

## Checklist for Diamond DA42 NG-VI NXI

Edition #: **1.1 NG-VI NXI** Edition date: **15.05.2020**

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 # 1.0 NXI are on page 2 of this document**

### Checklist DA42 NG-VI NXI LEP

Page	Following Edition	Date
	(or any higher) is valid	
<b>Section : Normal Checklist</b>		
1	15.2	15.12.2011
2	17	01.03.2015
3	15.2	15.12.2011
4	17	01.03.2015
5	17.4	15.04.2017
6	17	01.03.2015
7	17.1	01.10.2015
8	17.2	15.03.2016
9	17.3	15.03.2017
10	1.0 Nxi	20.02.2019
11	1.1 NXI	15.05.2020

<b>Section: Emergency Checklist</b>		
1	18	15.12.2017
2	18	15.12.2017
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4	18	15.12.2017
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8	18	15.12.2017
9	18.1	15.03.2018
10	18	15.12.2017
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12	18	15.12.2017
13	18	15.12.2017
14	18	15.12.2017
<b>Section: Abnormal Checklist</b>		
15	18	15.12.2017
16	18.1	15.03.2018
17	18	15.12.2017
18	1.0 Nxi	20.02.2019
19	18	15.12.2017
20	1.0 Nxi	20.02.2019

## Comments explaining Edition # 18

### Normal Procedures:

No change

### Emergency Procedures:

Pages rearranged and renumbered

Major changes:

Page 5: L/R STARTER  
Pages 6/7: Engine Fire  
Page 9: Engine Restart

### Abnormal Procedures:

Pages renumbered

## Comments explaining Edition # 18.1

### Normal Procedures:

No change

### Emergency Procedures:

Page 9: Engine Restart speeds corrected

### Abnormal Procedures:

Pages 16, 18, 20: Editorial correction

## Comments explaining Edition # 1.0 NXI

changes from legacy edition #18.1

### Normal Procedures:

Page 10: ( $V_{YSE}$ ) – "In Ice" speeds added  
Page 10: Min Flight Mass - Editorial correction

### Emergency Procedures:

Editorial correction

### Abnormal Procedures:

Editorial correction

## Comments explaining Edition # 1.1 NXI

changes from legacy edition #1.0 Nxi

### Normal Procedures:

Blank Page deleted – Checklist Page sequence edited - Editorial Change

# 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 DA42 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 Industries 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 23 (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.**

**Attention!**

For use of fuel additives see AFM

- \* if ice protection is installed
- \*\* if AUX tanks are installed

### PREFLIGHT INTERIOR + EXTERIOR.

- 1 Check airplane documents
- 2 Remove pitot cover
- 3 Check interior for foreign or loose objects
- 4 Check circuit breakers
- 5 Start key PULLED OUT
- 6 Gear selector CHECKED DOWN
- 7 Electric Master ON  
Check battery voltage
- 8 Gear 3 greens CHECKED
- 9 Check fuel quantity + temp
- 10 \*\*AUX PUMPS (2) ON  
if AUX FUEL E caution ON:  
AUX tank(s) empty  
AUX PUMPS (2) OFF
- 11 External lights ON
- 12 Parking Brake SET
- 13 Pitot heat ON
- 14 \* Check de-ice fluid quantity
- 15 \* Select de-ice pump 1
- 16 \* De-ice HIGH/MAX
- 17 \* Check DEIC PRES LO+HI out
- 18 \* Select de-ice pump 2
- 19 \* Check DEIC PRES LO+HI out
- 20 \* Ice lights ON
- 21 \* Check de-ice function
- 22 Check external lights
- 23 Check stall warning
- 24 Check pitot tube heat
- 25 Pitot heat OFF
- 26 External lights OFF
- 27 \* De-ice, ice lights OFF
- 28 Electric Master OFF

### PREFLIGHT EXTERIOR

Canopy left side

#### Left main gear

Strut (min 4cm bare piston) & downlock  
Tire condition, pressure (4,5 bar), position mark  
Brake, hydraulic line  
Gear door & linkage

#### Left engine nacelle

Drain gascolator and sample check  
2 / 3 air inlets  
Spinner, propeller  
Gearbox oil level  
Engine oil level  
Cowling  
Nacelle underside  
Venting pipe  
Exhaust  
\*\* Check AUX tank full

#### Left wing

Vortex generators  
Wing leading edge, top- and bottom surface  
Tank drain and sample check  
Stall warning  
Tank air vent  
Fuel filler cap  
Pitot probe (cover removed)  
Wing tip, position light  
Static dischargers  
Aileron (freedom of movement, hinges, control linkage, covers if DA42)  
Wing flap - hinge pin (covers)  
Fuel cooler air in- & outlet  
2 air outlets  
\*\*AUX tank vent  
AUX tank drain and sample check

#### Left fuselage

Step  
Rear cabin door  
Fuselage left side  
Static source  
Antennas

**Tail**

Elevator & rudder (freedom of movement, hinges)  
Elevator & rudder trim - tabs  
Tail skid & lower fin  
Static dischargers

**Right fuselage**

Fuselage right side  
Static source  
Rear window  
Step

**Right wing**

Fuel cooler air in- & outlet  
\*\* AUX tank vent  
\*\* Drain AUX tank  
Wing flap  
Aileron (freedom of movement, hinges, control linkage, security)  
Static dischargers  
Wing tip, position light  
Wing leading edge, top- and bottom surface  
Fuel filler cap  
Tank air vent  
Tank drain  
Cabin air vent inlet  
Vortex generators  
  
Canopy right side

**Right engine nacelle**

\*\* Check AUX tank full ?  
3 air inlets / 2 air outlets  
Spinner, propeller  
Gearbox oil level  
Engine oil level  
Cowling  
Nacelle underside  
Venting pipe  
Exhaust  
Drain gascolator

Ventilation air inlet

**Right main gear**

Strut (min 4cm bare piston) & downlock  
Tire condition, pressure (4,5 bar), position mark  
Brake, hydraulic line  
Gear door & linkage

**Nose section**

\* De-ice fluid tank  
L + R front baggage door locked  
OAT sensor  
EPU connection  
Landing / Taxi light

**Nose gear**

Strut (min 15cm bare piston) & lock  
Tire condition, pressure (6 bar), position mark  
Gear door & linkage

