

**INITIAL**

Weather & Den. Alt.  
Weight & Balance  
Performance Req.  
Flight Plan - File  
Papers - A.R.O.W  
Mags - Off  
Mixtures - Full Lean  
Pitot/Static - Drain  
Gear Lever - Down  
Master - On  
Gear Lights - 3 Green  
Flaps - Extend  
Pitot Heat - Test  
Stall Vanes - Test  
Lights - Int. / Ext.  
Fuel Gauges - True  
Master - Off

**EXTERIOR SUMMARY**  
*After Geographical Check*

Fuel Quantity  
Fuel Quality  
Caps / Drains / Vents  
Engines / Oil / Belt  
Props / Air Intakes  
Exhaust Systems  
Cowl Flaps  
Surfaces & Controls  
Pitot & Static Ports  
Deice Equipment  
Gear / Tires / Brakes  
Antennas  
Baggage Doors  
Ties / Chocks  
Final Walk Around

**INTERIOR**

Passenger Brief  
Hobbs / Tach Time  
Circuit Breakers  
Oxygen  
ELT - Armed

**START**

Seat Track/Back- Lock  
Avionics - Off  
Autopilot - Off  
Alternate Air - Off  
Cowl Flaps - Open  
Fuel Selector - On  
Beacon - On  
Brakes - Set  
---1st Engine Start---  
Prop - High RPM  
Throttle - 1/2"  
Prop - Clear  
ALT - On  
Master - On  
Fuel Pump - On  
Mixture - Rich/Off  
Mags - On  
Starter - Engage  
Mixture - Advance  
Oil Pressure  
#2 Engine - Start  
Lights - As Req.  
Mixture - As Req.  
Fuel Pumps - Off

**PRE-TAXI / TAXI**

Seat Belts / Harness  
Flaps - Up  
Heat / Vent / Defrost  
Deice - Electric Test  
Avionics - On / Set  
XPDR - STBY  
ATIS / AWOS  
Altimeter - Set  
Taxi Light - As Req.  
Brakes - Release/Test  
XFeed-Test / FUEL-ON  
Attitude Indic. - Test  
Turn Coord. - Test  
H.I. / Compass - Test

**RUN-UP**

Brakes - Set  
Elec. Trim/Autopilot  
Trim-Takeoff  
Flight Controls  
Instruments  
Mixture - Best Power  
1500 RPM  
Feather - Test  
  
2000 RPM  
Props - Cycle / Gov.  
Alternate Air - Test  
Mags (L&R) - Test  
Vacuum  
Amps / Volts  
ALTs  
Oil Pressure  
Oil Temperature  
Annunciator Lights  
Idle - Check Closed  
Friction Lock

**PRE-TAKEOFF**

Flaps - 0°-25°  
Props - High RPM  
Mixture - Best Power  
Fuel Selectors - On  
Fuel Pumps - On  
Alternate Air - Off  
H.I. To Compass  
Doors / Windows  
Pitot Heat / Deice  
XPDR - Alt + Sqwk  
Landing Light - On  
Strobes-On  
Time - Note  
Brakes - Release

*Abort Plan - Ready!*

**TAKEOFF**

Full Throttle  
2700 RPM (Max)  
Manifold Pressure  
Oil Pressure  
Rotate \* 70 (80)  
Vy - 91 (105)  
Gear - Up  
Flaps - Up

**CLIMB**

104 (120)  
Throttles  
Props  
Mixture - As Req.  
Fuel Pumps - As Req.  
Cowl Flaps - As Req.  
Instruments  
Taxi / Land Light - Off  
Flight Plan - Open

**CRUISE**

Throttles  
Props  
Mixture  
Fuel Pumps - Off  
Cowl Flaps  
Instruments  
H.I. To Compass  
Oxygen  
Fuel - Proper Tanks

**DESCENT**

Power - As Req.  
Mixture - Richen  
Fuel Selectors - On  
Cowl Flaps - Close  
ATIS / AWOS  
Altimeter - Set  
Defroster  
Instruments  
H.I. To Compass

**PRE-LANDING**

Landing Light - On  
Autopilot - Off  
Gas....On / Pumps-On  
Undercarriage....Down  
Mixture....Best Power  
Props.....2500 RPM  
Flaps.....As Req.  
Seatbelts...& Harness

**LANDING**

Gear - Down  
Flaps - 40° Or As Req.  
Props - High RPM  
Speed \* 78 (90)

**GO AROUND**  
Power - Full  
Positive Rate Climb  
Flaps - Retract  
Gear - Up  
Cowl Flaps - Open

**AFTER LANDING**

Flaps - Up  
Fuel Pumps - Off  
Cowl Flaps - Open  
Strobes - Off  
Landing Light - Off  
Taxi Light - As Req.  
Pitot Heat - Off  
Deice Equip. - Off  
Mixture - As Req.  
Trim - Takeoff  
XPDR - STBY

