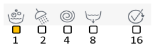
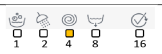
Error Codes

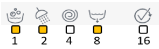
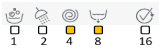
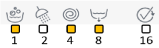
Windy Fault Table
Faults are shown on Human Machine Interface to customer

Fault Visual. HMI LCD/DGT	Fault Visual. HMI LED	Appliance Configuration	Fault Subcode	Involved Component	Electronic Description	Potential Cause	Explanation and Recommended Procedure (To be filled in by Service)
F1		UM	0x01	Motor	Motor driving triac short circuit	UM Motor disconnected, Motor Stuck, Motor bimetal protector open, ACU motor driver circuit failure. Harness disconnected, connector loose. Water leakage on motor connector or on ACU. Door Lock not closing/ACU door lock driver circuit open.	
F1		UM	0x02	Motor	Motor driving triac in diode mode		
F1		UM	0x03	Motor	Motor feedback fault		
F1		UM	0x04	Motor	Motor relay contacs sticking/ 2 motor relay contact sticking (one open the other one closed)/ door lock triac open		
F1		All	0x12	Heating Element	Wash heating element feedback fault	Washing Heater Open; Harness disconnected, connector loose. ACU Heating Element reading circuit failure.	Check value of 1700W heater, usually 30 Ω ± 10%
F1		All	0x21	Drain Pump	Drain pump feedback fault	Drain Pump stuck, Drain pump disconnected. Harness Disconnected, connector loose. ACU drain pump driver circuit failure.	Check impedance value of pump, tipically 170 Ω ± 10%
F1		All	0x23	Drain Pump	Drain pump driving triac open		launch autotest after repair
F1		All	0x24	Drain Pump	Drain pump driving triac in diode mode		
F1		WD	0x41	Drying Heater	Triac+dryer heating element relay open	Dryer Heating Element open or disconnected; Harness disconnected, connector loose. ACU Dryer Heating Element driver/feedback circuit failure	Unplug and wait for 2 minutes before doing the checks
F1		WD	0x42	Drying Heater	Dryer heating element feedback fault		launch autotest after repair
F1		WD	0x61	Drying Fan	Drying fan feedback fault	Drying Fan not running, Drying fan coil open, harness disconnected; ACU Drying Fan driver failure	
F1		WD	0x63	Drying Fan	Drying fan driving triac open		
F1		WD	0x64	Drying Fan	Drying fan driving triac short circuit		

F1	BPM	0x81	Motor	Hardware protection trip due to overcurrent on inverter U (probable inverter branch failure)	BPM/CIM motor disconnected; Stator Coil of the motor in short cicuit; Motor Harness Disconnected, connector loose; Water leakage on motor connector; ACU Motor Driver or Feedback circuit failure.	
F1	CIM	0x81	Motor	Hardware protection trip due to overcurrent (probable inverter branch failure)		
F1	BPM	0x82	Motor	Hardware protection trip due to overcurrent on inverter V (probable inverter branch failure)		
F1	CIM	0x82	Motor	Incorrect reading of offsets from inverter U		
F1	BPM	0x83	Motor	Hardware protection trip due to overcurrent on inverter W (probable inverter branch failure)		
F1	CIM	0x83	Motor	Incorrect reading of offsets from inverter V		
F1	BPM	0x84	Motor	Incorrect reading of offsets from inverter U (tolerance +- 2.5% at 3.3V)		
F1	CIM	0x84	Motor	Incorrect reading of offsets from inverter W		
F1	BPM	0x85	Motor	Incorrect reading of offsets from inverter V (tolerance +- 2.5% at 3.3V)		
F1	CIM	0x85	Motor	Incorrect reading of reference signal (tolerance +- 10% on 2.5V)		
F1	BPM	0x86	Motor	Incorrect reading of offsets from inverter W		
F1	BPM	0x87	Motor	Hardware protection trip due to Bulk capacity overvoltage. When signal on PIN18 becomes low all PWM outputs are disabled, the fault is declarated and IGBTs are set low (zero vector) while the overvoltage persists.		
F1	BPM	0x91	Motor	Hardware protection trip due to overcurrent on inverter U during the initial check of the overvoltage hardware protection circuit.		

