TROUBLESHOOTING

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Modification journal

Revision:	Data:	Modification	Initials:
0	2009-04-30	Ground document	FC
1	2010-08-23	Revised user messages	MBO
2			
3			
4			
5			
6			
7			
8			
9			
10			

Overview modifications

Page	REVISION											Page	REVISION											Page	REVISION										
	0	1	2	3	4	5	6	7	8	9	10		0	1	2	3	4	5	6	7	8	9	10		0	1	2	3	4	5	6	7	8	9	10
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15	X	S																																	
16	X	S																																	
17	X	S																																	
18		S																																	

X	Changes in content, corrections	S	New paging

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Index SECTION 6

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User Messages	6.14 - 6.18

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Overview Diagnostics

Enter „SERVICE-Master-Card“
„Service card“

Service Card

Select the desired diagnostic menu with the Plus or Minus key

Confirm/enter with the step key

Valve test: Check all valves →

Valvetest
Brew valve
Select valve

Inputtest: Check all low voltage components →

Inputtest
Flowmeter
detected

Sensortest: Check sensors →

Boiler xxC°
Steamtab xxx°C
Presso 0 Probe 11

Outputtest: Check all high voltage components (208V / 230V) →

230 Outputtest
Grinder 1
Press Product Key

Keyboardtest: Check all keys on function →

Keytest

Press key

Clear Counter: Read and clear product counters →

Supplies

Total x

Water Product: Read and clear water counter →

Water Product

xx litres

Water Rinse: Read and clear rinse water counter →

Water rinse

xx litres

Errorhistory: Read and clear the last 16 error messages →

Errorhistory

Top

Clear Cleancounter: Read and clear the cleaning counter →

Clear Cleancounter

0 0 0

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CT

Enter „SERVICE-Master-Card“
„Service card“

Service card

Select the desired diagnostic menu with the Plus or Minus key

Confirm/enter with the step key

Select desired valve

	Not implemented	**Not implemented**		
Valvetest Brewvalve Select valve	Valvetest Bypassvalve Select valve	Valvetest Coffeeairvalve Select valve	Valvetest POD valve Select valve	Valvetest Tea valve Select valve

---

Function test: Press „2x“ key. Check by visual and/or aural examination.

Leave test with the „step“ key.

Note:

The water entrance valve is activated (open) as soon as one enter the service mastercard.
(An accoustic CLICK audible)

To check the water line from boiler to mobile piston:
Valvetest „Brewvalve“, press and hold „2x“ key (water rinses out of the mobile piston)

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CTS

Enter „SERVICE-Master-Card“
„Service card“

Service card

Select the desired diagnostic menu with the Plus or Minus key

Confirm/enter with the step key

Select desired valve

	Not implemented	**Not implemented**		
Valvetest Brewvalve Select valve	Valvetest Bypassvalve Select valve	Valvetest Coffeeairvalve Select valve	Valvetest POD valve Select valve	Valvetest Steam valve Select valve
Valvetest Tea valve Select valve	Valvetest Fill valve Select valve			

Function test: Press „2x“ key. Check by visual and/or aural examination.

Leave test with the „step“ key.

Note:

The water entrance valve is activated (open) as soon as one enter the service mastercard.
(An accoustic CLICK audible)

To check the water line from boiler to mobile piston:
Valvetest „Brewvalve“, press and hold „2x“ key (water rinses out of the mobile piston)

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CTMF5

Enter „SERVICE-Master-Card“
„Service card“

Service card

Select the desired diagnostic menu with the Plus or Minus key

Confirm/enter with the step key

Select desired valve

Not implemented **Not implemented**

Valvetest Brewvalve Select valve	Valvetest Bypassvalve Select valve	Valvetest Coffeeairvalve Select valve	Valvetest POD valve Select valve	Valvetest Tea valve Select valve
Valvetest Autoclean valve Select valve				

Function test: Press „2x“ key. Check by visual and/or aural examination.

Leave test with the „step“ key.

