

DID YOU KNOW?

NO: 295

FEBRUARY 18, 2015

PROBLEMS PRIMUS RECENTLY FOUND IN THE FIELD

Overview

Periodically, Tim Stanislav, PRIMUS National Service Manager, is requested to travel to an end user customer's facility when the customer and/or PRIMUS Authorized Service Agents (ASA) are not able to return a sterilizer to its original design state.

Root Causes of Design State Deviations

During these service visits, the root cause issues are often readily apparent and easily fixed. The majority of the issues are due to the following:

Lack of training – personnel working on the sterilizer have not attended the PRIMUS Steam Sterilizer School

Adjusting valves and process settings without proper knowledge of the impacts of such actions

Failure to conduct basic preventive maintenance

Non-PRIMUS replacement parts being used

Examples of Problems Recently Found in the Field

Plumbing/Mechanical

The steam line to the sterilizer from the steam-to-steam generator was insulated, but did not have the required drip leg

The drain from the vacuum pump was reduced from 1 ¼ inch pipe to 1 inch sweat copper. This restriction will ultimately degrade the performance and longevity of the vacuum pump

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PROBLEMS PRIMUS RECENTLY FOUND IN THE FIELD (CONTINUED)

The pin trap in the chamber drain was full of tape and paper

The jacket RTD was found to be touching the chamber wall

Solenoid valves and check valves were found to be worn out

The drain check valve was upside down and the heat exchanger check valve was at a 45-degree angle pointing downward

The drain valve and heat exchanger check valve internals had fallen apart

The unions from the heat exchanger were only hand tight

The ½-inch ball cone check valve for the steam trap was worn out

The gasket retract solenoid valve was leaking

The water to the heat exchanger solenoid valve was missing one of the four bolts that hold it together

The drain valve, gasket retract valve, water quench valve, and the water-to-heat exchanger valve all needed replacement

The water quench needle valve was worn out

The door handle was loose as were the wheels on the transfer carriage

Process Settings

The gasket pressure air regulator was set at 85 PSIG instead of the required 30 PSIG

Found the chamber drain bleed valve only open ¼ turn instead of the normal two (2) full turns. This size sterilizer needed at least two turns open. Depending on the size of the sterilizer, this could be anywhere from 1/4 turn to 2 turns or more open

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The vacuum pump vacuum breaker was set to open too soon and would not let the sterilizer pull vacuum below 4 PSIA

The steam-to-chamber regulator was set between 45 and 50 PSIG instead of the required 35 PSIG

The chamber trim valve was adjusted to be fully open instead of being adjusted to cause the sterilizer temperature to control in the required tighter band

The gasket bleed needle valve was opened two full turns. This valve should be opened no more than a quarter turn

Calibration

The chamber was incorrectly calibrated:

Low setpoint 60.9 – should have been 90
High setpoint 60.9 - should have been 135

The load probe had not been calibrated

Controls and Electrical

The battery in the UPS was bad and had not been replaced

The Opto 22 rack was loose. The Opto 22 rack had a piece of foam on top of it with the controller placed on the foam

The dual power supply was not bolted down to the back plate

The gasket pressure switch had failed closed, had loose connections and was the wrong type of switch

The drain solenoid valve had the wrong coil on it and the wires were twisted together and covered with black tape

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The steam-to-jacket valve had the wrong coil on it and the wires were twisted together and covered with black tape

Loading the Sterilizer

Items placed in the sterilizer were not dry

Shelves were overloaded to the point where no steam could properly penetrate the load

Items placed in tubs that did not allow for proper air removal

Conclusion

All of these problems are easily avoided by simply doing the basics day in and day out.

As stated at the beginning of this DYK, end user facility management must make sure operating and maintenance technicians are properly trained, are using PRIMUS replacement parts, are conducting PMs on a routine basis, and are keeping unqualified personnel from adjusting sterilizer parameters.

It is really that simple and straightforward to achieve outstanding sterilizer uptime and low overall cost of ownership.

PRIMUS Steam Sterilizer School

A great place to start improving a facility's sterilizer operations is by having key personnel attend the PRIMUS Steam Sterilizer School.



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The next three-day school is scheduled for May 12 -14, 2015 at the PRIMUS Training Center in Omaha, Nebraska.

Please contact Connie Mansfield at (402) 344 – 4200 Ext. 1229 to sign up over the phone or complete the process on the PRIMUS website at www.primus-sterilizer.com.

PRIMUS Contacts

For questions, comments or further information, please contact Tim Stanislav at (402) 344-4200 Ext. 1701 or Dave Schall, PRIMUS Director of Sales/Service/ Aftermarket, at Ext. 1212. Tim and Dave can also be reached via e-mail at tstanislav@primus-sterilizer.com and dschall@primus-sterilizer.com.



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