

Flight Dynamics, LLC



Flight Operations

Basic Tailwheel Course

Student Workbook

Student Name: _____

Enrollment Date: _____

Current Revision: Rev: -

Revision	Date	Approval	Revision	Date	Approval
Initial	10-1-2008	R. Anderson			

REVISION HISTORY

Revision	Changes

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Student Information

Name: _____

Address: _____

City & State: _____

Pilot Certificates: None __ LSA __ Pvt __ Comm __ ATP __ CFI __

Others: _____

Certificate number: _____

Medical: None __ Class __ Date of medical _____

Please help us understand your needs by filling in the following areas of emphasis in your tailwheel/LSA training. Please put a 1 by the most important and a 7 by the least important. Please use each number only once.

1=most important

7=least important

___ Ability to rent the aircraft solo after the required courses

___ Getting the FAA tailwheel signoff

___ Low cost

___ Customer service that accommodates busy schedules

___ Good flight instructors

___ High quality tailwheel course

___ High degree of competency in tailwheel aircraft after the course

Please tell us in words why you are taking this course: _____

Introduction to Flight Dynamics Basic Tailwheel Course

Contents:

Unit #	Description	Gnd Time	Flt Time
Ground Lesson 1	Introduction	1.0	
Flight Lesson 1	Airwork		1.3
Ground Lesson 2	Understanding take offs and landings	1.5	
Flight Lesson 2	3 point take offs and landings on grass		1.3
Ground Lesson 3	Understanding take offs and landings II	1.0	
Flight Lesson 3	3 point take offs and landings on grass II		1.3
Ground Lesson 4	Low performance aircraft performance	1.0	
Flight Lesson 4	Wheel landings on grass		1.3
Ground Lesson 5	Review	1.0	
Flight Lesson 5	Landings on pavement		1.3
Flight Lesson 6	Practice and test for endorsement		1.3
Total		5.5 hrs	7.8 hrs

Solo Requirement

Insurance:

1. 25 hours of PIC tailwheel time and 10 hours in 7AC or,
2. 10 hours of instruction received in the Flight Dynamics 7AC

Flight Dynamics:

1. Meets minimum insurance requirements, and
2. Satisfactory completed the Flight Dynamics Advanced Tailwheel course, and
3. Passes both an oral and practical exam in the 7AC, and
4. Approved by the Chief Pilot.

Ground Lesson 1: Introduction

Ground lesson 1 is a basic introduction to the tailwheel course and the knowledge required to perform Flight 1. Flight 1 is an introduction to the Aeronca Champ and is comprised of air work specific to low horsepower tailwheel airplanes.

S	U	I	Topic
			Introduce Student Work Book
			Introduce FARs governing tailwheel operations and proficiency
			Introduce the history of tailwheel airplanes and the Aeronca Champ
			Introduce the safety record of tailwheel airplanes
			Introduce the Aeronca Champ 7AC (Basics)
			Introduce the Aeronca Champ 7AC airframe
			Introduce the Aeronca Champ 7AC's 65hp Continental Engine
			Introduce first flight lesson (major points: expanded discussion to follow)
			Introduce coordination
			Introduce stalls
			Introduce navigation
			Introduce company policies

Notes: _____

Ground Time: _____

Instructor: _____ Date completed: _____

Ground Lesson 2: Understanding Takeoffs and Landings

Ground lesson 2 is designed to provide the student with an in depth understanding of the underlying principals of aerodynamics and mechanics required to make safe tailwheel takeoffs and landing. Similarly, taxiing procedures and ground handling procedures will be discussed.

Lesson Prerequisites: Completion of Ground Lesson 1

S	U	I	Topic
			Introduce terminology
			Review of basic aerodynamics
			Introduction to important handling qualities factors for tailwheel airplanes
			Introduce the dynamics of a crosswind takeoff and landing (use only the terminology of upwind and down wind)
			Introduce taxi
			Introduce 3-point tailwheel takeoffs and landings
			Introduce wheel tailwheel takeoffs
			Introduce hand propping

Notes: _____

Ground Time: _____

Instructor: _____ Date completed: _____

Flight Lesson 2: 3-point Takeoff and Landings on Grass

Flight Lesson 2 is the beginning of tailwheel takeoff and landing practice using the most forgiving method and environment. During this lesson takeoffs and landings will be introduced at a grass field using a wheel takeoff and a 3-point landing. Takeoffs and landing at pave fields will begin after the student is proficient at a grass field.

Lesson prerequisites: Satisfactory completion of ground lesson 2 and flight lesson 1

S	U	I	Topic
			Instructor demonstrates (first takeoff)
			Student practices navigation to grass field (if applicable)
			Student practices 3-point TO and Landing operations
			Student practices navigation to home field (if applicable)
			Instructor demonstrates wheel landing on a paved runway
			Student practices taxiing on a paved taxiway with proper crosswind controls
			Student practices, P-lead check, shut down, post flight inspection, post flight cleaning and discuss proper method of tying down the aircraft

Notes: _____

Ground Time: _____ Flight Time: _____

Instructor: _____ Date completed: _____

Flight Lesson 3: 3-point Takeoff and Landings on Grass

Flight Lesson 3 is the refinement of tailwheel takeoff and landing practice using the most forgiving method and environment. During this lesson takeoffs and landings will be practiced at a grass field using a wheel takeoff and a 3-point landing.

