OPERATING MANUAL

DOC. NO. 438.9213-75/02 EDITION 16.2009

EX618cl – EX670cl
EXSM665cl – 680cl
SU620cl – 675cl
Clarus Control

Operating manual

EX618cl – EX670cl
SU620cl – 675cl

Clarus

WARNING: ALL OPERATING AND MAINTENANCE PROCEDURES SHOWN ON THE NEXT PAGE OF THIS MANUAL MUST BE FOLLOWED DAILY FOR PROPER OPERATION OF YOUR WASCOMAT MACHINE.

PLEASE ENTER THE FOLLOWING INFORMATION AS IT APPEARS ON THE MACHINE(S) DATA PLATE(S).

MACHINE TYPE OR MODEL	
MACHINE SERIAL NUMBER(S)	
ELECTRICAL CHARACTERISTICS:_____ VOLTS,_____ PHASE, _____ HZ.	

MAKE CERTAIN TO KEEP THIS MANUAL IN A SECURE PLACE FOR FUTURE REFERENCE.

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SAFETY AND WARNINGS SIGNS

Replace If Missing Or Illegible

One or more of these signs must be affixed on each machine as indicated, when not included as part of the front instruction panel.

LOCATED ON THE OPERATING INSTRUCTION SIGN OF THE MACHINE:

CAUTION

1. Do not open washer door until cycle is completed, operating light is off, and wash cylinder has stopped rotating.
2. Do not tamper with the door safety switch or door lock.
3. Do not attempt to open door or place hands into washer to remove or add clothes during operation. This can cause serious injury.

MACHINE MUST NOT BE USED BY CHILDREN

PRECAUCION

1. No abra la puerta de la máquina lavadora sino hasta que la máquina haya terminado su ciclo, la luz operativa esté apaga da y el cilindro de lavado haya completamento terminado de girar.
2. No interferia o manipule el switch o la cerradura de la puerta.
3. No trate de abrir la puerta o meta las manos dentro de la máquina para meter o sacar ropa mientras la máquina está en operación, pues puede resultar seriamento herido.

LAS MÁQUINAS NO DEBEN SER USADAS POR NIÑOS

LOCATED AT THE REAR OF THE MACHINE:

INSTALLATION AND MAINTENANCE WARNINGS – *AVERTISSEMENT*

1. **This machine MUST be securely bolted according to the installation instructions, to reduce the risk of fire and to prevent serious injury, or damage to the machine.**
   Pour reduire les risques d'incendie, fixer cet appareil sur un plancher beton sans revetement.
2. **If installed on a floor of combustible material, the floor area below this machine must be covered by a metal sheet extending to the outer edges of the machine.**
3. **This machine MUST be connected to a dedicated electrical circuit to which no other lightning unit or general purpose receptacle is connected. Use copper conductor only.**
   Utiliser seulement des conducteurs en cuivre.
4. **This machine MUST be serviced and operated in compliance with manufacturer's instructions. CHECK DOOR LOCK EVERY DAY FOR PROPER OPERATION TO PREVENT INJURY OR DAMAGE. IF THE DOOR LOCK FAILS TO OPERATE PROPERLY, PLACE THE MACHINE OUT OF ORDER UNTIL THE PROBLEM IS CORRECTED.**
5. **Disconnect power prior to servicing of machine.**
   Deconnecter cet appareil del'alimentation avant de proceder a l'entretien.
6. **To remove top panel, first remove screws at the rear. When remounting the top, reinstall them. To remove the top panel on models on which it is secured by one or two keylocks, use the keys provided in the drum package. Be certain to relock after remounting the top panel.**

MANUFACTURED BY WASCATOR
DISTRIBUTED BY WASCOMAT, INWOOD, NEW YORK, USA

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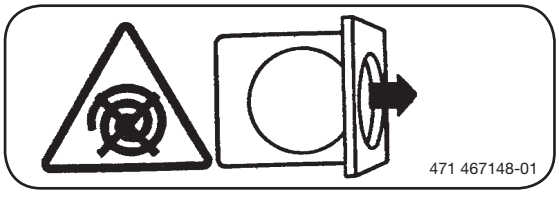
LOCATED ON THE DOOR:

If you need to order more safety or warning signs, call Wascomat's parts department at 516-371-2000, or call your local dealer.



471 467148-01

NOTICE TO: OWNERS, OPERATORS AND DEALERS OF WASCOMAT MACHINES

IMPROPER INSTALLATION AND INADEQUATE MAINTENANCE, POOR HOUSEKEEPING AND WILLFUL NEGLECT OR BYPASSING OF SAFETY DEVICES MAY RESULT IN SERIOUS ACCIDENTS OR INJURY. TO ASSURE THE SAFETY OF CUSTOMERS AND/OR OPERATORS OF YOUR MACHINE, THE FOLLOWING MAINTENANCE CHECKS MUST BE PERFORMED ON A DAILY BASIS.

1. Prior to operation of the machine, check to make certain that all operating instructions and warning signs are affixed to the machine and legible. (See the following page of this manual for description and location of the signs.) Missing or illegible ones must be replaced immediately. Be sure you have spare signs and labels available at all times. These can be obtained from your dealer or Wascomat.

2. Check the door safety interlock, as follows:

   (a) OPEN THE DOOR of the machine and attempt to start in the normal manner:

   For CLARUS microprocessor models, choose a program and press the START button.

THE MACHINE(S) MUST NOT START !

   (b) CLOSE THE DOOR to start machine operation and, while it is operating, attempt to open the door without exerting extreme force on the door handle. The door should remain locked!

   If the machine can start with the door open, or can continue to operate with the door unlocked, the door interlock is no longer operating properly. The machine must be placed out of order and the interlock immediately repaired or replaced. (See the door interlock section of the manual.)

3. DO NOT UNDER ANY CIRCUMSTANCES ATTEMPT TO BYPASS OR REWIRE ANY OF THE MACHINE'S SAFETY DEVICES, AS THIS CAN RESULT IN SERIOUS ACCIDENTS.

4. **Be sure to keep the machine(s) in proper working order**: Follow **all** maintenance and safety procedures. Further information regarding machine safety, service and parts can be obtained from your dealer or from Wascomat through its Technical Support Department - 516/371-0700.

All requests for assistance must include the model, serial number and electrical characteristics as they appear on the machine identification plate. Insert this information in the space provided on the previous page of this manual.

5. **WARNING**: DO NOT OPERATE MACHINE(S) WITH SAFETY DEVICES BYPASSED, REWIRED OR INOPERATIVE! DO NOT OPEN MACHINE DOOR UNTIL DRUM HAS STOPPED ROTATING!

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Safety Precautions

This machine can only be used with water. Never use dry cleaning agents.

Do not allow children to operate the machine.

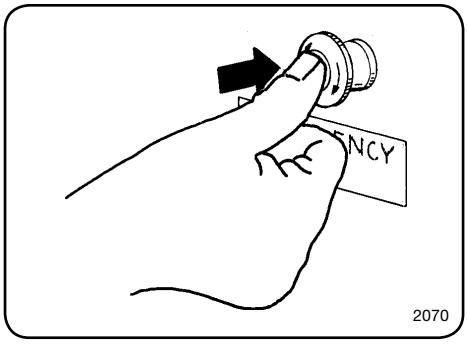
Do not hose down or spray the machine with water.

Mechanical and electrical installation must be carried out by qualified personnel.

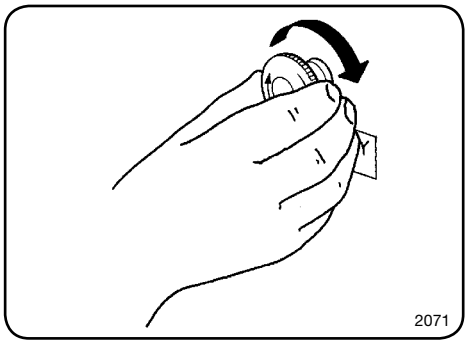
The machine's door lock must not be bypassed and it should be checked daily to ensure it functions.

Should the machine malfunction, turn off electrical power, mark the machine "out of order", and contact your local authorized Wascomat dealer.

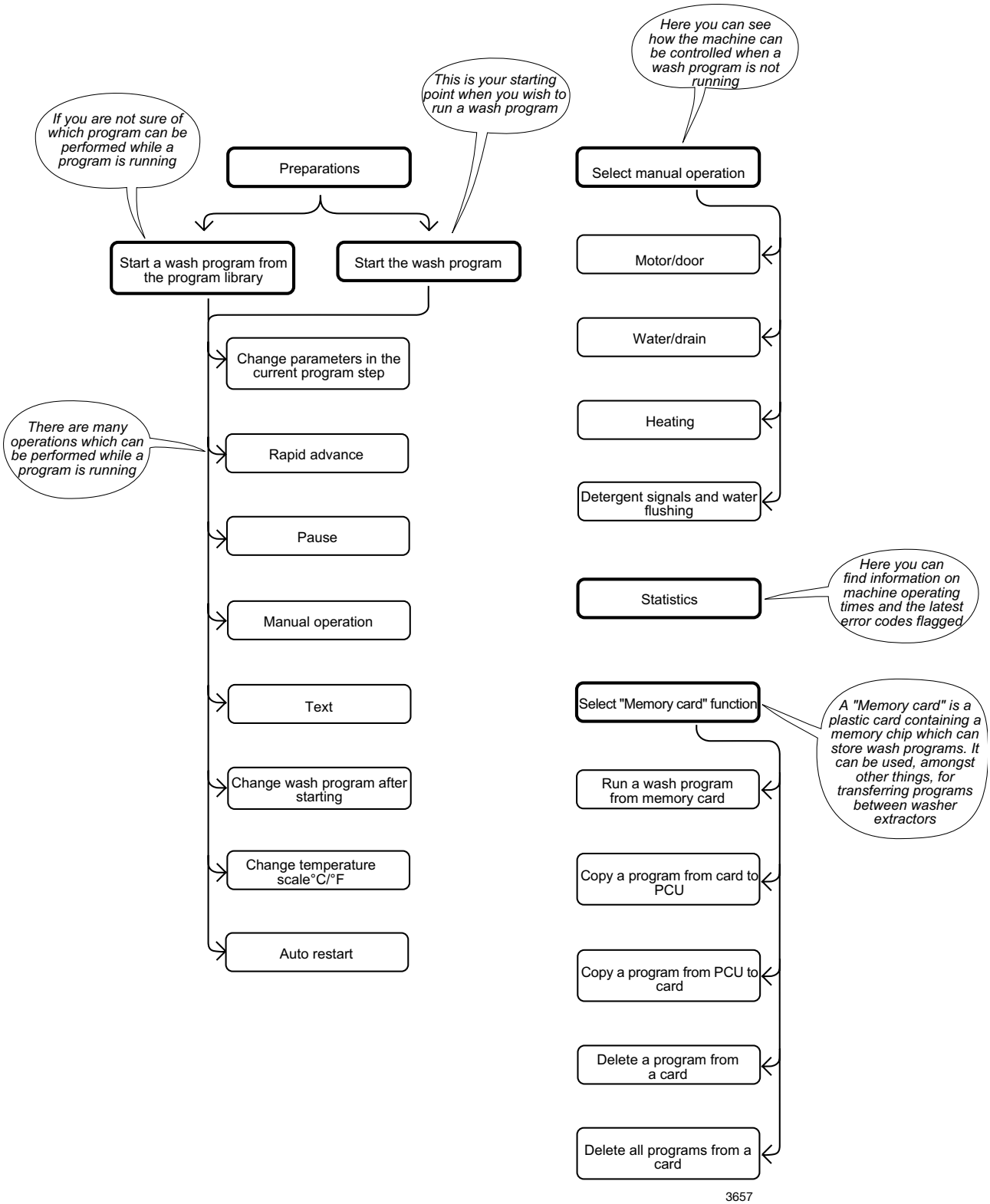
All external equipment which is connected to the machine must be CE/EMC-approved and connected using an approved shielded cable.



Emergency stop
Some models are equipped with an emergency stop button. Press it to turn off power to the drive motor and control circuits. Note that this switch DOES NOT completely disconnect power from the washer, and that some circuits may still be energized. Use appropriate caution.



When necessary measures have been taken, the emergency button can be reset by turning the button clockwise until it is released.


Here you can see how the machine can be controlled when a wash program is not running
This is your starting point when you wish to run a wash program
If you are not sure of which program can be performed while a program is running
Preparations
Select manual operation
Start a wash program from the program library
Start the wash program
Motor/door
Water/drain
Heating
Detergent signals and water flushing
Change parameters in the current program step
There are many operations which can be performed while a program is running
Rapid advance
Pause
Manual operation
Statistics
Here you can find information on machine operating times and the latest error codes flagged
Text
Select "Memory card" function
A "Memory card" is a plastic card containing a memory chip which can store wash programs. It can be used, amongst other things, for transferring programs between washer extractors
Change wash program after starting
Run a wash program from memory card
Change temperature scale°C/°F
Copy a program from card to PCU
Auto restart
Copy a program from PCU to card
Delete a program from a card
Delete all programs from a card
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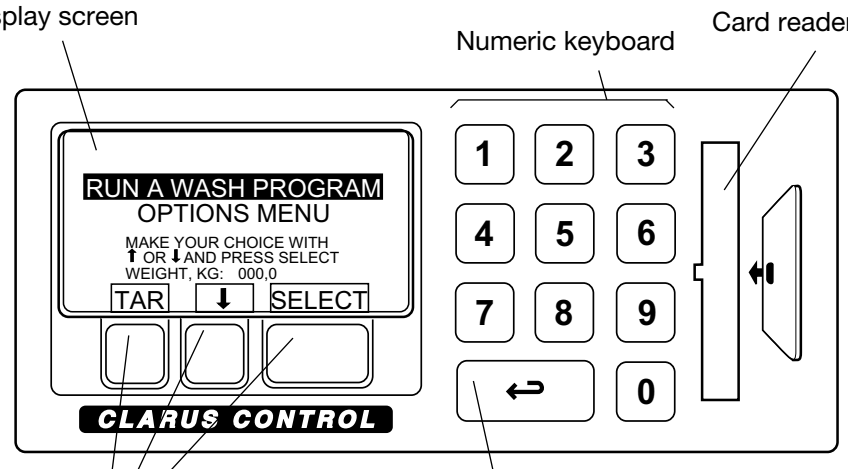
Procedure for use

(1) This washer extractor is controlled by a microprocessor-based program control unit. There are many advantages to this equipment, including:

- timing, levels and temperatures are controlled with great precision and flexibility
- detailed information on wash programs, machine status and operations, wash times and temperatures can be accessed in plain language on the large display screen
- it is possible for the user to create new wash programs, and to adapt programs precisely on the basis of experience and to suit various types of textile, degrees of soiling etc.
- a very high level of machine safety through continuous monitoring and built-in safety interlocks
- the program control unit has a reader for ”memory cards”. These are cards the size of a credit card which contain a memory chip. Memory cards allow the user to:
  - transfer wash programs between a PC and the washer extractor, or from one washer extractor to another
  - run programs straight from a card
- great flexibility during program operation:
  - rapid advance both forwards and backwards in the program
  - change temperatures, program module lengths and extraction speeds directly, during program operation
  - start a different program at any time during program operation.

