

Weather Requirements

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Federal Aviation
Administration



Overview

- **Regulations**
- **Handbook Guidance**
- **Operations Specifications**
- **Existing Exemptions**

Regulations

- **14 CFR 135 Subpart D**
 - VFR
 - IFR
- **Deviation**
- **Exemption**

Part 135

- Subpart D—VFR/IFR Operating Limitations and Weather Requirements
 - § 135.201 Applicability.
 - § 135.203 VFR: Minimum altitudes.
 - § 135.205 VFR: Visibility requirements.
 - § 135.207 VFR: Helicopter surface reference requirements.
 - § 135.209 VFR: Fuel supply.
 - § 135.211 VFR: Over-the-top carrying passengers: Operating limitations.

Part 135 Subpart D

- **§ 135.213 Weather reports and forecasts.**
 - (a) Whenever a person operating an aircraft under this part is required to use a weather report or forecast, that person shall use that of the U.S. National Weather Service, a source approved by the U.S. National Weather Service, or a source approved by the Administrator. However, for operations under VFR, the pilot in command may, if such a report is not available, use weather information based on that pilot's own observations or on those of other persons competent to supply appropriate observations.

135.213

- (b) For the purposes of paragraph (a) of this section, weather observations made and furnished to pilots to conduct IFR operations at an airport must be taken at the airport where those IFR operations are conducted, unless the Administrator issues operations specifications allowing the use of weather observations taken at a location not at the airport where the IFR operations are conducted. The Administrator issues such operations specifications when, after investigation by the U.S. National Weather Service and the certificate-holding district office, it is found that the standards of safety for that operation would allow the deviation from this paragraph for a particular operation for which an air carrier operating certificate or operating certificate has been issued.

Operations Specification Para A010

- **Describes system of aeronautical weather information used by the certificate holder.**
- **Enhanced Weather Information System (EWINS)**
- **Qualified Internet Communications Provider (QICP)**
- **Free Text**

Operations Specification Para A010

Sources of NWS Weather reports or sources approved by NWS and/or FAA are as follows:

- NWS offices (including contract observatories)***
- Flight Service Stations***
- Supplemental aviation weather reporting stations (SAWRS)***
- Limited aviation weather reporting stations (LAWRS)***
- Automated surface observations (AWOS)***
- Any active meteorological office operated by a foreign state which subscribes (is signatory) to the standards and practices of ICAO conventions.***
- Any U.S. or N.A.T.O. military reporting source***

- ***NOTE 1: Weather information used to control approaches and departures:***
 - *Time of observation*
 - *Visibility*
 - *Altimeter setting*
 - *Temperature*
 - *Dew point*
 - *Wind speed*
 - *Wind direction*
 - *Cloud height (required only when ceiling is specified as part of a landing or takeoff minimum)*

- ***NOTE 2: AWOS-3 installed, operated, and maintained, by the FAA are approved, without restriction, for use by Part 121 and 135 operators.***
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- ***NOTE 3: Brand X, Inc. is authorized in accordance with Federal Aviation Regulation 135.213(b) to conduct IFR operations at the:***
- ***1. William Dautruieve Children's Hospital (TX27) using weather observations at Tom Landry Field (CWB)***
- ***2. Buck Strickland Cardiac Center (TX94) using weather observations at Arlen Intercontinental Airport (ARL)***
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- ***NOTE 4: Brand X, Inc. may obtain aeronautical weather data for the control of flight operations as delivered by:***
- ***- The Direct User Access Terminal System (DUATS)***
- ***- Pan AM Weathermation IV***
- ***- Universal Weather and Aviation***
- ***- WSI Weather, Inc.***
- ***- Meteologix (DTN)***

Part 135 Subpart D

- § 135.215 IFR: Operating limitations.
 - (a) Except as provided in paragraphs (b), (c) and (d) of this section, no person may operate an aircraft under IFR outside of controlled airspace or at any airport that does not have an approved standard instrument approach procedure.
 - (b) The Administrator may issue operations specifications to the certificate holder to allow it to operate under IFR over routes outside controlled airspace if—
 - (1) The certificate holder shows the Administrator that the flight crew is able to navigate, without visual reference to the ground, over an intended track without deviating more than 5 degrees or 5 miles, whichever is less, from that track; and
 - (2) The Administrator determines that the proposed operations can be conducted safely.

