

Aircraft Checklist

Piper Seminole



This is an abbreviated checklist. Most explanatory items, notes cautions and warnings have been omitted for brevity. Procedures in red/bold text of this checklist should be committed to memory. All performance speeds should be computed prior to flight using the Aircraft Owner's Manual. This checklist is for training purposes only; users must be familiar with and operate in accordance with the official Aircraft Owner's Manual.

Piper Seminole Preflight Checklist

Cabin Preflight Inspection

REMOVE GUST LOCKS & PITOT COVER IF INSTALLED

1. InspectionsCHECK DATES and TIMES
2. Weight and CG..... WITHIN LIMITS
3. Documents CHECK
4. Performance Charts..... CHECK
5. Controls.FREE and CORRECT
6. Landing Gear Lever DOWN POSITION
7. Avionics Master SwitchOFF
8. Magneto SwitchesOFF
9. Battery Switch..... ON
10. Landing Gear Lights.....3 GREEN
11. Fuel Quantity..... CHECK
12. Interior and Exterior lights CHECK
13. Battery Switch.....OFF
14. Cowl Flaps OPEN
15. Trim..... NEUTRAL
16. FlapsEXTEND
17. Pitot And Static Systems..... DRAIN
18. Emergency Exit..... CLOSED and LOCKED
19. Parking Brake.....SET

Exterior Preflight Inspection

Right Wing

1. Fuel Sump Drains (2).....DRAIN and CHECK
2. Flap, Aileron And Hinges..... CHECK
3. Position Light..... CHECK
4. Wing..... CHECK
5. Wing Tie-down REMOVE
6. Fuel QuantityCHECK/CAP SECURE
7. Fuel System Vents OPEN
8. Wheel Assembly/Brakes..... CHECK
9. Landing Gear Shock Struts..... 2.6” INFLATED
10. Cowl flaps & Landing Gear Doors..... CHECK
11. Propeller and Spinner CHECK
12. Oil Quantity (4-6 Quarts) CHECK
13. Dipstick / Access Panel SECURE
14. Cowling. SECURE
15. Inspection Covers SECURE
16. Air Inlets / Oil CoolerCLEAR

Nose

1. Nose Wheel Assembly..... CHECK
2. Nose Strut Shock Strut..... 2.7” INFLATION
3. Tow Bar REMOVE/SECURE
4. Windshield. CLEAN and CHECK
5. Landing Light CHECK

Left Wing

1. Air Inlets / Oil Cooler CLEAR
2. Inspection Covers SECURE
3. Cowling SECURE
4. Oil Quantity (4-6 Quarts) CHECK
5. Dipstick Access Panel SECURE
6. Propeller and Spinner CHECK
7. Cowl Flaps & Landing Gear Doors CHECK
8. Landing Gear Shock Struts 2.6" INFLATED
9. Wheel Assembly CHECK
10. Fuel System Vents OPEN
11. Fuel Quantity CHECK/CAP SECURE
12. Wing Tie-down REMOVE
13. Stall Warning Tabs CHECK
14. Pitot Tube / Static Port CHECK/CLEAR
15. Wing CHECK
16. Position Light CHECK
17. Flap, Aileron And Hinges CHECK

Empennage

1. Antennas CHECK
2. Left Side Of Fuselage CHECK
3. Horizontal Stabilator and Anti-Servo Tab CHECK
4. Tail Tie-down REMOVE
5. Vertical Stabilizer and Rudder CHECK
6. Right Side Of Fuselage CHECK
7. Baggage Door CLOSED and LOCKED
8. General Walk Around COMPLETE

Before Starting Engines

1. Passenger Briefing COMPLETE
2. Seat Belts ADJUSTED/SECURE
3. Parking Brake TEST and SET
4. Circuit Breakers CHECK IN
5. Avionics and Electrical Equipment OFF
6. Autopilot OFF
7. Cowl Flaps OPEN

V Speeds

V _{so}	55 KIAS
V _{mca}	56 KIAS
V _s	57 KIAS
V _r	75 KIAS
V _{sse}	82 KIAS
V _x	82 KIAS
V _{xse}	82 KIAS
V _y	88 KIAS
V _{yse}	88 KIAS
V _{climb}	105 KIAS
V _{lo}	109 KIAS
V _{fe}	111 KIAS
V _a	2700 lbs..... 112 KIAS
	3250 lbs..... 124 KIAS
	3800 lbs..... 135 KIAS
V _{le}	140 KIAS
V _{no}	169 KIAS
V _{ne}	202 KIAS

