

WNC AVIATION
Piper Seminole PA44-180

INTERIOR

Weight & Balance..... checked
Papers A.R.O.W.
Hobbs / Tach Time Record
Maintenance Status Checked
Control Lock Remove
Gear Handle Down
Battery Switch On
Gear Lights 3 green
Fuel.....Gauges Check
Battery Switch Off
Flaps.....Extend
Magnetos Off
Pitot/Static System..... Drain
Light Check..... As Required

EXTERIOR

Fuel Quantity & Quality /Caps / Drains / Vents
Stall Indicator Vanes Check
Baggage Door..... Locked
Engine / Oil / Belt / Prop / Air Intake/Exhaust....Checked
Fuselage & Wing Surfaces & Controls.....Checked
Pitot & Static Ports.....Checked
Gear / Tires / BrakesChecked
Antennas.....Checked
Ties / Chocks..... Removed
Final visual inspection.....Checked

BEFORE START

Passenger Brief
Seat Belts/Harnesses..... Fastened & Adjusted
Seats..... Adjusted & Locked
Fuel Selectors..... On
Flaps..... Up
Cowl Flaps Open
Carb Heat Off
Circuit Breakers In
Avionics Master..... Off
Alternate Static..... Checked/Off
Beacon On
Alternators On
Brakes Pedal Test
Parking Brake As desired

STARTING

Magnetos On
Mixture Rich
Throttle 1/4 Inch
Prop..... Forward
Prime..... As Required
Battery Switch..... On
Fuel Pump On
Prop..... Verbal Clear
Starter Engage
RPM..... 1000
Fuel Pump Off Check Pressure
Oil Pressure..... Check
Alternator..... Check
Vacuum Check
Repeat for second Engine
Avionics Master On
Mixture Ground Lean
Circuit Breakers Check
Fuel Selectors Both Crossfeed for 30 seconds
Fuel Selectors Both On

TAXI

Lights As required
Instrmnts/Radios Set
Brakes..... Test
Flight Instruments Check

RUNUP

Brakes..... Hold
Controls Free & Corr.
Attitude & Heading Indicators Set
Mixture Full Rich
Throttle 1500 RPM
Props..... Check Feather
Throttle 2000 RPM
Props..... Exercise/Check Governors
Carb Heat..... Checked
Mags Check..... 175 max/50 diff
Fuel Pressure Check
Oil Pressure & Temp Check
Alternators..... Check
Vacuum 4.8-5.2
Annunciator Panel Test
Idle..... Smooth 600-800 rpm/then 1000

PRE - TAKEOFF

Fuel Selectors On
Trim.....Set
Flaps 0°
Mixture.....Best Power
Props Forward
Fuel Pumps On
Lndg. Light..... On
Radios & Instruments Setup
Transponder ALT
Auto Pilot Off
Doors Windows Closed & Locked
Abort Plan Reviewed
Final Clear
Time Off..... Record

TAKEOFF

Rotate 75 Knots
Climbout..... 88 Knots (Vy)/82 Knots (Vx)
Landing Gear Retract

CLIMB

Power ≥1000 AGL..... Set 25"/2500 RPM
Fuel Pumps On

CRUISE

Power..... Set To Cruise
Fuel Pumps Off
Mixture.....Lean as re
Heading Indicator Checked
Cowl Flaps Check temps/Close
Landing Light..... Off
Flight Plan Open

PRE-LANDING

Fuel On
Fuel Pumps On
Mixture.....Rich
Lndg. Lt. On/As Desired
Seat Belt/Shoulder harness..... All fastened
Landing Gear Down
Flaps As Required
Props Forward
Cowl flaps Open (for pattern operations)

AFTER LANDING

Flaps..... Retract
Fuel Pumps Off
Transponder Stby
Lights / Elect. Equip..... Off/As required
Cowl flaps Open
Heater Off

SHUTDOWN

Avionics Master Off
Idle Dead Mag check
1000 RPM
All Electrical except Beacon Off
Mixture Full Lean
Mags Off
Battery & Alternators Off
Hobbs / Tach Times Record
Control Lock..... Install
Pitot Cover..... Install
Chocks / Tie Down
CLOSE FLIGHT PLAN

SPEEDS

Vy.....88kias	Vyse.....88kias
Vx.....82kias	Vxse.....82kias
Vmca.....56kias	Vsse.....82kias
Vle.....140kias	Vfe.....111kias
Va.....135kias	
Vr.....75kias	

AIR START

Fuel Selector (inoperative engine) On
Fuel Pump (inoperative engine)..... On
Prop Forward
Mixture Rich
Throttle..... 2 full strokes then 1/4"
Magnetos On
Starter Engage until prop windmills
Throttle..... 15" until CHT to green
If no start – Prime as required and re-engage starter
Alternator On

