

Checklist für Diamond DA40 TDI **G1000**

Edition #: **15** Edition date: **20.05.2010**

Please observe:

The file you are receiving hereby combines all three sections of the checklist: Normal Checklist, Emergency Checklist and Abnormal Checklist.

All pages of a new edition will have the same new "edition #" and "edition date", even if only one page was amended and all other pages still have the same, unchanged content.

Therefore the "List of Effective Pages" (LEP) is provided. It is here where you can see whether a particular page was amended. Pages which have been amended by a new edition will be marked yellow. For all other pages you will see which original "edition #" (and of course any higher "edition #") is still valid.

Note:

The system of assigning "Edition #" is as follows:

- if the revision affects all types, a new edition # (without a decimal figure) will be assigned to all of the checklists
- if the revision does not affect all types, the affected checklists will get subsequent "decimal figures" until a major revision affecting all checklists is issued.

Have a lot of nice flights and happy landings!

Peter Schmidleitner

Comments explaining Edition # 15 are on page 2 of this document

Checklist DA40 TDI G1000 LEP

Page	Following Edition	Date (or any higher) is valid
Section : Normal Checklist		
1	14	01.12.2006
2	15	20.05.2010
3	14	01.12.2006
4	14	01.12.2006
5	14	01.12.2006
6	14	01.12.2006
7	14	01.12.2006
8	14	01.12.2006

Section: Emergency Checklist		
1	15	20.05.2010
2	15	20.05.2010
3	15	20.05.2010
4	15	20.05.2010
5	15	20.05.2010
6	15	20.05.2010
7	15	20.05.2010
8	15	20.05.2010
Section: Abnormal Checklist		
9	14	01.12.2006
10	14	01.12.2006
11	14	01.12.2006
12	14	01.12.2006

Comments explaining Edition # 12.1

Maximum fuel unbalance value added to the checklist.

Comments explaining Edition # 14

Actually there is no change to Edition 12.1, except to the preamble (terms and conditions of use, disclaimer).

So why Edition # 14?

Publication of the checklists has been taken over by "Diamond Aircraft Flight Training Division". This goes together with the publication of electronic checklist for Diamond aircraft equipped with the G1000.

In the future publication will be through the Diamond Web-site, where checklists can be found for download.

Paper checklists will be published in 2 formats:

- single-page A4: this will give you more flexibility to arrange the printout according your preferences (shrinking, duplex etc.);
- 2 A5-pages placed on one A4 sheet.

Edition # 13 was skipped for obvious reasons: many of you will not like the figure "13".

Comments explaining Edition # 15

Normal Procedures:

Page 2:
Battery voltage check added.

Emergency Procedures:

Several procedures rearranged to other pages

Revised procedures:

RPM overspeed
DOOR OPEN procedure

NORMAL CHECKLIST



This checklist is compiled according the guidelines of GAMA Specification No.1, SECTION 3, para 3.5, SECTION 3A, para 3A.5 and SECTION 4, para 4.5. The "Amplified Normal Procedures", „Amplified Emergency Procedures" and „Amplified Abnormal Procedures" according GAMA Specification No. 1 are in the DA40 Airplane Flight Manual Chapters 4A, 3 and 4B.

This checklist is a Recommended Operator Checklist and for reference only. It is not a substitute for and does not supersede the current approved Airplane Flight Manual or any of its supplements or parts thereof, or any training or procedures required by any regulatory or advisory bodies.

This checklist may not contain all procedures shown in the Airplane Flight Manual. For a comprehensive listing of all procedures consult the Airplane Flight Manual.

Use of the checklist is at the user's sole risk and discretion.

Any possible liability of Diamond Aircraft for any damages, injury or death resulting from its use is excluded.

All such terms and conditions shall be deemed to be explicitly accepted in full by using the checklist. If you do not understand, or if you disagree with, any of the above terms and conditions and in any jurisdiction that does not give effect to all provisions of these terms and conditions any use of the checklist is not permitted.

