MAYTAG
COMMERCIAL WASHER

MCG WASH COMPUTER
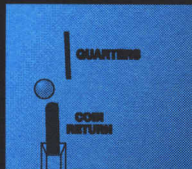
PROGRAMMING MANUAL
PUBLICATION DATE: 05/05
516532

PROGRAMMING FOR WASHING MACHINES MODELS
MFR 18/25/30/40/50/60/80

QUARTERING

COIN RETURN

MAYTAG
HEAVY DUTY COMMERCIAL WASHER

TO LOAD WASHER
- OPEN DOOR BY PULLING HANDLE.
- LOAD CLOTHES.
- CLOSE DOOR SECURELY, LATCHING HANDLE.

TO FILL DISPENSERS
- DISPENSER A - ADD DETERGENT FOR PREWASH AT START OF CYCLE.
- DISPENSER B - ADD POWDERED DETERGENT, POWDERED BLEACH AT START. ADD LIQUID DETERGENT, LIQUID BLEACH DURING WASH.
- DISPENSER C - ADD FABRIC SOFTENER AT START OF CYCLE.

TO START WASHER
- INSERT PAYMENT.
- PRESS CYCLE BUTTON TO SELECT CYCLE.
- WASHER WILL START AUTOMATICALLY.

WHITES   COLORS   BRIGHT COLORS

FABRIC SETTINGS

PERMANENT PRESS   QUICK WASH   DELICATES & KNITS

DETERGENT DISPENSER
A | B | C

CYCLES

WHITES
HOT WASH

COLORS
WARM WASH

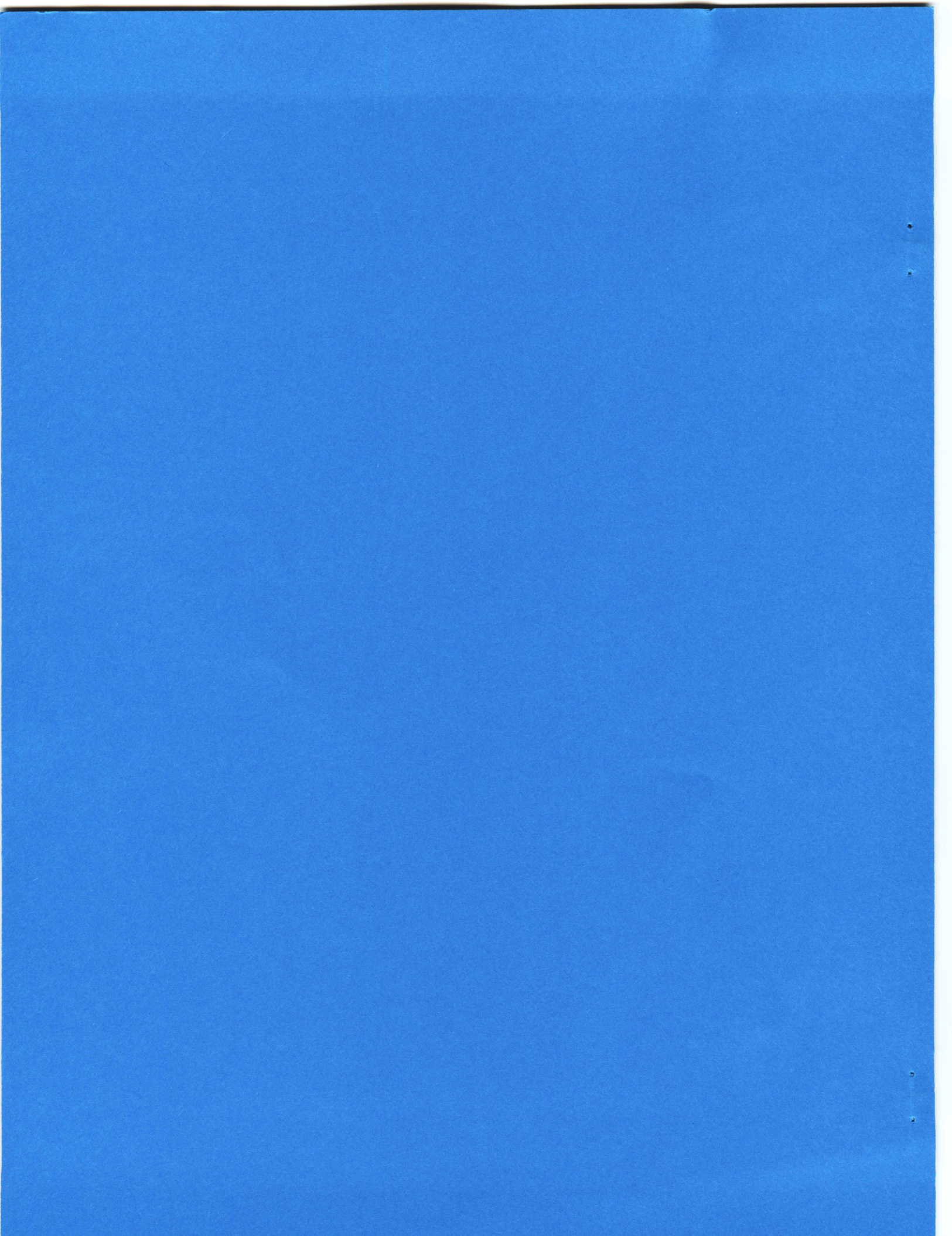BRIGHT COLORS
COLD WASH

PERMANENT PRESS
WARM WASH

QUICK WASH
WARM WASH

DELICATES & KNITS
WARM WASH

523220

1. TABLE OF CONTENTS

2. WARNINGS AND SYMBOLS

2.1. WARNINGS

⚠ **BEFORE OPERATING A MACHINE CONTROLLED BY AN ELECTRONIC PROGRAMMER, READ THIS MANUAL. INCORRECT USE CAN RESULT IN SERIOUS INJURIES OR DAMAGE TO THE MACHINE CONTROLS. IGNORING INSTRUCTIONS CAN CAUSE AN INCORRECT MACHINE FUNCTION, WHICH MAY RESULT IN INJURIES OR MACHINE AND/OR LINEN DAMAGE.**

– This manual version is an original English version. Without the original version these instructions are not complete. Before installation, operating and maintenance of the machine, read complete instructions thoroughly which means the following manuals: „Programming Manual", „User's Manual" and „Installation and Maintenance Manual". Follow these instructions and keep them handy for later use.

– A machine must be installed by following the „Installation and maintenance manual". Before a machine is started, it must be initialized and tested by a qualified installer . When operating the machine, follow the machine „Users Manual".

– The electric service must not be affected by other electrical loading. A nominal voltage, if loaded or not must work in the range ±10%, with a maximum permanent frequency deviation of 1% or a short-time one at 2% of a given frequency (50 or 60 Hz). Connecting or starting the machine at an incorrect voltage can damage the controls.

– The machine must not be exposed to <u>high humidity</u> or extreme high and low temperatures.

– Do not tamper with the controls.

INSTRUCTIONS IN THIS MANUAL DO NOT COVER ALL DANGEROUS SITUATIONS.

IT IS UP TO THE USER TO HANDLE THE MACHINE CAREFULLY.

The manufacturer has the right to change specifications in this manual without prior notice. All the stated information is only for informative purpose and must be considered as general. It is not possible to present all the specific data of the device.

NOTE !!!
EVERY CIRCUIT BOARD HAS A SERIAL NUMBER AND THE PART NUMBER OF THE BOARD (Picture 8.3).

ON THE FLASH MEMORY CHIP ON THE CIRCUIT BOARD IS A LABEL SPECIFYING THE SOFTWARE NUMBER AND VERSION AND/OR THE DATE OF THE SOFTWARE (Picture 8.3). **THIS DATA, AS WELL AS THE MODEL AND SERIAL NUMBER OF THE MACHINE, MUST BE MENTIONED IN ALL CORRESPONDENCE OR INQUIRIES ADDRESSED TO THE DISTRIBUTOR OR MANUFACTURER.**

2.2. SYMBOLS USED

❑ BUTTONS

* BUTTONS in Run Mode work as WASH CYCLE BUTTONS

WHITES   COLORS   BRIGHT COLORS

FABRIC SETTINGS
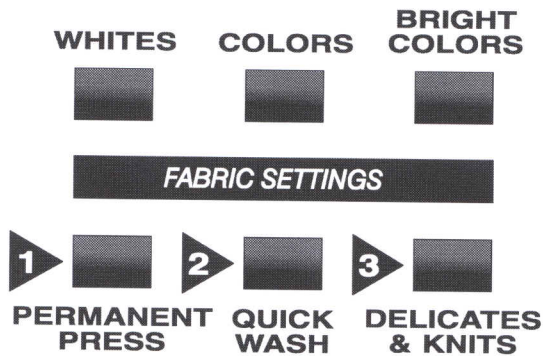
1 PERMANENT PRESS   2 QUICK WASH   3 DELICATES & KNITS   516554

* BUTTONS in Service – Set-Up Mode work as PROGRAM BUTTONS

▶ **ARROW RIGHT**
- Increase value
- Select next list element

▲ **ARROW UP**
- Go to previous menu item

✖ **ESCAPE**
- Return to previous Menu
- Edit : Keep old settings

WHITES   COLORS   BRIGHT COLORS
▶   ▲   ✖

FABRIC SETTINGS

1 ◀   2 ▼   3 ↵
PERMANENT PRESS   QUICK WASH   DELICATES & KNITS   516554

◀ **ARROW LEFT**
- Decrease value
- Select previous list element

▼ **ARROW DOWN**
- Go to next menu item

↵ **ENTER**
- Go to next Menu - Screen
- Edit : Confirm and Save

❑ SERVICE KEY

The key switch is mounted in the front of the cover panel.

With the key switch you can select „**Run mode**" or „**Service – Setup mode**"
- **RUN MODE** : - Normal wash machine operation.
- **Service - Setup MODE** : - changing the wash programs and machine settings.
  - information and diagnostics for service intervention

❑ LABELS

On the labels you can find Instructions for the Washing machine Operation and Information about the Wash Programs.

3. BASIC DESCRIPTION OF MCG WASH COMPUTER

3.1. GENERAL

❏ **THE CONTROL OFFERS :**

- 6 Standard Programs that can be adjusted
  1. Whites
  2. Color
  3. Bright Colors
  4. Permanent Press
  5. Quick Wash
  6. Delicates & Knits
- Automatic temperature balance during the water fill process
- Distribution of the garments to avoid unbalance
- 3 Languages (English, Spanish, French)
- Control signals for external pumps or liquid supply dispensers
- Coin / Debit Card payment
  3 Modes:
    1. Single Pricing
    2. Temperature based Pricing
    3. Basic Price with upgrade functions.
- Wash Cycle Stop and Advance (with use of key switch)
- Info about water level and water temperature and other machine functions (with use of key switch)

❏ **IN OPERATION THE FOLLOWING DATA IS DISPLAYED :**

- The selected Program number and Program Name
- The active wash Step Number and Sequence Function
- Time Remaining for Cycle
- The Door Lock Status
- Diagnostic messages for trouble shooting

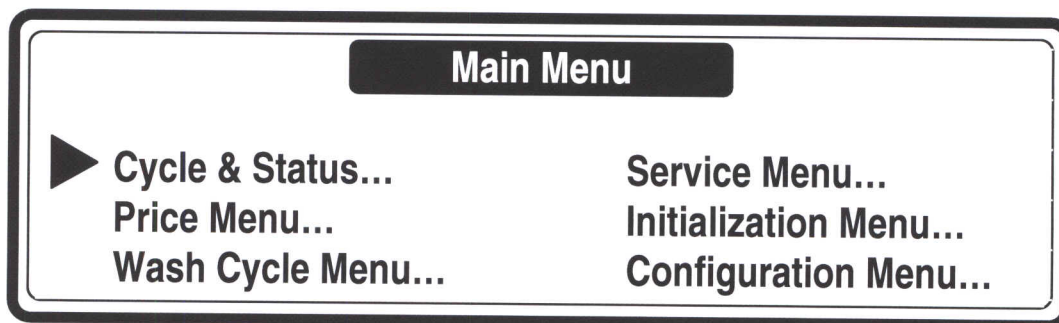❏ **THE HARDWARE AND SOFTWARE OF THE MCG WASH COMPUTER :**

- Easy operation by 6 button keypad
- The MCG board: Micro-Controller board with Graphical LCD display
- Software update via replaceable flash memory chip
- The Wash Programs and machine SET-UP is kept in EEPROM memory (non-volatile memory)
- Category based menu structure allows easy set-up and programming.

3.2. SERVICE - SET-UP MODE

- Turn the Service key to switch from RUN mode to SERVICE - SET-UP mode.
- In Service – SET-UP mode, the **Main Menu** Screen appears.
- In the Main Menu we can select the Category Based Menu's.

  ☞ Each Menu is explained in detail in the following chapters.

```
┌─────────────────────────────────────────────────────────┐
│              ┌─────────────────────────┐                 │
│              │        Main Menu        │                 │
│              └─────────────────────────┘                 │
│  ▶ Cycle & Status...          Service Menu...            │
│    Price Menu...              Initialization Menu...     │
│    Wash Cycle Menu...         Configuration Menu...      │
└─────────────────────────────────────────────────────────┘
```

❑ CYCLE & STATUS Menu :
- ❖ **Stop** & **Advance** a wash cycle.
- ❖ **Status** information of current cycle.

❑ PRICE Menu :
- ❖ **General** Set-up of Pricing related functions.
- ❖ Set-up machine as **Single Price**, **Temperature Based** (Individual) **Price** or **Upgradeable Pricing**.
- ❖ Set-up wash cycle **Normal Price** and **Special Prices**.

❑ WASH CYCLE Menu :
- ❖ To **Edit** a wash program step by step, wash function by function.

❑ SERVICE Menu :
- ❖ **Cycle Credit**.
- ❖ Run **Diagnostic** program
- ❖ List with **Diagnostic codes and Help codes** and a List with **Statistics**.
- ❖ **Toolbox** Functions :
  - View electric **Input** signals.
  - Turn On/Off **power** supply Motor frequency inverter.
  - Select-Reset **Cycle counter**.

❑ INITIALIZATION Menu :
- ❖ Select the wash computer **Language**.
- ❖ Select **Hot Water Heater Temperature** (hot water supply).
- ❖ Select **Maximum Fill time** value.
- ❖ Select **Level Overfill Detection** value.

❑ CONFIGURATION Menu :
- ❖ Select wash **Machine Type**.
- ❖ Loading default **Factory Settings** for resetting wash computer.
- ❖ Adjusting the visual **Brightness** angle of the display.
- ❖ Loading the frequency **Inverter Parameters**.
- ❖ **Erasing** all the programmed **Wash Programs** (reset Wash Program EEPROM memory).
- ❖ **Loading** the **Standard Wash Programs**.

3.3. THE STRUCTURE OF A WASH PROGRAM

- ◆ a Wash Program is built up step by step.
- ◆ each step always consists of a Wash/Rinse sequence and a Drain/Spin sequence.

❑ **Programmable Functions Wash/Rinse sequence :**

The available functions are :
- ◆ Temperature
- ◆ Water Level
- ◆ Supplies (bulk dispensing)
- ◆ Prewash Time
- ◆ Wash Time
- ◆ Rinse Time

❑ **Programmable Functions Drain/Spin sequence :**

The available functions are :
- ◆ RPM (Final Spin)
- ◆ Sequence Time

⚠ **ATTENTION !!!**
A MORE DETAILED EXPLANATION FOR THE SPECIFIC SEQUENCES CAN BE FOUND IN CHAPTER 5.

❑ **The Tumble sequence :**

- ◆ The wash cycle will always end with the Tumble sequence.
- ◆ The tumble sequence takes 30 Seconds, when the program is finished and the door can be opened.
- ◆ **The Tumble sequence cannot be changed.**

3.4. PROGRAMMING THE FUNCTIONS

❑ Limits

- ◆ To ensure the correct functionality of the washing machine you have to program values within certain limits.
- ◆ You can not program a value that is out of the limits range.

