**N12345**

**PA-28-180**

**PREFLIGHT - INTERIOR**

1. Flight Plan -------------------------------------- FILED
2. ARROW ---------------------------------------- CHECK
3. Tachometer ------------------------------------- LOG
4. Clock ------------------------------------ WIND & SET
5. Control Lock ------------------------------- REMOVE
6. iPad Mount ------------------ CHECK MOVEMENT
7. Fuel Selector ------------------------------------ LEFT
8. Ignition & Avionics ----------------------------- OFF
9. Master --------------------------- ON & CHECK FAN
10. Electric Switches ------------------ CHECK LIGHTS
11. Fuel Gauges ---------------------------------- CHECK
12. Elec. Switches (Except Beacon) ------------- OFF
13. Master --------------------------------------------- OFF
14. Throttle & Mixture ----------------------------- OFF
15. Carburetor ------------------------------------- COLD
16. Anti-Fog Heat ------------------------------------ OFF
17. Circuit Breakers ----------------------------------- IN
18. Flaps ------------------------------------------- DOWN
19. Trim ----------------------------------------- TAKEOFF

**PREFLIGHT - RIGHT WING**

1. General Surface Condition ---------------- CHECK
2. Flap (Track, Pushrod) ---------------------- CHECK
3. Aileron (Hinges, Pushrod) ----------------- CHECK
4. Wing Tip --------------------------------------- CHECK
5. Nav / Strobe Lights ------------------------- CHECK
6. Leading Edge --------------------------------- CHECK
7. Fuel Qty. & Cap ---------------- CHECK & SECURE
8. Tie-Down ----------------------------------- REMOVE
9. Fuel Vent -------------------------------------- CLEAR
10. Fuel Sump -------------------------- BLUE & CLEAR
11. Main Gear Tire --------------------------- INFLATED
12. Shock Absorber --------------------------- 4.5 INCH
13. Leaks ----------------------------------------- FREE OF
14. Cabin Air Vent -------------------------------- CLEAR

**PREFLIGHT - FORWARD FUSELAGE**

1. Windshield ------------------------------------ CLEAN
2. Oil Level -------------------------------- 6-8 QUARTS
3. Air Intake Cover -------------------------- REMOVE
4. Alternator Belt ------------------------------- CHECK
5. Propeller & Spinner ---------------- NO DAMAGE
6. Air Intakes ------------------------------------- CLEAR
7. Landing / Taxi Lights ------------------------ CHECK
8. Cowling & Covers -------------------------- SECURE
9. Anti-Bird Measure ----------------------- REMOVE
10. Temperature Sensor ----------------------- CHECK
11. Nose Gear Tire ------------------------------- CHECK
12. Shock Absorber --------------------------- 3.5 INCH
13. Fuel Sump -------------------------- BLUE & CLEAR
14. Leaks ----------------------------------------- FREE OF

**PREFLIGHT - LEFT WING**

1. General Surface Condition ---------------- CHECK
2. Cabin Air Vent -------------------------------- CLEAR
3. Leaks ----------------------------------------- FREE OF
4. Main Gear Tire ------------------------------- CHECK
5. Shock Absorber --------------------------- 4.5 INCH
6. Fuel Sump -------------------------- BLUE & CLEAR
7. Fuel Vent -------------------------------------- CLEAR
8. Tie-Down ----------------------------------- REMOVE
9. Pitot Static Cover ------------------------- REMOVE
10. Pitot Static Probe --------------------------- CHECK
11. Pitot Static Probe Heat -------------------- CHECK
12. Fuel Qty. & Cap ---------------- CHECK & SECURE
13. Leading Edge --------------------------------- CHECK
14. Stall Warning ------------------------------- CHECK
15. Wing Tip ------------------------------------- CHECK
16. Nav / Strobe Lights ------------------------ CHECK
17. Aileron (Hinges, Pushrod) --------------- CHECK
18. Flap (Hinges, Pushrod) ------------------- CHECK

**PREFLIGHT - EMPENNAGE**

1. Antennas ------------------------------------ CHECK
2. Tail Tie-Down ---------------------------- REMOVE
3. Tail Cone Cover ------------------------- REMOVE
4. Linkages ------------------------------------- CHECK
5. Stabilator -------------------------- CHECK & FREE
6. Antiservo Tab ------------------------------ CHECK
7. Rainfly, Covers, Tow Bar ---------------- STOWE
8. Baggage Door ----------------------------- SECURE
9. External Camera(s) ---------------------------- ON
10. **360 Walk Around ------------ LOOKING GOOD**

**PASSENGER / CREW BRIEFING**

Use Bathroom; Seat Belts; Door & Latch

Headsets, Intercom, Heater & Air Vents

Window Breaker & Belt Cutter

Exit & Egress Procedures

Fire Extinguisher & Life Vests

Passenger Discomfort (Sick Sack, Head Movement, & During Descend)

Clearing Traffic & Positive Transfer of Aircraft Control

Questions?

