

T.I. no.: 2018 - 21 Updated: -	Topic: Software 1.10.9 and pressure switch modification
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Date: 06.09.2018	Priority	Need for action
Affected machines: Schaeerer Barista	High	As soon as possible
From serial number: -	X Medium	X On next visit to the machine
As of date: -	Low	FYI only

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NEW FUNCTIONS AND IMPROVEMENTS

The following is an overview of the improvements:

New functions:

- Time zone and daylight saving time can be set

Improvements:

- New control dial – water system pressure switch – (Mod.3)
- Start temperature of coffee dispensing
- Cyclic brewer normalisation
- Extension of maintenance messages for the water filter replacement
- CAN error 9463

Start temperature of coffee dispensing

Occasionally, there have been reports from the field that the coffee is too hot at the start of coffee dispensing and that the beverage dispensing is overboiled at the outlet of the Portafilter. This has mainly been observed when the machine was heavily frequented.

Due to this high frequency, the solenoid coil of the cold water admixing valve (proportional valve) cannot cool down sufficiently due to the too short rest phases. As a result, the defined start opening of the valve is too small and too little cold water is mixed into the hot brewing water.

With the introduction of this software, the preload of the solenoid coil in the valve is now detected and the start opening of the required cold water addition is adjusted accordingly.

Cyclic brewer normalisation

Up to now, the brewer was only normalised once during the restart of the machine. The required brewing positions and the corresponding brewing runs were calculated based on this normalisation. If the value of this start normalisation changed during operation, it resulted in these error messages:

- 9560 / 9561 Portafilter underfilled / 9562 / 9563 Portafilter overfilled
- 9558 / 9559 Brewer cannot reach filling position
- F 149 during cleaning

With the introduction of this software, after every 20th brewing, the brewer is moved to the limit switch and thus another normalisation is carried out.

Extension of maintenance messages for the water filter replacement

With the new software, the maintenance messages for the water filter change have been extended.



- ▶ As soon as 75% of the set filter life is reached, a display message with the remaining filter life is displayed when switching on.



- ▶ As soon as 100% of the set filter life is reached, a display message indicating the filter life has expired is displayed every 3 hours.

Additional information:

- The water filter settings remain basically unchanged after a software update
- The same handling basically applies in self-service operation – with the difference that the message (with the exception of the morning) appears after the symbol and not in the foreground.

The display messages can be deactivated, as can all other maintenance messages.

CAN error 9463

Occasionally, users have reported that after the Portafilter has been inserted, the machine fails to react either to display inputs or to the dispensing of beverages. At this time the display and beverage buttons showed the normal ready for use condition and no error message was issued.

It has also happened that after a machine cleaning, the machine stopped at the bean image after switching on again or the machine restarted for no apparent reason.

Internal investigations and checking submitted data backups have enabled us to optimise the internal CAN queries and CAN software processes, thereby preventing the error patterns described above.

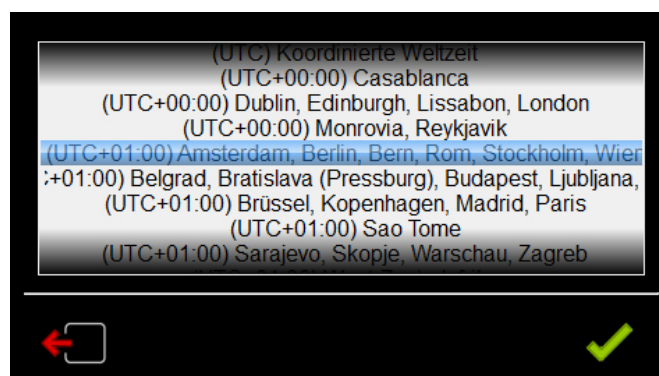
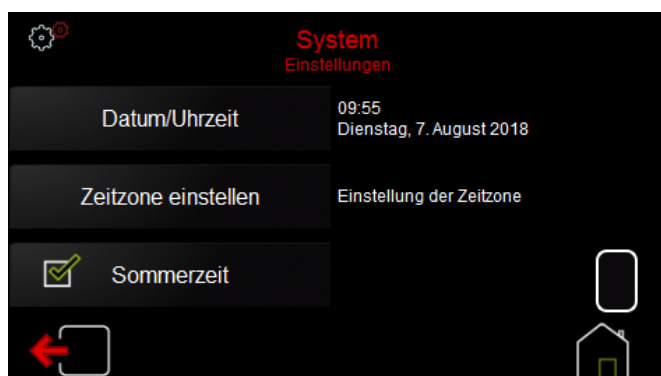
Time zone and daylight saving time can be set

With the new software, it is now possible to set the time zone and automatic changeover from summer to winter time. The advantage of this is that after "summer time" has been activated, the time on the coffee machine is automatically changed to summer or winter time.

