



**Diamond Star DA-40-180 Checklist**  
**Pre-Flight Inspection**

**Cabin**

- |                         |              |
|-------------------------|--------------|
| 1. AROW Documents       | Verify       |
| 2. Ignition             | OFF          |
| 3. Electrical Equipment | OFF          |
| 4. Circuit Breakers     | SET IN       |
| 5. BATT Master          | ON           |
| 6. Annunciator Panel    | Check        |
| 7. Fuel Quantity        | Check        |
| 8. Flaps                | Extended     |
| 9. Exterior Lights      | ON/Check/OFF |
| 10. BATT Master         | OFF          |
| 11. Emergency Axe       | Check        |

**Exterior**

**Left Wing**

- |                       |              |
|-----------------------|--------------|
| 1. General Condition  | Check        |
| 2. Landing Gear Strut | Check        |
| 3. Tire Inflation     | Check        |
| 4. Brakes/Brake Lines | Check        |
| 5. Chocks/Tie Downs   | Remove       |
| 6. Fuel tank          | Sump         |
| 7. Stall Warning      | Remove Cover |
| 8. Fuel Cap           | Check Secure |
| 9. Fuel Vent          | Check        |
| 10. Pitot Mast        | Remove Cover |
| 11. Ailerons          | Check        |
| 12. Flaps             | Check        |

**Fuselage Left Side**

- |                      |       |
|----------------------|-------|
| 1. General Condition | Check |
| 2. Canopy/Rear Door  | Check |
| 3. Antennas          | Check |

**Empennage**

- |                          |        |
|--------------------------|--------|
| 1. Horizontal Stabilizer | Check  |
| 2. Rudder and Trim Tabs  | Check  |
| 3. Tie Down              | Remove |
| 4. Tail Skid             | Check  |

**Fuselage Right Side**

- |                      |       |
|----------------------|-------|
| 1. General Condition | Check |
| 2. Antennas          | Check |

**Right Wing**

- |                        |              |
|------------------------|--------------|
| 1. General Condition   | Check        |
| 2. Flaps               | Check        |
| 3. Ailerons            | Check        |
| 4. Tie Downs/Chocks    | Remove       |
| 5. Fuel Vent           | Check        |
| 6. Fuel Cap            | Check Secure |
| 7. Fuel Tank           | Sump         |
| 8. Landing Gear Strut  | Check        |
| 9. Tire Inflation      | Check        |
| 10. Brakes/Brake Lines | Check        |

**Front Fuselage**

- |                      |               |
|----------------------|---------------|
| 1. Cowling Condition | Check         |
| 2. Oil Level         | 6 qts         |
| 3. Air Inlets        | Remove Covers |
| 4. Propeller         | Check         |
| 5. Spinner           | Check         |
| 6. Nose Gear Strut   | Check         |
| 7. Tire Inflation    | Check         |
| 8. Nose Fairing      | Check         |
| 9. Tow Bar/Chocks    | Remove        |
| 10. Fuel Strainer    | Sump          |

**Before Start**

- |                       |              |
|-----------------------|--------------|
| 1. Rudder Pedals      | Adjusted     |
| 2. Passenger Briefing | SAFETY       |
| 3. Seat Belts         | Secure       |
| 4. Rear Door          | Secure       |
| 5. Canopy             | Secure       |
| 6. Parking Brake      | SET          |
| 7. Trim Wheel         | SET T/O      |
| 8. Throttle           | IDLE         |
| 9. Prop Lever         | Full FORWARD |
| 10. Throttle Friction | Adjusted     |
| 11. Alternate Air     | CLOSED       |
| 12. Avionics Master   | OFF          |
| 13. Essential BUS     | OFF          |
| 14. BATT Master       | ON           |
| 15. Annunciator Panel | Test         |

**Starting Engine**

**Cold Start**

- |                       |                 |
|-----------------------|-----------------|
| 1. Strobes            | ON              |
| 2. Electric Fuel Pump | ON              |
| 3. Mixture Rich       | 3 - 5 Seconds   |
| 4. Throttle           | ¼ inch open     |
| 5. Propeller Area     | Clear           |
| 6. Ignition           | Start           |
| 7. Mixture            | Advance Rapidly |
| 8. Oil Pressure       | Green           |
| 9. Electric Fuel Pump | OFF             |
| 10. Ammeter           | Charging        |
| 11. Fuel Pressure     | Green           |
| 12. Annunciator Panel | Check           |

