Diamond DA40 Star (NG/XLT/Tundra)

Pre-inspection

- Documents - on board
- Walk around - complete
- Chocks and tie-downs - removed
- Pitot and static ports - clear, cover removed
- Control surfaces - free movement
- Fuel quantity - verified, caps secure
- Fuel sumps - drained, no water or debris
- Oil quantity - checked
- Tires, brakes, struts - checked
- Antennas and lights - secure

Before engine start

- Seats and seat belts - fastened
- Fuel selector - both / fullest
- Mixture - rich
- Throttle - cracked 1/4 inch
- Brakes - hold
- Master switch - battery and alternator on
- Beacon - on
- Auxiliary fuel pump - on for 3 seconds, then off
- Area - clear, shout 'clear prop'

Engine start

- Magnetos - both / start
- Engine - start
- Oil pressure - rises within 30 seconds
- Throttle - 1000 RPM
- Alternator - check ammeter positive

After engine start

- Avionics master - on
- Glass cockpit / PFD - boot and initialize
- Fuel quantity - verified on display
- Radios and audio panel - set
- ATIS / weather - obtain
- Altimeter - set to QNH
- Transponder code - set, mode standby
- Flight plan - load and activate

Before taxi

- Flaps - up
- Doors - closed and latched
- Flight controls - free and correct
- Brakes - check
- Taxi clearance - obtained

Before takeoff

- Throttle - 1800 RPM for run-up
- Magnetos - check L and R, max 175 RPM drop
- Engine instruments - all green
- Vacuum / electrical - check
- Throttle - idle
- Trim - takeoff position
- Flaps - 10 degrees / takeoff position
- Landing, strobe, beacon - on
- Transponder - ALT
- Departure briefing - complete

Takeoff

- Throttle - smoothly to full
- Engine instruments - green at full power
- Airspeed - alive
- Rotation - at Vr per POH
- Positive climb - established

Climb

- Power - climb power
- Airspeed - Vy initial then cruise climb
- Flaps - up after positive climb
- Auxiliary fuel pump - off
- Mixture - lean above 3000 ft DA
- Engine instruments - monitor

Cruise

- Power - cruise setting per POH
- Mixture - leaned for cruise
- Engine instruments - monitor
- Fuel flow and quantity - monitor

Descent

- Power - reduced for desired descent rate
- Mixture - enrich gradually
- ATIS at destination - obtain
- Approach briefing - complete
- Seat belts sign - on

Before landing

- Fuel selector - both / fullest
- Mixture - rich
- Auxiliary fuel pump - on
- Landing light - on
- Flaps - set per pattern phase
- Speeds - per POH

Landing

- Final approach - per POH
- Round out and flare - smooth

- Touchdown - main wheels first
- Throttle - idle after touchdown

After landing

- Flaps - up
- Auxiliary fuel pump - off
- Strobe - off
- Transponder - standby
- Taxi - to parking

Shutdown

- Parking brake - set
- Avionics master - off
- Throttle - idle
- Mixture - idle cutoff
- Magnetos - off after engine stops
- Master switch - off
- Beacon - off
- Doors - secured