Piper Comanche PA-24-250

N5799P

Preflight - Initial

Cowl plugs	removed, stowed
Tail cover	removed, stowed
Pitot cover	removed, stowed
Cockpit cover	removed, stowed
Master	off
Control wheel	release restraint
Avionics master	check off
Magnetos	check off
Landing gear selector	down
Master	on
Fuel Gauges	sufficient qty each tank
Nav lights	on
Landing lights	on
Strobe lights	on
Pitot heat	on
Walk around	confirm nav, landing, strobe on, pitot warm
Master	off
Required papers, navigation charts	confirm on board
Flaps	down full

Preflight - Fuel Check

Fuel selector	left tank
Fuel strainer/sump	drain, check for water and contaminants
Fuel selector	right tank
Fuel strainer/sump	drain, check for water and contaminants

Preflight - Wings

Control surfaces	check no binding, interference, free of snow/ice/frost
Pitot head (left wing)	cover removed, hole clear
Stall warning switch (left wing)	moves freely, light illuminates
Fuel tank	check supply visually, dip, ensure cover secure
Fuel tank vent and overflow drain	open
Main gear strut	proper inflation 2 3/4 in
Tire	check for wear and proper inflation (42 psi)
Brake	sufficient thickness on pad, no scoring on disc
chocks/chains	removed, stowed
Wing tip/nav night	Check

Preflight - Fuselage/Empennage

Static Vents (left and right)	holes clear
Control surfaces	check no binding, interference, free of snow/ice/frost
Tail Cover	check removed
Chains	removed
Tow bar	stowed
Baggage Door	secured

Preflight - Nose

Windshield	clean
Engine compartment	check fuel/oil leaks
Alternator belt	check tension
Brake fluid	check level
Oil	check, fill to 7 1/2 qts local flights
Dip stick and oil inspection cover	secure
Air inlets	clear
Propeller, spinner	check for nicks, cracks, defects
Propeller vicinity	clear of debris
Nose gear strut	inflated 2 3/4 in
Tire	check wear, inflation (27 psi)
Cowling	3 latches per side

Engine Start

Parking brake	on
Fuel	on, desired tank
Avionics master	off
Master	on
Electric fuel pump	on
Strobe lights	on
Propeller	full Increase
Mixture	full rich
Throttle	open 1/4 inch
Prime	6-8 pumps
Electric fuel pump	off
Magnetos	on
Clear	prop
Starter	engage (max 15 seconds)
Throttle	Engine firing evenly retard to 800 rpm
Oil pressure	check 60-85
Oil temp	warming 120 - 245

Engine Start (Hot)

Mixture	full rich
Propeller	full Increase
Throttle	open 1/2 in
Primer	in and locked, do not prime
Electric fuel pump	on to confirm flow, then off
Magnetos	on
Clear	prop
Starter	engage (max 30 seconds)
Throttle	open full then return to 1/2 in while cranking
Throttle	adjust after start
Oil pressure	check

Engine Start (Flooded)

Throttle	full forward (open)
Mixture	idle cut off
Propeller	full Increase
Master	check on
Electric fuel pump	off
Primer	in and locked, do not prime
Clear	prop
Starter	engage (max 30 seconds)
Throttle	retard
Mixture	advance slowly after start
Oil pressure	check
Time	note engine start

Before Taxiing

Strobe Lights	on
Flaps	retracted
Primer	in and locked
Mixture	lean for taxi
Landing gear light	check green
Avionics master	on
Turn coordinator	on
Autopilot	on/test position
Transponder	on
Elevator trim	set for takeoff
Artificial horizon	check erect and set
Directional Gyro	set to magnetic compass heading
Vertical Speed Indicator	check zero
GPS	answer prompts
ATIS/AWOS	check
Altimeter	set to pressure or local field elevation
Clock	wind and set
Doors	latched
Seatbelts	fastened
Taxi clearance	obtain
Time	note taxi

Run up / Ground Check

Brakes	set
Warm up	2 to 4 minutes at 800-1200 rpm
Transponder	confirm on
Mixture	still leaned
Propeller	full increase
Fuel Selector	proper tank
Fuel Pressure	check
Flight Controls	free and clear

Run up / Ground Check

Throttle	1800 rpm
Oil pressure	Check green
Oil temperature	Check green or warming
Manifold Pressure	check 15" Hg
Vacuum	5" Hg + 0.1 / - 0.2
Ammeter/Voltmeter	Check charging, voltage near 14v
Magnetos Left/Right	max drop 175, max dif 50 rpm
Carb heat	check, confirm rpm drop

