

Checklist für Diamond DA40-180 G1000 (Lycoming)

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 G1000 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	15.1	20.03.2014
4	15.2	01.03.2015
5	15.1	20.03.2014
6	15.1	20.03.2014
7	15.2	01.03.2015
8	14.1	06.04.2010

Section: Emergency and Abnormal Checklist		
1	14.1	06.04.2010
2	15.1	20.03.2014
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
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 and towbar added

Normal Procedures:

Page 4:

Autopilot test: added FD OFF

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.

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 16 (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 Ignition OFF, key removed
- 7 Mixture IDLE CUT OFF
- 8 Essential bus OFF
- 9 Avionic Master + electrics OFF
- 10 Parking brake SET
- 11 Electric Master ON
Check battery voltage
- 12 Electric fuel pump ON + OFF
- 13 Check fuel quantity
- 14 External lights ON
- 15 Check external lights
- 16 External lights OFF
- 17 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	Electric master	OFF	5
6	Avionic master	OFF	6
7	Essential bus.....	OFF	7
8	Alternate static.....	CLOSED	8
9	All electrics	OFF	9
10	Horizon emergency switch	OFF / GUARDED	10
11	ELT.....	ARMED	11
12	Circuit breakers	CHECKED IN	12
13	Flap selector	UP	13
14	Pitot heat	OFF	14
15	Electric fuel pump.....	OFF	15
16	Electric Master.....	ON (check avionic fan noise)	16
17	Rudder pedals	ADJUSTED	17
18	Passengers	INSTRUCTED	18
19	Seat belts	FASTENED	19
20	Adjustable backrests	UPRIGHT	20
21	Rear door	CLOSED and LATCHED	21
22	Front canopy.....	POS 1 or 2	22
23	G1000.....	POWERED, ACKNOWLEDGED	23
24	Fuel quantity.....	CHECKED	24
25	Fuel selector	FULL TANK	25
26	MFD.....	ENGINE – SYSTEM	26
27	Fuel Quantity	RESET/SET if requ.	27
28	Total time in service.....	NOTED	28
29	MFD.....	ENGINE – DEFAULT	29
30	ACL (strobe)	ON	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 pumpCHECK OFF
 Throttle ½ inch OPEN

StarterENGAGE
 Mixture FULL RICH when engine fires
 Throttle 1000 RPM
 Voltage, Electrical load..... CHECK INDICATION
 Oil pressure.....CHECK GREEN RANGE
 Annunciations / Eng.Instr.CHECK

Electric fuel pump OFF

CHECK AFTER ENGINE START

1	Oil pressure	CHECKED	1
2	Fuel selector	SWITCH TANKS	2
3	Pitot heatON, annunciation + Amps checked		3
4	Pitot heat	OFF	4
5	Avionics master	ON	5

FMS SETUP

I nitialize profile (AUX 4, MAP)

F light plan

R adios (COM, NAV, ADF, DME, CDI, BRG 1, 2)

P erformance (speed bugs)

6	FMS setup	COMPLETED	6
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AUTOPILOT TEST

DISCONN press, check electric trim not working

AP ON, check annunciations and GFC700: FD KAP140: overpowering

DISCONN press, check AP off, observe disconnect tone

GFC700: GA button press, check FD commands climb, FD OFF

7	Autopilot test	COMPLETED	7
8	Flood light	CHECKED, ON as required	8
9	Position lights.....	ON as required	9
10	Flaps.....	FULL TRAVEL, THEN T/O	10
11	Altimeters (GFC700: 2 KAP140: 3)	SET + COMPARED	11
12	Transponder	CODE / MODE CHECKED	12
13	Parking brake.....	RELEASED	13

End of Checklist

DURING TAXI

Check brakes, Check flight instruments

BEFORE TAKE OFF CHECK

1	Parking brake.....	SET	1
2	Adjustable backrests	VERIFY UPRIGHT	2
3	Seat belts	FASTENED	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

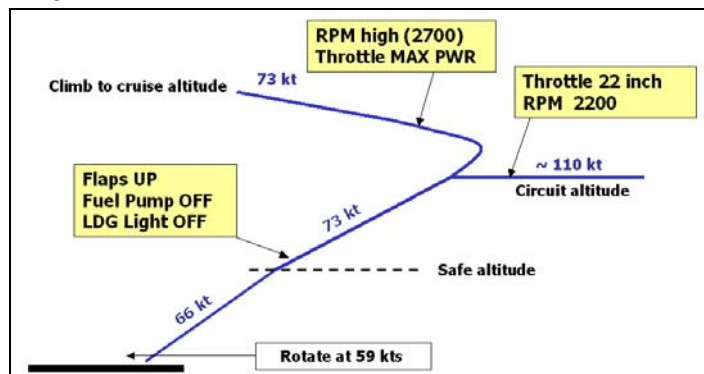
When cleared for Line Up:

