

INITIAL	START	RUN-UP	TAKEOFF	DESCENT	AFTER LANDING
Weather & Den. Alt. Weight & Balance Performance Req. Flight Plan – File Papers – A.R.O.W. Fuel – Both Control Lock Master – On Flaps – Extend Pitot Heat – 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 – Set Prop – Clear Master – On Beacon – On Mags – Start Oil Pressure Lights – As Req. Mixture – As Req.	Brakes – Set Fuel – Both Trim – Takeoff Flight Controls Instruments Mixture – Best Power Primer – In & Lock 1700 RPM Mags (R&L) – Test Carb Heat – Test Vacuum Amps / Volts Oil Pressure Oil Temperature Idle – Check Closed Throttle Friction	Full Throttle 2280 RPM (Min) Oil Pressure Rotate * 55 (63) Vy – 73 (84) Flaps – Up	Mixture – Richen Fuel – Both Carb Heat – As Req. ATIS / AWOS Altimeter – Set Instruments HSI To Compass	Flaps – Up Carb Heat – Off Strobes – Off Landing Light – Off Taxi Light – As Req. Pitot Heat – Off Mixture – As Req. Trim – Takeoff XPDR – Alt + Sqwk
EXTERIOR SUMMARY <i>After Geographical Check</i>	PRE-TAXI / TAXI	PRE-TAKEOFF	CLIMB	PRE-LANDING	SECURING
Fuel Quantity Fuel Quality Caps/Drains/Vents Engine / Oil / Belt Prop / Air Intake Exhaust System Stall Indicator – Test Surfaces & Controls Pitot & Static Ports Gear / Tires / Brakes Antennas Ties/Chocks/Towbar Baggage Door Final Walk Around	Seat Belts / Harness Flaps – Up Heat / Vent / Defrost Avionics – On / Set ATIS / AWOS Altimeter – Set XPDR – Alt + Sqwk ADS-B – On Radio – Test Taxi Light – As Req. Brakes – Test Attitude Indic. – Test Turn Coord. – Test HSI/Compass – Test	Brakes – 0°-10° Mixture – Best Power Carb Heat – Off <i>Or As Req.</i> HSI To Compass XPDR – Alt + Sqwk Doors / Windows Landing Light – On Strobes – As Req. Time – Note Brakes – Release <i>Abort Plan - Ready!</i>	70-80 (81-92) Power Mixture Instruments Taxi / Land Light – Off Flight Plan – Open	Landing Light – On Autopilot – Off Seat Belt / Harness Mixture – Best Power Carb Heat – On Fuel – Both Flaps – As Req.	ELT – Verify Silent Avionics – Off Mixture – Full Lean Mags – Off Master – Off Fuel – Left or Right Lights – Off Hobbs / Tach Time Control Lock Chocks Tie Downs Pitot Cover Baggage Door Cabin Doors
INTERIOR			CRUISE	LANDING	Close Flight Plan
Passenger Brief Hobbs / Tach Time Circuit Breakers Alternate Static Brakes – Pedal Test			Power Mixture Instruments HSI To Compass	Flaps – 40° <i>Or As Req.</i> Speed * 60 (69) G. U. M. P. F. S. GO AROUND Power – Full Carb Heat – Off Positive Rate Climb Flaps – Retract Slowly	* <i>Adjust Speed As Needed For Conditions</i>

X Wind • Max Demo'd – 15 (17)	V _{SO} • Stall w/flaps (77-79) – 41 (47)	Best Glide (2000 lbs) – 61 (70)	V _{NO} • Max Struct. Cruise – 127 (146)
V _R • Rotation Speed – 55 (63)	V _{SO} • Stall w/flaps (1980) – 33 (38)	Best Glide (Full Gross) – 65 (75)	V _{NE} • Never Exceed – 158 (182)
V _X • Best Angle Climb – 59 (68)	V _S • Stall w/o flaps (77-79) – 47 (54)	V _A • Max Abrupt Ctrl (2000 lbs) – 90 (104)	V _{FE} • 10° Flaps (79-80) – 110 (127)
V _Y • Best Rate Climb – 73 (84)	V _S • Stall w/o flaps (1980) – 44 (51)	V _A • Max Abrupt (Full Gross) – 97 (112)	V _{FE} • Full Flaps – 85 (98)

