

## Checklist für Diamond DA40 TDI Diamond Star

Edition #: **15.1** 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 # 15.1 are on page 2 of this document**

### Checklist DA40 TDI - 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	01.12.2006
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

<b>Section: Emergency Checklist</b>		
1	15.1	20.03.2014
2	15.1	20.03.2014
3	15	20.05.2010
4	15	20.05.2010
5	15	20.05.2010
6	15	20.05.2010
<b>Section: Abnormal Checklist</b>		
7	14	01.12.2006
8	14	01.12.2006
9	14	01.12.2006
10	14	01.12.2006

## **Comments explaining Edition # 15**

This is a major revision cycle and all checklists are now 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

## **Comments explaining Edition # 15.1**

### **Emergency Checklist:**

Page 1: "Emergency Landing": Safety harnesses added  
Page 2: "Rought 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.

## 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 All avionics + all 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 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	Circuit breakers.....	CHECKED IN	7
8	Fuel transfer .....	OFF	8
9	Avionic master .....	OFF	9
10	Essential bus.....	OFF	10
11	Electric Master.....	OFF	11
12	All light switches.....	OFF	12
13	Pitot heat .....	OFF	13
14	Alternate static.....	CLOSED	14
15	Emergency switch.....	OFF / GUARDED	15
16	ECU swap .....	AUTO	16
17	Engine Master .....	OFF	17
18	Instrument + flood light .....	OFF	18
19	Gyro slave switch .....	SLAVE	19
20	Flap selector .....	UP	20
21	Electric Master.....	ON	21
22	Annunciator Panel/ Eng.instr. ....	CHECKED	22
23	Acknowledge button.....	PRESS	23
24	Low coolant warning Light.....	CHECKED OFF	24
25	Rudder pedals .....	ADJUSTED	25
26	Passengers .....	INSTRUCTED	26
27	Seat belts .....	FASTENED	27
28	Rear door .....	CLOSED and LATCHED	28
29	Front canopy.....	POS 1 or 2	29
30	Fuel quantity.....	CHECKED	30
31	Fuel temperature .....	CHECKED	31
32	Hobbs meter .....	NOTED	32
33	Power lever.....	IDLE	33
34	ACL (strobe) .....	ON	34

End of Checklist

**ENGINE START PROCEDURE**

*Engine Master ..... ON*  
*Annunciations / Eng.Instr. .... CHECKED*  
*Glow indication ..... OFF*  
*Propeller area ..... CLEAR*  
*Start key..... START*  
*Oil pressure ..... OUTSIDE RED within 3 sec*  
*Voltage, Electrical load ..... CHECK INDICATION*  
*Annunciations ACKNOWLEDGE / 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 OT > 50°C and CT > 60°C*

4	Pitot heat ... ON, annunciation + Amps checked		4
5	Pitot heat .....	OFF	5
6	Avionics master .....	ON	6
7	VHF COM / NAV / GPS .....	SET	7

**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	Horizon / Directional gyro .....	CHECKED / SET	13
14	Transponder .....	CODE / MODE CHECKED	14
15	Parking brake.....	RELEASED	15

End of Checklist

**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*

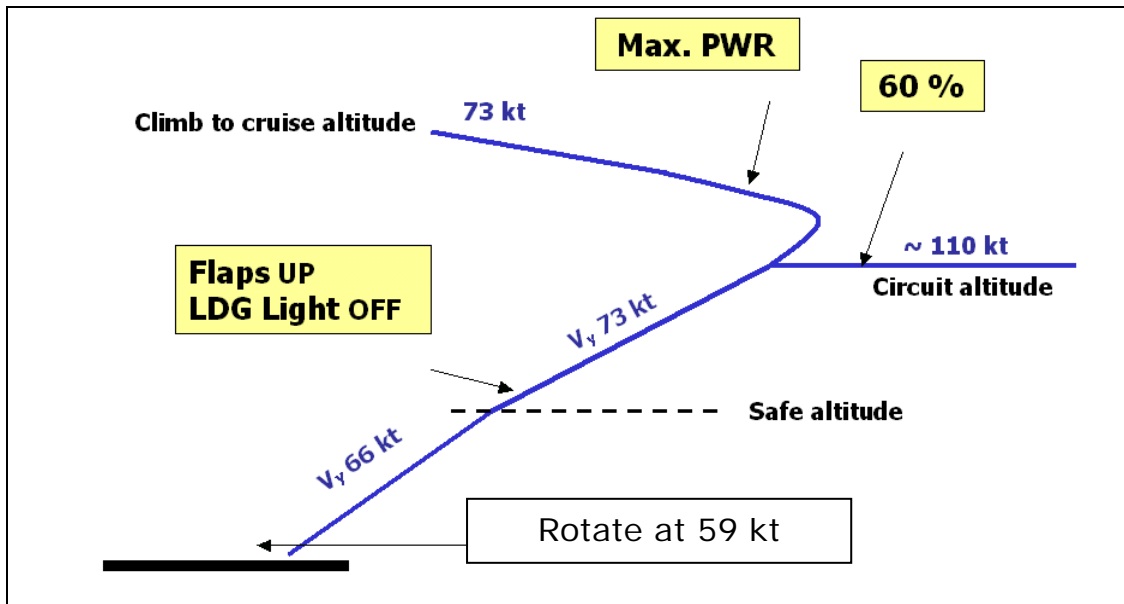
14	ECU swap .....	ECU B, ENGINE CHECKED	14
15	ECU swap .....	AUTO	15
16	Pitot heat .....	AS REQUIRED	16
17	Transponder .....	CODE / MODE CHECKED	17
18	Parking brake.....	RELEASED	18

