Interior preflight	
Airworthiness & registration	Both **present** in acft
Operator's handbook	**Present** in acft
Weight and bal. data as equip.	**Present** in acft (in binder)
Ignition and **key**	Ensure **off** and **removed**
Hobbs & tach times	**Note/Record**
Avionics/radios	Ensure **off**
Master switch	**On**
Fuel gauge	**Check** indications
Lights	**Check** as req. for day/night
Circuit breakers	**Check** for any popped out
Master switch	**Off**
Headsets	**Plug in**
Flaps	**Extend** for inspection

Exterior inspection	
R wing flap	**Inspect** ctrl rods & connect's
R gear, strut, & brake	**Inspect** for abnormalities
R wing aileron	**Inspect** ctrl rods & connect's
R wingtip & light fixtures	**Inspect** for abnormalities
R wing leading edge	**Inspect** for abnormalities
R tank fuel tank vent	**Inspect** for obstructions
R tank fuel sump	**Drain & inspect fuel**
R wing fuel tank	**Check level**
R wing fuel tank	**Replace cap**
Cabin air inlet	**Inspect** for obstructions

Nose	
Nose gear, strut, exhaust	**Inspect** for abnormalities
Cowling	**Open** & inspect engine
Oil level (~6-7 quarts)	**Check** & add as needed
Oil cap & engine cover	**Closed & latched**
Windscreen	**Inspect** & clean as needed
Prop, spinner, landing light	**Inspect** for abnormalities
Engine air inlet & alt. belt	**Inspect** for abnormalities
Engine fuel sump	**Drain & inspect fuel**
L gear, strut, & brake	**Inspect** for abnormalities
Cabin air inlet	**Inspect** for obstructions
L tank fuel sump	**Drain & inspect fuel**
L tank vent & pitot mast	**Inspect** for obstructions
L wing fuel tank	**Check level**
L leading edge & stall tab	**Inspect** for abnormalities
L wingtip & light fixtures	**Inspect** for abnormalities
L aileron & flap	**Inspect** ctrl rods & connect's
Fuselage & antennas	**Inspect** for abnormalities
Empennage	**Inspect** cables, rods, connect's
All tie downs	**REMOVED**

Pre-start	
Seats	**Adjust** and ensure **LOCKED**
Seatbelts	**Fasten** and assist passengers
Fuel selector	On **left** or **right**
Master & Beacon/strobe	Switch **On**

Engine start	
Mixture	Advance **halfway rich**
Throttle	Advance **half inch**
Fuel pump	Turn **on**
Primer	**Pump 5 times & SECURE**
Propeller area	**Clear**
Brakes	**Apply and hold**
Ignition	Key in and **engage starter**
Immediately after start	
Throttle	Adjust to **1000 RPM**
Fuel pump	Turn **off**
Oil pressure out of red. Shut down if red >30s (60s winter)	
Ammeter	**Check** for output > 0
Pre-taxi	
Flaps	**Retract**
Comms (radios) 1 & 2	Switch **On**
Transponder	Switch to **standby**
Altimeter & directional gyro	**Adjust** as needed
Flight instruments	**Normal** indications
Taxi	
Parking brake; brakes	**Release**; **test**
Turn coord. & inclinometer	**Check** indications in turn

Takeoff prep and run up	
Position aircraft for run up and **hold brakes.**	
Doors & windows	**Closed** & **locked**
Shoulder harnesses	**Fastened**
Flight controls	Ensure **free and correct**
Trim	Adjust to **neutral** setting
Directional gyro	**Adjust** again if needed
Throttle	Advance to **2000 RPM**
Mixture control	**Test** and set **full rich**
L&R magnetos (ignition key)	**Check** < 150 RPM loss each
Carb heat	**Check for RPM drop** and **off**
Suction gauge	Check between **4-6**
Oil temperature & pressure	Check in **green**
Ammeter	**Check** for output > 0
Throttle	**Fully back**, then to **1000 RPM**
Takeoff briefing	
Abnormality in T/O roll?	**Throttle back** and **brake!**
Engine fails after T/O?	**Do not attempt 180 return**
	Pitch for **75 MPH**
	Flaps as needed
	Declare emergency (on radio)
Impact imminent & power no longer needed? Secure engine:	**Shut off fuel**
	Pull **mixture to idle cut-off**
	Ignition & batt. master off