Starting Engines

(Flooded, Cold & External Power Starts on Page 13 & 14)

1. Fuel Selector Valves ON
2. Master Switch ON
3. Anti-Collision Lights ON

4. Mixture RICH
5. Propeller FORWARD
6. Throttle OPEN ¼ INCH
7. Prime AS REQUIRED / IN AND LOCKED
8. Electric Fuel Pump ON
9. Magneto Switches ON
10. Propeller Area CLEAR
11. Starter ENGAGE

Do not crank more than 10 seconds/Allow 20 seconds to cool

12. Throttle 1000 RPM
13. Oil Pressure INDICATING GREEN
14. Electric Fuel Pump OFF
15. Mixture LEAN
16. Alternator ON/CHECK

Repeat Items 4 Through 16 Above For Opposite Engine

17. Gyro Suction 4.8"-5.2"
18. Flaps RETRACT
19. Navigation Lights AS REQUIRED
20. Avionics ON
21. Transponder STANDBY/1200
22. ATIS / AWOS / ASOS OBTAIN
23. Altimeter SET
24. Engine Cross-feed CHECK
25. Departure & Taxi Clearance / Advisory CONTACT

Taxi

1. Brakes/Steering CHECK
2. Instrument Crosscheck CHECK

Before Take-off

1. Nose wheel..... STRAIGHT
2. Parking Brake SET
3. Flight Controls FREE and CORRECT
4. Fuel Selector Valves ON
5. Mixtures RICH
6. Throttles 1500 RPM
7. Propellers CHECK FEATHERING
8. Throttles 2000 RPM
9. Mixtures SET FOR DENSITY ALTITUDE
10. Propeller Governors CHECK
11. Carburetor Heat..... CHECK BOTH THEN OFF
12. Primers LOCKED
13. Magnets(175 max drop, 50 diff.) CHECK
14. Engine Gages and Ammeter CHECK
15. Suction 4.8-5.2"
16. Annunciator Panel..... PRESS-TO-TEST
17. Heater Over-temp PRESS-TO-TEST
18. Throttles IDLE THEN 1000 RPM
19. Throttle Quadrant Friction Lock..... ADJUST
20. Communication / Navigation Radios SET
21. Flight Instruments SET AND CHECKED
22. Fuel Quantities CHECKED
23. Trim..... SET FOR TAKEOFF
24. Flaps..... SET FOR TAKEOFF
25. Cabin Doors & Windows..... CLOSED AND LATCHED
26. Seats ADJUSTED/LOCKED
27. Departure Briefing CLEARANCE/
EMERGENCY PLAN
28. Parking Brake RELEASE
29. Tower / Advisory CONTACT

Cleared For Takeoff

1. Electric Fuel Pumps ON
2. Strobes / Lights ON AS REQUIRED
3. Pitot Heat AS REQUIRED
4. Transponder ALTITUDE
5. Traffic CHECK

Normal Takeoff

1. Wing Flaps 0°
2. Power FULL THROTTLE and 2700 RPM
3. Vr 75 KIAS
4. Pitch Vy 88 KIAS
5. Gear (Positive Rate) RETRACT

Short Field Takeoff

1. Wing Flaps AS NECESSARY*
2. Brakes HOLD
3. Throttles FULL OPEN
4. Engine Gages CHECK
5. Brakes RELEASE
6. Vr 70 KIAS
7. Pitch 75 KIAS THRU 50 FT
8. Gear (Positive Rate) RETRACT

After Clearing Obstacle:

9. Pitch Vx 82 KIAS FOR FURTHER OBSTACLES
10. Pitch Vy 88 KIAS NO OBSTACLES

***See POH for hazards associated with the use of flaps during take-off**

Enroute Climb (above 1000 Feet AGL)

1. Airspeed CRUISE CLIMB105 KIAS
2. Throttles 25 INCHES HG
3. Propellers 2500 RPM
4. Mixtures AS REQUIRED
5. Electric Fuel Pumps OFF
6. Fuel Pressure VERIFY GREEN
7. Cowl Flaps AS REQUIRED FOR ENGINE TEMP

Cruise

1. Power SET PER POWER TABLE
2. Mixtures SET PER POWER TABLE
3. Cowl Flaps AS REQUIRED
4. Aux. Fuel Pump OFF
5. Lights AS REQUIRED
6. Trim..... AS REQUIRED

Descent

1. ASOS/ATISOBTAIN
2. AltimeterSET
3. Arrival Briefing.....COMPLETE
4. Mixture..... ADJUST AS REQUIRED
5. Power AS REQUIRED
6. Cowl FlapsAS REQUIRED FOR ENGINE TEMP
7. Landing Light ON
8. Wing Flaps AS REQUIRED
9. Fuel Selector Valves ON