135.215

- (c) A person may operate an aircraft under IFR outside of controlled airspace if the certificate holder has been approved for the operations and that operation is necessary to—
 - (1) Conduct an instrument approach to an airport for which there is in use a current approved standard or special instrument approach procedure; or
 - (2) Climb into controlled airspace during an approved missed approach procedure; or
 - (3) Make an IFR departure from an airport having an approved instrument approach procedure.
- (d) The Administrator may issue operations specifications to the certificate holder to allow it to depart at an airport that does not have an approved standard instrument approach procedure when the Administrator determines that it is necessary to make an IFR departure from that airport and that the proposed operations can be conducted safely. The approval to operate at that airport does not include an approval to make an IFR approach to that airport.

Part 135 Subpart D

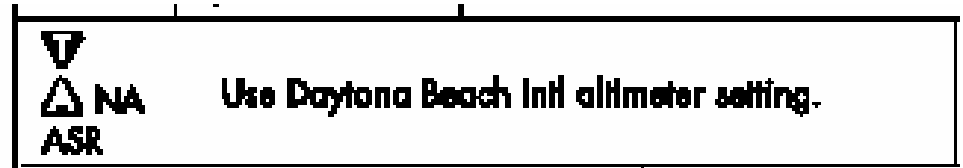
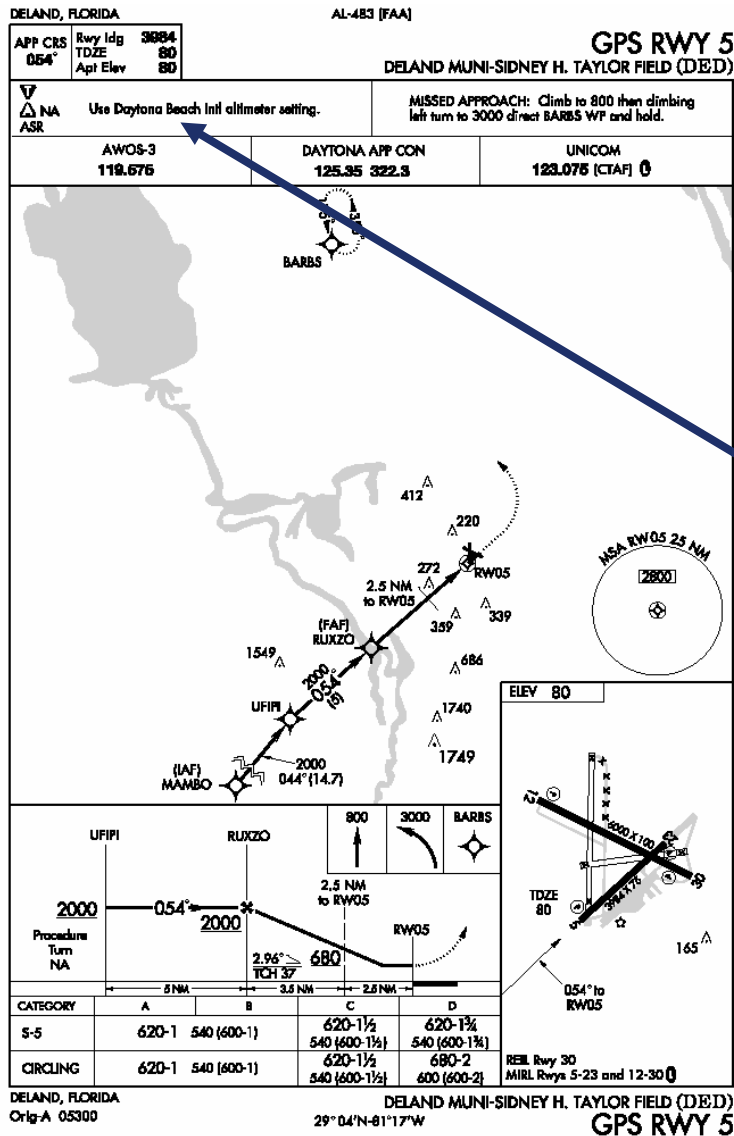
- § 135.217 IFR: Takeoff limitations.
 - No person may takeoff an aircraft under IFR from an airport where weather conditions are at or above takeoff minimums but are below authorized IFR landing minimums unless there is an alternate airport within 1 hour's flying time (at normal cruising speed, in still air) of the airport of departure.

