

United Flight Systems



N7530J – ARROW III – PA-28-201

NORMAL OPERATIONS

BEFORE START ENGINE

WALKAROUND INSPECTION COMPLETE
 S.A.F.E.T.Y PAX BRIEFING COMPLETE
 FLAP RETRACT
 FUEL SELECTOR DESIRED TANK
 PARKING BRAKE SET
 THROTTLE IDLE
 PROP FORWARD
 MIXTURE CUT-OFF
 ELECTRONIC SWITCHES OFF
 AVIONICS SWITCH OFF

ENGINE START

PROP AREA CLEAR
 MASTER SWITCH ON
 BEACON & NAV LIGHTS ON
 ELEC. FUEL PUMP ON/PRESSURE?

COLD START

THROTTLE ¼" OPEN
 MIXTURE RICH
 VERIFY FUEL FLOW INDICATION
 MIXTURE CUT-OFF
 IGNITION SWITCH START(release upon start)
 AS ENGINE STARTS, MIXTURE RICH

HOT START

THROTTLE 1/2 " OPEN
 ELEC. FUEL PUMP ON
 MIXTURE CUT-OFF
 IGNITION SWITCH START(release upon start)
 AS ENGINE STARTS, MIXTURE RICH

FLOODED START

THROTTLE FULL OPEN
 ELEC. FUEL PUMP OFF
 MIXTURE CUT-OFF
 IGNITION SWITCH START(release upon start)
 AS ENGINE STARTS, MIXTURE RICH
 THROTTLE RETARD/FULL IDLE

IMMEDIATE VISUAL FLOW CHECK

TACHOMETER <1000 RPM
 OIL PRESSURE CHECK
 LOADMETER CHECK
 AVIONICS POWER SWITCH ON
 RADIOS/NAVIGATION ON

AFTER START/BEFORE TAXI

MIXTURE LEAN AGGRESSIVELY
 FLIGHT INSTRUMENTS SET
 AVIONICS SET
 TRANSPONDER SET
 ATC COMM FLIGHT FOLLOWING / IFR CLEARANCE
 PARKING BREAK RELEASE
 BRAKES RELEASE/CHECK

TAXI

DO NOT RIDE BRAKES

RWY INCURSION SITUATIONAL AWARENESS
 CROSSWIND FLIGHT CONTROLS CLIMB INTO
 HEADWINDS / DIVE AWAY FROM TAILWIND
 FLIGHT INSTRUMENTS CHECKED (ATTITUDE INDICATOR,
 DG-COMPASS, TURN COORDINATOR)
 C.I.G.A.R.R. FLOW-CONTROLS
 / INSTRMENTS/ GAS/ ATTITUDE/ RUNUP/ RADIOS

RUN UP/BEFORE TAKEOFF

PARKING BRAKE SET
 FUEL SELECTOR FULLEST TANK
 ELEC. FUEL PUMP OFF
 ELEVATOR TRIM TAKEOFF
 MIXTURE (below 3000 ft) RICH
 FLIGHT CONTROLS FREE
 FLAPS SET
 THROTTLE 2300 RPM
 MAGNETOS CHECK
 (RPM drop <125 RPM & <50 RPM differential)

PROP CYCLE
 ENGINE INSTRUMENTS CHECK

- LOADMETER CHECK
- FUEL PRESSURE GAUGE CHECK
- ELEC. FUEL PUMP ON
- FUEL PRESSURE GAUGE CHECK
- SUCTION GAUGE CHECK
- THROTTLE FULL IDLE CHECK
- THROTTLE 1000 RPM
- FLIGHT INSTRUMENTS SET
- RADIOS/NAVS SET

****TAKE OFF / EMERGENCY PLAN** BRIEF**

RUN UP/BEFORE TAKEOFF (continued)

SEATS & SEAT BELTS SECURE
 DOORS AND WINDOWS SECURE
 STROBE/LANDING LIGHTS AS DESIRED
 PARKING BRAKE RELEASE

HOLD SHORT/LINE UP

FINAL APPROACH TRAFFIC CLEAR
 VERBALLY CONFIRM RUNWAY
 TIME OFF NOTE TIME.START CLOCK
 FLIGHT INSTRUMENTS CHECKED
 TRANSPONDER ALTITUDE
 SWITCHES VERIFY ELEC. SWITCHES
 FUEL PUMP ON
 GUMPS FOR TAKEOFF MIXTURE & PROP SET