Note:

The water entrance valve is activated (open) as soon as one enter the service mastercard.
(An accoustic CLICK audible)

To check the water line from boiler to mobile piston:
Valvetest „Brewvalve“, press and hold „2x“ key (water rinses out of the mobile piston)

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CTM

Enter „SERVICE-Master-Card“
„Service card“

Service card

Select the desired diagnostic menu with the Plus or Minus key

Confirm/enter with the step key

Select desired valve

	Not implemented	**Not implemented**		
Valvetest Brewvalve Select valve	Valvetest Bypassvalve Select valve	Valvetest Coffeeairvalve Select valve	Valvetest POD valve Select valve	Valvetest Tea valve Select valve
Valvetest Milkair valve Select valve	Valvetest Milk rinse valve Select valve	Valvetest Milk clean valve Select valve	Valvetest Milk bypass valve Select valve	Valvetest Drain valve Select valve
Valvetest Milk purge valve Select valve	Valvetest Milk select valve Select valve	Valvetest RefrigeRinseValve Select valve	Valvetest MilkdrainGateValve Select valve	

Function test: Press „2x“ key. Check by visual and/or aural examination.

Leave test with the „step“ key.

Note:

The water entrance valve is activated (open) as soon as one enter the service mastercard.
(An accoustic CLICK audible)

To check the water line from boiler to mobile piston:
Valvetest „Brewvalve“, press and hold „2x“ key (water rinses out of the mobile piston)

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Inputtest CT / CTM

Test of all low voltage components
Test message: detected or not detected

Inputtest Drawer x	Inputtest Flowmeter x	Inputtest Motorswitch x	Inputtest Motorrotation x	Iputtest Beanhopper x
Inputtest POD open x	Inputtest POD Cleaning x	Inputtest Drain Tub x		

Note for „Flowmeter“:

Inputtest Flowmeter x + = shows Tics

Inputtest CTS

Test of all low voltage components
Test message: detected or not detected

Inputtest Drawer x	Inputtest Flowmeter x	Inputtest Motorswitch x	Inputtest Motorrotation o x	Iputtest Beanhopper x
Inputtest POD open x	Inputtest POD Cleaning x	Inputtest Niveau probe x	Inputtest Security probe x	Inputtest Pressostat x
Inputtest Drain Tub x				

Note for „Flowmeter“:

Inputtest Flowmeter x + = shows Tics

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Diagnostics

SECTION 6

Inputtest CTMF5

Test of all low voltage components
Test message: detected or not detected

Inputtest Drawer x	Inputtest Flowmeter x	Inputtest Motorswitch x	Inputtest Motorrotation x	Iputtest Beanhopper x
Inputtest POD open x	Inputtest POD Cleaning x	Inputtest Drain Tub x		

Note for „Flowmeter“:

Inputtest Flowmeter x + = **shows Tics**

Sensortest CT

Shows the actual temperature of
- Coffee boiler

Boiler xxC°

Sensortest CTS

Shows the actual status of
- Coffee boiler
- NTC steam
- Pressostat
- Security and level probe