(1)



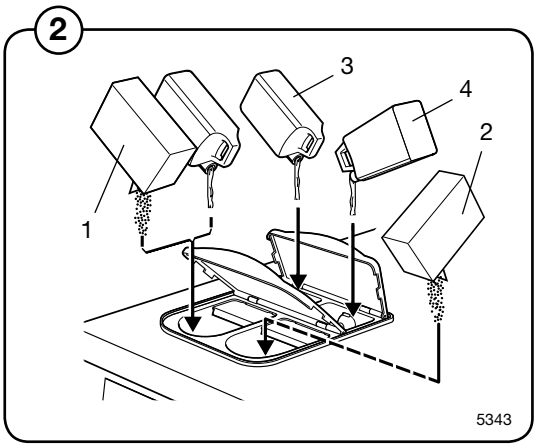
The functions of these keys change, depending on which menu or part of a menu you are using. Their current functions at any time are shown on the display immediately above each key.

The ”Move back” key
By pressing this key repeatedly you can move backwards through the menus you have navigated through. This will always bring you back to the menu illustrated here.

4115 3651

Preparations

- Sort the load, paying attention to the textile care labels on the items. Empty all pockets and do up zip fasteners.
- Open the machine door, check that the drum is empty, load the items into the machine and close the door.
- Check that the emergency stop button has not been pressed inwards (see ”Machine safety”).



Measuring the detergent

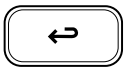
(2) Compartment 1 – pre-wash, powder or liquid detergent

Compartment 2 – main wash, detergent powder

Compartment 3 – softener

Compartment 4 – main wash, liquid powder

The ”Move back” key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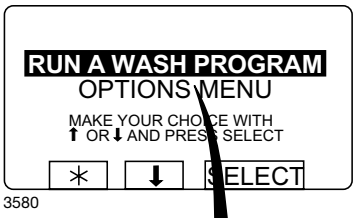
If you find you are in the wrong place, or if you want to undo earlier key presses:

Press the ”Move back” key one or more times.

The ”Move back” function

Each press of the ”Move back” key moves you back one menu, in reverse order. By pressing this key repeatedly you can return to this menu at any time:

To start the wash program



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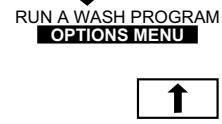
If this menu is not currently displayed:

Press ↩ repeatedly.



If ”GO TO THE MENU” is highlighted:

Press ⬆.

When ”RUN A WASH PROGRAM” is highlighted:

Press SELECT.

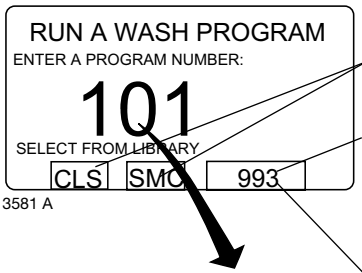
Two ways of starting a program

By entering the actual program number

Enter the actual program number if you know it, then press **SELECT**.

By starting from the program library (see section ”To start a wash program from the program library)

If you are unsure about the programs available, you can select a program from the program library, where the programs are listed with their descriptions.



Here you can select programs from the program libraries. See the section entitled ”To start a wash program from the program library”.

Displayed here will be the number of the most frequently used program. S993 would indicate the number of a program on a memory card.

for example: 991

Press this key if you want to select this program.

SELECT

Use the numeric keys to enter the program number

Press SELECT.

If you have entered the wrong number

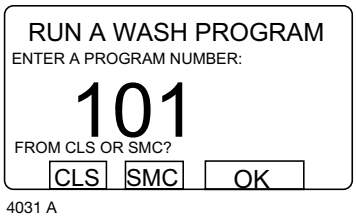
Enter the correct number to overstrike the earlier one.

Note: you must always enter three digits, even when the number is really only a one or two-digit number.

Examples:

The program number required is **9**. Enter **009** to overstrike all digits in the wrong number.

The program number required is **19**. Enter **019** to overstrike all digits in the wrong number.



If you have a memory card in the program control unit, and the program you selected is both on the memory card and in the PCU, you will be asked ”FROM CLS OR SMC?”.

CLS

Press CLS if you want to take the program from the PCU.

SMC

Press SMC if you want to take the program from the memory card.

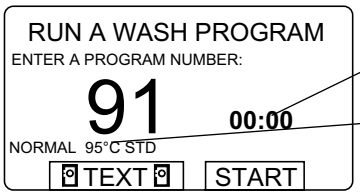
In some of the text shown on the display, Clarus Control is referred to as CLS and the memory card is referred to as SMC.

Memory cards

A memory card is a plastic card, the size of a credit card, with an electronic memory chip inside it. This card is capable of storing 10 to 15 wash programs of normal size. If the programs are mostly small ones, more of them can be stored, whereas larger programs will reduce the number which can be held by the card. Memory cards of this type can be used to:

- transfer wash programs from one washer extractor to another
- run wash programs straight from the card
- transfer wash programs from a PC to a memory card and from a memory card to a PC (these procedures, and how to write a wash program on a PC, are described elsewhere).

Memory cards are described in detail in the section entitled ”The Memory card”.



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Delayed start time (hrs:mins)

Program name

If you want to see the description of the program:

Press TEXT.

Pressing "Text" displays more information

The text displayed is a description of the wash program selected. This text description is inserted when a new wash program is created. This procedure is described fully in the programming manual.

Choose 1 or 2:

1 To start the program now:

Press START.

2 Delayed start

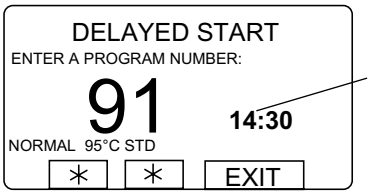
Use the numeric keys to enter a time (max. 99 hrs). This parameter appears on the right of the display.

Press START.

Delayed start

Delayed start means that the machine will not start the wash program until the time entered has elapsed.

This function allows you, for example, to load the machine in the evening, but delay the start of the wash until early the next morning, to end in time for the next shift.



Time left before the machine is to start

If you want to cancel the delayed start:
Press EXIT

During a wash program:

Press ↩ to make the machine pause during the wash program.

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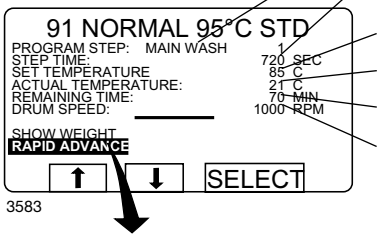
Two ways of pausing during a wash program

There are two ways of pausing during a wash program:

1 By pressing ↩.

2 As an additional function. This is described in **section "Pause"**.

Procedure for use

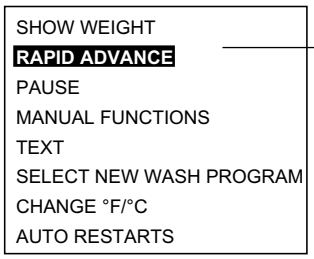


The following information is displayed during the wash program:

- Current program step
- Time left for this program step
- Set temperature
- Actual temperature
- Remaining program time
- Drum speed

To terminate a program before it has finished

- Select RAPID ADVANCE and press SELECT. Advance to ”END OF PROGRAM” and press SELECT.
- Wait until ”THE DOOR IS OPEN” appears on the display.
- Now the door can be opened.



To change parameters in the current program step

See section ”To change parameters in the current program step”.

Certain program step parameters can be altered during the course of the program. In the example (left), the length of the program step and the heating temperature can be altered.

If required:

Select a function using the cursor keys.

Press SELECT.

Additional functions during the program

Rapid advance (see section ”To change parameters in the current program step”)
Rapid advance through the program to the program step required. Rapid advance can be used to move both forwards and backwards through the program.

Display weight (see section ”Display weight”)
The actual load weight is shown in large digits on the display (weight display mode). (On machines with weighing equipment only.)

No water level reduction (see section ”No water level reduction”)
Machines with weighing equipment installed adjust the water level automatically according to the load weight. This function lets you switch off water level reduction during the current program.

Pause (see section ”Pause”)
The machine stops. The drain valve remains closed. Another way to pause the program: Press ⏎.

Manual functions (see section ”Manual operation during a program”)
The following functions can be controlled manually during the course of the program:

- all water valves, drain and pumps (where applicable).
- limit highest extraction speed.
- motor on/off after end of wash program.
- flush detergent.

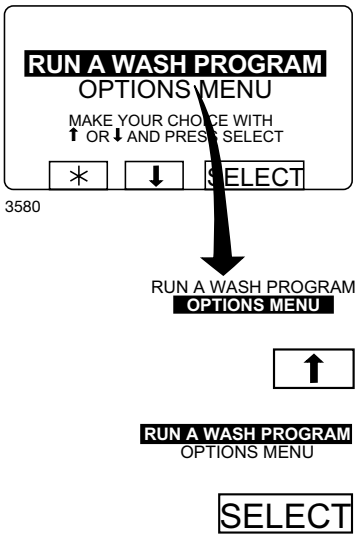
Text (see section ”Text”)
Display description of wash program (if available).

Select a different wash program (see section ”To change the wash program after program operation has commenced”)
You can switch to using a different wash program at any stage during the wash. Once this function has been selected, the current step (for example, rinse) of the earlier program will be allowed to finish and then the new program will start (from the beginning).

Change temperature scale °C or °F (see section ”To change temperature scale °C/°F”)

Auto restart (see section ”Auto restart”)
Here you enter the number of times you wish the wash program to restart automatically.

To start a wash program from the program library



If this menu is not currently displayed:

Press ↩ repeatedly.

If "GO TO THE MENU" is highlighted:

Press ↑.

When "RUN A WASH PROGRAM" is highlighted:

Press SELECT.

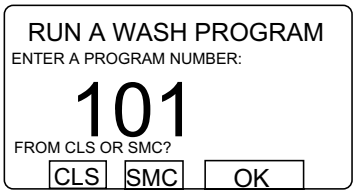
What is the program library?

The program library lists all wash programs, both user and standard programs, showing their program numbers and a description, for example:

1	MY OWN 40 °C
2	MY OWN 60 °C
3	MY OWN 90 °C
991	NORMAL 95°C STD
992	NORMAL 60°C STD
993	NORMAL 40°C STD
994	INTENSIVE 95°C
995	INTENSIVE 60°C
996	PERM. PRESS 60°C
997	PERM. PRESS 40°C
998	LOW EXTRACT 1 MIN
999	HIGH EXTRACT 5 MIN

Each time a new program is stored in the machine program memory, its number and description will be inserted automatically into the program library.

The program library may be used for starting a wash program, but is also used in programming, when a wash program needs to be modified or if a new program is to be created on the basis of an existing one.



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To select a program from the PCU program library:

Press CLS.

CLS

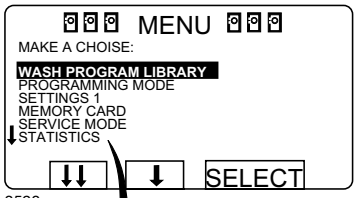
If there is a memory card in the PCU and you wish to select a program on that:

SMC

Press SMC.

Select library via menu

You can also select the program library via the option ”GO TO THE MENU”. Then select ”WASH PROGRAM LIBRARY”.



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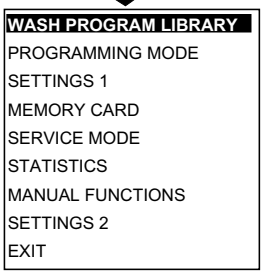

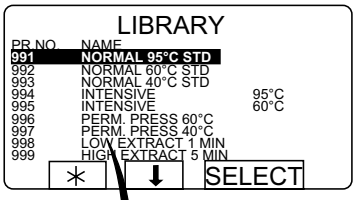

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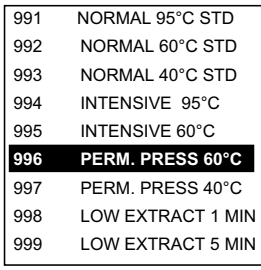
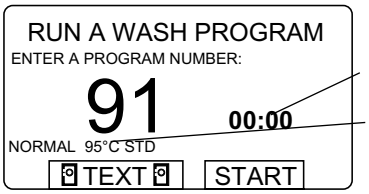


Press ⬇ the required number of times...

...to highlight the wash program required.

SELECT

Press SELECT.



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Delayed start time (hrs:mins)

Program name

If you want to see the description of the program:

Press TEXT

Pressing "Text" displays more information

The text displayed is a description of the wash program selected. This text description is inserted when a new wash program is created. This procedure is described fully in the programming manual.

