How to change a pump element on a P203 Pump

The most common problem with a P203 pump is pump element failure due to contamination inside the pump. This causes the pump to be unable to build enough pressure to cycle the indicator pin on the primary valve. The problem is that contamination has built up on the check valve of the pump element allowing the pumped grease to leak back into the pump. It is fairly easy to change the pump element and get your grease system back to working if you follow these steps.

1.) Turn on the power to the pump at the key and unplug the power at the pump. This allows you to control the power to the pump at the pump instead of moving back and forth to the cab.

2.) Remove the old pump element. When you remove the old element, make sure the piston, spring and washer are intact. If they come off the element and are left in the pump, they will have to be removed or you will risk damaging the motor if they get in its way.

3.) Cut the pump on and allow the empty space where the old element was to be filled with grease. This step is done to remove as much air as possible and to allow the pump element to prime faster. This usually only takes a few seconds, but in very cold temperatures or when using heavier greases, it can take a couple of minutes. Allow the grease to come to the edge of the opening.

4.) Insert the new element without assistance from tools. Remember that you are threading a metal object into plastic and you do not want to force it. If you have to use a tool to get it on, you will almost certainly cross-thread it. If the element does not want to go in or wants to slide to one side, you can cut the pump on for a split second to move the cam so it does not restrict the element. The cam will be in the way about 25% of the time. There is a plastic washer that must be on the element and will fit into a groove on the pump housing. When putting a new element on a Dropsa pump, do not use the washer. Only use a tool to tighten the element on the last turn but remember not to over tighten it.

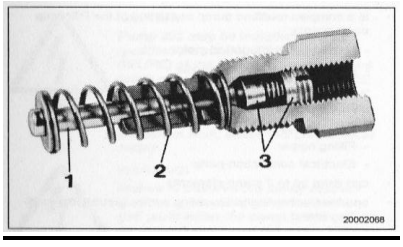
5.) Once the element is in place, turn on the pump before you hook up the line so the element can prime. Let the pump run until grease comes out of the element. This process can take 2 - 15 minutes. If you did step 3, then it should be closer to 2 minutes.

6.) Cut the pump off, replace the main line and cut the pump on again. Reset the pump and let it cycle. Within 2 minutes, the indicator pin on the primary valve should start moving. If you have a fault indication pump, you need to let the system run until it stops on its own. This will clear the fault and the pump will start back to its normal cycle time.

It is important to understand that if the pump element was contaminated, the contaminated grease may still be in the pump and the new pump element may fail again shortly if it is not removed. When we change elements in the field, we try to determine if the pump is still contaminated and if it is, we take it back to our shop, strip it down, clean all the parts, and test it before it goes back out. If it does not look too bad or bringing it back to the shop is not an option, we may field clean it by removing as much of the old grease as we can.

Contamination is most commonly introduced by incorrect filling procedures (filling through the top). The pump can also become contaminated due to a cracked lid or pumping contaminated grease from a drum into the pump. The correct way to fill the pump is by using the grease fitting on the front of the pump and pumping clean grease into the system. Lincoln has introduced a new lidless reservoir which would force everyone to fill the system the correct way.

If you have any questions or problems with this subject, please contact me at 225-869-1006.



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