

Piper Comanche 250

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<u>SPEEDS (MPH IAS)</u>	
Vso.....	64
Vs1.....	71
Vr.....	85
Vr (recommended).....	65
Vx.....	84
Vy (gear up @ sea level).....	105
Vy (gear down @ sea level).....	95
Vy (5,000 ft.).....	90
Vy (10,000 ft.).....	85
Vfe.....	125
Vfe (recommended).....	100
Vno.....	181
Vne.....	203
Va (2800 lbs.).....	144
Va (1900 lbs.).....	118
Vlo.....	150
Vle.....	150
Vlo/Vle (recommended).....	125
Best Glide.....	100
Max. Demon. X-Wind.....	20
Approach (Flaps DN).....	85
Enroute Climb.....	100-120

<u>PREFLIGHT INTERIOR INSPECTION</u>	
Weather.....	CHECK
Weight & Balance.....	COMPLETE
Documents (AROW).....	CHECK
Inspection/AD status.....	CHECK
Fire Extinguisher.....	CHARGED
Hobbs/Tach.....	CHECK
Control Restraint.....	REMOVE
Avionics Master.....	OFF
Gear Selector.....	DOWN
Ignition.....	OFF

<u>INTERIOR INSPECTION (cont.)</u>	
Master Switch.....	ON
Turn Coordinator.....	ON
Check audible, then OFF	
Fuel Quantity.....	CHECK
Flaps.....	EXTEND
Lights.....	ON/INSPECT/OFF
Master Switch.....	OFF
Oxygen (if required).....	CHECK

<u>EXTERIOR INSPECTION</u>	
<u>Right Wing</u>	
Flaps & Aileron.....	CHECK
Wing Tip & Nav. Light.....	CHECK
Leading Edge.....	CHECK
Tie Down.....	REMOVE
Fuel Quantity.....	CHECK
Fuel Cap.....	SECURE
Fuel Tank Vent.....	OPEN
Fuel Overflow.....	OPEN
Main Gear Strut.....	2 ¾ inch
Main Tire.....	CHECK
<u>Nose</u>	
Fuel Sump.....	DRAIN
Windshield.....	CLEAN
Engine Compartment.....	CHECK
Generator Belt.....	CHECK
Brake Fluid.....	CHECK
Oil Quantity (9-10 qts.).....	CHECK
Dipstick.....	SECURE
Oil Inspection Cover.....	SECURE
Air Inlets.....	CLEAR
Propeller.....	CHECK for nicks
Prop. Area.....	CHECK for debris
Nose Gear Strut.....	2 ¾ inch
Nose Tire.....	CHECK

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<u>EXTERIOR INSPECTION (cont.)</u>	
Cowling.....	SECURE
<u>Left Wing</u>	
Fuel Quantity.....	CHECK
Fuel Cap.....	SECURE
Fuel Tank Vent.....	OPEN
Fuel Overflow.....	OPEN
Tie Down.....	REMOVE
Main Gear Strut.....	2 ¾ inch
Tire.....	CHECK
Stall Warning.....	CHECK
Pitot Tube.....	CHECK
Wing Tip & Nav. Light.....	CHECK
Leading Edge.....	CHECK
Flap & Aileron.....	CHECK
<u>Fuselage/Empennage</u>	
Static Vents.....	CLEAR
Fuselage.....	CHECK
Antennas.....	CHECK
Horizontal Stabilizer.....	CHECK
Vertical Stabilizer.....	CHECK
Navigation Lights.....	CHECK
Ventilation Inlet.....	CLEAR
Tie Down.....	REMOVE
Baggage Door.....	SECURE

<u>BEFORE ENGINE START</u>	
Preflight Inspection.....	COMPLETE
Passenger Briefing.....	COMPLETE
Seats and Belts.....	SECURE
Parking Brake.....	SET
Carburetor Heat.....	COLD
Fuel Selector.....	FULLEST TANK
Circuit Breakers.....	CHECK IN
Avionics Master.....	OFF
Door.....	LATCHED

