

BEFORE STARTING ENGINE

External Checks Completed
Loose Articles..... Stowed & Secured
Passenger / Crew Briefing..... Completed
Seats & Seat Belts Adjusted & Secure
Hatches (Front & Rear) Secured
All 'Over Head' Switches OFF
Stabilator Trim..... Check & Set
Fuel Selector On Least full tank
Parking Brake..... SET
Emergency Gear Extension IN & Secured
Gear Selector DOWN
Dimming Switches..... All OFF
ELT Armed
Alternate Static..... Check & Closed
Night / Day Switch DAY

BEFORE STARTING ENGINE CONT'

Flight Instruments Serviceable
Radio Master OFF
GND Clear OFF
Pitot Heat OFF
Avionics Emergency Switch OFF
Backup Flight Instruments Serviceable
Cabin Heat & Defrost..... Check & OFF
Fan..... OFF
Circuit Breakers Check all IN
Flap Selector Set 0°
Alternate Air Check & CLOSE
Mixture Check / Set Idle Cut-Off
Propeller Check /Set Fully Forward
Throttle..... Check / Set Closed
Controls Full, Free & Correct
Evacuation / Pax Brief..... Completed

STARTING COLD ENGINE

BATT MASTR ON
ALT ON
Magnetos Both ON
Strobes ON
Annunciator Lights Press to Test
Propeller Fully Forward
Throttle Open ½"

Priming

Fuel Pump ON

Mixture Rich

Steady Fuel Flow – If no F/F open throttle a little more

Mixture Idle Cut-Off

Fuel Pump OFF

Starter Engage (See Notes)

As Engine fires Mixture to RICH.

Starter Warning Light Out

Oil Pressure Green (Max 30 sec)

Throttle Set 1200 rpm

STARTING WARM ENGINE

As above – Omit **Priming**

Notes: Limit starter motor to less than 30 sec cycles with 2 - 3 minutes cooling down time between attempts

STARTING FLOODED ENGINE

BATT MASTR ON
ALTR ON
Magnetos Both ON
Strobes ON
Annunciator Lights Press to Test
Propeller Fully Forward
Mixture Idle Cut Off
Throttle Fully OPEN
Starter Engage
As Engine fires Mixture RICH.
..... Throttle 1200 rpm
Starter Disengaged
Oil Pressure Green (Max 30 sec)
Throttle Set 1,200 rpm

STARTING ENGINE WITH EXTERNAL POWER

BATT MASTR ON
ALTR ON
Magnetos Both ON
External Power (24 Volt) Connect
Proceed with Normal Start
External Power Disconnect
Battery Master & Alternator ON
Oil Pressure Green (Max 30 sec)

AFTER START / WARM UP

Fuel Pump..... OFF
Magnetos Check for Dead Cut
Annunciator Lights Check all Out
Engine Instruments Check
Ammeter Check
Radio Master..... ON *PEP ON*
Auto Pilot..... Press to Test
Auto Pilot..... Functional Test
Radios & Nav Aids Set & Check
Transponder (Mode S)..... GND & 7000
HSI Slaved & Aligned
RMI..... Aligned
Backup DI..... Aligned
Altimeter(s)..... Set

TAXI CHECKS

Lean mixture for taxi

Oil Temperature Check
Taxi Area Clear
Throttle Apply Slowly
Brakes & Steering Test
Attitude Indicator(s)..... Steady
HSI, TC & Compass..... Turn / Indicate as req'd
RMI..... Tracking
Backup Instruments Turn / Indicate as req'd

POWER CHECKS

Parking Brake Set
Fuel Selector..... Change to Fullest Tank
BATT MASTR..... ON
ALTR..... ON
Magnetos Both ON
Propeller Fully Forward
Mixture RICH
Annunciator Lights Check
Oil Temperature Check
Throttle..... 2000 rpm
Brakes..... Holding
Engine Instruments Check
Magnetos Check
(Less than 175 RPM Drop / Difference Less than 50)
Alternate Air Check (Open / Close)
Propeller Cycle (x3) Max 500 RPM drop
Propeller Fully Forward
Ammeter Check
Vacuum Gauge..... Check (4.8" - 5.2")
Throttle..... IDLE; (RPM > 550)
Oil Pressure Above Red Line
Throttle..... 1200 rpm

