ASKO

BUILT TO LAST LONGER

Service manual: Washing machine

Type: WM70

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Service manual

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Contents

Updates

Rev	Date	Description	Sign
01	2010-10-06	First version developed	BPA
02	2010-10-12	Service menu WM70.1, WM70.2, WM70.3 updated	ISC
03	2012-04-20	Replacing front panel, door, cover plate and the hinges updated	EH

Introduction

You are holding the service manual for WM70 type washing machines.
It should be easy to service a washing machine. It is important that you, as a service technician, are given the conditions to be able to carry out work in an efficient and satisfactory way. Our hope is that this service manual is a useful tool for your daily work.
The type designation is located by the inside of the glass door (see image below).

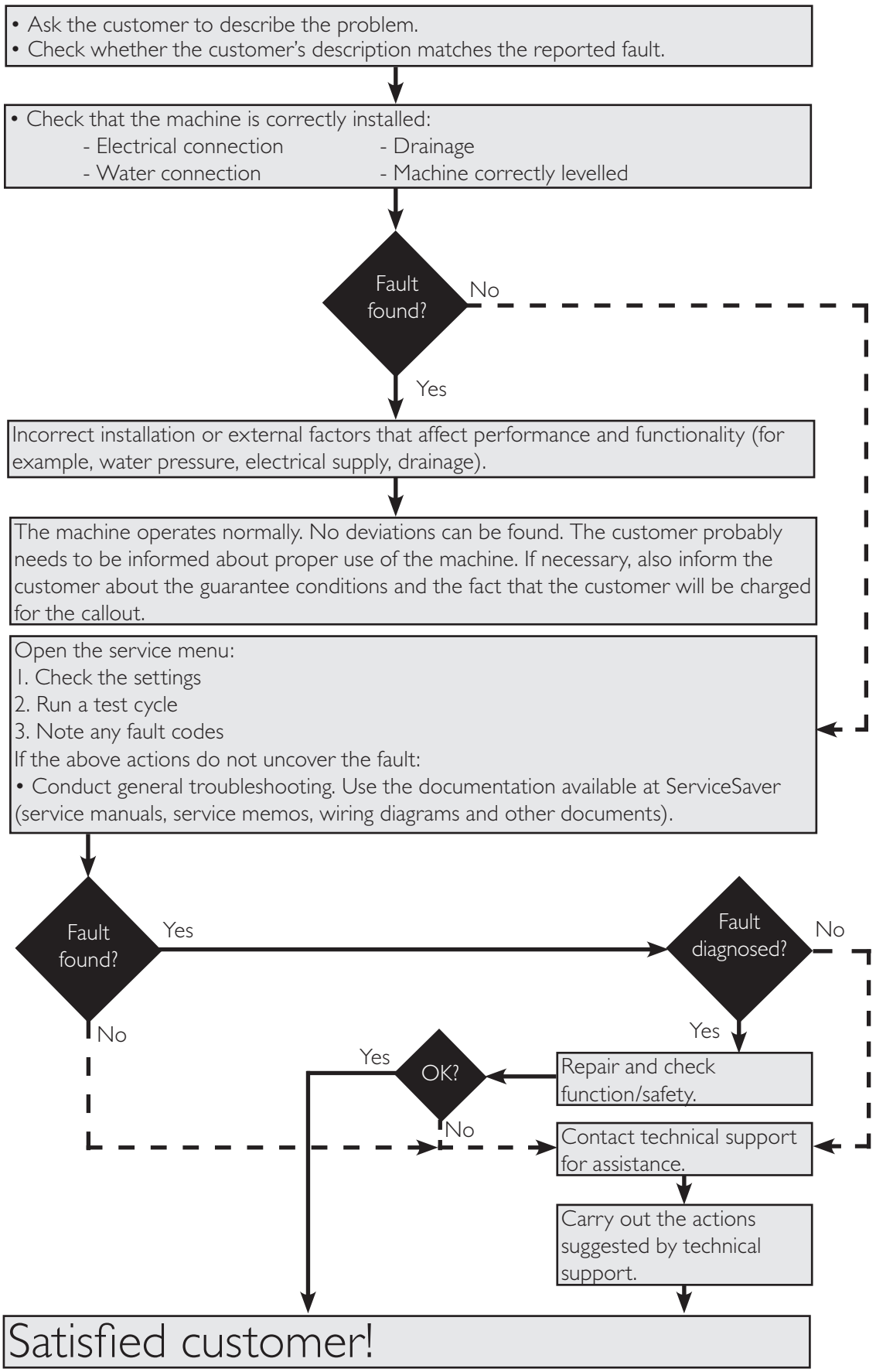
Asko Appliances AB
SE-534 82 Vara
Sweden

OPERATING INSTRUCTIONS

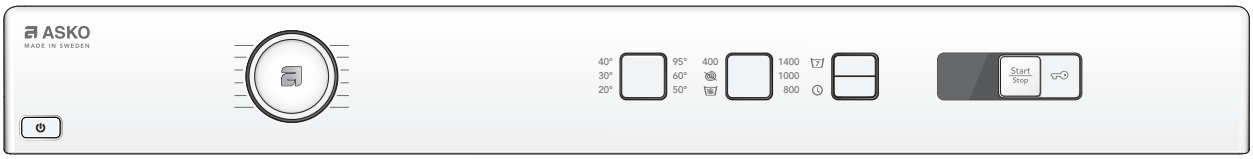
Always have the operating instructions for the machine available during service

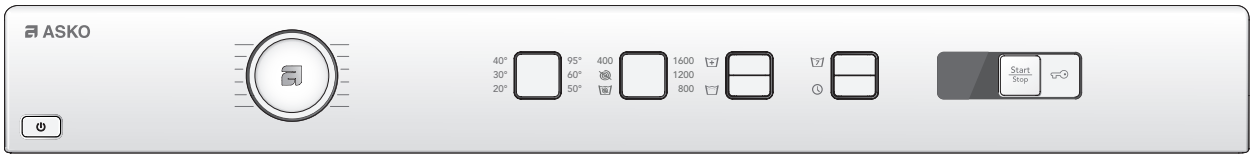
Troubleshooting strategy

Troubleshooting is an important part of the service callout, and as such we have drawn up a troubleshooting strategy that describes, in broad terms and step by step, what you need to do to find and diagnose faults arising in our machines.



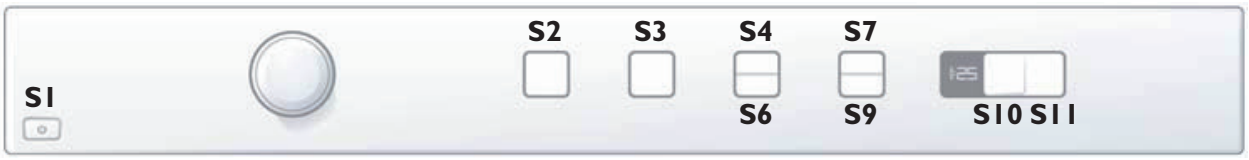
Overview: Panel WM70.1





Programs:	10
Options:	4 or 6
Settings:	1

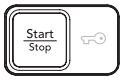
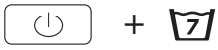
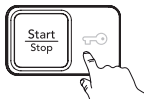
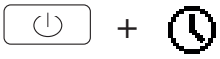
Service menu WM70.1



How to get to the service menu	
⏻	Is the machine turned on: turn off the power first at the main switch.
⏻ + ☐	Press and hold the button for super wash (S4) while you press the main switch.
☐	Press button (S4) three times within 5 seconds. You are about to component testing.

Turn/press	SCREENING	Comments/Instructions
1X		No component
		Intake valve 1 starting
		Intake valve 2 starting
		Intake valve 1 and 2 starting
		Heater starts and warms up to a maximum of 60 ° C
		Drain pump starts
		Spin and drain pump starts
		Door opening

Service menu WM70.1 cont.

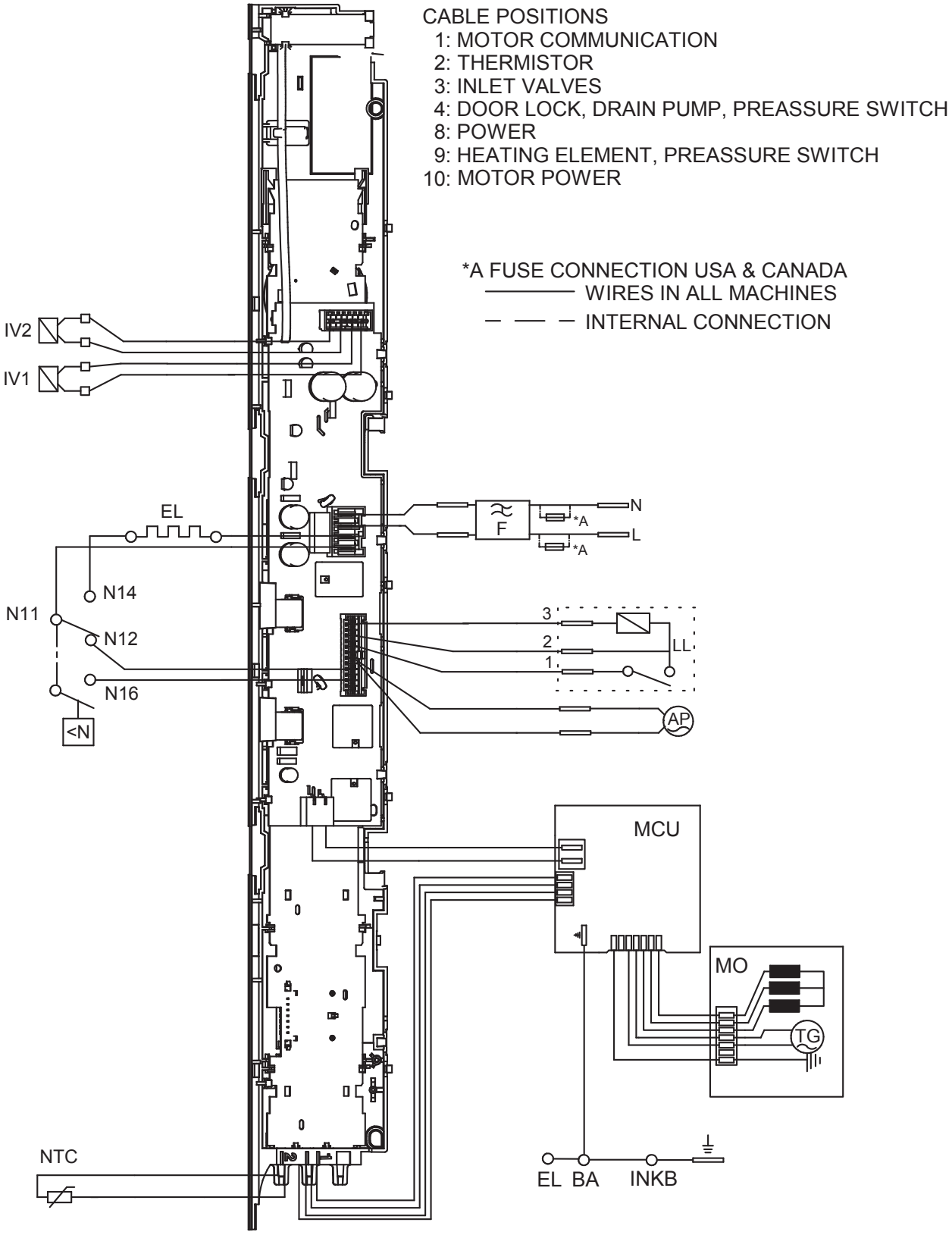
	Press the Start/Stop button to exit the service menu	
	”Auto door on/off”	
	Ad O	”Auto door on”
	Ad F	”Auto door off”
		Press button (S11) to store your selection
		”Extra rinses Off/On”
	r F	”Extra rinses off” - 3 rinses
	r 0	”Extra rinses On” 5 rinses
		Press button (S11) to store your selection

