













Testprogram

	 For appliances with program selection with a rotary knob.
1.	Close the door.
2.	Select the first mechanically available position of the rotary program selector on the left of the OFF position (usually "DRAIN" or "SPIN").
3.	Press push button Reset 4 times within 5 seconds.
4.	The last Fault code is shown in the display, press the Start button to advance.
5.	The 2nd to last Fault code is shown in the display, press the Start button to advance.
6.	The 3rd to last Fault code is shown in the display, press the Start button to start the Test Program.
7.	To go to next step, press the Reset button twice.
8.	To go to step C5, press the Start button once.







Attention: Use the test program only without laundry!

ICON - Phases	Digits Temperature	Description of the Program Flow	Check to perform
 Icons are switched on and off in a sequence from left to right and back.	C0	The door is locked. The CCU is performing the Selftest.	CCU detects: • F02, F05, F08, F12, F13, F14, F15, F21, F23, F26
 	C1	Fill x seconds hot valve (only if hot fill appliance) Fill x seconds in prewash (PW) Fill x seconds in mainwash (MW) Fill x seconds in PW + MW (Softener) Fill by MW to wash level. Motor is reversing.	Technician: • Check the valve activation • Check the dispensing into the dispenser • Check the pressure switch • Note: X seconds for filling depend by the model. For washers produced before than 07/2011 is 15 seconds. After 07/2011 is 5 seconds
 	C2	The heating element is switched ON. Motor is reversing.	Technician: • Check heating element activation • Check if the motor is reversing CCU detects: • F06, F07, F27
 	C3	The drain pump is switched ON until the wash level = OFF + 5" motor is reversing.	Technician: • Check drain pump activation • Check pressure switch operation • Check if the motor is reversing CCU detects: • F06, F07, F27, F03
 	C4	The motor is driven to maximum speed. Drain pump is ON.	Technician: • Check if the motor is running at max. speed • Check drain pump activation CCU detects: • F28
 	C5	Motor is switched OFF. Door is unlocked. Washer Machine is OFF	Technician: • Check if the door is unlocked CCU detects: • F13














Digits of "Rest time" are executing an animation, Digits of "Speed" are OFF

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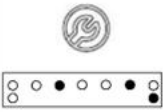


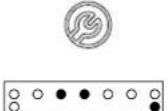
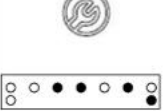

Error Codes

Failure Indication		Explanation and Recommended Procedure
Icon Active	On Digits 3 - 5	
Appliance "dead"	no indication at all or read out by ESAM F60 - F63	CCU failure Potential Causes Read out failure code with ESAM: <ul style="list-style-type: none"> If F60 - F63 is displayed: Check if NTC has a short circuit. Check if NTC wiring has a short circuit If NTC and wiring is ok, change the CCU
		Door Lock failure If the CCU is not able to lock the door of the washer after program start within 20", CCU is going to selection mode (LED of start/pause button is flashing) Potential Causes <ul style="list-style-type: none"> mechanical issue with door/ door hook/ door lock interface door not completely closed door lock issue
During normal cycle execution  During test program  	During normal cycle execution Remaining Time During test program F01	No water detected entering machine or pressure switch trip not detected. If after 6 minutes the control does not detect water entering machine, then valves will be turned off and the LED Water Tap will be switched ON. The Control is in Pause Mode. If it was possible to remove the failure, by pushing PB Start the appliance will restart. Potential Causes <ul style="list-style-type: none"> If there is no water in the unit: <ul style="list-style-type: none"> Make sure that both valves at the water source(s) are turned on all the way. Check for plugged or kinked inlet hoses or plugged filter in the inlet valves. Verify inlet valve operation. If there is water in the unit: <ul style="list-style-type: none"> Pressure switch hose is in good condition and properly connected to tub and pressure switch. Verify there is not a siphon problem. Verify wire harness connections to: inlet valves, pressure switch and central control unit (CCU). Check all hoses for possible leaks. Verify pressure switch operation. Verify CCU operation.
 	F02	AquaStop Failure If the aquastop contact on the bottom tray of the appliance is closed for more than 30" an aquastop failure will be detected. In aquastop condition the drain pump will run for 3 to 6 minutes. Afterwards the drain pump is off and the door will unlock. Potential Causes <ul style="list-style-type: none"> If there is water in the bottom tray of the appliance: <ul style="list-style-type: none"> Check all hoses for any leakage. Check if there was overfoam due to too much detergent used. Check the tub for any leakage. If there is no water in the bottom tray: <ul style="list-style-type: none"> Check if the aquastop switch has a short circuit. Check if the aquastop wiring is properly connected. Verify CCU operation. (Check also for F26: Pump triac short circuit is causing this code.)

