

RAM Aviation Piper Arrow

SPEEDS (MPH)

Vso.....	63
Vs1.....	69
Vr.....	60-70
Vx (gear up).....	90
Vx (gear down).....	85
Vy (gear up).....	100
Vy (gear down).....	95
Vfe.....	125
Vno.....	170
Vne.....	214
Va (max gross).....	134
Vlo (gear up).....	125
Vle.....	150
Best Glide.....	100
Max. Demon. X-Wind.....	20
Approach (Flaps DN).....	90
Short Field Approach.....	85
Enroute Climb.....	110
Max Gross Weight.....	2500.00
Basic Empty Weight.....	1512.00
Useful Load.....	988.00

PREFLIGHT

Weather.....	CHECK
Weight & Balance.....	COMPLETE
Documents (AROW).....	CHECK
Inspection/AD status.....	CHECK
Hobbs.....	RECORD
Electrical/Radios.....	OFF
Gear Selector.....	DOWN
Ignition.....	OFF
Master.....	ON
Fuel Pump/Quantity.....	CHECK
Turn Coordinator.....	AUDIBLE
Flaps.....	EXTEND
Lights/Pitot/Stall Light...INSPECT	
Lights.....	OFF
Master.....	OFF

EXTERIOR INSPECTION

Right Wing	
Flaps & Aileron.....	CHECK
Leading Edge.....	CHECK
Tie Down.....	REMOVE
Fuel Quantity.....	CHECK
Fuel Tank Vent.....	CHECK
Fuel Sump.....	CHECK
Strut/Tire/Brake.....	CHECK
Nose	
Windshield/Cowling.....	CHECK
Oil Quantity (6-8 qts).....	CHECK
Prop/Spinner.....	CHECK
Air Inlet.....	CHECK
Alternator Belt.....	CHECK
Nose Strut/Tire.....	CHECK
Cowling.....	CHECK
Fuel Sump.....	CHECK
Gear Extension Ports.....	CHECK
Left Wing	
Strut/Tire/Brake.....	CHECK
Fuel Sump.....	CHECK
Fuel Quantity.....	CHECK
Tie Down.....	REMOVE
Pitot Tube.....	CHECK
Static Source.....	CHECK
Fuel Tank Vent.....	CHECK
Flap & Aileron.....	CHECK
Aft Fuselage & Empennage	
Fuselage.....	CHECK
Antennas.....	CHECK
Horizontal Stabilizer.....	CHECK
Vertical Stabilizer.....	CHECK
Tie Down.....	REMOVE
Baggage Door.....	SECURE

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BEFORE ENGINE START

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

ENGINE START

Parking Brake.....	SET
Circuit Breakers.....	CHECK IN
Electrical Equipment.....	OFF
Avionics Master.....	OFF
Fuel Selector...FULLEST TANK	
Gear Selector.....	DOWN

COLD START

Throttle.....	FULL OPEN
Propeller.....	FULL FWD
Mixture.....	RICH
Master.....	ON
Beacon.....	ON
Fuel Pump.....	ON/PRIME/OFF
Throttle.....	1/4 INCH
Propeller Area.....	CLEAR
Ignition.....	ENGAGE
Throttle.....	1000 RPM
Oil Pressure.....	CHECK
Mixture.....	LEAN for taxi
Ammeter.....	CHECK

HOT START

Throttle.....	FULL OPEN
Mixture.....	IDLE CUTOFF
Ignition.....	ENGAGE
Mixture/Rich.....	Throttle/ ¼ Inch

BEFORE TAXI CHECK

Avionics Master.....	ON
Radios/Avionics.....	ON
Transponder.....	STBY
Flaps.....	RETRACT
Parking Brake.....	RELEASE
Brakes.....	TEST
Instrument Taxi.....	CHECK

