STANDARDIZATION MANUAL

MULTIENGINE LAND RATING
PIPER PA-30 TWIN COMANCHE

Version 2a, Revised August 2020 – Thomas Stehler

TABLE OF CONTENTS

REVISION HISTORY

May 2020: Revision 1 – Initial version.
August 2020: Revision 2 – Modified for counter-rotating procedures, added standard takeoff briefing, consolidated engine shutdown/feather procedures.
August 2020: Revision 2a – Added note regarding checklist usage to Single-Engine Approach and Landing.

GENERAL OPERATING RULES, GUIDELINES

The safe single-engine operating speed for training purposes [V_{SSE}] is 97 MPH. Every effort should be made to remain above this airspeed during any demonstration or maneuver involving single-engine operations.

Manual Gear Extension demonstrations will not be performed in the airplane for training purposes, due to the complication of the gear system. Instructors and students are encouraged to work with the maintenance department to see demonstrations related to the landing gear.

On any flight which involves intentional engine shutdowns below 1000' AGL, no rear seat passengers are permitted. In general, rear seat passengers are discouraged during single-engine operation and training due to highly deteriorated climb performance.

The airplane's auxiliary fuel tanks should not be filled before each training flight, in order to provide best single-engine climb performance.

Intentional full shutdown, feathering and restart of an engine will not be completed below 3000' AGL, and will only be performed within gliding distance of an airport with major powerplant maintenance.

The zero-thrust setting for simulated single-engine operation is 12" MP at 2000 RPM.

Multiengine training is not inherently dangerous. It is, however, inherently unforgiving of any carelessness or neglect. Students are expected to maintain a degree of professionalism and airmanship representative of a commercial pilot.

TRAFFIC PATTERN ARRIVAL

Ref: FAA-H-8083-3A (Airplane Flying Handbook), Aeronautical Information Manual

Objective: To develop the ability to safely and efficiently arrive at an uncontrolled airport, or after arrival, the procedure to utilize for traffic pattern operations.

1. Complete the Descent checklist.
2. At least 10nm from the airport, attempt to determine the active runway if the runway.

   If the runway in use cannot be determined…

3. Overfly the airport 500’ above traffic pattern altitude to observe traffic, wind direction indicators, or wind socks to determine runway to use for landing.

   NOTE: Remain vigilant for other traffic.

4. At least 2nm from the runway, enter the traffic pattern at traffic pattern altitudeon a 45° entry to the downwind, maintaining a one-half mile distance from the runway on the downwind leg.
5. Complete the appropriate approach and landing procedures checklist.

   NOTE: The above procedures assume an ideal pattern situation. Other traffic, ATC, local traffic pattern restrictions and noise abatement procedures, obstacles, etc., may require a modification of these procedures. In all cases, the pilot shall exercise good judgment and maintain positive airplane control.

Standards (Commercial)
Maintains proper spacing from other aircraft.
Maintains orientation with landing runway.
Maintains traffic pattern altitude +/- 50 feet.

TRAFFIC PATTERN DEPARTURE

Ref: FAA-H-8083-3A (Airplane Flying Handbook), Aeronautical Information Manual

Objective: To safely depart an airport after takeoff or integrate into the flow of traffic when remaining in the traffic pattern.

Departing the Pattern

1. Continue straight out for at least 2nm before turning on course, or…
2. After reaching pattern altitude, exit the pattern with a 45-degree turn in the direction of the traffic pattern.
3. Complete the Climb checklist at or above 1500’ AFE.

Remaining in the Pattern

1. Commence a turn to the crosswind leg when beyond the departure end of the runway and above 500’ AGL.

NOTE: The above procedures assume an ideal pattern situation. Other traffic, ATC, local traffic pattern restrictions and noise abatement procedures, obstacles, etc., may require a modification of these procedures. In all cases, the pilot shall exercise good judgment and maintain positive airplane control.

Standards

Maintains proper spacing from other aircraft.
Maintains orientation with landing runway.
Maintains traffic pattern altitude +/- 50 feet.

CLEARING TURNS

Ref: Aeronautical Information Manual Section 4

Objective: To exercise conscientious and continuous surveillance of the airspace in which the airplane is being operated.

First 90-degree clearing turn

1. Visually scan the area to the left and right of the aircraft.
2. Select a visual landmark of the wingtip in the direction of the turn to be executed as a 90-degree reference point to roll onto.
3. Enter a 30-degree bank turn in the direction of the visual landmark.
4. Continuously scan the area above, below and ahead of the flight path.
5. After 90 degrees of the turn has been completed, roll the wings level on the selected landmark.
6. Repeat steps 1-5, while turning in the opposite direction.

NOTE: After completion of the second clearing turn and with no conflicting traffic observed, immediately begin the maneuver to be performed.

