Maneuvers and Procedures Manual

Cessna 207

TRANSNORTHERN AVIATION

3350 Old International Airport Road
Anchorage, AK 99502

Revision: Original

March 6, 2025

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REVISIONS

It is the responsibility of the Driector of Operations or Chief Pilot to keep the Cessna 207 Maneuvers and Procedures current.

All revisions will be submittd to the FAA for acceptance prior to being implemented.

Revision control is for each page accomplished in the upper right-hand corner of each page.

LOG OF REVISIONS

Rev. No.	Date	Page Numbers	Initials
Original	03-06-2025	All	

EFFECTIVE PAGES

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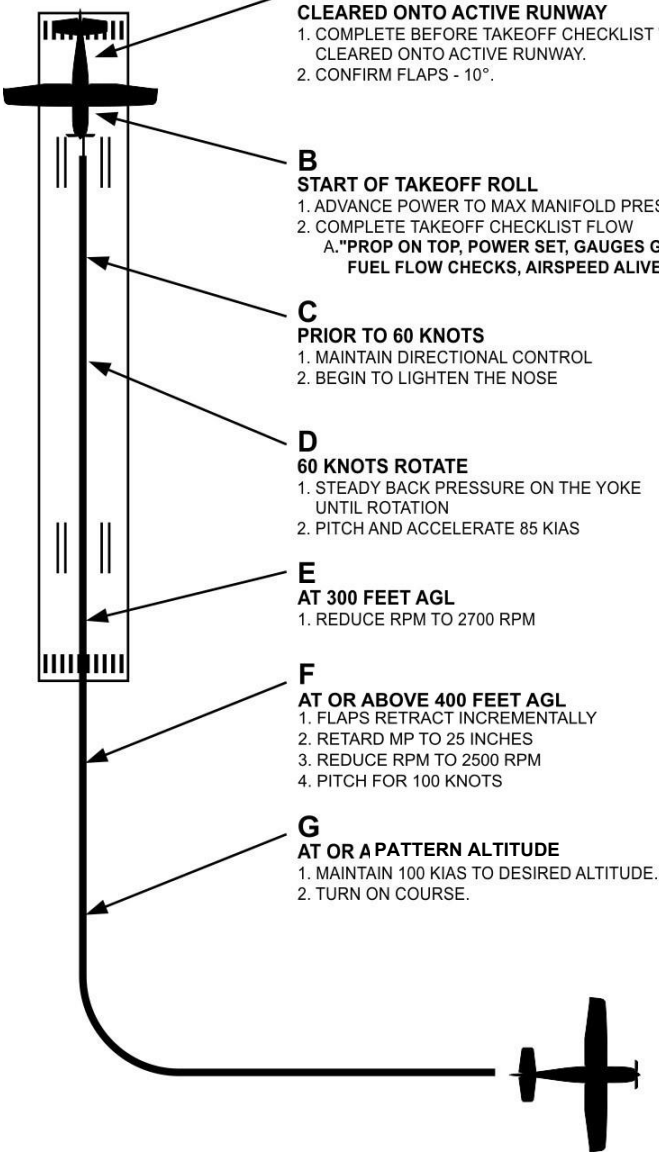
James Howery, POI

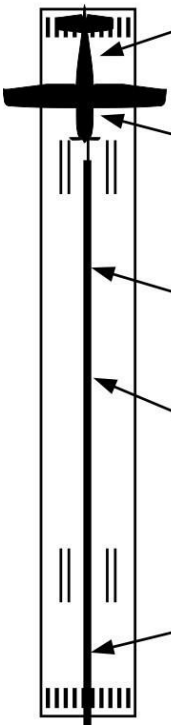
JAMES M HOWERY

Digitally signed by JAMES M HOWERY
Date: 2025.06.20 10:38:14 -08'00'

NORMAL TAKEOFF PROFILE



SHORT FIELD TAKEOFF PROFILE



A
CLEARED ONTO ACTIVE RUNWAY
1. COMPLETE BEFORE TAKEOFF CHECKLIST WHEN CLEARED ONTO ACTIVE RUNWAY.
2. CONFIRM FLAPS - 10°.

B
START OF TAKEOFF ROLL
1. ADVANCE POWER TO MAX MANIFOLD PRESSURE
2. COMPLETE TAKEOFF CHECKLIST FLOW
   A. **"PROP ON TOP, POWER SET, GAUGES GREEN, FUEL FLOW CHECKS, AIRSPEED ALIVE"**

C
PRIOR TO 60 KNOTS
1. MAINTAIN DIRECTIONAL CONTROL.
2. KEEP AIRCRAFT NOSE ON THE GROUND WITHOUT "WHEEL BARRELING"

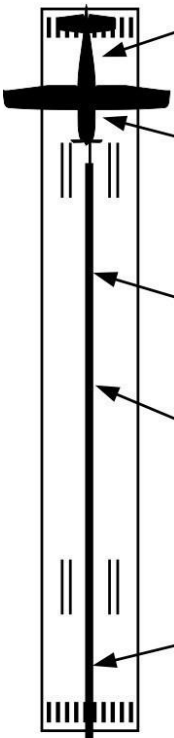
D
60 KNOTS ROTATE
1. MAINTAIN 74 KIAS UNTIL ALL OBSTACLES ARE CLEAR, THEN REDUCE PITCH AND CLIMB AT 85 KIAS

E
300 FEET AGL AFTER ALL OBSTACLES ARE CLEAR
1. REDUCE RPM TO 2700 RPM
2. PITCH FOR 85 KNOTS

F
AT OR ABOVE 400 FEET AGL
1. FLAPS RETRACT INCREMENTALLY.
2. RETARD MP TO 25 INCHES.
3. PROP BACK TO 2500 RPM.
4. PITCH FOR 100 KNOTS.

G
AT OR ABOVE PATTERN ALTITUDE
1. MAINTAIN 100 KIAS TO DESIRED ALTITUDE
2. TURN ON COURSE

¶SOFT FIELD TAKEOFF PROFILE



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1. ADVANCE POWER TO MAX MANIFOLD PRESSURE
2. COMPLETE TAKEOFF CHECKLIST FLOW
   A. **"PROP ON TOP, POWER SET, GAUGES GREEN, FUEL FLOW CHECKS, AIRSPEED ALIVE"**

C
PRIOR TO 60 KNOTS
1. MAINTAIN DIRECTIONAL CONTROL.
2. BEGIN TO LIGHTEN THE NOSE WHEEL.

D
65 KNOTS ROTATE
1. ALLOW AIRCRAFT TO FLY OFF THE GROUND WHEN IT WANTS TO
2. LOWER NOSE AND STAY IN GROUND EFFECT

E
300 FEET AGL AFTER ALL OBSTACLES ARE CLEAR
1. REDUCE RPM TO 2700 RPM
2. PITCH FOR 85 KNOTS TO 400' AGL

F
AT OR ABOVE 400 FEET AGL
1. FLAPS RETRACT INCREMENTALLY.
2. RETARD MP TO 25 INCHES.
3. PROP BACK TO 2500 RPM.
4. PITCH FOR 100 KNOTS.

G
AT OR ABOVE PATTERN ALTITUDE
1. MAINTAIN 100 KIAS TO DESIRED ALTITUDE
2. TURN ON COURSE

CROSSWIND TAKEOFF

Directional and lateral control throughout a crosswind takeoff is critical. Initially, directional control is accomplished with the nose wheel steering. The pilot lightly holds enough forward pressure on the yoke to keep the nose wheel firmly on the ground. This forward pressure stops the nose wheel from trying to skid and in turn, makes the nose wheel steering more effective. Once enough airspeed has been obtained for the rudder to become effective, the pilot will lighten the nose relying on the rudder and aileron role for directional control. Aileron deflection into the crosswind will aid in directional control during the takeoff roll.

