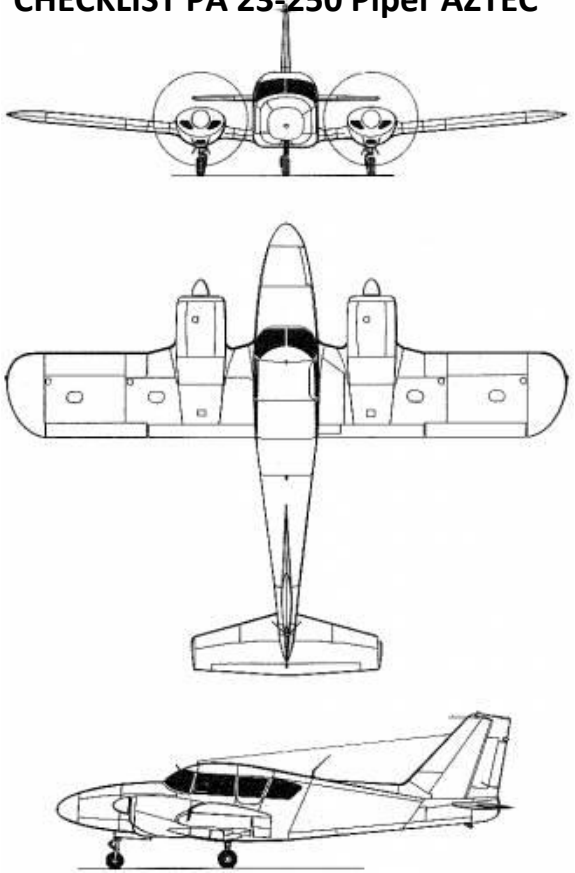
KANATA AVIATION TRAINING

CHECKLIST PA 23-250 Piper AZTEC

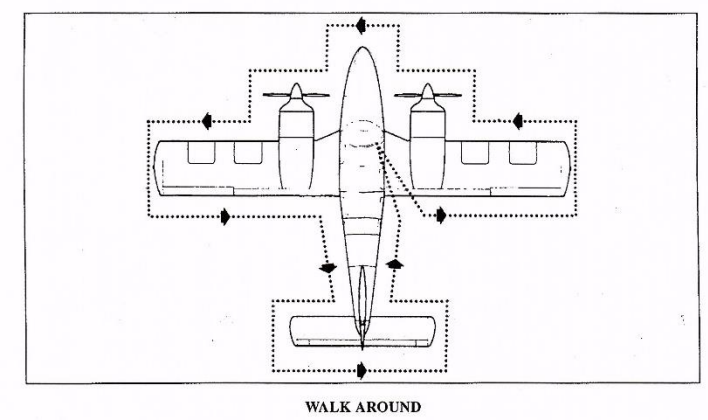


ORIGINAL VERSION MARCH 2022

PREFLIGHT INSPECTION

INSIDE CABIN

Landing Gear control	Neutral Position
Avionics Switch	OFF
Fuel pumps	OFF
Mags	OFF
Flaps (Manual Pump)	Down
Alternators switches	ON
Alternate Static Source	Drain
Circuit Breakers	Check all in
Heater Switch	OFF
Trims (Pitch & Yaw)	Take-off
Cowl Flaps	Open
Master Switch	ON
Landing gear lights	3 GREEN
Fuel Quantity	Min 70 Gal (1/2 tanks)
Cross feed	ON
L/H fuel pump	ON
Cross feed line	Drain
L/H fuel pump	OFF
R/H Fuel pump	ON
Cross feed line	Drain
R/H fuel pump	OFF
Cross feed	OFF
Door Ajar light	ON
Int/Ext lights	CHECKED
Master Switch	OFF
Emergency Window	Secure
Exterior Inspection	Complete



