2022 EAA PPC AirVenture Clinic Lesson Plan

Provide educational resources and opportunities to develop better, safer pilots.

Clinic Title: **CFI to CFI**
Subtitle:

Description:
The CFI to CFI Clinic focuses on issues that have led to a substantial number of aviation accidents, including those with CFIs onboard the aircraft.
The decision whether to continue or abort a takeoff must be made during every flight, and power losses on initial climb are a distinct risk, yet in many cases these topics receive little attention during training. On the other hand, crosswind landing technique and go arounds are commonly taught, yet pilots continue to have accidents. This clinic shares instructional methods and using hands-on exercises, instills training skills that help to improve CFIs' proficiency in teaching dynamic take-off decisions, low-altitude power loss scenarios, crosswind landings, and go arounds.

Clinic Objectives: To instill training skills that help to improve CFIs' proficiency in teaching dynamic take-off decisions, low-altitude power loss scenarios, crosswind landings, and go arounds.

Schedule:

Activity	Time	Duration
Check/Breakfast	07:30	30
Keynote	08:00	
	08:45	45
	Break	5
Breakout 1	08:50	
	09:35	45
	Break	5
Breakout 2	09:40	
	10:25	
	Break	5
Breakout 3	10:30	
Flight Simulation	11:15	45
Debriefing	11:20	
Check Out	12:00	40

About the Participants:

- 66 total, with 22 per Breakout session
- CFI certificate is required
- 33 participants designated as ‘Pilots’
- 33 participants designated as ‘Observers’

Handouts for Participants:

- Breakout Session slide decks
- Flight Sim Briefing and Scenario Packet

Equipment:

- 11 Redbird LD Sims with a combination of glass and steam gauges
- 1 Redbird LD for CFI training

PPC Volunteer Qualifications:

- CFI certificate
- Completion of pre-AirVenture training webinars
- Completion of onsite training

Wings Credit:

- Knowledge credit for all participants – amount determined per FAA
- Flight credit for participants with hands-on AATD practice during Breakout Session

Presenter Bios

Karen Kalishek is a FAA DPE, ATP-rated pilot and independent flight instructor, flying aircraft from J-3 Cubs to Pilatus. Her own aircraft is a RV6. She is a NAFI Master Instructor, with CFI/CFII/MEI/CFIG and FAA Gold Seal Instructor credentials. A FAASTeam Lead Representative, Kalishek was honored as the 2019 National FAASTeam Representative of the Year. She is a Major in the Civil Air Patrol, active in numerous aviation organizations, serves on FAA working groups, and is the National Association of Flight Instructors Board Chair. Prior to her aviation involvement, Kalishek had successful careers as a bank executive, graduate school instructor, and also worked in 37 countries as president of her own international consulting corporation.

Philip Mandel has been a pilot since 1981 and currently holds CFI, CFI-I, MEI, AGI, and IGI certificates and ratings. Through the years he has owned airplanes ranging from a C-150 to a Piper Apache and is now the proud owner of his 10th aeroplane, a Thorp T-18. Phil is an active flight instructor based in Oregon and a popular speaker at events ranging from local aviation gatherings to EAA AirVenture and national webinars. Phil was the FAASTeam Rep of the Year for the Portland, OR FSDO in both 2021 and 2022.

David St. George has been flying for 50 years and has served as an FAA DPE for 25. A 12X Master Instructor, David has given 16K of dual instruction and is the current Executive Director of SAFE. He flies as a captain for a jet charter company and is the Apple Developer who wrote the "SAFE Toolkit" app.

Keynote

Title: Title "Proficiency Prevents Peril"

Description:
Flight instructors in many cases teach to the depth that they were taught, enough to meet FAA minimum standards. While experience typically leads to additional instructional expertise, it becomes up to the individual CFI to identify ways to improve and develop his or her skills. Exploring and integrating new training techniques and content can be a matter of trial and error, both in flight and ground training. As a result, inconsistency in practice abounds throughout the flight training community. Flight instructors pay varying amounts of attention to teaching proficiency in aborted takeoffs, low altitude power loss, crosswind landings, and go arounds. This clinic focuses on these areas, which are a significant source of accidents and would benefit from heightened instructional attention.

Objectives:

- Create awareness of the discrepancy between FAA minimum standards and 'real world' proficiency in varying conditions
- Promote continuous instructional improvement and use of best practices
- Establish the need for improved take-off and landing proficiency
- Introduce the exercises and methodology used in the CFI to CFI Clinic

Keynote Presenter:
Karen Kalishek

Agenda:

Topic	Presenter	Duration
Welcome, Bathroom, Exits	Karen Kalishek	5 minutes
PPC Introduction/CFI Role	Jeremy Desruisseaux	5 minutes
Proficiency Prevents Peril	Karen Kalishek	30 minutes
Logistics	Karen Kalishek	5 minutes

Breakout Session 1

Title: Throttle In, Brain Engaged - Rejected Takeoffs and Low Altitude Power Loss"

Presenter: Philip Mandel

Description: This session focuses on selecting abort points on takeoff, as well as planning for and surviving low-altitude engine trouble. Factors such as weight, center of gravity, density altitude, power setting, leaning for best power, runway length, terrain, obstacles, field conditions, and other issues combine to make the takeoff roll and initial climb more complex than many pilots realize. Low altitude engine trouble leaves so little time to act that pilots need a specific plan in mind prior to advancing the throttle. This interactive session will cover techniques that teach pilots how to make sound go/no-go decisions on the takeoff roll and to manage initial-climb engine trouble.

