



PIPER PA28-181 ARCHER III CHECKLISTS

SP - WOW

(serial no 2843039)

PART 1

— NORMAL PROCEDURES —

SPEEDS FOR SAFE OPERATION

V_{BG}	76 KIAS
V_X	64 KIAS
V_{X (25°)}	60 KIAS
V_Y	76 KIAS
V_{CLIMB}	87 KIAS
V_A	113 KIAS
V_{FE}	102 KIAS
V_{NO}	125 KIAS
V_{S0}	45 KIAS
V_{S1}	50 KIAS
V_{APP}	75 KIAS
V_{REF (40)}	66 KIAS

SPECIFICATIONS

Usable fuel	182 LTR (48 USG)
Taxi fuel (assumption)	5.5 LTR (1.4 USG)
Climb fuel (assumption)	46 LTR (12 USG)
Maximum crosswind	17 KIAS
Cruise 4000' @55%	2300 RPM / 106 KIAS / 31 LPH (8.2 GPH)
Cruise 4000' @65%	2450 RPM / 115 KIAS / 36 LPH (9.5 GPH)
Cruise 4000' @75%	2575 RPM / 124 KTAS / 42 LPH (11 GPH)

PREFLIGHT CHECKLIST

COCKPIT

Control wheelRELEASE RESTRAINTS
 Parking brakeSET
 AvionicsOFF
 All switchesOFF
 MixtureIDLE CUT OFF
 Magneto switchesOFF
 Battery master switchON
 Fuel gaugesCHECK QUANTITY
 Annunciator panelCHECK
 Battery master switchOFF
 FlapsEXTENDED
 Primary flight controlsPROPER OPERATION
 TrimNEUTRAL
 Pitot and static systemDRAIN
 WindowsCHECK CLEAN
 Required docs, charts and POHCHECK ON BOARD
 Towbar and baggageSTOWED - SECURED
 Baggage doorCLOSED AND SECURED

RIGHT WING

Surface conditionFREE OF ICE, FROST AND SNOW
 Flap and hingesCHECK
 Aileron and hingesCHECK
 Static wicksSECURE
 Wingtip and lightsCHECK
 Fuel tankCHECK SUPPLY - VISUALLY SECURE CAP
 Fuel tank ventCLEAR
 Fuel tank sumpsDRAIN AND CHECK FOR WATER SEDIMENT AND
 Tie down and chockREMOVED
 Main gear strutPROPER INFLATION 4.5" ± 0.25"
 TyreCHECK
 Brake block and diskCHECK
 Fresh air inletCLEAR

NOSE SECTION

- General conditionCHECK
- CowlingSECURE
- WindshieldCLEAN
- Propeller and spinnerCHECK
- Air inletsCLEAR
- Engine baffle seals.....CHECKED
- ChockREMOVED
- Nose gear strutPROPER INFLATION 3.25" ± 0.25"
- Nose wheel tyreCHECKED
- Oil.....CHECK QUANTITY
- Dipstick.....PROPERLY SEATED
- Oil filler capSECURE
- Fuel stainerDRAINED

LEFT WING



- Surface condition.....FREE OF ICE, FROST AND SNOW
- Fresh air inletCLEAR
- Fuel tank sumpsDRAIN AND CHECK FOR WATER SEDIMENT AND
- Fuel tank ventsCLEAR
- Main gear strut.....PROPER INFLATION 4.5" ± 0.25"
- TyreCHECK
- Brake block and diskCHECK
- Tie down and chock.....REMOVED
- Fuel tankCHECK SUPPLY - VISUALLY SECURE CAP
- Pitot static headREMOVE COVER - HOLES CLEAR
- Wingtip and lights.....CHECK
- Flap and hinges.....CHECK
- Aileron and hingesCHECK
- Static wicksSECURE

FUSELAGE

- AntennasCHECKED
- EmpennageFREE OF ICE, FROST AND SNOW
- Stabilator and trim tabCHECK
- Tie down.....REMOVE

