

# United Flight Systems



## N5415F – Warrior PA-28-151

### NORMAL OPERATIONS

#### BEFORE START ENGINE

HOBBS.....RECORD  
 PREFLIGHT INSPECTION ..... COMPLETE  
 A.R.R.O.W. .... CHECK  
 AIRPORT DIAGRAM .....AVAILABLE  
 PASSENGER BRIEF ..... S.A.F.E.T.Y.  
Seat & Seat Belts, Air, Fire, Exit/Emergencies, Traffic & Talking, Your Questions?  
 SEATS & SEAT BELTS ..... LOCKED / FASTENED  
 MASTER (bat & alt) ..... OFF  
 AVIONICS MASTER ..... OFF  
 FUEL SELECTOR ..... LEFT or RIGHT  
 FRESH AIR FAN ..... OFF  
 CIRCUIT BREAKERS ..... CHECK  
 CARB HEAT ..... OFF  
 THROTTLE .....CLOSED  
 MASTER (bat & alt) ..... ON  
 BEACON ..... ON  
 NAV LIGHTS..... AS REQ

#### ENGINE START (Hot Start)

BRAKES..... SET / HOLD  
 MIXTURE .....RICH / FULL FWD  
 THROTTLE ..... Open 1/2 In.  
 FUEL PUMP ..... ON / CHECK PRESSURE  
 BRAKES..... HOLD  
 PROP AREA..... CLEAR  
 STARTER..... (8-10 seconds max) ENGAGE  
If engine fails to start, consider primer(3 max) or flooded start

#### \*\*WHEN ENGINE STARTS\*\*

THROTTLE ..... 1000 – 1200 RPM  
 OIL PRESSURE ..... CHECK  
 FUEL PUMP ..... OFF  
 FUEL FLOW..... CHECK  
 MIXTURE .....LEAN  
 Check GPS ..... CHECK

#### AFTER START

AVIONICS MASTER ..... ON  
 FRESH AIR FAN / HEATER / DEFROST .... AS REQ  
 HEADSETS ..... ON / CHECK  
 ALTERNATOR OUTPUT .....CHECK  
 GPS / CDI.....CHECK  
 GPS DATABASE CURRENCY ..... CHECK / ENT  
 COMS ..... SET / ATIS  
 ALTIMETERS .....SET  
 CLEARANCE (If IFR).....OBTAIN  
 GPS.....ENTER WPT/FPL/APR AS REQ  
 NAVS ..... SET / COURSE  
 FLIGHT INSTRUMENTS .....CHECK / SET  
 TRANSPONDER ..... SET CODE / ALT MODE  
 FLAPS .....CHECK / UP

#### TAXI

Do Not Ride Brakes

AIRPORT DIAGRAM .....AVAILABLE  
 TAXI CLEARANCE ..... OBTAIN / BRIEF  
 TAXI AREA ..... (left & right) CLEAR  
 BRAKES..... RELEASE / CHECK  
 FLIGHT INSTRUMENTS .....CHECK

Check in turns.

STERILE COCKPIT .....NO NONESSENTIAL TALKING

#### \*\*Pre-Takeoff Emergency Brief\*\*

Engine Failure on runway  
 THROTTLE..... IDLE  
 BRAKES..... APPLY  
 STOP STRAIGHT AHEAD  
 Engine Failure After Rotation  
 THROTTLE..... IDLE  
 PITCH FOR BEST GLIDE ..... 73  
 CONTINUE STRAIGHT AHEAD  
 At or above 1000ft AGL – Turn around point  
 TURN TO AIRPORT

#### RUN UP

BRAKES ..... SET / HOLD  
 FUEL PUMP ..... ON  
 FUEL GAUGES / QTY.....CHECK  
 FUEL SELECTOR.....SWITCH TANKS

*CONFIRM BOTH TANKS ARE WORKING*

MIXTURE ..... FULL FWD  
 THROTTLE .....2000 RPM  
 MAGNETOS..... (175 max drop, max diff. 50) CHECK  
 OIL TEMPERATURE & PRESSURE.....CHECK  
 VACUUM..... 5.0 Hg +/- 0.1  
 ANNUNCIATOR PANEL.....TEST  
 AMPS .....CHECK  
 FUEL PUMP ..... OFF  
 FUEL PRESSURE.....CHECK  
 CARB HEAT ..... ON  
 THROTTLE ..... IDLE  
 CARB HEAT ..... OFF  
 THROTTLE ..... 1000 RPM  
 MIXTURE ..... LEAN  
 FLIGHT CONTROLS ..... FREE / CORRECT  
 TRIM .....SET