❑ Programming the Water Temperature

- ◆ Limits (depends sequence : see 6 Standard Wash Tables)
  - Minimum value : 34 °F
  - Maximum value : 120°F for the PREWASH and 180°F for the WASH sequence.
  - For RINSE and FINAL RINSE sequence, no Temperature can be programmed.

❑ Programming the water level

- **– Water level Limits**
  - ◆ See table 3.4 A and 3.4 B as these values are different for each machine size.
  - ◆ Minimum value : above the temperature sensor
  - ◆ Maximum value : below the overflow outlet
- **– Normal Low Level, Normal High Level**
  - ◆ The Normal Low Level is recommended for the PREWASH and WASH sequences.
  - ◆ The Normal High Level is recommended for the RINSE and FINAL RINSE Sequences.

⚠ **ATTENTION !!!**
FOR WOOLENS AND OTHER DELICATE LINEN, A NORMAL HIGH WATER LEVEL IS RECOMMENDED.

Programmable water level units related to the amount of water (ℓ = liters) in the tub

Machine Size (units)	MFR18	MFR25	MFR30	MFR40	MFR50	MFR60	MFR80
18							
19	13 ℓ	14 ℓ	19 ℓ				
20	14 ℓ	① 16 ℓ	21 ℓ				
21	① 15 ℓ	19 ℓ	23 ℓ				
22	16 ℓ	② 22 ℓ	① 25 ℓ				
23	② 18 ℓ	25 ℓ	28 ℓ				
24	20 ℓ	28 ℓ	② 31 ℓ	① 31 ℓ	① ② 47 ℓ		61 ℓ
25	22 ℓ	31 ℓ	34 ℓ	35 ℓ	52 ℓ		① 67 ℓ
26	24 ℓ	34 ℓ	37 ℓ	② 38 ℓ	57 ℓ	① 55 ℓ	73 ℓ
27	26 ℓ	36 ℓ	40 ℓ	41 ℓ	62 ℓ	② 60 ℓ	② 78 ℓ
28	29 ℓ	38 ℓ	43 ℓ	44 ℓ	67 ℓ	65 ℓ	83 ℓ
29	32 ℓ	41 ℓ	46 ℓ	48 ℓ	72 ℓ	70 ℓ	89 ℓ
30	34 ℓ	43 ℓ	49 ℓ	52 ℓ	77 ℓ	76 ℓ	95 ℓ
31	36 ℓ	45 ℓ	52 ℓ	56 ℓ	83 ℓ	81 ℓ	101 ℓ
32	38 ℓ	48 ℓ	55 ℓ	60 ℓ	89 ℓ	86 ℓ	107 ℓ
33	40 ℓ	51 ℓ	58 ℓ	63 ℓ	67 ℓ	91 ℓ	113 ℓ
34	42 ℓ	54 ℓ	60 ℓ	67 ℓ	72 ℓ	96 ℓ	119 ℓ
35	45 ℓ	57 ℓ	63 ℓ	71 ℓ	77 ℓ	101 ℓ	125 ℓ
36	47 ℓ	59 ℓ	66 ℓ	75 ℓ	83 ℓ	106 ℓ	131 ℓ
37	49 ℓ	61 ℓ	69 ℓ	79 ℓ	89 ℓ	111 ℓ	137 ℓ
38	51 ℓ	64 ℓ	72 ℓ	83 ℓ	95 ℓ	116 ℓ	144 ℓ
39	53 ℓ	66 ℓ	76 ℓ	87 ℓ	101 ℓ	121 ℓ	150 ℓ
40	55 ℓ	68 ℓ	79 ℓ	91 ℓ	107 ℓ	127 ℓ	157 ℓ
41			83 ℓ	96 ℓ	113 ℓ	132 ℓ	164 ℓ
42			86 ℓ	100 ℓ	119 ℓ	137 ℓ	170 ℓ
43			89 ℓ	104 ℓ	125 ℓ	142 ℓ	177 ℓ
44			92 ℓ	108 ℓ	131 ℓ	148 ℓ	184 ℓ
45			95 ℓ	113 ℓ	137 ℓ	153 ℓ	192 ℓ
46				117 ℓ	143 ℓ	159 ℓ	198 ℓ
47				121 ℓ	149 ℓ	164 ℓ	204 ℓ
48				125 ℓ	155 ℓ	170 ℓ	210 ℓ
49				129 ℓ	161 ℓ	175 ℓ	216 ℓ
50				133 ℓ	167 ℓ	181 ℓ	223 ℓ
51					173 ℓ	187 ℓ	
52					179 ℓ	192 ℓ	
53					185 ℓ	198 ℓ	
54					191 ℓ	203 ℓ	
55					197 ℓ	208 ℓ	
56						214 ℓ	
57						220 ℓ	
58						225 ℓ	
59						231 ℓ	
60						236 ℓ	

Programmed water LEVEL (Water level height in units)

① Normal Low Level   ② Normal High Level

❑ Default Programmable Water Level (units)

Machine size	Minimum programmable level	Normal Low Level Default value	Normal High Level Default value	Maximum programmable level
MFR 18	19	21	23	40
MFR 25	19	20	22	40
MFR 30	19	22	24	45
MFR 40	24	24	26	50
MFR 50	24	24	24	55
MFR 60	26	26	27	60
MFR 80	24	25	27	50

Tab. 3.4.A. Programmable water Level

❑ Default Programmable drum speed at Wash and Spin

Machine size	Wash Speed default RPM	Spin Speed default RPM	min RPM	max RPM	Low Spin Speed default RPM
MFR18	048	570	95	580	290
MFR25	048	570	95	580	290
MFR30	045	515	85	525	265
MFR40	044	495	85	505	260
MFR50	044	470	85	480	260
MFR60	042	480	75	490	250
MFR80	038	500	75	510	260

Tab. 3.4.B. Speed of machines with frequency inverter.

❑ Programming Extraction speed

- Speed Limits
- Check table 3.4.B for the minimum and maximum speed limits. The limits differ depending on the maximum allowed g-force at high spin for each washing machine **size**.

❑ Programming Supplies

- 1 Soap Supply Signal can be programmed for each of the following: prewash, wash and final rinse.
- If Liquid soap pumps have been installed on the washing machine, then a pulse signal has to be sent to the external control system to activate the pumps. The pulse time value has to be programmed in the Soap Supplies menu-item.
- Default time is set for zero seconds.

- Time Limits
- The maximum programmable time is 99 Seconds
- If the time is 0 Seconds then the supply will NOT be activated during the wash cycle.

❑ Programming the Sequence time.

- The sequence time starts running after the programmed water level has been reached.

- Time Limits
- DEPENDS OF SEQUENCE TYPE. SEE INFO IN TABLES - 6 STANDARD WASH CYCLES.

4. PRICING MENU

In the PRICING MENU you can make settings for Coin Selection and Debit Card Reader.

❑ General

```
┌─────────────────────────────────────┐
│  ┌──────────────────────────────┐   │
│  │        Pricing Menu          │   │
│  │ ▶  General...                │   │
│  │    Special Pricing...      No │   │
│  │    Enhanced Pricing...   None │   │
│  │    EXIT                       │   │
│  └──────────────────────────────┘   │
└─────────────────────────────────────┘
```

• **General Price settings are stored at the General Menu.**

Menu Item	Default	Info	Limits
Value of Coin 1	0.25	This represents the value of coin 1	0.05 – 9.95
Value of Coin 2	1.00	This represents the value of coin 2	0.05 – 9.95
Regular Cycle Price	x.xx	Wash cycle Price	0.00 – 99.95
Special Cycle Price	x.xx	Wash cycle Price	0.00 – 99.95
Money Counter Permanently ?	No	Turns on Money Counter (Permanently = can not be switched off anymore)	No / Yes
Reset Money Counts	No	Reset value of Money Counter Shown only if „Money Counter: Yes"	No / Yes
Money Count : _ _ _ _	-	Value Money Counter (Info)	-
Vault: Display Counts	Hidden	Show Money Counter when Vault is open	Hidden / Viewable
Price Display	Normal	Show the price, token or no information when invited for payment	Normal / Token / Hidden
Coin / Debit	Coin	Payment method selection	Coin / Card / Coin & Card Enh. Debit
Clear Escrow	Yes	Escrow is cleared 30 minutes after end cycle	No / Yes
Penny Increment Offset	0.00	Offset cycle Price (Gen 2 Debit)	0.00 – 0.04
Decimal Selection	Yes	Show Decimal Point	No / Yes
Exit Price Menu		Return to Main Menu	

x.xx depends of machine size

Default Prices	MFR18	MFR25	MFR30	MFR40	MFR50	MFR60	MFR80
Regular Cycle Price	$1.75	$2.50	$3.00	$4.00	$5.00	$6.00	$8.00
Special Cycle Price	$1.50	$2.25	$2.75	$3.75	$4.75	$5.75	$7.75

❑ SPECIAL PRICING

Special pricing functions as a second price.
The wash computer contains a clock that keeps track of the Time and Day of the week.
Special price can be selected for each day of the week and for a specific time period.

```
          Pricing Menu
    General...
  ▶ Special Pricing...          No
    Enhanced Pricing...         None
    EXIT
```

• **Special price settings are stored in the Special Pricing Menu.**

Menu Item	Default	Info	Limits
Today is :	Sunday	Actual Day of week	Sunday-Saturday
Hour :	00	Actual Clock Hour	0-23
Minutes :	00	Actual Clock Minutes	0-59
Spec Price Start Hour :	0	Start Hour Special Price	0-23
Spec Price Stop Hour :	0	Stop Hour Special Price	0-23
Sunday Spec Price ?	No	Day of week Special Price switched on	No / Yes
Monday Spec Price ?	No	Day of week Special Price switched on	No / Yes
Tuesday Spec Price ?	No	Day of week Special Price switched on	No / Yes
Wednesday Spec Price ?	No	Day of week Special Price switched on	No / Yes
Thursday Spec Price ?	No	Day of week Special Price switched on	No / Yes
Friday Spec Price ?	No	Day of week Special Price switched on	No / Yes
Saturday Spec Price ?	No	Day of week Special Price switched on	No / Yes
Exit		Return to Main Menu	

x.xx depends of machine size

❑ Enhanced Pricing : TEMPERATURE BASED

```
┌─────────────────────────────────┐
│     ┌─────────────────┐          │
│     │  Pricing Menu   │          │
│       General...                 │
│   ►   Special Pricing...    No    │
│       Enhanced Pricing...  Temp. Based │
│       EXIT                       │
└─────────────────────────────────┘
```

• **Temperature Based, Enhanced Pricing is stored in the Temperature Based Pricing Menu.**

Menu Item	Default	Info	Limits
Regular Hot Price	x.xx	Temperature Based Price	0.00 – 99.95
Regular Warm Price	x.xx	Temperature Based Price	0.00 – 99.95
Regular Cold Price	x.xx	Temperature Based Price	0.00 – 99.95
Special Hot Price	x.xx	Temperature Based Price	0.00 – 99.95
Special Warm Price	x.xx	Temperature Based Price	0.00 – 99.95
Special Cold Price	x.xx	Temperature Based Price	0.00 – 99.95

x.xx depends of machine size

A different price can be set for Cold, Warm and Hot.
For the special prices 3 more prices can be set.

Example : Temperature Based Wash Cycle Selection

```
┌──────────────────────────────────────────────┐
│                                    PRICE       │
│  Hot Wash:    Whites                  3.50     │
│  Warm Wash:   Colors-Perm Press       3.25     │
│               Quick Wash-Delicates             │
│  Cold Wash:   Bright Colors           3.00     │
└──────────────────────────────────────────────┘
```

Default Prices	MFR18	MFR25	MFR30	MFR40	MFR50	MFR60	MFR80
Regular Hot Price	$1.75	$2.50	$3.00	$4.00	$5.00	$6.00	$8.00
Regular Warm Price	$1.50	$2.25	$2.75	$3.75	$4.75	$5.75	$7.75
Regular Cold Price	$1.25	$2.00	$2.50	$3.50	$4.50	$5.50	$7.50
Special Hot Price	$1.50	$2.25	$2.75	$3.75	$4.75	$5.75	$7.75
Special Warm Price	$1.25	$2.00	$2.50	$3.50	$4.50	$5.50	$7.50
Special Cold Price	$1.00	$1.75	$2.25	$3.25	$4.25	$5.25	$7.25

❑ Enhanced Pricing : UPGRADE BASED

```
┌─────────────────────────────────┐
│      � Pricing Menu           │
│   General...                    │
│   Special Pricing...      No     │
│ ▶ Enhanced Pricing...   Upgr. Based │
│   EXIT                           │
└─────────────────────────────────┘
```

• **Upgrade Based, Enhanced Pricing is stored in the Upgrade Based Pricing Menu.**

Menu Item	Default	Info	Limits
Upgrade Value	0.25	Upgrade Reference Value	0.00 – 12.75
Super Cycle Display ?	Yes	Show Super Cycle Upgrade.	No / Yes
Sup. Cycle Prewash ?	No	Super cycle Extra Function	No / Yes
Sup. Cycle Extend.Wash ?	Yes	Super cycle Extra Function	No / Yes
Sup.Cycle Extra Rinse?	Yes	Super cycle Extra Function	No / Yes
Sup.Cycle Extend.Spin?	No	Super cycle Extra Function	No / Yes
Sup.Cycle + Detergent?	No	Super cycle Extra Function	No / Yes
Sup.Cycle + Softener ?	No	Super cycle Extra Function	No / Yes
Super Cycle Price	0.25	Price for a Super Cycle Upgrade	0.00 – 99.95
Deluxe Cycle Display?	Yes	Show Deluxe cycle Upgrade	No / Yes
Del.Cycle Prewash?	No	Deluxe cycle Extra Function	No / Yes
Del.Cycle Extend.Wash?	Yes	Deluxe cycle Extra Function	No / Yes
Del.Cycle Extra Rinse?	Yes	Deluxe cycle Extra Function	No / Yes
Del.Cycle Extend.Spin?	Yes	Deluxe cycle Extra Function	No / Yes
Del.Cycle + Detergent?	No	Deluxe cycle Extra Function	No / Yes
Del.Cycle + Softener?	No	Deluxe cycle Extra Function	No / Yes
Deluxe Cycle Price	0.50	Price for a Deluxe Cycle Upgrade	0.00 – 99.95
Ultimate Cycle Display?	Yes	Show Ultimate cycle Upgrade	No / Yes
Ultimate Cycle Prewash?	Yes	Ultimate cycle Extra Function	No / Yes
Ult.Cycle Extend.Wash	Yes	Ultimate cycle Extra Function	No / Yes
Ult.Cycle Extra Rinse?	Yes	Ultimate cycle Extra Function	No / Yes

Ult.Cycle Extend.Spin?	Yes	Ultimate cycle Extra Function	No / Yes
Ult.Cycle + Detergent?	No	Ultimate cycle Extra Function	No / Yes
Ult.Cycle + Softener?	No	Ultimate cycle Extra Function	No / Yes
Ultimate Cycle Price	0.75	Price for an Ultimate Cycle Upgrade	0.00 – 99.95

Upgrade Based Prices allows the customer to select extra wash cycle functions.
For Each Upgrade „Super Cycle", „Deluxe Cycle", „Ultimate Cycle" up to 6 functions can be selected.

Example : Upgrade Based Wash Cycle Selection

Basic Cycle	**PRICE**		**3.00**
Super Cycle	**Press**	**1**	**3.25**
Deluxe Cycle	**Press**	**2**	**3.50**
Ultimate Cycle	**Press**	**3**	**3.75**

Example : If the upgrade is selected (these are not the default values)

Super Cycle   **PRICE**   **3.25**

- **3 Minutes Extra Wash Time**
- **Extra Rinse**

Deluxe Cycle   **PRICE**   **3.50**
- **Prewash**
- **3 Minutes Extra Wash Time**
- **Extra Rinse, Extra Spin Time**

Ultimate Cycle   **PRICE**   **3.75**
- **Prewash**
- **3 Minutes Extra Wash Time**
- **Extra Rinse, Extra Spin Time**
- **Auto Detergent & Softener**

5. MACHINE SET-UP

Machine SET- UP has four step (steps 2, 3 and 4 are not required if factory default settings are acceptable)**:**

      1. Install the machine mechanically. (See Installation Manual)

      <u>MCG Wash Computer only :</u>

      2. Select the machine specific settings in the Configuration Menu.

      3. Select the operator specific settings in the Initialization Menu.

      4. Adjust standard Programs.

⚠ <u>**ATTENTION**</u> **!!!**

THE SET-UP SHOULD BE PERFORMED BY QUALIFIED PERSONNEL ONLY. AN INCORRECT SET-UP MAY CAUSE SERIOUS INJURIES AND SERIOUS DAMAGE TO THE MACHINE!

