OPERATING MANUAL

EX6102c, EX6135c
EX6200c, EX6250c

Operating manual

EX6102c, EX6135c
EX6200c, EX6250c

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 SHOULD 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 apagada 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

1. **This machine MUST be securely bolted according to the installation instruction 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 LOCKS 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 originally shipped in the drum package. Be certain to relock after remounting the top panel.**

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

471 7662-02

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.

WARNING !

DO NOT ATTEMPT TO OPEN DOOR
UNTIL PROGRAM HAS FINISHED AND
DRUM HAS STOPPED ROTATING.

471 7651-17

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!

Intentionally blank

Contents

Contents

<div style="border:1px solid black; padding:1em;">

⚠️   **<u>Safety</u>**   ⚠️

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.

All mechanical and electrical installation must be carried out by qualified personnel.

Do not bypass the door locking device.

Should the machine malfunction, please report the fault to the technician responsible for the machine.

2070

2071
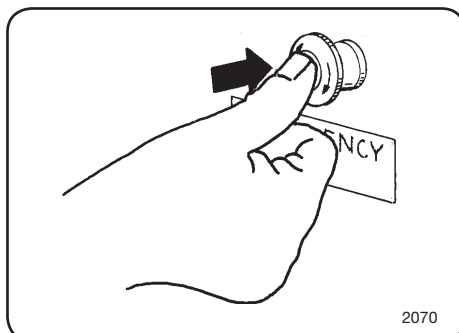
Emergency stop
If the machine for some reason has to be stopped – press emergency stop button
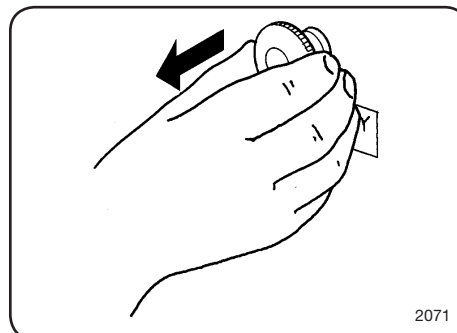
When necessary measures have been taken, the emergency button can be reset by pulling it out.

</div>

<div style="border:1px solid black; padding:1em;">

⚠️   ⚠️

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

</div>

The manufacturer reserves the right to make changes to design and component specifications.

General description

(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

- the large display screen means that detailed information on wash programs, machine status and operations, wash times and temperatures can be accessed in plain language

- it is possible for the user to create new wash programs, and to adapt programs with great precision, 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 "smart cards". These are cards the size of a credit card which contain a memory chip. Smart 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

  - the user can change temperatures, program module lengths and extraction speeds directly, during program operation

  - change to running a different wash program, at any time during program operation of the washer extractor.
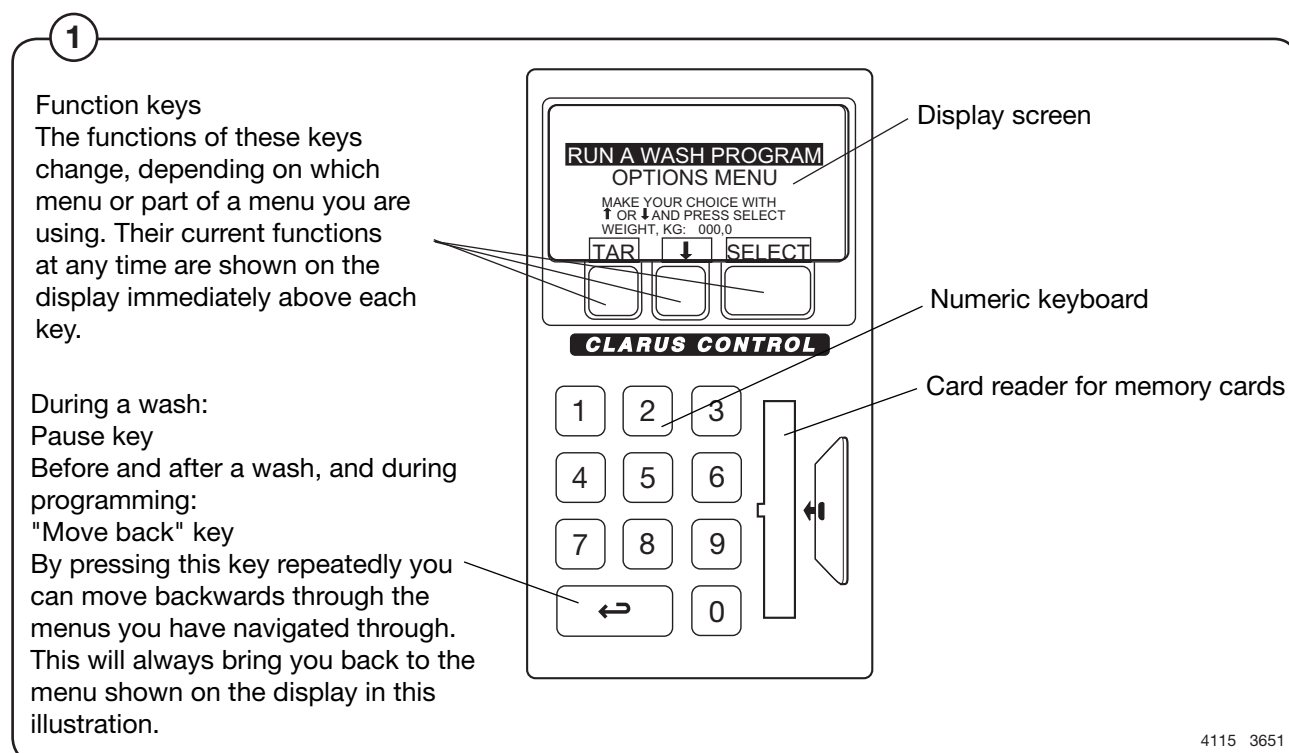

Function keys
The functions of these keys change, depending on which menu or part of a menu you are using. Their current functions at any time are shown on the display immediately above each key.

During a wash:
Pause key
Before and after a wash, and during programming:
"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 shown on the display in this illustration.

RUN A WASH PROGRAM
OPTIONS MENU
MAKE YOUR CHOICE WITH
↑ OR ↓ AND PRESS SELECT
WEIGHT, KG: 000,0
TAR   ↓   SELECT

CLARUS CONTROL

Display screen

Numeric keyboard

Card reader for memory cards

4115 3651

Automatic operation

Preparations

- Open the machine door and check that the drum is empty.

- Load the laundry items into the drum and close the door.

- Check that the emergency stop button has not been pressed inwards (see "Machine safety").

- Close the machine door. The machine is now ready to begin washing.
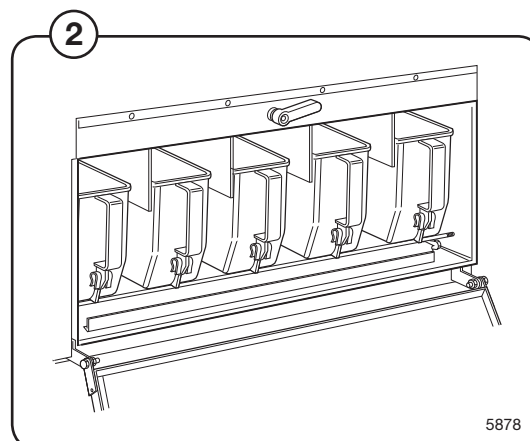
Add detergent and other laundry products

(2) If you are using the machine's built-in detergent dispensers, add the required detergent and other laundry products.

⚠️ ⚠️

Warning!
Take care when adding laundry products.
Powder or liquids left in the compartments
(scoops) may be corrosive.

To run a wash program

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").

The "Move back" key

3627

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:
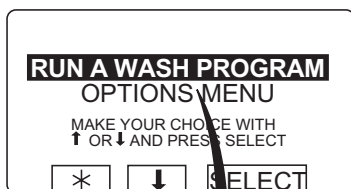
```
RUN A WASH PROGRAM
    OPTIONS MENU
MAKE YOUR CHOICE WITH
↑ OR ↓ AND PRESS SELECT
WEIGHT, KG:   000,0
  TAR   │  ↓  │ SELECT
```

To start the wash program

```
RUN A WASH PROGRAM
    OPTIONS MENU
MAKE YOUR CHOICE WITH
↑ OR ↓ AND PRESS SELECT
  ✳   │  ↓  │  SELECT
```
3580

If this menu is not currently displayed:

Press ↩ **repeatedly.**

```
RUN A WASH PROGRAM
  OPTIONS MENU
```

If "GO TO THE MENU" is highlighted:

Press ↑.

↑

```
RUN A WASH PROGRAM
    OPTIONS MENU
```

When "RUN A WASH PROGRAM" is highlighted:

Press SELECT.

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.

```
┌─────────────────────────────┐
│ RUN A WASH PROGRAM          │
│ ENTER A PROGRAM NUMBER:     │
│       101                   │
│ SELECT FROM LIBRARY         │
│ │CLS│ │SMC│    │ 993 │      │
└─────────────────────────────┘
```
3581 A

for example: **991**

│ SELECT │

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.
Press this key if you want to select this program.

Use the numeric keys to enter the program number
Press SELECT.

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.

```
┌─────────────────────────────┐
│ RUN A WASH PROGRAM          │
│ ENTER A PROGRAM NUMBER:     │
│       101                   │
│ FROM CLS OR SMC?            │
│ │CLS│ │SMC│   │ OK │        │
└─────────────────────────────┘
```
4031 A

│ CLS │

│ SMC │

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?".

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

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".

RUN A WASH PROGRAM
ENTER A PROGRAM NUMBER:

91　　00:00

NORMAL　95°C STD

☐ TEXT ☐　　START

3582

Delayed start time (hrs: mins)
Program name

☐ TEXT ☐

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 START

1 To start the program now:

Press START.

②

1 2 3
4 5 6
7 8 9
　　0

2 Delayed start

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

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.

START

Press START.

DELAYED START
ENTER A PROGRAM NUMBER:

91　　14:30

NORMAL　95°C STD

✳　✳　EXIT

Time left before the machine is to start

EXIT

If you want to cancel the delayed start:
Press EXIT

↩

3627

During a wash program:

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

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"**.

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

```
91 NORMAL 95°C STD
PROGRAM STEP:   MAIN WASH        1
STEP TIME:                     720 SEC
SET TEMPERATURE                 85 C
ACTUAL TEMPERATURE:             21 C
REMAINING TIME:                 70 MIN
DRUM SPEED:                   1000 RPM

SHOW WEIGHT
RAPID ADVANCE
      ↑        ↓     SELECT
3583
```

```
SHOW WEIGHT
RAPID ADVANCE
PAUSE
MANUAL FUNCTIONS
TEXT
SELECT NEW WASH PROGRAM
CHANGE °F/°C
AUTO RESTARTS
```

↓ If required:

↑ **Select a function using the cursor keys.**

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 OPEN" appears on the display.
- Now the door can be opened.
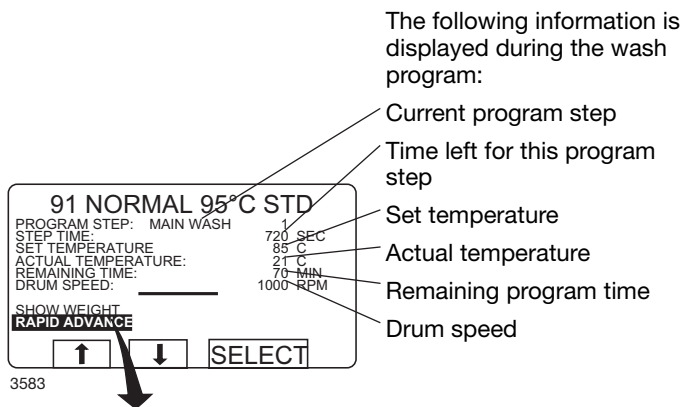
To change parameters in the current program step

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.

Function not allowed

In Settings 1 you can determine whether the use of these functions will be allowed. If you have entered "N" alongside any of these functions in Settings 1, the text FUNCTION NOT ALLOWED will be displayed.

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

RUN A WASH PROGRAM
OPTIONS MENU
MAKE YOUR CHOICE WITH
↑ OR ↓ AND PRESS SELECT
⊛   ↓   SELECT
3580

If this menu is not currently displayed:

Press (↩) **repeatedly.**

RUN A WASH PROGRAM
OPTIONS MENU

If "GO TO THE MENU" is highlighted:

↑   **Press ↑ .**

RUN A WASH PROGRAM
OPTIONS MENU

When "RUN A WASH PRO-GRAM" is highlighted:

SELECT   **Press SELECT.**
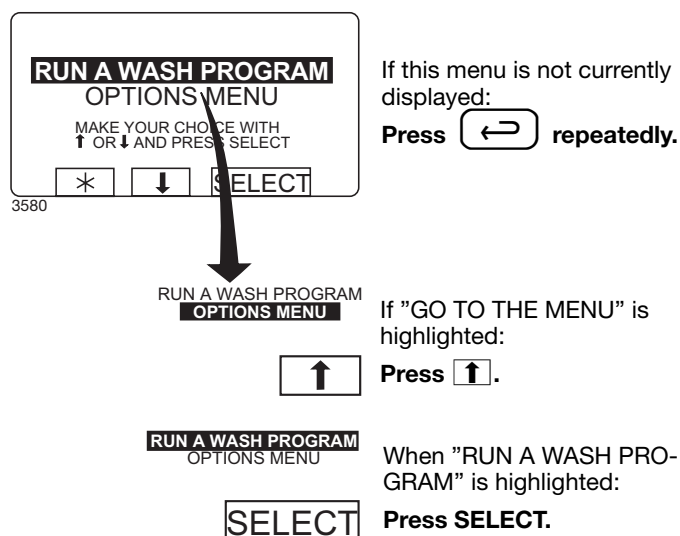
What is the program library?

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.

```
┌─────────────────────────────┐
│ RUN A WASH PROGRAM          │
│ ENTER A PROGRAM NUMBER:     │
│                             │
│      101                    │
│                             │
│ FROM CLS OR SMC?            │
│ │CLS│ │SMC│   │ OK │        │
└─────────────────────────────┘
4031 A
```

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".

```
┌─────────────────────────────────┐
│    ▨▨▨  MENU  ▨▨▨               │
│ MAKE A CHOISE:                  │
│ WASH PROGRAM LIBRARY            │
│ PROGRAMMING MODE                │
│ SETTINGS 1                      │
│ MEMORY CARD                     │
│ SERVICE MODE                    │
│ ↓STATISTICS                     │
│  │ ⇊ │  │ ↓ │  │SELECT│         │
└─────────────────────────────────┘
3590
```

```
┌────────────────────────────────┐
│ WASH PROGRAM LIBRARY           │
│                                │
│ PROGRAMMING MODE               │
│                                │
│ SETTINGS 1                     │
│                                │
│ MEMORY CARD                    │
│                                │
│ SERVICE MODE                   │
│                                │
│ STATISTICS                     │
│                                │
│ MANUAL FUNCTIONS               │
│                                │
│ SETTINGS 2                     │
│                                │
│ EXIT                           │
└────────────────────────────────┘
```

```
┌─────────────────────────────┐
│          LIBRARY            │
│ PR NO.  NAME                │
│ 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     │
│  │ ✱ │  │ ↓ │  │SELECT│      │
└─────────────────────────────┘
3591
```

┌─────┐
│ ↓ │
└─────┘

```
┌──────────────────────────────┐
│ 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    LOW EXTRACT 5 MIN      │
└──────────────────────────────┘
```

Press ↓ the required number of times...

...to highlight the wash program required.

┌────────┐
│ SELECT │
└────────┘

Press SELECT.

```
RUN A WASH PROGRAM
ENTER A PROGRAM NUMBER:
91      00:00
NORMAL  95°C STD
  ▣ TEXT ▣      START
```
3582

Delayed start time (hrs:
mins)
Program name

If you want to see the de-
scription of the program:

Press TEXT

```
  ▣ 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 proce-
dure is described fully in the programming manual.

---

①   START

Choose 1 or 2:

1   To start the program now:

Press START.

②
```
1  2  3
4  5  6
7  8  9
      0
```

2   Delayed start

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

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.

START

Press START.

```
DELAYED START
ENTER A PROGRAM NUMBER:
91      14:30
NORMAL  95°C STD
  ✳    ✳    EXIT
```
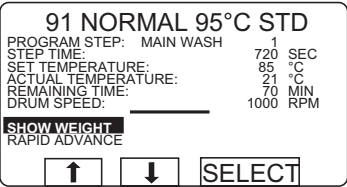
Time (in hours and minu-
tes) left before the machi-
ne is to start.

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

EXIT

The functions which are avai-
lable during program opera-
tion are described in sections
"To change parameters in the
current program step - Auto
restart".

Machine operation

To change parameters in the current program step

```
  91 NORMAL 95°C STD
PROGRAM STEP:   MAIN WASH      1
STEP TIME:                   720  SEC
SET TEMPERATURE:              85  °C
ACTUAL TEMPERATURE:           21  °C
REMAINING TIME:               70  MIN
DRUM SPEED:      _____     1000  RPM

SHOW WEIGHT
RAPID ADVANCE

   ↑      ↓    SELECT
```
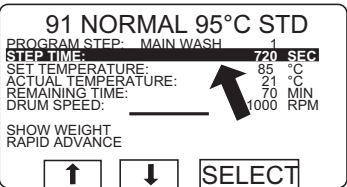3584

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. 3600 seconds), extraction speed.

└──────────────────────────────────────┘

| ↑ | **Press ↑ one or more times...** |

```
  91 NORMAL 95°C STD
PROGRAM STEP:   MAIN WASH      1
STEP TIME:                   720  SEC
SET TEMPERATURE:              85  °C
ACTUAL TEMPERATURE:           21  °C
REMAINING TIME:               70  MIN
DRUM SPEED:      _____     1000  RPM

SHOW WEIGHT
RAPID ADVANCE

   ↑      ↓    SELECT
```

...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.
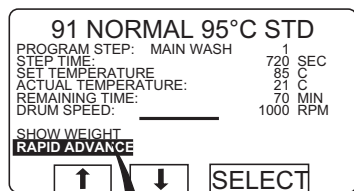
└──────────────────────────────────────┘

SELECT **Press SELECT.**

(1)(2)(3)
(4)(5)(6)　**Use the numeric keys to enter the new parameter .**
(7)(8)(9)
　　(0)

SELECT **Press SELECT.**

Rapid advance

```
    91 NORMAL 95°C STD
PROGRAM STEP:   MAIN WASH        1
STEP TIME:                     720  SEC
SET TEMPERATURE                 85  C
ACTUAL TEMPERATURE:             21  C
REMAINING TIME:                 70  MIN
DRUM SPEED:     _____       1000 RPM

SHOW WEIGHT
RAPID ADVANCE
    ↑        ↓      SELECT
3583
```

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

Check that "RAPID AD-VANCE" is highlighted.

