

INITIAL	START	RUN-UP	TAKEOFF	DESCENT	AFTER LANDING		
Weather & Den. Alt. Weight & Balance Flight Plan - File Papers - A.R.O.W. Extinguisher/Emer. Ax Master - On Lights - Int/Ext Fuel Gauges - True Elec Master - Off	Canopy Lock <i>Unlocked, Key Removed</i> All Electrics - Off Prop - High RPM Mixture - Lean Prop - Clear Elec Master - On G1000 - Pwd-Ackd MFD - Eng - System MFD - Eng - Default Anti-Collision Lt - On (3) Throttle - 1/2" Open Fuel Pump - On <small>Check Noise</small> Mixture - Rich <small>3-5 Secs. Then Lean</small>	Brakes Trim - Takeoff Flight Controls Alt Air - Test/Close Eng Instruments PFD Annunciator Fuel - Reset/Set Fuel Pump - On Mixture - Best Power 2000 RPM Prop - Cycle x3 Mags-Test <i>R-L-Both</i> <i>RPM Drop 175 RPM</i> <i>Max Difference 50 RPM</i> ALT Load Fuel/Oil Pressure Oil Temperature Idle - Check Closed Throttle Friction	Full Throttle 2700 RPM Oil Pressure Rotate - * 59 Initial - 66 [67] Safe Alt - 73 [76] Flaps - Up	Throttle - MP As Req Fuel - Fullest Tank Fuel Pump - As Req Mixture - Adjust ATIS / AWOS Altimeter COM/NAV/FMS CHT - 150°- 475° Instruments	Flaps - Up Pitot Heat - Off Fuel Pump - Off Alternate Air - Off Lights - As Req 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 Prop & Spinner Air Intakes Exhaust System Canopy Stall Indicator - Test Surfaces & Controls Pitot & Static Ports Gear / Tires / Brakes Antennas Ties/Chocks/Towbar Final Walk Around	Brakes Starter - Engage Mixture - Full Rich Oil Pressure/Voltage Annun & Eng Instr Fuel Pump - Off Pitot Heat - Test Avionics Master - On FMS Setup (I-F-R-P)* Autopilot - Test Lights - As Req Mixture - As Req	Flaps - Takeoff Fuel Pump - On Canopy - Locked Door Warning Annun XPDR - Alt + Sqwk Heading Bug Strobes - On Time - Note Brakes - Release Landing Light - On FMS/GPS Flight Plan CDI Softkey - NAV Source <i>ABORT PLAN - READY!</i>	73 [76] 2400 RPM Instruments Fuel Pump - Off <i>On At High Altitudes</i> Trim - Adjust Mixture - Rich <i>5K, Hold EGT Constant</i> Landing Light - Off Flight Plan - Open	Brakes - Pedal Test Seat Belts / Harness Landing Light - On Fuel Pump - On Mixture - Best Power Flaps - Takeoff	ELT - Verify Silent Avionics Master - Off Throttle - 1000 RPM Ignition Lights - Off Mixture - Full Lean Ignition - Off Elec Master - Off Hobbs / Tach Time Control Lock Chocks Tie Downs Canopy		
INTERIOR			CRUISE	LANDING	Close Flight Plan		
Passenger Brief ELT - Armed Hobbs / Tach Time Front Canopy - 1 or 2 Pedals - Adjust/Lock Fuel - Fullest Tank Circuit Breakers Alt. Air/Static - Close RR Door - Closed/Secure	Seat Belts / Harness Flaps - Test / T/O Fuel-Test Other Tank <i>> 1 Min. @ 1500 RPM</i> Heat / Vent / Defrost ATIS / AWOS Altmtrs - Set/Compare XPDR - Alt + Sqwk ADS-B - On Radio - Test Brakes - Test Flt Instruments - Test		Throttle Prop Mixture - As Req Instruments Fuel High <i>On At High Altitude</i> Fuel - Proper Tank <i>Fuel Pump On</i> <i>While Switching Then</i> <i>Off After 10 Seconds</i>	Flaps - Landing Prop - High RPM * 71 [73] G. U. M. P. F. S. GO-AROUND Throttle - Full Mixture - Rich Flaps - Takeoff Airspeed - 66 [67]	* Adjust Speed As Needed For Conditions. Check Your POH For Notes / Cautions Plus Manufacturer For Revisions		
<p>When 2 Speeds Are Shown: 1st Speed Refers To MTOW: 2535 LBS ALL SPEEDS ARE KIAS 2nd Speed (#) Refers To MTOW: 2646 LBS</p>							
Vr • Rotation - 59 Vx • Best Angle Climb - (1) 66 [67] Vy • Best Rate Climb - (2) 66 [67]		Vs0 • Stall W/Landing Flaps - 49 [52] Vs • Stall w/o Flaps - 52 [53] Best Glide (1874 lbs) - 60 [64] Best Glide (Full Gross) - 73 [76]		Va • Max Abrupt (1720 lbs) - 89 [94] Va • Max Abrupt (Full Gross) - 108 [111] Vno • Max Structural Cruise - 129 Vne • Never Exceed - 178		Vfe • Flaps Landing - 91 Vfe • Flaps Takeoff - 108 X Wind • Max Demo'd - 20	