⚠ <u>**ATTENTION**</u> **!!!**

BEFORE MAKING CHANGES IN THE CONFIGURATION AND INITIALIZATION MENU READ THIS MANUAL CAREFULLY.

CHANGES YOU MAKE WILL INFLUENCE THE WASH PROGRAM PROCESSES.

WE RECOMMEND BEFORE MAKING CHANGES TO CAREFULLY WRITE DOWN WHAT THE PREVIOUS SETTINGS WERE.

AS THE MCG WASH COMPUTER IS USED FOR A WHOLE RANGE OF WASHING MACHINES, AFTER THE INSTALLATION OF A NEW MCG WASH COMPUTER, YOU NEED TO PROGRAM MACHINE SPECIFIC SETTINGS INTO THE CONFIGURATION MENU. SEE PARAGRAPH 5.2.

AFTER THE INSTALLATION OF NEW SOFTWARE, AFTER LOADING THE FACTORY SETTINGS (see paragraph 5.2) YOU NEED TO CHECK THE DEFAULT SETTINGS ONE BY ONE TO FIND OUT IF THEY CORRESPOND WITH THE SETUP AS YOU PREFER.

THE CONFIGURATION AND INITIALIZATION OF THE WASHING MACHINE HAS BEEN DONE AT THE FACTORY. FOR THE ADJUSTMENT OF THE 6 STANDARD PROGRAMS, NO CHANGES NEED TO BE MADE IN THE INITIALIZATION OR CONFIGURATION MENUS.

5.1. INITIALIZATION MENU

❑ HOW TO GET INTO THE INITIALIZATION MENU

Turn the Service Key from Run into Service - Set-up Mode.

„Main Menu" is displayed.

With the arrow DOWN button select the Initialization Menu and Press ENTER button.

Main Menu	
Cycle & Status...	Service Menu...
Price Menu...	▶ Initialization Menu...
Wash Cycle Menu...	Configuration Menu...
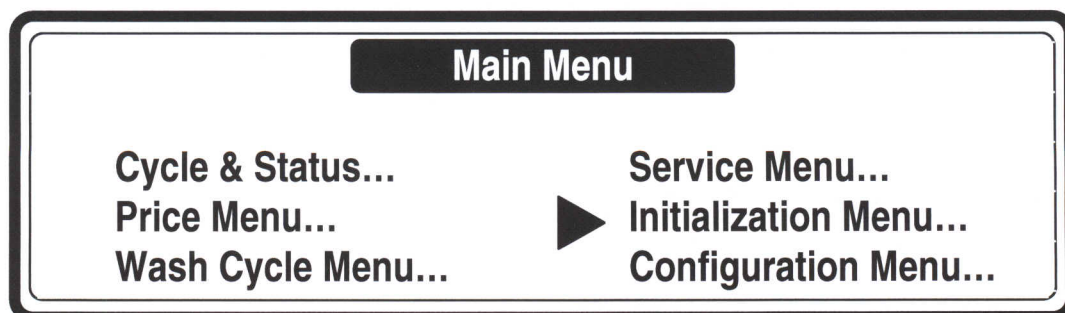
Menu Item	Default	Info	Limits
Language	English	Language selection: English, Spanish, French	List
Compart. Flush Pre-Wash	Yes	Makes sure that the first soap dispenser Compartment is always Flushed at the end of the Wash Sequence.	No / Yes
Hot water Heater Temp.	140°F	It is recommended to set temperature of Hot water supply to obtain a more accurate water temperature control during the fill process.	122° - 176°F
Max Water Fill Time	7 Min	Diagnostic D7 is generated if the machine is not filled within it's maximum allowed water fill time. For a value of 99, no Diagnostic is generated at all.	5 – 99 Minutes
Overfill Detection	10 units	Diagnostic D15 is generated when machine fills water 10 units above programmed water level.	10 – 25 units
Exit		Return to Main Menu	

5.2. CONFIGURATION MENU

This electronic managing system has been specially constructed for a wide range of washing machines. For that reason it must be individually set up with important parameters for various machine **sizes**. Basic machine adjustments were made at the factory.

> ⚠ **WARNING !**
> ONLY A QUALIFIED TECHNICIAN SHOULD CHANGE THE CONFIGURATION SET UP. AN INCORRECT CONFIGURATION CAN CAUSE INJURIES AND SERIOUS MACHINE DAMAGE.

❏ HOW TO GET INTO THE CONFIGURATION MENU

The Configuration Menu requires a password to enter. To get into the Configuration Menu press enter, then following sequence of buttons bright colors, colors and then whites followed by the enter button.

```
┌─────────────────────────────────────────────────┐
│              ┌───────────────────┐              │
│              │     Main Menu     │              │
│              └───────────────────┘              │
│                                                  │
│   Cycle & Status...        Service Menu...       │
│   Price Menu...            Initialization Menu...│
│   Wash Cycle Menu...    ▶  Configuration Menu... │
└─────────────────────────────────────────────────┘
```
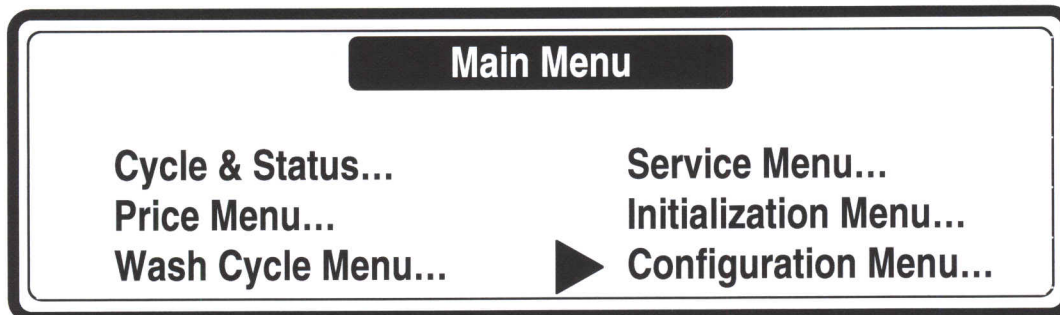
> ⚠ **ATTENTION !!!**
> BE SURE THAT YOU WANT TO ERASE THE OLD SETTINGS, AS THEY CAN'T BE RECAPTURED. CHANGING THE MACHINE SIZE SHOULD ONLY OCCUR WHEN A NEW MCG WASH COMPUTER IS INSTALLED.

> ⚠ **ATTENTION !!!**
> BE SURE THAT YOU HAVE SELECTED THE CORRECT MACHINE SIZE, OTHERWISE THE MACHINE WILL NOT FUNCTION PROPERLY.

> ⚠ **ATTENTION !!!**
> BY CHANGING THE MACHINE SIZE THE WASH PROGRAMS, KEPT IN THE EEPROM MEMORY, ARE NOT CHANGED.
> AFTER CHANGING THE WASH MACHINE SIZE IT'S RECOMMENDED TO ERASE THE PROGRAM MEMORY AND LOAD THE STANDARD WASH PROGRAMS AGAIN.
>   THE WASH PROGRAM SETTINGS DIFFER FOR EACH MACHINE SIZE

> ⚠ **ATTENTION !!!**
> SELECTING FACTORY RESET IS RECOMMENDED IF A NEW MACHINE SIZE HAS BEEN SELECTED. THIS WILL ENSURE THAT ALL THE DEFAULT SETTINGS OF THE NEW MACHINE SIZE ARE LOADED.

```
┌─────────────────────────────┐
│    ■■■Service Faults■■■      │
│                             │
│  ▶ Reset Factory Settings ? │
│                             │
└─────────────────────────────┘
```

- All the Initialization and Configuration Menu settings will be cleared and the default Factory settings will be re-installed.
- This function should only be used at the initialization of a new Graphic Control Wash Computer.

Menu Item	Default	Info	Limits
Machine Type	MFR18	Machines : MFR 18, 25, 30, 40, 50, 60, 80	List
Reset Factory Settings? Are You Sure ?	No	Complete reset of wash computer. A new wash computer must be Factory Reset.	No / Yes
Brightness Display	9	Sets the Visualization angle of the Display.	0 – 25
Load Inverter Param. ? Are You Sure ?	No	Loads the Inverter Parameters into the inverter. THIS IS DONE WHEN A NEW INVERTER IS INSTALLED.	No / Yes
Temperature	Fahrenh	Select temperature in °F or °C.	List
Erase all Wash Prog ? Are You Sure ?	No	Complete reset of the wash programs. Existing values are erased completely.	No / Yes
Load Stand. Programs ? Language (English) Load Program 1 – 6 ?	No	Language selection of the titles of the Wash Programs. Wash Programs 1-6, as shown in Manual, are loaded.	No / Yes
Exit		Return to Main Menu	

5.3. WASH CYCLE MENU

❏ HOW TO GET INTO THE WASH CYCLE MENU

Turn the Service Key from Run into Service - Set-up Mode.

„Main Menu" is displayed.

With the arrow DOWN button select the Wash Cycle Menu and Press ENTER button.

```
┌─────────────────────────────────────────────────────┐
│                  ████ Main Menu ████                 │
│                                                       │
│   Cycle & Status...          Service Menu...          │
│   Price Menu...              Initialization Menu...   │
│ ▶ Wash Cycle Menu...         Configuration Menu...    │
└─────────────────────────────────────────────────────┘
```
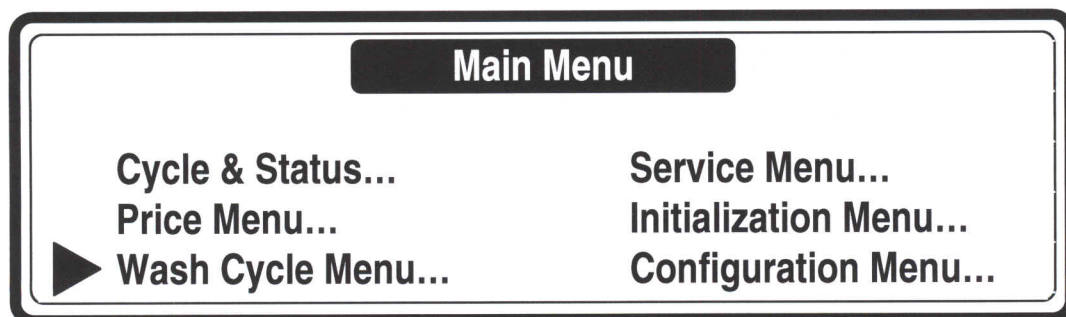
At the Wash Cycle Menu select the Desired Wash Cycle you want to Edit and Press ENTER button.

```
┌─────────────────────────────────────────────────────┐
│              ████ Wash Cycle Menu ████               │
│ ▶ 1 Whites...              4 Permanent Press...       │
│   2 Colors...              5 Quick Wash...            │
│   3 Bright Colors...       6 Delicates & Knits...     │
│                            Prog. Menu Exit            │
└─────────────────────────────────────────────────────┘
```
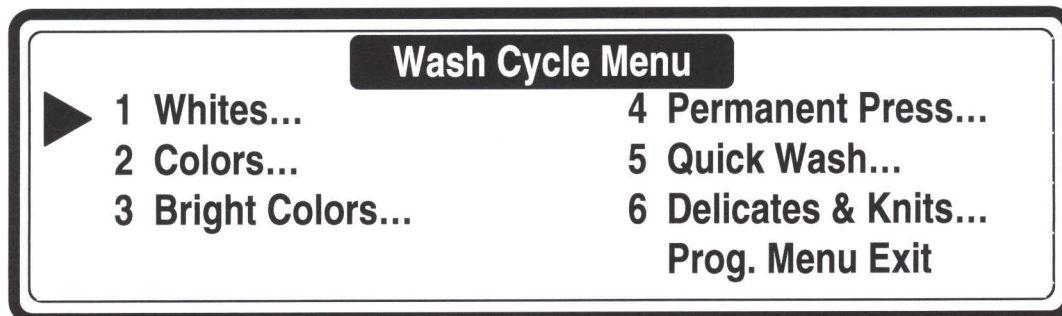
At the Edit Step Menu select the wash cycle step you want to Edit and Press ENTER button.

```
┌─────────────────────────────────────────────────────┐
│ ████ Program  1 Whites          Edit Step ████       │
│                                                       │
│ ▶ Step 1 Pre-Wash          Step 4 Rinse               │
│   Step 2 Wash              Step 5 Final Rinse         │
│   Step 3 Rinse             Step Menu Exit             │
└─────────────────────────────────────────────────────┘
```
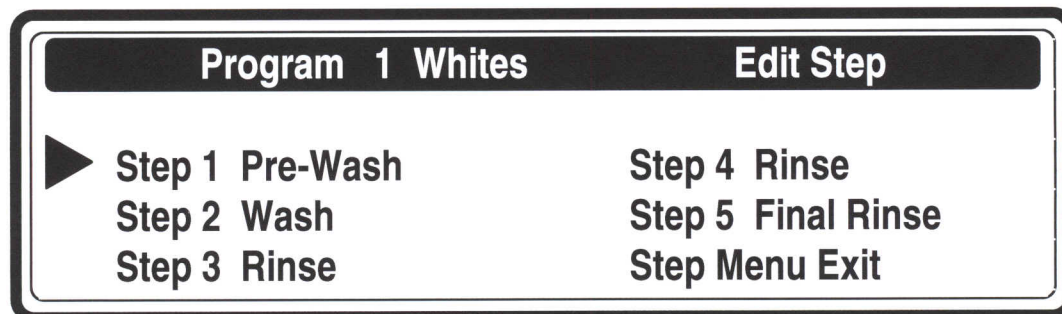
There are 5 Wash Cycle steps:

1 Pre-Wash

2 Wash

3 Rinse

4 Rinse

5 Final Rinse

If the programmed time of the Wash/Drain steps is „0" then the Wash/Drain step will be skipped.

Some functions will be activated automatically in case of the upgrade cycles, even if they are disabled at the standard wash cycles.

❏ EDIT A WASH CYCLE

Program Number	Original Value	STEP Wash ⇔ Spin part	Info action

```
Prog 1          Wash              Spin

                Time:       8.0  Min    ↵      △
STEP 2                                         5
                8.0              [4.0-20.0]     ▽
```

Step Number	Menu Item	Value Menu Item	Limits Menu Item	Position Menu Item
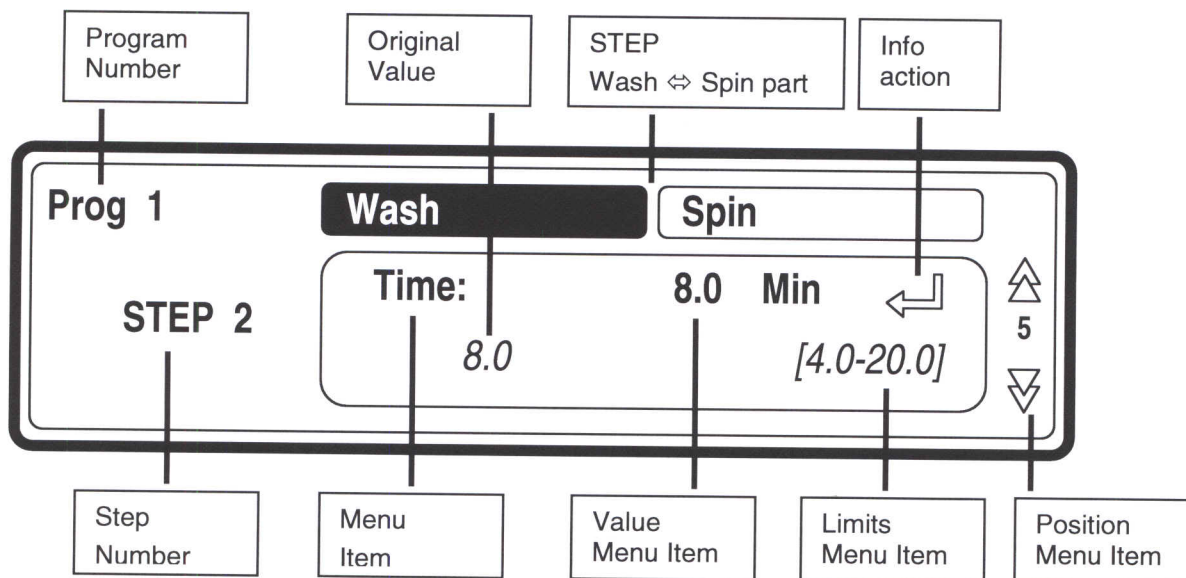
- ♦ Each program step contains a Wash-Rinse part and a Drain-Spin part. (see labels at top of the screen)
- ♦ By the arrow buttons **UP** and **DOWN**, without making chages, you can scroll throught the menu items. First the Wash-Rinse menu items are shown and then the Drain-Spin menu items.
- ♦ At the menu item you want to modify, by the arrow buttons LEFT and RIGHT you can adjust the value.
- ♦ When you change the value, the value range is shown in brackets. You can only change the value within these ranges.
- → Press the **ENTER** button to save your changes, or the **ESCAPE** button if you want to keep the old setting.

