Quick Reference Checklist (rev. 9-14-2019)

PREFLIGHT	
EXTEIOR	
Pitot Tube Cover and Cowl Plug Covers	REMOVE / STOWED
CABIN	
Hobbs/Tach	RECORD
Required Documents (ARROW/ PMID)	ABOARD
Airplane Weight and Balance	CHECKED
Parking Brake	SET
Control Wheel Lock	REMOVE
Flight Controls	FREE / CORRECT
Ignition Switch	OFF
Avionics Master Switch	OFF
Elevator Trim	SET FOR TAKEOFF
Mixture	IDLE CUTOFF (FULL OUT)
Throttle	CLOSED (FULL OUT)
Fuel Selector Valve	BOTH
Fuel Shutoff Valve	ON (Push Full In)
Electrical Switches	OFF
Master Switch	PROP AREA CLEAR / ON
Fuel Quantity	CHECK
Low Fuel Annunciators (L LOW FUEL R)	EXTINGUISHED
Avionics Master Power Switch	ON
Avionics Master Power Switch	AUDIBLE
Avionics Cooling Fail	OFF
Pitot Tube Heat	OF ON / CHECK WARM WITHIN 30 SEC
Pitot Fleat	ON / CHECK WARM WITHIN 30 SEC
Static Pressure Alternate Source Valve	
	OFF POSITION / ALL ANNUNCIATORS ILLUMINATE
Annunciator Panel Switch RELEASE / CHECK	
Wing Flaps	FULLY EXTEND
Lights (Int./Nav/Strobes/Beacon/Landing/Taxi)	ON / CHECK / OFF
Master Switch	OFF
Windows / Windshield	CHECK / CLEAN
LEFT WING / FUSELAGE	
Wing Fuel Tank Sumps (5)	DRAIN EACH/ CHECK
Fuel Quantity	
Fuel Filer Cap	SECURE / VENT UNOBSTRUCTED
Overhead Cabin Vent Inlets	CLEAR
Leading Edge	CHECK
Stall Warning	CHECK
Fuel Tank Vent	CHECK
Wing Tie Down	REMOVE
Wingtip	CHECK
Aileron and Flap	CHECK
Main Wheel Tire and Brake	CHECK
Baggage Door	CLOSED / LOCKED
Auto-Pilot Static Source Opening	CHECK FOR BLOCKAGE
Airplane Antennas	CHECK
EMPENNAGE	
Control Surfaces	CHECK
Elevator Trim Tab	CHECK
Airplane Antennas	CHECK
Tail Tie Down / Rudder Gust lock (if installed)	REMOVE

PREFLIGHT – continued

RIGHT WING	
Main Wheel Tire and Brake.	CHECK
Aileron and Flap	CHECK
Wingtip	CHECK
Leading Edge	CHECK
Overhead Cabin Vent Inlets	CLEAR
Tie-Down	REMOVE
Wing Fuel Tank Sump (5)	DRAIN EACH / CHECK
Fuel Quantity	CHECK
Fuel Filer Cap	SECURE / VENT UNOBSTRUCTED
NOSE	
Oil (6-8 Quarts)	CHECK / CAP SECURE
Fuel Strainer Quick Drain Valve/Sumps (3)	DRAIN / CHECK
Air / Engine Cooling Inlets	CLEAR
Alternator Belt	CHECK
Propeller and Spinner	CHECK
Air Filter	CHECK
Nose Wheel Tire and Strut	CHECK
Left Static Source Opening	CLEAR
FINAL 360° WALKAROUND	COMPLETE

BEFORE STARTING ENGINE

COMPLETE
BRIEFED
SECURE
TEST and SET
BOTH
ON
CHECK IN
OFF

STARTING ENGINE (with Battery)

Throttle	OPEN ¼ inch
Mixture	IDLE CUTOFF
Propeller Area	CLEAR
Master Switch	ON
Beacon	ON
	(if engine is warm, omit priming procedure steps)
Auxiliary Fuel Pump Switch	ON
Mixture SET to FULL RICH 3-5 SECONDS, THEN IDLE CUTOFF	
Auxiliary Fuel Pump Switch	OFF
Ignition Switch	START (release when engine starts)
Mixture ADVANCE smoothly to RICH when engine starts	
Throttle	ADJUST TO 1000 RPM
Oil Pressure* CHECK-GREEN	
*If not in green within 30 seconds shutdown the engine to prevent further damage to engine.	
If engine fails to start (engine has been primed too much, turn off the auxiliary fuel pump, place the mixture to idle cutoff, open the throttle ½ to full, and motor (crank) engine. When engine starts, set mixture to full rich and close the throttle to idle promptly.	