```
SHOW WEIGHT
RAPID ADVANCE
PAUSE
MANUAL FUNCTIONS
TEXT
SELECT NEW WASH PROGRAM
CHANGE °F/°C
AUTO RESTARTS
```
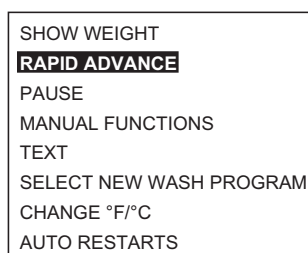
↓	If it is not highlighted:
↑	**Press ↑ or ↓ one or more times to highlight "RAPID ADVANCE".**
SELECT	**Press SELECT.**

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.

```
┌─────────────────────────────────┐
│  91 NORMAL 95°C STD             │
│ RAPID ADVANCE                   │
│ PRE WASH      1                 │
│ EXTRACT       1                 │
│ ▐MAIN WASH    1▌                │
│ EXTRACT       2                 │
│ RINSE         1                 │
│  [↑]    [↓]  SELECT             │
└─────────────────────────────────┘
3586
```

```
┌─────────────────────────────┐
│ PRE WASH        1           │
│ EXTRACT         1           │
│ ▐MAIN WASH      1▌          │
│ EXTRACT         2           │
│ RINSE           1           │
│ EXTRACT         3           │
│ RINSE           2           │
│ EXTRACT         4           │
│ RINSE           3           │
│ EXTRACT         5           │
│ END OF PROGRAM              │
└─────────────────────────────┘
```

[↑]
[↓]

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** ─┐

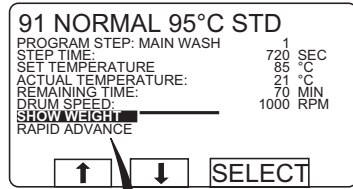Rapid advance works in both directions, using [↓] and [↑].

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.

└──┘

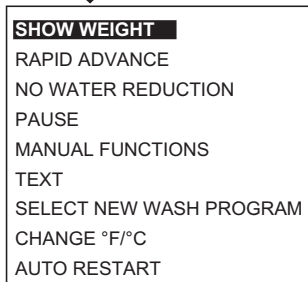┌─ **Automatic return to normal display** ─┐

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 only!

Show weight

```
91 NORMAL 95°C STD
PROGRAM STEP: MAIN WASH      1
STEP TIME:                 720 SEC
SET TEMPERATURE             85 °C
ACTUAL TEMPERATURE:         21 °C
REMAINING TIME:             70 MIN
DRUM SPEED:               1000 RPM
SHOW WEIGHT
RAPID ADVANCE

     [↑]   [↓]   SELECT
```
4774

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

┌─ **Show weight** ──────────────────┐
│ The actual weight is shown in large digits on the display (weight display mode).
│ To display the line "WEIGHT, KG", the weighing equipment must be connected up.
└────────────────────────────────────┘

```
SHOW WEIGHT
RAPID ADVANCE
NO WATER REDUCTION
PAUSE
MANUAL FUNCTIONS
TEXT
SELECT NEW WASH PROGRAM
CHANGE °F/°C
AUTO RESTART
```

[↓]
[↑]

Press [↑] or [↓] one or more times to highlight "SHOW WEIGHT".

SELECT

Press SELECT.

```
CLARUS CONTROL
  WEIGHT, KG:

   007,0

   [*]   [*]   [*]
```
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 (↵) .
└────────────────────────────────────┘

For machines with weighing equipment only!

No water reduction

```
91 NORMAL 95°C STD
PROGRAM STEP: MAIN WASH          1
STEP TIME:                  720 SEC
SET TEMPERATURE              85 °C
ACTUAL TEMPERATURE:          21 °C
REMAINING TIME:              70 MIN
DRUM SPEED:               1000 RPM

SHOW WEIGHT
RAPID ADVANCE
   ┌──┐ ┌──┐  ┌──────────┐
   │ ↑ │ │ ↓ │  │ SELECT   │
   └──┘ └──┘  └──────────┘
```
4776

```
┌──────────────────────────────┐
│ SHOW WEIGHT                    │
│ RAPID ADVANCE                  │
│ ██NO WATER REDUCTION██         │
│ PAUSE                          │
│ MANUAL FUNCTIONS               │
│ TEXT                           │
│ SELECT NEW WASH PROGRAM        │
│ CHANGE °F/°C                   │
│ AUTO RESTART                   │
└──────────────────────────────┘
```

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. 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.
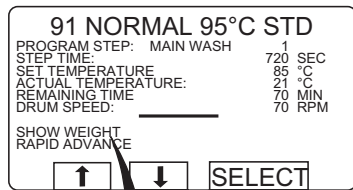

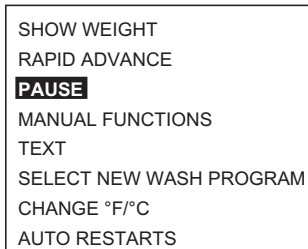↓ ↑   **Press ↑ or ↓ one or more times to highlight "NO WATER REDUC-TION".**
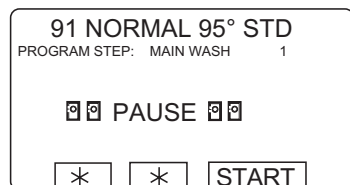
SELECT   **Press SELECT.**

Pause

```
┌─────────────────────────────────────┐
│      91 NORMAL 95°C STD              │
│ PROGRAM STEP:   MAIN WASH      1     │
│ STEP TIME:                  720 SEC  │
│ SET TEMPERATURE              85 °C   │
│ ACTUAL TEMPERATURE:          21 °C   │
│ REMAINING TIME               70 MIN  │
│ DRUM SPEED:        _____     70 RPM │
│                                      │
│ SHOW WEIGHT                          │
│ RAPID ADVANCE                        │
│   ┌────┐  ┌────┐  ┌──────────┐      │
│   │ ↑  │  │ ↓  │  │ SELECT   │      │
│   └────┘  └────┘  └──────────┘      │
└─────────────────────────────────────┘
3587
```

```
┌─────────────────────────────────────┐
│                                      │
│   SHOW WEIGHT                        │
│                                      │
│   RAPID ADVANCE                      │
│                                      │
│   ▐PAUSE▌                            │
│                                      │
│   MANUAL FUNCTIONS                   │
│                                      │
│   TEXT                               │
│                                      │
│   SELECT NEW WASH PROGRAM            │
│                                      │
│   CHANGE °F/°C                       │
│                                      │
│   AUTO RESTARTS                      │
│                                      │
└─────────────────────────────────────┘
```

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

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.

↓
↑

Press ↑ or ↓ one or more times to highlight "PAUSE".

SELECT

Press SELECT.

```
┌─────────────────────────────────────┐
│      91 NORMAL 95° STD               │
│ PROGRAM STEP:   MAIN WASH      1     │
│                                      │
│                                      │
│      ▯▯ PAUSE ▯▯                     │
│                                      │
│   ┌────┐  ┌────┐  ┌──────────┐      │
│   │ ✳  │  │ ✳  │  │ START    │      │
│   └────┘  └────┘  └──────────┘      │
└─────────────────────────────────────┘
3588
```

START

Press START to restart the wash program.

Manual operation during a program

```
 91 NORMAL 95°C STD
PROGRAM STEP:   MAIN WASH        1
STEP TIME:                      720 SEC
SET TEMPERATURE                  85 C
ACTUAL TEMPERATURE:              21 C
REMAINING TIME:                  70 MIN
DRUM SPEED:      _____       1000 RPM

SHOW WEIGHT
RAPID ADVANCE
┌────┐  ┌────┐  ┌──────┐
│ ↑  │  │ ↓  │  │SELECT│
└────┘  └────┘  └──────┘
```
3585

```
SHOW WEIGHT
RAPID ADVANCE
PAUSE
MANUAL FUNCTIONS
TEXT
SELECT NEW WASH PROGRAM
CHANGE °F/°C
AUTO RESTARTS
```

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".**
│ ↑ │
└────┘

┌──────┐
│SELECT│   **Press SELECT.**
└──────┘

```
  MANUAL FUNCTIONS
  MAKE A CHOICE:
  WATER/DRAIN
  HIGH EXTRACT
  MOTOR
  DETERGENT/FLUSH
  EXIT

      *    ▢    SELECT
```
3679

```
  WATER/DRAIN
  HIGH EXTRACT
  MOTOR
  DETERGENT/FLUSH
  EXIT
```

↓

↑

Use the cursor keys to select the function.

SELECT **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")
Note: this function is available only on machines with a frequency-controlled motor.

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.
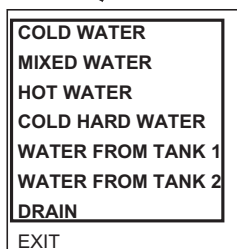
Water/drain

```
MANUAL FUNCTIONS
        WATER/DRAIN
COLD WATER
MIXED WATER
HOT WATER
COLD HARD WATER
WATER FROM TANK 1
WATER FROM TANK 2

LEVEL:   63 UNITS
   *    |  ↓  |  OPEN
```
3680
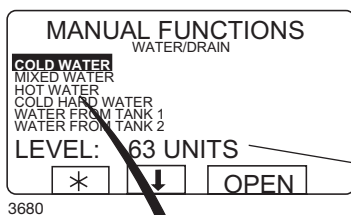
To access this function, see instructions in section "Manual operation".

Water level in drum

| ↓ |
| ↑ |

Use ↓ and ↑ to select the water/drain option you require.

```
COLD WATER
MIXED WATER
HOT WATER
COLD HARD WATER
WATER FROM TANK 1
WATER FROM TANK 2
DRAIN
EXIT
```

| 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".

| ↓ |

```
COLD WATER
MIXED WATER
HOT WATER
COLD HARD WATER
WATER FROM TANK 1
WATER FROM TANK 2
DRAIN
EXIT
```
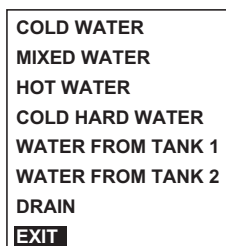
| SELECT | **Press SELECT.**

Maximum extraction speed

```
┌─────────────────────────────────────┐
│       MANUAL FUNCTIONS               │
│          HIGH EXTRACT                │
│ CURRENT MAXIMUM EXTCACT SPEED: 1000 RPM │
│ SELECT NEW EXTRACT SPEED:            │
│          1000 RPM                    │
│  ┌───┐  ┌───┐  ┌────────┐            │
│  │ ↑ │  │ ↓ │  │ SELECT │            │
│  └───┘  └───┘  └────────┘            │
└─────────────────────────────────────┘
3681
```

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

Maximum extraction speed in current program.

(1)(2)(3)
(4)(5)(6)
(7)(8)(9)
(0)

Enter the maximum extraction speed you require for this program.

| SELECT |

Press SELECT.

Please note!

This function is available only on machines with a frequency-controlled motor.

To limit the program's highest extraction speed

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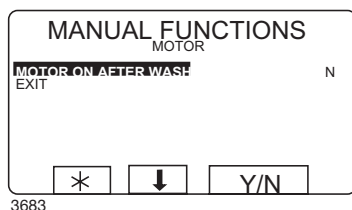
Example:

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

All speeds above 700 rpm will be limited to 700 rpm

Speeds below 700 rpm will not be affected

3682
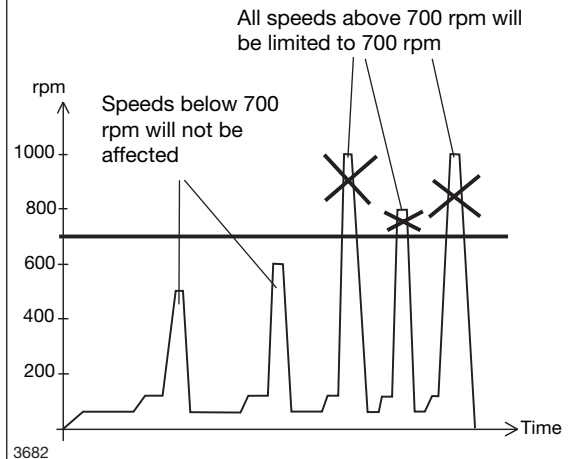
This change will affect the current program only. No change will be implemented if extraction is taking place at the time of the (attempted) change. The next time that this program is used, the original maximum speed will apply.

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

Motor on after wash

```
  MANUAL FUNCTIONS
            MOTOR
  MOTOR ON AFTER WASH            N
  EXIT



  |  *  |  |  ↓  |  |  Y/N  |
```
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".**

```
  MOTOR ON AFTER WASH
  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.

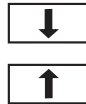When the program has ended, the display will look like this:
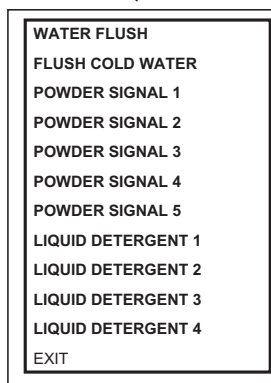
```
  91 NORMAL 95°C STD


  MOTOR ON IN
  MANUAL FUNCTIONS


  |  *  |  |  *  |  |  STOP  |
```
4111
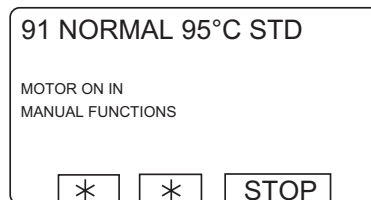
Press STOP to stop the motor.

Detergent signals and water flushing

```
MANUAL FUNCTIONS
      DETERGENT/FLUSH
WATER FLUSH
FLUSH COLD POWDER
POWDER SIGNAL 1
POWDER SIGNAL 2
POWDER SIGNAL 3
POWDER SIGNAL 4

   [ * ]  [ ↓ ]  [ OPEN ]
```
3684

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

[↓]
[↑]

Use [↓] and [↑] to select the function you require.

```
WATER FLUSH

FLUSH COLD WATER

POWDER SIGNAL 1

POWDER SIGNAL 2

POWDER SIGNAL 3

POWDER SIGNAL 4

POWDER SIGNAL 5

LIQUID DETERGENT 1

LIQUID DETERGENT 2

LIQUID DETERGENT 3

LIQUID DETERGENT 4

EXIT
```

Detergent signals and water flushing

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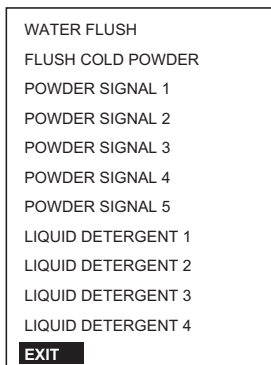
POWDER SIGNAL:
This function will either: a) use water to dispense detergent from machine compartments, or: b) dispense detergent from an external system. The number of valves present will vary according to the machine type.

[OPEN]
[↓]

```
WATER FLUSH

FLUSH COLD POWDER

POWDER SIGNAL 1

POWDER SIGNAL 2

POWDER SIGNAL 3

POWDER SIGNAL 4

POWDER SIGNAL 5

LIQUID DETERGENT 1

LIQUID DETERGENT 2

LIQUID DETERGENT 3

LIQUID DETERGENT 4

EXIT
```

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.**

Text

```
   91 NORMAL 95°C STD
PROGRAM STEP:  MAIN WASH        1
STEP TIME:                    720  SEC
SET TEMPERATURE              85   C
ACTUAL TEMPERATURE:          21   C
REMAINING TIME:              70   MIN
DRUM SPEED:         _____  1000 RPM

SHOW WEIGHT
RAPID ADVANCE
   [↑]    [↓]    SELECT
```
3592

```
SHOW WEIGHT
RAPID ADVANCE
PAUSE
MANUAL FUNCTIONS
TEXT
SELECT NEW WASH PROGRAM
CHANGE °F/°C
AUTO RESTARTS
```

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

[↓]

[↑]

Press [↑] or [↓] one or more times to highlight "TEXT".

SELECT

Press SELECT.

```
   91 NORMAL 95°C STD
PROGRAM STEP:  MAIN WASH        1
NORMAL PROGRAM FOR MEDIUM SOILED
CLOTHES

          _____
TEXT
AUTO RESTARTS
   [↑]    [↓]    SELECT
```
3630

Description of wash program

SELECT

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

```
91 NORMAL 95°C STD
PROGRAM STEP:   MAIN WASH      1
STEP TIME:                   720  SEC
SET TEMPERATURE:              85  °C
ACTUAL TEMPERATURE:          21  °C
REMAINING TIME                70  MIN
DRUM SPEED:      _____     1000  RPM

SHOW WEIGHT
RAPID ADVANCE
   ↑      ↓    SELECT
3694
```

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

<table>
<tr><td>SHOW WEIGHT</td></tr>
<tr><td>RAPID ADVANCE</td></tr>
<tr><td>PAUSE</td></tr>
<tr><td>MANUAL FUNCTIONS</td></tr>
<tr><td>TEXT</td></tr>
<tr><td>**SELECT NEW WASH PROGRAM**</td></tr>
<tr><td>CHANGE °F/°C</td></tr>
<tr><td>AUTO RESTARTS</td></tr>
</table>

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.

↓

↑

Press ↑ or ↓ one or more times to highlight "SELECT NEW WASH PROGRAM".

SELECT

Press SELECT.

```
91  NORMAL 95°C STD
SELECT NEW PROGRAM AND PRESS SELECT
PR NO.    NAME
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
   ✳      ↓    SELECT
3695
```

↓

Press ↓ one or more times as required...

Automatic return to normal display

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

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

...to highlight the new wash program.