Choose 1 or 2:

1 To start the program now:

Press START.

2 Delayed start

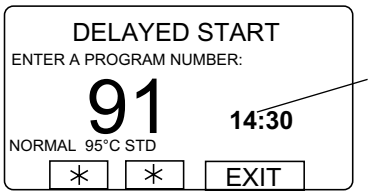
Use the numeric keys to enter a time (max. 99 hrs). This parameter appears on the right of the display.

Press START.

Delayed start

Delayed start means that the machine will not start the wash program until the time entered has elapsed.

This function allows you, for example, to load the machine in the evening, but delay the start of the wash until early the next morning, to end in time for the next shift.

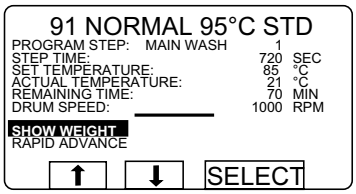


Time (in hours and minutes) left before the machine is to start.

Olf you want to cancel the delayed start:
Press EXIT.

The functions which are available during program operation are described in sections "To change parameters in the current program step - Auto restart".

To change parameters in the current program step



3584

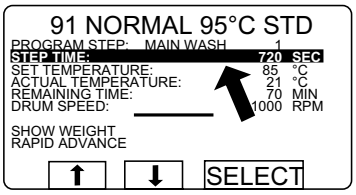
During program operation the display will look like this (see section "To start the wash program").

You can alter the following program steps:

Prewash, Main wash, Rinse, Drain, Soak
Length of program step (max. 9998 seconds), heating temperature (max. 97°C).

Extraction
Length of program step (max. 3599seconds), extraction speed.

Press ⬆ one or more times...



...to highlight the line required.

If you have entered the wrong parameter

Continue pressing numeric keys to overstrike the incorrect parameter.

Note: always use the same number of digits as used on the display to overstrike the incorrect parameter.

Example:

To change the time for the program step to **30** seconds, enter **030** to overstrike the earlier parameter.

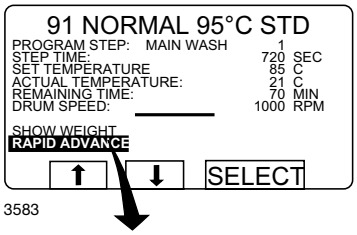
SELECT **Press SELECT.**

1 2 3
4 5 6
7 8 9
0

Use the numeric keys to enter the new parameter .

SELECT **Press SELECT.**

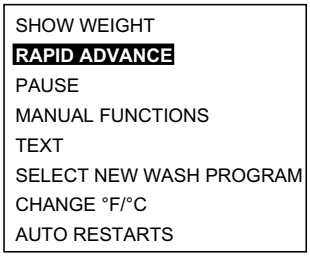
Rapid advance



3583

During program operation the display will look like this (see section "To start the wash program").

Check that "RAPID ADVANCE" is highlighted.

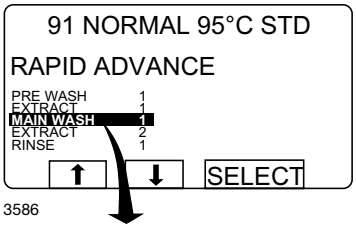


If it is not highlighted:
Press ⬆ or ⬇ one or more times to highlight "RAPID ADVANCE".

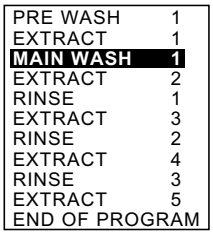
SELECT **Press SELECT.**

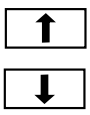
To terminate a program before it has finished

- Select RAPID ADVANCE and press SELECT. Advance to "END OF PROGRAM" and press SELECT.
- Wait until "THE DOOR IS UNLOCKED" appears on the display.
- Now the door can be opened.



3586





Press ⬇ or ⬆ one or more times to highlight the program step you wish to advance to.

SELECT **Press SELECT.**

Rapid advance works in both directions

Rapid advance works in both directions, using ⬇ and ⬆.

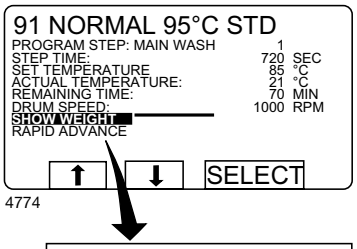
Using rapid advance to move forwards allows you to skip one or more program steps. Using rapid advance backwards allows you to repeat one or more program steps.

Automatic return to normal display

Once you have selected any of the functions below, you must make any changes required within 20 seconds. If no further keys are pressed within 20 seconds, the display will revert automatically to its normal appearance during a wash program.

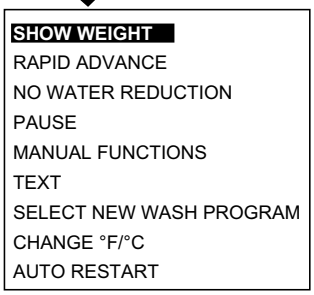
For machines with weighing equipment installed only!

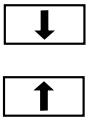
Show weight



4774

During program operation the display will look like this (see section ”To start the wash program”).





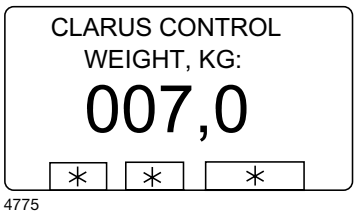
Press ⬆ or ⬇ one or more times to highlight ”SHOW WEIGHT”.

Press SELECT.

Show weight

The actual weight is shown in large digits on the display (weight display mode).

If the weighing equipment is not connected, the error message “FUNCTION NOT ALLOWED” will appear. See the section “Fault-finding, weighing equipment” in the machine manual.



4775

Weight display mode:

The actual net weight is shown in large digits on the display.

Return to normal display

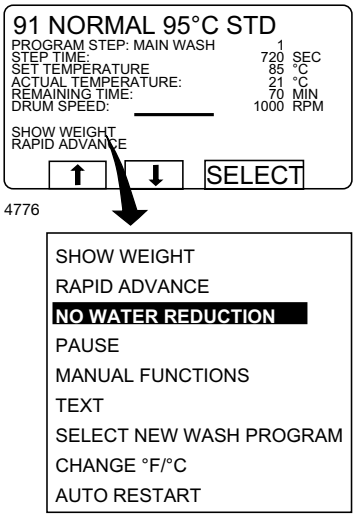
The display will return to normal at the end of the ”time for weight display” set as a parameter in Settings 1. The manufacturer’s default parameter is 20 seconds.

To end weight display sooner

Press ↩ or use the numeric keys to enter a new program number.

For machines with weighing equipment installed only!

No water reduction



During program operation the display will look like this (see section ”To start the wash program”).

No water reduction

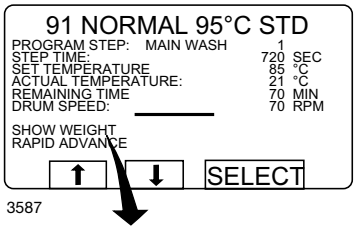
The wash load is weighed during the program and the water level is adjusted automatically according to its weight. If the load is not a full one, the water level will be reduced according to a water level reduction table. You can switch off water level reduction at any stage of a program.

Note that if you select ”NO WATER REDUCTION”, this applies only to the program currently running. The next time a program is started, water level reduction will occur automatically again.

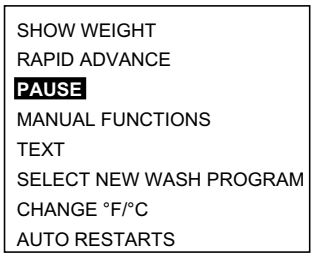
Press ⬆ or ⬇ one or more times to highlight ”NO WATER REDUCTION”.

Press SELECT.

Pause



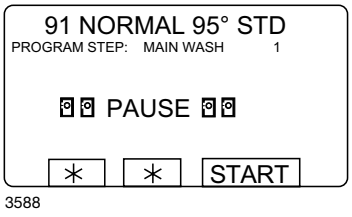
3587



During program operation the display will look like this (see section ”To start the wash program”).

Press ⬆ or ⬇ one or more times to highlight ”PAUSE”.

Press SELECT.



3588

Press START to restart the wash program.

Two ways of pausing during a wash program

Note that you must be in normal wash mode to be able to pause in this way. If, for example, you are using ”Manual Functions”, you will have to exit that first before you can use Pause.

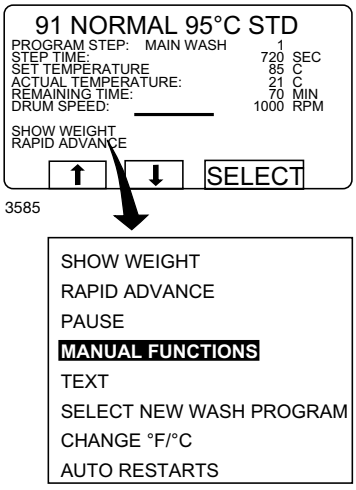
There are two ways of pausing during a wash program:

1 As an additional function. This is described in this section.
2 By pressing ⮌.

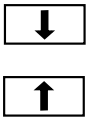
When the machine pauses:

- Program operation is halted.
- Filling is halted (where applicable).
- Heating is halted (where applicable).
- The motor stops.
- The drain valve remains closed.
- The door cannot be opened.

Manual operation during a program



During program operation the display will look like this (see section **"To start the wash program").**



Press ⬆ or ⬇ one or more times to highlight "MANUAL FUNCTIONS".

Press SELECT.

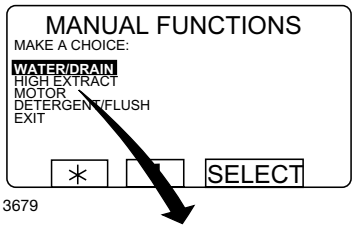
Two types of manual operation

There are two types of manual operation, which should not be confused:

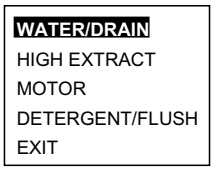
- **Manual operation during a program**

  These functions are described in this section.
- **Manual operation when no program is running**

  These functions are described in **section "Manual operation"**.



3679



Use the cursor keys to select the function.

Press SELECT.

Automatic return to normal display

Once you have selected any of the functions below, you must make any changes required within 20 seconds. If no further keys are pressed within 20 seconds, the display will revert automatically to its normal appearance during a wash program.

Manual functions during a wash program

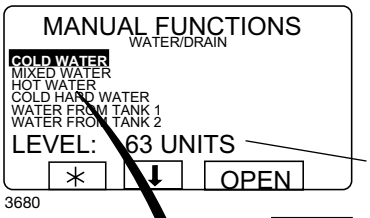
Water/drain (see section ”Water/drain”)
Allows manual operation of all water valves and the drain valve.

Highest extraction speed (see section ”Maximum extraction speed”)
Here you can limit the maximum extraction speed for the current program.

Motor (see section ”Motor on after wash”)
Motor on/off after program has ended.

Detergent valves (see section ”Detergent signals and water flushing”)
Allows you to control all valves in the detergent compartment or in external detergent supply system.

Water/drain



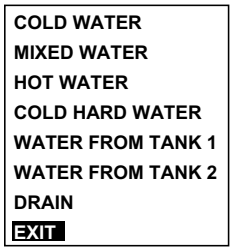
To access this function, see instructions in section "Manual operation".

Water level in drum

Use ⬇ and ⬆ to select the water/drain option you require.

OPEN

Press OPEN.
The function will be activated for as long as you press and hold this key. The function ceases as soon as you release the key.



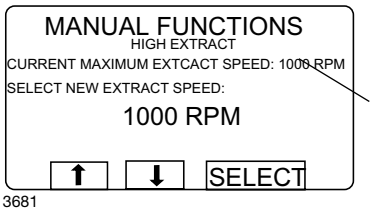
When you have finished:

Press ⬇ repeatedly to highlight "EXIT".

SELECT

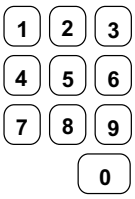
Press SELECT.

Maximum extraction speed



To access this function, see instructions in section "Manual operation".

Maximum extraction speed in current program.



Enter the maximum extraction speed you require for this program.

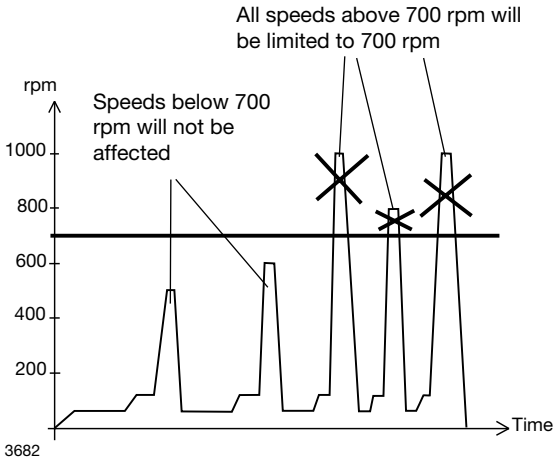
Press SELECT.

To limit the program's highest extraction speed

This function allows you to modify the highest extraction speed allowed during the program.

Example:

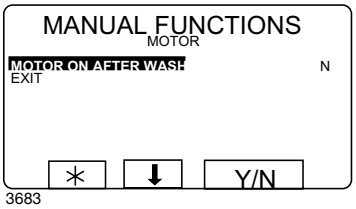
Assume that the highest speed in the program is 1000 rpm and that you have set 700 rpm as the highest speed allowed.



This change will affect the current program only. No change will be implemented if extraction is taking place at the time of the (attempted) change. The next time that this program is used, the original maximum speed will apply.

This function does not allow you to set a **higher** speed than the usual maximum speed for the program.

