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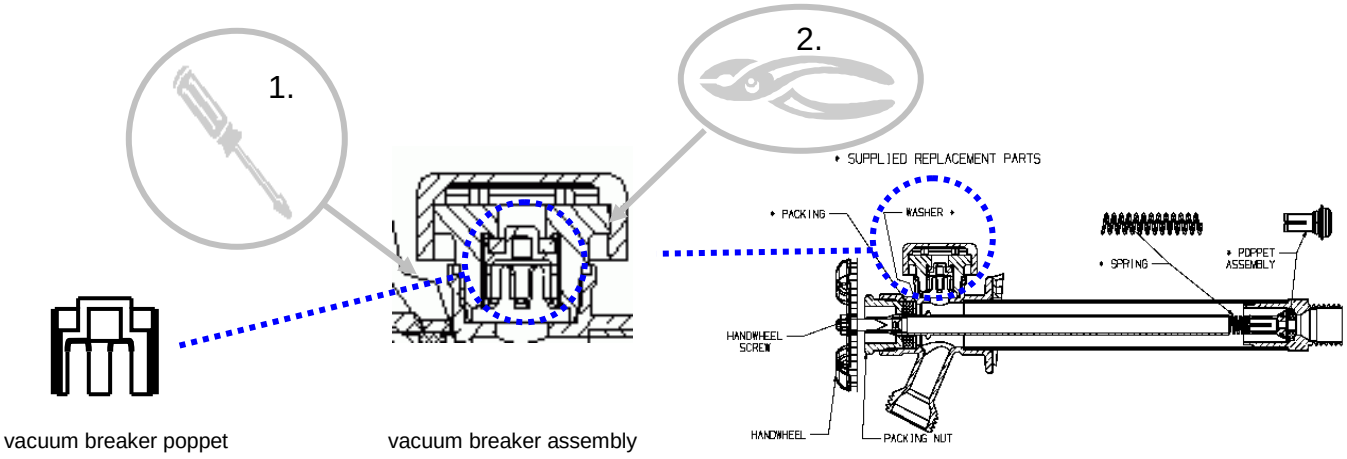
Technical Bulletin

Fig. #90 – Anti-Siphon Repair



The NIBCO Figure 90 Frostproof valve (sometimes referred to as a sillcock or hydrant) employs an integral vacuum breaker. The vacuum breaker's function is to prevent any potential siphon effect (via a connected garden hose) in the event of a significant drop in line pressure, thus preventing undesired backflow that could draw contaminants into the potable water supply.

The vacuum breaker is contained in a plastic housing that is assembled into the top of the valve via a threaded connection. Inside the housing is a small plastic component known as a vacuum-breaker poppet. The poppet floats vertically within the housing to provide a watertight seal, when water is flowing through the valve. The plastic housing is designed with a slotted channel to ensure that the poppet's sealing gasket remains aligned correctly with the plastic housing's sealing surface.

The poppet employs an elastomeric disc (gasket) that rests flat against a rounded, slightly protruding surface within the vacuum breaker's plastic housing. The water pressure within the valve forces the poppet up against this sealing surface, preventing external leakage through the vacuum breaker during operation.

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If leakage occurs through the vacuum breaker, this usually indicates some debris has been lodged in the vacuum breaker's poppet channel or has been deposited on the poppet's sealing gasket, interfering with the operation of the poppet's sealing ability. To stop this leakage, the vacuum breaker must be disassembled and the components cleaned of debris. This can be accomplished by rinsing the components with clean water. If leakage persists after cleaning, the poppet should be replaced.

To disassemble the vacuum breaker assembly and clean the components:

- Remove the tan colored cap by wedging a screwdriver shaft between the valve body and the cap, prying upward (the cap should pop off with minimal effort, as it is just pressed on).
- Remove the vacuum breaker's plastic housing by turning it counter-clockwise with a pair of pliers (taking care not to distort the plastic housing out-of-round).
- Clean and rinse the components in clean water, clearing away any debris from the housing and the poppet.
- Replace all components and re-assemble the valve.

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