

Checklist for Diamond DA42 NG / -VI

Edition #: **18 NG / -VI** Edition date: **15.12.2017**

Please observe:

The file you are receiving hereby combines all three sections of the checklist: Normal Checklist, Emergency Checklist and Abnormal Checklist.

All pages of a new edition will have the same new "edition #" and "edition date", even if only one page was amended and all other pages still have the same, unchanged content.

Therefore the "List of Effective Pages" (LEP) is provided. It is here where you can see whether a particular page was amended. Pages which have been amended by a new edition will be marked yellow. For all other pages you will see which original "edition #" (and of course any higher "edition #") is still valid.

Note:

The system of assigning "Edition #" is as follows:

- if the revision affects all types, a new edition # (without a decimal figure) will be assigned to all of the checklists
- if the revision does not affect all types, the affected checklists will get subsequent "decimal figures" until a major revision affecting all checklists is issued.

Have a lot of nice flights and happy landings!
Peter Schmidleitner

Comments explaining Edition # 18 are on page 2 of this document

Checklist DA42 NG / -VI - LEP

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| (or any higher) is valid | | |
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| 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 | 16 | 01.12.2012 |
| 11 | 16.5 | 01.08.2014 |

| Section: Emergency Checklist | | |
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| Section: Abnormal Checklist | | |
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| 19 | 18 | 15.12.2017 |
| 20 | 18 | 15.12.2017 |

Comments explaining Edition # 17.4

Normal Procedures:

Page 5:
Engine Start Procedure: "Propeller area ... CLEAR" placed on top

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

NORMAL CHECKLIST

Diamond DA42 NG/-VI



This checklist is compiled according to 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 to 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
3 air inlets / 2 air outlets
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
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, security)
Wing flap
Fuel cooler air in- & outlet
** AUX tank vent
** Drain AUX tank

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)..... | ON | 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 |
| | Control stick | AFT and HOLD | |
| | Power levers | MAX | |
| | Check stop limit decreasing | | |
| | Power levers | IDLE | |
| | Check stop limit increasing | | |
| 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 - FUEL | 38 |
| 39 | Fuel Quantity | CHECKED, RESET/SET if requ. | 39 |
| 40 | Fuel temperature | CHECKED | 40 |
| 41 | Total time in service | NOTED | 41 |
| 42 | MFD | EIS - SYSTEM | 42 |
| 43 | * DEIC PRESS LO caution | CHECKED ON | 43 |
| 44 | * De-ice ANNUN TEST | OFF | 44 |
| 45 | Start key | INSERTED | 45 |
| 46 | Power levers (2) | IDLE | 46 |
| 47 | 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 powerDISCONNECT

Start RH engine, procedure as above**CHECK AFTER ENGINE START**

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

FMS SETUP**I** nitialize profile (AUX 4, MAP)**F** light plan**R** adios (COM, NAV, ADF, DME, CDI, BRG ½)**P** erformance (speed bugs; Flight ID if applicable)

| | | | |
|---|-----------------|-----------|---|
| 9 | FMS setup | COMPLETED | 9 |
|---|-----------------|-----------|---|

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

| | | | |
|----|---------------------------|-------------------------|----|
| 10 | Autopilot test | COMPLETED | 10 |
| 11 | Flood light | CHECKED, ON as required | 11 |
| 12 | Position lights | ON as required | 12 |
| 13 | Fuel Selectors (2) | ON | 13 |
| 14 | Altimeters (2) | SET | 14 |
| 15 | Standby horizon | CHECKED | 15 |
| 16 | Transponder | CODE / MODE CHECKED | 16 |
| 17 | Engine temperatures | CHECKED | 17 |
| 18 | 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 | Short field TKOF: APP Normal TKOF: UP | 12 |
| 13 | Flight controls |CHECKED | 13 |
| 14 | Power levers (2) |IDLE | 14 |
| 15 | MFD |EIS – SYSTEM | 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 |
|----|--------------------|------------------------|----|

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

BrakesAPPLY
 GearUP

Alternate air: OPEN in rain, snow, visible moisture

At safe altitude: FlapsUP

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 | Engine / System page | ..... | CHECKED | 4 |
| 5 | Engine / Fuel page | ..... | 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 red:

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

End of Checklist

SECURING THE AIRCRAFT

Release parking brake, use chocks.
 Cover the pitot probe.
 Attach tie down ropes to mooring points.

