

# PIPER CHEROKEE 28-180



**N6527J**



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PIPER PA-28-180 CHEROKEE N6527J

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# PREFLIGHT COCKPIT

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<b>Parking Brakes</b>	<b>SET</b>
<b>Flight Controls</b>	<b>FREE &amp; CORRECT</b>
<b>ARROW Documents</b>	<b>Check &amp; Plain View</b>
<b>Magnetos</b>	<b>OFF, KEYS OUT</b>
<b>Mixture</b>	<b>CUTOFF IDLE</b>
<b>Throttle</b>	<b>CLOSED</b>
<b>Electrical Switches</b>	<b>OFF</b>
<b>BAT Master</b>	<b>ON</b>
<b>Fuel Quantity</b>	<b>CHECK</b>
<b>Fuel Pump</b>	<b>ON &amp; Check Fuel Pressure/OFF</b>
<b>Avionics</b>	<b>ON</b>
	<i>GYROS CHECK FOR NOISE</i>
	<i>SET/CHECK CLOCK</i>
<b>IFR Checks</b>	<i>VACUUM SYSTEM CHECK</i>
	<i>TURN COORDINATOR CENTER AND WITH FLUID</i>
<b>Hobbs &amp; Tach</b>	<b>RECORD</b>
<b>Exterior Lights</b>	<b>ON, CHECK, OFF</b>
<b>BAT Master</b>	<b>OFF</b>
<b>Trim</b>	<b>SET FOR TAKEOFF</b>
<b>Flaps</b>	<b>EXTENDED</b>
<b>Baggage &amp; Loose Items</b>	<b>STOWED &amp; SECURE</b>

# PREFLIGHT OUTSIDE

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## RIGHT WING

<b>Step</b>	<b>SECURE</b>
<b>Flaps &amp; Hinges</b>	<b>CHECK</b>
<b>Aileron &amp; Hinges</b>	<b>CHECK</b>
<b>Wing Surface &amp; Rivets</b>	<b>CHECK &amp; NONE MISSING</b>
<b>Wing Tip &amp; Lights</b>	<b>SECURE</b>
<b>Fuel Vent</b>	<b>UNOBSTRUCTED</b>
<b>Fuel Drain</b>	<b>DRAIN &amp; CHECK NO WATER/BLUE</b>
<b>Fuel Tank</b>	<b>VISUALLY CHECK QUANTITY</b>
<b>Fuel Cap</b>	<b>SECURE</b>
<b>Landing Gear Strut</b>	<b>CHECK 4.5 INCHES</b>
<b>Tire</b>	<b>CHECK 24 PSI, NO DAMAGE</b>
<b>Brake &amp; Brake Line</b>	<b>CHECK NO LEAKS</b>
<b>Chocks &amp; Tie Down</b>	<b>REMOVE</b>
<b>Cabin Air Inlet</b>	<b>UNOBSTRUCTED</b>

## AIRCRAFT BRAKES

When checking the aircraft brakes look on the ground for black or red fluid as that will indicate a hydraulic leak. Also, ensure there is enough padding on the brakes and no cracks.

# PREFLIGHT OUTSIDE

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## AIRCRAFT NOSE

<b>General Conditions</b>	<b>CHECK</b>
<b>Oil Level</b>	<b>MIN 7 QTS</b>
<b>Propeller</b>	<b>SECURE &amp; FREE OF NICKS</b>
<b>Alternator Belt</b>	<b>CHECK</b>
<b>Air Inlets</b>	<b>CHECK/UNOBSTRUCTED</b>
<b>Landing Light</b>	<b>CHECK/SECURE</b>
<b>Landing Gear Strut</b>	<b>CHECK 3.25 INCHES</b>
<b>Tire</b>	<b>CHECK 24 PSI, NO DAMAGE</b>
<b>Cowlings Latches</b>	<b>SECURE</b>
<b>Fuel Drain</b>	<b>DRAIN &amp; CHECK NO WATER/BLUE</b>

## PROP INSPECTION

Before and after any flight, take a few minutes to inspect your aircraft propeller. Start by visually inspecting the prop to ensure there are no signs of nicks, gouges, cracks in the spinner dome, blade “wobble,” missing hardware or erosion.

