Federal Aviation Regulations
&
NTSB 830

The following presentation highlights the important Federal Regulations that are applicable to our Part 135 Operation.

If you should have any questions at the conclusion of the presentation, please see your instructor for clarification.

At the end of this module, you will be required to complete a quiz to demonstrate your understanding of the material.

Cape Air
NANTUCKET AIRLINES

FAR Part 119:
Commuter Operations

Cape Air
NANTUCKET AIRLINES

119.3 Definitions

A **Commuter Operation**:

- is scheduled
- uses non-turbojet powered airplanes with a maximum passenger-seat configuration of 9 seats or less, excluding each crewmember seat, and a maximum payload capacity of 7,500 pounds or less
- operates with a frequency of at least five round trips per week on at least one route between two or more points according to the published flight schedules.

Cape Air
NANTUCKET AIRLINES

119.3 Definitions

A Passenger-carrying operation:

- Carries any person, unless the only persons on the aircraft are those identified in Part 135.85 (see later slide)
- May also carry cargo or mail in addition to passengers.

A Scheduled operation:

- Is any common carriage passenger-carrying operation for compensation or hire
- Is conducted by an air carrier or commercial operator
- the certificate holder or its representative offers in advance the departure location, departure time, and arrival location.
- does not include any passenger-carrying operation that is conducted as a public charter operation.

FAR Part 135

Cape Air
NANTUCKET AIRLINES

135.1 Applicability

The Part 135 regulations apply to:

- The commuter or on-demand operations of those who hold an Air Carrier Certificate or Operating Certificate under part 119 of this chapter.
- Each person employed or used by a certificate holder conducting operations under this part including the maintenance, preventative maintenance and alteration of an aircraft.
- The transportation of mail by aircraft conducted under a postal service contract awarded under 39 U.S.C. 5402c.

Cape Air
NANTUCKET AIRLINES

135.19 Emergency Operations

In an emergency, the certificate holder, including the pilot in command, may deviate from the regulations in order to ensure the safety of persons or property.

If a person deviates from the regulations to handle an emergency, he/she shall submit a report on the deviation to our FSDO office within 10 working days

Cape Air
NANTUCKET AIRLINES

135.63 Recordkeeping Requirements

We are responsible for preparing an accurate load manifest in duplicate before each takeoff. It must include:

- The number of passengers
- The total weight of the loaded aircraft;
- The maximum allowable takeoff weight for that flight;
- The center of gravity limits
- The center of gravity of the loaded aircraft (the actual cg is not necessary if the aircraft is loaded according to a loading schedule or other approved method that ensure the cg is within approved limits. In those cases, the manifest must indicate that the center of gravity is within limits)
- The registration number of the aircraft or flight number;
- The origin and destination
- Identification of crew members and their crew position assignments.

The pilot in command of an aircraft for which a load manifest must be prepared shall carry a copy of the completed load manifest in the aircraft to its destination. The certificate holder shall keep copies of completed load manifests for at least 30 days at its principal operations base or at another location used by it and approved by the Administrator.

Cape Air
NANTUCKET AIRLINES

135.65 Reporting Mechanical Irregularities

A maintenance log must be on board each aircraft for recording or deferring mechanical irregularities and their correction.

The pilot in command shall enter or have entered any mechanical irregularity that occurs during flight into the maintenance log.

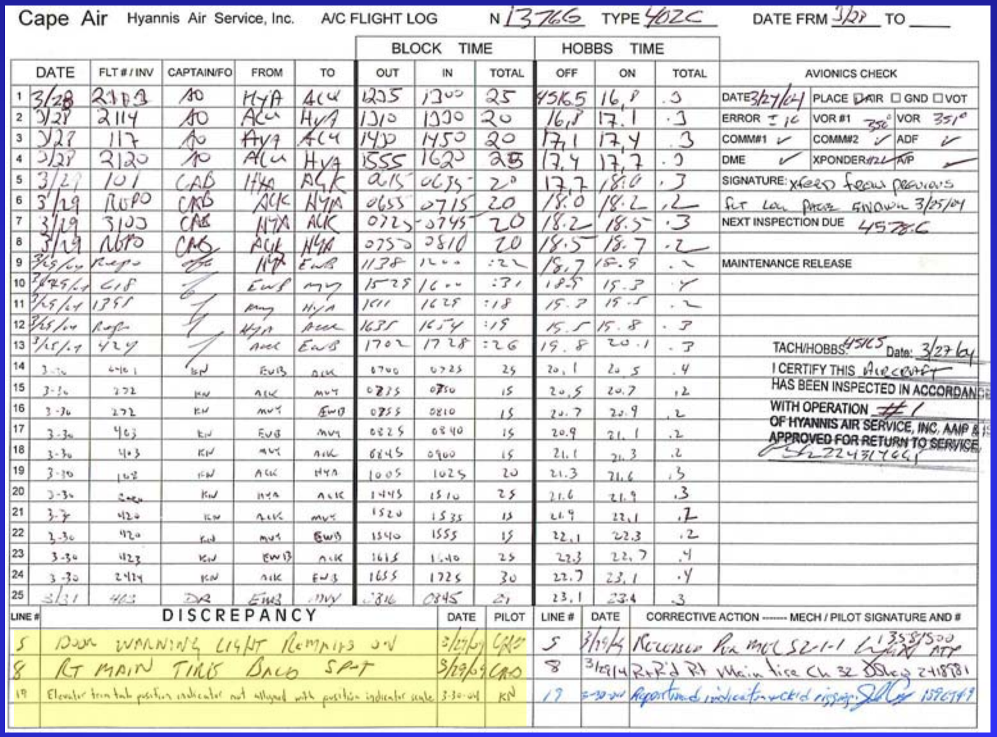
Before each flight, the PIC shall determine the status of each irregularity entered in the log.

Each person who takes corrective action or defers action concerning a failure or malfunction of an airframe, powerplant, propeller, rotor, or appliance, shall record the action taken in the log.

We must have a procedure for keeping copies of the aircraft maintenance log required in the aircraft for access by appropriate personnel.

