

PRELIMINARY and CABIN CHECK

Cover, Cowl Plugs, Prop Cover	REMOVE
Pitot Cover	REMOVE
Gust Locks (if fitted)	REMOVE
Flaps	EXTEND
Brake	ON
Trim Tab – Set to Neutral	CHECK
Stick Lock	REMOVE
Flight Controls	FREE & CLEAR
Mixture	OFF
Fuel Selector	ON
Oil Level	CHECK
Gascolator	SAMPLE
Fuel Tank Filler	SECURE
Fuel Selector	OFF
Windshield Clean	CHECK
Inspection Status (AROW)	CHECK
CO Monitor	PRESENT
ELT	ARM
All Electrical	OFF
Mag Switches (2)	OFF
Propeller Area	CLEAR
Instruments	ON
Lights All (Strobe, Nav, Landing)	ON
Master	ON
Lights	WALK ROUND
Cockpit Lights (for night)	CHECK
Hobbs Time and Fuel Level	CHECK
ALL SWITCHES & MASTER	OFF
Baggage Secure	CHECK

WALK AROUND - FUSELAGE / EMPENNAGE

Fuselage – left - Top and Bottom	CHECK
Horizontal Stab - left	CHECK
Elevator – left	FREE & SECURE
Trim Tab	SECURE/CORRECT
Vertical Stab – left	CHECK
Rudder and Tab	FREE & SECURE
Tail Tie Down	REMOVE
Tail Wheel (lift to check)	SECURE
Steering Rod	SECURE
Elevator – right	FREE & SECURE
Horizontal Stab – right	CHECK
Antennas (1 Comm, Xpon, ADSB/ELT)	CHECK
Fuselage – right - Top and Bottom	CHECK

WALK AROUND – RIGHT WING

Flap – Top, Bottom, Tie Rod	COND & SECURE
Aileron	SECURE & FREE
Wing Tip	COND & CLEAR
Tiedown	REMOVE
Pitot / Static Tube	CLEAR
Landing Gear – Pant, Tire, Brake	CONDITION

WALK AROUND - ENGINE & NOSE

Cowling right	SECURE
Fuel Cap Cover	SECURE
Check inside Cowl	CONDITION
Propeller (Nicks, “wood thunk”)	CHECK
Cowling left	CHECK
Fuel Vent (under aircraft)	CLEAR

WALK AROUND – LEFT WING

Landing Gear – Pant, Tire, Brake	CONDITION
Fuel Vent	CLEAR
Tiedown	REMOVE
Wing Tip	COND & CLEAR
Aileron	SECURE & FREE
Flap – Top, Bottom, Tie Rod	COND & SECURE

BEFORE START

Preflight Inspection	COMPLETE
PIC Determination	AGREE
Passenger Briefing (SAFETY)	COMPLETE
Safety Belts	SECURE
Canopy – Latch or full lock	CHECK
Controls – Full Free and Clear	CHECK

ENGINE START (IF <30°F PREHEAT ENGINE)

Brakes – Test & Set	CHECK
Fuel Selector – On	CHECK

COLD START

Throttle	¼” (Line with “H”)
Mixture	CUTOUT
Master	ON
Instruments	ON
Mags	ON
ANNOUNCE	“CLEAR”
Mixture (Count)	IN-2-3
Starter	ENGAGE
Throttle 7/900rpm till oil pressure then 1200 RPM	

HOT START

Throttle	¼” (Line with “H”)
Mixture	CUTOUT
Master	ON
Instruments	ON
Mags	ON
ANNOUNCE	“CLEAR”
Starter	ENGAGE
Mixture (as engine fires)	FULL RICH
Throttle 7/900rpm till oil pressure then 1000-1200 RPM	

Oil Pressure Check	ALIVE
Mixture – Lean for Ground Ops	CHECK
Flaps	RETRACT
Battery – Charging	CHECK
Avionics	ON
Transponder 1200 and	ALT & IDENT

ENGINE STOP

Throttle	1200 RPM
Transponder	1200
Hobbs	RECORD
Lights Avionics & Instruments	OFF
Mags Grounding	CHECK
Mixture	CUT OFF
Mags	OFF
MASTER	OFF
Fuel Selector	OFF

Vr-40(46)	Vx-55(60) with F0	Vy-61(70)	Vfe-F10-87(100)	Va-109(125)	Vno-109(125)	Vne-171(197)	Vso-35(40)	Vs-40(46)
Vg-70(81)	Vapp-55 (60)TBDC	Minimum	Maneuvering Speed - 1100 Lbs	60(69)	Vopt - 92(106)(Carson)	Fuel – 16.2US Gall useable		

