



WELLINGTON NEW ZEALAND

PURSUANT to Section 28 of the Civil Aviation Act 1990

I, MAURICE WILLIAMSON, Minister of Transport,

HEREBY MAKE the following ordinary rules.

SIGNED AT Wellington

This

29

day of

March

1999

by **MAURICE WILLIAMSON**

Minister of Transport

A handwritten signature in black ink, appearing to read 'Maurice Williamson', written over a large, dark, scribbled-out area.

Civil Aviation Rules

Part 135 – Amendment 6

Air Operations - Helicopters and Small Aeroplanes

Docket 98/CAR/1303

Civil Aviation Rules

Part 135

**Air Operations - Helicopters and Small
Aeroplanes**

RULE OBJECTIVE, EXTENT OF CONSULTATION AND COMMENCEMENT

The objective of the Part 135 Review was to examine the existing requirements in Part 135 in view of industry submissions and propose a new regulatory framework for the types of operations concerned. The review resulted in the amendment of Parts 1, 12, 19, 61, 66, and 93. The review also examined the relationship of air transport operations and other hire or reward operations and resulted in the reissue of Parts 119, 121, and 135 and the initial issue of a new Part 125.

A draft of Part 135 was developed in consultation with members of an Aviation Industry Association / Civil Aviation Authority consultative group. An informal draft was published and distributed at the AIA conference in July 1998 and a period of informal consultation followed. This culminated in the issue of Notice of Proposed Rulemaking 98-6 under Docket 98/CAR/1303 on 18 September 1998. The NPRM 98-6 contained the proposed Part 135 amendments as well as the other rule amendments proposed.

The publication of this notice was advertised in the daily newspapers in the five main provincial centres on 19 September 1998. The notice was mailed to the consultative group, the industry members most likely to be affected, and to other parties, including overseas Aviation Authorities and organisations, who were considered likely to have an interest in the proposal. The NPRM was also made available on the CAA Internet site.

Because of the extensive work with the consultative group and a series of presentations conducted by the CAA and consultative group representatives at ten locations around New Zealand, a shorter period of 28 days was allowed for comment on the proposed rule. A total of 54 comments were received. 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 6 to Part 135 comes into force on 30 April 1999 and all those affected by Part 119 must be in compliance by the dates specified in the transition provisions of 119.169.

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Part 135 Amendment

Part 135 is revoked and the following new Part inserted:

“Subpart A — General

135.1 Purpose

This Part prescribes rules governing air transport operations and commercial transport operations using—

- (1) aeroplanes having a seating configuration of 9 seats or less, excluding any required crew member seat, and a MCTOW of 5700 kg or less; and
- (2) helicopters.

135.3 Definitions

In this Part—

Air operation means an air transport operation or a commercial transport operation using—

- (1) an aeroplane having a seating configuration of 9 seats or less, excluding any required crew member seat, and a MCTOW of 5700 kg or less; or
- (2) a helicopter:

Air operator certificate means an airline air operator certificate or a general aviation air operator certificate:

Exposition, unless the context otherwise requires, means the exposition required by 119.81 or 119.125:

Helicopter external sling load means the external carriage, lowering, or picking up, of a load, cargo, or passengers by a helicopter by means of a bucket, net, harness, sling, or stretcher, suspended beneath the helicopter:

Holder of an air operator certificate means the holder of an air operator certificate issued under Part 119 that authorises the holder to conduct air operations:

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 1:20 obstacle-free approach surface intersects the runway surface.

135.5 *Laws, regulations, and procedures*

Each holder of an air operator certificate shall take reasonable care to ensure that all persons employed, engaged, or contracted by the holder of an air operator certificate to perform aviation activities, 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 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 *Reserved*

135.11 *Reserved*

135.13 *Passenger training*

In addition to the requirements in 91.211, each person performing a commercial transport operation shall ensure that each passenger receives additional briefing or training in safety and emergency procedures appropriate to the characteristics of the flight operation.

Subpart B — Flight Operations

135.51 *Reserved*

135.53 *Aircraft airworthiness*

(a) Each holder of an air operator certificate shall ensure that each aircraft it uses in conducting an air transport operation has a current standard category airworthiness certificate.

(b) Each holder of an air operator certificate shall ensure that each aircraft it uses in conducting a commercial transport operation has—

- (1) a current standard category airworthiness certificate; or
- (2) a current restricted category airworthiness certificate provided that the aircraft flight manual allows such an operation.

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 and flight planning

(a) Each holder of an air operator certificate shall ensure for each air operation that information is available to the pilot-in-command to complete the preparation for the intended operation.

(b) Each holder of an air operator certificate shall ensure a flight plan is prepared for each—

- (1) air transport operation; and
- (2) commercial transport operation where passengers or goods are carried from or to a remote aerodrome.

(c) Each holder of an air operator certificate shall ensure that prior to each air operation the flight plan required by paragraph (b) is submitted to an appropriate ATS unit or, if the air operation is a VFR operation outside controlled airspace—

- (1) an appropriate ATS unit; or
- (2) an alternative flight information service or alerting service organisation.

(d) Notwithstanding 91.307(a) and 91.407(a)(1), the pilot in command is not required to submit a flight plan where the holder of an air operator certificate has submitted the flight plan and advised the pilot in command of its contents.

135.59 Emergency and survival equipment information

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

(b) For air operations performed in excess of 10 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 en-route replanning, to ensure that each aircraft carries sufficient fuel, including reserve fuel, for 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 planned flight is to be conducted.

(c) Each holder of an air operator certificate shall ensure that the calculation of useable fuel required for a flight takes into account the following factors:

- (1) taxi fuel:
- (2) trip fuel:
- (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:
- (4) if applicable, fuel required for en-route re-planning.

(d) Each person flight planning or en-route replanning an air operation shall comply with the fuel policy required by paragraph (a).

135.63 Cockpit check

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

(b) Each person performing an air operation shall establish and use an appropriate practice for cockpit checks covering the procedures, including emergency procedures, for the operation of the aircraft in accordance with the aircraft flight manual.

135.65 Passenger safety

(a) Each person performing an air operation shall ensure that—

- (1) 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

- (2) disabled passengers are appropriately cared for, including allocation of appropriate seating positions and handling assistance in the event of an emergency; and
- (3) escorted passengers do not constitute a safety hazard to other passengers or to the aircraft, and that prior arrangement for their carriage have been made in accordance with procedures in the certificate holder's exposition.

(b) Notwithstanding (a)(1), where an operation is conducted for the purpose of search and rescue or is an air ambulance operation, passengers may be carried who are under the influence of alcohol or drugs or exhibit behavioural characteristics to the extent where the safety of the aircraft or its occupants is likely to be endangered, provided that reasonable action is taken by the operator to minimise the risk to the aircraft and its occupants from such passengers.

135.67 *Reserved*

135.69 *Manipulation of controls*

- (a) Except as provided in paragraph (a), no person shall manipulate the controls of an aircraft performing an air operation.
- (b) Each holder of an air operator certificate shall take reasonable care to ensure that no person manipulates the flight controls of its aircraft performing an air operation, unless the person is—
- (1) a flight crew member; or
 - (2) an authorised representative of the Director who—
 - (i) has the permission of the certificate holder and the pilot-in-command; and
 - (ii) is performing a required duty.

135.71 Flight recorder requirements

(a) Each flight crew member shall ensure that, when a **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 helicopter 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 a **flight data recorder** is required by 135.369—

- (1) it is operated continuously from the instant the helicopter begins the take-off until it has completed the landing; and
- (2) all recorded data is kept until the helicopter has been operated for 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) No person performing an air operation shall permit an aircraft to be 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) No person performing an air operation shall permit an aircraft to be refuelled or defuelled with Class 3(b) fuel when passengers are embarking, on board, or disembarking the aircraft, or when one or more propulsion engines are running, unless the person ensures that safety and aircraft evacuation precautions are taken in accordance with procedures specified in the exposition of the holder of an air operator certificate.

(c) Each holder of an air operator certificate shall take reasonable care to ensure that refuelling or defuelling does not take place where undue risk or hazard exists for any third party.

135.75 Fuel spillage

Each person performing an air operation shall ensure that while refuelling or defuelling, where fuel is spilled onto an impermeable surface and is likely to endanger persons or property—

- (1) refuelling or defuelling 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.

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 for—

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

(b) Each holder of an air operator certificate shall ensure that any heliport to be used in its air transport operations meets the requirements of Part 91.

(c) Each holder of an air operator certificate 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) Each holder of an air operator certificate shall ensure that any aeroplane operating VFR by day does not use any place for the purpose of landing or taking-off unless—
- (1) 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 aeroplane being used; and
 - (2) the width of the runway strip surrounding 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) Each holder of an air operator certificate 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 holder of an air operator certificate 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; or
- (3) a lesser minimum runway width is acceptable to the Director.

135.79 Reserved

135.81 Operations of single engine aircraft – IFR

No person shall perform an air 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

(a) Rule 91.311(c) shall not apply to a pilot-in-command performing an air transport operation.

(b) Notwithstanding 91.311(c)(3), each pilot-in-command performing a commercial transport operation may, if necessary for the proper accomplishment of the operation, conduct approaches, departures, and manoeuvres below a height of 500 feet above the surface within the horizontal radius of 500 feet of any person, vessel, vehicle, or structure provided the pilot-in-command—

- (1) prepares a plan for the operation in conjunction with all personnel and organisations involved in the operation; and
- (2) takes reasonable care to conduct the operation without creating a hazard to any person or property; and

- (3) briefs all personnel and organisations involved in the operation on the plan required by paragraph (b)(1).

135.87 Flights over water

(a) Each person performing an air operation shall not operate over water more than 10 nm beyond gliding or autorotational distance from shore unless—

- (1) life rafts are carried of sufficient capacity to carry all occupants; and
- (2) a life preserver is worn by each passenger; and
- (3) a flight plan is filed or a flight information service or alerting service is provided in accordance with 135.57.

(b) Each person performing an air operation in a single engine helicopter shall not operate over water more than 10 nm beyond autorotational distance from shore unless—

- (1) the helicopter is equipped with an operable flotation device; or
- (2) the occupants are wearing immersion suits.

(c) The operator of a multi-engine aircraft may, instead of the requirement in paragraph (a)(2), have life preservers available for use in a position accessible to each passenger.

(d) Each person performing an air transport operation over water—

- (1) to a point more than gliding or autorotational distance from shore shall file a flight plan with a suitable ATS unit; and
- (2) beyond 100 nm from shore shall conduct the flight under IFR.

135.89 Reserved

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; and**
- (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.**

(d) Each holder of an air operator certificate shall ensure appropriate staff are trained and competent to perform their duties during emergencies in accordance with the emergency situation action plan.

135.93 Operations over congested areas

(a) Notwithstanding 91.311(a)(2), a pilot-in-command of a helicopter may perform a commercial transport operation over a congested area of a city, town, or settlement at a height less than 1000 feet above the highest obstacle and within a horizontal radius from the helicopter of less than 2000 feet provided that—

- (1) a plan for the operation is prepared containing—
 - (i) a chart depicting flight areas and altitudes; and
 - (ii) procedures to ensure that reasonable care is taken to conduct the operation without creating a hazard to any person or property; and
 - (iii) details of any coordination necessary with any air traffic control service; and
 - (iv) a copy of the prior written notification given to the appropriate territorial authority and the requirements of that territorial authority that must be complied with; and
- (2) all personnel and organisations involved in the operation are briefed on the plan required by subparagraph (1); and
- (3) the plan required by subparagraph (1) is retained for a period of at least 12 months from the date of the operation.

(b) Each pilot-in-command performing an operation in accordance with paragraph (a) shall comply with the applicable plan required by paragraph (a)(1).

135.95 Helicopter sling loads

(a) Each pilot-in-command performing an air transport operation in a helicopter shall not carry a helicopter external sling load.

(b) Notwithstanding 133.53, each pilot-in-command performing a commercial transport operation in a helicopter may carry goods in a helicopter external sling load if—

- (1) the goods in the sling load are associated with the passengers on board; and
- (2) the flight complies with the remaining helicopter external load operation requirements in Part 133; and
- (3) the flight is conducted under VFR by day; and
- (4) the helicopter is operated with not less than a 10% power margin from maximum power available at the point of departure and landing.

