

INITIAL

Weather & Den. Alt.
Weight & Balance
Performance Req.
Flight Plan – File
Papers – A.R.O.W
Flaps – Extend
Master – On
Pitot Heat – Test
Stall Indicator – Test
Lights – Int. / Ext.
Fuel Gauges – True
Master – Off
Pitot / Static – Drain/Close

START

Seat Track/Back – Lock
Avionics – Off
Autopilot – Off
AC – Off
Carb Heat – Off
Throttle – Slight
Brakes
Prop – Clear
Master – On
Beacon – On
Fuel Pump – On
Mixture – Full Rich
Prime – As Req.
Mags – Start
Oil Pressure
Fuel Pump – Off
Fuel Pressure
Lights – As Req.
Mixture – As Req.

RUN-UP

Brakes
Fuel – Proper Tank
Trim – Takeoff
Flight Controls
Annunciator Lights
Instruments
Mixture – Best Power
Primer – In & Lock
2000 RPM
Mags-Test (R-L-Both)
Carb Heat – Test
Vacuum
Amps / Volts
Fuel Pressure
Oil Pressure
Oil Temperature
Idle – Check Closed
Throttle Friction

TAKEOFF

Full Throttle
2325 RPM (Min)
Oil Pressure
Rotate – * 59 (68)
Vy – 76 (87)
Flaps – Up

DESCENT

Mixture – Richen
Carb Heat – As Req.
Fuel – Proper Tank
ATIS / AWOS
Altimeter
Instruments

AFTER LANDING

Flaps – Up
Carb Heat – Off
Fuel Pump – Off
Strobes – Off
Landing Light – Off
Taxi Light – As Req.
Pitot Heat – Off
Mixture – As Req.
Trim – Takeoff
XPDR – Alt + Sqwk

EXTERIOR SUMMARY
After Thorough Geographical Check

Fuel Quantity
Fuel Quality
Caps/Drains/Vents
Engine / Oil / Belt
Prop / Air Intake
Exhaust System
Surfaces & Controls
Pitot Static Ports
Gear / Tires / Brakes
Antennas
Ties/Chocks/Towbar
Baggage Door
Final Walk Around

INTERIOR

Flaps – Up
Passenger-Load/Brief
Hobbs / Tach Time
Fuel – Proper Tank
Circuit Breakers
Alternate Static
ELT – Armed

PRE-TAXI / TAXI

Seat Belts / Harness
Heat / Vent / Defrost
Avionics – On
ATIS / AWOS
Altimeter
XPDR – Alt + Sqwk
ADS-B – On
Radio – Test
Taxi Light – As Req.
Brakes – Test
Attitude Indic. – Test
Turn Coord. – Test
H.I. To Compass – Test

PRE-TAKEOFF

Flaps – 0°-25°
Mixture – Best Power
Carb Heat-Off Or As Req.
Fuel Pump – On
XPDR – Alt + Sqwk
Heading Bug
Pitot Heat – As Req.
AC – Off
Doors / Windows
Landing Light – On
Strobes – On
Time – Note
Brakes – Release
Abort Plan - Ready!

CLIMB

76-87 (87-100)
Power
Mixture
Fuel Pump – Off
Instruments
Taxi / Land Light – Off
Flight Plan – Open

PRE-LANDING

Brakes – Pedal Test
Landing Light – On
Autopilot – Off
AC – Off
Seat Belts / Harness
Mixture – Best Power
Carb Heat – As Req.
Fuel Pump – On
Fuel – Proper Tank
Flaps – As Req.

CRUISE

Power
Mixture
Instruments
Fuel – Proper Tank
(Fuel Pump On If Switch)

LANDING

Flaps – 40° Or As Req
* 66 (76)

G. U. M. P. F. S.

GO-AROUND

Power – Full
Carb Heat – Off
Positive Rate Climb
Flaps – Retract Slowly

SECURING

ELT – Verify Silent
Avionics – Off
AC – Off
Mixture – Full Lean
Mags – Off
Master – Off
Lights – Off
Hobbs / Tach Time
Secure Yoke
Chocks
Tie Downs
Pitot Cover
Baggage Door
Cabin Door

Close Flight Plan

* Adjust Speed As Needed For Conditions.