☞ Select Exit or press the ESCAPE button if you want to return to a higher menu level.

☞ Turn the Service switch back to Run mode when you have finished.

1. Time
- the programmed time of the Wash-Rinse or Drain-Spin sequence.
- the Time to fill the tub with water is not included in the programmed time of the Wash-Rinse sequence as the filling can be fast or very slow.
- when „time = 0" is programmed, then the corresponding sequence will be skipped.

2. Water Temperature in Tub
- at the water fill sequence, the cold and hot water is mixed by the wash computer to obtain the programmed wash temperature.

3. Water Level

4. Liquid Soap Supply

    - for machines equiped with external Liquid Soap Supply, the time
     value for the Liquid Soap Signal can be set to activate the corresponding
     pump, or to give a pulse to start the external liquid Soap Supply computer.

5. Spin Speed

    - At Final Spin you can adjust the max Spin Speed.

OPERATION MENU

5.4. STARTING UP

> ⚠ __ATTENTION__ !!!
> BEFORE STARTING UP THE FIRST TIME, BE SURE THAT THE MACHINE IS PROPERLY INSTALLED.
> SEE INSTALLATION MANUAL.

> ⚠ __ATTENTION__ !!!
> WASH CYCLES CAN ONLY BE STARTED WHEN THE KEY SWITCH IS IN RUN MODE.

5.5. SWITCHING ON THE POWER

☞ The display lights up when you switch on the power.
  - The Price of the wash cycle is shown. (There are different Pricing modes, see Price Menu.)
  - If the cycle is ready to be started (Cycle price Paid), __SELECT CYCLE__ is displayed.

5.6. LOAD THE WASHING MACHINE

☞ Open the door and load the laundry into the drum. When the drum is loaded, close the door.

5.7. PUT SOAP INTO THE SOAP DISPENSER

101008

☞ Put the correct amount of soap into the soap dispenser, compartments A & B.

☞ Put the correct amount of softener into the soap dispenser, compartment C.

5.8. PAY

☞ Insert coins until „__SELECT CYCLE__" is displayed.

☞ Use the Debit Card for the payment procedure until „__SELECT CYCLE__" is displayed.

5.9. START WASH CYCLE

☞ Press one of the 6 wash cycle buttons to START the wash cycle.
  - If the door is not closed, the message „__CLOSE DOOR__" will be shown.

☞ Close the door and Press one of the 6 wash cycle buttons to START the wash cycle.
  - If you have selected the wrong cycle.

☞ The cycle can be changed until the first fill of the cycle is completed.

- For each Wash program Step :
  - first you will see the Wash / Rinse Sequence
  - then you will see the Drain / Extraction Sequence

| Program Name | Wash Sequence | Cycle Upgrade | | Units | |

```
Whites           - SUPER CYCLE
  Hot                              Minutes
    Wash              35              Door
```

| | Temperature wash Sequence | | Remaining Time Wash Cycle | | Door State |
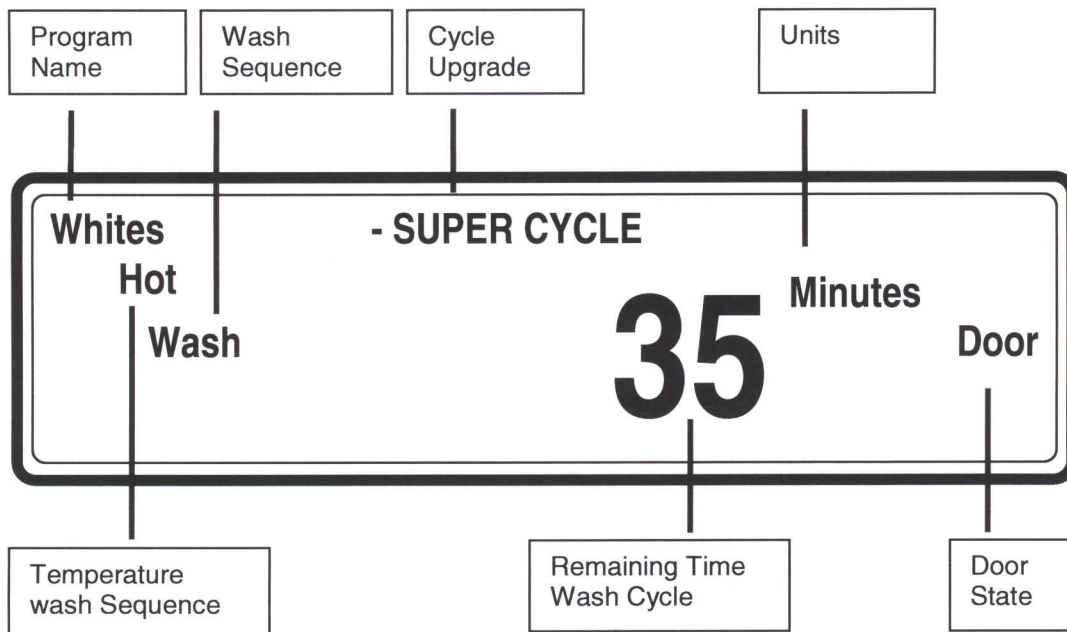
5.11. ADVANCING OR STOP A WASH CYCLE

```
Whites          Service Status      ► Stop
  Hot                                 Advance
    Wash              35              Status
                                      EXIT
```

In run time, you can Stop or Advance a wash cycle.

Stop : terminate the wash cycle.

(With extra request for confirmation to Stop or Continue the wash cycle.)

Advance : skip the current sequence and go to the next sequence.

☞ Turn the Service Switch in Service – Set-Up mode,

☞ Select „**Cycle & Status**" in the Main Menu.

☞ A pop-up menu appears so that you can select Advance or Stop. Press ENTER to confirm.

☞ Turn the key switch back to Run Mode after you have finished the intervention.

5.12. WASH TIME

- Once the program has been started, the remaining cycle time is displayed (less fill time).
- The total wash time = programmed time (1) + the extra time (2+3+4)
    1. The programmed time of the processes.
    2. The extra time for adding water.
    3. The extra time for draining (if the water is not drained in 30 sec and the extended drain time is started)
    4. The coast down time at the end of the spin sequence.

5.13. PROGRAM END

- The time on the display counts down until 0.
- The Door Lock will be released. You can open the Door when **UNLOCK** picture appears on the Display.

☞ Open the door and unload the machine.

- The Message **THANK YOU FOR USING MAYTAG WASHERS** is shown and when it disappears, the machine is ready to start a new wash cycle.

5.14. WATER FILL PROCESS

- Depending on the target water temperature, the cold and hot inlet valves will be opened.
- The water level is measured by an electronic water level sensor.
- The Temperature Balance function, in the Graphic Control Wash Computer, will control the water temperature until the target temperature is reached.
- In the standard wash tables you will find a Normal Low and Normal High water level.
- These are the standard water levels :
    - The Normal Low water level is used for the Prewash and Wash sequence.
    - The Normal High water level is used for the Rinse and Final Rinse sequence.

5.15. WAIT STATE

- It can occur that the normal machine operation has been interrupted and that you have to wait until the Graphic Control Wash Computer allows you to go on.
- You can recognize the wait state by a display that shows **WAIT** and a decreasing counter.
- This will occur when the power has been switched off and on during a running wash cycle.
- As the software doesn't know how fast the motor was spinning, a delay time is respected before the machine can be restarted.

5.16. HOW TO HANDLE FAILURE MESSAGES

◆ When a failure has been detected by the MCG Wash Computer, a failure message is generated, to inform the operator about the problem.

```
                                                   UNLOAD

          Out Of Order (Pr XX St YY)
          Ask For Service


          (D ZZZ : Fault Message)
```
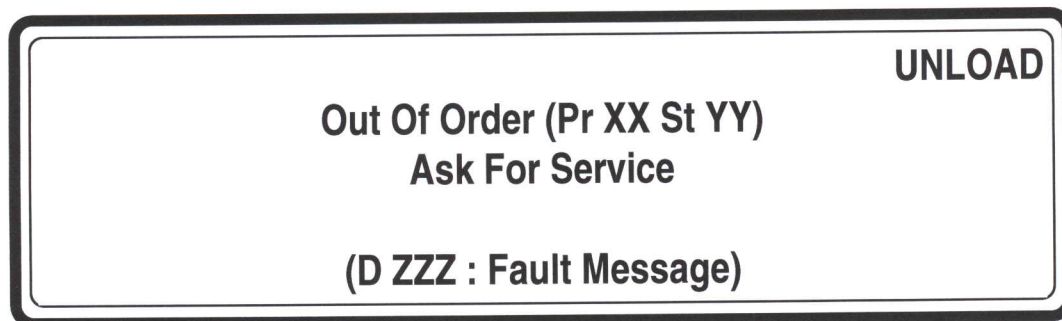
XX	:	The Program number
YY	:	The Step number
UNLOAD	:	If it is allowed to open the door, the message Unload is displayed
D ZZZ	:	The Diagnostic or Help code
Fault Message	:	The name of the Diagnostic message

❏ **Safety conditions**

◆ If there is still water in the drum or if the temperature is too high, it's not possible to open the door.

◆ The messages „**WATER IN CAGE**" or „**TOO HOT**" will be displayed together with the level and the temperature.

⚠ **ATTENTION !!!**
IT'S UP TO THE OPERATOR TO TAKE THE NECESSARY PRECAUTIONS IF THE DRAIN VALVE IS NOT FUNCTIONAL AND THERE IS STILL HOT WATER IN THE TUB AT THE END OF THE WASH CYCLE. ON THE DISPLAY THE ACTUAL WATER TEMPERATURE AND LEVEL WILL BE DISPLAYED. WAIT UNTIL THE WATER IS DRAINED AND UNTIL THE WATER HAS COOLED BEFORE ALL INTERVENTIONS AS HOT WATER CAN CAUSE BURNS.

◆ If something goes wrong with the door lock, the program will be finished immediately.

◆ For safety purposes, the door will stay locked.

⚠ **ATTENTION !!!**
GO TO THE CHAPTER 8 TROUBLE SHOOTING TO FIND OUT MORE ABOUT ERROR HANDLING.

5.17. HOW TO HANDLE POWER INTERUPTIONS

◆ When a power interruption occurs while the machine is in standby mode and no program cycle was started, the machine will stay in standby mode.
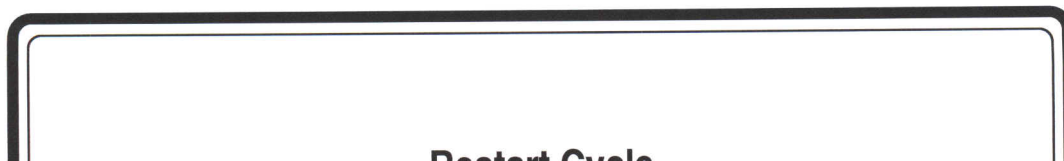
◆ When a power interruption occurs while the machine is washing or spinning, after the power interruption, the wash computer will show a message to restart the interrupted wash cycle.

☞ **PRESS** the button of the interrupted wash cycle to restart the cycle.

5.18. CYCLE - STATUS

☞ At the Main Menu, Select **Cycle & Status**.

Whites Hot Wash	Service Status **35**	▶ Stop Advance Status EXIT

◆ At the **Status** Menu, you can check the water temperature and water level in the tub and consult the actual machine states for diagnostic purposes. (press enter button to see the current Status)
◆ By the ARROW UP and DOWN buttons, you can scroll the screens.

6. PRE-PROGRAMMED PROGRAMS

THE MCG WASH COMPUTER CONTAINS 6 PRE-PROGRAMMED STANDARD WASH PROGRAMS.

6.1. LEGEND
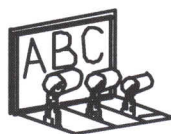
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❑ WATER INLET VALVES

- Valve **1**	Cold	Flush softener dispenser during final rinse	☞ **C**
- Valve **2**	Cold	Flush pre-wash compartment	☞ **A**
- Valve **3**	Hot	Direct Inlet at soap dispenser	
- Valve **4**	Hot	Flush main wash soap compartment	☞ **B**
- Valve **5**	Cold	Flush main wash soap compartment	☞ **B**
- Valve **6**	Cold	Direct Inlet at soap dispenser	

❑ **WATER LEVEL**

- **E** : **E**mpty – open drain
- **NL** : **N**ormal **L**ow level
- **NH** : **N**ormal **H**igh level

❑ **Tub action - RPM**

- **W** : Washing Speed
- **D** : Distribution speed
- **L** : Low extraction speed, depends of the ramp and time (approximately 1/2 of max RPM)
- **H** : Maximum, high extraction speed

6.2. WASH PROGRAMS

❏ **TABLE 1: WHITES CYCLE**

Steps	Valves	Preset Water Temperature	Water Level	Time	Tub Action (RPM)	Soap Signal
Pre-Wash	hot 3 cold 2	113°F (45°C) 100°F (38°C) 90°F (32°C)	NL	(10 min) 0 min (0 min)	W (Normal)	Soap 1 [0 sec]
Drain	--	--	--	(0.5 min) 0 min 0 min	W (Normal)	--
Wash	hot 3, 4 cold 5	180°F (82°C) 160°F (71°C) 125°F (52°C)	NL	(20 min) 8 min (4 min)	W (Normal)	Soap 1 [0 sec]
Drain + spin	--	--	--	1 min	L	--
Rinse (1)	cold 2, 5, 6	--	NH	1 min	W (normal)	--
Drain + Spin	--	--	--	1 min	L	--
Rinse (2)	cold 2, 5, 6	--	NH	(1 min) 0 min (0 min)	W (normal)	--
Drain + Spin	--	--	--	(1 min) 0 min (0 min)	L	--
Final Rinse (3)	cold 1, 6	--	NH	2 min	W (normal)	Soap 3 [0 sec]
Drain + Spin	--	--	--	(10 min) 5.5 min (3 min)	H	--
Slow down	--	--	--	--	--	--
Tumble	--	--	--	30 sec	W (normal)	--

☐ Table 2: Color Cycle

Steps	Valves	Preset Water Temperature	Water Level	Time	Tub Action (RPM)	Soap Signal
Pre-Wash	hot 3 cold 2	113°F (45°C) 100°F (38°C) 70°F (21°C)	NL	(10 min) 0 min (0 min)	W (normal)	Soap 1 [0 sec]
Drain	--	--	--	(0.5 min) 0 min (0 min)	W (normal)	--
Wash	hot 3, 4, cold 5	120°F (49°C) 100°F (38°C) 70°F (21°C)	NL	(20 min) 8 min (4 min)	W (normal)	Soap 1 [0 sec]
Drain + spin	--	--	--	1 min	L	--
Rinse (1)	cold 2, 5, 6	--	NH	1 min	W (normal)	--
Drain + Spin	--	--	--	1 min	L	--
Rinse (2)	cold 2, 5, 6	--	NH	(1 min) 0 min (0 min)	W (normal)	--
Drain + Spin	--	--	--	(1 min) 0 min (0 min)	L	--
Final Rinse (3)	cold 1, 6	--	NH	2 min	W (normal)	Soap 3 [0 sec]
Drain + Spin	--	--	--	(10 min) 5.5 min (3 min)	H	--
Slow down	--	--	--	--	--	--
Tumble	--	--	--	30 sec	W (normal)	--

