

Comanche PA30 N7539Y

Before starting engines

1. Passengers – Briefed
2. Door – Closed & Latched (can be left open for taxi if hot)
3. Seats – Adjusted and Locked
4. Seat Belts & Shoulder Harnesses – Fastened
5. Brakes – Test and Set
6. Air vents, Heater and Defroster – As desired
7. Circuit breakers – Check In (also the one under floor cover)
8. Alternate Static Source – Closed
9. Avionics Master Switch – Off
10. Alternators – Both On
11. Cowl Flaps – Both Open
12. Alternate Induction Air – Both Closed

Starting engines

1. Gear Handle – Down
2. Master Switch – On
3. Beacon – On
4. Nav. Lights – As required
5. Fuel Tanks – Check Aux & Main Quantity, Set Both on Main Tank
6. Throttles Friction Lock - Adjust
7. Mixtures – Idle Cut-Off
8. Prop Controls – Full Forward
9. Throttles – 1/2” or less open
10. Magnetos – On
11. Electric Fuel Pump – On
12. Mixture – Rich until flow is indicated, then Idle Cut-off
13. Electric Fuel Pump – Off
14. Area and Prop – Clear
15. Starter – Engage
16. Mixture – Advance as engine starts
17. Oil Pressure – Check (Should indicate within 30 secs.)
18. Vacuum & Alternator – Check
19. Mixture – Lean to keep from fouling plugs
20. Repeat 11 through 19

Pre-Taxi

1. Avionics Master Switch – On
2. Clock – Set
3. JPI Fuel Totalizer – Set for current fuel amount (Full 2x Rt, 1x Lt)
4. Autopilot – Off
5. HSI – Verify Slaving is On and Correct
6. Radios – Check & Set, Obtain Atis/Awos
7. Transponder – Stand-By, Verify code
8. Flaps – Verify Up

Taxi

1. Lights – As Required
2. Parking Brake – Off
3. Brakes – Test
4. HSI, Att. Indicator, Turn Coordinator & Compass – Check

Before Take-Off

1. Parking Brake – On
2. Cowl Flaps – Verify Open
3. Alternate Induction Air – Verify Both Closed
4. Controls – Free & Correct
5. Fuel Tanks – On Main
6. Electric Trim – On & Verify Correct Operation
7. Pitch Trim, Rudder Trim, Aileron Trim – Set for Take-Off
8. Flaps – Set for Take-Off
9. Flight Instruments – Set & Correct, Verify Altimeter Setting
10. Alternator output – Check Left & Right via Voltmeter in Davtron
11. Gyro Pressure – 4.8’-5.1”Hg
12. Mixtures – Full Rich
13. Prop Controls – Full Forward
14. Engine Instruments & GEM – Check (warm enough for run-up)
15. Throttles – 2000 RPM
16. Prop Controls – Exercise, no more than 300 RPM drop
17. Throttles – 15”
18. Magnetos – Check (Max drop 175 RPM, Max diff 50 RPM)
19. Throttles – 1500 RPM
20. Prop Controls – Feather Check (Max 500 RPM drop)
21. Throttles – 1000 RPM
22. Fuel Pumps – Both On, Check Pressure
23. Engine Instruments & GEM – Check
24. Seat Belts & Shoulder Harnesses – Fastened
25. Door – Closed & Secured
26. Parking Brake – Off

RUN UP

Line-Up Check (Normal Take Off)

1. Time – Noted
2. Exterior lights – On
3. Check windsock and position flight controls for the wind
4. Verify correct runway and HSI showing proper heading, heading bug on runway heading
5. Confirm takeoff power and proper engine and flight instrument indications prior to rotation
6. Rotate at 90mph
7. Establish positive rate of climb (verified by positive roc in VSI and climb in altimeter)
8. Tap the brakes
9. Gear up (amber light when up)
10. Climb out at Vy 112mph
11. Flaps – Up (if used for takeoff)

Cruise climb (unless max perf. required)

1. Verify gear up
2. Verify flaps up
3. Accelerate to 130mph
4. Power – Reduce to 25” and 2500 rpm (25/25)
5. Cowl Flaps – Open (or as required)

Above 1000agl

1. Fuel pumps – Off (one at a time, wait 20sec in between)

Short Field Take Off

1. Flaps – 15 Degrees
2. Time – Noted
3. Exterior lights – On
4. Check windsock and position flight controls for the wind
5. Verify correct runway and HSI showing proper heading, heading bug on runway heading
6. Brakes – Partial Power Before Brake Release, Then Full Power
7. Confirm takeoff power and proper engine and flight instrument indications prior to rotation
8. Rotate at 70-80mph, back pressure to rotate to climb attitude
9. After breaking ground, Accelerate to V_x 90mph
10. Climb past obstacle
11. Accelerate to V_y 112mph
12. Tap the brakes
13. Gear up (amber light when up)
14. Flaps – Up (if used for takeoff)

Cruise climb (unless max perf. required)

1. Verify gear up
2. Verify flaps up
3. Accelerate to 130mph
4. Power – Reduce to 25" and 2500 rpm (25/25)
5. Cowl Flaps – Open (or as required)

Above 1000agl

1. Fuel pumps – Off (one at a time, wait 20sec in between)

Cruise check (climb to 4500-5500 for airwork)