# PREFLIGHT OUTSIDE

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## LEFT WING

Cabin Air Inlet	UNOBSTRUCTED
Wing Surface & Rivets	CHECK & NONE MISSING
Fuel Vent	UNOBSTRUCTED
Fuel Drain	DRAIN & CHECK NO WATER/BLUE
Fuel Tank	VISUALLY CHECK QUANTITY
Fuel Cap	SECURE
Tire	CHECK 24 PSI, NO DAMAGE
Brake & Brake Line	CHECK NO LEAKS
Chocks & Tie Down	REMOVE
Pitot-Static Tube	UNOBSTRUCTED
Stall Warning	CHECK
Wing Tip & Lights	SECURE
Aileron & Hinges	CHECK
Flaps & Hinges	CHECK

## EMPENAGE

Skin & Antennas	CHECK
Stabilator	CHECK
Trim Tab	CHECK
Rudder	CHECK
Tail Skid	CHECK
Tiedown	REMOVE
Baggage Door	LOCKED & SECURED

# BEFORE START

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<b>Preflight</b>	<b>COMPLETE</b>
<b>Seatbelts/Harnesses</b>	<b>ON &amp; SECURE</b>
<b>Seats</b>	<b>VERIFY SECURE</b>
<b>Passenger Brief</b>	<b>COMPLETED</b>
<b>Circuit Breakers</b>	<b>VERIFY IN</b>
<b>Carburetor Heat</b>	<b>COLD/DOWN POSITION</b>
<b>Primer</b>	<b>LOCKED</b>
<b>Flaps</b>	<b>RETRACT/UP</b>
<b>BRAKES</b>	<b>SET&amp;HOLD</b>

ENGINE START

## PASSENGER BRIEF

Brief your passengers on how to open and close the door, seat and seatbelt use, emergency exit, emergency procedures, flight controls awareness, sterile cockpit, traffic avoidance, and normal aircraft operations.

# START– NORMAL

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Master Switch	ON
Mixture	FULL RICH
Fuel Pump	ON
Prime	1-2 THROTTLE
Propeller Area	CLEAR PROP
Ignition	BOTH

## WHEN ENGINE STARTS

Throttle	1000 RPM
Oil Pressure	CHECK IN GREEN
Fuel Pressure	CHECK
Mixture	LEAN
Fuel Pump	OFF/VERIFY FUEL PRESSURE AFTER
Ammeter/Volts	CHECK
AVIONICS	ON

## BEFORE TAXI

Transponder	VFR
ATIS/AWOS	RECEIVED
Radios/Avionics	SET
Altimeter/Compass	SET
Lights	AS REQUIRED
Parking Brakes	RELEASE
Door & Overhead Latch	CLOSED & LOCKED

## TAXI

Brakes	CHECK 8
Gyros (IFR)	TAXI CHECK



# ENGINE RUNUP

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<b>Parking Brake</b>	<b>SET</b>
<b>Seats</b>	<b>SECURE IN TRACKS</b>
<b>Flight Controls</b>	<b>FREE &amp; CORRECT</b>
<b>Fuel Selector</b>	<b>FULLEST TANK</b>
<b>Throttle</b>	<b>2000 RPM</b>
<b>Mixture</b>	<b>LEAN</b>
<b>Carburetor Heat</b>	<b>ON/OFF</b>
<b>Circuit Breakers</b>	<b>IN NONE OUT</b>
<b>Magnetos L/R</b>	<b>MAX 125 RPM Drop ,DIFF 50 RPM</b>
<b>Vacuum</b>	<b>5.0 INCHES Hg</b>
<b>Oil Temperature</b>	<b>CHECK IN GREEN</b>
<b>Oil Pressure</b>	<b>CHECK IN GREEN</b>
<b>Fuel Pressure</b>	<b>CHECK</b>
<b>Ammeter/Volts</b>	<b>CHECK WITH LOAD</b>
<b>Throttle</b>	<b>IDLE ( MIN 500RPM)</b>
<b>Throttle</b>	<b>1000 RPM</b>

