

Piper Archer III

MAXIMUM TAKEOFF WEIGHT 2550 LBS
MAXIMUM BAGGAGE WEIGHT 200 LBS

STALL SPEED

V_{SO} 45 KIAS
 V_{S1} 50 KIAS

MANEUVERING SPEED

V_A 2550 lbs 113 KIAS
 V_A 1634 lbs 89 KIAS

TAKEOFF & CLIMB

V_Y (flaps 0) 76 KIAS
 V_X (flaps 0) 64 KIAS
 V_R (flaps 0) 57 KIAS

ENROUTE CLIMB SPEED 80 KIAS

OPERATING SPEEDS

V_{NE} NEVER EXCEED SPEED 154 KIAS
 V_{NO} MAXIMUM STRUCTURAL CRUISING SPEED 125 KIAS
 V_{FE} FLAP EXTENDED SPEED 102 KIAS
 FLAP OPERATING RANGE 45– 102 KIAS
 NORMAL OPERATING RANGE 50– 125 KIAS
 CAUTION RANGE 125– 154 KIAS
 MAX. DEMONSTRATED CROSSWIND 17 KIAS

DESCENT SPEEDS

NORMAL DESCENT SPEED 100-110 KIAS
 INITIAL APPROACH SPEED 75 KIAS
 FINAL APPROACH SPEED 66 KIAS
 SHORT FIELD APPROACH 66 KIAS
 V_{GLIDE} (Flaps Up) 76 KIAS

FUEL CAPACITY

Total fuel 50 gal
 Usable fuel (total) 48 gal

PREFLIGHT INSPECTION

CABIN

Cabin Cover CAREFULLY REMOVE, FOLD, PLACE IN BAGGAGE
 Pilot's Operating Handbook & Certificates IN AIRPLANE
 Control Wheel RELEASE RESTRAINTS
 Radio Master and Autopilot Master Switches OFF
 Lights OFF
 Magneto Switches OFF
 Mixture IDLE CUT OFF
 Master Switch ON
 Fuel Quantity Indicators CHECK
 Annunciator Panel CHECK
 Master Switch OFF
 Flaps EXTEND
 Hobbs and Tachometer CHECK

RIGHT WING

Flap – Hinges/Pushrod CHECK
 Aileron – Hinges/Pushrod CHECK
 Static Wicks CHECK - SECURE
 Wing Tip CONDITION/ SECURITY
 Nav LT/ Strobe LT CHECK
 Wing Leading Edge CHECK CONDITION
 Tie Down REMOVE
 Fuel Tank - Visually check quantity CHECK
 Fuel Cap SECURE
 Fuel Tank Vent Opening CLEAR
 Main Landing Gear - Tire, Brakes CHECK
 Fuel Sump (Return Sample if Not Contaminated) DRAIN
 Upper Wing Surface INSPECT
 Fresh Air Inlet CLEAR

NOSE

General Condition CHECK

Cowling.....SECURE
 WindshieldCLEAN
 Engine Oil (Max. 8 qts., Min. 5 qts)..... CHECK
 SpinnerSECURE
 Propeller -Check for nicks..... INSPECT
 Cowl PlugsREMOVE/ PLACE IN BAGGAGE
 Air InletsCHECK
 Alternator Belt CHECK FOR TENSION
 Nose Strut, Tire and Gear Well..... CHECK (30 PSI)
 Chock REMOVE
 Fuel Sump - Return sample if not contaminated..... DRAIN

LEFT WING

Fuel Sump - Return sample if not contaminated..... DRAIN
 Fuel Tank - Visually check quantity CHECK
 Fuel Cap.....SECURE
 Fuel Tank Vent OpeningCLEAR
 Main Landing Gear - Tire, Brakes.....CHECK
 Pitot Tube CoverREMOVE/ PLACE IN BAGGAGE
 Pitot Tube and Static SourceCHECK
 Fuel Tank Vent OpeningCHECK
 Fresh Air Inlet.....CLEAR
 Tie Down REMOVE
 Stall Warning VaneCHECK
 Wing Leading Edge.....CHECK
 WingtipCHECK
 Nav LT/ Strobe LT.....CHECK
 Aileron – Hinges, PushrodCHECK
 Flap – Hinges, Pushrod.....CHECK
 Static WicksCHECK - SECURE
 Upper Wing Surface.....INSPECT

FUSELAGE

AntennasCHECK
 Static vents.....CHECK
 Control SurfacesCHECK
 Empennage..... INSPECT
 Tail Tie DownDISCONNECT
 Baggage DoorCLOSE AND SECURE

BEFORE STARTING ENGINE

Preflight Inspection / BriefingCOMPLETE
 Seats, Seat Belts, Shoulder Harness.....SECURE

Door/Latches.....SECURE
 Fuel Selector..... DESIRED TANK
 Avionics, Autopilot, and Electrical Equipment OFF
 FlapsUP
 Brakes TEST & SET
 Circuit Breakers CHECK IN
 Alternate Static Source OFF
 Carburetor HeatFULL COLD

NORMAL START – COLD ENGINE

Throttle ¼ inch OPEN
 Battery Master Switch ON
 Alternator Switch ON
 Left Magneto Switch..... ON
 Mixture FULL RICH
 Primer..... ON for 3 sec
 Propeller AreaCLEAR
 Starter ENGAGE
 ThrottleADJUST
 Right Magneto Switch ON
 Oil Pressure/ Fuel Pressure CHECK

Note: If engine does not start within 10 seconds, prime and repeat starting procedure

NORMAL START – WARM ENGINE

(Skip Cold Start Procedures)