**START ENGINE & TAXI**

1. Preflight Inspection ----------------- COMPLETE
2. Passenger Briefing ------------------- COMPLETE
3. iPad & Cables ------------------------------- CHECK
4. Headsets & Kneeboard ------------------ CHECK
5. Seats -------------------------- ADJUST & SECURE
6. Seat Belts ---------------------------------- FASTEN
7. Head Lamp -------------------------------------- SET
8. Backup Radio -------------------- WITHIN REACH
9. Backup Batteries --------------- WITHIN REACH
10. Hammers & Cutters ----------- WITHIN REACH
11. Avionics ----------------------------------------- OFF
12. Circuit Breakers ---------------------------------- IN
13. Fuel Selector ---------------------------------- LEFT
14. Fuel Clock ------------------------------------ START
15. Parking Brake ---------------------------- ENGAGE
16. Carburetor ------------------------------------ COLD
17. Mixture ----------------------------------------- RICH
18. Prime ----------------------------------- AS NEEDED
19. Throttle ----------------------------------- 1/4 INCH
20. Side Window ----------- CLEEEEAAAARRRR!!!!!
21. Master -------------------------------------------- ON
22. Panel Lights --------------------------------- CHECK
23. Ammeter ---------------------------- DISCHARGING
24. Electric Pump ------------------------------------- ON
25. Fuel Pressure -------------------------------- GREEN
26. Ignition Switch ---------------- ENGAGE (<5 SEC.)
27. Throttle ----------------------------------- 1000 RPM
28. Engine Gauges ------------------------------- GREEN
29. Electric Pump ------------------------------------ OFF
30. Ammeter -------------------------------- CHARGING
31. Mixture ---------------------- LEAN FOR GND OP’S
32. Intercom & Radio --------------------------- CHECK
33. Weather --------------------------------------- CHECK
34. Altimeter & Heading Indicator --------------- SET
35. Attitude Indicator & VSI ------------------- CHECK
36. Turn Coordinator --------------------------- CHECK
37. GPS / RAIM ----------------------------------- CHECK
38. CTAF / GND / CD Frequency ---------------- CALL
39. Flight Plan -------------------------------- ACTIVATE
40. Transponder Code ------------------------------ SET
41. ADS-B ---------------------------- WIFI CONNECTED
42. iPad / GPS / VOR ---------------- PROGRAMMED
43. Flaps ------------------------------------------------- UP
44. Brakes ------------------------------------------ CHECK

**BEFORE TAKEOFF**

1. Brakes ---------------------------------------------- SET
2. Seats and Belts ------------------------------ CHECK
3. Flight Control ------------------- FREE & CORRECT
4. Fuel Selector ----------------------- PROPER TANK
5. Electric Pump ------------------------------------- ON
6. Mixture ------------------------------------------ RICH
7. Throttle ----------------------------------- 1800 RPM
8. Mags. (R, L, Both) ------------- RPM DROP < 175
9. Carb. Heat ----------------- RPM DROP < 50; OFF
10. Suction ---------------------------------------- 5 IN Hg
11. Heading Indicator ------------------------------- SET
12. Throttle --------------- IDLE & CHECK; 1000 RPM
13. Friction Lock -------------------------------- ADJUST
14. Primer ------------------------------------------- LOCK
15. Trim ----------------------------------------- TAKEOFF
16. **Takeoff & Emergency ----------------------- BRIEF**
17. Flaps ------------------------------------------------ SET
18. Frequencies ---------------------------------- READY
19. CTAF / TWR. Freq. ----------------------------- CALL
20. Door -------------------------------------------- LATCH
21. Landing / Nav / Strobe Lights ----------------- ON

**TAKEOFF – NORMAL**

Flaps ---------------------------------------------- 0

Trim ------------------------------------- TAKEOFF

Mixture ----- RICH; Throttle ----- FULL

Engine Gauges & Airspeed ----------- CHECK

VR ----------------------------------------- **55 KIAS**

VX ------- **64 KIAS**; VY ------- **74 KIAS**

**CLIMBING & CRUISE**

Electric Pump ------ OFF OUTSIDE PATTERN

Landing Light -------------------------------- OFF

Carburetor ----- HOT IN VISIBLE MOISTURE

Mixture ------------- ADJUST **ABOVE 3000 FT**

**Fuel Tank ---------- SWITCH EVERY 30 MIN.**

**BEFORE LANDING / WIRES / GUMPS**

1. Weather ----------------------------- CHECK
2. Flight Instrument --------- CHECK & SET
3. Radio --------------------------------- CHECK
4. Fuel & Selector -------------------- CHECK
5. Mixture -------------------------------- RICH
6. Carburetor ------ HOT IN VISIBLE MOIS.
7. Seats and Belts -------------------- CHECK
8. Landing Light --------------------------- ON

