



Aircraft Checklist

MFU - Pilotenclub - LOAV



3fly.at

OE-DGE

Diamond DA40-180

MTOM = 1150 kg / 2.535 lb

A/C-Size: W: 11.9 m H: 2.0 m L: 8.0 m

OPERATOR	MFU Pilotenclub	
	A-2542 Kottingbrunn	
	Flugplatz 1, Top 1	
	www.mfu-pilotenclub.at	
	+43 2252 77340	

FPL (EXAMPLE)		
7	A/C ID	OE-DGE
8	Flight Rules	V,I,Y,Z
	Type of Flight	G
9	Type of A/C	DA40
	Wake Turbul. Cat.	L
10	Equipment	BDFGLORY/S
13	Departure A/D	LOAV
	Departure Time	0830
15	Speed	N0125
	Flight Level	080
	Route	SNU GRZ
16	Destination A/D	LJMB
	Total EET	0045
	Alternate A/D	LOWG
18	Other Info	EET/GOLVA0045
	PBN/B2C2D2O2S2	NAV/SBAS
19	Endurance	04:00
	Persons on Bord	2
	Emerg. Equipm.	ELT
	A/C Colour	WHITE
	Name PIC	NAME

CONTACT	Tower LOAV	+43 1 700729201
	Maint. LOAV	+43 2252 790894
	AIS	+43 51703 3211
	MET	+43 51703 3443

FUEL	Fuel	AVGAS 100LL
	Maximum Fuel	156 L / 41.2 gal
	Unusable Fuel	3.8 L / 1 gal

OIL	Shell Aero	15 W 50
	Minimum	4 quarts
	Minimum IFR	6 quarts

TIRE	Front Tire	29 psi / 2.0 bar
	Main Tires	36 psi / 2.5 bar

SPEED	V _{S0} (Stall- Flaps max)	49 KIAS
	V ₀ (Stall- Flaps up)	52 KIAS
	V _G (Flaps up)	60-73 KIAS *
	Max. Demo. X-Wind	20 knots

*) A/C - Mass 850Kg - 1150Kg

COM FAIL		Clear to Land
		Return to Landing
		Continue Circling
		A/D unsafe, don't Land
		Land at this A/D and proceed to Apron - wait for Clearance

Do not Land

Consult POH/AFM for "Warnings, Cautions and additional Information"

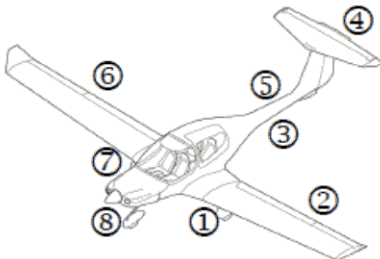
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PREFLIGHT

1	Wing Tanks & Gascolator	DRAIN
2	A/C Doc, Mass&Bal	CHECK

**CABIN CHECK**

3	Ignition Key	REMOVE
4	Canopy, Rear Door	CHECK
5	Electr. Equipment	OFF
6	Circ. Breaker	ALL-IN
7	Control Levers	Check Free
8	Prop	FULL FWD
9	Throttle	IDLE
10	Mixture	LEAN
BATTERY	Master – BAT	ON
	Annunc. Panel	CHECK
	Fuel Quantity	CHECK
	Pos. Light, ACL	CHECK
	Ldg./ Taxi - Light	CHECK
	Master – BAT	OFF
17	Loose Items	CHECK
18	Flight Control	CORRECT
19	Trim Tab	MOVABLE
20	Baggage	SECURED

**EXTERIOR CHECK****1. Left Main Gear**

21	Gear Strut	VIS. INSP.
22	Strut Fairing	VIS. INSP.
23	Wheel Fairing	VIS. INSP.
24	Tire 36psi / 2,5 bar	CHECK
25	Tire Wear, Tread	CHECK
26	Wheel Brake	VIS. INSP.
27	Break Line Leaks	CHECK
28	Slip Marks	VIS. INSP.
29	Chocks	REMOVE