SELECT

Press SELECT.

```
996 PERM. PRESS 60°C
PROGRAM STEP:   PREWASH        1
STEP TIME:                   120  SEC
NO HEATING
ACTUAL TEMPERATURE:          21  °C

DRUM SPEED:      _____       48  RPM

SHOW WEIGHT
RAPID ADVANCE
   ↑      ↓    SELECT
```
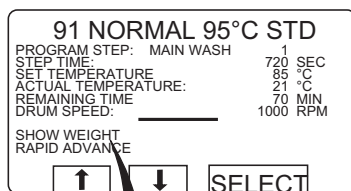
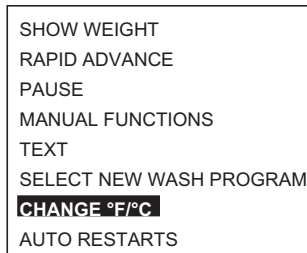The existing wash program will now be interrupted and the new one will begin.

To change temperature scale °C/°F

```
   91 NORMAL 95°C STD
PROGRAM STEP:   MAIN WASH      1
STEP TIME:                   720 SEC
SET TEMPERATURE               85 °C
ACTUAL TEMPERATURE:           21 °C
REMAINING TIME                70 MIN
DRUM SPEED:          _____ 1000 RPM

SHOW WEIGHT
RAPID ADVANCE
   ┌──┐   ┌──┐
   │ ↑ │   │ ↓ │  SELECT
   └──┘   └──┘
```
3696

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

┌─ **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.

└───────────────────────────────────┘

```
SHOW WEIGHT

RAPID ADVANCE

PAUSE

MANUAL FUNCTIONS

TEXT

SELECT NEW WASH PROGRAM

CHANGE °F/°C

AUTO RESTARTS
```

┌──┐
│ ↓ │   **Press** ↑ **or** ↓ **one or**
└──┘   **more times to highlight**
┌──┐   **"CHANGE °C/°F".**
│ ↑ │
└──┘

SELECT   **Press SELECT.**

Auto restart

```
91 NORMAL 95°C STD
PROGRAM STEP:   MAIN WASH        1
STEP TIME:                     720 SEC
SET TEMPERATURE:                85 °C
ACTUAL TEMPERATURE:             21 °C
REMAINING TIME                  70 MIN
DRUM SPEED:      _____       1000 RPM

SHOW WEIGHT
RAPID ADVANCE
   ↑      ↓     SELECT
```
3593

During program operation the display will look like this (see section 2.C).

```
SHOW WEIGHT
RAPID ADVANCE
PAUSE
MANUAL FUNCTIONS
TEXT
SELECT NEW WASH PROGRAM
CHANGE °F/°C
AUTO RESTART
```

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

SELECT Press **SELECT.**

```
91 NORMAL 95°STD
PROGRAM STEP:   MAIN WASH        1
STEP TIME:                     300 SEC
NO HEATING
ACTUAL TEMPERATURE:             19 C
DRUM SPEED:      _____        70 RPM

AUTO RESTARTS´        0
   ↑      *     SELECT
```
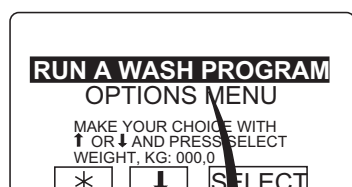
...s the number of ... the program will ...t.

1 2 3
4 5 6
7 8 9
0

...ired:
...he numeric keys to ...ge the required num-...f restarts.

SELECT ...SELECT.

Manual operation

To select manual operation

RUN A WASH PROGRAM
OPTIONS MENU

MAKE YOUR CHOICE WITH
↑ OR ↓ AND PRESS SELECT
WEIGHT, KG: 000,0

| ✳ | ↓ | SELECT |

3589

RUN A WASH PROGRAM
OPTIONS MENU

If this menu is not currently displayed:
Press ⟨⟵⟩ repeatedly.

| ↓ |

Press ↓ to highlight "GO TO THE MENU".

| SELECT |

Press SELECT.

🔲🔲🔲 MENU 🔲🔲🔲

MAKE A CHOICE:
WASH PROGRAM LIBRARY
PROGRAMMING MODE
SETTINGS 1
MEMORY CARD
SERVICE MODE
↓ STATISTICS

| ↓↓ | ↓ | SELECT |

3685

| ↓ |

Press ↓ six times...

WASH PROGRAM LIBRARY

PROGRAMMING MODE

SETTINGS 1

MEMORY CARD

SERVICE MODE

STATISTICS

MANUAL MODE

SETTINGS 2

EXIT
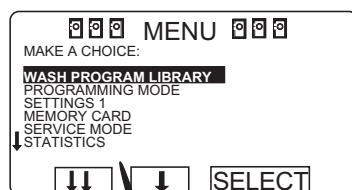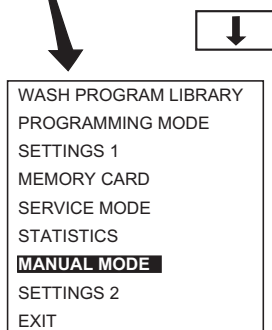
....to highlight "MANUAL MODE".

| 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.

```
  MANUAL FUNCTIONS
 MAKE A CHOICE:
 MOTOR/DOOR
 WATER/DRAIN
 HEATING
 DETERGENT/FLUSH
 EXIT

   ✳        ↕      SELECT
 3686
```

```
 MOTOR/DOOR
 WATER/DRAIN
 HEATING
 DETERGENT/FLUSH
 EXIT
```

⬇

Select the function required using the cursor keys.

⬆

SELECT **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

```
  MANUAL FUNCTIONS
         MOTOR/DOOR
 DOOR LOCK ON              N
 MOTOR ON                  N
 EXIT

   ✳        ↕      Y/N
 3687
```

⬇

```
 DOOR LOCK ON
 MOTOR ON
 EXIT
```

Press ⬇ as required to select a function.

A toggle function:

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

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

```
 DOOR LOCK ON
 MOTOR ON
 EXIT
```

SELECT **Press SELECT.**

Lock the door and start the motor
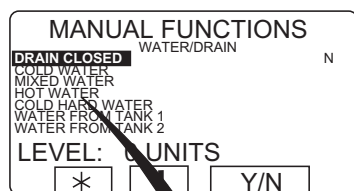
DOOR LOCK ON
If you answer **Yes (Y)**:

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)**:

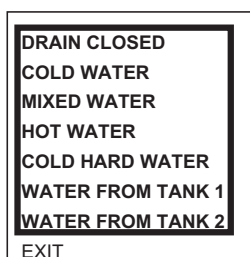The motor will start and operate, using normal action.

Water/drain

```
MANUAL FUNCTIONS
           WATER/DRAIN          N
DRAIN CLOSED
COLD WATER
MIXED WATER
HOT WATER
COLD HARD WATER
WATER FROM TANK 1
WATER FROM TANK 2
LEVEL:   0 UNITS
  [ * ]   [ ↕ ]   [ Y/N ]
```
3688

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 CLOSED
COLD WATER
MIXED WATER
HOT WATER
COLD HARD WATER
WATER FROM TANK 1
WATER FROM TANK 2
EXIT
```
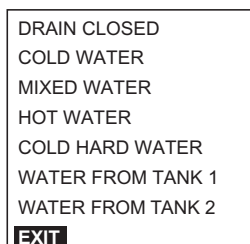
Drain (a toggle function) :
Press Y/N to toggle the function from Yes (Y) and No (N).

[Y/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.
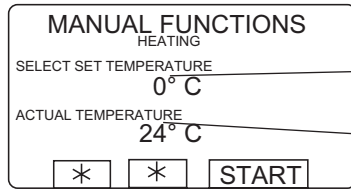
[OPEN]

[↓]

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

```
DRAIN CLOSED
COLD WATER
MIXED WATER
HOT WATER
COLD HARD WATER
WATER FROM TANK 1
WATER FROM TANK 2
EXIT
```

[SELECT]

Press SELECT.

Heating

```
MANUAL FUNCTIONS
        HEATING
SELECT SET TEMPERATURE
              0° C
ACTUAL TEMPERATURE
              24° C
  [ ✳ ]  [ ✳ ]  [ START ]
```
3689

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

Temperature selected

Actual temperature

Please note!
The drum must have filled to above the safety level before manual heating can take place.

```
[1] [2] [3]
[4] [5] [6]
[7] [8] [9]
    [0]
```

Use the numeric keys to enter the temperature the water is to be heated to.
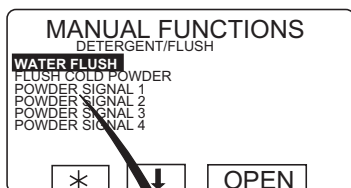
[START]   **Press START.**
Heating will now begin.

[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

MANUAL FUNCTIONS
DETERGENT/FLUSH
WATER FLUSH
FLUSH COLD POWDER
POWDER SIGNAL 1
POWDER SIGNAL 2
POWDER SIGNAL 3
POWDER SIGNAL 4

| ✳ | ↓ | OPEN |

3684

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

↓

↑

Use ↓ and ↑ to select the function you require.

WATER FLUSH

FLUSH COLD WATER

POWDER SIGNAL 1

POWDER SIGNAL 2

POWDER SIGNAL 3

POWDER SIGNAL 4

POWDER SIGNAL 5

LIQUID DETERGENT 1

LIQUID DETERGENT 2

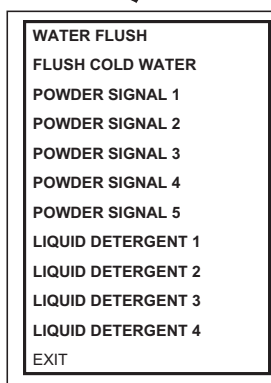**LIQUID DETERGENT 3**

LIQUID DETERGENT 4

EXIT

┌─ **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.
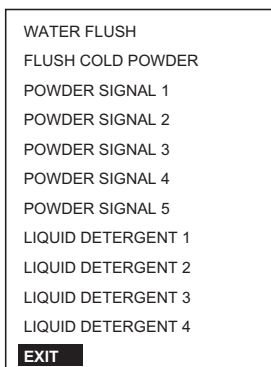
OPEN

↓

WATER FLUSH

FLUSH COLD POWDER

POWDER SIGNAL 1

POWDER SIGNAL 2

POWDER SIGNAL 3

POWDER SIGNAL 4

POWDER SIGNAL 5

LIQUID DETERGENT 1

LIQUID DETERGENT 2

LIQUID DETERGENT 3

LIQUID DETERGENT 4

EXIT

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:
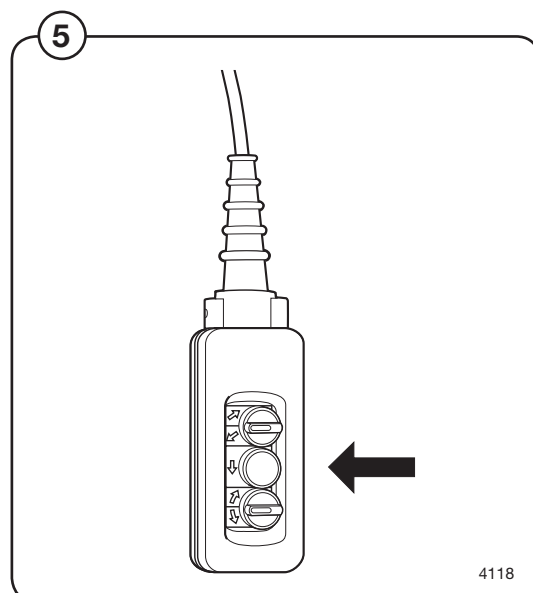
Press ↓ repeatedly to highlight "EXIT".
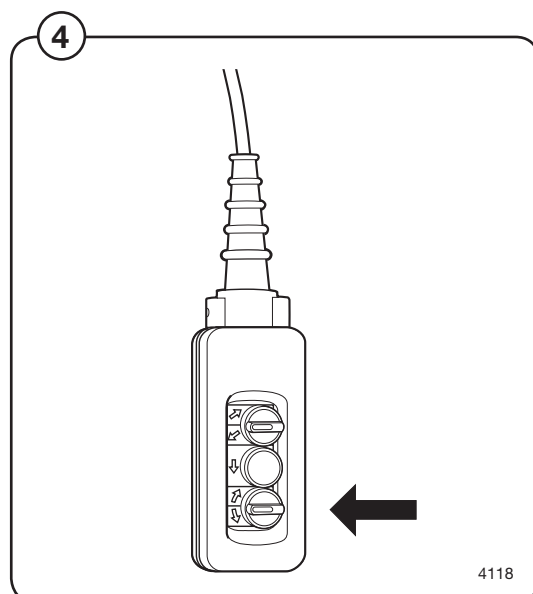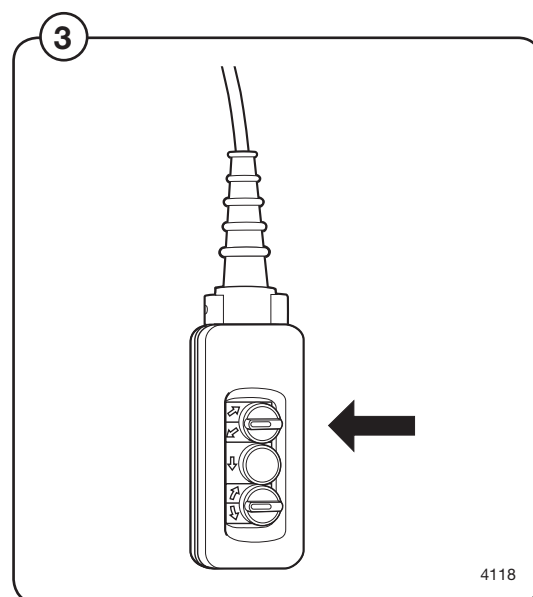
SELECT   **Press SELECT.**

At the end of the wash

Machines without tilt function:

> Open the machine door and remove the washed load.

Machines with tilt function forward:

③
- Turn the uppermost switch on the tilt control unit clockwise. The machine will now tilt forward.

④
- Use the bottom switch on the tilt control unit to rotate the drum, either to the right or the left. This makes it easier to empty the drum.

⑤
- Press the middle switch on the tilt control unit. The machine will now return to its normal position.

Statistics

To select Statistics
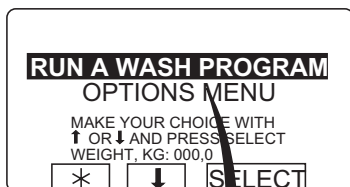
RUN A WASH PROGRAM
OPTIONS MENU
MAKE YOUR CHOICE WITH
↑ OR ↓ AND PRESS SELECT
WEIGHT, KG: 000,0

| ✳ | ↓ | SELECT |

3589

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

RUN A WASH PROGRAM
OPTIONS MENU

↓   **Press ↓ to highlight "GO TO THE MENU".**

SELECT   **Press SELECT.**

▯▯▯ MENU ▯▯▯
MAKE A CHOICE:
WASH PROGRAM LIBRARY
PROGRAMMING MODE
SETTINGS 1
MEMORY CARD
SERVICE MODE
STATISTICS
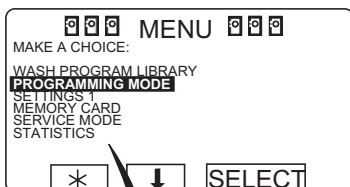
| ✳ | ↓ | SELECT |

3691

↓   **Press ↓ five times...**

WASH PROGRAM LIBRARY
PROGRAMMING MODE
SETTINGS 1
MEMORY CARD
SERVICE MODE
STATISTICS
MANUAL MODE
SETTINGS 2
EXIT

...to highlight "STATISTICS".

SELECT   **Press SELECT.**

```
            STATISTICS
TOTAL RUN TIME HOURS                    0
TOTAL TRIP RUN TIME HOURS               0
HOURS SINCE LAST SERVICE                0

LAST 5 ERROR CODES     PROGRAM    HOURS
08 NO HEATING            991         0
08 NO HEATING            996         0
08 NO HEATING            993         0
08 NO HEATING            991         0
08 NO HEATING            991         0
   [ ✳ ]   [ ↓ ]    [ EXIT ]
```
3690

To display the next page of statistics:

[↓]

Press ↓.

```
            STATISTICS
PROGRAM  WASHES   PROGRAM  WASHES
   2        4       10        0
  12        0       52        0
  78        0      123        0
 991       35      992        3
 993        1      994        0
 995        0      996        0
 997        0      998        0
 999        0
   [ ✳ ]   [ ✳ ]    [ EXIT ]
```
3958

To display the next page of statistics:

[↓]

Press ↓.

```
            STATISTICS
PROGRAM  WASHES   PROGRAM  WASHES
S  1        0     S  2        0
S  5        0     S  6        0
S 80        0     S 90        0
S 99        0     S991        0
S992        0     S993        0
S994        0     S995        0
S996        0     S997        0
S998        0     S999        0
   [ ↑ ]   [ ✳ ]    [ EXIT ]
```
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.

[EXIT]

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).
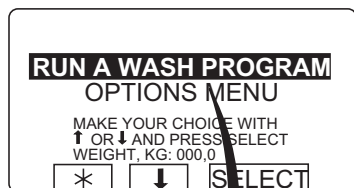
LAST 5 ERROR CODES:

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

```
┌─────────────────────────────────┐
│                                 │
│ ▌RUN A WASH PROGRAM▐            │
│      OPTIONS MENU                │
│                                 │
│ MAKE YOUR CHOICE WITH           │
│ ↑ OR ↓ AND PRESS SELECT         │
│ WEIGHT, KG: 000,0               │
│ ┌───┬───┬─────────┐             │
│ │ ✳ │ ↓ │ SELECT  │             │
│ └───┴───┴─────────┘             │
└─────────────────────────────────┘
```
3589

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.**
└────────┘

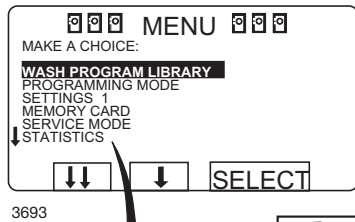┌───┐
│ **Statistics registers which can be reset to zero** │
│ The following registers in the statistics function can │
│ be cleared (reset to zero):   │
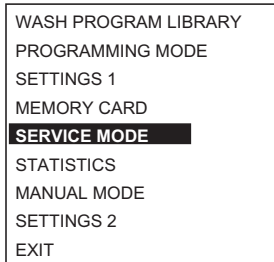│ • Total trip run time hours.   │
│ • Hours since last service.   │
│ • No. of times each program used (PCU programs). │
│ • No. of times each program used (programs on │
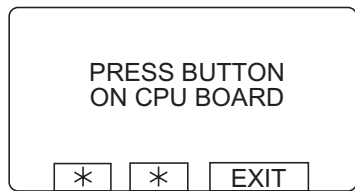│   any memory card currently in the PCU).   │
└───┘

```
□□□ MENU □□□
MAKE A CHOICE:
WASH PROGRAM LIBRARY
PROGRAMMING MODE
SETTINGS 1
MEMORY CARD
SERVICE MODE
STATISTICS
  ↓↓      ↓    SELECT
```
3693

Press ↓ ..four times....

> ⚠ The service program may only be used by authorised personnel, because all safety interlocks are disabled when it is in use. ⚠

```
WASH PROGRAM LIBRARY
PROGRAMMING MODE
SETTINGS 1
MEMORY CARD
SERVICE MODE
STATISTICS
MANUAL MODE
SETTINGS 2
EXIT
```

... to highlight "SERVICE PROGRAM".

Press SELECT

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. Two screws have to be undone to open the control panel.