Cape Air
NANTUCKET AIRLINES

These are pictures of the aircraft maintenance log



Cape Air Hyannis Air Service, Inc. A/C FLIGHT LOG N 1376G TYPE 402C DATE FRM 3/28 TO ____

	DATE	FLT # / INV	CAPTAIN/FO	FROM	TO	BLOCK TIME OUT	BLOCK TIME IN	BLOCK TIME TOTAL	HOBBS TIME OFF	HOBBS TIME ON	HOBBS TIME TOTAL
1	3/28	2103	AO	HYA	ACK	1235	1300	25	4516.5	16.8	.3
2	3/28	2114	AO	ACK	HYA	1310	1330	20	16.8	17.1	.3
3	3/28	117	AO	HYA	ACK	1430	1450	20	17.1	17.4	.3
4	3/28	2120	AO	ACK	HYA	1555	1620	25	17.4	17.7	.3
5	3/29	101	CAB	HYA	ACK	0615	0635	20	17.7	18.0	.3
6	3/29	RUPO	CAB	ACK	HYA	0655	0715	20	18.0	18.2	.2
7	3/29	3103	CAB	HYA	ACK	0725	0745	20	18.2	18.5	.3
8	3/29	NRPO	CAB	ACK	HYA	0750	0810	20	18.5	18.7	.2
9	3/25/04	Repo	[illegible]	HYA	EWB	1138	1200	:22	18.7	15.9	.2
10	3/25/04	618	[illegible]	EWB	MVY	1529	1600	:31	18.5	15.3	.4
11	3/25/04	1351	[illegible]	MVY	HYA	1611	1629	:18	15.3	15.5	.2
12	3/25/04	Repo	[illegible]	HYA	ACK	1635	1654	:19	15.5	15.8	.3
13	3/25/04	424	[illegible]	ACK	EWB	1702	1728	:26	19.8	20.1	.3
14	3-30	4401	KN	EWB	ACK	0700	0725	25	20.1	20.5	.4
15	3-30	272	KN	ACK	MVY	0735	0750	15	20.5	20.7	.2
16	3-30	272	KN	MVY	EWB	0755	0810	15	20.7	20.9	.2
17	3-30	403	KN	EWB	MVY	0825	0840	15	20.9	21.1	.2
18	3-30	403	KN	MVY	ACK	0845	0900	15	21.1	21.3	.2
19	3-30	148	KN	ACK	HYA	1005	1025	20	21.3	21.6	.3
20	3-30	[illegible]	KN	HYA	ACK	1445	1510	25	21.6	21.9	.3
21	3-30	420	KN	ACK	MVY	1520	1535	15	21.9	22.1	.2
22	3-30	420	KN	MVY	EWB	1540	1555	15	22.1	22.3	.2
23	3-30	423	KN	EWB	ACK	1615	1640	25	22.3	22.7	.4
24	3-30	2424	KN	ACK	EWB	1655	1725	30	22.7	23.1	.4
25	3/31	403	DR	EWB	MVY	0816	0845	21	23.1	23.4	.3

AVIONICS CHECK

DATE 3/27/04	PLACE ☒ AIR ☐ GND ☐ VOT	
ERROR ± 1°	VOR #1 350°	VOR 351°
COMM#1 ✓	COMM#2 ✓	ADF ✓
DME ✓	XPONDER #2 ✓	A/P ✓

SIGNATURE: xfeed from previous flt log page shown 3/25/04

NEXT INSPECTION DUE 4578.6

MAINTENANCE RELEASE

TACH/HOBBS 4516.5 Date: 3/27/04

I CERTIFY THIS Aircraft HAS BEEN INSPECTED IN ACCORDANCE WITH OPERATION #1 OF HYANNIS AIR SERVICE, INC. AAIP & IS APPROVED FOR RETURN TO SERVICE.

[illegible] 2224314661

LINE #	DISCREPANCY	DATE	PILOT	LINE #	DATE	CORRECTIVE ACTION ------- MECH / PILOT SIGNATURE AND #
5	DOOR WARNING LIGHT REMAINS ON	3/29/04	CAB	5	3/29/04	Released per MEL 52-1-1 [illegible] 1358/500 ATP
8	RT MAIN TIRE BALD SPOT	3/29/04	CAB	8	3/29/04	R+R'd Rt Main tire Ch 32 [illegible] 2418981
19	Elevator trim tab position indicator not aligned with position indicator scale	3-30-04	KN	19	3-30-04	Reported indicator rigging [illegible] 1596749

135.67 Reporting Potentially Hazardous Meteorological Conditions and Irregularities of Communications or Navigation Facilities

Whenever a pilot encounters a potentially hazardous meteorological condition or an irregularity in a ground communications or navigational facility in flight, the pilot shall notify an appropriate ground radio station as soon as practicable.

See FOM Chapter 4, Section 2 – "Company Pilot Reports"

Cape Air
NANTUCKET AIRLINES

135.69 Restriction or Suspension of Operations: Continuation of flight in an emergency

If a certificate holder or PIC knows of conditions, including airport and runway conditions, that are a hazard to safe operations, he/she shall restrict or suspend operations as necessary until those conditions are corrected.

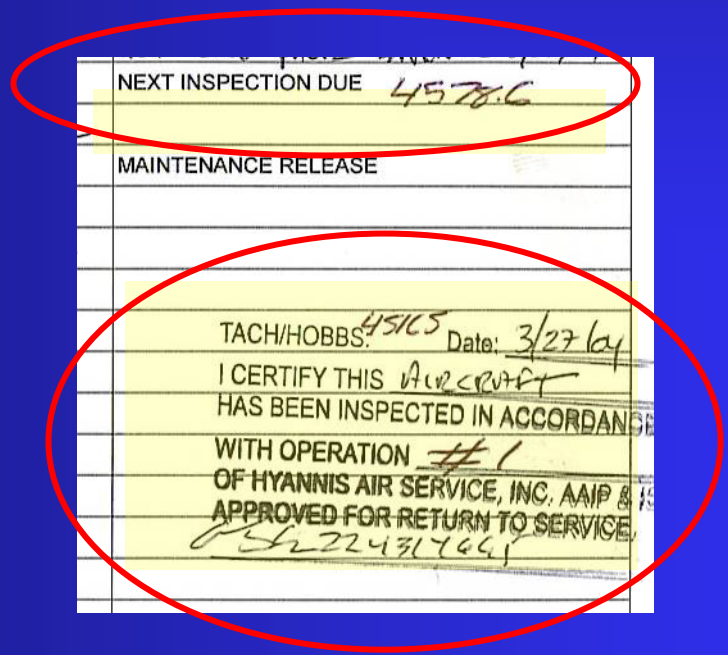
The PIC may not continue a flight in hazardous conditions unless he/she believes the conditions may be corrected by the estimated time of arrival or that there is no safer procedure.

If there is no safer procedure, continuing toward that airport is considered an emergency situation.

135.71 Airworthiness Check

The pilot in command may not begin a flight unless the pilot determines that the required airworthiness inspections have been made.

* *135.419 refers to the AAIP ("Phase" inspection)*



Cape Air NANTUCKET AIRLINES

135.73 Inspections and Tests

Each certificate holder and its employees shall allow the Administrator, at any time or place, to make inspections or tests (including en route inspections) to determine the holder's compliance with the Federal Aviation Act of 1958, applicable regulations, the certificate holder's operating certificate and operations specifications.

Cape Air
NANTUCKET AIRLINES

135.75 Inspectors Credentials: Admission to Pilots' Compartment or Forward Observer's Seat

Whenever an FAA inspector presents an Aviation Safety Inspector credential, FAA Form 110A, to the PIC, the inspector must be given free and uninterrupted access to the pilot compartment of that aircraft.