NORMAL TAKEOFF AND CLIMB

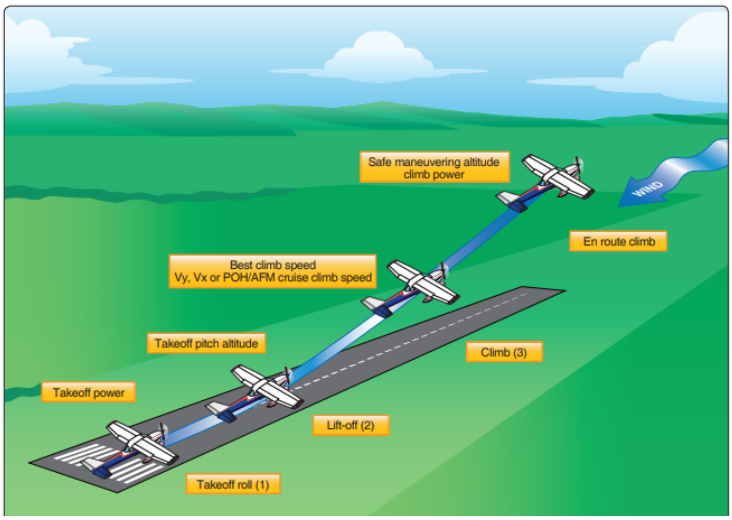
Ref: FAA-H-8083-3A (Airplane Flying Handbook)

Objective: To safely execute a takeoff under normal conditions.

1. Complete the Before Takeoff checklist.
2. Center aircraft on runway centerline with nose wheel straight ahead.
3. Advance throttles smoothly to 2000 RPM, check engine instruments. Make sure thrust feels symmetrical.
4. Advance throttles full forward. Maintain centerline.
5. Accelerate to at least 90 MPH and increase control yoke back pressure to pitch up for takeoff.
6. When aircraft begins climbing, call out *"positive rate, gear up"* and raise landing gear.
7. Accelerate to 112 MPH [V_Y] and climb on centerline. Use trim as necessary.
8. At 1000' AFE, set throttles and propellers to Climb power (24" MP, 2400 RPM).
9. After leaving traffic pattern, complete Climb checklist.

If remaining in the pattern…

10. Accelerate to 112 MPH [V_Y] and climb on centerline. Use trim as necessary.
11. At 500' AFE, turn to crosswind.
12. Continue climb to TPA and turn to downwind. Reduce throttles to 17" MP. Use trim as necessary.



Standards

Airspeed V_Y +5/-0 MPH.

TAKEOFF BRIEFING

This briefing should be verbally given before any departure.

1. Takeoff runway, with heading or sign verification.
2. Current surface winds.
3. Route and/or direction of departure.
4. Engine failure considerations.
    a. If engine fails while aircraft still on runway, abort takeoff.
    b. If engine fails while aircraft is airborne, but landing gear is still extended OR indicated airspeed is less than 105 MPH [V_Y], land straight ahead.
    c. If engine fails after gear retraction and above 105 MPH [V_{YSE}], continue controlled climb and complete all memory items, then return to land as soon as possible.

Example

Today we will be taking off on runway 32. The current wind is from 290 at 12, which is a crosswind from the left. We will be making a downwind departure to the south and climbing to 3000 feet.

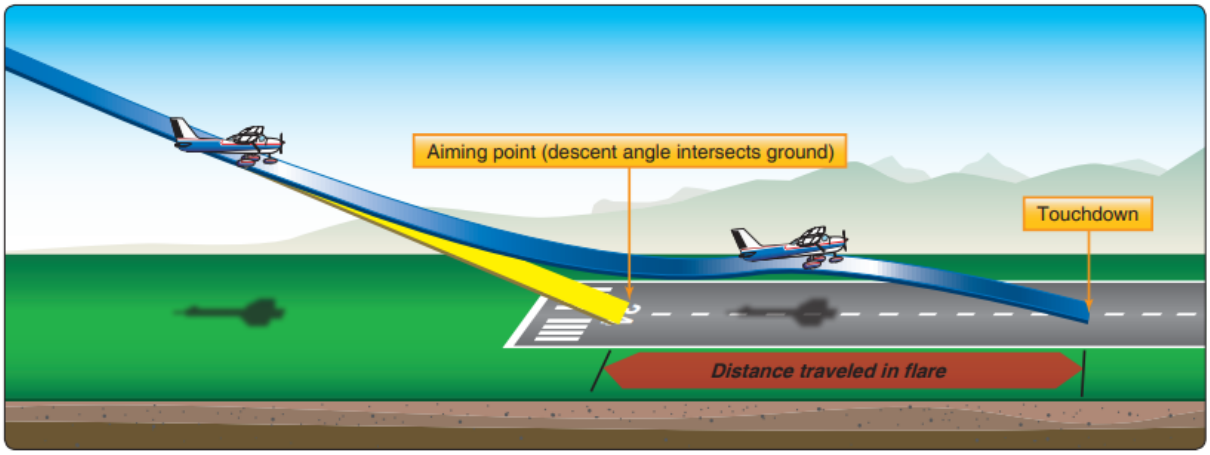
If an engine fails below our rotation speed of 90 MPH, we will immediately idle the throttles and apply brakes to stop the takeoff roll. If an engine fails after takeoff with the gear extended or the speed below the blue line, we will land ahead, only making shallow turns if necessary. If an engine fails with the gear retracted after takeoff, we will continue climbing out, maintain directional control at or above blue line, and run the appropriate memory items.