WALK AROUND

OUTSIDE CABIN

- Crossfeed drains — verify no leak
- Right wing aileron and flap — Check, no ice
- Right main gear — No leaks
- Strut — Proper inflation
- Tire — Check
- Right Fuel vents — check clear
- Right leading edge — Check, no ice
- Fuel Cap — Open, check qty, and color, secure
- Right engine nacelle — Check oil [6-10 Qts]
- Right Propeller — Check
- Cowl Flaps — OPEN and secure
- Fuel drains — Drain
- Nose section — Check
- Nose Gear — No leaks
- Strut — Proper inflation
- Tow bar — Removed and stowed
- Landing light — Check
- Forward baggage door — Secures, locked, key removed
- Windshield — Clean
- Left engine nacelle and landing gear — Check as right side
- Pitot Tube — Clear, checked
- Stall warning vanes — Check
- Anti retraction switch — Check
- Dorsal fin air scoop — Clear
- Empennage — Check, no ice
- Stabilator — Free
- Antennas — Check
- Navigation and landing lights — Check
- Wheel chocks and tie down — Removed

PASSENGER BRIEFING

- Seat & Belt Adjustments
- No Touch Controls & Instruments
- Doors and Emergency Exit.
- Fire Extinguisher
- First Aid Kit
- Quiet During Radio Calls
- Look for Traffic
- ELT /

In the event of a forced landing

Stay calm
Remove glasses and pen
Unlatch door
Exit towards back

NORMAL OPERATIONS

BEFORE STARTING ENGINE

- Aircraft documents — On board
- Pilot Documents — On board
- Flight Plan /Itinerary — Filed
- Transponder code — Obtained if required
- Flight sheet — Filled

STARTING ENGINE

- Hobbs / Time — Noted
- Seats — Adjusted
- Seat Belts and harness — Fasten/adjusted
- Parking Brake — Set
- Circuit breakers — In
- Radios — OFF
- Cowl flaps — Open
- Alternate Air — OFF
- Alternators — ON
- Master Switch — ON
- Beacon — ON

1 ENGINE AT A TIME

- Fuel Selector — Outboard
- Mixture — Idle cut-off
- Throttle — ½" FORWARD
- Prop Control — FULL FORWARD
- Magnetos — ON
- Cross feed — OFF
- Fuel Pump — ON
- Mixture — Full rich (5-10 sec) for FF
- Mixture — ICO
- Starter — Engage
- Mixture — Increase to full as engine starts
- Throttle — 1000 RPM
- Oil Pressure — Check
- Suction — Very red ball disappeared
- Ammeter — Check
- Mixture — Lean for taxi

REPEAT for OPPOSITE ENGINE

STARTING FLOODED ENGINE

- Mixture — Idle Cut-Off
- Throttle — FULL FORWARD
- Propeller — FORWARD
- Master Switch — ON
- Ignition Switches — ON
- Fuel pump — OFF
- Propeller — Clear
- Starter — Engage
- Throttle — Retard when engine fires
- Mixture — Advance slowly

NORMAL OPERATIONS

AFTER START

Cross feed	ON
Left fuel tank	OFF
Flaps	UP
Heater	As required
Avionics Master	ON
GPS Database	Valid
HIS	Slaved & Accurate
Transponder	Standby
Altimeter	Set
Radios	Set & Test as applicable

TAXIING

Left fuel Tank	Inboard
Right fuel tank	OFF
Taxi light	ON
Navigation lights	As required
Taxi Clearance	As Applicable
Throttle	Apply slowly
Brakes	Check
Steering	Check
Instruments	Check

RUN UP BEFORE TAKE-OFF

Parking brakes	ON
Right fuel tank	Inboard
Cross feed	OFF
Mixture control	FORWARD
Prop Control	FORWARD
Throttle Control	1500 RPM
Prop Control	Check Feathering, 500 RPM max drop
Throttle control	2200 RPM
Prop Control x3(MP,RPM,oil Press)	Check
Alternate Air	Check
Magnetos	Check drop. 125RPM max. Diff drop 50RPM
Alternator Output	Check
Gyro Pressure gauge	Check
Throttle	idle then 1000 RPM
Engine gauges	in the Green
Cowl flaps	Set
Seat backs	Erect
Wing flaps	Set
Trim	Set
Seat belts/harness	Fasten / adjust
Controls	Free, full travel
Doors	Latched
Pitot heat	As required
Transponder	ALT
Time	Noted
Landing light	ON

NORMAL OPERATIONS

TAKEOFF BRIEFING

This is going to be a (Normal/short/x-wind take-off). In case of engine hesitation or failure on runway, both throttles back, max braking, exit runway advise ATC taxi-back to investigate. In case of engine failure after rotation below 102MPH (VYSE) and with enough remaining runway, both throttles back land on remaining runway.