The aileron deflection should be placed at full scale deflection initially, with the amount of deflection reduced as the aircraft accelerates and the aileron becomes more effective. The aileron deflection required as speed increases will decrease but it will never diminish to zero throughout the takeoff roll. The primary objective is to keep the aircraft on centerline.

During rotation increase the yoke input into the wind to compensate for the tendency of the upwind wing to rise during rotation. After liftoff, the aircraft is in a sideslip, gradually level the wings and neutralize the rudder, which will result in a crab.

NOTE:
Crosswind takeoff will utilize the same procedure as normal takeoff with the addition of paragraphs outlined above.

NORMAL LANDING

BEFORE LANDING CHECKLIST

1. Propeller ..... High RPM
2. Mixture ..... Full Rich
3. Flaps ..... Set for Landing

BEFORE LANDING CHECKLIST (AMPLIFICATION)

Propeller .....High RPM

- Advance propeller knob slow and smooth towards high RPM.
- Avoid abrupt movements, if possible, to avoid surging of the prop.

Mixture ..... Full Rich

- Advance mixture by slowly turning mixture in until full rich has been achieved.

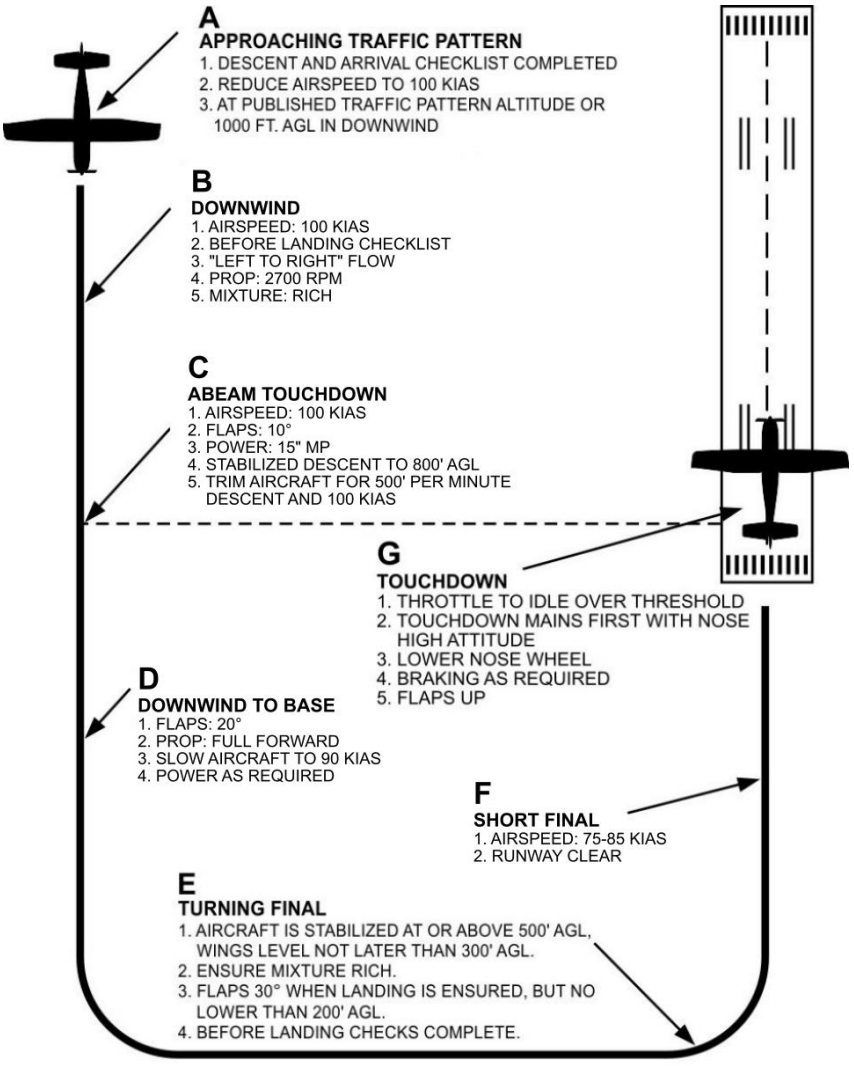
Flaps .....Set for Landing

- Set flaps for the appropriated segment of the approach to land.
  - Flaps 10°- Downwind abeam touchdown point
  - Flaps 20°- Base Leg
  - Full Flaps - When landing assured but no lower than 200 ft AGL

Caution:

Full flaps should not be initiated until landing is assured, but no lower than 200 ft AGL. In the event of an engine failure full flaps will diminish the aircrafts glide ability, causing touchdown to be shorter than desired touchdown point.

NORMAL LANDING PROFILE



CAUTION

FOR ALL LANDINGS, THE PIC MUST TAKE SPECIAL CARE TO ENSURE THEIR HEELS ARE ON THE FLOOR. IF THE HEELS ARE NOT ON THE FLOOR IT IS POSSIBLE TO INADVERTENTLY APPLY BRAKE PRESSURE, ESPECIALLY DURING A CROSSWIND LANDING. EVEN THE SMALLEST AMOUNT OF BRAKE PRESSURE HAS RESULTED IN BLOWN TIRES, FLAT SPOTS OR BROKEN BRAKE CALIPERS.

CROSSWIND LANDINGS

When performing a crosswind landing, staying on a stabilized approach path is paramount. When descending on the turn to final, consideration needs to be given to the velocity of wind, and the crab angle necessary to maintain direction.

Procedure (with a Crosswind from the left):

- Roll out from Base to Final with Final Checks complete and no further configurations needing to be performed.
- Asses crab angle needed to maintain directional path control.
- Descend with crab angle down to the flare.
- Power to Idle before touchdown, as entering the flare.
- When in the flare, add right rudder to maintain directional control with the runway and left aileron to touchdown with the left wheel first.
    - Additional aileron may be needed on contact to maintain directional control with rudder and not allow left wing to "bounce" back up again.
- Keep nose wheel off the runway.
- Touchdown with right main.
- Allow nose wheel to settle to the ground.
- Once nose wheel is on the ground, push control wheel firmly forward with wind aileron into the wind to ensure nose wheel and wing stays on the ground.
- Use wind correction as needed when taxiing.

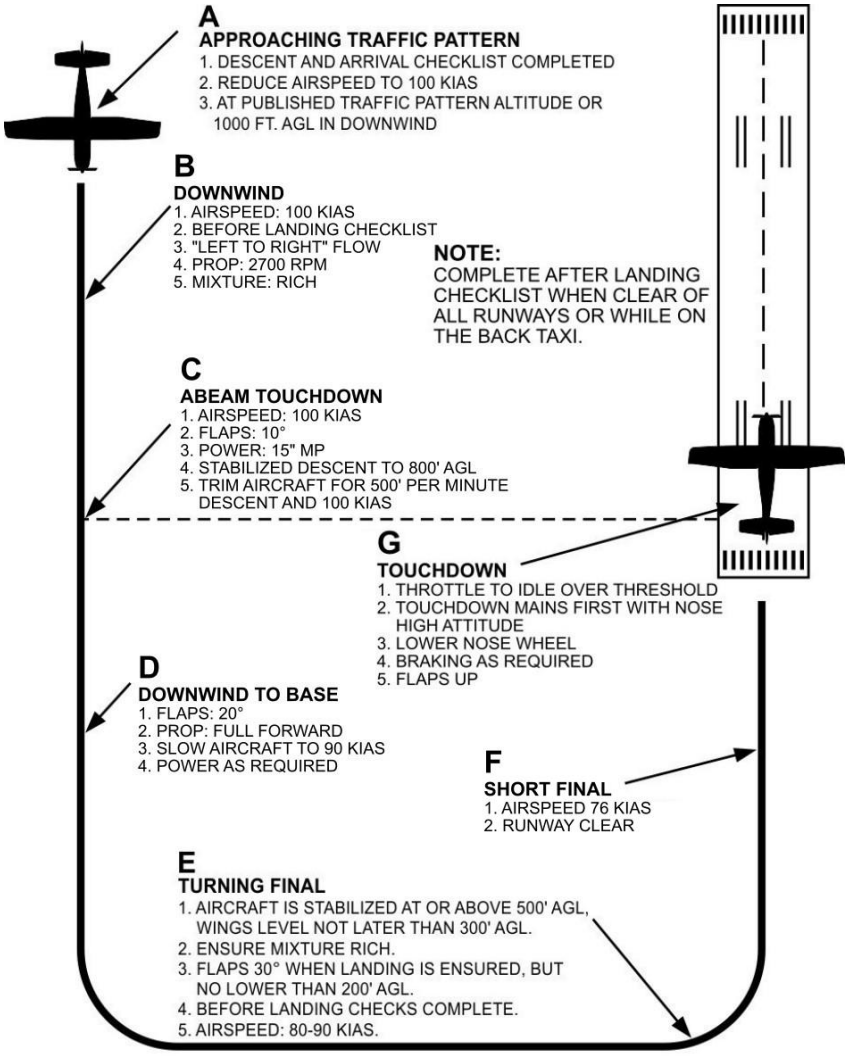
NOTE:
Crosswind landing will utilize the same procedure as normal landing with the addition of paragraphs outlined above.

