended and is closely based on FAR requirements for personnel such as dispatchers.

One commenter suggested it should be deleted as it would cause significant problems to those smaller firms carrying out work seven days a week.

CAA response: The CAA disagrees. The relief from duty requirements are applicable regardless of the size or work programme of the organisation.

Two commenters suggested it should be deleted as it was an employment issue.

CAA response: The CAA disagrees. The rule addresses the rest periods required to assure the ability of maintenance personnel to safely and effectively carry out their tasks. The requirements are strictly safety related.

One commenter suggested that the requirement should be deleted until more liaison has been carried out with representative engineering groups. The commenter also suggested that the requirements would be better in Part 145 or Part 43.

CAA response: The CAA disagrees. The requirement was taken from the FAR and has been published for public comment during the rule development process in the informal draft stage, the NPRM stage, and in numerous discussions with various industry members. The requirement has been amended as a result of the rules development consultation.

135.469 Maintenance review [Final rule 135.419]

One commenter suggested this was unnecessary as it was covered in Part 43.

CAA response: The CAA disagrees. The maintenance review is not the same as the annual review of airworthiness.

135.503 Assignment of flight crew duties

One commenter believed that 135.503(e) [paragraph (d) in the final rule] would preclude public address announcements during taxi or holding i.e. delay information or passing next sector fuel load requirements etc.

CAA response: That only duties required for the safe operation of the aircraft should be undertaken during these phases. This restriction applies only to flight crew.

135.505 Pilot-in-command type experience requirements

Eight commenters sought, in respect to 135.505(a)(1), either a reduction in the hours stipulated or eliminated entirely and left to individual operators to determine.

CAA response: That a reduction in the number of hours would be inappropriate and considers the requirement the minimum necessary for pilot-in-command experience on a specific make and basic model aircraft. As a matter of information the number of hours are considerably less than required by the FAA.

CAA agrees that in respect to 135.505(b)(2) that no limit need be placed on the use of a flight simulator for gaining the experience required.

135.507 Pilot-in-command VFR experience requirements

Two commenters believed the hour requirements are either too high or the limits should be left to the individual operator to determine.

CAA response: The hour requirements are considered the minimum necessary for pilot-in-command on VFR operations in an aircraft, excluding pilot seats, of ten seats or more. This is broadly in line with FAA requirements.

CAA agrees that 135.507(3), the requirement to hold a current instrument rating, is not relevant for VFR only operations and has deleted this requirement from the rule.

135.509 Pilot-in-command IFR experience requirements

Three commenters either wanted the hour specifications reduced or left to operators to determine.

CAA response: Disagrees and believes minimum hour requirements should be set and does not accept they are excessive for the type of operation and seating capacity involved. The FAA has similar requirements.

135.511 Single pilot operations – IFR

One commenter wanted the seating restriction to be removed i.e. it should apply irrespective of seating capacity while another commenter requested an increase in the seating capacity to twenty.

CAA response: Does not accept the view that single pilot IFR operations should be allowed above the limit set of fourteen seats, excluding any pilot seat. This compares to the FAA limit of nine seats and is considered an acceptable maximum limit for air transport operations.

135.513 Category 11 or 111 approaches

CAA notes that this rule has been transferred to Part 91.

135.553 General

Provision has been made in 135.553(d) to give operators the flexibility of providing or undertaking required training.

135.565 Flight crew training programme

One commenter disagreed with the need for a qualified instructor to carry-out the required training.

CAA response: Disagrees with this view and believes that an operator must use a qualified instructor when undertaking any flight crew training under this Part.

135.567 Flight crew member instructor qualifications

One commenter proposed the use of experienced C category instructors in addition to an A, B, or D, flight instructor.

CAA response: Disagrees with this proposal. The C category instructor regardless of the experience gained, remains under supervision, and should be encouraged to gain a higher qualification in order to participate in a training role under this Part.

135.603 General

One commenter requested flexibility to use offshore training establishments for simulator checks.

CAA response: The intent of 135.603(b) is to enable operators to establish an operational competency assessment programme which does not preclude the use of simulator checks being carried out by another organisation as part of the operators programme.

135.605 Flight examiner qualifications

One commenter queried the status of a flight examiner qualification.

CAA response: The flight examiner qualification is being developed under the revision of Part 61.

135.607 Flight crew competency checks

One commenter requested alternative methods to actually carrying out a route check e.g. flight in tandem.

CAA response: Does not accept that such an option is an adequate alternative but has added in the option of utilising a flight simulator approved for this purpose. CAA notes that under 135.607(4) the test may be written or oral or a combination of both and does not preclude a flight examiner emphasising what the pilot is least current or competent at to ensure maintenance of the required standard.

135.853 Operating information

CAA confirms that it is the certificate holder's responsibility as the holder of the exposition to maintain the currency of this document.

135.855 Documents to be carried

Four commenters proposed reducing the number of documents to be carried.

CAA response: That several of the documents e.g. notams; meteorological information; load manifest; dangerous goods; are only required to be carried if they are appropriate to the flight.

135.857 Operation record

Two commenters proposed either eliminating the need for retaining such a record altogether or exempting VFR flights of less than 100 nm.

CAA response: Does not agree with either submission. It is a safety issue and the operation record reflects both the planned aspects of the flight which is in effect the operational flight plan or its equivalent and the actual accomplishment of the flight. This information can be used for both internal and external monitoring and audit purposes.

135.859 Retention periods

Three commenters proposed reducing the retention period to six months and one commenters queried the retention of VFR flight logs for twelve months.

CAA response: Does not agree and believes that twelve months is not excessive for retaining the documents listed to enable the monitoring and audit process to be effectively carried out.

Conclusion

The Authority concludes from this consultation that the majority of the aviation industry participants favour the direction of the new rules. Specific issues that were identified in the comments received from the consultative group have been addressed. The rules also meet New Zealand's international obligations under the applicable ICAO Annex. The comments and all the background material used in developing the rules are held on the docket file and are available for public scrutiny. Persons wishing to view the docket file should call at Aviation House, 1 Market Grove, Lower Hutt and ask for docket files 1100, 1116, and 1101.

Transitional arrangements

Part 135 contains transition provisions in Appendix A. These transition provisions relate to the use of flight simulators and the requirement to equip public address and intercom systems, CVRs, and FDRs in certain aircraft. Part

135 will also be effected by the transition provisions in Part 119 which prescribes certification rules for air transport operations.

Regulatory activities

Part 135 replaces numerous requirements from the Civil Aviation Regulations 1953, the Civil Aviation Safety Orders, and the New Zealand Airworthiness Requirements.

Section 14(2) of the Civil Aviation Amendment Act 1991 (as amended by section 34 of 1996 No. 91) deems the Civil Aviation Regulations 1953 that are continued in force by section 8 of that Act to be revoked on the close of 31 March 1997.

Section 14(3) states that any order, notice, requirement, circular, or other publication continued in force by section 8 shall expire on the close of 31 March 1997.

MEMBERS OF THE TECHNICAL STUDY
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