


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
Anticollision Lights	LEAVE ON
Master Battery Switch	OFF
Flight Controls	CHECK
Cabin CO Detector	ON

EXTERIOR PREFLIGHT

RIGHT SIDE	
Flap	CHECK
Aileron	CHECK
Wingtip, Lights	CHECK
Fuel Cap	SECURE
Leading Edge	CHECK
Stall Warning Vane	CHECK
Fuel Drains	SAMPLE
Engine Oil	6 QUARTS

RIGHT SIDE, continued

Engine Nacelle	CHECK
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
Aileron	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
Cabin CO Detector	ON, ZERO
Doors	CLOSED
Brakes	SET
Fuel Selectors	ON
Avionics Master	OFF
Cowl Flaps	OPEN
<i>If OAT < 0C, CLOSED</i>	
Wastegate Levers	OUT

ENGINE START

<i>Complete all steps below line for each engine. Start right engine first, then left engine.</i>	
Throttles	½" OPEN
Propellers	FORWARD
Mixtures	CUTOFF
Master Battery Switch	ON
Anticollision Lights	ON

Magnetos	ON
Electric Fuel Pump	ON
Mixture	PRIME
<i>Advance for 2-5s, then CUTOFF</i>	
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

AFTER START - continued

Electric Trim Switch	ON
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
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
Fuel Pumps	OFF
Aircraft Lights	SET

SHUTDOWN

Avionics Master Switch	OFF
Throttles	IDLE
Magnetos	CHECK
Mixtures	CUTOFF
Magnetos	OFF
All Electrical Switches	OFF
Anticollision Lights	LEAVE ON
Master Switches	OFF
Wastegate Levers	OUT
Cabin CO Detector	OFF

REFERENCE SPEEDS

VS0	67 MPH
VS1	73 MPH
VMCA	67 MPH
VSSE	90 MPH
VX	90 MPH
VXSE	90 MPH
VY	105 MPH
VYSE	105 MPH
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

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

Go to Engine Shutdown/Feather Checklist.

ENGINE FAILURE ON TAKEOFF

Throttles	IDLE
Brakes	APPLY

*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.

Fuel Selector	OFF
Throttle	IDLE
Mixture	CUTOFF
Propeller	FEATHER

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

Affected Engine Starter	CRANK
Mixtures	CUTOFF
Throttles	FULL
Fuel Pumps	OFF
Fuel Selectors	OFF

*When fire is extinguished...
Master Switches OFF
Evacuate Aircraft immediately.*

EMERGENCY DESCENT

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

ELECTRICAL FIRE

Master Switches	OFF
All Electrical Switches	OFF
Heater/Defroster Vents	CLOSE

*If fire extinguishes, land as soon as possible.
If electrical power is necessary for safety of flight...
Master Switches ON
Circuit Breakers CHECK
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

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

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

ENGINE ROUGHNESS

Wastegate Levers	OUT
Fuel Pumps	ON
Fuel Selectors	ON
Mixtures	ADJUST
Magnetos	CHECK

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

If roughness continues, land as soon as practical.

ALTERNATOR FAILURE

Inop Alternator Switch	CYCLE
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*If power is not restored...
Electrical Load REDUCE
Turn off all electrical components not necessary for the safety of flight.
12V Charging Port UNPLUG
Circuit Breakers CHECK
If no circuit breakers tripped...
Inop Alternator Master CYCLE
If power is not restored, land as soon as practical.*

LOSS OF OIL PRESSURE

Prepare for a loss of engine power or engine failure.

Altitude	MAINTAIN
Throttles	18" MAP
Mixture	FULL RICH

If oil pressure does not return to normal, land as soon as practical.

CARBON MONOXIDE ALERT

Cabin Heat	OFF
Defroster	OFF
Storm Windows	OPEN

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

Emergency Checklist Rev 10/04/2021

PA-34 Seneca
SINGLE-ENGINE
OPERATING PROCEDURES



ENGINE FAILURE IN FLIGHT

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

Go to Engine Shutdown/Feather Checklist.

ENGINE SHUTDOWN/FEATHER

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

FUEL CROSSFEED

Inop Engine Fuel Pump	OFF
Good Engine Fuel Pump	ON
Good Engine Fuel Select	XFEED
Fuel Flow, Pressure	MONITOR

Good Engine Fuel Pump	ON
Good Engine Fuel Select	ON
Fuel Flow, Pressure	MONITOR
Good Engine Fuel Pump	AS REQD

ENGINE IN-FLIGHT RESTART

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

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

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

If engine does not start...

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

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

ENGINE WARM-UP

Use this procedure after starting an engine in flight.

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

Wait 2 minutes or until 250 CHT before adding additional power on the engine.

SINGLE ENGINE APPROACH

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

MTOW Single Engine Ceilings

Service Ceiling	3650' MSL
Absolute Ceiling	5000' MSL

Single Engine Checklist Rev 10/04/2021