Fault indications WM70.1

Error messages on the display	Cause	Action
F10 – Overflow	Too much water in the machine.	**Service action:** - Check the machine's level system, inlet valve and drainage pump. - Check for any leaks.
	The drainage pump is running but the machine is empty.	**Service action:** - The overflow cut-out at the bottom of the machine has been activated (some models only). - Check for leaks.
F11 - Water outlet fault	The drainage pump has been running for 3 minutes. Water remains in the machine. The wash cycle has been interrupted and the programme reset.	**Information to customer:** - Check that no objects are stuck in the drainage hose outlet. - Check that the drainage pump is not blocked by foreign objects. - Check that there are no kinks in the drainage hose. Service action: - If the pump only runs for a short while (approximately 20 seconds), this indicates a fault in the level system. Check the level sensor and hoses. - Check wiring and voltage to the pump. If necessary, replace the pump and/or control unit. After implementing corrective action, run the Drain programme or press the Key (door opening) button to empty the machine.
F12 – Water inlet fault	If the correct water level is not achieved within 5 minutes the wash cycle will be interrupted.	**Information to customer:** - Check that the tap on the water pipe is open. **Service action:** - Check that the filter in the machine's water intake is not blocked. - Check the inlet valve. If necessary, replace the valve. - Check voltage to the inlet valve. If there is no voltage, this could be due to a fault in the level system, wiring or control unit.
Ξ ΞΞ - Unbalance detection	After 10 failed attempets to spin the load the machine has stoped to spin beacuse of to high umbalance.	**Information to customer:** - Small loads with heavy items can cause this problem when these articles are difficult to redistribute.

PERSONAL NOTES

Wiring diagram WM70.1 CIM



Wiring diagram WM70.1 CIM

RESISTANCES AT ROOM TEMPERATURE (CA. 20°C/68°F)
VALUES WITHIN +/-10% ARE REGARDED AS NORMAL COMPONENT

F: RADIO INTERFERENCE SUPPRESSION FILTER	680K Ohm
EL: HEATING ELEMENT	25 Ohm
AP: DRAIN PUMP 50 Hz	144 Ohm
AP: DRAIN PUMP 60 Hz	76 Ohm
LL: DOOR LOCK, 1-2	122 Ohm
NTC: THERMISTOR	6.1 - 3.8 K Ohm
IV 1: INLET VALVE 1	3.7 K Ohm
IV 2: INLET VALVE 2	3.7 K Ohm
MO: MOTOR, 1-3	4,3±7% Ohm
1-2	4,3±7% Ohm
2-3	4,3±7% Ohm

MCU: MOTOR CONTROL UNIT
N: PRESSURE SWITCH
TS: PRESSURE SENSOR
TG: TACHO GENERATOR

BA: CONTAINER
INKB: INCOMING GROUND

TOTAL RESET
TURN OFF POWER (S1)
WAIT FOR AT LEAST 5 SEC
HOLD DOOR OPENING (S11)
TURN ON POWER (S1)

SERVICE MENU
TURN OFF POWER (S1)
WAIT FOR AT LEAST 5 SEC
HOLD START/STOP (S10)
TURN ON POWER (S1)
PRESS START/STOP (S10) 5 TIMES TO ENTER SERVICE MENU

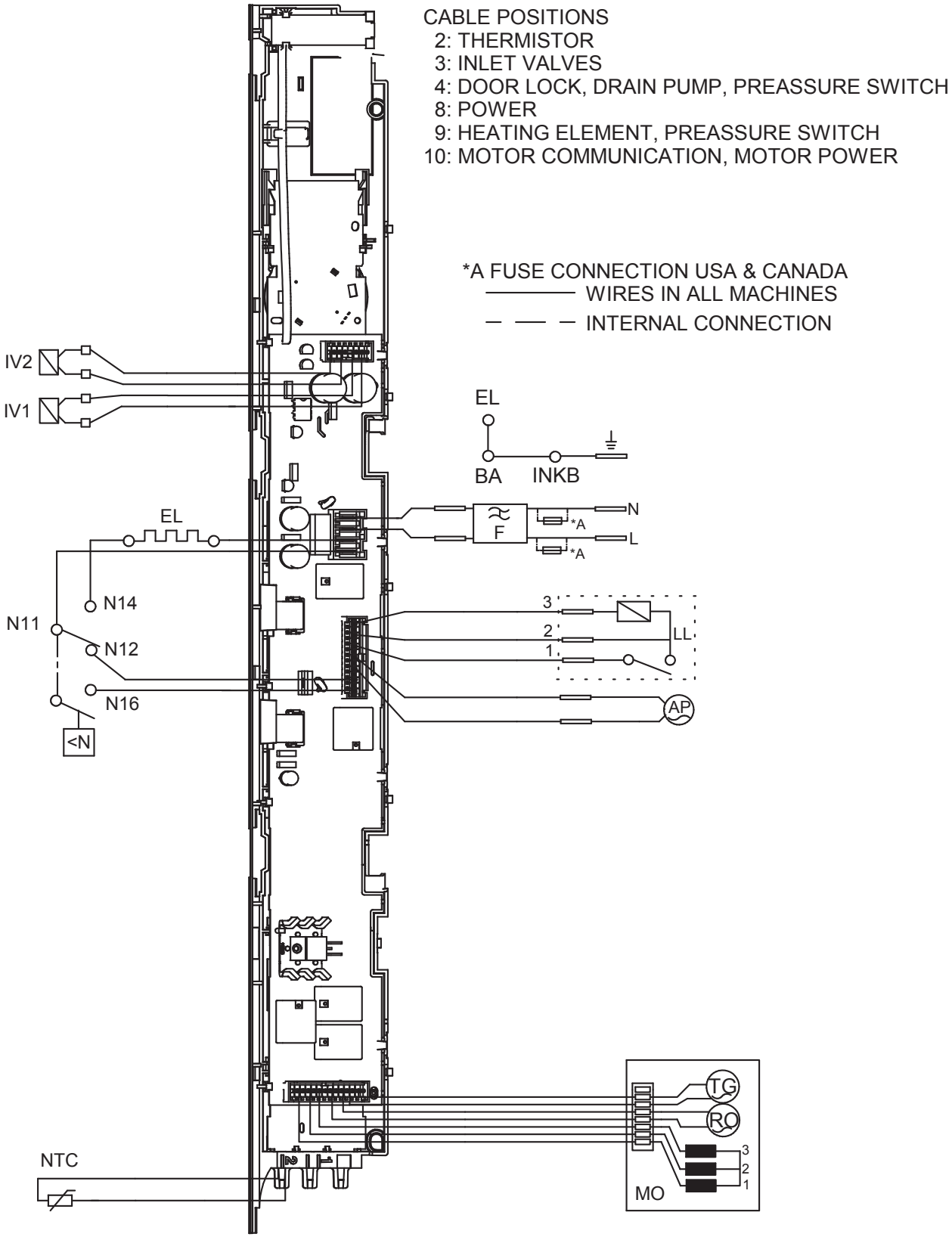
PRESS DOOR OPENING (S11) TO CHANGE MENU STEP
ROTATE DIAL TO CHANGE IN STEP
PRESSING START/STOP (S10) STORES AND EXITS SERVICE MENU

2010-10-19

CIRCUIT DIAGRAM WM70.1 CIM

80 886 20 - 01

Wiring diagram WM70.1 UM



Wiring diagram WM70.1 UM

RESISTANCES AT ROOM TEMPERATURE (CA. 20°C/68°F)
VALUES WITHIN +/-10% ARE REGARDED AS NORMAL COMPONENT

F: RADIO INTERFERENCE SUPPRESSION FILTER	680K Ohm
EL: HEATING ELEMENT	25 Ohm
AP: DRAIN PUMP 50 Hz	144 Ohm
AP: DRAIN PUMP 60 Hz	76 Ohm
LL: DOOR LOCK, 1-2	122 Ohm
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IV 1: INLET VALVE 1	3.7 K Ohm
IV 2: INLET VALVE 2	3.7 K Ohm
MO: MOTOR, 1-3	3,7±7% Ohm
1-2	3,6±7% Ohm
2-3	3,6±7% Ohm

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TS: PRESSURE SENSOR
TG: TACHO GENERATOR
BA: CONTAINER
INKB: INCOMING GROUND