ENGINE INOPERATIVE PROCEDURES

BEFORE LIFTOFF

Throttles..... Idle
BrakesApply

AFTER LIFTOFF < 88 kias or GEAR STILL DOWN

Throttles..... Idle
GearDown
Flaps..... 40°
Land Straight Ahead turning to avoid obstacles
Master..... Off
Fuel Selectors..... Off

AFTER LIFTOFF > 88 kias and GEAR UP

Airspeed.....88 kias
Mixture-Props-Throttle Full forward
Flaps..... Up
Gear Up
Airspeed.....88 kias
Failed Engine.....Identified
Failed Engine..... Verified w/throttle
Propeller (failed engine)Feather
Airspeed.....88 kias

Climb to a safe altitude secure failed engine and land

IN FLIGHT ABOVE 1000' AGL

Airspeed.....88 kias minimum
Mixture-Props-Throttle Full forward
Flaps..... Up
Gear Up
Failed Engine.....Identified
Failed Engine..... Verified w/throttle
Troubleshoot as time and altitude permit
Carb heat.....On
Fuel Pump..... On
MagnetosCheck left & right
Fuel Selector..... On/Crossfeed
Primer..... Locked
Mixture Adjust
If no restart
Prop.....feather before RPM < 950

SINGLE ENGINE FLIGHT

Trim.....As required
Secure Inoperative Engine
Mixture..... Idle Cut-off
Fuel pump.....Off
MagnetosOff
Alternator.....Off
Fuel SelectorOff
Cowl Flaps..... Closed
Operative Engine
Fuel pump.....Off
Throttle/RPMas necessary to maintain ≥ 88 kias
Cowl Flaps..... As required
Crossfeed As required

CROSSFEED

Fuel Selector (operative engine) Crossfeed
Fuel Selector (inoperative engine).....Off
Fuel PumpsOff

SINGLE ENGINE LANDING

Fuel Selector (operative engine) On
Fuel Pump (operative engine) On
Fuel Selector (inoperative engine).....Off
When landing assured
Gear..... Down
Flaps Extend (10° or 25° max)
Final Approach Speed..... 90 kias

SINGLE ENGINE GO-AROUND

Mixture/Prop..... forward
Throttle Full (smoothly)
FlapsRetract
Landing Gear.....Retract
Airspeed 88 kias
Trim..... As required
Cowl Flap (operating engine) As required

ENGINE FIRE ON GROUND

Mixture..... Idle cutoff
Throttle Open
Starter.....Keep engaged
If engine starts and fire goes out, shut down and inspect. If fire continues
Fuel selector valves Off
Battery Off
Evacuate aircraft

ENGINE FIRE IN FLIGHT

Throttles close
Props forward
Gear down
Fuel selector (affected engine) Off
Commence emergency descent-When necessary for landing on affected engine
Propeller..... feather
Mixture..... Idle cutoff

EMERGENCY GEAR EXTENSION

make these checks before manual extension
Circuit breakersCheck
Master Switch On
AlternatorsCheck
Navigation Lights Off (daytime)
manual extension
Airspeed100 kias maximum
Gear selectorDown
Emergency Gear Extension KnobPull
Indicator Lights Check 3 green

ELECTRICAL FAILURE

ALT Annunciator light illuminated
Ammeters.....Check

If one alternator shows 0
Inoperative Alternator Switch Off
Electrical loadReduce to min
Alternator CBCheck/Reset once if necessary
Inoperative Alternator Switch On
If power is not restored
Inoperative Alternator Switch Off
Electrical load60 amps max

ELECTRICAL FAILURE (continued)

If both alternators show 0
ALT switches Both Off
Electrical load..... Reduce to min
Alternator CB's..... Check/Reset once if necessary
ALT switchesOn one at a time
Determine Alternator showing least (not 0) load
ALT switches Least load ON, other Off
Electrical load..... 60 amps max

If alternator outputs are NOT restored
Battery..... Off
ALT switchesOn one at a time
If one or both alternator outputs are restored
Electrical load..... Reduce to min
Land as soon as practical
If alternator outputs are NOT restored
ALT switches Both Off
Battery.....On
Electrical load..... Reduce to min
Land as soon as practical

ELECTRICAL OVERLOAD

ALT switchesOn
Battery..... Off
If alternator loads are reduced
Electrical load..... Reduce to min
Land as soon as practical
If alternator loads are NOT reduced
ALT switches Both Off
Battery.....On (as required)
Electrical load..... Reduce to min
Land as soon as practical