Before Landing

1. Seats, Seatbelts..... ADJUST/LOCKED
2. Heater Control Switch OFF/FAN
3. Fuel Selectors..... ON
4. Electric Fuel Pumps ON
5. Landing Gear EXTEND / 3 GREEN
6. Mixture..... ADJUST AS REQUIRED
7. Propeller HIGH RPM
8. Carb HeatAS APPROPRIATE

Normal Landing (IFR approach speed: 110 KIAS)

1. Airspeed(flaps up) 100 KIAS
2. Landing Gear EXTEND / 3 GREEN
3. Wing Flaps 0°-40° AS DESIRED
4. Airspeed (final approach) 75-90 KIAS
5. Power FOR DESIRED DESCENT RATE
6. Brakes APPLY AS NECESSARY

Short Field Landing

1. Landing Gear EXTEND / 3 GREEN
2. Wing Flaps 40°
3. AirspeedPER PERFORMANCE CHART
4. Power FOR DESIRED DESCENT RATE

After Touchdown:

5. Wing Flaps RETRACT
6. Control Wheel..... FULL AFT
7. Brakes APPLY AS NECESSARY

Go Around (Balked Landing)

1. Throttles FULL OPEN
2. Climb Speed..... 88 KIAS
3. Wing Flaps RETRACT TO 25°
4. Landing Gear RETRACT
5. Wing Flaps(after clearing obstacles) RETRACT
6. Cowl Flaps OPEN

After Landing / Clear of Runway

1. TransponderSTANDBY
2. Flaps RETRACT
3. Cowl Flaps OPEN
4. Carburetor Heat..... OFF
5. Mixture.....LEAN FOR TAXI
6. Electric Fuel Pumps OFF
7. Strobes..... AS REQUIRED
8. Landing Light OFF
9. Heater Control Switch FAN FOR 2 MNUTES
10. Taxi Clearance / AdvisoryCONTACT

Securing Airplane

1. Parking BrakeSET
2. Radios & Electrical Equipment OFF
3. Throttles 1000 RPM
4. Mixtures IDLE CUT-OFF
5. Magnetos..... OFF
6. Fuel Quantities..... CHECK
7. Master Switch OFF
8. Strobes OFF
9. Alternators OFF
10. Control Lock..... INSTALL
11. Flight Information.....RECORD
12. Parking Brake RELEASE
13. Wheel Chocks & Tie Downs SECURE
14. Post Flight Walk Around.....COMPLETE
15. Doors.....LOCKED
16. Debrief ItemsCOMPLETE

Abnormal Procedures

Starting Engines When Flooded

1. Master Switch ON
 2. Beacon..... ON
- | | |
|---|-------------------|
| 3. Mixture. | IDLE CUT-OFF |
| 4. Propeller. | FORWARD |
| 5. Throttle..... | FULL OPEN |
| 6. Propeller Area | CLEAR |
| 7. Magneto Switches..... | ON |
| 8. Starter | ENGAGE |
| 9. Throttle..... | RETARD |
| 10. Mixture..... | ADVANCE FULL RICH |
| 11. Oil Pressure..... | CHECK |
| 12. Mixture..... | LEAN |
| 13. Alternator – Operating engine | ON/CHECK |

Repeat Items 3 Through 13 Above For Opposite Engine.

Continue With Starting Engines Checklist Item 17 On Page 6.

Starting Engines When Hot

DO NOT ADVANCE THROTTLES PRIOR TO ENGINE START

1. Master Switch ON
 2. Strobes..... ON
- | | |
|-----------------------------|-------------|
| 3. Mixture..... | RICH |
| 4. Propeller | FORWARD |
| 5. Throttle..... | OPEN ½ INCH |
| 6. Electric Fuel Pump | ON |

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- | | |
|--|------------------|
| 7. Propeller Area..... | CLEAR |
| 8. Magneto Switches..... | ON |
| 9. Starter..... | ENGAGE |
| 10. Throttle..... | 1000 RPM |
| 11. Oil Pressure..... | INDICATING GREEN |
| 12. Electric Fuel Pump..... | OFF |
| 13. Mixture..... | LEAN |
| 14. Alternator – Operating engine..... | ON/CHECK |

Repeat Items 3 Through 14 Above For Opposite Engine.

Continue With Start Checklist Item 17 On Page 6.

Starting Engine When Cold

Pre-Heat Both Engines Prior To Start When OAT Is Below 10° C.