*avoid long ground ops with carb heat on as air is unfiltered

Propeller	Cycle as needed to circulate oil

*do not exceed 500 rpm drop for more than 3 seconds

Propeller/throttle	test governor
Throttle	retard to 800 rpm
Time	note departure

Take Off and Climb Out

Clearance	obtain
Transponder	set to alt
Fuel Selector	desired tank
Electric Fuel Pump	on
Flaps	set as desired
Elevator Trim	set for takeoff (nuetral)
Directional Gyro	set rwy heading
Strobe Lights	confirm on
Landing/Nav Lights	on as needed
Mixture	full rich
Throttle	advance slowly, smoothly to full
Rotate	65-70 kts
Control wheel	back pressure, climb attitude

Take Off and Climb Out

Establish positive rate of climb

Area around manual gear lever	clear
Brakes	stop wheel spin
Landing Gear	Retract end rwy
Gear Light	amber

Reduced Power Climb

Propeller	RPM 2500
Throttle	Man press 25" Hg
Elevator Trim	as needed
Climb best enroute	104 kts
Electric Fuel Pump	off
Mixture	lean

Approach and Landing

10 minutes out	slow, descend
Seats	Erect
Seat Belts	Fastened
Electric Fuel Pump	On
Fuel Selector	desired tank
Landing Lights	on as needed
Autopilot	off
Carb Heat	as required
Area around landing gear lever	clear
Landing Gear	down under 108 kts recommended
Gear indicator	130 kts max green
Flaps	below 87 kts recommended 108 kts max
Trim tab	set for landing
Mixture	enrich as required
Propeller Control	Full forward - increase RPM
GUMP check	on final
Vapp	72 kts

After Landing

Off runway	hold for clearance
Taxi	Obtain clearance
Flaps	up
Carb Heat	off
Fuel Pump	off
Transponder	standby
Pitot Heat	off
Landing Lights	off
Nav Lights	off

Engine Shutdown

Idle	until a decided decrease in CHT is noted
Tune comm to 121.5	Check ELT for false operation
Strobe lights	off
Nav, Panel lights	off
Avionics Master	off
Throttle	1800 rpm
Clear plugs	15-20 seconds
Throttle	< 1000 rpm
Wait until EGT decreased	< 900
Mag check	confirm then re-enable
Mixture	idle cut-off
Magnetos	off
Master switch	off
Time	note shutdown

Parking / Securing

Wheel chocks	in place
Tie downs	secure
Pitot head	cover
Cowl plugs	in place
Tail cone	cover
Control Wheel	secure restraint

PA-24-250 V Speeds (kts)

2000	2250	2500	2800		Gross Weight
104	110	116	123	Va	Design Maneuvering Speed
61	65	68	72	Vapp	Final approach to landing speed
			108	Vfe	Maximum flap extension speed
			129	Vle	Landing gear extended speed
			129	Vlo	Landing gear operation speed
			199	Vne	Never Exceed speed
			157	Vno	Maximum structural cruising speed
63	66	70	74	Vr	Rotation speed
48	51	54	57	Vs0	Stall speed with flaps and gear extended
53	56	60	63	Vs1	Stall speed with flaps and gear retracted
62	65	69	73	Vx	Best angle of climb speed
77	82	86	91	Vy	Best rate of climb speed
88	93	98	104		Best en route rate of climb speed
74	78	82	87	Vbg	Best Glide Speed Optimum
63	66	70	74		Best Glide Speed Endurance
			17		Demonstrated crosswind component

06/18	ATIS	Ground	Tower	Clear	App Dep	Runway	Elev	TPA/Dir	ASOS
MYF	126.9	118.225	119.2	123.725	124.35 119.6	10L-28R 05-23 10R-28L	427	1427-L-R 1427-L 1427-R-L	858-576-4337
SEE	125.45	121.7	120.7	125.1	124.35	09R-27L 09L-27R 17-35	388	1400-L 800-L 1400-L-R	619-449-1228
CRQ	120.15	121.8	118.6	134.85	127.3	06-24	330	1500-L-R	760-930-0864
RNM	132.025	121.65	119.875		132.2 127.3	09-27	1395	2395-L	760-789-0736

DO NOT PERFORM MANUAL GEAR EXTENSION UNLESS YOU ARE EXPERIENCING A REAL EMERGENCY.