Use of the electronic checklist (if available):

Before using the electronic checklist on the G1000 the following sections have to be completed using this paper checklist:

- **Preflight interior + exterior**
- **Preflight exterior**
- **Check before engine start items 1 to 20 (may be completed by heart).**

This checklist also serves as a back up for the electronic checklist in case the G1000 MFD is not available.

PREFLIGHT INTERIOR + EXTERIOR.

- 1 Check Aircraft papers
- 2 Remove pitot cover
- 3 Check interior for foreign objects
- 4 Check flight controls free
- 5 Check circuit breakers
- 6 Emergency Fuel Valve
NORMAL
- 7 Engine Master OFF
- 8 ECU SWAP AUTO
- 9 Essential bus OFF
- 10 Avionic Master + electrics OFF
- 11 Electric Master ON
Check battery voltage
- 12 Check fuel quantity + temp
- 13 External lights ON
- 14 Pitot heat ON
- 15 Check stall warning
- 16 Check pitot heat
- 17 Check external lights
- 18 Pitot heat / ext. lights OFF
- 19 Electric Master OFF,
key removed

PREFLIGHT EXTERIOR**Left main gear**

- Wheel fairing
- Tire condition, pressure (2,5 bar),
position mark
- Brake, hydraulic line

Left wing

- Wing leading edge, top- and
bottom surface, stall strips
- Drain fuel sump
- Stall warning
- Fuel vent
- Fuel filler cap
- Pitot, static probe (cover
removed)
- Landing/Taxi light
- Wing tip, position light
- Static dischargers
- Aileron (freedom of movement,
hinges, control linkage,
security)
- Wing flap

Left fuselage

- Canopy left side
- Rear door
- Fuselage left side
- Antennas

Tail

- Elevator & rudder (freedom of
movement, hinges)
- Trim - tab
- Tail skid + lower fin
- Static dischargers

Right fuselage

- Fuselage right side
- Rear window
- Canopy right side

Right wing

- Wing flap
- Aileron (freedom of movement,
hinges, control linkage,
security)
- Static dischargers
- Wing tip, position light
- Wing leading edge, top- and
bottom surface, stall strips
- Fuel filler cap
- Fuel vent
- Drain fuel sump

Right main gear

- Wheel fairing
- Tire condition, pressure (2,5 bar),
position mark
- Brake, hydraulic line

Nose section

- OAT sensor
- Propeller surface
- Spinner
- Cowling, Air inlets (5)

Nose gear

- Wheel fairing
- Tire condition, pressure (2,0 bar),
position mark

Engine bay

- Engine oil level (4,5 – 6,0 l)
- Gearbox oil level
- Drain fuel strainer

CHECK BEFORE ENGINE START

1	Preflight check	COMPLETED	1
2	Baggage and tow bar	SECURED	2
3	Emergency fuel valve	NORMAL	3
4	Power lever.....	IDLE	4
5	Parking brake.....	SET	5
6	Alternate Air	CLOSED	6
7	Electric master	OFF	7
8	Avionic master	OFF	8
9	Essential bus.....	OFF	9
10	Alternate static.....	CLOSED	10
11	Engine master.....	OFF	11
12	ECU swap	AUTO	12
13	All light switches.....	OFF	13
14	Emergency switch.....	OFF / GUARDED	14
15	ELT.....	ARMED	15
16	Circuit breakers	CHECKED IN	16
17	Flap selector	UP	17
18	Pitot heat	OFF	18
19	Fuel transfer	OFF	19
20	Electric Master.....	ON (check avionic fan noise)	20
21	Rudder pedals	ADJUSTED	21
22	Passengers	INSTRUCTED	22
23	Seat belts	FASTENED	23
24	Rear door	CLOSED and LATCHED	24
25	Front canopy	POS 1 or 2	25
26	G1000.....	POWERED, ACKNOWLEDGED	26
27	PFD/MFD	BACKUP MODE	27
28	MFD.....	ENGINE – FUEL	28
29	Fuel Quantity	CHECKED, RESET/SET if requ.	29
30	Fuel temperature.....	CHECKED	30
31	Total time in service.....	NOTED	31
32	MFD.....	ENGINE – SYSTEM	32
33	Power lever.....	IDLE	33
34	ACL (strobe)	ON	34