1. Cowl flaps – Closed (or as required)
2. Fuel pumps – Verify Off (one at a time, wait 20sec in between)
3. Throttles – Set to 20” (20/23 is about 55/60% power)
4. Prop Controls – Set to 2300 RPM
5. Mixtures – Adjust to 50 degrees Fahrenheit rich of peak
6. Fuel Tanks – As Required (Aux fuel can be used level flight. Use fuel pumps when switching tanks)

Descent

1. Plan your descent, at 150mph 5miles/1000feet, 180mph 6miles/1000feet
If it is turbulent or you need a steeper descent, slow below 150mph and lower landing gear
2. Slowly reduce MP, a couple inches every minute, not lower than 15” and keep cyl. head temps in green
3. Mixtures – Enrich with descent
4. Fuel – On main tanks, (check quantity, use fuel pumps when switching)
5. Exterior Lights – As Required

Landing

1. **Gas** – Fuel Tanks on Main, Fuel Pumps ON
2. **Undercarriage** – Gear Down below 149mph, Verify gear is down both by green light and mirror on engine cowling
3. **Mixtures** – Rich (or as required for high altitude)
4. **Propellers** – Full forward (wait to be slowed down below 124mph)
5. **Cowl FlapS** – Open
6. **Seat belt & Shoulder Harness** - On

115mph on downwind, 110mph on base with ½ flaps, 100mph on final with full flaps

No flaps landing 105mph

If crosswind component is above 12kts, use partial or no wing flaps and above normal approach speed

On final verify Mixtures and Props Forward, Gear Down

Short Field Landing

Airspeed on Final – Coordinate to 95mph

Throttles – Carry Power Until Flare

Wing Flaps – Retract Immediately After Touchdown

Control Wheel – Full Back Pressure to Put Airplane Weight on Main Gear

Brakes – Apply Heavily

Go Around, Rejected Landing

1. **Mixtures** – Full Forward, Full Rich
2. **Propellers** – Full Forward
3. **Throttles** – Full Forward
4. **Control Wheel** – Rotate to climb attitude
5. **Landing Gear** – Up
6. **Landing Gear Indicator** – Amber
7. **Climb out at Vy** – 112mph
8. **Wing Flaps** – Retract
9. **Cowl Flaps** – Verify Open
10. **Cruise Climb Checklist** – When reaching safe altitude

After Landing

1. Electric Fuel Pumps – Off
2. Mixtures – Lean to keep from fouling plugs
3. Cowl Flaps – Open
4. Flaps – UP
5. Lights – As Required (Strobes off)
6. Heater – If used, Fan only for 3min and Close fuel valve
7. Pitot Heat – Off
8. Transponder – Stand-by

Shutdown

1. Parking Brake – As required
2. Heater – If used, make sure that heat has been off for at least three minutes before shutting off fan. Ensure fuel valve is closed
3. Taxi/Landing lights – Off
4. Avionics Master Switch – Off
5. Prop Controls – Forward
6. Throttles – 1000 RPM
7. Mixtures – Idle cut off, One at a time, Check Vacuum & Alt.
8. Throttles – Idle
9. Magnetos – Off
10. External Lights – Off
11. Instrument Lights – Off
12. Cabin Lights – Off
13. Master Switch – Off

Hot Engine Start

1. Gear Handle – Down
2. Master Switch – On
3. Beacon – On
4. Exterior Lights – As required
5. Fuel Tanks – Check Aux & Main Quantity, Set Both on Main Tank
6. Mixtures – Idle Cut-Off
7. Prop Controls – Full Forward
8. Throttles – 1/2” open
9. Magnetos – On
10. Electric Fuel Pumps – On to remove vapor from lines
11. Electric Fuel Pumps – Off
12. Area and Prop – Clear
13. Starter – Engage
14. Mixture – Advance as engine starts. If engine does not start, advance mixtures for a short time, then move them back to Cut-Off
15. Oil Pressure – Check (Should indicate within 30 secs.)
16. Vacuum and Alternator – Check
17. Mixture – Lean to keep from fouling plugs
18. Repeat 13 through 17

Flooded Start

1. Prop Controls – Full Forward
2. Mixtures – Idle Cut-Off
3. Throttles – FULL OPEN
4. Magnetos – On
5. Electric Fuel Pumps – OFF
6. Area and Prop – Clear
7. Starter – Engage
8. When engine fires, retard throttle, advance mixture slowly
9. Oil Pressure – Check (Should indicate within 30 secs.)
10. Vacuum – Check
11. Repeat 7 through 10
12. Mixtures – Lean to keep from fouling plugs

Quick Turn (No engines shutdown in between)

1. Cowl Flaps – Verify Open
2. Fuel Tanks – On Main
3. Fuel Quantity – Verify
4. Pitch Trim, Rudder Trim, Aileron Trim – Set for Take-Off
5. Flaps – Set for Take-Off, 15 Degrees for Short Field Take Off
6. Flight Instruments – Set & Correct, Verify Altimeter Setting
7. Prop Controls – Full Forward
8. Mixtures – Full Rich
9. Fuel Pumps – Both On, Check Pressure
10. Engine Instruments & GEM – Check
11. Seat Belts & Shoulder Harnesses – Fastened
12. Door – Closed & Secured
13. Exterior Lights – As required
14. Parking Brake – Off