Part 135 Subpart D

- § 135.219 IFR: Destination airport weather minimums.
 - No person may take off an aircraft under IFR or begin an IFR or over-the-top operation unless the latest weather reports or forecasts, or any combination of them, indicate that weather conditions at the estimated time of arrival at the next airport of intended landing will be at or above authorized IFR landing minimums.

Part 135 Subpart D

- § 135.221 IFR: Alternate airport weather minimums.
 - No person may designate an alternate airport unless the weather reports or forecasts, or any combination of them, indicate that the weather conditions will be at or above authorized alternate airport landing minimums for that airport at the estimated time of arrival.



Operations Specifications H105

Alternate Airport IFR Weather Minimums		
Approach Facility Configuration	Ceiling	Visibility
For airports with at least one operational navigational facility providing a straight-in nonprecision approach procedure, or a straight-in precision approach procedure, or, when applicable, a circling maneuver from an instrument approach procedure.	A ceiling derived by adding 200 ft. to the published HAT or HAA for the approach to be flown.	1 sm. but never less than the published minimum visibility for the approach to be flown.

Operations Specifications C55

Approach Facility Configuration	Ceiling	Visibility
For airports having at least one operational navigation facility providing a strait-in non-precision approach procedure, a strait-in precision approach procedure, or, when applicable, a circling maneuver from an instrument approach procedure.	A ceiling derived by adding 400 feet to the authorized Category I HAT or, when applicable, the authorized HAA.	A visibility derived by adding 1 SM to the authorized Category I landing minimum.
For airports with at least two operational navigational facilities, each providing an strait-in non-precision or a strait in precision approach procedure to different, suitable runways.	A ceiling derived by adding 200 feet to the higher CAT I HAT of the two approaches used.	A visibility derived by adding ½ SM to the higher authorized Category I landing minimum of the two approaches used.

OpSpec C55 – ER-OPS

For airports with at least two operational navigational facilities, each providing a straight-in nonprecision approach procedure or a straight-in precision approach procedure to different, suitable runways. (However, when an airport is designated as an ER-OPS En Route Alternate Airport in these operations specifications, the approach procedures used must be to separate, suitable runways).

“Separate vs. Different”

A VOR and an NDB are *separate* navaids. An ILS approach and a localizer approach going to the same runway, however, do *not* use *separate* navaids. (They both use the localizer antenna.)

Reciprocal runways 7 and 25 are considered *different* even though they aren't *separate*. (If the wind favors landing on 7, it may preclude landing on 25. But if an airplane crashes in the middle of 25, 7 becomes unusable as well.) Runways 9L and 9R are *separate* but *not different*. (If the wind precludes landing on 9L, it also precludes landing on 9R. On the other hand, an airplane could crash in the middle of 9L and 9R would still be usable.)

Part 135 Subpart D

- **§ 135.223 IFR: Alternate airport requirements.**
 - (a) Except as provided in paragraph (b) of this section, no person may operate an aircraft in IFR conditions unless it carries enough fuel (considering weather reports or forecasts or any combination of them) to—
 - (1) Complete the flight to the first airport of intended landing;
 - (2) Fly from that airport to the alternate airport; and
 - (3) Fly after that for 45 minutes at normal cruising speed or, for helicopters, fly after that for 30 minutes at normal cruising speed.

135.223

- (b) Paragraph (a)(2) of this section does not apply if part 97 of this chapter prescribes a standard instrument approach procedure for the first airport of intended landing and, for at least one hour before and after the estimated time of arrival, the appropriate weather reports or forecasts, or any combination of them, indicate that—
 - (1) The ceiling will be at least 1,500 feet above the lowest circling approach MDA; or
 - (2) If a circling instrument approach is not authorized for the airport, the ceiling will be at least 1,500 feet above the lowest published minimum or 2,000 feet above the airport elevation, whichever is higher; and
 - (3) Visibility for that airport is forecast to be at least three miles, or two miles more than the lowest applicable visibility minimums, whichever is the greater, for the instrument approach procedure to be used at the destination airport.

