



ARCHER CHECKLIST

V SPEEDS (MPH)

Vso	60	VA	124
Vs1	70		
VR	70	VNO	140
VX	75	VNE	171
VY	85	VFE	115
VG	85		

Archer Max Crosswind 20

PASSENGER BRIEF

Seatbelts
 Air Vents
 Fire Extinguisher
 Exits, Emergency, Electronics
 Traffic/Talking
 Y... Questions

CREW BRIEF

- This will be a (normal/short/soft field) takeoff.
 - Calculated T/O distance is _____ ft.
 - We will depart RWY ____, which is ___ ft.
 - We will rotate at Vr __, Climb at Vx/Vy __.
1. *Any malfunction prior to Rotation:*
 - Announce “**ABORT**” 3X, power idle, brakes.
 2. *Engine failure after Rotation below 1,000 ft MSL.*
 - We will land straight ahead with flaps to decrease touchdown speed and shallow turns to avoid obstacles.

3. *Eng. failure, with alt above 1,000 ft MSL.*
 - Consider return to the field using best pilot judgment.

(You/I) will fly the emergency.
 We will depart to the (direct) climb to _____ ft.
 (You/I) have flight controls.

FUEL

100LL Blue
 Total Usable - Reserves 48 gal. (Cap 50 gal.)
 Archer – To tabs (Standard) 48 gal.

Best Power Fuel Burn Rate

Archer – 180 hp

75% - 10.5 gal/hr @ 2550 lbs (600 nm range - 4 hrs.)
 50% - 7.8 gal/hr @ 2550 lbs (650 nm range - 6.4 hrs.)

RICH OF PEAK (ROP) – BEST POWER

1). Reference Power vs. Alt Chart for RPM setting, then.....

Leaning Fuel with EGT

- a). Lean mixture until EGT peaks
- b). Set marker bug on peak
- c). Enrich mixture 100° F Rich of Peak

Leaning Fuel with RPM

- a). Lean mixture until engine runs rough
- b). Enrich mix. until engine runs smoothly

OIL

Capacity min 6 qts.
max 8 qts.
Type Aeroshell W15W-50

AIRCRAFT

Tire Pressure Nose & Mains 24 in. lbs.
Main Struts 4.5 in.
Nose 3.25 in.
Brake Fluid MIL-H-5606

Flap Positions 10°, 25°, 40°

Engine
Archer Lycoming 180 hp @ 2700 rpm

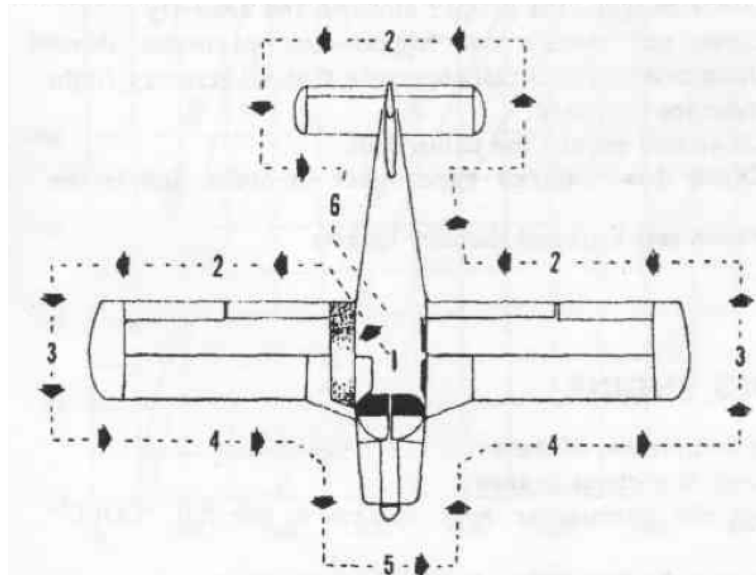
Alternator 60 amp/hr
Battery 12 volt

PERFORMANCE

Archer
Service Ceiling 13.6K @ 2550 lbs.
Absolute Ceiling 15.7K @2550 lbs.

