Checklist für Diamond DA40 NG

Edition #: **20.1**  Edition date: **10.11.2020**

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 Schmideitner

Comments explaining Edition # 20.1 are on page 2 of this document

### Checklist DA40 NG - LEP

<table>
<thead>
<tr>
<th>Page</th>
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<th>Date (or any higher) is valid</th>
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<td>20.02.2019</td>
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</table>
Comments explaining Edition # 17.1

Emergency Procedures
Page 2:
Emergency landing (Engine OFF): Fuel pumps OFF added

Abnormal Procedures
Page 13:
Editorial correction

Comments explaining Edition # 17.2

Normal Procedures
Page 5: Gearbox temperature before ECU Test
Page 7: “SECURING THE AIRCRAFT” added

Emergency Procedures
No change

Abnormal Procedures
No Change

Comments explaining Edition # 17.3

Normal Procedures
Page 4: Engine Start Procedure: “Prop Area….CLEAR” placed on top

Comments explaining Edition # 18.1

Normal Procedures
Page 2: Editorial changes
Page 5: Props cycling 2 times > 1800RPM
Page 8: Vy up to safe altitude (Flap T/O)
Page 8: Cruise climb speed (Flaps UP)
Page 8: Maneuvering speed (Vo) above 1180kg
Page 8: Empty mass 940kg

Emergency Procedures
Page 1: G1000 Warnings ALTN AMPS Pg. 8 (page referral)
Page 4: Engine Troubleshooting, 9. updated acc. AFM
Page 10: Fire / Smoke on ground, 3. “Apply Brakes added”

Abnormal Procedures
Page 14: Cool Lvl, Check Temp. check page 16 (page referral)
Page 16: Fuel Temp low, changed to <-25°C

Comments explaining Edition # 20.1

changes from edition #18.1

Emergency Procedures
Page 2 referral "Restart changed p.7 to p.3”

Abnormal Procedures
Page 12 referral “COOL LVL changed from p.16 to p14”
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.

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 21 (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.
DA40 NG  PREFLIGHT PROCEDURES

For use of fuel additives see AFM.

PREFLIGHT INTERIOR + EXTERIOR.
1. Check Aircraft papers
2. Remove pitot cover
3. Check interior for foreign or loose objects
4. Check flight controls free
5. Check circuit breakers
6. Fuel Valve NORMAL
7. Engine Master OFF
8. VOTER switch AUTO
9. Fuel pumps OFF
10. Essential bus OFF
11. Avionic Master + electrics OFF
12. Electric Master ON
   check voltage
13. Check fuel quantity + temp
14. External lights ON
15. Pitot heat ON
16. Parking brake SET
17. Check stall warning
18. Check pitot tube
19. Check external lights
20. Pitot heat / ext. lights OFF
21. Electric Master OFF,
   key removed

PREFLIGHT EXTERIOR

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
Fuel filler cap
Fuel vent
Fuel cooler air inlet (winter baffle ?) + outlet
Drain fuel tank

Right main gear
Wheel fairing
Tire condition, slip mark
Brake, hydraulic line

Nose section
OAT sensor
Propeller surface
Spinner
Cowling, Air inlets

Nose gear
Wheel fairing
Tire condition, slip mark

Engine bay
Engine oil level (5,0 – 7,0 l)
Gearbox oil level
Drain gascolator and sample check
Chocks removed
Towbar removed

10.11.2020 Diamond Flight Training Page 2
Edition #20.1 Does not replace the Airplane Flight Manual
# CHECK BEFORE ENGINE START

<table>
<thead>
<tr>
<th></th>
<th>Description</th>
<th>Status</th>
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<tbody>
<tr>
<td>1</td>
<td>Preflight check</td>
<td>COMPLETED</td>
</tr>
<tr>
<td>2</td>
<td>Baggage and tow bar</td>
<td>SECURED</td>
</tr>
<tr>
<td>3</td>
<td>Fuel valve</td>
<td>NORMAL / SECURED</td>
</tr>
<tr>
<td>4</td>
<td>Power lever</td>
<td>IDLE</td>
</tr>
<tr>
<td>5</td>
<td>Parking brake</td>
<td>SET</td>
</tr>
<tr>
<td>6</td>
<td>Alternate Air</td>
<td>CLOSED</td>
</tr>
<tr>
<td>7</td>
<td>Electric master</td>
<td>OFF</td>
</tr>
<tr>
<td>8</td>
<td>Avionic master</td>
<td>OFF</td>
</tr>
<tr>
<td>9</td>
<td>Essential bus</td>
<td>OFF</td>
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<tr>
<td>10</td>
<td>Alternate static</td>
<td>CLOSED</td>
</tr>
<tr>
<td>11</td>
<td>Engine master</td>
<td>OFF</td>
</tr>
<tr>
<td>12</td>
<td>VOTER switch</td>
<td>AUTO</td>
</tr>
<tr>
<td>13</td>
<td>Fuel pumps</td>
<td>OFF</td>
</tr>
<tr>
<td>14</td>
<td>All light switches</td>
<td>OFF</td>
</tr>
<tr>
<td>15</td>
<td>Emergency switch</td>
<td>OFF / GUARDED</td>
</tr>
<tr>
<td>16</td>
<td>ELT</td>
<td>ARMED</td>
</tr>
<tr>
<td>17</td>
<td>Circuit breakers</td>
<td>CHECKED IN</td>
</tr>
<tr>
<td>18</td>
<td>Flap selector</td>
<td>UP</td>
</tr>
<tr>
<td>19</td>
<td>Pitot heat</td>
<td>OFF</td>
</tr>
<tr>
<td>20</td>
<td>Fuel transfer</td>
<td>OFF</td>
</tr>
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</table>

