Type UB Air Release Head

Bulletin MN01040 Issue/Rev. 0.1 (10/15)

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SMITH METER® RELEASE HEAD OPERATION

The operation of the UB Air Release Head is as follows:

1. When air enters the tank, the float will drop because of the presence of excess air accumulation.
2. When the float drops, the small poppet which is attached to the float linkage opens allowing pressure to vent through the small port. This will cause a differential pressure inside the UB Head and will allow the large poppet to open.
3. When the large poppet opens, air accumulation in the tank is vented. The large port is 3/4" in diameter and will vent the air instantly.
4. When the air has vented from the air eliminator, the float will rise with the liquid level and will close the small poppet. This will cause a build up of pressure under the large poppet. Because of this differential in pressure and the float rising, the large poppet will close. (See Figure 1.)

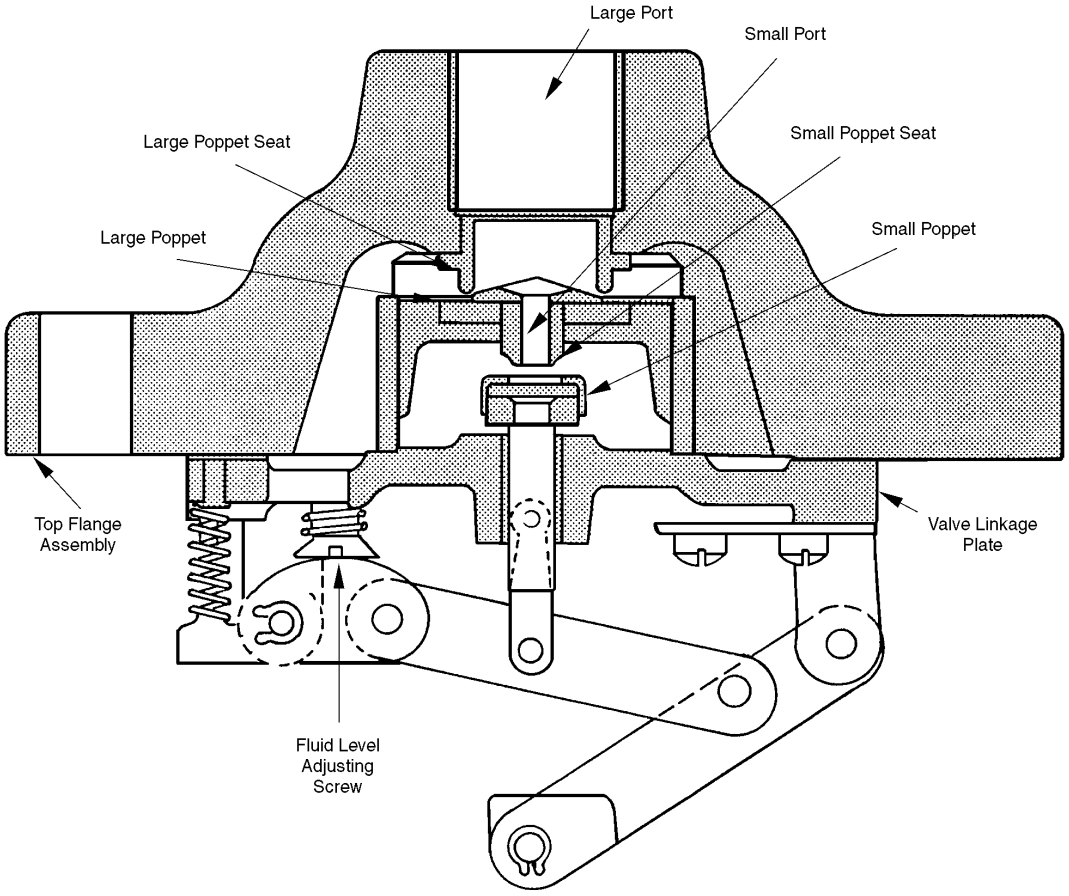

Figure 1 – Type UB Air Release Head

For parts information reference bulletin number P003040.

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DISASSEMBLY AND SERVICE

1. Remove the air eliminator assembly by disconnecting the vent line and removing the eight mounting bolts. Caution should be taken to isolate the air release tank and ensure the vessel is depressurized.
2. Remove the three screws and nuts holding the float guard to the three brackets.
3. Remove the float guard.
4. Remove the float from the valve spring assembly by prying open the fastening clips and removing the retainer pins.
5. Visually check the float for damage and shake the unit to ensure it does not leak. Replace the float if it appears damaged or contains fluid.
6. Remove the four screws that hold the valve linkage plate to the top flange assembly.
7. Inspect the small valve poppet assembly for damage or wear. If the poppet assembly requires replacement, remove the fastening clip and pin. The poppet can now be removed.
8. Inspect the bushing in the linkage plate for wear. Replace the bushing if it is worn or if there are signs of the poppet seating off center.
9. Remove the large poppet assembly from the body.
10. Inspect the seat for the small poppet, which is the small center hole in the large poppet assembly. Replace if the surface is damaged. Lock the large poppet assembly in a soft jaw vise and use a large screwdriver to remove the small poppet seat (turn counterclockwise).
11. Inspect the elastomer on the large poppet assembly. If it is damaged, disassemble the poppet as explained above and reassemble with the new seal in the reverse order. Use loctite master gasket when reassembling.
12. Inspect the seat in the top flange assembly. Replace if it is damaged.
13. Reassemble in the reverse order using a light oil to lubricate parts. When reinstalling the assembly on the pressure vessel, a new gasket should be used.

This assembly only has one adjusting screw for the float height. See Figure 1. Adjusting the screw clockwise raises the fluid level and counterclockwise will lower the float level.

Revisions included in MN01040 Issue/Rev. 0.1 (10/15):
Renumbered Disassembly and Service section. Reference to parts list on the first page has been updated to P003040.
The specifications contained herein are subject to change without notice and any user of said specifications should verify from the manufacturer that the specifications are currently in effect. Otherwise, the manufacturer assumes no responsibility for the use of specifications which may have been changed and are no longer in effect. Contact information is subject to change. For the most current contact information, visit our website at www.fmctechnologies.com/measurementsolutions and click on the "Contact Us" link in the left-hand column.

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