A forward observer's seat on the flight deck or forward passenger seat with headset or speaker must be provided for use by the Administrator during the en route inspections.

Cape Air
NANTUCKET AIRLINES

FAA Form 110A

The FAA Form 110A credential contains authorization for an inspector to issue FAA Form 8430-13, “Request for Access to Aircraft,” for access to U.S.-registered aircraft, along with a requirement that inspectors be given free and uninterrupted entry to the pilot compartment when performing official duties. These official duties include the conduct of cockpit en route inspections.

135.79 Flight Locating Requirements

We must have procedures established for locating each flight for which an FAA flight plan is not filed. The procedures must:

- Provide at least the information required to be included in a VFR flight plan
- Provide for timely notification of an FAA facility or search and rescue facility, if an aircraft is overdue or missing
- Provide the location, date, and estimated time for reestablishing radio or telephone communications, if the flight will operate in an area where communications cannot be maintained.

Flight locating information shall be retained until the completion of the flight.

135.83 Operating Information Required

The following, which the pilot must use, must be provided at the pilot station:

- A cockpit checklist.
- For multiengine aircraft or for aircraft with retractable landing gear, an emergency cockpit checklist
- Pertinent aeronautical charts.
- For IFR operations, each pertinent navigational en route, terminal area, and approach and letdown chart.
- For multiengine aircraft, one-engine-inoperative climb performance data

Each cockpit checklist must contain the following procedures:

- Before starting engines
- Before takeoff
- Cruise
- Before landing
- After landing
- Stopping engines

Each emergency cockpit checklist must contain the following procedures, as appropriate:

- Emergency operation of fuel, hydraulic, electrical, and mechanical systems.
- Emergency operation of instruments and controls.
- Engine inoperative procedures.
- Any other emergency procedures necessary for safety.

Cape Air
NANTUCKET AIRLINES

135.85 Carriage of Persons Without Compliance with the Passenger-Carrying Provisions of this Part

The following persons may be carried aboard an aircraft without complying with the passenger-carrying requirements of this part:

- **A crewmember or other employee of the certificate holder.**
- A person necessary for the safe handling of animals on the aircraft.
- A person necessary for the safe handling of hazardous materials
- A person performing duty as a security or honor guard accompanying a shipment made by or under the authority of the U.S. Government.
- **An authorized representative of the FAA conducting an en route inspection.**
- A person, authorized by the FAA, who is performing a duty connected with a cargo operation of the certificate holder.
- A DOD commercial air carrier evaluator conducting an en route evaluation.

Cape Air
NANTUCKET AIRLINES

What is a “repo?”

- A true reposition flight (“repo”) is a flight that has neither revenue *nor* passengers aboard. In other words, the only occupants on board fit into a category listed in FAR 135.85 (see previous slide), and the only materials aboard are COMAT (Company Materials).
- The only non-rev passengers on board may be company employees or FAA inspectors. Otherwise you are operating a passenger-carrying flight.
- Freight-only flights are not repos (manifest/W&B required, etc.); however, regulations governing “passenger-carrying” operations do not apply (SIC/autopilot required, runway lights, etc.).
- Excess luggage is considered freight *not* COMAT

Cape Air
NANTUCKET AIRLINES

135.87 Carriage of Cargo Including Carry-On Baggage

All cargo, including carry-on baggage, must be carried in an approved cargo rack, bin, or compartment, must be secured by an approved means and must be carried according to the following:

- Cargo is secured by a safety belt/tie-down that will keep it from shifting.
- Carry-on baggage is restrained so it doesn't move during turbulence.
- Cargo is packaged/covered to avoid injuring anyone.
- Cargo does not impose any load that exceeds the limitations of the seats or floor.
- Cargo does not block an emergency or regular exit or the aisle between the crew and the passenger compartment.
- Cargo does not block any passenger's view of the "seat belt" sign, "no smoking" sign or a required exit sign.
- Cargo is not carried directly above seated occupants.
- Cargo is stowed for takeoff and landing - it must not be held by the passenger.

The above rules do not apply to cargo-only operations as long as all occupants can reach an emergency or regular exit in case of an emergency.

Cape Air
NANTUCKET AIRLINES

135.91 Oxygen for medical use by passengers

Per Chapter 21 of the Hyannis Air Service General Operations Manual (GOM), we are not permitted to carry medical oxygen under any circumstances – despite any provisions in 135.91.

Cape Air
NANTUCKET AIRLINES

135.93 Autopilot: Minimum altitudes for use

Hyannis Air Service Flight Operations Manual restrictions apply (Chapter 5, Section 5, Para. J):
(These restrictions are at least as restrictive as 135.93)

	Minimum En Route Altitude for using autopilot (including Climb and Descent)	Minimum altitude for use of autopilot on an ILS	Minimum altitude for use of autopilot on a non-precision approach
Cessna Autopilots	1,200 feet AGL	Decision Altitude (DA)	400 feet AGL or MDA (whichever is greater)
King Autopilots	1,000 feet AGL	Decision Altitude (DA)	MDA
S-Tec Autopilots	1,000 feet AGL	Decision Altitude (DA)	MDA

Cape Air
NANTUCKET AIRLINES

135.100 Flight Crewmember Duties

Pilots may not perform any duties during a critical phase of flight except those required for the safe operation of the aircraft.

*Company required calls made for such non-safety related purposes as confirming passenger connections, announcements made to passengers promoting the air carrier or pointing out sights of interest, and filling out company payroll and related records are not required for the safe operation of the aircraft.

Pilots may not permit any activity during a critical phase of flight which could distract any pilot from or interfere with the performance of his/her duties.

*Activities such as eating meals, engaging in nonessential conversations within the cockpit and nonessential communications between the cabin and cockpit crews, and reading publications not related to the proper conduct of the flight are not required for the safe operation of the aircraft.

For the purposes of this section, critical phases of flight includes all ground operations involving taxi, takeoff and landing, and all other flight operations conducted below 10,000 feet, except cruise flight.

Note: Taxi is defined as “movement of an airplane under its own power on the surface of an airport.” (*Note: Includes “non-movement areas”*)

Cape Air
NANTUCKET AIRLINES

135.101 Second in command required under IFR

Except as provided in §135.105 (see next slide), no person may operate an aircraft carrying passengers under IFR unless there is a second in command in the aircraft.

Cape Air
NANTUCKET AIRLINES

135.105 Exception to Second in Command Requirement: Approval for Use of Autopilot System

Unless two pilots are required by this chapter for operations under VFR, a person may operate an aircraft without a SIC if it is equipped with an operative and approved autopilot system.

The autopilot must be capable of operating the aircraft controls to maintain flight and maneuver it about the three axes.

No person may serve as a PIC under IFR in a passenger-carrying operation unless that person has at least 100 hours PIC flight time in the make and model of aircraft to be flown and has met all other applicable requirements of this part.