PRE FLIGHT VITAL ACTIONS

Overhead Switches All ON
Lights..... As Required
Stabilator Trim..... Set
Electric Trim Check
AP Disconnect Check
Fuel Quantity..... Confirm
Fuel Selector..... Fullest Tank
Fuel Pump..... On
Engine Instruments Check
HSI Slaved & Aligned
Attitude Indicator Erect
Altimeter(s)..... Set
Radios & Nav Aids Set
Alternate Air CLOSE
Flaps Set & Check visually
Mixture RICH
Propeller..... Fully Forward
Flight Controls..... Full, Free & Correct
Seat & Seat Belts Secure & Fastened
Hatches (Front & Rear)..... Secure
Takeoff Briefing..... Completed
Parking Brake..... Release

JUST BEFORE LINING UP

Strobes ON
PITOT Heat..... As Required
Landing Light As Required
Instruments Confirm
Transponder ALT (Mode S)
Wind Check Wind Sock

NORMAL TAKEOFF

Flaps As Required
Throttle..... Fully Open
Power / MAP Check
Fuel Flow Check
Propeller / RPM..... Check
T's & Ps Check
Airspeed..... ALIVE
Lift Off 84 to 88
Climb (Best Rate Gear Down) 85
Clear of obstacles & Positive ROC
Gear..... Up (Max 110 Kts)
Flaps..... Retract in stages
Power..... Set Climb Power
MAP = 25" Prop = 2500
Climb (Best Rate)..... 93

SHORT FIELD TAKEOFF

Flaps	25°
Trim.....	Slightly AFT
Toe Brakes	Hold
Throttle.....	Fully Open
Power / MAP	Check
Fuel Flow.....	Check
Propeller / RPM.....	Check
T's & Ps.....	Check
Brakes	Release
Airspeed	ALIVE
Lift Off	67 to 72
In Ground Effect	
Accelerate	74 to 77
Climb (Best Rate Gear Down).....	85
Clear of obstacles & Positive ROC	
Gear	Up (Max 110 Kts)
Flaps	Retract in stages
Power	Set Climb Power
MAP = 25" Prop = 2500	
Climb (Best Rate).....	93 Kts
Climb (Cruise)	105 Kts

PASSING 1,000' / CRUISE CLIMB

Power	Set for Climb
MAP = 25" Prop = 2500	
Mixture	Rich
Ts & P's	Check
Gear.....	Confirm UP
Flaps.....	Confirm UP
Fuel Pump	OFF
Fuel Flow	Check
Landing Light	OFF
QNH.....	SET
Transponder (Mode S).....	Confirm ALT
Climb (Best Rate).....	93 Kts
Climb (Cruise).....	105 Kts

LEVELLING OFF / CRUISING

Power.....	SET per Power Table
Mixture	Adjust
Engine Instruments	Check

Note: Refer Useful Information Section for sample power settings

APPROACH & LANDING

Mixture Rich
Throttle / MAP As Required
Fuel Selector Fullest Tank
Fuel Pump..... ON
Brakes Check Pressure
Parking Brake..... OFF
Gear Selector Down (Max132 Kts)
Gear Secure Confirm '3 Greens'
Flaps Set (Max 110 Kts)
Engine Instruments Check
Hatches & Harnesses Secure & Fastened
Landing Lights..... As Required

NORMAL LANDING

Flaps 40°
Approach Speed 90
Throttle As Required
Mixture (Red) Rich
Propeller (Blue) Fully Forward
Landing Gear (Green) Down & Locked

SHORT FIELD LANDING

Flaps 40°
Final Approach Speed 85
Throttle..... As Required

GO AROUND

Propeller Fully FWD
Throttle..... Fully OPEN
Flaps Retract to 25°
Airspeed..... 83
Clear of obstacles & Positive ROC
Gear Up (Max 110 Kts)
Flaps Retract in stages
Power..... Set Climb Power

