Normal & Emergency Checklist

new ARCHER II



Carenado

NORMAL PROCEDURES CHECKLIST

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 Tanks sumps -- DRAIN AND CHECK FOR WATER
SEDIMENT AND PROPER FUEL
Fuel vents -- OPEN
Main Gear Struts -- PROPER INFLATION (4.50IN)
Tires -- CHECKS
Brakes Blocks -- CHECKS
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 (3.25IN)
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 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 -- ¼" OPEN
Master switch -- ON
Electric fuel pump -- ON
Mixture -- FULL RICH
Starter -- ENGAGE
Throttle -- CHECK

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

STARTING ENGINE WHEN HOT

Throttle -- ½" 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 -- CHECKL

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

Throttle -- 800 to 1200 RPM

TAXIING

Chocks -- REMOVED
Taxi area -- CLEAR
Throttle -- APPLY SLOWLY
Brakes -- CHECK
Steering -- CHECK

GROUND CHECK

Parking brake -- SET
Throttle -- 2000 RPM
Magnetos -- MAX. DROP 175RPM MAX. DIFF. 50RPM
Vacuum -- 5.0" HG+1
Oil Temp -- CHECK
Oil pressure -- CHECK
Air conditioner -- CHECK
Annunciator panel -- PRESS TO TEST
Carburetor hear -- CHECK
Engine is warm for takeoff when throttle can be opened without engine faltering.

Electric fuel pump -- OFF
Fuel pressure -- CHECK
Throttle -- RETARD

BEFORE TAKEOFF

Master switch -- ON
Flight instruments -- CHECK
Fuel selector -- PROPER TANK
Electric fuel pump -- ON
Engine gauges -- CHECK
Carburetor heat -- OFF
Seat backs -- ERECT
Mixture -- SET
Primer -- LOCKED
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 CLEARENCE

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 flap up rate of climb speed 76KIAS

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

CLIMB

Best rate (flaps up) -- 76 KIAS
Best angle (flaps up) -- 64 KIAS
En route -- 87 KIAS
Electric fuel pump -- OFF AT DESIRED ATTITUDE

CRUISING

Reference performance charts and
Avco-Lycoming Operator's Manual.
Normal max. Power -- 75%
Power -- SET POWER TABLE
Mixture -- ADJUST

DESCENT

NORMAL

Throttle -- 2500 RPM
Airspeed -- 122 KIAS
Mixture -- RICH
Carburetor heat -- ON IF REQUIRED

POWER OFF

Carburetor heat -- ON IF REQUIRED
Throttle -- CLOSED
Airspeed -- AS REQUIRED
Mixture -- AS REQUIRED
Power -- VERIFY WITH THROTTLE EVERY 30 SECOND

APPROACH AND LANDING

Fuel selector -- PROPER TANK
Seat backs -- ERECT
Belts/harnes -- FASTEN/ADJUST
Electric fuel pump -- ON
Mixture -- SET
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

EMERGENCY CHECK LIST

ENGINE FIRE DURING START

Starter -- CRANK ENGINE
Mixture -- IDLE CUT-OFF
Throttle -- OPEN
Electric fuel pump -- OFF
Fuel selector -- OFF
Abandon if fire continues

ENGINE POWER LOSS DURING TAKE OFF

If sufficient runaway remains for a normal landing,
land straight ahead.

If insufficient runaway remains:
Maintain safe airspeed.
Make only shallow turn to avoid obstructions.
Flaps as situation requires.

If sufficient altitude has been gained to attempt a restart:
Maintain safe airspeed
Fuel selector -- SWITCH TO TANK CONTAINING FUEL
Electric fuel pump -- CHECK ON
Mixture -- CHECK RICH
Carburetor heat -- ON
Primer -- LOCKED
If power is not regained, proceed with power off landing.

ENGINE POWER LOSS IN FLIGHT

Fuel selector -- SWITCH TO TANK CONTAINING FUEL
Electric fuel pump -- ON
Mixture -- RICH
Carburetor heat -- ON
Engine gauges -- CHECK FOR INDICATION OF CAUSE
OF POWER LOSS
Primer -- CHECK LOCKED
If no fuel pressure is indicated, check tank selector
position to be sure it is on a tank containing fuel.

When power is restored:
Carburetor heat -- OFF
Electric fuel pump -- OFF
If power is not restored prepare power off landing.
Trim for 76 KIAS

POWER OFF LANDING

Locate suitable field.
Establish spiral pattern.
1000 ft. above field at downwind position for normal landing approach.
When field can easily be reached, slow to 66 KIAS for shortest landing.

