Diamond Star DA-40-180 Checklist

BEFORE START
Rudder Pedals                Adjusted
Passengers                   Briefed
Seatbelts                    Secure
Doors                        Closed & Latched
Circuit Breakers             Check
Parking Brake                On
Trim                         T/O
Throttle                     Idle
Propeller                    Forward
Mixture                      Cut-off
Throttle Friction            Adjust
Alternate Air                Closed
Alternate Static Valve       Handle Aft
Avionics Master Switch      Off
Essential Bus Switch        Off

STARTING
(Read through, do by flow pattern)
BAT Master Switch            On
Strobe Light                 On
Throttle                     1” Open

BEFORE TAXI
Lights                      As required
Flight Instruments           Check
Radios                      Check
Parking brake               Off
Flaps                       Cycle
Brakes                      Test

BEFORE TAKE OFF
Parking brake                Set
Flight Controls              Free
Fuel Tank Selector           Switch tank
Fuel Pressure                Check
Flaps                       T/O
Mixture                     Rich
Throttle                    2000 RPM
Prop                        Cycle 3 times
Magnetos                    Check
Gauges                      Green
Throttle                    Idle
Flight Instruments          Check
Radios/NAVAIDS              Set
Fuel pump                   On
Canopy                      Close/Lock
Annunciator Panel           Check
Auto pilot                  Off
Departure plan              Complete
Parking Brake               Off

FLOODED START
Strobe light                 On
Fuel pump                    OFF
Mixture                      Cut-off
Throttle                    Mid Position
Ignition Switch              Start
Throttle                    1000 RPM
Mixture                     Full Rich

AFTER START
Electric Fuel Pump           Off
ALT Master Switch            On
Ammeter                      Check
Fuel Pressure                Check
Avionics Master              On
Annunciator/Engine Inst.     Check (PFD)

FMS SETUP
Initialize Profile...............AUX 4
........................................MAP
........................................MFD FPL
........................................PFD FPL
Fuel Quantity                Reset
Flight Plan                   Input
Radios                       COMM, NAV
........................................CDI, BRG ½
Performance                  Speed Bugs

COLD START
Fuel pump                    On
Mixture                      Rich, 3-5 secs
Mixtures                     Cut-off
Starter                      Engage*
Mixtures                     Rich
Oil pressure                 Check

WARM START
Fuel pump                    On
Mixture                      Cut-off
Starter                      Engage*
Mixtures                     Rich
Oil pressure                 Check

*If no start, refer to cold start procedure for priming.
*Starter Duty cycle: 6 attempts then cool for 30 sec.

Auto Pilot Test* .................. COMPLETED
Position Lights .................ON as Required
Fuel Selectors (2) ...............ON/FUEL RST
Altimeters (3) ....................SET
Standby Horizon .................CHECKED
Transponder                   ON/CHECKED
Parking Brake ..................RELEASED

* Auto Pilot Trim Test ............AS NECESSARY

BEFORE TAKE OFF
Parking brake                Set
Flight Controls              Free
Fuel Tank Selector           Switch tank
Fuel Pressure                Check
Flaps                       T/O
Mixture                     Rich
Throttle                    2000 RPM
Prop                        Cycle 3 times
Magnetos                    Check
Gauges                      Green
Throttle                    Idle
Flight Instruments          Check
Radios/NAVAIDS              Set
Fuel pump                   On
Canopy                      Close/Lock
Annunciator Panel           Check
Auto pilot                  Off
Departure plan              Complete
Parking Brake               Off

CLIMB (500’ AGL)
Flaps                       TO
Mixtures                    Rich
Prop                        Full FWD
Lights                      As required

Flaps                       Up
Throttle                    Full
Prop                        2400 RPM
*Maintain Flaps            OFF
Cruise Climb                90 KIAS
Lights                      As Required
Engine Gauges               Green
* Fuel pump on high Alt.
CRUISE
Throttle  Set
Prop  2200 to 2400 RPM
Mixture  lean -100°
CHT  150° – 400° F

PRE-MANEUVER CHECK
Mixtire  Fwd
Prop  Fwd
Fuel pump  On

SWITCHING FUEL TANKS
Fuel pump  On
Fuel selector  Switch
Fuel pressure  Check
Fuel pump  Off
Fuel pressure  Check

DESCEwNT
Mixture  Slowly Enrich
Fuel  Fullest Tank
Seatbelts  Fastened
Altimeter  Set
Instruments/Radios  Set

LANDING
Mixture  Rich
Prop  Full Fwd
Fuel Pump  On
Flaps  As required
Lights  As required

BALKED LANDING (GO AROUND)
Throttle  Full
Flaps  T/O
Climb speed  66 KIAS

AFTER LANDING
Throttle  1000 RPM
Fuel Pump  Off
Lights  As Required
Flaps  Up

SHUT DOWN
Throttle  1000 RPM
Avionics master  Off
Electric Equip  Off
Mixture  Cut-off
Ignition Switch  Off
Master switch  Off

AFTER ALL FLIGHTS
Hobbs meter  Note time
Tie-downs  Secure
Pitot cover  Install
Stall opening  Plug
Air Inlets  Plug

RESTART IN FLIGHT

EMERGENCY LANDING

ENGINE FIRE
Cabin Heat  Off
Fuel Tank Selector  Off
Throttle  Max Power
Fuel Pump  Off
BALT Master Switch  On
Canopy  Open

ELECTRIC FIRE/SMOKE
Emergency Switch  On
Master Switch (BALT)  Off
Cabin Heat  Off
Emergency windows  Open

SPEEDS REFERENCE
Check Speeds
Vr  59 KIAS
Vy  66 KIAS
Vy Flaps up  73 KIAS

Landing
Normal  71 KIAS
Short Field  67 KIAS

PROP WINDMILLING
Airspeed  80KIAS
Fuel selector  Fullest tank
Ignition Switch  Both
Mixture  Rich
Fuel pump  On
Alternate Air  Open

If Req.
Mixture  Lean
Mixture  Adv. Slow

PROP STOPPED
Airspeed  80KIAS
Electrical Equip  Off
Avionics master  Off
Master switch  On
Mixture  Rich
Fuel selector  Left or Right
Fuel pump  On
Alternate air  Open
Ignition  Start

EMERGENCY LANDING

AIRSPEED
73 KIAS

Radio  Call
Fuel Tank Selector  Off
Flaps (field assured)  LDG
Ignition Switch  Off
Master Switch  Off