

Before Start

Preflight.....COMPLETE
 Fuel Quantity G
 PaperworkCOMPLETE
 Radio Master..... OFF
 Fresh Air Fan.....OFF
 Cowl Flaps OPEN
 Carb. Heat OFF
 Mixtures RICH
 Propellers..... HIGH
 Throttles.....CLOSED
 Fuel SelectorCORRECT TANK
 Seats/Seat Belts SECURE
 Briefing..... Complete

Electrical Power On

Master ON
 Alternators..... ON
 Anti-Collision ON
 Boost Pumps ON
 Magnetos..... ON
 Brakes SET

Starting (each engine)

PrimeLOCKED
 Area CLEAR
 ThrottleCYCLE 2X
 Engine.....START
 Oil PressureCHECK
 Boost Pump OFF
 Mixture LEAN
 Ammeter BELOW 20 AMPS

After Start

Engine/Inst. NORMAL
 Lights AS REQUIRED
 Radios ON/SET
 Time Out
 Annunciator Panel.....CHECK
 Alternator OutputCHECK
 Autopilot.....CHECK

 ATIS/AWOS OBTAIN
 Altimeter SET
 Heading..... SET

Taxi Checks

BrakesCHECK
 Flight Instruments.....CORRECT

Runup

Mixtures RICH
 Engine..... 1500 RPM
 Propeller Feather CHECK
 Engine..... 2000 RPM
 Propeller.....CHECKED
 Carb. Heat CHECK
 Magnetos.....CHECKED
 Electrical.....CHECKED
 Vacuum.....CHECKED

Before Takeoff

Fuel Selectors ON
 Controls..... FREE/CORRECT
 Seats/Seat Belts SECURE
 Trim TAKEOFF
 Flaps TAKEOFF
 Primer LOCKED
 Carb. Heat OFF
 Autopilot..... OFF
 Briefing..... COMPLETE

 Door/Window SECURE
 Boost Pump ON
 Mixture..... RICH
 Transponder ALT
 Pitot Heat AS REQUIRED
 Lights..... ON

Taking Runway

Flaps Takeoff
 Heading..... RUNWAY
 Time Off.....

Takeoff

Rotate 75 K
 Climb 88 K
 Gear..... UP (No Runway)
 600 AGL
 Throttle 24"
 Propeller..... 2500 RPM
 Climb100 K

Climb

Gear UP
 Power/RPM 24"/2500
 Mixture..... LEAN (if needed)
 Cowl Flaps TRAIL

Cruise

Power/RPM SET
 Cowl Flaps CLOSE
 Fuel Pumps..... OFF
 Mixture..... LEAN
 Landing Light..... OFF
 Engine Inst. CHECK
 Ammeter CHECK
 Vacuum CHECK

Approach

Seats/Belts SECURE
 Fuel Quantity G
 ATIS/AWOS OBTAINED
 Briefing COMPLETE
 Radios SET
 Heading..... SET
 Altimeter SET
 Fuel Selectors ON
 Boost Pump ON
 Lights..... ON

Final Approach Fix

Instruments.....NO FLAGS
 Gear DOWN
 Flaps..... AS REQUIRED

Landing

Boost Pump ON
 Gear DOWN
 Mixtures RICH
 Propellers..... ADVANCED
 Cowl Flaps.....OPEN
 Flaps..... LANDING

Approach Speeds

Downwind	100 K
Gear/Flaps	88 K
Short Final	80 K

Speeds

V _X	82 K
V _Y	88 K
V _{MC}	56 K
V _A	135 K 112 K
V _{FE}	111 K
V _{LO} (Retract)	109 K
V _{LO} (Extend)	120 K
V _{LE}	140 K

Power Settings

Condition	MP	RPM	GPH
Takeoff			
Initial Climb			
Cruise			
Climb			
Cruise			
Descent			

After Landing

Time Down _____
 Flaps UP
 Cowl Flaps OPEN
 Heater Switch..... FAN
 Mixture LEAN
 TransponderSTANDBY
 Pitot Heat OFF
 Boost Pumps OFF
 Lights AS REQUIRED
 Trim TAKEOFF

Shutdown

Fresh Air Switch OFF
 Radios OFF
 Switches OFF
 Mixtures CUT-OFF
 Throttle CLOSE
 Magnetos..... OFF
 Masters OFF

Securing

Flight Controls..... SECURE
 Window CLOSED
 Sun Shields..... INSTALLED
 Tie-downs..... INSTALLED
 Baggage Lights..... OFF

Manual Gear Extension

Speed 130 K
 Gear Actuator Ckt Breaker.. OFF
 Gear Switch DOWN
 Latch..... FORWARD
 Lever BACK
 T-HandlePULL (until gear down)
 Latch..... DOWN

NO MANUAL GEAR RETRACT

DO NOT ATTEMPT TO
 OPERATE GEAR ELECTRICALLY
 WITH MANUAL SYSTEM
 ENGAGED

Electrical Fire - InFlight

Master..... OFF
 Cabin Vents OPEN
 Heating CLOSED

Air Start Procedure

Propeller..... HIGH
 Fuel FULL TANK
 Mixture..... CUT-OFF
 Fuel BOOST PUMP (as req)
 Throttle..... OPEN ¼"
 Magneto..... START
 Mixture..... ADVANCE

Rough Engine/Loss of Power

Airspeed 90 K
 Fuel Selector..... FULLEST TANK
 Boost Pump ON
 Mixture..... RICH
 Magnetos LEFT/RIGHT

Engine Fire - Ground

Mixture..... CUT-OFF
 Fuel OFF
 Master..... OFF

Engine Fire – In-Flight

Fuel OFF
 Throttle CLOSE
 Mixture..... CUT-OFF
 Cabin Vents CLOSED

Pre-Flight (Cockpit)

Fire ExtinguisherCHECK
 DocumentsCHECK
 Fuel Selectors ON
 Trim SET
 Primers..... LOCKED
 Carb. Heat OFF
 Master OFF
 Throttles..... IDLE
 Propellers HIGH
 Mixtures CUT-OFF
 Cowl Flaps OPEN
 Ckt. BreakersCHECK
 ELT Armed
 Radio Master..... OFF
 Gear DOWN
 Pitot Static DRAIN
 Master ON
 FuelCHECK
 LightsCHECK
 Pitot HeatCHECK
 Annunciator PanelCHECK
 Heater Overheat Light.....CHECK
 Master OFF
 Fuel Drain..... RIGHT & LEFT
 Controls..... FREE
 Flaps DOWN

Pre-Flight (Exterior)

Fuel Drains CLOSED
 Flaps CHECKED
 AileronsCHECKED
 Fuel SAMPLED
 Fuel Quantity G
 Oil..... CHECKED (8-6 qts)
 Cowl FlapsCHECKED
 PropellerCHECKED
 Engine.....CHECKED
 Stall WarningCHECKED
 Pitot MastCHECKED
 Static PortsCHECKED
 ElevatorsCHECKED
 RudderCHECKED
 Skins/RivetsCHECKED
 Tie-downs..... REMOVED
 Chocks REMOVED