**SECURING**

ELT - Verify Silent  
Avionics - Off  
Mixture - Full Lean  
Mags - Off  
Master / ALTs - Off  
Lights - Off  
Cowl Flaps - Closed  
Hobbs / Tach Time  
Secure Yoke  
Chocks  
Tie Downs  
Pitot Cover  
Baggage Doors  
Cabin Doors

**Close Flight Plan**

\* Adjust Speed  
As Needed For  
Conditions

Vr • Rotation Speed - 70 (80)	Vs0 • Stall with flaps - 60 (69)	Va • Max Abrupt (3000 lbs) - 107 (123)	Vle / Vlo Gear Speeds - 130 (150)
Vx • Best Angle Climb - 78 (90)	Vs • Stall w/o flaps - 66 (76)	Va • Max Abrupt (Full Gross) - 127 (146)	Vlr • Max Gear Retract - 109 (125)
Vxse • Best Angle 1 Eng - 78 (90)	Vmca • Min. Ctr. 1 Eng. - 70 (80)	Vno • Max Structural Cruise - 165 (190)	Vfe • 10° Flaps - 139 (160)
Vy • Best Rate Climb - 91 (105)	Vsse • 1 Eng. Intentional - 78 (90)	Vne • Never Exceed - 190 (217)	Vfe • 25° Flaps - 122 (140)
Vyse • Best Rate 1 Eng. - 91 (105)		X Wind • Max Demo'd - 13 (15)	Vfe • Full Flaps - 109 (125)

	KNOTS (MPH)	FLAPS °	- NOTES -
<b>DEPARTURE</b>			
Rotation *	70 (80)	0	Short Field w/Obstacle: 25° - 70 KIAS (80) Thru 50 Feet
Best Angle Climb	78 (90)	0	Short Field w/o Obstacle: 0° - 74 KIAS (85) Thru 50 Feet
Best Rate Climb	91 (105)	0	
<b>CRUISE</b> (TAS-5,000')			
Economy	140 (161)	0	19.3" Hg - 2400 RPM - 16.0 GPH - 55%
Normal	151 (174)	0	21.7" Hg - 2400 RPM - 18.3 GPH - 65%
Maximum	160 (184)	0	Full Throttle - 2400 RPM - 20.6 GPH - 75%
<b>ARRIVAL</b>			
Approach	100 (115)	10-25	17" MP - (Initially)
Short Final *	78 (90)	40	Props - High RPM

**WARNING:** Permission to use this CheckMate® is granted to the authorized purchaser only. No warranties, either express or implied, of any kind, are made hereunder, including, but not limited to any warranties for fitness for particular use. The information contained herein varies according to individual aircraft, model, and year of manufacturer and while we believe the information to be accurate, no representations are made as to the degree of accuracy of the information. This information constitutes only partial information necessary to properly operate an aircraft and is not to be used as a substitute for the use of other information sources routinely used in the operation of aircraft or the acquisition of requisite training to operate aircraft. Purchaser assumes all risk of use in using this product. Purchaser consents to and understands that CheckMate Aviation Inc., or any related entity, bears no liability for the use of this product.

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", New Engines. ( ) = MPH.

**© ALL RIGHTS RESERVED (Ver 7.61)**  
CheckMate Aviation Inc. 1992-2009, 800-359-3741

## POWER LOSS DURING TAKEOFF

- THROTTLES – CLOSE BOTH IMMEDIATELY
- BRAKES – AS REQUIRED / STOP STRAIGHT AHEAD
- \* IF INSUFFICIENT RUNWAY REMAINS FOR STOPPING
  - \* FUEL SELECTORS – OFF
  - \* MASTER & MAGS – OFF

## ONE ENGINE IMMEDIATELY AFTER TAKEOFF

>87 KIAS (100 MPH) (Also One Engine Go-Around – Avoid If Possible)

- MAINTAIN SAFE AIRSPEED (Quality Landing Area Ahead?)
- GEAR / FLAPS – UP
- DIRECTIONAL CONTROL – MAINTAIN IDENTIFY
- VERIFY – CLOSE THROTTLE (Inop. Engine)
- PROP – FEATHER (Inop. Engine) (Above 800 RPM)
- ACCELERATE TO 91 KIAS (105 MPH) (5° Bank & 1/2 Ball to Good Engine)