Chocks removed  
Tow bar removed

**CHECK BEFORE ENGINE START**

1	Preflight check.....	COMPLETED	1
2	Baggage and tow bar.....	SECURED	2
3	**AUX PUMPS (2) .....	OFF	3
4	Fuel selectors (2) .....	ON, safety guard closed	4
5	Power levers (2) .....	IDLE	5
6	Parking brake .....	SET	6
7	Alternate Air.....	CLOSED	7
8	Fuel pumps (2) .....	OFF	8
9	Manual gear extension handle.....	PUSHED	9
10	Gear selector.....	DOWN	10
11	Avionic master.....	OFF	11
12	Electric master.....	OFF	12
13	Engine masters (2).....	OFF	13
14	Pitot heat.....	OFF	14
15	Alternate static .....	CLOSED	15
16	Alternators (2).....	<b>ON</b>	16
17	VOTER switches (2) .....	AUTO	17
18	All light switches .....	OFF	18
19	Emergency switch .....	OFF/GUARDED	19
20	ELT .....	ARMED	20
21	Circuit breakers .....	CHECKED IN	21
22	Flap selector.....	UP	22

If starting with external power:

a	Prop area.....	CHECK CLEAR	a
b	External power .....	CONNECT	b

23	Electric master.....	ON	23
24	Rudder pedals .....	ADJUSTED	24
25	Flight controls.....	CHECKED	25
26	Trims .....	CHECKED	26
27	Gear warning + lights, fire detector .....	TEST	27
28	* De-ice ANNUN TEST.....	ON	28
29	* DEICE LVL LO caution ...	CHECKED ON if applic.	29
30	* Windshield de-icing.....	PUMP 1 + 2 CHECKED	30

Checklist continued next page

**CHECK BEFORE ENGINE START continued**

31	Flaps full travel -->LDG -->UP .....	CHECKED	31
32	Variable elevator stop .....	CHECK	32
	<i>Control stick .....</i>	<i>AFT and HOLD</i>	
	<i>Power levers .....</i>	<i>MAX</i>	
	<i>Check stop limit decreasing</i>		
	<i>Power levers .....</i>	<i>IDLE</i>	
	<i>Check stop limit increasing</i>		
33	Passengers .....	INSTRUCTED	33
34	Seat belts .....	FASTENED	34
35	Rear door .....	CLOSED and LATCHED	35
36	Front Canopy .....	POS 1 or 2	36
37	G1000 .....	POWERED, ACKNOWLEDGED	37
38	MFD - EIS .....	ENGINE	38
39	Fuel Quantity .....	CHECKED, RESET/SET if requ.	39
40	Fuel temperature .....	CHECKED	40
41	Total time in service .....	NOTED	41
42	* DEIC PRESS LO caution .....	CHECKED ON	43
43	* De-ice ANNUN TEST .....	OFF	44
44	Start key .....	INSERTED	45
45	Power levers (2) .....	IDLE	46
46	ACL (strobe) .....	ON	47

End of Checklist

**ENGINE START PROCEDURE**

**Normal sequence: first start LH engine**

*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 / Eng.Instr. ....* CHECK

If external power was used:

External power .....DISCONNECT

**Start RH engine, procedure as above**

**CHECK AFTER ENGINE START**

1	Oil pressure.....	CHECKED	1
2	RPM 710 +/- 30 .....	CHECKED	2
3	Fuel selectors (2) .....	X-FEED	4
4	Pitot heat.....	ON, annunciation + Amps checked	5
5	Pitot heat.....	OFF	6
6	Avionics master .....	ON	7
7	WX radar (if installed).....	VERIFY STBY	8

**FMS SETUP**

- I* nitialize profile (AUX 4, MAP)
- F* light plan
- R* adios (COM,NAV,ADF,DME,CDI,BRG 1/2,AUX,RAIM)
- P* erformance (speed bugs; Flight ID if applicable)

8	FMS setup.....	COMPLETED	9
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**AUTOPILOT TEST**

- DISCONN* press, check electric trim not working
- AP ON*, check annunciations and *FD*
- DISCONN* press, check *AP* off
- GA* button press, check *FD* commands climb
- FD* off

9	Autopilot test.....	COMPLETED	10
10	Flood light.....	CHECKED, ON as required	11
11	Position lights .....	ON as required	12
12	Fuel Selectors (2).....	ON	13
13	Altimeters (2).....	SET	14
14	Standby horizon.....	CHECKED	15
15	Transponder.....	CODE / MODE CHECKED	16
16	Engine temperatures .....	CHECKED	17
17	Parking brake .....	RELEASED	18

*Max power 50% until engine temperatures  
in green range*

End of Checklist

**DURING TAXI**

- Check Brakes*
- Check nose wheel steering*
- Check flight instruments*



**BEFORE TAKE OFF CHECK**

1	Parking brake .....	SET	1
2	Seat belts .....	FASTENED	2
3	Adjustable backrest .....	UPRIGHT	3
4	Rear door.....	CLOSED + LATCHED	4
5	Front canopy .....	CLOSED + LATCHED	5
6	Front baggage doors.....	CHECKED CLOSED	6
7	Door warning light.....	OFF	7
8	Circuit breakers .....	CHECKED	8
9	Electric elevator trim .....	CHECKED, T/O SET	9
10	Fuel selectors (2) .....	CHECKED ON	10
11	Rudder trim.....	AS REQUIRED	11
12	Flaps .....	Normal TKOF: UP Short field TKOF: APP	12
13	Flight controls.....	CHECKED	13
14	Power levers (2) .....	IDLE	14
15	MFD - EIS .....	ENGINE	15
16	Engine instruments .....	CHECKED	16

*Engine temperatures must be in green range before performing ECU test. (For gearbox min.38° recommended). For warm up max power 50%.*

17	VOTER switches (2) .....	A, AUTO, B, AUTO	17
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**ECU TEST**

*ECU test buttons (2) ..... press and hold  
 "L/R ECU A/B fail"..... ON  
 Props cycling  
 "L/R ECU A/B fail"..... OFF  
 ECU test button.....release*

18	ECU test (2) .....	PERFORMED	18
19	Pitot heat .....	AS REQUIRED	19
20	* Ice protection .....	AS REQUIRED	20
21	Transponder .....	CODE / MODE CHECKED	21
22	Fuel pumps (2) .....	ON	22
23	MFD - EIS .....	DEFAULT	23
24	Parking brake .....	RELEASED	24

End of Checklist

**LINE UP PROCEDURE**

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

Available power check (see pg.10)..... PERFORMED

**AFTER TAKE-OFF PROCEDURE**

- Brakes ..... APPLY
- Gear ..... UP
- Alternate air: OPEN in rain, snow, visible moisture
- At safe altitude: Flaps ..... UP
- Climb power ..... 92%