AFTER ENGINE STOP

Fuel Selector to	OFF
Fuel Aircraft	AS REQUIRED
Seat Belts	SECURE
Trash & Personal Gear	REMOVE
Pitot Cover, Stick Lock, Cowl Plugs	FIT
Covers and Tiedowns	AS REQUIRED

BEFORE TAXI WHILE WARMING UP

Charts and Plates	ORGANIZE
Compass	FREE
Set up GPS, Comm, NAV Radios	CHECK
ATIS/ASOS	OBTAIN
Altimeter	SET
Clearance (Class B, C airports)	OBTAIN
Transponder (1200 or....)	SET

TAXI TO RUN-UP & RUN-UP

Motion Brake Check	TEST
Taxi correcting for winds	CHECK
Turn to Wind	CHECK
Brakes	SET & HOLD
Run-up Area Debris and People	CLEAR
Flight Controls – Clear no conflict	CHECK
Fuel Selector – Recheck	ON
Fuel Quantity as expected	CHECK
Oil Temperature	ORANGE
Mixture	RICH
Throttle	1800 RPM
Magnetos (Max drop 50 / Diff 50)	CHECK
Throttle	IDLE
Magnetos Quick Double OFF/ON	ENGINE HESITATE
Oil Pressure	GREEN
Oil Temperature	GREEN
Throttle Idle – Stay Alive	CHECK
Throttle	1200 RPM
Throttle Friction	SET
Mixture for ground running	SET

TAKE OFF when cleared on to Runway

Canopy	CLOSE AND LOCK
Flaps (depends on load)	0° or 10°
FLOW - LEFT to RIGHT	
Trim – Mixture - RICH – Both Mags ON – Lights – ON -	
Transponder ALT	

END OF CLIMB WORKFLOW

Landing Light (Operation Lights On)	ON
Strobes unless battery full	OFF
Power to POH Cruise - 75% MAX	SET
Mixture per POH	LEAN
Trim	SET
Lookout Scan / Instrument Checks	ESTABLISH

START OF DESCENT WORKFLOW

ATIS/ASOS	OBTAIN
Altimeter	SET
Crosswind Component	EVALUATE
Fuel Selector	ON
Mixture	RICH

APPROACH AND LANDING

Seat belts secure	CHECK
Strobes	ON
Mixture	RICH

NORMAL LANDING (WHEEL LANDING)

Throttle	AS REQUIRED hold 63KIAS
Flaps	30 deg, or AS NEEDED
Touchdown	LEVEL
Landing Roll	STICK FORWARD
Maintain straight line down runway with rudder.	
Power off and stick forward till stall then stick aft	
Brakes	MINIMUM

3 POINT LANDING

Throttle	CLOSED
Flaps	FULL 30 deg, or AS NEEDED
Touchdown	Near full stall with stick back
Landing Roll	Maintain straight down runway
Brakes	Minimum required

AFTER LANDING – Stop clear of runway on taxiway.

Throttle	1200RPM
FLOW – RIGHT to LEFT	
Lights – OFF Mag 2 – OFF – Mixture – LEAN - Trim –	
Neutral	
Flaps	UP

AEROBATIC ENTRY SPEEDS**ENSURE AIRCRAFT IS <950lb GROSS
CG in Aerobatic Range**

MONITOR G Meter on EFIS All speeds KIAS

Aileron Rolls	3G	120-130
Barrel Rolls	3G	120-130
Chandelles		69-95
Hammerhead (AVOID TAIL SLIDE)		100-110
Loops / Cloverleaf	3G	125-140
Lazy Eights		69-109
Horizontal Eights		125-140
Snap Roll		NOT RECOMMENDED
Spins		35-40
Split S		60-70
Stalls		<40
Whip Stalls		PROHIBITED
Wing Over		78-95

GO AROUND – FULL THROTTLE – FLAPS 20/10/0 TRIM

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FIRE ON ENGINE START - KEEP CRANKING**STARTS**

Throttle 1700 RPM	2 MINS
Mixture	IDLE CUT OFF
Fuel Shut Off Valve	OFF
Magnetos and Master	OFF
EVACUATE	

NO START

Throttle	FULL
Mixture	IDLE CUT OFF
Fuel Shut Off Valve	OFF
Magnetos and Master	OFF
EVACUATE	

ENGINE FAILURE IMMEDIATELY AFTER TAKEOFF**FLY THE AIRPLANE**

RUNWAY REMAINING	SLIP/LAND
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IF >800ft AGL CONSIDER 45 degree COORDINATED
TURN BACK with Flaps 10 during turn then flaps Zero and
Glide at Vg

OTHERWISE	60 KIAS and LAND
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ONLY IF ALTITUDE PERMITS

