Piper Twin Comanche Checklist N8883Y

NORMAL PROCEDURES

Limiting and Recommended Airspeeds

Va – Maneuvering Speed	162 MPH @ 3600lbs
Va – Maneuvering Speed	145 MPH @ 2825lbs
Vapp – Final Approach Speed	100 MPH
Vfe – Max Flap Extension Speed	125 MPH
Vfe – Recommended	100 MPH
Vle – Land. Gear Extended Speed	150 MPH
Vlo – Max Land. Gear Op Speed	150 MPH
Vlo – Recommended	125 MPH
Vmca – Min Control Speed SE	80 MPH
Vne – Never Exceed Speed	230 MPH
Vno – Normal Op Speed	194 MPH
Vr – Rotation Speed	85 MPH
Vso – Stall Speed (Landing Config)	70 MPH
Vs1 – Stall Speed (Clean)	76 MPH
Vsse – Min Intentional Single Engine Speed	97 MPH
Vx – Best Angle of Climb Speed	90 MPH
Vxse – Best Single Engine Angle of Climb	94 MPH
Vy – Best Rate of Climb Speed	112 MPH
Vyse – Best Single Engine Rate of Climb	105 MPH
Best Enroute Rate of Climb Speed	130 MPH
Both Engines Failed Glide Speed	110 MPH

PREFLIGHT

CABIN

1. Hobbs / Tach ____ CHECK
2. Airworthiness Inspections ____ CHECK
3. AROW ____ CHECK
4. VOR Check ____ LAST 30 DAYS
5. Control Wheel Lock (Seatbelt) ____ REMOVE
6. Magneto Switches ____ OFF
7. Electrical Equipment ____ OFF
8. Gear Switch ____ DOWN
9. Master Switch ____ ON
10. Fuel Quantity (Main & Aux & Tip) ____ CHECK
11. Lights ____ CHECK
12. Stall Warning Indicator & Horn ____ TEST
13. Wing Flaps ____ 27 DEGREES
14. Master Switch ____ OFF
15. Fuel Drain Valve ____ DRAIN (OUTSIDE ONLY)

RIGHT WING

1. Wing Flaps ____ CHECK
2. Aileron ____ CHECK
3. Lights ____ CHECK
4. Leading Edge ____ CHECK
5. Fuel Quantity (Main & Aux & Tip) ____ CHECK
6. Filler Caps ____ SECURE
7. Fuel Tank Vent & Overflow Drains ____ CHECK
8. Oil ____ CHECK (6-8 quarts)
9. Cowling Screws ____ CHECK
10. Cowl Flaps & Exhaust ____ CHECK
11. Propeller ____ CHECK
12. Main Wheel, Wheel Well, Brakes ____ CHECK
13. Chocks / Wing Tie Down ____ REMOVE

NOSE

1. Cowling Screws ____ CHECK
2. Heater Exhaust Pipe ____ CHECK
3. Nose Wheel ____ CHECK
4. Heater Air Intake ____ CHECK
5. Windshield ____ CLEAN

LEFT WING

1. Main Wheel, Wheel Well, Brakes ____ CHECK
2. Chock / Wing Tie Down ____ REMOVE
3. Fuel Quantity (Main & Aux & Tip) ____ CHECK
4. Filler Caps ____ SECURE
5. Fuel Tank Vent & Overflow Drains ____ CHECK
6. Oil ____ CHECK (6-8 quarts)
7. Cowling Screws ____ CHECK
8. Cowl Flaps & Exhaust ____ CHECK
9. Propeller ____ CHECK
10. Stall Warning ____ CHECK
11. Pitot Tube ____ CHECK
12. Leading Edge ____ CHECK
13. Lights ____ CHECK
14. Aileron ____ CHECK
15. Wing Flaps ____ CHECK

EMPENNAGE

1. Antennas ____ CHECK
2. Baggage Door / Emergency Exit ____ CLOSED
3. Fuselage ____ CHECK (skin & rivets)
3. Static Port ____ CHECK
4. Stabilator ____ CHECK
5. Rudder ____ CHECK
6. Lights ____ CHECK
7. Static Port ____ CHECK