If starting with external power: External power….CONNECT

Check Prop clear

<table>
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<th>Description</th>
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<tbody>
<tr>
<td>21</td>
<td>Electric Master</td>
<td>ON (check avionic fan noise)</td>
</tr>
<tr>
<td>22</td>
<td>Rudder pedals</td>
<td>ADJUSTED</td>
</tr>
<tr>
<td>23</td>
<td>Passengers</td>
<td>INSTRUCTED</td>
</tr>
<tr>
<td>24</td>
<td>Seat belts</td>
<td>FASTENED</td>
</tr>
<tr>
<td>25</td>
<td>Rear door</td>
<td>CLOSED and LATCHED</td>
</tr>
<tr>
<td>26</td>
<td>Front canopy</td>
<td>POS 1 or 2</td>
</tr>
<tr>
<td>27</td>
<td>G1000</td>
<td>POWERED, ACKNOWLEDGED</td>
</tr>
<tr>
<td>28</td>
<td>MFD EIS</td>
<td>FUEL</td>
</tr>
<tr>
<td>29</td>
<td>Fuel Quantity</td>
<td>CHECKED, RESET/SET if requ.</td>
</tr>
<tr>
<td>30</td>
<td>Fuel temperature</td>
<td>CHECKED</td>
</tr>
<tr>
<td>31</td>
<td>Total time in service</td>
<td>NOTED</td>
</tr>
<tr>
<td>32</td>
<td>MFD - EIS</td>
<td>EIS - SYSTEM</td>
</tr>
<tr>
<td>33</td>
<td>Power lever</td>
<td>IDLE</td>
</tr>
<tr>
<td>34</td>
<td>ACL (strobe)</td>
<td>ON</td>
</tr>
</tbody>
</table>

End of Checklist
ENGINE START PROCEDURE

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

CHECK AFTER ENGINE START

If external power was used:

External power .............................................. DISCONNECT

1. Oil pressure .................................. CHECKED 1
2. RPM 710 +/- 30 ........................... CHECKED 2
3. Circuit breakers ............................. CHECKED IN 3
4. Pitot heat ...... ON, annunciation + Amps checked 4
5. Pitot heat ............................................. OFF 5
6. Avionics master ................................. ON 6

FMS SETUP

I nitialize profile (AUX 4, MAP)
F light plan
R adios (COM,NAV,ADF,DME,CDI,BRG 1/2, AUX3,RAIM)
P erformance (speed bugs, flight ID if applicable)

7. FMS setup .................................. COMPLETED 7

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

8. Autopilot test .................................. COMPLETED 8
9. Flood light .......................... CHECKED, ON as required 9
10. Position lights ............................ ON as required 10
11. Flaps .......................... full travel CHECKED, then T/O 11
12. Altimeters (2) .......................... SET 12
13. Standby horizon .................. CHECKED 13
14. Transponder .................. CODE/MODE CHECKED 14
15. Engine temperatures .................. CHECKED 15
16. Parking brake .......................... RELEASED 16

Max power 50% until engine temperatures in green range

End of Checklist; see next page for “During taxi” – items
DURING TAXI
Check brakes
Check flight instruments

