DA40-G1000 (Ted Yin v0.7)

Ground Operations

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/O
- ▲ Lights/Pitot – test
- ▲ Master – off
- ▲ Hobbs Time – note

- ● 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/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/O
- ▲ Fuel Selector – fullest
- ■ Hdg./Alt. Bugs
- ■ Circuit Brkrs. – check
- ■ 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

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

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

Airspeeds (KIAS)
- V_r = 59
- ▲ Weights
  - 2646/2535/2205/1874 lbs
- V_g = 76/73/68/60
- V_y(Up) = 76/73/68/60
- V_y(T/O) = 67/66/60/54
- ▲ Approach Speeds
  - ■ Up – 76/73/68/60
  - ■ T/O – 74/72/66/59
  - ■ LDG – 73/71/63/58
- V_a
  - ■ MAM 40-227
  - · yes – 111 @ 2284-2646
  - · no – 108 @ 2161-2535
  - ● below 2161/2284 – 94

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

In-Flight Operations

Pre-Takeoff
- Abort Plan/Lost Comm.
- Canopy/Door – lock
- Fuel Selector – fullest
- Flaps – T/O
- 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
- V_r – 59, then 67–60 KIAS
- Safe Altitude
- Prop – 2400 RPM
- Elect. Pump – off
- Lights – as required

Climb
- T/O
- W_y = 67–54 KIAS
- W_y = 76–60 KIAS
  - under 2640
  - 68 minus 1.8 per 100 lbs

Cruise
- Flaps – up
- W_y = 76–60 KIAS
- Mixture – rich
- >5000 hold const. EGT
- Prop – 2400 RPM
- Throttle – full
- Engine Inst. – green
- Trim – as required
- High Altitude – pump on
- Mixture

Cruise
- Flaps – up
- Throttle – 23–24"
- Prop – 1800–2400 RPM
- Mixture
- Higher Power – richen
- Economy: max EGT & <=75%
- Power: 100°F/55°C lower
- High Altitude – pump on
- Flow Check (~15 min)
- Trim, Fuel
- Mixture, Prop, Throttle
- Flaps, Engine Inst.
- Pump, Mag., Master
- CHT: 150–400°F

Oil: 165–220°F

Descent
- Short Flow
- Fuel Selector – fullest
- Mixture – full/check
- Elect. Pump – on
- Mags. – key out
- Alternate Air – on
- Mixture – idle cutoff
- Throttle – idle
- Avionics – off

Descent
- Mixture – richen slowly
- Mixture – full/check
- High Altitude – pump on
- Flow Check
- CHT Cool Down
  - <= 50°F(22.8°C) per min.

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

Engine Failure
Glide and Trim
- Speed: 76–60 KIAS
- 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

Windmill: 1:8.8,
Stationary: 1:10.3,
1.45nm/1kft
1.7nm/1kft

Go Around
- Throttle – full
- W_y – 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

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

C172S-G1000 (Ted v1.2)

Initial
- Papers – A.R.O.W.
- Control Lock – off
- Mags. – key out
- Oil Pressure – 30 secs.
- Fuel Shutoff – on
- Fuel – both
- Master – on
- Lights/Pitot – test
- Avionics on/off – fans
- Flaps – down
- Fuel – note
- 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
- Brakes – test

Pre-Start
- Doors – secure
- Belts/Seat Track
- Brakes – check, set
- Mags. – off
- Master – off
- Beacon – on
- Avionics – off
- Fuel – both

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

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

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

Pre-Takeoff
- Abort Plan/Lost Comm.
- Brakes – secure
- Fuel – on/both
- Flaps – 0–10°
- Mixture – rich
- Aux. Pump – off
- Pitot heat – as required
- Lights – as required
- ADSB Handheld – on
- Beacon – on
- Throttle – 1000 RPM
- Mags. – off then both
- Mixture – lean
- Throttle – 1000 RPM
- Trim – takeoff
- Lights – as required
- Avionics – off
- Lights – off

Takeoff
- Mixture – 3/4 rich
- "Prop Clear!"
- Mags. – start
- Throttle – 1000 RPM
- Engine Inst. – green
- Mixture/Throttle
- V_r – 55 kts
- V_x – 62 kts, V_y – 74 kts
- "Lights, Camera, Action"

Climb / Cruise
- Cruise Climb – 75–85 kts
- Flaps – up
- Fuel, Trim
- Mixture – lean >3000'
- Mixture, Engine Inst.
- Master, Mag., Pump

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

Pre-Landing
- ATIS/Rwys & Patterns
- "CCGUMPSF"
- G: Fuel
- 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
- Mixture – idle cutoff
- Fuel – on/both
- Throttle – 1000 RPM
- Mags. – off then both
- Throttle – 1000 RPM
- Mixture – lean
- Pitot heat – as required
- Review Airspeeds
- Time – note/start
- Tach Time – note
- Master – off
- Stby. Battery – off