Boiler xxC°
Steamtab xxC°
Presso 0 Probe 11

Sensortest CTMF5

Shows the actual status of
- Coffee boiler

- FT-Feeler
- Milk level
- NTC Floor
- NTC Container
- NTC Top

Boiler xxC°

Foamer: FT xx
Level: x Boden: xx
Wanne: xx Oben: xx

Sensortest CTM

Shows the actual temperature of
- Coffee boiler

Boiler xxC°
Milkheater 250°C
Help 0100

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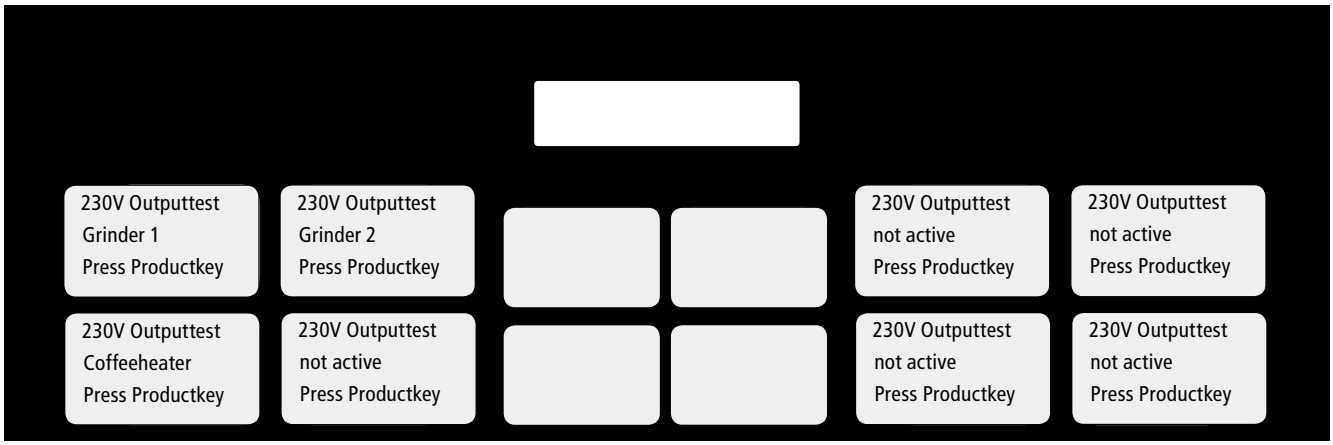
Diagnostics

SECTION 6

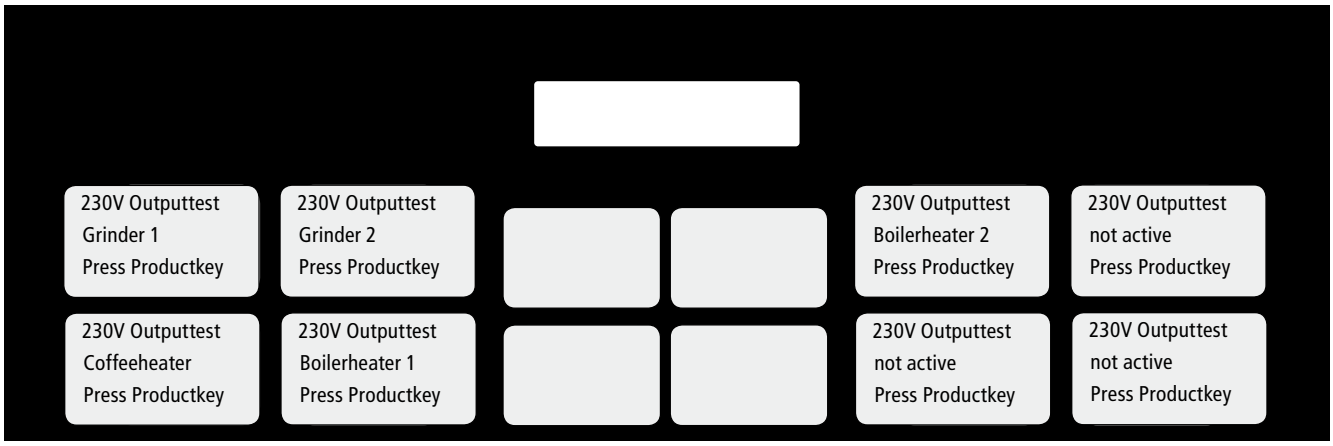
Output Test CT

Test of all high voltage components (208V / 230V)