<u>ENGINE START (COLD)</u>	
Throttle.....	OPEN 1/4 INCH
Mixture.....	Full RICH
Propeller.....	FULL FWD
Master Switch.....	ON
Beacon.....	ON
Fuel Pump.....	ON
Fuel Pressure.....	CHECK
Fuel Pump.....	OFF
Primer.....	3-5 STROKES
Propeller Area.....	CLEAR
Starter.....	ENGAGE
Throttle.....	1000 RPM
Oil Pressure.....	CHECK
Mixture.....	LEAN for taxi
Fuel Pump.....	OFF
Ammeter.....	CHECK

<u>ENGINE START (HOT)</u>	
Throttle.....	OPEN ¼ INCH
Mixture.....	FULL RICH
Propeller.....	FULL FWD
Master Switch.....	ON
Beacon.....	ON
Fuel Pump.....	ON
Fuel Pressure.....	CHECK
Fuel Pump.....	OFF
Primer.....	IN and LOCKED
Propeller Area.....	CLEAR
Starter.....	ENGAGE
Throttle.....	1000 RPM
Oil Pressure.....	CHECK
Mixture.....	LEAN for TAXI
Fuel Pump.....	OFF
Ammeter.....	CHECK

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<p><u>ENGINE START (FLOODED)</u></p> <p>Throttle.....FULL OPEN Mixture.....IDLE CUTOFF Propeller.....FULL FWD Master Switch.....ON Beacon.....ON Fuel Pump.....OFF Primer.....IN and LOCKED Propeller Area.....CLEAR Starter.....ENGAGE Throttle.....RETARD to 1000 RPM Mixture.....ADVANCE Oil Pressure.....CHECK Mixture.....LEAN for TAXI Ammeter.....CHECK</p> <p style="text-align: center;"><u>TAXI</u></p> <p>Avionics Master.....ON Radios/Avionics.....SET Transponder.....STBY Turn Coordinator.....ON Flaps.....RETRACT Primer.....IN and LOCKED Landing Gear Indicator.....CHECK Parking Brake.....RELEASE Throttle.....APPLY SLOWLY Brakes.....TEST Steering.....CHECK Flight Instruments.....CHECK</p>	<p><u>RUNUP</u></p> <p>Parking Brake.....SET Seats/Belts.....SECURE Doors/Windows.....CLOSED AND LOCKED Controls.....FREE & CORRECT Fuel Quantity.....CHECK Mixture.....SET RICH Fuel Selector...FULLEST TANK Throttle.....2000 RPM Oil Pressure/Temp.....CHECK Mixture.....LEAN for altitude Propeller.....CYCLE 3X (MAP, RPM, Oil Pressure) Magnetos.....CHECK Max drop 125 RPM Max differential 50 RPM Carburetor Heat.....CHECK Suction.....5.0" hg + 1/ -2" hg Ammeter.....CHECK Oil Temperature.....CHECK Oil Pressure.....check GREEN Throttle.....IDLE then 1000 RPM Flight Instruments.....SET Parking Brake.....RELEASE</p> <p style="text-align: center;"><u>BEFORE TAKEOFF</u></p> <p>Fuel Pump.....ON Fuel Selector...FULLEST TANK Carburetor Heat.....OFF Flaps (as required).....SET Trim.....NEUTRAL Heading Indicator.....SET Transponder.....ALT Engine Gauges.....NORMAL Strobe Light.....ON Emerg. Procedures.....REVIEW</p>
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<p><u>NORMAL TAKEOFF</u></p> <p>Throttle.....Full OPEN Engine Gauges.....NORMAL Rotate.....85 MPH Climb.....95 MPH Gear.....UP Gear Selector.....NEUTRAL</p> <p style="text-align: center;"><u>SOFT-FIELD TAKEOFF</u></p> <p>Flaps.....18° (2nd notch) Trim.....SET Control Wheel.....full AFT Throttle.....APPLY SLOWLY Accelerate in ground effect after breaking ground Climb.....84 MPH (Vx) Gear.....UP Climb.....105 MPH (Vy) Flaps.....RETRACT