NORMAL TAKEOFF

(Lean, best takeoff power above DA: 3000')

WING FLAPS 0-25°
 THROTTLE FULL OPEN
 ELEVATOR CONTROL Vr @ 65 MPH
 CLIMB SPEED Vy 100 MPH
 LANDING GEAR RETRACT

SHORT & SOFT SPECIALTY TAKEOFFS

REVIEW NON-NORMAL T/O PROFILE

ENROUTE/CRUISE CLIMB

AIRSPPEED Vy 100 MPH
 Vx 90 MPH
 CRUISE CLIMB AIRSPEED 110 MPH
 LANDING GEAR UP
 FLAPS UP
 POWER/PROP 25" / 2500 RPM
 MIXTURE RICH
 (above 3000 ft, lean to obtain maximum RPM)
 FUEL PUMP OFF

CRUISE

POWER NORMAL 75% PER PERF. CHARTS
 ELEVATOR TRIM ADJUST
 MIXTURE LEAN AS NECESSARY
 FUEL TANK MANAGEMENT SWITCH EVERY 30 MIN
 MONITER FREQUENCY 121.5 IN COMM 2

DESCENT

FUEL SELECTOR FULLEST TANK
 MIXTURE ADJUST FOR SMOOTH OPERATION
 POWER/PROP AS DESIRED

ARRIVAL/TERMINAL AREA

W.I.R.E.S BRIEFING COMPLETE
 LANDING & TAXI PLAN COMPLETE
 AIRSPEED & CONFIG AS REQUIRED

BEFORE LANDING

SEATS, BELTS, HARNESES..... SECURE
FUEL SELECTOR VALVE FULLEST TANK
ELEC. FUEL PUMP ON
LANDING GEAR..... DOWN/ 3 GREEN
MIXTURE..... ENRICHEN
PROP..... FULL FORWARD
GUMPS FLOW..... COMPLETE

LANDING

AIRSPPEED100 MPH (FLAPS UP)
WING FLAPS 0-45° (<125 MPH)
AIRSPPEED 90 MPH (FLAPS DOWN)
TOUCHDOWN..... MAIN WHEELS FIRST
LANDING ROLL LOWER THE NOSE GENTLY
BRAKING MINIMUM REQUIRED

SHORT & SOFT SPECIALTY LANDINGS

REVIEW NON-NORMAL T/O PROFILE

GO AROUND/ BALKED LANDING

CRAM, CLIMB, CLEAN, COOL, CALL, COMPLY

PROP..... FULL FORWARD
THROTTLE FULL OPEN
WING FLAPS 25° IMMEDIATELY
LANDING GEAR..... UP
CLIMB SPEED 90 MPH
WING FLAPS 10°
(until all obstacles cleared)
WING FLAPSRETRACTS AT 95 MPH
(after reaching a safe altitude & 95 MPH)
ACCELERATE Vy 100 MPH

AFTER LANDING

WING FLAPS UP
MIXTURE..... LEAN AGGRESSIVELY
TRANSPONDER 1200
LANDING LIGHTS AS REQUIRED
STROBES OFF

PARKING / SECURING (S.L.I.M)

PARKING BRAKE SET
CALL FBO FOR FUEL (122.95).....
TRANSPONDER 1200 / VFR
AVIONICS POWER SWITCH, ELEC. EQUIPMENT..... OFF
ELEC. FUEL PUMP OFF
MIXTURE..... IDLE / CUT-OFF
IGNITION SWITCH..... OFF
MASTER SWITCH OFF

PARKING / SECURING (S.L.I.M) (continued)

HOBBS / TACH TIMES..... RECORD
CONTROL WHEEL..... SEATBELT SECURE
PILOT WINDOW CLOSE AND SECURE
PITOT TUBE COVER
TIE-DOWNS SECURED
SQUAWKS RECORD ANY