#### BEFORE TAKEOFF

**\*\*TAKE OFF / EMERGENCY PLAN\*\* ..... BRIEF**  
 FUEL SELECTOR..... (FULLEST TANK) PROPER TANK  
 FLIGHT INSTRUMENTS .....CHECK  
 ENGINE GAUGES .....CHECK  
 PRIMER ..... LOCKED  
 MASTER SWITCH.....CONFIRM ON  
 FUEL PUMP ..... ON / CHECK PRESSURE

*START 30 MINUTE TIMER*

CARB HEAT ..... OFF  
 FLAPS .....VERIFY SET  
 SEATBACKS .....SECURE  
 SEATS & SEAT BELTS ..... LOCKED / FASTENED

#### Final Items When #1 for Takeoff

DOOR ..... CLOSE / LOCKED  
 LANDING LIGHT ..... ON  
 STROBE ..... ON  
 TRANSPONDER ..... VERIFY ALT / SET  
 MIXTURE .....SET

### TAKE OFF

THROTTLE..... FULL  
 ROTATE ..... 44-55 KTS  
 YOKE..... APPLY BACK PRESSURE / ESTABLISH CLIMB  
 CLIMB..... 70 - 80 KTS  
           V<sub>X</sub> - 63 KTS / V<sub>Y</sub> - 75 KTS

### AFTER TAKEOFF(above 1000 feet)

CRUISE CLIMB ..... 70-80 KTS  
 THROTTLE..... FULL  
 FLAPS UP ..... CHECK

### CRUISE

THROTTLE..... SET  
     2300-2400 RPM LOCAL / 75% BHP FOR XC  
 ENGINE / SYSTEM INSTRUMENTS ..... CHECK  
 FUEL SELECTOR ..... PROPER TANK  
 FUEL PUMP ..... OFF / CHECK PRESSURE  
 LANDING LIGHT..... OFF  
 MIXTURE ..... LEAN

V Speeds	KDWH Frequencies
V <sub>R</sub> ..... 50	Ground ..... 121.8
V <sub>Y</sub> ..... 75	Tower ..... 118.4
V <sub>X</sub> ..... 63	Unicom ..... 122.95
V <sub>FE</sub> ..... 103	West Practice.. 123.5
V <sub>A</sub> ..... 111	ATIS..... 128.375
V <sub>NO</sub> ..... 126	Hou App NW... 119.7
V <sub>NE</sub> ..... 160	Hou App SW ... 123.8
V <sub>G</sub> ..... 73	Max Demo Xwind..17

### DESCENT(for XC use)

ATIS / AWOS .....CHECK  
 APPROACH BRIEFING .....COMPLETE  
 ALTIMETER.....SET  
 CARB HEAT ..... AS REQ  
 THROTTLE ..... AS REQ  
 MIXTURE ..... SLIGHTLY ENRICH

### APPROACH (15NM FROM AIRPORT)

ATIS / AWOS .....CHECK  
 APPROACH BRIEFING .....COMPLETE  
 ALTIMETER.....CHECK  
 FUEL PUMP ..... ON  
 FUEL SELECTOR.....PROPER TANK  
 MIXTURE ..... SLIGHTLY ENRICH  
 PARKING BRAKE ..... OFF  
 LANDING LIGHT..... ON  
     When direct to IAF or Vectored  
 FLIGHT & NAV Instruments..... SET / IDENT  
 CDI KEY ..... VLOC / GPS  
 AIRSPEED ..... 90 KTS

### BEFORE LANDING CHECKLIST

*G.U.M.P.S.*

FUEL SELECTOR.....PROPER TANK  
 MIXTURE .....SET FOR ALT / FULL RICH  
 FUEL PUMP ..... ON  
 CARB HEAT ..... ON  
 POWER..... AS REQ  
 SEAT BELTS / SWITCHES.....CHECK  
 FLAPS ..... (V<sub>FE</sub> 103) AS REQ

### GO AROUND / MISSED APPROACH

*“Cram, Climb, Clean, Click, Call”*

THROTTLE ..... FULL FWD  
 CARB HEAT ..... OFF  
 FLAPS 25 ..... IMMEDIATELY  
 PITCH ..... 60 KTS / PITCH FOR CLIMB  
 FLAPS 10 ..... POS RATE, OBST CLEARED, 70 KTS  
 FLAPS UP .... AFTER REACHING SAFE ALT 76 KTS  
     Fly assigned or published heading & altitude

### AFTER LANDING

When aircraft is stopped

GROUND OR ASSIGNED FREQ.....CHECK  
 FLAPS ..... UP  
 CARB HEAT..... OFF  
 FUEL PUMP ..... OFF  
 MIXTURE ..... LEAN  
 STROBE..... OFF  
 LANDING LIGHT ..... OFF  
 TAXI CLEARANCE..... OBTAIN / BRIEF

### SHUTDOWN

CALL FOR FUEL @ KDWH ..... 122.95  
 TRANSPONDER ..... 1200 / VFR  
 AVIONICS MASTER..... OFF  
 THROTTLE ..... 1000 RPM  
 MIXTURE .....CUTOFF  
     When Propeller stops  
 MAGNETOS..... OFF  
 MASTER SWITCH..... OFF  
 ELECTRICAL SWITCHES..... OFF  
 HOBBS / TACH..... RECORD

Secure aircraft, tiedown and walk around.