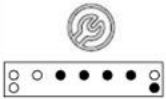
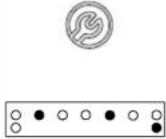
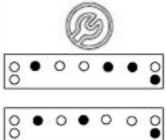
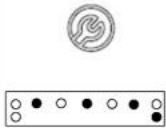
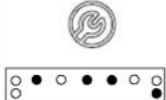

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<p>During normal cycle execution</p>  <p>During test program</p>  	<p>Remaining Time</p> <p>During test program</p> <p>F03</p>	<p>Long Drain</p> <p>If the drain time exceeds the drain timeout, the LED "clean filter" is turned ON. The timeout is: 4 minutes drains -> 4 minutes impulse draining (10sec.ON /10sec. OFF) -> 4 minutes drain.</p> <p>The control is in Pause Mode. Press start button. If the water can be drained out, the cycle will continue.</p> <p>Potential Causes</p> <ul style="list-style-type: none"> • Check the drain hose and make sure it is not plugged or kinked. • Check the drain pump filter for foreign objects. • Check the electrical connections at the pump and make sure the pump is running. • Check the electrical resistance of the drain pump. • The failure can also be generated by too much foam in wash phase. Read also failure description F18. • Check CCU operation.
 	<p>F04</p>	<p>Too Long Heat Time</p> <p>If the water temperature is not increasing over 35 °C during 50 minutes of the first heating step in the cycle the CCU will display this Error.</p> <p>Potential Causes</p> <ul style="list-style-type: none"> • Check the electrical resistance of the heating element. • Check Wire Harness connections to the heating element, NTC and CCU. • Check the electrical resistance of the NTC (failure can also occur, when NTC resistance is not changing with temperature). • Check CCU operation
 	<p>F05</p>	<p>Water Temperature Sensor Error</p> <p>If during the water heating step in the wash cycle, the water temperature sensor (NTC) value is out of range, the F05 error code will be displayed.</p> <p>Potential Causes</p> <ul style="list-style-type: none"> • Check the NTC resistance. • Check connections to the NTC and CCU. <p>NTC short circuit (NTC or wiring to NTC): appliance is dead at switch on - read failure code from eeprom: class B failure (F60 - F63)</p>
 	<p>F06</p>	<p>Drive Motor Tachometer Error</p> <p>The control is unable to properly detect motor speed (several times) and the machine will shut down.</p> <p>Potential Causes</p> <ul style="list-style-type: none"> • Check wire harness connections between the motor and CCU. • Check the resistance of the tachometer circuit on the motor. • Check resistances of the motor windings. • Check tension of belt and fixation of pulley.
 	<p>F07</p>	<p>Motor Control Triac Error</p> <p>The main control has detected a short circuit in the motor control triac.</p> <p>Potential Causes</p> <ul style="list-style-type: none"> • Check CCU by running Test Program: if failure occurs with universal motor: exchange CCU if failure occurs with CIM, BPM or Direct Drive: exchange motor control unit
 	<p>F08</p>	<p>Heater Circuit Error open circuit</p> <p>The main control has detected a heater circuit failure. These failure modes are checked before the cycle starts and after the spinning steps.</p> <p>Potential Causes</p> <ul style="list-style-type: none"> • Check the resistance of the heater connectors to the ground. • Check the resistance of the heater. • Check the wiring connectors to the heater and CCU. • Check the CCU.