☐ Table 3: Bright Colors Cycle

Steps	Valves	Preset Water Temperature	Water Level	Time	Tub Action (RPM)	Soap Signal
Pre-Wash	cold 2, 6	75°F (24°C) 34°F (1°C) 34°F (1°C)	NL	(10 min) 0 min (0 min)	W (normal)	Soap 1 [0 sec]
Drain	--	--	E	(0.5 min) 0 min (0 min)	W (normal)	--
Wash	cold 5, 6	75°F (24°C) 34°F (1°C) 34°F (1°C)	NL	(20 min) 8 min (4 min)	W (normal)	Soap 1 [0 sec]
Drain + spin	--	--	E	1 min	L	--
Rinse (1)	cold 2, 5, 6	--	NH	1 min	W (normal)	--
Drain + Spin	--	--	--	1 min	L	--
Rinse (2)	cold 2, 5, 6	--	NH	(1 min) 0 min (0 min)	W (normal)	--
Drain + Spin	--	--	--	(1 min) 0 min (0 min)	L	--
Final Rinse (3)	cold 1, 6	--	NH	2 min	W (normal)	Soap 3 [0 sec]
Drain + Spin	--	--	--	(10 min) 5.5 min (3 min)	H	--
Slow down	--	--	--	--	--	--
Tumble	--	--	--	30 sec	W (normal)	--

❑ Table 4: Permanent Press Cycle

Steps	Valves	Preset Water Temperature	Water Level	Time	Tub Action (RPM)	Soap Signal
Pre-Wash	hot 3 cold 2	113°F (45°C) 100°F (38°C) 70°F (21°C)	NL	(10 min) 0 min (0 min)	W (normal)	Soap 1 [0 sec]
Drain	--	--	--	(0.5 min) 0 min (0 min)	W (normal)	--
Wash	hot 3, 4, cold 5	120°F (49°C) 100°F (38°C) 70°F (21°C)	NL	(20 min) 8 min (4 min)	W (normal)	Soap 1 [0 sec]
Drain + spin	--	--	--	1 min	D	--
Rinse (1)	cold 2, 5, 6	--	NH	1 min	W (normal)	--
Drain + Spin	--	--	--	0,5 min	D	--
Rinse (2)	cold 2, 5, 6	--	NH	(1 min) 0 min (0 min)	W (normal)	--
Drain + Spin	--	--	--	(1 min) 0 min (0 min)	D	--
Final Rinse (3)	cold 1, 6	--	NH	2 min	W (normal)	Soap 3 [0 sec]
Drain + Spin	--	--	--	(10 min) 5.5 min (3 min)	L	--
Slow down	--	--	--	--	--	--
Tumble	--	--	--	30 sec	W (normal)	--

❑ Table 5: Quick Wash Cycle

Steps	Valves	Preset Water Temperature	Water Level	Time	Tub Action (RPM)	Soap Signal
Pre-Wash	Hot 3, cold 2	113°F (45°C) 100°F (38°C) 70°F (21°C)	NL	(10 min) 0 min (0 min)	W (normal)	Soap 1 [0 sec]
Drain	--	--	E	(0.5 min) 0 min (0 min)	W (normal)	--
Wash	Hot 3, 4, cold 5	120°F (49°C) 100°F (38°C) 70°F (21°C)	NL	(20 min) 4 min (4 min)	W (normal)	Soap 1 [0 sec]
Drain + spin	--	--	E	1 min	L	--
Rinse (1)	cold 2, 5, 6	--	NH	(1 min) 0 min (0 min)	W (normal)	--
Drain + Spin	--	--	--	(1 min) 0 min (0 min)	L	--
Rinse (2)	cold 2, 5, 6	--	NH	(1 min) 0 min (0 min)	W (normal)	--
Drain + Spin	--	--	--	(1 min) 0 min (0 min)	L	--
Final Rinse (3)	cold 1, 6	--	NH	2 min	W (normal)	Soap 3 [0 sec]
Drain + Spin	--	--	--	(10 min) 5.5 min (3 min)	H	--
Slow down	--	--	--	--	--	--
Tumble	--	--	--	30 sec	W (normal)	--

❑ Table 6: Delicate & Knits Cycle

Steps	Valves	Preset Water Temperature	Water Level	Time	Tub Action (RPM)	Soap Signal
Pre-Wash	hot 3 cold 2	113°F (45°C) 100°F (38°C) 70°F (21°C)	NH	(10 min) 0 min (0 min)	W (Gentle)	Soap 1 [0 sec]
Drain	--	--	E	(0.5 min) 0 min (0 min)	W (Gentle)	--
Wash	hot 3 cold 5, 6	120°F (49°C) 75°F (24°C) 70°F (21°C)	NH	(20 min) 8 min (4 min)	W (Gentle)	Soap 1 [0 sec]
Drain + spin	--	--	E	1 min	L	--
Rinse (1)	cold 2, 5, 6	--	NH	1 min	W (Gentle)	--
Drain + Spin	--	--	--	0.5 min	D	--
Rinse (2)	cold 2, 5, 6	--	NH	(1 min) 0 min (0 min)	W (Gentle)	--
Drain + Spin	--	--	--	(1 min) 0 min (0 min)	D	--
Final Rinse (3)	cold 1, 6	--	NH	2 min	W (Gentle)	Soap 3 [0 sec]
Drain + Spin	--	--	--	(10 min) 3.5 min (3 min)	L	--
Slow down	--	--	--	--	--	--
Tumble	--	--	--	30 sec	W (normal)	--

7. TROUBLESHOOTING

7.1. DISPLAY MESSAGES

- Various messages may appear on the display at the start, during or at the end of a washing cycle.
  - When an error occurs the machine will automatically go over to a safe state. With the diagnostic program you can determine the problem. This program will test the individual functions of the washing machine one by one.

7.2. FAULT MESSAGES

- If a failure occurs the computer will display a diagnostic error message.
- The program number and step at which the interruption has occurred are displayed.
- The fault message itself contains a number and a corresponding text label by which it's easy to find the related information in the manual.
- If **UNLOAD** is displayed, the door can be opened.

UNLOAD

Out Of Order (Pr XX St YY)
Ask For Service
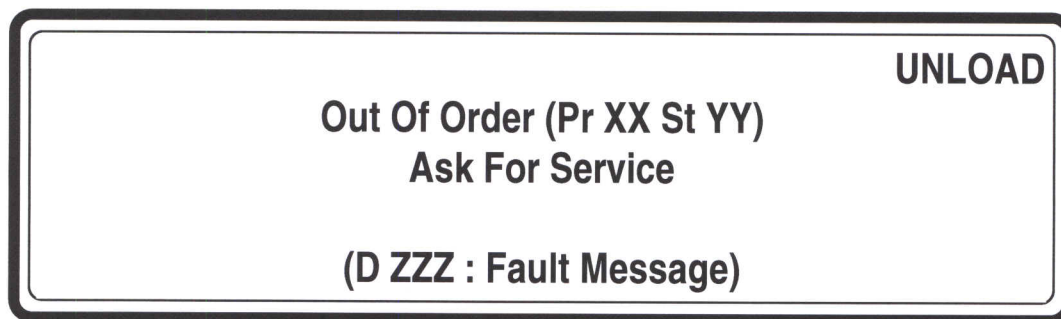
(D ZZZ : Fault Message)

XX	: the program number
YY	: the program step number
UNLOAD	: you can open the door if **UNLOAD** is displayed
D ZZZ	: the number of the occurred Diagnostic or Help message
Fault Message	: the text label of the Diagnostic message

7.3. HOW TO HANDLE FAULT MESSAGES

> ⚠ **ATTENTION !!!**
> **CHECK IN THE MANUAL FOR WHAT PROBLEM THE DIAGNOSTIC OR HELP CODE CORRESPONDS TO. ASK THE ASSISTANCE OF AN EXPERIENCED TECHNICIAN TO SOLVE THE PROBLEM.**
> **ALL THE SAFETY PRECAUTIONS MUST BE FOLLOWED BEFORE EACH INTERVENTION.**

◆ You can overrule and erase fault messages by:

☞ pressing the **ENTER** button (key switch in Service – Set-Up mode)

☞ switching the power off/on

☞ opening the door (D3 and D21)

◆ For safety reasons the door will not be unlocked if :
- there is still water in the drum
- the water temperature is above 130°F
- the drum is still turning (a safety time will be respected until the drum comes to a standstill)
- there is a problem with the door lock system

◆ Each time at the end of the cycle, the Graphic Control Wash computer will fulfil a safety test sequence.

◆ If at the end of the cycle the safety conditions are not fulfilled, the messages **TOO HOT** or **WATER IN CAGE** will be displayed.

```
┌─────────────────────┐        ┌─────────────────────────┐
│      TOO HOT        │        │     WATER IN CAGE       │
│       XX°F          │        │     XX°F  LEVEL YY       │
└─────────────────────┘        └─────────────────────────┘
```

◆ If the problem disappears (the water has dropped below the safety level for spin or the water temperature has dropped below 130°F) the Error message **TOO HOT** or **WATER IN CAGE** will disappear automatically.

> ⚠ **ATTENTION !!!**
> **IT'S UP TO THE OPERATOR TO TAKE THE NECESSARY PRECAUTIONS IF THE DRAIN VALVE IS NOT FUNCTIONAL AND IF THERE IS STILL HOT WATER IN THE TUB AT THE END OF THE WASH CYCLE.**
> **ON THE DISPLAY THE ACTUAL WATER TEMPERATURE AND LEVEL WILL BE DISPLAYED.**
> **WAIT UNTIL THE WATER IS DRAINED AND UNTIL THE WATER HAS COOLED BEFORE ALL INTERVENTIONS AS HOT WATER CAN CAUSE SEVERE BURNS.**
> **CARE MUST BE TAKEN THAT NOBODY GETS BURNED DUE TO HOT WATER.**

DEPENDING THE FAILURE TYPE THE MCG WASH COMPUTER WILL START A SPECIFIC PROCEDURE :

❑ **WHEN SAFETY IS INVOLVED**
- ◆ Full stop + tumble   : the program is stopped but will run the tumble sequence
- ◆ Full stop + safety time   : the program is stopped and a safety time is started
- ◆ Don't start   : the program will not be started as long as the safety

❑ WHEN SAFETY IS NOT INVOLVED

- ◆ Full stop + request for continue : a request to **Continue ?** the program is displayed
- ◆ Skip + continue : the actual cycle step is skipped and the program continues with the next step
- ◆ Continue : the program continues

SPECIAL CASES :

- ◆ **D 1: Defective Water Level sensor**
  D 2: Defective Temperature sensor
  Err 35: Wrong software version
  => the Failure message can **only** be erased by loading Factory Settings and switching the power off and back on.

- ◆ **H 63: Initialization fault - inverter**
  H 64: Verification fault - inverter
  => can be erased by switching off the power.
  => but as H63 and H64 indicates that the frequency inverter is not loaded with the correct parameter settings, the washing machine can get damaged when the inverter is functioning with the wrong settings.
  Do not use the washing machine before a technician has inspected the problem.

- ◆ **D 3: Service Due**
  => A symbol will appear on the display when a Service Due has to be executed.
  See Paragraph 8.5 how to reset the cycle counter.

7.4. OVERVIEW

❑ DIAGNOSTIC MESSAGES

Code	Diagnostic message	Failure	Action	Fault occurrence
D1	Water Level Sensor	Defective level sensor	Continue + Don't start	Before start up
D2	Temperature Sensor	Defective temperature sensor	Continue + Don't start	Before start up
D3	Service Due	Service Due Warning	Symbol For Info only	End cycle
D4	Door Sense Fault	Door switch failure	Full stop + safety time	Whole cycle
D5	Coin 1 Drop Blck	Coin Drop 1 Blocked	Don't start	At start up
D6	Door Unload	Door lock switch closed failure	Don't start	End cycle
D7	Slow Fill Detect	Fill failure	Full stop + tumble	While filling
D8	Slow Drain Detect	Drain failure	Skip + Continue	Draining sequence
D9	-	-	-	-
D10	Dr Lock Sense	Door solenoid switch failure	Full stop + safety time	Whole cycle
D11	Motor Speed Err	(*)		
D12	Motor Sense Flt	(**)		
D13	Coin 2 Drop Blck	Coin Drop 2 Blocked	Don't start	At start up
D14	Door Start	Door lock check at start failure	Don't start	At start up
D15	Overfill	Overfill failure	Full stop + tumble	While filling
D16	Comm Debt Crd Flt	No Debit Card Reader Communication	Don't start	At start up
D17	Door Fail Lock	Bimetal/Spring	Continue	Check 2 min after start cycle
D18	Memory Err	Memory Error	Full stop + safety time	Any time
D19	Softw Err	Software Error	Full stop + safety time	Any time
D20	Tilt Fault	Out of balance : Before spin	Full stop + tumble	Start spin
D21	Imbalance	Out of balance : Normal spin	Skip + continue	After 10 x tilt
D22	Tilt High Spin	Out of balance : high spin	Full stop + safety time	>500 or 750 RPM
D23	-	-	-	-
D24	-	-	-	-

❑ HELP MESSAGES

Code	Help message	Failure	Action	Fault occurrence
H50	Too Hot	Too Hot	Full stop + tumble	While heating
H51	Overflow	Overflow failure	Full stop + tumble	Wash step
H52	Wrong Input	Input tilt must always be low	Don't start	Start Cycle
H53	RS7 Select	MFR18 selected in case of MFR25	Don't start	Start Cycle
H54	RS10 Select	MFR25 selected in case of MFR18	Don't start	Start Cycle
H55	Slow Refill	ReFill failure	Continue	While refilling
H56	No Int. Clock	No Internal Clock	Continue	At power up
H60	Mitsubishi Code	Undefined frequency inverter error code	Full stop + tumble	Start Cycle
H61	THT time	THT Time out	Full stop + safety time	At spin sequence
H62	OV3 time	OV3 Time out	Full stop + safety time	At spin sequence
H63	Load Parr	Initialization fault inverter	Don't start	At initialization
H64	Verify Parr	Verification fault inverter	Don't start	At loading parameters
H65	Stall prev	Stall prevention function active	Continue	At spin sequence
H66	Wrong Voltage Par	Wrong Voltage Range Selection	Make correct selection	Configuration menu
H67	Wrong Model Type	Wrong Inverter Model Type	Make correct selection	Configuration menu
H71	Polling	Polling out of sequence	Stop Card Reader Interfacing	At the Card Reader Communication Process
H74	Remaining Balance	Remaining Balance out of sequence	Stop Card Reader Interfacing	At the Card Reader Communication Process
H75	New Card Balance	New Card Balance out of sequence	Stop Card Reader Interfacing	At the Card Reader Communication Process
H76	Money Off	Money Off out of sequence	Stop Card Reader Interfacing	At the Card Reader Communication Process
H88	Invalid Messaging	Invalid messaging State	Stop Card Reader Interfacing	At the Card Reader Communication Process

❑ ERROR MESSAGES

Code	Help message	Failure	Action	Fault occurrence
E35	Wrong Softw	Wrong software version	Don't start	New software version
E200	MITS ERR			

7.5. SERVICE MENU

The Service Menu contains :

- ◆ Start a **Cycle Credit**.
- ◆ The Software Version Number.
- ◆ An overview of the 20 last failure messages.
- ◆ Statistics for 9 general Diagnostic messages
- ◆ Pulley ratio
- ◆ An overview of the input states
- ◆ Switching On the Motor Drive for a technical intervention
- ◆ Reset Cycle Counter and Statistics Diagnostic Messages

❑ HOW TO GET INTO THE SERVICE MENU

Main Menu	
Cycle & Status...	▶ Service Menu...
Price Menu...	Initialization Menu...
Wash Cycle Menu...	Configuration Menu...
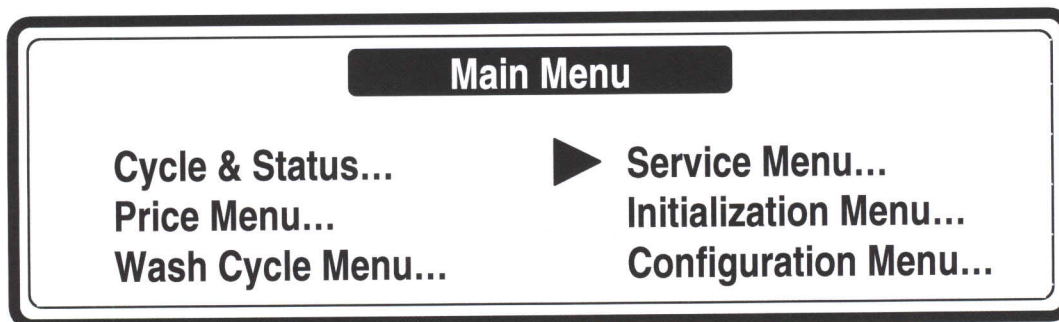
- ◆ At the Main Menu, Select the Service Menu
- ◆ Press the **ENTER** button to make your selection.
- ◆ Now you will see the Service menu.