```
PRESS BUTTON
ON CPU BOARD

   *      *     EXIT
```
4209

Press the button on the CPU circuit board.

CPU button

3972

```
SERVICE PROGRAM
MAKE A CHOICE:
SERVICE PROGRAM
CLEAR TRIP HOUR COUNTER
CLEAR SERVICE COUNTER
CLEAR WASH PROGRAM COUNTER IN CLS
CLEAR WASH PROGRAM COUNTER IN SMC
SCALE ADJUSTMENTS
CALIB. OF LEVEL SENSOR
   *      ↓     SELECT
```
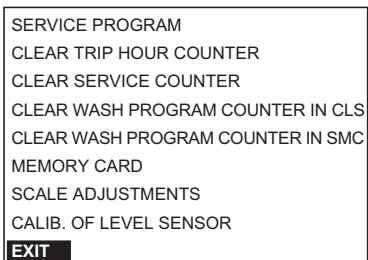4042 A

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.

If you want to exit:

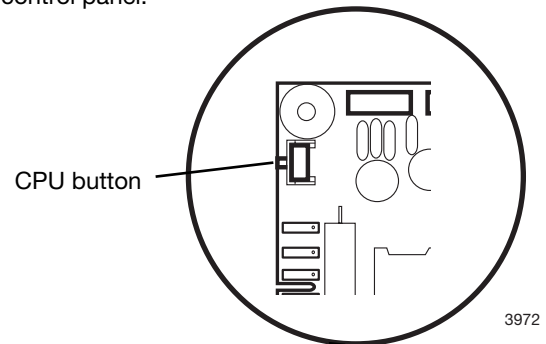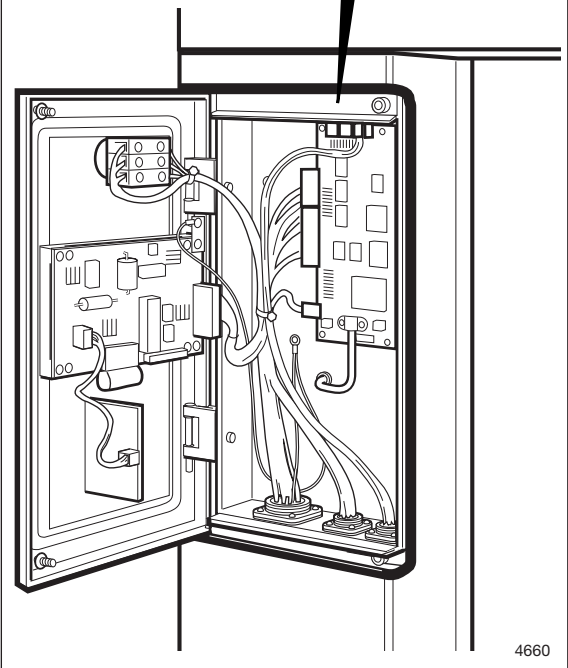**Press ↓ repeatedly until EXIT is highlighted.**

```
SERVICE PROGRAM
CLEAR TRIP HOUR COUNTER
CLEAR SERVICE COUNTER
CLEAR WASH PROGRAM COUNTER IN CLS
CLEAR WASH PROGRAM COUNTER IN SMC
MEMORY CARD
SCALE ADJUSTMENTS
CALIB. OF LEVEL SENSOR
EXIT
```

4660

Press SELECT.

Time counter, hours after last service

```
        SERVICE MODE
MAKE A CHOICE:

SERVICE PROGRAM
CLEAR TRIP HOUR COUNTER
CLEAR SERVICE COUNTER
CLEAR WASH PROGRAM COUNTER IN CLS
CLEAR WASH PROGRAM COUNTER IN SMC
SCALE ADJUSTMENTS
CALIB. OF LEVEL SENSOR
EXIT
    [ ↑ ]   [ ↓ ]   SELECT
```
4041 A

Both counters can be reset in the same way.

[↓]

SELECT

Press [↓] so that CLEAR TRIP HOUR COUNTER OR CLEAR SERVICE COUNTER will be marked.

Press SELECT.

```
       CLEAR COUNTER
            CLS


      ARE YOU SURE ?

PRESS SELECT ELSE PRESS ANY OTHER KEY
   [ ✳ ]   [ ✳ ]   SELECT
```
4043 A

First you have a chance to change your mind.

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

Press any key other than SELECT.

If you want to reset the register:

SELECT

Press SELECT.

Number of washes for program in timer or memory card

```
┌─────────────────────────────┐
│        SERVICE MODE         │
│ MAKE A CHOICE:              │
│                             │
│ SERVICE PROGRAM             │
│ CLEAR TRIP HOUR COUNTER     │
│ CLEAR SERVICE COUNTER       │
│ CLEAR WASH PROGRAM COUNTER IN CLS │
│ CLEAR WASH PROGRAM COUNTER IN SMC │
│                             │
│  ┌───┐  ┌───┐  ┌────────┐   │
│  │ ↑ │  │ ↓ │  │ SELECT │   │
│  └───┘  └───┘  └────────┘   │
└─────────────────────────────┘
```
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.

┌────────┐
│ SELECT │
└────────┘

Press SELECT.

```
┌─────────────────────────────┐
│       CLEAR COUNTER         │
│            CLS              │
│ FROM PROGRAM NUMBER:        │
│            0                │
│ TO PROGRAM NUMBER:          │
│            0                │
│ TO END: TO PROGRAM NUMBER = 0 │
│  ┌───┐  ┌───┐  ┌──────┐     │
│  │ * │  │ ↓ │  │ EXIT │     │
│  └───┘  └───┘  └──────┘     │
└─────────────────────────────┘
```
4045 A

① ② ③
④ ⑤ ⑥   Write from which program
⑦ ⑧ ⑨   number you want to clear
    ⓪   wash programs.

┌───┐
│ ↓ │   **Press ↓.**
└───┘

```
┌─────────────────────────────────┐
│        CLEAR COUNTER            │
│             CLS                 │
│  FROM PROGRAM NUMBER:           │
│                1                │
│  TO PROGRAM NUMBER:             │
│                0                │
│  TO END: TO PROGRAM NUMBER = 0  │
│   ┌──────┐ ┌──────┐ ┌────────┐  │
│   │  ✳   │ │  ↓   │ │  EXIT  │  │
│   └──────┘ └──────┘ └────────┘  │
└─────────────────────────────────┘
```

┌───┐ ┌───┐ ┌───┐   Enter digits corresponding to
│ 1 │ │ 2 │ │ 3 │   the program number (inclu-
└───┘ └───┘ └───┘   sive) up to which you wish to
┌───┐ ┌───┐ ┌───┐   clear the total counter.
│ 4 │ │ 5 │ │ 6 │
└───┘ └───┘ └───┘
┌───┐ ┌───┐ ┌───┐
│ 7 │ │ 8 │ │ 9 │
└───┘ └───┘ └───┘
      ┌───┐
      │ 0 │
      └───┘

┌─────────────┐
│   ERASE   │   **Press ERASE.**
└─────────────┘

```
┌─────────────────────────────────────┐
│          CLEAR COUNTER              │
│              CLS                    │
│                                     │
│        ARE YOU SURE ?               │
│  PRESS SELECT ELSE PRESS ANY OTHER KEY │
│   ┌──────┐ ┌──────┐ ┌────────┐      │
│   │  ✳   │ │  ✳   │ │ SELECT │      │
│   └──────┘ └──────┘ └────────┘      │
└─────────────────────────────────────┘
```
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.**

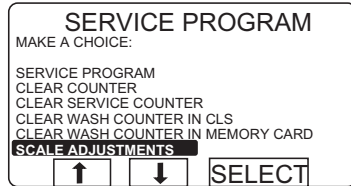If you do want to reset the
register:

┌─────────────┐
│   SELECT   │   **Press SELECT.**
└─────────────┘

For machines with weighing equipment only!

Scale adjustments

```
        SERVICE PROGRAM
MAKE A CHOICE:

SERVICE PROGRAM
CLEAR COUNTER
CLEAR SERVICE COUNTER
CLEAR WASH COUNTER IN CLS
CLEAR WASH COUNTER IN MEMORY CARD
SCALE ADJUSTMENTS
   ↑         ↓       SELECT
```
4777

| ↓ | **Press ↓ repeatedly until SCALE ADJUST-MENTS is highlighted.** |

| SELECT | **Press SELECT.** |

| ↓ | **When you have finished: Press ↓ repeatedly until EXIT is highlighted.** |

```
SERVICE PROGRAM
CLEAR COUNTER
CLEAR SERVICE COUNTER
CLEAR WASH COUNTER IN CLS
CLEAR WASH COUNTER IN MEMORY CARD
SCALE ADJUSTMENTS
EXIT
```
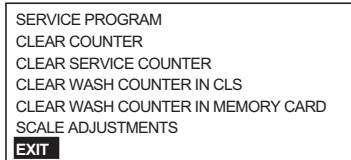
| SELECT | **Press SELECT.** |

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 set the weighing equipment to disregard a given weight, such as the weight of water left in the machine (so it will not be included in the net weight of the load).

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 only!

Reset scale to zero

```
SERVICE PROGRAM
MAKE A CHOICE:
RESET SCALE TO ZERO
RESET TARE TO ZERO
TARE SCALE
SET TARE TO A CERTAIN VALUE
READ TARE VALUE
CALIBRATE THE SCALE
    ↑        ↓     SELECT
```
4778

```
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
```

Check that "RESET SCALE TO ZERO" is high-lighted.

If it isn't...

↓

↑

Press ↑ or ↓ as required to highlight "RE-SET SCALE TO ZERO".

SELECT

Press SELECT.

```
SCALE ADJUSTMENTS
RESET SCALE TO ZERO
DONE!
PRESS SELECT
   ✳      ✳    SELECT
```
4779

SELECT **Press SELECT.**

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

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.

For machines with weighing equipment only!

Reset tare to zero

```
SERVICE PROGRAM
MAKE A CHOICE:
RESET SCALE TO ZERO
RESET TARE TO ZERO
TARE SCALE
SET TARE TO A CERTAIN VALUE
READ TARE VALUE
CALIBRATE THE SCALE
                    ↑    ↓    SELECT
```
4780

┌─────────────────────────────────┐
│ **Reset tare to zero** │
│ If your attempt to clear the tare parameter fails at this │
│ point, you will see an error message equivalent to: "FAI- │
│ LED. PRESS SELECT" on the display. For troubleshoo- │
│ ting, see the section "Fault-finding, weighing equipment" │
│ in the machine manual. │
└─────────────────────────────────┘

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

```
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.**

```
SCALE ADJUSTMENTS
RESET TARE TO ZERO
DONE!
PRESS SELECT
      ✳    ✳    SELECT
```
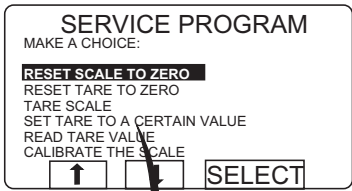4781

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

SELECT   **Press SELECT.**
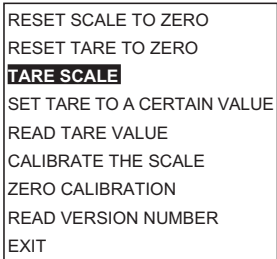
For machines with weighing equipment only!

Tare scale

```
SERVICE PROGRAM
MAKE A CHOICE:
RESET SCALE TO ZERO
RESET TARE TO ZERO
TARE SCALE
SET TARE TO A CERTAIN VALUE
READ TARE VALUE
CALIBRATE THE SCALE
   ↑            SELECT
```
4782

↓ **Press ↓ twice to high-light "TARE SCALE".**

```
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.**

Tare scale

This function is used to set the weighing equipment to disregard a given weight (such as water left inside the drum) so it will not be included in the net weight of the load.

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.

```
SCALE ADJUSTMENTS
     TARE SCALE
      DONE!
   PRESS SELECT
  ✳    ✳    SELECT
```
4783
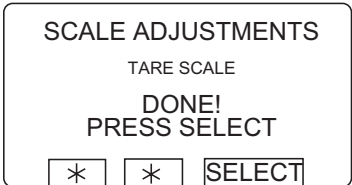
This screen shows that the weighing equipment has been tared successfully.

SELECT **Press SELECT.**

For machines with weighing equipment only!

Set tare to a certain value

```
SERVICE PROGRAM
MAKE A CHOICE:
RESET SCALE TO ZERO
RESET TARE TO ZERO
TARE SCALE
SET TARE TO A CERTAIN VALUE
READ TARE VALUE
CALIBRATE THE SCALE
     ↑        ↓     SELECT
```
4784

↓ **Press ↓ three times to highlight "SET TARE TO A CERTAIN 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.**

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.

```
SCALE ADJUSTMENTS

SET TARE TO A CERTAIN VALUE

ENTER TARE IN HG AND
   PRESS SELECT

     ✳        ✳     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.**

```
SCALE ADJUSTMENTS

SET TARE TO A CERTAIN VALUE

   DONE!
PRESS SELECT

     ✳        ✳     SELECT
```
4786

This screen shows that the parameter has been entered successfully.

SELECT **Press SELECT.**

For machines with weighing equipment only!

Read tare value

```
SERVICE PROGRAM
MAKE A CHOICE:
RESET SCALE TO ZERO
RESET TARE TO ZERO
TARE SCALE
SET TARE TO A CERTAIN VALUE
READ TARE VALUE
CALIBRATE THE SCALE
    ↑       ↓    SELECT
```
4787

⬇ **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.**

```
SCALE ADJUSTMENTS
    READ TARE VALUE

       10 HG

    ✳    ✳    SELECT
```
4788

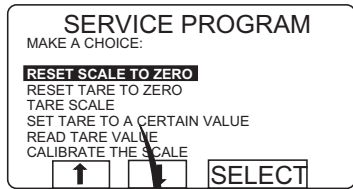This screen shows the stored tare parameter (unit: hectograms (1 hectogram = 100 grams).

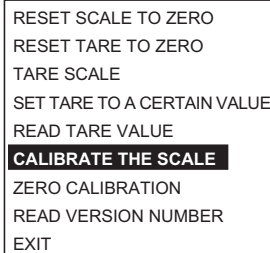SELECT **Press SELECT.**

┌─ **Read tare value** ──────────────────┐
This function lets you check the value currently stored as the tare parameter.
└──┘

For machines with weighing equipment only!

Calibrate the scale

SERVICE PROGRAM
MAKE A CHOICE:
RESET SCALE TO ZERO
RESET TARE TO ZERO
TARE SCALE
SET TARE TO A CERTAIN VALUE
READ TARE VALUE
CALIBRATE THE SCALE

↑   ↓   SELECT

4789

↓ **Press ↓ five times to highlight "CALIBRATE THE SCALE".**
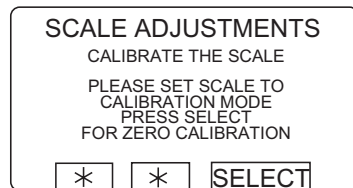
RESET SCALE TO ZERO

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.**

SCALE ADJUSTMENTS
CALIBRATE THE SCALE
PLEASE SET SCALE TO
CALIBRATION MODE
PRESS SELECT
FOR ZERO CALIBRATION

✳   ✳   SELECT

4790

Set the calibration switch to calibration mode.

SELECT **Press SELECT.**

SCALE ADJUSTMENTS
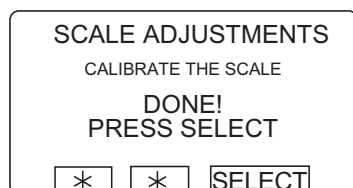CALIBRATE THE SCALE
DONE!
PRESS SELECT

✳   ✳   SELECT

4791

SELECT **Press SELECT.**

Please note:

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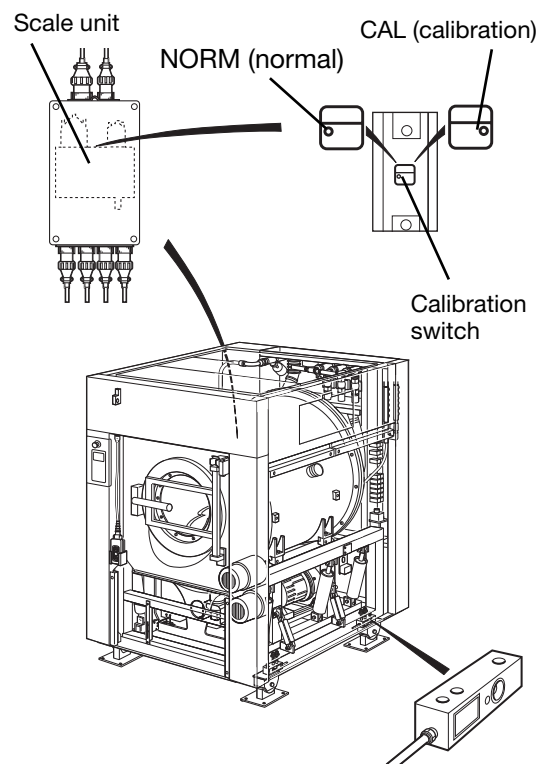

Calibrate the scale

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.