**CLIMB TO CRUISE CHECK**

1	Gear.....	CHECKED UP	1
2	Flaps .....	CHECKED UP	2
3	Fuel pumps (2) .....	OFF	3
4	Climb power .....	SET	4
5	Alternate air .....	AS REQUIRED	5
6	Landing light .....	OFF	6

End of Checklist

**DESCENT / APPROACH CHECK**

1	Landing data .....	RECEIVED	1
2	Altimeters (2) .....	SET	2
3	COM / NAV / FMS .....	SET	3
4	Safety harnesses.....	FASTENED	4
5	Adjustable backrests.....	UPRIGHT	5
6	Parking brake .....	CHECKED RELEASED	6
7	Rudder trim.....	AS REQUIRED	7
8	Gear warning + lights .....	TEST	8
9	Landing light .....	ON	9

❖ → **Normal Approach:**

10	Fuel selectors (2) .....	CHECKED ON	10
11	Fuel pumps (2) .....	ON	11

End of Checklist

↓ **1 engine out Approach:**

10	Fuel selector (good engine) .....	CHECKED ON	10
11	Fuel pumps (good engine) .....	ON	11

End of Checklist

**FINAL CHECK**

1	Flaps .....	LDG	1
2	Gear.....	3 GREENS CHECKED	2
3	Rudder trim.....	NEUTRAL	3

**GO AROUND PROCEDURE**

Power .....MAX  
 Flaps..... APP  
 Positive rate of climb:  
 Gear ..... UP  
 Flaps..... UP  
 Continue with take-off profile  
 At safe altitude:  
 Climb power ..... 92%

**AFTER LANDING CHECK**

*When clear of runway*

1	Alternate air .....	CLOSED	1
2	Pitot heat .....	OFF	2
3	Flaps .....	UP	3
4	Fuel pumps (2) .....	OFF	4
5	* De-ice systems .....	OFF	5
6	Landing/Taxi light .....	AS REQUIRED	6

End of Checklist

**PARKING CHECK**

1	Parking brake .....	SET	1
2	Power levers (2) .....	max 10% for 1 min.	2
3	ELT .....	CHECK not activated	3
4	MFD - EIS .....	ENGINE	4
5	MFD - EIS .....	TTL TIME IN SVC NOTED	5
6	Avionic master .....	OFF	6
7	Electrical consumers except ACL (strobe) .....	OFF	7
8	Engine Masters (2) .....	OFF	8
9	ACL (strobe) .....	OFF	9

*When engine indications x-ed out:*

10	Electric Master .....	OFF	10
11	Interior light .....	CHECKED OFF	11
12	Start key .....	REMOVED	12

End of Checklist

**SECURING THE AIRCRAFT**

*Use chocks, consider parking brake released.  
 Cover the pitot probe.  
 Consider tie down ropes to mooring points.*

**DA42 NG** **IMPORTANT DATA AND LIMITATIONS**

All masses and speeds are for ACFT **without** increase of MTOM, MZFM, MLM

	<b>"NG"</b>	<b>"Dash-6"</b>	<b>"NG"</b>	<b>"Dash-6"</b>
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<b>STALLING SPEEDS KIAS for MTOM 1900 kg</b>		
(V <sub>S0</sub> ) Flaps LDG, gear down	62	62
(V <sub>S</sub> ) Flaps APP, gear down	66	65
(V <sub>S</sub> ) clean, gear up	69	68
In Ice: + 4-6 KIAS		

<b>OPERATING SPEEDS KIAS for MTOM 1900 kg</b>				
Min. control speed (V <sub>MCA</sub> )	Flaps UP	76	71	
	Flaps APP	73	68	
Rotation speed		80	76	
Best angle of climb (V <sub>X</sub> )		--	--	
Best rate of climb (V <sub>Y</sub> )		90		
Best rate of climb 1-eng. (V <sub>YSE</sub> ) (V <sub>YSE</sub> ) – In ice up to 1900kg		85		
		88		
Operating speed in ice		118 - 156		
Max. flap speed (V <sub>FE</sub> ) Flaps APP		133		
Max. flap speed (V <sub>FE</sub> ) Flaps LDG		113		
Max. LG extension (V <sub>LOE</sub> )		188		
Max. LG extended (V <sub>LE</sub> )		188		
Max. LG retraction (V <sub>LOR</sub> )		152		
Approach V <sub>REF</sub> Flaps UP		86 in ice: 94		
Approach V <sub>REF</sub> Flaps APP		84 in ice: 90		
Approach V <sub>REF</sub> Flaps LDG		84 in ice: prohib.		
Min. Go-around speed Flaps UP		90		
Max. cruising speed (V <sub>NO</sub> )		151		
Never exceed speed (V <sub>NE</sub> )		188		
	<b>up to</b>	<b>1700 kg</b>	<b>1800 kg</b>	<b>1900 kg</b>
Manoeuvring speed (V <sub>O</sub> )		112	119	122

<b>Short field TKOF with flaps APP</b>	
76	71
82	77
85	

<b>MASS</b>	
Max. TKOF mass	1900 kg
Max ZF mass	1765 kg
Max. LDG mass	1805 kg
Empty mass -Min Flight Mass	1450 kg
Max. baggage in NOSE	30 kg
Max. baggage in COCKPIT	45 kg
Max. baggage in rear EXTENSION	18 kg
	<b>45 kg</b>

**Available Power Check - 10 sec. power MAX, RPM 2250 – 2300, min. load acc. table below**

Altitude [ft]	OAT								
	-35°C	-20°C	-10°C	0°C	10°C	20°C	30°C	40°C	50°C
0						97%	96%	93%	91%
2000	99%					97%	96%	93%	-----
4000						97%	96%	93%	-----
6000						97%	96%	93%	-----
8000			98%	98%	98%	96%	95%	92%	-----
10000	98%	97%	97%	95%	94%	92%	89%	-----	-----

All masses and speeds are for ACFT with increased MTOM, MZFM, MLM

**"NG"**

**"Dash-6"**

**"NG"**

**"Dash-6"**

<b>STALLING SPEEDS KIAS for MTOM 1999 kg</b>		
(V <sub>S0</sub> ) Flaps LDG, gear down	64	64
(V <sub>S</sub> ) Flaps APP, gear down	68	68
(V <sub>S</sub> ) clean, gear up	72	72
In Ice: + 4-6 KIAS		

