

## Post-Flight

- ▶ ADBS Handheld - off
  - ▶ Tiedowns/Chocks
  - ▶ Pitot Cover
  - ▶ Fuel - switch to L/R
  - ▶ Gust Lock
  - ▶ Close Flight Plan
  - ▶ Hobbs Time - note
  - ▶ Check Under Seats
  - ▶ Cabin / Baggage - lock
  - ▶ Post-Flight Walkaround
- ## Engine Failure
- ▶ Short Flow
    - Fuel - on/both
    - Mixture - full/check
    - Electrical Pump - on
    - Alternate Air - on
    - Mags. - check all
  - ▶ **Glide and Trim**
    - **Speed: 68 kts**
    - **Ratio: 9, 1.48nm/1000ft**
  - ▶ Wind and Landing Site
  - ▶ Longer Flow
  - Engine Indicators
  - Short Flow Again
  - ▶ **No Restart**
    - Fuel - off
    - Mixture - idle cut-off
    - Prop/Throttle - off
    - Mags. - off
    - Master - off
    - Belt and Seat - check
    - Unlatch Door
    - Brace
  - ▶ Approach - 80/70/65 kts

DA40-G1000 (Ted Vin v0.7)

## Ground Operations

### Initial

- ▶ Papers - A-R-0-W.
- ▶ Controls - free & correct
- ▶ Mags. - key out
- ▶ Mixture - idle cutoff
- ▶ Throttle - idle
- ▶ Electrical - off
- ▶ Essential Bus - off
- ▶ Avionics - off
- ▶ Master - on
- ▶ Fuel Pump - check
- ▶ Fuel - note
- ▶ Flaps - check & set T/O
- ▶ Lights/Pitot - test
- ▶ Master - off
- ▶ Hobbs Time - note

### Walkaround

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

### Pre-Start

- ▶ Rear Door - secure
- ▶ Rudder Pedals - adjust
- ▶ Seat Belts
- ▶ Parking/Brakes - test/set
- ▶ Circuit Brkrs. - check
- ▶ Strobe (ACL) - on
- ▶ Avionics - off
- ▶ Fuel Selector - least
- ▶ Canopy - pos. 1/2
- ▶ Passenger - brief

### Start

- ▶ Prime
  - Mixture - idle cutoff
  - Prop - high RPM
  - Friction - adjust
  - Master Bat. - on
  - Throttle - 1.2"
  - Electric Pump - on
  - Warm
- ▶ Mixture - 1-3 sec

▪ Cold

- Mixture - 3-5 sec
- Throttle - 0.4"
- "Prop Clear!"

- ▶ Mags. - start
- ▶ Throttle - 1000 RPM
- ▶ Oil Pressure - 15 secs.
- ▶ Electric Pump - off
- ▶ Master Alt. - on
- ▶ Engine Inst. - no Xs
- ▶ Volts/Amps - [25-30] [ >0]
- ▶ Fuel Pressure - 14-35 psi
- ▶ Mixture - lean (peak)

### Pre-Taxi

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

### Run-Up

- ▶ Parking Brake - set
- ▶ Seat Belts - check
- ▶ Canopy/Door - lock
- ▶ Door Warning - off
- ▶ Flight Controls - correct
- ▶ Instruments - scan
- ▶ Alternate Static - check
- ▶ AP - MET/HDG
- ▶ Trim - T/O
- ▶ Fuel Selector - fullest
- ▶ Hdg./Alt. Bugs
- ▶ GPS/Status Bar/Ann. Test
- ▶ MFD Range/Track Up
- ▶ Comm/Nav/VOR/FP
- ▶ Mixture - rich

- ▶ Throttle - 2000 RPM
- ▶ Cycle Prop x3 - 250-500
- ▶ Mags. L/R - 175, 50.
- ▶ Alternate Air - check
- ▶ Engine Inst. - check
- ▶ Idle Check
- ▶ Throttle - 1000 RPM
- ▶ Mixture - lean
- ▶ Lights - as required
- ▶ ADBS Handheld - on

### 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
- ▶ Master - off

### Post-Flight

- ▶ ADBS Handheld - off
  - ▶ Tiedowns/Chocks
  - ▶ Pitot Cover
  - ▶ Gust Lock
  - ▶ Close Flight Plan
  - ▶ Hobbs Time - note
  - ▶ Check Under Seats
  - ▶ Canopy/Door - lock
  - ▶ Post-Flight Walkaround
- ## Flooded Engine
- ▶ Electric Pump - off
  - ▶ Mixture - lean (full aft)
  - ▶ Throttle - 1/2 position
  - ▶ Mags. - start
  - ▶ When engine fires:
    - Throttle - idle
    - Mixture - rich (rapidly)
  - ▶ Finish up normal start