TOTAL RESET
TURN OFF POWER (S1)
WAIT FOR AT LEAST 5 SEC
HOLD DOOR OPENING (S11)
TURN ON POWER (S1)

SERVICE MENU
TURN OFF POWER (S1)
WAIT FOR AT LEAST 5 SEC
HOLD START/STOP (S10)
TURN ON POWER (S1)
PRESS START/STOP (S10) 5 TIMES TO ENTER SERVICE MENU

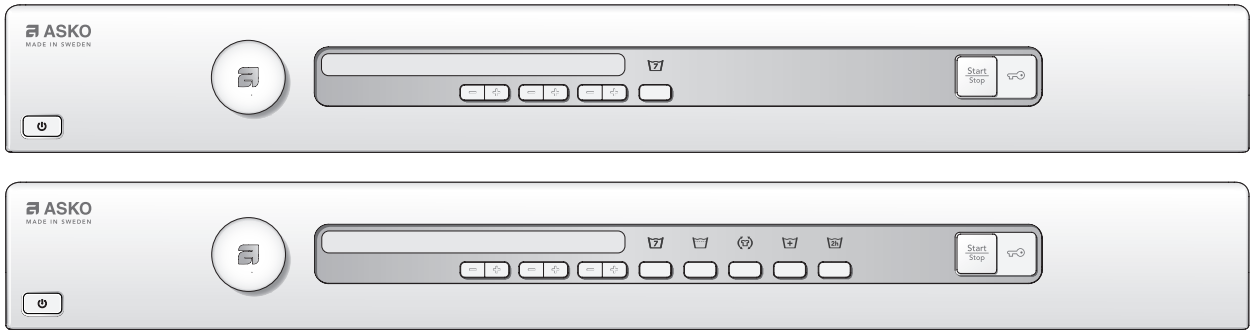
PRESS DOOR OPENING (S11) TO CHANGE MENU STEP
ROTATE DIAL TO CHANGE IN STEP
PRESSING START/STOP (S10) STORES AND EXITS SERVICE MENU

2010-10-27

CIRCUIT DIAGRAM WM70.1

80 886 21-02

Overview: Panel WM70.2

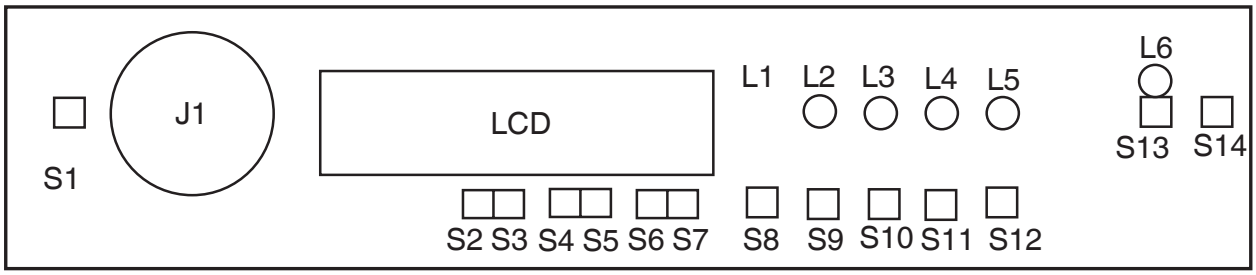


Programs: 12

Options: 1 or 5

Settings: 3

Service menu WM70.2



⏻	Switch off, and then on main power.
S6	•Wait for at least 5 seconds •Press down button S6 •Turn on the power •Pressing S6 when power on followed by 3 pushes on S6 within 5 sec enters the service menu.
NOTE!	Make all selections. Pressing S13 stores all selections made in service menu and leaves service mode.
Turn J1	Tracking data reed out SP: (software programming date: year week CM: (control unit manufacturing date: year week SV1: (Software version) SV2: (Software version) NC: Number of cycles Press S14 next step is accessed.
	Failure reed out Rotating J1 will display 2nd and 3rd last deviating fault, ex "Thermistor fault (2); 30" , "Over flow (3); 20" Failure record is cleared by total reset Pressing S14 next step is accessed.
	Diagnostics Separate test of auxiliary components. Rotating J1 each component will be turned on (with a 1 sec delay) and inputs detected in sequence: "Testing" (no component), "Testing valve 1" (inlet valve 1 on), "Testing valve 2" (inlet valve 2 on), "Testing valve SM" (inlet valve 1 and 2 on), "Testing heater" (heater on until max 60°C), "Testing motor" (normal action), "Testing drain" (drain pump on), "Testing spin" (spin sequence, drain pump on), "Testing door". Pressing S14 components will be off and next step is accessed.
	Spin speed Turn J1 counter clockwise 1500 rpm, 1600 rpm, 1700 rpm, 1800 rpm, default or clockwise 1800 rpm, 1700 rpm ... Pressing S14 next step is accessed or S13 to store or leave service mode.
	Reset By pressing S13, the machine returns to the default settings.

Fault indications WM70.2

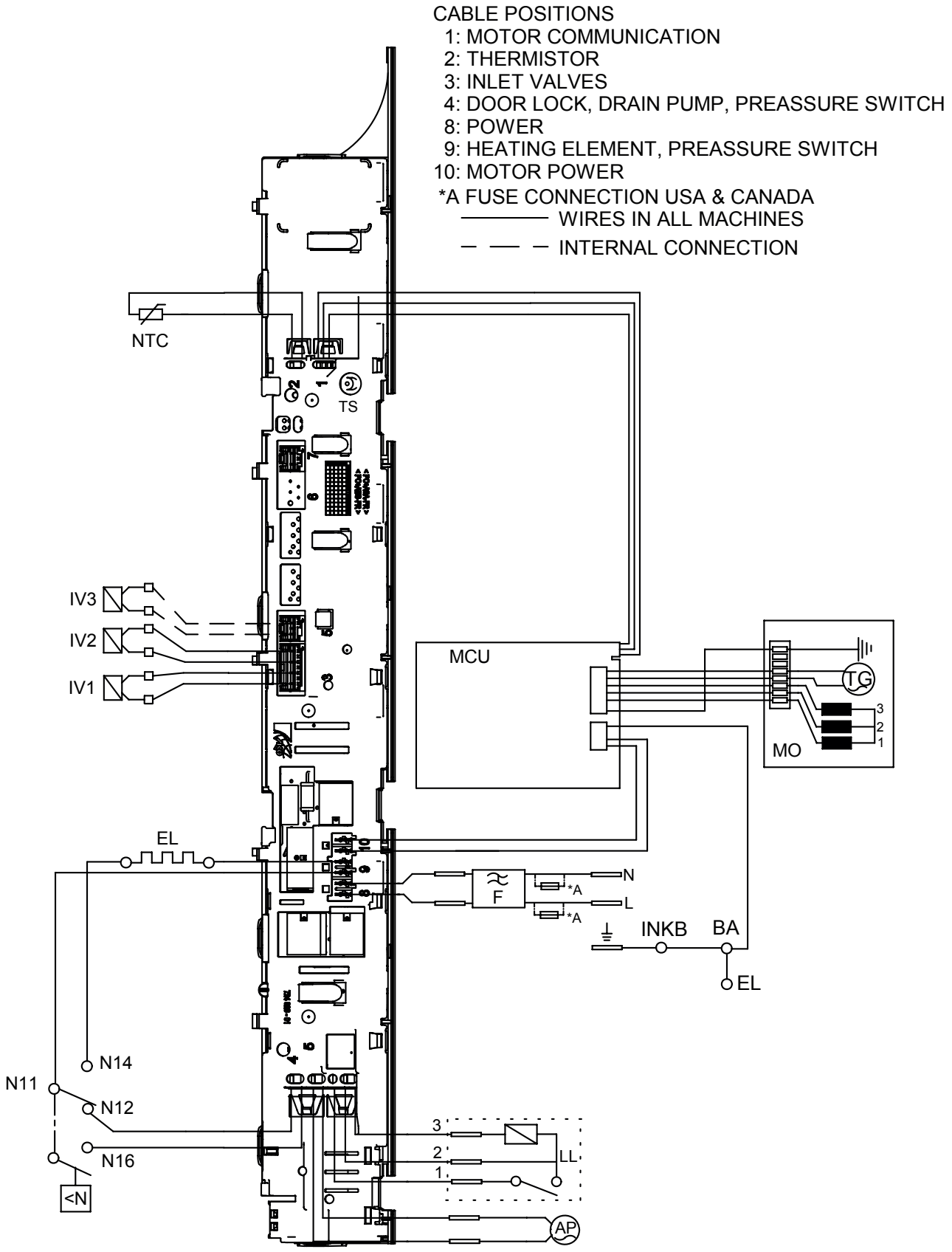
Error messages	Cause	Action
Over flow fault	Too much water in the machine.	**Service action:** Check the machine's level system, inlet valve and drain pump. Make sure that there is no leaks.
	The drain pump is on, without any water in the machine.	**Service action:** The overflow protection at the bottom of the machine is activated (not all models). Make sure that there is no leaks (water on the machines base)
Water outlet fault	1. The drain pump has been activated more than 3 minutes. There is still water in the machine. 2. The wash cycle is interrupted and the program is cleared.	**Customer information:** 1. Check that no objects are stuck in the drainage hose outlet. 2. Check that the drain pump is not blocked by foreign objects. 3. Check that there are no kinks in the drainage hose. **Service action:** 1. If the pump only runs for a short while (approximately 20 seconds), this indicates a fault in the level system. Check the level sensor and hoses. 2. Check wiring and voltage to the pump. If necessary, replace the pump and/or control 3. After implementing corrective action, run the Drain program or press the Key button (door open) to empty the machine.
Water inlet fault	If the correct water level is not reached within 5 minutes, the wash cycle is interrupted.	**Customer information:** 1. Check that the tap on the water pipe is open. **Service action:** 1. Check that the filter in the machine's water intake is not blocked. 2. Check the inlet valve. If necessary, replace the valve. 3. Check voltage to the inlet valve. If there is no voltage, this could be due to a fault in the level system, wiring or control unit.
Security fault	The door is open.	Close the door

Fault indications WM70.2 cont.