Cape Air
NANTUCKET AIRLINES

135.115 Manipulation of Controls

No PIC may allow any person to manipulate the flight controls of an aircraft during flight conducted under this part, nor may any person manipulate the controls during such flight unless that person is:

- A pilot employed by the certificate holder and qualified in the aircraft; or
- An authorized FAA safety representative who has the permission of the pilot in command, is qualified in the aircraft and is checking flight operations

Cape Air
NANTUCKET AIRLINES

135.117 Briefing of passengers before flight

Before each takeoff, each PIC or other crewmember of an aircraft carrying passengers must orally brief them on the following:

- Smoking
  - -when, where, and under what conditions smoking is prohibited
  - -must include the statement that the FAA requires passenger compliance with the lighted passenger information signs, posted placards, areas designated for safety purposes as no smoking areas and crewmember instructions with regard to these items.

- The use of safety belts, including instructions on how to fasten and unfasten them.
  - - when, where, and under what conditions the safety belt must be fastened.
  - - must include the statement that the FAA requires passenger compliance with lighted passenger information signs and crewmember instructions concerning the use of safety belts.

- Location and means for opening the passenger entry door and emergency exits
- Location of survival equipment
- Location and operation of fire extinguishers

(continues next slide)

Cape Air
NANTUCKET AIRLINES

135.117 Briefing of Passengers Before Flight (cont.)

The oral briefing must be supplemented by printed cards which must be carried in the aircraft in locations convenient for the use of each passenger. The cards must:

- Be appropriate for the aircraft on which they are to be used
- Contain a diagram of, and method of operating, the emergency exits
- Contain other instructions necessary for the use of emergency equipment on board the aircraft
- include the sentence, “Final assembly of this aircraft was completed in [INSERT NAME OF COUNTRY].”

In addition, before each takeoff the PIC shall ensure that each person needing assistance to move to an exit in an emergency and that person's attendant, if any, have received a briefing as to the procedures to be followed in an evacuation

Cape Air
NANTUCKET AIRLINES

135.119 Prohibition Against Carriage of Weapons

No person may, while on board one of our aircraft, carry a deadly or dangerous weapon, either concealed or unconcealed. This section does not apply to officials or employees of a municipality or a State, or of the United States, who are authorized to carry arms.

Cape Air
NANTUCKET AIRLINES

135.121 Alcoholic Beverages

No person may drink any alcoholic beverage aboard an aircraft unless the airline operating the aircraft has served that beverage.

No person may board any aircraft if that person appears to be intoxicated.

Cape Air
NANTUCKET AIRLINES

135.128 Use of Safety Belts and Child Restraint Systems

Each person shall occupy an approved seat with a separate safety belt properly secured about him/her during movement on the surface, takeoff, and landing.

A single safety belt may not be used by more than one person over the age of two (2).

Notwithstanding the preceding requirements, a child may be held by an adult who is occupying an approved seat, provided the child has not reached his or her second birthday and the child does not occupy or use any restraining device.

(continues next slide)

Cape Air
NANTUCKET AIRLINES

135.128 Use of Safety Belts and Child Restraint Systems *(cont.)*

A child may occupy an approved child restraint system provided the following requirements are met:

The child is accompanied by a parent, guardian or attendant designated by the child's parent or guardian to attend to the safety of the child during the flight

The approved child restraint system bears one or more labels as follows:

- Seats manufactured to U.S. standards between January 1, 1981, and February 25, 1985, must bear the label: “This child restraint system conforms to all applicable Federal motor vehicle safety standards”;

- Seats manufactured to U.S. standards on or after February 26, 1985, must bear two labels:

  (1) “This child restraint system conforms to all applicable Federal motor vehicle safety standards”; and

  (2) “THIS RESTRAINT IS CERTIFIED FOR USE IN MOTOR VEHICLES AND AIRCRAFT” in red lettering;

Cape Air
NANTUCKET AIRLINES

135.144 Portable Electronic Devices

Portable electronic devices are not allowed on any U.S.-registered civil aircraft operating under this part except for the following:

- Portable voice recorders;
- Hearing aids;
- Heart pacemakers;
- Electric shavers; or
- Any other portable electronic device that we have determined will not cause interference with the navigation or communication system of the aircraft on which it is to be used.

Cape Air
NANTUCKET AIRLINES

135.149 Equipment Requirements: General

No person may operate an aircraft unless it is equipped with:

- A sensitive altimeter that is adjustable for barometric pressure;
- Heating or deicing equipment for each carburetor or, for a pressure carburetor, an alternate air source;

Cape Air
NANTUCKET AIRLINES

135.155 Fire Extinguishers: Passenger-Carrying Aircraft

No person may operate an aircraft carrying passengers unless it is equipped with hand fire extinguishers meeting the following requirements:

- The type and quantity of extinguishing agent must be suitable for the kinds of fires likely to occur;
- At least one hand fire extinguisher must be provided and *conveniently located on the flight deck* for use by the flight crew

Cape Air
NANTUCKET AIRLINES

135.159 Equipment requirements: Carrying passengers under VFR at night or under VFR over-the-top conditions

No person may operate an aircraft carrying passengers under VFR at night or under VFR over-the-top, unless it is equipped with:

- An anti-collision light system;
- Instrument lights to make all instruments, switches, and gauges easily readable, the direct rays of which are shielded from the pilots' eyes; and
- A flashlight having at least two size "D" cell batteries.

Cape Air
NANTUCKET AIRLINES

135.163 Equipment Requirements: Aircraft Carrying Passengers Under IFR

No person may operate an aircraft under IFR, carrying passengers, unless it has:

- A vertical speed indicator
- A free-air temperature indicator
- A heated pitot tube for each airspeed indicator;
- A power failure warning device or vacuum indicator to show the power available for gyroscopic instruments from each power source;
- An alternate source of static pressure for the altimeter and the airspeed and vertical speed indicators;

(continues next slide)

135.163 Equipment Requirements: Aircraft Carrying Passengers Under IFR (cont.)

No person may operate an aircraft under IFR, carrying passengers, unless it has:

- For multi-engine aircraft, at least two generators or alternators each of which is on a separate engine, of which any combination of one-half of the total number are rated sufficiently to supply the electrical loads of all required instruments and equipment necessary for safe emergency operation of the aircraft
- Two independent sources of energy (with means of selecting either) of which at least one is an engine-driven pump or generator. Each energy source must be able to drive all required gyroscopic instruments powered by that particular source and installed, so that failure of one instrument or source, does not interfere with the energy supply to the remaining instruments or the other energy source.
- For multi-engine aircraft, each engine-driven source of energy must be on a different engine.