- | | |
|--|------------------|
| 1. Master Switch..... | ON |
| 2. Strobes..... | ON |
| 3. Mixture..... | RICH |
| 4. Propeller..... | FORWARD |
| 5. Throttle..... | OPEN ¼ INCH |
| 6. Primer..... | 5-10 STROKES |
| 7. Electric Fuel Pump..... | ON |
| 8. Propeller Area..... | CLEAR |
| 9. Magneto Switches..... | ON |
| 10. Starter..... | ENGAGE |
| 11. Throttle..... | 1000 RPM |
| 12. Oil Pressure..... | INDICATING GREEN |
| 13. Electric Fuel Pump..... | OFF |
| 14. Mixture..... | LEAN |
| 15. Alternator – Operating engine..... | ON/CHECK |

Repeat Items 3 Through 15 Above For Opposite Engine.

Continue With Starting Engines Checklist Item 17 On Page 6



Landing Gear Malfunction

Trouble Shooting;

1. Indicator Light Bulb CHECK
2. Circuit Breakers CHECK
3. Battery Switch ON
4. Alternators CHECK
5. Navigation Lights (Daytime) CHECK

Manual Extension;

6. AirspeedBELOW 100 KIAS
7. Gear Selector DOWN
8. Emergency Gear Knob UNGUARD and PULL
9. Indicator Lights3 GREEN

ALT Annunciator Illuminated

1. Ammeters CHECK
2. Inoperative Alternator SwitchOFF
3. Electrical Loads REDUCE
4. Alternator Circuit BreakerCHECK and RESET
5. Inoperative Alternator Switch ON

If Power Is Not Restored;

6. Inoperative Alternator SwitchOFF
7. Electrical Loads60 AMPS MAX
8. FlightLAND AS SOON AS PRACTICAL

Note: If Electrical Power Is Lost, Landing Gear Must Be Manually Extended.

Open Door

1. Airspeed82 KIAS
2. Cabin Vents CLOSE
3. Storm Window OPEN
4. Side Latch.....(If Open) LATCH
5. Upper Latch.....(If Open) LATCH

Propeller Over-speed

1. Throttle RETARD
2. Oil Pressure CHECK
3. Propeller Control DECREASE
4. Airspeed REDUCE
5. Throttle AS REQUIRED

Emergency Checklist

This is an operational checklist. Procedures in red/bold text in this section should be committed to memory. The official aircraft AFM contains additional procedures and expanded procedures not listed in this checklist. Users should be familiar with all

Airspeeds For Emergency Operation

Minimum Controllable Airspeed (Vmc).....	56 KIAS
Single Engine Best Rate Of Climb (Vyse)	88 KIAS
Single Engine Best Angle Of Climb (Vxse).....	82 KIAS
Maneuvering Speed (Va @ 3800 lbs).....	135 KIAS
Never Exceed Speed (Vne).....	202KIAS

Engine Fire On Ground

- 1. Mixture..... IDLE CUT-OFF**
- 2. Throttle..... FULL OPEN**
- 3. Starter CONTINUE CRANKING**

If Engine Start:s

4. Power..... 2000 RPM
5. Fire VERIFY OUT
6. EngineSHUTDOWN

If Engine Fails To Start:

- 4. Fuel Selector Valves OFF**
- 5. Master Switch OFF**
- 6. Magnetos OFF**
- 7. Fire Extinguisher..... OBTAIN**



Engine Failure During Takeoff

Adequate Runway Remaining

1. **Throttles..... CLOSE**

Stop Straight Ahead

2. Brakes..... MAXIMUM BRAKING
3. Master Switch..... OFF
4. Magnetos OFF
5. Fuel Selector Valves OFF

Engine Failure / Power Loss During Flight

Maintain Directional Control and Airspeed Above 82 KIAS

1. **Zero Side Slip ESTABLISH**
2. **Mixtures FORWARD**
3. **Propellers FORWARD**
4. **Throttles FORWARD**
5. **Wing Flaps RETRACT**
6. **Landing Gear RETRACT**

Identify Inoperative Engine;

7. **Throttle RETARD TO VERIFY
THEN ½ OPEN**

If Altitude Permits. Use Trouble Shoot Checklist Prior To Securing.

