

AW/OPS 1.1.051	 <small>רשות התעופה האזרחית Civil Aviation Authority</small>	OPS Inspector Handbook
Lower than Standard Takeoff		Revision 2
Minima		01 Dec 12

1. Objective

- 1.1. This section contains information to be used by inspectors in approving lower than standard takeoff minima for air carrier operators.
- 1.2. The POI, principal maintenance inspector (PMI), and principal avionics inspector (PAI) must coordinate the issuance of OpSpec takeoff minima.
- 1.3. This is a common directive for Airworthiness and Operations.
 - 1.3.1. Close coordination between AW and OPS inspectors executing this directive is required.
 - 1.3.2. The OI will be the lead inspector in executing this directive.
 - 1.3.3. Any amendments to this directive must be made to both AW Inspector Handbook and OPS Inspector Handbook.

2. General

- 2.1. Regulatory Requirements
 - 2.1.1. IANR.Ops. 1, 110, 386A, 526, ATT 4.
- 2.2. **Instrument Flight Rules (IFR) Takeoff Minima.** Standard IFR takeoff minima for operators are issued in IANR Ops. 110. The standard takeoff minima are defined as visibility 1500m (1 statute mile visibility or runway visual range (RVR) 5000) for airplanes having two engines and visibility 800m (1/2 statute mile visibility or (RVR) 2400) for airplanes having more than two engines.
- 2.3. **Chap 13 operators.** According to IANR Ops. Att. 4(2)(c)(3), Att.4 (2)(a)(7) and IANR Ops. 386A, Chap. 13 operators are required to establish "Operating Minima" (for takeoff and landing) and a system to determine takeoff and landing minima at each airport.

3. Reference Material, Forms & Job-Aids

FAA AC 120-29 (as amended),

FAA AC 120-28 (as amended),

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4. Process

4.1. TRAINING.

POIs shall ensure that operators requesting lower than standard takeoff minima provide training to their personnel in all procedures contained in the OpSpecs. In addition, the operator's training program must contain at least the following, as applicable:

- Rejected takeoffs in a low visibility environment,
- Engine failure at V_1 in low visibility,
- Taxiing in a low visibility environment with emphasis on preventing runway incursion,
- Critical areas,
- Crew coordination and planning,
- Dispatcher training,
- Required ground based visual aids (such as stop bars, taxi holding position lights),
- Required ground based electronic aids (such as instrument landing system/microwave landing system (ILS/MLS) transmissometers), and
- Determination of takeoff alternate airports, as applicable.

4.2. IFR LOWER THAN STANDARD TAKEOFF MINIMA, IANR.Ops. Chap 13 — ALL AIRPORTS.

4.2.1. Takeoff Visibility.

Lower than standard takeoff minima allows for takeoff visibility with the following exceptions:

- Takeoff operations without runway centerline lighting not less than RVR 1000 (300m); and
- Takeoff operations using visual references not less than RVR 500(150m).
- Two new subparagraphs added for the authorization of takeoff with lower than standard takeoff minima using takeoff guidance systems; and
- A new subparagraph was added which contains provisions for pilot assessment of touchdown zone (TDZ) RVR for takeoff when the installed RVR is inoperative.

4.2.2. Touchdown Zone.

The touchdown zone RVR 1200 (350m) or RVR 1000 (300m) authorization can be selected, as applicable. Either the touchdown, mid, and rollout RVR 600 (175m) or touchdown zone RVR 500(150m), mid RVR 500(150m), and rollout RVR 500(150m) can be selected for authorization.

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- 4.2.3. Air carriers currently authorized RVR 600 (175m) may be approved for RVR 500(150m) operations when changes reflecting RVR 600 (175m) have been incorporated into the approved training program. No additional flightcrew qualification, by a check airman or qualified inspector, is required to fly to these reduced minima provided current flightcrew qualification for lower than standard minima for takeoff operations utilizes RVR 500(150m) or lower. Both pilots of a two-pilot flightcrew must be qualified for takeoffs using RVR 500(150m) before a flightcrew may conduct such takeoffs. Individual pilots must be trained) and checked) in takeoffs using RVR 500(150m), or lower, before conducting such takeoffs. Pilot qualification must include a flight check including at least one takeoff during each pilot's recurrent qualification cycle in a flight simulator capable of replicating takeoff visibility of RVR 500(150m); and the simulator must be set at RVR 500(150m), or lower, during such takeoffs. (Additional pilot qualification involving a check airman or a qualified inspector is not required.)
- 4.2.4. Operations below RVR 600 (175m) at require appropriate surface movement and guidance control procedures (Low Visibility Procedures) to be in place at the airport.
- 4.2.5. Takeoff Minima. The authorized takeoff minima changed from touchdown, mid, and rollout RVR 600 (175m) to a reported TDZ RVR 500(150m), mid RVR 500(150m), and rollout RVR 500 (150m).
- 4.2.6. Pilot Assessment of IFR Lower than Standard Takeoff Minima.
The authorisation allows for pilots to make an assessment of RVR when the TDZ RVR is inoperative, is not reported, or the pilot determines that reported TDZ RVR is in error. This assessment, when equal to or greater than that required in the TDZ report for takeoffs made with only outside visual references, or for takeoffs using takeoff guidance systems, can be used for takeoff when the Mid and Rollout reports are available, and are equal to or greater than that required. To take advantage of this possibility, each certificate holder must:
- 4.2.6.1 For each runway for which the assessment is allowed, have an approved procedure for assessing RVR that includes identification of an appropriate number and type of runway lights or markings of known spacing that must be visible to the pilot when viewed from the flight deck with the aircraft in the takeoff position. This procedure must include variability of runway light intensity settings and ambient lighting (day or night).

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4.2.6.2 For each runway for which the assessment is allowed, have an approved procedure for describing the actions to be taken when local visibility conditions, as determined by the pilot, indicate that a significantly different visibility exists from that reported for the TDZ.

4.2.6.3 For each runway for which the assessment is allowed, have an approved procedure for coordinating release with air traffic control (ATC) and Dispatch.

4.2.6.4 Approved procedures for RVR assessment, for determining that TDZ RVR reports are in error, and for takeoff and flight release in operating manuals and in such materials that are readily available to the flightcrew in the cockpit.

4.2.6.4.1. An approved training and validation program of the approved procedures for all flightcrews authorized to participate. Validation of the procedures will be accomplished in a qualified and approved flight simulator. No flight crewmember may participate in these operations until this portion of the approved training program is accomplished satisfactorily.

5. Task Outcomes

5.1. Authorization.

The OpSpecs block 10 provides for the authorization for lower than standard take off minima using takeoff guidance systems with certain limitations and provisions. Although RVR 500(150m) is the lowest authorized RVR when the takeoff is based upon outside visual references, RVR 300 is the lowest authorized RVR when using a takeoff guidance system.