Motor on after wash



3683

To access this function, see instructions in section "Manual mode".

Y/N

A toggle function:
Use Y/N to toggle the function from ON (Yes) to OFF (No).

When you have finished:
Press ↓ to highlight "EXIT".

SELECT

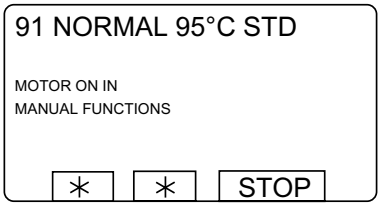
Press SELECT.

Motor to rotate after program has ended

If you answer **Yes (Y)**:

The motor will continue to rotate in alternative directions after the program has ended. This prevents creasing of the load.

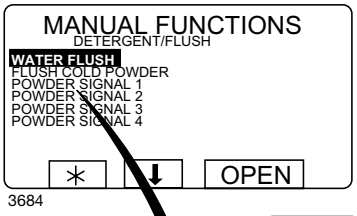
When the program has ended, the display will look like this:



4111

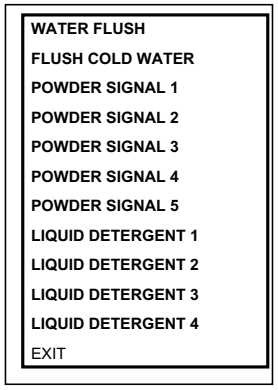
Press STOP to stop the motor.

Detergent signals and water flushing



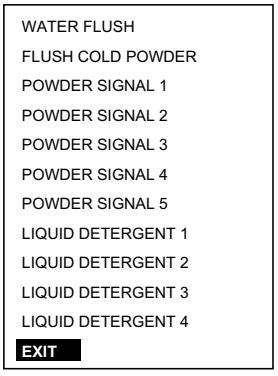
To access this function, see instructions in section "Manual mode".

Use ⬇ and ⬆ to select the function you require.



Press OPEN.
The function will be activated for as long as you press and hold this key. The function ceases as soon as you release the key.

When you have finished:
Press ⬇ repeatedly to highlight "EXIT".



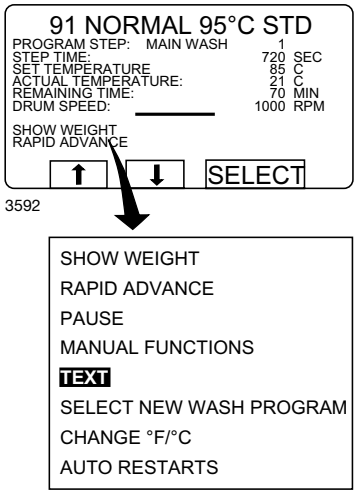
Press SELECT.

Detergent signals and water flushing

FLUSH WATER:
This function uses water to clear detergent from the supply tubes of the detergent dispensing system.

POWDER SIGNAL:
This function will either: a) use water to dispense detergent from machine compartments, or: b) dispense detergent from an external system. The number of valves present will vary according to the machine type.

Text



3592

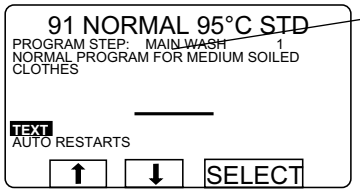
During program operation the display will look like this (see section "To start the wash program".

Pressing "Text" displays more information

The text displayed is a description of the wash program selected. This text description is inserted when a new wash program is created. This procedure is described fully in the programming manual.

Press ⬆ or ⬇ one or more times to highlight "TEXT".

Press SELECT.



3630

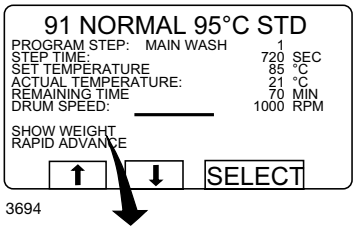
Description of wash program

To return to the normal display:
Press SELECT again.

Automatic return to normal display

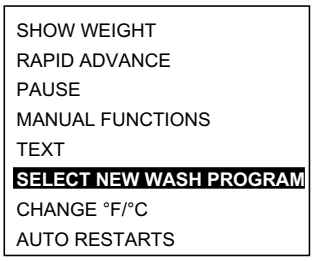
If you do not press SELECT within 20 seconds, the display will revert automatically.

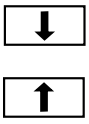
To change the wash program after program operation has commenced



3694

During program operation the display will look like this (see section "To start the wash program".





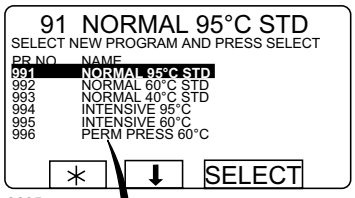
Press ⬆ or ⬇ one or more times to highlight "SELECT NEW WASH PROGRAM".

Press SELECT.

To change the wash program after program operation has commenced

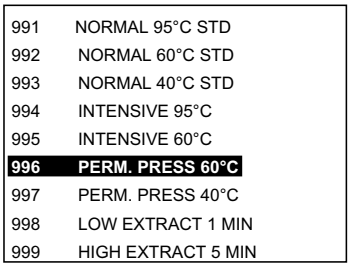
You can change to a different wash program at any time during program operation. When you do, the current function (for example, rinse) will be interrupted. The new program will start immediately after that (from the beginning).

This function is useful, for example, if you discover that you have started the wrong program.



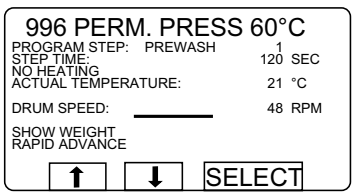
3695

Press ⬇ one or more times as required...



...to highlight the new wash program.

Press SELECT.

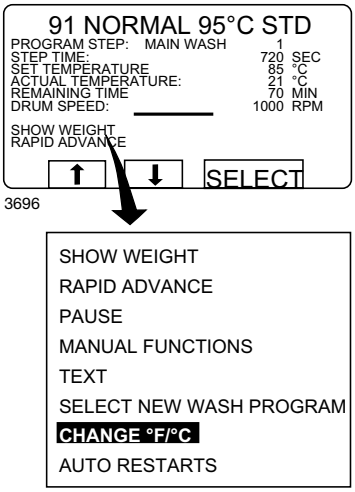


The existing wash program will now be interrupted and the new one will begin.

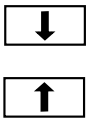
Automatic return to normal display

If no key is pressed within 20 seconds, the display will revert automatically.

To change temperature scale °C/°F



During program operation the display will look like this (see section ”To start the wash program”.



Press ⬆ or ⬇ one or more times to highlight ”CHANGE °C/°F”.

Press SELECT.

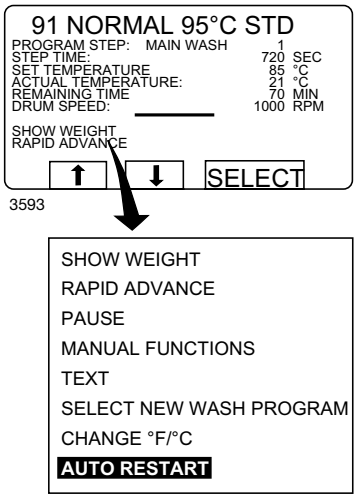
To change temperature scale °C/°F

This function changes the temperature scale used for all temperatures displayed during the wash program.

Please note that this scale change applies only to the current program. The default temperature scale will apply next time you run a program.

To change the default temperature scale for all programs, use the function ”SETTINGS”, which is described in the Service Manual.

Auto restart



3593

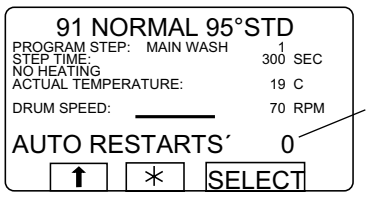
What is Auto restart?

Auto restart means that the same program will be repeated one or more times, according to the number set. The program will restart immediately, and the door will remain locked. If you have set auto restart, the display will show the number of restarts left.

This function is used primarily for testing.

Press ⬇ one or more times to highlight "AUTO RESTART".

Press SELECT.



3594

Shows the number of times the program will restart.

If required:
Use the numeric keys to change the required number of restarts.

Press SELECT.

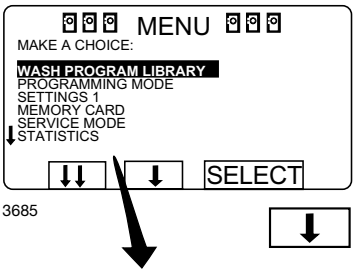
Manual operation

To select manual operation

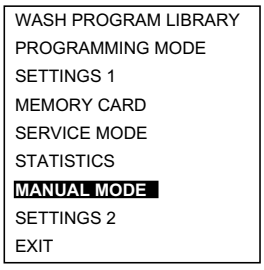
If this menu is not currently displayed:
Press ⮐ repeatedly.

Press ⬇ to highlight "GO TO THE MENU".

SELECT **Press SELECT.**



Press ⬇ six times...



....to highlight "MANUAL MODE".

SELECT **Press SELECT.**

Two types of manual operation

There are two types of manual operation, which should not be confused:

- **Manual operation when no program is running**
  These functions are described in this section.
- **Manual operation during a program**
  These functions are described in **section "Manual operation"** .

Always lock the door first!

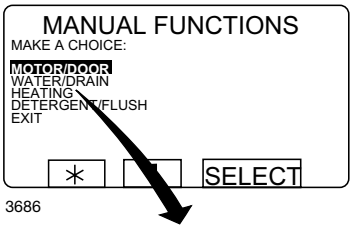
You must always close and lock the door first before you can operate the machine manually.

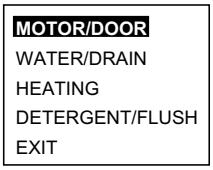
To lock the door, use the submenu MOTOR/DOOR, **see section "Motor/door"**.

All manual settings are cancelled when you exit manual operation

All manual settings (such as door, motor, temperature, and drain) will be cancelled when you exit manual operation.

The door is unlocked, the motor stops, the drain opens, heating is halted, and the temperature is reset to zero.





Select the function required using the cursor keys.

Press SELECT.

Manual operation when no program is running

Motor/door (see section "Motor/door")
Lock/unlock door. Switch motor on/off (normal drum action).

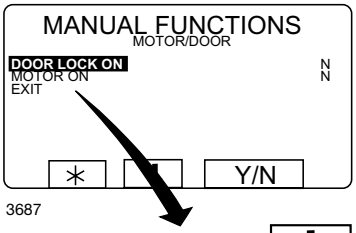
Water and drain valves (see section "Water/drain")
Operation of drain valve and all water valves.

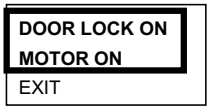
Heating (see section "Heating")
Heat water to any temperature required.

Detergent valves (see section "Detergent signals and water flushing")
Allows manual operation of all valves in detergent compartment or external detergent supply system.

Exit
Returns you to the MENU display.

Motor/door





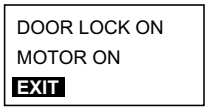
Press ⬇ as required to select a function.

A toggle function:

Use Y/N to toggle the function from ON (Yes) to OFF (No).

When you have finished:

Press ⬇ to highlight "EXIT".



Press SELECT.

Lock the door and start the motor

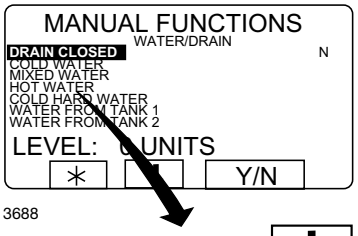
DOOR LOCK ON
If you answer **Yes (Y):**

The door will be locked. Note that you must always lock the door before you can operate the machine manually.

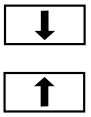
MOTOR ON
If you answer **Yes (Y)**:

The motor will start and operate, using normal action.

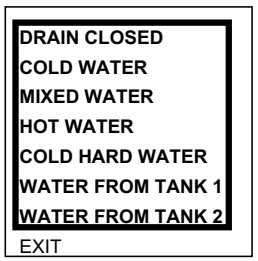
Water/drain



To access this function, see instructions in section ”To select manual operation”.



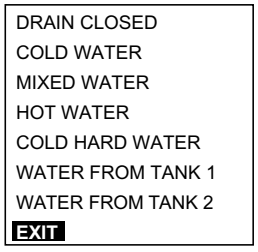
Use ⬇ or ⬆ to select Drain or one of the six Water filling alternatives.



Drain (a toggle function) :
Press Y/N to toggle the function from Yes (Y) and No (N).

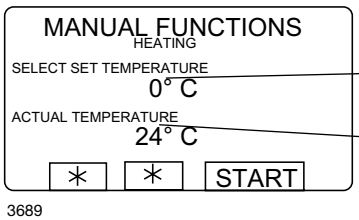
Water filling:
Press OPEN.
The function will be activated for as long as you press and hold this key. The function ceases as soon as you release the key.

When you have finished:
Press ⬇ to highlight ”EXIT”.



Press SELECT.

Heating

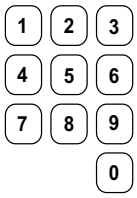


3689

To access this function, see instructions in section ”To select manual operation”.

Temperature selected

Actual temperature



Use the numeric keys to enter the temperature the water is to be heated to.

START

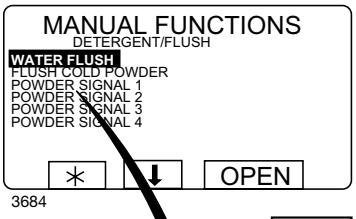
Press START.
Heating will now begin.

STOP

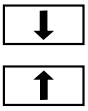
If you wish, you can cancel heating before the set temperature is reached:

Access this function again and press STOP.

Detergent signals and water flushing



To access this function, see instructions in section "To select manual operation".

