

	Technical Information	730-153-EN		V04
	Failures discovered with Cleaning Process Monitoring Indicators (CPI), having not been discovered before without CPI	Created	05.07.2018	UK
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No.	Failure cause	Failure consequence
1	Detergent damaged by storage	Enzymes, especially in solution with high pH-values, decompose at higher temperature and longer storage time and lose their cleaning efficacy.
2	Blocked spray nozzle	Spray nozzle is deflected or blocked by dirt. (Is only discovered if the indicator is positioned in the spray area.)
3	Wrong programming of the WD	Dosing of detergent and/or changing of water quality at wrong time or detergent is added after the cleaning process step.
4	Failure in central dosing from barrels	Magnetic valves of the dosing system are defect or wrongly programmed (often all WDs are affected).
5	Connection of the spray arm is leaking or cart not locked correctly	Connection of the spray arm is leaking because of worn out seals or incorrect insertion of the cart, therefore less spray strength is observed.
6	Detergent canister mixed up by mistake	Detergent and neutralizer or 2-component detergent have been mixed up or one of the components is used twice.
7	Tube from pump to chamber is not fixed or leaking	Dosage in the chamber is too low or not present at all.
8	Suction tube kinked, injection lance faulty or tube not correctly inserted in the canister	Dosing does not take place or dosage is too low.
9	Air in tube and/or pump of the dosing system	Air in suction tube after shutdown or change of canister. Pump doses incorrectly or not at all.
10	WD connected incorrectly during first installation	Water quality is not appropriate for the program step. Wrong connection of pipes during installation.
11	Leak of salt container	Salt container for water softening leaks. No softened water is provided anymore, therefore reduction of the cleaning efficacy.
12	Rinsing agent carried over	Rinsing agent valve leaks. Rinsing agent is added to each program, therefore reduction of the cleaning efficacy.
13	Wrong water quality	Because of failure during water preparation hard water and/or no demineralized water enters the WD.
14	Wrong dosing of 2-component detergent	One component of the 2-component detergent is not added because of a defect pump.
15	Detergent is diluted by liquor flowing back from the chamber	Water from the WD chamber flows back to the canister. and dilutes the detergent. Films of germs can occur in the canister over time.

These failures are reducing the cleaning efficacy. They have been only discovered after CPI have been used in routine monitoring.