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 - check
- ► 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
- ► Canpoy/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
- • MĂM 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/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
- ► Vr - 59, then 67-60 KIAS
- ► Safe Altitude
- • Prop - 2400 RPM
- • Elect. Pump - off
- • Lights - as required

Climb

- ► Vy (T/O)
- • 67-54 KIAS
- • 68 minus 1.8 per 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
- ► Lights - as required
- ► 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 - 1,000 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

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

C172S-G1000 (Ted v1.2)

Initial

- Papers - A.R.O.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>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 - 1,000 RPM
- Oil Pressure - 30 secs.
- Volts/Amps - [[>26] [>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 - 1,800 RPM
- Mags. - 150, 50
- Engine Inst. - check
- Idle Check
- Throttle - 1,000 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 - 1,000 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 - 1,000 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