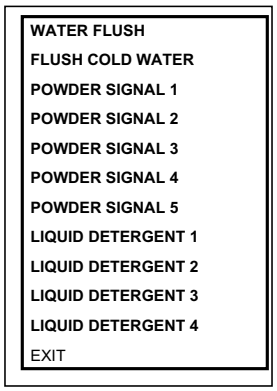


Use ⬇ and ⬆ to select the function you require.

Detergent signals and water flushing

FLUSH WATER:
This function uses water to clear detergent from the supply tubes of the detergent dispensing system.

POWDER SIGNAL:
This function will either: a) use water to dispense detergent from machine compartments, or: b) dispense detergent from an external system. The number of valves present will vary according to the machine type.

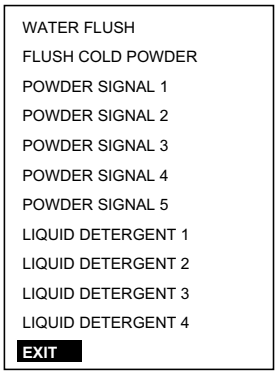


Press OPEN.

The function will be activated for as long as you press and hold this key. The function ceases as soon as you release the key.

When you have finished:

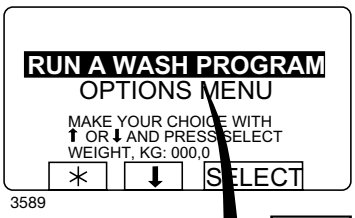
Press ⬇ repeatedly to highlight "EXIT".



Press SELECT.

Statistics

To select Statistics

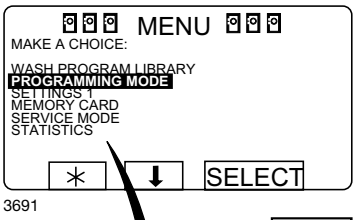


If this menu is not currently displayed:

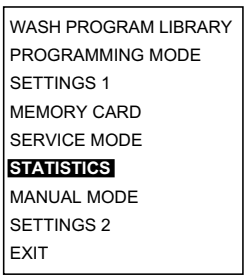
Press ⮐ repeatedly.

Press ⬇ to highlight ”GO TO THE MENU”.

Press SELECT.

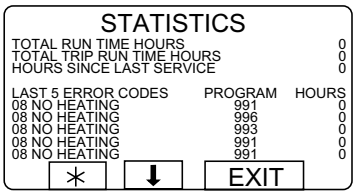


Press ⬇ five times...



...to highlight ”STATISTICS”.

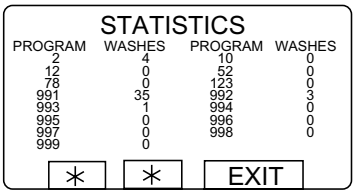
Press SELECT.



3690

To display the next page of statistics:

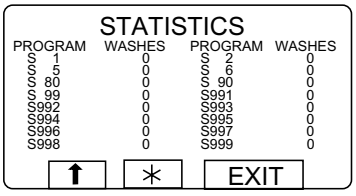
Press ⬇.



3958

To display the next page of statistics:

Press ⬇.



4040

If a memory card is in place in the PCU, the memory card program statistics will be displayed. An ”S” before the program number shows that it is a memory card program.

When you want to cancel the display of statistics:

Press EXIT.

The Statistics function

The Statistics function gives you access to the following information:

TOTAL RUN TIME HOURS:

Shows the total operating time for the machine since it was installed.

TOTAL TRIP RUN TIME HOURS:

This register records the total number of operating hours since it was last reset. It can, for example, be used to keep track of operating time since the last machine service. The procedure for resetting it is described in **section ”To reset ”Total trip run time hours” to zero”**.

HOURS SINCE LAST SERVICE

This register shows the time elapsed since the last service. The register can also be used to generate a signal on the display to show when service is needed (see the section ”Settings 1” in the service manual).

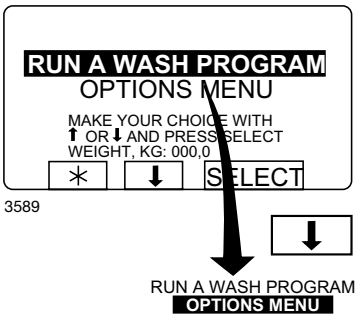
LAST 5 ERROR CODES:

This displays the most recent error codes, and tells which program was operating at the time and during which hour (according to the ”total run time” record) the error code was flagged.

NO. OF TIMES EACH PROGRAM USED:

Displays statistics for PCU programs and for programs on any memory card currently in place in the PCU.

Resetting statistic registers



If this menu is not currently displayed:

Press ⮌ repeatedly.

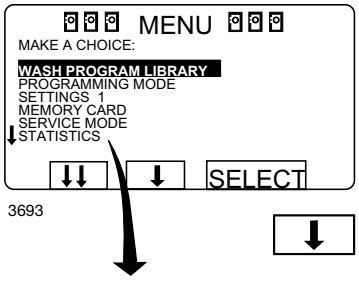
Press ⬇ to highlight "GO TO THE MENU".

Press SELECT.

Statistics registers which can be reset to zero

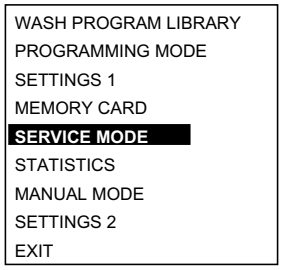
The following registers in the statistics function can be cleared (reset to zero):

- Total trip run time hours.
- Hours since last service.
- No. of times each program used (PCU programs).
- No. of times each program used (programs on any memory card currently in the PCU).



3693

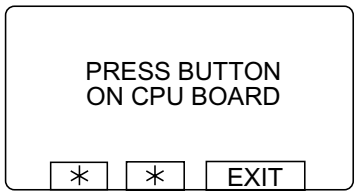
Press ⬇ ..four times....



... to highlight "SERVICE PROGRAM".

SELECT **Press SELECT**

The service program may only be used by authorised personnel, because most safety interlocks are disabled.

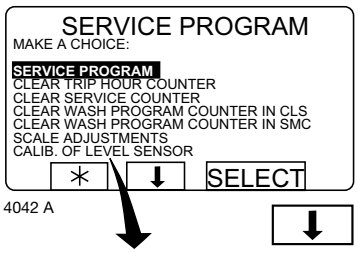


4209

Press the button on the CPU circuit board.

Prevention of unauthorised access

A button on the CPU circuit board has to be pressed to gain access to the service program, to prevent its unauthorised or inadvertent use. The CPU circuit board is located behind the control panel.



4042 A

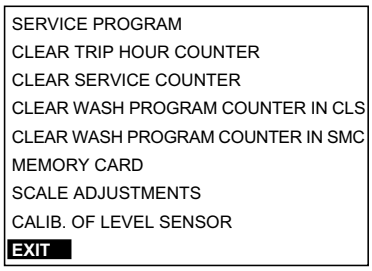
Now you can choose either to clear/reset a register or to adjust the weighing equipment.

Press ⬇ to highlight the option you want, then press SELECT.

SELECT

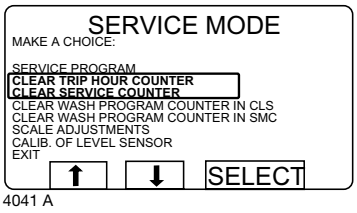
If you want to exit:

Press ⬇ repeatedly until EXIT is highlighted.



SELECT **Press SELECT.**

Time counter, hours after last service

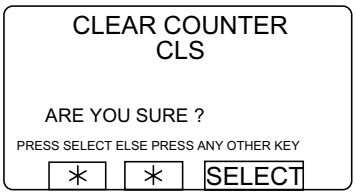


4041 A

Both counters can be reset in the same way.

Press ⬇ so that CLEAR TRIP HOUR COUNTER OR CLEAR SERVICE COUNTER will be marked.

Press SELECT.



4043 A

First you have a chance to change your mind.

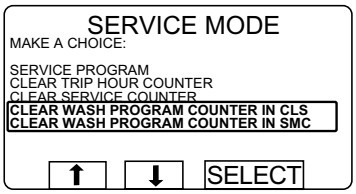
If you **do not want to reset** the register:

Press any key <u>other than</u> SELECT.

If you want to reset the register:

Press SELECT.

Number of washes for program in timer or memory card

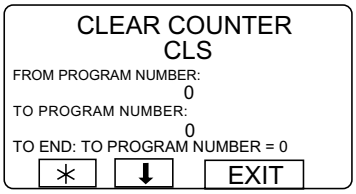


4044 A

You can reset program in both timer and the memory card (if inserted).

Press ⬇ so that CLEAR WASH PROGRAM COUNTER IN CLS or CLEAR WASH PROGRAM COUNTER IN SMC will be marked.

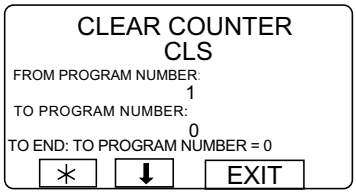
Press SELECT.



4045 A

Write from which program number you want to clear wash programs.

Press ⬇.



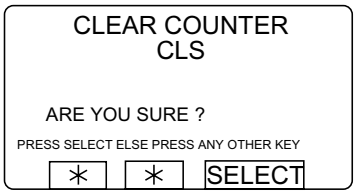
4046 A

1 2 3
4 5 6
7 8 9
0

Enter digits corresponding to the program number (inclusive) up to which you wish to clear the total counter.

ERASE

Press ERASE.



4043 A

First you have the chance to change your mind.

If you **do not want to** reset the register:

Press any key other than SELECT.

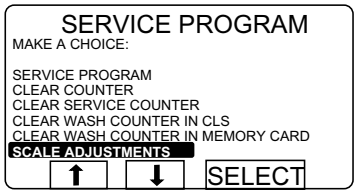
If you do want to reset the register:

SELECT

Press SELECT.

For machines with weighing equipment installed only!

Scale adjustments



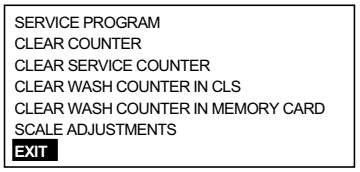
4777 A

Press ⬇ repeatedly until SCALE ADJUSTMENTS is highlighted.

SELECT

Press SELECT.

When you have finished: Press ⬇ repeatedly until EXIT is highlighted.



SELECT

Press SELECT.

Scale adjustments

The following functions are accessed via the SCALE ADJUSTMENTS menu:

Reset scale to zero (see section ”Reset scale to zero”)
Used to make the weighing equipment display 0 when the machine has no load in it.

Reset tare to zero (see section ”Reset tare to zero”)
Used to clear a stored tare parameter.

Tare scale (see section ”Tare scale”)
Used to reset the weighing equipment so that a weight such as a container will not be included when calculating net weight.

Set tare to a certain value (see section ”Set tare to a certain value”)
Used to enter a value for the tare parameter, a weight in hectograms.

Read tare value (see section ”Read tare value”)
Used to check the value currently stored as the tare parameter.

Calibrate the scale (see section ”Calibrate the scale”)
This function is used only on installation of a new scale unit.

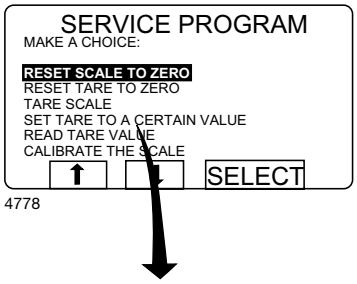
Zero calibration (see section ”Zero calibration”)
Used to increase the accuracy of the weighing equipment.

Read version number (see section ”Read version number”)
This is where you find the version number of the weighing equipment.

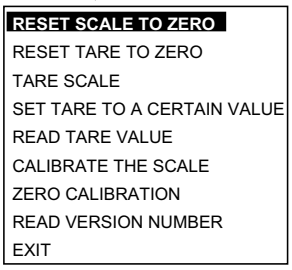
If the weighing equipment is not connected, the error message “WEIGHING EQUIPMENT NOT CONNECTED” will be displayed. Connect the weighing equipment and try again. If necessary, see the section “Fault-finding, weighing equipment” in the machine manual.

For machines with weighing equipment installed only!

Reset scale to zero



4778

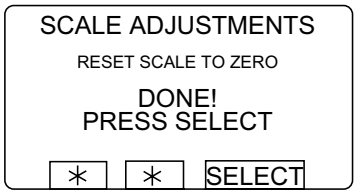


Check that "RESET SCALE TO ZERO" is highlighted.

If it isn't...

Press ⬆ or ⬇ as required to highlight "RESET SCALE TO ZERO".

Press SELECT.



4779

This screen shows that the weighing equipment has been reset to zero.

Press SELECT.

Reset scale to zero

"Reset weighing equipment" is used to make the weighing equipment display 0 when the machine has no load in it.

If your attempt to reset the weighing equipment fails at this point, you will see an error message equivalent to: "FAILED. PRESS SELECT" on the display. For troubleshooting, see the section "Fault-finding, weighing equipment" in the machine manual.

Please note:

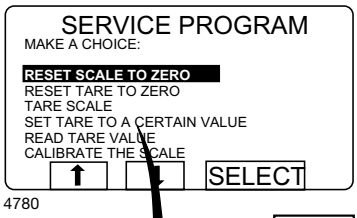
The machine must be unladen when you use this function, i.e. no water or wash load in the drum.

Please note:

After a power-cut, the weighing equipment will always display 0, no matter what the actual load in the drum. In this event you will have to use the "Reset scale to zero" function.

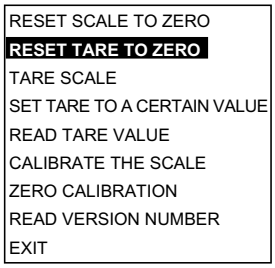
For machines with weighing equipment installed only!

