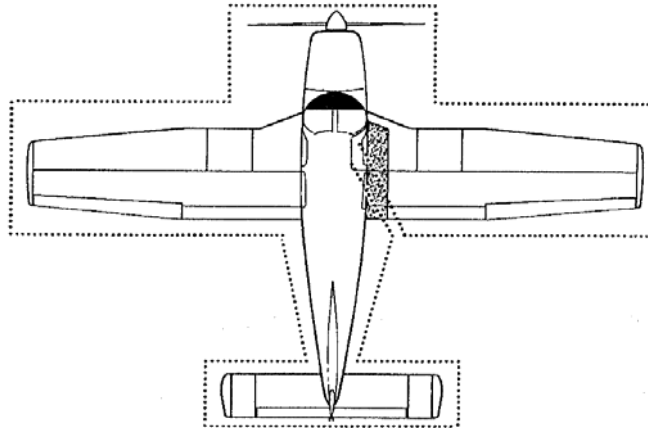


**PREFLIGHT**



**WALK-AROUND**  
Figure 4-1

**COCKPIT**

1. Control Wheel ..... Release Restraints
2. Parking Brake ..... Set
3. Avionics..... OFF
4. All Switches..... OFF
5. Mixture ..... Idle cut-off
6. Magneto Switches ..... OFF
7. Battery Master Switch ..... ON
8. Fuel Gauges ..... Check Quantity
9. Annunciator Panel ..... Check
10. Battery Master Switch ..... OFF
11. Flaps ..... Extend
12. Primary Flight Controls ..... Check Operation
13. Trim ..... Neutral
14. Required Papers and POH ..... Check on Board
15. Tow Bar and Baggage ..... Stow - Secure
16. Baggage Door ..... Secure

**RIGHT WING**

1. Surface Condition ..... Clear of ice, frost, snow
2. Flap and Hinges ..... Check
3. Aileron and Hinges ..... Check
4. Static wicks ..... Check - Secure
5. Wing Tip and Lights ..... Check
6. Fuel Tank ..... Check Supply – Secure Cap
7. Fuel Tank Vent..... Check Clear
8. Fuel Tank Sumps..... Drain
9. Tie Down and Chock ..... Remove
10. Main Gear Strut..... Check Inflation (4.5 ± 0.25 in)
11. Tire ..... Check
12. Brake Block and Disk..... Check
13. Fresh Air Inlet..... Clear

# ARCHER III CHECKLIST

OY-JAL

## NOSE SECTION

1. General Condition ..... Check
2. Cowling ..... Secure
3. Windshield ..... Clean
4. Propeller and Spinner ..... Check
5. Air Inlets ..... Clear
6. Engine Baffle Seals ..... Check
7. Chock..... Remove
8. Nose Gear Strut.....Check Inflation ( $3.25 \pm 0.25$  in)
9. Tire ..... Check
10. Oil.....Check Quantity (6-8 qts)
11. Dipstick ..... Properly Seated
12. Oil Filler Cap ..... Secure
13. Fuel Strainer ..... Drain

## RIGHT WING

1. Surface Condition ..... Clear of ice, frost, snow
2. Fresh Air Inlet..... Clear
3. Fuel Tank Sump ..... Drain
4. Fuel Tank Vent..... Check Clear
5. Main Gear Strut..... Check Inflation ( $4.5 \pm 0.25$  in)
6. Tire ..... Check
7. Brake Block and Disk..... Check
8. Tie Down and Chock ..... Remove
9. Fuel Tank ..... Check Supply – Secure Cap
10. Pitot/Static Head ..... Remove Cover – Holes Clear
11. Wing Tip and Lights ..... Check
12. Aileron and Hinges ..... Check
13. Flap and Hinges..... Check
14. Static wicks ..... Check - Secure

## FUSELAGE

1. Antennas..... Check
2. Empennage..... Clear of ice, frost, snow
3. Stabilator and Trim Tab ..... Check
4. Tie Down..... Remove

## MISCELLANEOUS

1. Battery Master Switch ..... ON
2. Flaps ..... Retract
3. Interior Lighting ..... ON and Check
4. Pitot Heat Switch ..... ON
5. Pitot Heat OFF/INOP Annunciator..... Extinguished
6. Pitot Heat Switch ..... OFF
7. Pitot Heat OFF/INOP Annunciator..... Illuminated
8. Exterior Lighting Switches ..... ON and Check
9. Stall Warning Horn..... Check
10. All Lighting Switches..... OFF
11. Battery Master Switch ..... OFF

