

Preflight Inspection Cockpit

Aircraft docs (ARROW)	Check
Weight & Balance	Check
Control wheel	Release belt
Hobbs	Note time
Ignition	Off
Avionics Power Switch	Off
Master Switch	On
Fuel quantity indicators	Check
Lights, Pitot Heat	On
Check lights and test pitot tube	
Stall warning	Check operation
Lights, Pitot Heat	Off
Alt Static	Off
Gear Selector	Down
Flaps	Down
Master Switch	Off

Fuselage and Empenage

Baggage Door	Closed & Locked
Rivets	Check
Tail Tie-Down	Disconnect
Control surfaces	Free & Secure
Trim Tab	Check Security
Antennas	Check Security

Right wing

Wing tie-down	Removed
Flaps / Ailerons	Free and Secure
Main tire	Inflated / condition
Main gear strut	4"- 7"
Brakes	Not Leaking
Fuel tank sump	Sample
Fuel Quantity	Check
Fuel Filler cap	Secure
Wing leading edge/surface	Clean

Nose

Cowling	Secure
Engine oil level	Check
Fuel strainer	Sample
Propeller and spinner	Check
Alternator belt	Check
Engine cooling intake	Clear
Nose wheel strut & tire	Check
Nose Strut	Clean if dirty

Left Wing

Wing tie-down	Disconnect
Wing leading edge/surface	Clean

Flaps / Aileron	Free and Secure
Flaps	Secure
Main tire	Inflated / condition
Brakes	Not Leaking
Squat Switch	Check
Fuel tank vent open	Check
Fuel tank sump	Sample
Fuel Quantity	Check
Fuel Filler cap	Secure
Pitot / static mast	opening clear

Before starting engine

Preflight inspection	Complete
Passenger Briefing	Complete
Seats, belts	Adjust & Lock
Doors	Closed & Locked
Brakes	Test and set
Circuit breakers	Check In
Electrical Equip/Autopilot	Off
Avionics Power Switch	Off
Fuel Selector Valve	Fullest tank
Flaps	Up
Gear Selector	Down

KSPG Frequencies:

ASOS	118.87
Ground	121.80
Tower	127.40
Departure/ Approach	119.65

KSPG Runways:

7 RNAV	
25 VISUAL only (no T/Gs)	
18 VOR/RNAV	
36 RNAV	

Starting Engine

Brakes	HOLD
Master / Alternator Switch	On
Anti Collision Lights	On
Propeller area	"Clear"
Throttle	Full
Fuel Pump	On

Mixture	Move full rich
Fuel Flow	steady (about 5 sec)
Throttle	¼"
Mixture	Idle
Ignition	Start
Mixture	Advance when engine fires
Throttle	1000RPM
Oil Pressure	Check
Mixture	lean for taxi
Avionics Master Switch	On
Transponder	Alt and 1200
Ammeter	Check charge
Heading Indicator.	Check
ATIS/AWOS/ASOS	Obtain
Altimeter	Set
Clearance/Ground	Contact

Run-Up

Brakes	Set
Cabin doors	Closed & Locked
Seats, belts	Adjust & Lock
Flight controls	Free & Correct
Flight Instruments	Set
Fuel Quantity	Check
Fuel Selector Valve	Fullest Tank
Elevator Trim	Set for TAKEOFF
Mixture	Rich
Throttle	2000 rpm
Gyro pressure	5" +- 0.1"
Oil Pressure /Temp	check
Annunciator Panel	Test
Magnetos L/R	max 175rpm drop
Propeller	cycle 3 times
Ammeter	Check
Fuel Pump	Off momentarily then On
Throttle	Idle check then 100RPM

Normal Take Off

Fuel	Fullest Tank
Ignition	Both
Lights (IFR)	Anti Collision (all)
Radios/Avionics/GPS	Set
Mixture	Rich (or set to DA)
Prop	Full forward
Fuel Pump	On
Alternate Air	Closed
Flaps	as required
Trim	Set
Door	Latched
Departure Brief	Briefed

After Take Off

Climb	85 KIAS (see horizon)
Gear	Up
Landing Lights	OFF
Fuel Pump	Off at desired altitude

Cruise

Throttle	24"MP
Propeller	2400-2500RPM

Trim	Set
Mixture	Adjust (75° rich of peak)
Fuel	Switch Tanks

Pre-landing checklist

Fuel selector	Fullest Tank
Mixture	Full Rich below 3000'
Fuel Pump	On
Seatbelts	Fastened
ATIS/AWOS/ASOS	Checked

Final Approach

Flight instruments	Checked & Set
Radios	Set
GUMPS	check
Landing light	On - IFR or Night
Airspeed	75 KIAS (Flaps Up) 70-75 KIAS (Flaps Full)

After landing

Flaps	Up
Lights	Off
Trim	Neutral
Mixture	Lean for taxi
Fuel Pump	Off
Taxi Clearance	Contact Ground