If no remaining runway or if failure after 102MPH (VYSE), IVF (Identify, Verify and Feather) Maintain VXSE (97MPH) if obstacle. When cleared or if none maintain VYSE (102 MPH).

VFR = Circuit and return for landing

IFR = Advise ATC as soon as Possible for desired intention

Only communication regarding the flight is permitted until at least 1000AGL or higher as directed by PIC

TAKEOFF

Do not exceed 40 in. Hg. Manifold pressure. Fast taxi turns immediately prior to takeoff run can cause temporary malfunction of one engine during takeoff.
Normal sea level takeoff at 39 in. Hg. and 2575 RPM.
Adjust mixture prior to takeoff from high elevations. Do not over heat. Do not exceed 40 in.Hg. manifold pressure.

NORMAL TAKEOFF (Flaps up)

- Flaps — UP
- Throttles — 1500 RPM
- Engine gauges — Check in the green
- Throttles — Full
- Rotate — 85 MPH (Vmc+5)
- After breaking ground, — 102MPH (VYSE)
- Gear — Tap Brakes and UP
- Climb speed — 120MPH (VY)

After Take-off at +1000 AGL

- Flaps and Gear — confirm UP
- Climb Power — 26”-2400RPM
- Engine gauges — In the green
- Taxi and Landing light — OFF
- Cowl flaps — as required

CRUISING

- Power — Set
- Propellers — Set
- Mixture — Adjust
- Cowl Flaps — As required
- Fuel pumps (1 at a time) — OFF (check FF)
- Fuel Tanks — Time the switch
- Engine gauges — Monitor

Suggested power setting

	ALTITUDE	MP	RPM	GPH
NORMAL	4000	26	2400	34
INTERMEDIATE	6000	24	2400	31
ECONOMY	6400	24	2200	28.2
PRACTICE AREA/Long range cruise	**6500**	**22**	**2200**	**26**

NORMAL OPERATIONS

APPROACH AND LANDING

- Airspeed — As required to fit with traffic
- Seat belts and harness — fasten/adjust
- Fuel selectors — Check for proper tank
- Cowl flaps — Closed
- Fuel pumps — ON
- Landing & Taxi lights — ON
- Mixture controls as a/c descends — Rich
- Flaps — 1: 160MPH
- Gear — Down 150 MPH Wait for handle
- Land gear lights — 3 Green and Mirror
- Flaps — 2: 140 MPH
- Flaps — 3: 125 MPH
- Propellers — Full fwd on final
- Brake pressure — Check

Short Final Call out

TWO RED
TWO BLUE
THREE GREEN, MIRROR CONFIRM
RUNWAY IN SIGHT
STABLE
CLEARED TO LAND

AFTER LANDING

When clear of runway:

- Flaps (confirm before selecting) — UP
- Cowl Flaps — Fully OPEN
- Heater (if used) — FAN
- Landing time — Noted
- Transponder — Standby
- Fuel Pumps — OFF
- Landing light — OFF
- Pitot Heat — OFF
- Mixture — Lean for Taxi
- Taxi Clearance — Obtain if required

SHUTDOWN

- Throttle — 1000RPM
- Radio — 121.5Mhz listen
- Radio — Back to 123.0
- Taxi light — OFF
- Avionics master — OFF
- FAN — OFF if 2min or more
- All lights except beacon — OFF
- Dead magnetos — Check
- Mixture — ICO
- Magnetos — OFF
- Fuel pumps — Test
- Master Switch — OFF
- Hobbs/Time — Noted

NORMAL OPERATIONS

EMERGENCY PROCEDURES

AIRSPEED FOR SAFE OPERATIONS

VMC	80 MPH
VYSE (Blue line)	102MPH
VY	120 MPH
VXSE	97 MPH
VX	107 MPH
VA	149 MPH
VNE	249 MPH
Single engine Cruising speed	138 MPH

ENGINE INOPERATIVE PROCEDURES

ENGINE SECURING PROCEDURE (FEATHERING PROCEDURE)

To attempt to restore power prior to feathering:

Mags	Check
Fuel Pump	ON
Mixtures	As required
Alternate Air	Check
Fuel Selector	Switch tanks
Cross Feed	ON

If engine does not start, Feather before RPM drops below 1000RPM.