TRANSPONDER CODES

VFR 1200
Hijacking 7500
Lost Comm 7600
Emergency 7700



AIRCRAFT ACCEPTANCE

1. MAINTENANCE STATUSCHECK
2. HOBBS/TACH TIMES CHECK

(1) PREFLIGHT INSPECTION CABIN

1. A.R.O.W DOCUMENTS..... CHECK
2. CONTROL WHEEL..... FREE & CORRECT
3. CIRCUIT BREAKERS CHECK
4. IGNITION SWITCH..... OFF
5. RADIO/AVIONICS OFF
6. CARBURETOR HEAT COLD
7. BATTERY/MASTER SWITCH ON
8. FUEL QTY/SELECT DESIRED TANK..CHECK
9. LIGHTS/PITOT HEAT..... ON/CHECK/OFF
10. STALL WARNING..... CHECK
11. BATTERY/MASTER SWITCH OFF
12. FLAPS..... EXTENDED
13. PARKING BRAKE..... AS REQ
14. FIRE EXT/SAFETY EQUIP CHECK
15. EMPTY SEATS..... SEAT BELTS FASTENED
16. BAGGAGE..... SECURE



EXTERNAL INSPECTION

(2, 3, 4) RIGHT WING

1. WING (TRAILING EDGE/TOP) CHECK
2. FLAP CHECK
3. AILERON CHECK
4. NAV/ANTI COLLISION LIGHTS CHECK
5. WING (LEADING EDGE) CHECK
6. FUEL TANK SUMP..... DRAIN
7. FUEL TANKVIS CHECK-SECURE CAP
8. FUEL VENT..... CHECK
9. TIE DOWN/CHOCKS REMOVE
- 10.MAIN STRUT.....PROP INFLAT (4.5")
- 11.TIRE/BRAKE CHECK
- 12.DOOR HINGES CHECK

(5) ENGINE COMPARTMENT

1. WINDSHIELD CHECK
2. RIGHT COWLING.....CHECK COND/OPEN
3. ENGINE (HOSES, CLAMPS) CHECK
4. OIL CHECK LEVEL (MIN 6 QTS)
5. DIP STICK PROPERLY SEATED
6. RIGHT COWLING PROPERLY SEATED
7. PROPELLER/SPINNER.....CHECK
8. NOSE WHEEL TIRE.....CHECK
9. NOSE GEAR STRUT...PROP INFLAT (3.25")
- 10.TOW BAR/CHOCKS...REMOVED/STOWED
- 11.AIR INLETS.....CLEAR
- 12.ALTERNATOR BELTCHECK TENSION
- 13.LEFT COWLINGCHECK COND/OPEN
- 14.ENGINE (HOSES, CLAMPS) CHECK
- 15.BRAKE FLUID CHECK
- 16.LEFT COWLING PROPERLY SEATED
- 17.FUEL FILTER DRAIN

(4, 3) LEFT WING

1. WING (LEADING EDGE/TOP) CHECK
2. TIRE/BRAKE CHECK
3. MAIN STRUT.....PROPER INFLAT (4.5")
4. FUEL TANK SUMP..... DRAIN
5. FUEL TANK VENT CHECK
6. TIE DOWN/CHOCKS REMOVE
7. FUEL TANKCHECK VIS SECURE CAP

8. STALL WARNING.....CHECK
9. PITOT COVER.....REMOVED/HOLES CLEAR
- 10.NAV ANTICOLLISION LIGHTSCHECK
- 11.AILERONCHECK
- 12.FLAPCHECK

(2) FUSELAGE (LEFT SIDE)

1. GENERAL CONDITIONCHECK
2. ANTENNAS.....CHECK
3. UNDERBELLY.....CHECK

(2) EMPENNAGE

1. STABILATOR.....FREE AND CORRECT
2. RUDDERCHECK
3. TAIL TIE DOWN..... REMOVE
4. ANTENNAS.....CHECK

(6) FUSELAGE (RIGHT SIDE)