The setting option is available both during the commissioning of new machines and at a later date with: System > Settings > Daylight saving time

Note:

A machine with a built-in telemetry module which is operated via telemetry protocol NGx3 (Coffee Connect) receives its time and date (UTC) via the NGx3 server (the System > Settings > Date/Time menu item is greyed out). The deviation from the server time is made by setting the time zone and daylight saving time.



New 0.5 bar pressure switch

Up to Mod.2, a 2.7 bar pressure switch was installed in the water inlet group. At locations where the required minimum water inlet pressure of 3 bar was not constantly guaranteed, the function – Low pressure – could be activated in the machine software. However, since the water inlet pressure monitoring is deactivated in low-pressure operation, there have been situations in which the espresso pump can dry if the water inlet pressure was too low (e.g. water supply closed), causing damage or flow errors due to pressure fluctuations.

From Mod.3 onward, a 0.5 bar pressure switch is installed in the water inlet group. In connection with a software version higher than 1.7.1 and the corresponding setting, the function – Low pressure – is then no longer available. The espresso pump runs with every action (coffee/hot water dispensing and steam boiler filling). If the water inlet pressure falls below 0.5 bar, the current actions / dispensings are cancelled and the "Low water pressure..." error message appears. Dry running and damage to the espresso pump or possible flow errors are prevented.

Series and spare parts solution

With the following serial numbers the Mod. 3 is already in series production:

5551 / and from 5553 sequentially.

Spare parts supply for machines with:

- Up to Mod. 02 – Pressure switch 2.7 bar 33.2588.6000
- As of Mod. 03 – Pressure switch 0.5 bar 33.4216.9000 AND software version higher than 1.7.1

Notes for the technician:

We recommend that machines that are currently operated at – Low pressure – should be converted to Mod.3 and updated to the latest software the next time they are scheduled for customer service.

Distinguishing characteristics

Pressure switch – 0.5 bar as of Mod.3



- Marking of head screw red
- Housing imprint in red
- Chrome-plated compression ring without inscription

Pressure switch – 2.7 bar up to Mod.2



- Marking of head screw white
- Housing imprint in white
- Chrome-plated compression ring with inscription

Important technician's note:

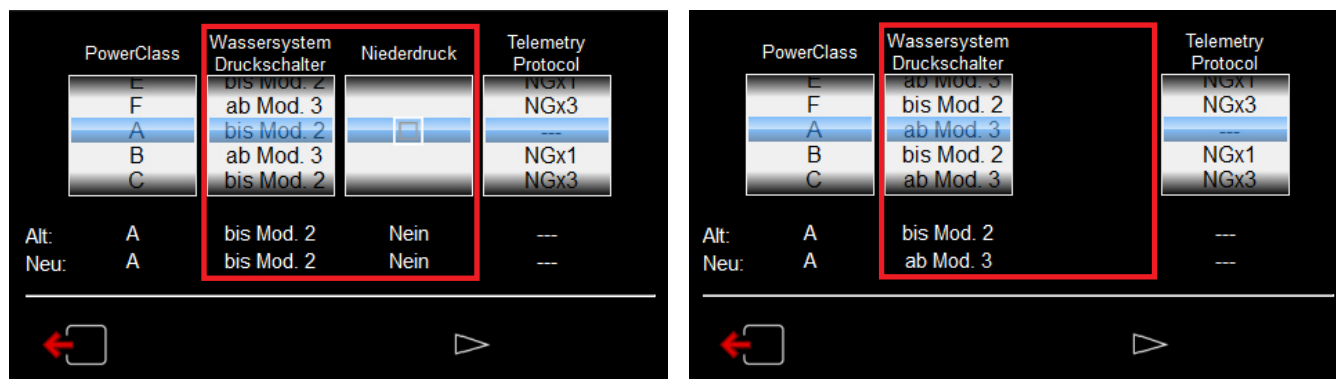
The hydraulic and electrical connections are the same for both pressure switch variants!

Software settings (from version 1.10.3 and higher)

The pressure switch used in a machine must be set in the software under "Machine equipment" on the NEW wheel – water system pressure switch.

