

## Checklist für Diamond DA40-180 Diamond Star

Edition #: **17** Edition date: **01.03.2015**

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 are on page 2 of this document**

### Checklist DA40-180 - LEP

Page	Following Edition   Date (or any higher) is valid	
<b>Section : Normal Checklist</b>		
1	14	01.12.2006
2	15.2	01.03.2015
3	15.1	20.03.2014
4	14	01.12.2006
5	15.1	20.03.2014
6	15.1	20.03.2014
7	15.2	01.03.2015
8	14.1	06.04.2010

<b>Section: Emergency Checklist</b>		
1	15.1	20.03.2014
2	14	01.12.2006
3	15	20.05.2010
4	14.1	06.04.2010
5	14	01.12.2006
6	14.1	06.04.2010
7	14	01.12.2006
8	14	01.12.2006
<b>Section: Abnormal Checklist</b>		
9	14	01.12.2006
10	14	01.12.2006
11	14	01.12.2006

## **Comments explaining Edition # 15.1**

Adjustable backrests added

## **Comments explaining Edition # 17**

### **Preflight Procedures:**

Page 2:

Parking brake, chocks, towbar added

### **Normal Procedures:**

Page 7:

Parking Check, item 3:

Text of ELT check revised

# 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 Ignition OFF, key removed
- 7 Mixture IDLE CUT OFF
- 8 Essential bus OFF
- 9 Avionic master + electrics OFF
- 10 Electric Master ON  
Check battery voltage
- 11 Electric fuel pump ON + OFF
- 12 Check fuel quantity
- 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 Pitot heat + ext. lights OFF
- 20 Electric Master OFF

**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 (3)

**Nose gear**

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

**Engine bay**

Engine oil level (min 5 qts)  
Drain fuel strainer

Chocks removed  
Towbar removed

**CHECK BEFORE ENGINE START**

1	Preflight check .....	COMPLETED	1
2	Baggage and tow bar .....	SECURED	2
3	Parking brake.....	SET	3
4	Alternate air.....	CLOSED	4
5	Circuit breakers .....	CHECKED IN	5
6	Flap selector .....	UP	6
7	Electric Master.....	OFF	7
8	Electric fuel pump .....	OFF	8
9	Avionic Master.....	OFF	9
10	Essential bus.....	OFF	10
11	Ignition .....	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	Instrument + flood light .....	OFF	16
17	Gyro slave switch .....	SLAVE	17
18	Electric Master.....	ON	18
19	Annunciator Panel/ Eng.instr. ....	CHECKED	19
20	Acknowledge button.....	PRESS	20
21	Rudder pedals .....	ADJUSTED	21
22	Passengers .....	INSTRUCTED	22
23	Seat belts .....	FASTENED	23
24	Adjustable backrests .....	UPRIGHT	24
25	Rear door .....	CLOSED and LATCHED	25
26	Front canopy.....	POS 1 or 2	26
27	Fuel quantity.....	CHECKED	27
28	Fuel selector .....	FULL TANK	28
29	ACL (strobe) .....	ON	29
30	Hobbs meter .....	NOTED	30
31	Propeller area.....	CLEAR	31

End of Checklist

**ENGINE START PROCEDURE: next page**

**ENGINE START PROCEDURE**

**Cold engine:**

Throttle ..... OPEN HALF WAY  
 Electric fuel pump ..... ON  
 Mixture... OPEN 5-10 sec, then IDLE CUT OFF  
 Throttle ..... ½ inch OPEN

**Hot engine:**

Electric fuel pump .....CHECK OFF  
 Throttle ..... ½ inch OPEN

Starter .....ENGAGE  
 Mixture ..... FULL RICH when engine fires  
 Throttle ..... 1000 RPM  
 Voltage, Electrical load..... CHECK INDICATION  
 Oil pressure.....CHECK GREEN RANGE  
 Annunciators ACKNOWLEDGE / Eng.Instr. ....CHECK