**Hot Start \*(Recommended)\***

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|-------------------------|-----------------|
| 1. Strobes              | ON              |
| 2. Electrical Fuel Pump | ON              |
| 3. Throttle             | ¼ inch open     |
| 4. Propeller Area       | Clear           |
| 5. Ignition             | Start           |
| 6. Mixture Lever        | Advance Rapidly |
| 7. Oil Pressure         | Green           |
| 8. Electric Fuel Pump   | OFF             |
| 9. Ammeter              | Charging        |
| 10. Fuel Pressure       | Green           |
| 11. Annunciator Panel   | Check           |

**Flooded Start**

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|-----------------------|-------------------|
| 1. Electric Fuel Pump | OFF               |
| 2. Mixture Lever      | CUT-OFF           |
| 3. Throttle           | Open Mid Position |
| 4. Ignition           | Start             |
| 5. Mixture            | Advance Rapidly   |
| 6. Throttle           | Normal Idle       |
| 7. Oil Pressure       | Green             |
| 8. Ammeter            | Charging          |
| 9. Fuel Pressure      | Green             |
| 10. Annunciator Panel | Check             |

<u>Before Taxi</u>	
1. Throttle Idle	1200-1300RPM
2. Avionics Master	ON
3. Flaps	UP
4. Flight Instruments	SET
5. Radios/Nav	SET
6. XPDR	SET/ALT

<u>Taxiing</u>	
1. Lights	As Required
2. Mixture	Lean
3. Parking Brake	Released
4. Toe Brakes/Steering	Check

<u>Run-Up Check</u>	
1. Nose into wind	If Able
2. Parking Brake	SET
3. All Doors	Check Closed
4. Fuel Selector	Switch Tanks
5. Circuit Breakers	Check
6. Fuel Pressure	Green
7. Mixture	Full RICH
8. Flaps	SET T/O
9. Trim	SET T/O
10. Flight Controls	Free/Correct
11. Throttle	2000RPM
12. Prop Cycle (2-3 times)	250-500RPM drop
13. Magnetos	Check
a. MAX DROP	175RPMs
b. MAX Difference	50RPMs
14. Circuit Breakers	Check
15. Ammeter/VOLTS	Green
16. Throttle	IDLE
17. Throttle	1200-1300RPM
18. Mixture	re-lean as required

<u>Before Takeoff</u>	
1. Mixture	Full RICH
2. Prop	Full FWD
3. Fuel Pump	ON
4. Fuel Sector	Fullest Tank
5. Lights	ON
6. Flaps	SET T/O
7. Trim	SET T/O
8. Doors/Windows	CLOSED
9. Departure Plan	Crew Briefed

<u>NORMAL Takeoff</u>	
1. Throttle	FULL OPEN
2. Rotate	Vr 60kts
3. Climb Flaps	Vy 77kts
4. Clear Obstacles	Flaps UP
5. Climb	Vy 77kts-85kts
6. Prop Lever (500AGL)	2400RPMs

<u>Cruise</u>	
1. Throttle	Set as Required
2. Prop Lever	1800-2400RPMs
3. Mixture	As Required
4. Fuel Selector	As Required
a. Max Difference	8 gal
5. Electric Fuel Pump	On at High ALT

<u>Descent</u>	
1. Throttle	As Required
2. Prop Lever	18000-2400RPMs
3. Mixture	Enrich as required
4. Electric Fuel Pump	On at High ALT
5. Lights	As required
6. Arrival Plan (IFR)	Briefed

<u>Before Landing</u>	
1. Electric Fuel Pump	ON
2. Fuel Selector	Fullest Tank
3. Seat belts	Fastened
4. Lights	ON
5. Mixture	Full RICH
6. Prop Lever	Full FWD
7. Flaps (Check Airspeed)	SET LDG

<u>After Landing/Clear of Runway</u>	
1. Throttle	1200-1300RPMs
2. Electric Fuel Pump	OFF
3. Flaps	UP
4. Lights	As Required
5. Pitot Heat	OFF

<u>Engine Shut-Down</u>	
1. Parking Brake	As Required
2. Throttle	1200-1300RPMs
3. Engine Instruments	Check
4. Lights	As Required
5. Avionics Master	OFF
6. Mixture	CUT-OFF
7. Ignition	OFF
8. Tachometer	Record
9. BATT Master	OFF

<u>Securing Aircraft</u>	
1. Ignition Key	Remove
2. ALL ELEC Switches	OFF
3. HOBBS	Record
4. Parking Brake	Released
5. Doors/Windows	Closed
6. Aircraft Covers	Re-Install
7. Chocks/Tie Downs	Secure