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

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/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
- ■ 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

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
- Mixture – rich
- Prop – high RPM
- Electric Pump – on
- Pitot Heat – as required
- Review Airspeeds
- Time – note/start
- Canopy/Door – lock
- Abort Plan/Lost Comm.

Takeoff
- Mixture – T/O
- Flaps – T/O
- Fuel Selector – fullest
- High Altitude – pump on
- Flow Check
- CHT Cool Down
  - <= 50°F/22.8°C pm
- "Lights, Camera, Action"
- Mixture/Prop/Throttle
- Engine Inst. – green
- Vr – 59, then 67-69 KIAS
- Safe Altitude

Climb
- Prop – 2400 RPM
- Elect. Pump – off
- Lights – as required
- Vy (T/O)
- 67-54 KIAS
- 68 minus 1.8 per 100 lbs under 26Hb
- Cruise
- Flaps – up
- Vy: 76-60 KIAS
- Prop – 2400 RPM
- Mixture – rich
- >5000 hold const. EGT

Cruise
- Throttle – full
- Engine Inst. – green
- Trim – as required
- High Altitude – pump on
- Mixture
- Flaps – up
- Throttle – 21-24"
- Prop – 1800-2400 RPM
- 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
- Short Flow

Descent
- Fuel Selector – fullest
- Mixture – full/check
- Elect. Pump – on
- Mags. – check air
- Longer Flow
- Wind and Landing Site
- Stationary: 1:10.3, 1.45nm/1kft
- Windmill: 1.8.8, 1.7nm/1kft
- Speed: 76-60 KIAS
- Glide and Trim

Pre-Landing
- ATIS/Rwys & Patterns
- "CGUMPSF"
- G: Fuel Selector – downwind/fullest
- M: Mixture – rich
- P: Elect. Pump – on
- P: Prop – high RPM
- S: Seat Belts – secure
- F: Flaps – as required
- Mags. – both
- Airspeed >= 70 KIAS
- Windmill Restart
- Short Flow Again
- Engine Inst.
- T/O <108 KIAS
- LDG <91 KIAS
- Trim – as required
- Lights – as required
- Approach – 73-58 KIAS
- Flaps – T/O
- Safe Altitude
- Vy – 67-54 KIAS
- Throttle – full

Go Around
- Mixture – richen slowly
- 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

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

Engine Failure
- Flow Check (~15 min)
- Flaps, Engine Inst.
- Mixture, Prop, Throttle
- Pump, Mag. – Master
- Short Flow

C172S-G1000 (Ted v1.2)

Initial
- Papers – A.R.O.W.
- Control Lock – off
- Fuel Shutoff – on
- Fuel – both
- Master – on
- Fuel – note
- Lights/Pitot – test
- Avionics on/off – fans
- Master – off

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>24] [[K1.5]
- 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.
- 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
- Mixture – richen slowly
- Throttle – as required
- Flow Check

Run-Up
- Brakes – test
- 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
- Mags. – 150, 50
- Throttle – 1800 RPM
- Mixture – rich
- Trim – takeoff

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

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

Pre-Landing
- ATIS/Rwys & Patterns
- "CGUMPSF"
- G: Fuel – on/both
- M: Mixture – rich
- S: Seat Belts – secure
- F: Flaps – as required
- Trim – as required
- Lights – as required
- Clearance – obtain
- Ldg. Light – on
- Approach – 60-65 kts

Post-Landing
- Throttle – 1000 RPM
- Mixture – lean
- Flaps – up
- Mixture – lean
- Throttle – 1000 RPM
- Engine Inst. – check
- Idle Check
- Lights – as required
- ADSB Handheld – on

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