**2. Left Wing**

30	Wing Surfaces	VIS. INSP.
31	Step	VIS. INSP.
32	Air Intake Lower	VIS. INSP.
33	Openings Lower	CHECK
34	Tank Drain	DRAIN
35	Stall Warning	CHECK
36	Tank Filler	VIS. INSP.
37	Tank Air Outlet	VIS. INSP.
38	2x Stall Strips	VIS. INSP.
39	Pitot Probe	CLEAN
40	Ldg / Taxi Lights	VIS. INSP.
41	Wing Tip	VIS. INSP.
42	Pos.Light & AC	VIS. INSP.
43	Tiedown	CHECK, CLEAR
44	Aileron & Linkage	VIS. INSP.
45	Aileron Hinges & Pin	Aileron & Linkage
46	Foreign.Obj.AileronPad	VIS- INSP.
47	Flap & Linkages	VIS. INSP.
48	Flap Hinges & Pin	VIS. INSP.



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3. Fuselage (Left)

49	Canopy Left side	VIS. INSP.
50	Rear Door, Window	VIS. INSP.
51	Fuselage Skin	VIS. INSP.
52	Antennas	VIS. INSP.



4. Empennage

53	Stabilizer Contr. Surf.	VIS. INSP.
54	Hinges	VIS. INSP.
55	Elev. Trim, Wire	VIS. INSP.
56	Rudder Trim Tab	VIS. INSP.
57	Fin Tiedown	CHECK, CLEAR
58	Tail Skid & Lower Fin	VIS. INSP.



5. Fuselage (Right)

59	Fuselage Skin	VIS. INSP.
60	Window	VIS. INSP.
61	Canopy Right Side	VIS. INSP.



6. Right Wing

62	Flap & Linkages	VIS. INSP.
63	Flap Hinges & Pin	VIS. INSP.
64	Aileron & Linkage	VIS. INSP.
65	Aileron Hinges & Pin	VIS. INSP.
66	Foreign.Obj.AileronPad	VIS. INSP.
67	Wing Tip	VIS. INSP.
68	Pos.Light & AC	VIS. INSP.
69	Tiedown	CHECK, CLEAR
70	Wing Surfaces	VIS. INSP.
71	2x Stall Strips	VIS. INSP.
72	Tank Air Outlet	VIS. INSP.

73	Tank Filler	VIS. INSP.
74	Openings Lower	CHECK
75	Tank Drain	DRAIN
76	Step	VIS. INSP.




7. Right Main Gear

77	Gear Strut	VIS. INSP.
78	Strut Fairing	VIS. INSP.
79	Wheel Fairing	VIS. INSP.
80	Tire 36psi / 2,5 bar	CHECK
81	Tire Wear, Tread	CHECK
82	Wheel Brake	VIS. INSP.
83	Break Line Leaks	CHECK
84	Slip Marks	VIS. INSP.
85	Chocks	REMOVE



8. Front Fuselage



86	Oil Level 6-8 Qts	CHECK
87	Cowling	VIS. INSP.
88	3 Air Intakes	CLEAR
89	Propeller 	VIS. INSP.
90	Spinner & Screws	VIS. INSP.
91	Nose Landing Gear	VIS. INSP.
92	Tire and Wheel	VIS. INSP.
93	Slip Marks	VIS. INSP.
94	Strut Fairing	VIS. INSP.
95	Tire Wear, Tread	CHECK
96	Wheel Fairing	VIS. INSP.
97	Tow Bar	REMOVE
98	Tire 29psi / 2,0bar	CHECK
99	Chocks	REMOVE

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100	Exhaust	VIS. INSP.
101	Forw. Cabin Inlets	CLEAR
102	Antennas	VIS. INSP.
103	Gascolator	DRAIN
104	Venting Pipes	CHECK
105	Fuselage Underside	CLEAN