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 RPM /OP / LOAD / Fuel flow



**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 / GPS.....	SET	3
4	Directional gyro .....	SET	4
5	Seatbelts .....	FASTENED	5
6	Fuel transfer .....	AS REQUIRED	6

End of Checklist

**BEFORE LANDING PROCEDURE**

*Downwind, latest base leg:*

*Flaps ..... T/O*

*Landing light..... ON*

*On final:*

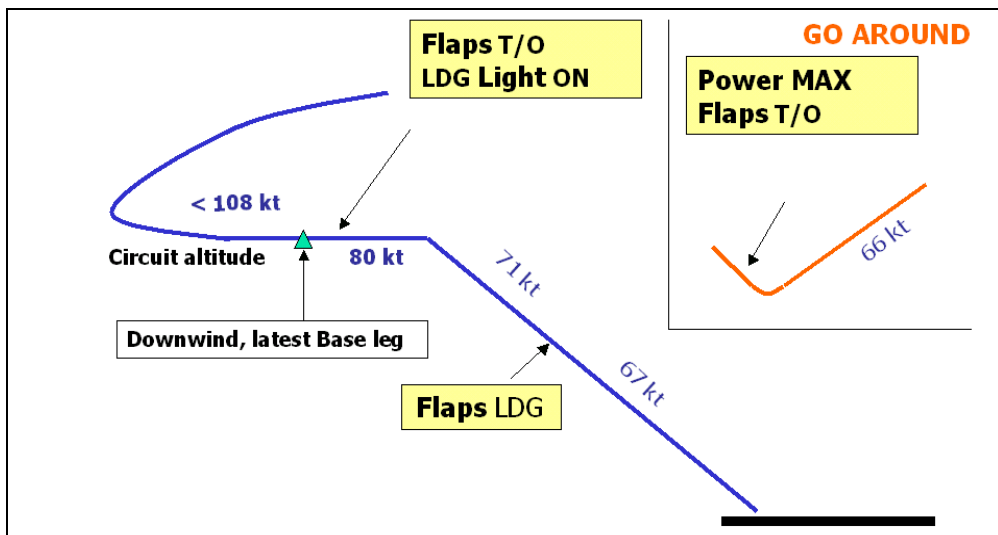
*Flaps ..... LDG*

**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
5	Transponder .....	AS REQUIRED	5

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	Hobbs meter .....	NOTED	4
5	Avionic master .....	OFF	5
6	Electrical consumers except ACL (strobe) ...	OFF	6
7	Engine Master .....	OFF	7
8	ACL (strobe) .....	OFF	8
9	Electric Master.....	OFF	9
10	Interior light .....	CHECKED OFF	10
11	Start key .....	REMOVED	11

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 <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		

Weights		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.



**Abnormal Checklist starts at page 7**

**WARNING LIGHTS** .....page 2

Engine

- Rough engine and/or power loss ..... page 2
- Windmill engine start ..... page 3
- Powered engine start ..... page 3
- Fluctuating RPM ..... page 4
- RPM overspeed..... page 4
- RPM underspeed ..... page 4

Electric System

- Under/over voltage ..... page 6
- Total electrical fail ..... page 6

Smoke and Fire

- Fire / smoke on ground ..... page 5
- Fire / smoke in continued TKOF ..... page 5
- Engine fire in flight ..... page 5
- Electric fire / smoke in flight ..... page 6

Other Emergencies

- Fuel transfer pump u/s ..... page 3
- Suspicion of carbon monoxide..... page 6

**EMERGENCY LANDING**

- |   |                              |               |   |
|---|------------------------------|---------------|---|
| 1 | Airspeed.....                | 73/68/60 KIAS | 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 |

**WARNING LIGHTS****STARTER****STARTER NOT DISENGAGING**

- |   |                      |      |   |
|---|----------------------|------|---|
| 1 | Power lever .....    | IDLE | 1 |
| 2 | Engine master.....   | OFF  | 2 |
| 3 | Electric master..... | OFF  | 3 |

