====➔ **BY HEART ITEM !**

AIRCRAFT PREPARATION

1	Preflightcheck acc. AFM, draining.....	completed.....	1
2	Aircraft equipment, A/C Log.....	on board.....	2
3	Flighttime counter.....	noted, checked.....	3
4	Rudder pedals.....	adjusted.....	4
5	Flight controls.....	free and correct.....	5
6	Electric switches.....	off.....	6
7	Ignition key.....	into starter, off.....	7

AIRCRAFT PREPARATION COMPLETED

ENGINE START

1	Cabin.....	secured, rear door closed, locked.....	1
2	Parking brake.....	set.....	2
3	Battery master switch.....	on.....	3
4	Announciator lights.....	check all lights blinking then press ack-knob (1 x„BLING“ !) or press ack-knob for 2 sec, check all lights blinking + „BLING-BLING-BLING...“, ➔ 2 yellow, 3 red (+ DOOR red) on.....	4
5	Circuit breakers.....	checked.....	5
6	Fuel quantity, endurance.....	lh ... / rh ..., endurance ... hrs.....	6
7	Fuel selector.....	**! select tank with <u>less</u> fuel !**.....	7
8	Propeller.....	high RPM.....	8
9	Alternate air.....	closed.....	9
10	Anticollision- / Strobelights.....	on.....	10

COLD ENGINE:

11	Electrical fuel pump.....	**on**, pressure checked.....	11
12	Throttle.....	set 3 cm.....	12
13	Mixture control.....	3-5 sec rich (fuel flow), then lean cutoff.	13
14	Throttle.....	set max. 1 cm.....	14
15	Propeller area.....	clear.....	15
16	Starter.....	engage.....	16
17	When engine fires.....	mixture control rich, release starter.....	17
18	Throttle.....	1200 RPM.....	18
19	Oilpressure.....	min mid yellow (within 15 sec).....	19

➔ ➔(continue procedure on next page at point **20**)

ENGINE START (continued)

HOT / WARM ENGINE:

11	Electrical fuel pump	**on,** pressure checked	11
12	Throttle	set 3 cm	12
13	Mixture control	1–3 sec rich (fuelflow), then lean cutoff	13
14	Throttle	set max. 1 cm	14
15	Propeller area	clear	15
16	Starter	engage	16
17	When engine fires	mixture control rich, release starter	17
18	Throttle	1200 RPM	18
19	Oilpressure	min mid yellow (within 15 sec)	19

➔ ➔(continue procedure below at point **20**)

FLOODED ENGINE („versoffen“):

11	Electrical fuel pump	check **off**	11
12	Throttle	mid position	12
13	Mixture control	lean cutoff	13
14	Propeller area	clear	14
15	Starter	engage	15
16	When engine fires	throttle idle and release starter and mixture control rich	16
17	Throttle	1200 RPM	17
18	Oilpressure	min mid yellow (within 15 sec)	18

➔ ➔(continue procedure below at point **20**)

➔➔ (continued procedure):

20	Announciator lights	red START light off	20
21	Electrical fuel pump	(check) off, pressure checked	21
22	Alternator switch	on	22
23	Announciator lights	all off except Pitot Y (+ Door R)	23
24	Avionic switch	on, COM: 121,500 checked	24
25	Transponder	GND 7000	25
26	ATIS / departure information	received	26
27	Avionics	preselected, set	27
28	Flight instruments	checked, set	28

ENGINE START COMPLETED

TAXI CHECK

1	Brakes, steering	checked	1
2	Gyro instruments, slip-indicator	checked	2

TAXI CHECK COMPLETED

ENGINE RUN UP

1	Parking brake	set	1
2	Engine instruments, oil temp	in limits, > 75°F	2
3	Fuelselector **change**	**change to fullest tank**	3
4	Area behind	clear	4
5	Throttle	2000 RPM	5
6	Magnetos	max. drop 175 RPM / max. diff. 50RPM	6
7	Propeller	retard 2 x 1700 RPM	7
8	Mixture control	EGT rise/fuel flow decr/small RPM drop Leaning above 5000 ft dens. ALT for smooth engine-run (with full power)	8
9	Alternate air	checked	9
10	Alternator	charging	10
11	Engine instruments	green	11
12	Throttle	idle (500 – 700 RPM)	12
13	Throttle	1000 – 1200 RPM set	13