Part 135 Subpart D

- § 135.225 IFR: Takeoff, approach and landing minimums.
 - (a) Except to the extent permitted by paragraph (b) of this section, no pilot may begin an instrument approach procedure to an airport unless—
 - (1) That airport has a weather reporting facility operated by the U.S. National Weather Service, a source approved by U.S. National Weather Service, or a source approved by the Administrator; and
 - (2) The latest weather report issued by that weather reporting facility indicates that weather conditions are at or above the authorized IFR landing minimums for that airport.

135.225

- (b) A pilot conducting an eligible on-demand operation may begin an instrument approach procedure to an airport that does not have a weather reporting facility operated by the U.S. National Weather Service, a source approved by the U.S. National Weather Service, or a source approved by the Administrator if—
 - (1) The alternate airport has a weather reporting facility operated by the U.S. National Weather Service, a source approved by the U.S. National Weather Service, or a source approved by the Administrator; and
 - (2) The latest weather report issued by the weather reporting facility includes a current local altimeter setting for the destination airport. If no local altimeter setting for the destination airport is available, the pilot may use the current altimeter setting provided by the facility designated on the approach chart for the destination airport.

What is an “eligible on demand” operation?

- **§ 135.4 Applicability of rules for eligible on-demand operations.**
 - (a) An “eligible on-demand operation” is an on-demand operation conducted under this part that meets the following requirements:
 - (1) *Two-pilot crew.* The flightcrew must consist of at least two qualified pilots employed or contracted by the certificate holder.
 - (2) *Flight crew experience.* The crewmembers must have met the applicable requirements of part 61 of this chapter and have the following experience and ratings:
 - (i) Total flight time for all pilots:
 - (A) Pilot in command—A minimum of 1,500 hours.
 - (B) Second in command—A minimum of 500 hours.

Eligible On Demand

- (ii) For multi-engine turbine-powered fixed-wing and powered-lift aircraft, the following FAA certification and ratings requirements:
 - (A) Pilot in command—Airline transport pilot and applicable type ratings.
 - (B) Second in command—Commercial pilot and instrument ratings.
- (iii) For all other aircraft, the following FAA certification and rating requirements:
 - (A) Pilot in command—Commercial pilot and instrument ratings.
 - (B) Second in command—Commercial pilot and instrument ratings.

Eligible On Demand

- **(3) *Pilot operating limitations.*** If the second in command of a fixed-wing aircraft has fewer than 100 hours of flight time as second in command flying in the aircraft make and model and, if a type rating is required, in the type aircraft being flown, and the pilot in command is not an appropriately qualified check pilot, the pilot in command shall make all takeoffs and landings in any of the following situations:
 - (i) Landings at the destination airport when a Destination Airport Analysis is required by §135.385(f); and
 - (ii) In any of the following conditions:
 - (A) The prevailing visibility for the airport is at or below 3/4 mile.
 - (B) The runway visual range for the runway to be used is at or below 4,000 feet.
 - (C) The runway to be used has water, snow, slush, ice, or similar contamination that may adversely affect aircraft performance.
 - (D) The braking action on the runway to be used is reported to be less than “good.”
 - (E) The crosswind component for the runway to be used is in excess of 15 knots.
 - (F) Windshear is reported in the vicinity of the airport.
 - (G) Any other condition in which the pilot in command determines it to be prudent to exercise the pilot in command's authority.

Eligible On Demand

- (4) *Crew pairing*. Either the pilot in command or the second in command must have at least 75 hours of flight time in that aircraft make or model and, if a type rating is required, for that type aircraft, either as pilot in command or second in command.

Eligible On Demand

- (b) The Administrator may authorize deviations from paragraphs (a)(2)(i) or (a)(4) of this section if the Flight Standards District Office that issued the certificate holder's operations specifications finds that the crewmember has comparable experience, and can effectively perform the functions associated with the position in accordance with the requirements of this chapter. The Administrator may, at any time, terminate any grant of deviation authority issued under this paragraph. Grants of deviation under this paragraph may be granted after consideration of the size and scope of the operation, the qualifications of the intended personnel and the following circumstances:

