Agilent Technologies

1100 HPLC Pump Repair Procedure

Exchanging Pump Seals & Seal Wear-in

Exchanging the Pump Seals and Seal Wear-in Procedure

When required:

❑Seal leaking, if indicated by the results of the leak test

Tools required:

❑ 4-mm hexagonal key, Wrench 1/4 inch

Parts required:

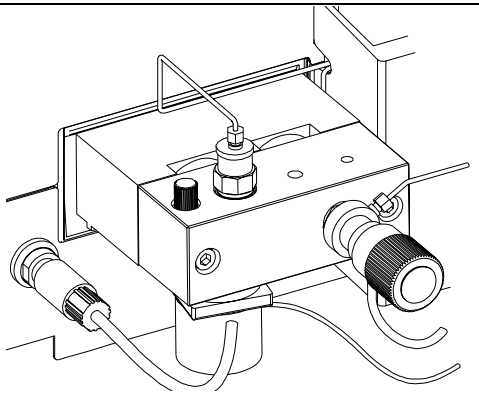
❑ Seals (pack of 2) 5063-6589 (standard) ***or*** 0905-1420 (for normal phase applications)

For the seal wear-in procedure:

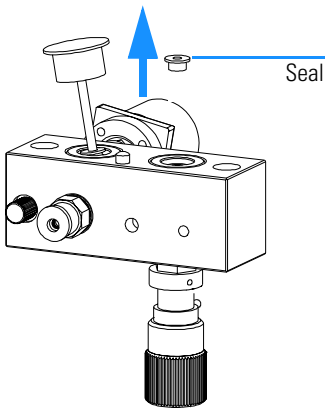
❑ Adapter AIV to inlet tube (0100-1847)

❑ Restriction capillary (5022-2159)

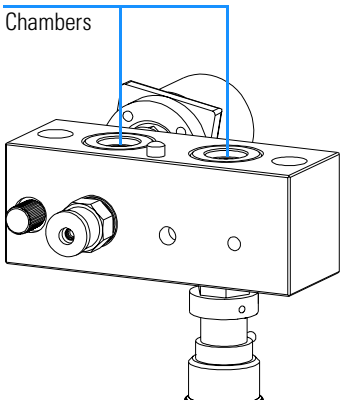
1 Disassemble the pump head assembly (see "Removing and Disassembling the Pump Head Assembly" on page 110).



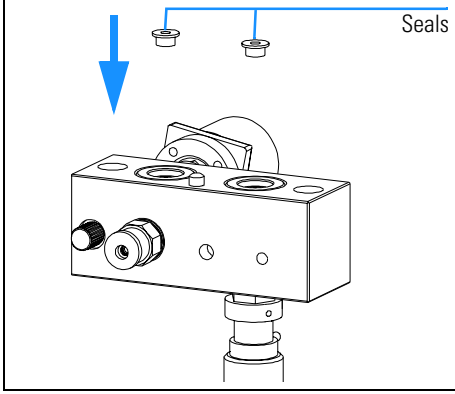
2 Using one of the plungers carefully remove the seal from the pump head (be careful not to break the plunger). Remove wear retainers, if still present.



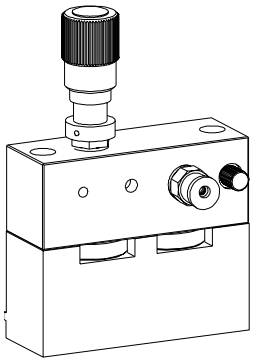
3 Clean the pump chambers, ensure all particulate matter is removed. Best cleaning results will be achieved by removing all three valves (see pages 103, 106 and 108) and injecting solvent into each chamber.



4 Insert new seals into the pump head.



5 Reassemble the pump head assembly (see "Reassembling the Pump Head Assembly" on page 121). Reset seal wear counter and liquimeter as described in the documentation.



Seal Wear-in Procedure

NOTE **This procedure is required for standard seals only (5063-6589), but it will definetely damage the normal phase application seals (0905-1420).**

1. Place a bottle with 100 ml of Isopropanol in the solvent cabinet and place the tubing (including bottle head assembly) of the channel used for the wear-in procedure in the bottle.
2. Unscrew the connecting tube from MCGV to AIV. Screw the adapter (0100-1847) to the AIV and connect the inlet tube from the bottle head directly to it.
3. Connect the restriction capillary (5022-2159) to the purge valve. Insert its other end into a waste container.
4. Open the purge valve and purge the system for 5 minutes with isopropanol at a flow rate of 2 ml/min.
5. Close the purge valve, set the flow to a rate adequate to achieve a pressure of 350 bar. Pump 15 minutes at this pressure to wear in the seals. The pressure can be monitored at your analog output signal, with the handheld controller, Chemstation or any other controlling device connected to your pump.

6 Turn OFF the pump, slowly open the purge valve to release the pressure from the system, disconnect the restriction capillary and reconnect the outlet capillary at the purge valve and the connecting tube from MCGV to the AIV.

7 Rinse your system with the solvent used for your next application.