Service Menu	
Software Version: 1.00	
▶ Cycle Credit...	
Diagnostic Prog. ...	Toolbox...
Faults...	Exit

Service Menu
Software version : 1.00
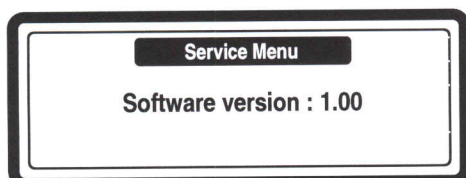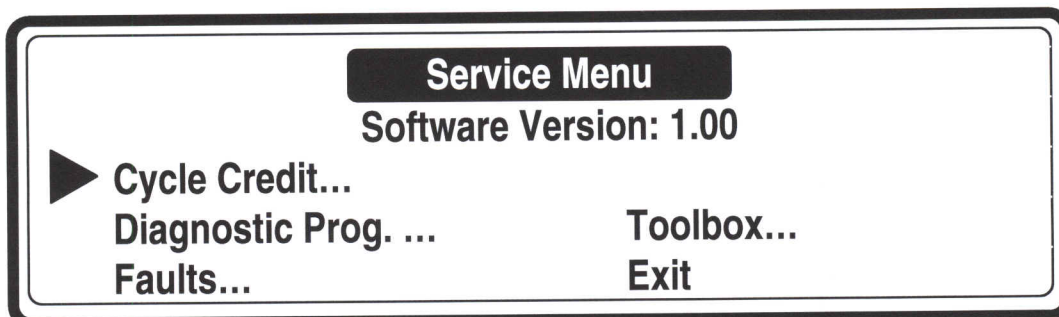
- ● The Software Version number.
  (this value can not be selected or changed)

```
        Service Faults
  ▶ View Fault Messages
```
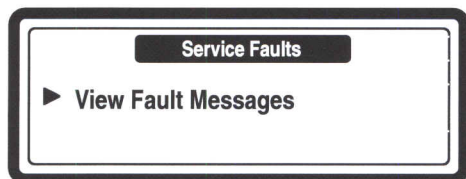
- Select View Fault Messages by the **ENTER** Button to see the 20 Fault messages kept in memory.

```
               Service Faults
    1 Fault 1: D XXX: YYYYYYYYYYYY
    2 Fault 2: D XXX: YYYYYYYYYYYY
    3 Fault 3: D XXX: YYYYYYYYYYYY
  ⯆ 4 Fault 4:  DXXX: YYYYYYYYYYYY
```
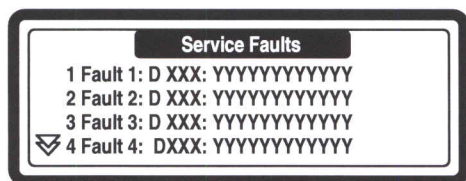
- There are 20 Fault Messages kept in EEPROM memory.
- Fault N° 1 : the last occurred Diagnostic message.
  Fault N° 2 : the last –1 occurred Diagnostic message.
   …
  Fault N° 20 : the last – 19 occurred Diagnostic message.

- **D XXX** : The Diagnostic message number
- **YYYYYYYYYY** : The Diagnostic message name

- If no messages are displayed, this means that no Errors have occurred.

```
              Service Faults
  ▶ Erase Fault Messages      No
```
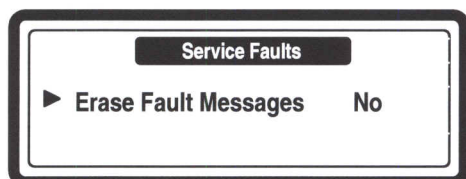
- Press the **YES** and **ENTER** button if you want to erase the Fault messages.

```
              Service Faults
  ▶ View Fault Statistics
```
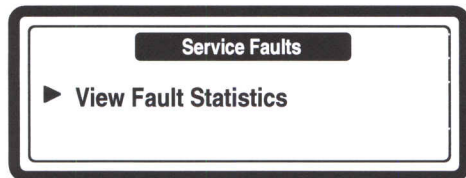
- The Fault Statistics are an accumulation of Diagnostic messages that have appeared over a long period.
- The Statistics can be reset at the Service Menu, by a Reset of the Cycle counter.
- With this information, the technician has an indication of what is in need of repair.

```
              Service Statistics
    1 No Drain                  0x
    2 Door Switch               0x
    3 Bim/Spring                0x
  ⯆ 4 No Fill                   0x
```
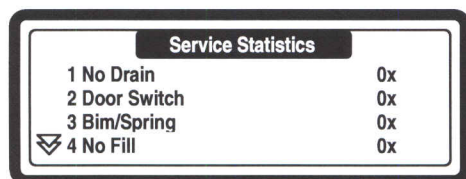
The List with Statistics.
- No Drain   : D8
- Door Switch   : D6 + D4 + D10 + D14
- Bimetal / Spring   : E17

```
      Service Menu

          ▶ Toolbox...
```
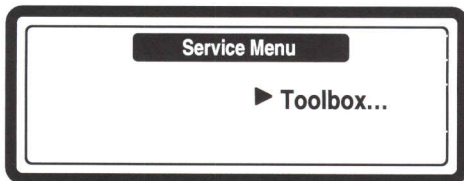
- The purpose of the Toolbox Menu is to give support at technical intervention.

```
     Service Tool Box

▶ View Input States...
```
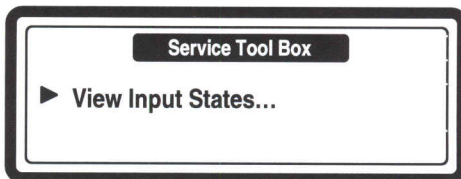
- Input states let you verify the electrical signals into the wash computer.

```
     Service Statistics
1 Input 1              Off
2 Input 2              Off
3 Input 3              On
▽ 4 Input 4            On
```
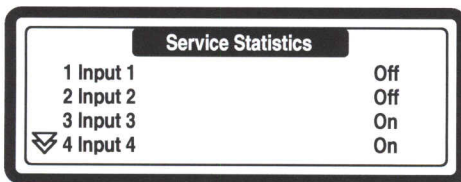
- Input 1 : the State that corresponds with Input 1.
  Input 2 : the State that corresponds with Input 2.
     …
  Input 16 : the State that corresponds with Input 16.

- The exact function of the inputs can be found on the electrical drawing of the Graphic Control Wash Machine.
- If the Input state is Off, the Input signal is low.
- If the Input state is On, the Input signal is high.

```
     Service Tool Box

▶ Inverter Power        Off
```
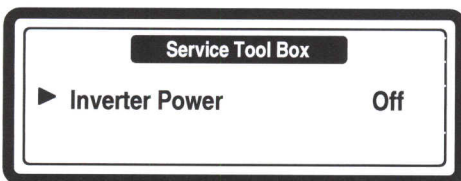
- For washing machines with Frequency Inverter Controlled motor only.
- By this function it's possible to switch on the power for the inverter if a technical intervention is needed.
- By selecting YES, the power of the inverter is switched on.

⚠ATTENTION !!!
SPECIAL CARE HAS BEEN TAKEN AT THE INITIALIZATION OF THE PARAMETERS OF THE MITSUBISHI FREQUENCY INVERTER.
THE MANUFACTURER IS NOT RESPONSIBLE FOR THE WRONG BEHAVIOR OF THE WASHING MACHINE IF THE OWNER HAS INSTALLED NEW PARAMETER SETTINGS IN THE INVERTER THAT DO NOT CORRESPOND WITH THE ORIGINAL SETTINGS AT THE FACTORY.

```
     Service Tool Box

▶ Pulley Ratio         4.38
```
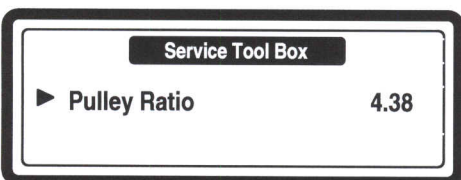
- XX is the Pulley Ratio.
  - You can check if the motor pulley and the drum pulley have the correct size by calculating the pulley ratio.
- This value should be about the same as the displayed value.
- This value can not be changed.
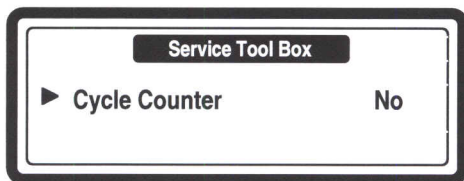
- By selecting Yes, the Escrow will be reset to „0".
- In the Escrow is kept the remainder that the customer has paid too much to start a wash cycle.

```
┌─────────────────────────────┐
│      Service Tool Box        │
│ ► Cycle Counter        No    │
└─────────────────────────────┘
```
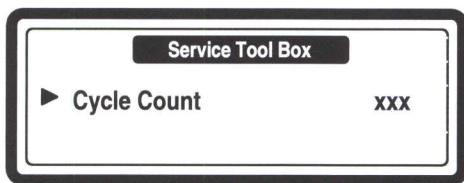
- By selecting Yes and by confirming „Are You Sure? Yes" the Cycle Count Menu Item will be shown in the Tool Box menu.
- Once the Cycle Count Menu item is shown, the Cycle Counter menu item is hidden.

```
┌─────────────────────────────┐
│      Service Tool Box        │
│ ► Cycle Count         xxx    │
└─────────────────────────────┘
```
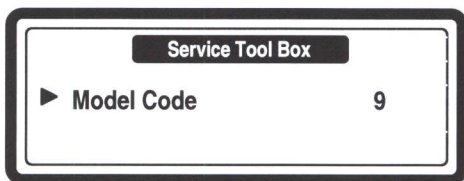
- At the Cycle count menu item, we see the number of cycles that the washing machine has been washing.
- The Cycle count menu item is hidden, until the it has been selected by the Cycle Counter Menu item.

```
┌─────────────────────────────┐
│      Service Tool Box        │
│ ► Model Code           9     │
└─────────────────────────────┘
```

- For future options it is possible to select a Model Code 11.
- Model Code 9 is the default value.

7.6. DIAGNOSTIC CYCLE

The purpose of the diagnostic program is to test the washing machine functions one by one.

❑ HOW TO GET INTO THE DIAGNOSTIC MENU
The Diagnostic menu can only be Started when no other wash cycle is running.
Select first the Diagnostic Program Sub-menu in the Service Menu.

```
┌─────────────────────────────┐
│        Service Menu          │
│ ► Diagnostic Prog. ...       │
└─────────────────────────────┘
```

```
┌─────────────────────────────┐
│                              │
│   PR :   Test                │
```
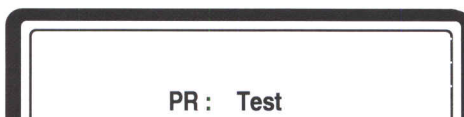
- If you want to start the diagnostic program, select YES and press the **ENTER** button.

❑ TEST SEQUENCE

- ◆ **Display test and door lock test**
- ◆ **Sensor test**
- ◆ **Motor test**
- ◆ **Water fill and drain test**
- ◆ **BASIC Diagnostic Wash program**

❑ Diagnostic Test Sequence

Test N°	Info	Explanation
1	Black display followed by a Text display.	→ Door lock test (locks and unlocks 5 x the door) → Display test
***	None	→ Sensor test (all wash machine sensors are tested)
3	Reverse	→ Wash speed (inverse direction high spin)
4	Stop	⇒ Standstill motor
5	Forward	→ Wash speed (same direction high spin)
6	Distribution	→ Distribution speed (same direction high spin)
7	Low spin	→ Low spin speed (same direction high spin)
	High spin	→ High spin speed (the drum is turning away from the soap box)
8	Stop	→ Free run or controlled deceleration
20	I1	→ The machine takes water by inlet 1
21	Drain 1	→ The water is drained by drain valve 1
22	I2	→ The machine takes water by inlet 2
23	Drain 1	→ The water is drained by drain valve 1
24	I3	→ The machine takes water by inlet 3
25	Drain 1	→ The water is drained by drain valve 1
26	I4	→ The machine takes water by inlet 4
27	Drain 1	→ The water is drained by drain valve 1
28	I5	→ The machine takes water by inlet 5
29	Drain 1	→ The water is drained by drain valve 1
32	I6	→ The machine takes water by inlet 6
31	Drain 1	→ The water is drained by drain valve 1
50	Tumble	⇒ The tumble sequence
	Unload	⇒ End of the Diagnostic Cycle

❑ BASIC Diagnostic Wash program

	Sequence		Supply		Inlet		Temp.	Level	Wash action	Time	R.P.M.
	Top	Front	Top	Front	Top	Front					
Step 1	Wash	Wash	B	-	3-4-5	2-3	104°F	NL	A=12" R=3"	6 min	W
	Drain	Drain	-	-	-	-	-	-	-	30 sec	D
Step 2	Rinse 1	Rinse 1	-	-	2-5-6	2	-	NH	A=12" R=3"	1.5 min	W
	Spin	Spin	-	-	-	-	-	-	-	1 min	L
Step 3	Final Rinse	Rinse 3	C	-	1(+6)	1(2)	-	NL	A=12" R=3"	2 min	W
	Spin	Spin	-	-	-	-	-	-	-	4.5 min	H
	Slowdown		-	-	-	-	-	-	-	1 min	-
	Tumble		-	-	-	-	-	-	A=12" R=3"	30 sec	W

Diagnostic Error messages :

- If the computer detects some problem during the Diagnostic Help Program, a diagnostic error message is generated.
- Check also the Diagnostic Error Log List in the Service-menu.
- Check the error handling and explanation of the error messages.

7.7. PROBLEM CHECK LIST

Problem	Cause	Solving the problem
When the power is switched on : the display is not illuminated Remark : The display must always light up when the power connector is connected to the power board (Flash Memory with software must be implemented)	• no external power	• Switch on the external power supply • verify the external power to the machine
	• the power connector is not connected on the board	• connect the power connector
	• the power connector is inverse connected	• check the wiring and connect the connector as it must be
	• the fuse on the MCG wash computer has blown	• if the transformer is broken replace the MCG wash computer
		Check the wiring and the voltage at the power Connector
	• disconnect the input connector	If the transformer is still OK change the Fuse
		• if the display is lighting up: verify if the input signals or the +16Vdc Supply Signal are touching the cabinet
	• check if the flash memory that contains the software is plugged in it's socket on the wash computer	• if there is no Flash Memory plugged in it's socket at the wash computer, put the right software on the wash computer
The display is illuminated, but it's difficult to read the text on the display.	• the brightness is not Ok	• Change the value for Brightness in the Configuration Menu until you get a bright display.
The machine is not responding on pressing the keyboard buttons	• no button is functional and the key switch is in the right position	• check if the connector „K" of the keyboard is well connected
The machine is not behaving as expected	• if the wrong machine type is selected the wrong outputs will be activated	• check if the right machine type is selected in the Configuration Menu.
A program is started, but the outputs are not activated	• check if connector „R" is connected	• connect the connector at the correct position
Wait is displayed and a counter is counting down	• this is a wait state caused by a power interruption or a safety sequence at the end of the process	• wait until the counter has reached „0" • do not switch off/on the power again as you will restart the counter
Unload is displayed and the Door is Open	• Check if the „Door Switch" is still closed	• If the „Door Switch" is broken, replace the „Door Switch"
Wrong water level (the water level sensor must not be calibrated)	• check if the programmed water levels are the correct ones	• set the right water levels
	• check if the right machine type is selected in the Configuration Menu	• select the right machine type in the Configuration Menu
	• you have changed the machine type, but the standard water levels do not change	• the standard water levels can only be reinitialized by programming new values or by loading the Standard Wash programs again.
The drum is not turning (No error message will be generated)	• Check if the belt is broken	• Check the tension of the belt or replace the belt
	• Check the applied motor voltage	• repair the motor power supply circuit
	• Check if the motor is still functional	• change the motor if needed
	• Check the Inverter	• send a request for more info to the manufacturer

7.8. EXPLANATION ERROR MESSAGES

DIAGNOSTIC CODE   D1 : DEFECTIVE LEVEL SENSOR

If the level sensor is broken then Diagnostic Code D1 will be displayed. The fault is only generated when the machine is in standby mode and no program is active.
The fault can only be erased by switching off and on the power.