Key Objectives:

- Create an effective pre-departure emergency briefing
- Learn how to select abort points
- Determine takeoff roll considerations, reasons to abort, and how to maintain control during an aborted takeoff
- Identify steps to take in case of low altitude power loss
- Discuss pilot-controllable factors leading to a survivable crash

Type of Presentation:
PowerPoint with Interactive Discussion

Equipment:
Whiteboard, Markers and AV for PowerPoint

Instructor Mindset:

- Lay the foundation for the lesson by reviewing key concepts.
- Facilitate deep thinking by posing questions rather than lecturing.
- Bring your unique style, techniques, and experiences to the lesson.

Participant Mindset:

- Be engaged and interactive.
- Be open to new ideas.
- Visualize and assimilate.
- Do the mental and physical work needed to answer the questions posed.

Breakout Session 2

Title: Managing Go Arounds and Crosswind Landings"

Presenter: David St. George.

Description: Landings are by nature a dynamic phase of flight. Add in a crosswind and the situation can become quite challenging for pilots, sometimes resulting in bent metal. While going around is a clear alternative to landing, it also carries risk. This interactive session will cover instructional considerations and methods to improve pilot skills in crosswind landings and avoid botched go arounds.

Key Objectives:

- Discuss factors that lead to successful and unsuccessful crosswind landings
- Identify effective instructional techniques for teaching crosswind landings
- Share methods to successfully instill a go-around mentality in pilots
- Exchange techniques used to ensure that aircraft control is maintained during go-arounds

Type of Presentation:
PowerPoint with Interactive Discussion

Equipment:
Whiteboard, Markers and AV for PowerPoint

Instructor Mindset:

- Lay the foundation for the lesson by reviewing key concepts.
- Facilitate deep thinking by posing questions rather than lecturing.
- Bring your unique style, techniques, and experiences to the lesson.

Participant Mindset:

- Be engaged and interactive.
- Be open to new ideas.
- Visualize and assimilate.
- Do the mental and physical work needed to answer the questions posed.

Breakout Session: Flight Exercises
See Lesson Plans for Exercises:

- Ground Hog
- Tally Ho
- Plenty of Spice at Spicewood
- What Now?!?

Title(s):

Description:

CFI lesson(s):

- Mission Summary
- Objectives

- Instructor Notes
- Training Elements
- Common Errors
- CFI Training Needs

Debrief

Objectives:
A post-clinic debrief that will tie together the keynote, breakout sessions and flight simulations.

Key Participant Take-aways:

- Determine an abort point for every takeoff and be ready to abort
- Apply takeoff checks
- State an emergency plan prior to every takeoff – be ready for it
- Aviate – Navigate – Communicate in case of low altitude power loss
- Be ready for a go around on every landing
- Manage the go around process Aviate – Navigate – Communicate
- Practice and hone crosswind landing skills

Leading Questions/Group Discussion Ideas:

- What is the most important idea you gained from the CFI Clinic?
- Will attending the Clinic change how you teach aborted takeoffs?
- Will attending the Clinic change how you instruct for possible low altitude power losses?
- Will attending the Clinic change how you teach crosswind landings?
- Will attending the Clinic change how you teach go-arounds?
- Would you recommend that other flight instructors attend the CFI Clinic?
- How would you improve the Clinic?

Presenters: Karen A. Kalishek, Phil Mandel, David St. George

Equipment: Whiteboard, Markers and AV for PowerPoint

List of Resources/Reference Materials:

CFI to CFI Clinic FAA WINGS
2 Credits Master Level
Knowledge Topic Two

Event Details and Registration

Below you will find the details for this seminar or webinar. You may register by clicking the "Register" link.

Title:	**CFI to CFI Clinic**
Topic:	**Instruction techniques and scenarios for teaching abort points, low-altitude power loss, cross-wind landings and go-arounds**
Date and Time:	**Monday, July 25, 2022, starting at 08:00 Central Daylight Time** Download Calendar File
Speaker(s):	**See Additional Information**
Brief Description:	**This clinic shares instructional methods and instills training skills that help to improve CFIs' proficiency in teaching dynamic take-off decisions, low-altitude power loss scenarios, crosswind landings, and go-arounds.**
Select Number:	**EA13113040**
Location of Seminar:	**EAA Pilot Proficiency Center** **3000 Poberezny Rd** **Oshkosh, WI 54902**
Directions to Venue:	**The NEW Pilot Proficiency Center is now connected to the EAA Aviation Museum**
Fly-in Seminar?:	**No**
Seating:	**200 seats at the facility, 200 for online registration.** **This event is not yet accepted for public viewing.**
Sponsoring Division:	**FAASTeam**
Contact Information:	**John Gibson** **Phone: (916) 765-2382** johngibson@jgibson.net

