

Saturday, May 9, 2026

Maximum Performance Takeoff

Purpose and Objective

A maximum performance takeoff, or max p, is a takeoff maneuver that allows the helicopter to transition from a hover to forward flight with the best rate of climb with the least amount of ground run. The max performance takeoff is essential to master for any pilot wanting to land in and take off from confined areas.

Maneuver

1. Before takeoff, the pre-takeoff (**LOGA**) check should be performed:
 1. **L**imits (5 min takeoff power)
 2. **O**bstacles
 3. **G**auge Check
 4. **A**rea clear and markers identified if aborted takeoff is needed.
 2. Apply slight forward pressure on the cyclic to accelerate the helicopter to Transverse Flow Effect.
 3. As soon as the nose picks up with the vibrations of Transverse Flow, leave the nose attitude level and raise the collective to 5 min takeoff power.
 4. Maintain the pitch attitude until obstacles are cleared.
 5. Apply forward cyclic as necessary to gain an airspeed of 53 KTS or best rate of climb.
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Common Errors

- Raising the collective before Transverse Flow Effect is reached.
 - Giving too much forward cyclic and pushing through Transverse Flow Effect.
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Performance Standards

Private Pilot for Rotorcraft Category Helicopter Rating ACS, Area of Operation V, Task C.

Highlights

- Use control inputs to initiate lift-off from the takeoff position using a forward climb attitude to fly the departure profile.
- Use required takeoff power.
- After clearing obstacles, transition to normal climb attitude, airspeed \pm 5 KTS, and power setting.

