


**PA-34 Seneca**  
**PREFLIGHT CHECKLIST**  
**LAKE ELMO**  


**INTERIOR PREFLIGHT**

Required Documents	ON BOARD
Hobbs, Tach Time	CHECK
Landing Gear Lever	DOWN
Mixtures	CUTOFF
Wastegate Levers	OUT
Avionics Master Switch	OFF
Trim	NEUTRAL
Cowl Flaps	OPEN
Magneto Switches	OFF
Pitot Static System	DRAIN
Circuit Breakers	IN
Master Battery Switch	ON
Landing Gear Lights	3 GREEN
Fuel Quantity	CHECK
All Exterior Lights	ON
Pitot Heat	ON
Lights, Pitot Heat	CHECK
Left Stall Warning Horn	CHECK
Lights, Pitot Heat	OFF
Flaps	EXTEND
<b>Anticollision Lights</b>	<b>LEAVE ON</b>
Master Battery Switch	OFF
Flight Controls	CHECK

**EXTERIOR PREFLIGHT**

<b>RIGHT SIDE</b>	
Flap	CHECK
Spoiler	CHECK
Wingtip, Lights	CHECK
Fuel Cap	SECURE
Leading Edge	CHECK
Angle of Attack Vane	CHECK
Fuel Drains	SAMPLE
Engine Oil	6 QUARTS
Engine Nacelle	CHECK

**RIGHT SIDE, continued**

Propeller	CHECK
Main Landing Gear	CHECK
Cowl Flap	CHECK

**NOSE SECTION**

Nose Cowling	CHECK
Nose Landing Gear	CHECK
Forward Baggage Door	LATCHED
Windshield	CHECK

**LEFT SIDE**

Main Landing Gear	CHECK
Cowl Flap	CHECK
Engine Oil	6 QUARTS
Engine Nacelle	CHECK
Propeller	CHECK
Fuel Drains	SAMPLE
Fuel Cap	SECURE
Leading Edge	CHECK
Stall Warning Vane	CHECK
Pitot Tube	CHECK
Wingtip, Lights	CHECK
Spoiler	CHECK
Flap	CHECK

**EMPENNAGE**

Left Fuselage	CHECK
Rear Door	LATCHED
Left Static Port	CHECK
Dorsal Fin Air Scoop	CHECK
Stabilator	CHECK
Rudder	CHECK
Right Static Port	CHECK
Right Fuselage	CHECK
Antennas	CHECK

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**See reverse side**

# PA-34 Seneca NORMAL CHECKLIST



## BEFORE START

Preflight Inspection	COMPLETE
Belts, Seats	SECURE
Doors	CLOSED
Brakes	SET
Fuel Selectors	ON
Avionics Master	OFF
Cowl Flaps	OPEN
<i>If OAT &lt; 0C, CLOSED</i>	
Wastegate Levers	OUT

## ENGINE START

Complete all steps below line for each engine.  
Start right engine first, then left engine.

Throttles	½" OPEN
Propellers	FORWARD
Mixtures	CUTOFF
Master Battery Switch	ON
Anticollision Lights	ON

Magnetos	ON
Electric Fuel Pump	ON
Mixture	PRIME

*Advance for 2-5s, then CUTOFF*

Propeller Area	CLEAR
Engine Starter	ENGAGE
Mixture (when engine starts)	RICH
Oil Pressure	POSITIVE
Throttle	1000 RPM

## AFTER START

Alternator Switches	BOTH ON
Fuel Pumps	OFF
Avionics Master Switch	ON
Autopilot Master Switch	ON
Electric Trim Switch	ON

## AFTER START - continued

Mixtures	LEAN
Flight Instruments/Nav	SET
Transponder	ALT
Flaps	RETRACT
Aircraft Lights	SET
Brakes	TEST

## ENGINE RUN-UP

Brakes	HOLD
Flight Controls	CHECK
Mixtures	RICH
Throttles	1500 RPM
Propeller Feathering	CHECK
Throttles	2000 RPM
Propellers	EXERCISE
Magnetos	CHECK

*Max drop 175 RPM*

*Max differential 50 RPM*

Ammeters	CHECK
Vacuum Suction	CHECK
Engine Instruments	CHECK
Throttles	IDLE
Throttles	1000 RPM
Mixtures	SET

