

**SECTION 4
NORMAL PROCEDURES**

4.1 GENERAL

This section describes the recommended procedures for the conduct of normal operations for the Archer II. All of the required (FAA regulations) procedures and those necessary for operation of the airplane as determined by the operating and design features of the airplane are presented.

Normal procedures associated with those optional systems and equipment which require handbook supplements are provided by Section 9 (Supplements).

These procedures are provided to present a source of reference and review and to supply information on procedures which are not the same for all aircraft. Pilots should familiarize themselves with the procedures given in this section in order to become proficient in the normal operations of the airplane.

The first portion of this section consists of a short form check list which supplies an action sequence for normal operations with little emphasis on the operation of the systems.

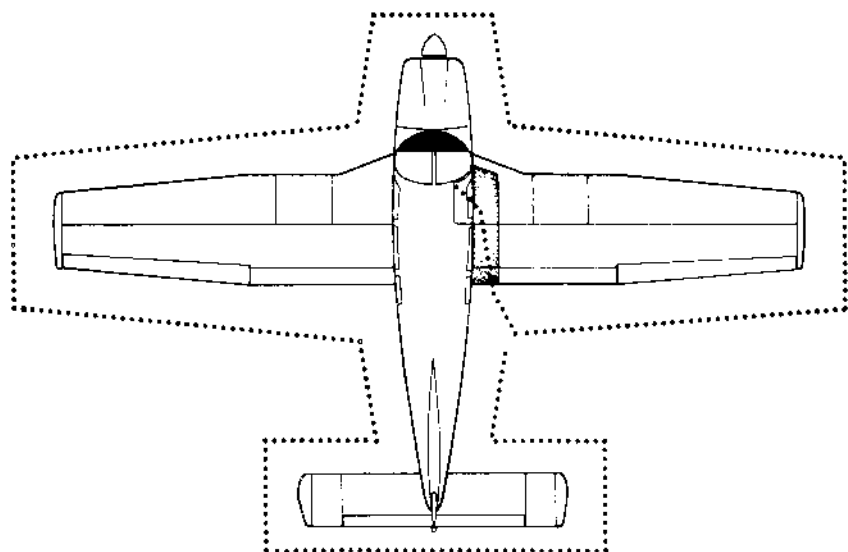
The remainder of the section is devoted to amplified normal procedures which provide detailed information and explanations of the procedures and how to perform them. This portion of the section is not intended for use as an in-flight reference due to the lengthy explanations. The short form check list should be used for this purpose.

4.3 AIRSPEEDS FOR SAFE OPERATIONS

The following airspeeds are those which are significant to the safe operation of the airplane. These figures are for standard airplanes flown at gross weight under standard conditions at sea level.

Performance for a specific airplane may vary from published figures depending upon the equipment installed, the condition of the engine, airplane and equipment, atmospheric conditions and piloting technique.

- (a) Best Rate of Climb Speed 76 KIAS
- (b) Best Angle of Climb Speed 64 KIAS
- (c) Turbulent Air Operating Speed (See
Subsection 2.3) 113 KIAS
- (d) Maximum Flap Speed 102 KIAS
- (e) Landing Final Approach Speed (Flaps 40°) 66 KIAS
- (f) Maximum Demonstrated Crosswind Velocity 17 KTS



WALK-AROUND
Figure 4-1

4.5 NORMAL PROCEDURES CHECK LIST

PREFLIGHT CHECK

Control wheel	release belts
Avionics	OFF
Master switch	ON
Fuel quantity gauges	check
Master switch	OFF
Ignition	OFF
Exterior	check for damage
Control surfaces	check for interference - free of ice, snow, frost
Hinges	check for interference
Wings	free of ice, snow, frost
Stall warning	check
Fuel tanks	check supply visually - secure caps