**DOORS****DOOR(S) OPEN OR UNLOCKED**

- |   |                            |                |   |
|---|----------------------------|----------------|---|
| 1 | Airspeed.....              | REDUCE         | 1 |
| 2 | Canopy and rear door ..... | CHECK visually | 2 |

If unlocked:

Aispeed below 140 KIAS, land ASAP

*Do not try to lock the rear door in flight*

**TRIM FAIL****AUTOPILOT TRIM FAIL**

- |   |                                   |       |   |
|---|-----------------------------------|-------|---|
| 1 | AP DISC switch (red button) ..... | PRESS | 1 |
| 2 | AP circuit breaker .....          | PULL  | 2 |

**ROUGH ENGINE AND/OR POWER LOSS**

- |    |                                     |                           |    |
|----|-------------------------------------|---------------------------|----|
| 1  | Airspeed.....                       | 73/68/60 KIAS             | 1  |
| 2  | Power lever .....                   | MAX                       | 2  |
| 3  | Engine caution light .....          | check                     | 3  |
|    | If ON: ..... CHECK CED              |                           |    |
| 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

**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

**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 |

**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 |

**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

**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*

**UNDER / OVER VOLTAGE**

- |   |                     |    |   |
|---|---------------------|----|---|
| 1 | Essential bus ..... | ON | 1 |
|---|---------------------|----|---|

Land ASAP

**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



**CAUTION LIGHTS**

<b>ENGINE</b>	Page 7	Eng. parameter(s) out of green range
<b>PITOT</b>	Page 7	Pitot heating system failed or OFF
<b>LOW FUEL</b>	Page 7	LH tank fuel quantity low
<b>ECU A</b>	Page 8	Engine ECU A malfunction
<b>ECU B</b>	Page 8	Engine ECU B malfunction
<b>LOW VOLTS</b>	Page 8	Bus voltage too low
<b>ALTERNATOR</b>	Page 8	Alternator failure

**Indications outside of green range**

<i>RPM high</i> .....	<i>page 9</i>
<i>OIL pressure high/low</i> .....	<i>page 9</i>
<i>OIL temperature high/ low</i> .....	<i>page 9</i>
<i>FUEL temperature high/low</i> .....	<i>page 9</i>
<i>COOLANT temperature high/low</i> .....	<i>page 10</i>
<i>GEAR temperature high</i> .....	<i>page 10</i>
<i>GENERATOR yellow range</i> .....	<i>page 10</i>
<i>VOLT low/high</i> .....	<i>page 10</i>

**ENGINE****ENG. PARAMETER(S) OUT OF GREEN RANGE**

- Check Compact Engine Display CED 125
- Check Auxiliary Engine Display AED 125
- Press „Acknowledge” button
  - ❖ If an indication is outside of green range:
    - ⇒ continue with appropriate INDICATIONS OUTSIDE OF GREEN RANGE procedure

**PITOT****PITOT HEATING SYSTEM FAILED OR OFF**

- Check pitot heat ON
  - ❖ If in icing conditions:
    - ⇒ Expect failure of the pitot-static-system
    - ⇒ Alternate static valve: OPEN
    - ⇒ Leave area with icing conditions

**LOW FUEL****LH TANK FUEL QTY LOW**

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

**ECU A OR B****ON GROUND**

- Discontinue operation, terminate flight preparation

**ECU A****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****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 EDU B caution message can be reset:
    - ⇒ Continue flight. Engine must be serviced after LDG

**LOW VOLTS****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"-caution procedure

**ALTERNATOR****ALTERNATOR FAILURE**

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

## 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 (OP) 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 (OP) low**

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

### **Oil temperature (OT) 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 (OT) low**

- Increase power
- Reduce airspeed

### **Fuel temperature high**

- Reduce power
- Increase airspeed

### **Fuel temperature low**

- Increase power
- Reduce airspeed

**Coolant temperature (CT) high**

- Check WATER LEVEL caution light
  - ❖ If "WATER LEVEL" OUT
    - ❖ During climb:
      - ⇒ Reduce power 10%
      - ⇒ Increase airspeed 10 KIAS
      - ⇒ If not returning to green range within 60 seconds: reduce power as much 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 "WATER LEVEL" ON
    - ⇒ Reduce power
    - ⇒ Expect loss of coolant fluid
    - ⇒ Be prepared for emergency landing

**Coolant temperature (CT) low**

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

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

**Gear temperature (GT) high**

- Reduce power
- Increase airspeed

**GENERATOR yellow range**

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

**VOLT low**

- Check circuit breakers
- Switch off unnecessary electrical equipment
  - ❖ If light still ON
    - ⇒ Apply "ALTERNATOR"-caution procedure

**VOLT high**

- Land ASAP