

Stage 1 - Private Pilot

Ground Lesson 3

Chapter 3, Aerodynamic Principles

Leading Edge Aviation

Version 2015

Student Name _____

Lesson Objective:

- Become familiar with aerodynamic principles, including the four forces of flight, stability, maneuvering flight, and load factor.
- Understand stall and spin characteristics as they relate to training airplanes.
- Learn the importance of prompt recognition of stalls.

Academic Content:

Section A - Four Forces of Flight

- Lift
- Airfoils
- Pilot Control of Lift
- Weight
- Thrust
- Drag
- Ground Effect

Date Completed _____

Time _____

Section B - Stability

- Three Axes of Flight
- Longitudinal Stability
- Center of Gravity Position
- Lateral Stability
- Directional Stability
- Stalls
- Spins

Date Completed _____

Time _____

Section C - Aerodynamics of Maneuvering Flight

- Climbing Flight
- Left-Turning Tendencies
- Descending Flight
- Turning Flight
- Load Factor

Date Completed _____

Time _____

Completion Standards:

- Demonstrate understanding of stalls, spins, and basic aerodynamic principles during oral quizzing by the instructor.
- Complete with a minimum score of 80%: questions for Chapter 3 Sections A, B, and C. Review with the instructor each incorrect response to ensure complete understanding before starting Ground Lesson 4

I certify that the aforementioned training has been conducted and/or received in accordance with Leading Edge Aviation Standards and the current 141 approved Jeppesen Private Pilot Syllabus.

Instructor _____

Date _____

Student _____

Date _____