BEFORE START

1. Preflight Inspection ____ COMPLETE
2. Passenger Briefing ____ BRIEF
3. Seats ____ LOCKED
4. Seat Belts ____ SECURE
5. Fuel Selector Valves ____ MAIN
6. Circuit Breakers ____ IN
7. Alternators ____ ON
8. Cowl Flaps ____ OPEN
9. Static Air Source ____ NORMAL
10. Landing Gear ____ DOWN
11. Avionics Switch ____ OFF
12. Electrical Equipment ____ OFF
13. Beacon ____ ON
14. Brakes ____ TEST & HOLD

ENGINE START

COLD START

1. Master Switch ____ ON
2. Magnetos ____ ON
3. Throttle ____ FULL OPEN
4. Propellers ____ FULL FORWARD
5. Mixture ____ RICH
6. Fuel Pump ____ ON TILL 3 GPH FUEL FLOW / OFF
7. Throttle ____ ½ INCH OPEN
8. Propeller Area ____ CLEAR
9. Starter ____ ENGAGE
10. Throttle ____ 1000 RPM OR BELOW
11. Oil Pressure ____ CHECK
12. Mixture ____ LEAN AS REQUIRED

Repeat Steps 2 – 12 for second engine

HOT START

1. Master Switch ____ ON
2. Magnetos ____ ON
3. Throttle ____ ½ OPEN
4. Propellers ____ FULL FORWARD
5. Mixture ____ RICH
6. Propeller Area ____ CLEAR
7. Starter ____ ENGAGE
8. Throttle ____ 1000 RPM OR BELOW
9. Oil Pressure ____ CHECK
10. Mixture ____ LEAN AS REQUIRED

Repeat Steps 2 – 10 for second engine

FLOODED START

1. Master Switch ____ ON
2. Magnetos ____ ON
3. Throttle ____ FULL OPEN
4. Propellers ____ FULL FORWARD
5. Mixture ____ IDLE
6. Propeller Area ____ CLEAR
7. Starter ____ ENGAGE
8. Throttle ____ DECREASE AS ENG STARTS
9. Mixture ____ RICH
10. Oil Pressure ____ CHECK
11. Mixture ____ LEAN AS REQUIRED

Repeat Steps 2 – 11 for second engine

BEFORE TAXI

1. Circuit Breakers ____ CHECK
2. Flaps ____ UP
3. Landing Gear Indicator Light ____ CHECK GREEN
4. Nav Lights ____ ON (night ops)
5. Avionics Switch ____ ON
6. Throttle ____ 800-1000 RPM
7. Fuel Totalizer ____ SET FUEL
8. Transponder ____ 1200 & GROUND
9. GPS ____ VERIFY DATABASE / INDICATIONS
10. Radios ____ SET & TEST
11. ATIS / AWOS ____ OBTAIN
12. Altimeter ____ SET
13. Directional Gyro ____ CONFIRM HDG

TAXI

1. Brakes ____ TEST
2. Taxi Clearance ____ RECEIVE
3. Flight Instruments ____ CHECK

BEFORE TAKEOFF

1. Brakes ____ HOLD
2. Flight Controls ____ FREE & CORRECT
3. Trims (Elevator & Rudder) _ TEST & SET FOR TAKEOFF
4. Fuel Selector Valves ____ MAIN
5. Turbo Controls ____ OUT
6. Throttles ____ 1500 RPM
   - Propellers ____ CHECK FEATHER / EXERCISE
   Throttles ____ 2000 RPM
   - Mixtures ____ SET FOR TAKEOFF (RICH OF PEAK)
   - Magnetos ____ CHECK
   - Ammeter / Voltmeter ____ CHECK
   - Engine Instruments ____ CHECK
   - Suction Gauge ____ CHECK
7. Throttle ____ IDLE
8. Throttle Friction Lock ____ ADJUST
9. Cowl Flap ____ AS REQUIRED
10. Flight Instruments ____ CHECK
11. Autopilot ____ TEST
12. GPS / NAV / Radios ____ SET
13. Transponder ____ GROUND & SQUAWK CODE
14. Lights ____ AS REQUIRED
15. Doors & Windows ____ LOCKED
16. Electric Fuel Pumps ____ ON
17. Emergency Procedures ____ BRIEF
    - Assign Crew Flying/ Non-Flying Duties
    - Abort Takeoff Procedure
    - Reasons to abort
    - Engine Failure After Lift-Off Procedure
    - Obstacles Near Airport
    - Airspeeds
18. Takeoff Briefing ____ REVIEW
19. Takeoff Clearance ____ RECEIVE
20. Brakes ____ RELEASE