BEFORE TAKE OFF CHECK

<table>
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<tr>
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<th>Description</th>
<th>Status</th>
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<tr>
<td>1</td>
<td>Parking brake</td>
<td>SET 1</td>
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<td>2</td>
<td>Seat belts</td>
<td>FASTENED 2</td>
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<tr>
<td>3</td>
<td>Adjustable backrests</td>
<td>UPRIGHT 3</td>
</tr>
<tr>
<td>4</td>
<td>Rear door</td>
<td>CLOSED + LATCHED 4</td>
</tr>
<tr>
<td>5</td>
<td>Front canopy</td>
<td>CLOSED + LATCHED 5</td>
</tr>
<tr>
<td>6</td>
<td>Door warning light</td>
<td>OFF 6</td>
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<tr>
<td>7</td>
<td>Circuit breakers</td>
<td>CHECKED 7</td>
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<td>8</td>
<td>Electric elevator trim</td>
<td>CHECKED, T/O SET 8</td>
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<td>9</td>
<td>Flaps</td>
<td>CHECKED T/O 9</td>
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<td>10</td>
<td>Flight controls</td>
<td>CHECKED 10</td>
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<td>Power lever</td>
<td>IDLE 11</td>
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<tr>
<td>12</td>
<td>MFD</td>
<td>EIS – SYSTEM 12</td>
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<tr>
<td>13</td>
<td>Engine instruments</td>
<td>CHECKED 13</td>
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Engine temperatures must be in green range before performing ECU test.
(For gearbox min.38° recommended). For warm up max power 50%.

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<tr>
<td>14</td>
<td>VOTER switch</td>
<td>A, AUTO, B, AUTO 14</td>
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</table>

ECU TEST

ECU test button ......................... press and hold
“ECU A/B fail” .............................. ON
Prop cycling 2 times > 1800 RPM
“ECU A/B fail” .............................. OFF
ECU test button ......................... release

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<td>ECU test</td>
<td>PERFORMED 15</td>
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<td>16</td>
<td>Pitot heat</td>
<td>AS REQUIRED 16</td>
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<td>Transponder</td>
<td>CODE/MODE CHECKED 17</td>
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<td>18</td>
<td>Fuel pumps</td>
<td>ON 18</td>
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<tr>
<td>19</td>
<td>MFD - EIS</td>
<td>DEFAULT 19</td>
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<td>20</td>
<td>Parking brake</td>
<td>RELEASED 20</td>
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End of Checklist

LINE UP PROCEDURE

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

Available power check (see pg.6) ........ PERFORMED
Available Power Check:
10 sec. power MAX, RPM 2200 – 2300 (min. 2100 below -10°C), min. load acc. table below

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<th>OAT</th>
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<th>-20°C</th>
<th>-10°C</th>
<th>0°C</th>
<th>10°C</th>
<th>20°C</th>
<th>30°C</th>
<th>40°C</th>
<th>50°C</th>
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<tr>
<td></td>
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<td>-31°F</td>
<td>-4°F</td>
<td>14°F</td>
<td>32°F</td>
<td>50°F</td>
<td>68°F</td>
<td>86°F</td>
<td>104°F</td>
<td>122°F</td>
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<tr>
<td>0</td>
<td></td>
<td></td>
<td>94%</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
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<td></td>
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<td>2000</td>
<td></td>
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<td>92%</td>
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<td>92%</td>
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<td>6000</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>95%</td>
<td>92%</td>
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<td>8000</td>
<td></td>
<td></td>
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<td></td>
<td></td>
<td></td>
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<td>94%</td>
<td>93%</td>
<td>91%</td>
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<td>10000</td>
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<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>94%</td>
<td>93%</td>
<td>88%</td>
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</table>

**AFTER TAKE-OFF PROCEDURE**

After passing safe altitude:
Flaps........................................................... UP
Climb power ............................................ SET

**CLIMB TO CRUISE CHECK**

1. Flaps ......................................................... CHECKED UP 1
2. Fuel pumps ............................................... OFF 2
3. Climb power ............................................... SET 3
4. Landing light ............................................ OFF 4

End of Checklist

**PERIODICALLY DURING CRUISE**

Fuel transfer ......................... repeat as required
Maximum fuel unbalance - Long range tank: 9 USG

**DESCENT / APPROACH CHECK**

1. Landing data .......................... RECEIVED 1
2. Altimeters (2) .............................. SET 2
3. COM / NAV / FMS .......................... SET 3
4. Seatbelts .................................. FASTENED 4
5. Adjustable backrests ..................... UPRIGHT 5
6. Fuel transfer .......................... AS REQUIRED 6
7. Parking brake .................. CHECKED RELEASED 7
8. Fuel pumps .................................. ON 8
9. Landing light .......................... ON 9

End of Checklist
BEFORE LANDING PROCEDURE

Downwind, latest base leg:
Flaps .......................................................... T/O
On final:
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 Fuel pumps ................................................... OFF 3
4 Alternate air .................................................. CLOSED 4
5 Landing/Taxi light ......................................... AS REQUIRED 5

End of Checklist

PARKING CHECK

1 Parking brake ............................................ SET 1
2 Power lever ....................................................... 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 Master ................................................... OFF 8
9 ACL (strobe) ...................................................... OFF 9

When engine indications x-out red:

10 Electric Master ............................................. OFF 10
11 Start key ..................................................... REMOVED 11

