

**Preflight Inspection Cockpit**

Aircraft docs	Check
<b>Hobbs</b>	Check/Record
Magnetos	Off
Master Switch	On
Fuel quantity indicators	Check
Landing/Nav/Beacon	Check
Master Switch	Off
Flaps	Down

**Walk Around**

Flaps	secure
Aileron	free and secure
All Wing tie-down	disconnect
All gear & tire	check
Brakes	not leaking
All Fuel sump	sample
Fuel quantity	check
Fuel filler cap	secure
Fuel vent	open
Engine oil level	check
Propeller and spinner	check
Air intake	check
Carburetor air filter	check
Nose wheel strut & tire	check
Pitot head	uncover and check
Stall warning	check
Aileron	free and secure
Flaps	secure
Antennas	Check
Stabilator & trim tab	free & secure
Baggage door	secure & locked

**Before starting engine**

Preflight inspection	complete
Flaps	UP
Passenger Brief	given
Seats, belts	adjust and lock
Fuel selector valve	fullest tank
Radios & elect	OFF
Alt static source	OFF
Brakes	set
Circuit breakers	IN

**Starting Engine**

Parking Brake	Set
Battery switch	ON
Alternator switch	ON
Elec. fuel pump	ON
L&R Magnetos	ON
Fin Strobe	ON
Mixture	RICH (full)
Prime	If Necessary
Propeller	CLEAR
Starter	Engage
Throttle	adjust 800 – 1200 RPM
Oil Pressure	check
Radio Master	ON
Transponder	ON/ALT
Electric Fuel Pump	OFF
Mixture	Lean for Taxi

**Pre Taxi**

SET RADIOS  
GET ATIS  
TEST BRAKES

**Run Up**

Parking Brake	Set
Mixture	Rich
Throttle	2000 rpm
Magnetos	check
Eng. instruments	check
Fuel flow	check
Carb heat	On
Throttle	<b>IDLE</b>
Carb heat	OFF
Annunciator panel	test
Flight controls	free & correct
Trim	set for TAKEOFF
Instruments	SET
Fuel selector valve	proper tank

**Before Takeoff**

Flaps	Set
Elec. fuel pump	ON
Mixture	RICH
Nav/landing/strobes	ON as req
Cabin doors	CLOSE & LATCH

**Takeoff**

Fuel Pump	Verify On
Carb heat	Verify Off
Mixture	Verify Rich
Throttle	FULL
Tach, oil, airspeed	check
Rotate	60 KIAS
Climb	76 KIAS
<b>Above 1000' AGL</b>	
En route climb	87 KIAS
Elec. Fuel Pump	OFF

**Cruise**

Throttle	2200/2400 RPM
Mixture	Adjust
Trim	Set
Lights	As Required

**Approach**

Flight instruments	Ckd & Set
Radios	Checked
ATIS	Checked

**Pre-landing checklist**

Fuel selector	proper tank
Elec. Fuel pump	ON
Mixture	RICH
Seatbelts	fastened
Downwind	85 KIAS
Base	75 KIAS
Final	65 KIAS

**After landing**

Flaps	UP
Lights / Wing Strobes	OFF
Elec. fuel pump	OFF
Mixture	Lean for Taxi

**Shut Down**

Avionics	OFF
Throttle	1000 RPM
Mixture	Cut-off
Electrical	OFF
Magnetos	OFF
Alternator switch	OFF
Master switch	OFF

**Securing the aircraft**

Control Lock	Install
<b>Hobbs</b>	Record
Door/Window	Secure
Tie-downs	Secure

**Short field take-off**

Take-off checklist	complete
Taxi	max runway
Brakes	set and hold
Flaps	25°
Throttle	FULL
Brakes	release
Rotate	55 KIAS
Climb	60 KIAS
Airspeed	64 KIAS
Flaps	retract when clear
Airspeed	76 KIAS

**Short field landing**

Pre-landing check	complete
Flaps	40°
Final Airspeed	60 KIAS
Touchdown	power off
Flaps	UP
Elevator	Full up
Braking	Heavy, as required

**Soft field take-off**

Take-off checklist	complete
Flaps	25°
Taxi	keep rolling
Liftoff	ASAP
<b>ACCELERATE TO 70 KIAS IN GND</b>	
<b>EFF.</b>	
Airspeed	76 MPH
Flaps	retract

**Soft field landing**

Pre-landing check	complete
Flaps	25°
Airspeed	70 KIAS
Touchdown	main first, softly
Landing roll	nose wheel up
Braking	as required