TAKEOFF FINAL ITEMS – FOR TAXI BACK OPERATIONS

1. Fuel Selector ____ MAIN
2. Trim ____ SET
3. Cowl Flaps ____ OPEN / AS REQUIRED
4. Flaps ____ UP / SET
5. Mixture ____ SET
6. Propellers ____ FULL FORWARD
7. Lights ____ AS REQUIRED
8. Electric Fuel Pumps ____ ON
9. Windows & Door ____ CLOSED

NORMAL TAKEOFF

1. Wing Flaps ____ 0 DEGREES
2. Brakes ____ HOLD
3. Throttle ____ FULL OPEN
4. Engine Instruments ____ CHECK IN GREEN
5. Brakes ____ RELEASE
6. Airspeed ____ ALIVE
7. Elevator ____ ROTATE 85 MPH
8. Landing Gear ____ RETRACT
9. Climb Speed ____ 112 MPH

SHORT FIELD TAKEOFF

1. Wing Flaps ____ 15 DEGREES
2. Brakes ____ HOLD
3. Throttle ____ FULL OPEN
4. Engine Instruments ____ CHECK IN GREEN
5. Brakes ____ RELEASE
6. Airspeed ____ ALIVE
7. Initial Climb Speed ____ 90 MPH
8. Landing Gear ____ RETRACT
9. Wing Flaps ____ UP ABOVE 200 FT AGL
10. Climb Speed ____ 112 MPH

CLIMB

1. Airspeed ____ 105-115 MPH
2. Wing Flaps ____ UP
3. Airspeed above 1000ft AGL ____ 115-130 MPH
4. Propellers ____ 2500 RPM
5. CHT ____ MONITOR / COWL FLAPS AS REQ
6. Electric Fuel Pumps ____ OFF (1 AT A TIME)
7. Mixture ____ LEAN AS REQUIRED
8. Landing / Taxi Light ____ OFF

CRUISE

1. Cowl Flaps ____ CLOSED
2. Power ____ REFER TO POWER CHART
3. Engine Instruments ____ MONITOR
4. Mixture ____ LEAN AS REQUIRED
5. Propellers ____ SYNCHRONIZE
6. Fuel Management ____ MAIN & AUX & TIP TANKS

DESCENT

1. Mixture ADJUST
2. Cowl Flaps CLOSED
3. Propellers CRUISE RPM
4. Turbo Controls REDUCE
5 Throttle AS REQUIRED
6. Weather / Approach Briefing COMPLETE

IFR APPROACH SETUP

Brief Procedure:

1. Inbound Course REVIEW / SET
2. Nav Frequency SET - TUNE
3. FAF WHAT & WHERE - SET
4. DH / MDA WHAT & WHERE
5. MAP WHAT & WHERE
6. Missed Procedure REVIEW

Pre-Approach:

1. Approach Procedure BRIEF
2. DG CONFIRM
3. Markers TEST - SET LOW - PHONE
4. Nav Radios SET – TUNE – TEST
5. GPS SET
6. Comm Frequencies SET
6. Wind & Ceiling VIEW MINIMUMS
7. **PCGUMPS** COMPLETE
8. Wing Flaps 15 DEGREES
9. Approach Clearance RECEIVE

Final Approach Fix:

1. Time START
2. Landing Gear DOWN
3. Descent GO DOWN
4. GPS SET

BEFORE LANDING

1. **Heater** OFF or FAN
2. **P** – Fuel Pumps ON
3. **C** – Cowl Flaps CLOSED
4. **G -** Gas / Fuel Selector Valve MAIN
5. **U** – Undercarriage / Gear DOWN & LOCKED
6. **M** – Mixture ADJUST
7. **P** – Propellers HIGH RPM
8. **S** – Seatbelts SECURE
9. Wing Flaps AS DESIRED
10. Airspeed 105-115 MPH

NORMAL LANDING

1. Airspeed 100-105 MPH
2. Wing Flaps AS DESIRED
3. Touchdown MAIN WHEELS FIRST
4. Landing Roll LOWER NOSE WHEEL GENTLY
5. Back Pressure APPLY
6. Brakes MINIMUM REQUIRED