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 (GFC700: 2 KAP140: 3).....	SET	2
3	COM / NAV / FMS.....	SET	3
4	Adjustable backrests.....	UPRIGHT	4
5	Seatbelts.....	FASTENED	5
6	Fuel selector.....	FULLER TANK	6
7	<i>At high altitude:</i> Electric fuel pump.....	ON	7

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

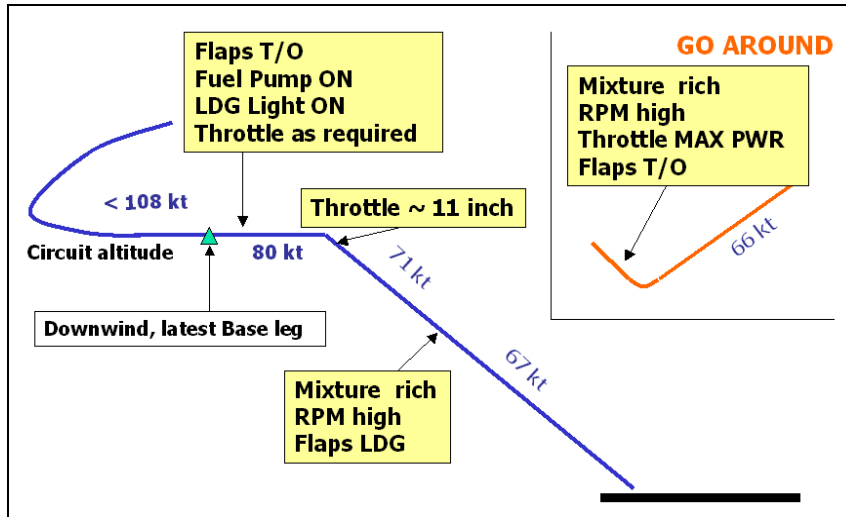
Flaps..... LDG

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	Engine / System page TTL TIME IN SVC NOTED		3
4	ELT	CHECK not activated	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
14	Start key	REMOVED	14

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 _X)					
Best rate of climb (V _Y)	54	60	66	67	
Cruising climb speed	60	68	73	76	
Rotating speed	49	55	59	60	
Max. flap speed (V _{FE}) T/O	108				
Max. flap speed (V _{FE}) LDG	91				
Stalling speed (V _{SO}) LDG	42	<-980 kg->	49	52	
Stalling speed (V _S) T/O	44	<-980 kg->	51	52	
Stalling speed (V _S) clean	47	<-980 kg->	52	53	
Max. cruising speed (V _{NO})	129				
Never exceed speed (V _{NE})	178				
Manoeuvring speed (V _A)	94	<-980 kg->	108		
Manoeuvring speed (V _A)	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**

G1000 WARNINGS

OIL PRES LO	Pg. 2	Oil pressure low (red range)
FUEL PRES LO	Pg. 3	Fuel pressure low (red range)
FUEL PRES HI	No procedure	Fuel pressure high (red range)
ALTERNATOR	Pg. 3	Alternator fail
STARTER ENGD	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 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 electric 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	Flap.....	LDG	6
7	Ignition.....	OFF	7
8	Master switch.....	OFF	8
9	Safety harnesses.....	TIGHT	9

OIL PRES LO

OIL (OP) PRESSURE LOW

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.....	REDUCE 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		

FUEL PRES LO

FUEL PRESSURE LOW

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

ALTERNATOR

ALTERNATOR FAIL

- 1 Circuit breakers..... CHECK 1
- 2 Master switch (ALT) OFF, then ON 2
 - If alternator does not reset:
- 3 Essential bus ON 3
- 4 Unnecessary equipment OFF 4
 - Land within 30 minutes
 - If PFD attitude information lost:
- 5 Horizon emergency switch ON 5

STARTER ENGD

STARTER NOT DISENGAGING

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

DOOR OPEN

UNLOCKED DOORS

- 1 Airspeed..... REDUCE 1
 - 2 Canopy and rear doorCHECK 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

OIL PRESSURE LOW checklist, page 2

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 | Horizon 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 Horizon emergency switch ON 1
 - 2 CanopyUNLATCH 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: apply isolation procedure as follows
- 6 Master switch (BAT)..... ON 6
 - 7 Essential bus ON 7
- If smoke decreases: Land ASAP
- If smoke persists:
- 8 Master switch (ALT) ON 8
 - 9 Essential bus OFF 9
 - 10 BATT and ESS TIE circuit breakersPULL 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

G1000 CAUTION LIGHTS

PITOT OFF	No procedure	Pitot heating system OFF
PITOT FAIL	Pg. 9	Pitot heating system failed
L FUEL LOW	No procedure	Left tank fuel qty low (< 3 USG)
R FUEL LOW	No procedure	Right tank fuel qty low (< 3 USG)
LOW VOLTS	Pg 9	Bus voltage too low

Engine instrument indications outside of green range

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

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

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 3)

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 pressure high

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

Oil 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 PRES LO** 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