1. GENERAL CONDITIONCHECK
2. UNDERBELLY.....CHECK



BEFORE STARTING ENGINE

1. FLAPS RETRACTED
2. SEATSADJUSTED SEAT
3. BELTS/HARNESSES FASTENED
4. ANTI-COLLISION BEACON ON
5. PASSENGER BRIEF*/**SAFETY**.....BRIEFED
6. BRAKES HOLD

STARTING ENGINE

(NORMAL AND/OR COLD)

DO NOT USE PRIMER IF ENGINE IS HOT

1. KEYIN IGNITION
2. PRIMETWO STROKES (AS REQ)
3. MIXTURE..... FULL RICH
4. BATTERY/MASTER SWITCH ON
5. ELEC FUEL PUMPON/CHK PRESS/OFF
6. THROTTLE (PUMP 2X)1/4 IN. OPEN
7. PROPELLER AREA.....“CLEAR PROP”
8. IGNITION SWITCH..... BOTH/START
(IF NO START WITHIN 5 SEC. PRIME &
REPEAT PROCEDURE)
9. THROTTLE1,000 RPM
- 10.OIL PRESSURE..... INDICATION IN 30 SEC
- 11.MIXTURE..... LEAN (ABOUT 1”)

TAXI

1. AVIONICS.....ON/SET
(PROGRAM GPS)
2. RADIOSON/SET
(ATIS, CLR DEL)
3. TRANSPONDER ALT
4. FLIGHT INSTRUMENTS.....CHECK SET
5. NAV/ANTI COLL LIGHTS..... AS REQ
6. RADIOSTATE INTENT
(GND, CTAF)
7. TAXI AREA.....CLEAR
8. THROTTLE APPLY SLOWLY
9. BRAKES RELEASE/BRAKE CHECK

ENGINE RUN-UP

1. DOOR CLOSED & LATCHED
2. ELECTRIC FUEL PUMP.....ON
3. FUEL QTY...SWITCH TANK/FULEST TANK
4. ELECTRIC FUEL PUMP.....OFF
5. PRIMER IN & LOCKED
6. MIXTURE.....FULL RICH
7. OIL TEMPGREEN ARC
8. THROTTLE2,000 RPM
9. VACUUM..... 5.0” GREEN
- 10.AMMETER.....POSITIVE (CHARGING)
- 11.OIL PRESSUREGREEN ARC
- 12.FUEL PRESSUREGREEN ARC
- 13.CARB HEAT.....ON/OFF, RPM DROP
- 14.MAGNETOS.....LEFT/BOTH/RIGHT/BOTH
(MAX DROP 175 RPM/MAX DIFF 50)
- 15.THROTTLE IDLE 600-800 RPM
- 16.THROTTLE1000 RPM
- 17.FLIGHT INSTRUMENTS..... CHECK/SET
- 18.CIRCUIT BREAKERS/FUSES..... CHECK
- 19.CREW BRIEF*ANNOUNCE
- 20.RADIOS/AVIONICS/NAV.....SET
(GND, TWR, DEPT, CTAF)

NORMAL TAKE-OFF

1. ELECTRIC FUEL PUMP ON
2. MIXTURE.....FULL RICH
3. CARBUETOR HEAT OFF
4. TRANSPONDER ALT
5. LANDING LIGHT..... ON
6. FLAPS SET
7. TRIM TAB(S)..... SET
8. DOORS/WINDOWSLATCHED
9. APPROACH COURSE.....FINAL CLEAR
- 10.RADIO.....STATE: POSITION/INTENT

LAST FINAL CHECK

LIGHTS.....LANDING LIGHT ON
CAMERA.....TRANSPONDER ALT
ACTION.....SET UP FOR TAKEOFF



SHORT FIELD TAKE OFF

1. FLAPS.....2 NOTCHES
2. BRAKE.....HOLD
3. THROTTLE.....FULL
4. ENG INSTRUMENTS.....IN THE GREEN
5. BRAKES.....RELEASE
6. CLIMB OBSTICALVx 74/Vy 85