End of Checklist

ENGINE START PROCEDURE

Engine Master..... ON
 Annunciators / Eng.Instr. CHECKED
 Glow indication

CHECK AFTER ENGINE START

1	Oil pressure	CHECKED	1
2	RPM 890 +/- 20.....	CHECKED	2
3	Warm up time	START	3

Warm up:

Idle 2 minutes
 1400RPM until Oil > 50°C and Coolant > 60°C

4	Pitot heat ...ON, annunciation + Amps checked	4	
5	Pitot heat	OFF	5
6	PFD/MFD	NORMAL MODE	6
7	Avionics master.....	ON	7

FMS SETUP

Initalize profile (AUX 4, MAP, MFD FPL, PFD FPL)
Flight plan
Radios (COM, NAV, ADF, DME, CDI, BRG 1/2)
Performance (speed bugs)

8	FMS setup	COMPLETED	8
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AUTOPILOT TEST

DISCONN press, check electric trim not working
AP ON, check overpowering servos
DISCONN press, check AP off

9	Autopilot test	COMPLETED	9
10	Flood light	CHECKED, ON as required	10
11	Position lights.....	ON as required	11
12	Flaps.....	full travel CHECKED, then T/O	12
13	Altimeters (3)	SET	13
14	Standby horizon	CHECKED	14
15	Transponder	CODE/MODE CHECKED	15
16	Parking brake.....	RELEASED	16

End of Checklist; see next page for "During taxi" – items

DURING TAXI

Check brakes
Check flight instruments

BEFORE TAKE OFF CHECK

1	Parking brake.....	SET	1
2	Seat belts.....	FASTENED	2
3	Rear door.....	CLOSED + LATCHED	3
4	Front canopy.....	CLOSED + LATCHED	4
5	Door warning light.....	OFF	5
6	Engine instruments.....	CHECKED	6
7	Fuel Temperature (Diesel min +5°) ...	CHECKED	7
8	Circuit breakers.....	CHECKED	8
9	Electric elevator trim.....	CHECKED, T/O SET	9
10	Flaps.....	CHECKED T/O	10
11	Flight controls.....	CHECKED	11
12	Power lever.....	IDLE	12
13	ECU test.....	PERFORM	13

ECU TEST

ECU test button..... *press and hold*
 ECU backup unsafe light..... *flashing*
 ECU A, B, Caution lights..... *flashing*
 ECU B, Caution lights..... *flashing / prop cycling*
 ECU A, Caution lights..... *flashing / prop cycling*
 All ECU caution lights..... *extinguished*
 ECU backup unsafe light..... *extinguished*
 ECU test button..... *release*

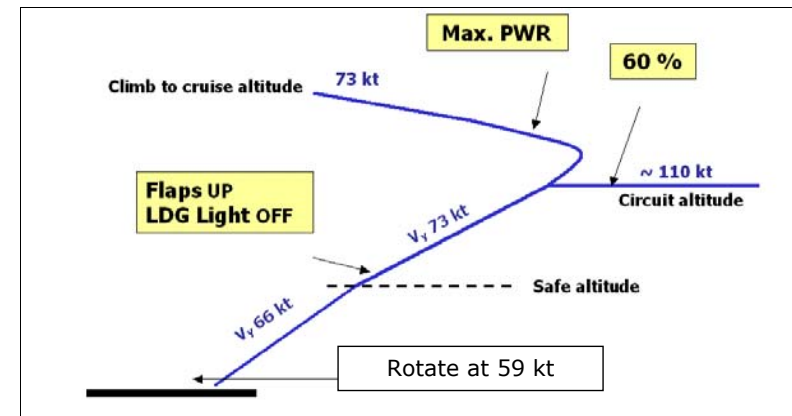
14	ECU swap.....	ECU B, ENGINE CHECKED	14
15	ECU swap.....	AUTO	15
16	Pitot heat.....	AS REQUIRED	16
17	Transponder.....	CODE/MODE CHECKED	17
18	Parking brake.....	RELEASED	18