Error messages	Cause	Action
Thermistor fault	1. The circuit for the thermistor is open. 2. The thermistor is faulty. 3. The measurment value for the thermistor is <300 Ω (>120 °C).	**Service action:** Check the thermistors function. If needed, replace it.
Temperature fault	The temperature is raised < 5 °C/41°F within 10 minutes. The wash cycle continues to next step	**Service action:** Check the heater, cables, thermistor and level system.
Engine fault	No signal from Tacho or MCU.	**Service action:** Check the output from the MCU and the wiring between the motor and the MCU
Pressour sensor fault	Iindicated if the level drops to 0 within 30 seconds of the first rinsing.	**Service action:** Check the leakage
Unbalance detection	After 10 failed attempets to spin the load the machine has stoped to spin beacuse of to high umbalance.	**Information to customer:** - Small loads with heavy items can cause this problem when these articles are difficult to redistribute.

After carrying out corrective actions as above, reset the fault indications by pressing the DOOR OPERING BUTTON at the same time as the main power switch.

Wiring diagram WM70.2



Wiring diagram WM70.2 cont.

RESISTANCES AT ROOM TEMPERATURE (CA. 20°C/68°F)
VALUES WITHIN +/-10% ARE REGARDED AS NORMAL COMPONENT

F: RADIO INTERFERENCE SUPPRESSION FILTER	680K Ohm
EL: HEATING ELEMENT	25 Ohm
AP: DRAIN PUMP 50 Hz	144 Ohm
AP: DRAIN PUMP 60 Hz	76 Ohm
LL: DOOR LOCK, 1-2	122 Ohm
NTC: THERMISTOR	6.1 - 3.8 K Ohm
IV 1: INLET VALVE 1	3.7 K Ohm
IV 2: INLET VALVE 2	3.7 K Ohm
IV 3: INLET VALVE 3	3.5 K Ohm
MO: MOTOR, 1-3	4,3±7% Ohm
1-2	4,3±7% Ohm
2-3	4,3±7% Ohm

MCU: MOTOR CONTROL UNIT
N: PRESSURE SWITCH
TS: PRESSURE SENSOR
TG: TACHO GENERATOR

BA: CONTAINER
INKB: INCOMING GROUND

SERVICE MENU
TURN OFF POWER (S1)
WAIT FOR AT LEAST 5 SEC
HOLD S6 OR S7
TURN ON POWER (S1)
PRESS S6 OR S7 3 TIMES TO ENTER SERVICE MENU

PRESS DOOR OPENING (S14) TO CHANGE MENU STEP
ROTATE DIAL TO CHANGE IN STEP
PRESSING START/STOP (S13) STORES AND EXITS SERVICE MENU

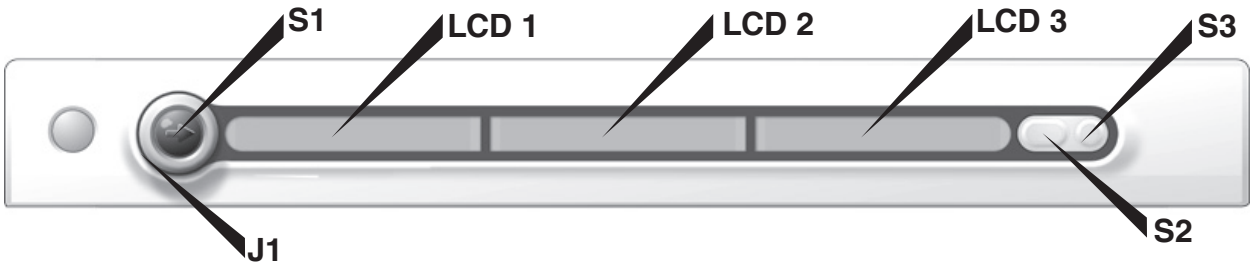
STEP 1: PRODUCT DATA
STEP 2: FAILURE DATA
STEP 3: COMPONENT TEST

TOTAL RESET
TURN OFF POWER (S1)
WAIT FOR AT LEAST 5 SEC
HOLD DOOR OPENING (S14)
TURN ON POWER (S1)

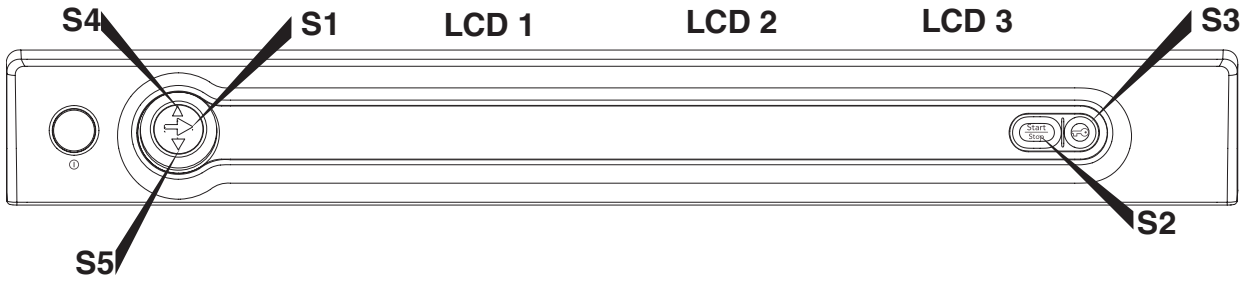
CIRCUIT DIAGRAM WM70.2

80 886 18 - 00

Overview: Panel WM70.3

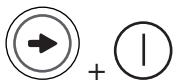


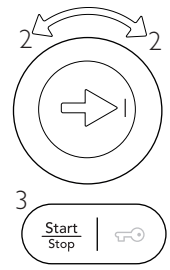
Programs:	14, where one consists of the menu for settings (Program 15) for V826, it is possible to add a program(stain program)
Options:	6
Settings:	8

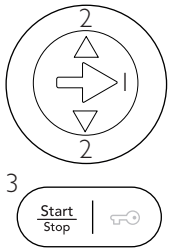


Programs:	14, where one consists of the menu for settings (Program 15) for V826, it is possible to add a program(stain program)
Options:	6
Settings:	8

Service menu WM70.3

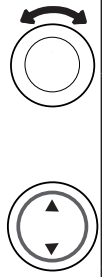
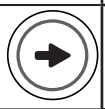
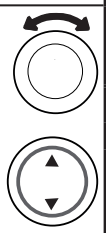
This is how to enter the service menu	
	If the machine is on: First switch the power off with the main power switch.
	Press the program selector (S1) at the same time as the Main power switch.
	Press the program selector button 3 times within 5 seconds. You are now in the service menu (shown in LCD 2. See instructions below for navigating the service menu.

Program selector	
	1. Press the program selector button to scroll between the various service menus. 2. Turn the program selector button to make a selection between the menus (e.g. set a certain water inlet). Confirm the selection and go to the next menu by pressing the program selector button (1). 3. Press the Start/Stop button to confirm the settings and exit the service menu.

Program selector button for integrated machines	
	1. Press the program selector button to scroll between the various options. 2. Press the small arrows to make a selection between the options (e.g. set a certain water inlet). Confirm the selection and go to the next option by pressing the program selector button (1). 3. Press the Start/Stop button to confirm the settings and exit the service menu.

Service menu WM70.3 cont.

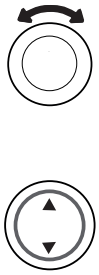
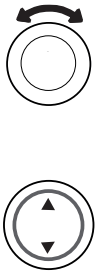
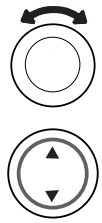
The options below are displayed in the order they occur in LCD 2. All display text language versions are displayed.

Press/turn	LCD 2	Comments/instructions
	DataSerialNo, Data Ser Num, DataSerialNo, DataSerialNo, Serienummer, Serienummer, Dataversio Nro, N° de série, Seriennummer, Num. di serie, N° de serie, Серийный номер, Serienummer	Date for programming the software (Year_ Week)
	CU date code, CU Date Code, CU date code, CU datum kod, CU dato kode, Styrekort prod dato, CU pvm koodi, Code date CU, CU Datumscode, Codice data CU, Código fecha CU, Код даты БУ, CU datacode	Control unit's date of manufacture (Year_ Week)
	Software1, Software1, Software1, Mjukvara1, Software1, Software ver.1, Ohjelmisto1, Logiciel1, Software1, Software1, Software1, Версия прог.1, Software1	The software version number of the software that controls the program flow
	Software2, Software2, Software2, Mjukvara2, Software2, Software ver.2, Ohjelmisto2, Logiciel2, Software2, Software2, Software2, Версия прог.2, Software2	The software version number of the software that controls the display.
	No. of cycles, Number of Cycles, No. of cycles, Antal cykler , Antal cyklusser, Antall bruk, Syklien lkm, Nb. de cycles, Anzahl der Zyklen, Numero cicli, N° de ciclos, Кол-во циклов, Aantal cycli	Number of cycles/programs run
	Press Start/Stop to exit the service menu.	
	''Error_Number of cycles''	Last three errors and number of cycles is shown. Total reset deletes the error indications from the system. Delete the error indications by pressing the DOOR OPENING BUTTON and the MAIN POWER SWITCH at the same time.
	''Error_Number of cycles''	
	''Error_Number of cycles''	
	Press Start/Stop to exit the service menu.	

Service menu WM70.3 cont.