## BEFORE TAKEOFF

Takeoff Briefing	COMPLETE
Fuel Selectors	ON
Stabilator Trim	SET
Flaps	SET
Cowl Flaps	OPEN
Wastegate Levers	OUT
Propellers	FORWARD
Transponder	ALT
Flight Instruments	SET
Doors/Windows	LATCHED
Door Seal Pump	ON
Aircraft Lights	SET
Fuel Pumps	ON
Mixtures	RICH

## CLIMB

Speed	105-120
Landing Gear	UP
Flaps	UP
Cowl Flaps	SET
Climb Power	SET
<i>25" MAP, 2500 RPM</i>	
Fuel Pumps	SET
Wastegate Levers	SET
<i>Never exceed 25" MAP</i>	

## CRUISE

Cruise Power	SET
Fuel Pumps	SET
Mixtures	SET
Cowl Flaps	SET
Aircraft Lights	SET

## APPROACH

Altimeters	SET
Fuel Pumps	ON
Mixtures	RICH
Cowl Flaps	SET
Fuel Selectors	ON
Approach Briefing	COMPLETE
Wastegate Levers	OUT
Aircraft Lights	SET

## BEFORE LANDING

Mixtures	RICH
Propellers	FORWARD
Landing Gear	DOWN
<i>Confirm 3 green lights</i>	
Flaps	SET

## CRUISE DATA (60%, 17.2 GPH)

Alt	RPM	MAP	TAS
3000	2400	21.0	162 MPH
6000	2400	20.3	169 MPH

## AFTER LANDING

Flaps	RETRACT
Mixtures	LEAN
Trim	SET
Cowl Flaps	OPEN
Door Seal Pump	OFF
Fuel Pumps	OFF
Aircraft Lights	SET

## SHUTDOWN

Avionics Master Switch	OFF
Throttles	IDLE
Magnetos	CHECK
Mixtures	CUTOFF
Magnetos	OFF
All Electrical Switches	OFF
<b>Anticollision Lights</b>	<b>LEAVE ON</b>
Master Switches	OFF
Wastegate Levers	OUT

## REFERENCE SPEEDS

VS0	67 MPH
VS1	73 MPH
<b>VMCA</b>	<b>67 MPH</b>
VSSE	90 MPH
VX	90 MPH
VXSE	90 MPH
VY	105 MPH
<b>VYSE</b>	<b>105 MPH</b>
VFE	125 MPH
VLO – Retract	125 MPH
VLO – Extend	150 MPH
VLE	150 MPH
VA	133-146 MPH
VNO	190 MPH
VNE	217 MPH

## PA-34 Seneca EMERGENCY CHECKLIST



### ENGINE FAILURE IN FLIGHT

<b>Directional Control</b>	<b>MAINTAIN</b>
<b>Airspeed</b>	<b>105 MPH</b>
<b>Mixtures</b>	<b>RICH</b>
<b>Propellers</b>	<b>FORWARD</b>
<b>Throttles</b>	<b>FULL</b>
<b>Landing Gear</b>	<b>UP</b>
<b>Flaps</b>	<b>UP</b>
<b>Fuel Selectors</b>	<b>ON</b>
<b>Fuel Pumps</b>	<b>ON</b>
<b>Inop Engine</b>	<b>IDENTIFY</b>
<b>Inop Engine Throttle</b>	<b>VERIFY</b>
<b>Inop Engine Propeller</b>	<b>FEATHER</b>

*Go to Engine Shutdown/Feather Checklist.*

### ENGINE FAILURE ON TAKEOFF

<b>Throttles</b>	<b>IDLE</b>
<b>Brakes</b>	<b>APPLY</b>

*Stop or land safely on remaining runway.  
Immediately declare RTO to ATC.*

### ENGINE FIRE IN FLIGHT

*Perform the following actions on the affected engine's controls only.*

<b>Fuel Selector</b>	<b>OFF</b>
<b>Throttle</b>	<b>IDLE</b>
<b>Mixture</b>	<b>CUTOFF</b>
<b>Propeller</b>	<b>FEATHER</b>

*If fire does not extinguish, proceed to Emergency Descent Checklist (except Mixtures) and land as soon as possible.*