	KNOTS (MPH)	FLAPS °	– NOTES –
DEPARTURE			
Rotation *	55 (63)	0	172n V-Speeds Vary 1 or 2 Knots Depending On Year. We Use The Most Conservative Figure. '77-'79: Short w/Obstacle: 0° Flaps – 59 (68) 1980: Short Field: 10° Flaps – 53 (61) '77-'80: Soft Field: 10° Flaps – 55 (63)
Best Angle Climb	59 (68)	0	
Best Rate Climb	73 (84)	0	
CRUISE (TAS - 5,000')			
Economy	99 (114)	0	2300 RPM – 6.3 GPH – 55%
Normal	107 (123)	0	2450 RPM – 7.3 GPH – 65%
Maximum	114 (131)	0	2575 RPM – 8.4 GPH – 75%
ARRIVAL			
Approach	70 (81)	10-20	1700 RPM (Initially)
Short Final *	60 (69)	30-40	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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VERTICAL SCALE = NAUTICAL MILES PER INCH: WAC = 14 SEC = 7 TAC = 3.5 NOS = 12 JEPP = 15 ELA = 12

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(IF UNABLE TO ABORT TAKEOFF)

POWER LOSS IMMEDIATELY AFTER TAKEOFF / NO RESTART

MAINTAIN AIRCRAFT CONTROL

BEST GLIDE – 65 KIAS (75 MPH) (Full Gross Weight)

FUEL SELECTOR – OFF

MIXTURE – FULL LEAN / IDLE CUTOFF

FLAPS – DOWN

MASTER & MAGS – OFF (Unlatch Doors)

POWER LOSS IN FLIGHT

BEST GLIDE – 65 KIAS (75 MPH) (Full Gross Weight)

CARB HEAT – ON (Also Supplies Alternate Air)

NOTE WIND DIRECTION & VELOCITY

PICK LANDING SITE

MIXTURE – FULL RICH

FUEL SELECTOR – CHECK / SWITCH / BOTH (Note Gauges)

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)

FUEL SELECTOR – OFF

MIXTURE – FULL LEAN / IDLE CUTOFF

SEATBELTS / HARNESS

FLAPS – AS NEEDED (Full Flaps When Field Assured)

MASTER & MAGS – OFF

UNLATCH DOORS

PROTECT BODY

ELECTRICAL FIRE IN FLIGHT

ALL ELECTRICAL DEVICES + MASTER – OFF (Mags On)

CLOSE VENTS, CABIN HEAT, & AIR

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

MIXTURE – FULL LEAN / IDLE CUTOFF

FUEL SELECTOR – OFF

MASTER SWITCH – OFF

CABIN HEAT & AIR – OFF (Except Overhead Vents)

INCREASE AIRSPEED TO EXTINGUISH – LAND ASAP

ENGINE FIRE DURING START

CONTINUE CRANKING ENGINE

IF START – RUN A FEW SECONDS - SHUTDOWN - INSPECT

IF NO START – MIXTURE IDLE 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 AS NEEDED

OTHER

AMMETER w/EXCESS RATE OF CHARGE: Alternator – Off, Pull C.B. / Nonessential Electric – Off / Terminate Flight A.S.A.P.

LOW VOLTAGE: Avionics Power Switch – Off / Alt. C.B. - In / Master – Off, then, Master – On / Ck. Volt Lt. Off / Avionics – On / If Illuminates Again: Alt. & Electric – Off / Terminate Flight A.S.A.P.

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)

FLIGHT WATCH: 122.0

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
Cessna 172n (Lycoming O-320-H2AD, 160 HP)

* **Empty Weight:** LBS (Specific Plane Weight)

* **Max. Useful Load:** LBS (Including Fuel @ 6 lbs/gal)

Max. Baggage Area: 120 LBS (Included In Useful Load)

Max. T.O. Weight: 2300 LBS

Fuel Type: 100 LL (Blue) / 100 (Green)

Usable Fuel: 40 Gallons (50 L.R Tanks)

Oil Capacity: 6 Quarts (Minimum 4)

Electrical: 24-28 VOLT / 60 AMP

Tire Pressure: Nose - 31 PSI / Main - 29 PSI