F1		BPM	0x92	Motor	Hardware protection trip due to overcurrent on inverter V during the initial check of the overvoltage hardware protection circuit.		
F1		BPM	0x93	Motor	Hardware protection trip due to overcurrent on inverter W during the initial check of the overvoltage hardware protection circuit.		
F2		UM	0x01	Motor	Motor tripped or not wired/ 1 or 2 motor relays sticking (both open or closed)/ motor tachogenerator open or short circuited	UM Motor tripped or not wired/ 1 or 2 motor relays sticking (both open or closed)/ motor tachogenerator open or short circuited	
F2		UM	0x02	Motor	Too much power to the motor after soft start	Garments stuck in the tub/drum, preventing the correct spinning of the drum.	
F2		CIM/BPM	0x81	Motor	One motor phase disconnected during motor run	BPM/CIM motor disconnected; Stator Coil of the motor in short cicuit; Motor Stuck; Excessive friction brake on the Motor; Motor Harness Disconnected; Tachometric Circuit (only for CIM) open or malfunctioning; ACU Motor Driver or Feedback circuit failure	
F2		CIM/BPM	0x82	Motor	Overcurrent on one phase		
F2		CIM/BPM	0x84	Motor	No switching at motor start		
F2		BPM	0x85	Motor	Stall after commutation		
F2		CIM	0x85	Motor	No tachogenerator signal with speed value higher than that of distribution		
F2		CIM	0x86	Motor	One drum revolution not completed in 5 sec		
F2		BPM	0x87	Motor	Motor stop not detected after 32 seconds		
F2		CIM	0x87	Motor	Motor stop not detected after 256 seconds		
F2		CIM	0x88	Motor	High frequency noise on signal		
F2		CIM	0x89	Motor	Low frequency noise on signal		
F2		CIM	0x8A	Motor	Request for PWM driver after an overheating was detected		
F2		CIM	0x8B	Motor	Overheating index greater than "High Temp Threshold"		
F3		All	0x01	Water Temperature Sensor	NTC whashing sensor short circuit	NTC Washing Temperature Sensor disconnected; NTC open circuit; NTC connector loose; NTC short circuited	Check with multimeter impedance at 20°C, should be around 20 kΩ

F3		All	0x02	Water Temperature Sensor	NTC whashing sensor open circuit		
F4		All	0x01	Water Leakage	Water leakage detected by the Aquastop switch in the water tray in the bottom of the washer	Water Leaking on the aquastop Tray	
F5		All	0x01	Drain Pump	Pressure switch empty condition not reached (valid for linear and status pressure switch or drain pump jammed (valid for linear and status pressure switch)	Analogue Pressure Switch (APS) disconnected; APS harness connector loose; Drain Pump harness disconnected, or connector loose; Drain Pump coil open; Drain hose clogged; Installation of drain hose incorrect; Drain Hose choked. Drain filter clogged; Wall drain outlet clogged;	After repair check that the water is loaded correctly in following cycle.
F5		All	0x02	Water Pressure Sensor	Analogue Pressure Switch reading out of range	Analogue Pressure Switch (APS) Disconnected; APS harness connector loose; APS faulty	
F5		All	0x03	Water Pressure Sensor	Absence or off high range on frequency reading on Analogue Pressure Switch		
F5		All	0x10	Water Pressure Sensor	Siphon Detection	Drain Hose incorrect installation.	
F6		All	0x01	Door Lock	Door lock fails to close/ PTC door lock triac open/ mains frequency signal fault/ mains power signal fault	Door Lock Failure; Door Lock not fitted correctly to front panel; Door lock connector loose; Harness disconnected; Water leakage on Door Lock; ACU feedback circuit faulty	
F6		All	0x02	Door Lock	Door lock fails to open/ IMP doork lock triac short circuit or open circuit		
F8		All	0x01	Heating Element	Wash heating element earth leakage/ wash heating element relay short circuit	Heater leaking to ground; ACU leakage detector faulty.	Check insulation of heater
F8		BPM	0x02	Heating Element	Wash heating element earth leakage		
F9		All	0x01	Setting File	Setting file error detected by Main PCB		unplug, wait for 2 minutes, run autotest. Reprogram the setting file
F9		All	0x02	Setting File	Setting file error detected by User Interface PCB		