End of Checklist

For procedural items and take-off profile see next page

LINE UP PROCEDURE

Landing light..... ON
 Approach sector..... CLEAR
 Runway..... IDENTIFIED
 Power lever max (100% / 10 sec).....
 CHECK LOAD / RPM / FUEL FLOW / OP



AFTER TAKE-OFF PROCEDURE

After passing safe altitude:
 Flaps..... UP
 Landing light..... OFF

CLIMB TO CRUISE CHECK

- 1 Flaps..... CHECKED UP 1
- 2 Landing light.....CHECKED OFF 2

End of Checklist

PERIODICALLY DURING CRUISE

Fuel Radio Engine Direction Altitude
 Fuel transferrepeat as required
 Maximum fuel unbalance - Long range tank: 9 USG

DESCENT / APPROACH CHECK

- 1 Landing data RECEIVED 1
- 2 Altimeters (3) SET 2
- 3 COM / NAV / FMS SET 3
- 4 Seatbelts FASTENED 4
- 5 Fuel transfer AS REQUIRED 5

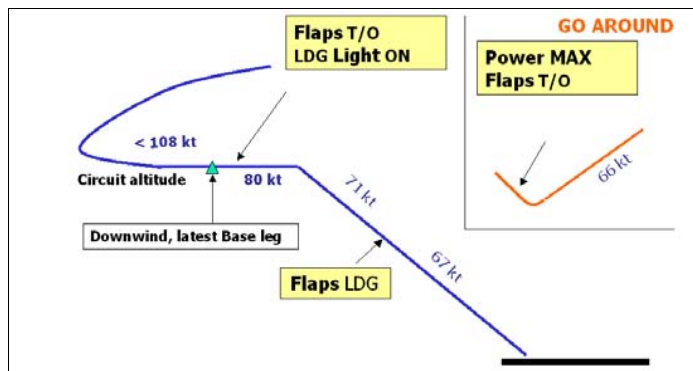
End of Checklist

BEFORE LANDING PROCEDURE

Downwind, latest base leg:
 Flaps T/O
 Landing light..... ON
 On final:
 Flaps LDG

GO AROUND PROCEDURE

Power MAX
 Flaps T/O
 Continue with take-off profile



AFTER LANDING CHECK

- 1 Flaps..... UP 1
- 2 Pitot heat OFF 2
- 3 Alternate air..... CLOSED 3
- 4 Landing/Taxi light..... AS REQUIRED 4

End of Checklist

PARKING CHECK

- 1 Parking brake..... SET 1
- 2 Power lever..... IDLE for 2 min. 2
- 3 ELT 121,5 CHECKED 3
- 4 Engine / System page CHECKED 4
- 5 Engine / Fuel page TTL TIME IN SVC NOTED 5
- 6 Avionic master OFF 6
- 7 Electrical consumers except ACL (strobe) ... OFF 7
- 8 Engine Master OFF 8
- 9 ACL (strobe) OFF 9
- 10 Electric Master..... OFF 10
- 11 Interior light CHECKED OFF 11
- 12 Start keyREMOVED 12

End of Checklist

OPERATING SPEEDS KIAS			
	850 kg	1000 kg	1150 kg
Best gliding angle (Flaps UP)	60	68	73
Best angle of climb (V _X)			
Best rate of climb (V _Y)	54	60	66
Cruising climb speed	60	68	73
Rotating speed	49	55	59
Max. flap speed (V _{FE}) T/O	108		
Max. flap speed (V _{FE}) LDG	91		
Landing speed Flaps UP	60	68	73
Landing speed Flaps LDG	58	63	71
Stalling speed (V _{S0}) LDG	42	<-980kg->	49
Stalling speed (V _S) T/O	44	<-980kg->	51
Stalling speed (V _S) clean	47	<-980kg->	52
Max. cruising speed (V _{NO})	129		
Never exceed speed (V _{NE})	178		
Manoeuvring speed (V _A)	94	<-980kg->	108
Max. turbulence speed	129		

Weights	Empty weight	850 kg
Max. TKOF weight	Max. baggage weight	30 kg

EMERGENCY + ABNORMAL CHECKLIST

For conditions to use this Emergency + Abnormal Checklist see page 1 of the Normal Checklist.