DIAGNOSE(ERR24):

1. Check the level sensor visually	If you see some damage: replace the PCB board
2. If the fault is persistent	Replace the PCB board (be sure that there is no drain problem)

DIAGNOSTIC CODE   D2 : DEFECTIVE TEMPERATURE SENSOR

When the temperature sensor is broken then Diagnostic Code D2 will be displayed. The fault is only generated when the machine is in standby mode and no program is active.
The fault can only be erased by switching off and on the power. If the fault is still active after switching on the power : fault 25 will be activated again.

DIAGNOSE(ERR25):

1. Check if the temperature sensor is connected on the PCB Board.	The Female connector must be connected with the Male connector T of the PCB board.
2. Check the temperature sensor	If the temperature sensor is broken: replace the temperature sensor
3. Measure the resistance of the sensor	If the resistance is not OK: replace the temperature sensor
4. Check if the earth wire is at the middle position of the connector	If the earth wire is not at the middle position: put the earth wire in the middle position of connector T
5. Check the PCB board visually	If you see some damage : replace the PCB board
6. If the fault is persistent	Replace the PCB board Be sure that the problem is related to the PCB board and not to a defective temperature sensor

DIAGNOSTIC CODE   D3 : SERVICE DUE WARNING

Diagnostic code D3 occurs when the cycle counter of the Electronic timer has reached the Programmed Value for Service due. A symbol will be displayed at the LCD display, to warn the operator that a service due must be executed.

DIAGNOSE(ERR41):

1. Check the cycle counter at the Toolbox Menu (Service Menu).	You can reset the cycle counter in the Service Menu.

DIAGNOSTIC CODE   D4 : DOOR SWITCH FAILURE

For safety reasons : while a process is running the door lock system is scanned all the time.

If the controller detects that the „DOOR SWITCH" is not closed then the machine will immediately stop all its functions. The door will stay locked.

DIAGNOSTIC CODE   D5 : COIN BLOCKING 1

When the input for coin drop 1 is blocked for more then 15 seconds, diagnostic D5 will be displayed.

When the problem disappears, the Diagnostic message will be cleared automatically.

Most likely the coinbox will get filled up completely with coins until they interrupt the infrared signal of the coin sensor. After removing these coins the coinsystem will work again in a normal way.

DIAGNOSE (ERR16):

1. Check the well functioning of coin drop 1	If the coin drop micro contract or optocoupler is not functioning 100% : replace the coin drop
2. Check the continuity of the wiring	If the wiring is not continuous: repair the wiring

DIAGNOSTIC CODE   D6 : DOOR SOLENOID SWITCH CLOSED FAILURE

If within 30 sec the „DOOR SOLENOID SWITCH" doesn't change state at the end of the cycle: Diagnostic Code D6 will be displayed. At the end of the cycle the Door Lock coil is switched off and the „DOOR SOLENOID SWITCH" must open it's contact. If the contact is broken and stay closed forever, the software will give a message to inform the user that the door lock system isn't safe anymore.

DIAGNOSE(ERR9):

1. Check the functioning of the „DOOR SOLENOID SWITCH"	If the door switch is broken or functions not 100%: replace the door lock system
2. Check the door lock coil	If the door lock coil doesn't function: replace the door lock coil
3. Check the mechanical functionality of the door lock	If the door lock is not functioning mechanically: replace the door lock system
4. Check the continuity of the wiring	If the wiring is not continuous: repair the wiring
5. Check the output relay that powers the door lock coil	If the relay stays closed and the relay is broken, replace the power board
6. Check the output relay that powers the door lock coil	If the relay is not broken, but receives a not allowed signal from the controller board, replace the controller board

DIAGNOSTIC CODE   D7 : FILL FAILURE

Diagnostic Code D7 occurs when the water level has not reached its target level in x minutes.

x = Max fill time, a value that can be programmed at the Initialization Menu.

⚠ **ATTENTION !!!** : The rubber hose must be fixed with a fastener on the electronic water level Sensor.

DIAGNOSE(ERR11):

1. Check if the programmed Max fill time in the Initialization menu is acceptable.	If the water flow is very slow increase the value for the Max fill time. The default value is x minutes.
2. Check if the external water valves are open	If the water valves are closed: open the water inlet valves
3. Check if the water inlet valves are not blocked by dirt	If the water inlet valves are blocked by dirt: clean the water inlet valves or replace the water inlet valves
4. Check the coil of the water inlet valves	If the coil of the water inlet valve is open: replace the coil or the complete inlet valve
5. Check the drain valve	If the drain valve is defective: replace the drain valve

9. Check the continuity of the wiring	If the wiring is not continuous: repair the wiring
10. Check the output relay that powers inlet valves and the drain valve	If the relay receives a command signal but is not closed, replace the wash computer

DIAGNOSTIC CODE   D8: DRAIN FAILURE

Diagnostic Code D8 occurs when the electronic timer detects that the water is not drained after 3 minutes in a Drain or Spin Sequence. The failure message is displayed at the end of the cycle.

DIAGNOSE (ERR2):

1. Check the drain tube of the washing machine	If the drain tube is blocked: repair the drain tube
2. Check the drain valve	If the drain valve is defective: replace the drain valve
3. Check the wiring: verify if the drain valve is Switched OFF The drain valve is normal open.	If the wiring is damaged: repair the wiring

DIAGNOSTIC CODE   D10 : DOOR SOLENOID SWITCH FAILURE

For safety reasons: the door locked system is scanned all the time.
If the machine detect that the „DOOR SOLENOID SWITCH" is not closed then the machine will immediately stop all its functions. The door will stay locked.

DIAGNOSE (ERR7):

1. Check the functioning of the „DOOR SOLENOID SWITCH". The „DOOR SOLENOID SWITCH" is a NO Open contact.	If the „DOOR SOLENOID SWITCH" is broken or functions not 100%: replace the door lock system
2. Check the door lock coil	If the door lock coil doesn't function: replace the door lock coil
3. Check the mechanical functionality of the door lock	If the door lock is not functioning mechanically: replace the door lock system
4. Check the continuity of the wiring	If the wiring is not continuous: repair the wiring
5. Check the door switch input at the wash computer. (See Inputs at Toolbox Menu)	If the wash computer input is not functional replace the wash computer board.

DIAGNOSTIC CODE   D11 : COMMUNICATION FAULT INVERTER

This fault will only occur when there is no communication between the electronic timer and the inverter.
The electronic timer is sending requests to the inverter, and the inverter is sending answers to the timer.
If the electronic timer is not receiving the answers within 5 seconds then Diagnostic Code D11 will be displayed.
The baud rate for the E500 series Mitsubishi inverters is 19200. (= RS485 communication)
(Graphic Control Wash Computer and Inverter have to communicate with the same baud rate.)

DIAGNOSE(ERR27):

1.For a new inverter or timer : Check if the right machine type and Washing	When the Inverter parameters are loaded at the Configuration menu, make sure that you have selected

6. Check if the connectors on both sides of the communication cable are still connected	Connect the connectors on the electronic timer board and the inverter.
7. Check if the wiring is still continue	Repair the wiring
8. Check if the output relays that activates the safety inverter contactor is functional	If the relay is broken, replace the wash computer

DIAGNOSTIC CODE D12 : ALARM FREQUENCY INVERTER

Diagnostic Code D12 occurs when the frequency inverter goes into alarm. Except for the THT and the OV3 fault where the timer software will reset the inverter automatically (only 1x). The active process will be interrupted immediately.

DIAGNOSE(ERR30):

1. Check if the correct machine type is selected in the Configuration Menu.	If the wrong machine type is selected, enter the right machine type
2. Check if the correct inverter parameters have been implemented.	Load the correct Inverter parameters.
3. Check the frequency inverter error list to know what happened.(See manual inverter)	If the fault is persistent, contact the manufacturer

DIAGNOSTIC CODE D11 – D12 : PWM MOTOR DRIVE ERRORS AND PROBLEMS

D11 (E63, E64, E65) Drum doesn't turn (no reset drive)

D12 (E66) Extended Speed (no reset drive)

D12 (E67) Continue Spin (no reset drive)

Problem	Cause	Solving the problem
The motor is spinning at 150 rpm	* the belt is broken (when the belt is broken, the load is so small that the motor starts spinning at 150 RPM	* Change the motor belt.
The motor is shaking	* bad contact in motor or communication cable	* Check wiring and pin connectivity and repair the problem
The drum is not able to spin at it's max speed	* 1 phase is missing	* Verify if the connector of motor supply is well connected
The belt is slipping	* check if the belt is wet	* Make sure that no water gets on the belt

DIAGNOSTIC CODE D13 : COIN BLOCKING 2

When the input for coin drop 2 is blocked for more then 15 seconds, diagnostic D13 will be displayed.

When the problem disappears, the Diagnostic message will be cleared automatically.

Most likely the coinbox will get filled up completely with coins until they interrupt the infrared signal of the coin sensor. After removing these coins the coinsystem will work again in a normal way.

DIAGNOSTIC CODE   D14 : DOOR LOCK CHECK AT START FAILURE

The washing machine will not start a new process when the door is not locked after pressing the **START** button.
The Message **DOOR** is displayed.
When you open the door : the fault message is erased.

Exception :

If the „DOOR SWITCH" is opened again just before the cycle has started, (the „DOOR SOLENOID SWITCH"
is still closed) Diagnostic Code D14 will also be generated.

DIAGNOSE(ERR8):

1. Check if the input connector A is connected	If the input connector A is not connected : connect connector A
2. Check the functioning of the „DOOR SOLENOID SWITCH"	If the door switch is broken or functions not 100% : replace the door lock system
3. Check the door lock coil	If the door lock coil doesn't function : replace the door lock coil
4. Check the mechanical functionality of the door lock	If the door lock is not functioning mechanically : replace the door lock system
5. Check the continuity of the wiring	If the wiring is not continuous : repair the wiring
6. Check the output relay that powers the door lock coil	If the relay is broken, replace the wash computer
7. Check the functioning of the „DOOR SWITCH"	If the door switch is broken or functions not 100% : replace the door lock system
8. Check the door switch input at the wash computer. (See Inputs at Toolbox Menu)	If the wash computer input is not functional replace the wash computer board.

DIAGNOSTIC CODE   D15 : OVERFILL FAILURE

If the target water level is X units above the target level then failure Diagnostic Code D15 will be displayed.
The fault message will not be generated when the user is advancing from a sequence with a high water level
to a sequence with a low water level.

X= „Max. level Overfill", a value that can be programmed at the Initialization menu.

DIAGNOSE(ERR12):

1. Check if the water inlet valves are broken	If the water inlet valves are broken: clean or replace the water inlet valve diaphragms
2. Check if the water pressure is not to high	Lower the water pressure
3. Check the output relay that powers the inlet valve	If the relay stays closed and the relay is broken, replace the wash computer

In Case of Steam Heating :

If the steam has not enough heating power (too low temperature), the machine will be filled with too much
water at the heating part. This will result in an increased water, energy and soap supply consumption.

It's strongly recommended that the heating installation works with enough heating power.

A simple solution can also be to reduce the programmed target water level. As less steam will be required,
the normal water level should be reached. In the initialization menu it is also possible to adjust the alarm level
to avoid the error message. (= not recommended)

DIAGNOSTIC CODE   D16 : COMM DEBIT CARD FAULT

1. Check if the Gen 2 Debit Card Reader is connected to the wash computer	Connect the Gen 2 Debit Card Reader to the wash computer
2. Check that the wash computer is setup to work with a Gen 2 Debit Card Reader	Adjust the wash computer settings so that Enhanced Debit is selected at the Pricing menu.
3. Check if the wiring is still continue	Repair the wiring

DIAGNOSTIC CODE   D17 : BIMETAL/SPRING

The bimetal/Spring is an extra security that the door can not be opened immediately when the power is switched off. To verify that the bimetal/Spring is not defective, the bimetal/Spring is checked each cycle. If the bimetal/Spring is defective : at the end of the program, Diagnostic Code D17 is displayed.

DIAGNOSE(ERR10):

1. Check the bimetal/Spring	If the bimetal/Spring is defective: replace the bimetal/Spring
2. Check the mechanical functionality of the door lock.	If the door lock is not functioning mechanically: replace the door lock system
3. Check the continuity of the wiring	If the wiring is not continuous: repair the wiring

DIAGNOSTIC CODE   D18 : MEMORY ERRORS

If a memory error occurs then something is going wrong with the EPROM.

Try to reload the Programs. Check for source of electrical „noise".

DIAGNOSTIC CODE   D19 : SOFTWARE ERRORS

Software errors must never occur. If a software error message occurs inform the manufacturer.

HELP CODE   H50 : TOO HOT

When the water temperature is 27°F above the target temperature : Help Code 50 will be displayed.

For evaluation of the problem, you can follow the water temperature of the bath on the display of the washing machine at the STATUS-menu. (Select Cycle-Status Menu at Main Menu).

DIAGNOSE(ERR15):

1. Check if the correct water inlet valves are Functional. If the cold water inlet valves are not Functional or if the main cold water supply is not available and only hot water inlet valves are open, and if the hot water supply has a temperature value above the programmed wash sequence value then the temperature of the wash bath will be too high.	See diagnostics Failure 11 : Fill Failure
2. Check the water temperature	If the temperature of the supplied hot water is too high: decrease the temperature of the hot water
3. Check if the temperature sensor is functioning	If the temperature sensor is defective: replace the temperature sensor
4. Check the output relay that powers the hot water inlet valves	If the relay stays closed and the relay is broken, replace the wash computer

1. Check if the overflow hole and tube isn't blocked	If the overflow tube is blocked: repair the tube
2. Check if the drain tube isn't blocked	If the drain tube is blocked: repair the drain tube
3. Check the water inlet valves	If the water inlet valves are broken: replace the water inlet valves
4. Check the output relay that powers the inlet valve	If the relay stays closed and the relay is broken, replace the wash computer

HELP CODE   H52 : WRONG INPUT (UNBALANCE)

Help Code H52 occurs when the input for tilt switch F- machines has been wired.

For safety reasons this input must stay low on MFR machines.

DIAGNOSE(ERR68):

1. Input (FS tilt) must not be wired and must have low voltage.	Remove the wire or replace the wash computer.

HELP CODE   H53 : RS7 Select

Wrong machine type has been selected. MFR18 has been selected in stead of MFR25.

Select the right machine type. (See machine type plate at the rear side of the washing machine)

HELP CODE   H54 : RS10 Select

Wrong machine type has been selected. MFR25 has been selected in stead of MFR18.

Select the right machine type. (See machine type plate at the rear side of the washing machine)

Check if the wire bridge on mobile connector F on pins 1 and 3 is available.

HELP CODE   H55 : Slow Refill

After the fill sequence (machine has already taken the right amount of water to wash), the machine fails to refill in case there is a leak.

Diagnostic evaluation see D7 : Slow Fill.

