# 4 - THE DISHWASHER MAINTENANCE

## 4.1. - The fault codes

- **Display with LCD or digits:** on this type of screen, codes are displayed in clear.
- **Display with LEDs:** on the programming without display, fault codes are indicated using LEDs (vertical or horizontal depending on the strip aesthetics).

To know the fault number, you have just to add the binary weight of the LEDs illuminated.

The weight of a LED is the binary value corresponding to its position: for example ❶ ❷ ❹ ❽ = **15**

| FAULT "CODE" | | FUNCTIONS and/or ELEMENTS TO BE CHECKED |
|---|---|---|
| LED display | LCD display | |
| ❶○○○ | d01 | **Filling** >>> No High Level after approximately 2' of supply to SV(s)<br>⇨ Check solenoid valve SV1 and Level control FBS |
| ○❷○○ | d02 | **Draining** >>> No Low Level after 30" of draining<br>⇨ Check the pump and the level control FBS |
| ❶❷○○ | d03 | **Heating** >>> No heating<br>⇨ Check the heating tunnel and the door safety device |
| ○○❹○ | d04 | **Thermistor (NTC) OOO or disconnected**<br>⇨ Check its value (47 kΩ at 25°C) |
| ❶○❹○ | d05 | **Current consumed by the cycling pump too low**<br>⇨ Check whether the pump is cut or disconnected |
| ○❷❹○ | d06 | **Current consumed by the cycling pump too high**<br>⇨Check whether the pump is blocked or OOO |
| ❶❷❹○ | d07 | **Leak detection**<br>⇨ Check for abnormal presence of water in the chassis bottom (float contact actuated) |
| ○○○❽ | d08 | **Alternation valve fault**<br>⇨ Check that the system is not blocked and that micro-motor or position sensor are not OOO |
| ❶○○❽ | d09 | Not used |
| ○❷○❽ | d10 | |
| ❶❷○❽ | d11 | Fault of the pressure transducer fitted to some cycling pumps<br>⇨ Check that its wiring is not cut |
| ○○❹❽ | d12 | **Filling** >>> High Level lost during the static filling<br>⇨ Check the draining (siphoning) |
| ❶○❹❽ | d13 | **Overheating** >>> T° read by the NTC too high<br>⇨ Check that the heating relay is not closed or NTC is not OOO |
| ○❷❹❽ | d14 | **Filling** >>> Cycling pump current not stabilized<br>⇨ Check the draining (siphoning) and the cycling pump |

## 4.2. - The aid-to-diagnostic program (ADP)

- **Signalling of faults during the ADP:** some fault codes may not appear during cycle. On the other hand, they will be displayed, for the technician, during the ADP.
  For the programming without display, the programming appears in clear (see table of codes).
  For models with LEDs, the way in which one of the LEDs is used indicates the dishwasher status:
  ✡ **: LED flashing slowly** (0.5" / 0.5") → waiting for servocontrol (level, T° …)
  ● **: LED steady** → servocontrol reached or status correct (step "OK")
  ✸ **: LED flashing rapidly** (0.1" / 0.1") → fault detected
- **Transition to next step** by pressing "Start ⏩" button. It is thus possible to skip steps (except those where it is necessary to wait for level or temperature servocontrol).
- **Checks possible during the ADP:** The board stores the latest ADP data, which allows opening the door (level check) or disconnecting the appliance to check the defective circuit, replace the defective part then connect the product again and continue the ADP.
- **Cancellation and exit from the ADP:** a dishwasher de-energization or actuation of the" On/Off" button does not cancel the current ADP. It is thus necessary to hold the "Start ⏩ " button down for 2'' to exit the ADP. For models with keyboard on the door edge (Full), this operation is performed with the door open.
- **Preliminary steps and conditions to enter the ADP**
  - Remove the plinth and the front crosspiece to gain access to the aid-to-diagnostic leaflet
  - Remove the right-hand panel to see the emptying of the water reserve intended for the regeneration
  - Use a clamp-on probe to check the power supply to heating element
  - Empty the appliance, open the cock and close the dishwasher door
- **ADP start**

| Type of access | Actions | | Display |
|---|---|---|---|
| **Micro-travel keys** (of pushbutton type) | **Cancel the current cycle if need be**<br>2 sec. on ⏩ with door open for Full appliances | 5 actuations of "Start ⏩" in less than 5'' | ***Signalling of all the LEDs? Illumination of all display segments?*** ***+ Buzzer*** *if any*<br>**NO:** the ADP is not started.<br>**YES:** the ADP is started<br>⇨ Continue to run it |
| **Touch controls** ("smooth keyboard) | | Hold the " + " key of the deferred start and 5 actuations of "Start" ⏩ in less than 5'' | |

- Models with control keyboard on the door edge (Full):
  The ADP is started with the door open. Then, close the door to continue.
  The display must be visible and the "Start ⏩ " key accessible. So, the dishwasher must be moved forward from under the working surface or the top must be removed from the dishwashers fitted with.