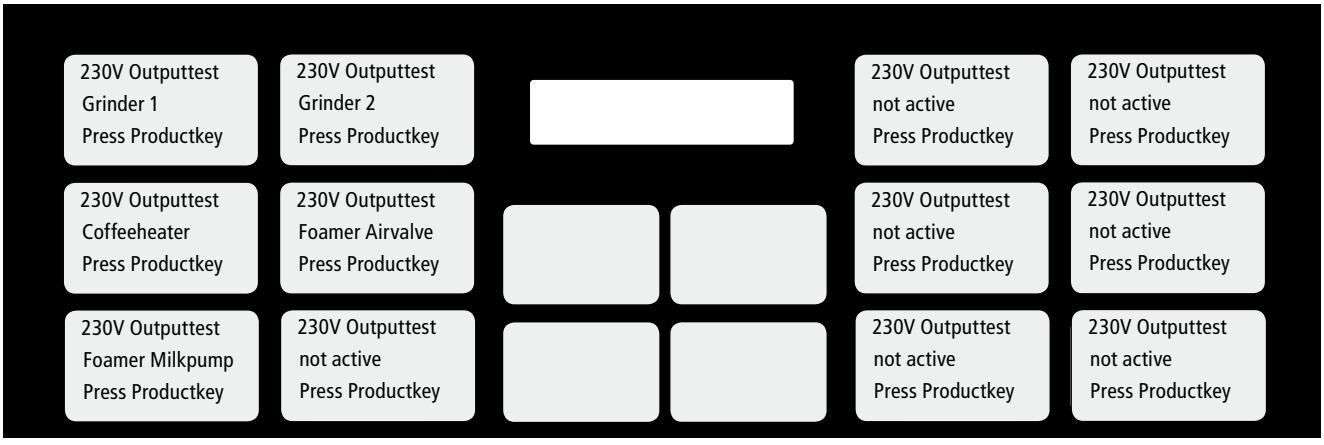
Outputtest CTS

Test of all high voltage components (208V / 230V)



Outputtest CTMF5

Test of all high voltage components (208V / 230V)



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Diagnostics

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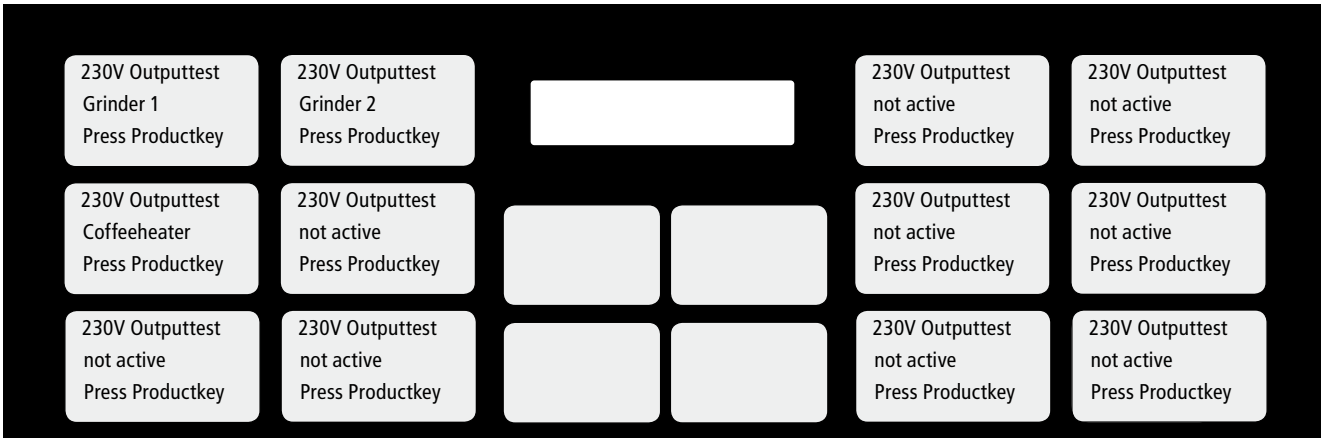
Outputtest CTM

Test of all high voltage components (208V / 230V)



Keyboard Test

Functions test of all keys
Press each key and check whether the display recognizes._

Keytest

Press Key

Clear Counter

Shows the number of all dispensed products.
The counter can be cleared by triple (3x) pressing the „2x" key.
„OK" confirms the erasure of the counter.

Supplies

Total x

Water Products

Shows the water consumption of all dispensed products in litres.
The counter can be cleared by triple (3x) pressing the „2x" key.
„OK" confirms the erasure of the counter.