RUNUP CHECK

Parking Brake.....	SET
Seats/Belts.....	SECURE
Doors/Windows.....	CLOSED AND LOCKED
Monitor.....	TOWER
Controls.....	FREE & CORRECT
Trim.....	TEST/SET
Fuel Quantity.....	CHECK
Mixture.....	RICH
Throttle.....	1800 RPM
Oil Pressure/Temp.....	CHECK
Mixture.....	SET for Altitude
Propeller.....	CYCLE (MAP, RPM, Oil Pressure)
Magnetos.....	L/R.....CHECK Max drop 175 RPM Max differential 50 RPM
Alternate Air.....	CHECK
Suction.....	5" hg +/- 1" hg
Ammeter.....	CHECK
Instruments.....	CHECK and SET
Throttle.....	IDLE/1000
Radios and Avionics.....	SET
Brakes.....	RELEASE

BEFORE TAKEOFF CHECK

Fuel Pump.....	ON
Landing Light.....	ON
Mixture.....	RICH/AS REQ.
Fuel Selector....	FULLEST TANK
Alternate Air.....	CLOSED
Flaps (as required).....	SET
Transponder.....	ALT
Emerg. Procedures.....	REVIEW

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NORMAL TAKEOFF

Throttle.....Full OPEN
Engine Instruments.....CHECK
Rotate.....60-70 MPH
Climb.....90 MPH
Gear.....POSITIVE RATE/UP
Climb.....100 MPH

SHORT-FIELD TAKEOFF

Flaps.....25°
Brakes.....APPLY
Override.....ON
Throttle.....Full OPEN
Engine Instruments.....CHECK
Brakes.....RELEASE
Rotate.....60-70 MPH
Accelerate.....85 MPH
Gear.....POSITIVE RATE/UP
(until clear of obstacle)
Accelerate/Climb.....100 MPH
Flaps.....RETRACT

SOFT FIELD TAKEOFF

Flaps.....25°
Override.....ON
Elevator.....Full AFT
Throttle.....Full OPEN
Liftoff.....Slowest Poss. Airspeed
Accelerate while in ground effect
Accelerate.....90 MPH
Gear.....UP
Accelerate/Climb.....100 MPH
Flaps.....RETRACT

CLIMB CHECK (1000AGL)

Pitch.....110 MPH
Throttle.....25" MP
Propeller.....2500 RPM
Mixture.....12G
Fuel Pump.....OFF
Fuel Pressure.....VERIFY
Landing Light.....OFF

CRUISE CHECK (23/2350)

Throttle.....SET
Propeller.....SET
Mixture.....SET
Engine Gauges.....CHECK
Trim.....SET
Heading Indicator.....SET
Auto Gear Extender.....SET

DESCENT CHECK (18"MP)

Power.....AS DESIRED
Fuel Pump.....ON
Landing Light.....ON
Mixture.....ADJUST
Fuel Selector....FULLEST TANK
Seats/Belts.....SECURE

FINAL LANDING CHECK

Mixture.....RICH
Propeller.....HIGH
Gear.....(3) IN THE GREEN

PRE-MANEUVER CHECK

Clearing Turns.....DO
Fuel Pump/Press.....ON/CHECK
Landing Light.....ON
Mixture.....RICH
Fuel Selector....FULLEST TANK
MP/Prop.....AS REQUIRED
Gear Override.....As Required

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NORMAL LANDING

Gear.....VERIFY DOWN
Flaps.....AS DESIRED
Airspeed.....85-90 (Flaps DN)

SOFT FIELD LANDING

Fuel Pump.....ON
Gear.....VERIFY DOWN
Airspeed.....85-90 MPH FINAL
Flaps.....Down (40°)
Touchdown.....MAINS first
Add power to keep nose-wheel
off the ground, hold elevator aft
Brakes.....MINIMAL

SHORT- FIELD LANDING

Fuel Pump.....ON
Gear.....VERIFY DOWN
Airspeed.....80-85 MPH FINAL
Flaps.....Down (40°)
Power.....IDLE
Touchdown.....MAINS first
Flaps.....RETRACT
Brakes.....APPLY
Elevator.....FULL AFT

