

N W K R A F T

NOTAMS
 Weather
 Known Traffic Delays
 Runways
 Alternates
 Fuel and Frequencies
 T.O.L.D.

FUEL/OIL/CABIN

Fuel- **13 SUMPS & AMOUNT**
 Oil- **5 - 7 QUARTS**

CHECK ALL CAPS SECURE

Fuel Sump- **STOW**
 Control Lock- **REMOVE**
 A.R.O.W.- **CONFIRM**
 Battery Master- **ON**
 Fuel Gauges- **CONFIRM**
 All Lights- **ON**
 Pitot Heat- **ON**
 Flaps- **EXTEND**

**Brisk walk around to confirm
 Lights/Pitot Heat/Stall Horn**
 Battery Master- **OFF**

EXTERIOR CHECK

**Start from pilot's door and
 proceed counter-clockwise**

**Ensure all control/flight
 surfaces free of frost/snow.**

Baggage Door
 Empennage & Tail
 Remove Tie Down
 Antennas
 Right Flap/Aileron/Tip
 Right Leading Edge & Gear
 Remove Tie Down
 Door Pins & Vents
 Windshield & Engine Cowl
 Prop & Spinner
 Alternator Belt & Air Inlets
 Nose Gear & Air Filter
 Static Port & Vent
 Left Gear & Leading Edge
 Remove Tie Down
 Left Tip/Aileron/Flap

BEFORE STARTING ENGINE

Hobbs/Tach- **RECORD**
 Passengers- **BRIEF**
 Seat Back/Track/Belt- **SET**
 Parking Brake- **SET**
 Circuit Breakers- **CHECK IN**
 Electrical & Avionics- **OFF**

STARTING ENGINE (COLD)

Fuel Selector- **BOTH**
 Fuel Shutoff- **ON**
 Throttle- **OPEN 1/4 INCH**
 Mixture- **IDLE CUTOFF**
 Battery & Alternator- **ON**
 Beacon- **ON**
 Fuel Pump- **ON**
 *Mixture- **FULL RICH** until
FF stabilizes for 3-4sec then
CUTOFF

Fuel Pump- **OFF**
 Starter- **ENGAGE (10s MAX)**
 Mixture- **Smoothly to RICH**
 Oil Pressure- **ABOVE RED ≤ 30s**
 Amps- **CHECK + CHARGE**
 Avionics- **ON**
MIXTURE- LEAN TILL ROUGH

***HOT START**

Mixture- **FULL RICH** until **FF**
stabilizes then CUTOFF

BEFORE TAKEOFF

Parking Brake- **SET**
 Pilot/Px Seat back- **UPRIGHT**
 Seats/belts- **SECURE**
 Doors- **CLOSED & LOCKED**
 Flight Controls- **CORRECT**
 Flight Instruments- **CHECK**
 Altimeters- **PFD & STBY SET**
 ALT Bug- **SET**
 STBY Instruments- **CHECK**
 Fuel Quantity- **CHECK**
 Mixture- **RICH**
 Fuel Selector- **BOTH**

Auto-Pilot

Elevator Trim- **TAKEOFF**
 Throttle- **1800 RPM**
 Magnetos- **DROP 50/50 ≤ 175**
 VAC Indicator- **CHECK**
 Engine Indicators- **CHECK**
 Ammeter&Volts- **+ & 28-32v**
 Throttle- **IDLE CHECK**
 Throttle Friction- **Set**
 Comm & Nav Freqs- **SET**
 GPS/FPL- **AS DESIRED**
 CDI- **SOURCE**
 XPDR- **SET**
 *Cabin 12v PWR- **OFF**
 Wing Flaps- **UP - 10***
 Windows- **CLOSE & LOCK**
 Stobes- **ON**

NORMAL TAKEOFF

Wing Flaps - **UP - 10***
 Throttle- **SMOOTH TO FULL**
 Mixture- **SET FOR ELEVATION**
 Engine Gauges- **CHECK**
 Elevator- **55 KIAS LIFT NOSE**
 Climb Airspeed- **70 - 80 KIAS**
 Wing Flaps- **RETRACT**

SHORT FIELD TAKEOFF**ENROUTE CLIMB**

Airspeed- **70 - 85 KIAS OR ≥**
 Throttle- **FULL**
 Mixture- **AS REQUIRED**
 Instruments- **CORRECT**
 Lights- **AS REQUIRED**
**Activate Flight Plan or Flight
 Following**

CRUISE

Pitch- **LEVEL**
 Power- **2000 - 2400 RPM**
 Trim- **ADJUST**
 Mixture- **LEAN AS NEEDED**
 FPL/GPS- **REVIEW and BRIEF**

PRE-MANEUVER

Fuel Selector- **BOTH**
 Mixture- **AS REQUIRED**
 Beacon & Stobes- **ON**
 Emergency Field- **CHOOSE**

DESCENT

Power- **AS DESIRED**
 Mixture- **ADJUST**
 Altimeters- **PFD & STBY**
 CDI- **SELECT NAV SOURCE**
 FPL/GPS- **REVIEW and BRIEF**
 Fuel Selector- **BOTH**
 Wing Flaps- **AS DESIRED**