MISCELLANEOUS

Battery master switchON
 FlapsRETRACT
 Interior lightningON AND CHECK
 Pitot heat switchON
 Pitot heat „off/inop” annunciatorEXTINGUISHED

	<p><i>Care should be taken when an operational check of the pitot heat is to be performed. The unit becomes very hot. Ground operations should be limited to 3 minutes to avoid damaging the heater elements.</i></p>
	<p><i>Secure and adjust all unused seat belts and shoulder harnesses to prevent control interference or passenger injury in flight in turbulent air.</i></p>

Exterior lightning switchesON AND CHECK
 PitotCHECK WARM
 Stall Warning HornCHECK
 All lightning switchesOFF
 Pitot heat switchOFF
 Pitot heat „off/inop” annunciatorILLUMINATED
 Battery master switchOFF
 PassengersBOARD
 DoorCLOSED AND SECURED
 SeatsADJUSTED AND LOCKED IN POSITION
 Seatbelts and harnessesFASTENED/ADJUST
 CHECK INERTIA REEL



Do not attempt flight if there is no indication of alternator output. If a positive oil pressure is not indicated within 30 seconds following the engine start, stop the engine and determine the trouble. In cold weather it will take a few seconds longer to get a positive pressure indication.

BEFORE STARTING ENGINE

- Brakes.....SET
- Flight authorization.....COMPLETE
- Maintenance release.....CHECKED & SIGNED
- Circuit breakersCHECK IN
- Alternate static sourceOFF
- Carburetor heatFULL COLD
- AvionicsOFF
- Fuel selectorDESIRED TANK (LEFT OR LEAST)

NORMAL START

- Throttle $\frac{1}{4}$ " OPEN (COLD) or $\frac{1}{2}$ " OPEN (HOT)
- Battery master switchON
- Alternator switchON
- Left magneto switchON
- Electric fuel pumpON
- Mixture.....FULL RICH
- PropellerCLEAR
- Starter.....ENGAGE
- ThrottleADJUST (1000 RPM)
- Right magneto switchON
- Oil pressureCHECK




If engine does not start within 10 seconds, prime and repeat starting procedure. Starter manufacturer recommends that cranking be limited to 10 seconds with a 2 minute resting period between cranking periods. Maximum of 5 start periods allowed. If start is not achieved on fifth attempt, allow 30 minutes for the starter to cool before attempting additional starts.

ENGINE START WHEN FLOODED

- Throttle.....OPEN FULL
- Battery master switchON
- Alternator switch.....ON
- Left magneto switchON
- Electric fuel pumpOFF
- Mixture.....IDLE CUT OFF
- Propeller CLEAR
- Starter.....ENGAGE
- MixtureADVANCE
- ThrottleRETARD
- Right magneto switchON
- Oil pressureCHECK

STARTING WITH EXTERNAL POWER SOURCE



It is possible to use the ships battery in parallel by turning only the battery master switch on. This will give longer cranking capabilities but will not increase the amperage. Care should be exercised if the ships battery has been depleted. The external power source can be reduced to the level of the ships battery. This can be tested by turning only the battery master switch on momentarily while the starter is engaged. If cranking speed increases the ships battery is at a higher level than the external powers supply. If the battery is at a lower level then the external power supply, continue starting with the battery master switch off.

- Battery master switchOFF
- Alternator switchOFF
- Left magneto switchON
- All electrical equipment.....OFF
- Terminals.....CONNECT
- External power plugINSERT IN FUSELAGE

Proceed with normal start

- Throttle.....LOWEST POSSIBLE RPM
- Right magneto switchON
- External power plugDISCONNECT FROM FUSELAGE
- Battery master switchON
- Alternator switchON / CHECK AMMETER
- Oil pressureCHECK

WARM UP

Throttle800-1200 RPM

TAXIING

BrakesCHECK

InstrumentsCHECK

SteeringCHECK

GROUND CHECK

Parking brakeSET

FuelCHANGE TANK (FULLEST)