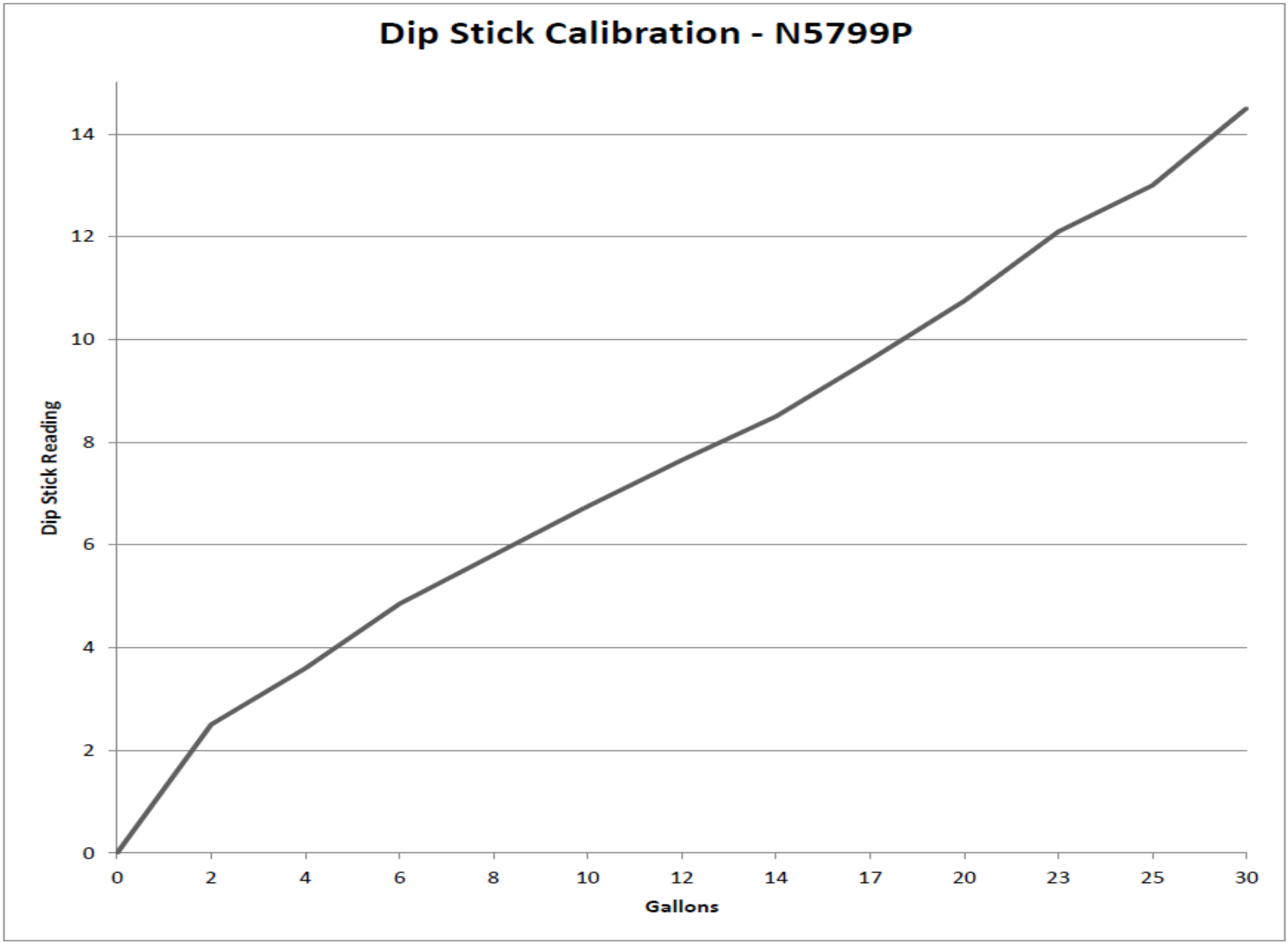
Parking / Securing	
Wheel chocks	in place
Tie downs	secure
Pitot head	cover
Cowl plugs	in place
Tail cone	cover
Control Wheel	secure restraint
Parking brake	disengaged
Fuel selector	off
Cabin fresh air inlets	closed
Storm window	closed
Tow bar	stowed
Doors (cabin, baggage)	locked
Cockpit	covered

Close Flight Plan

Soft Field Landing	
Airspeed on final	70 kts
Throttle	carry power until flare
Flaps	leave extended to maximize wing lift
Control Wheel	back pressure to relieve airplane weight
Brakes	utilize field conditions to slow airplane, minimum braking application

Short Field Landing	
Airspeed on final	70 kts
Throttle	carry power until flare
Flaps	retract immediately after touchdown
Control Wheel	full back pressure to put airplane weight on main landing gear
Brakes	apply heavily

Speeds	KIAS
Max	165
75% @ 7000	157
65% @ 10000	154
55% @ 14000	142
45% @ 15000	130
Stall full flaps/gear ext	56
Clean	62


Dip Stick Calibration - N5799P
Dip Stick Reading
0
2
4
6
8
10
12
14
Gallons
0
2
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8
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12
14
17
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23
25
30