

Checklist für Diamond DA40 TDI Diamond Star

Edition #: **17.1** Edition date: **15.04.2017**

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 # 17.1 are on page 2 of this document

Checklist DA40 TDI - LEP

Page	Following Edition Date (or any higher) is valid	
Section : Normal Checklist		
1	14	01.12.2006
2	15.2	01.03.2015
3	14	01.12.2006
4	17.1	15.04.2017
5	14	01.12.2006
6	14	01.12.2006
7	14	01.12.2006
8	15.2	01.03.2015

Section: Emergency Checklist		
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
Section: Abnormal Checklist		
7	14	01.12.2006
8	14	01.12.2006
9	14	01.12.2006
10	14	01.12.2006

Comments explaining Edition # 15.1

Emergency Checklist:

Page 1: "Emergency Landing": Safety harnesses added

Page 2: "Rough Engine and/or Power Loss" updated

Comments explaining Edition # 17

Preflight Procedures:

Page 2:

Parking brake, chocks, towbar added

Normal Procedures:

Page 8:

Parking Check, item 3:

Text of ELT check revised

Comments explaining Edition # 17.1

Normal Procedures:

Page 4: Engine Start Procedure: "Prop Area....CLEAR" placed on top

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 Parking brake SET
- 16 Check stall warning
- 17 Check pitot heat
- 18 Check external lights
- 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

Chocks removed
Towbar removed

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

Propeller area CLEAR
 Engine Master ON
 Annunciations / Eng.Instr. CHECKED
 Glow indication OFF
 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

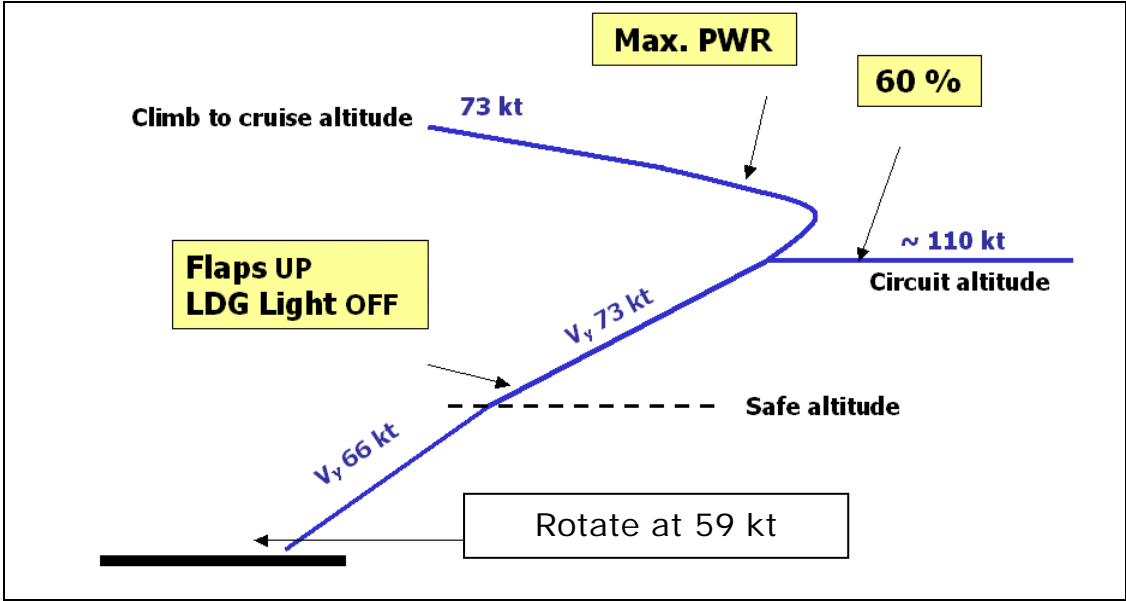
14	ECU swap	ECU B, ENGINE CHECKED	14
15	ECU swap	AUTO	15
16	Pitot heat	AS REQUIRED	16
17	Transponder	CODE / MODE CHECKED	17
18	Parking brake.....	RELEASED	18

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:
 FlapsUP
 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:

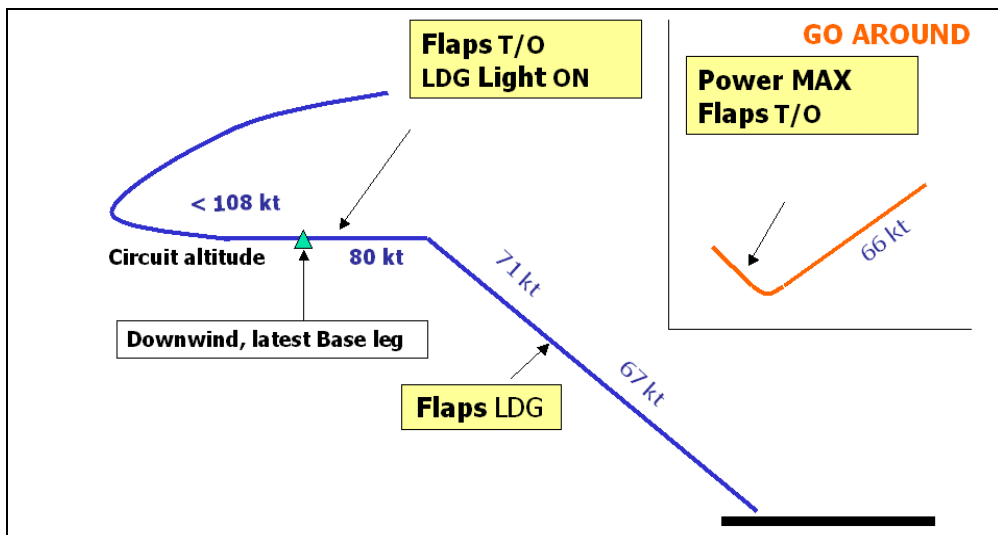
Flaps LDG

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.....	CHECK not activated	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 _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	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 LIGHTSpage 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

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