NORMAL LANDING

Ref: FAA-H-8083-3A (Airplane Flying Handbook)

Objective: To safely execute a landing under normal conditions

1. Complete the Before Landing checklist.
2. Maintain 105 MPH until the runway is within gliding distance.
3. Idle both throttles.
4. Use foot brakes as required.
5. Apply back elevator pressure to aerodynamically brake.



Standards

Final airspeed 1.3 V_{SO} +/- 5 MPH with gust factor applied.

Touch down within 200 ft of designated spot.

SHORT FIELD TAKEOFF

Ref: FAA-H-8083-3A (Airplane Flying Handbook)

Objective: To obtain maximum performance during takeoff and minimize runway length required.

1. Complete the Before Takeoff checklist.
2. Center aircraft on runway centerline with nose wheel straight ahead. Use all available runway.
3. Firmly hold brakes to keep airplane in position.
4. Advance throttles smoothly to 2000 RPM, check engine instruments.
5. Advance throttles full forward. Maintain centerline and make sure thrust feels symmetrical.
6. Accelerate to at least 90 MPH and increase control yoke back pressure to pitch up for takeoff.
7. When aircraft begins climbing, call out *"positive rate, gear up"* and raise landing gear.
8. Climb out at 90 MPH [V_X]
9. Once clear of obstacles, accelerate to 112 MPH [V_Y] and climb on centerline. Use trim as necessary.
10. At 1000' AFE, set throttles and propellers to Climb power (24" MP, 2400 RPM).
11. Climb out as normal (see "Normal Takeoff and Climb" steps 9-12).

NOTE: While the POH specifies a Flaps setting of 15 degrees for takeoff, this introduces undesired loss of climb performance in the event of an engine failure after takeoff. For training purposes, practice these with flaps retracted, but the costs and benefits of each flap configuration should be discussed.

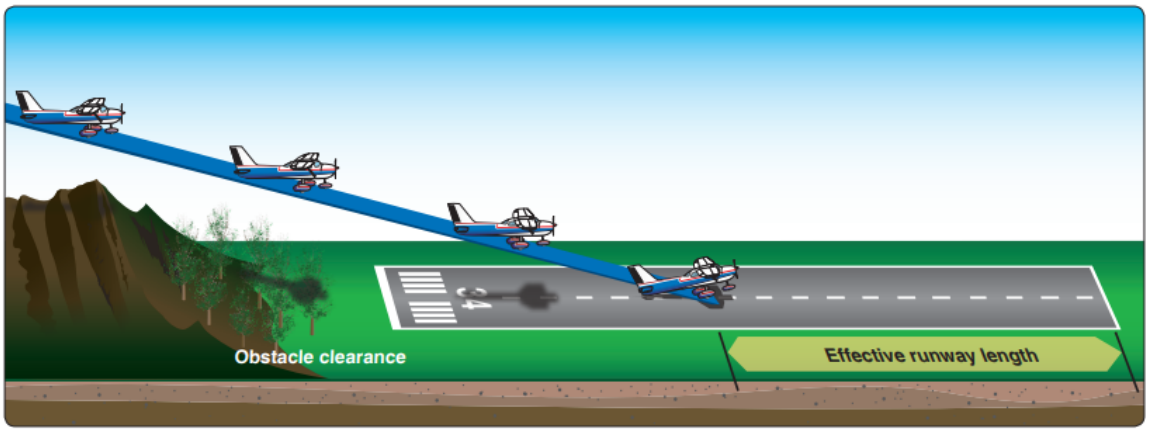
Standards (Commercial)
Airspeed V_X/V_Y +5/-0 MPH as appropriate.

SHORT FIELD LANDING

Ref: FAA-H-8083-3A (Airplane Flying Handbook)

Objective: To minimize runway length required during landing operations.

