

## Checklist für Diamond DA40 TDI **G1000**

Edition #: **16.1** Edition date: **20.03.2014**

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 # 16.1 are on page 2 of this document**

### Checklist DA40 TDI G1000 LEP

Page	Following Edition   Date (or any higher) is valid	
<b>Section : Normal Checklist</b>		
1	14	01.12.2006
2	15	20.05.2010
3	14	01.12.2012
4	14	01.12.2012
5	14	01.12.2006
6	14	01.12.2006
7	14	01.12.2006
8	14	01.12.2006

<b>Section: Emergency Checklist</b>		
1	15	20.05.2010
2	15	20.05.2010
3	15	20.05.2010
4	16.1	20.03.2014
5	15	20.05.2010
6	15	20.05.2010
7	15	20.05.2010
8	15	20.05.2010
<b>Section: Abnormal Checklist</b>		
9	14	01.12.2006
10	14	01.12.2006
11	14	01.12.2006
12	14	01.12.2006

## Comments explaining Edition # 16

### Normal Procedures:

Page 3,4:

EIS setting for engine starting procedure revised.

*The SOPs developed for our TRTO when the G1000 was introduced called for selecting "reversionary mode" before engine start.*

*The idea was to have two engine instrument displays (one on the PFD, the other on the MFD), so that both the oil pressure rise and the electrical data (volts, amperes) could be watched on an analogue scale.*

*Display mode was then switched back to "normal mode" during the check after engine start.*

*Experience, however, did show that this procedure frequently caused trainees to expect engine data display on the PFD even later, and they expressed their "disappointment" not to see these data on the PFD.*

*We now abandoned this procedure, and (in normal operation) we use the EIS display on the MFD only, also during engine start.*

*By selecting SYSTEM display all engine parameters can be monitored. Reaching minimum oil pressure is easily recognized when the red indication extinguishes.*

## Comments explaining Edition # 16.1

### Emergency Procedures:

Page 4: "Emergency Landing": Safety harnesses added  
"Rough Engine and/or Power Loss" updated

# 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 Flight Training and/or 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	MFD.....	EIS – FUEL	27
28	Fuel Quantity .....	CHECKED, RESET/SET if requ.	28
29	Fuel temperature .....	CHECKED	29
30	Total time in service.....	NOTED	30
31	MFD.....	EIS – SYSTEM	31
32	Power lever.....	IDLE	32
33	ACL (strobe) .....	ON	33

End of Checklist

**ENGINE START PROCEDURE**

Engine Master ..... ON  
 Annunciators / Eng.Instr. .... CHECKED  
 Glow indication ..... OFF  
 Propeller area ..... CLEAR  
 Start key..... START  
 Oil pressure..... OUTSIDE RED within 3 sec  
 Voltage, Electrical load ..... CHECK INDICATION  
 Annunciators / Eng.Instr. .... CHECK

**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	Avionics master .....	ON	6

**FMS SETUP**

*I* nitialize profile (AUX 4, MAP, MFD FPL, PFD FPL)  
*F* light plan  
*R* adios (COM, NAV, ADF, DME, CDI, BRG 1/2)  
*P* erformance (speed bugs)

7	FMS setup .....	COMPLETED	7
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**AUTOPILOT TEST**

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

8	Autopilot test .....	COMPLETED	8
9	Flood light .....	CHECKED, ON as required	9
10	Position lights.....	ON as required	10
11	Flaps.....	full travel CHECKED, then T/O	11
12	Altimeters (3) .....	SET	12
13	Standby horizon .....	CHECKED	13
14	Transponder .....	CODE/MODE CHECKED	14
15	Parking brake.....	RELEASED	15

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*

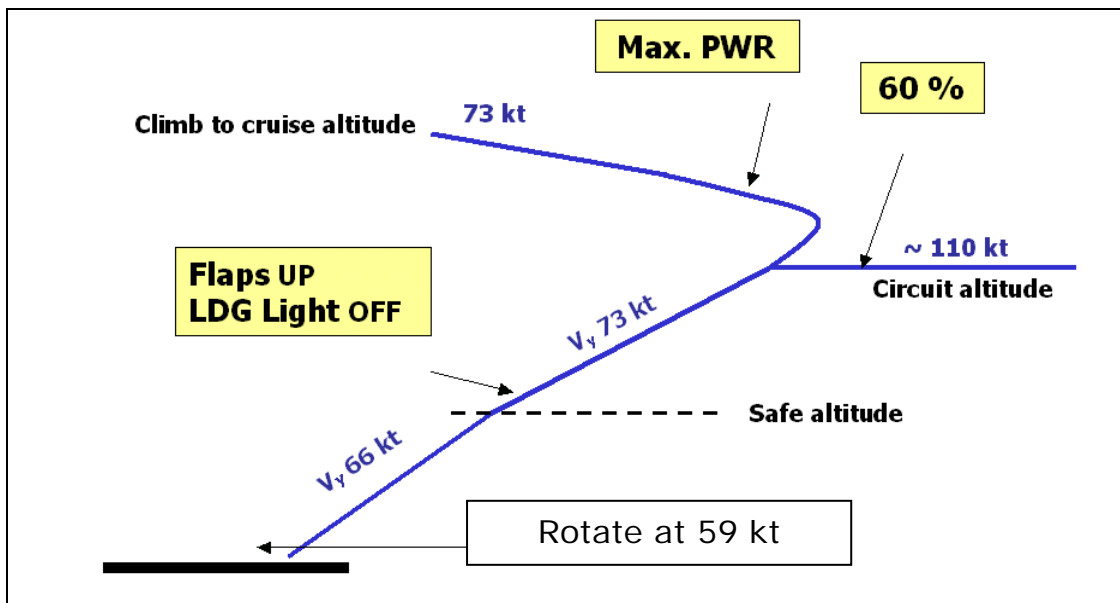
14	ECU swap .....	ECU B, ENGINE CHECKED	14
15	ECU swap .....	AUTO	15
16	Pitot heat .....	AS REQUIRED	16
17	Transponder .....	CODE/MODE CHECKED	17
18	Parking brake.....	RELEASED	18