SHORT FIELD LANDING

1. Airspeed ____ 103 MPH
2. Wing Flaps ____ 27 DEGREES
3. Touchdown ____ MAIN WHEELS FIRST
4. Brakes ____ APPLY AS REQUIRED
5. Wing Flaps ____ UP
6. Back Pressure ____ APPLY

GO-AROUND

1. Throttle ____ FULL OPEN
2. Propellers ____ FULL FORWARD
3. Landing Gear ____ RETRACT
4. Wing Flaps ____ UP
5. Cowl Flaps ____ OPEN
6. Airspeed ____ 112 MPH

AFTER LANDING

1. Heater ____ FAN
2. Wing Flaps ____ UP
3. Cowl Flaps ____ OPEN
4. Transponder ____ GROUND & 1200
5. Mixture ____ LEAN FOR TAXI
6. Landing / Taxi Lights ____ OFF
7. Fuel Pumps ____ OFF
8. Taxi ____ 1000 RPM OR LESS

SHUTDOWN / SECURING AIRPLANE

1. Electrical Equipment ____ OFF (NOT BEACON)
2. Interior Lights ____ OFF
3. Avionics Switch ____ OFF
4. Mixture ____ IDLE–CUT OFF
5. Magneto Switches ____ OFF
6. Heater ____ CABIN AIR COLD /OFF
7. Tach / Hobbs ____ RECORD
8. Master Switch ____ OFF
9. Window ____ CLOSED
10. Wheel Chock ____ INSTALL
11. Post flight Inspection ____ INSPECT

EMERGENCY PROCEDURES

ENGINE FAILURE DURING TAKEOFF

BELOW 85 MPH

1. Throttles _____ CLOSED
2. Braking _____ MAXIMUM AS REQUIRED
3. Fuel Selector _____ OFF
4. Master Switch _____ OFF

BETWEEN 85 AND 105 MPH

1. Land Straight Ahead

ABOVE 105 MPH

1. Airspeed _____ 105 MPH
2. Directional Control _____ MAINTAIN
3. All Power Levers _____ FORWARD
4. Wing Flaps _____ UP
5. Gear _____ RETRACT
6. Fuel Pumps _____ ON
7. Magnetos _____ ON
8. Fuel Selector _____ SELECT TANKS WITH FUEL

Initiate Engine Securing Procedure

ENGINE POWER LOSS DURING FLIGHT

1. Airspeed _____ 105 MPH
2. Directional Control _____ MAINTAIN
3. All Power Levers (Throttle, Prop, Mix) ____ FORWARD
4. Wing Flaps _____ UP
5. Alternate Air _____ OPEN
6. Gear _____ UP
7. Fuel Pumps _____ ON
8. Magnetos _____ ON
9. Fuel Selector _____ SELECT TANKS WITH FUEL

Initiate Engine Securing Procedure

ENGINE SECURING PROCEDURE (FEATHER)

1. Identify Failed Engine ____ DEAD FOOT = DEAD ENG
2. Verify _____ VERIFY ENG GAUGES
3. Verify _____ THROTTLE TO IDLE
4. Feather _____ PROP LEVER TO FEATHER

When able perform on FAILED ENGINE:

1. Mixture _____ IDLE CUT OFF
2. Fuel Pump _____ OFF
3. Magneto Switches _____ OFF
4. Fuel Selector _____ OFF
5. Cowl Flap _____ CLOSED
6. Cowl Flap *Operating Engine* _____ OPEN/MONITOR
7. Electrical Load _____ REDUCE IF NECESSARY

Land As Soon As Practical At Nearest Airport

AIR START – UNFEATHERING

1. Magneto Switches ____ ON
2. Mixture ____ RICH
3. Fuel Selector ____ ON
4. Throttle ____ ½ INCH OPEN
5. Propeller Control ____ FORWARD TO LINE
6. Avionics ____ OFF
7. Airspeed ____ PITCH FOR 120-130 MPH
8. Starter __ ENGAGE UNTIL PROPELLER WINDMILLS
9. Oil Pressure ____ CHECK
10. Propeller ____ 2000 RPM
11. Throttle ____ 15" MP
12. Cowl Flap ____ CLOSED / AS REQUIRED
13. Avionics ____ ON

Once engine is warm normal power settings can be resumed

SINGLE ENGINE CROSSFEED OPERATION

The fuel crossfeed system may only be used in level flight.