¶SHORT FIELD LANDING

Short field landings are utilized not in definition of the runway necessarily, but in the technique used when landing.

Retracting flaps on touchdown is a technique that degrades the lift generated from flaps on touchdown and prevents wind gust from lifting the aircraft back into the air.
(Profile on next page…)

SHORT FIELD LANDING PROFILE



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SOFT FIELD LANDING

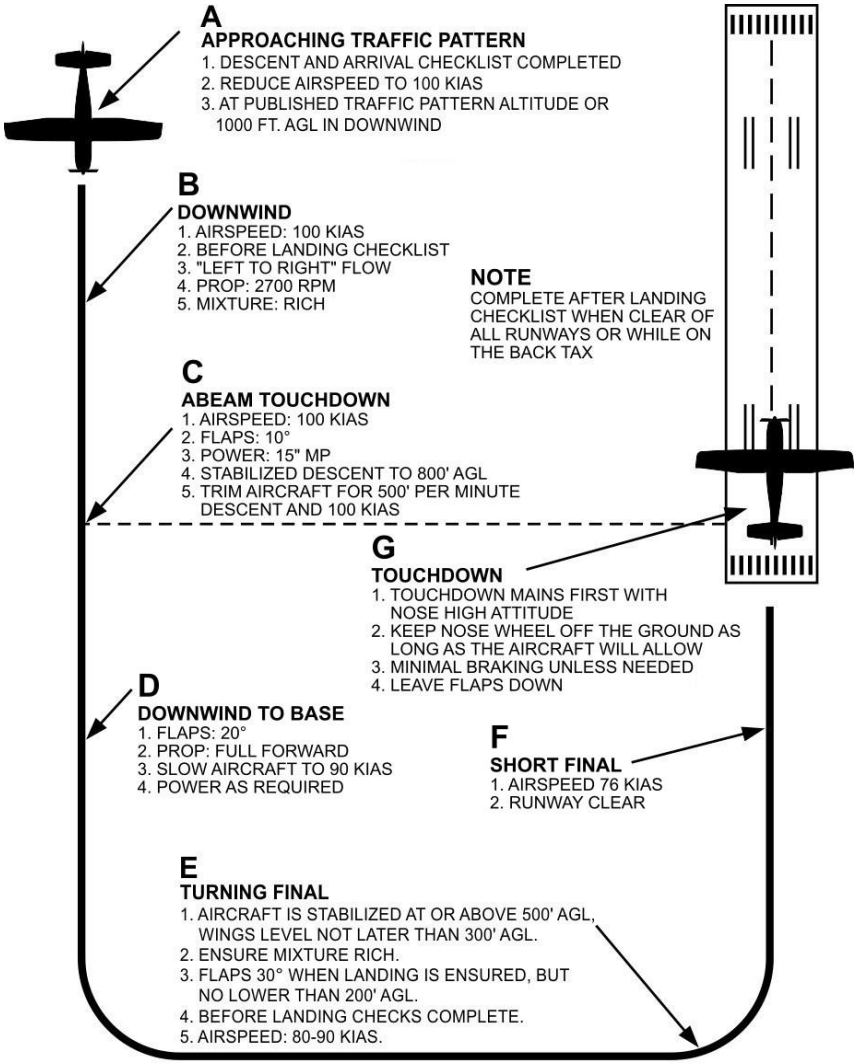
The soft field landing is a procedure developed to land in soft conditions with residual power as needed to prevent the aircraft from getting stuck.

Emphasis should be placed on small amounts of power being left in or added on short final as need to carry as little weight as possible on touchdown.

Also, unlike the normal and short field technique, the flaps should not be moved on touchdown, this will allow more weight to be carried by the wings.

(Profile on next page…)

SOFT FIELD LANDING PROFILE



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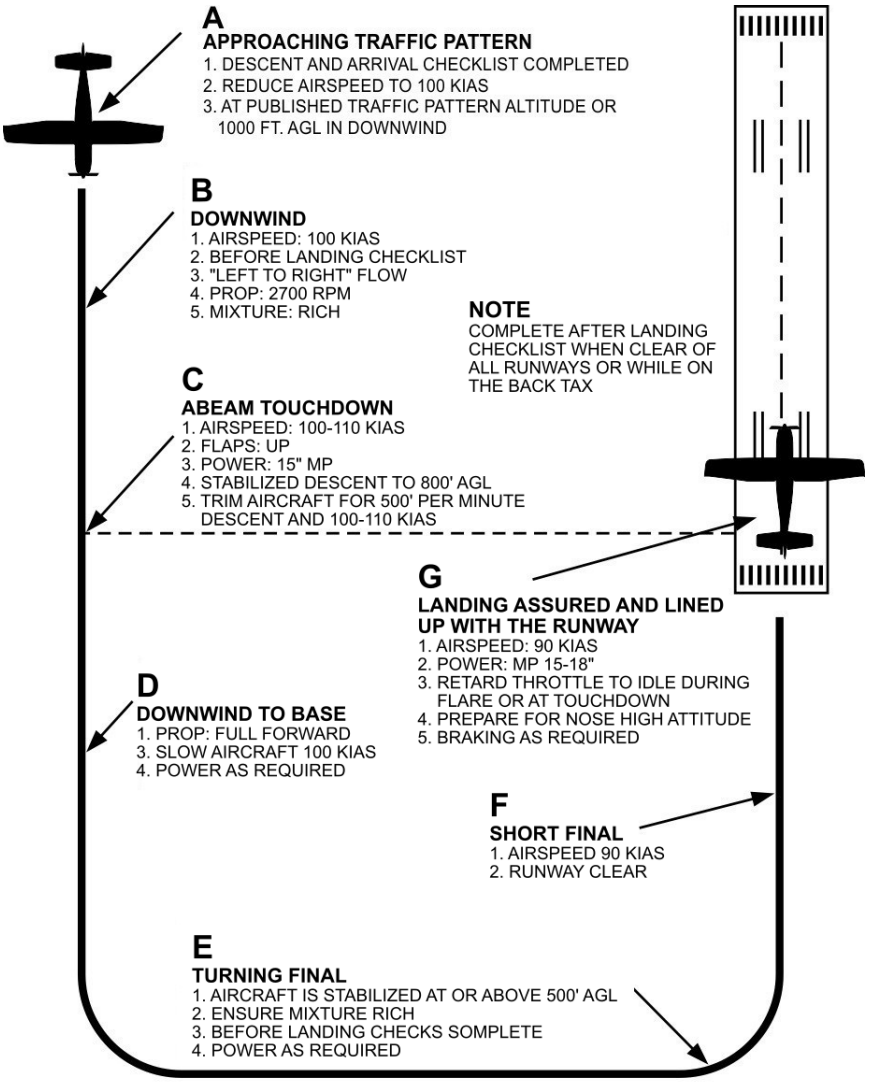
NO FLAP LANDING