Subpart C — Operating Limitations and Weather Requirements

135.151 Purpose

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

135.153 Meteorological information

- (a) Each person performing an air operation under VFR shall plan, perform, and control flights using meteorological information of a sufficient reliability and accuracy provided from a source considered acceptable to the operator and the pilot-in-command.
- (b) Each person performing an IFR 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.
- (c) Each pilot-in-command may, for each IFR 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 operation shall ensure a VFR flight is not commenced unless current meteorological information indicates VFR minima prescribed in Part 91 and in paragraphs (b), (c), (d), and (e) can be complied with along the route, or that part of the route to be flown under VFR.

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

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

(c) Each pilot-in-command performing a VFR air transport operation in a helicopter outside controlled airspace shall fly in meteorological conditions—

- (1) of not less than a ceiling of 600 feet AGL and visibility of not less than 1500 metres; and
- (2) if the use is by night, of not less than a ceiling of 2000 feet AGL and visibility of not less than 5 km.

(d) Each pilot-in-command performing a VFR commercial transport operation in a helicopter shall—

- (1) manoeuvre so as at all times to observe other traffic and any obstructions in time to avoid collision; and
- (2) fly—
 - (i) for remote aerodrome access, in meteorological conditions of not less than a ceiling of 600 feet AGL and visibility of not less than 1500 metres; and
 - (ii) for other than remote aerodrome access, beneath the ceiling, remaining clear of cloud, and in continuous sight

- of the surface and above not more than scattered cloud;
and
- (iii) if the use is by night, in meteorological conditions of not less than a ceiling of 2000 feet AGL and a flight visibility of not less than 5 km.
- (e) A pilot-in-command shall not perform an air operation under VFR in an 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 performing the operation; and
 - (2) the instruments and equipment, including radio navigation equipment, required for IFR flight are operative; and
 - (3) 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
 - (4) 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 operation carrying passengers, under VFR, in a single engine 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 95 for the instrument procedure likely to be used at the applicable destination aerodrome.

[Until Part 95 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 95 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 95 comes into force, instrument approach procedures are prescribed under Part 19]

135.161 IFR departure limitations

Each person performing an air transport operation shall ensure an IFR flight from an aerodrome is not commenced when meteorological conditions are at or above take-off minima requirements prescribed under 91.413 and are below authorised IFR landing minima requirements prescribed under 91.413, unless there is an appropriate aerodrome—

- (1) for a two engine aircraft, within a maximum of one 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 two 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 95 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 95 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 95 for the appropriate aerodrome.

(c) In uncontrolled airspace each pilot-in-command shall comply with any IFR departure and approach procedures prescribed under Part 95 for the appropriate aerodrome.

[Until Part 95 comes into force, instrument approach procedures are prescribed under Part 19]

Subpart D — Performance

135.201 Purpose

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

(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 holder of an air operator certificate 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 holder of an air operator certificate 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 holder of an air operator certificate 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 holder of an air operator certificate 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 holder of an air operator certificate 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 holder of an air operator certificate 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 holder of an air operator certificate 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 holder of an air operator certificate 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) Each holder of an air operator certificate 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), each holder of an air operator certificate 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 85% of landing distance available.

(c) When calculating the landing weight in accordance with paragraph (b), each holder of an air operator certificate 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) obstacles within the missed approach flight path.
- (e) If the holder of an air operator certificate 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, procedures, including 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) obstacles; and
 - (ii) the type of approach slope indicator reference and runway guidance such as visual aids, MLS, GPS, ILS, LLZ, VOR, or NDB; and

- (iii) the minimum visual reference to be required at DH and MDA; and
- (iv) useable airborne equipment; and
- (v) pilot qualification and special aerodrome familiarisation; and
- (vi) aeroplane flight manual limitation and procedures; and
- (vii) missed approach criteria.

135.228 FAR Part 23 commuter category and SFAR41 aeroplanes

Rules 135.229 to 135.235 inclusive apply to each holder of an air operator certificate conducting air operations using 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), each holder of an air operator certificate shall, assuming that the critical engine fails at V_{EF} and using a single V_I , 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_I for the rejected and continued take-off.

(c) When calculating the maximum take-off weight in accordance with paragraph (b), each holder of an air operator certificate 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 holder of an air operator certificate 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 holder of an air operator certificate 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 holder of an air operator certificate 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 holder of an air operator certificate 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), each holder of an air operator certificate 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), each holder of an air operator certificate 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) obstacles within the missed approach flight path.

(e) If the holder of an air operator certificate 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 Purpose

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 actual weights of goods and baggage to be carried on each of their operations.

(b) Each holder of an air operator certificate shall establish the weights of passengers to be carried on each of their operations by using one of the following:

- (1) passenger actual weights:
- (2) passenger standard weights of—
 - (i) 77 kg for an adult male or female; and
 - (ii) 46 kg for a child aged 4 to 14 years; and
 - (iii) 15 kg for a child under 4 years:
- (3) passenger standard weights established in accordance with a programme specified in the certificate holder's exposition.

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 operation.

Subpart F — Instruments and Equipment

135.351 Purpose

This Subpart prescribes the instruments and equipment required for aircraft.

135.353 General

- (a) Each holder of an air operator certificate shall ensure that an air 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 B to Part 125; or
 - (iii) Appendix C to Part 21; or
 - (iv) Part 26; or
 - (v) 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 aeroplanes is equipped with a shoulder harness or single diagonal shoulder belt for each flight 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 pitch propeller, actuated by the propeller blade angle or 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), each holder of an air operator certificate 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 Reserved

135.367 Cockpit-voice recorder

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

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

(b) The commencement of paragraph (a) is suspended until it is applied by notice in the Gazette, such application being no sooner than 1 April 1999.

135.369 Flight data recorder

(a) Each holder of an air operator certificate shall ensure each of its helicopters with a certificated seating capacity of 10 seats or more excluding any crew member seat is equipped with a flight data recorder in accordance with B.4 of Appendix B.

(b) The commencement of paragraph (a) is suspended until it is applied by notice in the Gazette, such application being no sooner than 1 April 1999.

135.371 Additional attitude indicator

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

Subpart G — Maintenance

135.401 Purpose

This Subpart prescribes rules for maintenance of each aircraft operated under this Part.

135.402 Option for maintenance

Each holder of an air operator certificate that performs air operations shall, in respect of maintenance of its aircraft, comply with —

- (1) the requirements of 135.403; or
- (2) all the requirements contained in 135.403 to 135.415.

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) Each holder of an air operator certificate shall have a maintenance programme for each aircraft, aircraft engine, propeller, rotor, appliance, emergency equipment item, and part.

(c) Each maintenance programme required by paragraph (b) shall contain standards at least equivalent to Part 91, Subpart G and the manufacturer's maintenance programme.

(d) Each holder of an air operator certificate 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 the Part 145 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

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

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 the Part 145 exposition.

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 aircraft unless a maintenance review of the aircraft 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) Each holder of an air operator certificate 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) Each holder of an air operator certificate 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) Each holder of an air operator certificate 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 Purpose

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 operation—

- (1) holds a current licence and rating appropriate to the tasks 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) Each holder of an air operator certificate shall designate, for each period of an air 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.

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 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 multi-engine 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) in flight during air operations performed, except that flight time and take-off and landing experience may be accrued in a flight simulator approved for this purpose; and
 - (2) in the case of an aircraft not previously used by the holder of an air operator certificate in air operations performed, during proving flights or ferry flights in the aircraft type; and

- (3) while performing the duties of a pilot-in-command under the supervision of a designated pilot-in-command.

135.507 Reserved

135.509 Reserved

135.511 Minimum flight crew – IFR

Each holder of an air operator certificate shall not operate an aircraft under IFR with one pilot unless—

- (1) the aircraft flight manual permits the aircraft to be operated by one pilot under IFR; 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 Purpose

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) Each holder of an air operator certificate shall ensure that each crew member is trained in accordance with the training programme contained in the certificate holder's exposition.

- (c) The holder of an air operator certificate shall ensure that its training programme is controlled by the certificate holder.
- (d) The holder of an air operator certificate 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 accurate 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 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 holder's policies and procedures appropriate to its air operations.
- (b) The holder of an air operator certificate 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 operation authorised by the certificate holder's certificate, completes appropriate transition training if—
- (1) the crew member is changing from one aircraft type or variant to another type or variant; or
 - (2) new procedures or equipment are introduced on an existing aircraft type or variant.
- (b) The transition training shall address—
- (1) the use of all safety and emergency equipment and procedures applicable to the aircraft type or variant; and
 - (2) new procedures or equipment introduced on the existing aircraft 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 *Reserved*

135.565 *Flight crew training programme*

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

(b) Each holder of an air operator certificate 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) Each holder of an air operator certificate shall accurately 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 Purpose

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 and control an operational competency assessment programme in accordance with this Subpart.

(b) The holder of an air operator certificate 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) is type rated in the aircraft used to conduct the operation; and
- (2) is familiar with the types of operations conducted by the certificate holder; and
- (3) has an appropriate current flight examiner rating; and

- (4) 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 a ground-based procedure check over one route segment, and a flight check with one or more landings at an aerodrome 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 procedures, including emergency procedures, in an aircraft type of similar operating characteristics to that 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 procedures, including 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, of 9 seats or less, excluding any required pilot seat, 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
 - (vi) location and operation of items of emergency equipment; 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 *Reserved*

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 accurate records of all competency assessments and testing of its crew members.

Subpart K — Fatigue of Flight Crew

135.801 *Purpose*

This Subpart prescribes flight time limitations and other rules to minimise fatigue in flight crew members of aircraft engaged in air operations.

135.803 *Operator responsibilities*

- (a) Each holder of an air operator certificate shall not cause or permit an aircraft to perform an air operation unless—
 - (1) a scheme has been established for the regulation of flight and duty times for every person flying in that aircraft as a flight crew member; and
 - (2) the scheme addresses the following factors for air transport operations where appropriate to the operator's type of operation:
 - (i) rest periods prior to flight:
 - (ii) acclimatisation:
 - (iii) time zones:
 - (iv) night operations:
 - (v) maximum number of sectors:

- (vi) single pilot operations:
 - (vii) two pilot operations:
 - (viii) two pilots plus additional flight crew members:
 - (ix) flight crew members' qualifications:
 - (x) mixed duties:
 - (xi) dead-head transportation:
 - (xii) reserve or standby periods:
 - (xiii) flight duty period:
 - (xiv) in-flight relief:
 - (xv) type of operation:
 - (xvi) cumulative duty time:
 - (xvii) cumulative flight time:
 - (xviii) discretionary increases in flight time limitations or flight duty limitations or both:
 - (xix) circadian rhythm:
 - (xx) days off:
 - (xxi) record-keeping; and
- (3) the scheme for commercial transport operations, complies with the following:
- (i) flight crew shall not fly in excess of 160 hours in any 30 consecutive days:
 - (ii) flight crew shall have not less than two days free of duty in any 14 day period:

(iii) flight crew shall have not less than two consecutive days free of duty in any 30 day period; and

(4) the scheme is acceptable to the Director.

(b) The operator of an aircraft performing an air operation shall not cause or permit any person to fly in the aircraft as a flight crew member if the operator knows or has reason to believe that the person is suffering from, or, having regard to the circumstances of the flight to be undertaken, is likely to suffer from, such fatigue while they are so flying as may endanger the safety of the aircraft or its occupants.

(c) The operator of an aircraft performing an air operation shall—

- (1) keep an accurate record of the flight times of each flight crew member; and
- (2) retain the flight time record required by paragraph (d)(1) for a period of 12 months from the date on which it was made.

135.805 Flight crew responsibilities

(a) A person shall not act as a flight crew member of an aircraft performing an air operation if that person knows or suspects that they are suffering from, or, having regard to the circumstances of the flight to be undertaken, are likely to suffer from, such fatigue as may endanger the safety of the aircraft or its occupants.

(b) A flight crew member shall not perform other hire or reward flight duties while employed, engaged, or contracted by an air operator when such duties and flying in addition to that in air operations will exceed the flight and duty time limitations prescribed in the scheme required by 135.803(a)(1) relating to that flight crew member.

(c) A person shall not act as a flight crew member of an aircraft performing an air operation unless that person has ensured that the limitations prescribed in the scheme required by 135.803(a)(1) relating to that person are not exceeded.

(d) Notwithstanding paragraph (c), the flight and duty time scheme limitations shall not apply where the flight is one which ought to be made in the interests of safety or health of any person, in such cases it is the

responsibility of the pilot-in-command to be satisfied that the safety of the flight will not be endangered by reason of any flight crew member exceeding the applicable flight time limitations.

