

Area of Operation IV. Takeoffs, Landings, and Go-Arounds

Task A. Normal Takeoff and Climb

References: AIM; FAA-H-8083-2, FAA-H-8083-3, FAA-H-8083-23, FAA-H-8083-25; POH/AFM

Objective: To determine the applicant exhibits satisfactory knowledge, risk management, and skills associated with normal takeoff, climb operations, and rejected takeoff procedures.

Note: *If a crosswind condition does not exist, the applicant's knowledge of crosswind elements must be evaluated through oral testing.*

Knowledge: The applicant demonstrates understanding of:

- CA.IV.A.K1 Effects of atmospheric conditions, including wind, on takeoff and climb performance.
- CA.IV.A.K2 Best angle of climb speed (V_x) and best rate of climb speed (V_y).
- CA.IV.A.K3 Appropriate airplane configuration.

Risk

Management: The applicant is able to identify, assess, and mitigate risk associated with:

- CA.IV.A.R1 Selection of runway or takeoff path based on aircraft performance and limitations, available distance, and wind.
- CA.IV.A.R2 Effects of:
 - CA.IV.A.R2a a. Crosswind
 - CA.IV.A.R2b b. Windshear
 - CA.IV.A.R2c c. Tailwind
 - CA.IV.A.R2d d. Wake turbulence
 - CA.IV.A.R2e e. Takeoff surface/condition
- CA.IV.A.R3 Abnormal operations, including planning for:
 - CA.IV.A.R3a a. Rejected takeoff
 - CA.IV.A.R3b b. Potential engine failure in takeoff/climb phase of flight
- CA.IV.A.R4 Collision hazards.
- CA.IV.A.R5 Low altitude maneuvering, including stall, spin, or controlled flight into terrain (CFIT).
- CA.IV.A.R6 Distractions, task prioritization, loss of situational awareness, or disorientation.
- CA.IV.A.R7 Runway incursion.

Skills: The applicant exhibits the skill to:

- CA.IV.A.S1 Complete the appropriate checklist(s).
- CA.IV.A.S2 Make radio calls as appropriate.
- CA.IV.A.S3 Verify assigned/correct runway or takeoff path.
- CA.IV.A.S4 Determine wind direction with or without visible wind direction indicators.

CA.IV.A.S5	Position the flight controls for the existing wind, if applicable.
CA.IV.A.S6	Clear the area, taxi into takeoff position, and align the airplane on the runway centerline (ASEL, AMEL) or takeoff path (ASES, AMES).
CA.IV.A.S6a	a. Retract the water rudders, as appropriate (ASES, AMES)
CA.IV.A.S7	Advance the throttle smoothly to takeoff power and confirm proper engine and flight instrument indications prior to rotation.
CA.IV.A.S7a	a. Establish and maintain the most efficient planing/lift-off attitude, and correct for porpoising or skipping (ASES, AMES)
CA.IV.A.S8	Avoid excessive water spray on the propeller(s) (ASES, AMES).
CA.IV.A.S9	Rotate and lift off at the recommended airspeed and accelerate to V_Y .
CA.IV.A.S10	[Archived]
CA.IV.A.S11	Establish a pitch attitude to maintain the manufacturer's recommended speed or V_Y ± 5 knots.
CA.IV.A.S12	Configure the airplane in accordance with manufacturer's guidance.
CA.IV.A.S13	Maintain V_Y ± 5 knots to a safe maneuvering altitude.
CA.IV.A.S14	Maintain directional control and proper wind-drift correction throughout takeoff and climb.
CA.IV.A.S15	Comply with noise abatement procedures, as applicable.

Task B. Normal Approach and Landing

References: AIM; FAA-H-8083-2, FAA-H-8083-3, FAA-H-8083-23, FAA-H-8083-25; POH/AFM

Objective: To determine the applicant exhibits satisfactory knowledge, risk management, and skills associated with normal approach and landing with emphasis on proper use and coordination of flight controls.

Note: If a crosswind condition does not exist, the applicant's knowledge of crosswind elements must be evaluated through oral testing.

Knowledge: The applicant demonstrates understanding of:

CA.IV.B.K1	A stabilized approach, including energy management concepts.
CA.IV.B.K2	Effects of atmospheric conditions, including wind, on approach and landing performance.
CA.IV.B.K3	Wind correction techniques on approach and landing.

Risk

Management: The applicant is able to identify, assess, and mitigate risk associated with:

CA.IV.B.R1	Selection of runway/landing surface, approach path, and touchdown area based on pilot capability, aircraft performance and limitations, available distance, and wind.
CA.IV.B.R2	Effects of:
CA.IV.B.R2a	a. Crosswind
CA.IV.B.R2b	b. Windshear
CA.IV.B.R2c	c. Tailwind