- Setting: up to Mod. 2 -> if 2.7 bar pressure switch is installed, low-pressure operation possible
- Setting: as of Mod. 3 -> if 0.5 bar pressure switch is installed, no low pressure operation (checkbox – Low pressure – is hidden)

Service > Machine equipment > Water system pressure switch



After a software update, the previous "Water system pressure switch" setting is retained, so no additional actions/settings are required.

If a machine is converted to Mod.3, in the – Machine equipment menu – the new pressure switch with the setting – Mod. 3 – MUST be activated.

Functional description of machine with Mod.3

Water inlet pressure higher than 0.5 bar:

- Machine ready for use,
espresso pump runs with every action (coffee/hot water dispensing and steam boiler filling)

Water inlet pressure less than 0.5 bar:

- Machine NOT ready -> Error message: "Low water pressure...", current actions are cancelled. When the water inlet pressure of 0.5 bar is reached again, the machine is ready for operation.

Behaviour in WRONG configuration (pressure switch <-> software setting):

Always ensure that the configuration is correct. If the configuration is incorrect, the following errors will occur:

Case 1 – 2.7 bar pressure switch installed / but software is set to "As of Mod. 03"

Water inlet pressure higher than 2.7 bar:

- Machine ready for use,
espresso pump runs with every action (coffee/hot water dispensing and steam boiler filling)

Water inlet pressure less than 2.7 bar:

- "Low pressure" setting in the "Machine configuration" menu cannot be activated
- Machine NOT ready -> Error message: – Low water pressure... – current actions are cancelled. When the water inlet pressure of 2.7 bar is reached again, the machine is ready for operation.

Case 2 – 0.5 bar pressure switch installed / but software is set to "Up to Mod. 02"

Machine equipment – Low pressure – NOT activated:

Water inlet pressure higher than 0.5 bar

- Machine – RESTRICTED – ready for operation,
espresso pump does NOT run with hot water dispensing and steam boiler filling; if the water inlet pressure is less than 2.7 bar, the timeout error (F186) can occur when the steam boiler is being filled or there can be quantity fluctuations during hot water dispensing and excessively hot beverage dispensing.

Water inlet pressure less than 0.5 bar:

- Machine NOT ready -> Error message: – Low water pressure... – current actions are cancelled. When the water inlet pressure of 0.5 bar is reached again, the machine is ready for operation.

Machine equipment – Low pressure – activated:

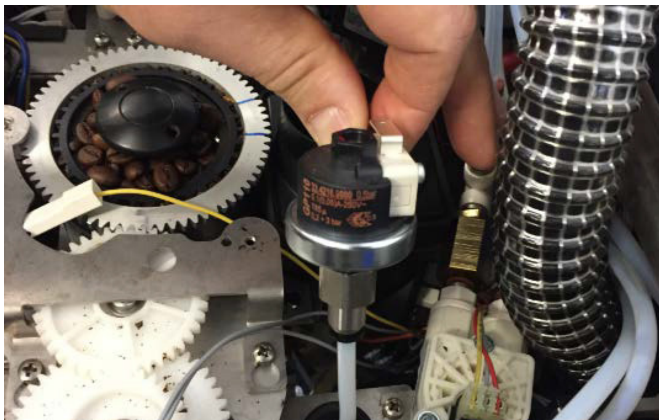
Water inlet pressure higher than 0.5 bar:

- Machine – RESTRICTED – ready for operation, espresso pump does NOT run with hot water dispensing and steam boiler filling; if the water inlet pressure is less than 2.7 bar, the timeout error (F186) can occur when the steam boiler is being filled or there can be quantity fluctuations during hot water dispensing and excessively hot beverage dispensing.

Water inlet pressure less than 0.5 bar:

- Machine – RESTRICTED – ready for operation, espresso pump runs with hot water dispensing and steam boiler filling – low water pressure is not detected, espresso pump can be damaged or a flow error can be generated.

Conversion



The following is required for the conversion:

- Degree of disassembly = top cover / front panel
- Software version higher than 1.7.1
Setting machine equipment:
Mod. 3
- Loctite 542 – Threaded seal – 33.2451.8000
For the connection:
Screw-in connector / pressure switch
- 1x 0.5 bar pressure switch



If a machine has been subsequently converted to Mod.03, this must be marked on the modification sticker with an indelible pen – this indicates that the modification has been made on this machine.