## BEFORE STARTING ENGINE

1. Door ..... Closed and Secure
2. Seat Belts and Harness ..... Fasten and Secure
3. Brakes ..... Set
4. Circuit Breakers ..... Check In
5. Alternate Static Source ..... OFF
6. Carburetor Heat ..... Full Cold
7. Avionics Master Switch ..... OFF
8. Fuel Selector ..... Desired Tank

## NORMAL START

1. Throttle ..... Open ¼ in (cold engine)  
..... Open ½ in (hot engine)
2. Battery Master Switch ..... ON
3. Alternator Switch ..... ON
4. **Left** Magneto Switch ..... ON
5. Electric Fuel Pump ..... ON
6. Prime ..... As Required
7. Mixture ..... Full RICH
8. Propeller ..... Clear
9. Starter ..... Engage
10. Throttle ..... Adjust
11. **Right** Magneto Switch ..... ON
12. Oil pressure ..... Check

NOTE: If a positive oil pressure is not indicated within 30 seconds (40 seconds in cold weather) following engine start, shut down.

## START - FLOODED ENGINE

1. Throttle ..... Open Full
2. Battery Master Switch ..... ON
3. Alternator Switch ..... ON
4. **Left** Magneto Switch ..... ON
5. Electric Fuel Pump ..... OFF
6. Mixture ..... Idle Cut
7. Propeller ..... Clear
8. Starter ..... Engage
9. Mixture ..... Advance
10. Throttle ..... Retard
11. **Right** Magneto Switch ..... ON
12. Oil pressure ..... Check

## START – EXTERNAL POWER

1. Battery Master Switch ..... OFF
2. Alternator Switch ..... OFF
3. **Left** Magneto Switch ..... ON
4. All Electrical Equipment ..... OFF
5. Terminals ..... Connect
6. External Power Plug ..... Insert in Fuselage
7. Electric Fuel Pump ..... ON
8. Prime ..... As Required
9. Mixture ..... Full RICH
10. Propeller ..... Clear
11. Starter ..... Engage
12. Throttle ..... Lowest possible RPM
13. **Right** Magneto Switch ..... ON
14. Oil pressure ..... Check
15. External Power Plug ..... Disconnect from Fuselage
16. Battery Master Switch ..... ON
17. Alternator Switch ..... ON – Check Ammeter

## WARM-UP

1. Throttle..... 800 – 1200 RPM
2. Avionics Master ..... ON

## TAXIING

1. Taxi area ..... Clear
2. Parking Brake ..... Released
3. Throttle..... Apply Slowly
4. Brakes..... Check
5. Steering..... Check

## ENGINE RUNUP

1. Parking Brake ..... Set
2. Autopilot ..... Self test
3. Electric trim ..... Test and Set
4. Mixture ..... Rich
5. Throttle..... 2000 RPM (min oil temp 50 °F)
6. Magnetos ..... Check 175/50
7. Vacuum..... 4.8 – 5.2 in
8. Oil Temperature..... Check
9. Oil Pressure ..... Check
10. Ammeter ..... Check
11. Annunciator Panel ..... Press-to-test
12. Carburetor Heat ..... Approx. 75 RPM drop
13. Electrical Fuel Pump..... OFF
14. Fuel Pressure..... Check
15. Throttle..... Retard
16. Standby Vacuum ..... Check – then OFF

## BEFORE TAKEOFF

1. Battery Master Switch ..... Verify ON
2. Alternator Switch..... Verify ON
3. Magnetos ..... Verify Both ON
4. Flight Instruments ..... Check
5. Nav aids ..... Set
6. Fuel Selector..... Proper Tank
7. Electric Fuel Pump..... ON
8. Engine Gauges ..... Check
9. Carburetor Heat ..... Verify OFF
10. Mixture ..... Full Rich
11. Flaps ..... Set
12. Trim ..... Set
13. Autopilot ..... Verify OFF
14. Controls..... Check Free
15. Seats, Belts, Harness ..... Check Secure
16. Door ..... Check Latched
17. Departure Brief..... Reviewed