Water Products

x Liter

Water Clean

Shows the water consumption of all rinse and cleaning cycles in litres.
The counter can be cleared by triple (3x) pressing the „2x" key.
„OK" confirms the erasure of the counter.

Water Clean

x Liter

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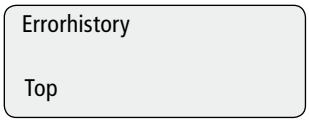
Diagnostics SECTION 6

Errorhistory

The last 16 Error messages are minuted.
They can be read out separately by pressing the Plus or Minus key.
The latest error is at first in the list.
TOP shows that now more messages are available.



Clear history: Step to the „Top" message, press and hold the „2x" key.

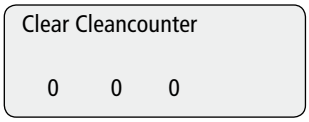
Clear Cleancounter

Select the desired diagnostic menu with the Plus or Minus key

Confirm/enter with the step key

The counter now shows the performed cleaning processes.

1. Number „Coffee Cleaning Processes"
2. Number „Milk Cleaning Processes"
3. Number „Total"



The counter can be cleared by triple (3x) pressing the „2x" key.
„OK" confirms the erasure of the counter.

Leave test with the „step" key.

By removing the Service master card, the diagnostic menu is closed.

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Display messages: Errors that can be solved by the operater	
a.	Drawer Missing
b.	Ready
c.	Ready Foamer ON/OFF
d.	Please wait
e.	Fill hopper M1 / Fill hopper M2
f.	Foamer off
g.	Clean appliance
h.	Please Rinse unit
i.	Milk not Ready
j.	Milk low
k.	Powder Error
l.	Empty Drawer
m.	Voltage high 109%
n.	Voltage low 91%
Display messages: Errors that can't be solved by the operater (service technician required)	
o.	Flow Error
p.	Change filter
q.	Piston Error
r.	NTC Foamer def.
s.	NTC Coffee def.
t.	PM Required
u.	Drain Tub
v.	Overtime error

If for any reason the machine had to be turned off, wait at least for 10 sec. before turning on again!

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Display messages: Errors that can be solved by the operater

	Display message	Description?
a.	Drawer Missing	• Drawer is not inserted – Insert drawer • Drawer sensor defective or missing – Diagnostic - Inputtest „Drawer"
b.	Ready	• Coffee machine is ready for next serving.
c.	Ready Foamer ON/OFF	– If you use the model CTM or CT MF5 the message „Ready Foamer ON" or „Ready Foamer OFF" appears on Display instead of „Ready".
d.	Please wait	• Coffee boiler has not reached set temperature – Allow machine to heat about four minutes. • High limit switches have tripped – Reset the high limit switches by firmly pushing them in. You must hear a click. • Bad heating element – Check continuity on heating elements. Activate heating element in the „OUTPUT TEST" and press the corresponding key (pressure on the gauge must increase). You can also check current temperature in the boiler in the diagnostic menu „SENSOR TEST".
e.	Fill hopper M1 (left side) Fill hopper M12 (right side)	• Bean hopper out of beans or hopper gate is closed. – Fill left hopper • Bean hopper or grinder outlet is obstructed – Remove Bean hopper and clear obstruction • Defective 24 DC Volt piston motor, pulley loose on motor shaft – Replace 24 Volt DC piston motor • Defective grinder motor capacitor – Replace capacitor
f.	Foamer off	• Milk circuit out of service. – If the milk-product-keys are not programmed for products without milk, no serving with these keys are possible. • If desired, switch on Foamer. – Press and hold the „mill 2 „ key, then press and hold a milk-product key until on the display „Foamer ON" appears.