All removable parts such as side panels and top cover must be in place on the machine for this calibration.

Calibration mode/normal mode

To gain access to the calibration switch in the scale unit, the left-hand rear side 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 "NORM" and calibration mode "CAL".

Scale unit

NORM (normal)

CAL (calibration)

Calibration switch

4933

Machine operation

For machines with weighing equipment only!

```
┌─────────────────────────────┐
│     SCALE ADJUSTMENTS        │
│                              │
│      CALIBRATE THE SCALE     │
│ FILL DRUM WITH CALIBRATION WEIGHT │
│ ENTER WEIGHT IN HG AND       │
│ PRESS SELECT                 │
│   ┌──┐  ┌──┐  ┌────────┐     │
│   │ ✳ │  │ ✳ │  │ SELECT │   │
│   └──┘  └──┘  └────────┘     │
└─────────────────────────────┘
4792
```

Put the calibration weight inside the drum or on top of the machine.

┌─ 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.

```
( 1 )( 2 )( 3 )
( 4 )( 5 )( 6 )
( 7 )( 8 )( 9 )
       ( 0 )
```

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

```
┌────────┐
│ SELECT │
└────────┘
```
Press SELECT.

```
┌─────────────────────────────┐
│     SCALE ADJUSTMENTS        │
│                              │
│      CALIBRATE THE SCALE     │
│          DONE!               │
│       PRESS SELECT           │
│   ┌──┐  ┌──┐  ┌────────┐     │
│   │ ✳ │  │ ✳ │  │ SELECT │   │
│   └──┘  └──┘  └────────┘     │
└─────────────────────────────┘
4791
```

```
┌────────┐
│ SELECT │
└────────┘
```
Press SELECT.

```
┌─────────────────────────────┐
│     SCALE ADJUSTMENTS        │
│                              │
│      CALIBRATE THE SCALE     │
│ REMOVE WEIGHT AND PRESS SELECT │
│   ┌──┐  ┌──┐  ┌────────┐     │
│   │ ✳ │  │ ✳ │  │ SELECT │   │
│   └──┘  └──┘  └────────┘     │
└─────────────────────────────┘
4793
```

Remove the calibration weight.

```
┌────────┐
│ SELECT │
└────────┘
```
Press SELECT.

```
┌─────────────────────────────┐
│     SCALE ADJUSTMENTS        │
│                              │
│      CALIBRATE THE SCALE     │
│ PRESS SELECT FOR ZERO CALIBRATION │
│   ┌──┐  ┌──┐  ┌────────┐     │
│   │ ✳ │  │ ✳ │  │ SELECT │   │
│   └──┘  └──┘  └────────┘     │
└─────────────────────────────┘
4794
```

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

```
┌────────┐
│ SELECT │
└────────┘
```
Press SELECT.

For machines with weighing equipment only!

```
SCALE ADJUSTMENTS
CALIBRATE THE SCALE
DONE!
PRESS SELECT
  ✳    ✳    SELECT
```
4791

SELECT **Press SELECT.**

```
SCALE ADJUSTMENTS
CALIBRATE THE SCALE
RESET SCALE FROM CALIBRATION
MODE AND PRESS SELECT
  ✳    ✳    SELECT
```
4795
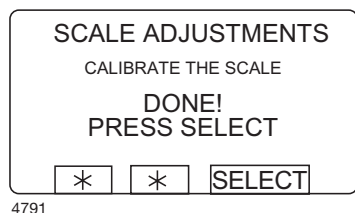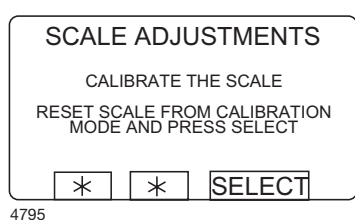
SELECT **Press SELECT.**

Restore the calibration switch to normal mode.

┌─ **Calibration mode/normal mode** ─┐

To gain access to the calibration switch in the scale unit the left-hand rear side 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 "NORM" and calibration mode "CAL".

Scale unit

NORM (normal)　　　CAL (calibration)

Calibration switch

4933
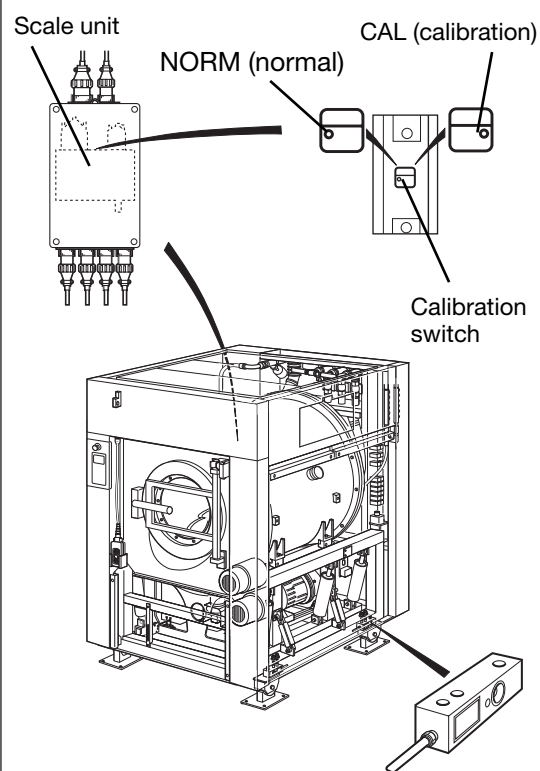
For machines with weighing equipment only!

Zero calibration

```
┌─────────────────────────────────┐
│  SERVICE PROGRAM                │
│  MAKE A CHOICE:                 │
│  RESET SCALE TO ZERO            │
│  RESET TARE TO ZERO             │
│  TARE SCALE                     │
│  SET TARE TO A CERTAIN VALUE    │
│  READ TARE VALUE                │
│  CALIBRATE THE SCALE            │
│   ↑        SELECT               │
└─────────────────────────────────┘
4796
```

┌───┐
│ ↓ │   **Press ↓ six times to highlight "ZERO CALI-BRATION".**
└───┘

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.

All removable parts such as side panels and top cover must be in place on the machine for this calibration.

```
┌─────────────────────────────────┐
│  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.**

```
┌─────────────────────────────────┐
│  SCALE ADJUSTMENTS              │
│                                 │
│     ZERO CALIBRATION            │
│    PRESS SELECT FOR             │
│    ZERO CALIBRATION             │
│   ✳    ✳    SELECT              │
└─────────────────────────────────┘
4797
```

If you wish to calibrate zero for the weighing equipment:

SELECT   **Press SELECT.**

```
┌─────────────────────────────────┐
│  SCALE ADJUSTMENTS              │
│     ZERO CALIBRATION            │
│                                 │
│        DONE!                    │
│     PRESS SELECT                │
│   ✳    ✳    SELECT              │
└─────────────────────────────────┘
4798
```

This screen shows you have calibrated zero.

SELECT   **Press SELECT.**

For machines with weighing equipment only!

Read version number

```
SERVICE PROGRAM
MAKE A CHOICE:
RESET SCALE TO ZERO
RESET TARE TO ZERO
TARE SCALE
SET TARE TO A CERTAIN VALUE
READ TARE VALUE
CALIBRATE THE SCALE
    ↑        ↓     SELECT
```
4799

↓ **Press ↓ seven times to highlight "READ VERSION NUMBER".**

```
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.**

> **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.

```
SCALE ADJUSTMENTS

READ VERSION NUMBER

STATHMOS AB 3050 REV 00521

  *      *     SELECT
```
4800

The screen shows the version number.

SELECT **Press SELECT.**

Memory card

General introduction
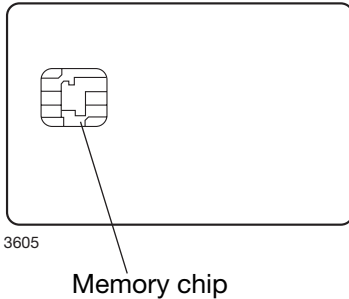
3605

Memory chip

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

Memory chip

3606
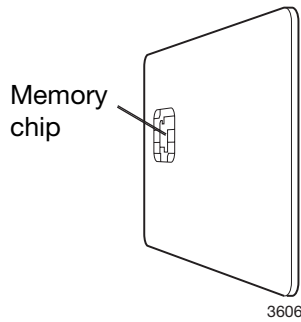
Turn the memory card so its memory chip is at the far end, and on the left of the card...

Card reader

```
1   2   3
4   5   6
7   8   9
↩   0
```

4115
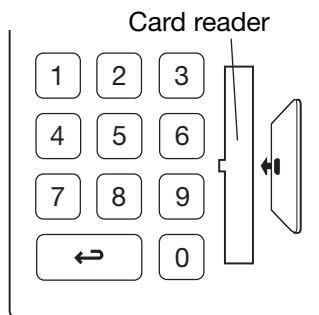
...then insert the memory card into the program control unit.
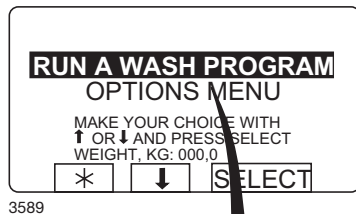
```
RUN A WASH PROGRAM
   OPTIONS MENU

MAKE YOUR CHOICE WITH
↑ OR ↓ AND PRESS SELECT
WEIGHT, KG: 000,0
  ✳    ↓    SELECT
```

3589

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.**

```
░░░ MENU ░░░
MAKE A CHOICE:
WASH PROGRAM LIBRARY
PROGRAMMING MODE
SETTINGS 1
MEMORY CARD
SERVICE MODE
STATISTICS
   ✳      ↓    SELECT
```
3596
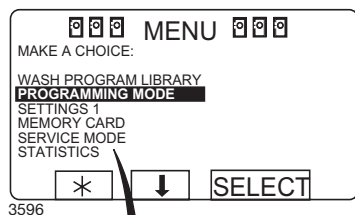
Press ↓ **three times...**

↓

↓

↓

...to highlight "MEMORY CARD".

```
WASH PROGRAM LIBRARY
PROGRAMMING MODE
SETTINGS 1
MEMORY CARD
SERVICE MODE
STATISTICS
MANUAL MODE
SETTINGS 2
EXIT
```

SELECT **Press SELECT.**

MEMORY CARD

EXECUTE WASH PROGRAM FROM MEMORY CARD
COPY PROGRAM FROM MEMORY CARD TO CLS
COPY PROGRAM FROM CLS TO MEMORY CARD
DELETE PROGRAM IN MEMORY CARD
CLEAR MEMORY CARD
EXIT

| ✳ | ↓ | SELECT |

3597 A

EXECUTE WASH PROGRAM FROM MEMORY CARD
COPY PROGRAM FROM MEMORY CARD TO CLS
COPY PROGRAM FROM CLS TO MEMORY CARD
DELETE PROGRAM IN MEMORY CARD
CLEAR MEMORY CARD
EXIT

| ↑ | ↓ |

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

```
MEMORY CARD

EXECUTE WASHPROGRAM FROM MEMORY CARD
COPY PROGRAM FROM MEMORY CARD TO CLS
COPY PROGRAM FROM CLS TO MEMORY CARD
DELETE PROGRAM IN MEMORY CARD
CLEAR MEMORY CARD

    ✳      ↓      SELECT
3598 A
```

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

Highlight "EXECUTE WASH PROGRAM FROM ME-MORY CARD" (press ↑ if necessary).

```
EXECUTE WASHPROGRAM FROM MEMORY CARD
COPY PROGRAM FROM MEMORY CARD TO CLS
COPY PROGRAM FROM CLS TO MEMORY CARD
DELETE PROGRAM IN MEMORY CARD
CLEAR MEMORY CARD
```

| SELECT | **Press SELECT.** |

```
MEMORY CARD
EXECUTE WASH PROGRAM FROM MEMORY

PR NO    NAME
991      NORMAL 95°C STD
992      NORMAL 60°C STD
993      NORMAL 40°C STD
994      INTENSIVE 95°C
995      INTENSIVE 60°C
996      PER.PRESS 60°C

    ✳      ↓      SELECT
3607
```

| ↓ | **If necessary, use ↓ to...** |

```
991    NORMAL 95°C STD
992    NORMAL 60°C STD
993    NORMAL 40°C STD
994    INTENSIVE 95°C
995    INTENSIVE 60°C
996    PER.PRESS 60°C
```

... highlight the wash program required.

| SELECT | **Press SELECT.** |

```
RUN A WASH PROGRAM
PROGRAM NUMBER AND START DELAY SELECTED:

994          00:00 ─ Program name
INTENSIVE 95 °C
    🔘TEXT🔘    START
3608
```

| 🔘 TEXT 🔘 | If you want to see the description of the program (where available): **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.


```
Program memory program control unit

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

Operating memory program control unit
997    PERM. PRESS 40°C
```
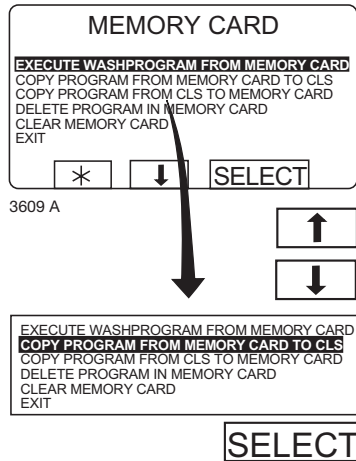Program currently being used

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.


```
Program memory card

1    MY OWN 40 °C
2    MY OWN 60 °C
3    MY OWN 90 °C
4    MY OWN WOOL 30 °C
5    MY OWN INTENSIVE
```

```
Program memory program control unit

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

Operating memory program control unit
4    MY OWN WOOL 30 °C
```

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

```
        MEMORY CARD
EXECUTE WASHPROGRAM FROM MEMORY CARD
COPY PROGRAM FROM MEMORY CARD TO CLS
COPY PROGRAM FROM CLS TO MEMORY CARD
DELETE PROGRAM IN MEMORY CARD
CLEAR MEMORY CARD
EXIT

    *        ↓      SELECT
```
3609 A

```
EXECUTE WASHPROGRAM FROM MEMORY CARD
COPY PROGRAM FROM MEMORY CARD TO CLS
COPY PROGRAM FROM CLS TO MEMORY CARD
DELETE PROGRAM IN MEMORY CARD
CLEAR MEMORY CARD
EXIT
```

```
        MEMORY CARD
COPY PROGRAM FROM MEMORY CARD TO CLS
PR NO.   NAME
1        MY OWN 40 °C
2        MY OWN 60 °C
3        MY OWN 90 °C
4        MY OWN WOOL 30 °C
5        MY OWN INTENSIVE

    *        ↓      SELECT
```
3610 A

```
1        MY OWN 40°C
2        MY OWN 60°C
3        MY OWN 90°C
4        MY OWN WOOL 30 °C
5        MY OWN INTENSIVE
```

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 PCS" (press ↓ or ↑ if necessary).

↑
↓

SELECT **Press SELECT.**
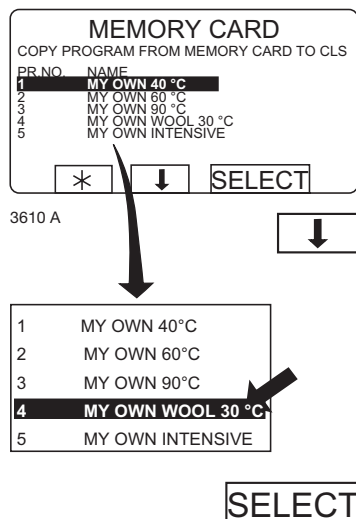
↓ **If necessary, use ↓ to...**

... 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

Program memory card	
1	MY OWN 40 °C
2	MY OWN 60 °C
3	MY OWN 90 °C
4	MY OWN WOOL 30 °C
5	MY OWN INTENSIVE

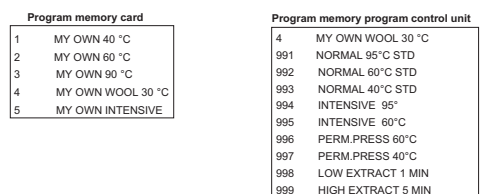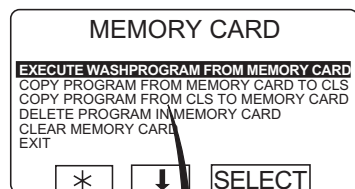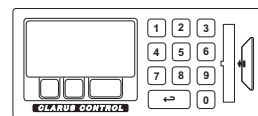| Program memory program control unit	
991	NORMAL 95°C STD
992	NORMAL 60°C STD
993	NORMAL 40°C STD
994	INTENSIVE 95°
995	INTENSIVE 60°C
996	PERM.PRESS 60°C
997	PERM.PRESS 40°C
998	LOW EXTRACT 1 MIN
999	HIGH EXTRACT 5 MIN
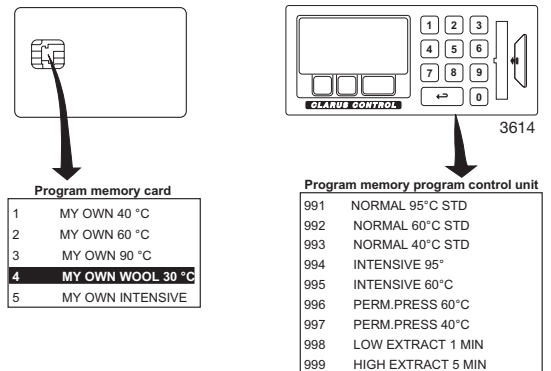
When a program is copied from a memory card to the machine's program control unit, it is copied, not moved (not deleted from the card). A copy is transferred from the chip on the memory card to the storage chip of the machine program control unit.