SOFT FIELD TAKE OFF

1. FLAPS.....2 NOTCHES
2. CONTROL WHEEL.....FULL BACK PRESS
3. THROTTLE.....FULL
4. ENG INSTRUMENTS.....IN THE GREEN
5. BRAKES.....RELEASE
6. CLIMB OBSTICALVx 74/Vy 85

CLIMB (1,000 AGL CHECK) - NORMAL

1. THROTTLE..... FULL
2. FLAPS..... UP
3. CRUISE CLIMBVy 85/100 MPH
4. ELECTRIC FUEL PUMP OFF
5. LANDING LIGHT..... OFF

CRUISE

Ref Lycoming Oper. Manual

1. NORMAL MAX POWER..... 75%
2. POWER SET PER POWER TABLE
3. MIXTURE(ABOVE 5000') LEAN
4. FLIGHT INSTRUMENTS ADJUST

DESCENT

1. THROTTLE AS REQ
2. CARB HEAT..... AS REQ
3. AIRSPEED..... AS REQ
4. MIXTUREENRICH AS YOU DESCEND

BEFORE LANDING

1. ELECTRIC FUEL PUMP ON
2. FUEL SELECTORFULLEST TANK
3. MIXTURE FULL RICH
4. LANDING LIGHT..... ON
5. RADIOSSET
6. HEADING INDICATOR.....SET
7. FLAPS.....SET
8. SEAT BELTS/HARNESSES FASTENED

Gas fullest tank

Fuel pump on

Mixture full rich

Set up/Lights on

AFTER LANDING - CLEAR OF ACTIVE

1. TRANSP..... STBY (OFF IF END OF FLT)
2. CARB HEAT.....OFF
3. ELECTRIC FUEL PUMP OFF
4. LANDING LIGHT..... OFF
5. MIXTURELEAN (ABOVE 1")
6. FLAPS..... RETRACTED

ENGINE SHUTDOWN

1. ANTI-COLLISION BEACONON
2. RADIOS/AVIONICS.....OFF
3. THROTTLE.....1,200 (10 SEC)/1,000 RPM
4. MIXTUREIDLE CUT-OFF
5. IGNITION SWITCHOFF
6. ELECTRIC SWITCHES.....OFF
7. BATTERY/MASTER SWITCHOFF



SECURE AIRCRAFT

1. HOBBS/TACH TIME RECORD
2. CABIN.....CLEAN
3. CHOCKS..... INSTALL
4. PITOT TUBE COVER INSTALL
5. TIE DOWNS AS REQ
6. DOOR/WINDOW CLOSED & LOCKED
7. AIRCRAFT COVER INSTALL
8. POST FLIGHT INSPEC.....COMPLETE
9. ACFT DISCREP.....ANNOTATE/NOTIFY

REMINDER:

- CELL PHONES
- MASTER SWITCH OFF
- LEAVE CHECKLIST WITH AIRCRAFT



EMERGENCY CHECKLIST

ENGINE FIRE - START

1. STARTERCONTINUE CRANKING
2. MIXTURE..... IDLE CUT-OFF
3. THROTTLEFULL OPEN
4. FUEL PUMP.....OFF
5. FUEL SELECTOR VALVES OFF
6. IF FIRE CONTINUES, EVACUATE AND EXTINGUISH FIRE

ENGINE FAILURE – BELOW Vr

1. THROTTLE.....IDLE
2. BRAKES.....AS REQ
3. ENGINE.....SHUTDOWN IF NEEDED

ENGINE FAILURE – ABOVE Vr

BELOW 1,000 AGL

1. LAND STRAIGHT.....AHEAD
2. AIRSPEED..... MAINT SAFE A/S
3. FLAPS AS NEEDED
4. ENGINE.....SHUTDOWN

1,000 AGL OR HIGHER

1. AIRSPEED.....BEST GLIDE 85
2. FUEL SELECTOR..... SWITCH
3. ELECTRIC FUEL PUMP ON
4. MIXTURE..... RICH
5. CARB HEAT ON
6. BATTERY/MASTER SWITCH..... ON
7. IGNITION..... RESTART/RESTART

