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Innovating the HP Way

Exchanging the Multi-Channel Gradient Valve on the G1311A, 1100 Series Quaternary Pump

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Page 1 of 6

Exchanging the Multi-Channel Gradient Valve (MCGV)

NOTE

The lifetime of the multi-channel gradient valve can be maintained by regularly flushing the valve, especially when using buffer solutions. If using buffer solutions, flush all channels of the valve with water to prevent precipitation of the buffer. Salt crystals can be forced into an unused channel and form plugs that may lead to leaks of that channel. Such leaks will interfere with the general performance of the valve

When using buffer solutions and organic solvents in the HP 1100 Quaternary Pump it is recommended to connect the buffer solution to one of the bottom ports and the organic solvent to one of the upper gradient valve ports. It is best to have the organic channel directly above the salt solution channel (e.g., A - salt solution, B - organic solvent).

Parts required

MCGV (exchange assembly, G1311-69701)

Tools required

Pozidriv #1

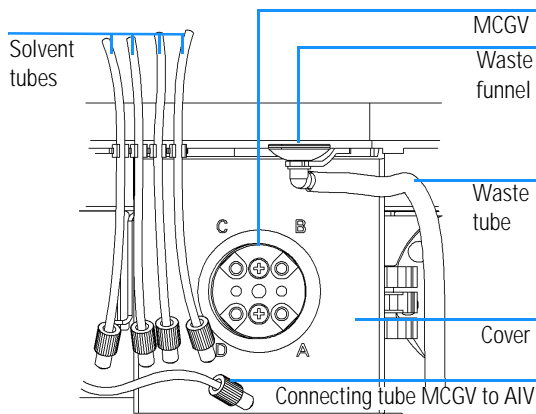
Preparations for this procedure

Switch the quaternary pump off at the power switch.
Remove the front cover to have access to the pump mechanics.

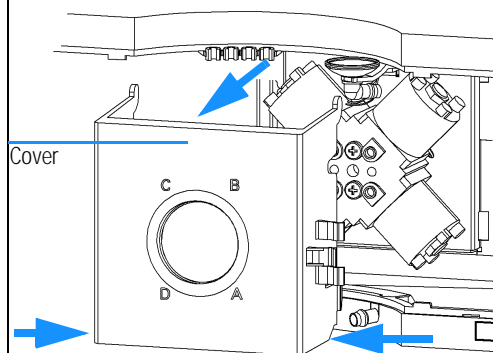
Repairing the Pump

Exchanging the Multi-Channel Gradient Valve (MCGV)

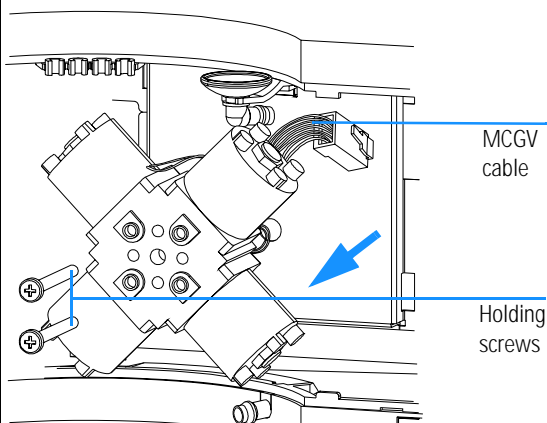
1 Disconnect the connecting tube and the solvent tubes from the MCGV, unclip them from the tube clips and place them into the solvent cabinet to avoid flow by hydrostatic pressure. Unclip the waste tube from the cover and remove the waste funnel from the pump.



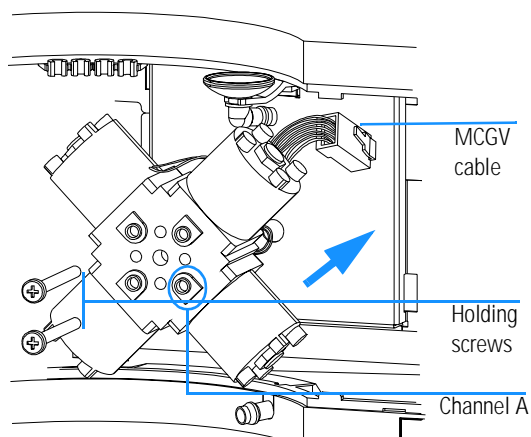
2 Press the lower sides of the cover to unclip it. Remove the cover.



3 Disconnect the MCGV cable, unscrew the two holding screws and remove the valve.



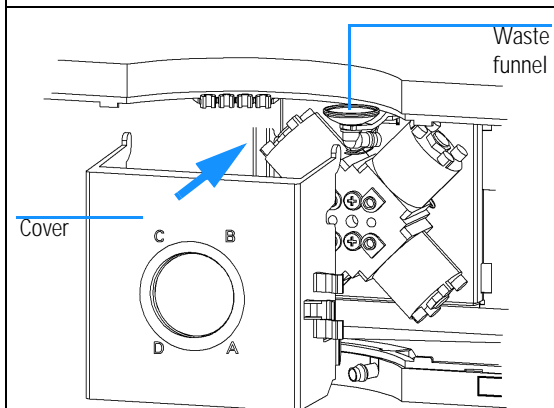
4 Place the new MCGV into position. Make sure that the valve is positioned with the A-channel at the bottom-right position. Tighten the two holding screws and connect the cable to its connector.



Repairing the Pump

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5 Replace the MCGV cover. Reconnect the waste funnel with the waste tube holder in the top cover. Insert waste tube in the holder in the waste pan and clip tube to the MCGV cover.



6 Reconnect the tube from the active inlet valve to the middle position of the MCGV and then the solvent tubes at channel A to D of the MCGV. Make sure the orientation of the channels on the cover is labelled as shown below, otherwise re-label the cover.