Electric fuel pump ..... OFF

**CHECK AFTER ENGINE START**

1	Oil pressure .....	CHECKED	1
2	Fuel selector .....	SWITCH TANKS	2
3	Pitot heat ... ON, annunciation + Amps checked		3
4	Pitot heat .....	OFF	4
5	Avionics master .....	ON	5
6	VHF COM / NAV / GPS .....	SET	6

**AUTOPILOT TEST**

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

7	Autopilot test .....	COMPLETED	7
8	Flood light .....	CHECKED, ON as required	8
9	Position lights.....	ON as required	9
10	Altimeters (3) .....	SET	10
11	Flaps.....	full travel CHECKED, then T/O	11
12	Horizon / Directional gyro .....	CHECKED / SET	12
13	Transponder .....	CODE/MODE CHECKED	13
14	Parking brake.....	RELEASED	14

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	Adjustable backrest.....	VERIFY UPRIGHT	3
4	Rear door .....	CLOSED + LATCHED	4
5	Front canopy.....	CLOSED + LATCHED	5
6	Door warning light .....	OFF	6
7	Engine instruments green range .....	CHECKED	7
8	Circuit breakers .....	CHECKED	8
9	Mixture .....	RICH	9

**RUN UP**

Throttle ..... 2000 RPM  
 Prop control ..... cycle 3 times, then high  
 Magnetos ..... (max 175/50) CHECKED  
 Circuit breakers, voltage ..... RECHECKED  
 Throttle ..... IDLE

10	Electric elevator trim.....	CHECKED, T/O SET	10
11	Flaps.....	CHECKED T/O	11
12	Flight controls .....	CHECKED	12
13	Fuel selector .....	FULLEST TANK	13

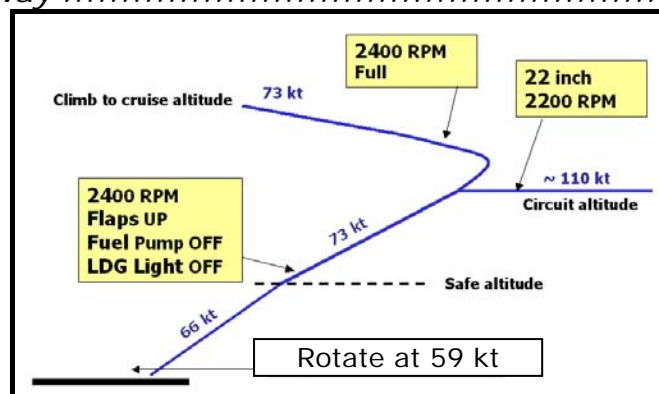
When cleared for Line Up:

14	Electric fuel pump.....	ON	14
15	Pitot heat .....	AS REQUIRED	15
16	Transponder .....	CODE/MODE CHECKED	16
17	Parking brake.....	RELEASED	17

End of Checklist

**LINE UP PROCEDURE**

Landing light ..... ON  
 Approach sector..... CLEAR  
 Runway ..... IDENTIFIED



**CLIMB TO CRUISE CHECK**

1	Flaps.....	CHECKED UP	1
2	Electric fuel pump.....	CHECKED OFF	2
3	Landing light.....	CHECKED OFF	3

End of Checklist

**CLIMB, CRUISE, DESCENT AT HIGH ALTITUDE**

*Electric fuel pump ON to avoid vapour bubbles which may cause intermittent low fuel pressure and high fuel flow indication.*

**PERIODICALLY DURING CRUISE**

*Fuel Radio Engine Direction Altitude*

Maximum fuel unbalance:

Standard tank: 10 USG, Long range tank: 8 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	Adjustable backrests.....	UPRIGHT	6
7	Fuel selector.....	FULLER TANK	7
8	<i>At high altitude:</i> Electric fuel pump.....	ON	8