### Airspeeds (KIAS)

- ▶ **Vr** = 59
- ▶ Weights
  - 2646/2535/2205/1874 lbs
- ▶ **Vg** = 76/73/68/60
- ▶ **Vy(Up)** = 76/73/68/60
- ▶ **Vy(T/O)** = 67/66/60/54
- ▶ Approach Speeds
  - Up - 76/73/68/60
  - T/O - 74/72/66/59
  - LDG - 73/71/63/58
- ▶ **Va**
  - MAM 40-227
  - yes - 111 @ 2284-2646
  - no - 108 @ 2161-2535
  - below 2161/2284 - 94

## In-Flight Operations

### Pre-Takeoff

- ▶ Abort Plan/Lost Comm.
  - ▶ Canopy/Door – lock
  - ▶ Fuel Selector – fullest
  - ▶ Flaps – T/0
  - ▶ **Mixture** – rich
  - ▶ **Prop** – high RPM
  - ▶ Pitot Heat – as required
  - ▶ Review Airspeeds
  - ▶ Time – note/start
- Takeoff
- ▶ "Lights, Camera, Action"
  - ▶ **Electric Pump** – on
  - ▶ Mixture/Prop/Throttle
  - ▶ Engine Inst. – green
  - ▶ Vr – 59, then b7-b0 KIAS
  - ▶ Safe Altitude
  - ▶ **Prop** – 2400 RPM
  - ▶ **Pump** – off
  - ▶ Lights – as required
- Climb
- ▶ T/0: Vy = b7-54 KIAS
  - ▶ b8 minus 1.8 per 100 lbs under 2b4b
  - ▶ Cruise
  - ▶ Flaps – UP
  - ▶ Vy = 7b-b0 KIAS
  - ▶ **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**
  - ▶ Higher Power – richen
  - ▶ Economy: max EGT & <=75% . Best: 100°F(55°C) lower
  - ▶ High Altitude – **pump** on
  - ▶ Flow Check (≈15 min)
  - ▶ Trim, Fuel (Switch tanks)
  - ▶ Mixture/Prop/Throttle
  - ▶ Flaps, Engine Inst.
  - ▶ Pump, Mag., Master
  - ▶ CHT: 150-400°F
  - ▶ Oil: 1b5-220°F

### Descent

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

### Pre-Landing

- ▶ ATIS/Rwys & Patterns
- ▶ "CGMPSP"
- ▶ **G**: Fuel Selector
- ▶ downwind/fullest
- ▶ **M**: **Mixture** – rich
- ▶ **P**: **Prop** – high RPM
- ▶ **P**: **Pump** – on
- ▶ **S**: Seat Belts – secure
- ▶ **F**: Flaps – as required
- ▶ T/0 <10b KIAS
- ▶ LDG <91 KIAS
- ▶ Trim – as required
- ▶ Lights – as required
- ▶ Approach – 73-5b KIAS

### Go Around

- ▶ **Throttle** – full
- ▶ Vy – b7-54 KIAS
- ▶ Flaps – T/0
- ▶ 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/0
  - ▶ Lights – as required
  - ▶ Clearance – obtain
- C0 Contamination
- ▶ Cabin Heat – off
  - ▶ Ventilation – open
  - ▶ Emergency windows – open
  - ▶ Forward Canopy – partially open (D0 NOT lock/unlock
  - ▶ **rear door** during flight)
  - ▶ **Engine Failure**
  - ▶ Short Flow
  - ▶ Fuel Selector – fullest

### **Mixture** – full/check

- ▶ **Pump** – on
- ▶ Alternate Air – on
- ▶ Mags. – check all
- ▶ **Glide and Trim**
- ▶ **Speed: 7b-b0 KIAS**
- ▶ Windmill: 1-b-8b
- ▶ Windmill: 1-b-8b
- ▶ 1-b5m/1kft
- ▶ Stationary: 1:10-3b
- ▶ 1-b7m/1kft
- ▶ Wind and Landing Site
- ▶ Longer Flow
- ▶ Engine Inst.
- ▶ Short Flow Again
- ▶ Windmill Restart
- ▶ Airspeed >= 70 KIAS
- ▶ **Mags. – both**
- ▶ **Mixture** – lean then slowly richen

### Stationary Restart

- ▶ Airspeed >= 80 KIAS
- ▶ Electrical – off
- ▶ Avionics – off
- ▶ Master – on
- ▶ **Mags. – start**
- ▶ **No Restart**
- ▶ Fuel Selector – off
- ▶ **Mixture** – idle cutoff
- ▶ Mags. – off
- ▶ Master – off
- ▶ Belt and Seat – check
- ▶ 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**
- ▶ Cabin Heat – off
- ▶ Emergency Switch – on
- ▶ Master – off
- ▶ Emergency windows – open
- ▶ Forward Canopy – partially Land ASAP

## CU22S-61000 (Ted v1.2)

### Initial

- ▶ Papers – A.R.0-W.
- ▶ Control Lock – off
- ▶ Mags. – key out
- ▶ Mixture – idle cutoff
- ▶ Throttle – idle
- ▶ Avionics – off
- ▶ Fuel Shutoff – on
- ▶ Fuel – both
- ▶ Master – on
- ▶ Fuel – note
- ▶ Flaps – down
- ▶ Lights/Pitot – test
- ▶ Avionics on/off – fans
- ▶ Master – off
- ▶ Hobbs Time – note