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	F09	<p>MCU low voltage (only appliances with external motor control unit like CIM, BPM or Direct Drive)</p> <p>The MCU has detected a too low mains voltage (ca. 170V). It's not a defect of any component.</p> <p>Potential Causes</p> <ul style="list-style-type: none"> • Check mains voltage supply
	F10	<p>MCU overheat continuously (only appliances with external motor control unit like CIM, BPM or Direct Drive)</p> <p>The MCU has detected a too high temperature.</p> <p>Potential Causes</p> <ul style="list-style-type: none"> • Check for drum blockage (also laundry can block the drum), noise or friction during the drum rotation • Check if the machine was overloaded • Check the ambient temperature -> instruct the customer <p>If the failure is permanent</p> <ul style="list-style-type: none"> • Check motor for defect (see F06) • Check if motor control unit is defect
	F11	<p>MCU not initialized / general MCU-failure (only appliances with external motor control unit like CIM, BPM or Direct Drive)</p> <p>The MCU failed during self-test.</p> <p>Potential Causes</p> <ul style="list-style-type: none"> • Check harness wires between CCU and MCU and motor • Check motor for defect (see F06) • Start cycle door lock has to lock <p>Relay for MCU on CCU has to close "click-noise"</p> <p>MCU self test starts automatically as soon as MCU is connected to voltage</p> <p>self-test was successful when relay on MCU switches - (can be recognized by click sound).</p>
	F12	<p>Heater Circuit Error short circuit</p> <p>The main control has detected a heater circuit failure. These failure modes are checked before the cycle starts and after the spinning steps.</p> <p>Potential Causes</p> <ul style="list-style-type: none"> • Check the resistance of the heater connectors to the ground. • Check the resistance of the heater. • Check the wiring connectors to the heater and CCU. • Check the CCU.
<p>Icon Door open is ON</p> 	F13	<p>CCU failure on door lock control circuit</p> <p>If CCU detects a defect of the door lock triac, F13 is displayed. This check is performed at start of cycle, during the cycle and at the end of the cycle.</p> <p>If CCU is not able to unlock the door at the end of program in 240 s this code will be displayed. After switch OFF and ON CCU will again try to open DL for 240 s – all Leds and Display will be OFF during this phase, If again not successful Code will appear after 240 s.</p> <p>Potential Causes</p> <ul style="list-style-type: none"> • Check the wiring between the CCU and the door lock. • CCU defect
	F14	<p>EEPROM Error</p> <p>The CCU receives its data from an EEPROM on board the CCU. If there is an error reading this data it will cause this failure indication.</p> <p>Potential Causes</p> <ul style="list-style-type: none"> • A power glitch voltage variation or interruption (mains disturbance) may cause this error: Run the Test Program. This will perform a complete check of the EEPROM. If the failure is detected during the Test Program replace the CCU.