End of Checklist

**BEFORE LANDING PROCEDURE**

*Downwind, latest base leg:*

*Flaps..... T/O*  
*Electric fuel pump..... ON*  
*Landing light..... ON*

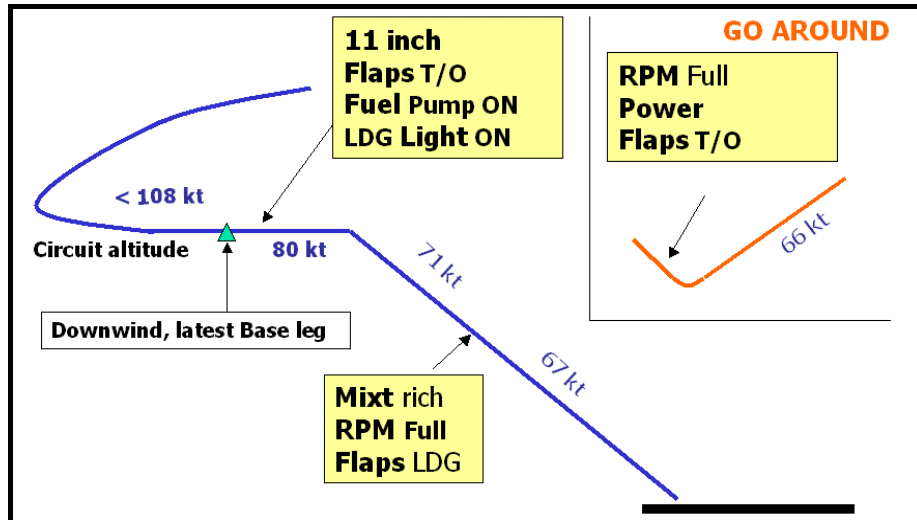
*On final:*

*Mixture..... RICH*  
*Prop..... HIGH RPM*  
*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	Electric fuel pump .....	OFF	3
4	Alternate air.....	CLOSED	4
5	Landing/Taxi light .....	AS REQUIRED	5
6	Transponder .....	AS REQUIRED	6

End of Checklist

**PARKING CHECK**

1	Parking brake.....	SET	1
2	Engine instruments .....	CHECKED	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	Throttle .....	1000 RPM	7
8	Ignition .....	GROUNDING CHECK	8
9	Mixture .....	IDLE CUT OFF	9
10	Ignition .....	OFF	10
11	ACL (strobe) .....	OFF	11
12	Electric Master.....	OFF	12
13	Interior light .....	CHECKED OFF	13

End of Checklist

OPERATING SPEEDS KIAS					
	850 kg	1000 kg	1150 kg	1200 kg	
Best gliding angle (Flaps UP)	60	68	73	76	
Best angle of climb (V <sub>X</sub> )					
Best rate of climb (V <sub>Y</sub> )	54	60	66	67	
Cruising climb speed	60	68	73	76	
Rotating speed	49	55	59	60	
Max. flap speed (V <sub>FE</sub> ) T/O	108				
Max. flap speed (V <sub>FE</sub> ) LDG	91				
Stalling speed (V <sub>SO</sub> ) LDG	42	<-980 kg->	49	52	
Stalling speed (V <sub>S</sub> ) T/O	44	<-980 kg->	51	52	
Stalling speed (V <sub>S</sub> ) clean	47	<-980 kg->	52	53	
Max. cruising speed (V <sub>NO</sub> )	129				
Never exceed speed (V <sub>NE</sub> )	178				
Manoeuvring speed (V <sub>A</sub> )	94	<-980 kg->	108		
Manoeuvring speed (V <sub>A</sub> )	94	<-1036kg->		111	
Max. turbulence speed	129				
Approach speed Flaps UP	60	68	73	76	
Approach speed Flaps T/O	59	66	72	74	
Approach speed Flaps LDG	850 kg	1000 kg	1092 kg	1150 kg	1200 kg
	58	63	67	71	73

Mass		
Max. TKOF mass	1150 kg	Optional: 1200 kg
Empty mass	795 kg	
Max. LDG mass	1092 kg	
Full tanks	108 kg	
Max. baggage in front	45 kg	45 kg
Max. baggage in rear	18 kg	