Eligible On Demand

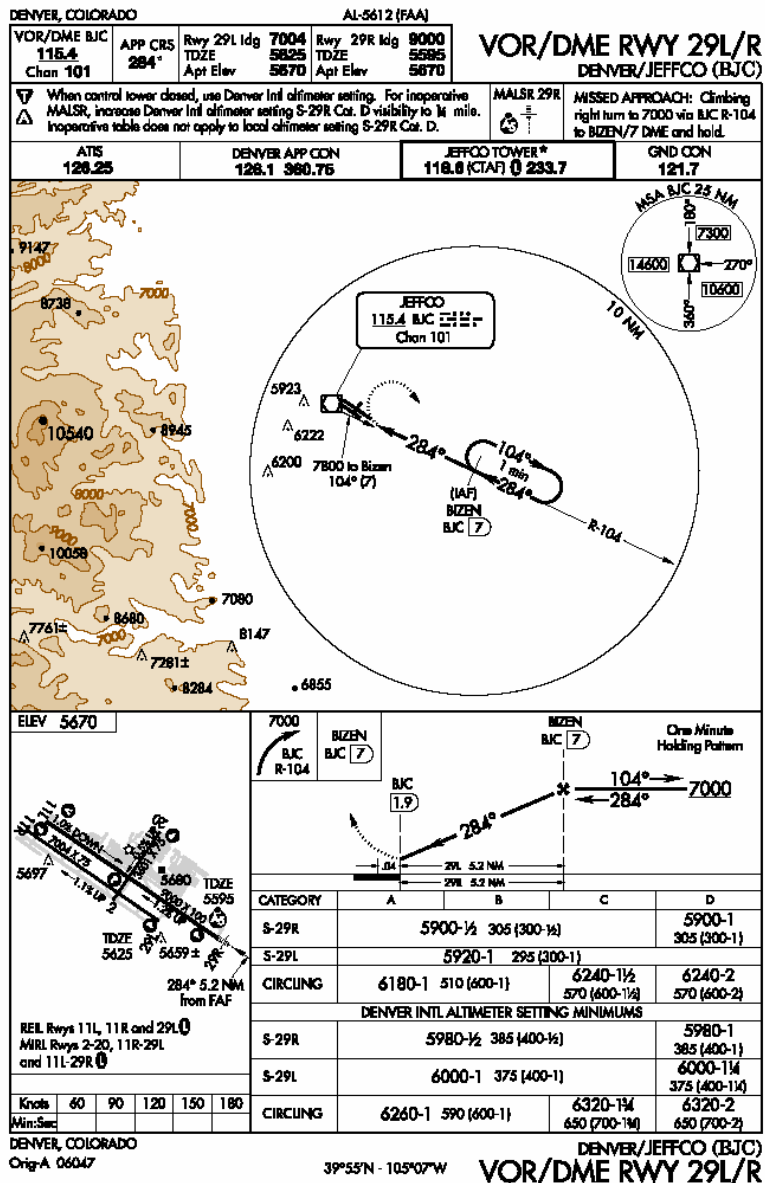
- (1) A newly authorized certificate holder does not employ any pilots who meet the minimum requirements of paragraphs (a)(2)(i) or (a)(4) of this section.
- (2) An existing certificate holder adds to its fleet a new category and class aircraft not used before in its operation.
- (3) An existing certificate holder establishes a new base to which it assigns pilots who will be required to become qualified on the aircraft operated from that base.
- (c) An eligible on-demand operation may comply with alternative requirements specified in §§135.225(b), 135.385(f), and 135.387(b) instead of the requirements that apply to other on-demand operations.

135.225

- (c) If a pilot has begun the final approach segment of an instrument approach to an airport under paragraph (b) of this section, and the pilot receives a later weather report indicating that conditions have worsened to below the minimum requirements, then the pilot may continue the approach only if the requirements of §91.175(l) of this chapter, or both of the following conditions, are met—
 - (1) The later weather report is received when the aircraft is in one of the following approach phases:
 - (i) The aircraft is on an ILS final approach and has passed the final approach fix;
 - (ii) The aircraft is on an ASR or PAR final approach and has been turned over to the final approach controller; or
 - (iii) The aircraft is on a nonprecision final approach and the aircraft—
 - (A) Has passed the appropriate facility or final approach fix; or
 - (B) Where a final approach fix is not specified, has completed the procedure turn and is established inbound toward the airport on the final approach course within the distance prescribed in the procedure; and
 - (2) The pilot in command finds, on reaching the authorized MDA or DH, that the actual weather conditions are at or above the minimums prescribed for the procedure being used.

