

PREFLIGHT CHECK

1	Aircraft preparation / outside check	COMPLETED (according AFM)	1
2	Baggage & rear door	CLOSED & LATCHED	2
3	Tow bar	REMOVED & SECURED	3
4	Cabin	CHECKED	4
5	Aircraft papers & aircraft log	CHECKED	5
6	Load sheet	WITHIN LIMITS	6

PREFLIGHT CHECK COMPLETED
COCKPIT PREPARATION

1	Parking brake	SET	1
2	Rudder pedals	ADJUSTED & LOCKED	2
3	Seat belts & harness	FASTENED	3
4	Engine levers	IDLE / HIGH RPM / CUT OFF	4
5	Alternate air	CLOSED	5
6	Ignition	OFF	6
7	Master switch (BAT / ALT)	OFF	7
8	Avionic master	OFF	8
9	Essential bus	OFF	9
10	Alternate static	CLOSED	10
11	All lights	OFF	11
12	Emergency switch	OFF / GUARDED	12
13	ELT	ARMED	13
14	Circuit breakers	CHECKED	14
15	Flaps	UP	15
16	Pitot heat	OFF	16
17	Fuel pump	OFF	17

COCKPIT PREPARATION COMPLETED
CHECK BEFORE ENGINE START

1	Master switch (BAT)	ON	1
2	Trim	CHECKED	2
3	Flight controls	FREE	3
4	G1000	DATA CHECKED / ACKNOWLEDGE	4
5	Annunciations / engine instrument	CHECKED	5
6	Fuel quantity	CHECKED / RESET (if required)	6
7	Fuel selector	FULLER TANK	7
8	Oil temperature	CHECKED	8
9	Rear door	CLOSED & LATCHED	9
10	Front canopy	POSITION 1 or 2	10

CHECK BEFORE ENGINE START COMPLETED

ENGINE START

1	Strobe	ON	1
2	Start key	INSERT	2
3	Throttle	OPEN 3 cm	3
4	RPM lever	HIGH RPM	4
5	Fuel pump	ON	5

Engine cold: (oil T < 120 °F)

6a	Mixture	OPEN 3-5 seconds then OFF	6a
7a	Throttle	OPEN 1 cm	7a

Engine warm: (oil T ≥ 120 °F)

6b	Mixture	OPEN 1-3 seconds then OFF	6b
7b	Throttle	OPEN 3 cm	7b
8	Propeller area	CLEAR	8
9	Starter	ENGAGE	9
10	Mixture	FULL RICH WHEN ENGINE FIRES	10
11	Throttle	1000 RPM	11
12	Oil pressure	GREEN SECTOR (max 15 seconds)	12
13	Fuel pump	OFF / FUEL PRESSURE CHECK	13
14	Master switch (ALT)	ON / AMMETER CHECK	14

ENGINE START COMPLETED

CHECK AFTER ENGINE START

1	Annunciations	CHECK	1
2	Avionics master	ON	2
3	Flood light	AS REQUIRED	3
4	Position light	ON	4
5	Ammeter	CHECK	5
6	Flaps	UP - T/O - LDG - T/O	6
7	Pitot heat	CHECK	7
8	Cabin heat & defroster	AS REQUIRED	8
9	Fuel tank selector	SWITCH TANK	9
10	Flight instruments	SET & CHECK	10
11	Autopilot / trim	TEST	11

CHECK AFTER ENGINE START COMPLETED

TAXI CHECK

1	Brakes and steering	CHECKED	1
2	Flight instruments	CHECKED	2

TAXI CHECK COMPLETED

RUN-UP

1	Parking brake.....	SET	1
2	Fuel selector	FULLER TANK.....	2
3	Circuit breakers.....	CHECK	3
4	Engine instruments	GREEN / WARM UP TEMP > 120 °F	4
5	Zone behind aircraft.....	CLEAR	5
6	Throttle.....	2000 RPM.....	6
7	RPM lever	CYCLE 3x (max drop 250-500 RPM).....	7
8	Magnetos (L-B-R-L-B)	CHECK (max -175 / Δ 50 RPM).....	8
9	Voltmeter	CHECK	9
10	Mixture	CHECK	10
11	Throttle.....	IDLE (500-700 RPM)	11
12	Throttle.....	1000 RPM	12

RUN-UP COMPLETED

CHECK BEFORE DEPARTURE

1	Magnetos	BOTH	1
2	Alternate air	CLOSED	2
3	Flight controls	FREE & CORRECT L / R / UP / DN	3
4	Trim.....	SET FOR T/O	4
5	Flaps	SET T/O	5
6	Avionics	SET	6
7	Fuel quantity	L+R / ENDURANCE.....	7
8	Fuel pump.....	ON.....	8
9	Pitot heat.....	AS REQUIRED	9
10	Mixture	RICH or AS REQUIRED	10
11	RPM lever	HIGH RPM	11
12	Cabin and pax.....	SECURED	12
13	ATC clearance	VERIFIED	13
14	Departure briefing.....	COMPLETED.....	14