Subpart L — Manuals, Logs, and Records

135.851 Purpose

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

135.853 Operating information

Each holder of an 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

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

- (1) NOTAM and aeronautical information service briefing documentation appropriate to the operation; and
- (2) meteorological information appropriate to the operation; and
- (3) notification of dangerous goods; and
- (4) copies of the relevant flight guide charts and plates.

135.857 Daily flight record

(a) Each holder of an air operator certificate shall keep accurate daily flight records in accordance with paragraph (b).

(b) Each daily flight record shall contain for each flight—

- (1) the date of the flight; and
- (2) the name of the operator; and
- (3) the name of the pilot-in-command; and

- (4) the registration markings of the aircraft; and
- (5) the total flight time; and
- (6) the number of passengers; and
- (7) the type of air operation.

135.859 Retention period

- (a) Each holder of an air operator certificate shall ensure that flight plan information including notification of dangerous goods is retained for 12 months from the date of the flight.
- (b) Each holder of an air operator certificate shall ensure that each of its flight crew records of flight and duty time is retained for 12 months from the date of the records entry.
- (c) Each holder of an air operator certificate 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.
- (d) Each holder of an air operator certificate shall ensure that its daily flight record is retained for a period of not less than 12 months after the date of the flight.

Appendix A — Reserved

Appendix B — Instruments and Equipment Airworthiness Design Standards

- B.1** *Reserved*
- B.2** *Reserved*
- 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) except as provided in an MEL, record the parameters as detailed in—
 - (i) Figure 1; and
 - (ii) as applicable, Table 1 and Table 2—
of Appendix B.

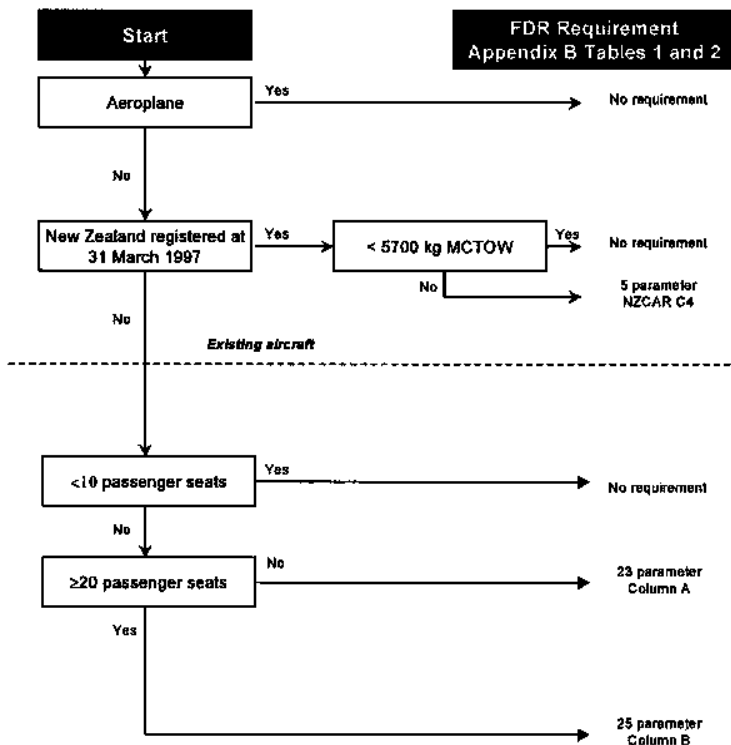


Figure 1. Flight Data Recorder Decision Chart

Table 1. Part 135 - Flight Data Recorder Parameter Requirements

When reading the parameter specifications from Table 2 the corresponding shaded specification should be chosen for each parameter. This table refers to the FDR requirements of 135.369.

Parameter * if sensor installed	(A)	(B)
	23 Parameter Helicopter	25 Parameter Helicopter
1	Time	Time
2	Airspeed	Altitude
3	Altitude	Airspeed
4	Heading	Heading
5	Vertical acceleration	Vertical acceleration
6	Longitudinal acceleration	Pitch attitude
7	Pitch attitude	Roll attitude
8	Roll attitude	Radio transmitter keying
9	Altitude rate	Power in each engine: Free power turbine speed and engine torque
10	Main rotor speed	Main rotor speed
11	Free or power turbine for each engine	Altitude rate
12	Engine torque for each engine	Pilot input - primary controls
13	Primary hydraulic pressure	Flight control hydraulic pressure low
14	Secondary hydraulic pressure (if available)	Flight control hydraulic pressure selector switch position, 1 st and 2 nd stage
15	Radio transmitter keying	AFCS mode and engagement status
16	Autopilot engaged	SAS status - engaged
17	SAS status - engaged	SAS fault status
18	SAS fault status	Main gearbox temperature low
19	Collective	Main gearbox temperature high
20	Pedal position	Controllable stabilator position
21	Lateral cyclic	Longitudinal position

Table 1. Part 135 - Flight Data Recorder Parameter Requirements

When reading the parameter specifications from Table 2 the corresponding shaded specification should be chosen for each parameter. This table refers to the FDR requirements of 135.369.

	(A)	(B)
Parameter * if sensor installed	23 Parameter Helicopter	25 Parameter Helicopter
22	Engine torque	Lateral acceleration
23	Controllable stabilator position	Master warning
24		Nav 1 and Nav 2 frequency selection
25		Outside air temperature

Table 2. Part 135 - Flight Data Recorder Parameter Specifications

This table refers to the FDR requirements of 135.369.

Parameters	Range	Installed system minimum accuracy (to recovered data) ¹	Sampling interval (per second)	Resolution read out ²
Relative time (from recorded on prior to takeoff)	25 ft minimum 24 hours	±0.125% per hour	1 0.25	1 sec
Indicated airspeed	V _{min} to V _{max} (KIAS) (minimum airspeed signal attainable with installed pitot/static system) As the installed measuring system	±5% or ±10 knots, whichever is greater ±3%	1	1 kt
Altitude	-1,000 ft to 20,000 ft pressure altitude -1,000 ft to max certificated altitude of aircraft	±100 to ±700 ft (see Table 1, TSO C51-a)	1	25 to 150 ft 5' to 30'
Magnetic heading	360°	±5° ±2°	1	1° 0.5°
Vertical acceleration	-3 g to +6 g	±0.2 g in addition to ±0.3 g maximum datum ±1% of max range excluding datum error of ±5%	4 (or 1 per second where peaks, ref. to 4 g are recorded) 8	0.05 g 0.01g
Longitudinal acceleration	±1.0 g	±1.5% max. range excluding datum error of ±5%	2 4	0.03 g 0.01g

Table 2. Part 135 - Flight Data Recorder Parameter Specifications

This table refers to the FDR requirements of 135.369.

Parameters	Range	Installed system minimum accuracy (to recovered data) ¹	Sampling interval (per second)	Resolution read out ²
Lateral Acceleration	±1.0 g	±1.5% max. range excluding datum error of ±5%	4	0.01g
Pitch attitude	100% of usable range	±2°	1	0.8°
	±75°		2	0.5°
Roll attitude	±60° or 100% of usable range, whichever is greater	±2°	1	0.8°
	±180°		2	0.5°
Altitude rate	±8,000 fpm	±10% Resolution 250 fpm below 12,000 ft indicated	1	250 fpm below 12,000
	±6,000 fpm	As installed	2	0.2%
Engine power each engine				
Main rotor speed	Maximum range	±5%	1	1% of full range
	0-130%	±2%	2	0.3% of full range
Free or power turbine	Maximum range	±5%	1 (per engine)	1% of full range
	0-130% (power Turbine Speed)	+2%		0.2% to 0.4% of full range
Engine torque	Maximum range	±5%	1 (per engine)	1% of full range
		±2%		0.2% to 0.4% of full range
Flight Control - Hydraulic Pressure				
Hydraulic Pressure Low	Discrete, each circuit		1	
Hydraulic Pressure	Discrete		1	

Table 2. Part 135 - Flight Data Recorder Parameter Specifications

This table refers to the FDR requirements of 135.369.

Parameters	Range	Installed system minimum accuracy (to recovered data) ¹	Sampling interval (per second)	Resolution read out ²
Selector Switch Position, 1 st and 2 nd Stage				
Primary (discrete)	High/low		1	
Secondary - if applicable (discrete)	High/low		1	
Avionics				
Radio transmitter keying (discrete)	On/off		1	
Autopilot engaged (discrete)	Engaged or disengaged		1	
AFCS Mode and Engagement	Discrete (5 bits necessary)		1	
SAS status - engaged (discrete)	Engaged/disengaged		1	
SAS fault status (discrete)	Fault/OK		1 0.25	

Table 2. Part 135 - Flight Data Recorder Parameter Specifications

This table refers to the FDR requirements of 135.369.

Parameters	Range	Installed system minimum accuracy (to recovered data) ¹	Sampling interval (per second)	Resolution read out ²
Flight Controls				
Collective	Full range	±3%	2	1% of full range 0.5% of full range
Pedal position	Full range	±3%	2	1% of full range 0.5% of full range
Lateral cyclic	Full range	±3%	2	1% of full range 0.5% of full range
Longitudinal cyclic	Full range	±3%	2	1% of full range 0.5% of full range
Controllable stabilator position	Full range	±3%	2	1% of full range 0.4% of full range
Main Gearbox Temperature Low	As installed	As installed	0.25	0.5% of full range
Main Gearbox Temperature High	As installed	As installed	0.5	0.5% of full range

Table 2. Part 135 - Flight Data Recorder Parameter Specifications

This table refers to the FDR requirements of 135.369.

Parameters	Range	Installed system minimum accuracy (to recovered data) ¹	Sampling interval (per second)	Resolution read out ²
Master Warning	Discrete		1	
Nav 1 and Nav 2 Frequency Selection	Full range	As installed	0.25	
Outside Air Temperature	-50°C to +90°C	±2°C	0.5	0.3°C

Notes:

1. When data sources are aircraft instruments (except altimeters) of acceptable quality to fly the aircraft the recording system excluding these sensors (but including all other characteristics of the recording system) shall contribute no more than half of the values in this column.

2. This column applies to aircraft manufactured after October 11, 1991.

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

"

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

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. NZ legislation is being generated where necessary for the areas not presently covered.

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 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 empowers 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 98-6 under

Docket 98/CAR/1303 on 18 September 1998. This Notice proposed a new regulatory safety boundary for the types of hire or reward operations concerned, namely air transport or commercial transport. The Notice proposed amendments to Parts 1, 12, 19, 61, 66, 91, and 93, the reissue of Parts 119, 121, and 135, and the initial issue of a new Part 125.

Supplementary Information

The 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 or on the CAA Internet page at <http://www.caa.govt.nz> Printed copies may be obtained from Publishing Solutions Ltd, PO Box 983, Wellington 6015, Telephone 0800 800 359.

Summary of Comments on Docket 98/CAR/1303 NPRM

1. General comments on the NPRM

From the 54 submissions received several general comments were received.

CAA Comment: Various amendments have been included as a result of comments from the Ministry of Transport and other parties. In addition, the CAA has added or changed some rules in structure but not content or intent. An example is the change of the *Applicability* rules to *Purpose* rules. The amendments to Part 91 proposed in the NPRM were also removed from the final rules and will be included in other Part 91 work being finalised early in 1999.

CAA Comment: The CAA appreciates the various commenters who suggested wording changes, improvements to grammar and spelling corrections throughout the NPRM. The CAA has made changes accordingly as and where appropriate. Many commenters expressed their approval of the changes and an appreciation toward the CAA for the improvements made to various rule Parts.

1.1 One commenter requested clarification regarding the relationship of Part 115 and Part 135 for tandem skydiving operations.

CAA Comment: The aircraft flight is proposed to be a commercial transport operation and the tandem sky dive is proposed to be an adventure aviation operation. This will be addressed in the Part 115 NPRM out early in 1999. An operator wishing to conduct both operations under the one certificate can certify the flight and the jump operations under Part 115. A company contracted to carry out the flight requires an air operator certificate under Part 119.

1.2 One commenter suggested that the definitions of passengers and crew members is problematic with insurance issues, and the relationship between a rescue trust and the aircraft operator is very similar as the crews are trained and to all intents and purposes are crew not passengers.

CAA Comment: The primary issue appears to be with the change in definition of passenger. It is suitable that the operation is a commercial transport operation not a Part 91 operation. Education may be required for insurers to evaluate the flight based on air transport or commercial transport operations not passengers or crew.