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

| | | | |
|------|----------|------|----------|
| "NG" | "Dash-6" | "NG" | "Dash-6" |
|------|----------|------|----------|

| STALLING SPEEDS KIAS for MTOM 1900 kg | | |
|---|----|----|
| (V _{SO}) Flaps LDG, gear down | 62 | 62 |
| (V _S) Flaps APP, gear down | 66 | 65 |
| (V _S) clean, gear up | 69 | 68 |
| In Ice: + 4-6 KIAS | | |

| OPERATING SPEEDS KIAS for MTOM 1900 kg | | | |
|---|-----------|-----------------|----|
| Min. control speed (V _{MCA}) | Flaps UP | 76 | 71 |
| | Flaps APP | 73 | 68 |
| Rotation speed | 80 | 76 | |
| Best angle of climb (V _X) | -- | -- | |
| Best rate of climb (V _Y) | 90 | | |
| Best rate of climb 1-eng. (V _{YSE}) | 85 | | |
| Operating speed in ice | 118 - 156 | | |
| Max. flap speed (V _{FE}) Flaps APP | 133 | | |
| Max. flap speed (V _{FE}) Flaps LDG | 113 | | |
| Max. LG extension (V _{LOE}) | 188 | | |
| Max. LG extended (V _{LE}) | 188 | | |
| Max. LG retraction (V _{LOR}) | 152 | | |
| Approach V _{REF} Flaps UP | 86 | in ice: 94 | |
| Approach V _{REF} Flaps APP | 84 | in ice: 90 | |
| Approach V _{REF} Flaps LDG | 84 | in ice: prohib. | |
| Min. Go-around speed Flaps UP | 90 | | |
| Max. cruising speed (V _{NO}) | 151 | | |
| Never exceed speed (V _{NE}) | 188 | | |

| Short field TKOF with flaps APP | |
|---------------------------------|----|
| 76 | 71 |
| 82 | 77 |
| 85 | |

| | up to 1700 kg | 1800 kg | 1900 kg |
|-------------------------------------|---------------|---------|---------|
| Manoeuvring speed (V _O) | 112 | 119 | 122 |

| MASS | |
|--------------------------------|---------|
| Max. TKOF mass | 1900 kg |
| Max ZF mass | 1765 kg |
| Max. LDG mass | 1805 kg |
| Empty mass | 1450 kg |
| Max. baggage in NOSE | 30 kg |
| Max. baggage in COCKPIT | 45 kg |
| Max. baggage in rear EXTENSION | 18 kg |

45 kg

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" |
|------|----------|------|----------|

| STALLING SPEEDS KIAS for MTOM 1999 kg | | |
|---|----|----|
| (V _{SO}) Flaps LDG, gear down | 64 | 64 |
| (V _S) Flaps APP, gear down | 68 | 68 |
| (V _S) clean, gear up | 72 | 72 |
| In Ice: + 4-6 KIAS | | |

| OPERATING SPEEDS KIAS for MTOM 1999 kg | | | |
|---|-----------|-----------------|---------|
| Min. control speed (V _{MCA}) | Flaps UP | 76 | 71 |
| | Flaps APP | 73 | 68 |
| Rotation speed | | 80 | 76 |
| Best angle of climb (V _X) | | -- | -- |
| Best rate of climb (V _Y) | | 92 | 85 |
| Best rate of climb 1-eng. (V _{YSE}) | | 85 | |
| Operating speed in ice | | 118 - 156 | |
| Max. flap speed (V _{FE}) Flaps APP | | 133 | |
| Max. flap speed (V _{FE}) Flaps LDG | | 113 | |
| Max. LG extension (V _{LOE}) | | 188 | |
| Max. LG extended (V _{LE}) | | 188 | |
| Max. LG retraction (V _{LOR}) | | 152 | |
| Approach V _{REF} Flaps UP | 92 | in ice: 97 | |
| Approach V _{REF} Flaps APP | 88 | in ice: 93 | |
| Approach V _{REF} Flaps LDG | 86 | in ice: prohib. | |
| Min. Go-around speed Flaps UP | 92 | | |
| Max. cruising speed (V _{NO}) | 151 | | |
| Never exceed speed (V _{NE}) | 188 | | |
| | up to | 1700 kg | 1800 kg |
| Manoeuvring speed (V _O) | | 112 | 119 |
| | | 1999 kg | 122 |

| Short field TKOF with flaps APP | |
|---------------------------------|----|
| 76 | 74 |
| 82 | 77 |
| 85 | |

| MASS | |
|--------------------------------|---------|
| Max. TKOF mass | 1999 kg |
| Max ZF mass | 1835 kg |
| Max. LDG mass | 1999 kg |
| Empty mass | 1450 kg |
| Max. baggage in NOSE | 30 kg |
| Max. baggage in COCKPIT | 45 kg |
| Max. baggage in rear EXTENSION | 18 kg |

Ice: 1900 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% | ----- | ----- | |

