DA40-G1000 (Ted Yin v0.8a)

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

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)
V_r = 59

Weights
2646/2535/2205/1874 lbs

V_g = 76/73/68/60
V_y(Up) = 76/73/68/60
Climb(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
MÀM 40-227
· yes – 111 @ 2204-2646
· no – 108 @ 2161-2535
· below 2161/2204 – 94

In-Flight Operations

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

Climb
- T/O: Vy = 67–54 KIAS
- 67 minus 1.8 per 100 lbs under 2646
- Cruise
- Flaps – UP
- Airspeed = 76–60 KIAS
- Mixture – rich
- >5000 hold const. EGT
- Prop – 2400 RPM
- Throttle – full
- Engine Inst. – green
- Trim – as required
- High Altitude – pump on
- Lights – as required

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: 165–220°F

Descent
- Mixture – richen slowly
- Throttle – as required
- Mags. – check all
- Alternate Air – on
- Pump – on
- Mixture – full/check
- High Altitude – pump on
- Prop – 1800–2400 RPM
- Throttle – as required
- Mixture
- CHT Cool Down
- <= 50°F(22.8°C) per min.

Glide and Trim
- Speed: 76–60 KIAS
- Windmill: 1:8.8, 1.45nm/1kft
- Stationary: 1:10.3, 1.7nm/1kft
- Wind and Landing Site
- Longer Flow
- Engine Inst.
- Short Flow Again

Windmill Restart
- Airspeed >= 70 KIAS
- Mixture – rich
- 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

Pre-Landing
- ATIS/Rwys & Patterns
- "CGUMPSF"
  - G: Fuel Selector – downwind/fullest
  - M: Mixture – rich
  - P: Prop – high RPM
  - P: Pump – on
  - S: Seat Belts – secure
  - F: Flaps – as required
- T/O <108 KIAS
- LDG <91 KIAS
- Trim – as required
- Lights – as required
- Approach – 73–58 KIAS

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

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

Engine Failure
- Short Flow
- Fuel Selector – fullest

Engine Fire
- Mixture – idle cutoff
- Fuel Selector – off
- Master – off
- Throttle – full
- Pump – off
- Master – on
- Fuel Selector – off
- Landing is ensured
- Emergency Descent
- Cabin Heat – off
- Emergency Windows – open
- Engine-off Landing

Electrical Fire
- Master – off
- Emergency Switch – on
- Master – off
- Emergency Windows – open
- Forward Canopy – partially
- Cabin Heat – off
- Emergency Descent
- Land ASAP