

PIPER ARROW II (PA 28R-200) CHECKLIST
 (See Pilot Operating Handbook for Amplified Procedures)
 Issued April 1971; Revisions to July 20, 1990

PREFLIGHT (FOGGLES NEEDED?)

CABIN

- 1) "ARROW" Docs CHECK
- 2) VOR 30-day certification log CHECK
- 3) Hobbs and Tach CHECK
- 4) Mixture, Magnetos OFF
- 5) Landing Gear Switch DOWN
- 6) Control Wheel Lock RELEASE
- 7) Flaps EXTEND
- 8) Brakes ON
- 9) Avionics OFF
- 10) Master Switch ON; Electric Fuel Pump ON;
- 11) Fuel Pressure CHECK; Electric Pump OFF
- 12) Fuel CHECK, Nav Lights, Landing Light, Pitot Heat CHECK
- 13) Stall Warning Light CHECK
- 14) Master Switch OFF
- 15) Rudder FREE and CORRECT

RIGHT WING

- 1) Flap CHECK for Damage, Hinges CHECK
- 2) Aileron CHECK, Hinges CHECK
- 3) Wing Underside CHECK for damage
- 4) Leading Edge CHECK for Damage, Ice, Frost
- 5) Fuel Quantity (25gal) CHECK, Cap SECURE
- 6) Fuel Drain CHECK for Water, Drain CLOSE
- 7) Fuel Vent CHECK Open
- 8) Tie-Down DISCONNECT, Chocks REMOVE
- 9) Main Gear, Oleo (2.0 in.) Brakes, Tire (27psi) CHECK
- 10) Landing Gear Cylinder and Hydraulic Lines CHECK
- 11) Gear Structure CHECK for Cracks and Bends
- 12) Air Inlet CHECK

ENGINE AND COWLING

- 1) Oil CHECK 6min-8max Quarts, Dipstick SEAT
- 2) Cowling SECURE
- 3) Gas or Oil Leaks CHECK on ground and belly
- 4) Nose Gear, Oleo (2.75 in.), Tire (30psi) CHECK
- 5) Nose Gear Cylinder and Hydraulic Lines CHECK
- 6) Propeller CHECK for Nicks, Cracks
- 7) Spinner CHECK for Cracks
- 8) Air Filter CHECK for Blockage
- 9) Alternator Belt CHECK
- 10) Fuel Strainer CHECK for Water or Contamination
- 11) Windshield CLEAN

LEFT WING

- 1) Air Inlet CHECK
- 2) Fuel Quantity (25gal) CHECK, Cap SECURE
- 3) Fuel Drain CHECK for Water, Drain CLOSE
- 4) Fuel Vent CHECK Open
- 5) Tie-Down DISCONNECT, Chocks REMOVE
- 6) Main Gear, Oleo (2.0 in.) Brakes, Tire (27psi) CHECK
- 7) Landing Gear Cylinder and Hydraulic Lines CHECK
- 8) Gear Structure CHECK for Cracks and Bends
- 9) Pitot Tube CHECK for Damage or Obstruction
- 10) Static Port CHECK Clear
- 11) Leading Edge CHECK for Damage, Ice, Frost
- 12) Wing Underside, CHECK for damage
- 13) Aileron CHECK, Hinges CHECK
- 14) Flap CHECK for Damage, Hinges CHECK

BODY and EMPENAGE

- 1) Antennas CHECK for Damage
- 2) Elevator CHECK for Damage, Ice, Snow, Frost
- 3) Left Elevator-Underside, CHECK for damage
- 4) Elevator Control CHECK Cables and Hinges
- 5) Trim Tab CHECK
- 6) Rudder CHECK
- 7) Tail Tie-Down DISCONNECT
- 8) Right Elevator-Underside, CHECK for damage

- 9) Baggage STOW and SECURE
- 10) Baggage Door CLOSE and SECURE

BEFORE ENGINE-START (NOTE WIND)

- 1) Empty Seats FASTEN BELTS on Seats
- 2) Flaps RETRACT
- 3) Cabin Door CHECK Side and Top Latches
- 4) Seats, Seatbelts, and Harnesses ADJUST and LOCK, Inertia Reel CHECK
- 5) Charts, Documents ARRANGE as needed
- 6) Brakes SET
- 7) Propellor Control FULL FORWARD (full increase RPM)
- 8) Fuel Selector FULLEST TANK
- 9) Avionics OFF
- 10) Circuit Breakers CHECK
- 11) **CALL Cinc. Del.** for IFR Clearance (if req'd)

