Pilot Valve Spool Removal & Replacement

1. Close the manual inlet isolation valve, the manual outlet isolation valve, the manual brine valve, and any external source of pressure to the pilot valve assembly. Follow the instructions on page 65 for depressurizing the system before proceeding.
2. Disconnect the power to the MVP controller.
3. Manually rotate the position dial on the pilot valve clockwise to position #1 to relieve pressure. Allow the flow of water to drain to stop before proceeding.
4. Remove the panhead retaining screw located at the bottom front portion of the pilot valve body (refer to Figure 114). Grasp the position dial and pull the pilot valve spool assembly from the pilot valve body.
5. A retaining clip on the rear of the position dial secures the pilot valve spool assembly to the position dial. Using a screw driver, gently pry the retaining clip off of the pilot valve spool.
6. LIGHTLY lubricate all seals on the replacement pilot valve spool with Dow Corning #11 silicone grease and assemble the position dial onto the pilot valve spool assembly.

NOTE **When inserting the pilot valve spool assembly on to the position dial, the larger flat portion of the pilot valve spool assembly must align with the ALIGN TO FLAT indicating arrow.**

7. Insert the new pilot valve spool assembly into the pilot valve body. Make sure that the #1 on the position dial aligns with the pilot valve body position indicator arrow.
8. Replace the small panhead retaining screw to secure the pilot valve spool assembly into the pilot valve body. Open the manual inlet isolation valve.
9. With the pilot in position #1, bleed the air from valves 1 and 4 of the Brunermatic valve. Allow Backwash to continue for 10 minutes.
10. Slowly rotate the position dial clockwise to the H position. Bleed the air from valves 2, 5, 6, and 17 of the Brunermatic valve.
11. Once the system has been repressurized, open the manual outlet isolation valve, manual separate source isolation valve (if installed) and manual brine valve. Close the external by-pass valve and restore power to the MVP controller.

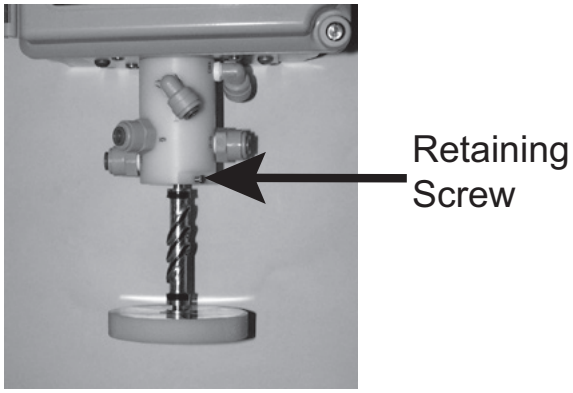

Figure 114.

Pilot Valve Assembly Removal

1. Refer to steps 1 thru 3 under "Pilot Valve Spool Removal & Replacement" on page 71.
2. Mark and remove all pilot valve tube connections from the pilot valve body.
3. Disconnect the four quick connect wire leads from the microswitches. Also disconnect the two motor leads from the circuit board. See Figure 115 and Figure 116.
4. Remove the 2 large panhead screws with nuts located at the bottom of the enclosure that secure the pilot valve body assembly. The pilot body assembly will now separate from the enclosure.
5. Refer to "Pilot Valve Assembly Replacement" on page 73 for reinstallation instructions.

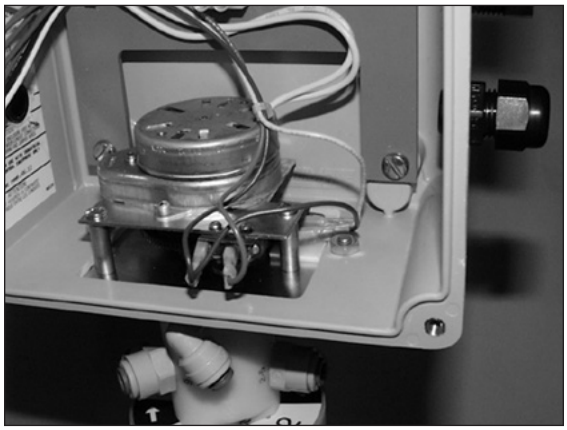

Figure 115.

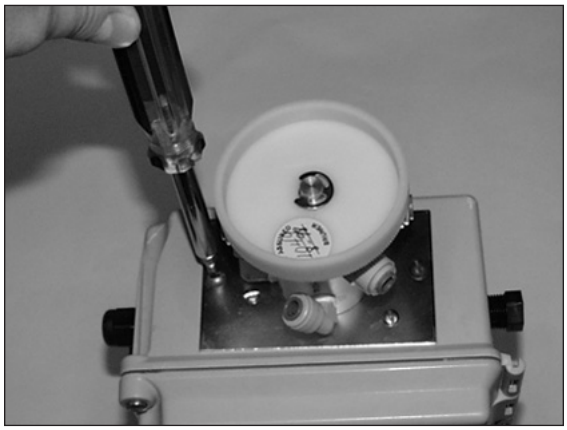

Figure 116.

Pilot Drive Motor Assembly Replacement

1. Refer to steps 1 thru 5 under "Pilot Valve Assembly Removal".
2. The pilot valve drive motor assembly is held in place with 3 panhead screws. Remove the screws and disconnect the motor leads.

NOTE **At this point it is also advisable to visually inspect the cam gear and microswitches for any wear indicating the need for replacement.**

3. Install the replacement pilot valve drive motor assembly making certain that the gears and assembly are properly engaged. Securely tighten the 3 screws and reconnect the motor leads (Figure 116).
4. Reinstall the pilot valve body assembly in the enclosure. Make certain the pilot valve position faces left when viewed from the front of the controller. Reconnect the four quick connect wire leads to the microswitches. Connect the two motor leads to the circuit board. Reconnect all pilot valve tube connections.

Pilot Valve Assembly Replacement

NOTE The cam gear is designed to only be installed one way onto the pilot valve spool.

1. The flat portion of the pilot valve spool must align with the flat side of the cam gear's pilot receptacle. When properly positioned, the cam will snap into place on the pilot valve spool.
2. Replace the pilot drive motor assembly making certain that the gears are properly engaged. Securely tighten the three screws.
3. When installing the replacement pilot valve body to the bottom of the MVP enclosure, make certain the word POSITION faces the left side when viewed from the front. Securely tighten the two panhead machine screws with nuts removed in step 4 of the "Pilot Valve Assembly Removal" on page 72.
4. Reconnect the four quick connect wire leads to the appropriate microswitches and the motor leads to the primary circuit board.
5. Reconnect the pilot valve tubing to the pilot valve body.

NOTE Refer to the appropriate tubing diagram located in this manual.

6. Slowly open the manual inlet isolation valve.
7. Slowly manually rotate the position dial clockwise back to position #1 allowing water to flow to the drain. Bleed the air from valves 1 and 4 of the Brunermatic valve. Allow Backwash to continue for 10 minutes.
8. Rotate the position dial slowly clockwise to the H position. Bleed the air from valves 2, 5, 6, and 17 of the Brunermatic valve.
9. Once the system has been repressurized, open the manual outlet isolation valve, manual separate source isolation valve (if available) and manual brine valve. Close the external by-pass valve and restore power to the MVP controller.