1.3 One commenter suggested that there was no evidence of harmonisation, or consultation with Australia and other authorities, as indicated at the APEC Transport Ministers meeting in Canada in 1997. The commenter suggested that the main aircraft groupings and new terminology should be standardised around the world.

CAA Response: Harmonisation is achieved where practical, however the New Zealand rule structure requires its own terminology due to the peculiar nature of New Zealand operations. For example, the definitions of *air transport* and *commercial transport* differ from those definitions used overseas but the applicable standards also differ.

1.4 One commenter submitted that there is no cost benefit analysis to justify management systems for *traditional aerial work operations* being included in Part 135.

CAA Response: The CAA notes that it was at the request of industry to require the certification of these operations. Further analysis was not considered necessary as CAA and industry are in agreement with the

requirement to have suitable management systems relevant to the size and scope of an operation.

1.5 One commenter submitted that the proposal for adventure aviation is the subject of a separate Part 115 and that to include a definition of adventure aviation in the NPRM is a prejudgment of the proposed rules.

CAA Response: The CAA agrees and has removed the adventure aviation terms from the rules. This subject will be dealt with in the Part 115 NPRM.

1.6 One commenter submitted that the removal from the definition of air transport operation the exclusion of a parachute operation in accordance with Part 105 represents a major alteration to the definition and has far reaching implications and suggested that the reference excluding a parachute operation should remain.

CAA Response: The CAA agrees and the parachute operation in accordance with Part 105 has been reinstated.

1.7 One commenter objected to the definition of commercial transport operation suggesting a crew member cannot be a passenger. The commenter suggested that the dictionary meanings of passenger and crew member should be used.

CAA Response: The changes were made in accordance with submissions from industry concerned at the various and conflicting interpretations of passenger and crew and the operations being carried out with passengers. Difficulties intensified when the CAA determined low level surveyors and photographers were passengers under Part 135 and that Part 135 prohibited these operations from occurring. The changes clarify who is a passenger and allow these operations to continue as commercial transport operations.

1.8 One commenter suggested that certification should only be required for air transport operations.

Various commenters suggested an increase in costs and compliance requirements were apparent.

CAA Response: The CAA notes that it was at the request of industry to require the certification of commercial transport operations. Further analysis was not considered necessary as CAA and industry are in agreement with

the requirement to have suitable management systems relevant to the size and scope of an operation. Further, the CAA notes that there is no more cost or compliance than in the present rule, in fact there is a reduction in compliance requirements and costs.

1.9 Two commenters were concerned about the comment on page five of the NPRM that 10 to 30 seat aeroplanes have always been intended to be eventually incorporated into Part 121.

CAA Response: This has always been the CAA's intent to bring the separation into line with other countries and regulatory authorities. Further discussion and consultation will occur prior to any change.

1.10 Various commenters noted that there were extensive requirements relating to proficiency checks and biannual flight reviews which require certified flight testing officers and quality assurance. As a result, if these rules were left unchallenged, there would be considerable cost to the industry with little or any benefit. Areas such as the check and training requirements need to be made more user friendly and along the lines the industry requires.

CAA Response: The scope of the Part 135 review was agreed on between industry and CAA before the task was initiated and all points in the scope have been addressed. Many issues identified during the process have been taken into account for further work.

1.11 One commenter asked if the various operations types were going to require separate Part 119 certificates.

CAA Response: The CAA will not require separate Part 119 certificates for different operating rules. The operations specifications detail the operating rules to which the certificate holder can operate, this could be Part 121, 125, and 135 or any combination as specified in the operator's exposition and operations specifications.

1.12 One commenter asked if they could operate all operations in accordance with Part 125 requirements even though the aircraft were less than 10 passenger seats.

CAA Response: The CAA suggests that if an operator writes their manual to the Part 125 standard, for example, then they will have met the respective

Part 135 standard and can operate accordingly. In this case, whilst the operation is technically to Part 135 the operator is meeting the Part 125 standards.

1.13 One commenter queried whether there would be charges associated with amendments of their existing Part 119 manuals to reflect the new rules.

CAA Response: The CAA has endeavoured to keep the requirement references the same in the new rules as in the previous Part 135. This provision should remove the majority of currently certificated operator problems. For operators with a compliance matrix system any change should only affect this matrix. For operators without a compliance matrix and whose manuals involve significant other change these changes will generally be actioned by the CAA at no cost. Operators affected will have their operations specifications changed automatically by the CAA to cover the new Parts.

1.14 One commenter suggested that the new system provided lower standards that would affect tourism and the commenter did not support the changes, preferring the current Part 119 and Part 135 combination. The commenter submitted that all tourist industry operators should comply with the current rules regardless of seat numbers and of aircraft type.

CAA Response: The CAA accepts the commenter's points but disagrees that the revised rules reduce safety in any form. The rule as it was applied standards similar to airline type operations to smaller operations. These airline type standards were considered impractical for smaller operators and could result in unsafe practices developing. The CAA suggests that with a focus on small operators and unscheduled operations the relevance of the revised rules improves compliance and therefore safety.

1.15 One commenter stated that we should not remove the word *transport* blindly from the phrase *air transport operation* as that commenter felt that this is exactly what Part 119 is all about. The commenter stated that Part 119 does not provide certification for air operations conducted under Part 91 or Part 141. The commenter suggested that the proposal implied that Part 119 certification was required for these types of operation.

CAA Response: The CAA disagrees. The term *air operation* has been defined in Part 1 and each of the operating rules as both air transport operations and commercial transport operations. This definition was made

to make writing subsequent rules easier as many rules apply to both types of operation. By definition then air operations only include operations under Parts 121, 125, and 135. Operations under Part 91 or 141 may be operations in the air but by definition are not air operations.

1.16 One commenter stated that the terms *airline air operator* and *general aviation air operator* are vague and cumbersome. The commenter provided an alternative system for the separation of the different levels of operation suggesting the use of a level 1, level 2, level 3, and level 4 system based on Part 121, 125, 135 air transport, and 135 non-air transport types of operation. The commenter applied this proposal to all relevant rules.

CAA Response: The CAA disagrees. The CAA would like to thank the commenter for the layout and work involved in the proposal but considers that the structure as proposed in the NPRM and worked through with the industry working group is appropriate.

2. Specific comments on the NPRM

Specific comments received from the 54 submissions are discussed as follows:

Part 1 Definitions

CAA Comment: The definitions of air transport and commercial transport have been returned to essentially the old definition of air transport. Further amendment of these definitions will be completed as part of the Part 115 NPRM where the specific exclusions will in future be covered.

2.1 One commenter was concerned with the exclusion of Part 137 agricultural operations in the definition for commercial transport operation as an agricultural operation includes surveys for water, forestry and agricultural operations below 500 feet. The commenter suggested all surveys should be commercial transport operations.

CAA Response: A survey conducted in relation to an agricultural activity is an agricultural operation and this is reflected in the Part 1 definition of agricultural aircraft operation. This survey must be agriculture related which is considered appropriate for these operations.

2.2 Two commenters suggested that the definition of crew member should include the person being assessed for employment and the commenters provided a definition in their submission.

CAA Response: The definition of crew member covers an assessment for employment if the assessment is for a crew member position. A normal employment assessment flight would be a Part 91 flight or possibly a training flight if manipulation of controls is involved.

Part 61

61.29 Pilot Logbooks - General

2.3 One commenter submitted that the log book entry rule should recognise different formats and means of recording flight and instrument time, such as a computer. The commenter also suggested that the time periods allowed for in subparagraphs (1) and (2) ought to be extended from 7 and 14 days respectively to 30 days.

CAA Response: This point is outside the scope of the review. The inclusion of this rule was to remove the word *transport*. The commenter's point has been noted for future review of Part 61.

2.4 One commenter suggested that the term *aerial work operation* is redundant and should be replaced by the new term *commercial transport operation*. The commenter also noted that the term *below the last entry* is also redundant.

CAA Response: The CAA disagrees as the term *aerial work* will continue to be valid until all operators are certified under Part 119. The transition provisions of Part 119 allow aerial work operations until 28 February 2003. The commenter's point regarding *below the last entry* is noted but no change has been made.

61.37 Recent flight experience

2.5 Two commenters agreed that night currency should be three take offs and landings at night rather than one hour instrument.

One commenter asks what is meant by [aircraft] *type*.

CAA Response: The CAA acknowledges the comments. The definition of *Type* is as in Part 1.

61.901 Eligibility requirements

2.6 Three commenters considered the flight examiner requirement to hold an A category instructor rating too restrictive and that an A, B, or D category instructor should be eligible provided they are assessed annually by an A category instructor.

CAA Response: The comments relating to flight examiners have been noted as a significant issue which has attracted considerable comment elsewhere in this proposal. The issue is, however, outside the scope of the Part 135 Review. The requirements for flight examiners to conduct these checks is to be addressed in a separate Part 61 project and full consideration of harmonisation issues and industry comments will be made then.

Part 91

91.307 VFR Flight Plan

2.7 Two commenters suggested that the reduction of 50 nm to 10 nm for the requirement to have a flight following service is erroneous and unnecessary. Both suggested that the decision to file a flight plan should be left up to the pilot-in-command to allow the correct person to assume responsibility for their safety actions.

CAA Response: The CAA has reinstated 50 nm. This rule is also being amended by NPRM 98-1 and a decision has been made to combine the changes into one amendment upon completion of the NPRM 98-1 project. Rule 91.307 has been removed from these amendments.

Part 93

Part 93.3 Definitions

2.8 One commenter suggested a variety of wording changes be made.

CAA Response: The amendment was the deletion of the word *transport* to bring this rule into line with the definition of *air operations*. Further amendment is outside the scope of this review but the comment will be noted in the upcoming Part 93 project scheduled for early in 1999.

Part 119

Part 119.1 Applicability

2.9 One commenter suggested changing the rule to *This Part shall apply to the certification and activities of persons conducting air operations under Part 121 and Part 125 and Part 135.*

CAA Response: The CAA agrees and has rewritten the rule. After further discussions with the CAA Legal Unit this rule and other applicability rules have been changed to more correctly reflect their intent.

2.10 One commenter suggested omitting the phrase *domiciled in New Zealand* as the rules are New Zealand Civil Aviation Rules so the repetition to this reference is unnecessary.

CAA Response: The CAA disagrees. The term *domiciled in New Zealand* has been used to clarify the difference between Part 119 and Part 129.

119.7 Certificate categories

2.11 Two commenters stated that the certificate categories did not appear to address cargo aircraft exceeding 5700 kg MCTOW but less than 3410 kg payload capability. One commenter stated that typical aircraft affected would be the Metro, SFAR 41 Bandeirante, and the DC-3. The commenters stated that this omission made it difficult to determine if these aircraft would be Part 125 or Part 135.

CAA Response: The CAA agrees and has rewritten the rule to address the anomaly. The aircraft in question are covered by Part 125.

119.9 Application for Certificate

2.12 Three commenters considered the 90 days too long for many of the simpler operations manuals as for general aviation operators a three month delay could be detrimental to small businesses.

CAA Response: The CAA agrees that time is often critical to smaller operators. The requirement to process an exposition is part of the rules and this processing does take a finite time to complete. The rule has been written to allow a shorter period to be arranged with the CAA. The CAA is endeavouring to meet industry expectations for entry into the aviation

system and at the initial pre-assessment meeting between a new applicant and the CAA, the period for processing can be negotiated.

119.15 Operations Specifications

2.13 One commenter stated that the addition of the words *and registration* in paragraph (b)(4) is not necessary and has no added benefit.

CAA Response: The CAA disagrees. The registration of an operator's aircraft has previously been captured in the maintenance programme requirements. This location is considered to be inappropriate to describe an overall organisational requirement.

2.14 One commenter stated that the requirement in paragraph (b)(5) to have a list of the types of operations that are authorised is unnecessary and unduly restrictive. The commenter stated that the explanatory note suggested so broad and general application as to be meaningless for the operations specification. The commenter stated that to be too specific would require changes to be specifically approved by the Director. An operator would therefore try to describe the types of operations in an exhaustive list to cover every eventuality and possibility.

One commenter stated that the list of air operation types should be in the operator's exposition.