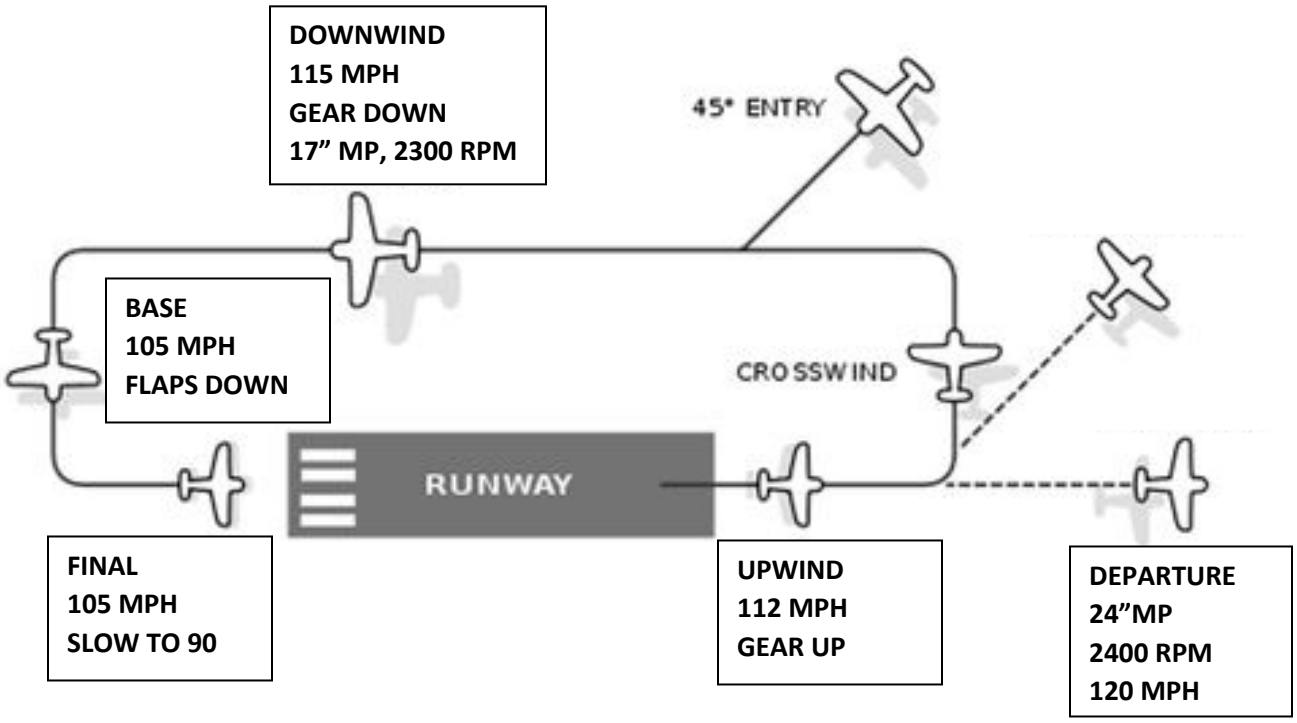
1. Complete the Before Landing checklist.
2. Maintain 105 MPH as long as practical, then above 90 MPH until runway is within gliding distance.
3. Idle both throttles.
4. Touch down with minimal airspeed.
5. Use foot brakes as required.
6. Apply back elevator pressure to aerodynamically brake.



Standards (Commercial)
Airspeed 1.3 V_{SO} +/ 5 MPH with gust factor applied
Touch down within 100 ft of designated spot

TRAFFIC PATTERN REFERENCE SPEEDS

Pattern Departure	**120 MPH**
Upwind	**112 MPH [V_Y]**
Downwind	**115 MPH**
Base	**105 MPH**
Final	**105 MPH**



MANEUVERING DURING SLOW FLIGHT

Ref: FAA-H-8083-3A (Airplane Flying Handbook)

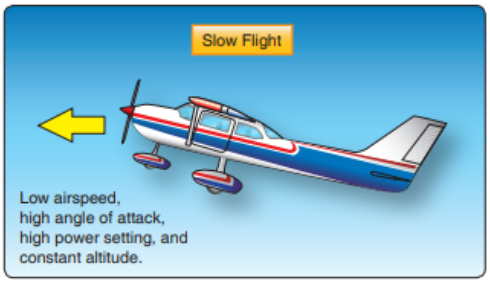
Objective: To recognize changes in aircraft flight characteristics and control effectiveness at critically slow airspeeds in various configurations.

1. Reduce throttles to 15” MP.
2. Set propellers to high RPM.
3. Below 150 MPH [V_{LE}], extend landing gear.
4. Below 125 MPH [V_{FE}], extend full flaps.
5. Maintain heading.
6. Maintain altitude with power (18”-20” MP) and trim as necessary.
7. Maintain 69-74 MPH [V_{S0} +5].
8. Maintain control at minimum airspeed, just above stall indication.
9. Execute any climbs, descents, turns as directed. Maintain bank angle less than 20 degrees.

