



***N8261H***

***QRH***

# N4334X CHECKLISTS

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## Airspeed limitations in KIAS

Vne	154 (also max window open speed)
Vno	125
Va	113 @ 2,550lbs 89 @ 1,634lbs
Vfe	102 @ 10 degrees 86 @ 40 degrees

## Weight limits (Normal Category) – *Utility data in POH*

Maximum ramp weight:	2,550 lbs.
Maximum t/o weight:	2,550 lbs.
Maximum lndg weight:	2,550 lbs.
Baggage:	200 lbs.

## Airspeeds for EMERGENCY OPERATION in KIAS

Engine failure after takeoff:

Wing flaps up	76
Wing flaps down	66

Landing without engine power:

Flaps up	76
Flaps down	66

## Speeds

Chandelle entry	113 knots
Lazy Eights entry	113 knots
Steep turns entry	113 knots

Spins - PROHIBITED

Vy	76 KIAS sea level
Vx	64 KIAS sea level
Vbg	76 KIAS
Vso	49 KIAS
Vs1	55 KIAS
Max crosswind velocity - 17 knots	

## Preflight inspection

1. Control wheel - Release belts
2. Master switch - ON
3. Fuel quantity gauges - Check
4. Master switch - OFF
5. Ignition - OFF
6. Exterior - Check for damage
7. Control Surfaces - Check for interference
  - a. free of ice, snow, frost
8. Hinges - Check for interference
9. Wings - Free of ice, snow, frost
10. Stall warning - Check
11. Navigation lights - Check
12. Fuel tanks - Check supply visually
  - a. secure caps
13. Fuel tank sumps - Drain and check for water, sediment and proper fuel
14. Fuel vents - Open
15. Main gear struts - Proper inflation (4.50 in.)
16. Tires - Check
17. Brake blocks - Check
18. Pitot head - Remove cover – holes clear
19. Windshield - Clean
20. Propeller and spinner - Check
21. Fuel and oil - Check for leaks
22. Oil - Check level
23. Dipstick - Properly seated
24. Cowling - Secure
25. Inspection covers - Secure
26. Nose wheel tire - Check
27. Nose gear strut - Proper inflation (3.25 in.)
28. Air inlets - Clear
29. Alternator belt - Check tension
30. Tow bar and control locks – Stow

31. Baggage - Stowed properly – secure
32. Baggage door - Close and secure
33. Fuel strainer - Drain
34. Primary flight controls - Proper operation
35. Cabin door - Close and secure
36. Required papers - On board
37. Seat belts and harness - Fastened/adjust

### **Before starting engine**

1. Brakes - Set
2. Carburetor heat - Full COLD
3. Fuel selector - Desired tank

### **Starting engine when cold**

1. Throttle - 1/4" open
2. Master switch - ON
3. Electric fuel pump - ON
4. Mixture - Full RICH
5. Starter - Engage
6. Throttle - Adjust
7. Oil pressure - Check

### **Starting engine when hot**

1. Throttle - 1/2" open
2. Master switch - ON
3. Electric fuel pump - ON
4. Mixture - Full RICH
5. Starter - Engage
6. Throttle - Adjust
7. Oil pressure - Check

### **Starting engine when flooded**

1. Throttle - Open full
2. Master switch - ON
3. Electric fuel pump - OFF
4. Mixture - Idle cut-off
5. Starter - Engage
6. Mixture - Advance
7. Throttle - Retard
8. Oil pressure - Check

## Starting engine with external power source

1. Master switch - OFF
2. All electrical equipment - OFF
3. Terminals - Connect
4. External power plug - Insert in fuselage  
Proceed with normal start
5. Throttle - Lowest possible RPM
6. External power plug - disconnect from fuselage
7. Master switch - ON – check ammeter
8. Oil pressure - Check