All such conditions are fully applicable also for this checklist.



G1000 WARNINGS

ENG TEMP	Pg. 2	Coolant temperature high (red range)
OIL TEMP	Pg. 2	Oil temperature high (red range)
OIL PRES	Pg. 2	Oil pressure low (red range)
GBOX TEMP	Pg. 3	Gearbox temperature high (red range)
L/R FUEL TEMP	Pg. 3	Fuel temperature high (red range)
ALTN AMPS	Pg. 3	High Current (red range)
ALTN FAIL	Pg. 3	Alternator fail
STARTER	Pg. 3	Starter not disengaging
DOOR OPEN	Pg. 3	Unlocked doors

For other parameters "out of green range" see Abnormal Checklist

Abnormal Checklist starts at page 9

Emergency landing page 4

Engine

Rough engine and/or power loss page 4

Windmill engine start page 5

Powered engine start page 5

Fluctuating RPM page 6

RPM overspeed page 6

RPM underspeed page 6

Electric System

Under/over voltage page 5

Total electrical fail page 8

Smoke and Fire

Fire / smoke on ground page 7

Fire / smoke in continued TKOF page 7

Electric fire / smoke in flight page 7

Engine fire in flight page 8

Other Emergencies

Fuel transfer pump u/s page 4

Suspicion of carbon monoxide page 8

ENG TEMP

COOLANT TEMPERATURE HIGH

- Check COOL LVL caution light
 - ❖ If "COOL LVL" OUT:
 - ❖ During climb:
 - ⇒ Reduce power 10%
 - ⇒ Increase airspeed 10 KIAS
 - ⇒ If not returning to green range within 60 seconds: reduce power as far as possible and increase airspeed
 - ❖ During cruise:
 - ⇒ Reduce power
 - ⇒ Increase airspeed
 - ⇒ Check coolant temperature in green range
 - ⇒ If not returning to green range: land ASAP
 - ❖ If "COOL LVL" ON:
 - ⇒ Reduce power
 - ⇒ Expect loss of coolant fluid
 - ⇒ Be prepared for emergency landing

OIL TEMP

OIL TEMPERATURE HIGH

- Check oil pressure
 - ❖ If too low:
 - ⇒ Reduce power
 - ⇒ Be prepared for loss of oil and engine fail; be prepared for emergency landing
 - ❖ If in green range:
 - ⇒ Reduce power
 - ⇒ Increase airspeed

OIL PRES

OIL PRESSURE LOW

- Reduce power
- Be prepared for loss of oil and engine fail; be prepared for emergency landing

GBOX TEMP**GEARBOX TEMPERATURE HIGH**

- Reduce power
- Increase airspeed

L/R FUEL TEMP**FUEL TEMPERATURE HIGH**

- Reduce power
- Increase airspeed

ALTN AMPS**HIGH CURRENT****Consumption of electrical power is too high**

- Switch off electrical equipment to reduce electrical load
 - If problem not cleared:
 - ⇒ Land ASAP

ALTN FAIL**ALTERNATOR FAIL****Batteries will last for about 30 minutes**

- Check circuit breakers
 - If all CBs OK:
 - ⇒ ESSENTIAL BUS: ON
- Switch off unnecessary electrical equipment
- Land ASAP
- Be prepared for engine fail and emergency landing

STARTER**STARTER NOT DISENGAGING**

- Power lever IDLE
- Engine master OFF
- Electric master OFF

DOOR OPEN**UNLOCKED DOORS**

- Reduce airspeed
- Check canopy and rear door visually
 - If canopy and/or rear door unlocked:
 - ⇒ Airspeed below 140 KIAS
 - ⇒ Land ASAP

Do not try to lock the rear door in flight

EMERGENCY LANDING

1	Airspeed.....	73/68/60 kts	1
2	ATC.....	INFORM	2
3	Emergency fuel valve.....	OFF	3
4	Engine Master.....	OFF	4
	On final:		
5	Flaps	LDG	5
6	Electric master switch	OFF	6