   On recovery…

10. Apply full power while maintaining altitude.
11. Return to normal cruise flight (20” MP, 2300 RPM).
12. Perform Cruise checklist.

NOTE: Any time a maneuver specifies sustained flight below 105 MPH [V_{YSE}], pilots should exercise caution in case of an engine failure. During recovery, ensure that this speed is maintained or exceeded as soon as practical.



Standards (Commercial)
Altitude +/- 50 feet.
Heading +/- 10 degrees.
Bank +/- 5 degrees.
Airspeed +5/-0 MPH.

POWER OFF STALL

Ref: FAA-H-8083-3A (Airplane Flying Handbook)

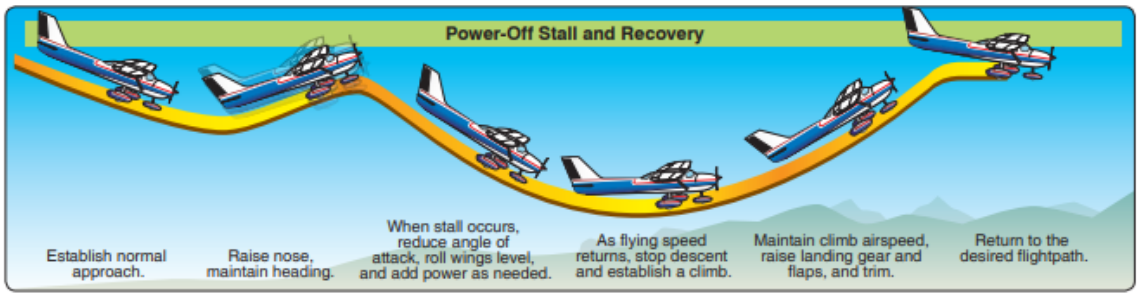
Objective: To recognize indications of an imminent or full stall during power off situations in the landing configuration, and to make prompt, positive, and effective recoveries with minimal altitude loss.

1. Reduce throttles to 15" MP.
2. Set propellers to high RPM.
3. Below 150 MPH [V_{LE}], extend landing gear.
4. Below 125 MPH [V_{FE}], extend full flaps.
5. Maintain heading and altitude with power (18-20" MP) and trim as necessary.
6. At 90 MPH, reduce throttles to idle. Add bank if directed.
7. Pitch nose up as necessary to stall the airplane.

On recovery…

8. Release elevator back pressure and apply full throttle.
9. Pitch to maintain positive rate of climb while maintaining below critical angle of attack.
10. Retract flaps above 74 MPH [V_{S1}]
11. Retract landing gear.
12. Return to normal cruise flight (20" MP, 2300 RPM) at starting altitude.
13. Perform Cruise checklist.

NOTE: Any time a maneuver specifies sustained flight below 105 MPH [V_{YSE}], pilots should exercise caution in case of an engine failure. During recovery, ensure that this speed is maintained or exceeded as soon as practical.



Standards

Heading +/- 10 degrees.

Recover at first indication of stall unless directed otherwise.

POWER ON STALL

Ref: FAA-H-8083-3A (Airplane Flying Handbook)

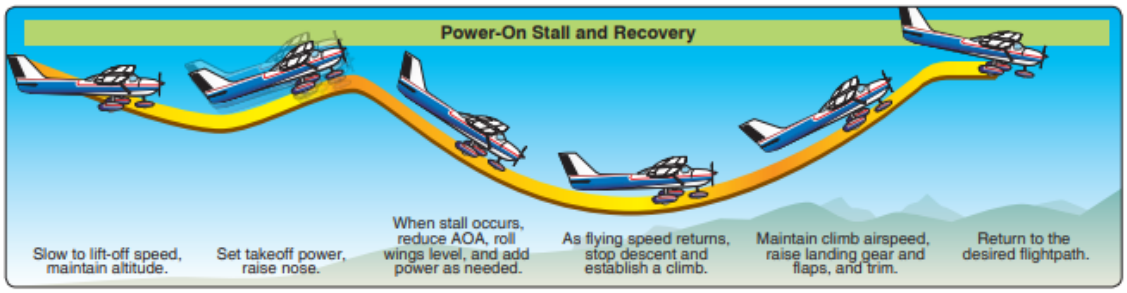
Objective: To recognize indications of an imminent or full stall during power on situations in the clean configuration, and to make prompt, positive, and effective recoveries with a minimum loss of altitude.

1. Reduce throttles to 15" MP.
2. Set propellers to high RPM.
3. Maintain altitude with trim as necessary.
4. At 90 MPH, increase throttles to 21" MP. Add bank if directed.
5. Pitch nose up as necessary to stall the airplane.