<b>OPERATING SPEEDS KIAS for MTOM 1999 kg</b>				
Min. control speed (V <sub>MCA</sub> )	Flaps UP	76	71	
	Flaps APP	73	68	
Rotation speed		80	76	
Best angle of climb (V <sub>X</sub> )		--	--	
Best rate of climb (V <sub>Y</sub> )		92		
Best rate of climb 1-eng. (V <sub>YSE</sub> ) (V <sub>YSE</sub> ) – In ice above 1900kg		85		
		90		
Operating speed in ice		118 - 156		
Max. flap speed (V <sub>FE</sub> ) Flaps APP		133		
Max. flap speed (V <sub>FE</sub> ) Flaps LDG		113		
Max. LG extension (V <sub>LOE</sub> )		188		
Max. LG extended (V <sub>LE</sub> )		188		
Max. LG retraction (V <sub>LOR</sub> )		152		
Approach V <sub>REF</sub> Flaps UP		92	in ice: 97	
Approach V <sub>REF</sub> Flaps APP		88	in ice: 93	
Approach V <sub>REF</sub> Flaps LDG		86	in ice: prohib.	
Min. Go-around speed Flaps UP		92		
Max. cruising speed (V <sub>NO</sub> )		151		
Never exceed speed (V <sub>NE</sub> )		188		
	<b>up to</b>	<b>1700 kg</b>	<b>1800 kg</b>	<b>1999 kg</b>
Manoeuvring speed (V <sub>O</sub> )		112	119	122

<b>Short field TKOF with flaps APP</b>	
76	74
82	77
85	

<b>MASS</b>		
Max. TKOF mass	1999 kg	
Max ZF mass	1835 kg	
Max. LDG mass	1999 kg	Ice: 1900 kg
Empty mass	1450 kg	
Max. baggage in NOSE	30 kg	
Max. baggage in COCKPIT	45 kg	45 kg
Max. baggage in rear EXTENSION	18 kg	

**"Ice":**  
Ice accumulation and/or icing conditions

**Available Power Check:**

10 sec. power MAX, RPM 2250 – 2300, min. load acc. table below

Altitude [ft]	OAT								
	-35°C	-20°C	-10°C	0°C	10°C	20°C	30°C	40°C	50°C
0						97%	96%	93%	91%
2000	99%					97%	96%	93%	-----
4000						97%	96%	93%	-----
6000						97%	96%	93%	-----
8000	98%			98%	98%	96%	95%	92%	-----
10000	98%	97%	97%	95%	94%	92%	89%	-----	-----

# 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.



*2 engines out landing..... page 2*

*G1000 Warnings..... page 3*

## Engine

*Engine failure during take-off..... page 7*

*Engine failure, engine shutdown in flight .... page 7*

*Engine troubleshooting ..... page 8*

*Engine restart..... page 9*

*Oscillating RPM ..... page 10*

*RPM overspeed ..... page 10*

## Landing Gear

*Landing with defective main gear tire..... page 10*

*Landing with defective brakes..... page 10*

*Landing gear unsafe warning ..... page 11*

*Manual extension of landing gear ..... page 11*

*Landing gear up landing..... page 11*

## Smoke and fire

*Engine fire on ground or during take-off..... page 6*

*Engine fire in flight ..... page 6*

*Electrical fire on ground ..... page 12*

*Electrical fire in flight..... page 12*

### **If Oxygen System is installed**

*Cabin smoke, cabin fire, above 10.000 ft... page 13*

*Oxygen pressure loss above 10.000 ft ..... page 13*

## Other Emergencies

*Emergency descent ..... page 13*

*Unintentional flight into icing, Inadvertent icing  
encounter & excessive ice accumulation .... page 14*

*Ice protection failure..... page 14*

*Suspicion of carbon monoxide..... page 14*

## Electrical System

*Complete electrical failure ..... page 12*

**ENGINES OUT LANDING**

- 1 Mayday call .....CONSIDER 1
- 2 Engine masters (2) ..... OFF 2
- 3 Alternators (2)..... OFF 3
- 4 Fuel pumps (2) ..... OFF 4
- 5 Fuel selectors (2) ..... OFF 5
- 6 Avionic master..... OFF 6
- 7 Safety harnesses ..... FASTENED and TIGHT 7

When sure of making landing area:

- 8 Flaps ..... APP or LDG, as required 8
- 9 Approach speed ..... min 84 KIAS 9
- 10 Power levers (2) ..... IDLE 10

❖ → Gear UP landing

After touchdown:

- 11 Electric master ..... OFF 11

❖ Gear DOWN landing

- 11 Gear.....DOWN, 3 GREENS CHECKED 11
- 12 Electric master ..... OFF 12

**G1000 WARNINGS**

L/R ALTN AMPS	Pg. 3	High Current (red range)
L/R OIL PRES	Pg. 3	Oil pressure low (red range)
L/R OIL TEMP	Pg. 3	Oil temperature high (red range)
L/R GBOX TEMP	Pg. 4	Gearbox temperature high (red range)
L/R ENG TEMP	Pg. 4	Coolant temperature high (red range)
L/R FUEL TEMP	Pg. 4	Fuel temperature high (red range)
L/R FUEL PRES	Pg. 5	Fuel pressure low
L/R STARTER	Pg. 5	Starter not disengaging
DOOR OPEN	Pg. 5	Unlocked doors
L/R ENG FIRE	Pg. 6	Engine fire on ground, during take-off, in flight

**For other parameters "out of green range" see Abnormal Checklist**

**Abnormal Checklist starts at page 15**

**L/R ALTN AMPS****HIGH CURRENT**

- Check circuit breakers
- Reduce electrical load and land at nearest suitable airfield

**L/R OIL PRES****OIL PRESSURE LOW**

- Reduce power on affected engine
- Be prepared for loss of oil and an engine failure;  
land at nearest suitable airfield

**L/R OIL TEMP****OIL TEMPERATURE HIGH**

- Check oil pressure
  - ❖ If oil pressure too low (outside green range):
    - ⇒ Reduce power on affected engine
    - ⇒ Expect loss of engine oil
    - ⇒ Be prepared for an engine failure
  - ❖ If oil pressure in green range
    - ⇒ Reduce power on affected engine
    - ⇒ Increase airspeed
      - If oil temperature not returning to green range:
        - ⇒ Be prepared for an engine failure;  
land at nearest suitable airfield



**L/R GBOX TEMP**

- Reduce power on affected engine
- Increase airspeed
  - If gearbox temperature still in red range:
    - ⇒ Land at nearest suitable airfield
    - ⇒ Be prepared for an engine failure