**Go-around**

Throttle	FULL
Carb Heat	Cold
Flaps	25°
Airspeed	76 KIAS

**ENGINE FAILURE**

**BEFORE LIFT-OFF**

Throttle	IDLE
Brakes	apply
Flaps	UP
Mixture	IDLE cut-off
Magnetos	OFF
Master switch	OFF

**AFTER LIFT-OFF**

Airspeed	76 KIAS
Mixture	Idle Cut-off
Magnetos	OFF
Battery / Alt. switch	OFF
Flaps	as required
Landing	STRAIGHT AHEAD

**DURING FLIGHT**

Airspeed	trim to 76 KIAS
Fuel selector valve	switch tanks
Elec. fuel pump	ON
Mixture	RICH
Carb Heat	ON
Starter	Engage
Engine instruments	Check

Airspeed	trim to 76 KIAS
Throttle/Mixture	close/cutoff
Fuel selector valve	OFF
Magnetos	OFF
Mayday	transmit 121.5

**Before Touchdown**

Alternator switch	OFF
Battery switch	OFF
Doors	unlatch
Flaps	as required

**ENGINE ROUGHNESS**

Carb Heat	ON
Mixture	Adjust
Elec. fuel pump	ON
Fuel selector valve	switch tanks
Magnetos	Check

**OPEN DOOR**

Airspeed	87 KIAS
Cabin Vents	Close
Storm Window	Open
If upper latch open	Latch
If lower latch open, open top latch, push door open and close rapidly. Latch top latch.	

**ENGINE FIRE DURING START**

Crank	Continue
Mixture	IDLE cut-off
Throttle	OPEN
Elec. fuel pump	OFF
Fuel selector valve	OFF

**Abandon if fire continues**

**ENGINE FIRE DURING FLIGHT**

Fuel selector valve	OFF
Throttle	CLOSED
Mixture	IDLE Cut-off
Elec. fuel pump	OFF
Cabin air	OFF
Master Switch	OFF
Airspeed	87 MPH

**Power-Off Landing Procedure**

**ELECTRICAL FAILURE**

Alt. Annunciator Light	verify
Alternator	OFF
<b>Reduce load to minimum</b>	
Breaker/alt	chk & reset
Alternator	ON
<b>If still no power:</b>	
Alternator	OFF
<b>Reduce elec. load and land</b>	

**ELECTRICAL OVERLOAD**

Alternator Switch	ON
Battery Switch	OFF
<b>Reduce elec. load and land</b>	

**SPIN RECOVERY**

Throttle	IDLE
Ailerons	NEUTRAL
Rudder	Full opposite
Control wheel	full forward
Rudder control/wheel	Neutral
Pitch	Level
<b>POWER</b>	
<b>AILERONS</b>	
<b>RUDDER</b>	
<b>ELEVATOR</b>	

**Light Signals:**

Signal	On Ground	In Flight
Steady <b>Green</b>	Takeoff	Land
Flashing <b>Green</b>	Taxi	Return to land
Steady <b>Red</b>	Stop	Give way - return to pattern
Flashing <b>Red</b>	Clear runway	Do not land - GO AWAY!!
Flashing <b>white</b>	Return to ramp	--
<b>Red/Green</b> alternating	WARNING – USE CAUTION	

**Comm freq**

VRB ATIS	120.575
VRB GND	127.45
VRB TWR	126.30
VRB UNICOM	122.95
VRB CLC	124.25
FPR ATIS	134.825
FPR GND	119.55
FPR TWR	128.20

**Traffic alt**

Vero Beach	1024'

- Alpha
- Bravo
- Charlie
- Delta
- Echo
- Foxtrot
- Golf
- Hotel
- India
- Juliet
- Kilo
- Lima
- Mike
- November
- Oscar
- Papa
- Quebec
- Romeo
- Sierra
- Tango
- Uniform
- Victor
- Whiskey
- X-ray
- Yankee
- Zulu

**V-Speeds (KIAS)**

Rotate	V <sub>r</sub>	60
Max angle	V <sub>x</sub>	64 no flaps 60 25° flaps
Climb rate	V <sub>y</sub>	76
Maneuver	V <sub>a</sub>	113 (2550 GW) 89 (1634 GW)
Flaps max	V <sub>fe</sub>	102
Normal max	V <sub>no</sub>	125
Never exceed	V <sub>ne</sub>	154
Climb		87
Stall (no flaps)	V <sub>s1</sub>	50
Stall (flaps)	V <sub>so</sub>	45
Final Approach	Flaps	66
	No flaps	75
Max Glide		76