CLEAR OF ACTIVE RUNWAY

Brakes ON
Throttle 1200 RPM
Fuel Pump OFF
Landing Light OFF
Flaps Retracted
Pitot Heat OFF
Transponder Check GND
Unnecessary Electrics OFF

SHUTTING DOWN

Brakes ON
Throttle 1200 rpm
Radio Master OFF
Magnetos Check Dead Cut
Throttle CLOSED
Mixture Idle Cut -off
All Overhead Switches OFF
All Electrics OFF

Intentionally Blank

ENGINE FIRE DURING START

Starter Continue to crank
Mixture Idle Cut Off
Throttle Fully Open
Primer OFF
Fuel Selector OFF
When Fire OUT Shut Down

DO NOT ATTEMPT TO RESTART

If Fire Continues Evacuate

FIRE IN FLIGHT

Trim for Best Glide 83
Propeller Fully AFT
Source of Fire Electrical / Engine

Electrical (Smoke in Cabin)

Battery Master OFF
Alternator OFF
Vents OPEN
Cabin Heat OFF

Land as soon as practicable

Prepare for Forced Landing

FIRE IN FLIGHT (Contd...)

Engine Fire

Throttle CLOSED
Mixture Idle Cut Off
Fuel Pump OFF
Fuel Selector OFF
Heater & Defroster OFF

Prepare for Forced Landing

EMERGENCY DESCENT (Fire)

Throttle CLOSED
Mixture Idle Cut-off
Fuel Selector CLOSED
Fuel Pump OFF
Propeller Fully FWD
Gear DOWN (Max 132 Kts)
Flaps DOWN (Max 108 Kts)
Airspeed 108 Kts
Master Switch OFF
Heater & Defroster OFF
Smoke in Cockpit Ventilate
Spiral Descent To extinguish flames

ENGINE FAILURE DURING FLIGHT

Trim for Best Glide 83

CHECK FOR FIRE

Throttle 1/3 Open

Mixture RICH

Alternate Air OPEN

Fuel Pump ON

Fuel Selector Change Tanks

Engine Gauges Check

Once Power Restored

Throttle / Prop Reset

Fuel Pump OFF

Alternate Air CLOSED

Prepare For Forced Landing

ENGINE RUNNING ROUGH

Mixture Adjust for smooth running

Fuel Pump ON

Fuel Selector Change Tanks

Alternate Air OPEN

Engine Gauges Check

Magnetos Check L then R

If engine runs better on either Mag, leave it on that one

Land as soon as practicable

Prepare for Forced Landing

FORCED LANDING

Trim for Best Glide 83

Propeller Fully AFT

Select Landing Site Note Wind

May Day Call As Time Permits

Transponder 7700

Brief Passengers

Seats & Seat Belts Secure & Tighten

Brace Position Review

Secure Aircraft

Fuel Pump OFF

Fuel Selector OFF

Mixture Idle Cut Off

Magnetos OFF

Cabin Door Unlatch

Flaps As Required

Landing Gear As Required

Master Switch OFF

Note Lower Gear & Flaps before turning off Master Switch

LOW OIL PRESSURE / HIGH OIL TEMPERATURE

Minimise power changes
Land as soon as practicable
Prepare for Forced Landing

LOSS OF FUEL FLOW

Fuel Pump..... ON
Mixture RICH
Fuel Selector Change Tanks

If fuel pressure not restored, land as soon as practicable

ENGINE DRIVEN FUEL PUMP FAILURE

Throttle Retard
Electric Fuel Pump ON
Throttle Reset

If fuel flow not restored

Electric Fuel Pump ON

Land as soon as practicable

PROPELLER OVERSPEED

Throttle Idle
Propeller Fully AFT (Low RPM)
Airspeed Reduce
Oil Pressure Check
Use Throttle / MAP to keep RPM below 2700