Throttle2000 RPM

MagnetosMAX DROP 175 RPM
MAX DIFFERENCE 50 RPM

Vacuum4.8 - 5.2 inHG

Oil temperatureCHECK

Oil pressureCHECK

Air conditioner (if installed)CHECK

AmmeterCHECK

Annunciator panelPRESS TO TEST

Carburetor heatAPPROXIMATELY 75 RPM DROP

Electric fuel pumpOFF

Fuel pressureCHECK

ThrottleRETARD



Engine is warm for take-off when throttle can be opened without engine faltering.

BEFORE TAKE-OFF

- Battery master switchVERIFY ON
- Alternator switchVERIFY ON
- Magnetos.....VERIFY ON
- Flight instruments.....CHECK
- Fuel selector.....PROPER TANK (FULLEST)
- Electric fuel pumpON
- Engine gaugeCHECK
- Carburetor heatOFF
- MixtureSET
- Seatbacks.....ERECT
- Seats.....ADJUSTED AND LOCKED IN POSITION
- Belts/harnesses.....FASTENED/CHECKED
- Empty seats.....SEATBELTS SECURELY FASTENED
- FlapsSET
- Trim.....SET
- Controls.....FREE
- Door.....LATCHED
- Air conditioner (if installed)OFF

LINE UP

- InstrumentsCHECKED & ALIGNED
- Strobes & Landing LightON
- TransponderALT

SHORT FIELD - OBSTACLE CLEARANCE

Flaps25 (SECOND NOTCH)

TrimSLIGHTLY AFT OF NEUTRAL

Throttle.....FULL POWER PRIOR TO BRAKES RELEASE

Accelerate to 55 KIAS depending on aircraft weight

Control wheelBACK PRESSURE TO ROTATE
TO CLIMB ATTITUDE

After breaking ground, accelerate to 60 KIAS depending on aircraft

Accelerate to best flaps-up AOC speed.....64 KIAS

Flaps.RETRACT SLOWLY

Accelerate to best flaps up ROC speed76 KIAS

AFTER TAKE-OFF

FlapsRETRACTED

Fuel pump.....OFF

Landing Light.....OFF

Temps & PressuresCHECKED

DESCENT

Normal

Throttle.....2500 RPM

Airspeed122 KIAS

MixtureRICH

Carburetor heat.....AS REQUIRED

Power-off

Carburetor heat.....AS REQUIRED

Throttle.....CLOSED

Airspeed.....AS REQUIRED

MixtureAS REQUIRED

Power.....VERIFY WITH THROTTLE EVERY 30 SECS

APPROACH AND LANDING

- Fuel selector PROPER TANK
- Seatbacks ERECT
- Seats ADJUSTED AND LOCKED IN POSITION
- Belts/harnesses FASTEN / CHECK
- Electric fuel pump ON
- Mixture SET
- Flaps SET - 102 KTS MAX
- Air conditioner (if installed) OFF

AFTER LANDING

- Flaps RETRACTED
- Fuel pump OFF
- Trim NEUTRAL
- Transponder STANDBY
- Lights & Strobes OFF
- Radios AS REQUIRED

STOPPING ENGINE



The flaps must be placed in the up position for the flap stop to support weight. Passengers should be cautioned accordingly.

- Flaps RETRACT
- Electric fuel pump OFF
- Avionics master switch OFF
- Electrical switches OFF
- Throttle CLOSED
- Mixture IDLE CUT OFF
- Magneto switches OFF
- Alternator switch OFF
- Battery master switch OFF

Mooring

- Parking brake SET
- Flaps FULL UP
- Control wheel SECURED WITH BELTS
- Wheel CHOCKS IN PLACE
- Tie downs SECURE

PART 2 — EMERGENCY PROCEDURES —

SPEEDS FOR SAFE OPERATION

Manoeuvring Speed at 2550 lbs	113 KIAS
Manoeuvring Speed at 1634 lbs	89 KIAS
Maximum Glide	76 KIAS

ENGINE FIRE DURING START

- Starter.....CRANK ENGINE
- Mixture.....IDLE CUT OFF
- ThrottleOPEN
- Electric fuel pumpOFF
- Fuel selectorOFF

Abandon if fire continues.