Fuel Selector	ON
Mixture	RICH
Throttle	1/4
Mag Switches	ON
Starter	PRESS

IF ENGINE DOES NOT START
PERFORM EMERGENCY LANDING WITHOUT POWER

ENGINE FAILURE DURING FLIGHT**FLY THE AIRPLANE**

Airspeed	60 KTS & TRIM
WING CHORD LINE LEVEL TO HORIZON IF NO INSTR	
Fuel Selector	ON
Mixture	RICH
Throttle	1/4
Mag Switch	BOTH
Starter	Press

IF ENGINE DOES NOT START
PERFORM EMERGENCY LANDING WITHOUT POWER

ENGINE FIRE IN FLIGHT

Cabin Vent	SHUT
Fuel Selector	OFF
Mixture	IDLE CUTOFF
Throttle	OUT
MASTER	OFF
Dive to Blow Out Fire	Vne 171 KIAS

PERFORM EMERGENCY LANDING WITHOUT POWER

ABANDON AIRCRAFT (Memory Item)

Mixture	CUT OFF
Master and Mags	OFF
Headset	FLICK TO BAGGAGE
RED Canopy Pin	PULL
Canopy	UNLOCK AND PUSH UP
4 point harness	UNBUCKLE AND THROW TO SIDES
Crouch on seat pan	SPRING CLEAR OF AIRCRAFT
Right / Both hand(s) in to D Ring	OUT AND BACK PULL
D Ring	THROW AWAY
Steering	IDENTIFY TOGGLES
Landing Posture	INTO WIND
	PARACHUTE
	LANDING FALL

EMERGENCY LANDING WITHOUT POWER**FLY THE AIRPLANE**

Airspeed	60 KIAS
Best Place to Land	SETUP

IF TIME

Mayday: What/Where/Head Count	ATC/FF or 121.5MHz
Squawk	7700
ELT	ON

Fuel Selector	OFF
Mixture	IDLE CUTOFF
Throttle	OUT

Flaps	AS REQUIRED
MASTER when sure of landing	OFF
Canopy	UNLOCK
Passenger Brief	PROTECT FACE
Seatbelts	TIGHT

Flaps Up	55 KIAS
Flaps Down	40 KIAS

Touchdown	TAIL LOW
Brakes	APPLY HEAVILY

DITCHING

Secure or Jettison Heavy Objects	CHECK
Approach High Wind and Sea	INTO WIND
Approach Light Wind Heavy Sea	PARALLEL
Canopy	UNLATCH
Passenger Brief	PROTECT FACE
Touchdown	LEVEL
Open Canopy	EVACUATE

WING FIRE ELECTRICAL

Side slip HARD away from fire EXECUTE
All Light Switches OFF

IF FIRE NOT OUT:**ELECTRICAL FIRE IN FLIGHT**

MASTER AND MAGS STAY ON
All other OFF
Cabin Vent OFF/CLOSE

IF FIRE EXTINGUISHED

Essential Equipment – one at a time TRY

LAND AS SOON AS PRACTICABLE**ALTERNATOR FAILURE - VOLTAGE DROP**

All Unnecessary Electrics OFF
Backup Battery ON

LAND AS SOON AS PRACTICABLE**ALTERNATOR - OVERVOLTAGE**

Consider fully Load electrical system to consume current
and lower voltage

LAND AS SOON AS PRACTICABLE**COMMUNICATION LOSS**

Frequency CHECK
Volume/Squelch CHECK
Speaker/Phones Switch CHECK SELECTION
Headset Jacks RESET
Fuses CHECK
Squawk 7600
Tower Lights Signals OBSERVE

LOSS OF FUEL FLOW

Fuel Selector ON (Check)

HIGH OIL CHT EGT TEMPERATURE**Nose over to increase air flow****Full Rich Mixture****If no resolution:****LAND AS SOON AS PRACTICABLE****LOSS OF OIL PRESSURE**

Normal Oli pressure is 10lb per 1,000rpm or better.

If temperature increase is noted

Nose over to increase air flow**Full Rich Mixture****If no resolution:**

Prepare for power loss and DO NOT try and restart

LAND AS SOON AS PRACTICABLE**ICING**

Reverse Course 180° EXECUTE
Change Altitude EXECUTE
Throttle - need more lift INCREASE

LAND AS SOON AS PRACTICABLE

Flaps – may affect elevator AVOID USE
Approach – less lift from wing 75 KIAS
Touchdown LEVEL

BLOCKED STATIC SOURCE**LAND AS SOON AS PRACTICABLE****FLAT MAIN TIRE**

Approach
Flaps
Touchdown on Good Tire first and hold

NORMAL
NORMAL
EXECUTE