135.165 Radio and Navigational Equipment: Extended Overwater or IFR Operations

A multiengine airplane in a commuter operation under IFR or in extended overwater operations must have at least the following radio communication and navigational equipment:

- Two (2) transmitters,
- Two (2) microphones,
- Two (2) headsets or one (1) headset and one (1) speaker
- One (1) marker beacon receiver
- Two (2) independent receivers for navigation, and
- Two (2) independent receivers for communications.

This equipment must be capable of transmitting to/receiving from at least one ground facility from/to any place on the route to be flown.

Cape Air
NANTUCKET AIRLINES

135.171 Shoulder Harness Installation at Flight Crewmember Stations

Pilots must fasten shoulder harnesses during takeoff and landing.

The shoulder harness may be unfastened if the pilot cannot perform the required duties with the shoulder harness fastened.

Cape Air
NANTUCKET AIRLINES

135.175 Airborne Weather Radar Equipment Requirements

Airborne radar or thunderstorm detection equipment is not required on the Cessna 402c.

Cape Air
NANTUCKET AIRLINES

135.179 Inoperable Instruments and Equipment

A pilot may not depart in an aircraft with inoperable instruments or equipment installed unless the aircraft is operated under all applicable conditions and limitations contained in the Minimum Equipment List and the operations specifications authorizing use of the Minimum Equipment List.

Cape Air
NANTUCKET AIRLINES

135.185 Empty Weight and Center of Gravity: Currency Requirement

No person may operate a multiengine aircraft unless the current empty weight and center of gravity are calculated from values established by actual weighing of the aircraft within the preceding 36 calendar months.

Cape Air
NANTUCKET AIRLINES

135.203 VFR: Minimum Altitudes

Except when necessary for takeoff and landing, no person may operate under VFR:

- During the day, below 500 feet above the surface or less than 500 feet horizontally from any obstacle; or
- At night in non-mountainous terrain, at an altitude less than 1,000 feet above the highest obstacle within a horizontal distance of 5 miles from the course intended to be flown; or
- At night in designated mountainous terrain, less than 2,000 feet above the highest obstacle within a horizontal distance of 5 miles from the course intended to be flown

135.205 VFR: Visibility Requirements

No person may operate an airplane under VFR in Class G airspace when the ceiling is less than 1,000 feet unless flight visibility is at least 2 miles.

Cape Air
NANTUCKET AIRLINES

135.205 VFR: Visibility Requirements (cont.)

You are conducting an ILS approach to PVC. The aircraft breaks out into VMC in Class G airspace under a 900’ overcast. The reported visibility and flight visibility is 1.5 miles. Can this aircraft cancel IFR with Cape Approach while airborne?

Answer: NO. A visibility of two miles is required in Class G airspace.

Cape Air
NANTUCKET AIRLINES

135.209 VFR: Fuel Supply

No person may fly under VFR unless, considering wind and forecast weather conditions, the aircraft has enough fuel to fly to the first point of intended landing and, assuming normal cruising fuel consumption

- During the day, to fly after that for at least 30 minutes; or
- At night, to fly after that for at least 45 minutes

Cape Air NANTUCKET AIRLINES

135.213 Weather Reports and Forecasts

Whenever a pilot 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 FAA.

However, for operations under VFR, the pilot in command may, if such a report is not available, use weather information based on his/her own observations or on those of another person competent to supply appropriate observations.

Cape Air
NANTUCKET AIRLINES

135.215 IFR: Operating limitations

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:

- Conduct an instrument approach to an airport for which there is in use a current approved standard or special instrument approach procedure; or
- Climb into controlled airspace during an approved missed approach procedure; or
- Make an IFR departure from an airport having an approved instrument approach procedure.

Cape Air
NANTUCKET AIRLINES

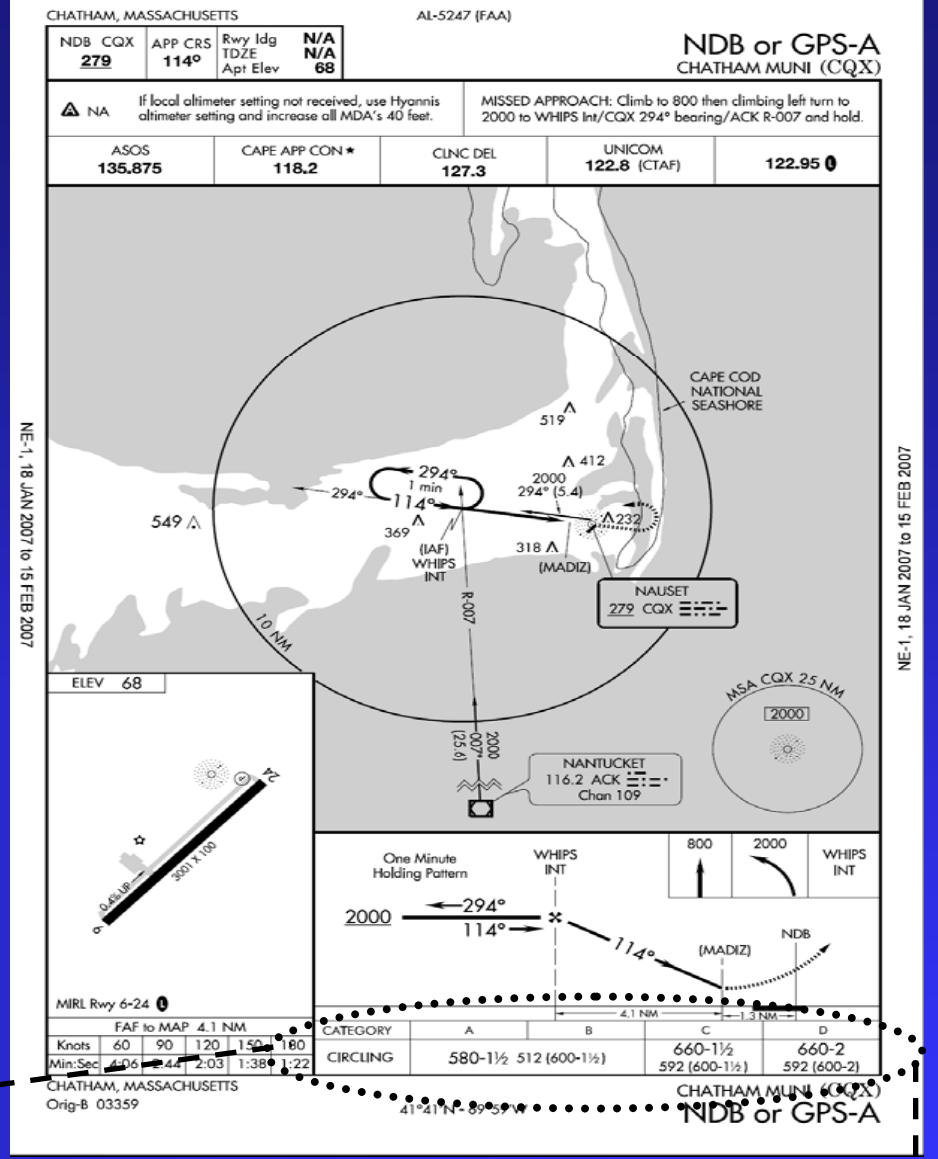
135.217 IFR: Takeoff Limitations

No pilot may depart 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

Cape Air
NANTUCKET AIRLINES

- If the visibility were being reported as 1 mile @ CQX, could we legally depart? How?