Check Your POH For Notes / Cautions Plus Manufacturer For Revisions.

Vr • Rotation Speed – 59 (68)
Vx • Best Angle Climb – 64 (74)
Vy • Best Rate Climb – 76 (87)

Vs₀ • Stall with Flaps – 49 (56)
Vs • Stall w/o Flaps – 55 (63)
Best Glide (1634 lbs) – 61 (70)
Best Glide (Full Gross) – 76 (87)

Va • Max Abrupt Ctrl (1634 lbs) – 89 (102)
Va • Max Abrupt (Full Gross) – 113 (130)
Vno • Max Structural Cruise – 125 (144)
Vne • Never Exceed – 154 (177)

Vfe • Flaps Extended – 102 (117)
X Wind • Max Demo'd – 17 (20)

	KNOTS (MPH)	FLAPS °	- NOTES -
DEPARTURE			
Rotation *	59 (68)	0	Short Field: 25° Flaps. Rotate * 41-49 KIAS (47-56) Then 45-54 KIAS (52-62).
Best Angle Climb	64 (74)	0	
Best Rate Climb	76 (87)	0	Soft Field: 25° Flaps. After Breaking Ground Accelerate To * 52 (60), When Flaps Up, 76 KIAS (87)
CRUISE (TAS-5,000')			
Economy	95 (109)	0	2280 RPM – 7.8 GPH – 55%
Normal	109 (125)	0	2430 RPM – 9.0 GPH – 65%
Maximum	119 (137)	0	2580 RPM – 10.5 GPH – 75%
ARRIVAL			
Approach	75 (86)	10-25	1700 RPM (Initially)
Short Final *	66 (76)	40	Idle-1200 RPM

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Specs Are Approximate Because Of Environment & Plane Model / Year Variables. Specs Are In: LBS, KIAS, Sea Level, Standard Day, Normal Category, Max Gross Wt., No Wind, "Best Power", Wheel Pants, New Engine. () = MPH.

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(IF UNABLE TO ABORT TAKEOFF)

POWER LOSS IMMEDIATELY AFTER TAKEOFF / NO RESTART

MAINTAIN AIRCRAFT CONTROL

BEST GLIDE – **76 KIAS** (87 MPH) (Full Gross)
 FUEL SELECTOR – OFF
 MIXTURE – FULL LEAN / IDLE CUTOFF
 FUEL PUMP – OFF
 FLAPS – DOWN
 MASTER & MAGS – OFF

UNLATCH DOOR
PROTECT BODY

POWER LOSS IN FLIGHT

BEST GLIDE – **76 KIAS** (87 MPH) (Full Gross)
 CARB HEAT – ON (Also Supplies Alternate Air)
 NOTE WIND DIRECTION & VELOCITY
 PICK LANDING SITE
 MIXTURE – FULL RICH
 FUEL SELECTOR – CHECK / SWITCH (Note Gauges)
 FUEL PUMP – ON
 FUEL PRIMER – LOCKED (Try Re-Priming)
 MAGNETOS – CHECK ALL
 MASTER – ON

IF NO RESTART & TIME PERMITS

MAINTAIN BEST GLIDE
 SQUAWK 7700
 DECLARE EMERGENCY (TWR, APP, Unicom, 121.5)
 ELT – ON
 MIXTURE – FULL LEAN / IDLE CUTOFF
 FUEL SELECTOR – OFF
 SEATBELTS / HARNESS
 FLAPS – AS NEEDED (Full Flaps When Field Assured)
 MASTER & MAGS – OFF
 AIRSPEED APPROX. **63 KIAS** (72 MPH)
 UNLATCH DOOR
 PROTECT BODY