	KNOTS	FLAPS	- NOTES -
DEPARTURE			** SEE POH & G1000 SUPPLEMENT FOR NOTES, CAUTIONS, WARNINGS.
Rotation *	59	Takeoff	(1) Vx w/Flaps T/O <small>Per Manual: Vx & Vy Are Both 66 [67]</small>
Best Angle Climb	(1) 66 [67]	Takeoff	(2) Vy w/Flaps T/O
Best Rate Climb	(2) 66 [67]	Takeoff	(3) Hot Engine : Fuel Pump Off, Throttle 1/2", Engage Starter.
CRUISE TAS - 5,000'			Short Field w/Obstacle: T/O Flaps Lift Off * 52 53, Climb 58 59 Until Clear.
Economy	118	Up	20.9" MP - 2200 RPM - 8.5 GPH - 55 %
Normal	127	Up	23.1" MP - 2200 RPM - 9.5 GPH - 65 %
Maximum	136	Up	24.1" MP - 2400 RPM - 11.0 GPH - 75 %
ARRIVAL			* FMS Setup (I-F-R-P)
Approach	85	Takeoff	Initialize Profile (Aux 4, MAP, MFD FPL, PFD FPL)
Short Final *	71 [73]	Landing	Flight Plan Radios (COM, NAV, ADF, DME, CDI, BRG 1/2) Performance (Speed Bugs)

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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...

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(IF UNABLE TO ABORT TAKEOFF)

POWER LOSS IMMEDIATELY AFTER TAKEOFF / NO RESTART

MAINTAIN AIRCRAFT CONTROL

AIRSPED – 73 [76] KIAS
FUEL SELECTOR – OFF
MIXTURE – FULL LEAN
FLAPS – FULL OR AS REQUIRED
BATT & IGNITION – OFF

PROTECT BODY

POWER LOSS IN FLIGHT

BEST GLIDE – 73 [76] KIAS *Flaps - Up, Max Gross Wt*
ALTERNATE AIR – OPEN
NOTE WIND DIRECTION & VELOCITY
PICK LANDING SITE
FUEL SELECTOR – CHECK SELECTED TANK
FUEL PUMP – ON
IGNITION – VERIFY ON BOTH
THROTTLE – MAX POWER
PROP – HIGH RPM
ALTERNATE AIR – OPEN *IGN CB - Pull If Installed To See If Rough Engine Clears*
MIXTURE – BEST POWER
LOSS OF OIL PRESSURE – LAND ASAP

IF NO RESTART & TIME PERMITS

MAINTAIN BEST GLIDE
SQUAWK 7700
DECLARE EMERGENCY *TWR, APP, Unicom, 121.5*
SEATBELTS / HARNESS
MIXTURE – FULL LEAN / IDLE CUTOFF
FUEL SELECTOR – OFF
FLAPS – AS NEEDED *Full Flaps When Field Assured*
BATT / ALT & IGNITION – OFF
PROTECT BODY
LAND SLIGHTLY TAIL LOW – 71 [73] KIAS *Ldg. Flaps*

