

Diamond DA40 XLS (GFC700, A.C.)

Initial Check performance: Weather and Density Altitude Weight and Balance Flight Plan — File as req. Papers (AROW, VOR) — Check Fire Extinguisher — Check Remove and stow: Control lock Pitot cover Cowl plugs Tie-downs Chocks G1000 SD Cards — Check Master — On Flaps — Set to T/O, then LDG Pedals — Adjust Hobbs & Tach — Check vs. log Lights — Test int., ext. Pitot Heat — Test for IFR Fuel Gauges — Check level Master — Off	Pre-Engine Start Electrical — Check all off Propeller — Set to high RPM Mixture — Set to idle cutoff Master — On Flaps — Up Transponder — Select VFR MFD — Select “Engine” Page Fuel Totalizer — Set Prop — Clear	Run-up Brakes — Set Trim — Set to T/O Flight Controls — Free & Correct Alt. Induction Air — Test, Close Alt. Static Air — Test, Close Annunciations — None exc. Pitot Fuel Tank — Switch Fuel Pump — On Mixture — Set to best power Throttle — Set to 2000 RPM Propeller — Cycle 3 times: RPM Decrease Manifold Pressure Increase Oil Pressure Decrease Ignition — Test L & R Magnetos Alternator Load — Check Fuel/Oil Pressure — Check Oil Temperature — Check Throttle — Test Idle Throttle Friction — Check/Set
	Engine Start <div><i>If engine is cold...</i> Throttle — Open halfway Fuel Pump — On Mixture — Set to rich for 3-5s Throttle — Open slightly</div> <div><i>If engine is hot...</i> Throttle — Open slightly Fuel Pump — On Mixture — Set to rich for 3s</div>	Pre-takeoff VOR Check — Current for IFR FMS Flight Plan — Activated CDI Nav Source — Set as req. Transponder — Check code Front Canopy — Locked Rear Door — Locked Air Conditioning — Off as req. Radio — Ready for departure
Exterior Check quantity and quality: Fuel — Sump and measure Oil — Check (4-8 qt, ideal 6 qt) Check for damage and debris: Intakes/Caps/Drains/Vents Propeller and Spinner Exhaust Canopy Stall Orifice Surfaces and Controls Pitot and Static Ports Gear/Tires/Brakes Antennas Final walk around — Complete	Pre-Taxi / Taxi Avionics Master — On Intercom — Test w/ passengers Radio — Test at un-towered field Autopilot — Test Position + Taxi Light — On ATIS / AWOS — Listen and note Altimeters — Set and check Clearance — Request as req. Transponder — Set code Radio — Set departure freq. Radio — Ready to taxi Mixture — Richen slightly for taxi Brakes — Test Check instruments: Altimeters — Correct HSI and Compass — Correct Airspeeds — Zero	Turn over for in-flight checklists → → →
Interior Passengers: Briefing — Complete Headsets — Connect Seatbelts — On ELT — Set to ARM Circuit Breakers — Check Front Canopy — Close Rear Door — Close Fuel — Set to fullest tank Brakes — Check		Securing Transponder — Set to VFR Throttle — Set to 1000 RPM Hobbs/Tach & Fuel — Note Lights — Off Avionics Master — Off Ignition — Check ground as req. Mixture — Lean to cutoff Ignition — Off Pilot Pedals — Adjust for lock Master — Off Control Lock, Covers — Install Tie-downs — Install

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Takeoff Time — Note Landing + Strobe Light — On Flaps — Set to T/O Fuel Pump — On Pitot Heat — On Mixture — Set as req. for alt. Throttle — Set to full RPM — Check ≤2700 RPM Oil Pressure — Check Brakes — Release Rotate at 60 KIAS Initial climb at 67 KIAS Flaps — Up at safe altitude Fuel Pump — Off >1,000' AGL Continue climb at 67+ KIAS	Descent Fuel Tank — Set to fullest tank Fuel Pump — Off <10,000' MSL Mixture — Set richer as req. ATIS / AWOS — Listen and note Altimeters — Set for destination Radio — Call as req. <i>Constant Airspeed</i> AS — Maintain ≈130 KIAS VS — Maintain ≈500 fpm Propeller — Set to 2200 RPM Throttle — Set to 15" or as req. <i>Low Airspeed (Steep)</i> AS — Maintain ≈80 KIAS VS — Maintain ≈500 fpm Propeller — Set to 1800 RPM Throttle — Set to 10" or as req. <i>High Airspeed (Shallow)</i> AS — Maintain <178 KIAS VS — Maintain as req. Propeller — Set to 2450 RPM Throttle — Set to full or as req.	Pre-landing Seatbelts — On Landing + Taxi Light — On Fuel Pump — On Mixture — Set for alt. Flaps — Set to T/O at 108 KIAS Flaps — Set to LDG at 91 KIAS Air Conditioning — Off as req.
Climb Cruise climb at 75-85 KIAS Landing + Taxi Light — Off Mixture — Lean as req. for alt. Oil Temperature — Check CHT — Check Fuel Pump — On >10,000' MSL		Landing Approach at 73 KIAS Land at 60-65 KIAS
Cruise Propeller — Set to 2450 RPM Fuel Pump — Off once stable Mixture — Lean for alt. Fuel Tank — Switch as req.		Go Around Mixture — Set richer as req. Propeller — Set to high RPM Throttle — Set to full Flaps — Set to T/O Initial climb at 67 KIAS Flaps — Up at safe altitude
		After Landing Flaps — Up Pitot Heat — Off Fuel Pump — Off Landing + Strobe Light — Off Mixture — Lean for ground ops Trim — Set to T/O Air Conditioning — On as req.

Ground Speed (kt)						
	65	70	75	80	85	90
200	217	233	250	267	283	300
250	271	292	313	333	354	375
300	325	350	375	400	425	450
350	379	408	438	467	496	525
400	433	467	500	533	567	600
450	488	525	563	600	638	675
500	542	583	625	667	708	750
550	596	642	688	733	779	825
600	650	700	750	800	850	900
650	704	758	813	867	921	975
700	758	817	875	933	992	1050
750	813	875	938	1000	1063	1125
800	867	933	1000	1067	1133	1200

V-Speeds (KIAS)		
V _R	59	T/O flaps
V _{x/V_y}	67	T/O flaps
V _s	53	no flaps
V _{so}	52	LDG flaps
V _A	111	
V _{No}	129	
V _{NE}	178	
V _{FE}	91	T/O flaps
V _{FE}	108	LDG flaps