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PRE TAXI	
Avionics Master Power Switch	ON
Navigation / Strobe Lights	ON AS REQUIRED
Ammeter	NORMAL CHARGE
Wing Flaps	RETRACTED TO 0°
Mixture	LEAN FOR TAXI
AWOS/Weather	OBTAINED
Altimeter	SET
Avionics	ON / SET
Transponder (1200 or assigned code)	CODE SET / ON ALT
Heading Indicator	SET
Brakes	TEST

TAXIING	
Compass	FULL OF FLUID / SWINGING FREELY
Gyro Instruments / Turn Coordinator	PROPER INDICATION
Controls	POSITION FOR WIND

BEFORE TAKEOFF	
Parking Brake	SET
Flight Controls	FREE/CORRECT
Fuel Selector Valve	RECHECK BOTH
Fuel Shutoff Valve	ON (FULLY IN)
Fuel Quantity Indicators	CHECK
Mixture	RICH
Throttle	1800 RPM
Magnetos (150 max drop / max 50 differential)	(R/Both/L/Both) / CHECKED
Engine Instruments and Ammeter	CHECK
Vacuum	4.6-5.4"
Annunciator Panel	NONE ILLUMINATED
Throttle	IDLE
Engine Gauges and Idle RPM	CHECK
Throttle	1000 RPM
Flight Instruments and Radios	SET / CHECK
NAV/GPS Switch	SET AS REQUIRED
Autopilot	OFF
Manual Electric Trim	CHECK
Elevator Trim	TAKE-OFF
Wing Flaps	SET FOR TAKEOFF (0°-10°)
Cabin Doors and Windows	CLOSED AND LOCKED
Passenger Seat Backs	MOST UPRIGHT POSITION
Seats and Set Belts	CHECK SECURE and LOCKED
Transponder	ON ALT
Strobes	ON
Pre-Takeoff Briefing	COMPLETED
Parking Brake	HOLD BRAKES / RELEASE

TAKEOFF - NORMAL Landing Light / Taxi Light Wing Flaps ON 0°-10° Elevator Trim Control Wheel TAKE-OFF POSITION Mixture RICH or ABOVE 3000' MSL LEANED MAX RPM at FULL THROTTLE STATIC RUNUP FULL OPEN Throttle Engine Instruments / RPM / Airspeed CHECK Elevator Control LIFT NOSE WHEEL AT 55 KIAS Climb Speed 70-80 KIAS Sea Level Vy 74 KIAS Wing Flaps RETRACT

TAKEOFF – SHORT FIELD	
Landing Light / Taxi Light	ON
Wing Flaps	10°
Elevator Trim Control Wheel	TAKE-OFF POSITION
Brakes	APPLY
Mixture	RICH or ABOVE 3000' MSL LEANED MAX
	RPM at FULL THROTTLE STATIC RUNUP
Throttle	FULL OPEN
Engine Instruments / RPM / Airspeed	CHECK
Brakes	RELEASED
Elevator Control	SLIGHTLY TAIL LOW
Climb Speed	until clear of obstacles 56 KIAS
Wing Flaps	RETRACT slowly after reaching 60 KIAS
Airspeed	Sea Level Vx 62 KIAS
	Sea Level Vy 74 KIAS

CLIMB - ENROUTE	
Airspeed	70-85 KIAS
Power	FULL THROTTLE
Mixture	RICH / MAY BE LEANED >3000'
Engine Instruments	CHECK

CRUISE	
Power	2100 to 2700 RPM (not more than 75%)
Mixture	LEAN
Elevator Trim Control Wheel	ADJUST
Landing Light	OFF
Engine Instruments	CHECK

Quick Reference Checklist (rev. 9-14-2019)

PRE-DESCENT	
ATIS/Airport Weather	OBTAINED
Altimeter Setting	CHECK / SET
Radios / Navigation	SET
Airport Information	REVIEW

DESCENT		
Mixture		ADJUST for smooth Operation / RICH <3000'
Power		AS DESIRED
NAV/GPS Switch		SET
Fuel Selector Valve		BOTH
Wing Flaps	AS DESIRED	(0°-10° below 110 KIAS, 10°-30° below 85 KIAS)

BEFORE LANDING	
Seats & Seat Belts	SECURED and LOCKED
Landing Light / Taxi Light	ON
Engine Instruments	CHECK
Autopilot	OFF
Fuel Selector Valve	BOTH
Mixture	RICH