## ONE ENGINE IN FLIGHT

- CONTROL AIRPLANE – MAINTAIN SAFE AIRSPEED >78 KIAS (90 MPH)
- INOPERATIVE ENGINE – IDENTIFY
- OPERATIVE ENGINE – ADJUST THROTTLE – AS NEEDED TO MAINTAIN CONTROL
- 
- TROUBLE-SHOOT (Fuel On/Crossfeed, Fuel Pump-On, Mixture, Prop, Throttle, Master / Alt., Mags, Alternate Air)
- IF NO RESTART – SECURE DEAD ENGINE (Above 800 RPM) (Retard Throttle, Feather Prop, Mixture-Idle Cutoff, Fuel Pump Off, Fuel Off, Mag/Alt Off, Close Cowl Flap)
- 
- COWL FLAP (OPERATIVE ENGINE) – AS REQUIRED
- FUEL PUMP (OPERATIVE ENGINE) – AS REQUIRED (Consider Xfeed)

## ONE ENGINE LANDING

- SECURE INOP. ENGINE – MAINTAIN SAFE AIRSPEED
- LOWER GEAR – WHEN FIELD ASSURED
- FLAPS – 25°
- FINAL APPROACH – 91 KIAS (105 MPH) (Minimum)
- FULL FLAPS – WHEN COMMITTED TO LAND

## BOTH ENGINES OUT / LANDING

- MAINTAIN SAFE AIRSPEED (Best Glide Not Given By Manufacturer)
- PROPS – FEATHER
- MIXTURE – FULL LEAN / IDLE CUTOFF
- FUEL SELECTORS – OFF
- MAGS – OFF
- SQUAWK 7700
- DECLARE EMERGENCY (TWR, APP, Unicom, 121.5)
- SEATBELTS / HARNESS
- FLAPS – AS NEEDED (Full Flaps When Field Assured)
- GEAR – DOWN (Up If Very Rough or Soft Terrain)
- MASTER – OFF
- UNLATCH DOOR / PROTECT BODY

## ELECTRICAL FIRE IN FLIGHT

- ALL ELECTRICAL DEVICES + MASTER – OFF (Pull CB's, 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 – LAND ASAP

## ENGINE FIRE IN FLIGHT

- FUEL SELECTOR – OFF TO AFFECTED ENGINE
- CLOSE THROTTLE / FEATHER PROP
- MIXTURE – FULL LEAN / IDLE CUTOFF
- HEATER / DEFROSTER – OFF
- INCREASE AIRSPEED TO EXTINGUISH – LAND ASAP

## ENGINE FIRE DURING START

- MIXTURE – FULL LEAN / IDLE CUTOFF
- CONTINUE CRANKING ENGINE / THROTTLE – FULL OPEN
- FUEL SELECTOR – OFF / MASTER – OFF
- SHUTDOWN OTHER ENGINE / EVACUATE / FIRE EXTINGUISHER

## ICING

- PITOT HEAT / DEICING EQUIPMENT – ON
- ALTERNATE INDUCTION AIR / STATIC SOURCE – AS NEEDED
- CABIN HEAT & DEFROST – MAXIMUM
- STRONGLY CONSIDER 180° TURN
- ATTAIN HIGHER OR LOWER ALTITUDE
- INCREASE ENGINE SPEED
- FULL FLAPS NOT RECOMMENDED FOR LANDING
- LAND FASTER AS NEEDED

## MANUAL GEAR EXTENSION

- REDUCE AIRSPEED BELOW 87 KIAS (100 MPH)
- MOVE EMERGENCY CONTROL CLIP DOWNWARD CLEAR OF KNOB
- LOWER LANDING GEAR LEVER
- PULL EMERGENCY GEAR EXTENSION KNOB
- IF ELECTRICAL SYSTEM OK – VERIFY GEAR LIGHTS

## OTHER

**ELECTRICAL FAILURES:** Observe Ammeters To Determine Inoperative ALT. Reduce Load. Check CB's In. Cycle ALT Off 1 Sec., Then On. If Will Not Stay Reset, ALT Off. Limit Loads <50 Amps. If Both ALTs Off, BATTERY Only. LAND A.S.A.P.

**OVERVOLTAGE TRIP LIGHTS ILLUMINATE:** Electrical Off Except Master, ALT Off Then On To Verify -Then Off. Reduce Load <50 Amps BATTERY ONLY - LAND A.S.A.P.

'Significant Compass Deviations May Occur w/Both ALTs Off'

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

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 Seneca I, PA-34-200, (Lycoming:IO-360-C1E6 / LIO-360-C1E6)

- \* Empty Weight:  LBS (Specific Plane Weight)
- \* Max. Useful Load:  LBS (Including Fuel @ 6 lbs/gal)
- Max. Bag Area: 200 LBS (Included in Useful Load)
- Max. T.O. Weight 4200 LBS
- Zero Fuel Weight 4000 LBS (Also Max Landing Weight)

- Fuel Type: 100 LL (Blue) / 130 (Green)
- Usable Fuel: 93 Gallons
- Oil Capacity: 8 Quarts Per Engine (Minimum 6)
- Electrical: 12-14 VOLT / 60 AMP
- Tire Pressure: Nose - 31 psi / Mains - 50 psi