8. DIAGNOSTICS MESSAGES

MALFUN. CODE	DESCRIPTION	POSSIBLE CAUSES	VERIFICATIONS and SOLUTIONS
017	**Invalid firmware detected on iDEA expansion board**	• iDEA expansion board not programmed correctly	• Update the software. If the problem persists, replace the iDEA expansion board
019	**Board communication fault on 485 Bus: iDEA expansion board**	• Module on 485 Bus not connected correctly • Board faulty or not programmed	• Check the module is correctly inserted and positioned on the relative connector • Check the status LED is working properly (normally flashing on the module) • Update the software. If the problem persists: • Replace module on 485 Bus • Replace iDEA CPU
020	**Power supply overcurrent alarm on USB port**	• USB-port current-consumption too high	• Check the status of the USB port and its connections in order to identify possible causes of excessive consumption (e.g. short-circuit) • Once the cause of the malfunction is fixed the USB port should restore itself automatically and return to normal operation. • If the problem persists, replace the CPU board
(x)21	**Group boiler pressure sensor x out of range (x = 1, 2, 3, 4)** Note: Group 1 is to the far left.	• Sensor faulty • Board faulty	• Check the wiring • Replace the sensor • Replace the board
024	**Insufficient clock battery voltage, or another fault (e.g. clock "jammed")**	• Contacts oxidised. • Dead battery. • Clock blocked.	• Clean the contacts on the battery. • Measure the voltage of the battery (3 V DC) and, if necessary, replace it. If the battery is OK try, with the machine turned off, to remove it from the board and wait 2-3 minutes. Then reinsert the battery and check that the clock is working properly.
(x)30	**Restart on the button pad or group display (x = 1, 2, 3, 4, 5)** Note: Group 1 is to the far left. 530 = services		•If the fault persists, replace the board.
051	**Boiler temperature sensor outside range**	• Sensor failure • Card failure	• Check cabling • Replace the sensor • Replace the card
(x)51	**Group boiler temperature sensor x out of range (x = 1, 2, 3, 4)** Note: Group 1 is to the far left.	• Thermocuple disconnected • Sensor failure	• Check cabling • Replace the sensor

(x)52	**Group x boiler heating timeout - 20 minutes (x = 1, 2, 3, 4)** Note: group 1 is the one on the far left. 0 = boiler	• The group x boiler safety thermostat has been triggered • The resistance is interrupted (cabling defect)	• Check if the safety thermostat of the group x boiler has been triggered, and reset it if necessary • Check if there are interruptions or detached fastons on the cabling • Check that the group x boiler resistance is not interrupted and replace it if necessary
(x)53	**Steam thermocouple out of range RH = 053; LH = 153**	• Thermocuple disconnected • Wrong configuration during standard data insertion	• Enter in the programming mode and insert the correct standard data • Check connections • Replace the steam temperature probe
058	**Boiler overpressure alarm**	• Resistanc alwayspowered • Temperature sensor out of range.	• Check cabling • Replace the sensor
059	**Boiler: Refill timeout**	• No water • Refill EV failure • Wiring interrupted • Card failure	• Check water is supplied from the main line • Replace the refill EV • Check cabling • Replace the card
060	**Boiler-level signal errors.**	• Electrical fault • Leakage to earth	• Check wiring • Check, by activating the components individually on the manual control panel, that the level signal does not show any anomalies (%)
062	**Coffees dispensed for MM1 with flow under the limit (3 consecutive coffees dispensed).**	• Coffee filter blocked • Coffee type changed • Qref calibration wrong • Grind too fine, excessive dose ground.	• Wash the group • Clean/replace the coffee filter • Use a coarser grind • Calibrate the machine correctly on the basis of the coffee/recipe.
063	**Coffees dispensed referred to MM1 with flow over the limit (3 consecutive coffees dispensed).**	• Coffee type changed • Qref calibration wrong • Grinding too coarse • Grinder/dispenser blocked, insufficient dose of ground coffee.	• Check that there are no external elements in the grinders • Check that the measure grinder is working (pick-up current and fuses) • Use a finer grind • Calibrate the machine correctly on the basis of the coffee/recipe.
064	**Coffees dispensed referred to MM2 with flow under the limit (3 consecutive coffees dispensed).**	• Coffee filter blocked • Coffee type changed • Qref calibration wrong • Grind too fine, excessive dose ground.	• Wash the group • Clean/replace the coffee filter • Use a coarser grind • Calibrate the machine correctly on the basis of the coffee/recipe.
065	**Coffees dispensed referred to MM2 with flow over the limit (3 consecutive coffees dispensed).**	• Coffee type changed • Qref calibration wrong • Grinding too coarse • Grinder/dispenser blocked, insufficient dose of ground coffee.	• Check that there are no external elements in the grinders • Check that the measure grinder is working (pick-up current and fuses) • Use a finer grind • Calibrate the machine correctly on the basis of the coffee/recipe.

(x)66	**Coffee water dose fault during dispensing (recipe test or self-learning). (x = 1, 2, 3, 4)** Note: Group 1 is to the far left.	• Clogged hydraulic circuit • Faulty volumetric doser	• Check water is supplied from the main line. • Check there are no fitting obstructions or leakage. • Check flowmeter electrical connections. • Replace the broken flowmeter. • Replace the broken board.
(x)67	**Fault on group volumetric measuring device during coffee washing (x = 1, 2, 3, 4)** Note: Group 1 is to the far left.	• Clogged hydraulic circuit. • Faulty volumetric doser	• Check water is supplied from the main line. • Check there are no fitting obstructions or leakage. • Check flowmeter electrical connections. • Replace the broken flowmeter. • Replace the broken board.
(x)70	**Measure-grinder adjustment: Bluetooth set up by the technician. (x = 1, 2) MM1 = 170; MM2 = 270**		• Event only archived and not displayed on the display during normal machine operation.
(x)82	**Button pad reset via CPU board owing to repeated communication problems. (x = 0, 2)**		• Check the insulation • Check the wiring and connections
(x)83	**Exclusion of group button pad from I2C Bus communication (x = 1, 2, 3, 4)** Note: Group 1 is to the far left. **(083=water button pad, 583 steam button pad, 683 TS board, 783 RGB light module)**	• Incorrect keyboard configuration (if applicable). • Wiring interrupted • Card failure.	• Check that the dip switches are correctly configured on the key board (if applicable). • Check cabling • Replace key board.
(x)85	**Bluetooth communication error (x = 1, 2) MM1 = 185; MM2 = 285**	• Incorrect association with measure grinder. • Measure grinder turned off.	• Turn on the grinder. • Repeat device association.
(x)87	**Calibration fault on group touchscreen (x = 1, 2, 3, 4)** Note: Group 1 is to the far left.		**Calibrate the touchscreen**
092	**Request water softener resin regeneration.**		• Softener maintenance.
093	**Request replacement water filter**		• Replace the water-softner filter.
096	**Maintenance needed)**		• The machine has displayed the message to warn the user that maintenance must be performed. Carry out maintenance operations.
097	**Reset standard password**	• Action desired by the user by entering the special code (applicable only for machines with TFT display).	

098	**Historical malfunctions and wash 1 reset**	• Initialisation malfunction history (and washing history for machines without TFT display)	• Event only archived and not displayed on the display during normal machine operation.
099	**Default data input.**		