Lesson prerequisites: Satisfactory completion of ground lesson 2 and flight lesson 2

Performance standards: Student should be able to perform a satisfactory wheel takeoff and 3 point landing on grass at the conclusion of the lesson.

S	U	I	Topic
			Student performs, starting, taxi, takeoff and climb
			Student practices navigation to grass field (if applicable)
			Student practices 3-point takeoffs and landings
			Student practices navigation to home field (if applicable)
			Instructor demonstrates one wheel go-around and landing on a paved runway
			Student practices taxiing on a paved taxiway with proper crosswind controls
			Student practices, P-lead check, shut down, post flight inspection, post flight cleaning and discuss proper method of tying down the aircraft

Notes: _____

Ground Time: _____ Flight Time: _____

Instructor: _____ Date completed: _____

Flight Lesson 4: Wheel Landings

Flight Lesson 4 is the beginning of wheel landing practice. During this lesson wheel takeoffs and landings will be introduced at a grass field or paved field depending upon the students abilities.

Lesson prerequisites: Satisfactory completion of ground lesson 3 and flight lesson 3

S	U	I	Topic
			Student performs starting, taxi, takeoff and climb
			Student practices navigation to grass field (if applicable)
			Student practices wheel takeoffs and
			Student practices navigation to home field (if applicable)
			Instructor demonstrates one wheel go-around landing on a paved runway
			Student practices taxiing on a paved taxiway with proper crosswind controls
			Student practices P-lead check, shut down, post flight inspection post flight cleaning and discuss proper method of tying down the aircraft

Notes: _____

Ground Time: _____ Flight Time: _____
 Instructor: _____ Date completed: _____

Ground Lesson 5: Review

Ground lesson 5 is review of all pertinent material for safe tailwheel operations including terminology, aerodynamics, dynamics, handling qualities, aircraft performance, procedures, safety aspects, historical points and regulations.

Lesson Prerequisites: Completion of Ground Lesson 4

S	U	I	Topic
			Review terminology
			Review of basic aerodynamics
			Review handling qualities factors for tailwheel airplanes
			Review the dynamics of a crosswind takeoff and landing (use only the terminology of upwind and down wind)
			Review taxi
			Review 3-point tailwheel takeoffs and landings
			Review wheel tailwheel takeoffs
			Review hand propping
			Review of basic aircraft performance
			Review of climb performance
			Review FARs governing tailwheel operations and proficiency (See App. A)
			Review the history of tailwheel airplanes and the Aeronca Champ
			Review the safety record of tailwheel airplanes

Notes: _____

Ground Time: _____

Instructor: _____ Date completed: _____

Flight Lesson 5: Wheel Landings and 3-point Landing on Pavement

Flight Lesson 5 is practice of all of the techniques learned to date in the demanding environment of a paved airport.

Lesson prerequisites: Satisfactory completion of ground lesson 3 and flight lesson 4

Completion Standards: Only some review required to meet FAA tailwheel endorsement signoff.

S	U	I	Topic
			Student practices starting, taxi, takeoff and climb
			Student practices navigation to grass field (if applicable)
			Student practices 3-point and wheel takeoffs and landings
			Student practices navigation to home field (if applicable)
			Instructor demonstrates one wheel go around landing on a paved runway
			Student practices taxiing on a paved taxiway with proper crosswind controls
			Student practices, P-lead check, shut down, post flight inspection, post flight cleaning and discuss proper method of tying down the aircraft

Notes: _____

Ground Time: _____ Flight Time: _____

Instructor: _____ Date completed: _____

Flight Lesson 6: Demonstration of Tailwheel Operations

Flight Lesson 6 is the demonstration of tailwheel proficiency for the FAA endorsement.

Lesson prerequisites: Satisfactory completion of ground lesson 5 and flight lesson 4

Completion Standards: FAA tailwheel endorsement criteria

A	P	Inst.	Topic
			Student demonstrates to the satisfaction of the instructor starting, taxi, takeoff and climb
			Student demonstrates to the satisfaction of the instructor navigation to grass field (if applicable)
			Student practices 3-point takeoffs and landings
			Student demonstrates to the satisfaction of the instructor 3-point and wheel takeoffs and landings
			Student demonstrates to the satisfaction of the instructor navigation to home field (if applicable)
			Student demonstrates to the satisfaction of the instructor taxiing on a paved taxiway with proper crosswind controls
			Student demonstrates to the satisfaction of the instructor, P-lead check, shut down, post flight inspection, post flight cleaning and discuss proper method of tying down the aircraft

Notes: _____

Ground Time: _____ Flight Time: _____

Instructor: _____ Date completed: _____

Tailwheel Endorsement by: _____

Appendix A: Tailwheel FAR 61.31(i)

§ 61.31 Type rating requirements, additional training, and authorization requirements.

(i) *Additional training required for operating tailwheel airplanes.* (1) Except as provided in paragraph (i)(2) of this section, no person may act as pilot in command of a tailwheel airplane unless that person has received and logged flight training from an authorized instructor in a tailwheel airplane and received an endorsement in the person's logbook from an authorized instructor who found the person proficient in the operation of a tailwheel airplane. The flight training must include at least the following maneuvers and procedures:

(i) Normal and crosswind takeoffs and landings;

(ii) Wheel landings (unless the manufacturer has recommended against such landings); and

(iii) Go-around procedures.

(2) The training and endorsement required by paragraph (i)(1) of this section is not required if the person logged pilot-in-command time in a tailwheel airplane before April 15, 1991.