ENGINE START

SAFETY - Brief
Breakers - In
Electrical - Off
Trim - Set
Cowl Flaps - Open

Master - On
Magnetos - On
Beacon - On
Gear Light - Green
Alternators - On
Throttles - ½ in. open
Props - Forward
Fuel Pump - ON
Mixture - Prime 5GPM
Mixure/Pump - Off
Prop - Clear
Starter - Engage
Mixture - Rich when start
Repeat other engine
*Flooded/Cold start
POH section 4-5*

AFTER START

Throttle - 1000RPM
Oil Pressure - ✓
Amps/Volts - Check
Mixtures - Lean
Flaps - Up
Avionics - On
Weather - Copy
Instruments - Set
GPS - Configure

TAXI

Parking Brake - ✓
Brakes - Test
Taxi lights - ON

V-Speed	MPH
Vmc	90
Vyse	105
Vx	90
Vy	112
Vfe	125
Vlo	130

RUNUP

Temp -*100F At Least*
Parking Brake - SET
Flight Controls - ✓
Mixture - Forward
Propellors - Forward
Throttles - 1500RPM
Propellor - Cycle Test
Throttles - 2000RPM
Engine Gauges - ✓
Amps/Voltage - ✓
Magnetos - ✓
Throttles - Retard

BEFORE TAKEOFF

Navigation - Set
Radios - Set
Transponder - Set
ALL Instruments - ✓
Fuel Gauges - ✓
Oil Gauges - ✓
Elevator/Rudder Trim - ✓
Autopilot - TEST

Fuel Selectors - Main
Flaps - Set Takeoff
Mixture - ✓
Props - Forward
Alternators - On
Lights - On
Fuel Pumps - On
Magnetos - On
Parking Brake - Off
Door - Locked
Seatbelts - On
Departure -Brief
Emergency Checklist
Brief failed takeoff
Traffic - ✓

TAKEOFF

Power - Set
Gauges - Check Green
Accelerate to 90MPH
Gear Up - Positive Rate
Pitch for Vy - 112mph

AFTER TAKEOFF

AT SAFE ALTITUDE
Flaps - Up
Power - Set (25/25)
Fuel Pumps - Off Slowly
Fuel Flow - Check
Lights - ✓
Gauges - ✓

ENROUTE CLIMB

Throttles/Props - (25/25)
Speed - 130MPH
Gauges - Check
Mixture - Adjust +3K

CRUISE

Throttles/Props - Set
Gauges - Check
Mixture - 75F ROP
Cowl Flaps - As Req

APPROACH / LAND

ATIS - ✓
Brief - ✓
Mixture - Enrich As Req.
Props - 2400rpm
Power - As Req.
Cowl Flaps - As Req.
Fuel Selectors - Mains
BEFORE LAND:
GUMPS - On Downwind
Vapp - 95 mph

AFTER LAND

Flaps - Up
Mixture - Lean
Fuel Pumps - Off
Lights - ✓
Cowl Flaps - Open

SHUTDOWN

Avionics - OFF
Mixture - Out
Lights - Off
Ignition/Master - OFF
Parking Brake - Set

ENGINE FAILURES

AFTER TAKEOFF

Vyse - 105 MPH
MIXTURE/PROPS/THROTTLES - MAX
GEAR/FLAPS - UP
Identify - Dead Engine (Dead foot)
Verify - Dead Engine (Throttle)
Feather - Dead Engine
Rudder Trim - Apply
Bank 5 Toward Operating Engine

CRUISE FLIGHT

Maintain Control and Vyse - 105MPH
MIXTURE/PROPS/THROTTLES - MAX
GEAR/FLAPS - Verify Up
Identify - Dead Engine (Dead Foot)
Verify - Dead Engine (Throttle)
Feather - Dead Engine
Bank 5 Degree Into Good Engine
Rudder Trim - Apply
Cause Of Engine Failure?

TROUBLESHOOTING B4 SECURE

Fuel Selector - Fullest Tank
Mixture - Rich
Fuel Pump - On
Magnetos - Check on
Alternate Air - On
Engine Gauges - Check
Prop - FWD If Restarting
---If Power Is Restored---
Fuel Pump - Off
Alternate Air - Off

SECURING ENGINE

SHUTDOWN

Mixture - Cut Off
Fuel Selector - Off
Fuel Pump - Off
Magnetos - Off
Alternator - Off
Cowl Flaps - Closed
Propellor - Feather Position
Electrical Load - Reduce

EMERGENCY GEAR EXTENSION

Gear Circuit Breaker - In
Master - On
Nav Lights - Off (day)
Emergency Disengage Cover - Remove
Airspeed - 100mph
Landing Gear Switch - Off
Disengage Motor - Full Forward
Gear Extension Handles - Full Forward
Gear Light - Green
Don't Retract With Handle In Socket
Don't Reengage Motor In Flight

AIR START / UNFEATHER

Magnetos - On
Mixture - Rich
Fuel Selector - Tank with fuel
Fuel Pump - Prime (if needed)
Throttle - ¼ inch Open
Propellor - Cruise position
Starter - Engage

WHEN ENGINE STARTS
Propellor - 2000RPM
Throttle - 15 in. Hg
Oil pressure - Check
Fuel Pump - Off
Alternator - On
*Allow Temp To Rise
Before Matching Power*

STALL SPEED TABLE (CAS)

Angle of Bank	Gear & Flaps Up	Gear & Flaps Down
0°	76	98
20°	79	79
40°	87	71
60°	108	69

Power Setting Table	Pressure Altitude	36HP—55%			104HP—65%			120HP—75%		
		2100	2200	2300	2400	2100	2200	2300	2400	2200	2300	2400
GPH	SL	22.4	21.7	21.0	20.4	25.0	24.2	23.3	22.7	26.5	25.6	24.9
65% — 15.2	2000	21.8	21.2	20.5	19.9	24.4	23.6	22.8	22.2	25.9	25.0	24.3
75% — 17.2	4000	21.3	20.8	19.9	19.4	23.8	23.0	22.2	21.6	25.3	24.3	23.7
	6000	20.8	20.1	19.4	18.9	23.2	22.4	21.6	21.1	FT	FT	23.1
	8000	20.2	19.5	18.9	18.4	FT	21.8	21.0	20.5	---	---	FT
	10,000	19.7	19.0	18.3	17.9	---	FT	FT	20.0			
	12,000	FT	18.4	17.7	17.4	---	---	---	FT			
	14,000	---	FT		16.9	---	---	---	---			