F9		BPM	0x81	Setting File	Motor data area has incorrect checksum	Setting File is not present, corrupted or not correctly matched to product configuration.	
F9		CIM	0x81	Setting File	Motor Safety data area has incorrect checksum		
F9		CIM	0x82	Setting File	Incorrect number of Motor parameters (mismatch in lenght of data setting file expected by DSP firmware)		
F9		BPM	0x83	Setting File	Motor Application data area has incorrect checksum		
F9		CIM	0x83	Setting File	Failure of reading of setting file for 5 times		
F9		BPM	0x91	Setting File	Wrong number of Safety parameters		
F9		BPM	0x92	Setting File	Wrong number of Application parameters (first part of the Application table)		
F9		BPM	0x93	Setting File	Wrong number of Application parameters (first part of the Application table)		
F9		BPM	0xA1	Setting File	Can't read Safety table after 10 attempts		
F9		BPM	0xA2	Setting File	Can't read Application table (first part) after 10 attempts		
F9		BPM	0xA3	Setting File	Can't read Application table (second part) after 10 attempts		
F11		All	0x01	Drain Pump	Pump not connected/ pump driving triac short circuit/ drain pump feedback pin in short circuit with Vdc	Drain Pump stuck, Drain pump disconnected. Harness Disconnected, connector loose. ACU drain pump driver/feedback circuit failure.	
F12		All	0x01	Communication	Communication error between power PCB (main) and interface PCB (user interface)	Harness failure; connector loose ACU side or HMI side; ACU communication circuit failure. HMI communication circuit failure	
F13		WD	0x01	Drying Temperature Sensor	NTC dryer sensor short circuit	NTC Drying Temperature Sensor disconnected; NTC open circuit; NTC connector loose; NTC short circuited; Condenser filter clogged; lint/fluff on drying fan paddles;	Check with multimeter impedance at 20°C, should be around 20 kΩ
F13		WD	0x02	Drying Temperature Sensor	NTC dryer sensor open circuit		

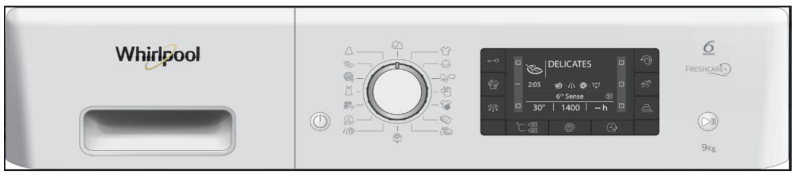
F15		WD	0x01	Drying Heater	Triac+dryer heating element short circuit/ dryer heating element ground fault/ dryer heating element open circuit/ dryer heating element feedback pin short with Vdc	Drying Heater Open; Drying Heater short circuit; Harness disconnected, connector loose. ACU Drying Heater Element reading circuit failure.	
F15		WD	0x02	Drying Heater	dryer heating element ground fault	Drying Heater Leaking current to ground	Check insulation of heater
F16		Drum Lock Only	0x01	Drum Lock	Drum lock failure	Drum Lock Failure; Harness connection; connectors loose; ACU circuit failure	
F17		All	see description	Voltage Out Of Range	Any Fault checked out in "out of range" power line voltage conditions is changed into "Fault 17", showing as Subcode the original fault code (e.g.: fault F11.01 becomes F17.11).	Power Supply Voltage out of range	Check wall power socket voltage value
F18		CIM/BPM	0x01	Boards communication problem	No UART communication between DSP and Main PCB	ACU failure	
F18		CIM/BPM	0x02	Boards communication problem	No UART communication between DSP and Main PCB		
F19		WD	0x01	Drying Fan	Fan harness disconnected; driver Triac on ACU in short circuit; ACU relay stuck; ACU Feedback pin in short	Drying fan disconnected; Connectors loose; Drying Fan coil open; ACU driver/feedback circuit fault.	

Windy Warnings Table
Warnings are NOT shown on Human Machine Interface to customer

Warning number	Warning Visual. HMI LCD/DGT	Warning Visual. HMI LED	Appliance Configuration	Warining Subcode	Involved Component	Electronic Description	Potential Cause	Explanation and Recommended Procedure (To be filled in by Service)
1	warning is not shown	warning is not shown	All	0x05	ACU	No zero crossing while the motor is spinning: probable failure to zero crossing.	ACU zero crossing fault failure	
6	warning is not shown	warning is not shown	All	0x02	Door Lock	Door lock not opening / door lock triac short or open circuit	Door Lock; ACU	
7	warning is not shown	warning is not shown	All	0x01	Heating Element	Washing Element not connected (heating timeout)	Heater is disconnected	
7	warning is not shown	warning is not shown	All	0x33	Heating Element	Washing Element not connected (warning triggered by protection number 3.3)		
7	warning is not shown	warning is not shown	All	0x54	Heating Element	Washing Element not connected (warning triggered by protection number 5.04)		
7	warning is not shown	warning is not shown	All	0x55	Heating Element	Washing Element not connected (warning triggered by protection number 5.05)		
7	warning is not shown	warning is not shown	All	0x56	Heating Element	Washing Element not connected (warning triggered by protection number 5.06)		
7	warning is not shown	warning is not shown	All	0x57	Heating Element	Washing Element not connected (warning triggered by protection number 5.07)		
7	warning is not shown	warning is not shown	All	0x58	Heating Element	Washing Element not connected (warning triggered by protection number 5.08)		

