ACS HELICOPTER MANEUVER SERIES · 4 OF 24

Air Taxi

Area of Operation IV — Hovering Maneuvers

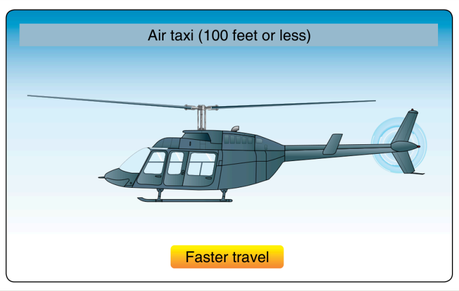
Private Pilot task PH.IV.C **Commercial Pilot task** CH.IV.C

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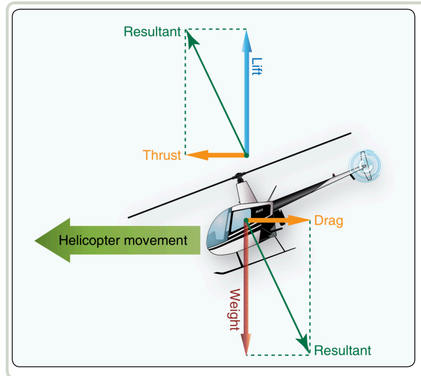
Objective. To determine the applicant exhibits satisfactory knowledge, risk management, and skills associated with air taxi operations.

HOW IT IS FLOWN

condensed from the FAA Helicopter Flying Handbook, Chapter 9 — Air Taxi



HFH Figure 9-10. *Air taxi.*



HFH Figure 2-33. *To transition to forward flight, more lift and thrust must be generated to overcome the forces of weight and drag.*

1. Air taxi is used for longer movements inside the airport boundary: fly to the new location, staying below 100 ft AGL at an appropriate airspeed, never overflying aircraft, vehicles or people.
2. Before starting, pick an airspeed/altitude combination that keeps you out of the shaded areas of the height/velocity diagram, and consider crosswinds that could lead to loss of tail rotor effectiveness.
3. Pick two references in line along the desired ground path and keep them in line.
4. From a normal hover, ease the cyclic forward; set the desired airspeed with cyclic, altitude with collective, rpm with throttle. Hold heading with pedals.
5. To stop: aft cyclic to reduce speed while lowering collective to descend toward hover height; as motion stops, cyclic to neutral; add collective to stop the descent at hover height — much like a quick stop.

COMMON ERRORS — HFH LIST

- Erratic cyclic → poor airspeed control.
- Excessive heading change from poor pedal use.
- Failing to hold altitude or rpm.
- Overflying parked
- Flying inside the H/V shaded area; crosswind LTE exposure.
- Excessive tail-low attitude; excessive power used to stop; skids not aligned with

SKILLS — THE STANDARD

the applicant exhibits the skill to:

	PRIVATE · ACS-15 / COMMERCIAL · ACS-16
S1	Complete the appropriate checklist(s).
S2	Use an airport diagram or taxi chart during taxi, if published, and maintain situational awareness.
S3	Select a safe airspeed and altitude.
S4	Maintain desired track and groundspeed in headwind and crosswind conditions, avoiding conditions that might lead to loss of tail rotor/antitorque effectiveness.
S5	Maintain powerplant and main rotor (Nr) speed within normal limits.
S6	Comply with airport/heliport/helipad/landing area markings, lights, signs, and ATC instructions.
S7	Maintain specified altitude, **±10 feet**.

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

KNOWLEDGE

PH.IV.C.K1–K10 · the applicant demonstrates understanding of:

- Current airport aeronautical references and information resources such as the Chart Supplement, airport diagram, and Notices to Air Missions (NOTAMs).
- Air taxi instructions, clearances, and limitations.
- Airport/heliport/helipad/landing area, signs, markings, and lighting.
- Visual indicators for wind.
- Aircraft lighting, as appropriate.
- Procedures for:

  a. Pilot activities during taxiing

  b. Safe air taxi at towered and nontowered airports

  c. Overflying of runways
- Height/Velocity (H/V) considerations.

RISK MANAGEMENT

PH.IV.C.R1–R6 · identify, assess and mitigate risk associated with:

- Distractions, task prioritization, loss of situational awareness, or disorientation.
- Reduced visibility or night taxi operations.
- Runway incursion.
- Main rotor, tail rotor, and tail strike hazards.
- H/V diagram performance in case of powerplant failure.
- Confirmation or expectation bias as related to taxi instructions.

Standards: FAA-S-ACS-15 Private Pilot Helicopter and FAA-S-ACS-16 Commercial Pilot Helicopter (text reproduced from the current ACS). **References:** AC 91-73; AIM; Chart Supplements; 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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