P Alt	45%			55%			65%			75%		
	MP	RPM	TAS	MP	RPM	TAS	MP	RPM	TAS	MP	RPM	TAS
2000	22.1	1800	101	23.3	2000	113	24.2	2200	123	25.2	2400	132
3000	21.8	1800	102	23.0	2000	114	23.8	2200	125	24.8	2400	134
4000	21.5	1800	103	22.7	2000	116	23.5	2200	127	24.5	2400	135
5000	21.2	1800	104	22.3	2000	117	23.1	2200	128	24.1	2400	137
6000	20.9	1800	105	22.0	2000	118	22.8	2200	129	-----	-----	
7000	20.5	1800	106	21.7	2000	119	21.1	2400	130	-----	-----	
8000	20.2	1800	107	21.3	2000	120	21.0	2400	131	-----	-----	
9000	19.9	1800	108	21.1	2000	121	20.7	2400	131	-----	-----	
10000	19.6	1800	109	19.4	2200	121	-----	-----		-----	-----	
Econ	5.8 G/h			7.0 G/h			8.2 G/h			9.5 G/h		
Pwr	-----			-----			9.6 G/h			11 G/h		

# 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.



Speeds quoted like this: **76/73/68/60 KIAS** are for mass values of **1200/1150/1000/850kg**

**Abnormal Checklist starts at page 9**

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

Engine

- Rough engine and/or power loss ..... page 4
- RPM overspeed..... page 4
- RPM underspeed ..... page 4
- Windmill engine start ..... page 5
- Powered engine start ..... page 5

Electric System

- Total electrical fail ..... page 5

Smoke and Fire

- Engine fire in flight ..... page 6
- Engine fire on ground ..... page 6
- Electric fire / smoke in flight ..... page 7
- Electric fire / smoke on ground..... page 7

Other Emergencies

- Suspicion of carbon monoxide..... page 8
- Unintentional flight into icing..... page 8
- Landing with defective main gear tire ..... page 8
- Landing with defective brakes..... page 8

## EMERGENCY LANDING

- |   |                           |                  |   |
|---|---------------------------|------------------|---|
| 1 | Adjustable backrests..... | UPRIGHT          | 1 |
| 2 | Airspeed.....             | 76/73/68/60 KIAS | 2 |
| 3 | ATC.....                  | INFORM           | 3 |
| 4 | Fuel tank selector.....   | OFF              | 4 |
| 5 | Mixture.....              | IDLE CUT OFF     | 5 |
|   | On final:                 |                  |   |
| 6 | Flaps.....                | LDG              | 6 |
| 7 | Ignition.....             | OFF              | 7 |
| 8 | Master switch.....        | OFF              | 8 |
| 9 | Safety harnesses.....     | TIGHT            | 9 |

**WARNING LIGHTS**

**OIL PRESS**

**OIL PRESSURE < 25 PSI**

- 1 Oil pressure (**OP**) ..... CHECK 1
- 2 Oil temperature (**OT**) ..... CHECK 2
- 3 Cylinder head temperature (**CHT**)..... CHECK 3
  - **OP** indication below green and **OT** normal
- 4 **OT** and **CHT** ..... MONITOR 4
  - **OP** indication below green and **OT** or **CHT** rising
- 5 Engine power ..... RECUEDE TO MIN 5  
 Land ASAP,  
 be prepared for Emergency Landing
  - **OP** near zero, vibration, loss of oil, smoke
- 6 Mechanical failure..... SUSPECT 6
- 7 Engine ..... SHUT DOWN 7  
 Emergency landing

**ALTERNATOR**

**ALTERNATOR FAILURE**

- 1 Emergency switch ..... ON 1
- 2 Essential bus ..... ON 2
- 3 Circuit breakers..... CHECK 3  
 If all OK:
- 4 Unnecessary equipment ..... OFF 4
- 5 Voltmeter ..... CHECK regularly 5