End of Checklist

SECURING THE AIRCRAFT

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

<table>
<thead>
<tr>
<th></th>
<th>1000kg</th>
<th>1100kg</th>
<th>1200kg</th>
<th>1310kg</th>
</tr>
</thead>
<tbody>
<tr>
<td>Stalling speed ($V_S$) Flaps UP</td>
<td>58</td>
<td>61</td>
<td>64</td>
<td>66</td>
</tr>
<tr>
<td>Stalling speed ($V_S$) Flaps T/O</td>
<td>54</td>
<td>56</td>
<td>60</td>
<td>62</td>
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<tr>
<td>Stalling speed ($V_{SO}$) Flaps LDG</td>
<td>55</td>
<td>57</td>
<td>59</td>
<td>60</td>
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## Operating Speeds KIAS

### Rotation speed

<table>
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<th></th>
<th>940kg</th>
<th>1000kg</th>
<th>1100kg</th>
<th>1200kg</th>
<th>1280kg + above</th>
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<tbody>
<tr>
<td>$V_{SO}$ up to 50 ft</td>
<td>56</td>
<td>58</td>
<td>61</td>
<td>65</td>
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<tr>
<td>$V_y$ up to safe altitude (Flaps T/O)</td>
<td>62</td>
<td>65</td>
<td>67</td>
<td>70</td>
<td>72</td>
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<tr>
<td>Cruise climb speed (Flaps UP)</td>
<td>72</td>
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<tr>
<td>Max. cruising speed (VNO)</td>
<td>88</td>
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<tr>
<td>Never exceed speed (VNE)</td>
<td>130</td>
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<tr>
<td>Max. flap speed ($V_{FE}$) Flaps T/O</td>
<td>110</td>
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<td>Max. flap speed ($V_{FE}$) Flaps LDG</td>
<td>98</td>
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### Approach $V_{REF}$ Flaps UP

<table>
<thead>
<tr>
<th></th>
<th>940kg</th>
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<th>1216kg</th>
<th>1280kg + above</th>
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<tbody>
<tr>
<td>$V_y$ up to safe altitude (Flaps T/O)</td>
<td>71</td>
<td>73</td>
<td>78</td>
<td>82</td>
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<td>83</td>
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<tr>
<td>Approach $V_{REF}$ Flaps T/O</td>
<td>68</td>
<td>70</td>
<td>74</td>
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<tr>
<td>Approach $V_{REF}$ Flaps LDG</td>
<td>66</td>
<td>68</td>
<td>72</td>
<td>76</td>
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<tr>
<td>Min. GA speed Flaps T/O</td>
<td>72</td>
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### Maneuvering speed ($V_o$)

<table>
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<tbody>
<tr>
<td>$V_y$ up to safe altitude (Flaps T/O)</td>
<td>up to 1080 kg</td>
<td>1081-1180 kg</td>
<td>above 1180 kg</td>
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<td>$V_y$ up to safe altitude (Flaps T/O)</td>
<td>101</td>
<td>108</td>
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### Best gliding

<table>
<thead>
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<th>1280kg + above</th>
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<tbody>
<tr>
<td>$V_y$ up to safe altitude (Flaps T/O)</td>
<td>88</td>
<td></td>
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</tr>
<tr>
<td>$V_y$ up to safe altitude (Flaps T/O)</td>
<td>88</td>
<td></td>
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</tbody>
</table>

**Max demonstrated X-wind: 25 kt**

### Mass

<table>
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<tr>
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<th>Option “574”</th>
<th>Option “662”</th>
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<tbody>
<tr>
<td>Max. TKOF mass</td>
<td>1280 kg</td>
<td>1310 kg</td>
</tr>
<tr>
<td>Max ZF mass</td>
<td>1200 kg</td>
<td>1265 kg</td>
</tr>
<tr>
<td>Max. LDG mass</td>
<td>1216 kg</td>
<td>1280 kg</td>
</tr>
<tr>
<td>Empty mass</td>
<td>940 kg</td>
<td></td>
</tr>
<tr>
<td>Max. baggage in FWD compartment</td>
<td>45 kg</td>
<td></td>
</tr>
<tr>
<td>Max. baggage in AFT extension</td>
<td>18 kg</td>
<td></td>
</tr>
<tr>
<td>Total in both</td>
<td>45 kg</td>
<td></td>
</tr>
</tbody>
</table>
# 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.