BEF. ENGINE START


1	Preflight Check	COMPL
2	Rudder Pedals	ADJUST
3	Passenger Briefing	COMPL
4	Seat Belts / Harness	FASTEN
5	Baggage	SECURE
6	Rear Door	LOCKED
7	Door Lock 	UNBLOCKED
8	Front Canopy	POS. 1 or 2
9	Canopy Lock 	UNBLOCKED
10	Parking Brake	SET
11	Flight Controls	FREE
12	Trim Wheel	SET T/O
13	Throttle	IDLE
14	Prop	FULL FWD
15	Mixture	LEAN
16	Friction Device	ADJUST
17	Alternate Air	CLOSED
18	Alternate Static	CLOSED
19	Avionics Master	OFF
20	Essential Bus	OFF
21	Master - BAT	ON
22	Annunciator Panel	Test 5secs.
23	Fuel Tank Selector	FULLER TANK

ENGINE START

1	Bef. Engine Start CL	COMPL
2	Strobe Light / ACL	ON
3	Fuel Pump	ON
4	Throttle	3 cm OPEN
COLD	Mixture	3-5 SEC RICH
	Mixture	LEAN
	Throttle	1 cm OPEN
HOT	Mixture	1 SEC RICH
	Mixture	LEAN
10	Fuel Pump	OFF
11	Prop Area	CLEAR
12	Ignition	START
13	Mixture when fires	RICH
14	Oil Press. <15 sec	IN RANGE 
15	Master -ALT	ON
16	Ammeter	Check
17	Fuel Press. 14-35 psi	CHECK
18	Annunciator Panel	CHECK 5 SECS.

FLOODED ENGINE START



1	Strobe Light / ACL	ON
2	Fuel Pump	OFF
3	Mixture	LEAN
4	Throttle	MID POS
5	Prop Area	CLEAR
6	Ignition	START
7	Throttle When Fires	PULL BACK
8	Mixture	RAPIDLY RICH
9	Oil Press. <15 sec	IN RANGE 

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10	Master - ALT	ON
11	Ammeter	CHECK
12	Fuel Press. 14-35 psi	CHECK
13	Annunciator Panel	CHECK 5 SECS.

BEFORE TAXI

1	Avionic Master	ON
2	Electr. Equipment	ON
3	Flaps all Positions	CHECK
4	Eng-/Flight Instr.	CHECK / SET
5	Instr.-/Flood light	AS REQ.
6	GTN750 NAV Data	CHECK
7	GPS Selftest	CHECK
8	Fuel Selector 	LEFT/RIGHT
9	Pitot On → Ammeter	CHECK
10	Pitot	OFF
11	Taxi/Posn. Lights	AS REQ.
12	Engine Warm UP 	max 1100rpm
13	Transponder	CHECK
14	Parking Barake	RELEASE
TAXI	Brakes	CHECK
	Flight Instruments	CHECK
	Gyro Instruments	CHECK


BEFORE TAKEOFF

1	Parking Brake	SET
2	Seat Belts/Harness	FASTEN
3	Rear Door	CLOSE LOCK
4	Front Canopy	CLOSE LOCK
5	Door Warning Light	CHECK OFF
6	Fuel Selector	FULLER TANK
7	Engine Instruments	IN GREEN
8	Circuit Breakers	CHECK IN
9	Fuel Pressuere	14-35 psi
10	Autopilot	ON
11	Flight Controls	OVERRIDE
12	A/P DISC+Horn	PRESS & VFY
13	Fuel Pump	ON
14	Mixture	FULL FWD
15	Flaps	T/O
16	Trim	T/O
17	Flight Controls	FREE&CORR
18	Throttle	2000 rpm
MAGNETOS	Prop 3x Pull-Drop	250-500rpm
	Ignition R-B-L-B	Switch
	Drop max. 175rpm	Check
	Diff. L/R max. 50rpm	Check
	Ignition Switch Both	CONFIRM
24	Circuit Breakers	CHECK IN
25	Voltmeter	IN GREEN
26	Throttle Idle 600-800rpm	CHECK
27	Alternate Air	Closed
28	Landing Light	ON
29	Ptitot Heat	AS REQ.
30	Departure Briefing	COMPLETE
31	Parking Brake	Release