**FUEL PRESS**

**FUEL PRESSURE < 14 PSI**

- 1 Fuel flow ..... CHECK 1
  - If fuel flow high (red range):  
Suspect fuel leak,  
Land ASAP

**START**

**STARTER NOT DISENGAGING**

- 1 Throttle..... IDLE 1
- 2 Mixture ..... IDLE CUT OFF 2
- 3 Ignition..... OFF 3
- 4 Master switch..... OFF 4

**TRIM FAIL**

**AUTOPILOT TRIM FAIL**

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

**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***

**ROUGH ENGINE AND/OR POWER LOSS**

- |   |                                   |                  |   |
|---|-----------------------------------|------------------|---|
| 1 | Airspeed.....                     | 76/73/68/60 KIAS | 1 |
| 2 | Electrical fuel pump .....        | ON               | 2 |
| 3 | Fuel tank selector .....          | CHECK            | 3 |
| 4 | Engine instruments.....           | CHECK            | 4 |
| 5 | Throttle and propeller lever..... | CHECK            | 5 |
| 6 | Mixture .....                     | SET              | 6 |
| 7 | Alternate air .....               | OPEN             | 7 |
| 8 | Ignition status light .....       | CHECK            | 8 |
| 9 | Ignition CB .....                 | PULL             | 9 |

If no success and insufficient power:  
Land ASAP

**RPM OVERSPEED**

- |   |                         |       |   |
|---|-------------------------|-------|---|
| 1 | Friction adjuster ..... | CHECK | 1 |
| 2 | Oil pressure .....      | CHECK | 2 |

- If oil pressure lost:  
Adjust RPM with power lever  
Continue with  
LOW OIL PRESSURE CHECKLIST

**RPM UNDERSPEED**

- |   |                            |          |   |
|---|----------------------------|----------|---|
| 1 | Electrical fuel pump ..... | ON       | 1 |
| 2 | Fuel tank selector .....   | CHECK    | 2 |
| 3 | Friction adjuster .....    | CHECK    | 3 |
| 4 | Propeller control.....     | HIGH RPM | 4 |

- If no success:  
Regulate RPM with throttle  
Land ASAP

**WINDMILL ENGINE START**

1	Airspeed.....	73 - 80 KIAS	1
2	Fuel tank selector .....	FULLEST TANK	2
3	Ignition .....	BOTH	3
4	Mixture .....	CHECKED	4
5	Electrical fuel pump .....	ON	5
6	Alternate air .....	OPEN	6
	If no success:		
7	Mixture .....	LEAN	7
8	Mixture .....	SLOWLY TO RICH	8

**POWERED ENGINE START**

1	Airspeed.....	80 KIAS	1
2	Electrical equipment .....	OFF	2
3	Avionic master .....	OFF	3
4	Master switch.....	ON	4
5	Mixture .....	CHECKED	5
6	Fuel tank selector .....	CHECKED	6
7	Electric fuel pump.....	ON	7
8	Alternate air .....	OPEN	8
9	Ignition .....	START	9

**TOTAL ELECTRIC FAIL**

1	Circuit breakers.....	CHECK, PULL, RESET	1
2	Essential bus .....	ON	2
	• If no success:		
3	Emergency switch .....	ON	3
4	Flood light, if required.....	ON	4
5	Power .....	SET	5
	according power lever position and/or engine noise		
6	Flaps .....	VERIFY POSITION	6

Land ASAP

**ENGINE FIRE IN FLIGHT / AFTER TAKE OFF**

1	Cabin heat.....	OFF	1
2	Emergency landing .....	PREPARE	2
3	Airspeed.....	76/73/68/60 KIAS	3
4	ATC .....	INFORM	4
5	Canopy .....	UNLATCH as necessary	5
When landing assured:			
6	Fuel tank selector .....	OFF	6
7	Throttle.....	MAX PWR if possible	7
8	Electrical fuel pump .....	OFF	8
9	Master switch (BAT).....	ON	9
10	Emergency window .....	OPEN if required	10
On final:			
11	Mixture .....	IDLE CUT OFF	11
12	Flaps .....	LDG	12
13	Ignition.....	OFF	13
14	Master switch.....	OFF	14