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Display messages: Errors that can be solved by the operater

	Display message	Description?
g.	Clean appliance	• Machine has reached a pre-programmed number of brew cycles, indicating a cleaning cycle must be performed. – Perform a cleaning cycle to clear message on display
h.	Please Rinse unit	• Machine demands a rinse – Press the „Cleaning" button
i.	Milk not Ready	• Milk or milk foam being heated. – Temperature setting for milk or milk foam not yet reached. No milk serving possible. – Wait: Heating time for milk products approx. 12 minutes.
j.	Milk low	• Indicate that the container of milk is half empty. – Fill it if necessary • Defective FT-Feeler F5 – Replace FT-Feeler F5
k.	Powder Error	• Too much coffee is ground, exceeding the fill capacity in brew chamber – Push the product key that prompted the error. If error reoccurs check the powder quantity and adjust the grinder finer.
l.	Empty Drawer	• Grounds drawer has reached the programmed number of coffee pucks and needs to be emptied. – Take out puck drawer and empty it. The machine will automatically reset counter to zero. – Note: Drawer must be removed by at least 5 seconds before counter is reset.
m.	Voltage high 109%	• The option „voltage control" is working – The tension is to high. As soon as the adjusted value is reached, all products can be served again.
n.	Voltage low 91%	• The option „voltage control" is working – The tension is to low. As soon as the adjusted value is reached, all products can be served again.

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Display messages: Errors that can't be solved by the operater (service technician required)

	Display message	Description?
o.	Flow Error	• Flow meter impeller is not rotating – Obstruction inside flow meter or water path, check with diagnostic parameter "Valve Test". • Flow meter sensor does not read magnetic contacts on impeller – Pins on electrical plug are not connected or corroded, check for proper mounting of hydraulic modules • No water to machine – Verify gauge pressure on coffee boiler is above 2 bar. • Flow meter is defective – Check Flowmeter in the „Inputtest"
p.	Change filter	• Water filter is saturated. This message is displayd until the filter is changed and the water counter is set to zero. All products can be served. – Change water filter and reprogram it in „Filter" menu. Press „Clear" key three times rapidly to reset counter to zero. This will be confirmd with „OK" on the display.
q.	Piston Error	• Motor blocked b) The 24 VDC is present. Check if the brew chamber is seized against the rear aluminium block. If it's seized, release the chamber by turning on the cogwheel and push another beverage button to reset. If the problem persists check the function of micro switch in diagnostic program „INPUT TEST". c) The drive shaft is so much incrusted with an old hard coffee residue or choco late that it's no more possible for the motor to move the brew chamber or the brew chamber is blocked on the front position. Clean it and apply new grease. • No impulses d) The impulses counter doesn't work. See detailed troubleshooting page 4.6. Check the counter in the diagnostic program „INPUT TEST". When you are in the menu „INPUT" turn the bigger pulley manually and slowly, observe that you see impulses on the display (asterisk, see card instructions. • No 24VDC e) Check the plug on motor, correct insertion. f) Check fuse 6.3A on electrical drawer. a) Press the clean key.

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Display messages: Errors that can't be solved by the operater (service technician required)

	Display message	Description?
r.	NTC Foamer def.	• CPU does not read NTC probe signal – Check for defective wiring on foamer module NTC probe – Note: "NTC foamer def" message automatically appears on the display when the machine is on and the hydraulic module is removed.
s.	NTC Coffee def.	• CPU does not read NTC probe signal – Check for defective wiring on hydraulic module NTC probe – Note: "NTC coffee def" message automatically appears on the display when the machine is on and the hydraulic module is removed.
t.	PM Required	• Machine has reached a preprogrammed number of brew cycles, indicating preventive maintenance must be performed. – Perform PM as required – To clear the error message, go to parameter "Service interval" and press the "Clear" key 3 times rapidly. The display will confirm OK and the counter is set back to zero.
u.	Drain Tub	• Excess water inside the chassis below the hydraulic unit has shorted out the two pins located at the back of the chassis – Check machine for leaks
v.	Overtime error	• Grind is set too fine. The coffee flow is to slow (more then 2 minutes). – Press „Cleaning" button – Check grind setting and weight according to parameters • Waterflow blocked – Check brew valve on hydraulic module – Check air valve on mechanic module

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