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LINE UP / TAKEOFF

1	Before T/O Check	COMPL
2	Approach Sector	CLEAR
3	Runway Heading	CONFIRM
4	Transponder	ON/ALT
5	Prop	FULL FWD
6	Throttle 	FULL FWD
7	Full Takeoff Power 	CONFIRM
8	Elevator	NEUTRAL
9	Rudder	DIRECTION
10	Rotate (V_R)	59 KIAS
11	Climb Speed (V_Y)	60-66 KIAS*


*) A/C - Mass 1000Kg - 1150Kg

CLIMB

1	Throttle	FULL FWD
2	Mixture	RICH
3	Prop 2400 rpm	REDUCE
4	Engine Instruments	IN GREEN
5	Climb Speed (V_Y)	60-66 KIAS*
6	400ft AGL Safe Alt	CHECK
7	Flaps	UP
8	Trim	AS REQ
9	Landing Light	OFF
10	Fuel Pump	OFF
11	Fuel Press.	CHECK
12	Mixture >5000ft	SET EGT



*) A/C - Mass 1000Kg - 1150Kg

CRUISE - CLIMB

1	Flaps	UP
2	Airspeed	68-73 KIAS*
3	Prop 2400rpm	SET
4	Throttle	FULL FWD
5	Mixture >5000ft	SET EGT
6	Engine Instruments	IN GREEN
7	Trim	AS REQ
8	Fuel Pump (high Alt.)	ON 

*) A/C - Mass 1000Kg - 1150Kg



CRUISE


1	Flaps	CHECK UP
2	Throttle (Page 7)	SET
3	Prop 1800 - 2400 rpm	SET
4	Mixture	SET
5	Trim	AS REQ
6	Fuel Selector	AS REQ
7	Fuel Pump (high Alt.)	ON 
8	Manover Spd V_A	94/108 KIAS*
9	Turbulent Air Spd V_{no}	129 KIAS
10	Fuel Pump (high Alt)	ON 

*) A/C - Mass 780Kg - 980Kg 94 KIAS

*) A/C - Mass 981Kg - 1150Kg 108 KIAS

DESCENT

1	Mixture 	AS REQ
2	Prop 1800 - 2400 rpm	AS REQ
3	Throttle	AS REQ
4	Fuel Pump (high Alt.)	ON 
5	Descent Planning	COMPLETE

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LANDING APPROACH

1 Fuel Pump	ON
2 Fuel Selector	FULLER TANK
3 Safety Harness	FASTEN
4 Airspeed Reduce MAX	108 KIAS
5 Flaps	T/O
6 Trim	AS REQ
7 Landing Light	AS REQ

AFTER LANDING

1 Throttle	IDLE
2 Brakes	AS REQ
3 Fuel Pump	OFF
4 Transponder	GND/STBY
5 Pitot Heat	OFF
6 Avionics	AS REQ
7 Landing Light	OFF
8 Taxi Light	ON
9 Flaps	UP

BEFORE LANDING


1 Mixture	FULL FWD
2 Throttle	AS REQ
3 Airspeed Reduce	91 KIAS
4 Prop	FULL FWD
5 Flaps	LANDING
6 Final Approach Spd 	63-71 KIAS*

G O A R O U N D	Prop	FULL FWD
	Throttle	FULL FWD
	Airspeed	60-66 KIAS*
	Flaps	T/O
	400ft AGL Safe Alt	CHECK
	Prop	2400
	Airspeed	68-73 KIAS*
	Flaps	UP
Fuel Pump	OFF	

SHUT DOWN

1 Parking Brake	SET
2 Engine Instruments	CHECK
3 ELT (121,5 MHz)	CHECK
4 Flight Plan	CLOSE
5 Avionic Master	OFF
6 Throttle	1000 rpm
7 Taxi Light	OFF
8 Position Lights	OFF
9 Mixture	CUTOFF
10 Ignition	OFF
11 Strobes	OFF
12 Master ALT - BAT	OFF
13 Flight Logger	SLIDE CARD
14 Map Light	CHECK OFF
15 Parking Brake	AS REQ
16 Tiedown	AS REQ

