

WELLINGTON NEW ZEALAND

PURSUANT to Section 28 of the Civil Aviation Act 1990

I, HARRY JAMES DUYNHOVEN, Minister for Transport Safety,

HEREBY MAKE the following ordinary rules.

SIGNED AT Wellington

This *Twelfth* day of *October* 2004

by **HARRY JAMES DUYNHOVEN**

A handwritten signature in black ink, appearing to read 'Harry James Duynhoven', with a stylized flourish extending to the right.

Minister for Transport Safety

Civil Aviation Rules

Part 135, Amendment 11

Air Operations- Helicopters and Small Aeroplanes

Docket 2/CAR/5

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Rule amendment objective

- (a) The objective of Amendment 11 to Part 135 is to:
- (1) remove the prescribed standard passenger weight and replace it with a provision for operators to use a passenger declared weight;
 - (2) provide additional flexibility for operators to allow them to establish and use a standard weight for crew members;
 - (3) include a requirement for the operator to establish additional procedures to reduce the possibility for errors when using passenger declared weights and crew member standard weights;
 - (4) require additional information to be recorded in the daily flight record.

Extent of consultation

In May 1999 petition 99/PET/27-*Goods, passengers and baggage weights* was published in the Civil Aviation Rules Register Information Leaflet (CARRIL) for public comment. The petition called for an amendment to the Civil Aviation Rules because the adult standard passenger weight of 77 kg, established in 1958, that was prescribed in the rules needed to be updated to a more appropriate figure of 82 kg. A second petition 99/PET/6 also requested an amendment to the rules to allow standard weights to be used for crew members and for checked baggage to provide greater flexibility for the operator.

In December 1999 NFO Research carried out a survey of passenger weights on behalf of the CAA. The survey established the adult mean passenger weight with carry-on baggage should be 85 kg.

In August 2001 a CAA/Industry Technical Study Group (TSG) was established to develop a rule amendment proposal.

The TSG was split into two sub-groups, one concentrating on the issues relating to Parts 121 and 125 for large and medium size aeroplanes, and the second dealing with Part 135 for helicopters and small aeroplanes. These sub-groups met twice each, in September and November 2001, with matters arising from the meetings being developed through

comprehensive email debate. The Part 121/125 TSG met in Wellington, and the Part 135 TSG met in Timaru and Tekapo to reduce the cost for industry participation.

A Notice of Proposed Rule Making (NPRM 02-05) was published for public comment in April 2002 and contained the proposed rule amendments to Parts 121, 125, 135 and 1. This NPRM was issued under Docket 2/CAR/5, and advertised in the daily newspapers in the five main provincial centres on 13th April 2002 and in the Gazette on 11th April 2002. A period of 40 days was allowed for submissions on the proposed rules. Following a request from 2 parties the time for making submissions was extended by another 2 weeks. Twelve written submissions were received on the NPRM.

The Environmental Risk Management Authority was not consulted on the proposed amendments as the amendments do not contain any issues that are relevant to the Authority.

The Office of the Human Rights Commission was consulted to determine whether the proposed rules might conflict with the human rights legislation. The Commissioner noted that a discrimination issue could arise if individual passengers needed to be weighed but if all passengers on a flight needed to be weighed then there should not be an issue.

The CAA considered the submissions on the NPRM and developed a draft final rule that was forwarded to TSG members on 23 August 2002 for comment.

Copies of the draft final rule were also sent on 23 September 2002 to those individuals and organisations who responded to the NPRM for their comment.

In October 2002, the Aviation Industry Association (AIA) wrote to the CAA expressing concerns about the content of the draft final rule. The CAA met with representatives from the AIA on 29 November 2002 to discuss the AIA concerns. Agreement was reached on some technical changes including the removal of prescribed standard weights from Part 135.

In February 2003 the CAA published NPRM Supplement 02-05 that detailed the agreed changes to the rule proposal and requested comment from the wider aviation community.

Two responses were received to the NPRM Supplement, these came from NZALPA and AIA.

Further discussions with NZALPA and AIA resulted in a further simplification of the proposed rules including the removal of the proposed matrix of standard passenger weights from rule Parts 121 and 125. NZALPA questioned the ability of operators to develop the necessary procedures to warrant the use of standard or exposition weights and CAA's ability to effectively monitor the implementation of the procedures.

The CAA also noted NZALPA's concern about the reliability of using passenger declared weights. After further consideration the rule has been amended to include a 4 kg increment on a passenger's declared weight, which is consistent with a similar Federal Aviation Administration requirement.

In March 2004 the CAA carried out an assessment of the passenger declared weight procedure while completing the Part 135 passenger weight survey. The resulting total passenger load weight, when incremented by 4 kg per passenger, resulted in figures which were accurate to within 2% of the actual passenger weight.

NZALPA also commented on the proposal to require additional information in the daily flight records instead of requiring a load manifest and queried how the pilot would obtain the relevant information to ensure that the aircraft remained within the weight and balance limitations.

As a result of these comments an additional requirement has been included in 135.857 for the certificate holder to ensure that the information is available to the pilot and an additional requirement has been inserted into 135.305 to ensure that the pilot assesses the information to ensure that the aircraft remains within the weight and balance limitations.

The rule as amended including editorial and format changes was then referred to Parliament's Regulations Review Committee, before being signed by the Minister for Transport Safety.

Examination of submissions

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

Insertion of Amendments

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

Effective date of rule

Amendment 11 to Part 135 comes into force on 25 November 2004.

Availability of rules

Civil Aviation Rules are available from–

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

Freephone: 0800 GET RULES (0800 438 785)

Subpart E — Weight and Balance

Rule 135.303 is revoked and the following new rule is inserted:

135.303 Goods, passenger, and baggage weights

(a) Subject to paragraphs (b), (c), and (d), a holder of an air operator certificate must ensure that for every air operation conducted under the authority of the certificate the weights of the following items that are carried on the aircraft are established:

- (1) the total weight of passengers:
- (2) the total weight of crew members:
- (3) the total weight of goods and baggage.

(b) The total weight of passengers (excluding their carry-on baggage (if any)) must be determined by using only 1 of the following:

- (1) the actual weight of every passenger:
- (2) a standard weight for every passenger that is established by the certificate holder and detailed in the certificate holder's exposition:
- (3) a weight that is declared by the passenger plus an additional 4 kg for every passenger.

(c) The total weight of crew members (excluding their carry-on baggage (if any)) must be established by using—

- (1) the actual weight of every crew member; or
- (2) a standard weight for every crew member that is established by the certificate holder and detailed in the certificate holder's exposition.

(d) The total weight of goods and baggage must be determined by using—

- (1) the actual weight of the goods and baggage; or

- (2) for commercial transport operations operating from a remote aerodrome where it is not practicable to establish the actual weight of the goods and baggage, the certificate holder must establish procedures to enable the pilot-in-command to assess the weight of the goods and baggage.
- (e) A certificate holder who intends to establish a standard weight to be detailed in the certificate holder's exposition for use under paragraphs (b)(2) or (c)(2) must establish the respective standard weight in accordance with a survey programme that is acceptable to the Director.
- (f) A certificate holder who intends to use declared weights for passengers under paragraph (b)(3), or standard weights for passengers under paragraph (b)(2) or for crew members under paragraph (c)(2) must establish procedures that are acceptable to the Director to ensure that, if the weight of a passenger or crew member is clearly greater than the declared weight or standard weight being used, a weight that is more representative of the actual weight of the person is used.
- (g) A certificate holder who uses a passenger declared weight under paragraph (b)(3) must ensure that the passenger is not encouraged to declare a weight that is less than the passenger's actual weight.

135.305 Aircraft load limitations

- (a) A holder of an air operator certificate must 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 paragraph (a)(1) at departure, and will remain within those limits throughout the air operation.
- (b) A pilot-in-command of an aircraft must, before taking-off on an air operation, assess the information required under rules 135.857(b)(11)

to (b)(15) to ensure that the aircraft will remain within the weight and balance limitations specified in the flight manual for the duration of the flight.

135.857 Daily flight record

(a) A holder of an air operator certificate must keep accurate daily flight records for every aircraft, unless the information is recorded in another document in a manner that will enable the daily flight record details for every flight to be constructed.

(b) Daily flight records must contain the following details for every flight:

- (1) the date of the flight:
- (2) the name of the operator:
- (3) the name of the pilot-in-command:
- (4) the registration markings of the aircraft:
- (5) the total flight time:
- (6) the number of passengers:
- (7) the type of air operation:
- (8) the name or identification of the departure and destination aerodromes:
- (9) the flight number or estimated time of departure:
- (10) the total empty weight of the aircraft, the total weight of any removable equipment, the total weight of consumables, and the total weight of crew members:
- (11) the total weight of—
 - (i) passengers; and
 - (ii) goods; and

- (iii) baggage:
 - (12) the total weight of usable fuel:
 - (13) the take-off weight:
 - (14) evidence that the centre of gravity is within the specified limits:
 - (15) the maximum allowable weights for the operation, including zero fuel weight, take-off weight, and landing weight for the operation:
 - (16) an indication of the occasions when a more indicative weight is used under rule 135.303(f).
- (b) Before every air operation the certificate holder must ensure that the information required in paragraphs (b)(11) to (b)(15) is made available to the pilot-in-command in a timely manner to enable the pilot to make the assessment required by rule 135.305(b) regarding the weight and balance of the aircraft.

Consultation Detail

(This statement does not form part of the rules contained in Part 135. It provides details of the consultation undertaken in making the rule.)

Comments arising from the NPRM

Twelve written submissions were received on the NPRM. A full summary of the submissions is contained in the consultation details associated with amendment 11 to Part 121.

Comments relating to Part 135

NZALPA commented in their submission to the NPRM Supplement that they opposed the use of declared passenger weights, exposition passenger weights, and standard passenger weights. They considered that only actual weighing of passengers was acceptable for Part 135 operations.