LANDING - NORMAL		
Wing Flaps	AS DESIRED	(0°-10° below 110 KIAS, 10°-30° below 85 KIAS)
Airspeed		FLAPS DN 60-70 KIAS
		FLAPS UP 65-75 KIAS
Touchdown		MAIN WHEELS FIRST
Landing Roll		LOWER NOSE WHEEL GENTLY
Braking		MINIMUM REQUIRED

LANDING - SHORT FIELD	
Airspeed	65-75 KIAS (flaps UP)
Flaps	FULL DOWN (30°)
Airspeed	61 KIAS (until flare)
Power	REDUCE to idle after clearing obstacle
Touchdown	MAIN WHEELS FIRST
Nosewheel	LOWER IMMEDIATELY
Braking	APPLY HEAVILY
Flaps	RETRACT
Elevator	HOLD NOSE UP

BALKED LANDING (GO AROUND)	
Throttle	FULL THROTTLE
Flaps	RETRACT to 20°
Climb Airspeed	60 KIAS
Wing Flaps	RETRACT to 10° (until obstacles are cleared)
Upon Reaching 65 KIAS AND safe altitude - Retract Flaps Slowly to 0°	
Climb	70-80 KIAS

AFTER LANDING

RETRACTED TO 0°
OFF or AS NECESSARY
ON DAY / OFF NIGHT
LEAN AS REQUIRED

SHUTDOWN

Parking Brake	SET
Avionics Master	OFF
Electrical Equipment (except Beacon)	OFF
Throttle	IDLE
Mixture	IDLE CUT-OFF
Ignition Switch	OFF
Beacon	OFF
Master Switch	OFF
Control Wheel Lock	INSTALL
Fuel Selector Valve	LEFT or RIGHT to prevent cross feeding
Hobbs / Tach	RECORDED
Aircraft	SECURED
Pitot Tube Cover / Cowl Plugs	INSTALLED

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ENGINE FAILURE	
(DURING TAKEOFF ROLL)	
Throttle	IDLE
Brakes	APPLY
Wing Flaps	RETRACT
Mixture	IDLE CUT-OFF
Ignition Switch	OFF
Radio Call	AFTER BRINGING AIRCRAFT TO STOP
	NOTIFY ATC or CTAF
Master Switch	OFF

ENGINE FAILURE (IMMEDIATELY AFTER TAKEOFF)	
Airspeed	Flaps UP – 70 KIAS
	Flaps DN – 65 KIAS
Mixture	IDLE CUT OFF
Fuel Shutoff Valve	OFF (Pull Full Out)
Ignition Switch	OFF
Wing Flaps	AS REQUIRED
Master Switch	OFF
Cabin Door	UNLATCH PRIOR TO TOUCHDOWN
Land	STRAIGHT AHEAD

ENGINE FAILURE DURING FLIGHT	
(Sufficient Altitude Remaining)	

68 KIAS
SELECT and MANUEVER TO AS
NECESSARY
ON (Push full in)
BOTH
ON
RICH
ON BOTH
If propeller has stopped windmilling,
turn the ignition switch to START
Advance throttle slowly from idle and lean the
mixture from full rich as required
OFF
If the fuel flow indicator immediately drops to
zero (indicating an engine-driven fuel pump
failure), return the Auxiliary Fuel Pump Switch
to ON
7700
AS ABLE
if already in contact with ATC)
ergency Landing without Power checklist

EMERGENCY LANDING W/O POWER

Airspeed	68 KIAS
Passenger Seat Backs	MOST UPRIGHT POSITION
Seats and Seat Belts	SECURE
Mixture	IDLE CUT-OFF
Fuel Shutoff Valve	OFF (Pull Full Out)
Ignition Switch	OFF
Wing Flaps	AS NECESSARY
Airspeed	FLAPS UP 70 KIAS
	FLAPS DN 65 KIAS
Master Switch	OFF (When landing is assured)
Doors	UNLATCH PRIOR TO TOUCHDOWN
Touchdown	SLIGHTLY TAIL LOW
Brakes	APPLY HEAVILY
Elevator	HOLD FULL NOSE UP

DITCHING (IMMEDIATELY AFTER TAKEOFF)	
Airspeed	Flaps UP – 70 KIAS
	Flaps DN – 65 KIAS
Radio Call	TRANSMIT MAYDAY CALL
Passenger Seat Backs	MOST UPRIGHT POSITION
Seats and Seat Belts	SECURE
Wing Flaps	20°-30
Airspeed	65 KIAS
Master Switch	OFF
Doors	UNLATCH PRIOR TO TOUCHDOWN
Touchdown	LEVEL ATTITUDE
Face	CUSHION
Airplane	EVACUTE through cabin doors. If necessary
-	open window and flood cabin to equalize
	pressure so doors can be opened