Pre-departure items	
Flaps	**Set** for takeoff
Fuel pump	Turn **on** for takeoff
Transponder	**ALT**itude mode
Lights	**On** as needed
Taxi from position in preparation for departure; hold short.	
Radios	**Set freq. & make call**
Clearance	**Obtain/verify**
Normal takeoff *memorize*	
Taxi into position on centerline.	
Throttle	Smoothly push **full forward**
T/O roll callout	**"Takeoff power set!"**
Centerline	**Maintain** without brakes
Oil temp. & pressure gauges	**Check** visually
T/O roll callout	**"Engine gauges in green!"**
Airspeed indicator	**Check** for normal increase
T/O roll callout	**"Airspeed alive!"**
Accelerate to **65 MPH** then **pull back** and call out **"rotate!"**	
After takeoff	
Airspeed	Accel. to Vx (**70**) or Vy (**80**)
Flaps	**Retract** if necessary
Trim	**Adjust** as needed

Cruise	
Fuel pump (>1000 AGL)	Turn **off**
Throttle & Mixture	**Adjust** for altitude
Trim	**Adjust** as needed
Engine guages	**Check all**
Lights	Turn **off** unnecessary lights.
Directional gyro	**Sync** with compass
Approach prep and descent/let down	
Weather broadcast/ATIS	**Listen and write** needed info
Altimeter & directional gyro	**Adjust** as needed
Communications	**Make radio call**
Approach briefing	**Complete**
Fuel selector	Check on **fullest tank**
Lights	Switch **on** as needed
Seatbelt & shoulder harness	**Fasten**
Mixture & throttle	**Adjust** for descent
Carburetor heat	**On** for low power settings
Trim	**Adjust** as needed
Final landing check (abeam touchdown or on long final)	
Mixture & Throttle	**Set** for descent (13.5" MAP)
Fuel Pump	Turn **on**
Carburetor heat	**On** for low power settings
Flaps	**Set** as desired
Airspeeds	**90** downwind, **80** base, **70** final

Go around/missed approach (if needed)	
Throttle	Advance **full forward**
Carb heat	**Off**
Flaps	**Retract to second notch**
Airspeed	At least Vx (**70**)
Flaps	Fully **retract**
Communications	**Call and comply** when able

After landing *memorize*	
Brakes	**Apply**
Flaps	**Retract**
Runway	**Taxi clear** at earliest chance
Carburetor heat	**Off** when clear
Fuel pump	**Off** when clear
Transponder	Set to **standby** when clear
Taxi clearance	**Obtain & read back**

Shutdown	
Radios/transponder/headsets	**Off**
Throttle	Adjust to **1000 RPM**
Mixture	Pull back to **cutoff**
Ignition (after prop stops)	Turn **off & remove key**
Electrical switches	All **off**
Battery Master	**Off**

Post-flight	
Aircraft check-in	mayberryaviation.com/log
Nose wheel	**Push back/position** as needed
Control yoke	**Secure** for overnight P on ramp
Seatbelts	**Fasten** over seats
P-brake/tie downs/chocks	**Set/tie down** as needed
Pitot mast cover	**Replace** on pitot mast

Reference speeds	
Vr (rotate)	**65 MPH**
Vx (best angle of climb)	**70 MPH**
Vy (best rate of climb)	**80 MPH**
Va (maneuvering speed)	**115 MPH**
Vfe (max. for flap extension)	**115 MPH**
Vno (normal cruise)	**139 MPH**
Vne (never exceed)	**170 MPH**
Vs (stall, no flaps)	**60 MPH**
Vso (stall, full flaps)	**50 MPH**
Final approach	**70 MPH**
Vg (best glide)	**75 MPH**