## RUNUP AREA

A suitable location for run-up should be firm and free of debris. Otherwise, the propeller may pick up pebbles, dirt, mud, sand, or other loose objects and hurl them backwards. This damages the propeller and may damage the tail of the airplane.

# BEFORE TAKEOFF

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<b>Fuel Pump</b>	<b>ON</b>
<b>Transponder</b>	<b>ALT</b>
<b>Takeoff Departure</b>	<b>BRIEFED</b>
<b>Flaps</b>	<b>NORMAL UP</b>
	<b>SHORT/SOFT 25°</b>
<b>Landing Light</b>	<b>ON</b>
<b>Radios</b>	<b>TOWER/CTAF</b>

## TAKEOFF NORMAL

<b>Throttle</b>	<b>FULL</b>
<b>Engine Instruments</b>	<b>CHECK</b>
<b>Airspeed</b>	<b>ALIVE</b>
<b>Engine Gauges (T&amp;Ps)</b>	<b>GREEN</b>
<b>Power</b>	<b>&gt;2300 RPM CHECK</b>
<b>Rotate</b>	<b>60 MPH</b>
<b>Climb</b>	<b>Vy 85MPH/ Vx 74 MPH</b>

## TAKEOFF BRIEF

Brief NORMAL takeoff expectations (runway, departure ops, altitude before turning) and EMERGENCIES ( loss of engine after t/o, turning altitude back to airport, aborted takeoff )

# CLIMB - CRUISE

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## CLIMB

Flaps	UP
Fuel Pressure	CHECK
Cruise Climb > 1000 FT	100 MPH
Engine Instruments	MONITOR
Fuel Pump	OFF AT DESIRED ALTITUDE

## CRUISE

FUEL PUMP	OFF
Throttle	55-75% POWER
Mixture	LEAN
Trim	SET
Lights	AS REQUIRED

## FUEL TANK SWITCH

Fuel Pump	ON
Fuel Selector	SWITCH
Fuel Pressure	CHECK
Fuel Pump	OFF

## FUEL TANK

For cross-country flight, the POH recommends that one tank to be used for 1h after takeoff, then the other tank to be used for 2h, then return to first tank which will have 1.5H of fuel remaining if tanks were full at take-off. The other tank will have left approx. 30min left.

CLIMB-CRUISE

# LANDING

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## DESCENT

Fuel Pump	ON
Carburetor Heat	AS REQUIRED
Mixture	AS REQUIRED

## APPROACH & LANDING

Weather	OBTAIN
Radio	APPROACH/CTAF
IFR Approach	DETERMINE/BRIEF/LOAD
Altimeter	SET
Fuel Selector	FULLEST TANK
Lights	LANDING ON
Flaps	< 115 MPH
Downwind	90 MPH
Base	85 MPH
Final Approach	AS REQUIRED + GUST FACTOR

## AFTER LANDING

Flaps	RETRACT
Fuel Pump	OFF
Transponder	STB
Trim	T/O
Carburetor Heat	OFF
Lights	AS REQUIRED
Radio	GROUND/ <sup>12</sup> CTAF

LANDING

# SHUTDOWN

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<b>Fuel Call</b>	<b>AS REQUIRED</b>
<b>Parking Brake</b>	<b>SET</b>
<b>AVIONICS</b>	<b>OFF</b>
<b>BEACON</b>	<b>ON</b>
<b>Throttle</b>	<b>1000RPM</b>
<b>Mixture</b>	<b>CUTOFF</b>
<b>Electrical Switches</b>	<b>OFF</b>
<b>Hobbs &amp; Tach</b>	<b>NOTE</b>
<b>BAT Master</b>	<b>OFF</b>
<b>Magnetos</b>	<b>OFF &amp; KEY OUT</b>
<b>Flight Controls</b>	<b>SECURE</b>
<b>Tie Down/Chocks</b>	<b>AS REQUIRED</b>
<b>Pitot Cover</b>	<b>APPLY</b>