Reset tare to zero

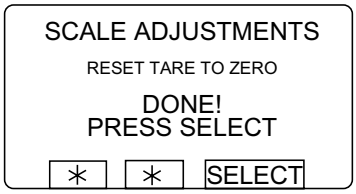


4780

Press ↓ once to highlight "RESET TARE TO ZERO".



SELECT **Press SELECT.**



4781

This screen shows that the stored tare parameter has been cleared.

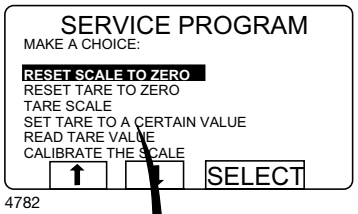
SELECT **Press SELECT.**

Reset tare to zero

If your attempt to clear the tare parameter fails at this point, you will see an error message equivalent to: "FAILED. PRESS SELECT" on the display. For troubleshooting, see the section "Fault-finding, weighing equipment" in the machine manual.

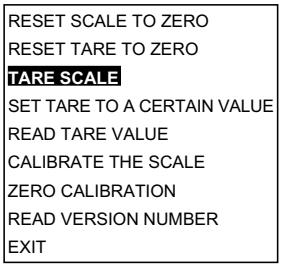
For machines with weighing equipment installed only!

Tare scale

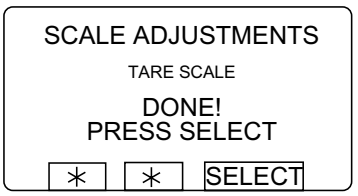


4782

Press ↓ twice to highlight "TARE SCALE".



SELECT **Press SELECT.**



4783

This screen shows that the weighing equipment has been tared successfully.

SELECT **Press SELECT.**

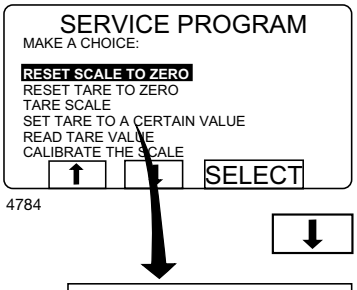
Tare scale

This function involves first loading the drum with, for example, a container, then taring (resetting) the weighing equipment so that the weight of the container will not be included when calculating net weight.

If your attempt to tare the weighing equipment fails at this point, you will see an error message equivalent to: "FAILED. PRESS SELECT" on the display. For troubleshooting, see the section "Fault-finding, weighing equipment" in the machine manual.

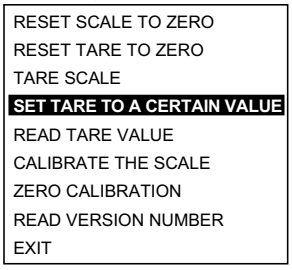
For machines with weighing equipment installed only!

Set tare to a certain value

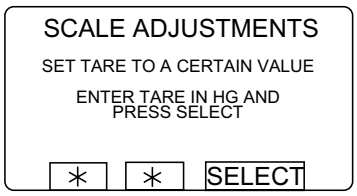


4784

Press ⬇ three times to highlight "SET TARE TO A CERTAIN VALUE"



SELECT **Press SELECT.**

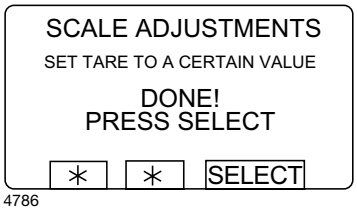


4785

1 2 3
4 5 6
7 8 9
0

Use the numeric keys to enter the tare you require, unit: hectograms; 1 hectogram = 100 grams).

SELECT **Press SELECT.**



4786

This screen shows that the parameter has been entered successfully.

SELECT **Press SELECT.**

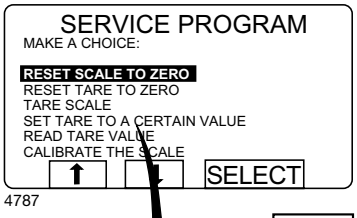
Set tare to a certain value

This function lets you enter a value for the tare parameter, i.e. a weight value which the weighing equipment will disregard when showing a net weight on the display. The function will automatically clear any earlier tare value when you enter a new one.

If your value is not entered successfully at this point, you will see an error message equivalent to: "FAILED. PRESS SELECT" on the display. For troubleshooting, see the section "Fault-finding, weighing equipment" in the machine manual.

For machines with weighing equipment installed only!

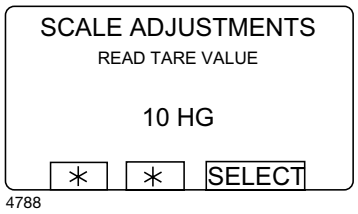
Read tare value



Press ⬇ four times to highlight "READ TARE VALUE".

RESET SCALE TO ZERO
RESET TARE TO ZERO
TARE SCALE
SET TARE TO A CERTAIN VALUE
READ TARE VALUE
CALIBRATE THE SCALE
ZERO CALIBRATION
READ VERSION NUMBER
EXIT

SELECT **Press SELECT.**



This screen shows the stored tare parameter (unit: hectograms (1 hectogram = 100 grams).

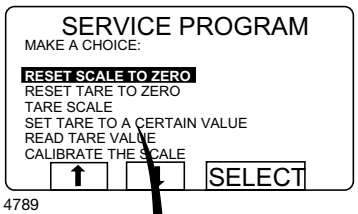
SELECT **Press SELECT.**

Read tare value

This function lets you check the value currently stored as the tare parameter.

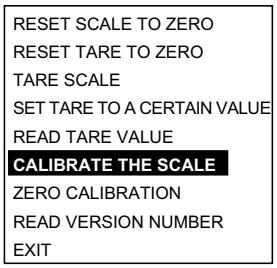
For machines with weighing equipment installed only!

Calibrate the scale

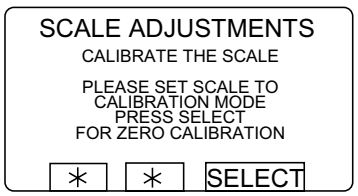


4789

Press ⬇ five times to highlight ”CALIBRATE THE SCALE”.



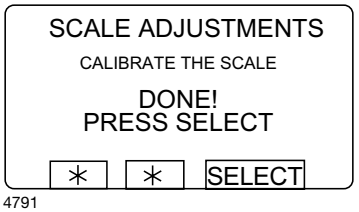
SELECT **Press SELECT.**



4790

Set the calibration switch to calibration mode.

SELECT **Press SELECT.**



4791

SELECT **Press SELECT.**

Please note:

This function is used only on installation of a new scale unit.

Calibrate the scale

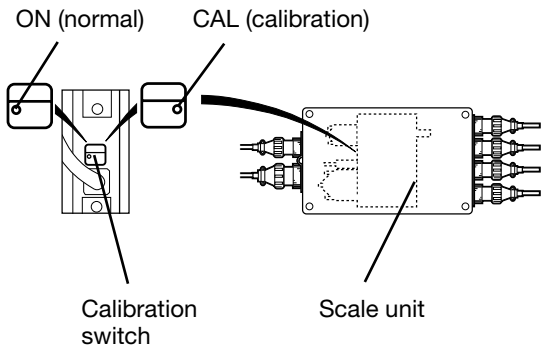
If this calibration has not succeeded you will see an error message equivalent to: “FAILED. PRESS SELECT” on the display. For troubleshooting, see the section “Fault-finding, weighing equipment” in the machine manual.

Please note:

The machine must be unladen at the start of calibration, i.e. no water or wash load in the drum.

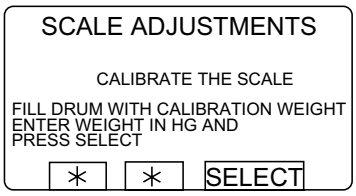
Calibration mode/normal mode

To gain access to the calibration switch in the scale unit, the top panel has to be taken off. Remove the four screws on the scale unit cover. Then the calibration switch can be switched between normal mode ”ON” and calibration mode ”CAL”.



4758 A

For machines with weighing equipment installed only!



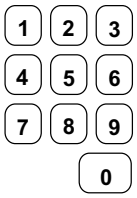
4792

Put the calibration weight in the drum.

Calibration weight

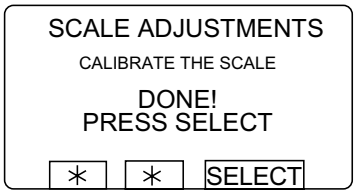
A weight of between 40 kg and 400 kg should be used as a calibration weight.

The higher the weight (within these limits), the better the weighing accuracy of the machine.



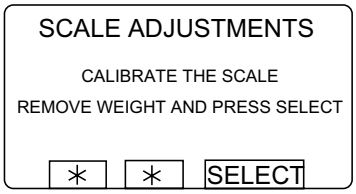
Use the numeric keys to enter the calibration weight in hg (1 hg = 100 grams).

Press SELECT.



4791

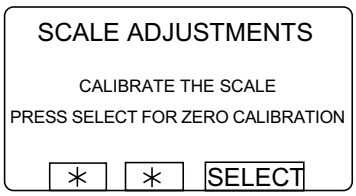
Press SELECT.



4793

Remove the calibration weight.

Press SELECT.

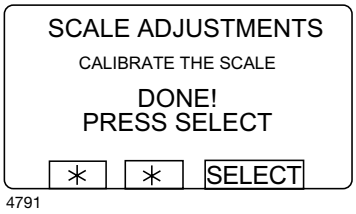


4794

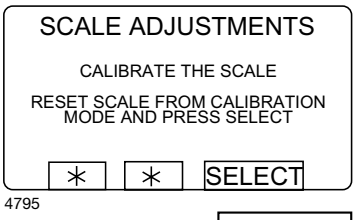
If you want to use the ”Calibrate zero” function now:

Press SELECT.

For machines with weighing equipment installed only!



SELECT **Press SELECT.**

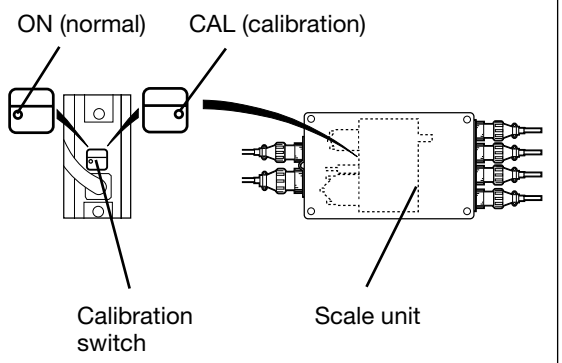


Restore the calibration switch to normal mode.

SELECT **Press SELECT.**

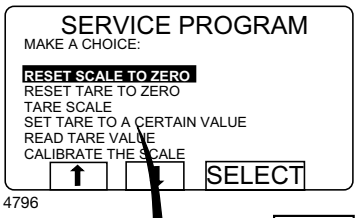
Calibration mode/normal mode

To gain access to the calibration switch in the scale unit, the top panel has to be taken off. Remove the four screws on the scale unit cover. Then the calibration switch can be switched between normal mode ”ON” and calibration mode ”CAL”.



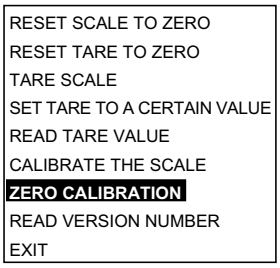
For machines with weighing equipment installed only!

Zero calibration

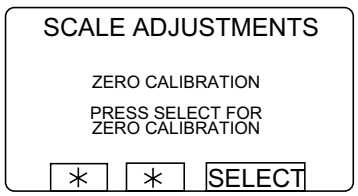


4796

Press ⬇ six times to highlight "ZERO CALIBRATION".



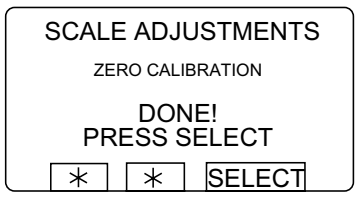
Press SELECT.



4797

If you wish to calibrate zero for the weighing equipment:

Press SELECT.



4798

This screen shows you have calibrated zero.

Press SELECT.

Zero calibration

The "Zero calibration" function is used to increase the accuracy of the weighing equipment. This should be done once a month.

If this calibration has not succeeded you will see an error message equivalent to: "FAILED. PRESS SELECT" on the display.

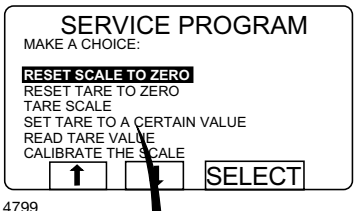
For troubleshooting, see the section "Fault-finding, weighing equipment" in the machine manual.

Please note:

The machine must be unladen during this calibration, i.e. no water or wash load in the drum.

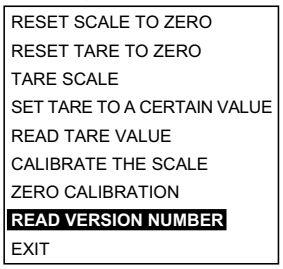
For machines with weighing equipment installed only!

Read version number

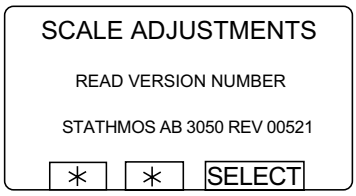


4799

Press ⬇ seven times to highlight ”READ VERSION NUMBER”.



SELECT **Press SELECT.**



4800

The screen shows the version number.

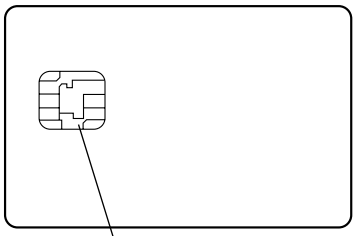
SELECT **Press SELECT.**

Read version number

In the event of a fault in the weighing equipment (which cannot be put right with the aid of the section “Fault-finding, weighing equipment” in the machine manual), make a note of the version number accessed via this function before you contact the supplier’s service department.