## LINING UP

1. Strobe / Landing Light..... ON
2. Transponder..... Alt
3. Gyros (*RWY Hdg*).....Set
4. Takeoff Time ..... Note

## NORMAL TAKE OFF

1. Flaps ..... Set
2. Trim ..... Set
3. Power..... Full Throttle
4. Stabilator Control .....Lift nose at 60 KIAS

## SHORT FIELD TAKE OFF

1. Flaps ..... 25° (second notch)
2. Trim ..... Set slightly aft of neutral
3. Power..... Full Throttle prior to Brake Release
4. Brakes ..... Release
5. Stabilator Control .....Lift nose at 55 KIAS
6. Accelerate ..... to 60 KIAS then to  $V_X$  64 KIAS
7. Flaps ..... Retract slowly
8. Accelerate ..... to  $V_Y$  76 KIAS

## CLIMB

1. Best Rate (flaps up) ..... 76 KIAS
2. Best Angle (flaps up) ..... 64 KIAS
3. Enroute ..... 90 KIAS
4. Electric Fuel Pump..... OFF at Desired Altitude

## CRUISE

1. Power.....Set per Power Table
2. Mixture .....Adjust

## DESCENT – NORMAL

1. Throttle ..... 2500 RPM
2. Airspeed..... 122 KIAS
3. Mixture ..... RICH
4. Carburetor Heat ..... ON if Required

## DESCENT – POWER OFF

1. Carburetor Heat .....ON if Required
2. Throttle..... Closed
3. Airspeed..... As required.
4. Mixture ..... As required
5. Power..... Verify with throttle every 30 seconds

## APPROACH AND LANDING

1. ATIS ..... Received
2. Altimeters ..... Set
3. Heading Indicator..... Set
4. Landing Lights..... On / As Required
5. Fuel Selector Valve.....Proper Tank
6. Seats, Belts, Harness ..... Secure
7. Electric Fuel Pump..... ON
8. Mixture ..... Set
9. Flaps ..... Set – 102 KIAS max
10. Autopilot..... OFF
11. Initial Approach Speed..... 75 KIAS
12. Final Approach Speed (flaps 40°)..... 66 KIAS

**BALKED LANDING**

1. Power..... Full Throttle
2. Carburetor Heat ..... OFF
3. Check safe speed and altitude .....

**AFTER LANDING**

1. Carburetor Heat ..... Cold
2. Wing Flaps..... Retract
3. Transponder..... Standby

**SHUT DOWN**

NOTE: The flaps must be placed in the up position for the flap stop to support weight.

1. Flaps ..... Retract
2. Electric Fuel Pump..... OFF
3. Avionics Master Switch..... OFF
4. Electrical Switches..... OFF
5. Throttle..... Closed
6. Mixture ..... Idle Cut
7. Magneto Switches ..... OFF
8. Alternator Switch..... OFF
9. Battery Master Switch..... OFF
10. Gust Lock..... Installed
11. Documents..... Filled Out

## ENGINE FAILURE DURING TAKEOFF

1. Throttle..... Idle
2. Brakes..... Apply
3. Wing Flaps..... Retract
4. Mixture..... Idle Cut
5. Ignition Switch..... OFF
6. Master..... OFF

## ENGINE FAILURE AFTER TAKEOFF

1. Airspeed..... 75 KIAS
2. Mixture..... Idle cut
3. Fuel Selector..... OFF
4. Ignition Switch..... OFF
5. Master..... OFF
6. Wing Flaps..... As required

## ENGINE FAILURE IN FLIGHT

1. Airspeed..... 75 KIAS
2. Fuel Selector..... Switch Tank
3. Electric Fuel Pump..... ON
4. Mixture..... RICH
5. Carburetor Heat..... ON
6. Engine Gauges..... Check for indication
7. Mayday Call..... Completed
8. Passenger..... Briefed
9. Seats & Belts..... Locked
10. ELT..... On
11. Transponder..... 7700

## POWER OFF LANDING

1. Airspeed..... 75 KIAS (flaps up)  
..... 66 KIAS (flaps 40)
2. Flaps..... As required (40° recommended)
3. Throttle..... Close
4. Mixture..... Idle Cut
5. Magnetos..... OFF
6. Battery Master Switch..... OFF
7. Alternator Switch..... OFF
8. Fuel Selector..... OFF
9. Seats, Belts, Harness..... Secure and Tight
10. Doors..... Unlatch before touchdown

## ENGINE FIRE DURING START

1. Starter..... Crank Engine
2. Mixture..... Idle Cut
3. Throttle..... Open
4. Electric Fuel Pump..... OFF
5. Fuel Selector..... OFF
6. Abandon if fire continues
7. Airplane..... Evacuate
8. Fire Extinguisher..... As Necessary