ELECTRICAL FIRE IN FLIGHT

ALL ELECTRICAL DEVICES + MASTER – OFF (Mags – On)
 VENTS, CABIN HEAT & AIR – OFF
 IF FIRE OUT – MASTER ON ONLY IF CRITICAL (Vents – Open)
 THEN ONE ESSENTIAL ELECTRICAL DEVICE AT A TIME
 RESET CIRCUIT BREAKERS ONLY IF CRITICAL

ENGINE FIRE IN FLIGHT

THROTTLE – CLOSED
 MIXTURE – FULL LEAN / IDLE CUTOFF
 FUEL SELECTOR – OFF
 MASTER – OFF
 CABIN HEAT & AIR – OFF (Vents – Open)
 INCREASE AIRSPEED TO EXTINGUISH – LAND ASAP

ENGINE FIRE DURING START

CONTINUE CRANKING ENGINE
 IF START – RUN A FEW SECONDS - SHUTDOWN - INSPECT
 IF NO START – IDLE MIXTURE CUTOFF & FUEL SELECTOR OFF
 THROTTLE – FULL OPEN
 CONTINUE CRANKING ENGINE A FEW SECONDS
 MASTER & MAGS – OFF
 EVACUATE / FIRE EXTINGUISHER

ICING

PITOT HEAT – ON
 CARB HEAT – ON
 CABIN HEAT & DEFROST – MAXIMUM
 STRONGLY CONSIDER 180° TURN
 ATTAIN HIGHER OR LOWER ALTITUDE
 INCREASE ENGINE SPEED
 FLAPS – NOT RECOMMENDED FOR LANDING
 LAND FASTER – **70-80 KIAS** (81-92 MPH)

OTHER

ALTERNATOR FAILURE: Reduce Electrical Load / Verify C.B. In. Attempt To Reset Overvoltage Relay – Turn ALT Switch Off For One Second, Then On.

If Ammeter Continues To Indicate Zero Output, Or If Alternator Will Not Remain Reset, Turn Off ALT Switch, Maintain Minimum Electrical Load and Land A.S.A.P. (BATTERY ONLY)

RADIO OUT: Check Circuit Breakers & VOLUME
 Recycle Alternator Switch
 If IFR & Still Out, Set XPDR To 7600.
 (Suggested For VFR If In B, C, D Airspace.)

UNICOM: 122.7 – 122.8 – 122.95 – 123.0 – 123.05
 MULTICOM: 122.9 (CTAF) – 122.75 – 122.85 (Air To Air)
 F.S.S.: 122.000-122.675. **Most Common-122.2**
 EMERGENCY: 121.5

TOWER SIGNALS	ON GROUND	IN FLIGHT
Steady Green	Cleared For Takeoff	Cleared To Land
Flashing Green	Cleared To Taxi	Return For Landing
Steady Red	Stop	Yield & Continue Circling
Flashing Red	Taxi Clear of Landing Area	Airport Unsafe - Do Not Land
Flashing White	Return To Starting Point	N/A
Alternating Red & Green	Use Extreme Caution	Use Extreme Caution

* Every Plane Has A Different Empty Weight And Useful Load.
 Piper Archer II PA-28-181 (Lycoming: 0-360-A4M or A4A, 180 HP)

* **Empty Weight:** LBS (Specific Plane Weight)
 * **Max. Useful Load:** LBS (Including Fuel @ 6 lbs/gal)
Max. Baggage Area: 200 LBS (Included In Useful Load)
Max. T.O. Weight: 2550 LBS

Fuel Type: 100LL (Blue) / 100 (Green)
Usable Fuel: 48 Gallons
Oil Capacity: 8 Quarts (POH Minimum 2. Recommend 6)
Electrical: 12-14 VOLT / 60 AMP
Tire Pressure: Nose - 18 PSI / Main - 24 PSI