Checklist für Diamond DA40-180 Diamond Star

Edition #: 17  Edition date: 01.03.2015

Please observe:

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

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

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

Note:
The system of assigning “Edition #” is as follows:

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

Have a lot of nice flights and happy landings!

Peter Schmidleitner

Comments explaining Edition # 17 are on page 2 of this document

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Checklist DA40-180 - LEP

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<thead>
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<th>Page</th>
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<table>
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Comments explaining Edition # 15.1
Adjustable backrests added

Comments explaining Edition # 17

Preflight Procedures:

Page 2:
Parking brake, chocks, towbar added

Normal Procedures:

Page 7:
Parking Check, item 3:
Text of ELT check revised
NORMAL CHECKLIST

DA40-180 Diamond Star

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 GAMA Specification No. 1 are in the DA40 Airplane Flight Manual Chapters 4A, 3 and 4B.

This checklist is a Recommended Operator Checklist and for reference only. It is not a substitute for and does not supersede the current approved Airplane Flight Manual or any of its supplements or parts thereof, or any training or procedures required by any regulatory or advisory bodies. This checklist may not contain all procedures shown in the Airplane Flight Manual. For a comprehensive listing of all procedures consult the Airplane Flight Manual.

Use of the checklist is at the user's sole risk and discretion.
Any possible liability of Diamond Flight Training and/or Diamond Aircraft for any damages, injury or death resulting from its use is excluded.
All such terms and conditions shall be deemed to be explicitly accepted in full by using the checklist. If you do not understand, or if you disagree with, any of the above terms and conditions and in any jurisdiction that does not give effect to all provisions of these terms and conditions any use of the checklist is not permitted.
PREFLIGHT INTERIOR + EXTERIOR.

1. Check Aircraft papers
2. Remove pitot cover
3. Check interior for foreign objects
4. Check flight controls free
5. Check circuit breakers
6. Ignition OFF, key removed
7. Mixture IDLE CUT OFF
8. Essential bus OFF
9. Avionic master + electrics OFF
10. Electric Master ON
    Check battery voltage
11. Electric fuel pump ON + OFF
12. Check fuel quantity
13. External lights ON
14. Pitot heat ON
15. Parking brake SET
16. Check stall warning
17. Check pitot heat
18. Check external lights
19. Pitot heat + ext. lights OFF
20. Electric Master OFF

PREFLIGHT EXTERIOR

Left main gear
Wheel fairing
Tire condition, pressure (2,5 bar), position mark
Brake, hydraulic line

Left wing
Wing leading edge, top- and bottom surface, stall strips
Drain fuel sump
Stall warning
Fuel vent
Fuel filler cap
Pitot, static probe (cover removed)
Landing/Taxi light
Wing tip, position light
Static dischargers
Aileron (freedom of movement, hinges, control linkage, security)
Wing flap

Left fuselage
Canopy left side
Rear door
Fuselage left side
Antennas

Tail
Elevator & rudder (freedom of movement, hinges)
Trim - tab
Tail skid + lower fin
Static dischargers

Right fuselage
Fuselage right side
Rear window
Canopy right side

Right wing
Wing flap
Aileron (freedom of movement, hinges, control linkage, security)
Static dischargers
Wing tip, position light
Wing leading edge, top- and bottom surface, stall strips
Fuel filler cap
Fuel vent
Drain fuel sump

Right main gear
Wheel fairing
Tire condition, pressure (2,5 bar), position mark
Brake, hydraulic line

Nose section
OAT sensor
Propeller surface
Spinner
Cowling, Air inlets (3)