**APPROACH - NORMAL**

Instrument APP ---------------------- **90 KIAS**

Pattern Altitude ---------------------- **90 KIAS**

Abeam Threshold ----- **FLAPS** **10°**, **80 KIAS**

Base ---------------------- **FLAPS** **25°**, **70 KIAS**

Final ---------------------- **FLAPS** **40°**, **61 KIAS**

**GO-AROUND**

Throttle ------------------------------------ FULL

Carburetor ------------------------------- COLD

Flaps ------------------------------------------ **25°**

VX ------- **64 KIAS**; VSI ------- **POSITIVE**

Trim --------------------- ADJUST AS NEEDED

VY ------ **74 KIAS**; Flaps ------ **10°**

Airspeed ----- **80 KIAS**; Flaps ------ **0**

**TAKEOFF - SHORT-FIELD**

Flaps ------- **10°;** Trim ------- TAKEOFF

Mixture ----- RICH; Brakes ----- APPLIED

Throttle --------------------------------------- FULL

Tachometer - 2300 RPM; Brakes - RELEASE

Engine Gauges & Airspeed ------------ CHECK

VR ------------------------------------------- **60 KIAS**

VX ------------------------------------------- **64 KIAS**

Obstacles ------------------------------- CLEARED

VY ------- **74 KIAS**; Flaps ------- **0°**

**TAKEOFF - SOFT-FIELD**

Elevator ---------------------------------- FULL UP

Flaps ------- **25°**; Trim ------- TAKEOFF

Mixture ----- RICH; Throttle ----- FULL

Engine Gauges & Airspeed ------------ CHECK

Elevator --------------------- UP TILL AIRBORNE

Elevator --------------- EASE UPON AIRBORNE

Stay In Ground Effect ------ TILL VX = **64 KIAS**

Obstacles ------------------------------- CLEARED

Flaps --------------------- RETRACT GRADUALLY

**LANDING - SHORT-FIELD**

Before Landing Checklist -------- COMPLETE

Final ----------------------- **FLAPS** **40°**, **55 KIAS**

Throttle ---------------- IDLE AT 5 - 10 FT AGL

Elevator ---- FULL UP AFTER TOUCHDOWN

Brakes -------------------- APPLY AT **< 40 KIAS**

**LANDING - SOFT-FIELD**

Before Landing Checklist -------- COMPLETE

Final ----------------------- **FLAPS** **40°**, **61 KIAS**

Throttle ---------------- IDLE AT 5 - 10 FT AGL

Elevator ---------------------------------------- UP

Throttle ---------------------- ADD AS NEEDED

**LANDING - IN TURBULENT AIR**

Before Landing Checklist -------- COMPLETE

Base ------------ **FLAPS** **10 - 25°**, **70 - 80 KIAS**

Final ---- **FLAPS** **10 - 25°**, **61 KIAS + ½ GUST**

Throttle ---------------- IDLE AT 5 - 10 FT AGL

**LANDING - NO FLAPS**

Before Landing Checklist -------- COMPLETE

Approach Airspeed ------------------- **70 KIAS**

Throttle ---------------- IDLE AT 5 - 10 FT AGL

**AFTER LANDING**

1. Flaps ---------------------------------------- UP
2. Carburetor ----------------------------- COLD
3. Strobe Lights ---------------------------- OFF

**PARKING**

1. Flight Plan ----------------------------------- CLOSED
2. Avionics & Electric Switches ----------------- OFF
3. Throttle ----------------------------------- 1000 RPM
4. Mixture ------------------------------------- CUT-OFF
5. Ignition & Master Switches ------------------ OFF
6. Hobbs & Tach. ---------------------------------- LOG

**SECURING THE AIRCRAFT**

1. Control Lock -------------------------------- INSTALL
2. Air Intake Cover --------------------------- INSTALL
3. Pitot Tube Cover -------------------------- INSTALL
4. Tow Bar --------------------------------------- STOWE
5. Tie-Downs ----------------------------------- SECURE
6. Tail Cone Cover ---------------------------- INSTALL
7. Anti-Bird Measures ------------------ DEPLOYED
8. Cockpit & Baggage Doors -------------- SECURE
9. Rainfly -------------------------------------- SECURE

**ENGINE FAILURE ON TAKEOFF**

1. **Throttle ------------------------------ IDLE**
2. **Brakes ----------------------------- APPLY**
3. Mixture ------------------------- CUT-OFF
4. Ignition & Master Switches ------ OFF

