

TECHNICAL NOTE N. 828 LB – 11/10/2004

SUBJECT: New Hoover Nextra INTER@CT electronic washing machines:
Personalizing the Menu of Options and carrying out the Auto-test
checking routine.

FOREWORD:

The new Hoover Nextra INTER@CT washing machines, are now equipped with a display board of new concept, where both the clock and the memory are powered by a rechargeable Ni-MH accumulator. This new accumulator replaces the previously used Ni-Cad expendable batteries. The major advantage from the use of a rechargeable accumulator, is the improved reliability in time of the system, also after long periods of storage in the warehouses.

Obviously, the charge cannot be preserved indefinitely. In factory, the new Ni-MH accumulators receive a charge that should last at least for six months, in normal environmental conditions.

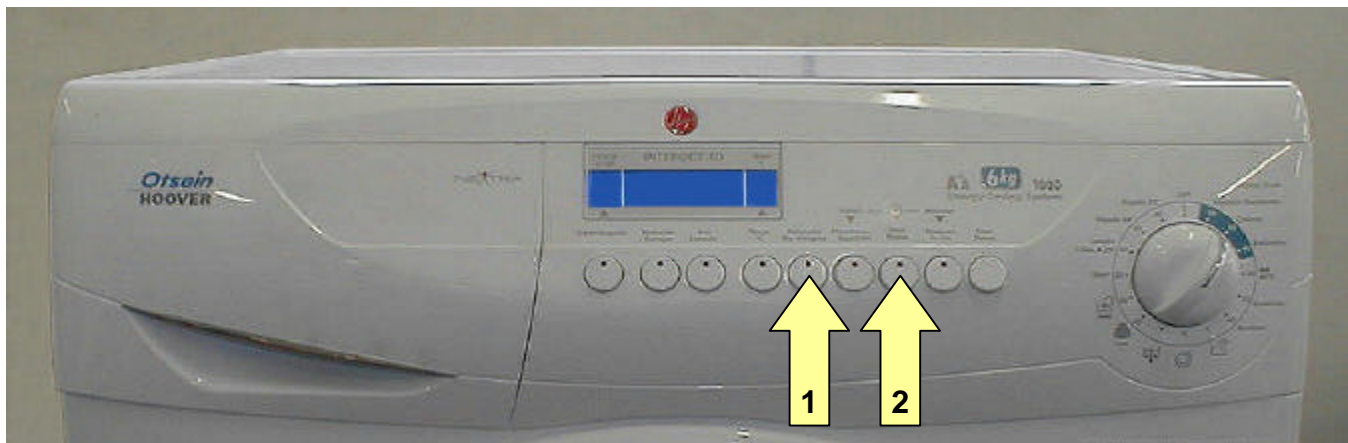
Once the said period is expired, the residual charge which is left in the accumulator may be not enough to feed both the clock circuit than the memory of the washing machine. Therefore, in order to guarantee the perfect functioning of the appliance, the accumulator must be re-charged for a certain period of time.

This is obtained by electrically feeding the appliance and then by moving the Programs Selector's Knob out of the OFF position. Once the LCD display becomes lighted, the accumulator is being charged.

Therefore, in case a seldom used washing machine should loose the programming of the Options Menu and of the time of the day (see chapter A), it's advisable to tell the Customer to switch ON the machine and keep it on for at least 24 hours and then try another programming of the Options Menu, before carrying out the Service replacement of the display board.



A) PERSONALIZATION OF THE INTER@CT OPTIONS MENU:



- A1) Electrically feed the washing machine.
Move the Programs Selector's Knob on the washing program n. 1.
The display shows for a few seconds the welcome message.



- A2) Next are displayed the basic feature of the set washing program and an acoustic signal is emitted (BEEP).
Within 5 seconds from the moment the BEEP is emitted, push simultaneously both buttons of the functions EXTRA RINSE (1) and START DELAY (2).



- A3) The display shows the request of setting the hour of the day: use the EXTRA RINSE (1) button, to make the display show the actual hour of the day.
Confirm the hour value, by pushing the START DELAY (2) button.



- A4) Use the EXTRA RINSE (1) button, to display the actual minutes of the present time of the day.
Confirm the minutes value, by pushing the START DELAY (2) button.



- A5) The display now shows: SET TIME MODE. The choice is between ABSOLUTE and RELATIVE. Use the EXTRA RINSE (1) button, to display the selected value (see note here after).
Confirm the choice, by pushing the START DELAY (2) button.



NOTE: The choice between ABSOLUTE and RELATIVE time modes, affects the way the Residual Time to the beginning of the washing cycle is displayed, once is selected the START DELAY option.