## G1000 WARNINGS

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Page</th>
<th>Condition</th>
</tr>
</thead>
<tbody>
<tr>
<td>ENG TEMP</td>
<td>6</td>
<td>Coolant temperature high (red range)</td>
</tr>
<tr>
<td>OIL TEMP</td>
<td>6</td>
<td>Oil temperature high (red range)</td>
</tr>
<tr>
<td>OIL PRES</td>
<td>6</td>
<td>Oil pressure low (red range)</td>
</tr>
<tr>
<td>GBOX TEMP</td>
<td>7</td>
<td>Gearbox temperature high (red range)</td>
</tr>
<tr>
<td>L/R FUEL TEMP</td>
<td>7</td>
<td>Fuel temperature high (red range)</td>
</tr>
<tr>
<td>FUEL PRESS</td>
<td>7</td>
<td>Fuel pressure low</td>
</tr>
<tr>
<td>ALTN FAIL</td>
<td>7</td>
<td>Alternator failed</td>
</tr>
<tr>
<td>ALTN AMPS</td>
<td>8</td>
<td>High Current (red range)</td>
</tr>
<tr>
<td>STARTER</td>
<td>8</td>
<td>Starter not disengaging</td>
</tr>
<tr>
<td>DOOR OPEN</td>
<td>8</td>
<td>Unlocked doors</td>
</tr>
</tbody>
</table>

*For other parameters “out of green range” see Abnormal Checklist*

Abnormal Checklist starts at page 12

## Emergency landing (engine off) .......... page 2

### Engine
- Engine failure in flight ........................................ page 2
- Windmill engine start ........................................... page 3
- Engine troubleshooting ........................................... page 4
- Oscillating RPM .................................................. page 5
- RPM overspeed .................................................... page 5
- RPM underspeed .................................................... page 5

### Electric System
- High current ................................................................ page 9
- Total electrical fail .............................................. page 9

### Smoke and Fire
- Engine fire in flight .............................................. page 2
- Electric fire / smoke in flight .................................... page 9
- Fire / smoke on ground ............................................. page 10
- Fire / smoke in continued TKOF ................................ page 10

### Other Emergencies
- Unintentional flight into icing ................................ page 8
- Landing with defective main gear tire ....................... page 11
- Landing with defective brakes .................................. page 11
- Fuel transfer pump u/s ............................................ page 11
- Suspicion of carbon monoxide ................................ page 11
**ENGINE FAILURE IN FLIGHT**

1. Airspeed ........................................... 88 KIAS  
2. Flaps ........................................................ UP  

   Depending on remaining altitude consider:
   **RESTART** (page 3) or  
   **EMERGENCY LANDING (ENGINE OFF)** (see ↓)

**EMERGENCY LANDING (ENGINE OFF)**

1. Gliding speed .................................... 88 KIAS  
2. ATC.................................................. INFORM  
3. Adjustable backrests ......................... UPRIGHT  
4. Engine master ......................................... OFF  
5. Fuel transfer pump ................................... OFF  
6. Fuel pumps ............................................. OFF  
7. Fuel valve ............................................... OFF  
8. Avionic master........................................... OFF  
9. Safety harness ..................................... TIGHT  

   On final:
10. Flaps ............................................ T/O or LDG  

<table>
<thead>
<tr>
<th>Flaps</th>
<th>Approach speed KIAS</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>1000 kg</td>
</tr>
<tr>
<td>T/O</td>
<td>70</td>
</tr>
<tr>
<td>LDG</td>
<td>69</td>
</tr>
</tbody>
</table>

11. Electric master switch.................................. OFF  

**ENGINE FIRE IN FLIGHT**

1. Cabin heat ............................................... OFF  
2. Canopy ............................................. UNLATCH as necessary  

   Select emergency landing area  
   When certain to reach landing area:  

3. Fuel valve ........................................... OFF  
4. Power lever ........................................... MAX  
5. Emergency windows............OPEN as necessary  

   Carry out:
   **EMERGENCY LANDING (ENGINE OFF)** (see ↑)
WINDMILL ENGINE START

Do not consider starter assisted restart if propeller has stopped

Max. altitude:
16,400 ft PA for immediate restart
10,000 ft PA for restart within 2 minutes

1. Airspeed ........................................... 88 KIAS  
2. Power lever ............................................. IDLE  
3. VOTER switch ......................... CHECKED AUTO  
4. Fuel valve .......................... CHECKED NORMAL  
5. Alternate air .............................. AS REQUIRED  
6. Fuel quantity ................................. CHECKED  
7. Alternate air .............................. AS REQUIRED  
8. Electric master ......................... CHECKED ON  
9. Engine master ......................... CHECKED ON  
   • If engine does not start:
10. Fuel valve ................................... EMERGENCY  
   • If engine does not start:
11. Flaps ........................................................ UP

Carry out:
EMERGENCY LANDING (ENGINE OFF)  (page 2)
ENGINE TROUBLESHOOTING

1. Airspeed ........................................... 88 KIAS  
2. Power lever ............................................ MAX 

If 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

3. POWER lever ...................... IDLE for 1 second
4. POWER lever ...... slowly increase to 1975 RPM
   ● If engine shows power loss during the
     POWER lever increase
5. POWER lever ........................ idle for 1 second
6. POWER lever .......................... slowly increase
   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

