

Saturday, May 9, 2026

Hover Autorotation

Purpose and Objective

A hover autorotation is used in the event of a complete loss of engine power or tail rotor thrust while in a hover. The pilot utilizes the stored kinetic energy of the rotor system to safely land the helicopter from a hover.

“Throttle, Pedal, Settle, Raise”

Maneuver

1. Setup in a stationary 3 foot hover, over a level surface, and into the wind.
 2. Complete a gauge check and raise carb heat.
 3. Reposition your left hand into an “underhand grip” position on the throttle.
 4. Announce: *“Eyes outside, underhand grip on the throttle, entering hover autorotation in 3... 2... 1...”*
 5. Smoothly roll the throttle off and into detent (overtravel spring) and simultaneously apply right pedal to prevent any yaw.
 6. Add right cyclic to counter any drift caused by the reduction of translating tendency.
 7. As the helicopter begins to settle, raise the collective to cushion the touchdown.
 8. Once on the ground, the collective comes to a full down position.
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Common Errors

- Failure to give appropriate pedal input when the throttle is reduced.
 - Early raise of collective before the helicopter begins to settle.
 - “Chopping” the throttle can lead to poor pedal inputs or drift.
 - Not reducing the throttle into overtravel spring.
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Performance Standards

Private Pilot for Rotorcraft Category Helicopter Rating ACS, Area of Operation VIII, Task A.

Highlights

- Simulate power-plant failure.
- Touchdown with minimum sideward movement and no readward movement.
- Heading control $\pm 10^\circ$.

