BEFORE STARTING

3. Avionics Master - OFF
4. Panel Lights – off daytime
5. Nav Lights – OFF daytime/ ON night
6. Parking Brake - SET
7. Seatbelts- FASTENED
8. Circuit Breakers – CHECK IN
9. Flaps – UP
10. Fuel Selector – FULLER TANK
11. Master Switch – **ON**
13. Fuel Indicators – CHECK QUANTITY
14. Beacon **ON** - Strobes - **OFF**

STARTING 180 HP Lyc O-360 C1C

1. Mixture – FULL RICH
2. Prime as required (3-5x)
3. Throttle – push open 1 INCH
4. Electric fuel pump –On
5. Throttle –1/2" OPEN
6. Ignition Switch – START then release
7. Throttle- adjust for 1000 RPM

11. Oil Pressure - CHECK
12. Voltmeter – VERIFY > 13.5 VOLTS

AFTER STARTING > TAXIING

1. Fuel Pump OFF
2. Avionics Master **On**

3. **Nav lights- OFF daytime**-- ON night
4. FULL RICH – no leaning for taxi
5. Brakes --- test and release

BEFORE TAKE-OFF -- RUNUP

1. Seat belts - CHECK
2. Parking Brake - SET
3. Flight Instruments – CHECK & SET
4. Engine instruments - CHECK
5. Radios/ Xponder – CHECK & SET
6. GNS 480 - program flight plan
7 Check auto pilot operation
8. Throttle 2000 RPM
   Mag Check < 150 rpm drop
9. Carb heat lever down - note rpm drop
10. Check idle; carb heat out; 1000 RPM
11. Set trim
12. Flaps –SET APPROPRIATELY.
13. Window - CLOSED
14. Controls – CHECK FULL MOTION
15. Mixture – RICH
16. **Aux Fuel Pump – ON**
17. **Door- pilot checks proper closure**

TAKE-OFF

1. Release Brakes
2. Full throttle - 2700 RPM
3. **Check engine instruments green**
4. Rotate at **65 knots**
5 climb rate is established
6. Airspeed Vy- 76 Kts or as required
   When clear of obstacles

7. **Century IIB Autopilot (N4508X)**

Heading bug on desired course
Select HDG on rotary selector
Depress left and right AP buttons
Nav Function (GPS)
Heading bug on desired course
Center CDI by entering on GNS 480
Direct (hard key)→Direct (soft key)
Move AP rotary selector to **"loc"**

8. **Century 21 Autopilot (N17AV)**

Heading bug on desired course
Push Heading button

__ **Nav Function (GPS)**
Heading bug on desired course
Center CDI by entering on GNS 480
Direct (hard key)→Direct (soft key)
Push Nav button

CLIMB

1. **NO LEANING IN THE CLIMB**
2. Full throttle >2500 rpm
3. Cruise climb ~ 2500 rpm
4. Monitor temps- **EGT & OIL TEMP**

CRUISE

1. Pitch & Trim for level flight
2. 2450 rpm
3.. Leaning
   Until engine runs a bit rough then
   enrichen until the engine smooths out

DESCENT Arrival or Enroute

1. VFR descent planning --
   * Figure height above pattern altitude
   * **Allow 3 miles for each 1000 feet of descent required**
2. Mixture richer or full rich
3. Enrichen mixture to maintain same EGT
4. Pitch for 600 fpm descent rate

BEFORE LANDING CHECKS

1. Mixture **RICH**
2. Furl pump **ON**
3. Select **FULLER TANK**

ILS TYPE APPROACH (2 AXIS)

1. Level flight 2200 rpm for
   Localizer intercept
2. Level & 2200rpm to GS intercept
3, At glideslope intercept
   1800 rpm
   10 degrees of flaps
   Descend @ 5x groundspeed in FPM
4. @ DH- 25° flaps, power back,

PATTERN

1. **Downwind**
   2000 rpm
   10° flaps

2. **Base 1500 rpm**
   25 deg flaps

3. **Final**
   Power for **80 kts IAS on final**
   Power for **65-70 kts over the fence**
   Full flaps if required
   Power out land

EMERGENCY AIRSPEEDS (KIA)

EMERG DESCENT.....**144 KTS / 166 mph**
BEST GLIDE.....**76 KTS / 100 mph**
EMERG APPR.....**70 KTS / 81 mph**

SPEEDS FOR SAFE OPERATION (KIAS)

TAKE-OFF
Rotate..... ... .**65 Kts / 75 mph**
50Feet.....**74 Kts / 85 mph**

CLIMBS

Best Rate **V y** .....**76 Kts / 100 mph**
Best Angle **Vx**.....**64 Kts / 86 mph**
Cruise Climb.....**100 Kts / 115 mph**

Max Rough Air.....**125 Kts / 138 mph**

Max Dem.Xwind..... .**17 kts / 20 mph**

Vne.....**154Kts / 177 mph**

Va @ max gross .....**113 Kts / 130 mph**

Va @ 2200 lbs .....**100 Kts / 115 mph**

Tire Pressures
Nose wheel tire .....18 psi
Main gear tires .....24 psi.