

SOFT FIELD APPROACH AND LANDING (Commercial)

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WHAT: Landing on fields that are rough or have soft surfaces, such as snow, sand, mud, or tall grass requires unique techniques.

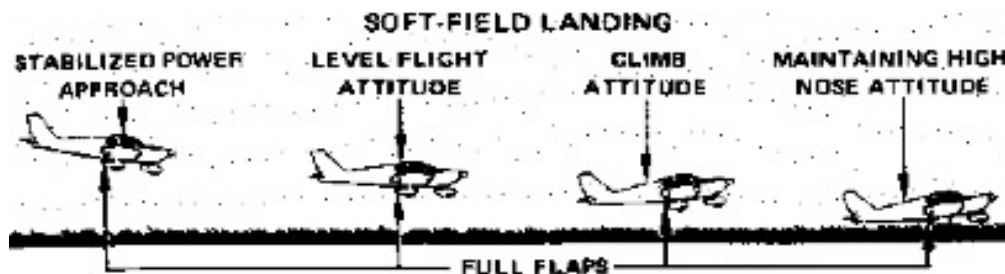
WHY: *When landing on such surfaces, the pilot must control the airplane in a manner that the wings support the weight of the airplane as long as practical, to minimize drag and stresses imposed on the landing gear by the rough or soft surface.*

HOW:

- 1) Set up the aircraft as you would do for a normal landing.
- 2) Fly the exact same pattern; reducing power, lowering flaps, and turning to the different pattern legs as you normally would.
- 3) The pilot should use full flaps and fly the airplane at **the recommended soft field approach speed OR $1.3 \times V_{s0}$** to allow for a minimum touchdown speed.
- 4) Use approximately 1100-1300 RPM for the roundout, flare, and touchdown.
- 5) The pilot will hold the aircraft off the ground as long as possible, bleeding off speed until the aircraft touches down at a minimum speed and with minimum sink rate.
- 6) After touchdown, reduce power to idle and hold the nose off the ground as long as possible.
- 7) Do not use brakes, as this will force the nose onto the soft or rough surface.
- 8) Leave the flaps extended throughout the landing roll. This will keep the weight of the airplane supported by the wings.

Key Elements:

- 1) Fly the manufacturer's recommended speed, or in its absence, $1.3 \times V_{s0}$.
- 2) Use power in the flare and touchdown to achieve a minimum rate of descent.
- 3) Use full flaps, if wind conditions permit, to allow a minimum airspeed at touchdown.



COMMON ERRORS:

- 1) Improper initial positioning of the flight controls or wing flaps.
- 2) Allowing the airplane to stop on the takeoff surface prior to initiating takeoff.
- 3) Improper power application.
- 4) Inappropriate removal of hand from throttle.
- 5) Poor directional control.
- 6) Improper use of brakes.
- 7) Improper pitch attitude during lift-off.
- 8) Setting back to takeoff surface after becoming airborne.
- 9) Failure to establish and maintain proper climb configuration and airspeed.
- 10) Drift during climb.
- 11) Not completing the appropriate checklists.

COMMERCIAL PILOT COMPLETION STANDARDS:

D. TASK: SOFT-FIELD APPROACH AND LANDING (ASEL)

REFERENCES: FAA-H-8083-3; POH/AFM.

Objective. To determine that the applicant:

1. Exhibits knowledge of the elements related to a soft-field approach and landing.
2. Considers the wind conditions, landing surface, and obstructions, and selects the most suitable touchdown area.
3. Establishes the recommended approach and landing configuration and airspeed; adjusts pitch attitude and power as required.
4. Maintains a stabilized approach and recommended airspeed, or in its absence, not more than $1.3 V_{SO}$, ± 5 knots, with wind gust factor applied.
5. Makes smooth, timely, and correct control application during the roundout and touchdown.
6. Touches down softly, with no drift, and with the airplane's longitudinal axis aligned with the runway/landing path.
7. Maintains crosswind correction and directional control throughout the approach and landing sequence.
8. Maintains proper position of the flight controls and sufficient speed to taxi on the soft surface.
9. Completes appropriate checklist.