Power.....AS REQUIRED ABOVE 1,000 ft. AGL Climb.....ENROUTE SPEED</p> <p style="text-align: center;"><u>SHORT-FIELD TAKEOFF</u></p> <p>Flaps.....18° (2nd notch) Trim.....SET Brakes.....HOLD Throttle.....Partial OPEN Brakes.....RELEASE Rotate.....65-75 MPH Climb.....84 MPH (Vx) Gear.....UP Climb.....105 MPH (Vy) Flaps.....RETRACT Power..as REQ..abv. 1000 ' AGL) Climb.....ENROUTE SPEED</p>	<p><u>CLIMB</u></p> <p>Power...REDUCE at 1,000' AGL Best Angle (Vx).....84 MPH Best Rate (Vy).....105 MPH Enroute.....100-120 MPH CHT/EGT.....CHECK Mixture.....LEAN for ASCENT</p> <p style="text-align: center;"><u>CRUISE</u></p> <p>Throttle.....SET Propeller.....SET Mixture.....SET Fuel Pump.....OFF Fuel Pressure.....VERIFY Engine Gauges.....CHECK Trim.....SET Heading Indicator.....SET</p> <p style="text-align: center;"><u>DESCENT</u></p> <p>Propeller.....CRUISE RPM Manifold Pressure.....15-17" Hg Airspeed.....MAINTAIN CHT/EGT in GREEN Mixture.....ENRICH in descent</p> <p style="text-align: center;"><u>BEFORE LANDING</u></p> <p>Seat Backs.....UPRIGHT Seats/Belts.....SECURE Fuel Pump.....ON Fuel Selector...FULLEST TANK Fuel Pressure.....VERIFY Gear.....DOWN (125 MPH) Gear Indicator.....GREEN Flaps.....AS REQ. (125 MPH)</p>
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<p><u>BEFORE LANDING (cont.)</u></p> <p>Trim.....SET Mixture.....ENRICH (as req.) Propeller.....FULL FWD GUMPS Check.....ON FINAL Approach Speed.....85 MPH</p> <p><u>SOFT-FIELD LANDING</u></p> <p>Gear.....VERIFY DOWN Airspeed.....80 MPH FINAL Flaps.....Down (27°) Throttle....carry POWER until flare Touchdown.....MAINS first Add power to keep nosewheel off the ground, hold elevator full aft Brakes.....MINIMAL</p> <p><u>SHORT FIELD LANDING</u></p> <p>Fuel Pump.....ON Gear.....VERIFY DOWN Airspeed.....80 MPH FINAL Flaps.....Down (27°) Power.....IDLE Touchdown.....MAINS first Brakes.....APPLY Flaps.....RETRACT Elevator.....FULL AFT</p> <p><u>GO-AROUND</u></p> <p>Throttle.....FULL OPEN Climb.....95 MPH Gear.....UP Climb.....105 MPH Flaps.....RETRACT Power...as REQ. (abv. 1000 ' AGL)</p>	<p><u>AFTER LANDING</u></p> <p>Flaps.....RETRACT Transponder.....STBY Landing Light.....OFF Strobe Light.....OFF Fuel Pump.....OFF</p> <p><u>SHUTDOWN</u></p> <p>Throttle.....IDLE Electrical Equipment.....OFF Avionics Master.....OFF Propeller.....FULL FWD Mixture.....IDLE cutoff Ignition.....OFF Master Switch.....OFF Beacon.....OFF Control Wheel.....SECURE Doors/Windows.....LOCKED Tie-Downs.....SECURE Flight Plan.....CLOSE</p>