Although flap up landings are not normally performed, MEL procedures or flap system malfunctions may require a flap up landing. All procedures remain the same as listed in this chapter with the following exceptions:

- A no-flap landing in a Cessna 207 requires adjusting approach speed and glide path to compensate for the lack of increased drag from flaps. The pilot should maintain higher airspeeds (5-10 KIAS), anticipate a longer rollout and be prepare to use more braking.
- Since you will be flying with a more nose-up pitch attitude, it might make it difficult to see the runway. Judging height and distance is more difficult with a nose-up attitude, and you will need to use peripheral vision to tell your height-above-runway. Don't forget that if you fly the prescribed speed, you are well above stall speed. This nose-up attitude has resulted in many pilots abruptly forcing the nose over to prevent a stall, even with plenty of airspeed, leading to a risk of a prop-strike or nosewheel landing.
- Use Airspeed 90kts. - note that it may be required to slow the aircraft earlier to be stabilized at higher speeds without use of flaps.
- The most critical phase of a flap up landing is the touchdown itself. Higher pitch angles are required, and the tail is closer to the runway surface. Exercise caution when flaring the aircraft, do not let the nose get higher than 10° pitch up in the flare, otherwise the possibility of a tail strike will exist.

NO FLAP LANDING PROFILE



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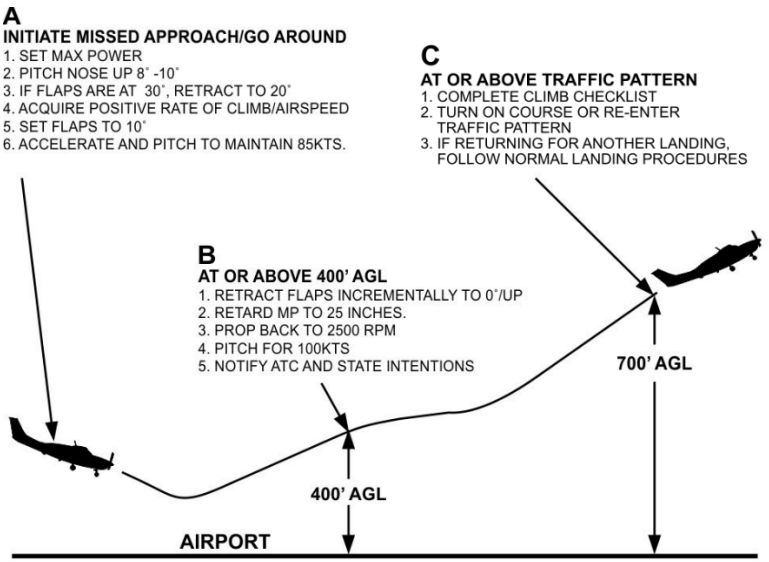
REJECTED LANDING/MISSED APPROACH /GO AROUND



CAUTION

IF THE AIRPORT IS NOT IN SIGHT AT EXPIRATION OF TIME LIMITS OR AT THE MISSED APPROACH POINT, EXECUTE THE PUBLISHED MISSED APPROACH PROCEDURE FOR THAT APPROACH OR AS DIRECTED BY ATC.

DESCENT BELOW THE MDA OR DH IS NOT PERMITTED UNTIL VISUAL CONTACT WITH RUNWAY OR ENVIRONMENT IS OBTAINED.

IF VISUAL CONTACT IS LOST AT ANY TIME AFTER INITIAL SIGHTING, I**MMEDIATELY** EXECUTE THE PUBLISHED MISSED APPROACH.

APPROACH-TO-STALL, CLEAN

Initial Condition

Altitude ..... 3,000 feet above terrain
Props ..... 2,850 RPM
Manifold Pressure ..... 15 Inches

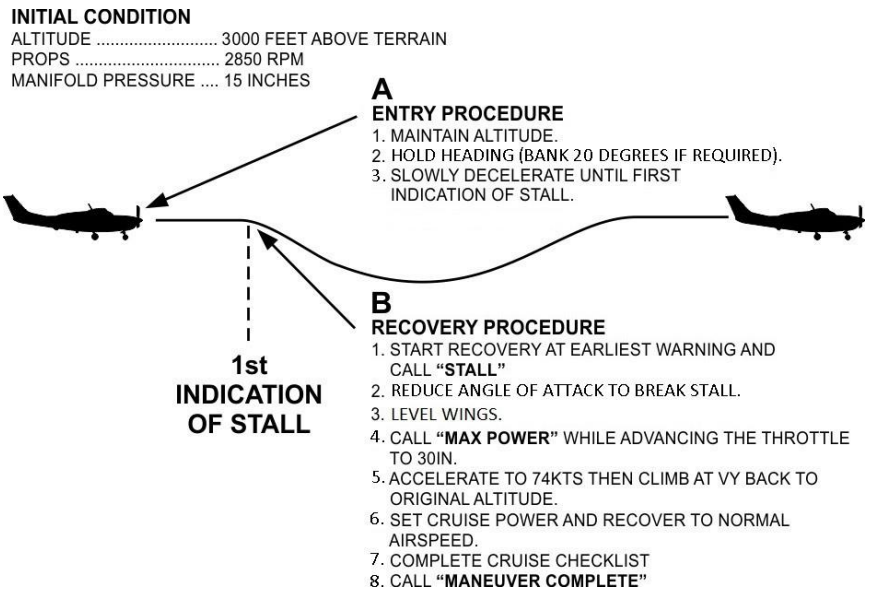
Entry Procedure

1. Maintain altitude.
2. Hold heading (bank 20 degrees if required).
3. Slowly decelerate until first indication of stall.

Recovery Procedure

1. Start recovery at earliest warning and call “STALL”
2. Reduce angle of attack to break stall.
3. Level wings.
4. Call “MAX POWER” while advancing the throttle to 30in.
5. Accelerate to 74kts then climb at V_Y back to original altitude.
6. Set cruise power and recover to normal airspeed.
7. Complete Cruise Checklist
8. Call “MANEUVER COMPLETE”

APPROACH-TO-STALL, CLEAN PROFILE



APPROACH-TO-STALL, DEPARTURE

Initial Condition

Altitude ..... 3,000 feet above terrain
Props .....2,850 RPM
Manifold Pressure ..... 20 Inches
No Trim past ..... 80 KIAS

Entry Procedure

1. Reduce manifold pressure to 15 inches.
2. Add flaps to 10° below 140 knots
3. Slow to 80 KIAS while maintaining altitude
4. At 80 KIAS, add MP to 20 inches
5. Pitch up 20°, bank 20° (bank 20 degrees if required).
6. Hold flight attitude to first indication of stall.

Recovery Procedure

1. Start recovery at earliest warning and call “STALL”.
2. Reduce angle of attack to break stall.
3. Level the wings.
4. Establish climb.
5. Accelerate to 85 KIAS, flaps from 10° to UP.
6. Once passing 100 KIAS.
7. Set cruise power and recover to normal airspeed.
8. Complete Cruise Checklist.
9. Call “MANEUVER COMPLETE”.