	Testing	
	Test valve 1, Testing Valve 1, Test valve 1, Ventiltest 1, Tester ventil 1, Test av vannventil 1, Mg venttiilitesti 1, Essai vanne 1, Ventil testen 1, Test valvola 1, Test válvula 1, Тест клапана 1, Test inlaatventiel 1	Inlet valve 1 is open. Pressure sensor value is shown in LCD 2.
	Test valve 2, Testing Valve 2, Test valve 2, Ventiltest 2, Tester ventil 2, Test av vannventil 2, Mg venttiilitesti 2, Essai vanne 2, Ventil testen 2, Test valvola 2, Test válvula 2, Тест клапана 2, Test inlaatventiel 2	Inlet valve 2 is open. Pressure sensor value is shown in LCD 2.
	Test valve SM, Testing Valve SM, Test valve SM, Ventiltest SM, Tester ventil SM, Test av vannventil SM, Mg venttiilitesti SM, Essai vanne SM, Ventil testen SM, Test valvola SM, Test válvula SM, Тест клапана SM, Test inlaatventiel SM	Inlet valve 1 and 2 is open. Pressure sensor value is shown in LCD 2.
	Test heater, Testing Heater, Test heater, Elementtest, Tester varmelegeme, Test av element, Vastustesti, Essai résistance, Heizung testen, Test elem. riscald., Test elemento calef, Тест ТЭНа, Test verw. element	Heater is on until max 60 °C. Thermistor value is shown in LCD 2.
	Test motor, Testing Motor, Test motor, Motortest, Tester motor, Test av motor, Moottoritesti, Essai moteur, Motor testen, Test motore, Test motor, Тест мотора, Test motor	The motor is running at normal action (49 rpm).
	Test drain, Testing Drain, Test drain, Tömningstest, Tester udpumpning, Test av tømming, Tyhjennyspumpputesti, Essai vidange, Abfluss testen, Test scarico, Test drenaje, Тест насоса, Test afvoerpomp	A Drain pump is on. Pressure sensor value is shown in LCD 2.
	Test spin, Testing Spin, Test spin, Centifugeringstest, Tester centrifugering, Test av sentrifugering, Linkoustesti, Essai essorage, Schleudern testen, Test centrifuga, Test centrifugado, Тест отжима, Test centrifugeren	A Spin sequence is performed, the drain pump is running. Unbalance value is shown in LCD 2.
	Test door, Testing Door, Test door, Dörrtest, Tester luge, Test av dørlås, Luukun lukon testi, Essai porte, Luke testen, Test sportello, Test puerta, Тест замка дверцы, Test deurslot	Door lock is activated, the door is then opened.
	Press  to exit the service menu	

Service menu WM70.3 cont.

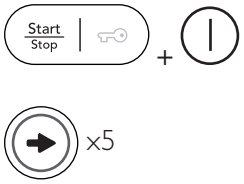
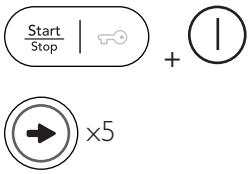
	0 -15% -10% -5% +5% +10% +15%	Setting amount of water taken into the machine. Default value is ”0”.
	Press Start/Stop to exit the service menu.	
	-1 -2 -3 0 +1 +2 +3	Adjust LCD contrast Default value is ”0”.
	Press Start/Stop to exit the service menu	
	1500 rpm 1600 rpm 1700 rpm 1800 rpm	Setting maximum speed. Default value is ”1600 rpm”.
	Press Start/Stop to exit the service menu.	
	Reset	
	Language	US English, English, Svenska, Dansk, Norsk, Suomi, Francais,Deutsch, Italiano, Esoanol, Русский, Nederlands

Service menu WM70.3 cont.

	Clock	24hr Realtime, 24 Hour Clock, 24hr Realtime, 24 timmarsvisning, 24 timers ur, 24t realtid, 24 h aika, Horloge 24 h, 24 Std. Echtzeit, 24h Tempo reale, Reloj 24 horas, Формат времени 24-ч., 24 uur weergave,12hr Realtime, 12 Hour Clock, 12hr Realtime, 12 timmarsvisning, 12 timers ur, 12t realtid, 12 h aika, Horloge 12 h, 12 Std. Echtzeit, 12h Tempo reale, Reloj 12 horas, Формат времени 12-ч., 12 uur weergave, No Real time, No Real Time, No Real time, Ej realtid, Intet ur, Ingen realtid, Ei aikaa, Pas d'horloge, Keine Echtzeit, No tempo reale, Sin hora real, Время не установлено, Geen tijdsweergave
	Transport protection	Transport protection, Transport protection, Transportskydd, Transportbeskytt., Transportvern, Kuljetustuet, Protection transport, Transportsicherung, Protezione transporto, Anclaje transport, защита при транспортировке, Transportbescherming
	Press  to exit the service menu.	

Shop program WM70.3

1. Activating the Shop program (for machines manufactured up to week 736)	
	If the machine is on: First turn off the power at the main power switch. Then press and hold the Start button while turning on the main power switch. At this point no settings can be made. The centre display will activate after 3 minutes. Settings can now be made, but the machine cannot be started.
2. Stopping the Shop program (for machines manufactured up to week 736)	
	First turn off the power at the main power switch. Then press and hold the Start button while turning on the main power switch. The Shop program is now stopped.

1. Activating the Shop program (for machines manufactured from week 737 on)	
	If the machine is on: First turn off the power at the main power switch. Then press and hold the Start button while turning on the main power switch. Press the program selector 5 times At this point no settings can be made. The centre display will activate after 3 minutes. Settings can now be made, but the machine cannot be started.
2. Stopping the Shop program (for machines manufactured from week 737 on)	
	First turn off the power at the main power switch. Then press and hold the Start button while turning on the main power switch. Press the program selector 5 times. The Shop program is now stopped.

Store program WM70.2 and WM70.1

There are no store programs on the WM70.2 and WM70.1.

Fault indications WM70.3

The below faults are indicated in plaintext in LCD 1. The table shows the indication in all languages and language variations.

LCD 1	Cause	Action
Over flow fault, Overflow Fault, Over flow fault, Överfyllnad, Overløbsfejl, Overflom, Ylitulviminen, Trop plein, Überfüllt, Troppo pieno, Desborde, Перелив воды, Te veel water	Too much water in the machine.	**Service action:** Check the machine's level system, inlet valve and drain pump. Make sure that there is no leaks.
	The drain pump is on, without any water in the machine.	**Service action:** The overflow protection at the bottom of the machine is activated (not all models). Make sure that there is no leaks (water on the machines base)
Water outlet fault, Water Outlet Fault, Water outlet fault, Uttömningsfel, Udpumpningsfejl, Vannutløp, Vedenpoistovika, Défaut , Wasserablauffehler, Uscita acqua, Fallo, Слив воды, Waterafvoer fout	1. The drain pump has been activated more than 3 minutes. There is still water in the machine. 2. The wash cycle is interrupted and the program is cleared.	**Customer information:** 1. Check that no objects are stuck in the drainage hose outlet. 2. Check that the drain pump is not blocked by foreign objects. 3. Check that there are no kinks in the drainage hose. **Service action:** 1 .If the pump only runs for a short while (approximately 20 seconds), this indicates a fault in the level system. Check the level sensor and hoses. 2. Check wiring and voltage to the pump. If necessary, replace the pump and/or control 3. After implementing corrective action, run the Drain program or press the Key button
Water inlet fault, Water Inlet Fault, Water inlet fault, Vattenintagsfel, Vandindtagsfejl, Vanntilførsel, Vika vedenotossa, Défaut, Wasseraufn.-fehler, Entrata acqua , Fallo , Набор воды, Watertoevoer fout	If the correct water level is not reached within 5 minutes, the wash cycle is interrupted.	**Customer information:** 1. Check that the tap on the water pipe is open. **Service action:** 1. Check that the filter in the machine's water intake is not blocked. 2. Check the inlet valve. If necessary, replace the valve. 3. Check voltage to the inlet valve. If there is no voltage, this could be due to a fault in the level system, wiring or control unit.
Security fault, Security Sys Fault, Security fault, Lucköppningsfel, Sikkerhedsfejl, Sikkerhetsfeil, Vika turvajärj., Erreur sécurité, Sicherh.-fehler, Err. sis.sicurezza, Fallo sistema seguridad, Ошибка сис. безоп., Deurslot fout	The door is open.	Close the door.

Fault indications WM70.3 cont.

Fault indications WM70.3

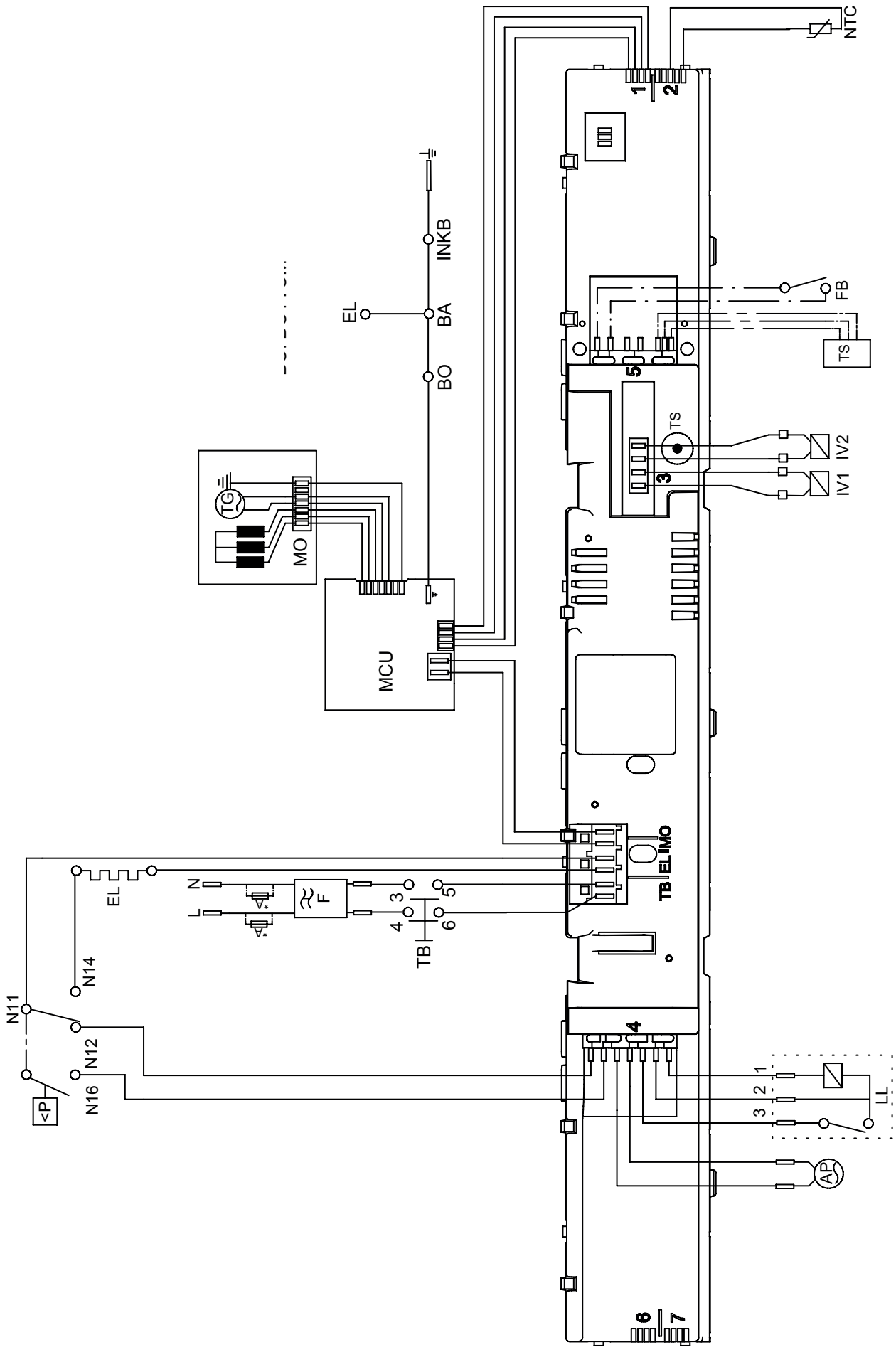
The below faults are indicated in plaintext in LCD 1. The table shows the indication in all languages and language variations.