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	F15	<p>Drum Up Circuit Missing (only for TOPLOADERS with DRUM UP Circuit)</p> <p>If the CCU is not detecting the Drum Up switch closing during Motor rotation this failure is displayed. This Error is detected ONLY during the Test Program.</p> <p>Potential Causes</p> <ul style="list-style-type: none"> • Check the position of the electromagnetic device. • Check the position of the reed sensors. • Check the resistance of the reed sensor. • Check the wiring connection between the reed sensor and the CCU.
	F18 FoD	<p>Foam detected During the Wash Cycle</p> <p>If the CCU is not able to drain out the water after washing or not able to spin after several trials this alarm code is displayed.</p> <p>Potential Causes</p> <ul style="list-style-type: none"> • Customer used too much detergent. • Check if there is any problem with the pump hoses. • Check the pump for foreign objects. • Check the electrical resistance of the pump. • Check the electrical resistance of the pressure switch. • Check if pressure switch hose is in good condition and properly connected to tub and pressure switch. • Verify there is not a siphon problem.
	F19 F20	<p>Relay for MCU on CCU is defect (only appliances with external motor control unit like CIM, BPM or Direct Drive)</p> <p>The central control unit has detected, that the relay to switch the MCU ON and OFF is defect (open or short circuit). The relay is placed on the CCU.</p> <p>Potential Causes</p> <ul style="list-style-type: none"> • Check the wiring between CCU and MCU
	F21	<p>User Interface Error (detected only with Smart user interfaces)</p> <p>If the communication between user interface module and CCU is disturbed, this Error is displayed. If the failure is displayed on the digits the display module is not able to "talk" to the CCU. If the failure is displayed on the status LED the CCU is not able to contact the Display module.</p> <p>Potential Causes</p> <ul style="list-style-type: none"> • Check wiring connection to the display module. • Check display module. • Check CCU.
	F22	<p>MCU communication failure (only appliances with external motor control unit like CIM, BPM or Direct Drive)</p> <p>Potential Causes</p> <ul style="list-style-type: none"> • Check wiring /connection between MCU and CCU (communication wires) • Check MCU function • Check CCU function
	F23	<p>Pressure switch Failure</p> <p>If the CCU detects during the wash cycle that the pressure switch contact for the wash level and the pressure switch level for the heater safety are ON or OFF simultaneously for 10" this failure will be displayed.</p> <p>Potential Causes</p> <ul style="list-style-type: none"> • Check the resistance of the pressure switch contacts. • Check the wiring of the connection to the pressure switch and to the CCU. • Start the Test Program. If the problem persists F23 will be displayed. • Check points of F08 / F12 (Failure can be caused also by Heater circuit failure).

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	<p>F24</p>	<p>Overflow Failure</p> <p>If the overflow contact on the pressure switch is closed, the drain pump is switched on for 45". The wash programs continue, if the overflow level is reached not more than 4x in a program. The overflow failure indication will occur, if the overflow contact is closed the 5th time. In overflow condition, the door will remain locked and the drain will run in interval mode.</p> <p>Potential Causes</p> <ul style="list-style-type: none"> • Check the drain hose and make sure it is not plugged or kinked. • Check wiring harness connections between drain pump, pressure switch and CCU. • Check/clean drain pump filter of foreign objects. • Check for drain pump failure. • Check the inlet valve for proper shut off. • Check the pressure switch for proper operation.
	<p>F26</p>	<p>Pump Driver Failure</p> <p>If the CCU detects during the wash cycle that the triac of the pump is defective it will display this failure.</p> <p>Potential Causes</p> <ul style="list-style-type: none"> • Check the resistance of the pressure switch contacts. • A failure of the pressure switch could also cause the Code. • If OK. Start Service test to check the CCU. If the failure occurs replace the CCU.
<p>Only during test program</p> 	<p>Only during test program</p> <p>F27</p>	<p>Reversing relay failure</p> <p>If the CCU detects that the motor is possible to rotate only in one direction this failure is displayed.</p> <p>Potential Causes</p> <ul style="list-style-type: none"> • Check the harness to the motor. • Check the CCU.
<p>Only during test program</p> 	<p>Only during test program</p> <p>F28</p>	<p>Tapped Field Failure</p> <p>If the CCU is not able to switch ON the tapped field of the Motor, this failure code is displayed.</p> <p>Potential Causes</p> <ul style="list-style-type: none"> • Check if the correct motor is built in. • Check the resistance of the fields of the motor. • Check the harness between Motor and CCU. • If the points above are OK replace the CCU.
	<p>F29 or FdL</p>	<p>Door Lock can not unlock, mechanical issue of door lock blockage,...</p> <p>Potential Causes</p> <ul style="list-style-type: none"> • Check if there is a mechanical problem on the door lock system (also door and door hook) • Check wiring between the CCU and the door lock. • Start the test program. If problem persists the error code F29 or FdL will be displayed <p>WAVE TCP: Door lock timeout is 4 minutes, but can be expired 2x within the last 16 cycles. If 3rd occurrence within 16 cycles: F29 or FdL is displayed The appliance is locked during the failure mode. The appliance can start a new cycle without waiting for unlocking. For unloading the laundry, the customer must wait for unlocking (ca. 4minutes).</p> <p>IMPORTANT: The failure indication can be deleted only by running the test program (completely!) or by reprogramming the variant file.</p> <p>WAVE 2: Door lock timeout is increased to 6minutes F29 or FdL is indicated at 1st occurrence. The door lock is not locked during failure conditions. It is not necessary to delete the failure.</p>