7. Land at nearest suitable airfield .....................  
   End of Checklist

Otherwise:
3. Circuit breakers ................................. CHECK/RESET
   ● If engine OK: continue, land ASAP End of Checklist
4. VOTER switch ........................... SWAP between A and B
   ● If engine OK: continue, land ASAP End of Checklist
5. VOTER switch ............................................ AUTO
   ● If engine OK: continue, land ASAP End of Checklist
6. Fuel valve ........................................ EMERGENCY
   ● If engine OK: continue, land ASAP End of Checklist
7. Fuel valve ............................................. NORMAL
8. Alternate air .............................................. OPEN
9. POWER lever .......................... apply power as required
   ● 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
**OSCILLATING RPM**

1. Power lever ....................... CHANGE SETTING 1
   - If no success:  
2. VOTER switch ............... SWAP between A and B 2
   - If no success:  
3. VOTER switch ........................................ AUTO 3
   Land at nearest suitable airfield

**RPM OVERSPEED**

1. Power lever ............. ADJUST to max. 2300 RPM 1  
2. Airspeed ........................................... 88 KIAS 2  
3. Flaps ................................................. UP 3  
   - If RPM stabilized below 2300:  
   4. Airspeed ...........................................AS REQUIRED 4  
   5. Power lever ........................................ AS REQUIRED 5  
   - but do not exceed 2300 RPM  
   - If RPM still above 2300:  
   6. VOTER switch ............... SWAP between A and B 6  
      - If no success:  
   7. VOTER switch ........................................ AUTO 7  
      adjust RPM with power lever  
      Land at nearest suitable airfield  
   - If increased climb rate required:  
   8. Flaps ................................................. T/O 8  
   9. Airspeed ........................................... 72 KIAS 9  
10. Power lever ............. ADJUST to max. 2300 RPM 10

**RPM UNDERSPEED**

1. Power lever ....................... AS REQUIRED 1  
2. VOTER switch ............... SWAP between A and B 2  
   - If no success:  
3. VOTER switch ........................................ AUTO 3  
4. Power lever ........................................ AS REQUIRED 4  
   Land at nearest suitable airfield
G1000 WARNINGS

ENG TEMP

- Check “COOL LVL” caution message
- If “COOL LVL” OUT:
  - During climb:
    - Reduce power 10%
    - Increase airspeed 10 KIAS
    - If not returning to green range within 60 seconds: reduce power as far as possible and increase airspeed
  - During cruise:
    - Reduce power
    - Increase airspeed, if necessary descend
    - Check coolant temperature in green range
      - If not returning to green range: land at nearest suitable airfield
- If “COOL LVL” ON:
  - Reduce power
  - Expect loss of coolant fluid
  - Be prepared for emergency landing

OIL TEMP

- Check oil pressure
- If too low:
  - Reduce power
  - Be prepared for loss of oil and engine fail; be prepared for emergency landing
- If in green range:
  - Reduce power
  - Increase airspeed

OIL PRES

- Reduce power
- Expect loss of oil
- Land at nearest suitable airfield
- Be prepared for engine fail
GBOX TEMP

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

L/R FUEL TEMP

- Reduce power
- Increase airspeed
- Consider fuel transfer from AUX to MAIN tank
  - If fuel temperature not returning to green range:
    ⇒ Land at nearest suitable airfield

FUEL PRESS

- Check fuel quantity
- Check fuel valve NORMAL
- Switch fuel pumps ON
  - If FUEL PRESS warning remains:
    ⇒ Fuel valve to EMERGENCY
    ⇒ Switch fuel pumps OFF
      - If FUEL PRESS warning still remains
        ⇒ Be prepared for engine fail

ALTN FAIL

**Batteries will last for about 30 minutes**

- Check circuit breakers
- ESSENTIAL BUS: ON
- Switch off unnecessary electrical equipment
- Land at nearest suitable airfield
- Be prepared for engine fail;
  be prepared for emergency landing
ALTN AMPS

**HIGH CURRENT**

**Consumption of electrical power is too high**

*Possible reason: fault in wiring or equipment*

- Switch OFF electrical equipment as necessary and possible to reduce electric load
  - If problem not cleared: Land at nearest suitable airfield

STARTER

**STARTER NOT DISENGAGING**

- Power lever IDLE
- Engine master OFF
- Electric master OFF

DOOR OPEN

**UNLOCKED DOORS**

- Reduce airspeed
- Check canopy and rear door visually
  - If canopy and/or rear door unlocked:
    - Airspeed below 140 KIAS
    - Land at nearest suitable airfield

Do not try to lock the rear door in flight

UNINTENTIONAL FLIGHT INTO ICING

Leave icing area, inform ATC

1. Pitot heat ................................................. ON 1
2. Cabin heat ............................................... ON 2
3. Cabin air ............................................... DEFROST 3
4. RPM ............................... INCREASE, change periodically 4
5. Alternate air ............................................. OPEN 5
6. Emergency windows .............. OPEN as required 6
**HIGH CURRENT**

