

RAM Aviation Piper Cherokee 180

SPEEDS (MPH)

Vso.....	57
Vs1.....	67
Vr.....	50-60
Vx	74
Vy	85
Vfe.....	115
Vno.....	140
Vne.....	171
Va (2400#).....	129
Va (1950#).....	123
Best Glide.....	82
Max. Demon. X-Wind.....	15
Approach (Flaps DN).....	80
Short Field Approach.....	70
Enroute Climb.....	90
Max Gross Weight.....	2400
Basic Empty Weight.....	1422
Useful Load.....	980
Cruise Speed.....	125
Fuel Consumption.....	10.0

PREFLIGHT

Weather.....	CHECK
Weight & Balance.....	COMPLETE
Inspection/AD status.....	CHECK
Fuel Level.....	CHECK Left & Right Call for fuel if required
Hobbs.....	RECORD
Documents (AROW).....	CHECK
Avionics Master.....	OFF
Ignition.....	OFF
Master.....	ON
Fuel Quantity.....	CHECK
Lights/Stall Light.....	ON/INSPECT
Master.....	OFF
Flight Controls..	FREE&CORRECT
Flaps.....	EXTEND

EXTERIOR INSPECTION

Right Wing	
Flap & Aileron.....	CHECK
Tip&Leading Edge.....	CHECK
Tie Down.....	REMOVE
Fuel Quantity.....	CHECK
Fuel Tank Vent.....	CHECK
Fuel Sump.....	CHECK
Strut/Tire/Brake.....	CHECK
Nose	
RT Windshield/Cowling.....	CHECK
Oil Quantity (6-7 qts).....	CHECK
Prop/Spinner.....	CHECK
Air Inlet.....	CHECK
Alternator Belt.....	CHECK
Nose Strut/Tire.....	CHECK
Fuel Sump.....	CHECK
LT Windshield/Cowling.....	CHECK
Left Wing	
Strut/Tire/Brake.....	CHECK
Fuel Sump.....	CHECK
Fuel Quantity.....	CHECK
Tie Down.....	REMOVE
Fuel Tank Vent.....	CHECK
Pitot / Static Mast.....	CHECK
Leading Edge&Tip.....	CHECK
Aileron & Flap.....	CHECK
Aft Fuselage & Empennage	
Fuselage.....	CHECK
Antennas.....	CHECK
Stabilator.....	CHECK
Vertical Stabilizer.....	CHECK
Rudder.....	CHECK
Tie Down.....	REMOVE
Baggage Door	
.....	CLOSED&SECURE

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BEFORE ENGINE START

Preflight Inspection..	COMPLETE
Passenger Briefing..	COMPLETE
Seats and Belts.....	SECURE

ENGINE START

Avionics Masters	OFF
Beacon.....	ON
Circuit breakers.....	CHECK IN
Fuel Selector.....	DESIRED TANK
Seatbelts.....	SECURE
Door.....	CLOSED & LATCHED
Brakes	HOLD
Carb Heat	COLD / OFF
Mixture	RICH / FORWARD
Primer.....	2 (warm) to 4 (cold)
Master Switch.....	ON
Fuel Pump	ON
Throttle	¼ INCH OPEN
Prop Area	CLEAR
Starter.....	TURN AND PUSH
Throttle	1000 RPM
Oil Pressure	CHECK
Fuel Pump off...CHK	PRESSURE
Mixture.....	LEAN
Strobe lights	ON
Other lights	AS REQUIRED

BEFORE TAXI CHECK

Avionics Master	ON
ATIS/AWOS/ASOS.....	RECORD
Altimeter	SET
Garmin430W.....	
CONFIRM CURRENT DATABASE	
Ammeter	CHECK CHARGING
Brakes	CHECK ON TAXI

RUNUP CHECK

Fuel Selector.....	DESIRED TANK
Oil Temperature.....	GREEN ARC
Mixture.....	RICH / FORWARD
HOLD BRAKES	
Throttle.....	1800 RPM
Magnetos.....	
.....check (max drop 175 / diff 50)	
Engine Instruments.....	GREEN
Fuel Pressure.....	CHECK
Suction gauge.....	4" to 6"
Carb Heat.....	CHECK
Throttle.....	1000 RPM
Flight controls.....	
.....	FREE & CORRECT
Attitude Indicator.....	
.....	STRAIGHT & LEVEL
HI.....	CONFIRM WITHIN
±10° OF COMPASS HEADING	
Altimeter	WITHIN 75' OF
FIELD ELEVATION	
Radios / transponder.....	
.....	SET UP FOR FLIGHT
Doors / Windows.....	
.....	CLOSED & LOCKED
Passenger Briefing.....	COMPLETE
Takeoff Briefing.....	COMPLETE