Additional Event Information & Acknowledgement of Industry Sponsor(s):	**Speaker(s):** 1. Karen Kalishek, Chair, National Association of Flight Instructors 2. David St. George, Executive Director, Society of Flight Educators 3. Phil Mandel, CFI, CFI-I, MEI, AGI, IGI, FAASTeam Representative **The CFI to CFI Clinic focuses on issues that have led to a significant number of aviation accidents, including those with CFIs onboard the aircraft. The decision whether to continue or abort a takeoff must be made during every flight, and power losses on initial climb are a distinct risk, yet in many cases these topics receive little attention during training. On the other hand, crosswind landing technique and go-arounds are commonly taught, yet pilots continue to have accidents. This clinic shares instructional methods and using hands-on exercises, instills training skills that help to improve CFIs' proficiency in teaching dynamic take-off decisions, low-altitude power loss scenarios, crosswind landings, and go-arounds.** **Keynote: "Proficiency Prevents Peril"** **Takeoff, initial climb and landing accidents continue to dominate accident statistics. Flight instructors are a vital component to improving aviation safety and with added focus on these key phases of flight, accident rates can be lowered. Objectives: Recognize the CFI's ability to improve aviation safety, raise awareness of key areas for training focus, and motivate flight instructors to learn & employ specific instructional techniques taught during the CFI Clinic.** **Breakout Session: "Throttle In, Brain Engaged - Rejected Takeoffs and Low Altitude Power Loss"** **This session focuses on selecting abort points on takeoff, as well as planning for and surviving low-altitude engine trouble. Factors such as weight, center of gravity, density altitude, power setting, leaning for best power, runway length, terrain, obstacles, field conditions, and other issues combine to make the takeoff roll and initial climb more complex than many pilots realize. Low altitude engine trouble leaves so little time to act that pilots need a specific plan in mind prior to advancing the throttle. This interactive session will cover techniques that teach pilots how to make sound go/no-go decisions on the takeoff roll and to handle initial-climb engine trouble.** **Breakout Session: "Managing Go-Arounds and Crosswind Landings"** **Landings are by nature a dynamic phase of flight. Add in a crosswind and the situation can become quite challenging for pilots, sometimes resulting in bent metal. While going around is a clear alternative to landing, it also carries risk. This interactive session will cover instructional considerations and methods to improve pilot skills in crosswind landings and avoid botched go-arounds.**
Equal Access Information:	**The FAA Safety Team (FAASTeam) is committed to providing equal access to this meeting/event for all participants. If you need alternative formats or services because of a disability, please communicate your request as soon as possible with the person in the "Contact Information" area of the meeting/event notice. Note that two weeks is usually required to arrange services.**
Credit Applicability:	▣ **2 Credits for Master Knowledge Topic 2**
FAASTeam Project Information:	
National Project:	**Any Safety Event held based upon data/risk**
Additional Event Documents:	***This event does not have any additional documents to view.***

LESSON PLAN

MISSION: CFI EXERCISE "Ground Hog"

THE MISSION:

You started your May 2nd lesson at Hartness State KVSF with yourself, your learner, full fuel, and twenty pounds of baggage. The post-solo learner flew a near-perfect takeoff, pattern, and landing at Hartness. You then headed 15 nm east to Parlin Field 2B3 for an introduction to grass runways. Your goal is to get in a couple of patterns using the turf runway 30 at Parlin before heading back to Hartness for another lesson starting in less than an hour.
There is no weather reporting station at Parlin. The closest reported weather is Hartness State which reports stable five knot winds from 300 degrees. Temperature/dewpoint are 20/15 and altimeter setting is 29.70.

THE OBJECTIVE:

Develop instructional skills to prepare pilots for aborted takeoff decision making and success

INSTRUCTOR NOTES:

This exercise will consist of three aborted takeoffs on Runway 30 at Parlin Field 2B3.

- The instructor will fail one magneto resulting in reduced RPM, so that when the throttle is advanced, the engine does not produce full takeoff RPM. For this exercise, the expected takeoff RPM will need to be determined prior to taking the runway by completing a full throttle runup. An important part of the exercise is to have pilots check takeoff RPM as part of their normal procedures and develop the verification habit.
- The instructor will fail the airspeed indicator as if a bug blocks the pitot tube. Pilots may be so focused on short and soft field technique and clearing the trees that they might not notice the lack of airspeed indication on the takeoff roll. Similar to less than takeoff RPM, we want to ingrain the habit of checking airspeed on every takeoff roll, no matter what else is going on.
- The instructor will fail the oil pressure gauge . Engine gauges need to be checked on every takeoff with a decision to abort if anything is abnormal.
- The pilot should become familiar with where and how the information is provided in the cockpit prior to taking the runway.
- Redbird failure modes
    - In contrast to an airplane, failing one magneto in the Redbird results in a minimal RPM drop which is likely unnoticeable. It can be simulated but is not realistic for the exercise
    - On the G1000 failure of the PFD or MFD could also be simulated
    - It is easiest to simply fail the airspeed indicator or oil pressure gauge with an immediate failure, rather than pre-setting a failure based on time or airspeed
- The comm frequency should be set up for Parlin and a departure announcement made. It will provide realism with an additional distraction from the pilot's focus on takeoff
- There are numerous other possible reasons for an aborted takeoff (e.g., door/window opening, animals on the runway, traffic, etc.) . However, this exercise is based upon mechanical failure. If desired, other issues can be simulated (Instructor: "My window flew open!" "Deer on the runway!")
- Remember that the purpose of the aircraft is to protect the occupants if the abort will result in exiting the runway or running into something, It is important to have the mentality to sacrifice the aircraft to save the occupants.

TRAINING ELEMENTS:

• Preflight decision making – determining whether to even attempt departure before heading to the aircraft. This avoids expectation bias once at the aircraft

- Application of PAVE – pilot recency, experience, appropriate aircraft and performance, issues concerning that specific airport & area, selecting emergency landing options, wildlife.
- Determining whether the runway is adequate for a takeoff.
- Gathering information on the airport and runway conditions.

