

## Preflight Inspection Cockpit

Aircraft docs (ARROW)	Check
Weight & Balance	Check
Hobbs	Check
Control wheel lock	Remove
Ignition	Off
Avionics Power Switch	Off
Master Switch	On
Lights	On and check
Fuel quantity indicators	Check
Static Pressure Alt Src Valve	Off
Flaps	Extend
Lights	Off
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

Flaps	Secure
Aileron	Free and Secure
Wing tie-down	Disconnect
Main wheel tire	Inflated/Cond
Brakes	Not Leaking
Fuel tank sump	Sample
Fuel Quantity	Check
Fuel Filler cap	Secure

## Nose

Engine oil level	Check
Fuel strainer	Sample
Propeller and spinner	Check
Alternator belt	Check
Air intake	Check
Carburetor air filter	Check
Landing lights	Check
Nose wheel strut & tire	Check
Nose Strut	Check
Static source opening	Check

## Left Wing

Pitot tube	Check
Stall warning	Check

Fuel tank vent open	Check
Landing/Taxi Light(s)	Clean/Cond
Aileron	Free and Secure
Flaps	Secure
Wing tie-down	Disconnect
Main wheel tire	Inflated/Cond
Brakes	Not Leaking
Fuel tank sump	Sample
Fuel Quantity	Check
Fuel Filler cap	Secure

## 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	Both

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 Switch	On
Beacon	On
Throttle	Open 1/4 inch
Mixture	Rich or D/A

Carb heat	Off
Propeller area	"Clear"
Prime	Prime if cold (three strokes)
Ignition	Start
Throttle	Adjust 1000 rpm
Oil Pressure	Check normal
Mixture	Lean for Taxi (1inch)
Flaps	Up
Avionics Master Switch	On
Radios	Check On
Circuit Breakers	Check
Transponder	Alt and 1200
Ammeter	Check charge
Heading Indicator.	check
ATIS/AWOS/ASOS	Obtain
Altimeter	Set
Passenger Brief	Complete
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	Both
Elevator Trim	Set for TAKEOFF
Throttle	1700 rpm
Engine Instruments	Check
Gyro pressure	4.5-5.5
Ammeter	Check
Circuit Breakers	Check
Magnetos	max 125rpm drop
Carb heat	On
Throttle	Idle (engine still runs)
Carb heat	Off
Throttle	1000 rpm
Throttle Friction Lock	Adjust

## Normal Take-Off

Ignition	Both
All lights	On (night / IFR)
Radios/Avionics	Set
Transponder	'1200' or assigned
Carb Heat	Off
Trim	Set
Flaps	Up
Mixture	Rich (or set to DA)
Departure Brief	Complete

## Cruise

Throttle	2400-2500 RPM
Trim	Set
Mixture	Adjust (75° rich of peak)
Lights	Off as Necessary

## Pre-landing checklist

Fuel selector	Both
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Mixture	Full Rich below 3000'
Seatbelts	Fastened
ATIS/AWOS/ASOS	Checked

## Final Approach

Flight instruments	Checked & Set
Radios	Set
Carb Heat under 2100 RPM	On
Mixture	Rich (or set for DA)
Landing light	On (IFR or Night)
Airspeed	65-70 KIAS (Flaps Up) 60-65 KIAS (Flaps Dn)

## After landing

Flaps	Up
Carb Heat	Off
Strobe light	Off
Mixture	Lean for taxi

## Shut Down

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

## Short field take-off

All lights.	On (night / IFR)
Radios/Avionics	Set
Transponder	'1200' or assigned
Trim	Set
Carb Heat	Off
Flaps	10°
Mixture	Rich (or set to DA)
Taxi	Max runway
Brakes	Set and hold
Departure Brief	Briefed
Throttle	Full
Brakes	Release

Climb **57 KIAS**  
 Flaps **Retract when clear**  
 Airspeed **67 KIAS**

### Short field landing

Pre-landing check **Complete**  
 Approach **60 KIAS**  
 Flaps **full down**  
 Throttle **Maintain glide**  
 Touchdown **Power Off**  
 Flaps **Up**  
 Elevator **Full up**  
 Braking **Heavy as required**

### Soft field take-off

All lights. **On (night / IFR)**  
 Radios/Avionics **Set**  
 Transponder **'1200' or assigned**  
 Trim **Set**  
 Carb Heat **Off**  
 Flaps **10°**  
 Mixture **Rich (or set to DA)**  
 Taxi **Max runway**  
 Departure Brief **Briefed**  
 Taxi **keep rolling & keep nose light**  
 Climb to **60 kts in ground eff.**  
 Flaps **retract @60kts**  
 Airspeed **67 KIAS**

### Soft field landing

Pre-landing check **Complete**  
 Throttle **1500 RPM**  
 Flaps **as required**  
 Airspeed **60 KIAS**  
 Touchdown **Main first, softly**  
 Landing roll **Nose wheel up**  
 Elevator **Up**  
 Braking **As required**

### Go-around

Throttle **Full**  
 Carb Heat **Off**  
 Flaps **20°**  
 Climb **55 KIAS**  
 Flaps **10°**  
 Climb **60 KIAS**  
 Flaps **Up**  
 Climb **>70 KIAS**

V-Speeds		
Rotate	V <sub>r</sub>	55
Max angle (Sea Level)	V <sub>x</sub>	60
Climb rate (Sea Level)	V <sub>y</sub>	75

Maneuver	V <sub>a</sub>	99
Norm. oper. range		44-127
Flaps	V <sub>fe</sub>	110 10° 85 full
Max structural cruise speed	V <sub>no</sub>	127
Never exceed	V <sub>ne</sub>	158
Stall (clean)	V <sub>s</sub>	44
Stall (land)	V <sub>so</sub>	33
Final Approach	Flaps	60
	No flaps	65
S-turns	95	
Point turns	95	
Chandelles	104 (2400rpm)	
Lazy Eights	104 (2400rpm)	
Steep Turns	97	
Steep Spirals	80	
Maneuver Speed	99	
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	

### Engine Failure

#### ON TAKEOFF

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

#### AFTER TAKEOFF

Yoke **push forward**  
 Airspeed **65 KIAS (flaps UP)**  
**60 KIAS (flaps DN)**  
 Mixture **Idle Cut-off**  
 Flaps **As Required**  
 Master switch **Off**  
 Cabin Doors **Unlatch**  
 Land (below 800' AGL) **Straight head**

#### DURING FLIGHT

Airspeed **65 KIAS**  
**LOOK FOR A FIELD**  
 Fuel selector valve **Both**  
 Mixture **Rich**  
 Ignition **Off**  
 Primer **In & Locked**

Airspeed **65 KIAS (flaps UP)**  
**60 KIAS (flaps DN)**

#### If no engine restart possible

Mixture **Idle Cut-off**  
 Fuel selector valve **Off**  
 Ignition **Off**  
 Mayday **Transmit 121.5**  
 Mayday **Squawk 7700**  
 Flaps **As Required**  
 Master switch **Off**  
 Passenger Brief **Complete**  
 Touchdown **Tail Low**

#### Emergency Decent

Power **IDLE**

Bank **30° - 40°**  
 Pitch **125kts**

### Engine Roughness

Throttle **Full**  
 Magnetos **Check**  
 Mixture **Rich**  
 Carb Heat **On**

### 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 appliances one at a time  
 Over-voltage light **Off**  
**or TERMINATE flight ASAP**

### Spin Recovery

Throttle **IDLE**  
 Ailerons **NEUTRAL**  
 Rudder **Full opposite**  
 Control wheel **Full forward**  
 Pitch **Level**