ACS HELICOPTER MANEUVER SERIES · 13 OF 24

Shallow Approach and Running/Roll-On Landing

Area of Operation V — Takeoffs, Landings, and Go-Arounds

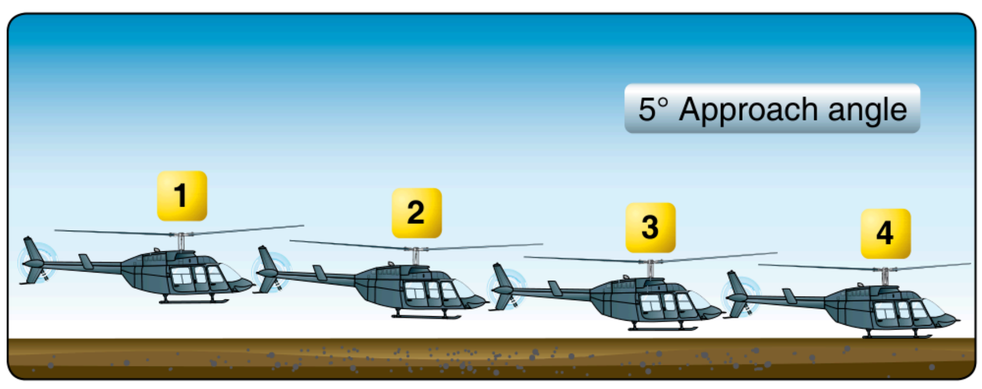
Private Pilot task PH.V.H **Commercial Pilot task** CH.V.F

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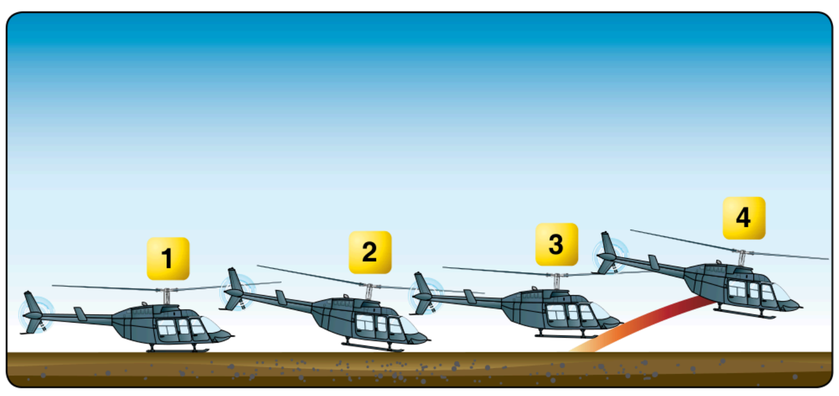
Objective. To determine the applicant exhibits satisfactory knowledge, risk management, and skills associated with shallow approach and running/roll-on landing operation.

HOW IT IS FLOWN

condensed from the FAA Helicopter Flying Handbook, Chapter 10 — Shallow Approach and Running/Roll-On Landing, Running/Rolling Takeoff



HFH Figure 10-5. *Shallow approach and running landing.*



HFH Figure 10-2. *Running/rolling takeoff.*

1. Used when high density altitude and/or high gross weight leave insufficient power to hover: translational lift is used until surface contact. Glide angle about 3°–5° (like an ILS). The area must be smooth and long enough; skids aligned with the direction of travel to prevent dynamic rollover.
2. Begin like a normal approach but with a shallower angle; the power reduction is smaller (1). Pedals for heading, throttle for rpm. Hold approach airspeed until the apparent rate of closure increases, then slow with aft cyclic (2).
3. Collective = angle and rate of descent; cyclic = groundspeed. Arrive at the touchdown point at or slightly above ETL — translational lift goes away quickly at low airspeed, so decelerate smoothly while keeping enough lift to avoid settling abruptly.
4. Just before touchdown, level the attitude with cyclic, heading with pedals, direction of travel = ground track (3). Descend gently to the surface straight and level, cushioning with collective. After contact, slight forward cyclic for tail boom clearance; cyclic holds the surface track (4).
5. Hold the collective stationary until stopped (lower slightly for more braking). Beware an abrupt stop pitching the nose forward — never correct with aft cyclic (rotor/tail boom contact). Keep normal rpm and heading with pedals.
6. Running takeoff (Figure 10-2): align to the path, takeoff rpm, raise collective until light on the skids (1), slight forward cyclic plus collective to start moving (2), skids aligned until airborne; lift off level through ETL (3), accelerate in ground effect, then climb through the clear H/V area (4). If the helicopter cannot hover at all, do not attempt it — wait or off-load.

COMMON ERRORS — HFH LIST

- Excessive nose-high attitude near the surface.
- Insufficient collective/throttle to cushion the landing.
- Not holding heading → turning or pivoting on contact.
- No pedal as collective is added → sideward touchdown.
- Losing ETL speed too early; touching down too fast for conditions.
- Wrong touchdown attitude; rpm not held through and after touchdown.
- Poor alignment with direction of travel.

SKILLS — THE STANDARD

the applicant exhibits the skill to:

	PRIVATE · ACS-15	COMMERCIAL · ACS-16
S1	Complete the appropriate checklist(s).	
S2	Make radio calls as appropriate.	
S3	Maintain powerplant and main rotor (Nr) speed within normal limits.	
S4	Establish and maintain the recommended approach angle and proper rate of closure.	
S5	Determine wind direction and maintain ground track with crosswind correction.	
S6	Maintain effective translational lift during surface contact with landing gear parallel to the ground track.	
S7	Make smooth, timely, and correct control inputs after surface contact to maintain directional control.	
S8	Use runway incursion avoidance procedures, if applicable.	

▢ Shaded rows are where the Commercial standard is tighter than Private. Unshaded rows apply to both certificates.

KNOWLEDGE

PH.V.H.K1–K2 · the applicant demonstrates understanding of:

- Elements related to shallow approach and running/roll-on landing, including when to use the maneuver, aircraft limitations, and effect of landing surface texture.
- Effects of wind, weight, temperature, and density altitude.

RISK MANAGEMENT

PH.V.H.R1–R13 · identify, assess and mitigate risk associated with:

- Selection of approach path and landing based on aircraft performance and limitations, and wind.
- Effects of:
  a. Wind Direction
  b. Windshear
  c. Turbulence, including wake turbulence
- Planning for:
  a. Powerplant failure during approach/landing phase of flight
- Collision hazards.
- Landing surface.
- Dynamic rollover.
- Ground resonance.
- Aircraft limitations.
- Distractions, task prioritization, loss of situational awareness, or disorientation.

Standards: FAA-S-ACS-15 Private Pilot Helicopter and FAA-S-ACS-16 Commercial Pilot Helicopter (text reproduced from the current ACS). **References:** FAA-H-8083-2, FAA-H-8083-21, FAA-H-8083-25; POH/RFM.
Figures and technique: FAA Helicopter Flying Handbook, FAA-H-8083-21B — figures reproduced unmodified.
Always confirm tolerances against the ACS in force on your checkride date and procedures against the R44 POH/RFM.

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