## Taxiing

1. Chocks - Removed
2. Taxi area - Clear
3. Throttle - Apply slowly
4. Brakes - Check
5. Steering - Check

## Ground check

1. Throttle - 1800 RPM
  - a. Magnetos - Max. drop 175 RPM / Max. diff. 50 RPM
  - b. Vacuum - 5.0" Hg.  $\pm$  0.1
  - c. Oil temp - Check
  - d. Oil pressure - Check
  - e. Air conditioner - Check
  - f. Annunciator panel - Press-to-test
  - g. Carburetor heat – Check Engine is warm for takeoff when throttle can be opened without engine faltering.
  - h. Electric fuel pump - OFF
  - i. Fuel pressure - Check
2. Throttle - Retard

### Before takeoff

1. Master switch - ON
2. Flight instruments - Check
3. Fuel selector - Proper tank
4. Electric fuel pump - ON
5. Engine gauges - Check
6. Carburetor heat - OFF
7. Seat backs - Erect
8. Mixture - Set
9. Primer - Locked
10. Belts, harness - Fastened/adjusted
11. Empty seats - Seat belts fastened
12. Flaps - Set
13. Trim tab - Set
14. Controls - Free
15. Doors - Latched
16. Air conditioner - OFF

### Normal takeoff

1. Flaps - Set
2. Tab - Set
3. Accelerate to 52 to 65 KIAS, back pressure to rotate to climb attitude

### Short field, obstacle clearance

1. Flaps - 25 degrees (second notch)
2. Accelerate to 41 to 49 KIAS depending on a/c wt.
3. Control wheel - Back pressure to rotate to climb attitude
  - a. After breaking ground, accelerate to 45 to 54 KIAS depending on aircraft weight
  - b. Accelerate to best flaps up angle of climb speed – 64 KIAS, slowly retract the flaps and climb past the obstacle.
4. Accelerate to best flaps up rate of climb speed – 76 KIAS

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### Soft field

1. Flaps - 25 degrees (2<sup>nd</sup> notch)
2. Accelerate to 41-49 KIAS depending on a/c wt.
3. Control wheel - **Back** pressure to rotate to climb attitude
  - a. After breaking ground, accelerate to 45 to 54 KIAS depending on aircraft weight
  - b. Accelerate to best flaps up rate of climb speed - 76 KIAS
4. Flaps - **Retract** slowly

### Climb

1. Best rate (flaps up) - 76 KIAS
2. Best angle (flaps up) - 64 KIAS
3. En route - 87 KIAS
4. Electric fuel pump - OFF > 400 AGL

### Cruising

*Reference performance charts and Avco-Lycoming Operator's Manual.*

1. Normal max power - 75%
2. Power - **Set** per power table
3. Mixture -**Adjust**

### Normal descent

1. Throttle - 2500 rpm
2. Airspeed - 126 KIAS
3. Mixture - Rich
4. Carburetor Heat - On if required

### Power off descent

1. Carburetor Heat - On if required
2. Throttle - Closed
3. Airspeed - As required
4. Mixture - As required
5. Power - Verify with throttle every 30 seconds

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## Approach and landing

1. Fuel selector - **P**roper tank
2. Seat backs - **E**rect
3. Belts/harness - **F**asten/adjust
4. Electric fuel pump - **O**N
5. Mixture - **S**et
6. Flaps - **S**et – 102 KIAS max
7. Air conditioner - **O**FF
8. Trim to 75 KIAS
9. Final approach speed (flaps 40 degrees) - 66 KIAS

## Stopping engine

1. Flaps - **R**etract
2. Electric fuel pump - **O**FF
3. Air conditioner - **O**FF
4. Radios - **O**FF
5. Throttle - **F**ull aft
6. Mixture - **I**dle cut-off
7. Magnetos - **O**FF
8. Master switch - **O**FF

## Parking

1. Parking brake - **S**et
2. Control wheel - **S**ecured with belts
3. Flaps - **F**ull up
4. Wheel chocks - **I**n place
5. Tie downs - **S**ecure

## **ENGINE FIRE DURING START**

1. Starter - Crank engine
2. Mixture - Idle cut-off
3. Throttle - Open
4. Electric fuel pump - OFF
5. Fuel selector - OFF
6. Abandon if fire continues

