

DA40-1A00 (Ted Yin v1.1)

Ground Operations

Initial

- ▶ Papers..... A.R.O.W.
- ▶ Fire Extinguisher..... check
- ▶ Mags..... key out
- ▶ Electrical..... off
- ▶ Avionics..... off
- ▶ Essential Bus..... off
- ▶ Mixture..... idle cutoff
- ▶ Prop..... high RPM
- ▶ Throttle..... idle
- ▶ Master..... on
- ▶ Flaps..... check & set T/O
- ▶ Lights/Pitot..... test
- ▶ Fuel..... note
- ▶ Master..... off
- ▶ Controls..... free & correct
- ▶ Hobbs Time..... note

Walkaround

- ▶ Fuel/Oil..... test/sample
- ▶ Caps/Drains/Vents
- ▶ Surfaces/Controls
- ▶ Exhaust/Antennas
- ▶ Prop/Air Intakes x3
- ▶ Pitot/Static/Stall
- ▶ Struts/Tires/Brakes
- ▶ Ties/Chocks
- ▶ Canopy/Door
- ▶ Final Walkaround

Pre-Start

- ▶ Passenger..... brief
- ▶ Rear Door..... secure
- ▶ Canopy..... pos. 1/2
- ▶ Seat Belts..... on
- ▶ Brakes..... test/set
- ▶ Circuit Brkrs..... check
- ▶ Strobe (ACL)..... on
- ▶ Avionics..... off
- ▶ Essential Bus..... off
- ▶ Mixture..... idle cutoff
- ▶ Prop..... high RPM
- ▶ Friction..... adjust
- ▶ Master (Battery)..... on
- ▶ Rudder Pedals..... adjust
- ▶ G1000 DB Date..... check
- ▶ Fuel Selector..... least

Start

- ▶ Throttle..... 1.2"
- ▶ Electric Pump..... on
- ▶ Warm

- ▶ Mixture..... 1-3 sec
- ▶ Cold
- ▶ Mixture..... 3-5 sec
- ▶ Throttle..... 0.4"
- ▶ "Clear Prop!"
- ▶ Mags..... start
- ▶ Mixture..... rich
- ▶ Throttle..... 1000 RPM
- ▶ Mixture..... lean (peak)
- ▶ Oil Pressure..... 15 sec
- ▶ Electric Pump..... off
- ▶ Alternators..... on
- ▶ Engine Indicators..... check

Shutdown

- ▶ ELT..... check (121.5)
- ▶ Avionics..... off
- ▶ Electrical..... off
- ▶ ACL Strobes..... on
- ▶ Throttle..... 1000 RPM
- ▶ Mags..... off then both
- ▶ Mixture..... idle cutoff
- ▶ Mags..... key out
- ▶ Tach Time..... note
- ▶ (Standby Alternator... off)
- ▶ Master..... off

Post-Flight

- ▶ Flight Plan..... close
- ▶ Hobbs Time..... note
- ▶ Under Seats..... check
- ▶ Gust Lock..... on
- ▶ Pitot Cover..... on
- ▶ Tiedowns/Chocks..... on
- ▶ Canopy/Door..... lock

Run-Up

- ▶ Brake..... set
- ▶ Seat Belts..... check
- ▶ Canopy/Door..... lock
- ▶ Door Warning..... off
- ▶ Flight Controls..... check
- ▶ Instruments..... when engine fires:

- ▶ Alternate Static..... check
- ▶ GPS/System/Ann..... check
- ▶ AP..... MET/HDG
- ▶ Heading/Altitude..... set
- ▶ Com/Nav/FPL..... set
- ▶ MFD Range/Track Up..... set
- ▶ Instruments..... scan
- ▶ Lights..... as required
- ▶ Engine

Airspeeds (KIAS)

- ▶ Vr..... 59
- ▶ Vso..... 49, Vsl..... 52
- ▶ Mass..... 2646/2535/2205/1874
- ▶ Vg..... 76/73/68/60
- ▶ Vy(Lp)..... 76/73/68/60
- ▶ Climb (T/O)..... 67/66/60/54
- ▶ Approach

- ▶ Up..... 76/73/68/60
- ▶ T/O..... 74/72/66/59
- ▶ LDG..... 73/71/63/58
- ▶ Va..... MAM 40-227
- ▶ yes..... 111 @ 2646-2284
- ▶ no..... 108 @ 2535-2161
- ▶ o/w..... 94 @ <2284/2161

- ▶ Bank: 30/45/60° .. 58/68/83
- ▶ Master (Alt.)..... on
- ▶ STBYALT ON..... on
- ▶ Electrical Load increase
- ▶ STBYALT ON..... flashing
- ▶ Master (Alt.)..... on

