

DA40-1400 (Ted Yin v1.0)

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 Pump..... check
- ▶ Fuel..... note
- ▶ Master..... off
- ▶ Controls..... free & correct
- ▶ Hobbs Time..... note

Walkaround

- ▶ Fuel/Oil..... test/sample
- ▶ Caps/Drains/Vents
- ▶ Surfaces/Controls
- ▶ Stall Strips/Fairings
- ▶ 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
- ▶ GA000 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"
- ▶ "Prop Clear!"
- ▶ Mags..... start
- ▶ Mixture..... rich
- ▶ Throttle..... 1000 RPM
- ▶ Mixture..... lean (peak)
- ▶ Oil Pressure..... 15 sec
- ▶ Electric Pump..... off
- ▶ Alternators..... on
- ▶ Engine Inst..... check
- ▶ Fuel Pressure..... 14-35 psi
- ▶ Volts/Amps..... 25-30V/2-75A

Pre-Taxi

- ▶ Flaps..... UP, then T/O
- ▶ Lights..... as required
- ▶ Avionics..... on/set
- ▶ Fuel Totalizer..... enter
- ▶ ATIS..... PFD/backup/AP(?)
- ▶ Radio..... test
- ▶ Transponder..... squawk
- ▶ Check..... TC/AL/HSI<->MC
- ▶ Clearance..... obtain
- ▶ Brakes..... release/test

Run-Up

- ▶ Brake..... set
- ▶ Seat Belts..... check
- ▶ Canopy/Door..... lock
- ▶ Door Warning..... off
- ▶ Flight Controls..... check
- ▶ Heading/Altitude..... set
- ▶ Com/Nav/FPL..... set
- ▶ Engine
- ▶ Fuel Selector..... fullest
- ▶ Mixture..... rich
- ▶ Throttle..... 2000 RPM
- ▶ Cycle Prop x3..... -250-500
- ▶ Mags. L/R..... -175, +/-50
- ▶ Alternate Air..... check
- ▶ Indicators..... check
- ▶ Throttle..... idle
- ▶ Throttle..... 1000 RPM
- ▶ Mixture..... lean
- ▶ Each Tank..... 1 min, 1500
- ▶ Full Check (initial)
- ▶ Alternate Static..... check
- ▶ GPS/System/Ann..... check
- ▶ AP..... MET/HDG

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
- ▶ Steep Turn: <45°, >=68

Post-Flight

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

Flooded Engine

- ▶ Electric Pump..... off
- ▶ Mixture..... lean (full aft)
- ▶ Throttle..... mid position
- ▶ Mags..... start
- ▶ When engine fires:

- ▶ Throttle..... idle
- ▶ Mixture..... rich (rapidly)
- ▶ Finish up normal start

In-Flight Operations

Pre-Takeoff

- ▶ Abort Plan/Lost Comm.
- ▶ Canopy/Door ..... lock
- ▶ Trim ..... T/O
- ▶ Fuel Selector ..... fullest
- ▶ Flaps ..... T/O

Mixture

- ▶ 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 ..... 2400 RPM
- ▶ Pump ..... off
- ▶ Lights ..... as required

Climb

- ▶ T/O: Vy ..... 67-54 KIAS
- ▶ Cruise ..... 76-60 KIAS
- ▶ Flaps ..... UP
- ▶ Mixture ..... rich
- ▶ >5000 hold const. EGT
- ▶ Prop ..... 2400 RPM
- ▶ Throttle ..... full
- ▶ Engine Inst. .... green
- ▶ Trim ..... as required
- ▶ High Altitude ..... pump on

Cruise

- ▶ Flaps ..... UP
- ▶ Throttle ..... 21-24"
- ▶ Prop ..... 1800-2400 RPM
- ▶ Mixture ..... rich

Mixture

- ▶ Economy ... max EGT, <=75%
- ▶ Best ... 100°F (55°C) lower
- ▶ Higher Power ..... richen
- ▶ 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
- ▶ "CGUMPSP"
- ▶ G Fuel Selector
- ▶ M Mixture ..... rich
- ▶ P Pump ..... on
- ▶ P Prop ..... high RPM
- ▶ S Seat Belts ..... secure
- ▶ F Flaps ..... as required
- ▶ T/O ..... <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/O
- ▶ Safe Altitude
- ▶ Prop ..... 2400 RPM
- ▶ Pump ..... off
- ▶ Lights ..... as required
- ▶ Cruise Climb

Post-Landing

- ▶ Throttle ..... 1000 RPM
- ▶ Mixture ..... lean
- ▶ Flaps ..... UP
- ▶ Electric Pump ..... off
- ▶ Pitot Heat ..... off
- ▶ Trim ..... T/O
- ▶ Lights ..... as required
- ▶ Clearance ..... obtain

C0 Contamination

- ▶ Cabin Heat ..... off
- ▶ Ventilation ..... open
- ▶ Emergency windows ..... open
- ▶ Canopy ..... open (partially, DO 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 ..... 1.45m/1kft
- ▶ Stationary ..... 1.7m/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