APPROACH-TO-STALL, DEPARTURE PROFILE

INITIAL CONDITION
ALTITUDE ..... 3000 FEET ABOVE TERRAIN
PROPS ..... 2850 RPM
MANIFOLD PRESSURE .... 20 INCHES
NO TRIM PAST ..... 80 KIAS

A
ENTRY PROCEDURE
1. REDUCE MANIFOLD PRESSURE TO 10 INCHES.
2. ADD FLAPS TO 10° BELOW 140 KIAS
3. SLOW TO 70 KIAS WHILE MAINTAINING ALTITUDE
4.AT 70 KIAS, ADD MP TO 20 INCHES
5. PITCH UP 20 DEGREES, BANK 20 DEGREES (IF REQUIRED).
6. HOLD FLIGHT ATTITUDE TO FIRST INDICATION OF STALL

1st INDICATION OF STALL

B
RECOVERY PROCEDURE
1. START RECOVERY AT EARLIEST WARNING AND CALL **"STALL**
2. GENTLY REDUCE ANGLE OF ATTACK TO BREAK STALL
3. LEVEL THE WINGS
4. MINIMIZE ALTITUDE LOSS AND ESTABLISH CLIMB
5. ACCELERATE TO 85 KIAS, FLAPS FROM 10° TO UP
6. ONCE PASSING 100 KIAS
7. SET CRUISE POWER AND RECOVER TO NORMAL AIRSPEED.
8. COMPLETE CRUISE CHECKLIST.
9. CALL **"MANEUVER COMPLETE"**

APPROACH-TO-STALL, LANDING

Initial Condition

1. Altitude . . . . . 3000 feet above terrain
2. Props . . . . . 2850 RPM
3. Manifold Pressure . . . . . .20 INCHES
4. No trim past . . . . . 80 KIAS

Entry Procedure

1. Add flaps to 10° below 140 KIAS
2. Reduce MP to 15"
3. Add flaps to 20° and 30° below 110 KIAS (bank 20 degrees if required).
4. Maintain altitude until 1st indication of stall

Recovery Procedure

1. Start recovery at earliest stall indication.
2. Reduce angle of attack to break stall.
3. Level wings.
4. Advancing throttle to 30 inches.
5. Flaps from 30° to 20°
6. Observe positive rate of climb, positive increase in airspeed
7. Flaps from 20° to 10°.
8. Accelerate to 85 KIAS.
9. At 85 KIAS, flap UP
10. Cruise climb to original altitude and;
11. Set cruise power and recover to normal airspeed.
12. Complete Cruise Checklist.
13. Call “MANEUVER COMPLETE”.

APPROACH-TO-STALL, LANDING PROFILE

INITIAL CONDITION
ALTITUDE ..... 3000 FEET ABOVE TERRAIN
PROPS ..... 2850 RPM
MANIFOLD PRESSURE .... 20 INCHES
NO TRIM PAST ..... 80 KIAS

A
ENTRY PROCEDURE
1. ADD FLAP 10˚ BELOW 140 KIAS
2. REDUCE MP TO 15"
3. ADD FLAPS TO 20˚ AND 30˚ BELOW 110 KIAS (BANK 20 DEGREES IF REQUIRED).
4. MAINTAIN ALTITUDE UNTIL 1ST INDICATION OF STALL

1st INDICATION OF STALL

B
RECOVERY PROCEDURE
1. START RECOVERY AT EARLIEST STALL INDICATION.
2. GENTLY REDUCE ANGLE OF ATTACK TO BREAK STALL WHILE;
3. LEVEL WINGS.
4. ADVANCING THROTTLES TO 30 INCHES.
5. FLAPS FROM 30˚ TO 20˚
6. OBSERVE POSITIVE RATE OF CLIMB, POSITIVE INCREASE IN AIRSPEED
7. FLAPS FROM 20˚ TO 10˚.
8. ACCELERATE TO 85 KIAS.
9. AT 85 KIAS, FLAP UP
10. CRUISE CLIMB TO ORIGINAL ALTITUDE AND;
11. SET CRUISE POWER AND RECOVER TO NORMAL AIRSPEED.
12. COMPLETE CRUISE CHECKLIST.
13. CALL **"MANEUVER COMPLETE".**

STEEP TURNS

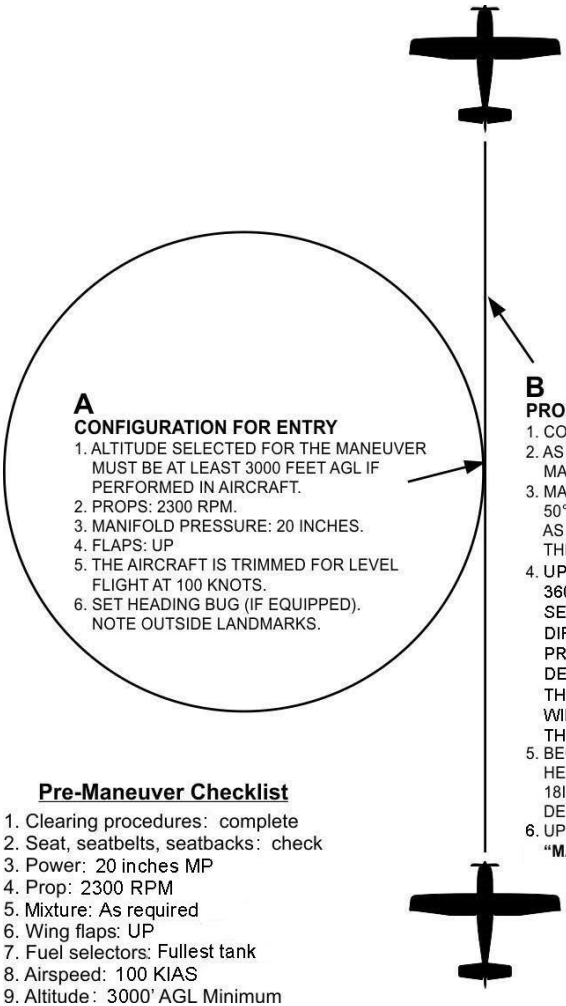
Configuration for Entry

1. Altitude selected for the maneuver must be at least 3000 feet AGL if performed in aircraft.
2. Props: 2300 RPM.
3. Manifold Pressure: 20inches
4. Flaps: UP
5. The aircraft is trimmed for level flight at 100 knots.
6. Set Heading Bug (if equipped).

Procedure

1. Complete the Pre Maneuver Check.
    a. Clearing turns
    b. Seats, seatbelts, seatbacks: check
    c. Power: 20” HG
    d. Prop: 2300
    e. Mixture: As required
    f. Flaps: Up
    g. Fuel selector: Fullest tank
    h. Airspeed: 100 KIAS
    i. Altitude: 3000’ AGL minimum
2. As the bank approaches 30°, increase Manifold Pressure 2 in.
3. Make a coordinated entry into a 50° ± 5° banked turn, adding power as required to maintain airspeed throughout the maneuver.
4. Upon completion of the first 360° turn immediately roll into a second 360° in the opposite direction. Gentle forward pressure on the yoke will decrease the propensity for the aircraft to balloon as the wings roll through level into the second turn.
5. Begin rollout 10° before desired heading, reducing power to 18inches as the bank angle decreases below 30°.
6. Upon desired heading roll out Call "MANEUVER COMPLETE".

STEEP TURNS PROFILE



A
CONFIGURATION FOR ENTRY
1. ALTITUDE SELECTED FOR THE MANEUVER MUST BE AT LEAST 3000 FEET AGL IF PERFORMED IN AIRCRAFT.
2. PROPS: 2300 RPM.
3. MANIFOLD PRESSURE: 20 INCHES.
4. FLAPS: UP
5. THE AIRCRAFT IS TRIMMED FOR LEVEL FLIGHT AT 100 KNOTS.
6. SET HEADING BUG (IF EQUIPPED). NOTE OUTSIDE LANDMARKS.