*If fire extinguishes, land as soon as practical. Go to Engine Shutdown/Feather Checklist as desired.*

### ENGINE FIRE ON START

<b>Affected Engine Starter</b>	<b>CRANK</b>
<b>Mixtures</b>	<b>CUTOFF</b>
<b>Throttles</b>	<b>FULL</b>
<b>Fuel Pumps</b>	<b>OFF</b>
<b>Fuel Selectors</b>	<b>OFF</b>

*When fire is extinguished...  
Master Switches OFF*

*Evacuate Aircraft immediately.*

### EMERGENCY DESCENT

<b>Throttles</b>	<b>IDLE</b>
<b>Propellers</b>	<b>FORWARD</b>
<b>Mixtures</b>	<b>RICH*</b>
<b>Landing Gear</b>	<b>DOWN</b>
<b>Bank</b>	<b>30-45 DEG</b>
<b>Airspeed</b>	<b>150 MPH</b>

### ELECTRICAL FIRE

<b>Master Switches</b>	<b>OFF</b>
<b>All Electrical Switches</b>	<b>OFF</b>
<b>Heater/Defroster Vents</b>	<b>CLOSE</b>

*If fire extinguishes, land as soon as possible.  
If electrical power is necessary for safety of flight...*

<b>Master Switches</b>	<b>ON</b>
<b>Circuit Breakers</b>	<b>CHECK</b>

*Turn on individual electrical components one at a time.*

*If fire does not extinguish, land as soon as possible. Consider off-airport landing if necessary.*

### EMERGENCY GEAR EXTENSION

<b>Circuit Breakers</b>	<b>CHECK</b>
<b>Master Switches</b>	<b>ON</b>
<b>Voltmeter, Ammeters</b>	<b>CHECK</b>
<b>Nav Lights</b>	<b>OFF</b>
<b>Airspeed</b>	<b>100 MPH</b>
<b>Landing Gear Lever</b>	<b>DOWN</b>
<b>Emergency Gear Extension</b>	<b>PULL</b>
<b>Landing Gear Lights</b>	<b>CHECK</b>

*If landing gear is not down and locked,  
use abrupt rudder or stabilator inputs to  
move landing gear into place.*

### ENGINE ROUGHNESS

<b>Wastegate Levers</b>	<b>OUT</b>
<b>Fuel Pumps</b>	<b>ON</b>
<b>Fuel Selectors</b>	<b>ON</b>
<b>Mixtures</b>	<b>ADJUST</b>
<b>Magnetos</b>	<b>CHECK</b>

*Never turn off more than one magneto switch  
at a time.*

*If roughness continues, land as soon as  
practical.*

### ALTERNATOR FAILURE

<b>Inop Alternator Switch</b>	<b>CYCLE</b>
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*If power is not restored...*

<b>Electrical Load</b>	<b>REDUCE</b>
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*Turn off all electrical components not  
necessary for the safety of flight.*

<b>12V Charging Port</b>	<b>UNPLUG</b>
<b>Circuit Breakers</b>	<b>CHECK</b>

*If no circuit breakers tripped...*

<b>Inop Alternator Master</b>	<b>CYCLE</b>
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*If power is not restored, land as soon as  
practical.*

### LOW OIL PRESS/HIGH OIL TEMP

*Prepare for a loss of engine power or engine  
failure.*

<b>Altitude</b>	<b>MAINTAIN</b>
<b>Throttles</b>	<b>18" MAP</b>
<b>Mixture</b>	<b>FULL RICH</b>

*If oil pressure does not return to normal  
and/or oil temperature is high, land as soon  
as practical.*

### CARBON MONOXIDE IN CABIN

<b>Cabin Heat</b>	<b>OFF</b>
<b>Defroster</b>	<b>OFF</b>
<b>Storm Windows</b>	<b>OPEN</b>

