

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  <b>EXTERIOR SUMMARY</b> <i>After Thorough Geographical Check</i> 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  <b>INTERIOR</b> Flaps - Up Passenger-Load/Brief Hobbs/Tach Time Fuel - Proper Tank Circuit Breakers Alternate Static Pitot/Static - Drain/Close ELT - Armed	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 <sup>(1)</sup> Oil Pressure Fuel Pump - Off Fuel Pressure Lights - As Req. Mixture - As Req.  <b>PRE-TAXI / TAXI</b> 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	Brakes Fuel - Proper Tank Trim - Takeoff Flight Controls Annunciator Lights Instruments Mixture - Best Power Primer - In & Lock 2000 RPM <sup>(2)</sup> Mags - Test R-L-Both Carb Heat - Test Vacuum Amps / Volts Fuel Pressure Oil Pressure Oil Temperature Idle - Check Closed Friction Lock  <b>PRE-TAKEOFF</b> 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 <i>ABORT PLAN - READY!</i>	Full Throttle 2300 RPM <i>Minimum</i> Oil Pressure Rotate - * 48 (55) Vy - 74 (85) Flaps - Up  <b>CLIMB</b> 87 (100) Power Mixture Fuel Pump - Off Instruments Taxi / Land Light - Off Flight Plan - Open  <b>CRUISE</b> Power Mixture Instruments Fuel - Proper Tank <i>Fuel Pump On While Switching Then Off After 10 Seconds</i>	Mixture - Richen Carb Heat - As Req. Fuel - Proper Tank ATIS / AWOS Altimeter Instruments  <b>PRE-LANDING</b> 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.  <b>LANDING</b> Flaps - 40° <i>Or As Req</i> * 65 (75)  G. U. M. P. F. S.  <b>GO-AROUND</b> Power - Full Carb Heat - Off Positive Rate Climb Flaps - Retract Slowly	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  <b>SECURING</b> 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  <b>Close Flight Plan</b>  * Adjust Speed As Needed For Conditions. Check Your POH For Notes / Cautions Plus Manufacturer For Revisions.

Vr • Rotation - 48 (55)	V <sub>50</sub> • 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)	V <sub>5</sub> • 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 -
<b>DEPARTURE</b>			EARLIER MODELS { <sup>(1)</sup> Start On <b>LEFT</b> Mag. Switch To <b>BOTH</b> After Start. <sup>(2)</sup> Run-Up @ 1800 RPM For Mag Check.
Rotation *	48 (55)	0	
Best Angle Climb	64 (74)	0	
Best Rate Climb	74 (85)	0	<i>Short Field:</i> 25° Flaps <i>Soft Field:</i> 25° Flaps
<b>CRUISE</b> <i>TAS-7,000'</i>			
Economy	106 (122)	0	2430 RPM - 60%
Normal	115 (132)	0	2510 RPM - 65%
Maximum	124 (143)	0	2640 RPM - 75%
<b>ARRIVAL</b>			
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

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