**L/R ENG TEMP****COOLANT TEMPERATURE HIGH**

- Check G1000 for **LOW COOL LVL** caution light
  - ❖ If **LOW COOL LVL** caution light OFF
    - ❖ During climb:
      - ⇒ Reduce power on affected engine by 10% or more as required
      - ⇒ Increase airspeed by 10 KIAS or more as required
      - If coolant temp. not returning to green range within 60":
        - ⇒ reduce power on affected engine as much as possible and increase airspeed
    - ❖ During cruise:
      - ⇒ Reduce power on affected engine
      - ⇒ Increase airspeed
      - If coolant temp. not returning to green range:
        - ⇒ Be prepared for an engine failure; land at nearest suitable airfield
  - ❖ If **LOW COOL LVL** caution light ON
    - ⇒ Reduce power on affected engine
    - ⇒ Expect loss of coolant fluid
    - ⇒ Be prepared for an engine failure

**L/R FUEL TEMP****FUEL TEMPERATURE HIGH**

- Reduce power on affected engine
- Increase airspeed
- Transfer fuel from AUX to MAIN tank if applicable
  - If not returning to green range:
    - ⇒ Land at nearest suitable airfield

**L/R FUEL PRES****FUEL PRESSURE LOW**

- Check fuel quantity
- FUEL SELECTOR of affected engine: check ON
- FUEL PUMPS of affected engine: ON
  - If warning remains:
    - ⇒ FUEL PUMPS of affected engine: OFF
    - ⇒ FUEL SELECTOR of affected engine: CROSSFEED
      - If warning still remains:
        - ⇒ Be prepared for an engine failure

**L/R STARTER****STARTER NOT DISENGAGING**❖ → **On ground:**

- ⇒ Affected power lever IDLE
- ⇒ Affected engine master OFF
- ⇒ Electric master OFF

❖ → **In flight:**

- ⇒ Pull **LDG LT/START CB** (RH Main Bus; push again when LDG light needed)
- ⇒ Watch engine cowling and instruments
- ⇒ Land at nearest suitable airfield

**DOOR OPEN****UNLOCKED DOORS**

- Reduce airspeed immediately
- Check canopy visually
  - If open:
    - ⇒ airspeed below 140 KIAS, land at nearest suitable airfield
- Check rear door visually
  - If open:
    - ⇒ airspeed below 140 KIAS, land at nearest suitable airfield
    - ⇒ do not try to lock door in flight
- Check front baggage doors visually
  - If one or both open:
    - ⇒ reduce airspeed to keep door(s) in stable position, land at nearest suitable airfield

G1000 WARNING

L/R ENG FIRE

OR ENGINE FIRE OBSERVED

❖→ On ground:

- 1 Engine masters (2) ..... OFF 1
- 2 Fuel selectors (2) ..... OFF 2
- 3 Mayday call ..... CONSIDER 3
- 4 Electric master ..... OFF 4

When engine and aircraft stopped:

- 5 Canopy ..... OPEN 5

Evacuate

❖→ During Take-off

- 1 Cabin heat & defrost ..... OFF 1
- 2 Emergency windows (2) ..... OPEN 2
- 3 Proceed according

**ENGINE FAILURE DURING TAKE-OFF** → page 7... 3

G1000 WARNING

L/R ENG FIRE

● In flight:

- ⇒ Evaluate the situation
  - If Engine Fire observed:
    - ⇒ Proceed according

**ENGINE FIRE IN FLIGHT** → page 7

**ENGINE FAILURE DURING TAKE-OFF**

**REJECTED TAKE-OFF OR EMERGENCY RE-LANDING**

- 1 Power ..... OFF 1
- 2 Brakes ..... APPLY 2
- 3 ATC ..... INFORM 3
- If necessary:
- 4 Engine Masters (2) ..... OFF 4
- 5 Fuel selectors (2) ..... OFF 5
- 6 Electric Master ..... OFF 6

**ENGINE FAILURE DURING FLIGHT**

**AND ENGINE SHUTDOWN**

*If airspeed below Vmca:*

Perform Vmc recovery procedure

**Airspeed above Vmca:**

- 1 Power ..... INCREASE up to MAX 1
- 2 Airspeed ..... min BLUE LINE 2
- 3 Landing gear ..... UP 3
- 4 Flaps ..... UP 4
- 5 Power lever (affected engine) . REDUCE TO VERIFY 5
- 6 Engine Master (affected engine) ..... OFF 6
- Above safe altitude
- 7 Power (life engine) ..... up to MAX CONTINUOUS 7
- 8 Alternator (dead engine) ..... OFF 8
- 9 Fuel pumps (dead engine) ..... OFF 9
- 10 Fuel selector (dead engine) ..... OFF 10

**ENGINE FIRE IN FLIGHT**

- 1 Cabin heat & defrost ..... OFF 1
- 2 Canopy ..... UNLATCH if necessary 2
- Max airspeed 117 KIAS*
- 3 Shut down the engine according

↑ **ENGINE SHUT DOWN**-procedure ↑

**ENGINE TROUBLESHOOTING**

❖→ If

**L** OR **R**  
**ECU A AND B FAIL**  
 simultaneously

and ALL of the following conditions exist:

- **indicated LOAD unchanged**
- **perceived thrust is reduced**
- **engine noise level changes or engine running rough**

- 1 POWER lever .....IDLE for 1 second 1
- 2 POWER lever .....slowly increase to 1975 RPM 2
  - If engine shows power loss during the POWER lever increase
- 3 POWER lever ..... idle for 1 second 3
- 4 POWER lever .....slowly increase 4  
**stop prior to the RPM where former engine power loss was observed**

*Do not increase the POWER lever past the propeller speed of 1975 RPM or the setting determined in step 4. An increase of engine power beyond this setting leads into another power loss.*

*With this power setting the engine can provide up to 65% at the maximum propeller speed of 1975 RPM*

- 5 Land at nearest suitable airfield ..... 5  
 End of Checklist

❖ Otherwise:

- 1 Power lever (good engine) . INCREASE up to MAX 1
- 2 Circuit breakers .....CHECK/RESET 2
  - If engine OK: continue, land ASAP End of Checklist
- 3 VOTER switch .....SWAP between A and B 3
  - If engine OK: continue, land ASAP End of Checklist
- 4 VOTER switch .....AUTO 4
  - If engine OK: continue, land ASAP End of Checklist
- 5 Fuel pumps (affected engine) .....CHECK OFF 5
- 6 Fuel selector (affected engine).....CROSSFEED 6
  - If engine OK: continue, End of Checklist
- 7 Fuel selector (affected engine)ON or CROSSFEED 7
- 8 Alternate air ..... OPEN 8
  - If engine OK: land as soon as practicable End of Checklist
  - If engine still not OK: Be prepared for ENGINE FAILURE IN FLIGHT, land ASAP End of Checklist