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 transfer.....repeat 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:*

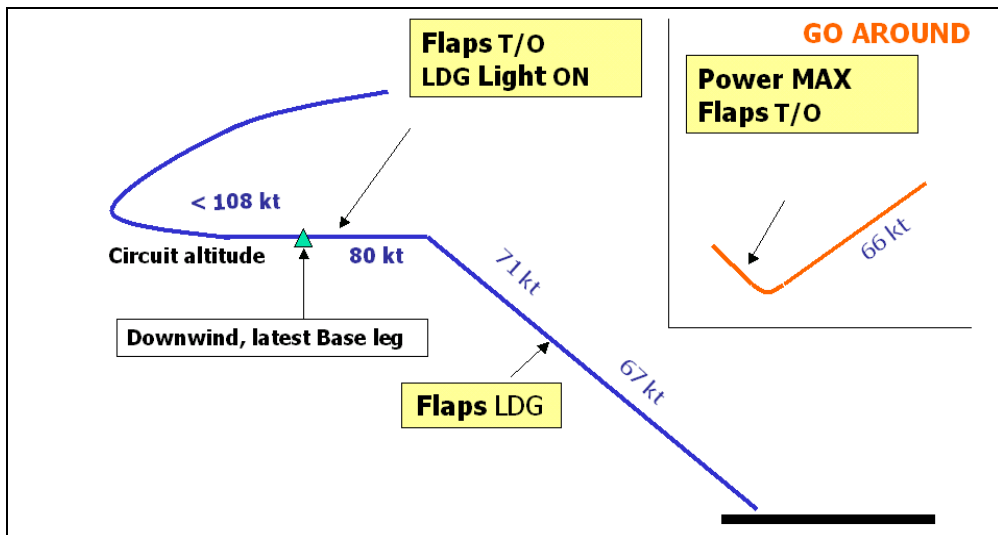
*Flaps ..... LDG*

**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 key .....	REMOVED	12

End of Checklist

<b>OPERATING SPEEDS KIAS</b>			
	<b>850 kg</b>	<b>1000 kg</b>	<b>1150 kg</b>
Best gliding angle (Flaps UP)	60	68	73
Best angle of climb (V <sub>X</sub> )			
Best rate of climb (V <sub>Y</sub> )	54	60	66
Cruising climb speed	60	68	73
Rotating speed	49	55	59
Max. flap speed (V <sub>FE</sub> ) T/O	108		
Max. flap speed (V <sub>FE</sub> ) LDG	91		
Landing speed Flaps UP	60	68	73
Landing speed Flaps LDG	58	63	71
Stalling speed (V <sub>S0</sub> ) LDG	42	<-980kg->	49
Stalling speed (V <sub>S</sub> ) T/O	44	<-980kg->	51
Stalling speed (V <sub>S</sub> ) clean	47	<-980kg->	52
Max. cruising speed (V <sub>NO</sub> )	129		
Never exceed speed (V <sub>NE</sub> )	178		
Manoeuvring speed (V <sub>A</sub> )	94	<-980kg->	108
Max. turbulence speed	129		
<b>Weights</b>		Empty weight	850 kg
Max. TKOF weight	1150 kg	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	Safety harnesses.....	TIGHT	6
7	Electric master switch .....	OFF	7

**FUEL TRANSFER PUMP U/S**

1	Emergency fuel valve.....	EMERG. TRANSFER	1
2	AUX fuel quantity .....	CHECK min 1 USG	2
3	MAIN fuel quantity.....	CHECK max 15 USG	3
4	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
	• In case of power loss: 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                      | 2 |
| 3 | Airspeed.....                     | 73 KIAS                 | 3 |
| 4 | Power lever .....                 | AS REQUIRED             | 4 |
|   | but do not exceed 2300 RPM        |                         |   |
| 5 | ECU swap.....                     | ECU B                   | 5 |
|   | • If no success:                  |                         |   |
| 6 | ECU swap.....                     | AUTO                    | 6 |
|   | Land ASAP                         |                         |   |
|   | If increased climb rate required: |                         |   |
| 7 | Flaps .....                       | T/O                     | 7 |
| 8 | Airspeed.....                     | 66 KIAS                 | 8 |
| 9 | Power lever .....                 | ADJUST to max. 2300 RPM | 9 |

**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 |
| <i>Push up and lock in cooling gap position</i> |                            |              |   |

**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