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 	<p>F31 or bdd</p>	<p>Blocked Drum Detected (only for Top Loader appliances)</p> <p>CCU detects problems with driving of the motor at the beginning of the cycle or after pause mode when door lock has been unlocked.</p> <p>Potential Causes</p> <ul style="list-style-type: none"> • Check if the drum door are properly closed • Check the belt position • Check the F06 case
	<p>Only during test program</p> <p>F40</p>	<p>MEB Communication Failure / Low Ambient Temperature</p> <p>If there is no communication between CCU and the Myst Extension Board (MEB) or if the ambient temperature is lower than 5 °C this failure code will be displayed.</p> <p>Potential Causes</p> <ul style="list-style-type: none"> • Check if there is power at the MEB CU2 connector. • Check if the communication cable is connected to the MEB and to the UI. • Check if the ambient temperature is higher than 5 °C. This is to avoid steaming with ice in the hoses, which would easily cause damages of the hoses. • If the failure code occurs at star of test program, the last cycle was not properly finished. Run a drain cycle, wait until drain cycle is completely finished and start test program again. • If the points above are OK and the failure occurs again, replace the MEB.
	<p>Only during test program</p> <p>F41</p>	<p>MEB Control Board Failure</p> <p>If there is any failure detected at the Myst Extension Board (MEB) this failure code will be displayed.</p> <p>Potential Causes</p> <ul style="list-style-type: none"> • Check if there is power at the MEB CU2 connector. • If the point above is OK replace the MEB.
	<p>Only during test program</p> <p>F42</p>	<p>Steamer Component Failure</p> <p>If there is any failure at the steamer component or steamer NTC, this failure Code will be displayed.</p> <p>Potential Causes</p> <p>Disconnect appliance from mains for all checks on steamer:</p> <ul style="list-style-type: none"> • Check the harness between Steamer, steamer NTC and MEB. • Check if there is no fuse or reset able thermostat at open state. • Check the electrical resistance of the Steamer Heater (unplug connector HSG3 from MEB measure resistance between pin 1 and 3: ca. 48-57Ohm - measure at harness connector and not at MEB header). • Check if the steamer NTC is not at open or short-circuit state. • Check if the steamer hoses are connected. • Check if the steamer tube is not blocked. • Check water NTC (in wash unit) and wiring connections (see F04 and F05) • If the points above are OK replace the steamer component.
	<p>Only during test program</p> <p>F43</p>	<p>Steam Valve Failure</p> <p>If there is no water supply or the steamer valve does not open, this failure code will be displayed.</p> <p>Potential Causes</p> <ul style="list-style-type: none"> • Check if water supply for the appliance is completely opened. • Check the cable between MEB and valve. • Check power supply from MEB to valve (230V). • Check if the hoses to the valve are connected with no leakage. • If the points above are OK replace the valve. • Re-test the machine and if the failure persists replace the MEB.

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