In-flight Operations

Pre-Takeoff

- ▶ Abort Plan/Lost Comm.
- ▶ Canopy/Door ..... lock
- ▶ Trim ..... T/0
- ▶ Fuel Selector ..... fullest
- ▶ Flaps ..... T/0
- ▶ **Mixture** ..... rich
- ▶ **Prop** ..... high RPM
- ▶ Pitot Heat ..... as required
- ▶ (Air Conditioner ..... off)
- ▶ Review Airspeeds
- ▶ Time ..... note/start
- ▶ Takeoff
  - ▶ "Lights, Camera, Action"
  - ▶ **Electric Pump** ..... on
  - ▶ Mixture/Prop/Throttle
  - ▶ Engine Inst. .... green
  - ▶ Vr ..... 59, then ..... 67-60
  - ▶ Safe Altitude
    - ▶ **Prop** ..... as required
    - ▶ **Pump** ..... off
    - ▶ Lights ..... as required
- ▶ **Climb**
  - ▶ T/0: Vy ..... 67-54 KIAS
  - ▶ Cruise ..... 76-60 KIAS
  - ▶ Flaps ..... UP
  - ▶ **Mixture** ..... rich
  - ▶ >5000 hold const. EGT
  - ▶ **Prop** ..... as required
  - ▶ **Throttle** ..... full
  - ▶ Engine Inst. .... green
  - ▶ Trim ..... as required
  - ▶ High Altitude ..... **pump** on
- ▶ **Cruise**
  - ▶ Flaps ..... UP
  - ▶ **Throttle** ..... 21-24"
  - ▶ **Prop** ..... 1800-2400 RPM
  - ▶ **Mixture**
    - ▶ Economy ... max EGT, <=75%.
    - ▶ Best ... 100°F(55°C) lower
    - ▶ Higher Power ..... richer
    - ▶ High Altitude ..... **pump** on
    - ▶ Flow Check (~15 min)
    - ▶ Trim, Switch Tanks
    - ▶ Mixture/Prop/Throttle
    - ▶ Flaps, Engine Inst.
    - ▶ Pump, Mag., Master
    - ▶ CHT ..... 150-400°F
    - ▶ Oil ..... 165-220°F

Descent

- ▶ **Mixture** ..... richen slowly
- ▶ **Throttle** ..... as required
- ▶ **Prop** ..... 1800-2400 RPM
- ▶ High Altitude ..... **pump** on
- ▶ CHT Cool Down
- ▶ <= 50°F (22.8°C)/min.

Pre-Landing

- ▶ ATIS/Rwys/Approach Plan
- ▶ "CCGUMP5F"
  - ▶ **G** Fuel Selector
  - ▶ **M** **Mixture** ..... rich
  - ▶ **P** **Pump** ..... on
  - ▶ **P** **Prop** ..... high RPM
  - ▶ **S** Seat Belts ..... secure
  - ▶ **F** Flaps ..... as required
  - ▶ T/0 ..... <100 KIAS
  - ▶ LDG ..... <91 KIAS
  - ▶ Trim ..... as required
  - ▶ Lights ..... as required
  - ▶ Approach Speed ..... 73-58
  - ▶ (Air Conditioner ..... off)
- ▶ **Go Around**
  - ▶ **Throttle** ..... full
  - ▶ Vy ..... 67-54 KIAS
  - ▶ Flaps ..... T/0
  - ▶ Safe Altitude
    - ▶ **Prop** ..... as required
    - ▶ **Pump** ..... off
    - ▶ Lights ..... as required
    - ▶ Cruise Climb
- ▶ **Post-Landing**
  - ▶ **Throttle** ..... 1000 RPM
  - ▶ **Mixture** ..... lean
  - ▶ Flaps ..... UP
  - ▶ **Electric Pump** ..... off
  - ▶ Pitot Heat ..... off
  - ▶ Trim ..... T/0
  - ▶ Lights ..... as required
  - ▶ Transponder ..... as required
  - ▶ Clearance ..... obtain
- ▶ **C0 Contamination**
  - ▶ Cabin Heat ..... off
  - ▶ Ventilation ..... open
  - ▶ Emergency Windows ..... open
  - ▶ Canopy ..... open (partially,
  - ▶ D0 NOT unlock rear door
  - ▶ during flight)
- ▶ **Engine Failure**
  - ▶ Short Flow
  - ▶ 1. Fuel Selector ..... fullest

2. **Mixture** ..... full/check

3. **Pump** ..... on

4. Alternate Air ..... on

5. Mags ..... check all

▶ **Glide and Trim**

▶ Airspeed ..... 76-60 KIAS

▶ Windmill ..... 1.45nm/1kft

▶ Stationary ..... 1.7nm/1kft

▶ Wind and Landing Site

▶ Longer Flow

▶ Engine Inst. .... check

▶ Short Flow

▶ **Windmill Restart**

▶ Airspeed ..... 70-80 KIAS

▶ Mags ..... both

▶ **Mixture** ..... lean then

▶ slowly richen

▶ **Stationary Restart**

▶ Airspeed ..... 80 KIAS

▶ Electrical ..... off

▶ Avionics ..... off

▶ Master ..... on

▶ Mags ..... **start**

▶ **Engine-off Landing**

▶ Fuel Selector ..... off

▶ **Mixture** ..... idle cutoff

▶ Mags ..... off

▶ Master ..... off

▶ Belt and Seat ..... check

▶ Flaps ..... LDG (when able)

▶ Unlatch Door?/Brace

▶ **Engine Fire**

▶ Cabin Heat ..... off

▶ Emergency Descent

▶ Landing is ensured

▶ Fuel Selector ..... off

▶ **Throttle** ..... full

▶ **Pump** ..... off

▶ Master ..... on

▶ Emergency Windows ..... open

▶ Engine-off Landing

**Electrical Fire**

▶ Emergency Switch ..... on

▶ Master ..... off

▶ Cabin Heat ..... off

▶ Emergency Windows ..... open

▶ Canopy ..... partially

▶ Land ASAP