*If indication/alert continues, land as soon as  
practical.*

Emergency Checklist Rev 03/17/2023

**PA-34 Seneca  
SINGLE-ENGINE  
OPERATING PROCEDURES**



**ENGINE FAILURE IN FLIGHT**

<b>Directional Control</b>	<b>MAINTAIN</b>
<b>Airspeed</b>	<b>105 MPH</b>
<b>Mixtures</b>	<b>RICH</b>
<b>Propellers</b>	<b>FORWARD</b>
<b>Throttles</b>	<b>FULL</b>
<b>Landing Gear</b>	<b>UP</b>
<b>Flaps</b>	<b>UP</b>
<b>Fuel Selectors</b>	<b>ON</b>
<b>Fuel Pumps</b>	<b>ON</b>
<b>Inop Engine</b>	<b>IDENTIFY</b>
<b>Inop Engine Throttle</b>	<b>VERIFY</b>
<b>Inop Engine Propeller</b>	<b>FEATHER</b>

*Go to Engine Shutdown/Feather Checklist.*

**ENGINE SHUTDOWN/FEATHER**

<b>Directional Control</b>	<b>MAINTAIN</b>
<i>Maintain zero-side-slip flight attitude.</i>	
<b>Trim</b>	<b>AS REQD</b>
<b>Inop Engine Fuel Pump</b>	<b>OFF</b>
<b>Inop Engine Mixture</b>	<b>CUTOFF</b>
<b>Inop Engine Magnetos</b>	<b>OFF</b>
<b>Inop Engine Cowl Flap</b>	<b>CLOSE</b>
<b>Inop Engine Alternator</b>	<b>OFF</b>
<b>Electrical Load</b>	<b>REDUCE</b>
<b>Inop Engine Fuel Selector</b>	<b>OFF</b>

**FUEL CROSSFEED**

<b>Inop Engine Fuel Pump</b>	<b>OFF</b>
<b>Good Engine Fuel Pump</b>	<b>ON</b>
<b>Good Engine Fuel Select</b>	<b>XFEED</b>
<b>Fuel Flow, Pressure</b>	<b>MONITOR</b>
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<b>Good Engine Fuel Pump</b>	<b>ON</b>
<b>Good Engine Fuel Select</b>	<b>ON</b>
<b>Fuel Flow, Pressure</b>	<b>MONITOR</b>
<b>Good Engine Fuel Pump</b>	<b>AS REQD</b>

**ENGINE IN-FLIGHT RESTART**

*Perform the following actions on the affected engine's controls only.*

<b>Fuel Selector</b>	<b>ON</b>
<b>Fuel Pump</b>	<b>OFF</b>
<b>Throttle</b>	<b>½" OPEN</b>
<b>Propeller</b>	<b>FORWARD</b>
<b>Mixture</b>	<b>RICH</b>
<b>Magnetos</b>	<b>ON</b>
<b>Starter</b>	<b>ENGAGE</b>

*If engine starts, proceed to Engine Warm-Up Checklist.*

*If engine does not start...*

<b>Fuel Pump</b>	<b>ON</b>
<i>Wait 3-5 seconds</i>	
<b>Fuel Pump</b>	<b>OFF</b>
<b>Starter</b>	<b>ENGAGE</b>

*If engine starts, proceed to Engine Warm-Up Checklist.*

**ENGINE WARM-UP**

*Use this procedure after starting an engine in flight.*

<b>Throttle</b>	<b>15" MAP</b>
<b>Propeller</b>	<b>2000 RPM</b>
<b>Cowl Flaps</b>	<b>SET</b>
<b>Alternator</b>	<b>ON</b>
<b>Fuel Pump</b>	<b>ON</b>
<b>Engine Instruments</b>	<b>MONITOR</b>

*Wait 2 minutes or until 200 CHT before adding additional power on the engine.*

**APPROACH – SINGLE ENGINE**

<b>Inop Engine Cowl Flap</b>	<b>CLOSED</b>
<b>Good Engine Fuel Select</b>	<b>ON</b>
<b>Good Engine Fuel Pump</b>	<b>ON</b>
<b>Good Engine Mixture</b>	<b>RICH</b>
<b>Good Engine Propeller</b>	<b>FORWARD</b>
<b>Altimeters</b>	<b>SET</b>
<b>Approach Briefing</b>	<b>COMPLETE</b>
<b>Wastegate Levers</b>	<b>OUT</b>
<b>Aircraft Lights</b>	<b>SET</b>

**MTOW Single Engine Ceilings**

<b>Service Ceiling</b>	<b>3650' MSL</b>
<b>Absolute Ceiling</b>	<b>5000' MSL</b>

Single Engine Checklist Rev 03/17/2023