Engine Securing Procedure

1. **Propeller Control Of Inoperative EngineFEATHER**
2. **Mixture Control Of Inoperative EngineIDLE CUT-OFF**
3. Electrical Fuel Pump Of Inoperative EngineOFF
4. Magnetos Of Inoperative EngineOFF
5. Cowl Flap Of Inoperative Engine CLOSED
6. Cowl Flap Of Operative Engine.....AS REQUIRED
7. Fuel Selector Of Inoperative Engine.....OFF
8. Alternator Of Inoperative EngineOFF
9. Electrical Load CHECK
10. Trim.....AS REQUIRED

Consider Cross-feed Operation If Necessary (Page 18)

Engine Troubleshoot Checklist

To Attempt To Restore Power Prior To Feathering

1. MixturesAS REQUIRED
2. Throttle..... OPEN
3. Fuel Selector ON
4. Carburetor Heat..... ON
5. PrimerLOCKED
6. Magneto SwitchesLEFT OR RIGHT/BOTH
7. Electric Fuel Pumps ON

Air Start (Unfeathering Procedure)

- ❖ *If aircraft is equipped with Garmin 430 unit, this unit must be manually shut down prior to engine restart*
 - 1. Fuel Selector (Inoperative Engine) ON
 - 2. Mixture RICH
 - 3. Electric Fuel Pump ON
 - 4. Propeller FORWARD
 - 5. Throttle TWO STROKES
THEN OPEN ¼ INCH
 - 6. Magneto Switches ON
 - 7. Starter ENGAGE
 - 8. Throttle LOW POWER UNTIL ENGINE WARMS
 - 9. Alternator ON
 - 10. Carburetor Heat OFF
 - 11. Cowl Flap AS REQUIRED
- If Engine Does Not Start, Prime As Required and Re-Try**

Electrical Fire

- 1. **Battery Master OFF**
- 2. **Alternator OFF**
- 3. **All Electrical OFF**
- 4. **Radio Master OFF**
- 5. **Vents CLOSED**
- 6. **Heater OFF**
- 7. **Fire Extinguisher AS APPROPRIATE**
- 8. **Flight TERMINATE**

Emergency Landing – Single Engine

1. Inoperative EngineSECURED
2. Fuel Selector (Operative Engine) ON
3. Seats & Seatbelts.....SECURE
4. Airspeed88 KIAS

When Certain Of Making Field;

5. Landing Gear..... EXTEND/3 GREEN
6. Flaps(MAX 25°) EXTEND AS REQUIRED
7. Airspeed82 KIAS

Crossfeed Operation (Level Cruise Flight Only)

1. Fuel Selector Operating Engine CROSSFEED
2. Fuel Selector Inoperative EngineOFF

Engine Fire In Flight

Effected Engine Only

- 1. Fuel Selector Valve..... OFF**
- 2. Electrical Fuel Pump OFF**
- 3. Throttle CLOSED**
- 4. Propeller.....FEATHER**
- 5. Mixture..... IDLE-CUT-OFF**
6. Cowl Flaps OPEN
7. Airspeed EMERGENCY DESCENT
8. Forced LandingEXECUTE

Spin Recovery

1. Throttles IDLE
2. Rudder OPPOSITE DIRECTION OF SPIN
3. Control Wheel FULL FORWARD
4. Ailerons NEUTRAL
5. Rudder (When Rotation Stops) NEUTRALIZE
6. Control Wheel SMOOTH BACK PRESSURE

Emergency Exit

1. Thermoplastic Cover REMOVE
2. Release Handle PULL FORWARD
3. Window PUSH OUT

Should any mechanical difficulty, accident, incident or delay occur, please contact a Leading Edge Aviation representative before continuing any flight. **DO NOT FLY** any aircraft that may have been damaged, until it has been inspected and certified airworthy by a certified mechanic. Call Leading Edge Aviation 435-752-5955, 801-392-5418, or 801-326-8250.

Passenger/Crew Briefing Checklist

Before Engine Start:

1. Normal and emergency exit procedures
2. Seatbelt operations
3. Fire extinguisher location & operations
4. Identify PIC for the flight
5. Positive exchange of flight controls process

Before Take-Off:

1. Verify runway in use
2. Type of take-off
3. Direction of departure (VFR)
4. Departure clearance (IFR)
5. Emergency plan
 - a. Emergency on runway
 - b. Emergency after liftoff
 - c. Emergency at altitude
 - d. Flying/non-flying pilot roles during emergency operations

Approach:

1. Verify runway in use
2. Type of landing
3. Expected crosswind direction/intensity
4. Traffic pattern (VFR)
5. Instrument approach briefing (IFR)

Emergency Transponder Codes:

Air Piracy: 7500
Lost Communication: 7600
General Emergency: 7700

Emergency 2-Way Communication Frequency:

Guard Frequency: 121.5