Engine roughness/failure in flight	
Engine gauges	**Check all** and diagnose issue
Fuel selector	**Troubleshoot** settings
Mixture	**Troubleshoot** settings
Throttle	**Troubleshoot** settings
Carburetor heat	**Turn on** if induction icing
NOTE: If induction icing present, perform. will worsen initially	
Master switch	Ensure **on**
Fuel pump	**Turn on**
Ignition/key	**On BOTH** magnetos
If the steps above do not restart the engine...	
Throttle	**Slightly forward from idle**
Ignition/key/**starter**	**Engage**
Engine does not restart?	**Execute forced landing list**

Forced landing (no fire)	
Airspeed	**75 MPH**
IMMEDIATELY **locate landing area** and maneuver toward it.	
Transponder	Squawk **7700**
Radio (121.5 Mhz)	Transmit **mayday** distress call
Seatbelts; shoulder harnesses	**Fastened**
Flaps	**Set** as needed
Doors	**Unlatch** before impact
Power no longer needed?	**Execute Securing engine list**

Securing engine	
Fuel selector	**Off**
Mixture	Pull back to **cutoff**
Throttle	Pull back to **idle**
Ignition	**Off**
Battery Master	**Off**

Engine fire in flight	
Securing engine list (above)	**Execute IMMEDIATELY**
Window	**Open** to ventilate smoke
Cabin Air & cabin heat	**Close**
Airspeed	**DIVE** to extinguish

Fire does not extinguish	
IMMEDIATELY **locate landing area** and maneuver toward it.	
Seatbelts; shoulder harnesses	**Fastened**
Doors	**Unlatch** before impact
Perform slip to land if needed, landing as early as possible	
Evacuate aircraft ASAP after landing	

Fire does extinguish	
Battery Master	Attempt to turn back **on**
Execute forced landing (no fire) checklist (previous page)	

Engine fire during start sequence	
Securing engine list (above)	**Execute IMMEDIATELY**
Evacuate aircraft ASAP!	
Use fire extinguisher.	

Electrical fire or cabin fire	
Battery master switches	**Off**
Cabin Air & cabin heat	**Close**
Windows	**Open** to ventilate smoke
Fire extinguisher	**Put out flames**
After electrical/cabin/wing fire	
Circuit breakers	**Do not reset any popped**
Avionics/radios switches	**Off**
All electrical switches	**Off**
Reverse any attempt below if fire reignites...	
Battery master switches	**Attempt** to turn back **on**
Avionics/radios master switch	**Attempt** to turn back **on**
Radios & other equipment	**Attempt** use **as needed**
Wing fire	
Battery master switches	**Off**
Cabin Air & cabin heat	**Close**
Windows	**Open** to ventilate smoke
Perform **slip** to **keep flames away from fuel.**	
Fire does not extinguish	
IMMEDIATELY **locate landing area** and maneuver toward it.	
Seatbelts; shoulder harnesses	**Fastened**
Doors	**Unlatch** before impact
Perform slip to land if needed, landing as early as possible	
Evacuate aircraft ASAP after landing	

Fire does extinguish	
All external lights	Ensure **switched off**
Reverse any attempt below if fire reignites...	
Battery master switches	**Attempt** to turn back **on**
Transponder	Squawk **7700**
Radio (121.5 Mhz)	Transmit **mayday** distress call
Severe wing damage?	Go to **forced landing** list
Little/no wing damage?	**Land at nearest airport**
Voltage warning	
Avionics/radios switches	**Off**
Battery master switches	**Off**
Battery master switches	**On**
Avionics/radios switches	**On**
Warning reappears?	**Land at nearest airport**
Light gun signals	
Steady green in flight	**Cleared to land**
Flashing green in flight	**Return to land**
Steady red in flight	**Give way**
Flashing red in flight	**Do not land**
Red and green alternating	**Use caution**
Flashing green on ground	**Cleared taxi**
Steady red on ground	**Stop/hold**
Flashing red on ground	**Clear the runway**
Flashing white on ground	**Return to the ramp**
Red and green alternating	**Use caution**