CAA Response: The CAA agrees that the list of operations types will be in an operator's exposition. The CAA also agrees that too specific a list would be administratively difficult for operators and the CAA alike. The operations specifications are essentially limitations on the operations of an operator and should be viewed as such. The list of operations is intended to be only a summary of the types of operations permitted, not the actual operations themselves. In most cases these types of operations will be air transport or commercial transport under the relative Part. This will be explained in the revision of the Part 119 advisory circular.

2.15 One commenter submitted that paragraph (b)(8) is unreasonably vague and can only lead to uncertainty. The commenter also considered the requirement unreasonably subjective and could give rise to confusion as a result of differing interpretations being placed on it.

CAA Response: The CAA disagrees. To remain flexible enough to cater for the types of operations that an applicant may propose, the Director needs some discretion in applying conditions on the operations. The provision exists elsewhere in the rules and the CAA considers it clearer to restate the ability here.

2.16 Two commenters stated that paragraph (b)(6) was too restrictive for general aviation operators and suggested that the requirement be limited to airline operators only.

CAA Response: The CAA disagrees but recognises the commenter's points. The CAA will take into account these considerations in pre-application discussions with any applicant.

2.17 One commenter stated that this rule suggested that operations specifications *may* include the list of conditions on the various descriptions of operations that the certificate holder may perform. The commenter also noted that 119.13 contained the word *may*.

CAA Response: The CAA agrees. The term *shall* is now included.

119.51 Personnel requirements

CAA Comment: The CAA specifically asked for comment on the combination of crew training and competency assessment and the following are comments received regarding this topic.

2.18 One commenter stated that the wording regarding training and competency should remain as suggested in the NPRM. The commenter noted that it is important that an airline operator have the ability to cross utilise its training staff in terms of training and competency requirements. The commenter stated that the checks and balances required to provide integrity of the system are more a matter of exposition and organisational structure.

One commenter agreed with the combination of crew training and competency assessment as it suits an airline structure with check and training sections. The commenter suggested that an option be provided where the competency assessment was able to be combined with the duties of the flight operations senior person.

CAA Response: The CAA thanks the commenters for their views and has taken them into account in the final rule. The CAA has provided a means of varying these responsibilities as a result of the comments.

119.71 Flight authorisation and control

2.19 One commenter stated that this rule was difficult and maybe impossible to comply with as every departure, cruise, descent, and landing would require the flight operations manager to authorise it. The commenter suggested alternative wording for the rule.

CAA Response: The CAA disagrees and points out that the flight operations manager need not physically authorise each and every flight. The key word in the rule is *procedures*. The rule requires procedures to ensure that a flight or series of flights is authorised and these procedures can be detailed in the exposition. The flight operations manager will be ultimately responsible for those procedures.

119.77 Establishment of operations procedures

CAA Comment: In this rule, and similarly in 119.123, the list of requirements have been removed. As not all these procedures may be applicable to all operators the general requirement to have procedures was considered more appropriate. Operators must have procedures for all those rules that require them. The advisory circular and the template manual will provide further guidance as to which rules require procedures. It is up to the operator to determine those procedures applicable to their operation.

119.101 Personnel requirements

2.20 One commenter suggested that the text in paragraph (c) be incorporated into paragraph (b) to make it easier to understand the intent of the rule.

CAA Response: The CAA agrees and has taken the suggestion into account in the final rule.

2.21 One commenter stated that guidance needs to be given to explain that there is no requirement to hire staff simply to fulfil the senior person functions. The commenter considered that this would be uneconomic for smaller operators. The commenter suggested adding a clause to

paragraph (c) to allow the issue of the certificate to a *one man band* if a senior person has reasonable levels of skill and experience to perform multiple functions.

CAA Response: The CAA agrees with the commenter's points and notes that this is how the rule is envisaged to be applied. Guidance will be given in the advisory circular but it is not intended that small operators employ someone for the sake of filling the position.

2.22 One commenter stated that the requirement in paragraph (b)(1) that a senior person be responsible for no more than one of the functions detailed is unreasonable and incurs substantial additional costs without any benefit. The commenter stated that the exclusion in paragraph (c) did not go far enough. The commenter stated that a present day business was required to be lean and to reduce overheads and expenses in every possible manner. The commenter stated that the personnel requirements of this rule enforced upon an aviation operator a bureaucratic hierarchy that is neither necessary, desirable, or justified.

CAA Response: The CAA agrees that it would be unnecessary for a small operator to incur the organisational arrangements of a larger operator. This is why the exception has been provided in the rule.

2.23 One commenter stated that there does not appear to be any provision for existing personnel employed by operators to continue in those positions. The commenter submitted that there should be provision for existing personnel to continue in those positions under the new certification requirements. To do otherwise could be deemed harsh and oppressive and may result in claims against operators pursuant to employment legislation.

CAA Response: The CAA agrees and notes that existing personnel will be considered acceptable for the ongoing operation of an operator. This is provided for in Appendices A and B. New operators and new staff for existing operators will be required to meet the Part 119 standards.

2.24 One commenter stated that the operator controlled how many functions one person is responsible for, not the rule.

CAA Response: The CAA agrees that an operator is responsible for their own structure but the rule specifies the minimum acceptable level of organisation considered necessary for safe operations.

119.103 Personnel competency requirements

2.25 One commenter stated that Part 149 would control the glider pilot training and competency checks and this ability should remain applicable.

A further late submission by the commenter suggested that they would rather wait until Part 115 was confirmed before progressing gliders into either Part 119 or 115.

CAA Response: The CAA disagrees. Part 149 is established for recreational purposes and Part 119 is for air transport types of operations. It may be that an operator utilises the same people for the two organisations but the Part 119 organisation is required to stand on its own. The further comment was taken into consideration and gliders removed from the Part 135 requirements for the time being.

119.111 Maintenance programme

2.26 One commenter suggested changing paragraph (4) to *procedures for maintenance trend analysis if the programme utilises condition monitored maintenance or information from a trend monitoring system.*

CAA Response: The CAA disagrees and considers the rule to convey the appropriate intent.

119.113 Documentation

2.27 One commenter requested that paragraph (a) be removed entirely as this is superfluous if the requirements in rule 119.124 were removed. The commenter stated that there was no justifiable requirement or need for an organisational management system as described in rule 119.124. The commenter stated that aviation companies have been managing themselves for years with excellent safety records and that there were sufficient new procedures already required by the introduction of the rules system without further restrictions on the way an organisation is managed.

CAA Response: The CAA disagrees. The paragraph relates to the organisational management system in rule 119.124 and is considered appropriate. The organisational management system is discussed in the following paragraphs.

119.119 Flight authorisation and control

2.28 One commenter stated that this is a repeat of rule 119.71 but for general aviation operators and was considered unnecessary.

CAA Response: The CAA disagrees and points out that the flight operations manager need not physically authorise each and every flight. The key word in the rule is *procedures*. The rule requires procedures to ensure that a flight or series of flights is authorised and these procedures can be detailed in the exposition. The flight operations manager will be ultimately responsible for those procedures.

2.29 One commenter considered this requirement covered by the pilot competency requirements in rule 119.103 and for general aviation was a repeat and unnecessary.

CAA Response: The CAA disagrees and points out that the two rules cover different areas of authorisation. Rule 119.103 covers the pilot's entry and continued operation within the operator's organisation but 119.119 covered the authorisation of the operation itself.

119.121 Flight following system

2.30 One commenter stated that the requirement in paragraph (b)(1) is not always reasonable or practicable. The commenter stated that the situation could arise, such as hunting or fishing, where an aircraft may be on the ground and out of contact for a period considerably in excess of 30 minutes. The commenter stated that the rule as written would require specific contact to be made. The commenter suggested that the rule be amended so as to provide the latitude in paragraph (b)(2) to air transport operations.

Three commenters suggested that the 30 minute requirement was difficult and inappropriate for some types of operations.

CAA Response: The CAA disagrees. The examples given by the commenter would be considered commercial transport operations and therefore already have the option though the operator's procedures. The 30 minute time limit is considered appropriate for air transport operations.

2.31 One commenter suggested that the new rule is considerably more restrictive than the existing rule.

CAA Response: The CAA disagrees and considers that the provision of alternative provisions in paragraph (b)(2) to be clearer and less restrictive than the current requirements.

2.32 One commenter suggested that the 30 minute maximum time period between reporting times be amended to 60 minutes to allow for some scenic flights and joy rides where 30 minutes may be considered difficult.

CAA Response: The CAA disagrees and considers 30 minutes appropriate for air transport operations.

2.33 One commenter suggested deleting the flight plan requirement and replacing it with SARWATCH abilities.

CAA Response: The CAA disagrees. The provision of SARWATCH is yet to be finalised from the NPRM 98-1 on Part 91 but will be considered again at that time.

119.124 Organisation Management System

2.34 One commenter noted that the requirement of this rule was a restatement of the internal quality assurance requirements contained within the existing rule 119.79. The commenter noted that the language was different but the end result is virtually the same except for the provisions for the very small operator. The commenter suggested that the requirements of the rule imposed an excessive and unnecessary impingement on an individuals right to run the business as that individual sees fit and that the only requirement that can be made in this respect is that which has a direct effect on aviation safety. The commenter stated that all businesses have some form of control and quality assurance and that organisations that do not have some such procedure would not continue to operate for any period of time. The commenter submitted that the Director's only concern should be those matters that directly affect questions of aviation safety.

CAA Response: The CAA agrees that the organisational management system is very similar to the internal quality assurance system currently required. The rule has been rewritten to reflect more commonly understood

terms. The CAA considers that the organisational culture that is reflected in these systems has a direct impact on aviation safety.

2.35 Three commenters suggested that the three aircraft and two bases demarcation should relate to bases used on air transport or commercial transport operations and not training or other purposes.

CAA Response: The CAA agrees and considers that the rule reflects this.

2.36 Two commenters suggested that the rule be amended to account for organisations such as aero clubs that allocate only a few aircraft to air transport or commercial transport but have many aircraft in the organisation as such.

CAA Response: The CAA agrees and has rewritten the rule to identify only those aircraft included in the operations specifications.

2.37 One commenter stated that there was no justifiable requirement or need for an organisational management system as described in rule 119.124. The commenter stated that aviation companies have been managing themselves for years with excellent safety records and that there were sufficient new procedures already required by the introduction of the rules system without further restrictions on the way an organisation is managed.

CAA Response: The CAA disagrees. The CAA considers that the organisational culture that is reflected in these systems has a direct impact on aviation safety and was one of the reasons for the changes already instituted in the aviation system. As the commenter points out, aviation businesses will already have been following similar procedures and so the requirements of this rule will be relatively easily met. The organisational management system requirements are not considered to be excessive or a further restriction on the way an organisation is managed.

119.125 General Aviation Operator Exposition

2.38 One commenter stated that the requirement that this rule list the necessary procedures is unnecessarily repetitive and largely superfluous. The commenter suggested that all that is required is a paragraph to the effect that the operator's exposition must contain detail of the procedural requirements required by the rules. The commenter stated that the operator

can then determine which rules are applicable and which matters need to be contained within the exposition.

CAA Response: The CAA agrees. The intention of this rule was to list the procedures in one place in the rules and provide better guidance to the applicant. The rule however has been rewritten as suggested.

2.39 One commenter stated that the reference to maintenance personnel training was not appropriate. The commenter stated that the operator has neither the expertise nor the inclination to take responsibility for the engineer's training.

CAA Response: The CAA disagrees. The operator is responsible for the airworthiness of the aircraft they operate. Part of this responsibility is the adequate provision of maintenance and part of this provision is appropriately trained personnel. It is not envisaged that the operator will necessarily conduct training but the operator should ensure that they have agreements that require their maintenance provider to ensure their personnel are trained.

119.151 Continued compliance

2.40 One commenter disagreed with this amendment as the definition of each major location will be argued with the CAA auditors. The commenter suggested that the requirements in 119.65 should be sufficient. The commenter suggested that the proposed change would require all flight operations and crew training manuals to be available at an engineering base if it was a *major location*.

CAA Response: The CAA agrees that flight operations manuals are not necessarily needed at non-flight operations bases. The requirements of 119.65 are appropriate but only apply to an applicant for a certificate. This rule is required to apply the continuing compliance requirements to the certificate holder. The CAA has taken the commenter's suggestions into account in amending the final rule.

2.41 One commenter suggested that the reference to 119.124 be removed, as the organisational management system requirement itself should be removed.

CAA Response: The CAA disagrees and has discussed the organisational management system previously in this document.

119.159 Use of non-NZ registered aircraft

2.42 One commenter stated that the maintenance status of the aircraft was more important than whether the aircraft provider is authorised by an ICAO state to perform air transport operations.

