



Spin Training and CFI Spin Certification Course

GROUND TRAINING

Classroom – approximately 2.5 hours

Discussion

Power Point (yippee)

Various Videos

- Review of aerodynamics, lift vectors and asymmetry of lift during uncoordinated flight
- Review of stall aerodynamics, stall development-propagation and effect of G loading
 - “Stall Speed” vs Critical AoA
 - Orientation of Lift Vector
 - Review of the ACTUAL meaning of V_a (maneuvering speed)
 - V_a applies to a specific list of conditions
 - A bank changes the Max G/ V_a
 - A “Rolling Recovery” will impose a greater load on the airframe
- Review recognition, mitigation, recovery and correction prior to stall
 - Indications of imminent stall
 - Stall Horn (not required/installed in all airplanes, might be INOP)
 - Buffet – May be gentle to very pronounced
 - Stall Break
 - Recovery from Imminent/Full Stall
 - Level the wings – Unload the wing by making the Lift Vector vertical
 - Lower the nose/AoA – Unload the wing improving Lift
 - Add power and accelerate to V_x to V_y
 - Establish a positive Rate of Climb before any configuration changes
- Discuss spin aerodynamics
 - Why are we less likely to enter a spin during a slip? (But you still can)
- Discuss the differences between a Spin and a Spiral Dive
 - Fully developed spins have a rapid rotation rate and a stable, near V_s IAS
 - Recovery is typically PARE
 - Power – Idle
 - Ailerons – Neutral
 - Rudder – Opposite to Rotation
 - Elevator – Release Back Pressure to Forward as needed
 - Spiral Dives have a slower rotation rate with increasing IAS

- Normal Category – Not approved for Spins. Testing requires several things. One turn spin followed by a recovery within 1 ½ turns after corrective control inputs have been made.
- Utility – Often approved for Spins (but not all [BE 33/35]), with loading restrictions.
- Aerobatic – Approved for Spins, recovery within 1 ½ turns after corrective control inputs have been made for a minimum of six rotations.
- Discuss the hazards of spins and Risk Management of spins
- Review of common LOC accidents due to stalls/spins
 - Failure to maintain appropriate airspeed/AoA awareness while maneuvering
 - The “Moose Stall/Spin”
 - Tuck Under Stall/Spin – Base to Final turn
 - Secondary Stalls / Trim Stalls (Go Around)
- Review Sheridan Pilots 307’s local rules for Stall/Spin Training/Operations
 - Local practice area elevation approximately 3500 MSL
 - Planned minimum entry altitude for Stalls 2500 AGL (appx 6000 MSL)
 - Planned minimum entry altitude for Spins 4000 AGL (appx 7500 MSL)
 - All Stall/Spin will be planned to be completed by 2000 AGL (appx 5500 MSL)

FLIGHT TRAINING

Flight One – Approximately 1.0 to 1.5 hours

- Orientation to the local Practice Area and acceptable procedures
- Review and practice of Power OFF Stalls
- Review and practice of Power ON Stalls
- Review and practice Secondary and Trim Stalls
- Demonstration and practice of Accelerated Stalls
- Review and practice of Turning Stalls (Power OFF and ON)
- Demonstration and practice the Falling Leaf maneuver
- Demonstration of Cross Controlled Stall
 - Stable and yawing Cross Controlled Stall

Flight Two – Approximately 1.0 to 1.5 hours

- Spin Entry with Immediate Recovery
- Spin Entry and Incipient Phase and Recovery
- Spin Entry continuing into Fully Developed Phase and Recovery
- Demonstration of differences between PARE and Beggs/Mueller Recovery Techniques
- Demonstration and practice of “Base to Final – Stall/Spin response/recovery
- Demonstration and practice of “Over the Top” – Stall/Spin response/recovery
- Other maneuvers as desired