

## DA40-G1000 (Ted Yin v0.6)

### Initial

- ▶ Papers - A-R.O.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/0
- ▶ 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 Brkr. - check
- ▶ Passenger - brief
- ▶ Strobe (ACL) - on
- ▶ Avionics - off
- ▶ Fuel Selector - least
- ▶ Canopy - pos. 1/2

### 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/0
- ▶ Lights - as required
- ▶ Avionics - on/set
- ▶ GPS - DB date
- ▶ Fuel Totalizer - enter
- ▶ ATIS - PFD/backup/AP(?)
- ▶ Radio - test
- ▶ Transponder - squawk
- ▶ Check - TC/AI/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/0
- ▶ 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
- ▶ ADSB Handheld - on

### Pre-Takeoff

- ▶ Abort Plan/Lost Comm.
- ▶ Canopy/Door - lock

- ▶ Fuel Selector - fullest
- ▶ Flaps - T/0
- ▶ Mixture - rich
- ▶ Prop - high RPM
- ▶ Electric Pump - on
- ▶ Pitot Heat - as required
- ▶ Review Airspeeds
- ▶ Time - note/start

### Takeoff

- ▶ "Lights, Camera, Action!"
  - Mixture/Prop/Throttle
- ▶ Engine Inst. - green
- ▶ Vr - 59; then 67-60 KIAS
- ▶ Safe Altitude
  - Prop - 2400 RPM
  - Elect. Pump - off
  - Ldg. Light - off

### Climb

- ▶ Vy (T/0)
  - 67-54 KIAS
  - 68 minus 1.8 for each 100 lbs under 2646
- ▶ Cruise
  - Flaps - up
  - Vy: 76-60 KIAS
- ▶ Prop - 2400 RPM
- ▶ Mixture - rich
  - >5000 hold const. EGT
- ▶ 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%  
· Power: 100°F/55°C lower
- ▶ Flow Check (↻15 min)
  - Trim, Fuel
  - Mixture, Prop, Throttle
  - Flaps, Engine Inst.
  - Pump, Mag., Master
- ▶ CHT: 150-400°F
- ▶ Oil: 165-220°F

### Descent

- ▶ Mixture - richen slowly
- ▶ Prop - 1800-2400 RPM
- ▶ Throttle - as required

- ▶ High Altitude - pump on
- ▶ Flow Check
- ▶ CHT Cool Down
  - <= 50°F/22.8°C pm

#### Pre-Landing

- ▶ ATIS/Rwys & Patterns
- ▶ "CCGUMPSF"
  - G: Fuel Selector
    - downwind/fullest
  - M: Mixture - rich
  - P: Elect. Pump - on
  - P: Prop - high RPM
  - S: Seat Belts - secure
  - F: Flaps - as required
  - T/O <108 KIAS
  - LDG <91 KIAS
- ▶ Trim - as required
- ▶ Ldg. Light - on
- ▶ Approach - 73-58 KIAS

#### Go Around

- ▶ Throttle - full
- ▶ Vy - 67-54 KIAS
- ▶ Flaps - T/O
- ▶ Safe Altitude
  - Prop - 2400 RPM
  - Elect. Pump - off
  - Cruise Climb

#### Post-Landing

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

#### 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

- ▶ ADSB Handheld - off
- ▶ Tiedowns/Chocks
- ▶ Pitot Cover

- ▶ Gust Lock
- ▶ Close Flight Plan
- ▶ Hobbs Time - note
- ▶ Check Under Seats
- ▶ Canopy/Door - lock
- ▶ Post-Flight Walkaround

#### Engine Failure

- ▶ Short Flow
  - Fuel Selector - fullest
  - Mixture - full/check
  - Elect. Pump - on
  - Alternate Air - on
  - Mags. - check all

#### Glide and Trim

- Speed: 76-60 KIAS
- Ratio: 8.8, 1.45nm/1kft
- ▶ Wind and Landing Site
- ▶ Longer Flow
- Engine Inst.
- Short Flow Again

#### Wind Restart

- Airspeed >= 70 KIAS
- Short Flow
- Mags. - both
- Mixture - lean and 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

#### C0 Contamination

- ▶ Cabin Heat - off
- ▶ Ventilation - open
- ▶ Emergency Windows - open
- ▶ Forward Canopy
  - partially open
  - DO NOT lock/unlock rear door during flight

#### Airspeeds (KIAS)

- ▶ Weights
  - 2646/2535/2205/1874 lbs

- ▶ Vr - 59
- ▶ Vy
  - Up - 76/73/68/60
  - T/O - 67/66/60/54
- ▶ Best Glide
  - 76/73/68/60
  - 70 @ 2300 lbs
- ▶ Va
  - MAM 40-227
    - no - 108 @ 2161-2535
    - yes - 111 @ 2284-2646
  - below 2161/2284 - 94
  - 101 @ 2300 lbs
- ▶ Approach Speeds
  - Engine Out
    - Up - 76/73/68/60
    - T/O - 74/72/66/59
    - LDG - 73/71/63/58
  - Normal - 73/71/63/58

## C172S-G1000 (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 Brkr. - check
- ▶ Passenger - brief
- ▶ Beacon - on
- ▶ Avionics - off
- ▶ Fuel - both

### Start

- ▶ Stby. Battery - test/arm
- ▶ Engine Ind. - no Xs
- ▶ Volts - [E>24] [M<1.5]
- ▶ Amps - S<0/ann on
- ▶ Prime:
  - 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 - [E>24] [M<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/AI/HSI<->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 - 62 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
- ▶ "CCGUMPSF"
  - G: Fuel - on/both
  - M: Mixture - rich
  - S: Seat Belts - secure
  - F: Flaps - as required
- ▶ Trim - as required
- ▶ Ldg. Light - on
- ▶ Approach - 80-65 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

### Post-Flight

- ▶ ADSB 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