BEFORE LANDING

Pilot/Px Seat back- **UPRIGHT**
 Seats/belts- **SECURE**
 Fuel Selector- **BOTH**
 Mixture- **RICH**
 Land & Taxi Lights- **ON**
 *Autopilot- **OFF***
 *Cabin 12v PWR- **OFF**

NORMAL LANDING

Airspeed- **65-75KIAS(no flaps)**
 Wing Flaps- **AS DESIRED**
 Airspeed- **60-70KIAS(w/ flaps)**
 Trim- **ADJUST**
 Touchdown- **MAINS FIRST**
 Rollout- **GENTLY LOWER NOSE**
 Braking- **MINIMUM NEEDED**

**Braking maximized when
 flaps retracted**

BALKED LANDING

Throttle- **FULL**
 Wing Flaps- **RETRACT to 20***
 Climb Speed- **55 KIAS**
 Wing Flaps- **10*/UP ≥ 60 KIAS**

AFTER LANDING

Wing Flaps- **UP**
MIXTURE- LEAN TILL ROUGH
 Taxi/Landing- **AS REQUIRED**
 Stobes- **OFF**
 Pitot Heat- **OFF**

SECURING AIRPLANE

Brakes- **HOLD**
 Throttle- **IDLE**
 Electrical Equipment- **OFF**
 Avionics Switch- **OFF**
 Mixture- **IDLE CUTOFF**
Wait for propeller to stop
 Magnetos- **OFF**
 Master Switch- **OFF**
 Control Lock- **SET (if needed)**
 Fuel Selector- **LEFT or RIGHT**
 Hobbs / Tach- **RECORD**

V Speeds KIAS

Vne- **163**
 Max Window Open- **163**
 Vno- **129**
 Va 2450 lbs- **99**
 Va 2200 lbs- **94**
 Va 1600 lbs- **82**
 Vfe 10*- **110**
 Vfe Full- **85**
 Vg- **65**
 Vy- **79**
 Vx- **57**
 Vr- **55**
 Vs- **44**
 Vso- **33**
 X Wind- **15 (not a limitation)**

ENGINE FAILURE**TAKE OFF ROLL**

Throttle- **CLOSED**
 Braking- **MAXIMUM**
 Fuel Selector- **OFF**
 Battery & Alternator- **OFF**
 Magnetos- **OFF**

AFTER LIFTOFF / IN FLIGHT

*Landing straight ahead is
 usually advisable. If sufficient
 altitude is available,*

accomplish the following:
 Mixture- **RICH**
 Boost Pump- **ON**
 Fuel Selector- **OTHER TANK**
Confirm In Detent

Magnetos- **CYCLE R & L**
IF NO RESTART

Airspeed- **78 KTS**
 Best Landing Spot- **FIND**
 Throttle- **CLOSED**
 Fuel Selector- **OFF**
 Mixture- **IDLE CUT OFF**
 Boost Pump- **OFF**
 *Battery & Alternator- **OFF**
 Magnetos- **OFF**
When landing assured
 Airspeed- **68 KTS**
 *Flaps- **AS REQUIRED**
 Doors- **UNLATCHED**

ENGINE FIRE**IN-FLIGHT**

Fuel Selector- **OFF**
 Mixture- **IDLE CUTOFF**
 Throttle- **CLOSED**
 Cabin Air Control- **PULL OFF**
 Defrost- **PUSH OFF**
 Battery & Alternator- **OFF**
 Magnetos- **OFF**
EMERGENCY DESCENT
 Throttle- **IDLE**
 Airspeed- **152 KTS**

ON GROUND

Fuel Selector- **OFF**
 Throttle- **CLOSED**
 Mixture- **IDLE CUTOFF**
 Battery & Alternator- **OFF**
 EXTINGUISH FIRE

ENGINE ROUGHNESS

Mixture- **ADJUST**
 Carb Heat- **CYCLE**
 Magnetos- **CYCLE L / R**
*If operation on one magneto
 stops roughness, proceed to
 landing as soon as
 practicable*

LOSS OF ENGINE POWER

Fuel Pressure Gauge- **CHECK**
If fuel flow is very low

Mixture- **RICH**
 Boost Pump- **ON**
 Mixture- **ADJUST**

If no improvement then:

Fuel Gauges- **CHECK**
 Fuel Selector- **SWITCH TANK**
 Boost Pump- **ON**
 Engine Instruments- **CHECK**

*If the condition continues,
 land as soon as practical*

LOW OIL PSI / HIGH TEMP.

*Land as soon as practical
 Prepare for engine failure*

ALTERNATOR OUT

Alternator- **CYCLE OFF / ON**
If condition persists

Alternator- **OFF**
 Nonessential Items- **OFF**

RADIO FAILURE

Volume Knob- **CHECK ON**
 Audio Panel- **CHECK**
 Circuit Breakers- **CHECK**
 Avionics Master- **OFF / ON**

EMERGENCY RADIO CALL:

121.5 or ATC Frequency
MAYDAY MAYDAY MAYDAY,
 Aircraft Callsign,
 Location,
 Number of Souls On Board,
 Fuel Remaining,
 Nature of emergency.

TRANSPONDER CODES

7700- **EMERGENCY**
 7600- **RADIO FAILURE**
 7500- **HIJACKING**
 1200- **VFR**

OTFA Checklist

C172R v1.0