CAA Response: The CAA disagrees. The status of the aircraft provider will dictate the likely provisions the New Zealand operator will be required to provide. An organisation authorised to perform air transport operations will have systems and procedures in place to provide ongoing maintenance support of the aircraft during its operation in New Zealand.

119.161 Business or Trading Name

2.43 One commenter made the point that this is not a safety issue and could not see the justification for its inclusion. The commenter stated that allowance should be made for the operations of aircraft without the necessity of having the operator's trading name prominently displayed.

CAA Response: The CAA disagrees. The requirement to display the operator's trading name is considered increasingly more necessary as the number of code share and multiple service flights are increasing.

119.163 Limitations of general aviation air operator certificate holder

2.44 One commenter stated that the proposal included an amendment to state that Part 121 operators may perform Part 125 and 135 operations and that a Part 125 operator may perform Part 135 operations. The commenter pointed out that the rule needs to state clearly that Part 135 air transport operators may also perform commercial transport and adventure aviation operations. The commenter stated that this would prevent confusion when an air transport operator does scenic flights or photography as part of their commercial activity.

CAA Response: The CAA agrees that a Part 135 operator may perform air transport or commercial transport operations as detailed in the exposition and operations specifications. The rule was examined to ensure this was reflected clearly. The CAA disagrees that a Part 135 operator should be able to perform adventure aviation operations. The Part 115 rules are being developed to provide for adventure aviation and the CAA is not intending to provide for Part 135 operators to conduct adventure aviation activities without the Part 115 certificate.

CAA Comment: The definitions in Part 119 have been amended to allow an airline air operator to perform Part 121, Part 125, or Part 135 operations. The general aviation air operator has remained limited to Part 135.

119.169 Transition

2.45 One commenter suggested checking the wording of this rule as it appears to read that a person shall not be required to meet the requirements in Appendix A after the time this part comes into force.

CAA Response: The CAA has checked and ensured that the rule reflects the intent.

CAA Comment: The transition provisions of this rule have been re-examined and the rule amended. The amendment does not change the certification dates required but clarifies which regulation 191 certificates the rule applies to. The rule also provides a transition for the existing Part 91 hire or reward operators that the new Part 119 now applies to and the existing Part 135 operators that the new Part 125 applies to. The transition will now be provided by the issue of a transitional air operator certificate. These certificates will be issued by the CAA automatically to all holders of valid certificates as at 30 October 1998 issued under the Civil Aviation Regulations 1953, specifically regulations 136, 136A, and 191, where associated with a regulation 136 certificate. No cost will be involved and this is a legal administrative change to tidy the sometimes confusing existing transitional arrangements. of the Civil Aviation Regulations 1953

Appendix B.1 – Senior person responsible for air operations

CAA Comment: The tables have been amended to reflect that an airline air operator may also be conducting Part 135 operations.

2.46 One commenter was pleased to see appropriate requirements and assumed that the *category of aircraft* would cover all gliders. The commenter stated that if this were the case the 750 hours flight time requirement can be met.

A further late submission by the commenter suggested that they would rather wait until Part 115 was confirmed before progressing gliders into either Part 119 or 115.

CAA Response: The CAA confirms that the category of aircraft for gliding operators is as stated by the commenter. The further comment was taken into consideration and gliders removed from the Part 135 requirements for the time being.

2.47 Two commenters stated that the 750 hours requirement would be difficult for many aero clubs to comply with. One commenter suggested that the requirements in AIC-Gen A93 were more appropriate.

CAA Response: The CAA notes that this is the requirement currently placed on the holders of restricted air operator certificates and was unchanged in the proposal. The requirements of AIC-Gen A93 were considered in the initial drafting of Part 119 that came into force on 1 April 1997 and the proposed rules do not change those requirements.

2.48 One commenter stated that the requirements were not sustainable and that it was not necessary for the senior person responsible for air operations to have pilot experience. The commenter stated as an example of this a central North Island parachute operation where the operations manager is an ex-policeman. The commenter stated that there are a number of smaller air transport and aerial work operators that have had company operations managers who do not have any actual flying experience. The commenter suggested that these companies have demonstrated quite clearly the fallacy that persons in essentially administrative positions must have practical aviation experience. The commenter suggested that a suitable qualified aviation person may not have the necessary managerial and organisational skills.

CAA Response: The CAA takes the commenter's point and agrees that a managerial position generally does not require specialist technical knowledge. This arrangement may be acceptable if there were suitable technical experts reporting to that person. The CAA considers that the

easiest way to control entry to this role for the smaller operators is to stipulate a relative level of operational experience for the senior person.

Appendix B.2 – Crew Training and Competency

2.49 Several commenters raised the issue of flight examiners versus A, B, or D Category instructors ratings.

CAA Response: The CAA has not examined the issues relating to flight examiners versus flight instructors in this review.

Appendix B.3 – Maintenance

2.50 Three commenters noted that the FAA Airframe and Powerplant certificate was not available to enable persons to comply. One commenter suggested that the FAA requirements allowed an Airframe and Powerplant certificate holder to meet the requirements in a few weeks.

CAA Response: The CAA agrees and notes that the minimum requirement is in most cases the New Zealand aircraft maintenance engineer licence. The Airframe and Powerplant certificate is not recognised for the New Zealand Part 66 maintenance engineer licence and this rule reflects that recognition. An Airframe and Powerplant certificate may be considered appropriate for background knowledge in the maintenance control role of a small operator, providing the person passed the required competency assessment of the CAA.

2.51 Three commenters suggested that a person that had not met the experience provisions should be able to qualify through a Part 141 organisation.

CAA Response: The CAA agrees and has rewritten the rule accordingly.

2.52 One commenter suggested that a provision be made for existing maintenance controllers to continue to hold the position.

CAA Response: The CAA agrees and notes that the rule already provides for this.

2.53 One commenter stated that the senior person in control of maintenance does not need to be a licensed aircraft maintenance engineer. The commenter suggested that maintenance control is not necessarily a

hands-on position and can be adequately and safely supervised and discharged by a person with the necessary commercial and administration skills and not necessarily the specific licensed engineer requirements.

CAA Response: The CAA agrees that persons other than licensed engineers may be able to provide the necessary maintenance control and has provided this ability for the smaller operators. As the organisation's size increases, more maintenance knowledge is required and the New Zealand Part 66 maintenance engineer licence is an appropriate qualification to determine an applicant's suitability.

Appendix B.4 – Quality Assurance

2.54 One commenter noted that this is a new requirement and was not contained in the previous Part 119. The commenter stated that the requirements of this position have been imposed without consultation with industry and objected to the proposal. The commenter noted that there were no transition provisions regarding existing appointments.

CAA Response: The CAA agrees that this is a new qualification standard. The standards are those that have been applied by the CAA to date but this was not clear to applicants. The inclusion of the requirements clarifies the qualifications for all parties and allows for industry comment on the proposal via the NPRM process. The commenter's point regarding transition was noted and the rule amended accordingly.

Part 121

121.161 IFR departure limitations

2.55 One commenter suggested that the third line down should read *and are at or above authorised* to be consistent with wording in second line and reflect sensible operating practice.

CAA Response: The CAA agrees with the change.

121.379 Ground Proximity Warning Systems

2.56 One commenter submitted that the requirement for a GPWS should only apply to new aircraft and a deferral of the requirement be considered

due to developments of enhanced GPWS. A cost benefit analysis must be undertaken to support the requirements for GPWS.

CAA Response: The requirements of GPWS are being examined as a separate project. The dates have been amended in accordance with amendment 2 to Part 119. The requirement for enhanced GPWS has not been examined further at this stage.

121.805 Flight crew responsibilities

2.57 Three commenters suggested that the flight duties recorded as a part of flight and duty time scheme should not include private flying.

CAA Response: CAA agrees with the commenter's points and has removed recreational flying from this rule.

Part 125

125.1 Applicability

2.58 One commenter suggested that commercial transport operations undertaken in accordance with the air transport operations requirements are unduly restrictive. Examples of difficulties are search and rescue, oil pollution control, fire-bombing activities which are commercial transport operations but under the above requirement would need to comply with air transport operating standards.

CAA Response: The CAA disagrees. The commercial transport operations in 10 to 30 seat aeroplanes are considered to be able to be conducted in accordance with the air transport operation requirements.

125.87 Flights over Water

2.59 One commenter suggested that the requirement in paragraph (c) that air transport operations more than 100 nautical miles from shore be conducted under IFR is unduly restrictive.

CAA Response: The CAA disagrees. It is considered appropriate for this size of aircraft conducting an air operation beyond 100 nm from New Zealand shores to operate under IFR.

2.60 Two commenters suggest the requirement to carry equipment in 91.525 and 527 does not add anything to 125.87.

CAA Response: CAA agrees and has removed the paragraph from the rule.

125.157 Meteorological conditions – IFR flight

2.61 One commenter suggested that the words *Meteorological reporting* should be amended to *meteorological forecasts* to align with NPRM 98-1 Rule 91.405.

CAA Response: The CAA disagrees. The NPRM 98-1 for Part 91 refers to the wording of weather reports and meteorological reports and forecasts, the correct terminology being the use of the word *meteorological* as opposed to *weather*.

125.163 Reduced take-off minima

2.62 One commenter suggested there should be no requirement to individually authorise specific runways under Part 95 provided (b)(1), (2), (4), (5), and (6) are complied with.

CAA Response: The CAA disagrees. The Part 95 requirements are being examined as part of NPRM 98-7 published 23 October 1998. The revision of these requirements is outside this review.

125.201 Applicability

2.63 One commenter pointed out that there does not appear to be a performance standard for Part 125 aircraft between 20 and 30 seats, nor Part 135 cargo aircraft below 3410 kg payload. The commenter stated that the wording of 125.201(d) is aimed at aircraft that can significantly comply with the performance standard and is not the basis for the CAA creating a defacto standard for aircraft referenced in rules 125.201(b) and 125.201(c). The commenter suggested that the rule should specifically state the performance rules for aircraft beyond the traditional 19 seaters, those being the aircraft certificated to Part 25, CAR 4b, and earlier standards.

The commenter also noted that 125.201, as an existing Part 135 item, does not properly handle FAR 135 Appendix A aircraft which are not limited by the single-engine distance to 35 ft being less than the TODA.

The commenter also stated that the changes to the rule numbering are rudimentary, however the CAA should give some thought to an explanation on the definition of FAR Part 23 and SFAR 23 since the CAA is referring to standards that few have access to. The commenter noted that this access makes interpretation of this rule difficult if not impossible.

CAA Response: The comments do not relate to the rule amendment, which is minor and does not change the meaning of the rule. Further work is beyond the scope of this review however comments are noted for further action. The documents incorporated by reference are available for viewing from many sources including the CAA.

125.225 Landing distance – wet and contaminated runways

2.64 One commenter suggested that the words *forecast or a combination of them* should be removed as they are too general and may not be from actual observations. The commenter stated that the application of wet or contaminated runways to aircraft performance is more accurately served from reported runway conditions.

CAA Response: The comment does not relate to the rule amendment, which is minor and does not change the meaning of the rule. No amendment action has been taken at this time.

125.235 Landing distance – wet and contaminated runways

2.65 One commenter suggested this rule should be amended as per 125.225.

CAA Response: CAA disagrees and draw attention to the two levels of applicability in 125.201.

125.303 Goods Passenger and baggage weights

2.66 One commenter suggested there is no valid reason why standard passenger weights and actual passenger weights cannot be combined on the same flight, and an adult standard passenger weight should be provided that is based on some properly researched basis.

CAA Response: The comments are noted as another project outside the scope of the review with regard to this category of aeroplane.

125.307 Load Manifest

2.67 One commenter submitted that there was no safety issue involved with the requirement for surnames and initials for all crew and passengers.

One commenter suggested because of options available by electronic transfer the rule should be amended to read *or delegated authority*.

CAA Response: The CAA disagrees and considers the rule to be appropriate for this size of aircraft.

125.367 Cockpit Voice Recorders

2.68 One commenter suggested that the rule mandates the carriage of the cockpit voice recorder equipment, but not that it must be switched on.

CAA Response: CAA disagrees. The rule requiring the operation of the unit is in 125.71.

CAA Comment: The rule requiring the operation of the CVR and FDR has been amended to reflect the responsibilities of the certificate holder and the flight crew more clearly.

