

## INITIAL

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

EXTERIOR SUMMARY  
*After Thorough Geographical Check*

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

## INTERIOR

Passenger Brief  
ELT - Armed  
Hobbs / Tach Time  
Front Canopy - 1 or 2  
Pedals - Adjust / Lock  
Fuel - Full Tank  
Circuit Breakers  
Alt. Air / Static - Close  
RR Door - Closed / Secure

## START

Canopy Lock  
*Unlocked, Key Removed*  
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 **Check Noise**  
Mixture - Rich  
3-5 Secs. Then **Lean**

Brakes  
Starter - Engage  
Mixture - Full Rich  
Oil Pressure / Voltage  
Annu & 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

## PRE-TAXI / TAXI

Seat Belts / Harness  
Flaps - Test / T/O  
Fuel - Test Other Tank  
> 1 Min. @ 1500 RPM  
Heat / Vent / Defrost  
ATIS / AWOS  
Altmtrs - Set / Compare  
XPDR - Alt + Sqwk  
ADS-B - On  
Radio - Test  
Brakes - Test  
Flt Instruments - Test

## RUN-UP

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 *R-L-Both*  
RPM Drop 175 RPM  
Max Difference 50 RPM

ALT Load  
Fuel / Oil Pressure  
Oil Temperature  
Idle - Check Closed  
Throttle Friction

## PRE-TAKEOFF

Flaps - Takeoff  
Fuel Pump - On  
Canopy - Locked  
Door Warning Annu  
XPDR - Alt + Sqwk  
Heading Bug  
Strobes - On  
Time - Note  
Brakes - Release  
Landing Light - On  
FMS / GPS Flight Plan  
CDI Softkey - NAV Source

ABORT PLAN - READY!

## TAKEOFF

Full Throttle  
2700 RPM  
Oil Pressure  
Rotate - \* **59**  
Initial - **66 [67]**  
Safe Alt - **73 [76]**  
Flaps - Up

## CLIMB

**73 [76]**  
2400 RPM  
Instruments  
Trim - Adjust  
Mixture - Rich  
*5K, Hold EGT Constant*  
Landing Light - Off  
Flight Plan - Open  
Fuel Pump - Off  
*At Safe Altitude*  
*On At High Altitudes*

## CRUISE

Throttle  
Prop  
Mixture - As Req  
Instruments  
Fuel Pump  
*On At High Altitude*  
Fuel - Proper Tank  
*Fuel Pump On*  
*While Switching Then*  
*Off After 10 Seconds*

## DESCENT

Throttle - MP As Req  
Fuel - Full Tank  
Fuel Pump - As Req  
Mixture - Adjust  
ATIS / AWOS  
Altimeter  
COM / NAV / FMS  
CHT - 150° - 475°  
Instruments

## PRE-LANDING

Brakes - Pedal Test  
Seat Belts / Harness  
Landing Light - On  
Fuel Pump - On  
Mixture - Best Power  
Flaps - Takeoff

## LANDING

Flaps - Landing  
Prop - High RPM  
\* **71 [73]**

G. U. M. P. E. S.

## GO-AROUND

Throttle - Full  
Mixture - Rich  
Flaps - Takeoff  
Airspeed - **66 [67]**

## AFTER LANDING

Flaps - Up  
Pitot Heat - Off  
Fuel Pump - Off  
Alternate Air - Off  
Lights - As Req  
Mixture - As Req  
Trim - Takeoff  
XPDR - Alt + Sqwk

## SECURING

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

## Close Flight Plan

\* Adjust Speed  
As Needed For  
Conditions.Check Your POH  
for Notes, Cautions  
Plus Manufacturer  
For Revisions

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

## DEPARTURE

Rotation \*  
Best Angle Climb  
Best Rate Climb

## KNOTS

59

(1) 66 [67]

(2) 66 [67]

## FLAPS

Takeoff  
Takeoff  
Takeoff

## - NOTES -

\*\* SEE POH &amp; G1000 SUPPLEMENT FOR NOTES, CAUTIONS, WARNINGS

(1) Vx w/Flaps T/O

(2) Vy w/Flaps T/O

Per Manual: Vx & Vy  
Are Both 66 [67]

(3) Hot Engine: Fuel Pump Off, Throttle 1/2", Engage Starter.

Short Field w/Obstacle: T/O Flaps Lift Off \* 52 53, Climb 58 59 Until Clear.

## CRUISE

TAS - 5,000'

Economy  
Normal  
Maximum

118

127

136

Up

Up

Up

20.9" MP - 2200 RPM - 8.5 GPH - 55 %

23.1" MP - 2200 RPM - 9.5 GPH - 65 %

24.1" MP - 2400 RPM - 11.0 GPH - 75 %

## ARRIVAL

Approach  
Short Final \*

85

71 [73]

Takeoff  
Landing

1500 RPM (Initially)  
Idle - 1200 RPM

## \* FMS Setup (I-F-R-P)

Initialize Profile (Aux 4, MAP, MFD FPL, PFD FPL)  
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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VERTICAL SCALE = NAUTICAL MILES PER INCH: WAC = 14

SEC = 7

TAC = 3.5

NOS = 12

JEPP = 15

ELA = 12

- IMPORTANT... FREQUENTLY CHECK OUR WEBSITE &amp; MANUFACTURER FOR UPDATES -

- COMPLETE CUSTOMIZATION AVAILABLE INCLUDING SIZES &amp; FORMATS - PLEASE DO NOT COPY -



(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

UNICOM:	122.7	122.725	122.8	122.975	123.0	123.05
MULTICOM:	122.9	(CTAF)	122.75	(Air To Air)		
FSS:	122.2					
GROUND:	121.3	123.5	121.7	123.9		

**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.)*

When 2 Speeds Are Shown: **1<sup>st</sup> Speed Refers To MTOW: 2535 LBS**  
**ALL SPEEDS ARE KIAS** **2<sup>nd</sup> Speed [#] Refers To MTOW: 2646 LBS**

\* 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*