

N19828 – CARDINAL



Cockpit

Parking Brake - SET
Ignition Switch/ Electrical - OFF
Hobbs/Tach - RECORD
Circuit Breakers - IN/ NOTE IF POPPED
Master Switch - ON
Fuel Indicators - CHECK QUANTITY
Flaps - DOWN
Lights - ON
Fuel Shutoff Valve - IN

Exterior

Tie-down - DISCONNECT
Lights - CHECK
Tires - INFLATION/ CORD
Brake - PAD THICKNESS / FLUID
Fuel Sump - BLUE / FREE OF DEBRIS
Fuel Tank - VISUALLY CHECK / CAP SECURE
Pitot Tube/ Static Port - COVERINGS REMOVED / CLEAR OF BLOCKAGE
PITOT HEAT IF IFR
Fuel Vent - CLEAR / NO INTERFERENCE WITH AILERON
Ailerons - SECURITY / FREEDOM OF MOVEMENT
Flaps - DOWN/ SECURITY/ CORRECT POSITION
Lights - OFF
Master Switches - OFF
Antennas - CHECK
Stabilator - MOVMENT
Trim Tab - MOVMENT
Oil Level - 8 Qt MAX / 4 Qt MIN / **6 Qt**
Fuel Strainer - PULL 3 SEC
Propeller - CHECK NICKS / SECURITY / OIL LEAKS
Air Intake - CLEAR OF RESTRICTIONS

Engine Start

Seatbelts / Shoulder Harness - ON
Parking Brake - SET
Master Switches - ON / GPS STATUS IFR
Lights - BEACON/ (NAV AS NEEDED) ON
Mixture - FULL FOWARD
Auxiliary Fuel Pump - ON 3-5 sec then OFF
Prime - 1-6 pumps COLD ENGINE
Carb Heat - COLD
Propeller - HIGH RPM / FULL FOWARD
Throttle - OPEN ¼ INCH
Propeller Area - CLEAR
Ignition Switch - START
Throttle - 1000 RPM
Oil Pressure - CHECK 25 psi min / 100 psi max

Warm Up

Avionics - ON
Flaps - UP
Weather - OBTAIN
Taxi - KNOW ROUTE / OBTAIN CLEARANCE
Parking Brake - RELEASE

Taxi

Taxi Light - AS NEEDED
Instruments - CHECK TURN / IFR
Cross Wind Corrections - APPLY

Runup

Parking Brake - SET
Cabin Doors & Windows - CLOSED / LOCKED
Flight Controls - FREE / CORRECT
Stabilator & Rudder Trim - SET FOR TAKEOFF
Fuel Shutoff Valve - IN
Mixture - RICH
Throttle - 1800 RPM
Engine Instruments & Ammeter - GREEN / POSITIVE
Magnetos - L/R/BOTH - no more than 150 drop/ difference of 50 rpm between the two
Propeller Cycle - HIGH to LOW RPM LEVER / 3 TIMES
Suction Gauge - CHECK / 4.6-5.4"
Carb Heat - ON
Throttle - IDLE / with carb heat on and throttle idle engine shouldn't stop
Carb Heat - OFF
Throttle - 1000 RPM
Flight Instruments & Radios - SET
Lights - ON / AS REQUIRED
Autopilot - OFF
Before Takeoff Brief - SAFETY

Normal Takeoff

Flaps - SET 10°
Cowl Flaps - OPEN
Mixture - FULL RICH / below 3,000ft
Throttle - FULL
Vr - LIFT NOSE 50Kts / ROTATE 60Kts
Climb Out - Vx 70Kts / Vy 80Kts
Brakes - APPLY MOMENTARILY
Call Outs - POSITIVE RATE / 500ft
Flaps - 500ft RETRACT

Cruise

Pitch - HORIZON / 0 FPM VSI
Throttle - (**left to right**) MANIFOLD 15-25"
Propeller - 2100 - 2500
Mixture - LEAN ABOVE 3000ft
Cowl Flaps - AS NEEDED

Descent

WORK RIGHT TO LEFT
Mixture - ENRICH
Propeller - SLOWLY FULL FOWARD (FULL FOWARD BEFORE LANDING)
Throttle - SET FOR DESCENT (**avoid 10" of manifold pressure between 1700-1900 rpm continuously**)
Cowl Flaps - AS NEEDED

Before Landing

Weather - OBTAIN
Seatbelts / Shoulder Harness - ON
GUMPS
Gas - FUEL TANKS BOTH
Undercarriage - FIXED
Mixture - FULL
Propeller - FULL FOWARD
Switches - AP OFF / AUX FUEL AS NEEDED