TAKEOFF EMERGENCY BRIEFING

ENGINE FAILURE PRIOR TO Vr

ABORT TAKEOFF
CHOP & STOP.....
CONTROL THE AIRCRAFT
THROTTLE IDLE
AERO BRAKING FULL UP ELEVATOR
FIRM BRAKES APPLY
MIXTURE IDLE CUT-OFF
ADVISE ATC.....
MASTER SWITCH..... OFF
EMERGENCY EGRESS IF NECESSARY

ENGINE FAILURE AVAILABLE RUNWAY

ABORT TAKEOFF
IMMEDIATELY PUSH THE NOSE DOWN
CONTROL THE AIRCRAFT
RE-LAND THE AIRCRAFT
THROTTLE IDLE
AERO BRAKING FULL UP ELEVATOR
FIRM BRAKES APPLY
MIXTURE IDLE CUT-OFF
ADVISE ATC.....
MASTER SWITCH..... OFF
EMERGENCY EGRESS IF NECESSARY

ENGINE FAILURE LOW ALTITUDE

IMMEDIATELY PUSH THE NOSE DOWN
BEST GLIDE SPEED 105 MPH
(de-accelerate to 90 MPH for landing)
MAINTAIN AIRCRAFT CONTROL.....
Look forward within windshield for landing spot.
TURN FOR LANDING SPOT
LANDING GEAR AS NECESSARY
IF POSSIBLE: FUEL SELECTOR..... OFF
MIXTURE IDLE CUT-OFF
FLAPS AS REQUIRED
MASTER SWITCH..... OFF
OPEN THE DOOR.....
EMERGENCY EGRESS WHEN POSSIBLE

NON-NORMAL / SPECIALTY TAKEOFFS & LANDINGS

SHORT FIELD TAKEOFF / CLIMB

WING FLAPS (2ND NOTCH) 25°
BRAKES APPLY
THROTTLE / PROP..... FULL FORWARD
MIXTURE RICH
BRAKES RELEASE
ACCELERATE TO Vr 65 MPH
LANDING GEAR (requires override) POS RT / UP
CLIMB SPEED 90 MPH
(until all obstacles cleared)
ACCELERATE Vy 100 MPH
FLAPS..... SLOWLY RETRACT TO 0°

SOFT FIELD TAKEOFF / CLIMB

WING FLAPS (2ND NOTCH) 25°
FULL AFT ELEVATOR FOR INITIAL TAXI ON SOFT RWY
CONTINUOUS TAXI FORWARD DO NOT STOP
THROTTLE / PROP..... FULL FORWARD
ALLOW NOSE UP OFF RUNWAY SURFACE.....
ALLOW AIRCRAFT TO LIFT INTO GROUND EFFECT
LOWER NOSE ATTITUDE TO ACCELERATE TO 90 MPH
(until all obstacles cleared)
LANDING GEAR (requires override) POS RT / UP
ACCELERATE Vy 100 MPH
FLAPS..... SLOWLY RETRACT TO 0°

SHORT FIELD LANDING

AIRSPPEED.....100 MPH (FLAPS UP)
LANDING GEAR..... DOWN/ 3 GREEN
WING FLAPS FULL DOWN (40°)
AIRSPPEED..... 90 MPH
POWER REDUCE TO IDLE AFTER CLEARING OBSTACLE
TOUCHDOWN..... MAIN WHEELS FIRST
BRAKES APPLY HEAVILY
AERO BRAKING..... FULL AFT ELEVATOR PRESSURE
WING FLAPS RETRACT FOR FULL WEIGHT ON WHEELS

SOFT FIELD LANDING

- NORMAL APPROACH TO LANDING TECHNIQUE
- PRIOR TO TOUCHDOWN, INCREASE POWER TO REDUCE LANDING TOUCHDOWN FORCE
- INCREASE ELEVATOR BACK PRESSURE TO KEEP NOSE UP IN PITCH ATTITUDE
- KEEP WEIGHT ON MAIN WHEEL WITH UP ELEVATOR PRESSURE
- CONTINUOUS TAXI MOVEMENT, AVOID STOPPING ON SOFT SURFACES

United Flight Systems



N7530J – ARROW III – PA-28-201 PREFLIGHT

BEFORE YOU ARRIVE AT THE AIRCRAFT

PAVE COMPLETE
91.103 PREFLIGHT ACTION COMPLETE
WEIGHT & BALANCE COMPUTED
FUEL REQUIRED COMPUTED

COCKPIT / CABIN

PITOT TUBE COVER REMOVE
HOBBS/TACH TIMES RECORD
PILOT TOOLS ORGANIZED
REQUIRE DOCUMENTS CHECKED
(ARROW, G1000 Ref. Docs.)