B
PROCEDURE
1. COMPLETE THE PRE MANEUVER CHECK.
2. AS THE BANK APPROACHES 30, MANIFOLD PRESSURE 2IN.
3. MAKE A COORDINATED ENTRY INTO A 50° ± 5° BANKED TURN, ADDING POWER AS REQUIRED TO MAINTAIN AIRSPEED THROUGHOUT THE MANEUVER.
4. UPON COMPLETION OF THE FIRST 360° TURN IMMEDIATELY ROLL INTO A SECOND 360° IN THE OPPOSITE DIRECTION. GENTLE FORWARD PRESSURE ON THE YOKE WILL DECREASE THE PROPENSITY FOR THE AIRCRAFT TO BALLOON AS THE WINGS ROLL THROUGH LEVEL INTO THE SECOND TURN.
5. BEGIN ROLLOUT 10° BEFORE DESIRED HEADING, REDUCING POWER TO 18INCHES AS THE BANK ANGLE DECREASES BELOW 30°.
6. UPON DESIRED HEADING ROLL OUT CALL **"MANEUVER COMPLETE"**.

Pre-Maneuver Checklist

1. Clearing procedures: complete
2. Seat, seatbelts, seatbacks: check
3. Power: 20 inches MP
4. Prop: 2300 RPM
5. Mixture: As required
6. Wing flaps: UP
7. Fuel selectors: Fullest tank
8. Airspeed: 100 KIAS
9. Altitude: 3000' AGL Minimum

SLOW FLIGHT

A. Configuration for Entry
   1. Altitude selected for the maneuver must be at least 3000 feet AGL if performed in aircraft.
   2. Manifold: 20 inches
   3. Props: 2850 RPM.
   4. Flaps: UP
   5. Speed: 100 knots.
   6. Set Heading Bug (if equipped). Note outside landmarks.

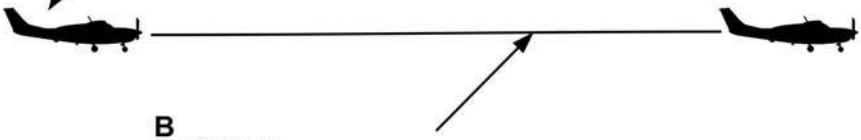
B. Procedure
   1. Complete the Pre Maneuver Check. Then brief the procedure prior to beginning.
   2. Set flaps to 10° below 140 knots.
   3. Reduce power to 15inches
   4. Once in the white arc, set flaps 20° and 30°
   5. Maintain directional control and altitude
   6. Allow aircraft to slow to 60 knots. Add power to 18 in MP to hold altitude and airspeed.
   7. Perform turns/climb/descents as specified
   8. Recovery will be similar to a Go-around or missed approach
      - Gently set MAX MP - lower the nose so as not to climb
      - Flaps from 30° to 20°
      - Positive rate of “climb”, positive airspeed increase.
      - At positive rate, flaps from 20° to 10°
      - At 85 KIAS, flaps from 10° to UP
   9. Once flaps are up and airspeed is passing beyond 100 KIAS, call “maneuver complete”

SLOW FLIGHT PROFILE

A

CONFIGURATION FOR ENTRY

1. ALTITUDE SELECTED FOR THE MANEUVER MUST BE AT LEAST 3000 FEET AGL IF PERFORMED IN AIRCRAFT.
2. MANIFOLD: 20 INCHES
3. PROPS: 2850 RPM.
4. FLAPS: UP
5. SPEED: 100 KNOTS.
6. SET HEADING BUG (IF EQUIPPED). NOTE OUTSIDE LANDMARKS.



B

PROCEDURE

1. COMPLETE THE PRE MANEUVER CHECK. THEN BRIEF THE PROCEDURE PRIOR TO BEGINNING.
2. SET FLAPS TO 10˚ BELOW 140 KIAS.
3. REDUCE POWER TO 15 INCHES
4. ONCE IN WHITE ARC, SET FLAPS TO 20 THEN 30.
5. MAINTAIN DIRECTIONAL CONTROL AND ALTITUDE
6. ALLOW AIRCRAFT TO SLOW TO 60 KNOTS. ADD POWER TO 18 IN MP TO HOLD ALTITUDE AND AIRSPEED
7. PERFORM TURNS/CLIMB/DESCENTS AS SPECIFIED
8. RECOVERY WILL BE SIMILAR TO A GO-AROUND OR MISSED APPROACH
   - GENTLY SET MAX MP - LOWER THE NOSE SO AS NOT TO CLIMB
   - FLAPS FROM 30˚ TO 20˚
   - POSITIVE RATE OF "CLIMB", POSITIVE AIRSPEED INCREASE, FLAPS FROM 20˚ TO 10˚
   - AT 85 KAIS, FLAPS FROM 10˚ TO UP
9. ONCE FLAPS ARE UP AND AIRSPEED IS PASSING BEYOND 100 KIAS, CALL **"MANEUVER COMPLETE"**

UNUSUAL ATTITUDES

A. Configuration for Entry
   1. Altitude selected for the maneuver must be at least 3000 feet AGL if performed in aircraft.
   2. Manifold: 20 inches.
   3. Props: 2850 RMP
   4. Flaps: UP
   5. Speed: 100 knots
   6. Set Heading Bug (if equipped). Note outside landmarks

B. Procedure
   1. Complete Pre-maneuver Check.
   2. Hand controls to instructor check airman if desired (they may have the student/candidate self-induce the unusual attitude).
   3. Two types of unusual attitude.
      - Nose high - to recover lower the nose, level the wings and add power.
      - Nose low - to recover level the wings, raise the nose and reduce power.
   4. Maneuver is complete once original aircraft configurations are set up and airspeed is 100 - 110 KIAS.

ENGINE FAILURE DURING TAKEOFF RUN

ENGINE FAILURE DURING TAKEOFF RUN		
1.	**Throttle**	**Idle**
2.	**Brakes**	**Apply**
3.	Flaps	Retract
4.	Mixture	Cutoff
5.	Ignition Switch	Off
6.	Master Switch	Off
	-End of Checklist-	

- The most important thing to consider with an engine failure in the takeoff roll segment is stopping the aircraft on the remaining runway.
- The additional items with in the checklist are for securing the engine and adding an additional level of safety to a failure of this type.

Aborted Takeoff

A takeoff may be safely rejected for numerous reasons. It may be performed after a normal takeoff has been started up to 85 KIAS or shortly after takeoff even when runway allows. When rejecting a takeoff for whatever reason, the power is brought to Idle without delay, and maximum braking (if required) is applied until the airplane is brought to a complete stop.

When conducting operations from airports where performance limitations exist, such as short runways, additional consideration and discussion should be given to the potential illumination of caution lights that may necessitate a rejected takeoff (for example, Gen caution lights). Caution lights (amber) are not generally considered critical enough to require a rejected takeoff. However, when performance is not a limiting factor it is considered an acceptable procedure to execute a rejected take-off any time a caution light or condition arises which cannot be readily

identified and in turn may compromise safety.

At the earliest possible opportunity, the PIC shall notify ATC of the aborted takeoff. If assistance is required in the cabin or an evacuation is necessary, the PIC will have to lead the procession away from the aircraft. Be clear, concise and calm when handling an emergency and involving passengers.

There are many variables that the captain must consider such as:

- Runway conditions (icy, dry, etc.)
- Runway dimensions (length, width, surface)
- Wind, weather (ability to come back to land VFR or will it be IFR or is it below minimums)
- The takeoff performance requirements for the current conditions.

ENGINE FAILURE AFTER TAKEOFF/IN FLIGHT

ENGINE FAILURE IMMEDIATELY AFTER TAKEOFF/ IN FLIGHT	
1.	**Airspeed . . . . . .85 KIAS**
2.	Mixture . . . . . .Cutoff
3.	Fuel Selector . . . . . Off
4.	Ignition Switch . . . . . Off
5.	Flaps. . . . . Full
6.	Master Switch. . . . . Off
	-End of Checklist-

¶An engine may fail after takeoff for various reasons. Prompt lowering of the nose to maintain airspeed and establish glide is the first response to a failure immediately after takeoff.