Answer: YES, provided we listed a takeoff alternate.



			4.1 NM	1.3 NM
CATEGORY	A	B	C	D
CIRCLING	580-1½ 512 (600-1½)		660-1½ 592 (600-1½)	660-2 592 (600-2)

135.219 IFR: Destination Airport Weather Minimums

No pilot may depart 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

Due to 9K's short route structure, the METAR is also controlling and is far more likely to indicate weather below minimums.

Cape Air
NANTUCKET AIRLINES

135.223 IFR: Alternate Airport Requirements

No pilot may fly in IFR conditions unless the aircraft carries enough fuel (considering weather reports or forecasts or any combination of them) to:

- Complete the flight to the first airport of intended landing;
- Fly from that airport to the alternate airport; and
- Fly after that for 45 minutes at normal cruising speed

(continues next slide)

Cape Air NANTUCKET AIRLINES

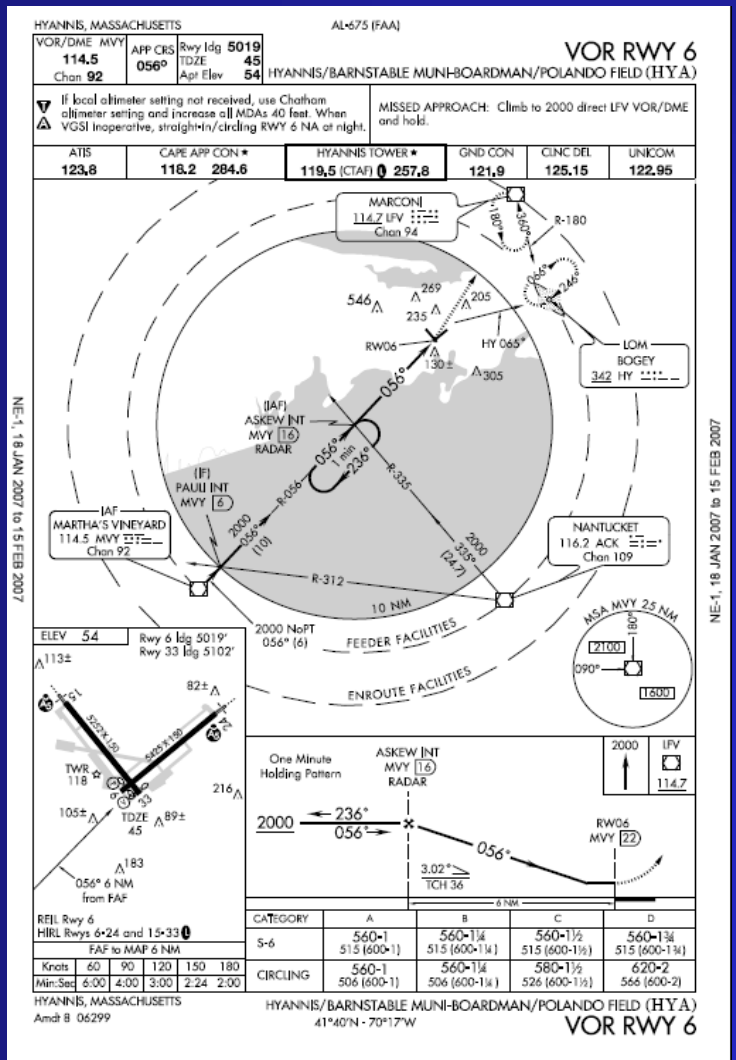
135.223 IFR: Alternate Airport Requirements (cont.)

An alternate airport is not required if there is 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:

- The ceiling will be at least 1,500 feet above the *lowest circling approach MDA*; or
- 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
- 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.

Cape Air
NANTUCKET AIRLINES

What weather would allow “no alternate required” @ HYA if the VOR 6 approach were in use?



CATEGORY	A	B	C	D
S-6	560-1 515 (600-1)	560-1¼ 515 (600-1¼)	560-1½ 515 (600-1½)	560-1¾ 515 (600-1¾)
CIRCLING	560-1 506 (600-1)	560-1¼ 506 (600-1¼)	580-1½ 526 (600-1½)	620-2 566 (600-2)

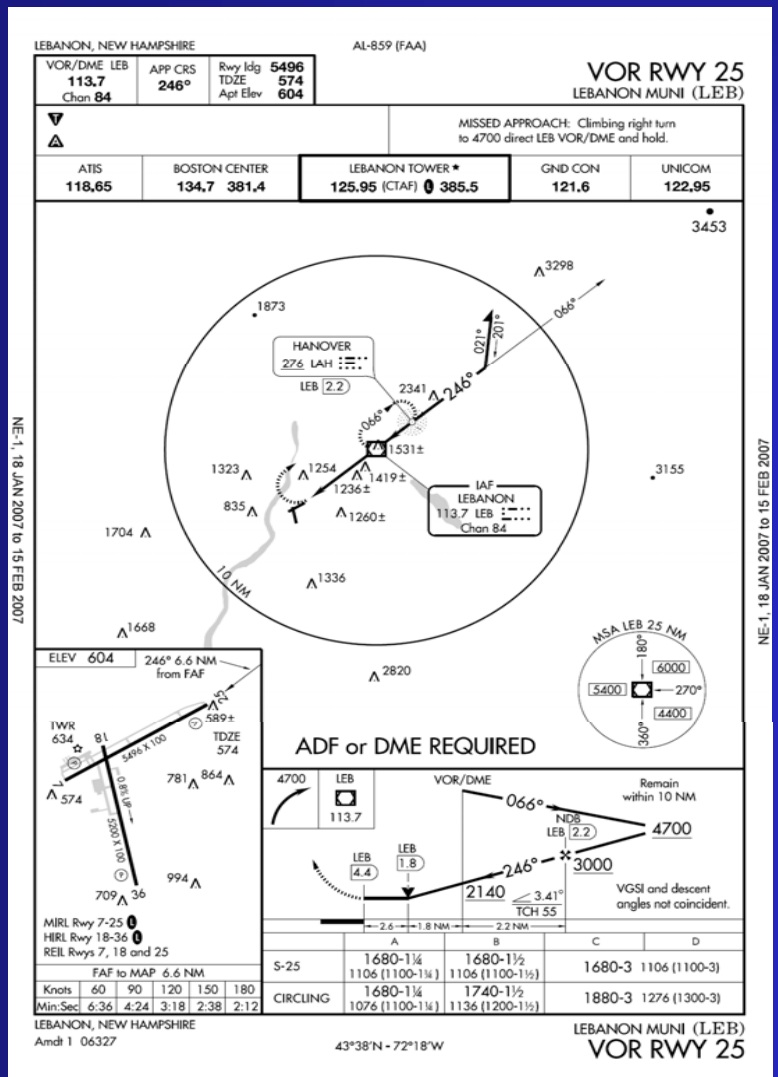
Answer: 2100 feet ceiling and 3 ½ miles visibility

1500’ + 506’ AGL (the lowest Category B circling MDA (HAA) @ HYA) = 2006, rounded to 2100’.