Throttle	Idle
Propeller	Feather
Mixture	ICO
Fuel pump	Off
Fuel selector	Off

ENGINE FAILURE DURING TAKEOFF (Below 85 MPH)

If engine failure occurs during takeoff and 85 KIAS has not been attained:
Throttles CLOSE both immediately
Stop straight ahead.
If inadequate runway remains to stop:

Throttles	CLOSED
Brakes apply	max.braking
Master switch	OFF
Fuel selectors	OFF

Continue straight ahead, turning to avoid obstacles.

ENGINE FAILURE DURING TAKEOFF (85 MPH or above)

If engine failure occurs during takeoff ground roll, or after lift-off with gear still down and 85 KIAS has been attained:
If adequate runway remains CLOSE both throttles immediately, land if airborne and stop straight ahead.
If runway remaining is inadequate for stopping, decide whether to abort or continue. If decision is made to continue, maintain heading and airspeed, retract landing gear when climb is established and feather inoperative engine prop (see Engine Securing Procedure).

EMERGENCY PROCEDURES

EMERGENCY PROCEDURES

ENGINE FAILURE DURING FLIGHT

- Rudder — apply toward operative engine
- Mixture — Rich
- Propeller — Full Fwd
- Throttle — Full
- Gear — UP
- Flaps — UP
- Inop. Eng identify — Dead foot-Dead Engine
- Inop. Eng verify — Throttle back to confirm

If no fire and non critical moment of flight, Troubleshoot

- Mags — Check
- Fuel Pump — ON
- Mixtures — As required
- Alternate Air — Check
- Fuel Selector — Switch tanks
- Cross Feed — ON

If engine does not restart secure it before rpm drop below 1000

- Throttle — Idle
- Propeller — Feather
- Mixture — ICO
- Fuel pump — Off
- Fuel selector — Off

FUEL MANAGEMENT: CROSS FEEDING

- Cross feed — ON
- Fuel Selector Inop engine — Select Tank
- Fuel pump inop engine — ON
- Fuel selector good engine — OFF
- Fuel pump good engine — OFF

SINGLE ENGINE LANDING

- Inop. engine prop — feather

When certain of making field:

- Landing gear — extend
- Wing flaps — lower
- **Maintain additional altitude and speed during approach**.
- Final approach speed — 102 MPH
- Wing flaps — ½ unless a short rwy

SINGLE ENGINE GO-AROUND (Avoid if at all possible.)

- Mixture — forward
- Propeller — forward
- Throttle — open slowly to Full
- Flaps — retract
- Landing gear — retract
- Airspeed — 102 MPH
- Trim — set
- Cowl flap operating engine — as required

AIR START (UNFEATHERING PROCEDURE)

- Fuel selector inop. engine — ON
- Throttle — open 1/2 inch
- Prop control — forward to cruise RPM position
- Mixture — ICO or full to prime then ICO

EMERGENCY PROCEDURES

- Magnetos — ON
- Starter — Engage
- Mixture — Enrich as engine starts
- Throttle — 1000-1400 rpm
- Oil Pressure & temp — Look for a rise
- Throttle — Back to cruise when gauge in green

ENGINE FIRE ON GROUND

- If engine has not started:
- Mixture — idle cut-off
- Throttle — open
- Starter — crank engine

If engine has already started and is running, continue operating to try pulling the fire into the engine.
If fire continues, extinguish with best available means.
If external fire extinguishing is to be applied:

- Fuel selector valves — OFF
- Mixture — idle cut-off

ENGINE FIRE IN FLIGHT

Affected engine:

- Fuel selector — OFF
- Throttle — close
- Propeller — feather
- Mixture — idle Cut-off
- Heater — OFF
- Defroster — OFF

MANUAL EXTENSION OF LANDING GEAR

Check following before extending gear manually:

- Circuit breakers — Check
- Master switch — ON
- Alternators — Check
- Navigation lights — OFF (daytime)

To extend, position handle down and proceed as follows:

- Airspeed — reduce (150MPH Max)
- Gear selector — GEAR DOWN LOCKED position
- Emerg. Hydraulic pump handle — Pull
- Hydraulic handle — Pump up and down (approx. 50 times)
- Indicator lights — 3 green
- Landing gear handle — Neutral
- Land — As soon as possible

If unable to extend gear with hydraulic pump handle

- Landing gear Handle — DOWN
- Raise firing ring cover under left front seat
- Pull ring as far as possible

After operating CO2 system the landing gear should not be operated and the handle should not be moved until repairs are done.