Balked Landing - " GO AROUND "

Power - FULL THROTTLE
Flaps - RETRACT 20°
Positive Rate - RETRACT FLAPS 20° to 10° (Above 500ft AGL and at Vy 10° to 0°)

Shut Down

Parking Brake - SET
Magneto Check - BOTH TO OFF BACK TO BOTH
Avionics Switch - OFF
Mixture - IDLE CUTOFF
Ignition Switch - OFF - KEY OUT
Master Switch - OFF

V Speeds - all in KNOTS

Vso - 45	Vy - 79
Vs1 - 55	Vg - FLAPS UP - 70
Vfe - 115	Vg - FLAPS DOWN - 65
Vno - 140	Va - 2500Lbs - 102
Vne - 170	Va - 2100Lbs - 93
Vr - 60	Va - 1700Lbs - 83
Vx - 65	Max X-Wind - 16

Emergency

Power Loss During Takeoff

Airspeed - Vg
 Best place to land - runway if sufficient remaining
 Checklist - if able - Fuel Shutoff valve IN - Mixture RICH
 - Aux Fuel Pump ON - Ignition Switch BOTH - **CUT OFF**
FUEL IF RESTART NOT OBTAINED
 Declare emergency - 7700 - 121.5
 Execute - **POWER OFF LANDING**

Power Loss Airborne

Airspeed - Vg
 Carb Heat - ON
 Mixture - Rich
 Primer - LOCKED
 Aux Fuel Pump - ON
 Fuel Selector - BOTH
 Fuel Shutoff Valve - IN
 Ignition Switch - BOTH
 F POWER IS REGAINED
 Carb Heat - OFF - LAND AS
 SOON AS PRACTICAL
 IF POWER IS NOT
 REGAINED
 Power Off Landing

Power Off Landing

Pitch - Vg
 Aux Fuel Pump - OFF
 Mixture - CUT OFF
 Fuel Shutoff Valve - OFF
 Flaps - AS NEEDED (if electrical power is available)

Prior To Touch Down

Cabin Doors - UNLATCH
 Master Switches - OFF

Fire

Source - **ENGINE** or **ELECTRICAL**

Electrical - Master Switch - OFF
 Avionics Master - OFF
 Cabin Vents - OFF
 Fire Extinguisher - USE IF EQUIPPED
LAND AS SOON AS PRACTICAL

ENGINE

Mixture - OFF
 Fuel Shutoff Valve - PULL ON
 Magnetos - OFF
DECLARE EMERGENCY
 Master Switch - OFF
 Cabin Vents - OFF
 Airspeed - PITCH 105 KTS
 IF FIRE IS NOT OUT SEE POWER OFF LANDING
 CHECKLIST

ABNORMAL INDICATIONS

Ammeter Discharge

Cycle Alternator Switch
 Non-Essential Equipment - OFF
 Squawk - 7600 IF NEEDED
 Land - AS SOON AS PRACTICAL

Loss Of Oil Pressure

First Indication of Engine Failure - LOW
 PRESSURE AND HIGH TEMP
 Engine Power - REDUCE
 Oil Temp - MONITOR
 Cylinder Temp - MONITOR
 Land - AS SOON AS PRACTICAL

High Oil Temp

First Indication of Engine Failure - LOW
 PRESSURE AND HIGH TEMP
 Mixture - RICH
 Manifold Pressure - 20"
 RPM - REDUCED
 Oil Pressure - MONITOR
 Oil Temp - MONITOR
 Cylinder Temp - MONITOR
 Land - AS SOON AS PRACTICAL

High Cylinder Temp

Cowl Flaps - OPEN
 Manifold Pressure - REDUCE
 RPM - REDUCED
 Descend - 90Kts - 500/1000FPM
 Land - AS SOON AS PRACTICAL IF
 OVER HEATING CONTINUES

Emergency General

Squawk Codes

7500 - Hijacking
 7600 - Lost Comms
 7700 - Emergency

Emergency Radio Calls

Frequency - 121.5
 STAY WITH ATC IF ALREADY
 TALKING TO THEM
 MAYDAY - 3x (LIFE THREATENING)
 PAN - 3x (NON-LIFE THREATENING)

Frequencies Near KHFY

KGEZ - 122.8
 KMQJ - 122.975
 KBAK - ATC 118.6
 INDY APP - 127.15
 INDY APP - 124.95
 KIND TOWER - 120.9

Checklist Legend

Pre-Flight

Engine Checks

Normal Operations

Emergencies