    - Prior to arrival (A/FD, Notams, airport management). Consider runway slope, surface condition (length, soft/recent rain), obstacles.
    - Onsite (e.g., walk the runway).

- Briefing for departure
    - Be certain to prepare for the runway being used and verbalize a pre-departure safety briefing. Verbalizing "what-if" scenarios to include "any issues on the runway" which covers the gamut of potential reasons to abort
    - Determining abort point prior to runway entry ; how to select and recognize (intersection taxiway, passing the windsock, the fifth runway stripe, etc).
    - Applying the 50%/70% rule. As usually stated by 50% of the runway have 70% of lift off airspeed. Does that make sense? What if the runway is a mile long? Better to use more common sense, basing it on 50% of expected takeoff distance
    - Tighten safety belts, particularly lap belts, and consider inertial reel 'catch'
- The takeoff sequence
    - Apply short field, soft field technique concurrent with confirming takeoff items (below)
    - Confirm: full power (RPM and MP, if equipped), oil pressure, fuel flow and airspeed alive prior to rotation
    - Managing an aborted takeoff
    - There is typically no need to slam on the brakes, which may result in loss of control when close to liftoff speed. Brake as needed, no more

COMMON ERRORS:

- Failing to consider PAVE and risk factors that may result in a no-go decision
- Failing to determine abort point prior to entering runway
- Failing to confirm full power, oil pressure, fuel flow and airspeed alive
- Failing to remain situationally aware of any issues inside and outside the aircraft that may lead to a decision to abort
- Commencing the departure without adequate briefing and preparation for any emergencies
- Failing to abort the takeoff when appropriate
- Failing to control the aircraft during the aborted takeoff

INFORMATION:

- Airport photo
- Sectional extract
- Takeoff rpm determined prior to taking runway
- Takeoff performance and procedures – see POH extract

NOTE : Deciding on an Abort Point and Implementing

If you have a plan, the odds of successfully managing an issue prior to rotation are MUCH higher than without a plan. The best antidote to a startling occurrence is your plan to address it.

Consider the airport environment and be alert for issues (examples: location/time of year with an elevated level of bird activity, airport layout without clear view of full runway(s), nontowered airport with possibility of air traffic lacking communication)

Instill a mindset that takeoff will not occur unless everything is right. Once the throttle is in, 'mission mind' tends to set in, with a bias towards continuing. The pilot must be willing to discontinue the takeoff.

Create a focus on the process at hand. Instruct learners to remain alert and not to project thoughts ahead to the initial climb. Becoming complacent increases the reaction time to any issues that arise.


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(C) VFRMAP.COM JUN 2022

LESSON PLAN

MISSION: CFI EXERCISE "NOW WHAT ?!"

THE OBJECTIVE:

Developing instructional skills to impart the mentality of expecting an engine failure on every flight and being prepared for it.

INSTRUCTOR NOTES:

This exercise will consist of four takeoffs and flights in a right-hand traffic pattern for runway 20 at Tweed/New Haven airport (CT) KHVN. The instructor will fail the engine at different points in the pattern: on the downwind, abeam the touchdown point; just as the pilot turns from crosswind to downwind; anywhere on takeoff, from the start of the takeoff roll up to, or through the upwind to crosswind turn. This will have the pilot totally prepared and expecting another failure on the final pattern. However, on the last pattern there will be NO failure. Upon landing the instructor should tell the pilot "I would like you to have this mentality on EVERY takeoff you make!"

Prior to starting the exercise, the instructor should cover the potential reasons for a partial power loss or engine failure, especially in a low wing, experimental airplane with a fuel system built by the pilot. These reasons could include lack of fuel flow caused by a blockage, vapor lock, blocked fuel tank vent, or a failed engine driven fuel pump; fuel starvation because of failing to switch tanks and running one tank dry; or possibly carb ice.

TRAINING ELEMENTS:

• Briefing for departure. Verbalizing "what-if" scenarios to include engine failure (or lack of proper engine/power indications) at any point from the start of the takeoff roll through short final

• Confirming: full power, oil pressure, fuel flow, and airspeed alive prior to rotation. (Note: the instructor could "fail" oil pressure or airspeed, or reduce fuel flow at start of takeoff roll)

• Determining abort point prior to runway entry

• Being prepared for a successful outcome, e.g., considering actions to be taken regardless of where the engine fails. This might mean thinking outside of the box, e.g., turning left for a landing on runway 32 (per NOTAM – runway 32 is closed permanently but it may be an option for landing), or accepting a ditching in the water, etc.

• Considering reasons for engine failure (i.e., lack of fuel, air, or ignition) and performing quick memory items to restore power (i.e., fuel pump on, switch tanks, carb heat on, trimming for best glide airspeed)

- Remember that the purpose of the aircraft is to protect the occupants. It is important to have the mentality to sacrifice the aircraft to save the occupants.

COMMON ERRORS:

• Failing to determine abort point prior to entering runway

• Failing to confirm full power, oil pressure, fuel flow, and airspeed alive

• Commencing the departure without adequate briefing and preparation for any emergencies

• Turning back without sufficient altitude

• Lack of flight control coordination

• Failing to attempt engine re-start, or improper re-start procedures, or attempting re-start without sufficient time or altitude

INFORMATION:

- Airport photo
- Sectional chart extract
- Airport diagram for Tweed/New Haven KHVN

NOTE : Planning for an engine out on take-off:

If you have a plan, the odds of surviving an engine failure are MUCH higher. The best antidote to an emergency scenario is your plan to address it.