ENGINE FAILURE - FLIGHT

1. CARB HEAT.....ON
2. MIXTURERICH
3. ELECTRIC FUEL PUMPON
4. PRIMER..... IN AND LOCKED
5. FUEL SELECTOR SWITCH
6. ENGINE GUAGES CHECK
7. FUEL PRESSURE CHECK
8. IGNITION START/BOTH, L, R

POWER OFF LANDING

1. AIRSPEED..... BEST GLIDE 85
2. BEST PLACE TO LAND PILOT OPTION
3. TRANSPONDER.....7700
4. RADIO..... MAYDAY/SOULS ONBOARD

LANDING ASURED

5. IGNITION OFF
6. MASTER..... OFF
7. FUEL SELECTOR OFF
8. MIXTUREIDLE CUT-OFF
9. SEATBELTS.....TIGHTEN
- 10.FLAPS..... REMOVED/STOWED
- 11.DOORAJAR



ELECTRICAL FIRE (SMOKE IN CABIN)

1. MASTER..... OFF
2. VENTS..... OPEN
3. CABIN HEAT..... OFF
4. PITCH..... MANEUVERING SPEED
5. LANDAS SOON AS PRACTICAL

ENGINE FIRE IN FLIGHT

1. MIXTURE..... IDLE CUT-OFF
2. THROTTLEIDLE
3. FUEL PUMP.....OFF
4. FUEL SELECTOR..... OFF
5. HEATER/DEFROST..... OFF
6. PREPARE FOR POWER OFF LANDING

LOSS OF OIL PRESSURE

1. THROTTLENO SUDDEN CHANGES
2. LAND ASAP

HIGH OIL TEMP

1. OIL PRESSURE GUAGECHECKS
2. LOW RISE IN TEMP LAND ASAP



ABNORMAL CHECKLIST

LOSS OF FUEL PRESSURE

1. FUEL PUMP ON
2. FUEL SELECTOR.....FULLEST TANK

ALTERNATOR FAILURE

1. AMMETER GUAGE NOTE
2. LIGHTS OFF IF POSSIBLE
3. ELECTRICAL LOAD REDUCE
4. CIRCUIT BREAKERS CHECK
5. ALT SWITCH..... OFF 30 SEC THEN ON
6. IF GUAGE CONT 0 OUTPUT.....ALT SWITCH-OFF

ENGINE ROUGHNESS

1. CARB HEAT.....ON & WAIT-RPM TO INCREASE
2. MIXTURE.... ADJUST FOR SMOOTHNESS
3. FUEL PUMP ON
4. FUEL SELECTOR..... SWITCH
5. ENGINE GUAGES..... CHECK
6. MAGNETO L,R, THEN BOTH

SPINS

1. POWER IDLE
2. AILERON NEUTRAL-AS REQUIRED
3. RUDDER FULL OPPOSITE
4. ELEVATOR.....FULL FORWARD

WHEN ROATION STOPS

5. CONTROL WHEEL.....AS REQUIRED
6. THROTTLE.....AS REQUIRED

OPEN DOOR

1. SPEED..... SLOW TO 100 MPH
2. CABIN VENTS CLOSE
3. STORM WINDOW OPEN

RADIO OUT

1. RADIOS..... SWITCH
2. VOLUME.....CHECK
3. RADIO MASTER.....CYCLE
4. CIRCUIT BREAKERS.....CHECK
5. TRANSPONDER.....SET 7600
6. BEACON/NAV/LANDING LIGHTS.....ON

Note:

*Bluetooth headset call FSS/Tower on cell phone you have a radio failure.

*VFR Uncontrolled airfield.....LAND

*VFR Controlled airfieldLook for tower light gun signals to LAND.