Help Code H55 is for informative purposes only and doesn't result in an Error handling procedure.

HELP CODE   H56 : No Internal Clock

Help Code H56 occurs when the Internal Clock of the wash computer is not functional anymore.

As a consequence the wash computer Day and Time calculation will be stopped and the function for automatic switching between Normal & Special Pricing will be disturbed.

This will probably be a hardware failure of the wash computer.

HELP CODE   H60 : UNDEFINED FREQUENCY INVERTER ERROR CODE

This fault should never occur. Inform the manufacturer.

HELP CODE   H61 : THT TIME OUT

Help Code H61 occurs when the software can not handle the THT fault of the frequency inverter.
This fault is a specific fault of the frequency inverter caused by an over current.

DIAGNOSE(ERR28):

1. Check if the correct machine type is selected in the Configuration Menu.	If the wrong machine type is selected, enter the right machine type
2. Check if the correct inverter parameters	Load the correct Inverter parameters.

HELP CODE   H62 : OV3 TIME OUT

Help Code H62 occurs when the software can not handle the OV3 fault of the frequency inverter. This fault is a specific fault of the frequency inverter caused by an over voltage during deceleration.

DIAGNOSE(ERR29):

1. Check if the correct machine type is selected in the Configuration menu.	If the wrong machine type is selected, enter the right machine type
2. Check if the correct inverter parameters have been implemented.	Load the correct Inverter parameters.
3. Check if there was a high unbalance during extraction, which can be caused by putting only half loads in the machine.	Put always a full load in the machine drum. Do not put other material than textile linen (fabrics) in the machine.
4. Check if the fault is persistent	If the fault is persistent, contact the manufacturer

HELP CODE   H63 : INITIALIZATION FAULT INVERTER

While the parameter set of the frequency inverter is written to the EEPROM memory of the inverter and a fault occurs during this action then Help Code H63 will be displayed.

IT IS NOT RECOMMENDED TO USE THE WASHING MACHINE AS THE INVERTER WILL FUNCTION WITH THE WRONG PARAMETERS SETTINGS.

Diagnose(ERR31):

1. Check if the door is closed and locked	If the door is not closed, close the door. If the door is not locked, repair the door lock system
2. Check if the inverter is energized	If the inverter is not energized, check the power to the inverter (see fault 27)
3. Write the parameters once more into the inverter	If the fault is persistent, contact the manufacturer

HELP CODE   H64 : VERIFICATION FAULT INVERTER

The software of the electronic timer will check if the parameter settings are correct loaded. If not:

Help Code H64 will be displayed. Help Code H64 can not be reset by the **ENTER** button.
The fault message can be erased by switching the power off / on.
The fault message can be erased by loading the correct parameter set.

DIAGNOSE(ERR32):

1. Check if the correct machine type is selected in the Configuration Menu	If the wrong machine type is selected, enter the right machine type
2. Check if the door is closed and locked	If the door is not closed, close the door. If the door is not locked, repair the door lock system
3. Check if the inverter is energized	If the inverter is not energized, check the power to the inverter (see fault 27)
4. Write the parameters once more into the inverter	If the fault is persistent, contact the manufacturer

DIAGNOSE(ERR33):

1. Check if the drum is not overloaded	Enter the correct amount of laundry in the drum
2. Check if the correct machine type has been selected in the Config menu	The installed parameters are related to the motor and machine type size. If a wrong machine type was selected then the stall prevention will function for the wrong motor type. Select the right machine type.
3. Check if the correct inverter parameters have been implemented.	Load the correct Inverter parameters.
4. Check if there are mechanical parts broken	Broken parts can cause an unbalance of the drum. Replace the broken parts.

HELP CODE   H66 : WRONG VOLTAGE RANGE SELECTION

Help Code H66 occurs when the wrong Voltage Range has been selected in the Configuration menu.
Depending on the machine type and the inverter type, certain Voltage ranges are not allowed.

DIAGNOSE(ERR43):

1. Check the Machine Identification plate at the back of the machine.	Select the same Voltage range in the Configuration menu as on the Identification plate of your washing machine. Menu Item : Supply Voltage

HELP CODE   H67 : WRONG INVERTER MODEL TYPE

Help Code H67 occurs when the wrong Inverter Model Type has been detected by the MCG AC software.
Before loading the parameters from the Wash Computer to the Mitsubishi inverter, the inverter type is checked first.

DIAGNOSE(ERR44):

1. Check if you have selected the correct machine type.	Select the correct machine type in the Configuration menu. Menu Item C:Machine Type
2. Check the Machine Identification plate at the back of the machine.	Select the same Voltage range in the Configuration menu as on the Identification plate of your washing machine. Menu Item C:Supply Voltage

HELP CODES   H71, H74, H75, H76, H88 : CARD READER MESSAGES

These Help Codes are related with a disturbed communication process between Card Reader and MCG AC Wash Computer.

These Help Codes are for informative purposes only and don't need technical intervention except if the problem should be persistent.

ERROR CODE   E35: WRONG SOFTWARE VERSION

When a total new software that isn't downward compatible with previous software versions is loaded, then the software will detect that the old and new software´s are not compatible.
You have to reconfigure the Graphic Control Wash Computer. See Chapter 4.

⚠

ATTENTION !!!
ALL THE CUSTOM SETTINGS WILL BE ERASED IN THE GRAPHIC CONTROL WASH COMPUTER BY

If the watch dog has been activated, Help Code H53 is logged in the Error log register. If this occurs often, ask the help of a technician.

DIAGNOSTIC CODE   D12
ERROR CODES   300-334: MITSUBISHI INVERTER ALARM MESSAGE

If a Mitsubishi Inverter Alarm occurs, check the trouble shooting in the Mitsubishi inverter manual.

300 ErrOC1	305 ErrOV3	310 ErrBE	315 ErrPUE	320 IPF	325 OP3	330 MB3
301 ErrOC2	306 ErrTHT	311 ErrGF	316 ErrRET	321 UVT	326 CTE	331 MB4
302 ErrOC3	307 ErrTHM	312 ErrOHT	317 ErrCPU	322 LF	327 P24	332 MB5
303 ErrOV1	308 ErrFIN	313 ErrOPT	318 E.6	323 OP1	328 MB1	333 MB6
304 ErrOV2	309 ErrOLT	314 ErrPE	319 E.7	324 OP2	329 MB2	334 MB7

DIAGNOSE FOR FAILURE 303-304-305 (OV-ERRORS) :

1. Check if the correct machine type is selected in the S-submenu	If the wrong machine type is selected, enter the right machine type
2. Check if there was a high unbalance during extraction, which can be caused by putting only half loads in the machine.	Put always a full load in the machine drum. Do not put other material than textile linen (fabrics) in the machine.
3. Check if the fault is persistent	If the fault is persistent, contact the manufacturer

DIAGNOSTIC CODE   D18
ERROR CODES   500-518: MEMORY ERRORS

If a memory error occurs then something is going wrong with the EPROM.

Try to reload the Programs. Check for source of electrical „noise".

DIAGNOSTIC CODE   D19
ERROR CODES   600-630: SOFTWARE ERRORS

Software errors must never occur. If a software error message occurs inform the manufacturer.

8. SERVICE INFORMATION

> ⚠ **ATTENTION !!!**
> **PROFESSIONAL REPAIRS IN INSTALLATION CAN BE CARRIED OUT ONLY BY SERVICE ORGANIZATION WITH PERMISSION GIVEN BY PRODUCER / SUPPLIER.**
>
> **IN CASE OF ANY MAINTENANCE OR REPAIR DISCONNECT THE MACHINE FROM SOURCE OF ENERGY AND WAIT UNTIL THE MACHINE COOLS DOWN OR DRAINS WATER.**
>
> **PLEASE FOLLOW ALL INSTRUCTIONS IN THE MANUALS AND THE LABELS AND AS WELL AS VALID BASIC SAFETY LAWS IN ORDER TO PREVENT BURNS AND INJURIES CAUSED BY ELECTRICITY.**

8.1. MAINTENANCE

Remove dirt from the buttons by a damp cloth after disconnection from the power supply.

> ⚠ **ATTENTION !!!**
> **DO NOT USE AGGRESSIVE SOAPS, CAUSTIC CHEMICALS, GASOLINE OR OTHER PETROCHEMICAL SUBSTANCES WHICH CAN DAMAGE THE BUTTONS**

8.2. INFORMATION FOR SERVICE

> ⚠ **ATTENTION !!!**
> **EVERY CIRCUIT BOARD HAS A STICKER PLACED ON THE FLASH MEMORY, WHICH SPECIFIES THE VERSION AND THE DATE OF THE SOFTWARE. THIS DATA ALONG WITH THE MACHINE SERIAL NO., ORDER CODE MUST BE GIVEN IN ALL CORRESPONDENCE OR INQUIRIES TO THE MANUFACTURER.**

XXX-VVV
XXX = 641   (Software for the Graphic Control washing machine computer)
VVV = Version

8.3. PROGRAMMER CIRCUIT BOARD
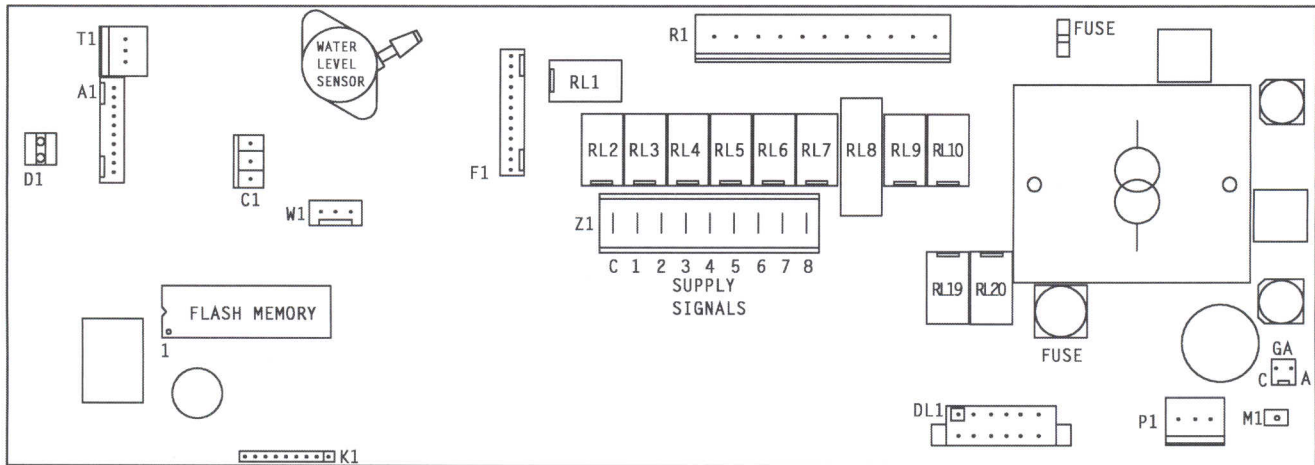
Picture 8.3

> ⚠ **WARNING !**
> CONNECTION TO THE WRONG VOLTAGE SUPPLY MAY CAUSE SERIOUS BODILY INJURY AS
> WELL AS DAMAGE TO THE ELECTRONIC PARTS AND TO THE WASHING MACHINE ITSELF.

- Voltage   :   200-240 Vac, 50/60 Hz
- Power   :   max 16 VA
- Memory   :   Flash Memory (contains the software)
                       EEPROM (contains the customized programs)
- Outputs   :   11 relays
- Serial interface :   RS485 (2 wire) networking between wash computer and
                           external device (PC Computer)
- Display   :   LCD display

8.4. INSTRUCTIONS FOR REPLACING THE ELECTRONIC BOARD

❑ Switch off the main power supply.
❑ Open the cover plate of the washing machine.
❑ Remove the connectors from the circuit board and remove the hose from the level sensor.
❑ Remove the combination of the metal support plate - electronic timer by the rear side of the fascia
   panel. Remove the two nuts of the metal support plate and pull the assembly carefully by the
   rear side.
❑ Put the new combination support plate – electronic timer into the machine and tighten the two nuts.
❑ Reconnect all the connectors and put the hose back on the level sensor.
❑ Close the cover plate of the washing machine.
❑ Now you can Switch On the power supply.
❑ The display should illuminate.

> ⚠ **ATTENTION !!!**
> MAKE SURE THAT THE HOSE OF THE LEVEL SENSOR IS WELL TIGHTENED WITH A
> FASTENER. IF THE HOSE IS NOT AIR TIGHT THEN THE LEVEL SENSOR WILL NOT MAKE A
> CORRECT MEASUREMENT

8.5. INSTRUCTIONS FOR INSTALLING NEW SOFTWARE

❑ Switch off the main power.

❑ Open the cover plate of the washing machine.

❑ Take the combination support plate - electronic timer out of the machine. See also paragraph 9.4.

❑ The Flash Memory with the implemented software is the only IC on the logic board that can be removed.

❑ Take the Flash Memory out of the IC-holder and replace it by a new one.

❑ Make sure that you put the new chip at the right position. See picture.

❑ Put the combination support plate - electronic timer back at it's original position.

❑ Reconnect all the connectors and put the hose back on the level sensor. **(fastener!)**

❑ Close the cover plate of the washing machine.

❑ Switch on the main power.

❑ The display should illuminate.

❑ If the software is compatible with the previous software: the new software can be used without re-initialization.

❑ You have to clear all the Diagnostic error messages in the Service-menu, if you want to make a correct inspection of the functioning of the new installed software.

❑ If the software is not 100% compatible with the previous software version:

  ◆ The new software will generate a diagnostic message 35. When fault message 35 occurs you have to reset the settings of the configuration and initialization menu.

  ◆ This can be easily done by Selecting **Reset Factory Settings** in the Configuration Menu.

    ➔ **This is explained in Chapter 3 : Basic Description of Controls.**

  ◆ Go through the Menu items of the Configuration and Initialization Menu one by one to ensure that all the settings do correspond with the ones you prefer.

  ◆ All the Custom Settings will be lost.

❑ Switch the power Off for 5 seconds, then turn power back on. When the reset has been executed properly, Err 35 will not appear on the display anymore.

❑ Now the Graphic Control Washing machine computer is ready to start a new cycle.

⚠ **ATTENTION !!!**
FOR A PRACTICAL WAY OF WORKING FOR CHANGING THE FLASH Memory : TAKE THE ELECTRONIC BOARD OUT OF THE WASHING MACHINE BY THE REAR SIDE OF THE FACIA PANEL.
See Paragraph 8.4.

9. SPECIFICATION OF YOUR MACHINE

❏ MACHINE DATA

◆ type	:.........................	◆ phases	:	....
◆ serial number	:.........................	◆ frequency	:	....
◆ voltage	:.........................	◆ output	:	....
◆ water supply	: ❏ cold soft	❏ cold hard	❏ hot soft	

❏ ELECTRONIC DATA

Programmer type :

◆ serial number	:	....
◆ software version	:	....
◆ software date	:	....
◆ keyboard	:	....

❏ MACHINE CONFIGURATION DATA

FUNCTION		DATA ENTERED
◆ MACHINE TYPE	:	....
◆ BRIGHTNESS DISPLAY	:	....
◆ TEMPERATURE	:	❏ Celsius ❏ Fahrenheit

❏ MACHINE INITIALIZATION DATA

FUNCTION		DATA ENTERED
◆ LANGUAGE	:	....
◆ COMPART. FLUSH PRE-WASH	:	❏ Yes ❏ No
◆ HOT WATER HEATER TEMPERATURE	:	.... °F
◆ MAX. WATERFILL TIME	:	.... Minutes
◆ OVERFILL DETECTION	:	.... Units

10. INDEX

IMPORTANT !

MACHINE TYPE:	
PROGRAMMER: **GRAPHIC CONTROL TIMER(MCG AC)**	
INSTALLATION DATE:	
INSTALLATION CARRIED OUT BY:	
SERIAL NUMBER:	

ELECTRICAL DETAILS:

..............VOLT................PHASE............HZ

NOTE:

ANY CONTACTS WITH YOUR DEALER REGARDING MACHINE SAFETY, OR SPARE PARTS, MUST INCLUDE THE ABOVE IDENTIFICATION.

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

DEALER: