Instrument number CASA EX87/09

I, MICHAEL DAVID QUINN, Deputy Director of Aviation Safety, a delegate of CASA, make this instrument under regulation 308 of the Civil Aviation Regulations 1988 (CAR 1988).

Mick Quinn
Deputy Director of Aviation Safety

2. November 2009

Exemption — from standard take-off minima – Jetstar

1. Duration
   This instrument:
   (a) commences on the day after it is registered; and
   (b) stops having effect at the end of 30 September 2011.

2. Revocation
   Instrument CASA EX73/09 is revoked.

3. Definitions
   In this instrument:
   aircraft means 1 or more of the following types of aircraft, namely A320, A321.
   ATC means air traffic control.
   CAT means category, and refers to Category I, Category II or Category III minima.
   controlling zone means any runway zone where the RVR or RV reading represents the minima for the runway zone.
   LH means left hand, and refers to the left-hand seat in the cockpit of an aeroplane.
   low visibility operation or LVO means:
   (a) a landing with less than CAT I minima; or
   (b) a take-off with less than 550 metres RV or RVR.
   Note: The instrument is for low visibility take-offs only, but the LVO concept also includes low visibility landings.
   operator means Jetstar Airways Pty Limited, Aviation Reference Number 510654, under Air Operator’s Certificate number ML 510654-105.
   RH means right hand, and refers to the right-hand seat in the cockpit of an aeroplane.
   runway zone means the touch-down zone (TDZ), the mid-zone (MID) or the end zone (END) of a runway.
   RV means runway visibility and is assessed by an approved observer and reported by ATC.
   RVR means runway visual range and is measured by instrument and reported by ATC.
4 Application
This instrument applies only to aircraft operated by the operator in an LVO take-off at an aerodrome when both of the following apply:
(a) ATC is in operation;
(b) ATC has informed the pilot of the aircraft that low visibility procedures are in force.

5 Exemption
Each aircraft operated by the operator is exempt from compliance with regulation 257 of CAR 1988 in relation to the standard take-off minima determined by CASA under subregulation 257 (1) of CAR 1988.

Note Details of the determination are set out in AIP En Route I.5, section 4.3.

6 Conditions
The exemption is subject to the following conditions:
(a) each aircraft must use not less than the aerodrome minima mentioned for it in Schedule 1, in accordance with Schedule 1;
(b) the requirements mentioned in Schedule 2 must be complied with.

Schedule 1 Aerodrome minima for low visibility operations

1 At aerodromes with the facilities required and operating to support low visibility take-offs, the following are the take-off minima that may be used by the aircraft mentioned:

Take-off minima

<table>
<thead>
<tr>
<th>Type of aerodrome and aircraft</th>
<th>Runway zone RVR and RV (in metres)</th>
</tr>
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<tbody>
<tr>
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<td>ATC aerodromes</td>
<td></td>
</tr>
<tr>
<td>A320, A321</td>
<td>350</td>
</tr>
</tbody>
</table>

2 The aircraft operation must observe the following requirements:

Visibility measurements
(a) for a take-off with visibility of at least 350 metres, visibility must be measured by:
   (i) RVR or RV for each applicable zone; or
   (ii) RV for each applicable zone other than the TDZ, provided the pilot makes the assessment for the TDZ;

Controlling zones
(b) for controlling zones:
   (i) any zone reading shown in the above table must act as the controlling minima for the zone; and
   (ii) if 2 zone readings are required and a MID zone RVR or RV in accordance with paragraph 2 (a) above is not available, the END zone RVR or RV may be substituted provided it is at least 350 metres;

Runway lighting and markings
(c) for runway lighting and markings:
   (i) the runway must have, for take-off operations with minima at 350 metres and greater, either centreline lighting or centreline markings; and
   (ii) runway edge lighting must be spaced at not greater than 60 metres for all low visibility operations.
Schedule 2 Requirements for LVO

Training
1 The LVO take-off training course syllabus covering ground training and flight simulator training must be approved in writing by CASA.

Note A sample training course syllabus is in Annex A.

2 The operator, or an approved training organisation, must certify that each pilot of the aircraft has successfully completed the LVO training course.

Competency
3 For competency, each pilot of the aircraft occupying a flight control seat must have successfully completed, to the operator’s approved operational and meteorological limits, a flight simulator competency check that includes a take-off with a near $V_1$ engine failure (reject) and a $V_1$ engine failure (continue).

4 Unless otherwise approved in writing by a CASA Team Leader, Flying Operations, a pilot mentioned in clause 3 must complete 2 checks every 12 months as follows:
   (a) each check must demonstrate competency in each activity mentioned in clause 3;
   (b) for 1 of the 2 checks, competency must be demonstrated to an operational check captain of the relevant aircraft type;
   (c) not more than 8 months and not less than 4 months may elapse between each check.

Note CASA will only approve otherwise in exceptional circumstances where prior testing, experience or other demonstration of competency is compelling evidence of equivalent safety.

5 A captain may not participate in an LVO from the RH seat unless, at least once in the preceding 12 months, he or she has demonstrated to an operational check captain competency in the LVO take-off from the RH seat.

Operational restrictions

Take-offs
6 For take-off, the following restrictions apply:
   (a) for minima — the pilot in command of the aircraft must use the most restrictive of the following:
      (i) the minima mentioned in Schedule 1 that apply to the type of operation or procedure in which the aircraft is engaged;
      (ii) the minima the aerodrome facilities will support at the time of the LVO;
      (iii) the minima approved by the aircraft operator;
      (iv) the minima approved by the relevant foreign aviation regulatory authority;
   (b) the maximum cross-wind component for an aircraft conducting an LVO is 15 knots;
   (c) the pilot flying must:
      (i) be a captain with the operator; and
      (ii) not be undergoing initial command training with the operator; and
      (iii) occupy the LH seat;
   (d) the approach, runway, taxiway and ramp lighting must be operating in accordance with the aerodrome lighting requirements for the type of operation.

Foreign approvals
7 An LVO may be conducted at an aerodrome outside Australia only if each of the following has been complied with:
   (a) the operator has:
      (i) received approval to conduct the operation from the relevant foreign aviation regulatory authority; and
      (ii) given CASA a copy of the approval;
   (b) the LVO is conducted in accordance with each of the operator’s relevant foreign aviation regulatory authority approvals.

Instrument number CASA EX87/09
Document and procedure requirements

8 The operator must ensure that there is an operations manual on board each aircraft containing the following:
   (a) all necessary crew procedures required for a safe LVO, including a standard call for the pilot monitoring to advise the pilot flying of deviations from the runway centreline during take-off;
   (b) a list of aerodromes and runways approved for LVO take-offs (the list);
   (c) the minima for the approved aerodromes and runways in the list;
   (d) a copy of this instrument;
   (e) an abbreviated check list which must include all relevant information for:
       (i) briefing on LVO; and
       (ii) identifying the aircraft equipment necessary for carrying out the LVO;

9 The operator’s procedures for LVO must be in accordance with this instrument.

Annex A — Low visibility operation training requirements

This is a sample training course syllabus as mentioned in clause 1 of Schedule 2.

Training

(a) Ground training

Ground training must cover at least the following subjects:

• aerodrome visual aids, markings and lighting systems
• the meaning of the term “clear of runway”, with respect to runway exit light colours
• use and limitations of different types of RVR systems
• characteristics of fog – homogenous and non-homogenous
• effects of precipitation, ice accretion, low level windshear
• correct seating and eye position.

(b) Flight simulator training

The simulator must be at least level C and type specific with correct visual modelling.

Some exercises should be conducted at maximum take-off weight (to provide a maximum split between \( V_1 \) and \( V_{ao} \)) at approved (or applied for) RVR minima with up to maximum cross-wind and where possible a mix of day and night environments.

Training must include the following:

• normal take-off with no failures
• take-off with engine failures
• correct use of MEL and the effect of known unserviceabilities
• effects on minima caused by changes in the status of ground installations
• loss of visibility during take-off
• pilot incapacitation during take-off.

Taxi exercise

Use of the aerodrome chart in following cleared taxi route to and from the runway and the terminal, identifying stop bars and CAT II and CAT III holding points and using all options to check line up on the correct runway.

Take-off exercises

There must be a minimum of 8 take-offs resulting in becoming airborne or in a RTO, covering the exercises below.

Instructors should demonstrate in visual conditions the effectiveness of the localizer display or other lateral guidance equipment, as the aircraft deviates from the runway centreline.

Some suggested exercises are:

• normal take-offs in 300 metres visibility (cross-wind 15 kts)
• engine failure near \( V_1 \) (RTO) and engine failure at \( V_1 \) (continue)
• loss of visibility at low speed (RTO) and after 100 kts (continue)
• incapacitation of the pilot flying
• deliberate runway centreline deviation.
Explanatory Statement

Civil Aviation Regulations 1988

Exemption — from standard take-off minima – Jetstar

Section 98 of the Civil Aviation Act 1988 (the Act) empowers the Governor-General to make regulations for the Act and the safety of air navigation.

Legislation

Under subregulation 257 (1) of the Civil Aviation Regulations 1988 (CAR 1988), CASA may determine the meteorological minima, that is the visibility requirements, for landing or take-off at an aerodrome. Under subregulation 257 (2), the determination must be published in AIP or NOTAMS. Under subregulation 257 (3), it is an offence for an aircraft to take off if an element of the meteorological minima for that operation is less than that determined for the aircraft at the aerodrome.

The determination of standard meteorological minima for take-off and landing was made in instrument CASA 146/08. The minima are also set out in AIP En Route 1.5, section 4.3. If conditions are met, the minimum visibility for take-off inside or outside Australian territory is 500 metres (proposed to become 550 metres).

Under subregulation 308 (1) of CAR 1988, CASA may exempt aircraft, or persons in, on, or otherwise associated with the operation of, the aircraft, from compliance with specified provisions of CAR 1988. Under subregulation 308 (2), before making an exemption CASA must take into account any relevant considerations relating to the interests of safety. Under subregulation 308 (3), CASA may make an exemption subject to any condition specified in the exemption as being necessary in the interests of safety. Under subregulation 308 (3A), it is an offence to contravene a condition of an exemption that is otherwise being relied upon for an operation.

Jetstar

On 25 September 2009, CASA made instrument CASA EX73/09 exempting Airbus A320 and A321 aeroplanes operated by Jetstar Airways Pty Limited (Jetstar) from the standard meteorological minima for take-off. The substituted minima and relevant conditions for them have since been revised in line with changes to the definition of runway visibility range. As a result, 300 m, as provided for in the exemption, is no longer regarded as suitable. The new exemption revokes CASA EX73/09 and replaces it with more suitable minima and conditions.

Instrument and conditions

The instrument, in effect, exempts the aircraft operated by Jetstar inside and outside Australian Territory, from the minimum visibility requirements for a take-off in instrument CASA 146/08. However, to ensure the safety of air navigation, the exemption is subject to a series of performance conditions and limitations.

In essence, the operator must ensure that specified visibility standards are met for take-offs that may be performed only at aerodromes properly equipped to support low visibility operations. Flight crew training, experience, recency and competency must meet specified benchmarks. Operational restrictions and limitations must be observed. Appropriate foreign approvals for the operations must be obtained. A range of documents for inspection must be carried on board the aircraft.

The technical details of the exemption and its conditions are set out in Attachment 1.

Legislative Instruments Act

Under subparagraph 6 (d) (i) of the Legislative Instruments Act 2003 (the LIA), an instrument is a legislative instrument for section 5 of the LIA if it is declared to be a disallowable instrument under legislation in force before the commencement of the LIA. Under subregulation 308 (4) of CAR 1988, an exemption is a disallowable instrument. The
exemption is, therefore, a legislative instrument and it is subject to tabling and disallowance in the Parliament under sections 38 and 42 of the LIA.

Consultation
Consultation under section 17 of the LIA has not been undertaken in this case. The instrument is required by the operator to enable low visibility take-offs inside and outside Australian territory consistent with the standards and requirements specified in the instrument which are not considered prejudicial to the interests of safety.

Office of Best Practice Regulation
The exemption would be of beneficial effect to the operator. The Office of Best Practice Regulation does not require preparation of a Regulation Impact Statement in this case because a preliminary assessment of business compliance costs in the context of the nature of the instrument indicates that it will have only a nil to low impact on business.

Making and commencement
The exemption has been made by a delegate of CASA in accordance with subregulation 7 (1) and regulation 308 of CAR 1988.

The instrument comes into effect on the day after it is registered. It stops having effect at the end of September 2011.

[Instrument number CASA EX87/09]
Details of exemption

1 Duration
This instrument commences on the day after it is registered and stops having effect at the end of 30 September 2011.

2 Revocation
Instrument CASA EX73/09 is revoked.

3 Definitions
A large number of relevant terms are given specific definitions for the purposes of the exemption.

4 Application
The instrument is expressed to apply only to A320 and A321 aeroplanes operated by Jetstar in an LVO take-off at an aerodrome where both of the following apply, namely, ATC is in operation, and ATC has informed the pilot of the aircraft that low visibility procedures are in force.

5 Exemption
By virtue of this section, each A320 and A321 aeroplane operated by Jetstar is exempt from compliance with regulation 257 of CAR 1988 in relation to the standard take-off minima determined by CASA under subregulation 257 (1) of CAR 1988 (in CASA 146/08). A Note indicates that details of the determination are set out in AIP En Route 1.5, section 4.3.

6 Conditions
The exemption is subject to key conditions. Thus:
- (a) each aircraft must use not less than the aerodrome minima mentioned for it in Schedule 1, in accordance with Schedule 1; and
- (b) the requirements mentioned in Schedule 2 must be complied with.

Schedule 1 Aerodrome minima for low visibility operations

1 This clause provides that at aerodromes with the facilities required and operating to support low visibility take-offs, the following are the take-off minima that may be used by the aircraft mentioned:

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<th>Type of aerodrome and aircraft</th>
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2 Under this clause, the aircraft operation must observe the visibility, controlling zone and runway lighting and marking requirements that are set out in the clause.

Schedule 2 Requirements for LVO

This Schedule sets out the detailed pilot training and operational requirements for an LVO take-off, and includes a sample training course syllabus.