135.225

- (d) If a pilot has begun the final approach segment of an instrument approach to an airport under paragraph (c) of this section and a later weather report indicating below minimum conditions is received after the aircraft is—
 - (1) On an ILS final approach and has passed the final approach fix; or
 - (2) On an ASR or PAR final approach and has been turned over to the final approach controller; or
 - (3) On a final approach using a VOR, NDB, or comparable approach procedure; and the aircraft—
 - (i) Has passed the appropriate facility or final approach fix; or
 - (ii) Where a final approach fix is not specified, has completed the procedure turn and is established inbound toward the airport on the final approach course within the distance prescribed in the procedure; the approach may be continued and a landing made if the pilot finds, upon reaching the authorized MDA or DH, that actual weather conditions are at least equal to the minimums prescribed for the procedure.



CATEGORY	A	B	C	D
S-29R	5900-½ 305 (300-½)			5900-1 305 (300-1)
S-29L	5920-1 295 (300-1)			
CIRCLING	6180-1 510 (600-1)		6240-1½ 570 (600-1½)	6240-2 570 (600-2)
DENVER INTL ALTIMETER SETTING MINIMUMS				
S-29R	5980-½ 385 (400-½)			5980-1 385 (400-1)
S-29L	6000-1 375 (400-1)			6000-1¼ 375 (400-1¼)
CIRCLING	6260-1 590 (600-1)		6320-1¼ 650 (700-1¼)	6320-2 650 (700-2)

135.225

- (e) The MDA or DH and visibility landing minimums prescribed in part 97 of this chapter or in the operator's operations specifications are increased by 100 feet and 1/2 mile respectively, but not to exceed the ceiling and visibility minimums for that airport when used as an alternate airport, for each pilot in command of a turbine-powered airplane who has not served at least 100 hours as pilot in command in that type of airplane.

135.225

- (f) Each pilot making an IFR take- off or approach and landing at a military or foreign airport shall comply with applicable instrument approach procedures and weather minimums prescribed by the authority having jurisdiction over that airport. In addition, no pilot may, at that airport—
 - (1) Take off under IFR when the visibility is less than 1 mile; or
 - (2) Make an instrument approach when the visibility is less than 1/2 mile.

135.225

- (g) If takeoff minimums are specified in part 97 of this chapter for the take-off airport, no pilot may take off an aircraft under IFR when the weather conditions reported by the facility described in paragraph (a)(1) of this section are less than the takeoff minimums specified for the takeoff airport in part 97 or in the certificate holder's operations specifications.

Example of a Part 97 Departure Minimum

ORLANDO, FL

EXECUTIVE

TAKE-OFF MINIMUMS: **Rwy 25**, 500-2½ or std. with a min. climb of 260' per NM to 700.

NOTE: **Rwy 7**, numerous trees beginning 194' from departure end of runway, 542' right of centerline, up to 114' AGL/132' MSL. **Rwy 13**, numerous trees and poles beginning 824' from departure end of runway, 126' right of centerline, up to 119' AGL/173' MSL. Pole 1275' from departure end of runway, 502' left of centerline, 119' AGL/160' MSL. **Rwy 25**, building 2 NM from departure end of runway, 4195' right of centerline, 439' AGL/547' MSL. Numerous trees beginning 1318' from departure end of runway, 277' right of centerline, up to 119' AGL/ 191' MSL. Tree 1823' from departure end of runway, 582' left of centerline, 109' AGL/156' MSL.

135.225

- (h) Except as provided in paragraph (i) of this section, if takeoff minimums are not prescribed in part 97 of this chapter for the takeoff airport, no pilot may takeoff an aircraft under IFR when the weather conditions reported by the facility described in paragraph (a)(1) of this section are less than that prescribed in part 91 of this chapter or in the certificate holder's operations specifications.

135.225

- (i) At airports where straight-in instrument approach procedures are authorized, a pilot may takeoff an aircraft under IFR when the weather conditions reported by the facility described in paragraph (a)(1) of this section are equal to or better than the lowest straight-in landing minimums, unless otherwise restricted, if—
 - (1) The wind direction and velocity at the time of takeoff are such that a straight-in instrument approach can be made to the runway served by the instrument approach;
 - (2) The associated ground facilities upon which the landing minimums are predicated and the related airborne equipment are in normal operation; and
 - (3) The certificate holder has been approved for such operations.

