

MA957 Clogged Needle Valve Repair Procedure

Over time dirty CO₂ gas flowing through the regulator will start to deposit dust and dirt in the small gas line located inside the needle valve. When these deposits become large enough the gas flow becomes restricted and eventually will stop. When you add more gas pressure, forcing the gas pass the inline restriction, the flow will start back but as the backpressure subsides the gas flow and bubble count will also diminish and will again eventually stop. This yo-yo effect causes the operator to apply even more pressure from the large black main regulator knob (Macro adjustment) until the backpressure is so high that the solenoid will not close, even when power to the solenoid is turned off. This high backpressure in the solenoid piston chamber will allow gas to continue to flow through the regulator dropping the pH to 5.5 causing a catastrophic effect on all biological life in a tank.

Field repair procedure - Turn the tank off and take the regulator off the tank. Take the bubble counter off the regulator needle valve. Open the needle valve all the way open by turning the knob counter-clockwise until it stops.

Use a 1/16" drill and go through the top hole of the needle valve and drill through the base of that hole until you feel the drill pass through into the main chamber. Drill time is only about 2 seconds at full drill speed. Turn the regulator over and tap the needle valve on a table to knock out the drill filings. Remount the regulator. **Note:** If 1/16" drill is not available then go to next size which is a 5/64" drill bit.