### Walkaround

- ▶ Fuel/Oil – dip/sample
- ▶ Caps/Drains/Vents
- ▶ Surfaces/Controls
- ▶ Exhaust/Antennas
- ▶ Prop/Belt/Air Intake
- ▶ Pitot/Static/Stall
- ▶ Gear/Tires/Brakes
- ▶ Ties/Baggage Door
- ▶ Final Walkaround

### Pre-Start

- ▶ Doors – secure
- ▶ Belts/Seat Track
- ▶ Brakes – check, set
- ▶ Circuit Brkrs. – check
- ▶ Passenger – brief
- ▶ Beacon – on
- ▶ Avionics – off
- ▶ Fuel – both

### Start

- ▶ Stby. Battery – test/arm
- ▶ Engine Ind. – no Xs
- ▶ Volts – [E>24V] [W<1.5V]
- ▶ Amps – S<0/arm on
- ▶ P-time:
- ▶ Mixture – idle cutoff
- ▶ Brakes – secure
- ▶ Master – on
- ▶ Throttle – slight
- ▶ Aux. Pump – on
- ▶ Mixture – prime
- ▶ warm: 0-3 sec
- ▶ cold: 3-5 sec
- ▶ Aux. Pump – off

### Mixture – 3/4 rich

- ▶ "Prop Clear!"
- ▶ Mags. – start
- ▶ Throttle – 1000 RPM
- ▶ Oil Pressure – 30 secs.
- ▶ Volts/Amps – [E2b] [E>0]
- ▶ Mixture – lean for taxi

### Pre-Taxi

- ▶ Flaps – up
- ▶ Lights – as required
- ▶ Avionics – on/set
- ▶ GPS – DB date
- ▶ Fuel Totalizer – enter
- ▶ ATIS – PFD/backup/AP(?)
- ▶ Radio – test
- ▶ Transponder – squawk
- ▶ Check – TC/Alt/ASI<>MC
- ▶ Clearance – obtain
- ▶ Brakes – test

### Run-Up

- ▶ Brakes – set
- ▶ Seat Belts – check
- ▶ Doors/Windows – secure
- ▶ Flight Controls – correct
- ▶ Instruments – scan
- ▶ Alternate Static – check
- ▶ AP – MET/HDG
- ▶ Trim – takeoff
- ▶ Fuel – on/both
- ▶ Hdg./Alt. Bugs
- ▶ GPS/Status Bar/Ann. Test
- ▶ MFD Range/Track Up
- ▶ Comm/Nav/VOR/FP
- ▶ Mixture – rich
- ▶ Throttle – 1800 RPM
- ▶ Mags. – 150, 50
- ▶ Engine Inst. – check
- ▶ Idle Check
- ▶ Throttle – 1000 RPM
- ▶ Mixture – lean
- ▶ Lights – as required
- ▶ ADSB Handheld – on

### Pre-Takeoff

- ▶ Abort Plan/Lost Comm.
- ▶ Fuel – on/both
- ▶ Flaps – 0-10°
- ▶ Mixture – rich
- ▶ Aux. Pump – off
- ▶ Pitot heat – as required
- ▶ Review Airspeeds
- ▶ Time – note/start

### Takeoff

- ▶ "Lights, Camera, Action"
- ▶ Mixture/Throttle
- ▶ Engine Inst. – green
- ▶ Vr – 55 kts
- ▶ Vx – b2 kts, Vy – 74 kts

### Climb / Cruise

- ▶ Cruise Climb – 75-85 kts
- ▶ Flaps – up
- ▶ Mixture – lean >3000'
- ▶ Flow Check (≈15 min)
- ▶ Fuel, Trim
- ▶ Flaps, Engine Inst.
- ▶ Mixture, Throttle
- ▶ Master, Mag., Pump

### Descent

- ▶ Mixture – richen slowly
- ▶ Throttle – as required
- ▶ Flow Check

### Pre-Landing

- ▶ ATIS/Rwys & Patterns
- ▶ "CGMPSP"
- ▶ **G**: Fuel – on/both
- ▶ **M**: Mixture – rich
- ▶ **S**: Seat Belts – secure
- ▶ **F**: Flaps – as required
- ▶ Trim – as required
- ▶ Ldg. light – on
- ▶ Approach – 80-b5 kts

### Post-Landing

- ▶ Throttle – 1000 RPM
- ▶ Mixture – lean
- ▶ Flaps – up
- ▶ Pitot Heat – off
- ▶ Trim – takeoff
- ▶ Lights – as required
- ▶ Clearance – obtain

### Shutdown

- ▶ ELT – check (121.5)
- ▶ Avionics – off
- ▶ Lights – off
- ▶ Beacon – on
- ▶ Throttle – 1000 RPM
- ▶ Mags. – off then both
- ▶ Mixture – idle cutoff
- ▶ Mags. – key out
- ▶ Master – off
- ▶ Tach Time – note
- ▶ Stby. Battery – off