## POST FLIGHT INSPECTION

After engine shutdown you should do a post-flight inspection: walk around to inspect the general condition of the aircraft, near and around the cowling for signs of oil or fuel streaks and around the oil breather for excessive oil discharge. Inspect under wings and other fuel tank locations for fuel stains. Inspect landing gear and tires for damage and brakes for any leaking hydraulic fluid. Inspect cowling inlets for obstructions.

# EMERGENCIES



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## ALTERNATOR FAILURE

**Ammeter** **CHECK WITH LOAD**

**Electrical Load** **REDUCE**

**ALT Circuit Breaker** **CHECK THE 5&60 FIELD AMP**

*IF popped, wait 5min, then reset. If pops again, DO NOT reset and land as soon as practical.*

*IF none breakers are popped:*

**BAT Master** **OFF, WAIT 30 SECOND, ON**

*IF alternator does not reset, maintain minimum electrical load :*

**Divert** **NEAREST AIRPORT**

## ELECTRICAL OVERLOAD

**BAT Master** **OFF FOR 1MIN THEN ON**

*IF alternator load NOT reduced :*

**BAT Master** **ON AS REQUIRED**

**Electrical Load** **REDUCE**

**Divert** **NEAREST AIRPORT**

# EMERGENCIES



PIPER PA-28-180 CHEROKEE N6527J

## ENGINE FAILURE DURING FLIGHT

**Airspeed** **Glide 80MPH**

**Fuel Pump** **ON**

**Fuel Selector** **OTHER TANK**

*IF previous tank empty, may take up to 10 seconds to restore power after switching to tank containing fuel.*

**Mixture** **FULL RICH**

**Carburetor Heat** **ON**

**Magnetos** **L/R/ then BOTH**

**Primer** **IN & LOCKED**

**Engine Gages** **CHECK FOR PROBLEMS**

**Throttle** **SWEEP IDLE to FULL FWD**

*IF propeller is Windmilling*

**Magnetos** **BOTH**

*IF propeller stopped*

**Magnetos** **START (release after)**

*IF engine DOES NOT start*

**Emergency Landing p. 20** **PERFORM CHECKLIST**

*IF engine starts*

**Carburetor Heat** **OFF**

**Fuel Pump** **OFF**

*IF the indicated fuel flow immediately drops to zero (indicating failure of the engine driven pump) return fuel pump switch to ON*

# EMERGENCIES



PIPER PA-28-180 CHEROKEE N6527J

## ENGINE FAILURE DURING TAKEOFF

<b>Airspeed</b>	<b>Glide 80MPH</b>
<b>Throttle</b>	<b>IDLE</b>
<b>Land &lt; 1000 feet</b>	<b>STRAIGHT AHEAD</b>

*IF time permits*

<b>Mixture</b>	<b>IDLE CUTOFF</b>
<b>Fuel Selector</b>	<b>OFF</b>
<b>Radio</b>	<b>MAYDAY CALL</b>
<b>BAT Master</b>	<b>OFF</b>
<b>Magnetos</b>	<b>OFF</b>
<b>Door</b>	<b>UNLATCH</b>
<b>Flaps</b>	<b>AS REQUIRED</b>

## ENGINE PARTIAL POWER LOSS

<b>Airspeed</b>	<b>Glide 80 MPH</b>
<b>Mixture</b>	<b>ADJUST FOR SMOOTH OPS</b>
<b>Carburetor Heat</b>	<b>ON</b>
<b>Fuel Pump</b>	<b>ON</b>
<b>Fuel Selector</b>	<b>CHANGE TANKS</b>
<b>Engine Instruments</b>	<b>CHECK FOR PROBLEM</b>
<b>Magnetos</b>	<b>L/R, then BOTH</b>

