"Tech Talk"

Pelton & Crane Validator Plus 8 ... That Annoying Little Error Code P2

by Phil Goldstein, RPI Product Development

In this day and age when computers talk to us, cars park themselves and machines have self diagnostics capabilities, you'd think troubleshooting would be a breeze.

But every now and then you run into a situation where that familiar Error Code just isn't enough help. You address every symptom and probable cause listed in the manual and still find yourself at a loss.

Case in point – I was recently working in the RPI lab on a Pelton-Crane Validator Plus-8 with a P2 Error Code. The machine would Fill, go into the Sterilize mode and hit 241kPa at approximately 122°C, which is 13°C below the cross over point (temperature vs pressure). This wasn't the first time I addressed the P2 code with the Validators, so I thought I'd have the machine up and running in no time.

I started with the steam sensor. Upon examining the wire connections in the connection plug, I spotted a small amount of corrosion around the wire and pin. Oh good, problem solved. After replacing the steam sensor, I ran another cycle. No good. P2 came up again.

Up next for review was the bellows solenoid. If it does not open and close properly, the machine will trap cold air. After removing the solenoid and inspecting the internal parts, I simply cleaned the seat, plunger, stop blank, spring, replaced the o-ring, and reassembled the valve. I also took the time to inspect the other solenoid valves since the bellows valve was a bit dirty.

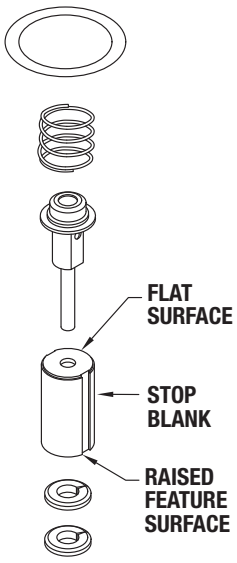
With everything back together, I ran another cycle. And for all my efforts, all I got was another P2. So I turned my attention to the heating aspect of the machine in question and inspected the heating element and the driver board. I could not see any physical damage to the heating element and leads; and the resistance values were correct. The LED on the board reacted as it should during heat up; and the Triac displayed the proper resistance values.

At that point I decided to go back and rebuild all the solenoid valves – but to no avail. By now I can feel a few more hairs turning grey, so I asked Mark (another RPI tech support engineer) to have a look at the machine to see what I was missing.

It wasn't until day three of troubleshooting that Mark noticed I had installed the STOP BLANK on the Bellows Valve (RPI Part #PCK204) upside down *(see illustration for proper orientation)*. We flipped it, reinstalled the valve kit and ran our first successful cycle.

Something so simple caused me so much grief. The lesson learned is that it doesn't really matter how many times you've done something – the simplest of things can be over looked.

BELLOWS PLUNGER KIT
(RPI Part #PCK204)



An upside down Stop Blank will result in a P2 Error Code. Make sure the flat surface is up and the raised feature surface is down.

As featured in ***the Alternate Source***® January 2011; Volume 9, No. 3

replacement parts industries, inc.
20338 Corisco Street • Chatsworth, California • 91311
Call (800) 221-9723 • Fax (818) 882-7028 • Email www.order@rpiparts.com