## ENGINE FIRE IN FLIGHT

1. Fuel Selector..... OFF
2. Throttle..... Close
3. Mixture..... Idle Cut
4. Electric Fuel Pump..... Check OFF
5. Cabin Heat & Vents..... Closed

***Continue Emergency Landing Checklist***

**ELECTRICAL FIRE**

- 1. Battery Master Switch..... OFF
- 2. Alternator Switch..... OFF
- 3. Avionics Master..... OFF
- 4. Ventilation .....Open
- 5. Cabin Heat..... OFF

***Land as soon as possible***

**LOSS OF OIL PRESSURE**

- 1. Flight ..... Terminate ASAP
- 2. Prepare for Power Off landing

**HIGH OIL TEMPERATURE**

- 1. Flight ..... Terminate ASAP
- 2. Prepare for Power Off landing

**LOSS OF FUEL PRESSURE**

- 1. Electric Fuel Pump..... ON
- 2. Fuel Selector..... Verify fullest tank

**ELECTRICAL FAILURES**

NOTE: Anytime the bus voltage is below 25 Vdc, the Low Bus Voltage Annunciator will be illuminated.

**ALT annunciator light illuminated:**

- 1. Ammeter ..... Check to verify inop. ALT

**If ammeter shows zero:**

- 2. ALT Switch..... OFF
- 3. Reduce electrical load to minimum.....
- 4. ALT Circuit Breaker ..... Check and reset as req.
- 5. ALT Switch..... ON

**If power not restored:**

- 6. ALT Switch..... OFF
- 7. Flight ..... Terminate ASAP

**ELECTRICAL OVERLOAD**

- 1. ALT Switch..... ON
- 2. BAT Switch ..... OFF

**If alternator loads are reduced:**

- 3. Electrical load..... OFF
- 4. Reduce electrical load to minimum.....
- 5. Land as soon as practical

**If alternator loads are not reduced:**

- 6. ALT Switch..... OFF
- 7. BAT Switch ..... As required
- 8. Flight ..... Terminate ASAP

**TRANSPONDER FREQUENCY**

- Emergency.....7700
- Radio Failure .....7600
- Standard VFR .....7000

**SPEEDS**

- Takeoff**
  - Normal Climb Out ..... 80 KIAS
  - Short Field Takeoff, Flaps 25° @ 50 ft ..... 65 KIAS
- Climb, Flaps Up**
  - Best Angle, V<sub>X</sub>..... 64 KIAS
  - Best Rate, V<sub>Y</sub>..... 76 KIAS
  - Enroute ..... 90 KIAS
- Landing Approach**
  - Normal Approach, Flaps Up ..... 75 KIAS
  - Short Field Approach, Flaps 40° ..... 66 KIAS
- Balked Landing**
  - Maximum Power, Flaps 25° ..... 65 KIAS
- Maneuvering Speed**
  - 1157 kg / 2550 lbs ..... 113 KIAS
  - 958 kg / 2113 lbs ..... 104 KIAS
  - 741 kg / 1634 lbs ..... 89 KIAS
- Max Demonstrated Crosswind Velocity**
  - Takeoff or Landing ..... 17 KTS
- Engine Failure After Takeoff**
  - Wing Flaps Up ..... 76 KIAS
  - Wing Flaps Down..... 66 KIAS
- Maximum Glide, Flaps Up**
  - 1157 kg / 2550 lbs ..... 76 KIAS
- Precautionary Landing With Engine Power** ..... 65 KIAS
- Landing without Engine Power**
  - Wing Flaps Up ..... 76 KIAS
  - Wing Flaps Down..... 66 KIAS

**CROSSWIND COMPONENT**

Angle between Wind Direction and Runway Hdg									
FOR CROSSWIND COMPONENT									
KTS	10°	20°	30°	40°	50°	60°	70°	80°	90°
5	1	2	3	3	4	4	5	5	5
10	2	3	5	6	8	9	9	10	10
15	3	5	8	10	11	13	14	15	15
20	3	7	10	13	15	17	19	20	20
25	4	9	13	16	19	22	23	25	25
30	5	10	15	19	23	26	28	30	30

**LIGHT SIGNALS**

Light Signal	Ground	Flight
Steady Green	Takeoff	Land
Flashing Green	Taxi	Continue
Steady Red	Stop	Give Way
Flashing Red	Clear RWY	Do not land
Flashing White	Return	—
Red / Green	Warning - Caution	