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

Engine bay
Engine oil level (min 5 qts)
Drain fuel strainer

Chocks removed
Towbar removed
### CHECK BEFORE ENGINE START

<table>
<thead>
<tr>
<th>Check Item</th>
<th>Status</th>
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<tbody>
<tr>
<td>1 Preflight check</td>
<td>COMPLETED</td>
</tr>
<tr>
<td>2 Baggage and tow bar</td>
<td>SECURED</td>
</tr>
<tr>
<td>3 Parking brake</td>
<td>SET</td>
</tr>
<tr>
<td>4 Alternate air</td>
<td>CLOSED</td>
</tr>
<tr>
<td>5 Circuit breakers</td>
<td>CHECKED IN</td>
</tr>
<tr>
<td>6 Flap selector</td>
<td>UP</td>
</tr>
<tr>
<td>7 Electric Master</td>
<td>OFF</td>
</tr>
<tr>
<td>8 Electric fuel pump</td>
<td>OFF</td>
</tr>
<tr>
<td>9 Avionic Master</td>
<td>OFF</td>
</tr>
<tr>
<td>10 Essential bus</td>
<td>OFF</td>
</tr>
<tr>
<td>11 Ignition</td>
<td>OFF</td>
</tr>
<tr>
<td>12 All light switches</td>
<td>OFF</td>
</tr>
<tr>
<td>13 Pitot heat</td>
<td>OFF</td>
</tr>
<tr>
<td>14 Alternate static</td>
<td>CLOSED</td>
</tr>
<tr>
<td>15 Emergency switch</td>
<td>OFF / GUARDED</td>
</tr>
<tr>
<td>16 Instrument + flood light</td>
<td>OFF</td>
</tr>
<tr>
<td>17 Gyro slave switch</td>
<td>SLAVE</td>
</tr>
<tr>
<td>18 Electric Master</td>
<td>ON</td>
</tr>
<tr>
<td>19 Annunciator Panel/ Eng.instr.</td>
<td>CHECKED</td>
</tr>
<tr>
<td>20 Acknowledge button</td>
<td>PRESS</td>
</tr>
<tr>
<td>21 Rudder pedals</td>
<td>ADJUSTED</td>
</tr>
<tr>
<td>22 Passengers</td>
<td>INSTRUCTED</td>
</tr>
<tr>
<td>23 Seat belts</td>
<td>FASTENED</td>
</tr>
<tr>
<td>24 Adjustable backrests</td>
<td>UPRIGHT</td>
</tr>
<tr>
<td>25 Rear door</td>
<td>CLOSED and LATCHED</td>
</tr>
<tr>
<td>26 Front canopy</td>
<td>POS 1 or 2</td>
</tr>
<tr>
<td>27 Fuel quantity</td>
<td>CHECKED</td>
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<tr>
<td>28 Fuel selector</td>
<td>FULL TANK</td>
</tr>
<tr>
<td>29 ACL (strobe)</td>
<td>ON</td>
</tr>
<tr>
<td>30 Hobbs meter</td>
<td>NOTED</td>
</tr>
<tr>
<td>31 Propeller area</td>
<td>CLEAR</td>
</tr>
</tbody>
</table>

**End of Checklist**

**ENGINE START PROCEDURE: next page**
ENGINE START PROCEDURE

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

Hot engine:
Electric fuel pump ......CHECK OFF
Throttle ................. ½ inch OPEN

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

Electric fuel pump ................................OFF

CHECK AFTER ENGINE START

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

AUTOPROCESSOR TEST

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

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

End of Checklist

DURING TAXI

Check Brakes
Check flight instruments
### BEFORE TAKE OFF CHECK

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</tr>
<tr>
<td>2</td>
<td>Seat belts</td>
<td>FASTENED</td>
<td>2</td>
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<tr>
<td>3</td>
<td>Adjustable backrest</td>
<td>VERIFY UPRIGHT</td>
<td>3</td>
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<tr>
<td>4</td>
<td>Rear door</td>
<td>CLOSED + LATCHED</td>
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<td>5</td>
<td>Front canopy</td>
<td>CLOSED + LATCHED</td>
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<td>6</td>
<td>Door warning light</td>
<td>OFF</td>
<td>6</td>
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<td>7</td>
<td>Engine instruments green range</td>
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<td>8</td>
<td>Circuit breakers</td>
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<tr>
<td>9</td>
<td>Mixture</td>
<td>RICH</td>
<td>9</td>
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</tbody>
</table>

### RUN UP

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

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<td>Electric elevator trim</td>
<td>CHECKED, T/O SET</td>
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<tr>
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<td>Flaps</td>
<td>CHECKED T/O</td>
<td>11</td>
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<td>12</td>
<td>Flight controls</td>
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<tr>
<td>13</td>
<td>Fuel selector</td>
<td>FULLEST TANK</td>
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When cleared for Line Up:

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<th>Action</th>
<th>Status</th>
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<tbody>
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<td>14</td>
<td>Electric fuel pump</td>
<td>ON</td>
<td>14</td>
</tr>
<tr>
<td>15</td>
<td>Pitot heat</td>
<td>AS REQUIRED</td>
<td>15</td>
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<tr>
<td>16</td>
<td>Transponder</td>
<td>CODE/MODE CHECKED</td>
<td>16</td>
</tr>
<tr>
<td>17</td>
<td>Parking brake</td>
<td>RELEASED</td>
<td>17</td>
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</tbody>
</table>

End of Checklist

### LINE UP PROCEDURE

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

![Diagram showing climb to cruise altitude and rotate at 59 kt]
CLIMB TO CRUISE CHECK

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

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  
2. Altimeters (3) ......................... SET  
3. COM / NAV / GPS....................... SET  
4. Directional gyro.......................... SET  
5. Seatbelts ................................ FASTENED  
6. Adjustable backrests ................. UPRIGHT  
7. Fuel selector ......................... FULLER TANK  
8. At high altitude: Electric fuel pump ............... ON  

End of Checklist

BEFORE LANDING PROCEDURE

Downwind, latest base leg:
- Flaps ............................................................ T/O
- Electric fuel pump ........................................ ON
- Landing light ............................................. ON

On final:
- Mixture .................................................. RICH
- Prop ........................................................ HIGH RPM
- Flaps ....................................................... LDG

GO AROUND PROCEDURE

- Power ..................................................... MAX
- Flaps ........................................................ T/O

Continue with take-off profile
AFTER LANDING CHECK

1. Flaps .......................................................... UP 1
2. Pitot heat ................................................... OFF 2
3. Electric fuel pump ......................................... OFF 3
4. Alternate air ............................................... CLOSED 4
5. Landing/Taxi light ................................. AS REQUIRED 5
6. Transponder ........................................ AS REQUIRED 6

End of Checklist

PARKING CHECK

1. Parking brake ................................................ SET 1
2. Engine instruments ..................................... CHECKED 2
3. ELT ............................................................ CHECK not activated 3
4. Hobbs meter .............................................. NOTED 4
5. Avionic master ............................................. OFF 5
6. Electrical consumers except ACL (strobe) ... OFF 6
7. Throttle ....................................................... 1000 RPM 7
8. Ignition ........................................................ GROUNDING CHECK 8
9. Mixture ....................................................... IDLE CUT OFF 9
10. Ignition ...................................................... OFF 10
11. ACL (strobe) ................................................ OFF 11
12. Electric Master ............................................ OFF 12
13. Interior light ............................................. CHECKED OFF 13

End of Checklist
## OPERATING SPEEDS KIAS

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<th>1000 kg</th>
<th>1150 kg</th>
<th>1200 kg</th>
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<tr>
<td>Best gliding angle (Flaps UP)</td>
<td>60</td>
<td>68</td>
<td>73</td>
<td>76</td>
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<tr>
<td>Best angle of climb (V(_a))</td>
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<td>Best rate of climb (V(_f))</td>
<td>54</td>
<td>60</td>
<td>66</td>
<td>67</td>
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<tr>
<td>Cruising climb speed</td>
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<td>68</td>
<td>73</td>
<td>76</td>
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<td>Rotating speed</td>
<td>49</td>
<td>55</td>
<td>59</td>
<td>60</td>
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<td>Max. flap speed (V(_{FE})) T/O</td>
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<td>108</td>
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<tr>
<td>Max. flap speed (V(_{FE})) LDG</td>
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<td>Stalling speed (V(_{SG})) LDG</td>
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<td>&lt;-980 kg-</td>
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<td>52</td>
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<td>53</td>
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<td>Max. cruising speed (V(_NO))</td>
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<td>Never exceed speed (V(_NE))</td>
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<td>Manoeuvring speed (V(_A))</td>
<td>94</td>
<td>&lt;-980 kg-</td>
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<tr>
<td>Manoeuvring speed (V(_A)) clean</td>
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<td>&lt;-1036 kg-</td>
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<td>Max. turbulence speed</td>
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<td>Approach speed Flaps UP</td>
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<td>Approach speed Flaps T/O</td>
<td>59</td>
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<td>72</td>
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<td>Approach speed Flaps LDG</td>
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<td>1000 kg</td>
<td>1092 kg</td>
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<td></td>
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### Mass

