

MANEUVERING DURING SLOW FLIGHT

2,500' AGL MINIMUM ALTITUDE

Goals:

Experience the changes in control “feel” and effectiveness as airspeed decreases.

Learn the control inputs required to maneuver the aircraft at low airspeeds without precipitating a stall.

Procedure:

Select an entry altitude per Airman Certification Standards (ACS)

Perform clearing turns

Configure the aircraft – mixture rich

Apply carburetor heat

Reduce power to 1900 rpm (+/- 100 rpm)

Lower flaps incrementally to approach setting

Maintain straight and level flight as the airplane decelerates

Adjust power so that airspeed stabilizes at 1.2 V_{so} (65 MPH)

Remember: Elevator = speed; Power = Altitude/Rate of climb/descent

Use elevator and throttle to maintain this airspeed & altitude while:

- Flying straight and level

- Gently turning at various bank angles (not to exceed 15°)

- Climbing and descending

Recover to normal cruise flight by:

- Adding power

- Decreasing angle of attack

- Raising flaps incrementally

Common Mistakes:

Using insufficient rudder to correct for torque and p-factor

Banking excessively during turns, leading to a loss of altitude or stall

Hesitating to make power, pitch, and rudder changes

Failing to trim the airplane appropriately

Unintentionally stalling the airplane