Memory card

General introduction



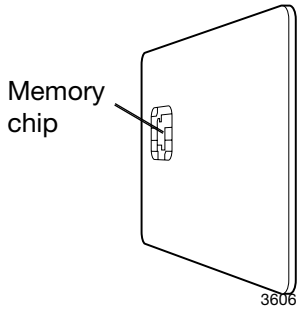
A memory card is a plastic card, the size of a credit card, with an electronic memory chip inside it. This memory card is capable of storing 10 to 15 wash programs of normal size. If the programs are mostly small ones, more of them can be stored, whereas larger programs will reduce the number which can be held by the memory card. Memory cards of this type can be used to:

- transfer wash programs from one machine to another
- run wash programs straight from the memory card
- transfer wash programs from a PC to a memory card and from a memory card to a PC (these procedures, and how to write a wash program on a PC, are described elsewhere)

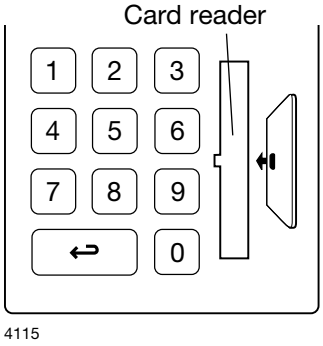
A program stored on a memory card may be given restricted-use status. This means that:

- The program cannot be deleted or copied to the program control unit of a washer extractor.
- You cannot alter the program or inspect the way it is written.
- To run the program you have to have the memory card and to insert it into the program control unit when the program is to be started.

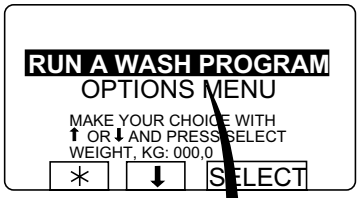
To select the ”Memory card” function



Turn the memory card so its memory chip is at the far end, and on the left of the card...



...then insert the memory card into the program control unit.



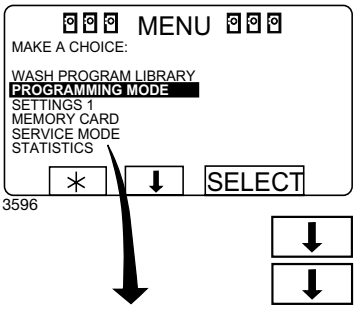
If this menu is not currently displayed:

Press ⮌ repeatedly.

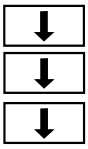
Press ⬇ to highlight ”GO TO THE MENU”.

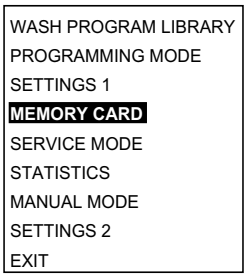
RUN A WASH PROGRAM
OPTIONS MENU

SELECT **Press SELECT.**



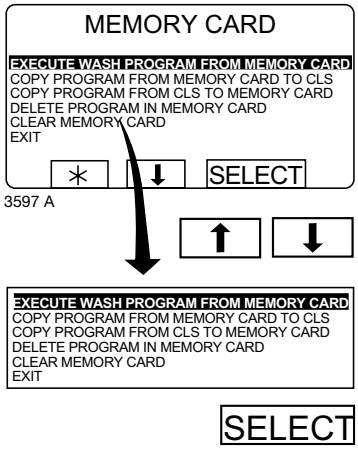
Press ⬇ three times...





...to highlight "MEMORY CARD".

SELECT **Press SELECT.**



Select the function required using the cursor keys.

SELECT **Press SELECT.**

”The ”Memory card” functions

Run wash program straight from memory card (see section ”To run a wash program straight from a memory card”)

A wash program can be run from the memory card, without first being copied to the washer extractor. The memory card may be removed from the card reader after the program has started.

Programs on memory cards may have ”restricted-use” status, which means that they can only be run straight from the memory card, not copied or modified.

Copy program from memory card to PCS (see section ”To copy a program from a memory card to the machine´s program control unit”)

One or more wash programs can be copied from the memory card to the memory chip in the machine’s program control unit. Note that programs on the memory card with ”restricted-use” status cannot be copied to the machine memory chip.

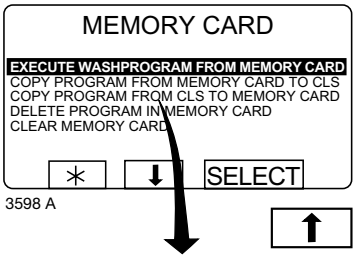
Copy program from PCS to memory card (see section ”To copy a program from the program control unit to a memory card”)

One or more wash programs can be copied from the memory chip in the machine’s program control unit to the memory card. The memory card can hold 10 to 15 wash programs of normal size.

Delete program on memory card (see section ”To delete a program on a memory card”)

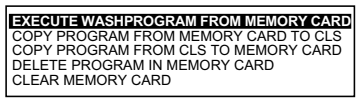
Clear memory card (see section ”To delete all programs on a memory card”)

To run a wash program straight from a memory card

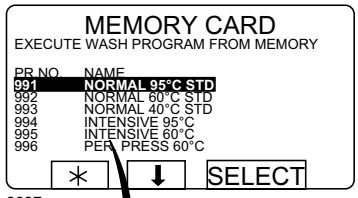


To access this menu, follow the instructions in section "To select the "Memory card" function".

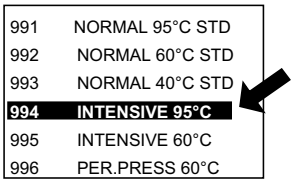
Highlight "EXECUTE WASH PROGRAM FROM MEMORY CARD" (press ⬆ if necessary).



SELECT **Press SELECT.**

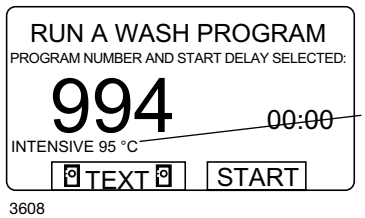


⬇ **If necessary, use ⬇ to...**



... highlight the wash program required.

SELECT **Press SELECT.**



Program name

If you want to see the description of the program (where available):

TEXT **Press TEXT.**

START To start the program:

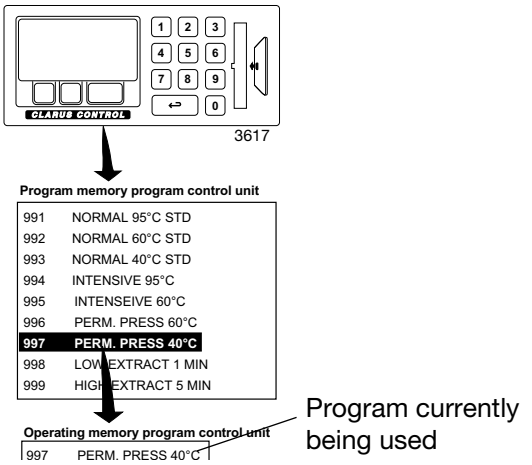
Press START.

Once the program has started, the memory card may be removed from the card reader.

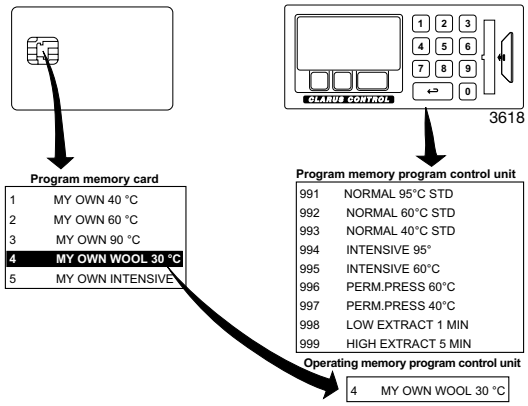
To run a program from the memory card

In broad terms, the program control unit has two different memories. One is a "**program memory**" where all its wash programs are stored, the other is an "**operating memory**", which is used to hold the program currently in use. The program control unit takes the instructions it needs to run the program from the operating memory.

When a wash program is started, the correct program is retrieved from the program memory and copied into the operating memory.



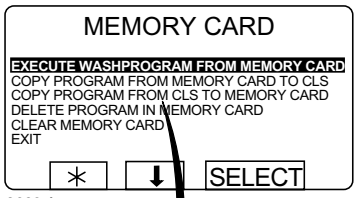
A parallel process takes place when a program is started from a memory card. In other words, the program is copied from the memory card into the operating memory, and the machine runs the program entirely from the set of instructions in the operating memory.



That is why you may remove the memory card from the card reader once the program has started.

Once the program has ended it is erased from the operating memory.

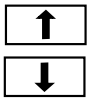
To copy a program from a memory card to the machine's program control unit



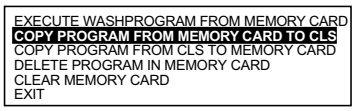
3609 A

To access this menu, follow the instructions in section "To select the "Memory card" function".

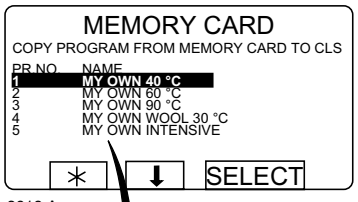
Note that restricted-use programs on a memory card cannot be copied.



Highlight "COPY PROGRAM FROM MEMORY CARD TO CLS" (press ⬇ or ⬆ if necessary).

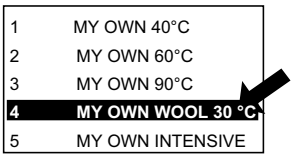


SELECT **Press SELECT.**



3610 A

If necessary, use ⬇ to...



... highlight the wash program required.

SELECT **Press SELECT.**

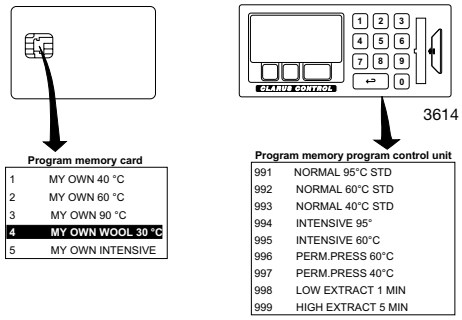
What is a restricted-use program?

A wash program which has been created on a PC can be made a "restricted-use" program. This means that:

- The program cannot be deleted or copied to the program memory of a washer extractor.
- You cannot modify the program or examine its structure.
- To run the program you must have access to the memory card, and insert it into the card reader when the program is to be started.

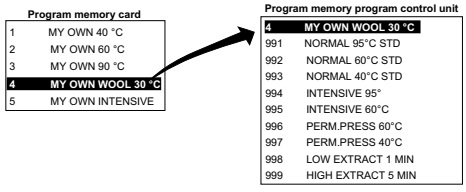
What happens when a program is copied?

Both the memory card and the program control unit have memory chips capable of storing wash programs. The chip on the card can hold about 10 to 15 programs of normal size, while the chip in the program control unit has a capacity of several hundred programs.



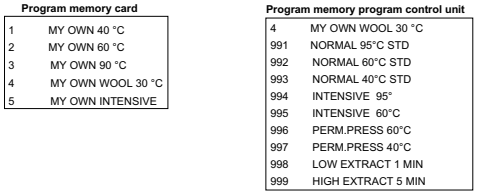
3614

When a program is copied from a memory card to the machine's program control unit, it is copied, not moved (not deleted from the card). A copy is transferred from the chip on the memory card to the storage chip of the machine program control unit.

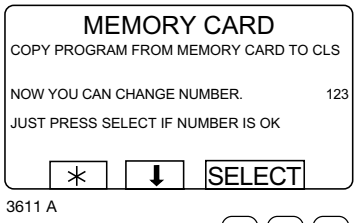


3615

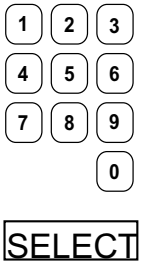
The program remains on the memory card, but another copy of it has now been stored in the program control unit.



3616



3611 A



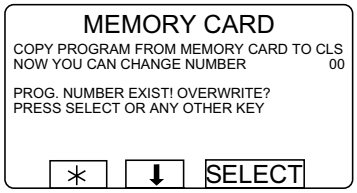
Choose 1 or 2:

1 If you want to give the program a different program number (from the one it had on the memory card):

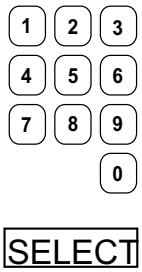
Use the numeric keys to enter the new program number, then press SELECT.

2 If the existing number is suitable:

Press SELECT.



4114 A



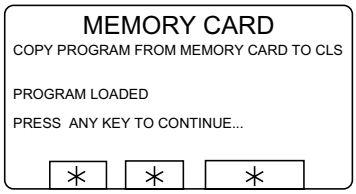
If the number you have choosen is already used:

1 Select another number.

Enter the new number and press SELECT.

2 Erase the old program number.

Press SELECT.

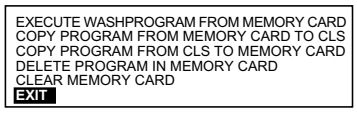


3612 A

After the program has been copied (it takes only a few seconds) the menu will look like this:

If you want to copy more programs:

Press any key to continue.



4210 A

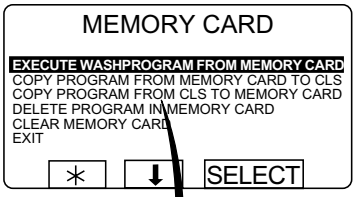
When you have finished:

Press ⬇ repeatedly to-highlight "EXIT".

SELECT

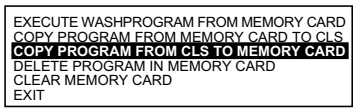
Press SELECT.