LANDING WITH A FLAT MAIN TIRE

1. EMERGENCY DECLARE
2. LAND ON GOOD TIRE.....WING LOW ON GOOD TIRE
3. AILERON.....APPLY FULL IN DREICTION OF GOOD TIRE



Pre-Maneuver Checklist

Must be completed prior to any maneuver

Clearing turns.....L, R 90° deg
Altitude.....Safe Alt for Maneuver
Radio.....Call out intentions
Set up.....**Boost pump on (fuel)**
Gas fullest tank
Mixture Rich

Power-Off Stall – Approach

Altitude.....Min. 1,500 ft agl
Throttle.....1,700 rpm
Altitude Maintain.....Airspeed 80 mph
White arc.....slowly add 3 notches flaps
Stabilized Approach.....Begin descent
Throttle.....Reduce to Idle
Pitch Attitude.....as if landing

Recover

Back pressure.....Reduce
Throttle.....Full fwd
Wings.....Level, coordinated
Flaps.....One notch out
Pitch.....Vy 85
VSI.....Positive rate climb (above 0)
Flaps.....Reduce one notch at a time
Altitude.... climb to original alt and level off

Power-On Stall - Departure

Altitude.....Min. 1,500 ft agl
Throttle.....1,700 rpm
Altitude Maintain.....Airspeed 80 mph
Throttle.....Full Fwd
Pitch Attitude.....as if taking off

Recover

Back pressure.....Reduce
Throttle.....Full Fwd
Wings.....Level, coordinated
Pitch.....Vx 75 or Vy 85
Altitude.... climb to original alt and level off

Slow Flight

Altitude.....Min. 1,500 ft AGL
Throttle.....1,700 RPM
Flaps.....Clean 0 flaps
Dirty 3 notches
Airspeed.....Clean 75 mph
Dirty 65 mph
Throttle.....As necessary to maint. alt.
Pitch.....Up to decrease airspeed
Down to increase airspeed

Steep Turns

Altitude.....Min. 1,500 ft. AGL
Power.....2,300 rpm
Airspeed.....100 (Va or lower)
Heading.....noted
Bank.....45±10 deg
Pitch...slight back press, keep nose on horiz.
Power.....add 200-300 rpm
Trim.....as required
Rollout.....on noted heading ±10 deg
Pitch.....nose forward to prevent ballooning

Ground Reference Maneuvers

Altitude.....800 – 1000 ft agl
Entry..... Downwind
Exit.....Downwind
S-Turns
Rectangular Course
Turns around a point



Short-Field Takeoff – See checklist

Soft-Field Takeoff – See checklist

Short-Field Landing

Flaps.....3 notches (45° deg)
Airspeed.....75 mph
Touchdown.....within 200 ft of point
Braking.....Max while pulling full aft on
yoke, Flaps 0

Soft-Field Landing

Flaps.....45° deg
Touchdown.....Softly, mains first
Nose wheel.....Gently lower

Go-Around

Throttle.....Full fwd
Flaps.....25°
Pitch.....Vx 75, Vy 85
VSI.....Positive rate of climb (above 0)
Flaps.....Reduce one notch at a time
Side step.....if conflicting traffic

Lost Procedures

- 1. Climb** - Better reception range, able to see landmarks.
- 2. Circle** - Don't want to get more lost, look for ground reference.
 - *Find nearest airport on GPS.
 - *Tune 2 diff VOR's and triangulate your position.
 - *Readjust flight instruments.
- 3. Confess** – to yourself that you are lost, and you need help
- 4. Communicate** – call ATC or 121.5 and confess lost
- 5. Comply** – Follow ATC instructions

Diversion

- Recognize a situation that requires a diversion
- Mark time and location,
- Turn on course, find exact heading
- Distance
- Groundspeed
- Time Enroute, ETA
- Fuel required, do I have enough?
- Weather
- FSS to announce diversion amend ETA
- Airspace ahead?
- Aircraft Performance?