FUEL TRANSFER PUMP U/S

7	Emergency fuel valve.....	EMERG. TRANSFER	1
8	AUX fuel quantity	CHECK min 1 USG	2
9	MAIN fuel quantity.....	CHECK max 15 USG	3
10	Emergency fuel valve.....	Reset to NORMAL	4

ROUGH ENGINE AND/OR POWER LOSS

1	Airspeed.....	73/68/60 KIAS	1
2	Power lever	MAX	2
3	G1000 annunciations	CHECK	3
	If ON: go to appropriate checklist		
4	Alternate air	in icing conditions: OPEN	4
5	Main tank fuel quantity	CHECK	5
6	Fuel transfer pump	ON	6
7	Emergency fuel valve.....	CHECK NORMAL	7
8	ECU swap.....	ECU B	8
	ECU reset:		
9	Engine master.....	OFF – ON	9
	If no success:		
10	ECU swap.....	AUTO	10
	If no success and insufficient power:		
	Land ASAP		

WINDMILL ENGINE START

- | | | | |
|----|---------------------------|-------------------|----|
| 1 | Airspeed..... | 73 - max 110 KIAS | 1 |
| 2 | Pressure Altitude | max 6000 ft | 2 |
| 3 | Power lever | IDLE | 3 |
| 4 | Emergency fuel valve..... | CHECK NORMAL | 4 |
| 5 | Alternate air | OPEN | 5 |
| 6 | Fuel transfer pump | ON | 6 |
| 7 | Avionic master | OFF | 7 |
| 8 | Electric master..... | ON | 8 |
| 9 | Engine master..... | OFF, then ON | 9 |
| 10 | Avionic master | ON | 10 |

POWERED ENGINE START

- | | | | |
|----|---------------------------|------------------------|----|
| 1 | Gliding airspeed | 73/68/60 KIAS | 1 |
| 2 | Pressure Altitude | max 6000 ft | 2 |
| 3 | Engine master..... | OFF | 3 |
| 4 | Power lever | IDLE | 4 |
| 5 | Emergency fuel valve..... | CHECK NORMAL | 5 |
| 6 | Alternate air | OPEN | 6 |
| 7 | Fuel transfer pump | ON | 7 |
| 8 | Avionic master | OFF | 8 |
| 9 | Electric master..... | ON | 9 |
| 10 | Engine master..... | ON | 10 |
| 11 | Glow indication | CHECK ON, wait for OFF | 11 |
| 12 | Electric master..... | START | 12 |
| 13 | Avionic master | ON | 13 |

UNDER / OVER VOLTAGE

- | | | | |
|---|---------------------|-----------|---|
| 1 | Essential bus | ON | 1 |
| | | Land ASAP | |

FLUCTUATING RPM

- | | | | |
|---|-------------------|----------------|---|
| 1 | Power lever | CHANGE SETTING | 1 |
| | | If no success: | |
| 2 | ECU swap..... | ECU B | 2 |
| | | If no success: | |
| 3 | ECU swap..... | AUTO | 3 |
| | | If no success: | |
| | | Land ASAP | |

RPM OVERSPEED

- | | | | |
|---|-------------------|-----------------------------------|----|
| 1 | Power lever | ADJUST to max. 2300 RPM | 1 |
| 2 | Flaps | UP | 3 |
| 3 | Airspeed..... | 73 KIAS | 2 |
| 4 | Power lever | AS REQUIRED | 5 |
| | | but do not exceed 2300 RPM | |
| 5 | ECU swap..... | ECU B | |
| | | • If no success: | |
| 6 | ECU swap..... | AUTO | 7 |
| | | Land ASAP | |
| | | If increased climb rate required: | |
| 7 | Flaps | T/O | 8 |
| 8 | Airspeed..... | 66 KIAS | 9 |
| 9 | Power lever | ADJUST to max. 2300 RPM | 10 |