START ENGINE (COLD)

- 1) Throttle 1/2 in. OPEN
- 2) Master Switch ON
- 3) Electric Fuel Pump ON
- 4) Mixture FULL RICH Until Fuel Flow Meter Indicates Flow (engine primed)
- 5) Mixture to IDLE CUT-OFF
- 6) Propeller Area CLEAR
- 7) Ignition Switch START (rotate clockwise and press in)
- 8) When engine fires, advance mixture control to FULL RICH and move throttle to desired setting.
- 9) If engine does not start in 5-10 seconds, disengage starter and reprime.
- 10) Oil Pressure, Ammeter CHECK
- 11) Warmup < 2min warm weather; <4min cold weather at 1400-1500 RPM
- 12) LEAN for Taxi AS REQUIRED by density altitude
- 13) Taxi/Nav/Landing Lights AS REQUIRED

START ENGINE (HOT)

Same as Cold Start, except NO PRIME (eliminate Step 4 above.)

START FLOODED ENGINE

- 1) Throttle FULL OPEN
- 2) Master Switch ON
- 3) Electric Fuel Pump OFF
- 4) Mixture Control IDLE CUT-OFF
- 5) Ignition Switch START (rotate clockwise and press in)
- 6) When engine fires, advance mixture control to FULL RICH and move throttle to desired setting.

SET INSTRUMENTS

- 1) Radios ON, Transponder STANDBY, GPS ON
- 2) Fuel Pump OFF, Fuel Pressure CHECK
- 3) DG, Turn Coord., Compass, ADF CHECK
- 4) COMM and NAV frequencies SET
- 5) Altimeter SET
- 6) Parking Brakes OFF, Brakes TEST

TAXI and CHECK INSTRUMENTS

- 1) Call Ground Control for Taxi Permission (if req'd)
- 2) Attitude Indicator CHECK
- 3) Directional Gyro CHECK
- 4) Turn Coordinator CHECK
- 5) ADF CHECK (use known station)
- 6) Compass, DG CHECK against known headings

BEFORE TAKE-OFF (Run Up)

- 1) Passengers BRIEF on run up, doors, belts
- 2) Brakes SET
- 3) Flight Controls FREE AND CORRECT
- 4) Flight Instr CHK (DG, ALT, COM, NAV, TRANS)
- 5) Fuel Selector FULLEST TANK
- 6) Mixture RICH
- 7) Trim TAKEOFF

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- 8) Run-Up: Throttle SET 2000 RPM
 - a) Magnetos CHECK, 175 RPM Drop, 50 RPM Difference
 - b) Fuel Pressure CHECK
 - c) EGT CHECK
 - d) Vacuum CHECK 5.0±.1 in. Hg
 - e) Annunciator Panel TEST
 - f) Oil Pressure CHECK
 - g) Oil Temperature CHECK
 - h) Ammeter CHECK
 - i) Propellor Control CHECK (cycle three times in Cold Weather)
 - j) Throttle SET 1000 RPM (1400-1500 RPM for extended hold)

BEFORE LINE-UP

- 1) **F-BLT SET**
 - a) Flaps SET
 - b) Electric Fuel Pump ON
 - c) Strobes ON
 - d) Transponder to ALT (CHECK setting)
 - e) Trim to TAKEOFF
- 2) Critical Checklists REVIEW
 - a) X(l/o)= ;X(stop)=; X(runway)=
 - b) Vr=52-61kts; Vx,y=74,87kts
 - c) Take-Off-Abort Plan REVIEW
 - d) Climb-Out Engine-Out Plan REVIEW
- 3) **CIFFTRS** (review for completion)
(Ctrls,Instr,Fuel,Flaps,Trim,Runup,Seat&Spds)
- 4) Tower CALL for Take-Off (as required)
- 5) Windows CLOSE; Time NOTE

LINE UP (NOTE WIND)

- 1) DG, Compass ALIGN with RWY HDG
- 2) Mixture RICH

TAKE-OFF & CLIMB OUT(Normal)

- 1) Throttle - FULL OPEN
- 2) Rotate 52-61 Kts (slower for lighter wts)
- 3) Climb Speed - (Vx 74 Kts; Vy 87 Kts)
- 4) Gear RETRACT; Flaps RETRACT slowly
- 5) Full Power to 1000' agl; 25x25 to cruise altitude
- 6) **FBI-C COMPLETE**
 - a) Flaps RETRACT
 - b) Boost (Electric Pump) OFF (at 1000' agl)
 - c) IDENT NAV Frequencies
 - d) CALL Departure Control (as required)