LCD 1	Cause	Action
Thermistor fault, Thermistor Fault, Thermistor fault, Termistorfel, Termostat fejl, Termistor, Termistorivika, Défaut , Termistorfehler, Termistore , Fallo , Термистор, Temp. sensor fout	1. The circuit for the thermistor is open. 2. The thermistor is faulty. 3. The measurment value for the thermistor is <300 Ω (>120 °C).	**Service action:** Check the thermistors function. If needed, replace it.
Temperature fault, Temperature Fault , Temperature fault, Temperaturstoppfel, Temperatur fejl, Temperaturstopp, Ei lämmitä vettä, Défaut , Temp.-stoppfehler, Errore arresto , Fallo , Температура, Temperatuurstop	• The temperature is raised < 5 °C/41°F within 10 minutes. The wash cycle continues to next step.	**Service action:** Check the heater, cables, thermistor and level system.
Wash motor fault, Wash Motor Fault , Wash motor fault, Motorfel, Motor fejl, Motorfeil, Moottorivika, Défaut , Motorfehler, Motore lavaggio , Fallo , Мотор, Motorstoring	No signal from Tacho or MCU.	**Service action:** Check signal from the MCU and cables between motor and MCU.
Pressure fault, Pres Sensor Fault, Pressure fault, Trycksensorfel, Tryksensor fejl, Nivåfeil, Painesensorivika, Défaut , Drucksensorfehler, Pressostato , Fallo , Датчик уровня, Druksensor fout	Indicated if the level drops to 0 within 30 seconds of the first rinsing.	**Service action:** Check the leakage.
Unbalance, Unbalance, Unbalance, Obalans, Ubalance, Ubalance, Epätasapaino, Balourd, Unwucht, Non bilanciato, Desequilibrio, Дисбаланс, Onbalans	After 10 failed attempets to spin the load the machine has stoped to spin beacuse of to high umbalance.	**Information to customer:** - Small loads with heavy items can cause this problem when these articles are difficult to redistribute.

After carrying out corrective actions as above, reset the fault indications by pressing the DOOR OPENING BUTTON at the same time as the main power switch.

PERSONAL NOTES

Wiring diagram WM70.3



Wiring diagram WM70.3 cont.

CABLE POSITIONS
1: MOTOR COMMUNICATION
2: THERMISTOR
3: INLET VALVES
4: DOOR LOCK, DRAIN PUMP, PREASSURE SWITCH
TB: POWER
EL: HEATING ELEMENT, PREASSURE SWITCH
MO: MOTOR POWER

———— WIRES IN ALL MACHINES
— —— — INTERNAL CONNECTION
—— · —— WIRES IN SOME MACHINES
*A FUSE CONNECTION USA & CANADA

RESISTANCES AT ROOM TEMPERATURE (CA. 20°C/68°F)
VALUES WITH +/-10% ARE REGARDED AS NORMAL COMPONENT

F: RADIO INTERFERENCE SUPPRESSION FILTER	680K Ohm
EL: HEATING ELEMENT	25 Ohm
AP: DRAIN PUMP 50 Hz	144 Ohm
AP: DRAIN PUMP 60 Hz	76 Ohm
LL: DOOR LOCK	122 Ohm
NTC: THERMISTOR	6.1 - 3.8 K Ohm
IV 1: INLET VALVE 1	3.7 K Ohm
IV 2: INLET VALVE 2	3.7 K Ohm
MO: MOTOR, 1-3	4,3±7% Ohm
1-2	4,3±7% Ohm
2-3	4,3±7% Ohm

MCU: MOTOR CONTROL UNIT
TG: TACHO GENERATOR
N: PRESSURE SWITCH
TB: MAIN SWITCH
FB: FLOAT SWITCH
TS: PRESSURE SENSOR
BA: CONTAINER
INKB: INCOMING GROUND
BO: BOTTOM

CIRCUIT DIAGRAM WM70.3

80 886 17 - 00

Components and measurement values WM70

Item number	Component	Measurement value	Comments
80 886 44	CIM-motor	See wiring diagram	
80 886 42	UM-Motor 50 Hz	See wiring diagram	
80 886 43	UM-Motor 60 Hz		
80 617 06	Heating element 2000 W	See wiring diagram	
88 014 74	Thermistor compl. w. holder	See wiring diagram	The thermistor for temperature reading is located between the motor cradle and the container. The thermistor measures and controls the water temperature that can vary from 0 to 90°C / 194°F. The element is disconnected if the thermistor is short-circuited or disconnected from the program control card.
88 012 63	Drain pump 50 Hz	See wiring diagram	The drain pump is combined with an integrated fine filter trap, which can be cleaned by the user. If the drain pump has run for 180 seconds during draining, the program stops, resets and a fault code is indicated in the display. The drain pumps capacity is 20 liters/min.
88 012 64	Drain pump 60 Hz	See wiring diagram	
80 782 21	Level switch		Electro mechanical level switch with two levels, see wiring diagram. Indicates levels for door opening, heat and overfilling
80 897 65	Level switch, WM70.1		
80 762 02	EMC-Filter with inductor	See wiring diagram	The filter eliminates interference to and from the machine
80 838 80	Inlet valve	See wiring diagram	2 way inlet valve 8 litres / minute
80 798 73	Door lock	See wiring diagram	The door lock is electro mechanical and equipped with a magnet.
88 014 40	Control unit WM70.3		
88 014 41	Control unit WM70.3 FI		
80 896 72	Motor Control Unit, WM70.2		
80 896 73	Motor Control Unit WM70.1, WM70.3		
80 928 56	Fuse, Motor Control Unit 18A 250V 5X22		

Thermistor measurement values WM70

Temp, ° C	Resistance, Ohm
0	15806
10	9634
20	6046
25	4841
30	3900
40	2579
50	1744
60	1204
70	848
80	609
85	519

Technical data WM70

Height:	850 mm
Width:	595 mm
Depth:	585 mm
Weight:	77 kg / 81 kg (with outer door)
Cylinder volume:	60 l
Max. washing capacity	EU 7,0/8,0kg, AU 7,0kg US 7,0/8,0kg Swan 6,0 kg
Spin speed:	WM70.3 400–1800 rpm, WM70.2 400–1800 rpm, WM70.1 400 –1600 spm
Connection:	1 phase 10 A
Element power:	2000W, 230V (See Type designation)
Water pressure/inlet valve:	0,1 – 1 MPa., 1 – 10 kp/cm2, 10 – 100 N/cm2. 8 litre/min
Wash drum and liquid compartment material:	Stainless steel
Outer casing material:	Powder coated and galvanized sheet steel or stainless steel
Set-up:	Stationary on four adjustable, rubber-covered feet
Water connection:	1,5 m pex pipe, 3/4" – 3/4" eller 3/4" – 1/2"

Technical data WM70 cont.

Technical data WM70

Drain:	1,7 m polypropylene tube
Protection class:	IP X4
Water consumption (tested normal program)	65 litre (3-rinse), <78 litre (5-rinse)
Energy consumption (tested normal program)	8kg: 1,2kWh, 6kg: 1,14kWh
Electricity consumption, Standby: - Main power switch off - Display on - Display off	 <0,3 W <6,0 W <3,0 W

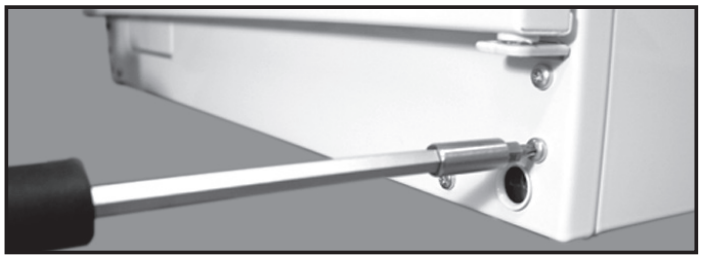
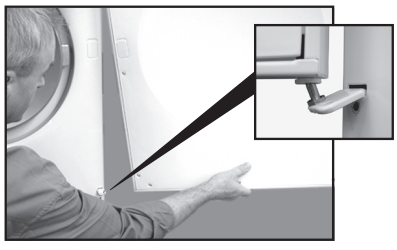
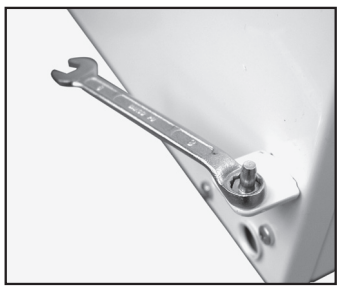
Tools