• Before flying:

o Brief your airport environment and have a plan

- ▪ Runway heading, length, obstacles, and terrain
- ▪ Determine the Abort Point on runway
- ▪ Identify Close-in alternates; is it this runway, a grass area, a crossing runway, or taxiways (if any)
- ▪ Identify best off airfield landing options
- ▪ Wind direction at surface and through TPA

o Brief your airplane performance characteristics and have a plan

- ▪ Determine Vr and understand the engine parameters you will confirm before the Abort Point
  - • Fuel flow
  - • Oil pressure
  - • RPM and/or Manifold Pressure
  - • Airspeed alive
- ▪ Determine climb out speed you think is best for the flight
  - • Vx has many advantages but gives less speed margin in the event of an engine failure
  - • Some use the adage, “There is nothing as useless as altitude above you”
  - • On the other hand, a Vx climb stores the least reserve energy in the event of a failure and requires quick recognition, harder push
  - • Vy is often very close to best glide - In the event of failure, this is a safe speed for maximizing glide

o Make your takeoff briefing and say it out loud

▪ “I will confirm the following engine parameters before abort point” Then, verbalize those parameters and literally point to each indicator or gauge

▪ “I will rotate NO later than abort point”

▪ “I will climb at X airspeed”

▪ “If I fail before X feet, I will……”

▪ “If I fail after X feet, I will…”

o Remember two things above all

▪ Speed is life. Push the nose where it needs to be to get best glide. Do it NOW

▪ Fly the airplane until it isn’t moving anymore


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See NOTAMs/Supple
for Class D eff hrs
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KHVN/HVN

Apt Elev 13′
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13 NOTAMs >

23 JUL 21 (10-9)

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TWEED-NEW HAVEN

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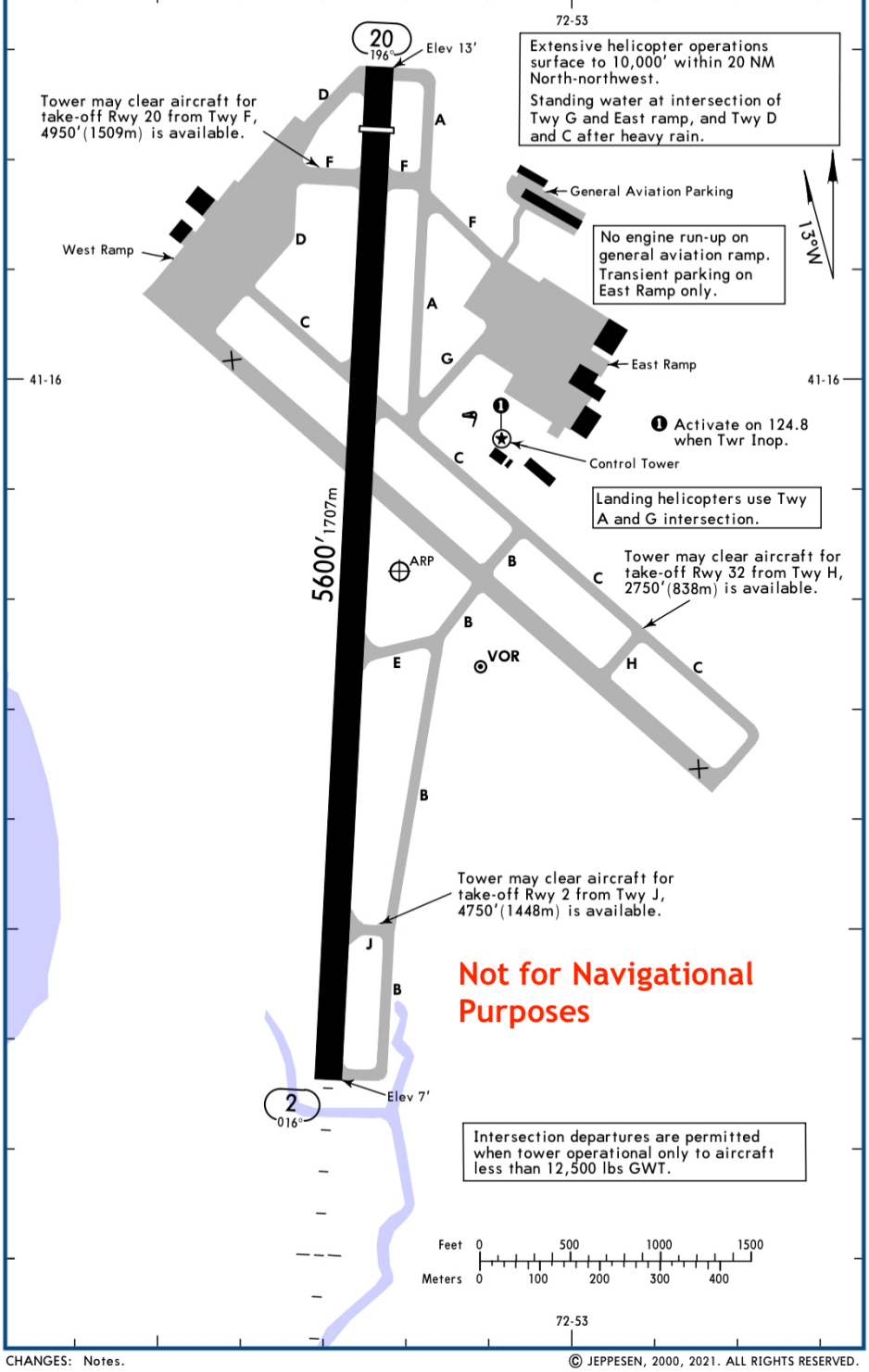


CHANGES: Notes.