*IF engine DOES NOT run smooth*

<b>Airport</b>	<b>LAND AS SOON AS PRACTICAL</b>
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# EMERGENCIES



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## OIL PRESSURE LOW

*IF Oil Pressure trending towards zero accompanied by engine roughness, noise, and vibration...*

**Engine** **SHUTDOWN**

**Land** **IMMEDIATELY**

**Emergency Landing p. 20** **PERFORM CHECKLIST**

*IF Oil Pressure below GREEN or Oil Temperature rising*

**Throttle** **MINIMUM REQUIRED**

**Divert** **NEAREST ALTERNATIVE**

## OIL TEMPERATURE HIGH (OVER 425° F)

**Oil Pressure** **CHECK**

**If Oil Pressure Low** **PERFORM CHECKLIST ABOVE**

*IF oil pressure normal*

**Climb Rate** **REDUCE**

**Airspeed** **110 MPH or MORE**

**Mixture** **ENRICH**

**Throttle** **REDUCE**

*IF Oil Temperature remains above red-line after 1 minute*

**Throttle** **MINIMUM REQUIRED**

**Divert** **NEAREST AIRPORT**

**Emergency Landing p. 20** **REVIEW CHECKLIST**

# EMERGENCIES



PIPER PA-28-180 CHEROKEE N6527J

## CABIN/ELECTRICAL FIRE

Emergency Descent	INITIATE
BAT Master	OFF
Cabin Heat	OFF
Window	CLOSED
Land	IMMEDIATELY

*IF there smoke and fumes in the cabin OPEN the little window or the door to provide airflow. LAND IMMEDIATELY*

## ENGINE FIRE DURING START

Magnetos	BOTH (CONTINUE CRANKING)
<i>IF engine starts</i>	
Power	1800 RPM for a few minutes
Engine	NORMAL SHUTDOWN

*IF Engine fails to start*

Mixture	IDLE CUTOFF
Fuel Selector	OFF
BAT Master	OFF
Magnetos	OFF
Aircraft	EVACUATE
Fire	EXTINGUISH

*Extinguish using fire extinguisher, wool blanket, or dirt*

# EMERGENCIES



PIPER PA-28-180 CHEROKEE N6527J

## ENGINE FIRE DURING FLIGHT

Mixture	IDLE CUTOFF
Fuel Pump	OFF
Fuel Selector	OFF
Throttle	IDLE
Door & Window	OPEN IF REQUIRED
Airspeed	115 MPH OR FASTER
Land	IMMEDIATELY

**DO NOT RESTART THE ENGINE**

### *After Stop*

Aircraft	EVACUATE
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# EMERGENCIES



PIPER PA-28-180 CHEROKEE N6527J

## EMERGENCY LANDING NO ENGINE POWER

<b>Turn</b>	<b>SAFEST TERRAIN</b>
<b>Airspeed</b>	<b>80 MPH</b>
<b>IF off airport, ELT</b>	<b>ACTIVATE</b>
<b>Mixture</b>	<b>IDLE CUTOFF</b>
<b>Radio</b>	<b>TRANSMIT MAYDAY 121.5</b>
<b>Transponder</b>	<b>SQUAWK 7700</b>
<b>Fuel Selector</b>	<b>OFF</b>
<b>Fuel Pump</b>	<b>OFF</b>

### *When Landing Assured*

<b>Flaps</b>	<b>AS NEEDED</b>
<b>Seat Belts</b>	<b>SECURED</b>
<b>BAT Master</b>	<b>OFF</b>
<b>Magnetos</b>	<b>OFF</b>
<b>Door</b>	<b>UNLATCH</b>
<b>Aircraft</b>	<b>EVACUATE</b>