On recovery…

6. Release elevator back pressure and apply full throttle.
7. Pitch to maintain positive rate of climb while maintaining below critical angle of attack.
8. Return to normal cruise flight (20" MP, 2300 RPM) at starting altitude.
9. Perform Cruise checklist.

NOTE: Any time a maneuver specifies sustained flight below 105 MPH [V_{YSE}], pilots should exercise caution in case of an engine failure. During recovery, ensure that this speed is maintained or exceeded as soon as practical.



Standards

Heading +/- 10 degrees.

Recover at first indication of stall unless directed otherwise.

ACCELERATED STALL

Ref: FAA-H-8083-3A (Airplane Flying Handbook)

Objective: To demonstrate that stalling is a function of angle of attack, weight, and load factor, rather than solely based on airspeed.

1. Reduce throttles to 15" MP.
2. Set propellers to high RPM.
3. Maintain altitude with trim as necessary.
4. At or below 110 MPH, establish a 45-50 degree bank to the left or right.
5. After bank and turn are established, increase elevator back pressure to induce stall indication.

NOTE: The stall indication should occur within the first 90 degrees of turn.

On recovery…

6. Release elevator back pressure and apply full throttle.
7. Pitch and roll the airplane back to level flight.
8. Return to normal cruise flight (20"MP, 2300 RPM).
9. Complete Cruise checklist.

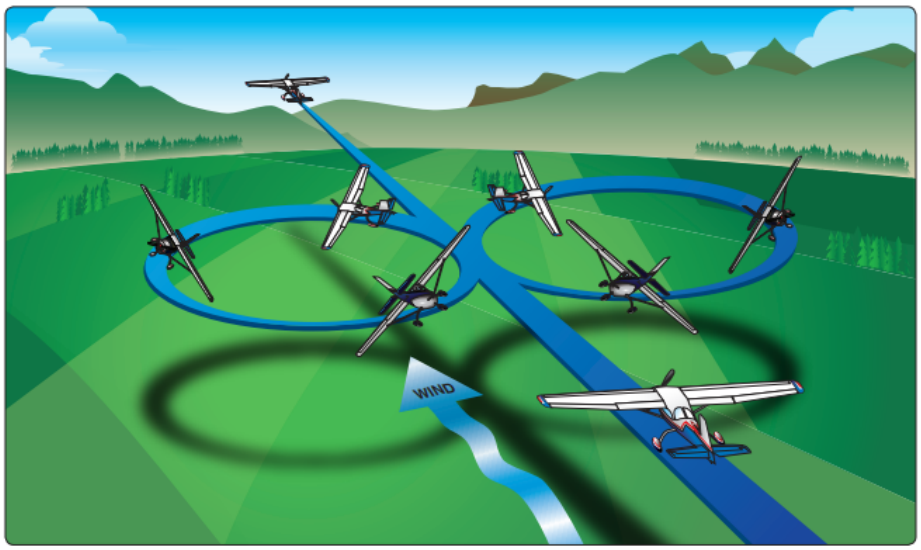
Standards
Demonstrate understanding of relationship between all factors effecting stall.
Recover at first indication of stall.

STEEP TURNS

Ref: FAA-H-8083-3A (Airplane Flying Handbook)

Objective: To develop smoothness, coordination, orientation, division of attention, and control techniques while executing high performance turns.

1. Set throttles to maintain flight at 140 MPH in the turn (approximately 21" MP at 2300 RPM).
2. Roll into 50-degree bank and begin 360-degree turn. Maintain altitude and airspeed.
3. Begin rolling out of turn 15-20 degrees before starting heading.
4. Roll wings level, and immediately enter 360-degree turn in opposite direction. If necessary, use pitch to maintain altitude during transition.
5. Begin rolling out of turn 15-20 degrees before starting heading.
6. Return to normal cruise power (20" MP, 2300 RPM).
7. Perform Cruise checklist.



Standards
Altitude +/- 100 feet.
Airspeed +/- 10 MPH.
Heading +/- 10 degrees from starting heading.
Bank +/- 5 degrees.

EMERGENCY DESCENT

Ref: FAA-H-8083-3A (Airplane Flying Handbook), PA-30 POH 3-13

Objective: To descend the airplane as rapidly as possible within its operating limitations.

1. Ensure all seat belts and harnesses are fastened, and all loose items are secured.
2. Reduce throttles to idle.
3. Increase propellers to high RPM.
4. Extend landing gear.
5. Pitch airplane down to maintain 150 MPH descent.

   On recovery…

6. Return to level flight.
7. Return to normal cruise power (20”, 2300 RPM).
8. Perform Cruise checklist.

NOTE: For training purposes, a gear-down configuration will be used. The costs and benefits of a gear-up emergency descent should be discussed.

