

OPERATING & MAINTENANCE INSTRUCTIONS

COMBINATION AIR VALVE FIGURE NOS. 945 & 945H OM0.5-4-945/945H-0703

GENERAL: The Combination Air Release valve performs 2 functions. 1)–as an Air Release valve designed to release small quantities of air from water systems, as it accumulates, while under normal working pressure conditions. 2)–as an Air/Vacuum valve to vent large quantities of air during the filling mode & to open to allow atmospheric air back into the line to prevent vacuums from occurring when draining the line.

INSTALLATION: The valve is installed generally at high points in the line or places of abrupt changes in the elevation of the pipeline. The valve should be installed in a vertical position with an inlet isolating valve to permit servicing. If installed in a vault adequate venting & freeze protection must be provided. If a momentary slight spray is undesired the exhaust port may be piped to a free drain.

OPERATION: The Combination Air Valve is fully automatic & operates by way of floats. When there is no fluid within the valve, the floats will lower opening both orifices.

As air is expelled fluid enters the body the floats rise closing the orifices. The air/vacuum float will remain closed as long as the system is pressurized. And will only open when the line is drained to allow atmospheric air to enter the line to prevent a vacuum.

Small quantities of air that enter the body displaces the water causing the air release float ball to drop, venting the air which allows the float to rise again closing the orifice. This cycle is repeated as air accumulates in the valve body. The larger air/vacuum float remains closed.

MAINTENANCE: A periodical visual inspection should be conducted, every 3/6 months, to check for proper operation. See In-Line Test Procedure.

LUBRICATION: None is required **TOOLS:** No special tools are required.

IN-LINE TEST PROCEDURE: Close the isolating valve & slowly open the lower body pipe plug to drain the valve, the float balls will drop opening the valve. Reinserting the pipe plug , slowly open the isolating valve to allow water into the valve. The floats should float upward & shut off tight.

TROUBLESHOOTING: A continuous discharge of water from the exhaust ports may indicate a worn or damaged seat or perhaps foreign debris caught between the ball and the seat. It is recommended that the valve is disassembled, the internals be inspected, cleaned, and replaced if necessary.

DISASSEMBLY & REASSEMBLY: **WARNING:** Before dismantling, isolate the valve from the line pressure and relieve the internal pressure by slowly removing the lower body pipe plug, A small amount of water will discharge.

- 1). Remove the cover bolts.
- 2). Remove the cover by lifting vertically. The valve cover & the Air Release float ball is removed with the cover, the Air Vacuum float remains inside the body.
- 3). Inspect and clean the lever assembly to ensure free movement. Inspect and clean the body to ensure the floats moves freely.
- 4). Inspect and replace, if necessary, the small orifice button & the large orifice seat.
- 5). Inspect cover gasket, and replace if necessary.
- 6). Reinstall the float/lever/cover assembly ensuring proper alignment of the bolt holes.
- 7). Reinstall cover bolts & body pipe plug.
- 9). Slowly open the valve isolating valve and observe proper venting of the air and closing of the valve. The valve is now ready for service. See In-Line Test Procedure.