Choose the **ABSOLUTE MODE**, if it's wanted the Residual Time to be displayed in the usual way of a normal clock (HH:MM). I.e. if we decide the washing cycle to start at 20:30, the washing machine will start the washing cycle exactly at that time of the day.

Choose **RELATIVE MODE**, if it's wanted the Residual Time to be displayed as time to be elapsed, before the beginning of the washing cycle (?H ??M). I.e. if we decide that the set washing cycle is to start after 3 hours from now, we'll input the time value 3H 00M. Being now 1 PM, the set washing cycle will start at 4 PM.

- A6) The display shows ENABLE BEEPING? This is related to the acoustic signal emitted by default, once the washing cycle is ended. It may be helpful to suppress this beeping, in case the washing machine is mainly used during nighttime. Use the EXTRA RINSE (1) button, to set your choice on the LCD display. Confirm by pushing the START DELAY (2) option's button.



- A7) The display now shows: ENABLE MEMORY? This question is related to the ability of the machine to keep memory of the selected washing options, for the lately carried out washing cycle.



I.e., if the last performed washing cycle was the 90° for White Cotton and the coupled options were the Pre-wash and Extra Rinse ones, these same options will be automatically activated, each time it's again selected the 90° White Cotton washing program. Choose between YES or NO, by pushing the EXTRA RINSE (1) option button. Confirm the choice, by pushing the START DELAY (2) option's button.

- A8) The display shows SET DEMO MODE?. This is a peculiar special option, uniquely dedicated to suit the needs of commercial show rooms. When selected, it allows the visitors to "play" with the keyboard and the display of the machine, without actually activating the real functioning of the machine.



Of course, for the normal use of the appliance this option must be disabled. Therefore, once the display shows: SET DEMO MODE?, push EXTRA RINSE (1) to choose NO. Confirm the choice, by pushing the START DELAY (2) option's button.

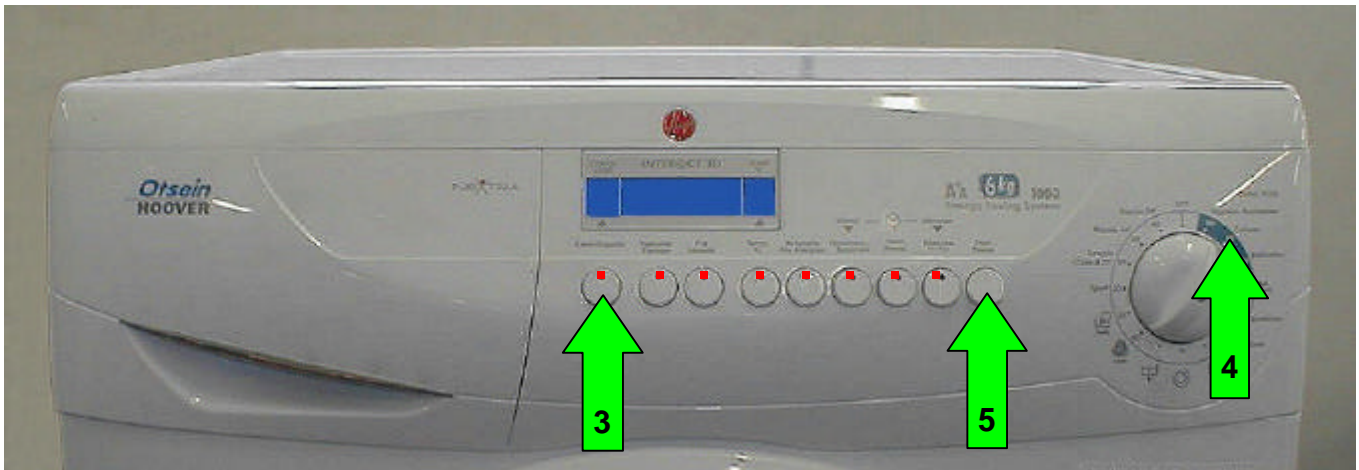
- A9) Eventually, the display shows: EXIT MENU? If all the previous options were correctly organized, push the EXTRA RINSE (1) button, to set YES. Confirm the choice, by pushing the START DELAY (2) option's button.



A10) Once the Menu of Options was exited, the display shows again the features of the washing program n. 1 (set in the beginning) and is now ready for the normal use.



B) SETTING AND CARRYING OUT THE AUTO-TEST CHECKING ROUTINE:



B1) PRELIMINARY OPERATIONS TO THE AUTO-TEST CHECKING ROUTINE:

- Empty the washing machine's drum, from water and laundry.
- Set the Program Selector's Knob to the OFF position.
- Connect a 20A/AC Digital Ammeter, in series to one of the two phases of the mains of the washing machine.
- Connect the washing machine to both electric and hydraulic networks.