BEFORE TAKEOFF CHECK

FLAPS.....	UP (HANDLE DOWN)
TRIM.....	SET
MIXTURE.....	RICH / FORWARD
LANDING LIGHT.....	ON
FUEL PUMP.....	ON
Emerg. Procedures.....	REVIEW
Time Up.....	START

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NORMAL TAKEOFF

Throttle.....Full OPEN
Engine Instruments.....CHECK
Rotate.....50-60 KTS
Climb.....85 MPH

SHORT-FIELD TAKEOFF

Flaps.....2nd NOTCH
Brakes.....APPLY
Throttle.....Full OPEN
Engine Instruments.....CHECK
Brakes.....RELEASE
Rotate.....50 MPH
Climb.....74 MPH
(until clear of obstacle)
Climb.....85 MPH
Flaps.....RETRACT

SOFT FIELD TAKEOFF

Flaps.....2nd NOTCH
Elevator.....Full AFT
Throttle.....OPEN GRADUALLY
Liftoff.....Slowest Poss. Airspeed
Accelerate while in ground effect
Climb.....85 MPH
Flaps.....RETRACT

CLIMB CHECK (1000AGL)

Pitch.....90 MPH
Mixture.....SET
Fuel Pump.....OFF
Fuel Pressure.....VERIFY
Transponder.....CONFIRM ALT
Check CHT.....SHADEN

CRUISE CHECK

Throttle.....SET
Mixture.....RICH BELOW 4000
Mixture.....LEAN ABOVE 4000
Find Peak.....SET 100 RICH
Engine Gauges.....SHADEN
Trim.....SET

DESCENT CHECK

ATIS/AWOS/ASOS.....RECORD
Altimeter.....SET
Carb Heat.....AS REQUIRED
Fuel Pump.....ON
Fuel Pressure.....VERIFY
Landing Light.....CONFIRM ON
Mixture.....RICH
Fuel Selector.....FULLEST TANK
Seats/Belts.....SECURE

FINAL LANDING CHECK

Airspeed.....80 MPH
Mixture.....RICH

PRE-MANEUVER CHECK

Clearing Turns.....DO
Fuel Pump/Press.....ON/CHECK
Landing Light.....ON
Mixture.....RICH
Fuel Selector.....FULLEST TANK
Power.....AS REQUIRED
Emergency Field.....Pick

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NORMAL LANDING

Airspeed.....80 (Flaps DN)
Crosswind.....INPUT

SOFT FIELD LANDING

Airspeed.....80 MPH
Flaps.....Down (40°)
Touchdown.....MAINS first
Add power to keep nose-wheel
off the ground, hold elevator aft
Brakes.....MINIMAL

SHORT-FIELD LANDING

Airspeed.....70 MPH
Flaps.....Down (40°)
Power.....IDLE
Touchdown.....MAINS first
Flaps.....RETRACT
Brakes.....APPLY
Elevator.....FULL AFT

GO-AROUND

Throttle.....FULL POWER
Pitch.....LEVEL
Flaps.....RETRACT 1/2
Climb.....85 MPH
Flaps.....RETRACT
Offset.....RIGHT/LEFT

AFTER LANDING CHECK

Flaps.....RETRACT
Transponder.....CONFIRM STBY
Fuel Pump.....OFF
Landing Light.....OFF
Mixture.....LEAN

SHUTDOWN

Throttle.....1000 RPM
All Electrical (Gray).....OFF
Avionics Master.....OFF
Mixture.....IDLE cutoff
Ignition.....OFF
Master Switch (Red).....OFF
Hobbs.....RECORD
Trash.....REMOVE
Doors/Windows.....LOCKED
Gust Lock.....INSTALL
Tie-Downs.....SECURE
Flight Plan.....CLOSE