Shut Down

Avionics	Off
Throttle	1000 RPM
Lights	Off
Mixture	Cut-off
Ignition	Off
Master switch	Off
Keys	Remove
Control Lock/ Seat Belt	Install

Short field take-off

Fuel	Fullest Tank
Ignition	Both
Lights (IFR)	Anti Collision (all)
Radios/Avionics/GPS	Set
Mixture	Rich (or set to DA)
Prop	Full forward
Fuel Pump	On
Alternate Air	Closed
Flaps	25°
Trim	Set
Door	Latched
Departure Brief	Briefed
Taxi	Max runway
Brakes	Set and hold
Throttle	Full
Brakes	Release
Rotate	57 kts

Flaps Retract when clear
Airspeed 75 kts

Short field landing

Pre-landing check Complete
Approach 62 KIAS
Flaps 25° (second notch)
Throttle Maintain glide
Touchdown Power Off
Flaps Up
Elevator Full up
Braking Heavy as required

Soft field take-off

Fuel Fulllest Tank
Ignition Both
Lights (IFR) Anti Collision (all)
Radios/Avionics/GPS Set
Mixture Rich (or set to DA)
Prop Full forward
Fuel Pump On
Alternate Air Closed
Flaps 25°
Trim Set
Door Latched
Departure Brief Briefed
Taxi Max runway
Brakes Set and hold
Throttle Full
Brakes Release
Rotate 57 kts
Flaps Retract when clear
Taxi keep rolling/ nose light
Rotate 60 kts in ground eff.
Flaps retract @78kts
Airspeed 87 kts

Soft field landing

Pre-landing check Complete
Throttle 1500 RPM
Flaps 25° (second notch)
Airspeed 60 kts
Touchdown Main first, softly
Landing roll Nose wheel up
Elevator Up
Braking As required

Go-around

Throttle Full
Carb Heat Cold (In)
Airspeed 65
Flaps slowly retract
Airspeed 75

V-Speed in kts		
Rotate	V _r	60-65
Normal Climb Out	V _{climb}	87
Max angle (Sea Level)	V _x	74
Climb rate (Sea Level)	V _y	87

Maneuver	V _a	89-113
Norm. oper. range		62-148
Flaps	V _{fe}	110
Maneuver max	V _{no}	113
Never exceed	V _{ne}	186
Stall (clean)	V _s	62
Stall (G/F)	V _{so}	56
Final Approach	V _{Ref} Flaps	70
	V _{Ref} No flaps	80
S-turns	100	
Point turns	100	
Chandelles	108	
Lazy Eights	108	
Steep Turns	108	
Steep Spirals	85	
Maneuver Speed	100	
Signal	On Ground	In Flight
Steady Green	Takeoff	Land
Flashing Green	Taxi	Return to land
Steady Red	Stop	Give way
Flashing Red	Clear runway	Do not land
Flashing white	Return to ramp	--

Red/ Green alternating	WARNING – USE CAUTION	WARNING – USE CAUTION
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Engine Failure

ON TAKEOFF

Power IDLE
Brakes APPLY
Centerline MAINTAIN
Mixture CUT OFF
Mags OFF
Ignition OFF

AFTER TAKEOFF

Yoke push forward
Airspeed 95 KIAS (flaps UP)
Mixture Idle Cut-off
Ignition Off
Flaps As Required
Gear as desired
Master switch Off
Cabin Doors Unlatch
Land (below 800' AGL) Straight head

DURING FLIGHT

Airspeed 95 KIAS
LOOK FOR A FIELD
Fuel selector valve Both
Primer In & Locked
Mixture Rich
Ignition BOTH (or START)
Airspeed 95 KIAS (flaps UP)
80 KIAS (flaps DN)

If no engine restart possible

Mixture Idle Cut-off
Fuel selector valve Off
Ignition Off
Flaps As Required
Gear as desired
Mayday Transmit 121.5
Mayday Squawk 7700
Master switch Off
Touchdown Tail Low

Propeller Overspeed

Throttle Retard
Oil Pressure Check
Prop Control Pull back then set
Airspeed Reduce
Throttle below 2700 RPM

Engine Roughness

Magnetos Check
Mixture Lean/Rich as necessary
Fuel Pump On
Fuel Tank Switch

Engine Fire during start

Crank Continue
Power 1700 RPM (2 min)
Engine Shut down and inspect

Engine Fire during flight

Mixture Idle Cut-off
Fuel selector valve Off
Master Switch Off
Cabin Heat/Air Off
Airspeed 100 KIAS

Electrical failure

Load meter Verify
Alternator Off
Reduce load to minimum
Breaker/alt Check & Reset
Alternator On
If still no power:
Alternator Off
Reduce load and land

Electrical overload

Master Switch Off
All on/off appliances Off
Master Switch On
turn on appliance one at a time
Over-voltage light Off
or TERMINATE flight ASAP

Spin Recovery

Ailerons
Throttle
Rudder
Control wheel
Pitch

NEUTRAL
IDLE
Full opposite
Full forward
Level