ENGINE RUN UP COMPLETED

CHECK BEFORE DEPARTURE

1	Flight controls	free and easy	1
2	Electrical fuel pump	on, pressure checked	2
3	Fuel quantity, endurance	lh ... / rh ..., endurance ... hrs	3
4	Fuel selector (if necessary only)	fullest tank	4
5	Propeller	high RPM	5
6	Mixture control	set (leaned > 5000 ft dens. ALT)	6
7	Alternate air	closed	7
8	Magnetos	both	8
9	Flaps	set T/O	9
10	Trim	set for T/O acc. load distribution	10
11	Engine instruments	in limits	11
12	Flight instruments	checked	12
13	Avionics	set	13
14	Departure briefing	completed	14
15	Doors / storm-windows	closed	15
16	Seatbelts / cabin + passengers	fastened / secured	16
17	Annoutriator lights	all out (except PITOT)	17

READY FOR DEPARTURE

LINE UP CHECK

1	Approach & RWY	clear	1
2	Strobelights	on	2
3	Time	noted	3
4	Transponder	ALT 7000 or according ATC	4
5	RWY / RWY HDG + directional gyro	identified / compared	5
6	Wind	checked	6
7	Time	check	7

LINE UP CHECK COMPLETED

DA-40-180 DIAMOND STAR
HB-SDJ

flugschule fricktal

CLIMB CHECK

1	Climb power	full throttle / 2400 RPM set	1
2	Flaps	up set	2
3	Electrical fuel pump	off, pressure checked	3
4	Landing light	as required	4

CLIMB CHECK COMPLETED

CRUISE CHECK

1	Altimeters	set (QNH = Altitude / STD 1013 = FL)	1
2	Directional gyro	set	2
3	Engine instruments	in limits	3
4	Cruise power	set according tables	4
5	Mixture control	leaned (at **all** altitudes)	5
6	Fuel quantity, endurance	lh ... / rh ..., endurance ... hrs	6
7	Lights	as required	7
8	Transponder	ALT 7000 or according ATC	

CRUISE CHECK COMPLETED

% POWERSETTINGS inches MP, Fuelflow for best Economy, shaded = recommended

	45% (TAS ≈ 106 kt)			55% (TAS ≈ 119 kt)			65% (TAS≈129 kt)	
RPM: / Fuelflow:	1800 5,8 gph	2000 6,0 gph	2200 6,3 gph	2000 7,0 gph	2200 7,2 gph	2400 7,5 gph	2200 8,2 gph	2400 8,5 gph
2000 ft	22,1	20,7	19,6	23,3	21,9	20,7	24,2	22,9
4000 ft	21,5	20,2	19,0	22,7	21,2	20,1	23,5	22,3
6000 ft	20,9	19,6	18,4	22,0	20,6	19,5	22,8	21,7
8000 ft	20,2	19,0	17,9	21,3	20,0	19,0	----	21,0
10000 ft	19,6	18,4	17,3	----	19,4	18,4	----	----
12000 ft	----	17,9	16,7	----	----	17,8	----	----

DESCENT CHECK

1	ATIS / landing information	received	1
2	Approach briefing	completed	2
3	Avionics	set / preselected	3
4	Altimeters	set (QNH)	4
5	Mixture control	enrich (full rich below 5000 ft)	5
6	Seatbelts / cabin + passengers	fastened / secured	6

DESCENT CHECK COMPLETED

APPROACH CHECK

1	Altimeters	set QNH	1
2	Directional gyro	checked	2
3	Landing light	on	3
4	Electrical fuel pump	on, pressure checked	4
5	Fuel quantity, endurance	lh ... / rh ..., endurance ... hrs	5
6	Fuel selector	fullest tank	6
7	Mixture control	rich	7

APPROACH CHECK COMPLETED

FINAL CHECK

1	Flaps	LDG set	1
2	Propeller (if MP < 15“)	high RPM	2

FINAL CHECK COMPLETED

CHECK AFTER LANDING

1	Transponder	GND	1
2	Time	noted	2
3	Strobe lights	as required	3
4	Electrical fuel pump	off, pressure checked	4
5	Flaps	up	5

CHECK AFTER LANDING COMPLETED

STOPPING ENGINE / PARKING CHECK

1	Parking brake	set	1
2	Throttle	1000 RPM set	2
4	COM	121,500 checked	4
5	Avionic switch	off	5
6	Electric switches	off	6
7	Mixture control	lean cutoff	7
8	Magnetos, ignition key	off, key removed	8
9	Alternator + battery master switches	off	9
10	Flight time counter	noted	10
11	Parking brake	as required	11

STOPPING ENGINE / PARKING CHECK COMPLETED