RPM UNDERSPEED

- | | | | |
|---|-------------------|------------------|---|
| 1 | Power lever | AS REQUIRED | 1 |
| 2 | ECU swap..... | ECU B | 2 |
| | | • If no success: | |
| 3 | ECU swap..... | AUTO | 3 |
| | | Land ASAP | |

FIRE / SMOKE ON GROUND

- | | | | |
|----------------------|---------------------------|------|---|
| 1 | Power lever | IDLE | 1 |
| 2 | Cabin heat..... | OFF | 2 |
| 3 | Emergency fuel valve..... | OFF | 3 |
| 4 | Fuel transfer pump | OFF | 4 |
| 5 | Engine master..... | OFF | 5 |
| 6 | Electric master..... | OFF | 6 |
| When engine stopped: | | | |
| 7 | Canopy | OPEN | 7 |
| Evacuate | | | |

FIRE / SMOKE DURING CONTINUED TKOF

- | | | | |
|-----------------------|---------------------------|----------------------|---|
| 1 | Cabin heat..... | OFF | 1 |
| Land ASAP | | | |
| When landing assured: | | | |
| 2 | Emergency fuel valve..... | OFF | 2 |
| 3 | Fuel transfer pump | OFF | 3 |
| 4 | Engine master..... | OFF | 4 |
| 5 | Electric master..... | OFF | 5 |
| 6 | Emergency window..... | OPEN as necessary | 6 |
| 7 | Canopy | UNLATCH as necessary | 7 |

ELECTRIC FIRE / SMOKE IN FLIGHT

- | | | | |
|-----------|------------------------|----------------------|---|
| 1 | Emergency switch | ON | 1 |
| 2 | Avionic master | OFF | 2 |
| 3 | Electric master..... | OFF | 3 |
| 4 | Cabin heat..... | OFF | 4 |
| 5 | Emergency window..... | OPEN as necessary | 5 |
| 6 | Canopy | UNLATCH as necessary | 6 |
| Land ASAP | | | |

ENGINE FIRE IN FLIGHT

- | | | | |
|-----------------------|------------------------------|----------------------|----|
| 1 | Cabin heat..... | OFF | 1 |
| 2 | Emergency landing | PREPARE | 2 |
| 3 | Airspeed..... | 73/68/60 KIAS | 3 |
| 4 | ATC..... | INFORM | 4 |
| 5 | Emergency window..... | OPEN as necessary | 5 |
| 6 | Canopy | UNLATCH as necessary | 6 |
| When landing assured: | | | |
| 7 | Emergency fuel valve..... | OFF | 7 |
| 8 | Power lever | MAX | 8 |
| 9 | Engine Master | OFF | 9 |
| On final: | | | |
| 10 | Flaps | LDG | 10 |
| 11 | Electric master switch | OFF | 11 |

SUSPICION OF CARBON MONOXIDE

- | | | | |
|--|----------------------------|--------------|---|
| 1 | Cabin heat & defrost | OFF | 1 |
| 2 | Ventilation..... | OPEN | 2 |
| 3 | Emergency windows | OPEN | 3 |
| 4 | Airspeed..... | max 120 KIAS | 4 |
| 5 | Canopy | UNLATCH | 5 |
| Push up and lock in cooling gap position | | | |

TOTAL ELECTRIC FAIL

- | | | | |
|--|--------------------------------|-----------------|---|
| 1 | Circuit breakers..... | CHECK ALL IN | 1 |
| 2 | Essential bus | ON | 2 |
| If no success: | | | |
| 3 | Emergency switch | ON | 3 |
| 4 | Flood light, if necessary..... | ON | 4 |
| 5 | Power | SET | 5 |
| according power lever position and/or engine noise | | | |
| 6 | Flaps | VERIFY POSITION | 6 |
| Land ASAP | | | |

G1000 CAUTION LIGHTS

ECU A FAIL	Page 9	Engine ECU A fail
ECU B FAIL	Page 9	Engine ECU B fail
L FUEL LOW	Page 10	Main tank fuel qty low
VOLTS LOW	Page 10	Bus voltage too low
PITOT FAIL	Page 10	Pitot heating system failed
COOL LVL	No procedure	Engine coolant level low
PITOT HT OFF	No procedure	Pitot heating system OFF