PROPELLER OVERSPEED

- Throttle — REDUCE
- Throttle — Increase as necessary
- Land as possible

EMERGENCY PROCEDURES

ELECTRICAL FAILURES

In the event of failure of the voltage regulating system; an abnormal operation may be indicated by a zero output on both alternators position and discharge on the battery position. To energize the auxiliary system:

- Aircraft electrical load — Reduce
- Voltage regulator selector — AUX
- CB — Reset **EXCEPT** "MAIN" voltage regulator breaker
- Turn Load Back ON

If this fails to maintain correct output while using AUX

- Electrical load — Reduce
- Master switch — OFF
- Both Alternators — OFF
- CB "MAIN" and "AUX" — RESET
- Master Switch — ON
- Alternator Reset — 1 at a time
- Very load does not exceed output capability

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GYRO PRESSURE FAILURES

Pressure below 4.5 in Hg.

RPM	increase to 2575
Altitude	descend to maintain 4.5 in Hg

Use electric turn indicator to monitor Directional Indicator and Attitude Indicator performance.

COMBUSTION HEATER OVERHEAT

Unit will automatically cut-off.
Do not attempt to restart.

SPINS

Throttles	retard to idle
Rudder	full opposite to direction of spin
Control wheel	release back pressure
Control wheel	full forward if nose does not drop
Ailerons	neutral
Rudder	neutralize when rotation stops
Control wheel	smooth back pressure to recover from dive

EMERGENCY DESCENT

Throttles	closed
Propellers	full forward
Mixture	as required for smooth operation
Landing gear	extend
Airspeed	150 MPH

EMERGENCY PROCEDURES

IFR PROCEDURES

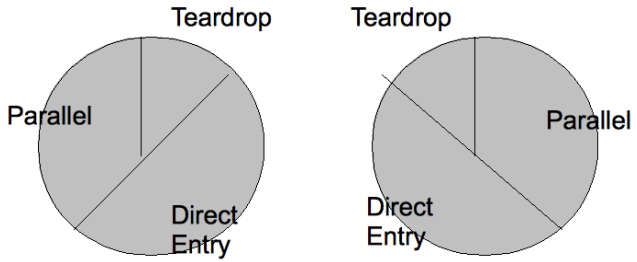
TAKE-OFF CLEARANCE

C-GSYH cleared to _____airport, SID procedure (if applicable) depart runway_____ flight planned route (or modified), squawk code _____

Hold Procedure

T : Type of entry
S: Speed for the hold (less than 175KIAS)
A: Altitude as per holding instructions
F: Fuel (destination-Alternate +45min)
E: Expect Further clearance time

T: Turn into the hold
T: time when wings level and at proper position
T: Twist for inbound course
T: Track, correcting for wind
T: Talk, advise ATC entering the hold and established if Not radar ID



Right Turn Holds Left Turn Holds

APPROACH

WARGGAME

W: Weather
A: Altimeter setting
R: radio Set Up
G: GPS load approach
G: Gyro reset if applicable
A: Altitude correction if applicable
M: Missed approach Procedure
E: Expected procedure : Brief plate from top to bottom

NOTES

IFR PROCEDURES

PA23-250D SPEEDS

- VS0: 68 MPH
- VS: 74 MPH
- VFE: 125 MPH
- VX: 107 MPH
- VY: 120 MPH
- VMC: 80 MPH
- VYSE: 102 MPH
- VXSE: 97 MPH
- VA: 149 MPH
- VNO: 216 MPH
- VNE: 249 MPH
- VSSE: 120 MPH KIAS
- Max. demo x-wind: 15 Kts