135.227 Icing conditions: Operating limitations

(a) No pilot may take off an aircraft that has frost, ice, or snow adhering to any rotor blade, propeller, windshield, wing, stabilizing or control surface, to a powerplant installation, or to an airspeed, altimeter, rate of climb, or flight attitude instrument system, except under the following conditions:

- (1) Takeoffs may be made with frost adhering to the wings, or stabilizing or control surfaces, if the frost has been polished to make it smooth.
- (2) Takeoffs may be made with frost under the wing in the area of the fuel tanks if authorized by the Administrator.

(d) No pilot may fly a helicopter under IFR into known or forecast icing conditions or under VFR into known icing conditions unless it has been type certificated and appropriately equipped for operations in icing conditions.

135.227 Icing conditions: Operating limitations

(f) If current weather reports and briefing information relied upon by the pilot in command indicate that the forecast icing condition that would otherwise prohibit the flight will not be encountered during the flight because of changed weather conditions since the forecast, the restrictions in paragraphs (c), (d), and (e) of this section based on forecast conditions do not apply.

FAA Order 8400.10, Air Transportation Operations Inspector's Handbook

1437. REGULATORY REQUIREMENTS SOURCES OF WEATHER REPORTS.

A. *Weather Reports.*

For all operations conducted under Parts 121 and 135, weather reports either must be prepared by the National Weather Service (NWS) or by sources approved by the NWS or Federal Aviation Administration (FAA). The term “weather report” as used in 14CFR and this order primarily refers to a surface aviation weather report (SA) as described in Advisory Circular 00-45 (as amended), Aviation Weather Services, section 2, Aviation Routine Weather Report (METAR). Forecasters use surface aviation weather observations as the basis for predicting future weather conditions. Any forecast used to control flight movement must be prepared from (based on) weather reports prepared by the NWS or other approved sources.

FAA Order 8400.10

1437. REGULATORY REQUIREMENTS SOURCES OF WEATHER REPORTS.

B. Weather Information Required in Reports Used to Control Approaches and Departures.

All Part 121 and Part 135 operators must use approved sources of weather reports of meteorological conditions at any airport where Instrument flight rules (IFR) departures or approaches are conducted.

An approved source may rely on specifically approved automated observation equipment for some or all of the required weather information. When a Part 121 or Part 135 operator is required to use a weather report, the report must contain at least the following meteorological information:

FAA Order 8400.10

1437. REGULATORY REQUIREMENTS SOURCES OF WEATHER REPORTS.

B. Weather Information Required in Reports Used to Control Approaches and Departures. (Continued)

- Time of observation
- Visibility
- Altimeter setting
- Temperature
- Dew point
- Wind speed
- Wind direction
- Cloud height (required only when ceiling is specified as part of a landing or takeoff minimum)

FAA Order 8400.10

1437. REGULATORY REQUIREMENTS SOURCES OF WEATHER REPORTS.

(D) Part 135

Whenever a Part 135 operator is required to use a weather report or forecast for IFR operations, the operator must use weather reports or forecasts prepared by the NWS, or a source approved by the NWS. Where NWS services are not available, the source must be approved by the FAA. If NWS or other approved reports are not available for VFR operations, a pilot in command (PIC) may use weather information based on his own observations or on those of other competent persons. For this purpose, the FAA considers certificated commercial pilots, airline transport pilots, dispatchers, air traffic controllers, and trained weather observers competent to provide weather information for Part 135 VFR operations.

Deviation

- **When the rule provides the Administrator to allow deviations from the stated rule.**
- **Principal Inspectors apply Handbook guidance in processing requests for deviation.**
 - Often the Handbook requires Headquarters concurrence

Exemption

- **Anyone may petition the Administrator for relief from a regulation.**
- **Evaluated on the basis of an equivalent level of safety to the conditions or requirements specified by the rule, and in the public interest.**
- **Grant, Partial Grant, Denial**

Existing Exemptions

- **6175**
 - HAI/AAMS
 - Original application
 - Partial Grant
- **3585**
 - People's Express, now ATA
 - Disregard Conditional Weather
 - Name a second alternate

Questions?



Hooper Harris

FAA AFS-250

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