Program memory card	
1	MY OWN 40 °C
2	MY OWN 60 °C
3	MY OWN 90 °C
4	MY OWN WOOL 30 °C
5	MY OWN INTENSIVE

Program memory program control unit	
4	MY OWN WOOL 30 °C
991	NORMAL 95°C STD
992	NORMAL 60°C STD
993	NORMAL 40°C STD
994	INTENSIVE 95°
995	INTENSIVE 60°C
996	PERM.PRESS 60°C
997	PERM.PRESS 40°C
998	LOW EXTRACT 1 MIN
999	HIGH EXTRACT 5 MIN
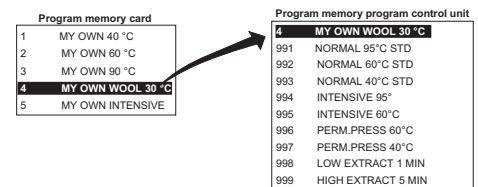
3615

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

Program memory card	
1	MY OWN 40 °C
2	MY OWN 60 °C
3	MY OWN 90 °C
4	MY OWN WOOL 30 °C
5	MY OWN INTENSIVE

Program memory program control unit	
4	MY OWN WOOL 30 °C
991	NORMAL 95°C STD
992	NORMAL 60°C STD
993	NORMAL 40°C STD
994	INTENSIVE 95°
995	INTENSIVE 60°C
996	PERM.PRESS 60°C
997	PERM.PRESS 40°C
998	LOW EXTRACT 1 MIN
999	HIGH EXTRACT 5 MIN

3616

```
┌─────────────────────────────────────┐
│          MEMORY CARD                 │
│ COPY PROGRAM FROM MEMORY CARD TO CLS │
│                                      │
│ NOW YOU CAN CHANGE NUMBER.       123 │
│                                      │
│ JUST PRESS SELECT IF NUMBER IS OK    │
│   ┌────┐  ┌────┐  ┌──────────┐       │
│   │ ✱  │  │ ↓  │  │ SELECT   │       │
│   └────┘  └────┘  └──────────┘       │
└─────────────────────────────────────┘
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.

(1)(2)(3)
(4)(5)(6)
(7)(8)(9)
(0)

SELECT

2 If the existing number is suitable:

Press SELECT.

```
┌─────────────────────────────────────┐
│          MEMORY CARD                 │
│ COPY PROGRAM FROM MEMORY CARD TO CLS │
│ NOW YOU CAN CHANGE NUMBER         00 │
│                                      │
│ PROG. NUMBER EXIST! OVERWRITE?       │
│ PRESS SELECT OR ANY OTHER KEY        │
│   ┌────┐  ┌────┐  ┌──────────┐       │
│   │ ✱  │  │ ↓  │  │ SELECT   │       │
│   └────┘  └────┘  └──────────┘       │
└─────────────────────────────────────┘
4114 A
```

If the number you have choosen is already used:

1 Select another number.

Enter the new number and press SELECT.

(1)(2)(3)
(4)(5)(6)
(7)(8)(9)
(0)

2 Erase the old program number.

Press SELECT.

SELECT

```
        MEMORY CARD
COPY PROGRAM FROM MEMORY CARD TO CLS

PROGRAM LOADED

PRESS  ANY KEY TO CONTINUE...

    [ ✳ ] [ ✳ ] [  ✳  ]
```
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.

```
EXECUTE WASHPROGRAM FROM MEMORY CARD
COPY PROGRAM FROM MEMORY CARD TO CLS
COPY PROGRAM FROM CLS TO MEMORY CARD
DELETE PROGRAM IN MEMORY CARD
CLEAR MEMORY CARD
[EXIT]
```
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

```
MEMORY CARD
EXECUTE WASHPROGRAM FROM MEMORY CARD
COPY PROGRAM FROM MEMORY CARD TO CLS
COPY PROGRAM FROM CLS TO MEMORY CARD
DELETE PROGRAM IN MEMORY CARD
CLEAR MEMORY CARD
EXIT
    ✳        ↓      SELECT
```
3619 A

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

↑
↓
Highlight "COPY PRO-GRAM FROM CLS TO ME-MORY CARD" (press ↓ or ↑ if necessary).

```
EXECUTE WASHPROGRAM FROM MEMORY CARD
COPY PROGRAM FROM MEMORY CARD TO CLS
COPY PROGRAM FROM CLS TO MEMORY CARD
DELETE PROGRAM IN MEMORY CARD
CLEAR MEMORY CARD
EXIT
```

SELECT **Press SELECT.**

```
MEMORY CARD
COPY PROGRAM FROM CLS TO MEMORY CARD
PR NO.    NAME
991    NORMAL 95 °C STD
992    NORMAL 60 °C STD
993    NORMAL 40 °C STD
994    INTENSIVE 95 °C
995    INTENSIVE 60 °C
996    PER. PRESS 60 °C
    ✳        ↓      SELECT
```
3620 A

↓
If necessary, use ↓ to...

```
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    LOW EXTRACT 1 MIN
998    HIGH EXTRACT 5 MIN
```

... highlight the wash pro-gram required.

SELECT **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.
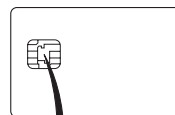
3614

Program memory card

1	MY OWN 40 °C
2	MY OWN 60 °C
3	MY OWN 90 °C
4	MY OWN WOOL 30 °C
5	MY OWN INTENSIVE

Program memory program control unit

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

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.

Program memory card

1	MY OWN 40 °C
2	MY OWN 60 °C
3	MY OWN 90 °C
4	MY OWN WOOL 30 °C
5	MY OWN INTENSIVE
992	NORMAL 60 °C STD

Program memory program control unit

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

3621

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

Program memory card

1	MY OWN 40 °C
2	MY OWN 60 °C
3	MY OWN 90 °C
4	MY OWN WOOL 30 °C
5	MY OWN INTENSIVE
992	NORMAL 60 °C STD

Program memory program control unit

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

3622

```
┌─────────────────────────────────────┐
│           MEMORY CARD                │
│  COPY PROGRAM FROM CLS TO MEMORY CARD│
│                                      │
│  NOW YOU CAN CHANGE NUMBER.      998 │
│                                      │
│  JUST PRESS SELECT IF NUMBER IS OK   │
│                                      │
│   ┌──┐  ┌──┐  ┌─────────┐            │
│   │ ✻│  │ ↓│  │ SELECT  │            │
│   └──┘  └──┘  └─────────┘            │
└─────────────────────────────────────┘
```
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.

```
┌─────────────────────────────────────┐
│           MEMORY CARD                │
│  COPY PROGRAM FROM MEMORY CARD TO CLS│
│  NOW YOU CAN CHANGE NUMBER        00 │
│                                      │
│  PROG. NUMBER EXIST! OVERWRITE?      │
│  PRESS SELECT OR ANY OTHER KEY       │
│                                      │
│   ┌──┐  ┌──┐  ┌─────────┐            │
│   │ ✻│  │ ↓│  │ SELECT  │            │
│   └──┘  └──┘  └─────────┘            │
└─────────────────────────────────────┘
```
4114 A

If the number you have chosen is already used:

1 Select another number.

Enter the new number and press SELECT.

2 Erase the old program number.
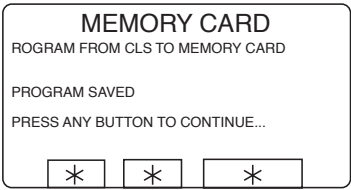
Press SELECT.

```
           MEMORY CARD
ROGRAM FROM CLS TO MEMORY CARD

PROGRAM SAVED

PRESS ANY BUTTON TO CONTINUE...

     ✳      ✳       ✳
```
3624 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.

```
EXECUTE WASHPROGRAM FROM MEMORY CARD
COPY PROGRAM FROM MEMORY CARD TO CLS
COPY PROGRAM FROM CLS TO MEMORY CARD
DELETE PROGRAM IN MEMORY CARD
CLEAR MEMORY CARD
EXIT
```
4210 A
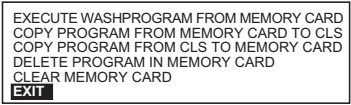
When you have finished:

Press ⬇ repeatedly to highlight "EXIT".

SELECT **Press SELECT.**

To delete a program on a memory card
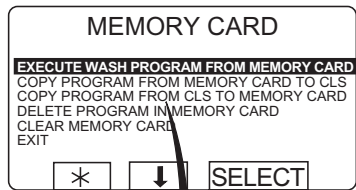
```
MEMORY CARD

EXECUTE WASH PROGRAM FROM MEMORY CARD
COPY PROGRAM FROM MEMORY CARD TO CLS
COPY PROGRAM FROM CLS TO MEMORY CARD
DELETE PROGRAM IN MEMORY CARD
CLEAR MEMORY CARD
EXIT

  *       ↓    SELECT
```
3625A

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 PRO-GRAM IN MEMORY CARD" (press ↑ or ↓ if necessary).

```
EXECUTE WASHPROGRAM FROM MEMORY CARD
COPY PROGRAM FROM MEMORY CARD TO CLS
COPY PROGRAM FROM CLS TO MEMORY CARD
DELETE PROGRAM IN MEMORY CARD
CLEAR MEMORY CARD
EXIT
```

SELECT **Press SELECT.**

```
MEMORY CARD
DELETE PROGRAM IN MEMORY CARD

PR NO.    NAME
1         MY OWN 40°C
2         MY OWN 60 °C
3         MY OWN 90 °C
4         MY OWN WOOL 30 °C
5         MY OWN INTENSIVE

  *       ↓    SELECT
```
3626

↓ **If necessary, use ↓ to...**

```
1    MY OWN 40 °C
2    MY OWN 60 °C
3    MY OWN 90 °C
4    MY OWN WOOL 30 °C
5    MY OWN INTENSIVE
```
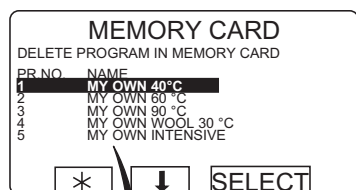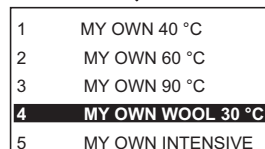
.... highlight the wash pro-gram required.

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.

```
EXECUTE WASHPROGRAM FROM MEMORY CARD
COPY PROGRAM FROM MEMORY CARD TO CLS
COPY PROGRAM FROM CLS TO MEMORY CARD
DELETE PROGRAM IN MEMORY CARD
CLEAR MEMORY CARD
EXIT
```
4210 A

When you have finished:

Press ↓ repeatedly to highlight "EXIT".

SELECT **Press SELECT.**

Machine operation

To delete all programs on a memory card

```
         MEMORY CARD
EXECUTE WASH PROGRAM FROM MEMORY CARD
COPY PROGRAM FROM MEMORY CARD TO CLS
COPY PROGRAM FROM CLS TO MEMORY CARD
DELETE PROGRAM IN MEMORY CARD
CLEAR MEMORY CARD
EXIT
   [ ✳ ]  [ ↓ ]  |SELECT|
```
4519 A

```
        [ ↑ ]

        [ ↓ ]
```

```
EXECUTE WASHPROGRAM FROM MEMORY CARD
COPY PROGRAM FROM MEMORY CARD TO CLS
COPY PROGRAM FROM CLS TO MEMORY CARD
DELETE PROGRAM IN MEMORY CARD
CLEAR MEMORY CARD
EXIT
```

|SELECT| **Press SELECT.**

```
         MEMORY CARD

CLEAR MEMORY CARD

THIS WILL CLEAR ALL PROGRAMS !!