FUEL SELECTOR FULLEST/AS DESIRED
IGNITION SWITCH OFF
PARKING BRAKE SET
THROTTLE IDLE
PROP FORWARD
MIXTURE CUT-OFF
CIRCUIT BREAKERS CHECK
AVIONICS SWITCH OFF
ELECTRICAL SWITCHES OFF
ROTARY NAV LIGHT SWITCH OFF
MASTER SWITCH ON
FUEL QUANTIFY CHECK
FUEL PUMP AUDIBLE/PRESSURE CHECK
FUEL PUMP OFF
LANDING/STROBE/NAV LIGHTS ON
EXIT COCKPIT CHECK LIGHTS/STALL WARN
LANDING/STROBE/NAV LIGHTS OFF
MASTER SWITCH OFF
FLIGHT CONTROLS CHECK
TRIM NEUTRAL
FLAPS EXTEND 1 NOTCH
BAGGAGE SECURE

EXIT COCKPIT

BAGGAGE/CARGO SECURED
BAGGAGE DOOR CHECK/LOCK

RIGHT WING TRAILING EDGE / WING TIP

WING SURFACE CLEAN
FLAPS/HINGES CHECK/SECURE
AILERON/STATIC WICKS CHECK/SECURE
WING TIP/LIGHTS CHECK

RIGHT WING

TRAILING EDGE CLEAR
WING TIE-DOWN DISCONNECT
FUEL TANK QUANTITY VERIFY
FUEL SUMP DRAIN DRAIN/CHECK
FUEL VENT CLEAR
MAIN GEAR OLEO STRUT >4.5"
MAIN TIRE CHECK
BRAKE & BRAKE LINES CHECK
FRESH AIR INLET CLEAR

NOSE

COWLING SECURE
EXHAUST STACK CHECK
WINDSHIELD CLEAN/SECURE
PROPELLOR & SPINNER CHECK/SECURE
ENGINE COOLING AIR INLETS CHECK/CLEAR
ALTERNATOR BELT CHECK
NOSE TIE-DOWN DISCONNECT
LANDING LIGHT CHECK CONDITION
NOSE WHEEL STRUT CHECK >3.25"
NOSE TIRE CHECK
OIL DIPSTICK CHECK OIL LEVEL MIN >4 QTS
FUEL STAINER DRAIN CHECK

LEFT WING TRAILING EDGE / WING TIP

WING SURFACE CLEAN
FLAPS/HINGES CHECK/SECURE
AILERON/STATIC WICKS CHECK/SECURE
WING TIP/LIGHTS CHECK
AUTO LANDING GEAR PROBE CHECK/CLEAR

RIGHT WING

TRAILING EDGE CLEAR
WING TIE-DOWN DISCONNECT
FUEL TANK QUANTITY VERIFY
FUEL SUMP DRAIN DRAIN/CHECK
FUEL VENT CLEAR
MAIN GEAR OLEO STRUT >4.5"
MAIN TIRE CHECK
BRAKE & BRAKE LINES CHECK
FRESH AIR INLET CLEAR
STALL WARNING SENSOR CHECK
PITOT-STATIC BOOM CHECK
LEADING EDGE CLEAR

EMPENNAGE / TAIL SECTION

ANTENNAS CHECK
FUSELAGE CHECK
FRESH AIR INLET CHECK
PITCH STABILATOR FREE/SECURE
STABILATOR TRIM TAB SECURE
RUDDER FREE/SECURE
TAIL TIE-DOWN DISCONNECT

PREFLIGHT COMPLETE