HOT START

Brakes.....HOLD
Throttle.....1/2" OPEN
Master.....ON
Fuel Pump.....ON
Mixture.....FULL RICH
Ignition.....ENGAGE
Oil Pressure.....CHECK

FLOODED START

Brakes.....HOLD
Throttle.....FULL OPEN
Master.....ON
Fuel Pump.....OFF
Mixture.....IDLE
Starter.....ENGAGE
*When engine fires, advance
mixture and retard throttle*
Oil Pressure.....CHECK

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**EMERGENCY PROCEDURES
ENGINE FAILURE DURING
TAKEOFF ROLL**

Throttle.....IDLE
Brakes.....APPLY
Flaps.....RETRACT
Mixture.....IDLE CUTOFF
Ignition.....OFF
Master.....OFF

**ENGINE FAILURE AFTER
TAKEOFF BELOW 1000 AGL**

Airspeed.....82 MPH
Mixture.....IDLE CUTOFF
Ignition.....OFF
Master.....OFF
Cabin Door.....UNLATCH
Land.....STRAIGHT AHEAD

**ENGINE FAILURE DURING
FLIGHT (RESTART)**

Airspeed/Trim.....82 MPH
Landing Site.....LOCATE
Fuel Selector.....FULLEST TANK
Fuel Pump.....ON
Mixture.....RICH
Carb Heat.....ON
Primer.....CHECK LOCKED
Ignition.....L,R, BOTH
Engine Gauges.....CHECK

IF POWER IS RESTORED

Carb Heat.....OFF
Fuel Pump.....OFF

***IF POWER IS NOT RESTORED
PREPARE FOR FORCED
LANDING***

**EMERGENCY PROCEDURES
EMERGENCY LANDING
WITHOUT POWER**

Seat Backs.....UPRIGHT
Seats/Belts.....SECURE
Airspeed.....82 MPH
Mixture.....IDLE CUTOFF
Ignition.....OFF
Fuel Selector.....OFF
Master.....OFF
Flaps.....AS REQUIRED
Final Approach Speed.....80 MPH
Doors.....UNLATCH
Touchdown.....TAIL LOW

PROPELLER OVERSPEED

Throttle.....RETARD
Oil Pressure.....CHECK
Airspeed.....REDUCE
Throttle.....AS REQUIRED
TO REMAIN BELOW 2700 RPM
Flaps.....AS REQUIRED

ROUGH ENGINE / ENGINE OUT

Pitch & Trim for.....82 MPH
Landing Site.....HEAD FOR
FLOW:
Carb Heat.....ON
Mixture.....RICH
Fuel Pump.....ON
Primer.....LOCKED
MAGS.....L/R/BOTH
Fuel Valve.....SWITCH
Squawk.....7700
Talk.....121.50
Crack.....DOORS

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**EXCESSIVE LOAD ON
ALTERNATOR GAUGE**

Alternator.....ON
Battery Switch.....OFF
Non-Essential Equipment.....OFF

IF LOADS ARE NOT REDUCED

Alternator.....OFF
Battery Switch.....AS REQUIRED

**Terminate flight as soon as
Practical.**

ALTERNATOR FAILURE

Electrical Equipment.....OFF
Alt. Switch.....OFF for 30 secs.
Circuit Breaker.....CHECK/RESET
Alternator Switch.....ON
Alternator Gauge.....CHECK
Electrical Equipment.....ON

***IF AMMETER RETURNS TO
ZERO***

Alternator.....OFF
Non-Essential Equipment.....OFF
LAND AS SOON AS PRACTICAL

FIRE DURING ENGINE START

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

**EMERGENCY PROCEDURES
ENGINE FIRE IN FLIGHT**

Fuel Selector.....OFF
Throttle.....CLOSED
Mixture.....IDLE CUTOFF
Fuel Pump.....OFF
Heater/Defroster.....OFF
Airspeed.....82 MPH
Power OFF landing.....EXECUTE

ELECTRICAL FIRE

Master.....OFF
Vents.....OPEN
Heat.....OFF

*If fire is out and electrical is
necessary for flight*

Master.....ON
Circuit Breakers.....CHECK

do not reset!

Radios.....OFF
Avionics Master.....ON
Radios/Electrical.....ON, one at a
time