If time permits for the pilot may decide whether to land straight ahead or turn back, consider airspeed first, then altitude. If airspeed is sufficient for glide, then the PIC may elect to turn back to the airport. Scenarios have shown, with all conditions ideal and a quick response time, this altitude is 700' to 1000' AGL. Below that, the pilot may land short or put additional risk to passengers with the abrupt maneuvering required to turn about.

However, seldom is altitude and airspeed sufficient to make 180° turn back to the airport.

If landing straight ahead, choose up to 30° to either side of heading to direct the aircraft down.

If altitude is insufficient for turn back, but sufficient to secure the engine, perform the ENGINE FAILURE IN FLIGHT CHECKLIST memory items, then refer to the checklist for ENGINE FAILURE AFTER TAKEOFF.

Quick Memory items

A common mnemonic for any engine fluctuation/potential failure is, “pitch, switch, switch”. That is:

- Pitch for 80 or 85 KIAS, depending on flap configuration
- Switch fuel selector to opposite tank - fuel may be empty on the operating side, blocked from being used, water, etc.
- Turn the aux fuel switch ON - this will ensure positive pressure is available to the engine driven fuel pump as needed.

At any time, that a engine malfunctions, surges, fails, etc. typically, it is a fuel related problem to some extent or another. Performing the “pitch, switch, switch” memory aid will be a catch-all for any potential cause of failure.

ENGINE FAILURE ENROUTE/EMERGENCY APPROACH AND LANDING

ENGINE FAILURE ENROUTE	
1.	Airspeed . . . . . .85 KIAS
2.	Fuel Selector Valve and Fuel Quantity. . . . . .Check
3.	Mixture . . . . . Rich
4.	Auxiliary Fuel Pump . . . . . ON for 3-5 seconds with throttle half open; then OFF
5.	Ignition Switch. . . . . Both (or START if propeller is stopped).
6.	Throttle. . . . . .ADVANCE slowly

EMERGENCY APPROACH AND LANDING (without engine power)	
1.	Airspeed . . . . . .85 KIAS (flaps up). 80 KIAS (flaps down)
2.	Mixture . . . . . Idle cut-off
3.	Fuel Selector Valve. . . . . OFF
4.	Ignition Switch. . . . . OFF
5.	Wing Flaps. . . . . As Required (30° recommended)
6.	Master Switch. . . . . OFF
7.	Doors . . . . . Unlatch prior to touchdown
8.	Touchdown. . . . . Slightly tail low
9.	Brakes. . . . . Apply heavily

WINDSHEAR

Windshear General

Pilots are expected to recognize windshear conditions and avoid operating in areas where severe windshear is reported or expected. Recognition of windshear is difficult and often complicated by marginal weather conditions. Windshear forces can often exceed the capability of any pilot or airplane. Once windshear is encountered the time available for recognition is normally very short - between 5 and 15 seconds. Flight crew coordination is essential for prompt windshear recognition and recovery.

The best defense against windshear is to avoid it altogether.

- **Windshear** is defined as any rapid change in wind direction and/or velocity.
- **Severe windshear** is defined as a rapid change in wind direction and/or velocity causing airspeed changes greater than 15 knots or vertical speed changes greater than 500 feet per minute.
- **Microbursts** are concentrated, powerful downdrafts that can occur anywhere convective weather conditions (thunderstorms, rain showers, virga) exist. Microburst downdrafts are typically only 400 to 3,000 feet across.

Windshear and Microbursts are encountered most often during airport terminal area operations-takeoff roll, climb and descent and approach when below 1,000 feet AGL

Pilot Technique

Flight path must be controlled with pitch attitude, often with unusually high control forces. Lower than normal airspeed may have to be accepted to counter loss of lift. Only by properly controlling pitch attitude and accepting reduced airspeed can flight path degradation be prevented.

As a general guideline, crews should be prepared to execute the recommended recovery procedure immediately if deviations from target conditions in excess of the following

occur, in areas of known or suspected windshear:

Takeoff and Approach

- +/- 15 knots indicated airspeed
- +/- 500 fpm vertical speed
- +/- 5° pitch attitude Approach

Approach

- +/- 1 dot from glideslope displacement
- Unusual throttle position for a significant period of time.

If windshear is encountered, the PIC is responsible for immediately assessing the situation and using sound judgment to determine the safest course of action. The primary recovery objective is to keep the airplane flying as long as possible in the hope of exiting the windshear.

The recommended recovery and escape technique should be initiated any time the flight path is threatened when below 1,000 feet AGL on takeoff or approach, or upcoming terrain/obstacle clearance is a concern.

WINDSHEAR EMERGENCY ESCAPE PROCEDURE

This procedure is not incorporated in the Emergency or Abnormal checklists in the POH. However, the following is a memory-based procedure and must be accomplished without reference to a checklist.

WINDSHEAR ESCAPE	
1.	Windshear, Power . . . . . .Maximum
	Note: *Engine limitations may be exceeded in order to avoid ground contact.*
2.	Pitch . . . . . 15 Degrees or as appropriate for aircraft configuration.
3.	Configuration . . . . . Maintain flap position until terrain clearance is assured

WINDSHEAR EMERGENCY ESCAPE PROCEDURE (AMPLIFICATION)

Since there is limited time for quick reaction, the PIC or (if flying) Flight Instructor/Check Airman is flying, may initiate the throttle lever repositioning for Windshear exiting.

With the onset of windshear suspicion, immediately set MAX POWER, and pitch up 12°-15°. Do not attempt to change flap position. If aircraft is at a steep enough angle of attack and slow enough airspeed, removing flaps increases stall speed and could potentially worsen the effects of windshear. Maintain attitude and focus on climbing the aircraft above the windshear.

Once clear, begin putting the aircraft into the climb configuration. Remove flaps at the appropriate speeds. Set enroute climb power if desired. Contact ATC and report the windshear incident and intentions for continuing the flight. If engine limitations were exceeded or structural integrity is suspect, land at nearest suitable airport and contact the maintenance department.

Windshear reports to ATC from pilots should include the following information:

- Maximum gain or loss of airspeed
- Altitude at which shear was encountered
- Location of shear with respect to runway in use
- Airplane type
- Severity of the reaction (“Max power required” or “Was within 100' of contacting ground.”)

WINDSHEAR RECOVERY PROFILE

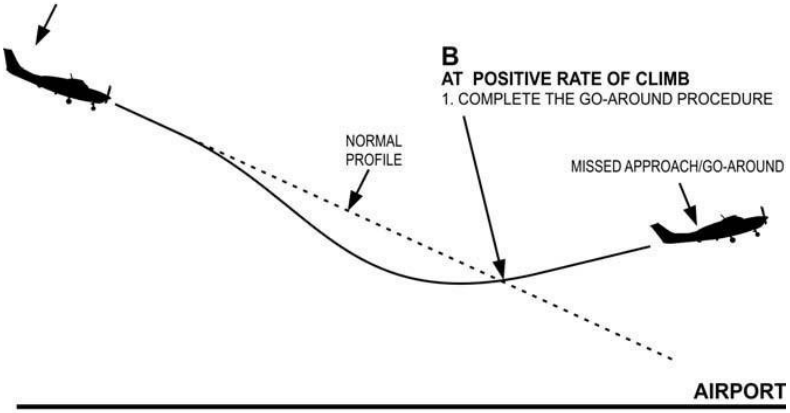
A WINDSHEAR IS CONSIDERED SEVERE WHEN:

- APPROACHING 500' AGL AND,
  - AIRSPEED IS INCREASING/DECREASING: 15 KIAS
  - SINK RATE IS INCREASING TO UNACCEPTABLE LIMITS (IN EXCESS OF 1000 FPM)