To copy a program from the program control unit to a memory card

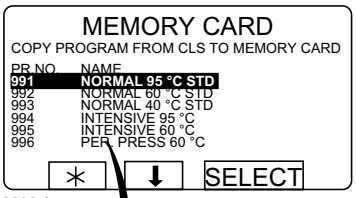


3619 A

Highlight "COPY PROGRAM FROM CLS TO MEMORY CARD" (press ⬇ or ⬆ if necessary).



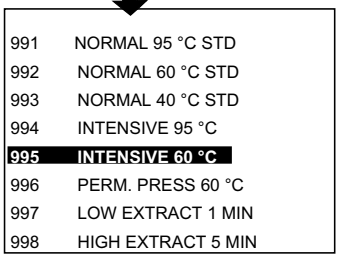
Press SELECT.



3620 A

If necessary, use ⬇ to...

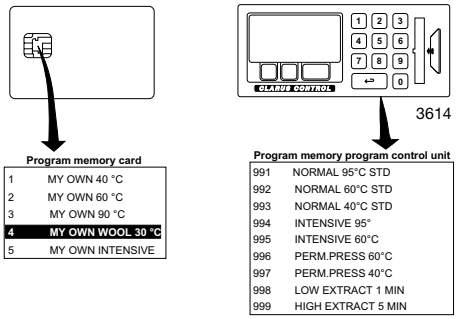
... highlight the wash program required.



Press SELECT.

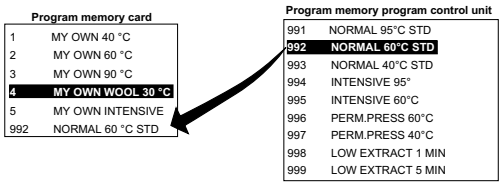
What happens when a program is copied?

Both the memory card and the program control unit have memory chips capable of storing wash programs. The chip on the memory card can hold about 10 to 15 programs of normal size, while the chip in the program control unit has a capacity of several hundred programs.



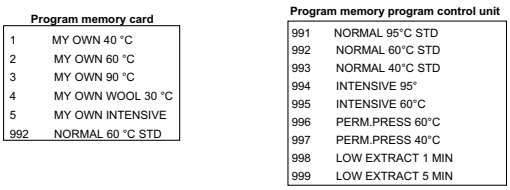
3614

When a program is copied from the machine's program control unit to a memory card, it is copied, not moved (not deleted from the machine). A copy is transferred from the storage chip of the machine program control unit to the chip on the card.

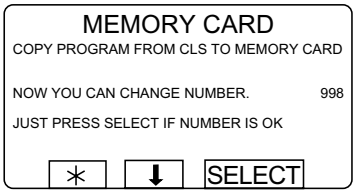


3621

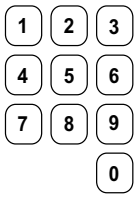
The program remains in the program control unit, but another copy of it has now been stored on the card.



3622



3623 A



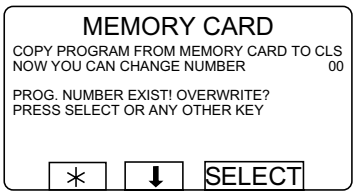
Choose 1 or 2:

1 If you want to give the program a different program number (from the one it had on the machine):

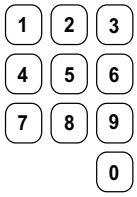
Use the numeric keys to enter the new program number, then press SELECT.

2 If the existing number is suitable:

Press SELECT.



4114 A



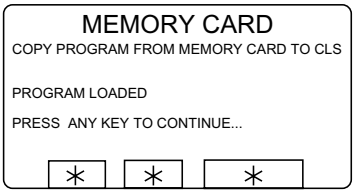
If the number you have choosen is already used:

1 Select another number.

Enter the new number and press SELECT.

2 Erase the old program number.

Press SELECT.

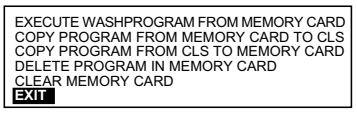


3612 A

After the program has been copied (it takes only a few seconds) the menu will look like this:

If you want to copy more programs:

Press any key to continue.



4210 A

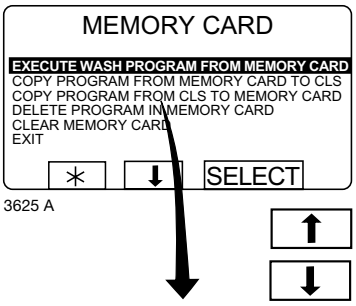
When you have finished:

Press ⬇ repeatedly to highlight "EXIT".

SELECT

Press SELECT.

To delete a program on a memory card



To access this menu, follow the instructions in section "To select the "Memory card" function

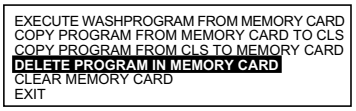
Note that restricted-use programs on a memory card cannot be deleted.

What is a restricted-use program?

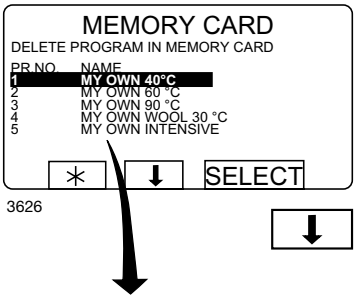
A wash program which has been created on a PC can be made a "restricted-use" program. This means that:

- The program cannot be deleted or copied to the program memory of a washer extractor.
- You cannot modify the program or examine its structure.
- To run the program you must have access to the memory card, and insert it into the card reader when the program is to be started.

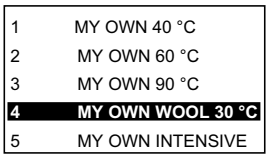
Highlight "DELETE PROGRAM IN MEMORY CARD" (press ⬆ or ⬇ if necessary).



SELECT **Press SELECT.**



⬇ **If necessary, use ⬇ to...**



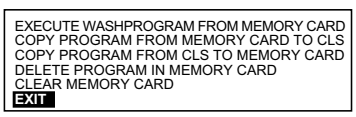
.... highlight the wash program required.

SELECT **Press SELECT.**

The program will now be deleted from the memory card. This takes between 5 and 15 seconds.

If you want to delete more programs:

Continue in the same way as described above.

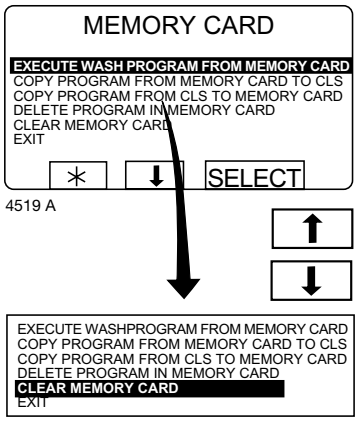


When you have finished:

Press ⬇ repeatedly to highlight "EXIT".

SELECT **Press SELECT.**

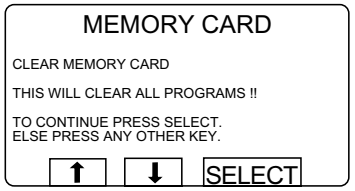
To delete all programs on a memory card



Note that restricted-use programs on a memory card cannot be copied or deleted.

Highlight "CLEAR MEMORY CARD" (press ⬇ or ⬆ if necessary).

SELECT **Press SELECT.**



If you change your mind and do not want to delete the entire memory card:

Press any key <u>other than</u> SELECT.

If you want to delete all programs on the memory card (with the exception of any restricted-use programs):

SELECT **Press SELECT.**

What is a restricted-use program?

A wash program which has been created on a PC can be made a "restricted-use" program. This means that:

- The program cannot be deleted or copied to the program memory of a washer extractor.
- You cannot modify the program or examine its structure.
- To run the program you must have access to the memory card, and insert it into the card reader when the program is to be started.

Preventive maintenance

To keep your machine in proper working order, follow the preventive maintenance recommendations provided below.

The maintenance interval should be adjusted according to machine usage. The suggested schedule assumes an 8 hour work day, and a 5 day work week..

Daily

- Check the door and door lock:
  - Open the door and try starting the machine. The machine MUST NOT START.
  - Close the door, start the machine and try opening the door. It MUST NOT BE POSSIBLE TO OPEN THE DOOR WHILE THE MACHINE IS OPERATING!
  - Check that the door does not leak.
  - Clean the door seal, removing any detergent and fluff.
- Check that the drain valve does not leak during the wash cycle.
- Clean out any detergent remaining in the detergent compartment. Rapid advance through a program and let the water rinse the compartment.
- Inspect liquid chemical tubing and connections for leaks. Repair as necessary.

Every third month

May only be carried out by authorized personnel.

- Check that the door does not leak.
- Check the drain valve and remove any lint.
- Inspect the interior of the machine (during an actual wash cycle to ensure that no leaks are noticed) by:
  - Turning of the main power switch of the machine.
  - Remove the top cover and the protective front and rear plates.
  - Cover the detergent dispenser to prevent water from splashing inside the machine.
  - Start a wash program.
  - KEEP CLEAR OF MOVING PARTS WHILE MACHINE IS OPERATING!!

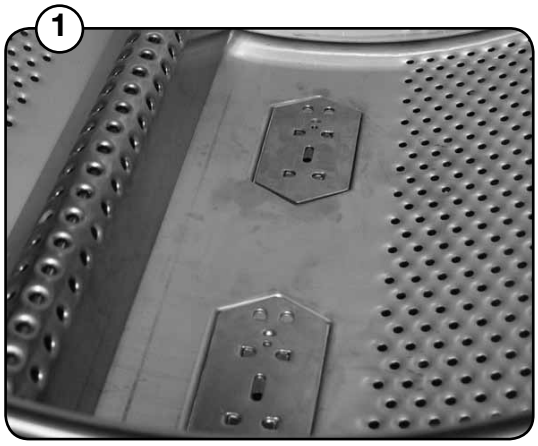
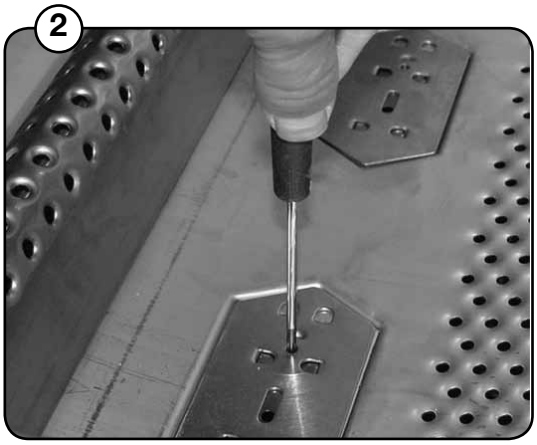
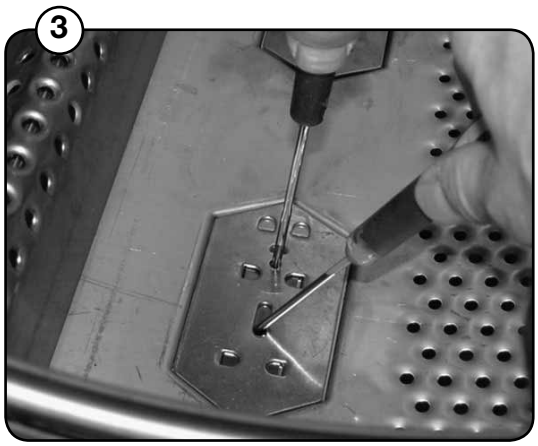
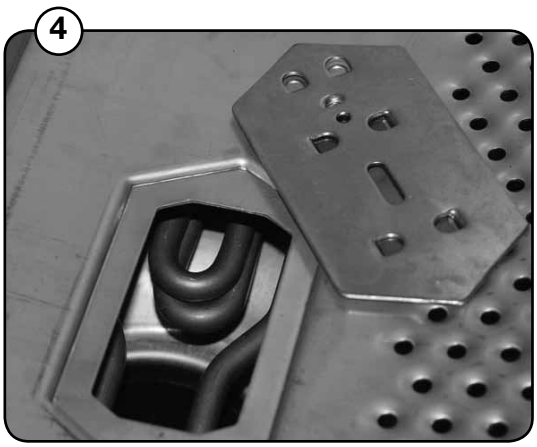
- Inspect all internal hoses, seals and gaskets for signs of leakage. Repair as necessary.
- Check that water inlet screens are clean of debris. Dirty screens result in longer fill times, which reduce productivity.
- Inspect the drive belt. Adjust the tension or replace if necessary.
- Check that there are no signs of leakage on the floor beneath the machine. Locate and repair any leak.
- On heated machines, if the heating time is unusually long, check the heating elements. If the water is very hard, check whether there are lime deposits on the heating elements. Decalcify the elements if necessary. Adapt the amount of deliming agent to the manufacturer's guidelines.
- Never switch on the heating elements when there is no water in the machine. This will cause the slow-blow fuse to trigger.
- Inspect the shock absorbers and coil springs.
  (Only EX- and H-model).

Every month (only for mop machines)

Cleaning the mop elements

(1)
- Depending on the size of the machine, you will find one or two core covers in the machine's inner drum so that the elements can be cleaned if so required. The front cover is located directly above the drain, while the other is in front of the element retainer. Two small screwdrivers are required to remove the core cover.

(2)
- Use a screwdriver to press down on the retaining plate in the round hole on the core cover.

(3)
- Place the other screwdriver in the oval hole on the core cover and through the round hole in the retaining plate
- Push the retaining plate towards the screwdriver which is pressing down on the retaining plate.

(4)
- Remove the core element/elements and clean the elements. If the elements are very dirty, it may be wise to remove the elements from the drum when cleaning them.
- The core covers are refitted in reverse order, with the difference that it is not necessary to press on the retaining plate; you only need to push the retaining plate back into place. When you hear a clicking sound, the retaining plate is in position.