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<p><u>EMERGENCY PROCEDURES ENGINE POWER LOSS DURING FLIGHT</u></p> <p>Airspeed.....100 MPH Landing Site.....LOCATE Fuel Selector.....FULLEST TANK Fuel Pump.....ON Ignition.....CHECK ON Mixture.....FULL RICH Carburetor Heat.....ON Primer...CHECK In and LOCKED Engine Gauges.....CHECK *IF POWER IS RESTORED* Carburetor Heat.....OFF Fuel Pump.....OFF *IF POWER IS NOT RESTORED PREPARE FOR FORCED LANDING*</p> <p><u>EMERGENCY LANDING WITHOUT POWER</u></p> <p>Airspeed.....100 MPH Propeller.....FULL AFT Radio.....121.5 Transponder.....7700 ELT.....ACTIVATE MANUALLY Throttle.....CLOSED Fuel Selector.....OFF Mixture.....IDLE CUTOFF Ignition.....OFF Seat Belts.....SECURE Door.....OPEN Flaps.....AS REQUIRED Gear...DOWN (before touchdown) Doors.....UNLATCH Master Switch.....OFF Touchdown.....SLOWEST PRACTICAL AIRSPEED</p>	<p><u>EMERGENCY PROCEDURES PROPELLER OVERSPEED</u></p> <p>Throttle.....RETARD Oil Pressure.....CHECK Propeller.....FULL AFT Set if any control available Airspeed.....REDUCE Throttle.....AS REQUIRED TO REMAIN BELOW 2575 RPM Flaps.....AS REQUIRED **loss of oil pressure will increase RPM** Land as soon as possible</p> <p><u>EMERGENCY LANDING GEAR EXTENSION</u></p> <p>Master Switch.....ON Circuit Breakers.....CHECK Navigation Lights...CHECK OFF Indicator Bulbs.....CHECK</p> <p>*IF GEAR IS NOT DOWN AND LOCKED*</p> <p>Airspeed.....below 100 MPH Gear Selector.....OFF Motor Release Arm..... DISENGAGE AND PUSH FWD -Allow landing gear to fall Emergency Handle....EXTEND -Rotate handle forward through FULL travel to extend gear -Green light on panel indicates gear is down and locked</p>
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<p><u>EMERGENCY PROCEDURES</u> <u>ENGINE ROUGHNESS</u></p> <p>Carburetor Heat.....ON Mixture.....ADJUST Fuel Pump.....ON Fuel Selector.....SWITCH TANKS Engine Gauges.....CHECK Magnetos.....CHECK</p> <p><u>ENGINE ROUGHNESS</u></p> <p>Carburetor Heat.....ON Throttle.....Full OPEN Mixture....ADJUST for smoothness When ice is cleared:</p> <p>Carburetor Heat.....OFF Throttle.....NORMAL CRUISE Mixture.....ADJUST Manifold Pressure.....MONITOR</p> <p><u>OPEN DOOR IN FLIGHT</u></p> <p>Airspeed.....BELOW 100 MPH Cabin Vents.....CLOSE Storm Window.....OPEN Slip Airplane.....DOOR INTO WIND Latch.....SECURE</p> <p><u>SPIN RECOVERY</u></p> <p>Throttle.....IDLE Ailerons.....NEUTRAL Rudder.....FULL OPPOSITE Control Wheel.....FORWARD Rudder.....NEUTRAL Control Wheel..BACK PRESSURE</p>	<p><u>EMERGENCY PROCEDURES</u> <u>FIRE DURING ENGINE</u> <u>START</u></p> <p>Cranking.....CONTINUE Mixture.....IDLE CUTOFF Throttle.....FULL OPEN Fuel Pump.....OFF Fuel Selector.....OFF *IF ENGINE FAILS TO START* Cranking.....CONTINUE Fire Extinguisher.....OBTAIN Master.....OFF Ignition.....OFF ABANDON IF FIRE CONTINUES</p> <p><u>ENGINE FIRE IN FLIGHT</u></p> <p>Throttle.....CLOSED Mixture.....IDLE CUTOFF Fuel Selector.....OFF Fuel Pump.....OFF Heater/Defroster.....OFF Gear.....AS NECESSARY Airspeed.....BEST GLIDE or greater Power OFF landing...EXECUTE</p> <p><u>ELECTRICAL FIRE</u></p> <p>Master Switch.....OFF Generator Circ. Breaker...PULL Vents.....OFF Door (as required).....OPEN Fire Extinguisher.....ACTIVATE Cabin Heat.....OFF Initiate Manual Gear Extension</p>
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