CHECK BEFORE DEPARTURE COMPLETED

LINE UP CHECK

1	Canopy / rear door	CLOSED & LOCKED	1
2	Time	NOTED	2
3	Transponder.....	CODE / MODE CHECKED.....	3
4	Approach sector & runway	CLEAR	4
5	Landing light.....	ON	5

LINE UP CHECK COMPLETED

Before brake release: available power check

CLIMB CHECK

1	Flaps	UP	1
2	Climb power	SET (FULL / 2400 RPM)	2
3	Fuel pump	OFF, PRESSURE CHECKED	3
4	Engine instruments	CHECKED	4
5	Alternate air	AS REQUIRED	5
6	Landing light	AS REQUIRED	6

CLIMB CHECK COMPLETED

*Lean according to AFM above 5000 ft MSL
Fuel pump ON above 8000 ft MSL*

CRUISE CHECK

1	Altimeters	CHECKED (STD / QNH)	1
2	Cruise power	SET	2
3	Mixture	SET	3
4	Engine instruments	CHECKED	4
5	Fuel quantity	L+R / ENDURANCE	5
6	Fuel selector	AS REQUIRED	6

CRUISE CHECK COMPLETED

DESCENT CHECK

1	ATIS or AD information	RECEIVED	1
2	Approach briefing	COMPLETED	2
3	Avionics	SET	3
4	Circuit breakers	CHECKED	4
5	Cabin & pax	SECURED	5

DESCENT CHECK COMPLETED

*Adjust mixture and RPM lever during descent
Fuel pump off below 8000 ft MSL*

APPROACH CHECK

1	Altimeters	QNH SET	1
2	Fuel pump	ON	2
3	Fuel quantity	L+R / ENDURANCE	3
4	Fuel selector	FULLER TANK	4
5	Mixture	RICH or AS REQUIRED	5
6	Landing light	ON	6

APPROACH CHECK COMPLETED

LANDING CHECK

1	Flaps	SET FOR LANDING	1
2	Park brake	RELEASED	2
3	Mixture	RICH	3
4	RPM lever	HIGH RPM	4

LANDING CHECK COMPLETED

AFTER LANDING CHECK

- 1 Time NOTE 1
- 2 Alternate air CLOSE 2
- 3 Pitot heat OFF 3
- 4 Fuel pump OFF 4
- 5 Flaps UP 5
- 6 Landing light OFF 6

AFTER LANDING CHECK COMPLETED

ENGINE SHUT DOWN AND PARKING

- 1 Parking brake SET 1
- 2 Throttle 1000 RPM 2
- 3 Engine instruments CHECK 3
- 4 Remaining fuel / time counter NOTE 4
- 5 121.500 CHECK 5
- 6 Avionic master OFF 6
- 7 Electrical consumers (except strobe light) . OFF 7
- 8 Magnetos OFF RPM DROP / BOTH 8
- 9 Mixture LEAN, CUT OFF 9
- 10 Magnetos OFF, REMOVE KEY 10
- 11 Strobe light OFF 11
- 12 Master switch (BAT / ALT) OFF 12
- 13 Flight data and documents NOTE and COMPLETE 13
- 14 Aircraft TO BE SECURED 14

PARKING CHECK COMPLETED

	850 kg	1000 kg	1092 kg	1150 kg	1200 kg
<i>V best glide (flaps UP)</i>	60	68		73	76
<i>V_R rotate</i>	49	55		59	60
<i>V_Y best rate</i>	54	60		66	67
<i>V_{REF} flaps UP</i>	60	68		73	76
<i>V_{REF} flaps T/O</i>	59	66		72	74
<i>V_{REF} flaps LDG</i>	58	63	67	71	73

Power settings DA40-180

Pres Alt	45%			55%			65%			75%		
	MP	RPM	TAS	MP	RPM	TAS	MP	RPM	TAS	MP	RPM	TAS
2000	22.1	1800	101	23.3	2000	113	24.2	2200	123	25.2	2400	132
3000	21.8	1800	102	23.0	2000	114	23.8	2200	125	24.8	2400	134
4000	21.5	1800	103	22.7	2000	116	23.5	2200	127	24.5	2400	135
5000	21.2	1800	104	22.3	2000	117	23.1	2200	128	24.1	2400	137
6000	20.9	1800	105	22.0	2000	118	22.8	2200	129	--	--	--
7000	20.5	1800	106	21.7	2000	119	21.1	2400	130	--	--	--
8000	20.2	1800	107	21.3	2000	120	21.0	2400	131	--	--	--
9000	19.9	1800	108	21.1	2000	121	20.7	2400	131	--	--	--
10000	19.6	1800	109	19.4	2000	121	--	--	--	--	--	--
Best Eco	5.8 USG/h			7.0 USG/h			8.2 USG/h			9.5 USG/h		
Best Pwr	--			--			9.6 USG/h			11 USG/h		