FMS Initialization - AUX 4 page
Recommended and compulsory settings

| | |
|-----------------|---------------|
| TIME FORMAT | UTC |
| NAV ANGLE | MAGNETIC |
| DIS. SPD | NAUTICAL |
| ALT. VS | FEET |
| TEMP | CELSIUS |
| FUEL | GALLONS |
| POSITION | HDDD°MM'SS.S" |
| AIRSPACE ALERTS | As desired |
| ARRIVAL ALERT | As desired |
| VOICE | As desired |

| | |
|---------------------|----------------------|
| MFD DATA BAR FIELDS | 1 GS |
| | 2 DIS |
| | 3 ETE |
| | 4 TRK |
| GPS CDI | |
| SELECTED | AUTO |
| COM CHANNEL SPACING | 25,0 KHZ or 8,33 KHZ |
| NEAREST APT | |
| RWY SURFACE | As desired |
| MIN LENGTH | As desired |

Compulsory:

ARINC 424 Distance Coding:

| | | | | |
|----|----|----|----|----|
| A | B | C | D | E |
| 1 | 2 | 3 | 4 | 5 |
| F | G | H | I | J |
| 6 | 7 | 8 | 9 | 10 |
| K | L | M | N | O |
| 11 | 12 | 13 | 14 | 15 |
| P | Q | R | S | T |
| 16 | 17 | 18 | 19 | 20 |
| U | V | W | X | Y |
| 21 | 22 | 23 | 24 | 25 |

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 landingpage 2

G1000 Warningspage 3

Engine

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

Engine failure, engine shutdown in flightpage 7

Engine troubleshootingpage 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**GEARBOX TEMPERATURE HIGH**

- 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 ATCINFORM 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 leveridle for 1 second 3
- 4 POWER leverslowly 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

| | | |
|---|--|--|
| | With starter | Windmilling <i>(demonstration and training not approved)</i> |
| 15.000 ft PA - 10.000 ft PA | Not approved | Immediate restart Min 100 KIAS Max 115 KIAS |
| Up to 10.000 ft PA | 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 | |
| | Max 80 KIAS or stationary prop, whichever is lower. Do not engage starter when prop is windmilling. | Min 110 KIAS Max 115 KIAS |

- 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 StarterENGAGE when prop stationary 6
- 7 Circuit breakersCHECK/RESET if necessary 7

If engine started:

- 8 Power (affected engine) MODERATE 8
- 9 Engine instrumentscheck 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 switchunaffected ECU 2
- 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 switchunaffected ECU 2
- 3 VOTER switch AUTO 3
 - Land at nearest suitable airfield
 - Be prepared for ENGINE FAILURE IN FLIGHT

LANDING WITH DEFECTIVE MAIN GEAR TIRE

- 1 ATCINFORMED 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

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

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
 - If ECU caution persists terminate flight preparation

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 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 4**

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

- Go to **Emergency Ckl page 4** ENGINE TROUBLESHOOTING

L/R VOLTS LOW**BUS VOLTAGE TOO 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 19

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 V_{REF} 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

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 13**, "Unintentional flight into icing")

DEICE LVL LO**DE-ICING FLUIDS LEVEL LOW**

- Maximum duration of ice protection in NORMAL mode: 45 min, in HIGH mode: 22 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 13**
 - 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 16

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 9** "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

#1 REASON GA AIRCRAFT ARE INTERCEPTED: Entering restricted airspace and not talking to ATC

NORAD / FAA / ICAO INTERCEPT PROCEDURES

Intercept Procedures

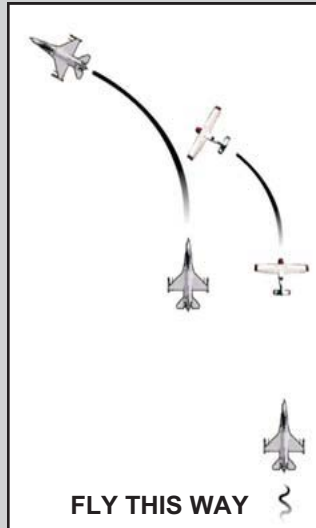
- Typically two fighters approach from the stern -- you may only see one
- Fighter rocks wings to signal intercept
- Fighter responsible for safe separation

Your Actions

- Remain predictable – Altitude, heading, airspeed, don't descend
- Acknowledge fighter with wing rock
- Talk to ATC
- Talk to fighter on 121.5

Post Intercept

- Comply with instructions
- Land where directed



DAY INTERCEPT SIGNALS

| Interceptor Signals | Meaning |
|--|--|
| Fighter slow turn to desired heading | FLY THIS WAY |
| Fighter abrupt turn across nose to desired heading and may dispense flares | <u>WARNING: TURN NOW</u> (DIRECTION OF FIGHTER) |
| Fighter circles airport, lowers landing gear, overflies runway in direction of landing | LAND HERE |

NIGHT INTERCEPT SIGNALS

| Interceptor Signals | Meaning | Your Signal | Meaning |
|-------------------------|---------------------------|----------------------------|--------------------|
| Flash navigation lights | You have been intercepted | Flash navigation lights | I will comply |
| Turn on landing lights | Land here | Turn on landing light | I will land |
| | | Flash landing light | Airport inadequate |
| | | Flash all lights regular | Can not comply |
| | | Flash all lights irregular | Distress |