Fuel tank sumps	drain and check for water sediment and proper fuel
Fuel vents	open
Main gear struts	proper inflation (4.50 in.)
Tires	check
Brake blocks	check
Pitot head	remove cover - holes clear
Windshield	clean
Propeller and spinner	check
Fuel and oil	check for leaks
Oil	check level
Dipstick	properly seated
Cowling	secure
Inspection covers	secure
Nose wheel tire	check
Nose gear strut	proper inflation (3.25 in.)
Air inlets	clear
Alternator belt	check tension
Tow bar and control locks	stow
Baggage	stowed properly - secure
Baggage door	close and secure
Fuel strainer	drain and check for water sediment and proper fuel
Primary flight controls	proper operation
Cabin door	close and secure
Required papers	on board
Seat belts and harness	fasten/adjust- check inertia reel

BEFORE STARTING ENGINE

Brakes	set
Carburetor heat	full COLD
Fuel selector	desired tank
Radios	OFF

STARTING ENGINE WHEN COLD

Throttle	1/4" open
Master switch	ON
Electric fuel pump	ON
Mixture	full RICH

Starter engage
Throttle adjust
Oil pressure check

If engine does not start within 10 sec. prime and repeat starting procedure.

STARTING ENGINE WHEN HOT

Throttle 1/2" open
Master switch ON
Electric fuel pump ON
Mixture full RICH
Starter engage
Throttle adjust
Oil pressure check

STARTING ENGINE WHEN FLOODED

Throttle open full
Master switch ON
Electric fuel pump OFF
Mixture idle cut-off
Starter engage
Mixture advance
Throttle retard
Oil pressure check

STARTING WITH EXTERNAL POWER SOURCE

Master switch OFF
All electrical equipment OFF
Terminals connect
External power plug insert in fuselage

Proceed with normal start

Throttle lowest possible RPM
External power plug disconnect from fuselage
Master switch ON - check ammeter
Oil pressure check

WARM-UP

Throttle800 to 1200 RPM

TAXIING

Chocksremoved
Taxi areaclear
Throttleapply slowly
Brakescheck
Steeringcheck

GROUND CHECK

Parking brakeset
Throttle2000 RPM
Magnetosmax. drop 175 RPM -
max. diff. 50 RPM
Vacuum5.0" Hg. \pm .1
Oil tempcheck
Oil pressurecheck
Air conditionercheck
Annunciator panelpress-to-test
Carburetor heatcheck
Engine is warm for takeoff when throttle can be opened without engine
faltering.
Electric fuel pumpOFF
Fuel pressurecheck
Throttleretard

BEFORE TAKEOFF

Master switchON
Flight instrumentscheck
Fuel selectorproper tank
Electric fuel pumpON
Engine gaugescheck
Carburetor heatOFF
Seat backserect
Mixtureset
Primerlocked

Belts/ harness fastened/adjusted
Empty seats seat belts snugly fastened
Flaps set
Trim tab set
Controls free
Doors latched
Air conditioner OFF

TAKEOFF

NORMAL

Flaps set
Tab set
Accelerate to 52 to 65 KIAS
Control wheel back pressure to rotate
to climb attitude

SHORT FIELD, OBSTACLE CLEARANCE

Flaps 25° (second notch)
Accelerate to 41 to 49 KIAS depending on aircraft weight.
Control wheel back pressure to rotate
to climb attitude
After breaking ground, accelerate to 45 to 54 KIAS depending on aircraft
weight.
Accelerate to best flaps up angle of climb speed - 64 KIAS, slowly retract
the flaps and climb past the obstacle.
Accelerate to best flaps up rate of climb speed - 76 KIAS.

SOFT FIELD

Flaps 25° (second notch)
Accelerate to 41 to 49 KIAS depending on aircraft weight.
Control wheel back pressure to rotate
to climb attitude
After breaking ground, accelerate to 45 to 54 KIAS depending on aircraft
weight.
Accelerate to best flaps up rate of climb speed 76 KIAS.
Flaps retract slowly

Flaps set - 102 KIAS max
Air conditioner OFF
Trim to 75 KIAS. Final approach speed (flaps 40°) 66 KIAS

STOPPING ENGINE

Flaps retract
Electric fuel pump OFF
Air conditioner OFF
Radios OFF
Throttle full aft
Mixture idle cut-off
Magnetos OFF
Master switch OFF

PARKING

Parking brake set
Control wheel secured with belts
Flaps full up
Wheel chocks in place
Tie downs secure