Emergency Descent
Throttles ……...Idle
Propellers ……..…..High RPM
Mixtures ……..…..Rich
Landing Gear…….....Down
Airspeed……...150MPH
Cowl Flaps ……..…..Closed
Bank ……30° - 45°

Standards

Demonstrate understanding of aircraft limitations, and emergencies or situations requiring use of Emergency Descent procedures.

DEMONSTRATION OF DRAG

Ref: FAA-H-8083-3A (Airplane Flying Handbook)

Objective: To demonstrate the drag effects and climb capability of various aircraft configurations on a single engine.

NOTE: This is a demonstrated flight maneuver only, and is not required to be performed on a Commercial Multiengine add-on checkride. It should be memorized and performed for a Multiengine Instructor checkride.

1. Pick one engine to be failed for the demonstration and close its associated cowl flap.
2. Reduced the failed engine's throttle to idle.
3. Increase the remaining engine's throttle to climb power (24" MP, 2400 RPM).
4. Establish controlled flight at 105 MPH [V_{YSE}]. Note current vertical speed.
5. Lower the landing gear. Note current vertical speed.
6. Lower the flaps. Note current vertical speed.
7. Retract the landing gear, leaving only flaps extended. Note current vertical speed.
8. Retract flaps and return to normal cruise flight (20", 2300 RPM) at starting altitude.
9. Perform Cruise checklist.

Standards
Demonstrate understanding of the effects of drag on climb performance.

SINGLE-ENGINE APPROACH AND LANDING

Ref: FAA-H-8083-3A (Airplane Flying Handbook), PA-30 Emergencies and Abnormals Checklist

Objective: To execute a safe approach and landing in the event of an engine failure.

1. Ensure that the Feathering and Securing checklist and the Single Engine Approach and Landing checklist have been completed.
2. Maintain a speed of at least 105 MPH [V_{YSE}] as long as practical.
3. Do not extend landing gear or flaps until landing on a runway is assured. Leaving flaps fully retracted for the approach and landing is not uncommon.
4. Use caution to avoid a single-engine go-around if possible.

Note: The Single Engine Approach/Landing Checklist takes the place of the Descent and Before Landing checklists; neither of these are required in a single engine scenario.

Feathering and Securing	
Affected Engine Throttle	Confirm Idle
Affected Engine Propeller	Feather
Affected Engine Mixture	Idle Cut-Off
Affected Fuel Pump	Off
Affected Magnetos	Off
Affected Cowl Flap	Close
Affected Generator	Off
Electrical Load	Reduce
Fuel Crossfeed	As Required

Single Engine Approach/Landing	
Inoperative Engine Cowl Flap	Closed
Operating Fuel Selector	Main Tank
Operating Fuel Pump	On
Operating Mixture	Full Rich
Operating Propeller	Full Forward
Aircraft Lights	As Required
Approach Speed	120 MPH
Do not extend Landing Gear or Flaps until landing is assured. Full flaps not required. Avoid single-engine go-around if possible.	

Standards
Altitude +/- 100 feet.
Airspeed +/- 10 MPH.
Heading +/- 10 degrees from starting heading.

DEMONSTRATION OF V_{MCA}

Ref: FAA-H-8083-3B (Airplane Flying Handbook – Chapter 12 Addendum)

Objective: To demonstrate the speed at which the aircraft will begin losing directional control in a worst-case single-engine scenario.

1. Pick one engine to be failed for the maneuver, and close its associated cowl flap.
2. Reduce throttles to 15" MP and maintain altitude with trim.
3. As the airplane slows through 120 MPH, increase both propellers to high RPM.
4. Reduce the failed engine's throttle to idle.
5. Gradually increase the remaining engine's throttle to full.
6. Establish sustained flight at 105 MPH [V_{YSE}].
7. Add pitch to induce gradual speed decrease until first indication of stall or loss of directional control.

   On recovery…

8. Immediately lower nose and reduce power on operating engine to idle.
9. When directional control is regained and airspeed is safe, gradually return operating engine power to full.
10. Re-establish controlled flight at 105 MPH [V_{YSE}].
11. Once stable at 105 MPH, return both engines to normal cruise power (20" MP, 2300 RPM).
12. Perform Cruise checklist.

NOTE: Any time a maneuver specifies sustained flight below 105 MPH [V_{YSE}], pilots should exercise caution in case of an engine failure. During recovery, ensure that this speed is maintained or exceeded as soon as practical.

Standards
Bank <5 degrees towards operating engine.
Heading +/- 20 degrees from initial.
Speed +/- 5 MPH from V_{YSE} on recovery.

ENGINE SHUTDOWN, FEATHER

Ref: PA-30 Emergencies and Abnormals Checklist PA-30 POH 3-3

Objective: To safely identify and feather an inoperative engine while maintaining control of the aircraft at an altitude or flight phase not conducive to extensive troubleshooting.