LESSON PLAN

MISSION: CFI EXERCISE "PLENTY OF SPICE at SPICEWOOD"

THE MISSION:

Your post-solo learner has done well at landings thus far, but you've decided that it is now time to 'up the game' by practicing crosswind landings at a location known for its challenging conditions – Spicewood TX 88R. Runway 17/35 dimensions are 4,185 x 38 feet.

THE OBJECTIVES:

To provide the CFI practice in training crosswind landing skills during the descent, flare, and rollout to a narrow runway with minimal visual cues.

INSTRUCTOR NOTES:

From a left base the pilot must transition to the extended runway centerline in a crab or side slip and fly a proper descent profile without a VASI or PAPI at Spicewood TX 88R. The airport sits on a bluff giving the pilot the illusion of being high on the approach. To fly this scenario competently, the pilot must pick an aim point and manage the glide path by eye while also landing on the centerline in a left crosswind.

TRAINING ELEMENTS:

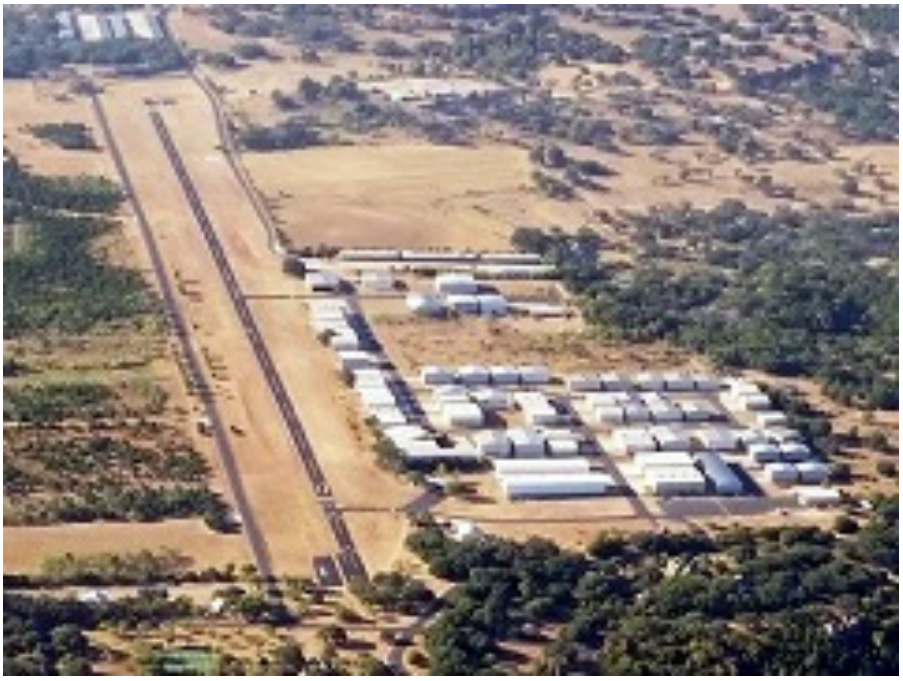
- Anticipating the wind effect in the base-to-final turn
- The potential for a stall/spin loss of control
- Establishing a slip or a crab to track the extended centerline during the descent
- Flying to an aim point: the spot in the windshield that does not move
- Managing a proper glide path where there is a strong visual illusion that will tend to make the pilot think they are too high
- Using pitch and power in coordination to be on speed and glide path crossing the fence
- Sharp awareness of the runway centerline during the flare, touchdown, and rollout

COMMON ERRORS:

- Failing to account for wind in the turn to final and overshooting through the centerline
- Failing to maintain coordination in the turn
- Improper slip or crab technique to remain aligned with the runway centerline
- Tendency to react late and make large corrections due to improper use of pitch and power
- Failing to maintain reference to an aim point to maintain the glidepath
- A tendency to relax and lose the centerline during the flare and rollout

INFORMATION:

- Airport photo
- Sectional extract
- See POH for landing procedure

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LESSON PLAN

MISSION: CFI EXERCISE "Tally Ho"

THE MISSION:

The early morning flight with your post-solo learner began at your home base of Eastern WV Regional/ Shepherd Field (KMRB). Your planned objective was to fly to and land at Leesburg (KJYO) 26 miles to the southeast. This will be the first time that your student has flown to Leesburg. Leesburg lies under the shelf of Washington Dulles class Bravo airspace. The possibility of significant traffic overhead, the non-typical 800 AGL traffic pattern (only 300 feet below the B airspace), and non-towered communications mean that your learner will be landing at a new airport while subject to distractions. Best be on your toes since there are many jets flying not only over, but into and out of Leesburg. This will be an early morning flight before the Leesburg tower opens. AWOS reports 3 knot wind from 300 degrees and on the CTAF you heard an aircraft announcing that they were taxiing to runway 35.

