

RAM Aviation Piper Tomahawk

SPEEDS (KTS)

Vso.....	49
Vs1.....	52
Vr.....	50-60
Vx	61
Vy	70
Vfe.....	89
Vno.....	110
Vne.....	138
Va (1670#).....	103
Va (1277#).....	90
Best Glide.....	70
Max. Demon. X-Wind.....	15
Approach (Flaps DN).....	70
Short Field Approach.....	65
Enroute Climb.....	80
Max Gross Weight.....	1670
Basic Empty Weight.....	1166
Useful Load.....	504
Cruise Speed.....	100
Fuel Consumption.....	6.5

PREFLIGHT

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

EXTERIOR INSPECTION

Left Wing	
Flap & Aileron.....	CHECK
Leading Edge.....	CHECK
Pitot Mast.....	CHECK
Tie Down.....	REMOVE
Fuel Quantity.....	CHECK
Fuel Tank Vent.....	CHECK
Fuel Sump.....	CHECK
Strut/Tire/Brake.....	CHECK
Nose	
Windshield/Cowling.....	CHECK
Brake Res.....	CHECK
Fuel Sump.....	CHECK
Prop/Spinner.....	CHECK
Air Inlet.....	CHECK
Alternator Belt.....	CHECK
Nose Strut/Tire.....	CHECK
Cowling.....	CHECK
Oil Quantity (5-6 qts).....	CHECK
Windshield/Cowling.....	CHECK
Right Wing	
Strut/Tire/Brake.....	CHECK
Fuel Sump.....	CHECK
Fuel Quantity.....	CHECK
Tie Down.....	REMOVE
Fuel Tank Vent.....	CHECK
Aileron & Flap.....	CHECK
Aft Fuselage & Empennage	
Fuselage.....	CHECK
Antennas.....	CHECK
Static Source.....	CHECK
Horizontal Stabilizer.....	CHECK
Vertical Stabilizer.....	CHECK
Tie Down.....	REMOVE
Static Source.....	CHECK

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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	
Throttle.....	1/4' OPEN
Mixture.....	RICH
Prime.....	AS REQUIRED
Master.....	ON
Beacon.....	ON
Fuel Pump.....	AS REQ
Propeller Area.....	CLEAR
Ignition.....	ENGAGE
Throttle.....	1000 RPM
Oil Pressure.....	CHECK
Mixture.....	LEAN for taxi
Ammeter.....	CHECK

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
Controls.....	FREE & CORRECT
Trim.....	SET
Fuel Quantity.....	CHECK
Mixture.....	RICH
Fuel Selector...FULLEST TANK	
Throttle.....	1800 RPM
Oil Pressure/Temp.....	CHECK
Mixture.....	SET for Altitude
Magnetos.....	CHECK

Max drop 175 RPM

Max differential 50 RPM

Carb Heat.....	CHECK
Suction.....	5" hg +/- 1" hg
Ammeter/Alt.....	CHECK
Instruments.....	CHECK and SET
Throttle.....	IDLE CHECK
Throttle.....	1000 RPM
Radios and Avionics.....	SET
Brakes.....	RELEASE

BEFORE TAKEOFF CHECK

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

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NORMAL TAKEOFF

Throttle.....Full OPEN
 Engine Instruments.....CHECK
 Rotate.....50-55 KTS
 Climb.....70 KTS

SHORT-FIELD TAKEOFF

Flaps.....21°
 Brakes.....APPLY
 Throttle.....Full OPEN
 Engine Instruments.....CHECK
 Brakes.....RELEASE
 Rotate.....40-45 KTS
 Climb.....61 KTS
 (until clear of obstacle)
 Climb.....70 KTS
 Flaps.....RETRACT

SOFT FIELD TAKEOFF

Flaps.....21°
 Elevator.....Full AFT
 Throttle.....Full OPEN
 Liftoff.....Slowest Poss. Airspeed
 Accelerate while in ground effect
 Climb.....70 KTS
 Flaps.....RETRACT

CLIMB CHECK (1000AGL)

Pitch.....80 KTS
 Mixture.....SET
 Fuel Pump.....OFF
 Fuel Pressure.....VERIFY
 Landing Light.....OFF

CRUISE CHECK

Throttle.....SET
 Mixture.....SET
 Engine Gauges.....CHECK
 Trim.....SET
 Heading Indicator.....SET

DESCENT CHECK

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

FINAL LANDING CHECK

Airspeed.....70 KTS
 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.....70 (Flaps DN)
 Crosswind.....INPUT

SOFT FIELD LANDING

Airspeed.....70 KTS
 Flaps.....Down (40°)
 Touchdown.....MAINS first
 Add power to keep nose-wheel
 off the ground, hold elevator aft
 Brakes.....MINIMAL

SHORT FIELD LANDING

Airspeed.....65 KTS
 Flaps.....Down (40°)
 Power.....IDLE
 Touchdown.....MAINS first
 Flaps.....RETRACT
 Brakes.....APPLY
 Elevator.....FULL AFT

GO-AROUND

Throttle.....FULL POWER
 Pitch.....LEVEL
 Flaps.....RETRACT to 21°
 Climb.....70 KTS
 Flaps.....RETRACT
 Offset.....RIGHT/LEFT

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
 Mixture.....IDLE cutoff
 Ignition.....OFF
 Master Switch (Red).....OFF
 Hobbs.....RECORD
 Trash.....REMOVE
 Control Lock.....INSTALL
 Doors/Windows.....LOCKED
 Tie-Downs.....SECURE
 Covers.....INSTALL
 Flight Plan.....CLOSE

HOT START

Parking Brake.....SET
 Throttle.....FULL OPEN
 Master.....ON
 Fuel Pump.....OFF
 Mixture.....IDLE CUT OFF
 Ignition.....ENGAGE

*When engine fires, advance
 mixture and retard throttle*

FLOODED START

Parking Brake.....SET
 Throttle.....FULL OPEN
 Master.....ON
 Fuel Pump.....OFF
 Mixture.....IDLE
 Starter.....ENGAGE

*When engine fires, advance
 mixture and retard throttle*

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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.....70 KTS
Mixture.....IDLE CUTOFF
Ignition.....OFF
Master.....OFF
Cabin Door.....UNLATCH
Land.....STRAIGHT AHEAD

ENGINE FAILURE DURING FLIGHT (RESTART)

Airspeed/Trim.....70 KTS
Landing Site.....LOCATE
Fuel Selector.....FULLEST TANK
Fuel Pump.....ON
Mixture.....RICH
Carb Heat.....ON
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.....70 KTS
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
Airspeed.....REDUCE
Throttle.....AS REQUIRED
TO REMAIN BELOW 2700 RPM
Flaps.....AS REQUIRED

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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.

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.....70 KTS
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