1. Maintain directional control and at least 105 MPH [V_{YSE}].
2. Increase mixtures to full rich.
3. Increase propellers gradually to high RPM, to avoid exceeding the red line.
4. Increase throttles gradually to full power.
5. Ensure that flaps and landing gear are fully retracted.
6. Ensure that the fuel pumps are on.
7. Ensure that the fuel selectors are on the main tanks.
8. Identify and verbalize which engine has failed by determining which foot is not presently applying rudder pressure (the “dead” foot).
9. Verify and verbalize the inoperative engine by decreasing its associated throttle to idle. If the correct engine was chosen, there should be no change in power or directional control.
10. Feather and verbalize the inoperative engine by decreasing its associated propeller lever to the feather position.
11. Return to land as soon as possible. Continue to maintain directional control and at least 105 MPH.
12. If time permits, proceed to the Engine Feathering and Securing checklist.

Engine Failure-*Critical Flight Phase*
Directional Control……..…..Maintain
Airspeed ……..Minimum 105MPH
Mixtures ……..……Rich
Propellers ……...……..…..Forward
Throttles ……...…Forward
Flaps ……..……..Up
Gear ……..……Up
Electric Fuel Pumps ……...……..On
Fuel Selectors …….....Main Tanks
Affected Throttle……..Identify, Verify
Affected Propeller…….....Feather
Proceed to Feathering and Securing.

FUEL CROSSFEEDING

Ref: PA-30 Emergencies and Abnormals Checklist, PA-30 POH 3-4, 7-10

Objective: To effectively manage fuel in a single-engine cruise situation.

1. Maintain directional control and at least 105 MPH [V_{YSE}].
2. Turn the operating engine's fuel pump is on.
3. With the inoperative engine's fuel selector, choose the fuel tank to be utilized by the operating engine.
4. Select the "Crossfeed" position on the operating engine's fuel selector (pointing inboard). Monitor fuel flow and ensure no loss of pressure or change of power.

   To return to normal operations…

5. Return the operating engine's fuel selector to the desired tank on its respective side.
6. Return the inoperative engine's fuel selector to the "Off" position (pointing outboard).
7. Set the operating engine's fuel pump as required.

NOTE: This procedure should only be used during level flight. Climbs and descents during crossfeed operations are prohibited.

Fuel Crossfeed (Level Flight Only)
Operating Fuel Pump……...On
Inoperative Fuel Selector……Main Tank
Operating Fuel Selector……Crossfeed

Operating Fuel Selector……...Main Tank
Inoperative Fuel Selector……Off

Standards

Demonstrate understanding of when crossfeed operations should be considered, as well as any associated limitations.

PERFORMANCE/CONTROL INFORMATION

Type of Flight	MP	RPM
Level Cruise Flight		
120 MPH	17”	2300
140 MPH	20”	2300
500fpm Straight Ahead Descent		
120 MPH, Gear Up	15”	2300
120 MPH, Gear Down	17”	2300
800fpm Straight Ahead Descent		
120 MPH, Gear Up	12”	2300
120 MPH, Gear Down	15”	2300
500fpm Straight Ahead Descent – SINGLE ENGINE		
120 MPH, Gear Up		
120 MPH, Gear Down		
800fpm Straight Ahead Descent – SINGLE ENGINE		
120 MPH, Gear Up		
120 MPH, Gear Down		

REQUIRED TASKS – AMEL ADD-ON

Ref: FAA-S-ACS-7A (Commercial ACS) Table A-14 (Addition of Airplane Multiengine Land)

I. Preflight Preparation
- F. Performance and Limitations
- G. Operation of Systems

II. Preflight Procedures
- A. Preflight Assessment
- B. Flight Deck Management
- C. Engine Starting
- D. Taxiing
- F. Before Takeoff Check

IV. Takeoffs, Landings and Go-Arounds
- A. Normal Takeoff and Climb
- B. Normal Approach and Landing
- E. Short-Field Takeoff and Maximum Performance Climb
- F. Short-Field Approach and Landing

V. Performance and Ground Reference Maneuvers
- A. Steep Turns

VII. Slow Flight and Stalls
- A. Maneuvering During Slow Flight
- B. Power-Off Stalls
- C. Power-On Stalls
- D. Accelerated Stalls
- E. Spin Awareness

IX. Emergency Operations
- E. Engine Failure During Takeoff Before V_{MC}
- F. Engine Failure After Liftoff
- G. Approach and Landing with an Inoperative Engine

X. Multiengine Operations
- A. Maneuvering with One Engine Inoperative
- B. VMC Demonstration
- C. One Engine Inoperative During Straight and Level Flight and Turns (simulated IMC)
- D. Instrument Approach and Landing with an Inoperative Engine (simulated IMC)