GO-AROUND

Throttle.....FULL OPEN
Climb.....100 MPH
Flaps.....RETRACT to 25°
Gear.....POSITIVE RATE/UP
Flaps.....RETRACT

AFTER LANDING CHECK

Flaps.....RETRACT
Trim.....ADJUST
Transponder.....STBY
Fuel Pump.....OFF
Landing Light.....OFF
Mixture.....LEAN for taxi

SHUTDOWN

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

NORMAL / SOFT LANDING

Downwind.....GUMPS

POWER / FLAPS / AIRSPEED:

Downwind.20"MP / 10° / 120 MPH
Abeam 18"MP / 10° / 100 MPH
Base 16"MP / 25° / 95 MPH
Final 12"MP / 40° / 85 MPH

SHORT FIELD LANDING

POWER / FLAPS / AIRSPEED:

Downwind.20"MP / 10° / 120 MPH
Abeam 18"MP / 10° / 100 MPH
Base 16"MP / 25° / 95 MPH
Final 12"MP / 40° / 80 MPH
Power.....IDLE
Touchdown.....ON MAINS
Flaps.....RETRACT
Brakes.....AS NEC.
Elevator.....FULL AFT

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**EMERGENCY PROCEDURES
ENGINE FAILURE DURING
TAKEOFF**

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

**ENGINE FAILURE AFTER
TAKEOFF**

Airspeed.....100 MPH
Mixture.....IDLE CUTOFF
Ignition.....OFF
Gear.....AS REQUIRED
Master.....OFF
Cabin Door.....UNLATCH
Land.....STRAIGHT AHEAD

**ENGINE FAILURE DURING
FLIGHT (RESTART)**

Airspeed/Trim.....100 MPH
Landing Site.....LOCATE
Gear Override.....ENGAGE
Fuel Selector.....FULLEST TANK
Fuel Pump.....ON
Mixture.....RICH
Alternate Air.....ON
Ignition.....L,R, BOTH
Engine Gauges.....CHECK

IF POWER IS RESTORED

Alternate Air.....OFF
Fuel Pump.....OFF

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

**EMERGENCY PROCEDURES
EMERGENCY LANDING
WITHOUT POWER**

Gear Override.....ENGAGE
Seat Backs.....UPRIGHT
Seats/Belts.....SECURE
Airspeed.....100 MPH
Propeller.....FULL FWD
Mixture.....IDLE CUTOFF
Ignition.....OFF
Fuel Selector.....OFF
Master.....OFF
Flaps.....AS REQUIRED
Doors.....UNLATCH
Touchdown.....TAIL LOW

PROPELLER OVERSPEED

Throttle.....RETARD
Oil Pressure.....CHECK
Propeller.....FULL AFT
Set if any control available

Airspeed.....REDUCE
Throttle.....AS REQUIRED
TO REMAIN BELOW 2700 RPM
Flaps.....AS REQUIRED
**loss of oil pressure will increase
RPM**

**EMERGENCY LANDING GEAR
EXTENSION**

Master Switch.....ON
Circuit Breakers.....CHECK
Panel Lights (Day).....OFF
Indicator Bulbs.....CHECK

***IF GEAR IS NOT DOWN AND
LOCKED CONT. PROCEDURES***

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**EMERGENCY PROCEDURES
EMERGENCY LANDING GEAR
EXTENSION (CONT.)**

Airspeed.....below 100 MPH
Gear Selector.....DOWN
Gear Override.....ENGAGE
Emergency Ext.....ENGAGE
Yaw.....AS NECESSARY

**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.

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
Gear.....AS NECESSARY
Airspeed.....BEST GLIDE
Power OFF landing....EXECUTE

ELECTRICAL FIRE

Master.....OFF
Vents.....OPEN
Heat.....OFF
Fire Extinguisher.....ACTIVATE
*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

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
Flight.....TERMINATE