

What to do when you get water in your Drainac™

Introduction

Your Drainac has been designed to give you years of trouble free service. With no moving parts, the Drainac has the least required maintenance of any freeness analyzer. Under certain circumstances, however, it is possible that flush water or stock filtrate can force its way back into the system and immerse one or more of the pneumatic elements. When this happens, it can be necessary to service or replace these components

How does water force its way back into the Drainac?

There are only a few ways that water can force its way back into the system.

Loss of Plant Air Supply: If you experience a loss of or reduction in plant air supply pressure for some reason, then the system will be unable to prevent the stock filtrate or flush water from forcing its way back into the pneumatics. The booster is placed so as to protect the upstream pneumatics from flooding, but excessive flow or overpressure can cause the booster to fail and allow liquid to flow past.

Ball Valve Closed: If the ball valve is closed and the system is not placed in hold mode, then the system will continue to sample and flush. In this case, the flush water can create the same problem as above and force its way back into the pneumatics.

Improper Regulator Settings: The differential pressure regulators were set for proper operation of your Drainac at startup. Subsequent adjustment of these pressure settings must be done with care. Setting exhaust pressures too low, for example, can cause back flooding of the instrument.

Indications that you have experienced a flooding event include evidence of water dripping from the bleed holes of the booster assembly, the presence of fibers and/or water in the pneumatic lines and evidence of water dripping from the pneumatic exhaust drain located on the right rear under side of the control cabinet.

Now What?

Both the booster and differential pressure regulator can tolerate some degree of immersion and recover, but will, in time, require service or replacement as a consequence of subsequent corrosion of

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the internal components. This is particularly so if you get stock filtrate flooding the equipment as opposed to pure flush water. The filtrate tends to be more corrosive than flush water and carries particulates which, in addition to corrosion, can clog the various internal plates and orifices.

Servicing the Booster or Differential Pressure Regulator

If the flooding event is detected soon enough, it may be possible to service, clean and re-lubricate the volume booster and/or differential pressure regulator as opposed to replacing them. Specific procedures for servicing these components are available for download from the Thompson Equipment Company website. Please point your browser to www.teco-inc.com.

Please be aware, however, that the Drainac relies on the proper operation of these precision pneumatic components. Any variation in performance will directly impact the reliability of the Drainac measurement. If there is any question as to the extent of the damage caused by a flooding event, TECO recommends replacing these components as opposed to servicing them.

Replacing the Booster or Differential Pressure Regulator

If you choose to replace these pneumatic components, please be aware that the differential pressure regulator is custom-made for our application. While similar in appearance to standard pressure bias relay models, the Drainac regulator is not the same as the standard model. Standard pressure bias relay models should not be used. Please only use regulators provided by TECO.

Other pneumatic components are standard models, however, please be advised that TECO does not warrant the performance of any pneumatic component acquired from third party sources.

TECO Part Numbers

F1001P001 Stock Line Biasing Regulator Assembly – Exhaust
F1001P002 Stock Line Biasing Regulator Assembly – Intake
F8014P Volume Booster Assembly

Please contact Thompson Equipment Company for the latest prices and availability.

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