1. Inoperative Engine Fuel Selector ____ MAIN OR AUX
2. Operative Engine Fuel Selector ____ CROSSFEED

DO NOT put both fuel selector valves on crossfeed.

Before landing the fuel system should be taken off crossfeed:

3. Operative Engine Fuel Selector ____ MAIN TANK
4. Inoperative Engine Fuel Selector ____ OFF

ENGINE ROUGHNESS IN FLIGHT

Affected Engine:

1. Alternate Air ____ ON

If roughness continues after one minute:

2. Alternate Air ____ OFF

In the Interim:

3. Mixture ____ ADJUST FOR MAX SMOOTHNESS
4. Fuel Pump ____ ON
5. Fuel Selector ____ SWITCH TANKS
6. Engine Gauges ____ CHECK
7. Magnetos ____ CHECK LEFT OR RIGHT

If operation is satisfactory on one magneto, continue at reduced power and standard mixture to the nearest airport.

Prepare for Engine Power Loss During Flight Procedure.

ENGINE FIRE DURING START

1. Starter ____ CONTINUE CRANKING ENGINE
2. Mixture ____ IDLE CUT-OFF
3. Throttle ____ OPEN
4. Fuel Pump ____ OFF
5. Fuel Selector ____ OFF

If fire continues – Extinguish with best available means

ENGINE FIRE IN FLIGHT

1. Throttle ____ IDLE
2. Mixture ____ IDLE CUT-OFF
3. Fuel Selector ____ OFF
4. Fuel Pump ____ OFF

Initiate engine power loss during flight procedure

Consider Emergency Descent Procedure

POWER OFF LANDING (BOTH ENGINES)

1. Establish Best Glide ____ 110 MPH
2. Propellers ____ FEATHER
3. Navigate ____ LOCATE SUITABLE FIELD
4. Communicate ____ ADVISE 121.50

When committed to landing:

5. Throttles ____ IDLE
6. Fuel Selectors ____ OFF
7. Mixtures ____ IDLE CUT-OFF
8. Magneto Switches ____ OFF
9. Seat Belts and Harnesses ____ TIGHT
10. Window ____ OPEN

GEAR DOWN LANDING:

11. Wing Flaps ____ AS DESIRED
12. Landing Gear LOWER JUST BEFORE TOUCHDOWN
13. Master Switch ____ OFF

GEAR UP LANDING:

11. Wing Flaps ____ UP
12. Landing Gear ____ UP
13. Master Switch ____ OFF

SINGLE ENGINE LANDING

When it is certain runway can be reached:

1. Landing Gear ____ EXTEND
2. Wing Flaps ____ AS DESIRED
3. Airspeed ____ 105 MPH

SINGLE ENGINE GO AROUND

Consider Single Engine Go Around as Last Option

1. Power FULL POWER
2. Directional Control ____ MAINTAIN
3. Landing Gear ____ RETRACT
4. Wing Flaps ____ UP
5. Airspeed ____ 105 MPH

SIMULATED SINGLE ENGINE OPERATION

1. Airspeed ____ BELOW 125 MPH
2. Left Engine Throttle ____ RETARD
3. Right Engine ____ FULL POWER
4. Directional Control ____ MAINTAIN
5. Left Engine Propeller ____ ZERO THRUST

Zero Thrust = 2100 RPM & 10" MP

6. Airspeed ____ ABOVE 105 MPH

ELECTRICAL FAILURE

EXCESSIVE DISCHARGE:

1. Voltmeter ____ INDICATES LOW VOLTAGE
2. Alternator Switches ____ CHECK
3. Electrical Load ____ REDUCE TO MINIMUM
4. Defective Alternator Switch ____ OFF

BATTERY OVERCHARGE:

1. Voltmeter ____ INDICATES EXCESSIVE CHARGE
2. Defective Alternator Switch ____ OFF
3. Electrical Load ____ REDUCE TO MINIMUM

If battery is depleted land without flaps and initiate manual gear extension procedure.