TO CONTINUE PRESS SELECT.
ELSE PRESS ANY OTHER KEY.
   [ ↑ ]  [ ↓ ]  |SELECT|
```
3629

|SELECT|

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 "CLEAR ME-MORY CARD" (press [↓] or [↑] if necessary).

If you change your mind and do not want to delete the entire memory card:
Press any key other than SELECT.

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

Maintenance

However, the following measures should be carried out at regular intervals and to the extent determined by the operating outlet.

6

3457

Daily

- Check that the door lock is working normally.

- Check that the door does not leak. Clean the door sealing disk of detergent residue.

- If the machine has an automatic dispenser: clean this (including scoops) of detergent residue.

- Check that the drain valve is not leaking and that it opens and closes normally.

- Check the compressed air regulator. If necessary empty separated water.

Every third month

- Ensure that the external switch is "OFF".

- Remove rear and side panels.

- Check that hoses and connections are not leaking.

6 • Check that the drive belts are undamaged and properly tensioned. If necessary adjust the drive belts.

	EX6102c	EX6135c	EX6200c	EX6250c
X	15 mm	10 mm	23 mm	23 mm
F	20 N	90 N	75 N	75 N

7 • Clean the filters at the steam and water connections.

7

Filter
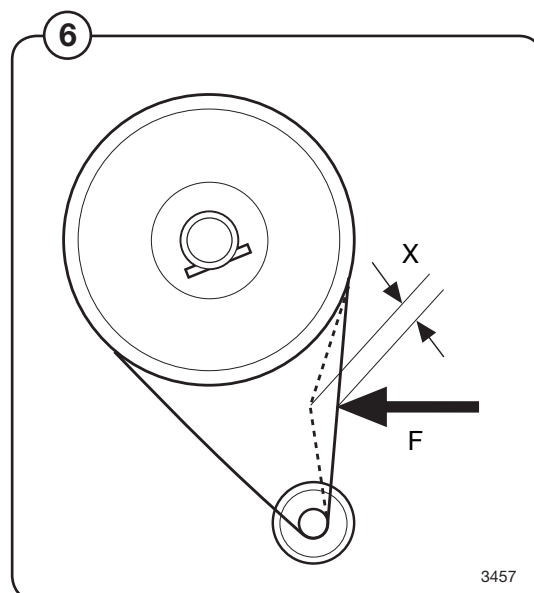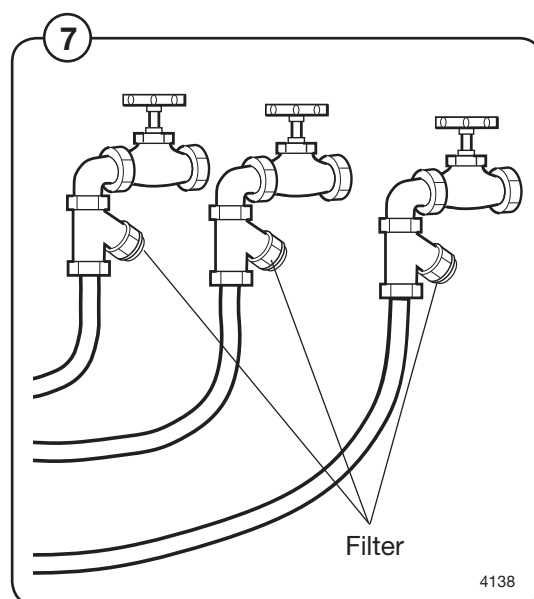
4138

(8) • Check that the imbalance switch's control arm is not bent or damaged, and that it is correctly adjusted. The control arm should be 10 mm from the two adjusting screws and should touch the screws' mounting plate (on an empty machine).

• Clean the filters at the steam and water connections. Empty the compressed air connection's water separator.
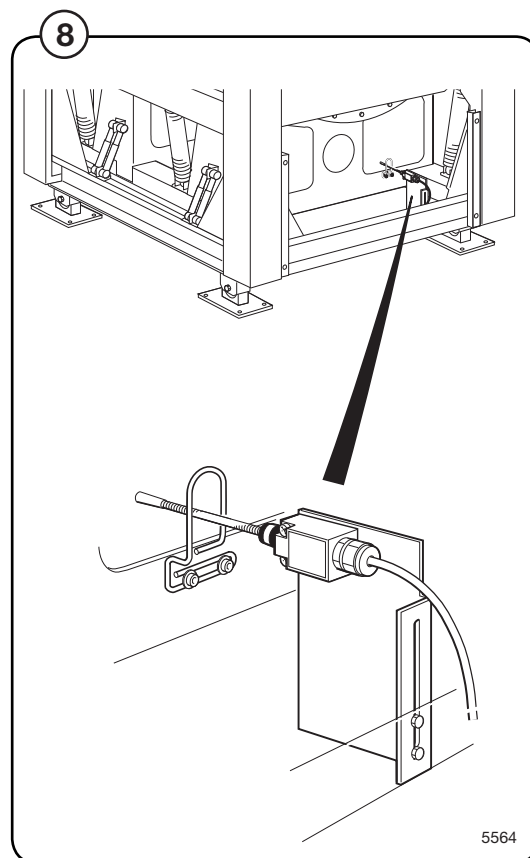
(9) • The machine is supplied with equipment for lubricating axle seals: check the oil level in the container. If the level is too low, the machine will stop and an error message will appear in the display. Fill with oil if necessary (Hydraulic oil Binol Hydrap or equivalent).

• Reinstall the cover plates after completing checks.
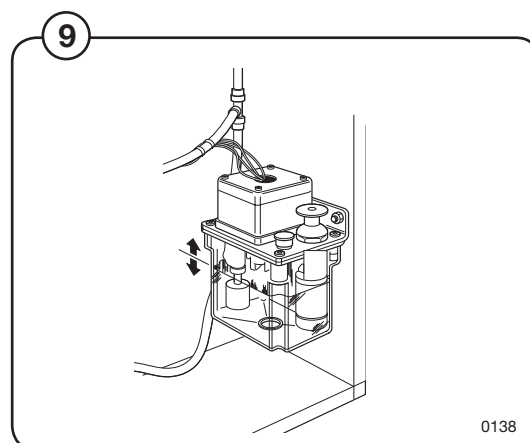
Every six month

- Make sure that the external switch is "OFF" before removing the machine's protective panels.

(10)
- Then remove the rear panel. Lubricate the drum shaft with a grease gun.

- Check oil lubrication container.

If empty the unit has to be changed

(11)
- Remove the cover (1) over the pump unit.

(12)
- Remove the jumper (2) on the electrical connection.

5880

5301

5302
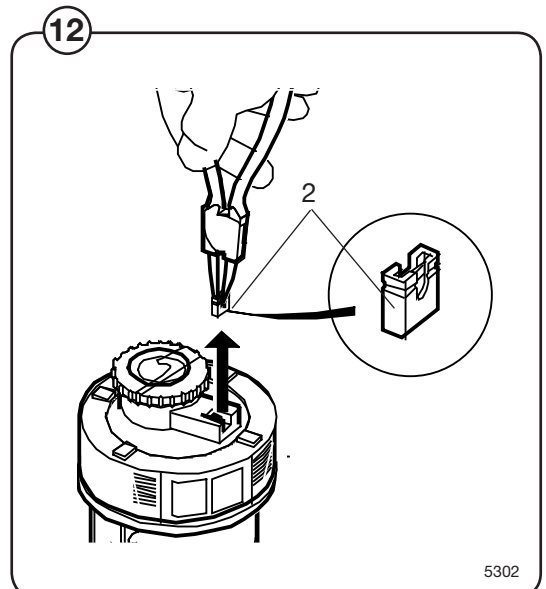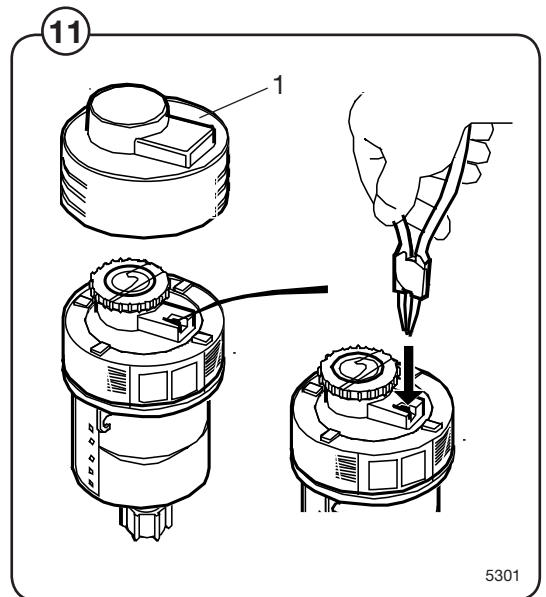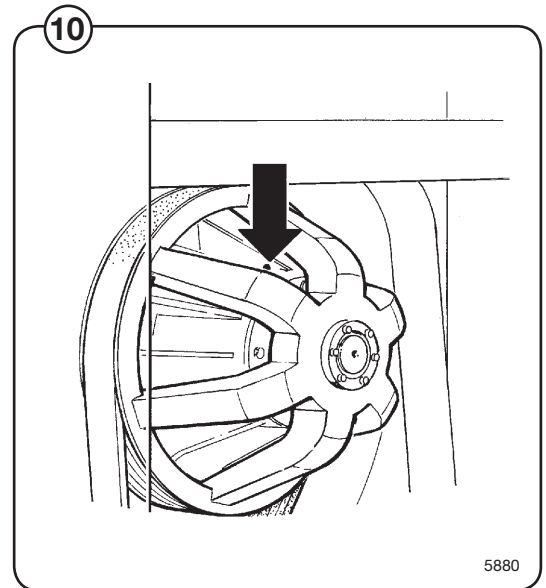
(13) • Pry off the switch panel cap.

(14) • EX6102c and EX6135c
Set switches 2 and 7 to the "ON" position,
2 = 2 months and 7 = switch on.

EX6200c and EX6250c
Set switches 1 and 7 to the "ON" position,
1 = 1 month and 7 = switch on.

(15) • Connect the cable on the new pump unit.

• Mount the switch cap and the oil pump cover.

• Mount the unit in the machine.

2207

6133

5303
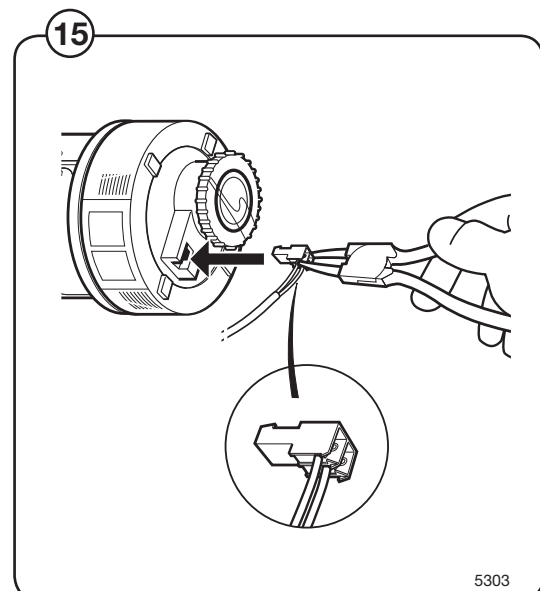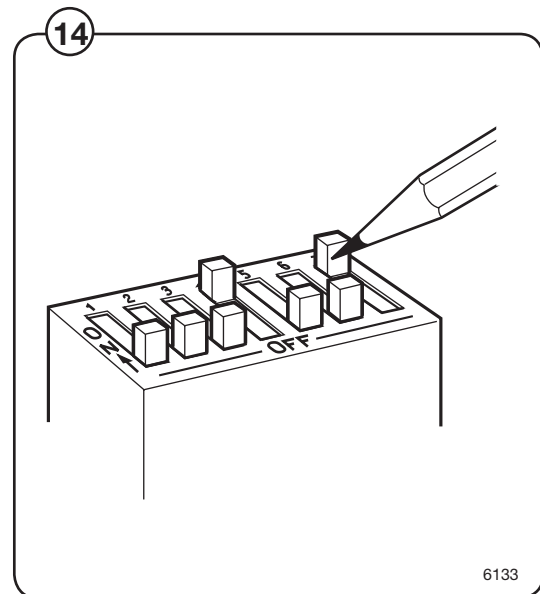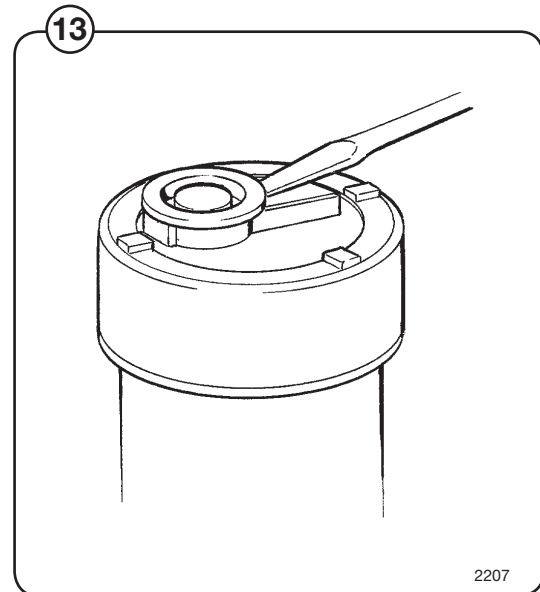
Weighing equipment

Description

(13) The weighing equipment comprises the following units:

- A scale unit located inside the machine's left-hand rear side panel

- Four load cells, one in each corner of the frame

- Wiring

The weight of the wash load is registered by the four load cells, which send analogue signals to the scale unit. In the scale unit the signals are processed and converted to a weight value in an analogue-digital converter. The weight value is transmitted via a serial interface to the CPU board. The weight is then shown on the display.

Weighing the load allows the water level to be adjusted automatically according to the actual weight of the load, i.e. the water level is reduced during washing if the machine does not have a full load. The consumption of water and energy can thus be reduced.

Scale unit

Load cell

5955, 5879

Safety rules

The weighing equipment is a precision measuring device and must be treated as such.

- Never spray water directly onto the load cells and scale unit.

- The load cells are vulnerable to impact.

- The load cells are potentially vulnerable if welding is carried out. If welding has to be done on the washer extractor, attach the earth cable clamp as close as possible to the welding site.

After a power-cut

When the supply is restored after a power-cut, the weight display will show "0" if the load inside the drum is less than 6.25 kg. If the load weighs more than 6.25 kg, the true weight of the load will be shown.
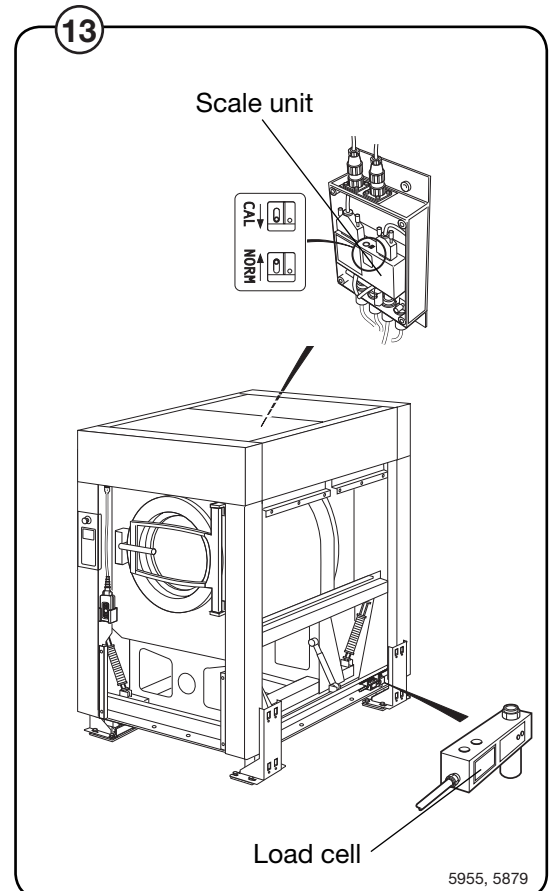
Water level reduction

To achieve optimum load volumes, the weight of the load can be seen on the display while the machine is being loaded. If the machine does not have a full load, the water level will 20be reduced according to a water-level reduction table. However the water level can never be lower than the safety level plus the hysteresis.

Actual weight display

(14) The Clarus control unit automatically detects if weighing equipment is connected, and the actual (current) weight is shown on the display, on one line of the menu (normal display mode).

(15) When the machine starts to be loaded, the display switches to showing the actual weight in large numerals (weight display mode).

Normal display mode is resumed:

- If a new program number is entered using the numeric keys.

- If ⏎ is pressed.

- Automatically after the time set via "Settings 1" under "Time for weight display".

While a wash program is running, you can switch to weight display mode by selecting "Show weight", see the section "Show weight" under "Machine operation".

The weight shown on the display will always be the net weight (achieved because the weighing equipment has been "tared"). A slight delay is built in to prevent the display from flickering.

Resetting the weighing equipment

(14) If the display does not show the weight (in an empty machine) as zero after a program, the weighing equipment can be reset to zero using the TAR key.

For a description of the functions used to set and check the tare value, see the section headed "Scale adjustments" under "Machine operation".

(14)

Normal mode

RUN A WASH PROGRAM
OPTIONS MENU

MAKE YOUR CHOICE WITH
↑ OR ↓ AND PRESS SELECT
WEIGHT, KG: 000,0

TAR | ↓ | SELECT

Resets to zero   Menu line showing
                        actual weight
                                        3651

(15)

Weight display mode

CLARUS CONTROL
WEIGHT, KG:

007,0

∗ | ∗ | ∗

4775
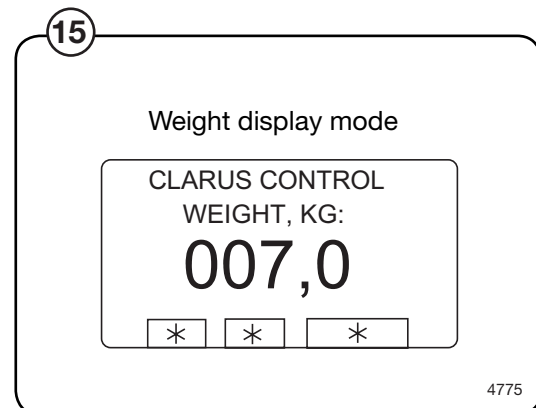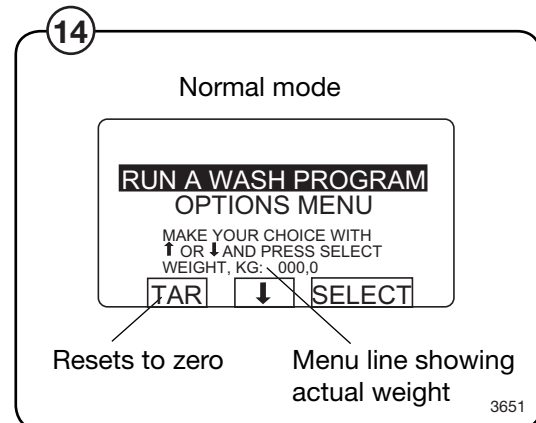
Calibrating the weighing equipment

The "Zero calibration" function is used to increase the accuracy of the weighing equipment. This should be done once a month. See the section headed "Zero calibration" under "Machine operation".

If a new scale unit is installed, it must be calibrated as described in the section "Calibrate the scale" under "Machine operation".

Checking accuracy of weighing equipment display

Twice a year you need to check that the weighing equipment is displaying the accurate weight, with the aid of an object of known weight. If the weighing equipment does not show the real weight of this object, you will need to follow the "Zero calibration" procedure, a function in the Clarus software. Follow the instructions under "Zero calibration" in the "Machine operation" section of the manual. If this is unsuccessful, the weighing equipment will have to be recalibrated using the "Calibrate the scale" function, as described under "Machine operation".

If the weighing equipment has a fault

Follow the troubleshooting procedure under the heading "Fault-finding, weighing equipment".