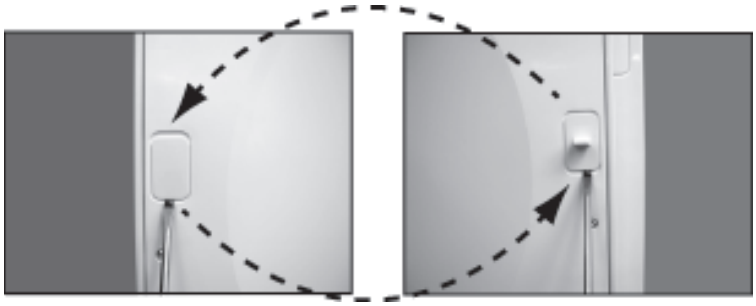
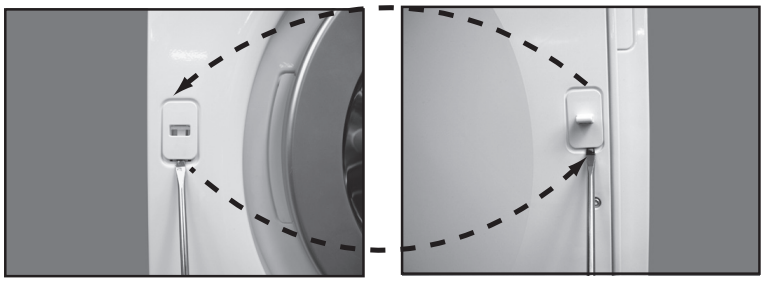
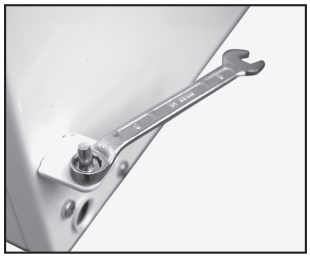
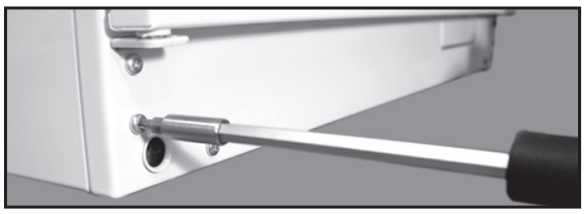
Torx; T25, T20, T10
Socket screwdriver 10 mm
5mm socket head cap screwdriver + small locking handle
Ring spanners; 11/16", 16mm, 13 mm, 10 mm
24mm extended socket + locking handle
Plastic hammer
Star socket head screwdriver
A pair of nippers

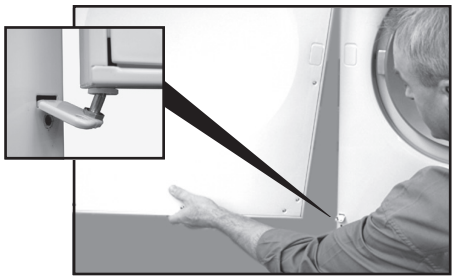
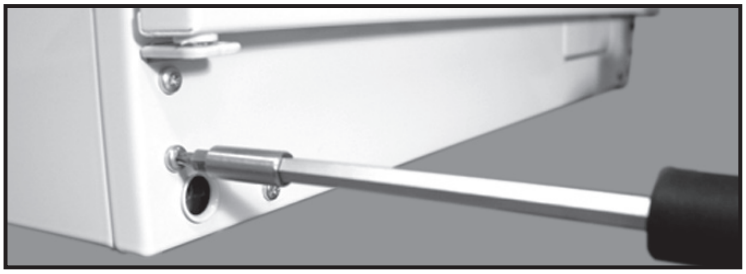
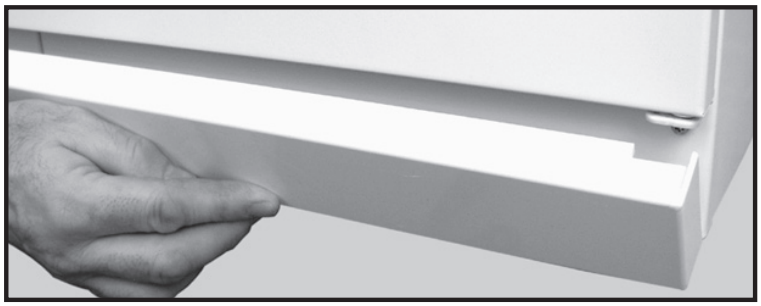
Rehanging the door

Some machines in the WM60-series is supplied with a door - is that the case the door is hung on the left-hand side. It is, however, possible to re-hang it according to the instructions below. Take care not to damage the paint when carrying out work with tools.

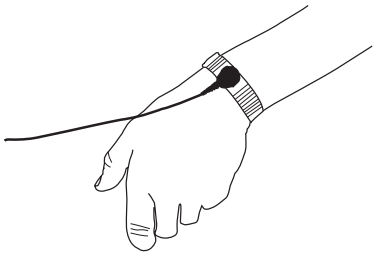
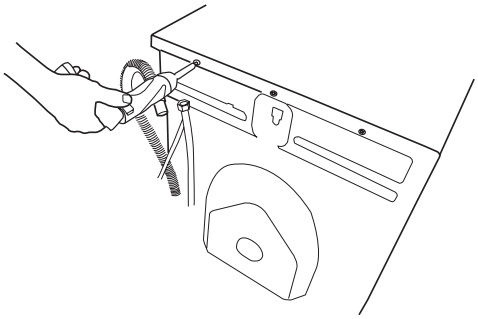
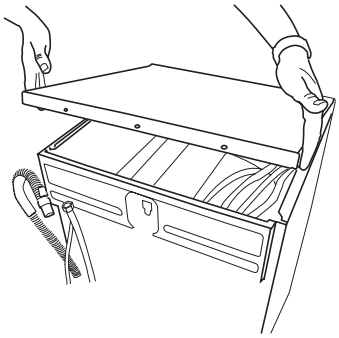
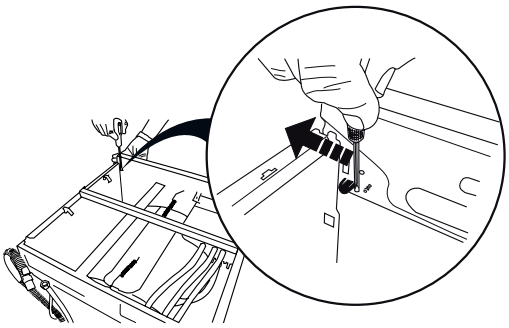
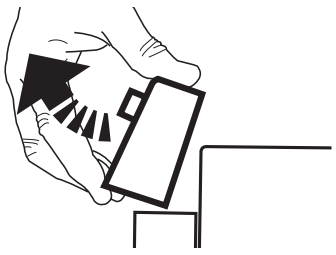
Required tools	
Flathead screwdriver	
Torx size 20	
Fixed spanner size 8	

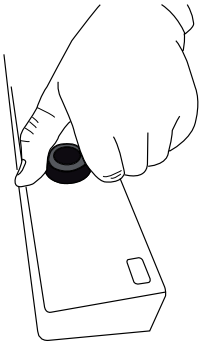
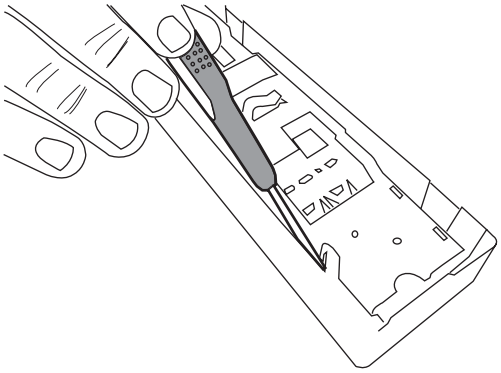
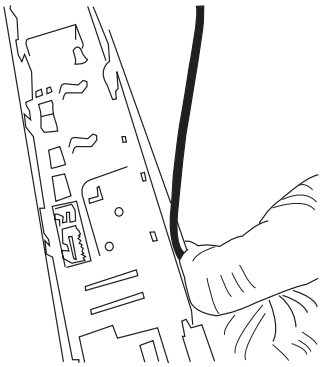
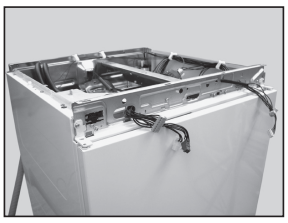
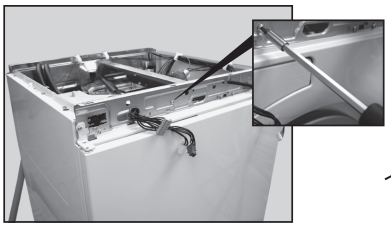
Instructions	Image
1. Remove the plinth by carefully pulling it out.	
2. Remove both screws for the lower hinge. Use Torx.	
3. Push the door upwards with care and angle outwards. If necessary, carefully press the lower hinge to detach the door.	
4. Slacken off the lower and upper hinge pins using a fixed spanner.	 