**ENGINE FIRE ON GROUND**

1	Fuel tank selector .....	OFF	1
2	Cabin heat.....	OFF	2
After standstill:			
3	Throttle.....	MAX POWER	3
4	Master switch (BAT).....	OFF	4
When engine stopped:			
5	Ignition .....	OFF	5
6	Canopy .....	OPEN	6

Evacuate



**ELECTRIC FIRE / SMOKE IN FLIGHT**

- |  |  |                      |    |
|--|--|----------------------|----|
| 1  | Emergency switch .....                 | ON                   | 1  |
| 2  | Canopy .....                           | UNLATCH as necessary | 2  |
| 3  | Master switch (ALT/BAT) .....          | OFF                  | 3  |
| 4  | Cabin heat.....                        | OFF                  | 4  |
| 5  | Emergency window.....                  | OPEN as necessary    | 5  |
| Land ASAP  |  |                      |    |
| • If electronics/avionics required<br>apply isolation procedure: |  |                      |    |
| 6  | Master switch (BAT).....               | ON                   | 6  |
| 7  | Essential bus .....                    | ON                   | 7  |
| • If smoke decreases:<br>Land ASAP                               |  |                      |    |
| • If smoke persists:   |  |                      |    |
| 8  | Master switch (ALT) .....              | ON                   | 8  |
| 9  | Essential bus .....                    | OFF                  | 9  |
| 10   | BATT and ESS TIE circuit breakers..... | PULL                 | 10 |
| Land ASAP  |  |                      |    |

**ELECTRIC FIRE / SMOKE ON GROUND**

- |                      |                          |              |   |
|----------------------|--------------------------|--------------|---|
| 1                    | Master switch (BAT)..... | OFF          | 1 |
| 2                    | Throttle.....            | IDLE         | 2 |
| 3                    | Mixture .....            | IDLE CUT OFF | 3 |
| When engine stopped: |                          |              |   |
| 4                    | Canopy .....             | OPEN         | 4 |
| Evacuate             |                          |              |   |

**SUSPICION OF CARBON MONOXIDE**

- 1 Cabin heat..... OFF 1
- 2 Ventilation..... OPEN 2
- 3 Emergency windows ..... OPEN 3
- 4 Forward canopy ..... UNLATCH 4

**UNINTENTIONAL FLIGHT INTO ICING**

- 1 Pitot heat ..... ON 1
- 2 Cabin heat..... ON 2
- 3 Cabin air distribution..... UP 3
- 4 RPM..... INCREASE 4
- 5 Alternate air ..... OPEN 5
- 6 Emergency windows ..... OPEN as required 6  
 Leave icing area, inform ATC  
 When pitot heat fails:
- 7 Alternate static valve ..... OPEN 7
- 8 Emergency windows ..... CLOSED 8

**LANDING WITH DEFECTIVE MAIN GEAR TIRE**

- 1 ATC ..... INFORMED 1  
 For landing:
  - Land on RWY side with "good" tire
  - Keep wing on "good" side low
  - Support directional control with brake

**LANDING WITH DEFECTIVE BRAKES**

After touchdown (if necessary):

- 1 Fuel tank selector ..... OFF 1
- 2 Mixture ..... IDLE CUT OFF 2
- 3 Ignition ..... OFF 3
- 4 Master switch..... OFF 4

**CAUTION LIGHTS**

<b>PITOT</b>	Page 1	Pitot heating system OFF
<b>LOW FUEL</b>	No procedure	Fuel qty low (< 3 USG) Single aural alert: left or right tank Continuous aural alert: both tanks
<b>LOW VOLTS</b>	Page 1	Bus voltage too low