2.69 One commenter suggested a change to the wording *Each holder of an air operator certificate shall ensure that each of its aircraft is equipped with a cockpit voice recorder no later than 30th June 2000 if the flight manual requires two or more flight crew members and has a MCTOW in excess of 5,700 kg.*

CAA Response: The CAA agrees with the commenter regarding incorporating a specific date in the rule itself. The transition provision in Appendix A has subsequently been removed and the rule reworded.

125.369 Flight Data Recorders

2.70 One commenter submitted the requirements for CVR's and FDR's should only apply to aircraft registered after 31 December 1999 and apply to air transport operations only. In respect of the exceptions in rule 125.369(b), the Nomad aircraft should also be exempted.

CAA Response: The issue of CVR and FDR has been extensively consulted in the initial drafting of Parts 121 and 135 and subsequently in the

amendment that came into effect in April 1998. The CAA sees no need to change this effective date from that already stated.

125.375 Ground Proximity Warning System

2.71 Two commenters are opposed to the mandatory fitting of this equipment. It was submitted that the requirement should be specifically restricted to air transport operations and to new aircraft certificated after 30 June 2000. One commenter requests a cost benefit analysis be conducted.

CAA Response: The date the requirement becomes effective has been amended in amendment 4 to Part 121 and amendment 5 to Part 135. These dates are appropriate at this point.

125.509 Pilot in command – IFR experience requirements

2.72 Two commenters suggested that only minimum IFR experience is required in Part 125.

CAA Response: The IFR experience for Part 125 was set with the development of the rule and is considered appropriate.

125.605 Flight Examiner Qualifications

2.73 One commenter submitted that paragraphs (a)(2) and (b)(2) ought to be amended to read that the person only requires to have an A, B or D category Instructor Rating and be checked annually by an A category Instructor, or Flight Examiner.

CAA Response: The comment is one of many relating to the subject of flight examiners. This is recognised as a separate project requiring attention but is outside the scope of this review.

125.607 Flight Crew Competency Check

2.74 One commenter submitted that the requirements of a flight examiner ought to be deleted and provide that checks may be carried out annually by an A, B or D category instructor who has been checked annually by an A category instructor, or Flight Examiner.

CAA Response: As in 125.605 the comment is noted and CAA acknowledges that the subject requires attention, but it is outside the scope of this review.

Appendix A – Transitional arrangements

2.75 One commenter suggested that some companies would prefer the equipment requirements in this transition rule to be effective after 1 April 2000 to allow time for acquisition of equipment.

CAA Response: The CAA indicated in the original draft of Parts 121 and 135 that the effective date would be no sooner than two years from the date of the rule. The requirements have been delayed pending the review and revision of the Transport Accident Investigation Act that completes other aspects of the CVR and FDR legislation. Operators should be aware that the CAA intends to require the equipment through the Civil Aviation Rules after the Transport Accident Investigation Act comes into force in July 1999.

CAA Comment: The appendix has been reserved and the previous content incorporated directly into the relevant rules.

Appendix C - Runways

2.76 Three commenters suggest various changes to this appendix such as moving the contents to an advisory circular and various wording changes.

CAA Response: No wording change has been made to Appendix C for this review and though the suggestion may have merit no further action is taken at this time.

Part 135

135.1 Applicability

2.77 Two commenters made the observation that it would be preferable to have a separate rule part for helicopters. However they support the concept of separating aeroplanes 9 seats or less for Part 135 and shifting the 10-30 seat aeroplanes to a new Part 125.

CAA Response: A separate helicopter rule has merit and was the subject of a well supported industry petition. This petition was considered as part of

the review, but the scope of this review was limited to amending the existing Part 135. After further industry consultation a separate rule was not considered appropriate.

135.13 - Passenger Briefing

2.78 Three commenters submitted that the CAA should insert the words *shall take reasonable care* as it is not always possible to give extra briefings such as rescuing people off cliffs or in fire situations and to add the word *briefing* with training to read *additional briefing or training*.

CAA Response: CAA agrees to reword the rule to include *take reasonable care to ensure* the passenger receives additional briefing or training suitable for the operation carried out.

135.53 Aircraft airworthiness

2.79 Two commenters wish to exclude restricted category aircraft from Part 135. The commenters are concerned that if passengers can be carried at certain times how will everyone know that aircraft is allowed to carry out the operation it is performing? The commenter suggested that the requirements would be difficult to control.

CAA Response: Restricted aircraft are given operating parameters in New Zealand with the issue of a mandatory flight manual supplement (MFMS). Previously issued MFMS contain clauses such as *No person may be carried unless that person performs an essential function in connection with a special purpose operation for which the aircraft is certified*, or are approved for aerial work operations only. Both cases include operations which are now determined as commercial transport operations carrying passengers formerly defined as crew in the Civil Aviation Regulations 1953. The wording of the rule allows operators of restricted aircraft to continue the privileges currently allowed.

135.57 Flight preparation and flight planning

2.80 One commenter suggested it is not clear who can provide the flight following and alerting services and recommend the general aviation operator be permitted to conduct flight following and alerting services.

CAA Comment: Due to the definition of *flight information* and *flight following* the rules reflecting these requirements have been amended to state *flight information service*.

CAA Response: The rule allows the operator to provide the flight information or alerting service.

2.81 One commenter suggested in this rule and various other rules the inclusion of SAR WATCH for flight following.

CAA Response: SAR WATCH will be introduced into Part 91 as a result of NPRM 98-1.

135.59 Emergency and survival equipment information

2.82 One commenter did not agree that there is a need to arbitrarily decrease the distance from 50 nm to 10 nm as this will prevent some operations from occurring simply because of increased costs of additional equipment with no substantial benefit.

CAA Response: The CAA disagrees. This rule requires the operator to have information available regarding the equipment on board. This is not a requirement to carry specific equipment.

135.63 Cockpit check

2.83 Seven commenters opposed this requirement as they saw it as impractical and stated that cockpit checks should only be in the flight manual and check and training manual and be examined as part of the competency check.

CAA Response: The CAA agrees to reword the rule to clarify the flight manual check list is acceptable compliance for (a) and clarify memory, mnemonics, or other pilot check system are acceptable means of compliance for (b). In addition the rule has been reworded to clarify that there is no requirement to have a procedure in the operator's exposition.

135.69 Manipulation of controls

2.84 One commenter objects to a person, under supervision from a qualified pilot, being unable to try operating the controls and suggested that this is an element of joy ride type flights where the passenger has the

opportunity to experience the handling of controls. The commenter recommends that the option for passengers to manipulate controls, under the supervision of a qualified flight instructor, be included in this rule.

CAA Response: The CAA disagrees. A passenger cannot manipulate the controls in the type of operations covered by these rules.

135.71 - Flight Recorder Requirements

2.85 One commenter suggested that flight recorder requirements as provided in 135.367 and 135.369 should only apply to new aircraft being entered on the register of aircraft and submitted that before requirements in respect of CVR's and FDR's can be implemented a cost benefit analysis must be undertaken.

CAA Response: The issue of CVR and FDR has been extensively consulted in the initial drafting of Parts 121 and 135 and subsequently in the amendment that came into effect in April 1998. The CAA sees no need to change this effective date from that already stated.

135.72 - Health and Usage Monitoring System Requirements

2.86 Five commenters objected to the requirement for electronic monitoring equipment in this rule. A total of 21 commenters objected to HUMS. The commenters appreciated there may be considerable benefits in introducing this equipment but more research and information was required before it was introduced into the rule. The commenters thought that piston powered aeroplanes in particular would not benefit from this requirement.

CAA Response: The CAA agrees to remove this requirement for further research into HUMS. In addition, the following rules relating to HUMS requirements are removed — 135.377, 135.861, 135 Appendix B.1.

135.77 Use of aerodromes

2.87 Four commenters submitted that this rule requires re-examination as it is too restrictive for remote strips. The commenters noted a potential 40% reduction in the aerodromes that could be utilised. The commenters considered that flight manual requirements were enough. One commenter suggested that this rule be deleted as it is a repeat of Part 139. Another commenter suggested that the amendment in (f) removed the ability to

operate on all the remote strips in contradiction to AC 139-11A Part 3 which describes the limitations required on these strips.

CAA Response: The CAA agrees to reinstate (f)(1) and (2) but consider the rest of the rule to be appropriate at this stage.

135.81 - Operations of Single Engine Aircraft - IFR

2.88 One commenter submitted that the restriction in respect of single engine aircraft operating under IFR ought to be restricted to air transport operations given the very broad definition of *passenger*. The commenter suggested a cost benefit analysis must be undertaken.

CAA Response: The CAA disagrees. Single engine instrument flight on operations other than carriage of freight is the subject of another CAA project nearing completion. The rule requirements for SEIFR carrying people will be proposed in a separate notice of proposed rule making, NPRM 98-9.

2.89 Two commenters suggest reinstating approval by the Director and two others hope single engine IFR gets a fair hearing.

CAA Response: The rule requirements for SEIFR carrying people will be proposed in a separate notice of proposed rule making, NPRM 98-9.

135.85 - Minimum Heights for VFR Flights

2.90 One commenter suggested that the requirements in (b) were unnecessary, complicated, and restrictive and the operation should be conducted in accordance with Part 91.

CAA Response: The requirements in (b) are introduced to enable commercial transport operations to be conducted at a lower level than 500 feet and closer to obstacles than 500 feet as required in Part 91.311. Without this addition these operations could not commence.

135.87 Flights over Water

2.91 Twenty-four commenters strongly opposed the requirements to carry flotation equipment for helicopters and objected to the 100 nm limit for VFR operations. Various other comments were dissatisfied with the rule content.

CAA Response: The CAA attended a meeting with industry to discuss the requirements of over water flight. The resulting recommendations from that meeting have been incorporated into new changes to 135.87 where flotation equipment is no longer a mandatory requirement. Other changes have been made in accordance with the results of the industry consultation including mandatory carriage of life rafts and life vests. There are separations between single and multi engine aircraft identified and applied to the rule. Air transport operations beyond 100 nm remain as IFR.

135.93 Operations over Congested Areas

2.92 Two commenters suggested replacing the word *helicopter* with *aircraft* as this can be carried out by an aeroplane as well.

CAA Response: The CAA disagrees. This rule is intended for helicopters only and the CAA sees no need to extend the operations to aeroplanes.

2.93 One commenter suggested that the requirements in 135.93 should remain in Part 91.

One commenter commented that the practical purpose of preparing a plan is questionable.

One commenter suggested there was a need to accurately define *congested areas*.

CAA Response: These requirements have been added to Part 135 to enable commercial transport operations and are based around the requirement for sling loads over congested areas in Part 133. Congested area is defined in Part I Definitions.

135.95 Helicopter Sling Loads

2.94 Two commenters suggested a more detailed briefing should be given for helicopter sling load operations.

CAA Response: This is a commercial transport operation which requires extra briefing and or training in 135.13 *Passenger Briefing*.

2.95 Three commenters submitted that the intent of the 90% out of ground effect (OGE) hover weight was in fact supposed to provide a 10% power margin and that the wording creates a higher restriction than intended.

CAA Response: The CAA agrees and has rewritten the rule. The intent was to allow a 10% power margin which can be established from the helicopter flight manual for departure and destination points.

135.153 Meteorological information

2.96 One commenter submitted that IFR air transport operations require greater flexibility in gaining weather information which currently must be supplied by a Part 174 certificate holder. The commenter noted that a full service is not always available from the Part 174 organisations and therefore the rule should allow alternative weather information providers.

CAA Response: The CAA agrees there are difficulties with weather information limitations in this area but considers the requirement appropriate for air transport operations.

135.155 Meteorological Conditions - VFR Flight

2.97 One commenter submitted that a case exists for the provision of special procedures for Part 135 operators transiting from an instrument approach at Auckland but desiring to land at Ardmore.

CAA Response: The CAA notes the comment but it is outside this review.

2.98 One commenter suggested that this is a repeat of 91.301.

One commenter suggested that the requirements of this rule in paragraph (d)(2)(iii) is unnecessarily restrictive. The commenter provided an example of a night filming operation in a built up area in which the machine lifts off to 50 feet from a carpark, conducts some filming and then lands. The commenter stated that this operation could be conducted quite safely but the requirement of a ceiling of a minimum of 2,000 feet would effectively prevent it.

CAA Response: The CAA disagrees. The example is considered to be extreme and the rule standards are fair and reasonable.