- **ADP run**

| Action | Step | Run / Check | Analysis / Display | |
|---|---|---|---|---|
| "Start" ⏩ | 01 | **Check of access**<br>Each button actuation or the selector rotation modifies the display. | ***A single LED illuminates at a time? Display modification on each actuation?*** | |
| | | | ***NO*** | Access board OOO. |
| | | | ***YES*** | Nothing to signal. |
| "Start" ⏩ | 02 | **- Check of temperature management** | ✸ 1 LED flashes rapidly and/or 804 is displayed | NTC OOO |
| | | NTC: approximately 47 KΩ at 25°C | ● LED becomes steady or "OK" | Nothing to report. |
| "Start" ⏩ | 03 | **- Draining in fraction**<br>According to model, power supply:<br>- Condenser SV2<br>- Ventilator | ***Low level (N0) reached?***<br>✡ 1 LED flashes slowly or "IN PROGRESS" if high level<br>● LED becomes steady or "OK" if low level (L0) | |
| | | | ***NO*** + ✸ and/or 802 | - Level FBS shorted<br>- Float blocked up<br>- Draining pump OOO |
| | | | ***YES*** | Nothing to report |

| Action | Step | Run / Check | Analysis / Display | |
|---|---|---|---|---|
| "Start" | **04** | **- Filling** (SV1)<br>According to model, power supply:<br>- Condenser SV1 + Fan<br>- Mixing SV<br>and Anti-leak check | ***Filling and high level (L1) reached?***<br>✡ 1 LED flashes slowly or "IN PROGRESS" if low level<br>● this LED becomes steady or "OK" if high level ⇨ Filling stop | |
| | | | ***NO*** + ✸ and/or d01 | - Level FBS cut<br>- Float blocked down<br>- SV1 OOO |
| | | | ***NO*** + ✸ and/or d07 | - Anti-leak actuated: **⇨ SV1 cut** **⇨ Draining** |
| | | | ***YES*** | NOTHING TO REPORT |
| "Start" | **05** | **- Dynamic filling**<br>**- Cycling**<br>**- Alternate spraying** (if present)<br>Power supply:<br>- SV1 (30'' without cycling)<br>- Cycling pump + SV1 (dynamic filling)<br>- Alternate-spraying motor (if present)<br>"QUATTRO" dishwasher<br>- "E5:0" ⇨ 30'' SV1 without cycling<br>- "E5:1" ⇨ test of filling + spraying down If "OK" ⇨<br>- "E5:2" ⇨ test of filling + simultaneous spraying If "OK" ⇨<br>- "E5:3" ⇨ test of filling + inner-door spraying | ***Do winches rotate correctly?***<br>✡ 1 LED flashes slowly or "IN PROGRESS"<br>● this LED becomes steady or "OK" ⇨ Filling stop<br>Transparent door 32X2668 allows checking:<br>- the right rotation of winches<br>- the alternate spraying (if present) | |
| | | | ***NO*** | Arms clogged or blocked |
| | | | ***NO*** + ✸ and/or d05 or d06 | - Cycling pump OOO |
| | | | ***NO*** + ✸ and/or d08 | - Alternate-spraying flap valve OOO (positioning contact or micro-motor) |
| | | | ***YES*** | Nothing to report |
| "Start" | **06** | **- Heating**<br>**- Cycling at regulated pressure** (if transducer)<br>Water topping up if need be<br>Current consumed during heating: 9 A | ***+ 5°C after 5' heating?***<br>✡ 1 LED flashes slowly or "IN PROGRESS" during heating<br>● this LED becomes steady or "OK" if T° has increased ⇨ Heating stop | |
| | | | ***NO*** + ✸ and/or d03 | Heating tunnel OOO |
| | | | ***NO*** + ✸ and/or d11 | Pump pressure transducer OOO (if pump fitted with it) |
| | | | ***YES*** | NOTHING TO REPORT |
| "Start" | **07** | **- Regeneration valve** (RV)<br>Remove the right-hand panel to see the regeneration reserve emptying | ***Is the technical zone reserve emptying?*** | |
| | | | ***NO*** | Regeneration valve OOO |
| | | | ***YES*** | NOTHING TO REPORT |
| | | **- Check of salt level**<br>Move the FBS using a magnet | ***LED flashes ⇨ Tank empty - LED steady ⇨ Tank full*** | |
| | | | ***NO*** | FBS (Flexible Blade Switch) OOO |
| | | | ***YES*** | NOTHING TO REPORT |
| "Start" | **08** | **- Rinsing product intake**<br>Open the door after 1' power supply to the actuator in order to see the product flow | ***Is product flowing along the door?*** | |
| | | | ***NO*** | Rinsing box actuator OOO or box empty |
| | | | ***YES*** | NOTHING TO REPORT |
| | | **- Check of rinsing liquid level**<br>Move the FBS using a magnet | ***LED flashes ⇨ Reserve empty - LED steady ⇨ Reserve full*** | |
| | | | ***NO*** | FBS (Flexible Blade Switch) OOO |
| | | | ***YES*** | NOTHING TO REPORT |
| "Start" | **09** | **- Draining in fraction** | ***10'' cycling*** *(inner-door rinsing)* | |

<table>
<tr><td rowspan="3"></td><td rowspan="3"></td><td rowspan="3">According to model, power supply:<br>- Condenser SV2 + Fan<br>- Inner-door ramp SV</td><td colspan="2">Draining – Low level (L0) reached?<br>✡ 1 LED flashes slowly or "IN PROGRESS" if high level<br>● this LED becomes steady or "OK" if low level (L0)</td></tr>
<tr><td>NO<br>+<br>✸ and/or<br>d02</td><td>- FBS shorted or Float blocked up<br>- Draining pump OOO</td></tr>
<tr><td>YES</td><td>NOTHING TO REPORT</td></tr>
<tr><td>"Start"</td><td>or ON/OFF</td><td>or Mains cutoff</td><td colspan="2">One of these 3 actions ends the ADP</td></tr>
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