Refer to Emergency Checklist page 8 “ALTN AMPS”

**TOTAL ELECTRIC FAIL**

1. Circuit breakers ......................... CHECK ALL IN  
2. Essential bus ............................................ ON  
   ● If no success:
3. Emergency switch ..................................... ON  
4. Flood light, if necessary ............................. ON  
5. Power ..................................................... SET  
   according power lever position and/or engine noise
6. Flaps .................................................  
   VERIFY POSITION  
   Land at nearest suitable airfield

**ELECTRIC FIRE / SMOKE IN FLIGHT**

1. Emergency switch ..................................... ON  
2. Avionic master ......................................... OFF  
3. Electric master ........................................ OFF  
4. Cabin heat ............................................... OFF  
5. Emergency window ............. OPEN as necessary  
6. Canopy .............................................. UNLATCH as necessary  
   Land immediately

Consider:
[EMERGENCY LANDING (ENGINE OFF)] (page 2)
**FIRE / SMOKE ON GROUND**

1. Power lever ............................................ IDLE 1
2. Cabin heat .............................................. OFF 2
3. Brakes ............................................... apply –airplane to stop 3
4. Fuel valve ............................................... OFF 3
5. Fuel transfer pump ................................... OFF 4
6. Engine master ......................................... OFF 5
7. Fuel pumps ............................................. OFF 6
8. Electric master ......................................... OFF 7

After standstill and when engine stopped:
9. Canopy ................................................. OPEN 8

Evacuate

**FIRE / SMOKE DURING CONTINUED TKOF**

1. Cabin heat .............................................. OFF 1
   If possible climb to safe height and land ASAP
   When landing assured:
2. Fuel valve ............................................... OFF 2
3. Fuel transfer pump ................................... OFF 3
4. Engine master ......................................... OFF 4
5. Fuel pumps ............................................. OFF 5
6. Electric master ......................................... OFF 6
7. Emergency window ............. OPEN as necessary 7
8. Canopy ........................ UNLATCH as necessary 8
9. Flaps .............................. Verify Flap position 9

### Approach speed KIAS

<table>
<thead>
<tr>
<th>Flaps</th>
<th>1000 kg</th>
<th>1080 kg</th>
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<th>1280 kg</th>
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<tr>
<td>T/O</td>
<td>70</td>
<td>73</td>
<td>76</td>
<td>77</td>
<td>78</td>
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<tr>
<td>LDG</td>
<td>69</td>
<td>72</td>
<td>74</td>
<td>76</td>
<td>77</td>
</tr>
</tbody>
</table>
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

   Preferably land on grass.
   After touchdown (if necessary):

   1. Fuel valve ................................................. OFF 1
   2. Engine master ............................................ OFF 2
   3. Fuel pumps ............................................... OFF 3
   4. Electric master ............................................ OFF 4

FUEL TRANSFER PUMP U/S

   1. Fuel valve ........................................... EMERGENCY 1
   2. Fuel pumps ............................................... OFF 2
   3. AUX fuel quantity ......................... CHECK min 1 USG 3
   4. MAIN fuel quantity .............. CHECK max 14 USG 4
   5. Fuel valve ........................................... Reset to NORMAL 5

SUSPICION OF CARBON MONOXIDE

   1. Cabin heat ................................................. 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

<table>
<thead>
<tr>
<th>Light</th>
<th>Page</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>ECU A FAIL</td>
<td>13</td>
<td>Fault in ECU A</td>
</tr>
<tr>
<td>ECU B FAIL</td>
<td>13</td>
<td>Fault in ECU B</td>
</tr>
<tr>
<td>FUEL LOW</td>
<td>14</td>
<td>Main tank fuel qty low</td>
</tr>
<tr>
<td>VOLTS LOW</td>
<td>14</td>
<td>Bus voltage too low</td>
</tr>
<tr>
<td>PITOT FAIL</td>
<td>14</td>
<td>Pitot heating system failed</td>
</tr>
<tr>
<td>COOL LVL</td>
<td>14</td>
<td>Engine coolant level low</td>
</tr>
<tr>
<td>PITOT HT OFF</td>
<td>No procedure</td>
<td>Pitot heating system OFF</td>
</tr>
</tbody>
</table>

#### Indications outside of green range

- RPM high ................................................ page 15
- OIL PRESSURE high/low ..................................... page 15
- OIL TEMPERATURE high/low ................................ page 15
- FUEL TEMPERATURE high/low ................................ page 16
- COOLANT TEMPERATURE high/low ............................ page 16
- GEARBOX temperature high ................................ page 16
- ALTERNATOR load yellow range ........................... page 16

