

INITIAL	START	RUN-UP	TAKEOFF	DESCENT	AFTER LANDING
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	Seat Track/Back – Lock Avionics – Off Autopilot – Off Carb Heat – Off Mixture – Full Rich Throttle – Slight Prime Brakes Prop – Clear Master – On Beacon – On Fuel Pump – On Mags – Start ⁽¹⁾ Oil Pressure Fuel Pump – Off Fuel Pressure Lights – As Req. Mixture – As Req.	Brakes Fuel – Proper Tank Trim – Takeoff Flight Controls Annunciator Lights Instruments Mixture – Best Power Primer – In & Lock 2000 RPM ⁽²⁾ Mags - Test R-L-Both Carb Heat – Test Vacuum Amps / Volts Fuel Pressure Oil Pressure Oil Temperature Idle – Check Closed Friction Lock	Full Throttle 2300 RPM <i>Minimum</i> Oil Pressure Rotate – * 48 (55) Vy – 74 (85) Flaps – Up	Mixture – Richen Carb Heat – As Req. Fuel – Proper Tank ATIS / AWOS Altimeter Instruments	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 <small>After Thorough Geographical Check</small>	PRE-TAXI / TAXI	PRE-TAKEOFF	CLIMB	PRE-LANDING	SECURING
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	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	Flaps – 0°-25° Fuel Pump – On Mixture – Best Power Carb Heat – Off <i>Or As Req.</i> Pitot Heat – As Req. XPDR – Alt + Sqwk Heading Bug Doors / Windows Landing Light – On Strobes – On Time – Note Brakes – Release ABORT PLAN - READY!	87 (100) Power Mixture Fuel Pump – Off Instruments Taxi / Land Light – Off Flight Plan – Open	Brakes – Pedal Test Landing Light – On Autopilot – Off Seat Belts / Harness Mixture – Best Power Carb Heat – As Req. Fuel Pump – On Fuel – Proper Tank Flaps – As Req.	ELT – Verify Silent Avionics – Off Mixture – Full Lean Mags – Off Master – Off Lights – Off Hobbs / Tach Time Secure Yoke Chocks Tie Downs Pitot Cover Baggage Door Cabin Door
INTERIOR			CRUISE	LANDING	Close Flight Plan
Flaps – Up Passenger-Load/Brief Hobbs / Tach Time Fuel – Proper Tank Circuit Breakers Alternate Static Pitot / Static – Drain/Close ELT – Armed			Power Mixture Instruments Fuel – Proper Tank <i>Fuel Pump On While Switching Then Off After 10 Seconds</i>	Flaps – 40° <i>Or As Req</i> * 65 (75) G. U. M. P. F. S. GO-AROUND <i>Power – Full Carb Heat – Off Positive Rate Climb Flaps – Retract Slowly</i>	<small>* Adjust Speed As Needed For Conditions. Check Your POH For Notes / Cautions Plus Manufacturer For Revisions.</small>

Vr • Rotation – 48 (55)	Vs ₀ • Stall With Flaps – 50 (57)	Va • Max Abrupt Ctrl (1700 lbs) – 94 (108)	X Wind • Max Demo'd – 15 (17)
Vx • Best Angle Climb – 64 (74)	Vs • Stall w/o Flaps – 58 (67)	Va • Max Abrupt (Full Gross) – 112 (129)	Vfe • Flaps Extended – 100 (115)
Vy • Best Rate Climb – 74 (85)	Best Glide (1700 lbs) – 59 (68)	Vno • Max Structural Cruise – 122 (140)	
	Best Glide (Full Gross) – 70 (80)	Vne • Never Exceed – 149 (171)	

	KNOTS (MPH)	FLAPS °	- NOTES -
DEPARTURE			EARLIER MODELS ⁽¹⁾ Start On LEFT Mag. Switch To BOTH After Start. ⁽²⁾ Run-Up @ 1800 RPM For Mag Check.
Rotation *	48 (55)	0	
Best Angle Climb	64 (74)	0	
Best Rate Climb	74 (85)	0	Short Field: 25° Flaps Soft Field: 25° Flaps
CRUISE <small>TAS-7,000'</small>			
Economy	106 (122)	0	2430 RPM – 60%
Normal	115 (132)	0	2510 RPM – 65%
Maximum	124 (143)	0	2640 RPM – 75%
ARRIVAL			
Approach	74 (85)	10-25	1600 RPM (Initially)
Short Final *	65 (75)	40	Idle-1200 RPM

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Specs Are Approximate Because Of Environment & Plane Model / Year Variables. Specs Are In: LBS, Sea Level, Standard Day, Normal Category, Max Gross Weight, 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 – 70 KIAS (80 MPH) *Full Gross Weight*
FUEL SELECTOR / FUEL PUMP – OFF
MIXTURE – FULL LEAN / IDLE CUTOFF
FLAPS – DOWN
MASTER / MAGS – OFF *UNLATCH DOOR
PROTECT BODY*

POWER LOSS IN FLIGHT

BEST GLIDE – 70 KIAS (80 MPH) *Full Gross Weight*
CARB HEAT – ON *Also Supplies Alternate Air*
NOTE WIND DIRECTION & VELOCITY
PICK LANDING SITE
MIXTURE – FULL RICH *Adjust For Carb Heat*
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
UNLATCH DOOR
PROTECT BODY

ELECTRICAL FIRE IN FLIGHT

ALL ELECTRICAL DEVICES + MASTER – OFF *Mags – On*
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 OR AS REQUIRED
CABIN HEAT & DEFROST – MAXIMUM
STRONGLY CONSIDER 180° TURN
ATTAIN HIGHER OR LOWER ALTITUDE
INCREASE ENGINE SPEED
FLAPS – NOT RECOMMENDED FOR LANDING
LAND FASTER AS NEEDED

OTHER

ALTERNATOR FAILURE: Reduce Electrical Load / Verify C.B. In., Turn ALT Switch Off For 30 Seconds, 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. Practical. **(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 Cherokee 180, PA-28-180 Lycoming O-360-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: 2400 LBS

Fuel Type: 100 LL (Blue) / 100 (Green) 91/96 Min.
Total Fuel: 50 Gallons
Oil Capacity: 8 Quarts *(POH Minimum 2. Recommend 6)*
Electrical: 12-14 VOLT / 60 AMP
Tire Pressure: Nose - 24 PSI / Main - 24 PSI