IN FLIGHT SMOKE AND FIRE

EMERGENCY SWITCH – ON *Standby Horizon & Flood Lt.*
ALT & BATT – OFF *Unlatch Canopy To Ventilate*
CABIN HEAT – OFF *Open Emergency Window If Req.*
LAND AT NEAREST SUITABLE AIRFIELD
IF ELECTRONICS OR AVIONICS A MUST TO CONTINUE:
BATT-ON, ESS BUS-ON, Land @ Nearest Suitable Airfield
IF SMOKE OR FUMES PERSIST: ALT-ON, ESS BUS-OFF, BATT & ESS TIE CBs-PULL, Use Standby Instruments, Land ASAP
Refer to ALT Failure

IN FLIGHT ENGINE FIRE

FUEL SELECTOR – OFF *Throttle – Full Open*
CABIN HEAT – OFF
FUEL PUMP – OFF
INCREASE AIRSPEED TO EXTINGUISH – LAND ASAP
EMERGENCY LANDING – SEE: **If No Restart & Time Permits**

ENGINE FIRE DURING START

CONTINUE CRANKING ENGINE *Cabin Heat – Closed*
IF START – RUN A FEW SECONDS - SHUTDOWN - INSPECT
IF NO START – FUEL SELECTOR – OFF
THROTTLE – FULL OPEN / CRANK ENGINE A FEW SECONDS
BATT & IGNITION – OFF
EVACUATE / FIRE EXTINGUISHER

ICING

ALTERNATE AIR – OPEN
PITOT HEAT – ON *Air Distributor Lever-Up*
CABIN HEAT & DEFROST – ON *Use Emerg. Window If Req.*
STRONGLY CONSIDER 180° TURN / CLIMB OR DESCEND
AIR DISTRIBUTION LEVER – UP
INCREASE RPM SPEED
LAND FASTER AS REQUIRED

ELECTRICAL SYSTEM FAILURES

ALTERNATOR FAILURE: Indicated By Red ALT Message & 0 AMPS. Verify Cbs In, ALT Off Then On. **IF DOESN'T COME BACK ON LINE-** ESS BUS On, Turn Off Non-Essential Electric, Land Within 30 Mins. If PFD Attitude Info Is Lost Prior To Landing: Emerg. Switch On. *(See Manual Supplement 3.7.2 To See What Items On ESS BUS)*

PFD OR MFD FAILURE: Display Backup Button On Audio Panel-Push.

AHRS FAILURE: Indicated By Removal Of Sky/Ground And A Red X & Yellow "AHRS FAILURE" On The PFD. Digital Heading Presentation Replaced With Yellow "HDG" And Compass Rose Digits Removed. Course Pointer Will Indicate Straight Up.

- 1) Use Standby Attitude Indicator, Magnetic Compass & Navigation Map.
- 2) Set Course Using Digital Window.

ADC FAILURE: 1) Use Standby Airspeed Indicator & Altimeter
2) Land As Soon As Practical At A Suitable Airport.

IN-FLIGHT EMERGENCY: DEPRESS & HOLD COM TRANSFER BUTTON FOR 2 SECS TO TUNE 121.5

When 2 Speeds Are Shown: 1st Speed Refers To MTOW: 2535 LBS
(ALL SPEEDS ARE KIAS) 2nd Speed [#] Refers To MTOW: 2646 LBS

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

* *Every Plane Has A Different Empty Weight And Useful Load*
Diamond Star DA40 G1000 Lycoming IO-360-M1A / 180 HP, Hartzell or MT Prop

* Empty Weight: LBS *(Specific Plane Weight)*
* Max. Useful Load: LBS *(Including Fuel @ 6 lbs/gal)*
Max. Baggage Areas: 66 LBS *(Included In Useful Load)*
Max. T.O. Weight: 2535 LBS *(Normal)* 2161 LBS *(Utility)*
2646 LBS *(IF OSB-40-057 CARRIED OUT) [INVOLVES LNDG GR STRUTS]*

Fuel Type: 100LL (Blue)
Usable Fuel: 40 Gallons
Oil Capacity: 8 Quarts *(VFR Minimum-4) (IFR Minimum-6)*
Electrical: 24-28 VOLT / 70 AMP
Tire Pressure: Nose - 29 PSI / Main - 36 PSI
EDITION #14, 1-12-2006, REV 8 12/1/10