

Service Bulletin

Bulletin No. 01-07
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To: ITW Ransburg and ITW Automotive Finishing Distributors
Subject: Installation & Use of MVR Trigger Valve Kit (P/N A10610-00)

BACKGROUND

The 76624 series weepless MVR valve was designed to be an alternate to the TR-SSMM series weeping style MVR valve and eliminate the need to have a drain line connected to the MVR valve. The weep port on the older style valve served two purposes: 1) it allowed the fluid being controlled by the valve to act both as the seal and as the lubricant between the needle valve and the bushing. 2) it prevented fluid pressure from passing from the upstream side of the valve to the downstream side when the valve was in the "off" state (not passing fluid) by allowing that pressure to pass out the weep port. While adding the upper and lower seals to the valve did eliminate weeping of the fluid, it, in turn, also eliminated the avenue for release of pressure. The valve is not a true shut-off valve in that it does not shut the fluid supply off completely but rather throttles the flow rate to zero (or very close to zero). With low viscosity materials and/or high inlet pressures, fluid can weep across the needle from the inlet port to the outlet port.

INDICATIONS

This manifests itself by a pressure buildup between the MVR valve and the applicator during extended trigger off times. This is evidenced by a burst of fluid exiting the applicator immediately after the trigger on event and then the fluid flow dropping back to normal within a second or two.

MODIFICATION

If this pressure buildup is undesirable and the inlet pressure of the MVR cannot be lowered or the viscosity of the material increased, a "trigger" valve can be installed prior to the MVR valve and that trigger valve connected in such a way that it opens any time the applicator is triggered. In that way, when the applicator trigger is off, the "positive off" trigger valve will prevent fluid pressure from weeping by the MVR valve.

INSTALLATION

The MVR Trigger Valve Kit (A10610-00) includes two CCV style trigger valves, one 24 VDC solenoid valve and all of the necessary fittings to install the kit. Both trigger valves should be piloted at the same time from the included solenoid valve and the solenoid valve should receive its signal simultaneously with the applicator trigger signal and the trigger signal into the DynaFlow control console. Alternately, the solenoid valve can be eliminated if an air pilot signal is available that parallels the applicator trigger signal.

If independent channel trigger delays are being programmed in the DynaFlow for any reason and it is desirable to activate the two trigger valves independently, the DynaFlow has independent MVR Enable signals for each channel. These signals would have to be connected to independent solenoid valves and each solenoid valve would pilot its own trigger valve. If operated in this manner, an additional solenoid valve would be necessary.

Refer to connection diagram below. If independent control of the trigger valves is desired, refer to the DynaFlow Operator's manual to connect the solenoid valves to the appropriate MVR Enable signals.

