PRIVATE PILOT

IV. AREA OF OPERATION: TAKEOFFS, LANDINGS AND GO-AROUNDS
B. TASK: NORMAL AND CROSSWIND APPROACH AND LANDING

OBJECTIVE

To determine that the applicant:

1. Exhibits knowledge of the elements related to a normal and crosswind approach and landing.
2. Adequately surveys the intended landing area (ASES).
3. Considers the wind conditions, landing surface and obstructions, them selects a suitable touchdown point.
4. Establishes the recommended approach and landing configuration and airspeed, and adjusts pitch attitude and power as required.
5. Maintains a stabilized approach and recommended airspeed, or in its absence, not more than 1.3 V_{SO} +10/-5 knots with wind gust factor applied.
6. Makes smooth, timely and correct control application during the roundout and touchdown.
7. Contacts the water at the proper pitch attitude (ASES).
8. Touches down smoothly at approximate stalling speed (ASEL).
9. Touches down at or within 400 feet (120 meters) beyond a specified point, with no wind drift, with the airplane's longitudinal axis aligned with and over the runway center / landing path.
10. Maintains crosswind correction and directional control throughout the approach and landing sequence.
11. Completes the appropriate checklist.

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

ELEMENTS

1. Know the predicted landing performance figures from the FAA-Approved AFM/POH.
2. Be familiar with airport layout, including runway lengths and hold short operations.
3. Use FAA-Approved AFM/POH landing configurations.
4. Use Before Landing Checklist.
5. Select runway based on wind for slowest groundspeed and shortest groundroll.
6. Announce intentions on CTAF or receive landing clearance from the tower controller.
7. Enter traffic pattern by the approved method.
8. Clear the landing path of other aircraft.
9. Turn onto base leg with reduced power and airspeed approximately 1.4V_{SO}.
10. Turn onto final approach with enough time to ensure a stabilized descent with a wings-level (crab) angle allowing the airplane's ground track to be aligned with the runway centerline.
11. On short final, transition to a wing-low (sideslip) attitude, aligning the airplane centerline with the runway centerline, by lowering the upwind wing (upwind aileron up) and applying opposite rudder (rudder deflected downwind).
12. Maintain drift control with aileron and heading control with rudder.
13. For strong crosswinds, reducing the amount of flap deflection and increasing approach speed can be helpful in maintaining heading control.
14. If the crosswind is so strong that maximum rudder authority cannot maintain runway heading, another runway (or airport) more aligned with the wind must be used.
15. Upon roundout (flare), gradually increase the deflection of the rudder and aileron to maintain the proper amount of drift correction and to keep the upwind wing down.
16. Land on the upwind wheel and gradually lower the nosewheel. Continue to increase the deflection of the rudder and aileron to maintain heading and drift correction.
17. As the ground roll slows and control surface deflections are maximized, lower the downwind wheel. Drift will be counteracted by ground friction on the tires.
18. Continue aileron and rudder wind drift corrections while taxiing off the runway.
19. Complete the After Landing Checklist.

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COMMON ERRORS

a. Improper use of landing performance data and limitations.
b. Failure to establish approach and landing configuration at appropriate time or in proper sequence.
c. Failure to maintain a stabilized slip.
d. Inappropriate removal of hand from throttle.
e. Improper procedure during transition from the slip to the touchdown.
f. Poor directional control after touchdown.
g. Improper use of brakes (ASEL).

REFERENCES

1. FAA-H-8083-3A, Airplane Flying Handbook, Chapter 8.
2. POH / AFM, Pilot Operating Handbook / FAA-Approved Airplane Flight Manual.