Throttle ½ inch OPEN
 Battery Master Switch ON
 Alternator Switch ON
 Left Magneto Switch..... ON
 Mixture FULL RICH
 Propeller AreaCLEAR
 Starter ENGAGE
 ThrottleADJUST
 Right Magneto Switch ON
 Oil Pressure/ Fuel Pressure CHECK

ENGINE START WHEN FLOODED

ThrottleFULL OPEN
 Battery Master Switch ON

SHORT FIELD TAKEOFF

Flaps 25° (second notch)
 Mixture RICH
 Trim SLIGHTLY AFT OF NEUTRAL
 Brakes APPLY
 Throttle FULL OPEN
 Brakes RELEASE
 Rotate 55 KIAS
 After breaking ground ACCELERATE TO 64 KIAS
 Climb Vx 64 KIAS
 Flaps (obstacle cleared & safe altitude) RETRACT SLOWLY
 Accelerate to Vy and continue climb 76 KIAS

ENROUTE CLIMB

Throttle FULL
 En Route 80-100 KIAS
 Trim ADJUST
 Fuel Pump OFF AT SAFE ALTITUDE
 Fuel Pressure CHECK
 Mixture LEAN AS NEEDED

CRUISE

Airspeed AS DESIRED
 Power (maximum 75% power recommended) 2200 – 2400 RPM
 Mixture LEAN TO 100° RICH OF PEAK EGT

Note: Lean mixture at altitudes above 5000' or at pilot's discretion at lower altitudes when 75% power or less is being used

Lights AS REQUIRED
 Engine and Flight Instruments CHECK

SWITCHING TANKS

(every 30 – 60 min in flight recommended)

Fuel Quantities CHECK PERIODICALLY
 Fuel Pump ON
 Fuel Tank Selector SWAP TANK
 Fuel Pressure CHECK
 Fuel Pump OFF/ OBSERVE SLIGHT DROP

DESCENT

ATIS/Airport Advisory COMPLETED
 Seat Belts SECURED
 Power AS REQUIRED
 Carburetor Heat ON IF REQUIRED
 Airspeed (power on) 100 – 110 KIAS
 Mixture (full rich at idle) ADJUST
 Altimeter SET
 Comm/ Navs SET

PRE LANDING CHECK

Fuel Selector PROPER TANK
 Seats, Seat Belts, Shoulder Harnesses SECURE
 Fuel Pump ON
 Carburetor Heat ON IF REQUIRED
 Mixture RICH BELOW 5000'
 Landing Lights ON
 Flaps EXTEND AS REQUIRED (102 KIAS MAX)

NORMAL LANDING

Power AS REQUIRED
 Airspeed (flaps 0° to 25°) 70 – 80 KIAS
 Airspeed (flaps 40°) 66 KIAS
 Touchdown MAIN WHEELS FIRST
 Landing Roll LOWER NOSE WHEEL GENTLY
 Brakes MINIMUM REQUIRED

GO-AROUND

Throttle FULL OPEN
 Airspeed/ Pitch (Vy) 76 KIAS
 Flaps RETRACT SLOWLY AFTER CLEAR OBS AND 76 KIAS
 Radio COMMUNICATE INTENTIONS

**SHORT FIELD AND
SOFT FIELD LANDINGS***

Flaps FULL (40°)
 Power AS REQUIRED TO MAINTAIN AIRSPEED
 Airspeed 66 KIAS
 Power REDUCE AFTER CLEARING OBSTACLE
 Contact Ground..... MAIN WHEELS FIRST CLOSE TO STALL SPEED
 Soft Field*..... HOLD NOSEWHEEL UP AS LONG AS POSSIBLE
 Nosewheel GENTLY LOWER
 Flaps RETRACT
 Brakes APPLY AS NEEDED
 Soft Field*..... APPLY BACK PRESSURE TO KEEP MOST OF
 WEIGHT ON MAIN WHEELS

Note: Use Caution in High Wind Conditions. It may be desirable to approach ground at higher speeds or with partial or no flaps

AFTER LANDING

Flaps RETRACT
 Transponder..... CHECK / STBY
 Fuel Pump..... OFF
 Landing Lights OFF or AS REQUIRED
 Mixture LEANED FOR TAXI
 Comm SET/ TAXI CLEARANCE

SHUTDOWN AND SECURING AIRCRAFT

Brakes SET
 Throttle IDLE
 Carburetor Heat OFF
 Radio Master OFF
 Autopilot Master OFF
 Mixture IDLE CUT-OFF
 Vent/Fan..... OFF
 Strobe Lights/ Landing Lights/ Nav Lights..... OFF
 Magnetos OFF
 Alternator Switch OFF
 Master Switch..... OFF
 Flight Controls SECURE
 Flaps UP

Window CLOSED
 Hobbs & Tach RECORD
 Aircraft..... TIE DOWN or CHOCKS
 Cabin Cover RECOVER CABIN, SECURE UNDER BELLY USING STRAPS, CHECK STRAPS CLEAR OF ANTENNAS AND DRAINS
 Cowl Plugs RE-PLACE WITH STRAP IN FRONT OF PROP AND ON TOP OF SPINNER
 Pitot Tube Cover RE-PLACE

CROSS COUNTRY FLIGHT PROCEDURE

- Park and tie down aircraft when possible.
- Order fuel.
- Call FSS and cancel flight plan, update weather, file new flight plan.
- Return to aircraft and check fuel/oil. Pay for fuel and get receipt.

**DID YOU LOCK THE AIRPLANE?
CLOSED FLIGHT PLANS?**