OBJECTIVE:

Develop instructional skills to prepare pilots for appropriate go around decision making and technique

INSTRUCTOR NOTES:

This exercise will consist of a go around from short final on Runway 35 at KJYO

- A jet which has been holding short of the runway taxis directly into the path of the landing aircraft
- To increase the surprise factor, the instructor can cause realistic distractions by mentioning the volume of traffic flying overhead, reminders to apply recommended non-towered airport communications and to comply with the 800 AGL traffic pattern altitude
- Have the pilot make non-towered airport calls on CTAF to add realism and a source of distraction while in the pattern
- CTAF should be set as 127.5
- Discuss FAR 91.113 – Right-of-way rules: Except water operations, especially paragraph (g): Landing. Aircraft, while on final approach to land or while landing, have the right-of-way over other aircraft in flight or operating on the surface…etc. You may have R-O-W, but do you have the R-U-N-W-A-Y?
- Leesburg is in the DC SFRA and has special "Leesburg Maneuvering Area" requirements (extract in NOTE below). For purposes of this exercise, assume that the pilots have undergone training, have the appropriate transponder code, and have filed the required flight plan.

TRAINING ELEMENTS:

- Being continuously in the mindset for a go-around
- Maintain situational awareness of the various factors that could lead to a go around
  - Flight issues such as an unstable approach, aircraft mechanical issues, distractions
  - External issues such as traffic – expected or not, weather, birds/wildlife
  - Uncertainty over location of other aircraft or perceived traffic conflicts
- Risk that in calm or light winds, other aircraft may be using different runways
- Awareness that some aircraft may be in the vicinity but not in communication
- Making the go around decision - when is it too late to do a go-around?
- Go around procedure/technique to maintain aircraft control

    - Specific technique will vary depending on aircraft, but in general cram/clean/climb/call
    - First, full power – pitch for Vy (unless there are obstacles then initially Vx), right rudder to control left turning tendencies
    - If full flaps were used, reduce to 20 degrees
    - Climb at Vy (if no obstacles) and at safe altitude begin taking out remaining flaps
    - Decide on whether departing the area or remaining in the pattern and make radio call
    - Complete climb checklist
- During initial climb, a sidestep maneuver can be used to avoid potential traffic taking off [see Instructor Notes below]

- Familiarity with the landing environment - gathering information on the airport and runway conditions

    - Prior to arrival (A/FD, Notams, airport management). Consider runway slope, surface condition (length, soft/recent rain), obstacles

- Need to clear final prior to turning
- Completion of pre-landing checklist to verify proper configuration
- Making recommended radio calls, in the pattern and after go around
- Applying appropriate sequence of activities – aviate, navigate, communicate during go-around

COMMON ERRORS:

- Not making the decision to go around when appropriate
- Situational unawareness of factors that may lead to a go around
- Not checking for traffic
- Not completing checklist items to verify proper configuration
- Loss of control:
    - Not controlling left turning tendencies
    - Not controlling pitch (trim stall)
    - Using trim rather than forward pressure to adjust pitch initially
    - Not cleaning up the aircraft (in accordance with POH): either taking out all flaps at once/ immediately, or forgetting to raise gear, bring up flaps
- If initially climbing at Vx, not adjusting to Vy after clearing obstacles
- Losing situational awareness of other traffic
- Not maintaining appropriate ground track (make and implement decision on side-step vs. runway heading)
- Lack of or late decision making on what to do next – stay in pattern vs. depart
- Not making radio calls

INFORMATION

- Airport photo
- Airport diagram for Leesburg KJYO
- Sectional chart extract
- See POH for landing procedure

NOTES
Airplane Flying Handbook (AFH) page 8-4:
"The upwind leg is a course flown parallel to the landing runway in the same direction as landing traffic. The upwind leg is flown at controlled airports **and after go-arounds. When necessary, the upwind leg is**

the part of the traffic pattern in which the pilot will transition from the final approach to the climb altitude to initiate a go-around. When a safe altitude is attained, the pilot should commence a shallow bank turn to the upwind side of the airport. This allows better visibility of the runway for departing aircraft."

AFH page 13-23:
"If the go-around was initiated due to conflicting traffic on the ground or aloft, the pilot should consider maneuvering to the side to keep the conflicting traffic in sight. This may involve a slight turn to offset from the runway/landing area."

AIM section 4−3−12. Low Approach (a):
"A low approach (sometimes referred to as a low pass) is the go−around maneuver following an approach. Instead of landing or making a touch−and− go, a pilot may wish to go around (low approach) in order to expedite a particular operation (a series of practice instrument approaches is an example of such an operation). Unless otherwise authorized by ATC, the low approach should be made straight ahead, with no turns or climb made until the pilot has made a thorough visual check for other aircraft in the area."

AIM Pilot/Controller Glossary:
"GO AROUND− Instructions for a pilot to abandon his/her approach to landing. Additional instructions may follow. Unless otherwise advised by ATC, a VFR aircraft or an aircraft conducting visual approach should overfly the runway while climbing to traffic pattern altitude and enter the traffic pattern via the crosswind leg."

The above FAA guidance provide two statements which indicate that r turning is appropriate, both in AFH (one says to the upwind side of the airport while the other is non-specific ("consider maneuvering")) and two which indicate that the aircraft should initially fly either straight ahead or remain over the runway, both in AIM ("straight ahead, with no turns" and "overfly the runway").

There is no ‘one size fits all’ solution. In reality, the pilot’s decision regarding flight path must be dynamic, considering the airport environment and other factors specific to the situation.