**ENGINE RESTART**

**Reason for shutdown must be ascertained**

	<b>With starter</b>	<b>Windmilling (demonstration and training not approved)</b>
<b>15.000 ft PA - 10.000 ft PA</b>	<b>Immediate restart Max 100 KIAS or stationary prop, whichever is lower. Do not engage starter when prop is windmilling.</b>	<b>Immediate restart Min 125 KIAS Max 145 KIAS</b>
<b>Up to 10.000 ft PA</b>	OAT below -15°C: max. engine OFF time 2 minutes	
	OAT -15 to -5°C: max. engine OFF time 5 minutes	
	OAT above -5°C: max. engine OFF time 10 minutes	
	<b>Max 100 KIAS or stationary prop, whichever is lower. Do not engage starter when prop is windmilling.</b>	<b>Min 125 KIAS Max 145 KIAS</b>

- 1 Power (affected engine) ..... IDLE 1
- 2 Fuel selector (affected engine) ..... ON 2
- 3 Alternate air ..... AS REQUIRED 3
- 4 Alternator (affected engine) ..... ON 4
- 5 Engine Master (affected engine) ..... ON 5

For restart with starter motor:

- 6 Starter ..... ENGAGE when prop stationary 6
- 7 Circuit breakers ..... CHECK/RESET if necessary 7

If engine started:

- 8 Power (affected engine) ..... MODERATE 8
- 9 Engine instruments ..... check GREEN RANGE 9

**OSCILLATING RPM**

- 1 Power lever ..... change setting 1
  - If no success:
    - Check G1000 for ECU FAIL caution
  - If ECU FAIL caution indicated:
- 2 VOTER switch ..... unaffected ECU 2
  - If no success:
- 3 VOTER switch ..... AUTO 3
  - Land at nearest suitable airfield

**RPM OVERSPEED**

- 1 Power setting ..... REDUCE 1
  - If no success:
    - Check G1000 for ECU FAIL caution
  - If ECU FAIL caution indicated:
- 2 VOTER switch ..... unaffected ECU 2
  - If no success:
- 3 VOTER switch ..... AUTO 3
  - Land at nearest suitable airfield
  - Be prepared for ENGINE FAILURE IN FLIGHT

**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 Engine Masters (2) ..... OFF 1
- 2 Fuel selectors (2) ..... OFF 2
- 3 Electric Master ..... OFF 3

**LANDING GEAR UNSAFE WARNING**

If on for more than 20 seconds:

1 Airspeed ..... max 152 KIAS 1

In cold temperature:

2 Airspeed ..... max 110 KIAS 2

3 Gear selector..... RECYCLE 3

❖→If landing gear **extension** unsuccessful:

Continue with MANUAL EXTENSION

❖ If landing gear **retraction** unsuccessful:

Consider flight with landing gear down

**MANUAL EXTENSION OF LANDING GEAR**

1 Airspeed ..... max 152 KIAS 1

2 Gear indicator lights .....TEST 2

3 Electric master .....CHECK ON 3

4 Bus voltage ..... CHECK NORMAL 4

5 Circuit breaker..... CHECK 5

6 Gear selector.....DOWN 6

7 Manual extension handle..... PULL 7

If necessary

8 Airspeed ..... max 110 KIAS 8

Apply moderate yawing

9 Gear indicator lights .....CHECK 3 GREENS 9

**LANDING GEAR UP LANDING**

(Landing gear completely retracted)

1 Approach .....NORMAL 1

If time/situation allows: just before touchdown:

2 Power lever ..... IDLE 2

3 Engine Masters (2)..... OFF 3

4 Fuel pumps (2) ..... OFF 4

5 Fuel selectors (2) ..... OFF 5

Immediately after touchdown:

6 Electric Master ..... OFF 6



**ELECTRICAL FIRE ON GROUND**

- |   |                                   |          |   |
|---|-----------------------------------|----------|---|
| 1 | Mayday call .....                 | CONSIDER | 1 |
| 2 | Electric Master .....             | OFF      | 2 |
| 3 | Power levers (2) .....            | IDLE     | 3 |
| 4 | Engine Masters (2) .....          | OFF      | 4 |
| 5 | Fuel selectors (2) .....          | OFF      | 5 |
|   | When engine and aircraft stopped: |          |   |
| 6 | Canopy .....                      | OPEN     | 6 |
- Evacuate

**ELECTRICAL FIRE IN FLIGHT**

- |   |                            |                      |   |
|---|----------------------------|----------------------|---|
| 1 | Emergency switch .....     | ON                   | 1 |
| 2 | Mayday call .....          | CONSIDER             | 2 |
| 3 | Avionic master .....       | OFF                  | 3 |
| 4 | Electric master .....      | OFF                  | 4 |
| 5 | Cabin heat & defrost ..... | OFF                  | 5 |
| 6 | Emergency windows .....    | OPEN as necessary    | 6 |
| 7 | Canopy .....               | UNLATCH if necessary | 7 |

*Max airspeed 117 KIAS*

Land at nearest suitable airfield

**COMPLETE ELECTRICAL FAILURE**

\* Leave icing area

- |   |  |                 |   |
|---|--|-----------------|---|
| 1 | Circuit breakers .....                             | CHECK all IN    | 1 |
|   | ● If no success:                                   |                 |   |
| 2 | Emergency switch .....                             | ON              | 2 |
| 3 | Flood light, if necessary .....                    | ON              | 3 |
| 4 | Power .....  | SET             | 4 |
|   | according power lever position and/or engine noise |                 |   |
| 5 | Flaps .....  | VERIFY POSITION | 5 |

Land at nearest suitable airfield

Landing gear may slowly extend

For landing apply "Manual extension of landing gear"

**CABIN SMOKE ABOVE 10.000 FT**

- 1 Oxygen.....CHECK ON 1
- 2 Emergency descent ..... INITIATE 2  
When passing 10.000 ft
- 3 Oxygen..... OFF 3  
Land at nearest suitable airfield

**CABIN FIRE ABOVE 10.000 FT**

- 1 Oxygen.....PUSH OFF 1
- 2 Emergency descent ..... INTITIATE 2  
Land at nearest suitable airfield