Touchdowns should normally be made at lowest possible airspeed with full flaps.

When committed to landing:
Ignition -- OFF
Master switch -- OFF
Fuel selector -- OFF
Mixture -- IDLE CUT-OFF
Seat belt and harness -- TIGHT

FIRE IN FLIGHT

Source of fire -- CHECK

Electrical fire (smoke in cabin):
Master switch -- OFF
Vents -- OPEN
Cabin heat -- OFF
Land as soon as practicable.

Engine fire:
Fuel selector -- OFF
Throttle -- CLOSED
Mixture -- IDLE CUT-OFF
Electric fuel pump -- CHECK OFF
Heater and defroster -- OFF
Proceed with power off landing procedure.

LOSS OF OIL PRESSURE

Land as soon as possible and investigate cause.
Prepare for power off landing.

LOSS OF FUEL PRESSURE

Electric fuel pump -- ON
Fuel selector -- CHECK ON FULL TANK

HIGH OIL TEMPERATURE

Land at nearest airport and investigate the problem.
Prepare for a power off landing.

ELECTRICAL FAILURES

ALT annunciator light illuminated:
Ammenter -- CHECK TO VERIFY INOP. ALT.

If ammeter shows zero:
ALT switch -- OFF

Reduce electrical loads to minimum:
ALT circuit breaker -- CHECK AND RESET AS REQUIRED
ALT switch -- ON

If power not restored:
ALT switch -- OFF
If alternator output cannot be restored, reduce electrical loads and land as soon as practical. The battery is the only remaining source of electrical power.

ELECTRICAL OVERLOAD (Alternator over 20 amp above known electrical load)

FOR AIRPLANES WITH SEPARATE BAT AND ALT SWITCH OPERATION
ALT switch -- ON
BAT switch -- OFF
If alternator loads are reduced:
Electrical load -- REDUCE TO MINIMUM
Land as soon as practical.
NOTE
Due to increased system voltage and radio frequency noise, operation with ALT switch ON and BAT switch OFF should be made only when required by an electrical system failure.
If alternator loads are not reduced:
ALT switch -- OFF
BAT switch -- AS REQUIRED
Land as soon as possible. Anticipate complete electrical failure.

SPIN RECOVERY

Throttle -- IDLE
Ailerons -- NEUTRAL
Rudder -- FULL OPPOSITE TO DIRECTION OF ROTATION
Control wheel -- FULL FORWARD
Rudder -- NEUTRAL (WHEN ROTATION STOPS)
Control wheel -- AS REQUIRED TO SMOOTHLY REGAIN LEVEL FLIGHT ALTITUDE

OPEN DOOR

If both upper and side latches are open, the door will trail slightly open and airspeed will be reduced slightly.

To close the door in flight:
Slow airplane to 87 KIAS
Cabin vents -- CLOSE
Storm window -- OPEN
If upper latch is open -- LATCH
If side latch is open -- PULL ON ARMREST WHILE MOVING LATCH HANDLE TO LATCHED POSITION
If both latches are open -- SIDE LATCH, THEN TOP LATCH

CARBURETOR ICING

Carburetor Heat -- ON
Mixture -- ADJUST FOR MAXIMUM SMOOTHNESS

ENGINE ROUGHNESS

Carburetor heat -- ON

If roughness continues after one min:
Carburetor heat -- OFF
Mixture -- ADJUST FOR MAXIMUM
SMOOTHNESS
Electric fuel pump -- ON
Fuel selector -- SWITCH TANKS
Engine gauges -- CHECK
Magneto switch -- L THEN R THEN BOTH

If operation is satisfactory on either one, continue on that magneto at reduced power and full RICH mixture to first airport. Prepare for power off landing.

Carenado

new ARCHER II

PA-28-181 Reference

VNE - Never Exceed Speed	154 KIAS
VNO - Max Structural Cruising Speed	125 KIAS
VA - Maneuvering Speed	
2550 pounds	113 KIAS
1634 pounds	89 KIAS
VFE - Maximum Flap Extended Speed	102 KIAS
VX - Best Angle of Climb Speed	64 KIAS
VY - Best Rate of Climb Speed	76 KIAS
Maximum Flap Speed	102 KIAS
Landing Final Approach Speed (Flaps 40°)	66 KIAS
Maximum Demonstrated Crosswind Velocity	17 KIAS



MARKING	KIAS VALUE OR RANGE
White Arc	49 - 102
Green Arc	55 - 125
Yellow Arc	125 - 154
Red Line	154

Carenado copyright 2009