**Engine instrument indications outside of green range**

*OIL pressure low / high ..... page 10*  
*OIL temperature high ..... page 10*  
*CYLINDER Head Temp high / low ..... page 11*  
*EXHAUST GAS Temp high / low ..... page 11*  
*FUEL FLOW high ..... page 11*  
*VOLT high (overvoltage) ..... page 11*  
*Manifold pressure high ..... page 11*

**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 VOLTS****BUS VOLTAGE TOO LOW**

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

- ❖ On ground
  - ⇒ Increase RPM to 1200
  - ⇒ Electrical equipment OFF
  - ⇒ Check Ammeter and voltmeter
    - ❖ If light still ON
      - ⇒ Terminate flight preparation
- ❖ In flight
  - ⇒ Switch off unnecessary electrical equipment
  - ⇒ Check Ammeter and voltmeter
    - ❖ If light still ON
      - ⇒ Apply "ALTERNATOR FAIL"-emergency procedure  
*(Emergency Checklist page 2)*

**OIL pressure low**

- Check **OIL PRES LO** warning light
  - ❖ **OIL PRES LO** warning light ON or flashing
    - ⇒ Apply "OIL PRES LO"-emergency procedure  
*(Emergency Checklist page 2)*
  - ❖ **OIL PRES LO** warning light OFF
    - ⇒ Check oil temperature and cylinder head temperature (CHT)
      - ❖ Oil temperature *and* CHT normal
        - ⇒ Monitor oil pressure warning light (suspect faulty oil pressure indication)
        - ⇒ Monitor oil temperature and cylinder head temperature
      - ❖ Oil temperature *or* CHT rising
        - ⇒ Reduce engine power to minimum
        - ⇒ Land ASAP
        - ⇒ Be prepared for engine failure and emergency landing
      - ❖ Oil pressure near zero, vibration, loss of oil, smoke
        - ⇒ Suspect mechanical failure in the engine
        - ⇒ Shut down engine immediately
        - ⇒ Perform emergency landing

**Oil (OP) pressure high**

- Check oil temperature
  - ❖ If oil temperature normal:
    - ⇒ suspect faulty oil pressure indication, continue flight

**Oil (OT) temperature high**

- Check cylinder head temperature and EGT
  - ❖ If CHT and EGT normal:
    - ⇒ Suspect faulty oil temperature indication, continue flight
  - ❖ If CHT or EGT high:
    - ⇒ Check oil pressure
      - ❖ If oil pressure low:
        - ⇒ Continue with OIL pressure LOW checklist
      - ❖ If oil pressure in green range:
        - ⇒ Check mixture setting, enrich if necessary
        - ⇒ Reduce power
          - ❖ If no success:
            - ⇒ Land ASAP

**Cylinder head temperature (CHT) or EGT high**

- Enrich mixture
- Check oil temperature
  - ❖ If oil temperature also high:
    - ⇒ Check oil pressure
      - ❖ If oil pressure low:
        - ⇒ Continue with abnormal checklist "Oil pressure low" (page 10)
      - ❖ If oil pressure in green range:
        - ⇒ Reduce power
          - ❖ If no success
            - ⇒ Land ASAP, be prepared for emergency landing

**Cylinder head temperature (CHT) or EGT low**

- A very low reading for a single cylinder may be the result of a loose sensor

**FUEL FLOW high**

- Check **FUEL PRESS** warning light
  - ❖ If ON:
    - ⇒ Suspect fuel leak
    - ⇒ Land ASAP
  - ❖ If OFF:
    - ⇒ Continue flight
    - ⇒ Take fuel flow from AFM
    - ⇒ Check fuel quantity frequently

**OVER VOLTAGE**

- Essential bus ON
- Master switch (ALT) OFF
- Master switch (BAT) ON
- Switch OFF unnecessary equipment
- Land ASAP

**Manifold pressure (MP) high**

- ❖ If clearly above green range:
  - ⇒ Reading is faulty