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<tr>
<th>Mass</th>
<th>1150 kg</th>
<th>Optional: 1200 kg</th>
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<tr>
<td>Max. TKOF mass</td>
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<tr>
<td>Empty mass</td>
<td>795 kg</td>
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<td>Max. LDG mass</td>
<td>1092 kg</td>
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<tr>
<td>Full tanks</td>
<td>108 kg</td>
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<tr>
<td>Max. baggage in front</td>
<td>45 kg</td>
<td>45 kg</td>
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<tr>
<td>Max. baggage in rear</td>
<td>18 kg</td>
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### P Alt

<table>
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<tr>
<th>P Alt</th>
<th>45%</th>
<th>55%</th>
<th>65%</th>
<th>75%</th>
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<td>RPM</td>
<td>TAS</td>
<td>MP</td>
<td>RPM</td>
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EMERGENCY + ABNORMAL CHECKLIST

For conditions to use this Emergency + Abnormal Checklist see page 1 of the Normal Checklist.

All such conditions are fully applicable also for this checklist.

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

Abnormal Checklist starts at page 9

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

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

Electric System
Total electrical fail ............................................page 5

Smoke and Fire
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EMERGENCY LANDING

1. Adjustable backrests ................................. UPRIGHT 1
2. Airspeed .................................................. 76/73/68/60 KIAS 2
3. ATC .................................................... INFORM 3
4. Fuel tank selector .................................... OFF 4
5. Mixture ................................................ IDLE CUT OFF 5

On final:
6. Flaps ..................................................... LDG 6
7. Ignition .................................................. OFF 7
8. Master switch .......................................... OFF 8
9. Safety harnesses ...................................... TIGHT 9

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Diamond Flight Training  Page 1  
Edition # 17  
Does not replace the Airplane Flight Manual
WARNING LIGHTS

OIL PRESSURE

OIL PRESSURE < 25 PSI

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

ALTERNATOR

ALTERNATOR FAILURE

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

**FUEL PRESSURE < 14 PSI**

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

**START**

**STARTER NOT DISENGAGING**

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

**TRIM FAIL**

**AUTOPILOT TRIM FAIL**

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

**DOORS**

**DOOR(S) OPEN OR UNLOCKED**

1. Airspeed...................................................... REDUCE 1
2. Canopy and rear door .................. CHECK visually 2
   - If unlocked:
     Aispeed below 140 KIAS, land ASAP
     *Do not try to lock the rear door in flight*
ROUGH ENGINE AND/OR POWER LOSS

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

If no success and insufficient power:
Land ASAP

RPM OVERSPEED

1. Friction adjuster ................................ CHECK 1
2. Oil pressure ...................................... CHECK 2
   • If oil pressure lost:
     Adjust RPM with power lever
     Continue with
     LOW OIL PRESSURE CHECKLIST

RPM UNDERSPEED

1. Electrical fuel pump ............................ ON 1
2. Fuel tank selector .............................. CHECK 2
3. Friction adjuster ................................. CHECK 3
4. Propeller control ............................... HIGH RPM 4
   • If no success:
     Regulate RPM with throttle
     Land ASAP
### WINDMILL ENGINE START

1. **Airspeed**: 73 - 80 KIAS
2. **Fuel tank selector**: FULLER TANK
3. **Ignition**: BOTH
4. **Mixture**: CHECKED
5. **Electrical fuel pump**: ON
6. **Alternate air**: OPEN

If no success:
7. **Mixture**: LEAN
8. **Mixture**: SLOWLY TO RICH

### POWERED ENGINE START

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

### TOTAL ELECTRIC FAIL

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

Land ASAP
ENGINE FIRE IN FLIGHT / AFTER TAKE OFF

1. Cabin heat .............................................. OFF 1
2. Emergency landing .............................. PREPARE 2
3. Airspeed ........................................ 76/73/68/60 KIAS 3
4. ATC ................................................. INFORM 4
5. Canopy .......................................................... UNLATCH as necessary 5