7	warning is not shown	warning is not shown	All	0x59	Heating Element	Washing Element not connected (warning triggered by protection number 5.09)		
7	warning is not shown	warning is not shown	All	0x99	Heating Element	Washing Element not connected (warning triggered by safety action that cuts power to all loads)		
14	warning is not shown	warning is not shown	WD Only	0x01	Drying Heating Element	Drying Heating element not connected or Drying NTC out of tolerance causes an exceedingly long "on" time of the heater	Drying Heating element not connected or Drying NTC out of tolerance causes an exceedingly long "on" time of the heater	
18	warning is not shown	warning is not shown	External Motor Only	0x01	ACU	MCU and ACU communication error	ACU motor control communication failure	
18	warning is not shown	warning is not shown	External Motor Only	0x02	ACU	MCU and ACU data communication corruption		

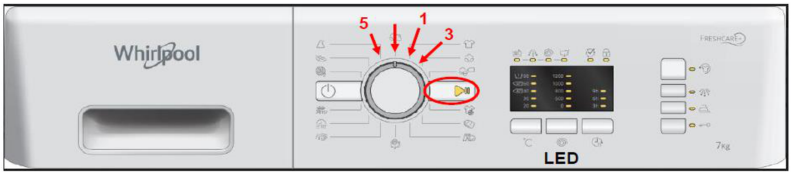
Before Autotest activation:



Initial condition before you activate the Autotest:

1. Machine empty (without clothes or water)
2. Spin option on position different to zero (not off)
3. Temperature option on position different to zero (not off)
4. Door closed
5. Inlet water must be cold

Autotest Activation (for Led, Small Digit and Big Digit):



To start AUTOTEST procedure, starting with machine in OFF conditionand notin «stand by» condition, it is necessary selecton the UI the TOP Position (at12 o'clock), then:

1.Switch ON the appliance and turn the program selector clockwise by one position
2.Switch OFF the machine and turn the program selector back to the original position
3.Switch ON the appliance and turn the program selector clockwise by two position
4.Switch OFF the machine and turn the program selector back to the original position
5.Switch ON the appliance and turn the program selector counterclockwise by one position
6.Press «Start» button

Autotest Activation (for LCD):

To start AUTOTEST procedure, starting with machine in OFF condition and not in «stand by» condition, it is necessary follow the next procedure:

1.Press «button number1»
2.Press «button number2»
3.Press «button number3»
4.Press «button number4»
5.Press «button number5»

6.Press and hold at the sametime «button number 1 and 6»
7.Press «Start» button

Test cycle flow

Note: instructions in the same point, are performed at the same time.

START

1. Test Drain Pump
   a. Motor movement 10on/5off 55rpm (clockwise and counterclockwise);
   b. Activation Drain Pump;
   c. Maintain Time 18”;

2. Test Ev PreWash
   a. Motor movement 10on/5off 55rpm (clockwise and counterclockwise);
   b. Activation Ev PreWash;
   c. Maintain Time 5”;

3. Test Ev Wash - 5”
   a. Motor movement 10on/5off 55rpm (clockwise and counterclockwise);
   b. Activation Ev Wash;
   c. Maintain Time 5”;

4. Test Ev Soft +Heating
    a. Step 0
        Maintain Time 2”;
    b. Step 1
        Fill 4L Ev Soft;
        Motor movement 4on/2off 28rpm (clockwise and counterclockwise);
        Maintain Time 24”;
    c. Step 2
        Maintain Time 1”;
    d. Step 3
        Fill 6L Ev Soft;
        Motor movement 10on/5off 55rpm (clockwise and counterclockwise);
    e. Step 4
        Fill 1L Ev Hot
        Maintain Time 5”;
    f. Step 5
        Activation Washing Heater;
        Maintain Time 10”;

5. Test Spin
    a. execution of spin profile (specific to the machine);

6. Test Drain
    a. Activation Drain Pump since empty machine;

7. Test Door Lock
    a. Maintain Time 120”

END

When a Fault is stated, a safety cycle will start. During the safety cycle, the product will not turn off, even if the customer presses the ON/OFF button
After such cycle has finished (duration 5 minutes ca.) the product can be turned off by pressing ON/OFF button and the fault will be reset (will disappear).
Almost every fault executes this safety cycle.
During the safety cycle the product can not be turned off, but if the customer presses the ON/OFF button, such action is stored in the memory of the appliance and when the safety cycle will end, the product will automatically turn off and the fault will be reset (will disappear)