B2) ACTIVATION OF THE AUTO-TEST CHECKING ROUTINE:

- Push and hold the SPIN option's button (n. 3 in picture).
- Turn 2 steps in clockwise sense the Program's Knob, in order to set it to the Washing Program n. 2 (60° COTTON). It's displayed the "Welcome" message. Wait for the digital clock to be displayed also.
- Once the Digital Clock is displayed, wait for 3 seconds and release the SPIN (3) option's button. (Clock's flashing dots can be helpful, to count the 3 seconds).
- ALL OPTION'S BUTTONS LEDs ARE SWITCHED ON and a BEEP is emitted.



- The display shows the **current software version** (in this case, it's the NEX-15) and the writing: MODEL 00000000. In this phase, the software is carrying out a self-test, to get the confirmation that the loaded software is correct, for the machine under test.



- After 1" a BEEP is emitted and the sequence of zeros on the display is being replaced by the **actual Product Code of the washing machine under test** (in this case, it's P/C. 31000749).



- Now check the good functionality of all pushbuttons**, by pushing them one by one. Each time a button is pushed a BEEP is emitted and the related LED is switched off. At a further pressure, a BEEP is emitted and the related LED is switched on. The test confirms the correct "dialogue" between the keyboard and the "Core" power module.
- Check the good functionality of the Programs Selector**, by moving the knob on all available settings (OFF EXCLUDED). Each time the knob is set on a washing program, a BEEP is emitted. End this check by leaving the knob set on Program n. 2 (60° White Cotton.).

B3) CARRYING OUT THE AUTO-TEST CHECKING ROUTINE:

- Push the START/PAUSE button**. The display shows the writing: "PROGRAMMING PLEASE WAIT".



- After about 10/15", a **Water Load Phase is started, until it's completed the basic level of 6 litres** of water. The display shows 4 minutes to the end and the spray nozzle is on pre.wash. The digital ammeter shows a current value of about 0.16A.



- As soon as the pressure switch has tripped to the "full tank" position, **it's fed for about 16" the Water Heating Element**. The water spray nozzle is now being moved from the pre-was compartment over the washing one. Ammeter now displays about 8A.



- Elapsed the 16", the Water Heating Element is switched off and are **simultaneously fed both the Solenoid Valve** (to carry out a "timed" water load) **and the Motor**, at 55 rpm (for about 13" in clockwise sense, 5" pause and 8" seconds counterclockwise). Ammeter displays a variable value, from 2A at start to about 1.30/1.50A while tumbling.



- Once the tumbling of the drum is ended, it's fed the **Drain Pump**, until it's obtained the "empty tank" condition of the pressure switch. Display now shows 2 minutes to the end and Ammeter displays a current value about 0.11A.
- When the Pressure Switch has tripped to the "empty tank" position, it's carried out **a short Spin Phase at low speed**, this lasting about 15". Ammeter displays a current value about 1.50A.
- Once the short Spin Phase is ended, the display informs that the **door is still locked**, due to the intervention by the Door Lock Safety Device.
- After a variable interval of time from 45" to about 60", a BEEP is emitted and the Door Lock Safety Device is deactivated. This allows the **opening of the door**. After about 15" it's emitted the first out of the sequence of 8 extended BEEPs, that are issued by the machine, to warn the User that the washing cycle has ended.
- The Auto-test routine can be halted at will, simply by setting the Programs Selector's Knob back to the OFF position. Once the knob is moved again out of the OFF position, the display will show: PROGRAM CANCELLED and a new selection will then be possible.



ERROR CODE	PROBABLE REASON OF THE ERROR CODE
ERROR 01	Faulty Door Safety Lock or Wiring
ERROR 02	Basic Water Load not completed within 3' 30".
ERROR 03	Drain Phase not completed within 3'.
ERROR 04	Intervention by the Anti Flood Safety Pressostat
ERROR 05	Faulty NTC Probe for Water Temperature or Wiring
ERROR 06	Faulty "Core" Control Board or Wiring
ERROR 07	Jammed Motor's Rotor or Blocked Drum
ERROR 08	Open/Short Circuited Tachometric Dynamo or Wiring
ERROR 09	Short Circuited Motor's Triac on Control Board
ERROR 11	Faulty Electronic Board for Drying or Wiring
ERROR 12	Missing Dialogue between Control Boards or Wiring
ERROR 13	Missing Dialogue between Control Boards or Wiring

Best regards.

GIAS S.r.l.