CAA comment:– Safe passenger load calculation processes can be developed for Part 135 which will involve effective monitoring on the part of the CAA, and diligence in application on the part of the certificate holder. Certificate holders have indicated a clear need for flexibility in how they calculate passenger load weights, and have stated that the use of exposition passenger weights and passenger declared weights can be responsibly used to conduct safe operations. The CAA requires certificate holders to specify procedures that mitigate the inappropriate use of exposition or passenger declared weights such as when very heavy passengers are to be carried.

NZALPA also commented in their submission to the NPRM Supplement that although they originally recognised the need for the passenger declared weight concept, they consider the concept is flawed because very few people know their actual weight. Dressed weight and weight inclusive of seasonal clothing and accessories will not be known and larger people will understate their weight.

CAA comment:– The CAA noted the issues mentioned in the NZALPA submission and has amended the rule. An increment of 4kg per passenger is included into the final rule proposal to cover the variations

in the person's knowledge of their actual dressed weight. This 4kg figure is supported by the Federal Aviation Administration's Flight Standards Service which requires a 10 pound increment to be added to any passenger declared weight.

In March 2004 the CAA carried out an assessment of the passenger declared weight procedure while completing the Part 135 passenger weight survey. At that time, the process of having passengers write their weights onto the load sheet was tested. Passengers had explained to them that the weights were necessary in order to have the aircraft operate safely, and as a result compliance was high. The resulting total passenger load weight, when incremented by 4 kg per passenger, resulted in figures which were accurate to within 2% of the actual passenger weight.

Air Safaris and Services considered that there should be recognition of passenger declared weights within the rules.

CAA comment:- The CAA accepts that passenger declared weights provide a sufficiently accurate passenger load weight. This provides additional flexibility for operators particularly when they are dealing with bus loads of scenic tourist passengers and when they are operating away from base.

AIA Helicopter Division commented that a large number of Part 135 helicopter operations are conducted away from airports and in many cases away from any sort of fixed base type environment. Consequently the requirement to weigh passengers and baggage and determine the centre of gravity can be impractical at some remote aerodromes.

CAA comment: - The CAA has noted the comment and some additional flexibility has been included in the rule regarding the weight of goods and baggage for operators conducting commercial transport operations from remote aerodromes. The passenger declared weight concept provides the flexibility for passenger weights.

AIA commented that the load manifest requirements were too onerous and do not improve the 'safety' of an operation.

An individual commenter also considered that this rule had nothing to do with safety and should not be included in the rule development.

AIA also commented that for these operations a sound and disciplined loading policy with robust procedures will best ensure safe loading. They consider the requirement for additional documentation in this situation can be counter productive and adversely impact upon safety.

AIA Helicopter Division commented that as part of the original certification process, aircraft are certified with a significant performance margin to allow for the carriage of external loads at a gross weight higher than that permitted for normal internal load operations. This statement should not in any way be interpreted as condoning overweight internal load operations, but it is important that the inherent performance guaranteed by the certification basis of most helicopters has a positive effect on safe operations without the need for load manifests.

Air Charter Taupo considered that passenger manifests and other associated forms should contain sufficient information to demonstrate the effectiveness of the operator's standard load system.

Air Safaris and Services commented that for high frequency, repetitive standard scenic operations, using standard fuel and passengers only, load manifests are inappropriate. Most of the information and passengers' details can be held elsewhere in company documentation.

CAA comment: -The CAA does not accept that completing a load manifest does not contribute to safety. The requirement for a load manifest instils a disciplined approach to the loading of an aircraft and this must contribute to safety. However the CAA acknowledges that a load manifest may not be necessary for Part 135 operations where a sound and disciplined loading policy and robust procedures can be implemented by the pilot who has a direct interaction with the passengers. The requirement for a load manifest has therefore been deleted.

However it is still necessary to have an accurate documented record for the operation and therefore rule 135.857 is being amended to require additional information to be recorded in the daily flight records. The emphasis will be on an operator being able to reconstruct flight details that allow safety monitoring of the operator's procedures.

NZALPA commented that while they accept in principle the need to avoid unnecessary paperwork and duplication, they queried the

availability of certain information for the pilot if the load manifest is deleted. They commented that the NPRM proposal required a load manifest to be completed and certified by the pilot-in-command, but if the items (i) through to (xi) were instead contained within the daily flight records, NZALPA questioned how the intended purpose of the load manifest could be achieved.

NZALPA also suggested in their NPRM Supplement submission that the information contained in the daily flight records must be completed and provided to the pilot before the flight commences. They also commented that the pilot-in-command needs the weight and balance information prior to the commencement of a flight, and that the load manifest had to be certified by the pilot-in-command.

CAA comment:– The current rules require the certificate holder to ensure that the aircraft load limitations are complied with (135.305), and that the pilot of the aircraft be familiar with the operating limitations set by the manufacturer (91.219). In order to comply with these requirements, rule 135.857 has been amended to require the certificate holder to make certain information, required for the daily flight record, available to the pilot, and rule 135.305 has been amended to require the pilot to assess the information prior to flight to ensure that the aircraft remains within the weight and balance limitations.