ELECTRICAL FIRE

1. Master Switch _____ OFF
2. Vents / Window _____ OPEN
3. Cabin Heater _____ OFF
4. Fire Extinguisher _____ AS REQUIRED

Land as soon as possible without flaps
Initiate Manual Gear Extension Procedure

HIGH OIL TEMPERATURE

1. Cowl Flaps _____ OPEN
2. Mixture _____ ENRICH
3. Power _____ REDUCE OF NECESSARY
4. Airspeed _____ MAINTAIN ABOVE 130 MPH

HIGH CYLINDER HEAD TEMPERATURE

1. Cowl Flaps _____ OPEN
2. Mixture _____ ENRICH
3. Power _____ REDUCE OF NECESSARY
4. Airspeed _____ MAINTAIN ABOVE 130 MPH

LOSS OF OIL PRESSURE

Land as soon as possible.
Initiate Engine Failure During Flight Procedure.

LOSS OF OIL PRESSURE TO TURBO

Turbo Oil Pressure Warning Light is ON:

1. Turbo Control _____ OFF
2. Mixture _____ LEAN AS NECESSARY
3. Engine Instruments _____ MONITOR

LOSS OF FUEL PRESSURE

1. Fuel Selector _____ SWITCH TO TANK WITH FUEL
2. Fuel Pump _____ ON
3. Mixture _____ ENRICH

If Pressure is not regained:

4. Fuel Pump _____ OFF

Initiate Engine Power Loss During Flight Procedure

INDUCTION SYSTEM ICING

1. Alternate Air _____ FULL ON
2. Throttle _____ FULL OPEN
3. Mixture _____ ADJUST FOR MAX SMOOTHNESS

When ice is cleared:

4. Alternate Air _____ FULL OFF
5. Throttle _____ NORMAL CRUISE SETTING
6. Mixture _____ ADJUST FOR CRUISE

GYRO SUCTION FAILURE

1. Propellers _____ INCREASE TO 2700 RPM
2. Altitude _____ DESCEND TO MAINTAIN 4.8 IN. HG
3. Flight Instruments _____ MONITOR ALL

OPEN DOOR IN FLIGHT

1. Airspeed _____ BELOW 100 MPH
2. Cabin Vents _____ CLOSE
3. Window _____ OPEN
4. Slip Airplane _____ FACING DOOR INTO WIND
5. Latch _____ SECURE

If unable to close door, land as soon as practical

PROPELLER OVERSPEED

1. Propeller Control _____ AFT - DECREASE RPM
2. Throttle _____ RETARD
3. Airspeed _____ REDUCE
4. Throttle _____ MAINTAIN BELOW 2700 RPM
5. Propeller _____ FEATHER IF NECESARY

LANDING GEAR FAILURE
MANUAL GEAR EXTENSION

1. Master Switch _____ ON
2. Landing Gear Circuit Breakers _____ CHECK
3. Landing Gear Indicator Light _____ CHECK DIMMING
4. Landing Gear Indicator Light _____ CHECK BULB

If gear fails to operate initiate manual gear extension

5. Airspeed _____ BELOW 100 MPH
6. Landing Gear Switch _____ DOWN POSITION
7. Motor Release Arm _____ DISENGAGE AND PUSH FWD THROUGH FULL TRAVEL
8. Gear Extension Handle _____ ENGAGE IN RT SLOT-ROTATE FULL FORWARD
9. Gear Ext. Handle _____ PLACE IN LEFT SOCKET ROTATE FULL FORWARD
10. Gear Ext. Handle _____ STOW
11. Landing Gear Indicator Light _____ GREEN

DO NOT re-engage landing gear motor in flight.
Consider minimal taxi after landing.

SPIN RECOVERY

INTENTIONAL SPINS ARE PROHIBITED

1. Throttles _____ IDLE
2. Ailerons _____ NEUTRAL
3. Rudder _____ FULL OPPOSITE OF DIRECTION OF ROTATION
4. Control Wheel ___ BRISKLY FORWARD FULL TRAVEL
5. Rudder _____ NEUTRAL WHEN ROTATION STOPS
6. Control Wheel _____ BACK PRESSURE TO RECOVER FROM DIVE

EMERGENCY DESCENT

1. Seat Belts and Harnesses _____ SECURE
2. Throttles _____ IDLE
3. Propeller Controls _____ FULL FORWARD
4. Landing Gear _____ UP
5. Airspeed _____ MAINTAIN BELOW 160 MPH
6. Bank Airplane _____ 45 TO 60 DEGREES