ENGINE POWER LOSS DURING TAKE-OFF

- Fuel selectorSWITCH TO TANK CONTAINING FUEL
- Electric fuel pumpCHECK ON
- Mixture.....CHECK RICH
- Carburetor heatON

If power is not regained, proceed with power-off landing.

ENGINE POWER LOSS IN FLIGHT

- Fuel selectorSWITCH TO TANK CONTAINING FUEL
- Electric fuel pumpCHECK ON
- Mixture.....CHECK RICH
- Carburetor heatON
- Engine gaugesCHECK FOR INDICATION OF
CAUSE OF POWER LOSS

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 heatOFF
- Electric fuel pumpOFF

If power is not restored, prepare for power-off landing.

POWER-OFF LANDING

Trim.....76 KIAS

Locate suitable field.

Establish spiral pattern.

1000ft above field at downwind position for normal landing approach.

When field can be easily reached, slow to 66KIAS for shortest landing.

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

When committed to landing:

FlapsAS DESIRED

Throttle.....CLOSED

Mixture.....IDLE CUT OFF

Magnetos.....OFF

Battery master switchOFF

ALTR switch.....OFF

Fuel selectorOFF

Seat belt and harnessTIGHT

FIRE IN FLIGHT

Source of fire.....CHECK

Electrical fire (smoke in cabin):

Battery master switchOFF

ALTR switch.....OFF

Vents.....OPEN

Cabin heatOFF

Land as soon as practicable.

Engine fire:

Fuel selectorOFF

Throttle.....CLOSED

Mixture.....IDLE CUT OFF

Electric fuel pumpCHECK OFF

Heater and defroster.....OFF

Proceed with power-off landing procedure.


LOSS OF OIL PRESSURE/HIGH OIL TEMP

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

LOSS OF FUEL PRESSURE

Electric fuel pumpON
Fuel selectorCHECK ON FULL TANK

ELECTRICAL FAILURES

	<i>Anytime the bus voltage is below 25 VDC, the low bus voltage annunciator will be illuminated.</i>
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ALT annunciator light illuminated:

AmmeterCHECK TO VERIFY INOP ALT

If ammeter shows zero:

ALTR switchOFF

Reduce electrical loads to minimum:


ALTR circuit breakerCHECK AND RESET AS REQUIRED

ALTR switchON

If power not restored:

ALTR switchOFF

If alternator output cannot be restored, reduce electrical loads and land as soon as practical. Anticipate complete electrical failure. Duration of battery power will be dependent on electrical load and battery condition prior to failure.

	<i>Low bus voltage annunciator will be illuminated.</i>
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ELECTRICAL OVERLOAD

(Alternator over 20 amps above known electrical load)

ALTR switch.....ON
Battery master switchOFF

If alternator loads are reduced:

Electrical load.....REDUCED TO MINIMUM

Land as soon as practicable.

	<i>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.</i>
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If alternator loads are not reduced:

ALTR switch.....OFF
Battery master switch.....AS REQUIRED

Land as soon as possible. Anticipate complete electrical failure.