Note and record squawks

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This checklist is for reference. It is not intended to replace the POH / AFM.

# United Flight Systems



## PIPER WARRIOR - PREFLIGHT

### CABIN

Walk up to aircraft .....INSPECT FOR DAMAGE  
Oil Level..... CHECK  
Pitot Tube Cover ..... REMOVE  
HOBBS ..... RECORD  
POH .....IN-AIRCRAFT  
UFS clip board and keys .....IN-AIRCRAFT  
Check List .....IN-AIRCRAFT  
Air Worthiness Certificate.....IN-AIRCRAFT  
Registration.....IN-AIRCRAFT  
GPS Reference Guide .....IN-AIRCRAFT  
Weight and Balance ..... CHECKED  
Parking Brake ..... SET  
Control Wheel..... RELEASE BELTS  
Magneto Switch ..... OFF  
Avionics Switch ..... OFF  
Circuit Breakers.....IN

### POWER

Master Switch (Batt) ..... ON  
Fuel Qty (R & L) ..... CHECK  
Avionics..... ON  
Avionics Fan (If Installed) ..... VERIFY ON  
GPS data base ..... VERIFY CURRENT  
Avionics Switch ..... OFF  
Annunciator Panel..... TEST  
Beacon ..... ON  
Navigation Lights..... ON  
Taxi/Landing Lights ..... ON  
Pitot Heat ..... ON

**VERIFY LIGHTS, PITOT HEAT, STALL WARNING**

### POWER - CONTINUED

Navigation Lights ..... OFF  
Taxi/Landing Lights ..... OFF  
Pitot Heat..... OFF  
Master Switch ..... OFF  
Elevator Trim Control..... TAKEOFF  
Fuel Selector Valve.....LEFT or RIGHT  
Alternate Static Air Valve .....CHECK FORWARD  
Fire Extinguisher .....CHECK  
Flaps (Extend One Notch at a Time) .... EXTEND

### RIGHT WING

Flap .....CHECK  
Aileron .....CHECK  
Wing Tip.....CHECK  
Leading Edge .....CHECK  
Fuel Quantity ..... CHECK VISUALLY  
Fuel Filler Cap ..... SECURE  
Right Tire.....CHECK  
Right Brake.....SECURE  
Right Brake Line ..... NO LEAKS  
Right Main Gear Strut .... (4.5 in. proper inflation)SECURE  
Right Wing Fuel Sump..... DRAIN  
Right Wing Tiedown..... REMOVE and STOW  
Right Wing Cabin Air Intake .....CHECK

### NOSE

Cowling .....CHECK / SECURE  
Engine Oil Dipstick/Filler Cap .....CHECK  
Engine Cooling Air Inlets ..... CLEAR  
Prop and Spinner .....CHECK  
Alternator Belt ..... CHECK TENSION  
Nosewheel Strut and Tire ..... (3.25 in. inflation)CHECK  
Air Intake.....CHECK  
Nose Sump (pilot side)..... DRAIN  
Windscreen.....CHECK (CLEAN)

### LEFT WING

Left Wing Cabin Air Intake .....CHECK  
Fuel Quantity .....CHECK VISUALLY  
Fuel Filler Cap ..... SECURE  
Left Tire.....CHECK  
Left Brake..... SECURE/WEAR INDICATOR  
Left Brake Line .....NO LEAKS  
Left Main Gear Strut ..... (4.5 in. inflation)SECURE  
Left Wing Fuel Sump.....CHECK  
Left Wing Tiedown..... REMOVE and STOW  
Pitot Tube .....CHECK  
Leading Edge.....CHECK  
Wing Tip.....CHECK  
Aileron .....CHECK  
Flap .....CHECK

### LEFT FUSELAGE

Body ..... STRAIGHT  
COM/GPS/VOR Antennas .....CHECK  
Data Plate .....CHECK

### RUDDER

Stabilator / Trim.....CHECK  
Tail Tiedown ..... REMOVE  
Rudder .....CHECK

### RIGHT FUSELAGE

Body ..... STRAIGHT  
Baggage Door ..... SECURE

# N5415F – PIPER WARRIOR

## EMERGENCY PROCEDURES

### ENGINE FIRE DURING START ON GROUND

#### IF ENGINE HAS NOT STARTED

MIXTURE..... IDLE CUTOFF  
THROTTLE..... OPEN  
STARTER..... CRANK  
ELECTRIC FUEL PUMP/Fuel Selector..... OFF  
FUEL SELECTOR..... OFF