**OXYGEN PRESSURE LOSS ABOVE 10.000 FT**

- 1 Oxygen.....PUSH OFF 1
- 2 Oxygen pressure.....CHECKED, note down 2
- 3 Emergency descent ..... INTIATE 3  
When passing 10.000 FT:
- 4 Oxygen pressure.....CHECK AGAIN 4
  - ❖→ If oxygen pressure constant: .....Continue flight
  - ❖ If oxygen pressure dropped: ... Land at nearest suitable airfield

If Oxygen System is installed

If Oxygen System is installed

**EMERGENCY DESCENT**

- 1 Flaps ..... UP 1
- 2 Landing Gear.....DOWN 2
- 3 Power levers ..... IDLE 3
- 4 Airspeed ..... AS REQUIRED 4

**UNINTENTIONAL FLIGHT INTO ICING**

Leave icing area, continue with item 1

**\* INADVERTENT ICING ENCOUNTER & EXCESSIVE ICE ACCUMULATION**

1	De-ice system .....	HIGH +MAX	1
2	Pitot heat .....	ON	2
3	Cabin heat & defrost .....	ON	3
4	Alternate air .....	OPEN	4
5	Windshield de-ice .....	USE AS APPROPRIATE	5
6	Emergency windows .....	OPEN as required	6

- \* When de-ice system does not work properly:  
Continue with ICE PROTECTION FAILURE

**\* ICE PROTECTION FAILURE**

1	Airspeed .....	118 to 156 KIAS until final	1
2	Flaps .....	limited to APP position	2
3	Approach with residual ice .....	min 90/93 KIAS	3
4	Landing distance .....	flaps LDG value + 20%	4

**SUSPICION OF CARBON MONOXIDE**

1	Cabin heat & defrost .....	OFF	1
2	Ventilation .....	OPEN	2
3	Emergency windows .....	OPEN	3
4	Airspeed .....	max 117 KIAS	4
5	Canopy .....	UNLATCH	5

*Push up and lock in cooling gap position*

**G1000 CAUTION LIGHTS**

<b>L/R FUEL LOW</b>	Page 15	<b>Main tank fuel qty low</b>
<b>L/R AUX FUEL E</b>	Page 15	<b>L/R auxiliary fuel tank empty</b>
<b>L/R ECU A FAIL</b>	Page 16	<b>Fault in ECU A</b>
<b>L/R ECU B FAIL</b>	Page 16	<b>Fault in ECU B</b>
<b>L/R VOLTS LOW</b>	Page 17	<b>Bus voltage too low</b>
<b>L/R ALTN FAIL</b>	Page 17	<b>Alternator failed</b>
<b>L+R ALTN FAIL</b>	Page 17	<b>Both Alternators failed</b>
<b>STICK LIMIT</b>	Page 17	<b>Stick limiting system failed</b>
<b>L/R COOL LVL</b>	Page 18	<b>Engine coolant level low</b>
<b>PITOT FAIL</b>	Page 18	<b>Pitot heating system failed</b>
<b>PITOT HT OFF</b>	Page 18	<b>Pitot heating system OFF</b>
<b>STALL HT FAIL</b>	Page 18	<b>Stall warning heating failed</b>
<b>STALL HT OFF</b>	Page 18	<b>Stall warning heating OFF</b>
<b>DEICE LVL LO</b>	Page 18	<b>De-icing fluid level low</b>
<b>DEIC PRES LO</b>	Page 18	<b>De-icing pressure low</b>
<b>DEIC PRES HI</b>	Page 18	<b>De-icing pressure high</b>

**Engine instrument indications outside of green range**

*COOLANT temperature high/low ..... page 19*

*OIL temperature high/low ..... page 19*

*OIL pressure high/low ..... page 19*

*FUEL temperature high/low ..... page 19*

*VOLT low ..... page 20*

*RPM high ..... page 20*

**Other abnormal situations**

***Hydraulic pump fail or continuous ops... page 20***

***AUX fuel transfer fail ..... page 20***

**L/R FUEL LOW****MAIN TANK FUEL QTY LOW**

- Check fuel quantity
- Avoid uncoordinated flight
- If LH & RH quantities show remarkable difference:
  - ⇒ Expect loss of fuel on side with lower indicaton
  - ⇒ Check fuel pumps OFF
  - ⇒ Use x-feed: Fuel selector to x-feed on side with LOW FUEL indication

**L/R AUX FUEL E****AUXILIARY FUEL TANK EMPTY**

- ⇒ L/R auxiliary fuel pump OFF

**L/R ECU A or B FAIL****ON GROUND**

- |   |                         |            |   |
|---|-------------------------|------------|---|
| 1 | VOTER switch .....      | check AUTO | 1 |
| 2 | Other ECU caution ..... | check OFF  | 2 |

Clearing procedure:

- |   |   |                   |   |
|---|---|-------------------|---|
| 3 | VOTER switch .....  | set to failed ECU | 3 |
|   | Wait 5 seconds  |                   |   |
| 4 | Voter switch .....  | AUTO              | 4 |
|   | ● <b>If ECU caution persists terminate flight preparation</b> |                   |   |

**L/R ECU A or B FAIL****DURING FLIGHT**

Remark: in case of ECU fail the system automatically switches to the other ECU

- |   |                        |                          |   |
|---|------------------------|--------------------------|---|
| 1 | Alternate Air .....    | OPEN                     | 1 |
| 2 | Fuel pumps LH/RH ..... | ON                       | 2 |
| 3 | Circuit breakers ..... | CHECK/RESET if necessary | 3 |
| 4 | VOTER switch .....     | check AUTO               | 4 |

- **If ECU caution persists:**

⇒ **ECU caution clearing procedure may be used:**

**BUT: In case of negative 1-eng climb rate only if a suitable landing site is available within gliding distance. Be prepared for loss of engine power.**

- |    |                         |                   |    |
|----|-------------------------|-------------------|----|
| 5  | Safe altitude .....     | CHECK             | 5  |
| 6  | Airspeed .....          | Min. 85 KIAS      | 6  |
| 7  | Flaps .....             | check UP          | 7  |
| 8  | Landing gear .....      | check UP          | 8  |
| 9  | Other ECU caution ..... | check OFF         | 9  |
| 10 | VOTER switch .....      | set to failed ECU | 10 |

Wait 5 seconds

- |    |                    |      |    |
|----|--------------------|------|----|
| 11 | Voter switch ..... | AUTO | 11 |
|----|--------------------|------|----|