1 ¼ + 2 = 3 ¼, rounded to 3 ½ miles

Cape Air NANTUCKET AIRLINES

What weather would allow “no alternate required” @ LEB if the VOR 25 approach were in use?



	A	B	C	D
S-25	1680-1¼ 1106 (1100-1¼)	1680-1½ 1106 (1100-1½)	1680-3	1106 (1100-3)
CIRCLING	1680-1¼ 1076 (1100-1¼)	1740-1½ 1136 (1200-1½)	1880-3	1276 (1300-3)

Answer = 3 ½ miles visibility and 2700’ ceiling

1 ½ + 2 = 3 ½ miles

1500’ + 1136’ (1136’ AGL represents the lowest Category B circling MDA (HAA) @ LEB.) = 2636’, rounded to 2700’

Cape Air
NANTUCKET AIRLINES

135.225 IFR: Takeoff, Approach and Landing Minimums

No pilot may begin an instrument approach procedure to an airport unless:

- 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

- 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.

(continues next slide)

Cape Air NANTUCKET AIRLINES

135.225 IFR: Takeoff, Approach and Landing Minimums (cont.)

If takeoff minimums are specified for the take-off airport, a pilot may not depart under IFR when the weather conditions are less than the takeoff minimums specified for the takeoff airport or in the certificate holder's operations specifications.

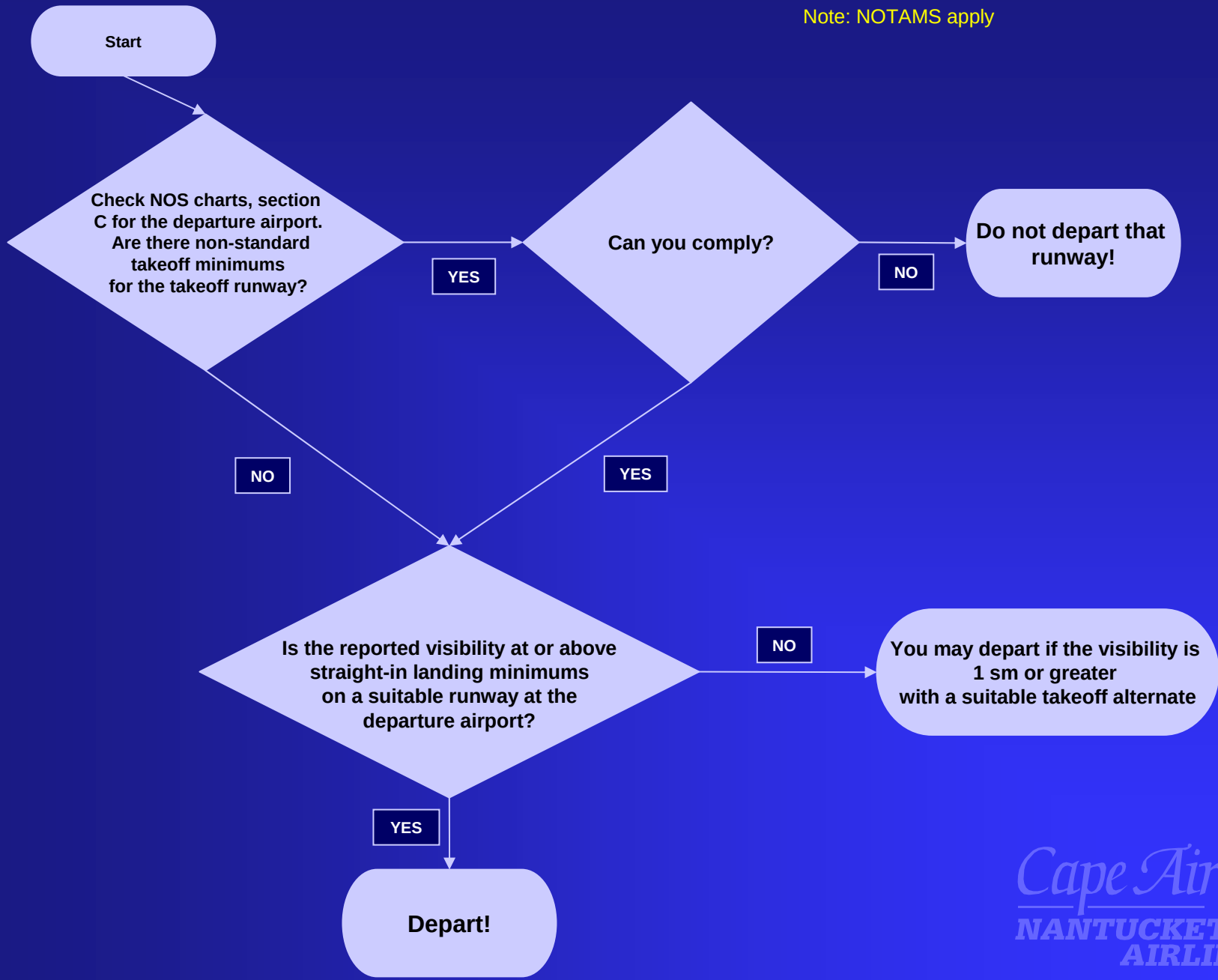
At airports where straight-in instrument approach procedures are authorized, a pilot may depart under IFR when the weather conditions reported by the facility are equal to or better than the lowest straight-in landing minimums, unless otherwise restricted, if:

- 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
- The associated ground facilities upon which the landing minimums are predicated and the related airborne equipment are in normal operation; and
- The certificate holder has been approved for such operations (see Ops Specs)

The following slide illustrates the decision-making process when determining Takeoff Minimums.

IFR Takeoff Minimum Determination

Note: NOTAMS apply



Cape Air
NANTUCKET AIRLINES

135.227 Icing Conditions: Operating Limitations

No pilot may take off an aircraft that has frost, ice, or snow adhering to any propeller, windshield, wing, stabilizing or control surface, to a powerplant installation, or to an airspeed, altimeter, rate of climb, or flight attitude instrument system

No pilot may take off an airplane any time conditions are such that frost, ice, or snow may reasonably be expected to adhere to the airplane unless the pilot has completed all applicable training and unless one of the following requirements is met:

A pretakeoff contamination check, that has been established by the certificate holder and approved by the FAA for the specific airplane type, has been completed within 5 minutes prior to beginning takeoff. A pretakeoff contamination check is a check to make sure the wings and control surfaces are free of frost, ice, or snow.