**ABANDON IF FIRE CONTINUES**

### ENGINE FIRE IN FLIGHT

SOURCE OF FIRE..... CHECK

#### ELECTRICAL FIRE

MASTER SWITCH..... OFF  
VENTS..... OPEN  
CABIN HEAT..... OFF

#### LAND AS SOON AS PRACTICABLE

#### ENGINE FIRE

FUEL SELECTOR..... OFF  
THROTTLE..... CLOSED  
MIXTURE..... IDLE CUTOFF  
ELECTRIC FUEL PUMP..... OFF  
HEATER and DEFROSTER..... OFF  
(PROCEED WITH POWER OFF LANDING PROCEDURE)

### ENGINE POWER LOSS DURING TAKEOFF

#### SUFFICIENT RUNWAY REMAINING

#### LAND STRAIGHT AHEAD

#### INSUFFICIENT RUNWAY REMAINING

- MAINTAIN SAFE AIRSPEED
- MAKE ONLY SHALLOW TURNS TO AVOID OBSTRUCTIONS
- FLAPS AS SITUATION REQUIRES

#### SUFFICIENT ALTITUDE GAINED

#### MAINTAIN SAFE AIRSPEED

FUEL SELECTOR..... FULLEST FUEL TANK  
ELECTRIC FUEL PUMP..... CHECK ON  
MIXTURE..... CHECK RICH  
CARB HEAT..... ON  
Primer..... CHECK LOCKED  
(If Power is Not Regained, Proceed with Power Off Landing)

### ENGINE POWER LOSS IN FLIGHT

BEST GLIDE..... 73 KIAS  
FUEL SELECTOR..... FULLEST FUEL TANK  
ELECTRIC FUEL PUMP..... ON  
MIXTURE..... RICH  
CARB HEAT..... ON  
ENGINE GAUGES..... CHECK  
(for indication of cause of power loss)  
Primer..... CHECK LOCKED  
(If NO fuel pressure is indicated, check tank selector position to be sure it is on a tank containing fuel)

#### WHEN POWER IS RESTORED

CARB HEAT..... OFF  
ELECTRIC FUEL PUMP..... OFF  
(if power is NOT restored, prepare for a power off landing)

#### TRIM FOR 73 KIAS

### POWER OFF LANDING

#### FLY TO SUITABLE LANDING FIELD

BEST GLIDE..... 73 KIAS  
Ignition Switch..... OFF  
Master Switch..... OFF  
Fuel Selector..... OFF  
Mixture..... IDLE CUTOFF  
Seatbelt and Harness..... TIGHT  
Doors..... UNLATCH PRIOR TO TOUCHDOWN

### LOSS OF OIL PRESSURE/HIGH OIL TEMP

Land as soon as possible and investigate the cause. Prepare for power off landing.

### LOSS OF FUEL PRESSURE

Electric Fuel Pump..... ON  
Fuel Selector..... CHECK ON FULL TANK

### ALTERNATOR FAILURE

VERIFY FAILURE..... ALT ANNUNCIATOR ILLUMINATED

#### AMMETER SHOWS ZERO

Alt Switch..... OFF  
*REDUCE ELECTRICAL LOAD AS MUCH AS POSSIBLE*  
Alternator Circuit Breakers.. CHECK & RESET  
Alt Switch..... ON

#### IF POWER NOT RESTORED

Alt Switch..... OFF  
**REDUCE ELECTRICAL LOAD and  
LAND AS SOON AS POSSIBLE**

### ENGINE ROUGHNESS

CARB HEAT..... ON  
**IF ROUGHNESS CONT. AFTER 1 MINUTE**  
CARB HEAT..... OFF  
MIXTURE..ADJUST FOR MAX SMOOTHNESS  
ELECTRIC FUEL PUMP..... ON  
FUEL SELECTOR.....SWITCH TANKS  
ENGINE GAUGES..... CHECK  
MAGNETO SWITCH...“L” then “R” then BOTH

*If operation is satisfactory on either one, continue on that MAG at reduced power and full “RICH” mixture to first airport.*

#### PREPARE FOR POWER OFF LANDING

### SPIN RECOVERY

Throttle..... IDLE  
Ailerons..... NEUTRAL  
Rudder..... FULL OPPOSITE  
to direction of rotation  
Control Wheel..... FULL FORWARD  
(to break stall)  
Rudder..... NEUTRAL (when rotation stops)  
Control Wheel..... AS REQ TO SMOOTHLY  
REGAIN LEVEL FLIGHT ATTITUDE