Land as soon as practicable

ELECTRICAL FAILURES

ALT Annunciator Illuminated
Ammeter Check with Load

Ammeter Shows Zero

ALT Circuit Breaker..... IN / Reset if required
ALT Switch..... ON

If electrical power can not be restored

ALT Switch..... OFF
Electrical Load Reduce

Land as soon as practicable

Anticipate complete electric failure

Note: Landing Gear may need to be lowered manually if all
Battery power is lost

ELECTRICAL OVERLOAD

Alternator over 20 Amps in excess of known load

ALT Switch..... ON
Battery Switch OFF

If Alternator output reduces

Electrical Load Minimise

If Alternator output not reduced

ALT Switch..... OFF
Battery Switch As required

Land as soon as practicable

EMERGENCY GEAR EXTENSION

Note: If gear failure occurs in the circuit, leave the circuit before troubleshooting

Gear Selector Confirm DOWN
Circuit Breakers..... Confirm IN
Battery Master Confirm ON
Alternator..... Confirm ON
Day / Night Switch Confirm DAY
Bulbs Checked
Reduce Speed Below 90
Emergency Gear Lever Hold Down
Confirm Gear Extended 3 Greens

IF GEAR FAILS TO EXTEND / LOCK

Yaw / Pitch aircraft to assist locking

PRACTISE GEAR EXTENSIONS

L/G PUMP Circuit Breaker **OUT**
Gear Selector DOWN
Reduce Speed Below 90
Emergency Gear Lever Hold Down
Confirm Gear Extended 3 Greens
Circuit Breaker **IN**
Gear Selector UP

CABIN DOOR OPEN IN FLIGHT

Airspeed..... 90
Vents..... CLOSED
DV Window OPEN
Pull on armrest while moving handle to latched position

PITOT STATIC SYSTEM FAILURE

PITOT Heat..... ON
Alternate Static OPEN
Note: ASI and ALT may over-read slightly due to lower pressure

LOSS OF ENGINE DRIVEN VACUUM PUMP

Vacuum Gauge..... Verify
Aux Vac Pump ON
Vacuum Gauge..... Verify

RADIO FAILURE

Frequency / Volume CHECK

Audio Panel CHECK

Headset Jacks CHECK

Circuit Breakers IN

Speaker ON

Attempt to call on another Frequency

Transponder 7600

Continue to make blind calls

RECOVERY FROM UNINTENTIONAL SPIN

Throttle IDLE

Check T/C to confirm direction of spin / yaw

Rudder FULL in Opposite
Direction of Spin

Ailerons NEUTRAL

Control Column FORWARD

When Spin Stops

Rudder Central

Control Column Ease out of Dive

Power / Prop Reset

Intentionally Blank

USEFUL SPEEDS & OTHER INFORMATION

Assume MTOM (3,600 lbs)

Clean Speed (V_{S1})	67
Stall (Gear & Flap 40)	63
Best Climb Angle (V_X)	67 to 77
Best Climb Rate (V_Y)	71 to 93
Cruise Climb (Normal) ...	105
Flap Limit Speed (V_{FE}) ...	110
Gear Retraction	110
Gear Extension	132
Gear Extended.....	132
Maneuver Speed (V_A)	134
V_A at 2,230 Lbs.....	105
Max Cruising (V_{NO}).....	160
Never Exceed (V_{NE})	191
Best Glide (Clean)	83
Approach Speed	95

USEFUL SPEEDS & OTHER INFORMATION

Maximum TOM	3,400 (See Note)
Basic Empty Mass	2414
Useful Load	986
Load (Tanks Full)	374

Note: Refer latest W&B Schedule to verify

Max Baggage FWD	100
Max Baggage AFT.....	100
Max Baggage AFT.....	100
Useable Fuel (USG)	102

Demonstrated Max Cross Wind - 17

Approximate Power / Performance Figures
(Refer Section 5 of PoH for further details)

PAIt 4,000' ISA Temperatures RPM 2400

	MAP	Fuel Flow	TAS
Normal	25.3	18.5	159
Economy	22.6	16.5	151
Long Range	20.5	14.5	137

Lean using %s on Fuel Flow as a guide

Lean using EGT for best Performance / Endurance