(continues next slide)

135.227 Icing Conditions: Operating Limitations (cont.)

Except for an airplane that has ice protection provisions that meet specific requirements (certain 9K aircraft do), no pilot may fly under IFR into known or forecast light or moderate icing conditions unless they receive a PIREP indicating that there is no icing reported greater than trace intensity.

No 9k pilot may fly an aircraft into known or forecast severe icing conditions.

(continues next slide)

Cape Air NANTUCKET AIRLINES

135.229 Airport Requirements

We may not use any airport unless it is adequate for the proposed operation, considering such items as size, surface, obstructions, and lighting.

A pilot cannot take off from or land at an airport at night carrying passengers unless:

- The pilot has determined the wind direction from an illuminated wind direction indicator or local ground communications or, in the case of takeoff, that pilot's personal observations; and

- The limits of the area to be used for landing or takeoff are clearly shown by boundary or runway marker lights;

Cape Air
NANTUCKET AIRLINES

135.244 Operating Experience

No person may serve as PIC of a particular make and basic model of an aircraft and in that crewmember position operated in a commuter operation unless he/she has completed, prior to designation as pilot in command the following operating experience in each make and basic model of aircraft to be flown:

- Aircraft multiengine, reciprocating engine-powered—15 hours.
- Operating experience must be acquired in flight during commuter passenger-carrying operations under this part.

Cape Air
NANTUCKET AIRLINES

135.247 Pilot Qualifications: Recent Experience

A person cannot serve as pilot in command of an aircraft carrying passengers unless, within the preceding 90 days, that person has:

- Made three takeoffs and three landings as the sole manipulator of the flight controls in an aircraft of the same category and class and, if a type rating is required, of the same type in which that person is to serve; or

- For operation during the period beginning 1 hour after sunset and ending 1 hour before sunrise (as published in the Air Almanac), made three takeoffs and three landings during that period as the sole manipulator of the flight controls in an aircraft of the same category and class and, if a type rating is required, of the same type in which that person is to serve.

135.263 Flight Time Limitations and Rest Requirements

A pilot is not considered to have exceeded flight time limitations if the flights to which he is assigned normally terminate within the limitations but, due to circumstances beyond the control of the certificate holder or flight crewmember (such as adverse weather conditions), are not at the time of departure expected to reach their destination within the planned flight time. *

* See FOM Chapter 4, Section 7, Subparagraph A(3)

Cape Air
NANTUCKET AIRLINES

135.265 Flight Time Limitations and Rest Requirements: Scheduled Operations

A pilot may not be scheduled, nor may he/she accept an assignment, for flight time in scheduled operations or in other commercial flying if that crewmember's total flight time in all commercial flying will exceed the following:

- 1,200 hours in any calendar year.
- 120 hours in any calendar month.
- 34 hours in any 7 consecutive days.
- 8 hours during any 24 consecutive hours for a flight crew consisting of one pilot.

* See FOM Chapter 4, Section 7, Subparagraphs A(1) and A(2)

(continues next slide)

Cape Air
NANTUCKET AIRLINES

135.265 Flight time Limitations and Rest Requirements: Scheduled operations (cont.)

A pilot may not be scheduled, nor may he/she accept an assignment, for flight time during the 24 consecutive hours preceding the scheduled completion of any flight segment without a scheduled rest period during that 24 hours of at least the following:

- 9 consecutive hours of rest for less than 8 hours of scheduled flight time.
- 10 consecutive hours of rest for 8 or more but less than 9 hours of scheduled flight time

A pilot may be scheduled for less than the rest required above or may reduce a scheduled rest under the following conditions:

- A rest may be scheduled for or reduced to a minimum of 8 hours if the flight crewmember is given a rest period of at least 10 hours that must begin no later than 24 hours after the commencement of the reduced rest period.
- A rest may be scheduled for or reduced to a minimum of 8 hours if the flight crewmember is given a rest period of at least 11 hours that must begin no later than 24 hours after the commencement of the reduced rest period.

Each pilot engaged in scheduled air transportation shall be relieved from all further duty *for at least 24 consecutive hours during any 7 consecutive days*.

* See FOM Chapter 4, Section 7, Paragraph B

135.297 Pilot in Command: Instrument Proficiency Check Requirements

A person may not serve as PIC of an aircraft under IFR unless the pilot has passed an instrument proficiency check since the beginning of the 6th calendar month before that service.

A pilot may not use any type of precision instrument approach under IFR unless he/she has satisfactorily demonstrated that type of approach since the beginning of the 6th calendar month before that use.

A pilot may not use any type of non-precision instrument approach under IFR unless he/she has satisfactorily demonstrated that type of approach since the beginning of the 6th calendar month before that use.

Cape Air
NANTUCKET AIRLINES

135.301 Crewmember: Tests and Checks, Grace Provisions, Training to Accepted Standards

If a pilot completes a test or flight check in the calendar month *before* or *after* the calendar month in which it is required, that crewmember is considered to have completed the test or check *in* the calendar month in which it is required.

Cape Air
NANTUCKET AIRLINES

NTSB Part 830

NTSB Part 830 includes the requirements for notification and reporting of aircraft accidents or incidents, overdue aircraft and preservation of aircraft wreckage, mail, cargo and records.

Cape Air
NANTUCKET AIRLINES

NTSB 830.2 Definitions

Aircraft Accident – an occurrence associated with the operation of an aircraft, which takes place between the time any person boards the aircraft with the intention of flight and in which a person is killed or suffers serious injury or the aircraft is substantially damaged.

Aircraft Incident – Any occurrence that does not meet the definition of an accident and could affect the safety of operations.

Fatal Injury – Death occurs within 30 days of the accident.

Serious injury – requires hospitalization of at least 48 hours within 7 days of the incident, results in the fracture of any bone (except fingers, toes or nose), causes severe nerve or tendon damage or involves any internal organ, 2nd or 3rd degree burns or any burns affecting more than 5% of the body.

Substantial Damage – Damage that adversely affects the structural strength, performance or flight characteristics and which would normally require major repair or replacement (landing gear, flaps and some types of propeller damage are specifically excluded).

NTSB 830.5 Notification

The operator of an aircraft must immediately notify the nearest NTSB field office when an aircraft accident or certain incidents occur.

NTSB 830.10 Preservation

The operator of an aircraft involved in an accident is responsible for preserving and not moving, to the extent possible, any aircraft wreckage, cargo and mail about the aircraft until the NTSB takes custody of it. This rule does not apply to wreckage, cargo and mail that must be moved to remove injured or fatally wounded passengers.

Cape Air
NANTUCKET AIRLINES

Thank you for your attention during this presentation.

Please see your instructor to obtain a copy of the quiz.

Cape Air
NANTUCKET AIRLINES