## **ENGINE POWER LOSS DURING TAKEOFF**

1. If sufficient runway remains for a normal landing, land straight ahead.
2. If insufficient runway remains:
  - a. Maintain safe airspeed
  - b. Make shallow turns to avoid obstructions
  - c. Flaps as situation requires
3. If sufficient altitude to attempt a restart:
  - a. Maintain safe airspeed
  - b. Fuel selector - Tank containing fuel
  - c. Electric fuel pump - Check ON
  - d. Mixture - Check RICH
  - e. Carburetor heat - ON
  - f. Primer - Locked
  - g. If still no power, plan power off landing

## **ENGINE POWER LOSS IN FLIGHT**

1. Fuel selector - Tank containing fuel
2. Electric fuel pump - ON
3. Mixture - Check RICH
4. Carburetor heat - ON
5. Engine gauges - Check for indication of cause of power loss
6. Primer - Check locked
7. If no fuel pressure is indicated, check tank selector position is on a tank containing fuel.
8. When power is restored:
  - a. Carburetor heat - OFF
  - b. Electric fuel pump - OFF
9. If power is not restored, prepare power off landing.
10. Trim for 76 KIAS

## **POWER OFF LANDING**

1. Locate suitable field. Establish spiral pattern
2. 1000 ft. above field at downwind position for normal landing approach.
3. When field can easily be reached,
  - a. slow to 66 KIAS for shortest landing.
4. Touchdowns should normally be made at lowest possible airspeed with full flaps.
5. When committed to landing: Ignition - OFF
  - a. Master switch - OFF
  - b. Fuel selector - OFF
  - c. Mixture - Idle cut-off
  - d. Seat belt and harness - Tight

## **FIRE IN FLIGHT**

Source of fire - Check

1. Electrical fire (smoke in cabin):
  - a. Master switch - OFF
  - b. Vents – Open
  - c. Cabin heat - OFF
  - d. Land as soon as practicable.
2. Engine fire:
  - a. Fuel selector - OFF
  - b. Throttle - Closed
  - c. Mixture - Idle cut-off
  - d. Electric fuel pump - Check OFF
  - e. Heater and defroster - OFF
  - f. Proceed with power off landing procedure.

## **HIGH OIL TEMPERATURE**

1. Land at nearest airport and investigate the problem.
2. Prepare for a power off landing.

## **LOSS OF OIL PRESSURE**

1. Land as soon as possible and investigate cause.
2. Prepare for power off landing.

## **LOSS OF FUEL PRESSURE**

1. Electric fuel pump - ON
2. Fuel selector - Check on full tank

## **ALTERNATOR FAILURE**

1. Verify failure
2. Reduce electrical load as much as possible.
3. Alternator circuit breakers - Check
4. Alt switch - OFF 1 second then ON
5. If no output:
  - a. Alt switch - OFF
6. Reduce electrical load and land as practical.

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## **SPIN RECOVERY**

1. Throttle - Idle
2. Ailerons - Neutral
3. Rudder - Full opposite to direction of rotation
4. Control wheel - Full forward
5. Rudder - Neutral when rotation stops
6. Control wheel - Smoothly regain level flight altitude

## **OPEN DOOR**

1. Slow airplane to 87 KIAS
2. Cabin vents - Close
3. Storm window - Open
4. If upper latch is open - Latch
5. If side latch is open - Pull on armrest while moving latch handle to latched position
6. If both latches are open - Side latch, then top

## **CARBURETOR ICING**

1. Carburetor Heat - ON
2. Mixture - Max. smoothness

## **ENGINE ROUGHNESS**

1. Carburetor heat - ON
2. If roughness continues after one min:
  - a. Carburetor heat - OFF
  - b. Mixture - Max smoothness
  - c. Electric fuel pump - ON
  - d. Fuel selector - Switch tanks
  - e. Engine gauges - Check
  - f. Magneto switch - "L"&"R" then BOTH
  - g. If operation is satisfactory on either one, continue on that magneto at reduced power and full "RICH" mixture to first airport.
  - h. Prepare for power off landing