This variability offers opportunities for discussion between the flight instructor and learner(s). Scenarios covering different situations (e.g., flock of birds, other aircraft, runway contamination, etc.) can be used to develop ADM skills in these quickly changing circumstances.

Extract from Leesburg Maneuvering Area requirements:

- SECTION III. OPERATING REQUIREMENTS (VFR AT JYO) - AIRCRAFT OPERATING UNDER VFR AT JYO MUST COMPLY WITH ALL OF THE FOLLOWING CONDITIONS:
- A. AIRCRAFT DEPARTING FROM OR LANDING AT JYO MUST:
    - 1. MUST SQUAWK TRANSPONDER CODE 1226;
    - 2. PRIOR TO DEPARTING JYO, ANNOUNCE THE AIRCRAFT CALL SIGN, TYPE, AND INTENDED DEPARTURE RUNWAY ON THE PUBLISHED CTAF;
    - 3. AFTER DEPARTING JYO, EXIT THE LMA VIA THE MOST DIRECT LATERAL ROUTE AND AVOID ENTERING THE REST OF THE DC SFRA; AND
    - 4. PRIOR TO ENTERING THE LMA, PILOTS LANDING AT JYO MUST ANNOUNCE THE AIRCRAFT CALL SIGN, TYPE, AND INTENDED LANDING RUNWAY ON THE PUBLISHED CTAF. PILOTS MUST ENTER THE LMA VIA THE MOST DIRECT ROUTE AND AVOID ENTERING REST OF THE DC SFRA.

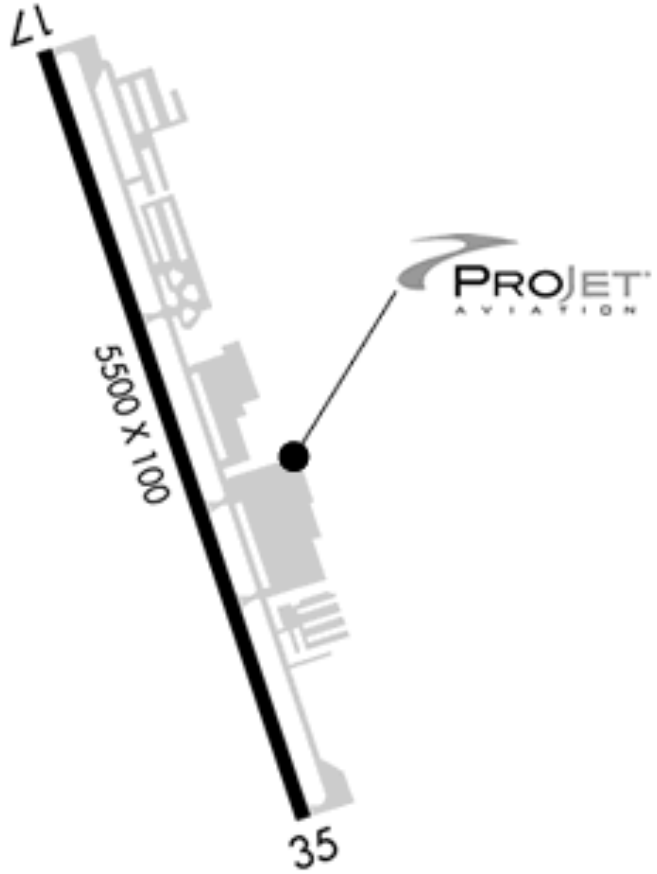
VFR & Traffic | FPL | KJYO

Caution: TFR Ahead

Paeonian Springs
Hamilton
Potomac River
ferry
500
DCA 310°
AML
12 NM
Leesburg
mall
440
water
golf course
pyramid
bldgs
golf cou
&.re
17
835
390 *L 55
122.975
+11
+1
N747001
N437SP
power plant
golf course
-1
N6017N
731
(245)
100
15
FARM
AML 7 NM
Broadlands
618
(296)
Beaverdam Cr Res
REC
00:00

Airports | Maps | Plates | Documents | Imagery | Flights | Devices | More


LEESBURG EXEC (JYO)
CT - 127.5
AWOS-3 125.225
390 L 55 122.975
LEESBURG
624' stack
665
Poolesville
WASHINGTON
METROPOLIT
AREA SFR
water
power plant
731
(245)
(Pvt)
GOOSE HUNT-FARM
340 17
618
(C) VFRMAP.COM JUN 2022


17
35
5500 X 100
PROJET
AVIATION

- 5. PILOTS DEPARTING FROM OR LANDING AT JYO UNDER VFR OPERATIONS ARE NOT REQUIRED TO CONTACT PCT UNLESS OTHERWISE DIRECTED.

- B. AIRCRAFT CONDUCTING TRAFFIC PATTERN OPERATIONS AT JYO MUST:
  - 1. FILE A DC SFRA FLIGHT PLAN;
  - 2. OBTAIN AND SQUAWK THE ASSIGNED TRANSPONDER CODE FROM PCT;
  - 3. ESTABLISH AND MAINTAIN TWO-WAY RADIO COMMUNICATIONS ON THE PUBLISHED CTAF FREQUENCY; AND
  - 4. OBTAIN ATC AUTHORIZATION TO PERFORM PRACTICE APPROACHES FROM PCT. AUTHORIZATIONS WILL BE GRANTED WORKLOAD PERMITTING.

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