SPIN RECOVERY

RudderFULL OPPOSITE TO DIRECTION OF ROTATION
Control wheel.....FULL FORWARD WHILE NEUTRALIZING AILERONS
Throttle.....IDLE
RudderNEUTRAL (WHEN ROTATION STOPS)
Control wheelAS REQUIRED TO SMOOTHLY
REGAIN LEVEL FLIGHT ATTITUDE

OPEN DOOR

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

Slow airplane to 87 KIAS
Cabin vents.....CLOSE
Storm windowOPEN
If upper latch is open.....LATCH
If side latch is openPULL ON ARMREST WHILE MOVING
LATCH HANDLE TO LATCHED POSITION
If both latches are open.....LATCH SIDE LATCH
THEN TOP LATCH

CARBURETOR ICING

Carburetor heatON
 Mixture.....ADJUST FOR MAXIMUM SMOOTHNESS

ENGINE ROUGHNESS

Carburetor heatON

If roughness continues after one minute:







Carburetor heatOFF
 Mixture.....ADJUST FOR MAXIMUM SMOOTHNESS
 Electric fuel pump.....ON
 Fuel selectorSWITCH TANKS
 Engine gaugesCHECK
 Magneto switches.....CHECK LEFT THEN RIGHT

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.

PART 3

— OPERATIONAL INFORMATIONS —

SIGNAL	A/C in <u>FLIGHT</u>	A/C on <u>GROUND</u>
<p><u>Flashing</u> WHITE</p> 	<p><i>Land at this airport and proceed to apron</i> <i>(This is not a clearance to either land or taxi. Clearances to land and taxi will follow).</i></p>	<p><i>Return to starting point on airport</i></p>
<p><u>Steady</u> GREEN</p> 	<p><i>Cleared to land</i></p>	<p><i>Cleared for takeoff</i></p>
<p><u>Flashing</u> GREEN</p> 	<p><i>Return for landing</i></p>	<p><i>Cleared to taxi</i></p>
<p><u>Steady</u> RED</p> 	<p><i>Give way to other aircraft and continue circling</i></p>	<p><i>STOP</i></p>
<p><u>Flashing</u> RED</p> 	<p><i>Airport unsafe, do not land</i></p>	<p><i>Taxi clear of the runway</i></p>
<p><u>Alternating</u> RED&GREEN</p> 	<p><i>Exercise extreme caution</i></p>	<p><i>Exercise extreme caution</i></p>

INTERCEPTING AIRCRAFT SIGNALS			
Intercepting Aircraft Signal	Meaning	Intercepted Aircraft Response	Meaning
<p>Rocks wings; after acknowledgement initiates a slow level turn, typically to the left, into the desired heading.</p>	<p><i>You have been intercepted</i></p>	<p>Rocks wings, follows intercepting aircraft's lead.</p>	<p><i>I understand and will comply.</i></p>
<p>Night operations = flashing of navigation lights.</p>		<p>Night = flash navigation lights.</p>	
<p>Performs an abrupt breakaway maneuver with a climbing 90 degree turn without crossing the intercepted aircraft's flight path.</p>	<p><i>You may proceed</i></p>	<p>Rocks wings</p>	<p><i>I understand and will comply</i></p>
<p>Circles airport, lowers landing gear, and files over runway in the direction of landing.</p>	<p><i>Land at this airport</i></p>	<p>Lowers landing gear, follows intercepting aircraft and lands if runway is safe</p>	<p><i>I understand and will comply</i></p>
<p>Night = additionally turns on landing lights</p>		<p>Night = turn on landing light</p>	

INTERCEPTED AIRCRAFT SIGNALS			
Intercepted Aircraft Signal	Meaning	Intercepting Aircraft Response	Meaning
Raises landing gear while flying over runway between 1000' and 2000' and continues to circle airport.	<i>This airport is inadequate</i>	If the intercepted aircraft is required to go to an alternate airport, intercepting aircraft will raise landing gear and use intercept procedures.	<i>Understood, follow me.</i>
Night operations = intercepted aircraft will flash landing lights while passing over runway.		To release the intercepted aircraft, the intercepting aircraft will perform a breakaway maneuver.	<i>Understood, you may proceed.</i>
Pilot switches all available lights on and off at regular intervals.	<i>Cannot comply.</i>	Performs breakaway maneuver.	<i>Understood.</i>
Pilot switches all available lights on and off at irregular intervals.	<i>In distress.</i>	Performs breakaway maneuver.	<i>Understood.</i>