INITIATE AN IMMEDIATE GO-AROUND AND BE PREPARED TO EXECUTE A WINDSHEAR RECOVERY

A
FIRST INDICATION OF WINDSHER

1. PF CALLS: **"WINDSHEAR, MAX POWER"**
2. PF SETS MAX POWER
3. INCREASE PITCH TO MINIMUM OF 15° OR PITCH UP TOWARDS STALL WARNING IF NEEDED
4. HOLD ATTITUDE UNTIL WELL CLEAR OF THE WINDSHEAR
5. MAINTAIN AIRCRAFT CONFIGURATION UNTIL CLIMB IS ESTABLISHED

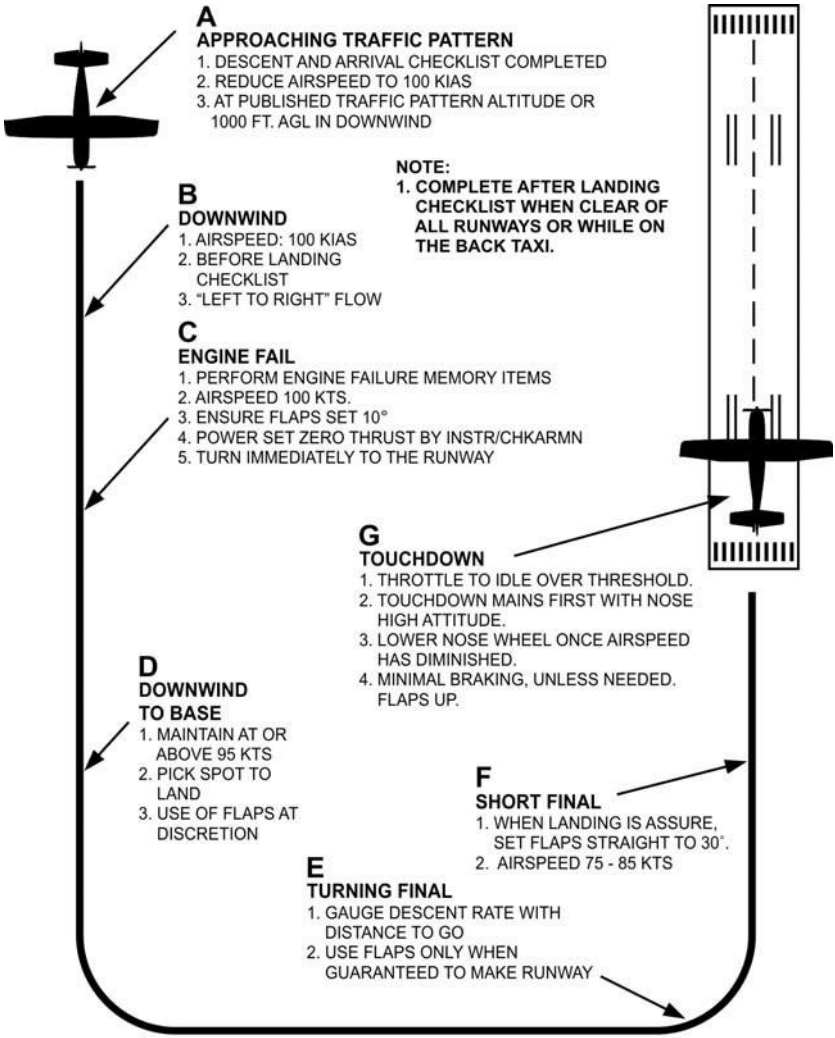


NOTE:
MANAGING ANGLE OF ATTACK IS FAR MORE CRITICAL TO SURVIVING WINDSHEAR THAN IS AIRSPEED. DO NOT CHANGE FLAP CONFIGURATION UNTIL OUT OF THE SHEAR.

POWER OFF 180° (EMERGENCY LANDING REF: 8900)

As desired by the FAA 8900, an emergency landing must be made in a single-engine aircraft. It is an approach and landing made by gliding with the engine idling from downwind to a touchdown beyond but within 200 feet of a designated line or mark on the runway. Since the C207 has a glide rate of about 1 mile per every 1000 ft., a turn directly to the runway when an engine failure occurs is always prudent.

POWER OFF 180°
(EMERGENCY LANDING REF: 8900) PROFILE



CAUTION

FOR ALL LANDINGS, THE PIC MUST TAKE SPECIAL CARE TO ENSURE THEIR HEELS ARE ON THE FLOOR. IF THE HEELS ARE NOT ON THE FLOOR IT IS POSSIBLE TO INADVERTENTLY APPLY BRAKE PRESSURE, ESPECIALLY DURING A CROSSWIND LANDING. EVEN THE SMALLEST AMOUNT OF BRAKE PRESSURE HAS RESULTED IN BLOWN TIRES, FLAT SPOTS OR BROKEN BRAKE CALIPERS.

IFR EMERGENCY APPROACH

In a single-engine VFR emergency approach, pilots should prioritize declaring an emergency, communicating their situation to ATC, and following ATC guidance while maintaining VFR conditions if possible, or declaring an IFR emergency if necessary.

Declaring and Communicating the Emergency:

- ***Immediate Action***:

  If an emergency arises, immediately declare it to ATC using appropriate distress signals (e.g., "Mayday, Mayday, Mayday") or urgency signals (e.g., "Pan-Pan, Pan-Pan, Pan-Pan").

- ***Clear Communication***:

  Provide ATC with your aircraft identification, type, nature of the emergency, weather conditions, and your intentions and requests.

- ***Maintain Radio Contact***:

  Do not change frequencies unless instructed by ATC.

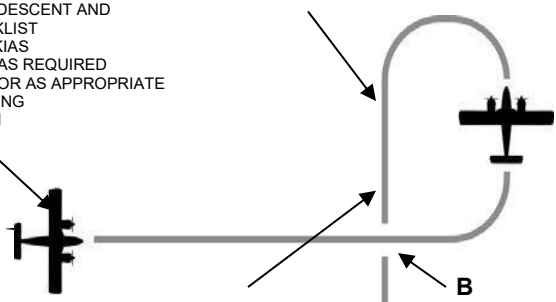
- ***Squawk Code***:

  Continue squawking assigned Mode A/3 discrete code/VFR code and Mode C altitude encoding when in radio contact with an air traffic facility or other agency providing air traffic services, unless instructed to do otherwise.

IFR EMERGENCY APPROACH PROFILE

A
PRIOR TO IAF OR BEING VECTORED
1.COMPLETE THE DESCENT AND APPROACH CHECKLIST
2. AIRSPEED: 110 KIAS
3. FLT DIRECTOR: AS REQUIRED
4. POWER: 23" HG OR AS APPROPRIATE FOR STAGE COOLING
5. PROP: 2300 RPM

C
LOCALIZER ALIVE
1.AIRSPEED: 110 KIAS
2. POWER: 20" HG

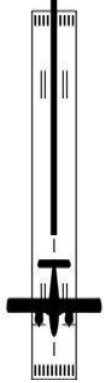


B
IF DOING PROCEDURE TURN
1.BEGIN TIMING APPROACH AT FIX OUTBOUND

D
2 MILES PRIOR TO FAF
1.POWER: 20" HG
2. PROP: 2850 RPM
3. FLAPS: 10°
4. SPEED: 90 KIAS
5. BEFORE LANDING CHECKS

E
FINAL APPROACH SEGMENT
1. AIRSPEED: 90 KIAS
2. POWER: 14-16" HG

F
LANDING ASSURED WITH RUNWAY IN SIGHT
1. FLAPS: 30° NO LESS THAN 200 FT AGL
2. AIRSPEED: NO LESS THAN 75 KIAS
3. 14-16" HG
4. RETARD THROTTLE TO IDLE DURING FLARE OR AT TOUCHDOWN



NOTE:
- **ALL MANIFOLD SETTINGS ARE APPROXIMATE. ±2" HG.**