If you cannot rectify the problem with the help of that section, make a note of the weighing equipment version number before you contact the service department.

To find the weighing equipment version number, access the service program, select "Scale adjustments", then "Read version number".

The dead load selector

(16) The dead load selector, located in the scale unit, is used for setting the machine's "dead load".

The dead load is the load (weight) to which the load cells are subjected before any load is placed in the wash drum. The dead load selector is set before the machine leaves the factory, and its setting should not normally be changed.

EX6102c   1000-1450 kg
EX6135c   1200-1600 kg
EX6200c   2100-2550 kg
EX6250c   2100-2550 kg

If calibration of the weighing equipment should fail, one possible cause can be that this selector is incorrectly set.
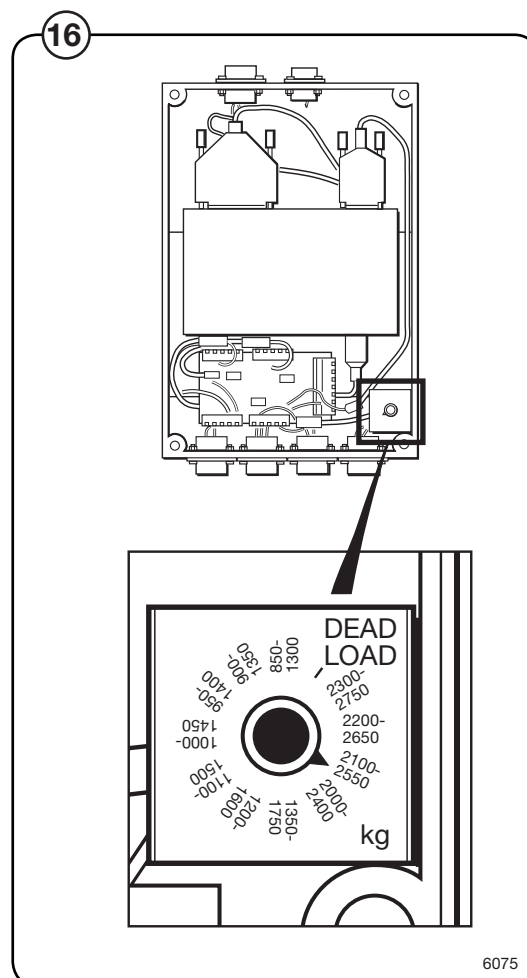
To replace a load cell

(17)

- <u>Machines without tilt function</u>: Remove nut + bolt (A).

- Use a suitable jack to lift under the frame at the corner where the load cell is to be replaced.

- Insert a suitable object as a chock beneath the frame, to remove risk of injury and machine damage.

- <u>Machines with tilt function</u>: Remove nut + bolt (A) and remove the wheel.

- Remove bolt (B). Use a socket wrench to remove the bolt.

- Disconnect the load cell cable at the scale unit and remove the strap.

- Remove nuts and bolts (C).

- Remove the faulty load cell and fit the new, assembly is reverse of disassembly.

> ⚠️   ⚠️
>
> **Install the new load cell as indicated by arrow on side of load cell, see figure!**
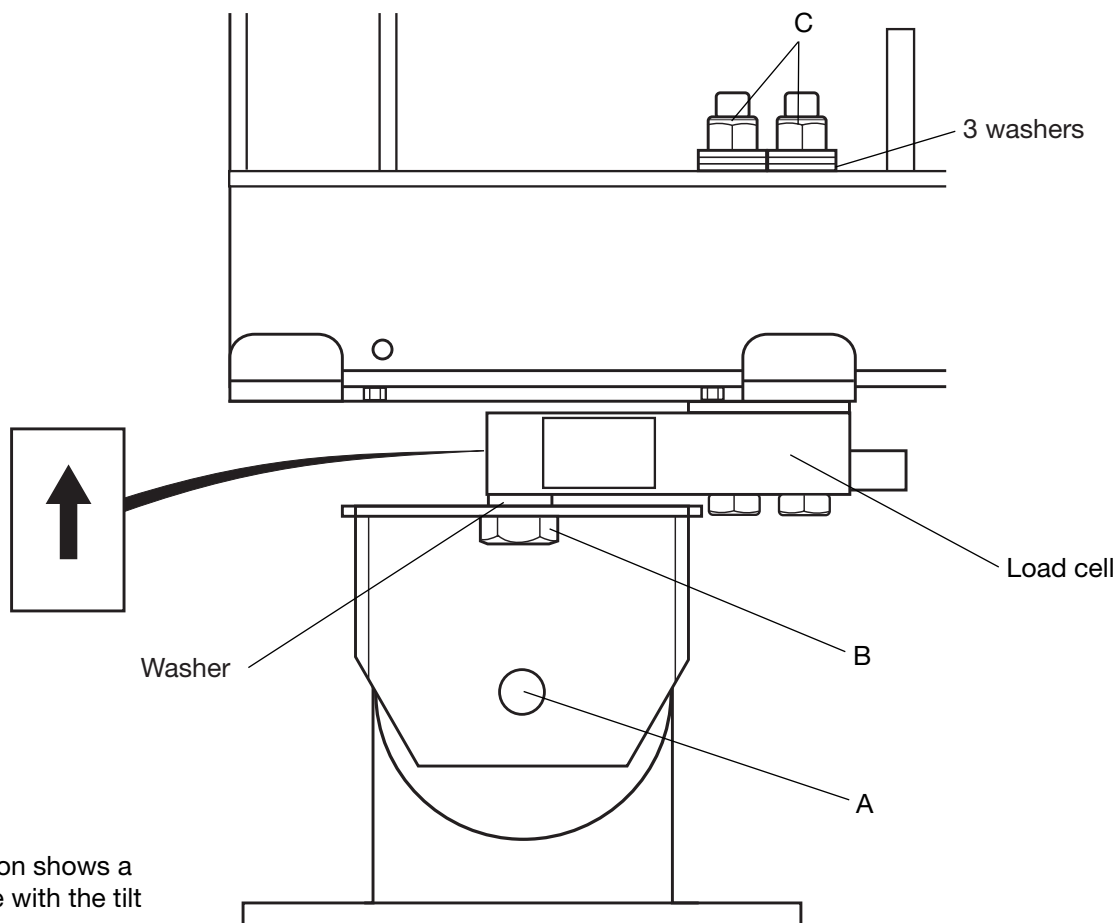
Illustration shows a machine with the tilt function.

5032

To replace the scale unit

(18) • Remove the machine's left-hand rear side panel.

- Disconnect the six connectors to the scale unit.

- Take the scale unit off its mounting plate.

- Install the new scale unit, assembly in reverse order of disassembly.

- Check that the dead load selector is set to:

  EX6102c   1000-1450 kg
  EX6135c   1200-1600 kg
  EX6200c   2100-2550 kg
  EX6250c   2100-2550 kg

- Calibrate the weighing equipment, see "Calibrate the scale" under "Machine operation".

6075
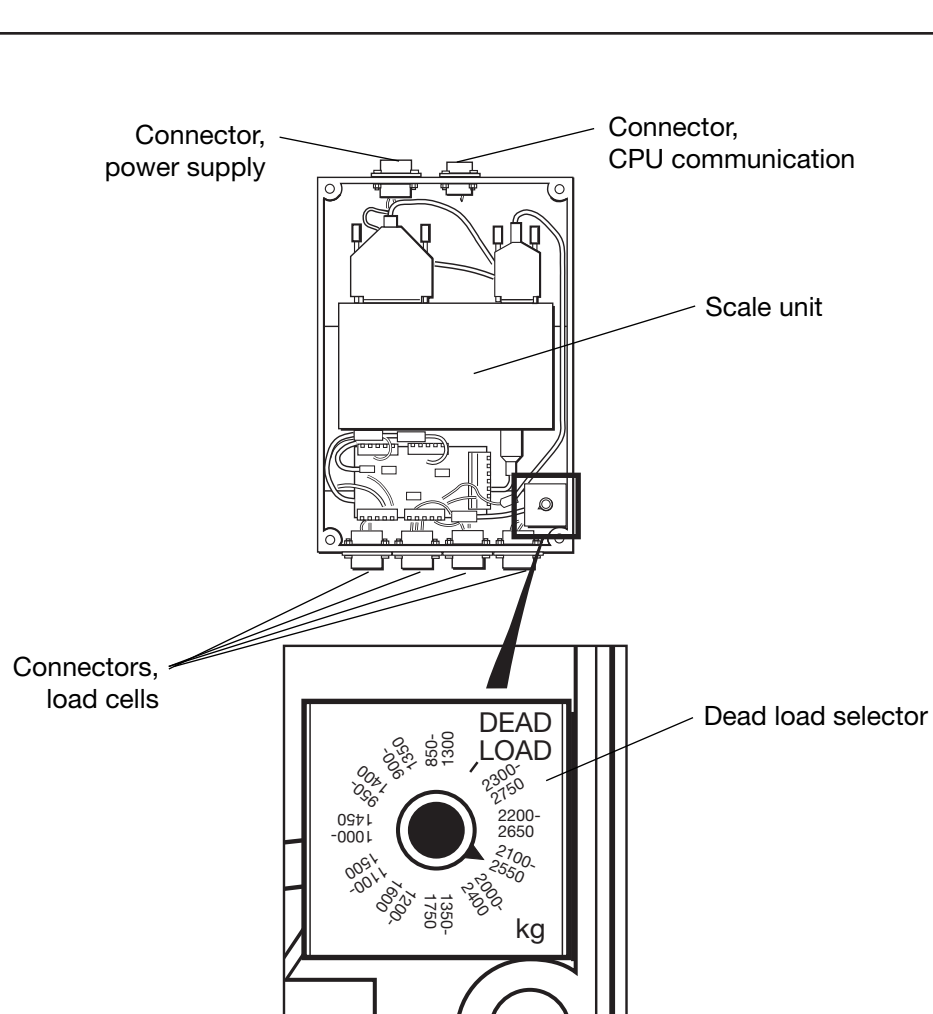
Component locations
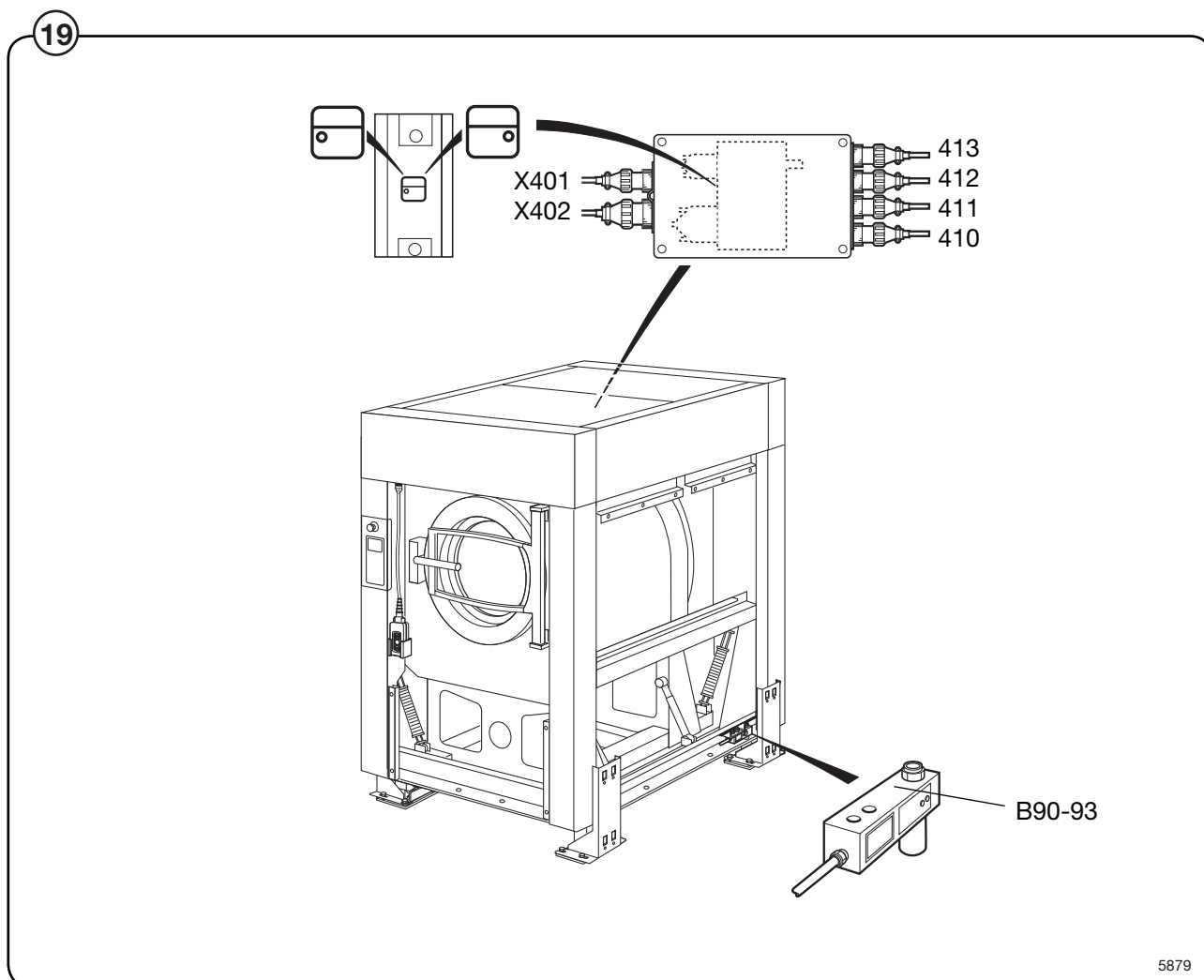
(19)	A90	Scale unit
	B90-93	Load cells
	Connectors	
	X401	Voltage feed
	X402	Communication with CPU board
	X410-413	Load cells

Fault-finding, weighing equipment

Error message on display:

Weight, kg:	999,9 eller -999,9

Probable cause:

The weighing equipment is overloaded/ "underloaded", i.e. the load cells are sending a signal which is too high/low to the scale unit. Probable cause is one or more load cells faulty. The dead load selector may be on the wrong setting. Alternatively, the machine may not have been installed correctly.

Fault-finding procedure:

- Check that all service connections to the machine are flexible.

(20)
- Remove the left-hand rear side panel. Check that the dead load selector is set to:
  EX6102c   1000-1450 kg
  EX6135c   1200-1600 kg
  EX6200c   2100-2550 kg
  EX6250c   2100-2550 kg
  If it is not, set it correctly and calibrate the weighing equipment according to "Calibrate the scale" under "Machine operation".

- If the weight displayed is -999.9, try following the "Zero calibration" procedure (described under "Zero calibration" in the "Machine operation" chapter).

- Remove the side panels and check that the load cells are unobstructed. Remove any mechanical obstructions.

- Taking the load cell cables one at a time, disconnect the cable connecting each load cell to the scale unit. Continue one by one until a stable weight parameter is displayed (but not 999.9). When this stable parameter is displayed you will know which of the load cells must be faulty.
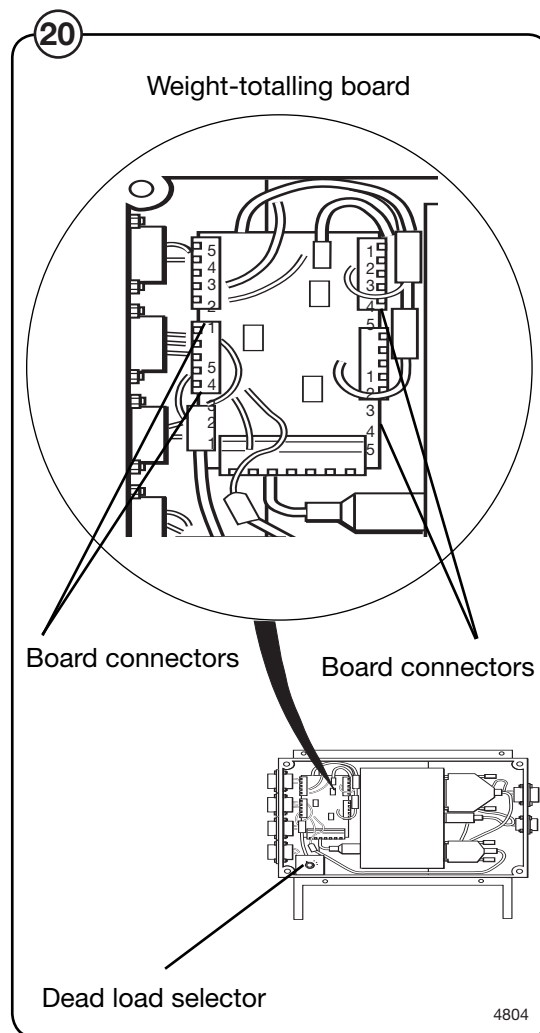

(20)

Weight-totalling board

Board connectors

Board connectors

Dead load selector

4804

Fig.
20

- If more than one load cell is faulty, the faulty cells can be identified using a multimeter on the scale unit weight-totalling board to check each cell in turn, as follows:
  - Remove the four screws on the scale unit cover.
  - Check that the four load cell cables are connected to the scale unit.
  - Measure the voltage at the connectors on the weight-totalling board, between terminal 2 and 3 for each load cell. The normal value for an unladen machine is approx. 3-5 mV (DC). A value different from this indicates that the load cell is faulty.
  - Replace the faulty load cell(s) as described under "To replace a load cell".

Menu line which should show actual weight not displayed.

Possible causes:

> The option "DISPLAY WEIGHT ALLOWED" may be switched off (have the answer "No" alongside) in "Settings 1". Possible fault in communication with CPU board or display. The fault can also be in the scale unit.

Fault-finding procedure:

- Check in "Settings 1" that the option "DISPLAY WEIGHT ALLOWED" has "Yes" alongside.

- Check that the cables/wiring for CPU communication and power supply are connected to the scale unit and in good condition.

- If the washer extractor appears to be working normally apart from the absence of weight parameter display, try replacing the scale unit as described under "To replace the scale unit".

The weighing equipment is not displaying accurate weight values.

Probable cause:

> Probably a faulty load cell.

Fault-finding procedure:

- Place an object of known weight at one corner on top of the washer extractor. Check the weight shown on the display. Move the weight to each of the other corners of the machine in turn, checking the display each time. If one corner is different from the others, this will reveal which load cell is faulty.

- Check that the load cell in question is mechanically unobstructed, free of anything which could affect its normal functioning.

- Replace the load cell as described under "To replace a load cell".

Error message on display:

| Failed. Press SELECT. |

Possible causes:

Dead load selector or calibration switch incorrectly set. An incorrect calibration weight has been used for calibration.
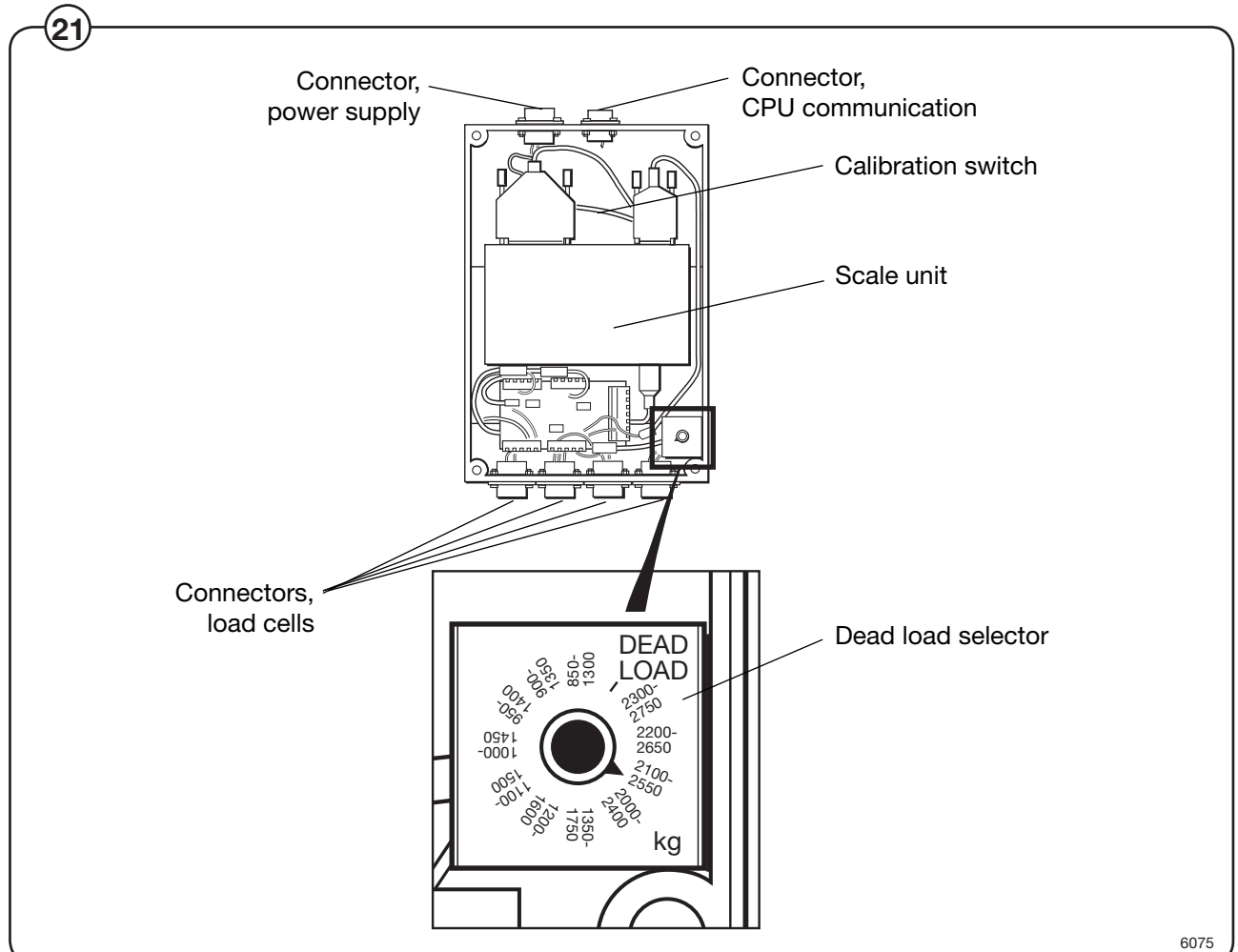
Fault-finding procedure:

(21)

- Check that the dead load selector is set correctly.

- If you are or have recently been calibrating the weighing equipment, the calibration switch may be incorrectly set, or an incorrect calibration weight may have been used for calibration.

  Check that the calibration switch is set correctly. It should normally be set to NORM. During calibration the switch should be set to CAL.

  The calibration weight should be between 40 and 400 kg.

  If relevant/necessary, calibrate the weighing equipment, or follow the "Calibrate the scale" procedure under "Machine operation".

- Check that all cables/wiring to the scale unit are sound and correctly connected.

Message on display:

Function not allowed.

Probable cause:

A function has been selected in the program which cannot be carried out.

Fault-finding procedure:

- Check that the function in question is switched on under "Settings".
- Check that the cables for CPU communication, power supply and load cells are connected.
- Check that these cables are all in good condition.
- If any cable is faulty, replace it.

Message on display in service program:

Weighing equipment not connected.

Probable cause:

CPU board not communicating with scale unit.

Fault-finding procedure:

- Check that the connectors for CPU communication, power supply and load cells are connected on the scale unit.
- Check that their cables are all in good condition.
- If any cable is faulty, replace it.

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 (refer this service to qualified personnel)

⚠️   ⚠️

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.