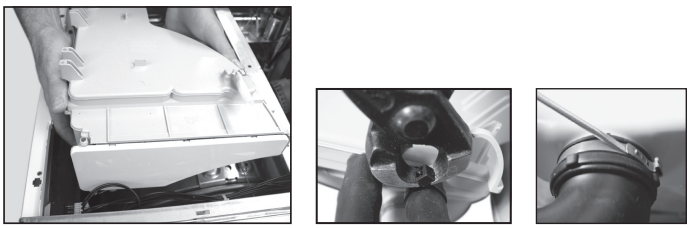
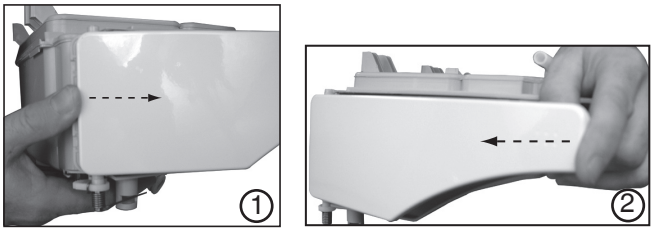
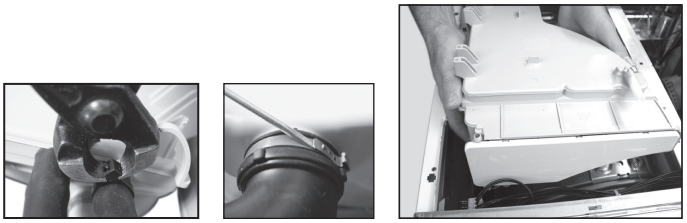
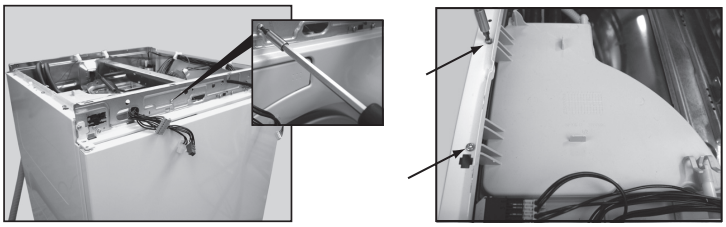
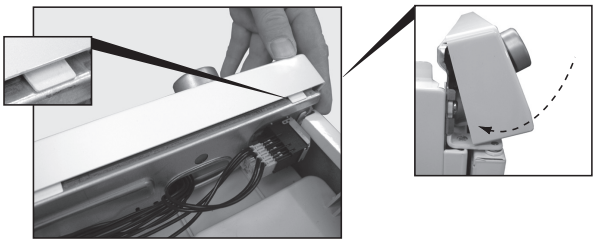
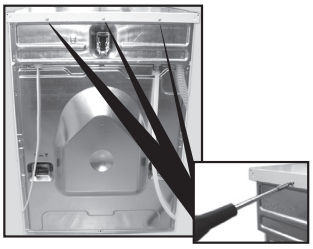
5. Remove the plastic plugs covering the holes for the hinge pins and switch location	
Method for removing plastic plugs, lock and catch located on the machine and the door: Carefully push the plug, catch or lock upwards with a flat screwdriver. as the picture shows.	
6. Carefully remove the catch and plastic plug on the door (according to the method above) and switch location.	
7. Carefully remove the lock and plastic plug on the machine (according to the method above) and switch location.	
8. Screw the hinge pins securely into place on the corresponding side of the machine.	 
9. Slacken off the screws for the lower hinge on the corresponding side of the machine. This must be done to hang the door.	

10. Align the door in the upper hinge. Carefully push the lower hinge down if necessary and align the door.	
11. Screw the lower hinge into place securely. Use Torx.	
12. Press the plinth into place. The door has now been re-hung.	

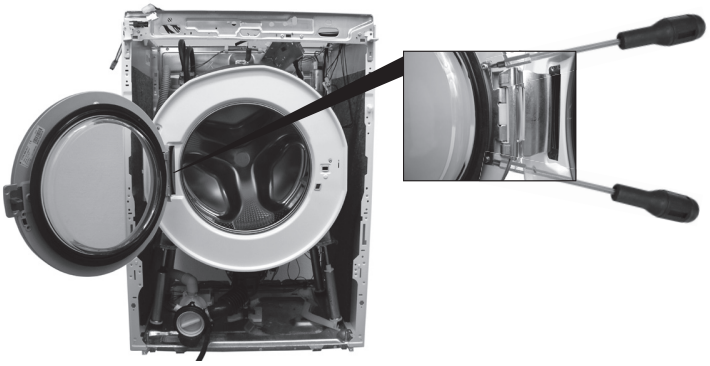
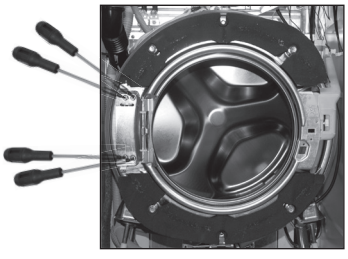
Replacing panels, control unit and detergent compartment

Instruction	Image
1. Attach the anti-static wristband to a part of the machine that is earthed! NOTE! An anti-static wristband must be used, otherwise you risk destroying the control card.	
2. Unscrew the top cover..	
3. Remove the top cover.	
4. Use a screwdriver to carefully free the panel. As you do so, carefully angle the panel outwards.	
5. Remove the panel and the cables. NOTE! Don't forget to remove the pressure sensor tube.	

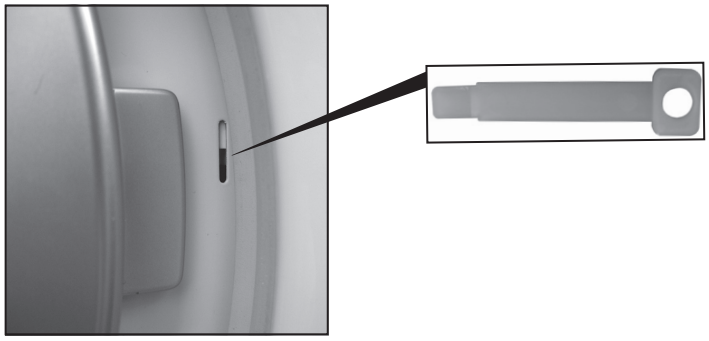
Instruction	Image
6. Carefully pull the programme selector from the panel.	
7. Use a screwdriver to free the control card from the panel. NOTE! The control card must be placed in an ESD-safe bag.	
8. Check that the push button, lens and decorative inlay are in place. Now carefully press the new control card into place. NOTE! Don't forget to replace the rubber seal.	
9. Carefully disconnect the wiring from the control unit.	 
10. When removing the detergent container, first slacken off the screw on the front member and then the two screws holding the detergent container in the side panel.	 

Instruction	Image
11. Lift the detergent compartment. Then remove the hose clamps for all hoses, which are secured in the detergent container. Then detach the hoses from the detergent compartment.	
12.If necessary: Replace the decor panel for the detergent compartment. Detach the decor panel by pressing according to image 1. Install the decor panel by first placing the decor panel in the grooves on the detergent container and then snapping it into place as illustrated in image 2..	
13. Install the detergent compartment by first pressing all hoses into place and then securing them using the hose clamps.	
14. Screw the detergent compartment into place using the three screws (one in the front panel and two in the frame)	
15. Install all wiring in the relevant locations on the control card.	
16. Install the panel. Angle the panel outwards and place the mounting plates in the relevant grooves in the front frame. Angle the panel downwards and secure it with the catches.	
17. Screw the top cover into place.	

Replacing front panel, door, cover plate and the hinges

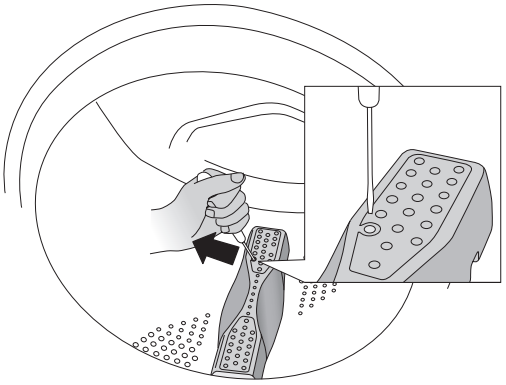
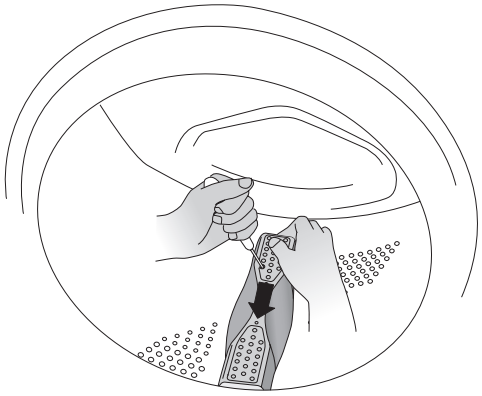
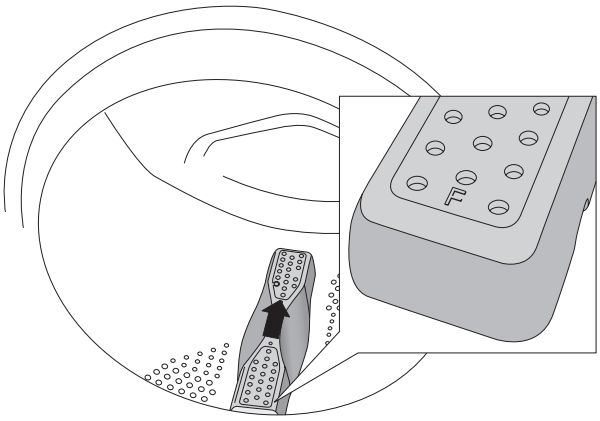
Instruction	Image
1. Carefully pull off the drainage hose that is secured in the door for the drain pump. Note! Water is poring out when the drainage hose is pulled off.	
2. Unscrew the screws holding the front panel. Then remove the front panel by carefully pulling it out at the lower edge.	
3. Unscrew the two screws holding the glass door. Use Torx.	
4. Unscrew the three screws that hold the covering plate to the container. Use a Torx driver. Fully open the hinge and remove the cover plate.	
5. Unscrew the three screws that hold the cover plate to the container. Use Torx.	

Emergency opener for door lock

Instruction	Image
1. The emergency opener is in the documentation kit.	
2. Push the emergency opener into the slot beside the glass door.	
3. Push the emergency opener upwards. and the door will open	

Wash agitator removal

When replacing or cleaning the wash agitators, or when removing items that have fallen through the wash drum, first you need to remove the agitators. Follow the instructions below.

1. Insert a screwdriver or the like into the hole on the agitator as illustrated and carefully pry to the left.	
2. Use your other hand to grasp the agitator and pull it towards you. 3. Lift the agitator. 4. Remove any foreign objects.	
5. Place the agitator in the mounting hole with the letter F towards you. Ensure that all the agitator fasteners are in their holes in the drum. Push it away from you until it fastens.	

PERSONAL NOTES

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