Indications outside of green range

RPM high..... page 11
 OIL PRESSURE high/low page 11
 OIL TEMPERATURE high/ low..... page 11
 FUEL TEMPERATURE high/low..... page 12
 COOLANT TEMPERATURE high/low page 12
 GEARBOX temperature high page 12
 ALTERNATOR load yellow range page 12
 VOLT high..... page 12

ECU A OR B FAIL**ON GROUND**

- Discontinue operation, terminate flight preparation

ECU A FAIL**DURING FLIGHT**

Remark: in case of ECU A fail the system automatically switches to ECU B

- Press ECU TEST button for more than 2 seconds
 - ❖ If ECU A caution message re-appears or cannot be reset:
 - ⇒ Land ASAP
 - ❖ If ECU A caution message can be reset:
 - ⇒ Continue flight. Engine must be serviced after LDG

ECU B FAIL**DURING FLIGHT**

- Press ECU TEST button for more than 2 seconds
 - ❖ If ECU B caution message re-appears or cannot be reset:
 - ⇒ Land ASAP
 - ❖ If ECU B caution message can be reset:
 - ⇒ Continue flight. Engine must be serviced after LDG

L FUEL LOW**MAIN TANK FUEL QTY LOW**

- Fuel transfer pump: ON
- Check fuel quantity
 - ❖ If light still ON:
 - ⇒ Expect fuel leak
 - ⇒ Be prepared for emergency landing

VOLTS LOW**BUS VOLTAGE TOO LOW**

Remark: possible reasons are
 - malfunction of electrical supply
 - RPM too low

- Check circuit breakers
 - ❖ On ground
 - ⇒ Increase RPM
 - ❖ If light still ON:
 - ⇒ Terminate flight preparation
 - ❖ In flight
 - ⇒ Switch off unnecessary electrical equipment
 - ❖ If light still ON:
 - ⇒ Apply "ALTERNATOR FAIL"-emergency procedure (*Emergency Checklist page 3*)

PITOT FAIL**PITOT HEATING SYSTEM FAILED**

- check pitot heat ON
 - ❖ if in icing conditions
 - ⇒ expect failure of the pitot-static-system
 - ⇒ alternate static valve: OPEN
 - ⇒ leave area with icing conditions

INDICATIONS OUTSIDE OF GREEN RANGE

RPM high

- Reduce power
- Keep RPM in green range with appropriate power lever setting
 - ❖ If power not sufficient: land ASAP

Oil pressure high

- Check oil temperature
- Check coolant temperature
 - ❖ If within green range
 - ⇒ Oil pressure indication may be faulty; watch temperatures
 - ❖ If outside of green range
 - ⇒ Reduce power
 - ⇒ Be prepared for engine fail; be prepared for emergency landing

Oil pressure low

- Reduce power
- Be prepared for loss of oil and engine fail; be prepared for emergency landing

Oil temperature high

- Check oil pressure
 - ❖ If too low
 - ⇒ Reduce power
 - ⇒ Be prepared for loss of oil and engine fail; be prepared for emergency landing
 - ❖ If in green range
 - ⇒ Reduce power
 - ⇒ Increase airspeed

Oil temperature low

- Increase power
- Reduce airspeed

Fuel temperature high

- Reduce power
- Increase airspeed

Fuel temperature low

- Increase power
- Reduce airspeed

Coolant temperature high

- Refer to **Emergency Checklist page 2**, "ENG TEMP"

Coolant temperature low

Remark: During low power descent from high altitude coolant temperature may decrease

- Check "COOL LVL" caution light
 - ❖ If ON
 - ⇒ Reduce power
 - ⇒ Expect loss of coolant fluid
 - ⇒ Be prepared for emergency landing

Gearbox temperature high

- Reduce power
- Increase airspeed

Alternator load yellow range

- Switch off unnecessary electrical equipment
 - ❖ If indication still outside of green range:
 - ⇒ Land ASAP

VOLT high

- Land ASAP