*) A/C - Mass 1000Kg - 1150Kg

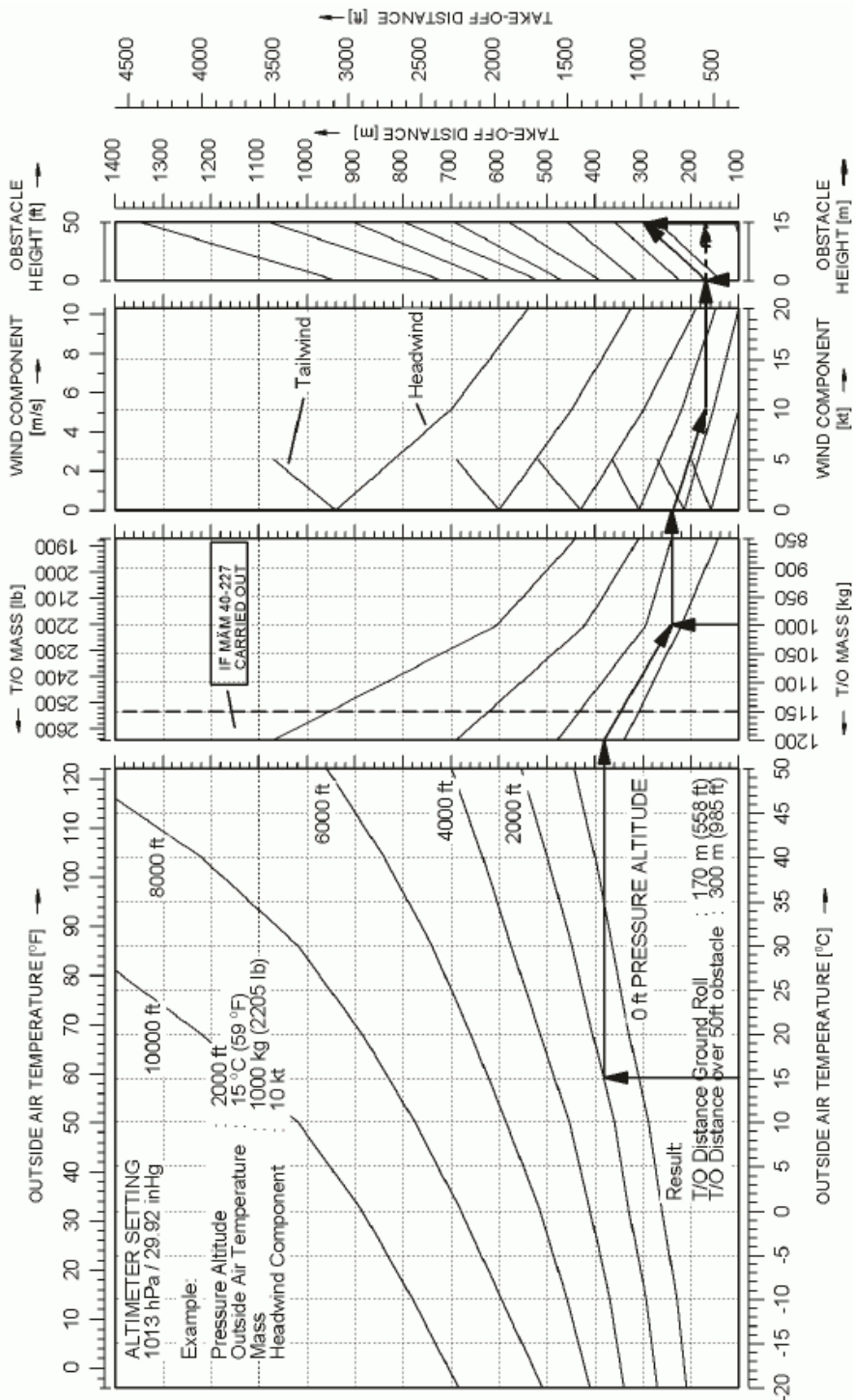
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Fuel Flow [US gal/h]	Drehzahl	Motorleistung in % der maximalen Startleistung						Motorleistung in % der maximalen Startleistung						
		45 %			55 %			65 %			75 %			
		1800	2000	2200	2400	2000	2200	2400	2000	2200	2400	2000	2200	2400
Best Economy	5,8	6	6,3	6,6	7	7,2	7,5	7,9	8,2	8,5	8,7	9,2	9,5	11
Best Power	-	-	7,3	7,7	-	8,5	8,7	-	9,5	9,8	10,7	10,7	11	
ISA	[°C]	[°F]	Ansaugdruck (MP) [inHg]						Ansaugdruck (MP) [inHg]					
MSL	15	59	22,7	21,3	20,2	19	23,9	22,4	21,2	26,8	24,9	23,4	27,3	25,8
1000	13	55	22,4	21,0	19,9	18,7	23,6	22,2	21,0	26,4	24,5	23,2	26,8	25,5
2000	11	52	22,1	20,7	19,6	18,4	23,3	21,9	20,7	26,0	24,2	22,9	26,5	25,2
3000	9	48	21,8	20,4	19,3	18,2	23,0	21,6	20,4	25,7	23,8	22,6	26,1	24,8
4000	7	45	21,5	20,2	19,0	17,9	22,7	21,2	20,1	25,4	23,5	22,3	-	24,5
5000	5	41	21,2	19,9	18,7	17,6	22,3	20,9	19,8	-	23,1	22,0	-	24,1
6000	3	38	20,9	19,6	18,4	17,4	22,0	20,6	19,5	-	22,8	21,7	-	-
7000	1	34	20,5	19,3	18,2	17,1	21,7	20,3	19,3	-	22,4	21,4	-	-
8000	-1	31	20,2	19,0	17,9	16,9	21,3	20,0	19,0	-	-	21,0	-	-
9000	-3	27	19,9	18,7	17,6	16,6	21,1	19,7	18,7	-	-	20,7	-	-
10000	-5	23	19,6	18,4	17,3	16,3	-	19,4	18,4	-	-	-	-	-
11000	-7	19	19,3	18,2	17,0	16,1	19,1	18,1	-	-	-	-	-	-
12000	-9	16	-	17,9	16,7	15,8	-	17,8	-	-	-	-	-	-
13000	-11	12	17,6	16,4	15,5	14,7	17,6	17,6	-	-	-	-	-	-
14000	-13	9	-	16,1	15,3	14,5	-	-	-	-	-	-	-	-
15000	-15	6	15,8	15,0	14,2	13,4	15,8	15,8	-	-	-	-	-	-
16000	-17	2	15,5	14,7	13,9	13,1	15,5	15,5	-	-	-	-	-	-
17000	-19	-2	-	-	14,5	13,7	14,5	14,5	-	-	-	-	-	-

**Shaded Areas are the
recommended powersettings**

DA 40 - TAKE-OFF DISTANCES



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Airspeeds for Normal Operations

TAKEOFF

A/C Mass	850 - 1150 kg
V_Y Flaps T/O	54 - 66 KIAS
Cruise Climb Flaps UP	60 - 73 KIAS

LANDING

Final APP Flaps LDG	58 - 71 KIAS
Balked Ldg Flaps T/O	54 - 66 KIAS
Max. demo X Wind	20 knots
V_{FE} max, Flaps LDG	91 KIAS

CRUISE

V_A Maneuvering	94 - 108 KIAS*
V_{NO} Max turbul. Air	129 KIAS
V_{NE} Max Airspeed	178 KIAS

Airspeeds for Emergency Operations

V_A Maneuvering	94 - 108 KIAS*
Engine Off - Best Glide / Flaps Up	60 - 73 KIAS
Engine Off - Best Glide / Flaps T/O	59 - 72 KIAS
Engine Off - Best Glide / Flaps LDG	59 - 71 KIAS
Engine Failure after T/O Flaps T/O	59 - 72 KIAS
Engine Failure after T/O / Flaps Up	60 - 73 KIAS

*) A/C - Mass 780Kg - 980Kg 94 KIAS

*) A/C - Mass 981Kg - 1150Kg 108 KIAS