SHORT-FIELD, OBSTACLE-CLEARANCE TAKEOFF

- 1) Flaps SET 25 degrees
- 2) Rotate 52-57kts; Accelerate to Vx=74kts
- 3) Gear RETRACT; Accelerate to Vy=87kts
- 4) Flaps RETRACT slowly
- 5) Full Power to 1000' agl; 25x25 to cruise altitude
- 6) **FBI-C COMPLETE**

CRUISE (70% Power @ 2400 RPM)

- 1) **Configuration** CHECK (rpm, MP, trim, flaps)
- 2) **Instrumentation** CHECK (all gauges, Electric Pump CHECK OFF, EGT CHECK less than 1550 peak)
- 3) **Navigation** (DG CHECK, NAV Freq CHECK & IDENT)
- 4) **Fuel** Mixture LEAN (as appropriate)
- 5) **5T's** At Each Waypoint
- 6) Fuel Management (After One Hour)
 - a) Electric Fuel Pump ON
 - b) Fuel Selector SWITCH TANKS, WAIT
 - c) Electric Fuel Pump OFF
 - d) Fuel Pressure CHECK

BEFORE DESCENT

- 1) Mixture RICH

PRE-APPROACH (>10mi before FAF)

TIMSABC

- a) TUNE NAV and COMM Frequencies
- b) IDENT NAV frequencies
- c) Marker Beacon ON and TEST
- d) SET Altimeter
- e) ALIGN DG with Compass
- f) BRIEF Approach AND Miss (MDA/DH, Time, Miss Pattern)
- g) CALCULATE App/Landing Speeds, R/W Rqd

PRE-LANDING (>2mi before FAF)

GUMPS (Air Speed Below 130kts)

- 1) Gas (Electric Pump ON, Fuel Sel TO fullest tank)
- 2) Under-carriage DOWN & CHECKED (three-in-green)
- 3) Mixture RICH
- 4) Power SET, Propellor FULL RPM
- 5) Speed SET & Seatbelts SECURE
- 6) Landing Light ON (as required)

APPROACH & LANDING

- 1) **5T's** over FAF (**R/W lights** KEYED-ON as rq'd)
- 2) Instrument Approach to DH/MDA; Land/MissApp
- 3) VFR Approach
 - a) downwind to mid-field 100kts
 - b) Trim 90kts at numbers, flaps 10deg
 - c) Base 80kts, flaps 25deg
 - d) Final 78kts, flaps 40deg (if rq'd)
- 4) **SHORT-FINAL**
Adjust Speed for (Light) Weight & Wind-Shear

GO-AROUND or MISSED APPROACH

- 1) Throttle FULL Power (to 1000' agl, then 25x25)
- 2) Flaps RETRACT to Second Notch (25degrees)
- 3) Positive Rate-of-Climb ESTABLISH
- 4) Gear RETRACT

AFTER LANDING (F-BLT)

- 1) Flaps RETRACT
- 2) Electric Fuel Pump OFF
- 3) Strobes OFF
- 4) Transponder STANDBY
- 5) Trim to TAKEOFF

SECURE AIRCRAFT

- 1) Brakes ON
- 2) Magnetos CHECK (right,left)
- 3) 121.5 MONITOR for ELT
- 4) Radios OFF
- 5) All Electrical OFF
- 6) Throttle FULL AFT; Mixture - IDLE CUTOFF
- 7) Magnetos OFF
- 8) Master Switch OFF
- 9) Trim NEUTRAL
- 10) Control Wheel SECURE
- 11) Hobbs and Tach CHECK
- 12) Chocks and Tie-Downs IN PLACE, Brakes OFF
- 13) Flight Plan CLOSE

CRITICAL SPEEDS (in knots at gross wt; Gear D/U)

Vr = 52-61kts Vx = 74/83kts Vy = 83/87kts
 Vlo = 109kts (gear retract)
Vglide = 91kts (gear up) Vglide = 83kts (gear down)
 Vge=130kts Vfe=108kts Vapproach=78kts (flaps)
 Vso = 56kts (full flap, gear down); =62kts (no flaps, gear up)
 Va = 114kts Max Xwind = 17kts

Landing Gear Automatically extends at 91kts

STATIC RPM: 2400+

**WT(CG): 2650 (87.6-93)
 Full Fuel Payload 706 lbs
 Empty Weight 1644**