**ENGINE FAILURE AFTER TAKEOFF**

1. **Airspeed ----------- 74 KIAS (FLAPS 0)**

**65 KIAS (FLAPS DOWN)**

1. Mixture ------------------------- CUT-OFF
2. Ignition & Master Switches ------ OFF
3. Door --------------------------- UNLATCH
4. Land --------- Straight Ahead (L-R 45°)

**ENGINE FAILURE DURING FLIGHT**

1. **Airspeed ----------- 74 KIAS (FLAPS 0)**

>2000 FT, TO RESTART:

1. Fuel Selector ------- TANK WITH FUEL
2. Electric Pump ------------------------ ON
3. Mixture ------------------------------ RICH
4. Carburetor -------------------------- HOT
5. Engine Gauges ------------- DIAGNOSE
6. Primer --------------------------- LOCKED
7. **Ignition ------------ BY WINDMILLING**

IF POWER RESTORED:

1. Carburetor ------------------------- COLD

**IF POWER NOT RESTORED:**

1. **Airspeed ---------- 74 KIAS (FLAPS 0)**
2. Suitable Field ----------------- LOCATE
3. Emergency -------------- 7700 / 121.5

WHEN COMMITTED TO LANDING:

1. Ignition & Master Switches ----- OFF
2. Mixture ------------------------------ OFF
3. Fuel Selector ----------------------- OFF
4. Seat Belts ------------------------ TIGHT
5. Door -------------------------- UNLATCH

**ENGINE FIRE DURING START**

1. Starter ----------------- CRANK ENGINE
2. Mixture ------------------------- CUT-OFF
3. Throttle ---------------------------- OPEN
4. Electric Pump ----------------------- OFF
5. Fuel Selector ------------------------ OFF
6. Aircraft ----------------------- ABANDON

**ENGINE FIRE DURING FLIGHT**

1. Fuel Selector ------------------------ OFF
2. Throttle ------------------------------ IDLE
3. Mixture ------------------------ CUT-OFF
4. Electric Pump ----------------------- OFF
5. Cabin & Anti-Fog Heat ------------ OFF
6. Emergency --------------- 7700 / 121.5

**SMOKE IN CABIN**

1. Master Switch ----------------------- OFF
2. Vents -------------------------------- OPEN
3. Cabin Heat --------------------------- OFF
4. LAND -------------------------------- ASAP

**CARBURETOR ICING**

1. Throttle ------------------------------ FULL
2. Carburetor -------------------------- HOT
3. Mixture ---------- MAX SMOOTHNESS

**ENGINE ROUGHNESS**

1. Carburetor -------------------------- HOT

IF ROUGHNESS PERSISTS AFTER 1 MIN:

1. Carburetor ------------------------- COLD
2. Mixture ---------- MAX SMOOTHNESS
3. Electric Pump ------------------------ ON
4. Fuel Selector --------- SWITCH TANKS
5. Engine Gauges ------------------ CHECK
6. Magnetos ------------------------- CYCLE
7. Land --------------------------------- ASAP

**ALTERNATOR FAILURE**

1. Electrical Load ----------------- REDUCE
2. Circuit Breakers ----------------- CHECK
3. Alt. Switch ------ OFF 1 SEC THEN ON

**IF AMMETER NOT CHARGING:**

1. Alternator Switch ------------------ OFF
2. Electrical Load ----------------- REDUCE
3. Emergency --------------- 7700 / 121.5
4. LAND -------------------------------- ASAP

**LOSS OF FUEL PRESSURE**

1. Electric Pump ------------------------ ON
2. Fuel Selector ------- TANK WITH FUEL

**EMERGENCY DESCENT**

1. Emergency --------------- 7700 / 121.5
2. Throttle ------------------------------ IDLE
3. Bank ------------------------------------ **45°**
4. Airspeed ------------------------- **74 KIAS**
5. Engine Gauges ------------------ CHECK

During Prolonged Glide, Advance Throttle Occasionally & Check Engine Running.

**SPIN RECOVERY**

1. **Throttle ------------------------------ IDLE**
2. **Aileron ------------------------ NEUTRAL**
3. **Rudder ---------------- FULL OPPOSITE**
4. **Elevator -------------- FULL FORWARD**
5. **Dive ---------------------------- RECOVER**

**OIL OUTSIDE GREEN**

1. Mixture ------------------------------ FULL
2. Throttle ------------------------- REDUCE
3. Emergency --------------- 7700 / 121.5
4. Land --------------------------------- ASAP

Best Glide At **74 KIAS.**

Maneuver At Between **100-80** **KIAS**.

No forward Slip With Extended Flaps.