PRECAUTIONARY LANDING (With Power)		
Airspeed	70 KIAS	
Passenger Seat Backs	MOST UPRIGHT POSITION	
Seats and Seat Belts	SECURE	
Wing Flaps	20°	
Airspeed	65 KIAS	
Selected Field	FLY OVER	
	Noting terrain and obstructions, then retract	
	flaps upon reaching a safe altitude and	
	airspeed.	
Wing Flaps	(inside White Arc) 30°	
Airspeed	65 KIAS	
Master Switch	OFF (When landing is assured)	
Doors	UNLATCH PRIOR TO TOUCHDOWN	
Touchdown	SLIGHTLY TAIL LOW	
Ignition Switch	OFF	
Brakes	APPLY HEAVILY	
Elevator	HOLD FULL NOSE UP	

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FIRE DURING ENGINE START

Cranking	CONTINUE
IF ENGINE STARTS:	
Power	1800RPM (2-3 min.)
Engine	SHUTDOWN AND INSPECT FOR DAMAGE
IF ENGINE FAILS TO START:	
Throttle	FULL OPEN
Mixture	IDLE CUT OFF
Cranking	CONTINUE
Fuel Shutoff Valve	OFF (Pull Full Out)
Auxiliary Fuel Pump	OFF
Fire Extinguisher	OBTAIN
Master and Ignition Switch	OFF
Parking Brake	RELEASED
Aircraft	EVACUATE
Fire Extinguisher	ACTIVATE INTO ENGINE COMPARTMENT
	IF SAFELY ABLE

ENGINE FIRE IN FLIGHT	
Mixture	IDLE CUT OFF
Fuel Shutoff Valve	OFF (Pull Full Out)
Auxiliary Fuel Pump	OFF
Master Switch	OFF
Cabin Heat	CLOSED
Airspeed	100 KIAS
Emergency Landing Site	SELECTED
Airspeed	INCREASE IF FIRE NOT EXTINGUISHED
	DO NOT EXCEED VNE
DO NOT ATTEMPT RESTART	
Emergency Landing without Power	EXECUTE
Airspeed	Flaps UP – 70 KIAS
	Flaps DN – 65 KIAS
Doors	UNLATCH PRIOR TO TOUCHDOWN
Touchdown	SLIGHTLY TAIL LOW
Brakes	APPLY HEAVILY
Elevator	HOLD FULL NOSE UP

ELECTRICAL FIRE IN FLIGHT		
Master Switch	OFF	
Avionics & Electrical Switches (except ignition)	OFF	
Vents/Cabin Air/Heat	CLOSED	
Fire Extinguisher	ACTIVATE	
Air Vents	OPEN after fire is extinguished	
IF FIRE IS OUT AND ELECTRICAL POWER IS NEEDED:		
Master Switch	ON	
Circuit Breakers	CHECK	
DO NOT RESET CIRCUIT BREAKERS		
Avionics and Electrical Switches	ON ONE BY ONE, WITH DELAY EACH	
	UNITL SHORT CIRCUIT IS LOCALIZED	
Land Airplane	AS SOON AS POSSIBLE	

WING FIRE IN FLIGHT

Landing/Taxi Light Switches	OFF
Navigation Light Switch	OFF
Strobe Light Switch	OFF
Pitot Heat Switch	OFF
Sideslip Airplane	Keep flames away from the fuel tank and cabin
Land Airplane	AS SOON AS POSSIBLE

CABIN FIRE IN FLIGHT

Master Switch	OFF
Vents/Cabin Air/Heat	CLOSED
Fire Extinguisher	ACTIVATE
After discharging fire extinguisher and ascertaining that fire is out	
Vents/Cabin Air	OPEN
Land Airplane	AS SOON AS POSSIBLE

ELECTRICAL MALFUNCTION AMMETER SHOWS EXCESSIVE RATE OF CHARGE Alternator OFF Nonessential Electrical Equipment OFF Flight TERMINATE as soon as practical

ELECTRICAL MALFUNCTION LOW VOLTAGE ANNUNCIATOR ILLUMINATED

Avionics Master	OFF	
Alternator Circuit Breaker	CHECK IN	
Master Switch	OFF (Both Sides)	
Master Switch	ON	
Low Voltage Annunciator (VOLTS)	CHECK OFF	
Avionics Master Switch	ON	
If low voltage annunciator (VOLTS) illuminates again:		
Alternator	OFF	
Nonessential Radio and Electrical Equipment	OFF	
Flight	TERMINATE as soon as practical	

OTHER EMERGENCIES

CONSULT THE POH FOR ADDITIONAL EMERGENCY PROCEDURES AND INFORMATION