#### Other abnormal situations

- Flap failure ................................................. page 16
ECU A OR B FAIL

ON GROUND

1. Alternate Air ........................................ check CLOSED 1
2. Fuel pumps ............................................... OFF 2
3. VOTER switch ......................................... check AUTO 3
4. Other ECU caution............................... check OFF 4

Clearing procedure:
5. VOTER switch ....................................... set to failed ECU 5
   Wait 5 seconds
6. Voter switch ........................................... AUTO 6
   • If ECU caution persists terminate flight preparation

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

1. Alternate Air ............................................ OPEN 1
2. Fuel pumps ............................................... ON 2
3. Circuit breakers ........ CHECK/RESET if necessary 3
4. VOTER switch ......................................... check AUTO 4
   • If ECU caution persists:
     ⇒ Land at nearest suitable airfield
   • If additional engine problems are observed:
     ⇒ Go to Emergency Checklist page 4
     ENGINE TROUBLESHOOTING

Remark: after landing the clearing procedure for “ECU FAIL ON GROUND” may be used.

ECU A AND B FAIL

SIMULTANEOUSLY

DURING FLIGHT

➢ Go to Emergency Ckl page 4 ENGINE TROUBLESHOOTING
**FUEL LOW**

- Fuel transfer pump: ON
- Check fuel quantity
- Avoid uncoordinated flight
  - If light still ON:
    - Expect fuel leak
    - Fuel valve to EMERGENCY
    - Fuel transfer pump OFF
    - Be prepared for emergency landing

**VOLTS LOW**

*Remark: possible reason is a fault in the electrical power supply*

- On ground
  - Terminate flight preparation
- In flight
  - Check circuit breakers
  - Switch off unnecessary electrical equipment
    - If light still ON:
      - Apply “ALTERNATOR FAIL”-emergency procedure
        (Emergency Checklist page 7)

**PITOT FAIL**

- Check pitot heat ON
  - If in icing conditions
    - expect loss of airspeed indication
    - leave area with icing conditions

**COOL LVL**

- Monitor annunciators and instruments
- Check „Coolant temperature“ procedure, page 16
INDICATIONS OUTSIDE OF GREEN RANGE

**RPM high**
*Yellow range is permitted for up to 5 minutes if required*
- Reduce power
- Keep RPM in green range using the power lever
  - If problem not solved
  - Go to „RPM overspeed“ procedure,
  - Emergency Checklist page 5
  - Land at nearest suitable airfield

**OIL pressure high**
- On ground during warm up with low oil temperature
  - Reduce power until oil pressure green,
  - continue warm up at reduced power
- During flight
  - Check oil temperature
  - Check coolant temperature
    - If temperatures within green range
      - Oil pressure indication may be faulty;
      - watch temperatures
    - If temperatures outside of green range
      - Reduce power;
      - Land at nearest suitable airfield,
      - be prepared for engine fail

**Oil pressure low**
- Refer to Emergency Checklist page 6, „OIL PRES“

**Oil temperature high**
- Refer to Emergency Checklist page 6, „OIL TEMP“

**Oil temperature low**
- Increase power
- Reduce airspeed
**Fuel temperature high**
- Refer to Emergency Checklist page 7, “L/R FUEL TEMP”

**FUEL temperature low**
- Monitor fuel temperature
  - If fuel temperature decreases to red range (< -25°C):
    - Increase power
    - Reduce airspeed
  - If not returning to yellow range:
    => Land at nearest suitable airfield

**Coolant temperature high**
- Refer to Emergency Checklist page 6, “ENG TEMP”

**Coolant temperature low**
*Remark: During low power descent from high altitude coolant temperature may decrease*
- Check “COOL LVL” caution light
  - If ON
    => Reduce power
    => Expect loss of coolant fluid
    => Be prepared for engine failure

**Gearbox temperature high**
- Refer to Emergency Checklist page 7, “GBOX TEMP”

**Alternator load yellow range**
- Switch off unnecessary electrical equipment
  - If indication still outside of green range:
    => Land at nearest suitable airfield

**Flap failure**
- Check flaps visually, recheck all flap switch positions
- Approach speeds with abnormal flap setting:

<table>
<thead>
<tr>
<th></th>
<th>940 kg</th>
<th>1000 kg</th>
<th>1100 kg</th>
<th>1200 kg</th>
<th>1216 kg</th>
<th>1280 kg + above</th>
</tr>
</thead>
<tbody>
<tr>
<td>T/O</td>
<td>68</td>
<td>70</td>
<td>74</td>
<td>77</td>
<td>77</td>
<td>78</td>
</tr>
<tr>
<td>UP</td>
<td>71</td>
<td>73</td>
<td>78</td>
<td>82</td>
<td>82</td>
<td>83</td>
</tr>
</tbody>
</table>