- **If ECU caution persists:**

- **Land at nearest suitable airfield**

- **If additional engine problems are observed:**

- **Go to **Emergency Checklist page 8****

**ENGINE TROUBLESHOOTING**

**L OR R****ECU A FAIL and ECU B FAIL****SIMULTANEOUSLY**

- **Go to **Emergency Ckl page 8** ENGINE TROUBLESHOOTING**

**L/R VOLTS LOW**

Remark: possible reasons are

- fault in the electrical power supply
- Alternators OFF

- Continue with "Engine instrument indications outside of green range" – VOLTS low, page 20

**L/R ALTN FAIL****ALTERNATOR FAILED**

- If in icing conditions:
  - ⇒ Leave icing area as soon as practicable
- Alternator on affected side OFF
- Monitor bus voltage
- Reduce electrical consumers
  - If both alternators failed:
    - ⇒ See Abnormal Checklist "Both Alternators failed", ↓

**L ALTN FAIL** +**BOTH ALTERNATORS FAILED****R ALTN FAIL**

Reduce all electrical equipment to a minimum:

- Avionic Master: OFF
- LH/RH Alternator: OFF
- Transponder: STBY
- Gear: DOWN
- When down and locked:
  - ⇒ Pull manual gear extension handle
  - Stall/Pitot heat: OFF
  - All lights: OFF
    - ⇒ Expect battery power to last for 30 minutes
    - ⇒ Expect engine stoppage after this time
      - ⇒ Land ASAP

**STICK LIMIT****VARIABLE ELEVATOR STOP****SYSTEM FAILED**

- ❖ → 1 or 2 power levers set for MORE than 20% load:
  - ⇒ Elevator variable stop is INOP
  - ⇒ Do not stall in any configuration!
- ❖ 2 power levers set for LESS than 20% load:
  - ⇒ Elevator variable stop always ACTIVE
  - ⇒ Reduced elevator capacity
  - ⇒ For approach min VREF 86 KIAS

**L/R COOL LVL**

**ENGINE COOLANT LEVEL LOW**

- Monitor annunciations / engine instruments
- Check coolant temperature
- See "Engine instrument indications outside of green range" – COOLANT TEMPERATURE **see page 19**

**PITOT FAIL**

**STALL HT FAIL**

**PITOT HT OFF**

**STALL HT OFF**

- check pitot heat ON, if in icing conditions
- ⇒ expect loss of airspeed indication
- ⇒ expect loss of aural stall warning
- leave area with icing conditions (see **Emergency Checklist page 14**, "Unintentional flight into icing")

**DEICE LVL LO**

**DE-ICING FLUIDS LEVEL LOW**

- Maximum duration of ice protection in NORMAL mode: 30 min, in HIGH mode: 15 min

**DEIC PRES LO**

**DE-ICING PRESSURE LOW**

- Switch DE-ICE to HIGH
- ❖ → If DEIC PRES LO light still ON
  - ⇒ PUMP1 / PUMP2: select other pump
  - ⇒ If necessary prime pump by activating windshield pump
  - ❖ → If DEIC PRES LO light still ON
    - ⇒ Activate ALTERNATE switch
    - ❖ → If DEIC PRES LO light still ON
      - Go to **Emergency Checklist page 14**
      - ICE PROTECTION FAILURE**
- ❖ → If DEIC PRES LO light OFF
  - Continue flight (de-icing fluid flow: 30 lt/hr)
  - Monitor ice protection system operation
  - Check de-icing fluid level periodically

**DEIC PRES HI**

**DE-ICING PRESSURE HIGH**

- Possible reduced system performance
- Filter cartridge to be replaced at next scheduled maintenance

## ENGINE INSTRUMENT INDICATIONS OUTSIDE OF GREEN RANGE

### **COOLANT temperature high**

- Refer to **Emergency Checklist page 4**, "L/R ENG TEMP"

### **COOLANT temperature low**

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

- Check G1000 for **LOW COOLANT LVL** caution light
- If "LOW COOLANT LVL caution light" ON
  - ⇒ Reduce power on affected engine
  - ⇒ Expect loss of coolant fluid
  - ⇒ Be prepared for an engine failure

### **OIL temperature high**

- Refer to **Emergency Checklist page 3**, "L/R OIL TEMP"

### **OIL temperature low**

- Increase power
- Reduce airspeed

### **OIL pressure high**

- ❖ → On ground during warm up with low oil temperature
  - Reduce power until oil press. green, continue warm up at reduced power
- ❖ → During flight
  - Check oil temperature
  - Check coolant temperature
    - ❖ → If temperatures within green range
      - ⇒ Oil press. indication may be faulty; watch temperatures
    - ❖ → If temperatures outside of green range
      - ⇒ Reduce power on affected engine;
      - ⇒ Land at nearest suitable airfield, be prepared for engine fail

### **OIL pressure low**

- Refer to **Emergency Checklist page 3**, "L/R OIL PRES"

### **FUEL temperature high**

- Refer to **Emergency Checklist page 4**, "L/R FUEL TEMP"

### **FUEL temperature low**

- Increase power on affected engine
- Reduce airspeed
- If not returning to green range:
  - ⇒ Be prepared for an engine failure; land at nearest suitable airfield



**VOLTS low**

## ❖ → On ground:

- ⇒ Check alternators ON
- ⇒ Check circuit breakers
  - If LOW VOLTS CAUTION still indicated on the G1000:
    - ⇒ Discontinue operation; terminate flight preparation

## ❖ In flight:

- ⇒ Check alternators ON
- ⇒ Check circuit breakers
- ⇒ Switch off unnecessary electrical equipment
  - If LOW VOLTS CAUTION still indicated on the G1000:
    - ⇒ Apply L/R ALTN FAIL caution procedure, page 17

**RPM high**

- Reduce power on affected engine
- Keep RPM in green range with appropriate power lever setting
- If problem not solved:
  - ⇒ Refer to **Emergency Checklist page 10** "RPM overspeed"
  - ⇒ Land at nearest suitable airfield

**OTHER ABNORMAL SITUATIONS****Hydraulic pump: failure or continuous operation**

- Check gear indication lights
- Prepare for manual landing gear extension

**L/R Auxiliary fuel XFER FAIL**

- Both AUX PUMPS: OFF
- Check fuel pumps OFF
- Check fuel quantity
- Use X-feed to keep main tank fuel unbalance within 1 USG
- Switch remaining AUX PUMP ON
- Use X-feed to keep main tank fuel unbalance within 1 USG
- Amend flight plan to allow for reduced amount of available fuel