When landing assured:

6. Fuel tank selector ...................................... OFF 6
7. Throttle .............................................. MAX PWR if possible 7
8. Electrical fuel pump ................................. OFF 8
9. Master switch (BAT) ..................................... ON 9
10. Emergency window ................................. OPEN if required 10

On final:

11. Mixture ............................................. IDLE CUT OFF 11
12. Flaps ................................................... LDG 12
13. Ignition .................................................. OFF 13
14. Master switch .......................................... OFF 14

ENGINE FIRE ON GROUND

1. Fuel tank selector ...................................... OFF 1
2. Cabin heat ................................................ OFF 2

After standstill:

3. Throttle ................................................ MAX POWER 3
4. Master switch (BAT) ................................. OFF 4

When engine stopped:

5. Ignition .................................................. OFF 5
6. Canopy ..................................................... OPEN 6

Evacuate
**ELECTRIC FIRE / SMOKE IN FLIGHT**

1. Emergency switch ..................................... ON  
2. Canopy ........................................... UNLATCH as necessary  
3. Master switch (ALT/BAT) ............................ OFF  
4. Cabin heat.......................................... OFF  
5. Emergency window............. OPEN as necessary 

   Land ASAP

- If electronics/avionics required
- apply isolation procedure:

6. Master switch (BAT)................................. ON  
7. Essential bus ...................................... ON  

   - If smoke decreases:
     Land ASAP
   - If smoke persists:

8. Master switch (ALT)................................. ON  
9. Essential bus ...................................... OFF  
10. BATT and ESS TIE circuit breakers............ PULL  

   Land ASAP

**ELECTRIC FIRE / SMOKE ON GROUND**

1. Master switch (BAT)................................. OFF  
2. Throttle........................................... IDLE  
3. Mixture ........................................... IDLE CUT OFF  

   When engine stopped:

4. Canopy ............................................ OPEN  

   Evacuate
SUSPICION OF CARBON MONOXIDE
1  Cabin heat.............................................. OFF  1
2  Ventilation.............................................. OPEN  2
3  Emergency windows .............................. OPEN  3
4  Forward canopy ............................... UNLATCH  4

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

LANDING WITH DEFECTIVE MAIN GEAR TIRE
1  ATC.......................................................... INFORMED  1
   For landing:
   • Land on RWY side with “good” tire
   • Keep wing on “good” side low
   • Support directional control with brake

LANDING WITH DEFECTIVE BRAKES
   After touchdown (if necessary):
1  Fuel tank selector.......................................... OFF  1
2  Mixture ............................................... IDLE CUT OFF  2
3  Ignition......................................................... OFF  3
4  Master switch............................................... OFF  4
CAUTION LIGHTS

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Engine instrument indications outside of green range

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- EXHAUST GAS Temp high / low ............page 11
- FUEL FLOW high ..................................page 11
- VOLT high (overvoltage) .....................page 11
- Manifold pressure high ......................page 11

PITOT

- check pitot heat ON
  - if in icing conditions
    - expect failure of the pitot-static-system
    - alternate static valve: OPEN
    - leave area with icing conditions

LOW VOLTS

BUS VOLTAGE TOO LOW

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

- On ground
  - Increase RPM to 1200
  - Electrical equipment OFF
  - Check Ammeter and voltmeter
    - If light still ON
      - Terminate flight preparation

- In flight
  - Switch off unnecessary electrical equipment
  - Check Ammeter and voltmeter
    - If light still ON
      - Apply “ALTERNATOR FAIL”-emergency procedure
        (Emergency Checklist page 2)
**OIL pressure low**

- Check OIL PRES LO warning light

  - OIL PRES LO warning light ON or flashing
    ⇒ Apply “OIL PRES LO”-emergency procedure
    *(Emergency Checklist page 2)*

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

**Oil (OP) pressure high**

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

**Oil (OT) temperature high**

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

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

Cylinder head temperature (CHT) or EGT low

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

FUEL FLOW high

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

OVER VOLTAGE

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

Manifold pressure (MP) high

- If clearly above green range:
  -> Reading is faulty