2.99 Three commenters submitted that the informal draft wording be reinstated to minima of 600 feet and 3 km for aeroplanes conducting commercial transport operations.

CAA Response: The CAA disagrees. The operation of aeroplanes is sufficiently different to helicopters to suggest that the current rule requirements are satisfactory.

135.159 Aerodrome Operating Minima - IFR Flight

2.100 One commenter noted that the requirements of this rule ought to be restricted to air transport operations. If these requirements were to apply to commercial transport operations it would effectively prevent flights such as calibration flights by Airways Corporation.

CAA Response: The CAA disagrees with the commenter's interpretation. Air transport operations incorporated certain commercial transport operations before the rule review and no change has been made to the meaning of the rule.

135.303 Goods passenger and baggage weights

2.101 One commenter objected to the means by which the 80 kg figure was acquired as an arbitrary number.

CAA Response: The CAA agrees and the weight of 77 kg has been reinstated.

135.353 Instruments and equipment

2.102 One commenter suggested that when referring to the minimum equipment list (MEL) the CAA should refer to the rule which requires the MEL and not necessarily the rule under which it is to be approved as that is specified under the rule which requires it.

CAA Response: There is no rule which requires an MEL, unless an operator wants to carry inoperative equipment. There is a rule where an operator can apply for an MEL in Part 91 and this is referred to in the rule.

2.103 Two commenters object to the requirement for two radios for Part 135 operations.

CAA Response: Two radios are only required on routes that require continued communication. For many Part 135 VFR operations therefore there will be lesser requirements.

135.355 Seating and Restraints

2.104 One commenter submitted that the word *flight* should be inserted before the word *crew*.

CAA Response: The CAA agrees and has rewritten the rule to reflect more accurately the intent, being a requirement for the seats occupied by the pilots flying the aircraft.

135.357 Additional Instruments

2.105 One commenter believed that this is not possible to comply with for AS 350 helicopters.

CAA Response: The CAA disagrees. The intent is otherwise to the commenter's opinion. No evidence has been found to justify this claim and none volunteered by the commenter.

135.361 Instrument flight rules

2.106 One commenter submitted that IFR aircraft should not require extra airspeed and altimeter equipment. Few if any countries require this for less than 10 passenger seat aircraft.

CAA Response: This requirement remains unchanged from the existing Part 135.

135.363 Emergency equipment

2.107 One commenter suggested discontinuing the requirement to carry first aid kits and hand held fire extinguishers for aircraft with less than 10 passengers and noted that Part 91 requirements were adequate.

CAA Response: The CAA disagrees and has retained the requirement.

135.367 Cockpit Voice Recorder

2.108 Three commenters submitted that the CVR should not be required for single pilot helicopter or for two pilot helicopters when operated IFR.

CAA Response: The commenter has misinterpreted the rule. Both paragraph (1) and (2) must apply before compliance is required.

135.369 Flight Data Recorder

2.109 One commenter stated these requirements should only apply to new aircraft not to existing aircraft. The commenter noted that a cost benefit analysis must be undertaken as the requirements in respect of CVR's and FDR's have a significant impact upon Industry.

CAA Response: The issue of CVR and FDR has been extensively consulted in the initial drafting of Parts 121 and 135 and subsequently in the amendment that came into effect in April 1998. The CAA sees no need to change this effective date or the requirements from that already stated.

135.377 Health and Usage Monitoring System

2.110 A total of 21 commenters objected to the requirement for electronic monitoring equipment. The commenters appreciated that there may well be considerable benefits in introducing this equipment but more research and information was required before it was introduced into the rule. The commenters thought that piston powered aeroplanes in particular would not benefit from this requirement and that costs were prohibitive. According to the commenters a tamper-proof clock is all that is required.

CAA Response: The CAA agrees to remove the requirement from the rule for further research into HUMS. The requirement will be reinserted at a later date after further research is carried out.

135.402 Option for maintenance

2.111 One commenter pointed out an error in numbering important to the interpretation of the rule.

CAA Response: The CAA disagrees and notes that the rule is correct.

135.415 Maintenance review

2.112 One commenter submitted that in practice the requirements of the maintenance review in the NPRM 135.415 are of a lesser standard than the requirements of the Annual Review of Airworthiness. The commenter pointed out that the reality is that many air transport aircraft are under a supposed quality system, and under the maintenance review program do not

meet the ARA standard. The commenter suggested that this anomaly be corrected and all aircraft meet a common standard, namely that of an ARA.

One commenter suggested that the CAA build in a one month latitude into the 12 month maintenance review for remote operations.

CAA Response: The CAA disagrees that the standards are different as the same standard is achieved in another way. This point will be explored again in another project in early 1999. The CAA also disagrees with the addition of a one month latitude to the maintenance review requirement as there are already 12 months to plan it. This too will be examined separately.

135.503 Assignment of flight crew duties

2.113 Eleven commenters submitted that paragraphs (c) and (d) are appropriate only for airline operations and should be deleted and that this rule is duplicated in Parts 119 and 91 and is therefore unnecessary. They suggest taking out *assign in writing*.

CAA Response: The CAA agrees to delete paragraphs (c) and (d).

135.505 Pilot in command type experience requirements

2.114 Thirteen commenters considered that the requirements of 5 and 10 hours experience requirements after gaining the aircraft rating are unnecessarily restrictive for experienced pilots, and suggested that if pilots are rated on aircraft they are legally entitled to fly it safely.

CAA Response: The CAA agrees to remove paragraphs (b)(1) and (c) but retain the minimum experience requirements. This change will allow pilots to log their type rating training, proving flights and ferry flying as part of their minimum flight experience.

135.511 Minimum flight crew IFR

2.115 One commenter suggested that an aircraft should not be required to be fitted with an autopilot for single pilot IFR operations.

CAA Response: This suggestion is outside the scope of this review and will be addressed in NPRM 98-9 SEIFR.

135.605 Flight examiner qualifications

2.116 One commenter submitted that the flight examiner qualifications to perform in-house training of company personnel are best acquired by the person who is most familiar with the operation that the operator wishes to conduct, provided they have a current A or B [not D] category instructor rating. The commenter considered that requiring a flight examiner rating was an overkill especially for the checking of pilots limited to VFR operations. The qualifications of a testing officer will do little to enhance the safety of a checked pilot.

CAA Response: The CAA notes the comment. As commented previously the issues relating to the flight examiner will be the subject of another project. The CAA has rewritten the rule to include that the examiner must be type rated on the aircraft used in the operation.

135.607 Flight crew competency checks

2.117 Five commenters submitted that an A, B, or D category instructor should be able to carry out crew competency checks. The commenters stated that if a flight instructor rating is not sufficient then what are we saying about our training?

CAA Response: The CAA notes the comment. As commented previously the issues relating to the flight examiner will be the subject of another project.

135.801 Applicability

2.118 One commenter states the flight time limitations and rules should be restricted to air transport operations only. This comment applies equally to Rules 135.803 and 135.805. The commenter wanted a cost benefit analysis to be undertaken in respect of these rules unless they were amended as submitted.

CAA Response: The rules allow an operator to develop their own scheme to suit their operations and is considered broad enough to meet the needs of all operators.

135.803 Operator responsibilities

2.119 Two commenters suggested that paragraph (a) be applicable to air transport operations only and suggested an amendment to read that *the holder of an air operator certificate shall not cause or permit an aircraft to perform a commercial transport operation unless a policy has been established for the regulation of cumulative flight hours per month and days off per month for every person flying in that aircraft as a flight crew member.*

CAA Response: After discussions with the industry consultative group the CAA agreed to include for commercial transport operations limitations of maximum flight hours per month, minimum days off per fortnight, and consecutive days off per month.

135.805 Flight crew responsibilities

2.120 Three commenters submitted that paragraph (b) should not apply to private flying.

One commenter requested that paragraphs (c)(1) and (2) be reinstated as flight and duty time hours should be defined in the rule and not in the operator's exposition.

CAA Response: The CAA agrees that recreational flying be removed from the rule requirement. After discussions with the industry consultative group the CAA agreed to include for commercial transport operations limitations of maximum flight hours per month, minimum days off per fortnight, and consecutive days off per month.

One commenter suggested if the flight and duty time scheme is taken out of the Appendix, a clause should be inserted in the rule to allow breach of flight or duty time in the interests of health and safety or in emergency, which was previously covered in the Appendix.

CAA Response: The CAA agrees. Paragraph (d) has been added to the rule for this purpose.

135.855 Documents to be Carried

2.121 One commenter stated that the requirement in paragraph (b) that separate copies of notification of dangerous goods be available for each operating pilot is superfluous and unnecessary.

CAA Response: The CAA agrees and has removed the requirement from paragraph (b).

135.859 Retention period

2.122 Four commenters submitted that retention of information under paragraph (a) is onerous and unnecessary with no safety benefit.

CAA Response: The CAA disagrees. There is a legal requirement to retain documentation for a minimum of 12 months for auditing and other procedures.

135.861 Health and usage monitoring system records

2.123 Twenty-one commenters suggested deleting the HUMS requirements.

CAA Response: The CAA agrees to remove requirement for further research into HUMS.

Appendix B Instruments and equipment airworthiness design standards

2.124 Twenty-one commenters suggested deleting the HUMS equipment standards.

CAA Response: The CAA agrees to remove HUMS requirement subject to further research.

Advisory circular AC135-1 Flight and Duty time scheme

2.125 One commenter agreed that two days off in 14 was appropriate.

Four commenters would like to see the flight and duty scheme for VFR operations simplified by deleting the references to flight hours, standby

time, and rest time and replacing them with two days rest time per fortnight, no standby or duty time.

CAA Response: After discussions with the industry consultative group the CAA agreed to include for commercial transport operations limitations of maximum flight hours per month, minimum days off per fortnight, and consecutive days off per month.

2.126 One commenter submitted that the flight and duty time scheme in Appendix 2 of Part 135 had been deleted and is to be contained within an advisory circular. The commenter noted that an advisory circular has no legal status or standing, therefore Appendix 2 ought to remain as part of Part 135.

CAA Response: The CAA disagrees. The advisory circular provides an acceptable means of compliance, but not necessarily the only means. To place a specific scheme in the rule would be unworkable as such a scheme may suit a few operators but the majority require the flexibility to develop their own schemes. It could be said that the CAA prefers an operator to develop their own scheme as the example may be detrimental to some operators with different circumstances.

2.127 Three commenters stated that the advisory circular limitations were too restrictive for commercial transport operations. An organisation should be able to design their own common sense flight and duty scheme.

CAA Response: The CAA notes that an operator can design their own scheme and are in fact required to do so by 135.803. After discussions with the industry consultative group the CAA agreed to include for commercial transport operations limitations of maximum flight hours per month, minimum days off per fortnight, and consecutive days off per month.

2.128 One commenter suggested taking out references using the word *shall*. The commenter also suggested that the introduction should also include the basis of the scheme being 8 to 12 hours per day off, any two days per fortnight, two consecutive days per month.

CAA Response: The CAA agrees that the advisory circular wording should use more advisory type language. The example scheme is written as if it were in the operator's exposition manual and it is therefore appropriate to

include words such as *shall*. The introduction of the advisory circular has been amended to clarify the basis of the scheme.

CAA Comment: There is a high level of misunderstanding as to the role of an advisory circular. The advisory circular is designed to expand on rule intent, give examples of compliance to a rule, or describe examples of what would be acceptable to the Director where a rule requires the Director's acceptance. The CAA has reworded 135.803 by adding the requirement to limit commercial transport operation flight to 100 hours per month, any two days per fortnight off duty, and two consecutive days per month off duty. This is the only specific requirement in the rules, all other schemes or advisory circular material are suggestions of what could be acceptable. Readers should note that the CAA may require amendment of a scheme if it does not suit the activities of the company proposing the scheme.

Transitional arrangements

The transitional arrangements for the certification and operating rules – Parts 119, 121, 125, and 135 – are provided in rule 119.169. Rule 119.169 authorises the issue of transitional air operator certificates to provide a phased approach to Part 119 certification. This process will be completed by 28 February 2003.

Regulatory activities

The commencement of the amendments to Parts 1, 12, 19, 61, 66, 93, 119, 121, and 135 and the commencement of Part 125 of the Civil Aviation Rules will affect the following regulations—

1. The Civil Aviation (Offence) Regulations 1997.

Conclusion

The Authority concludes from this consultation that the majority of aviation industry participants favour the direction of the new and amended 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 Chicago Convention. 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 98/CAR/1303.