A leak test checks for the following:

- Restrictions in the flow path associated with filling the loop
- Leaks in the carrier flow path
- Leaks in the vial pressurization flow path
- Leaks across the 6-port sampling valve

The most common leaks are at the connections of the transfer line, external plumbing, and sample probe union.

**Required tools**

- Beaker of water
- 20-mL capped vial
- Leak test kit G1888-60701
- 7 × 8-mm wrenches
- This test can also be facilitated using the Advanced Function 5 diagnostic tool located on the CD ROM.
**Setup**

1. Attach the 1/8-inch OD tubing to the vent with a Swagelok connection. Finger tight the connection.

2. Place the free end of the tube in a beaker of water.

3. If needed, install a shut-off valve between the gas source and the bulkhead fitting for carrier and vial pressurization gas. Install the valves on the back of the Headspace Sampler between the bulkhead fittings and the gas source.

4. For EPC setups, add a T-fitting connecting the shutoff valves on the carrier gas and vial pressurization gas inlets.

5. Change the pressure units to PSI. This setting has better resolution than kPa or bar.

6. Set the source pressure to 30 PSI.

7. Disconnect the transfer line from the GC inlet. If a transfer line needle is used, plug off the end with a septa. If there is no needle, plug off the end with a union and plug.

8. Place an empty 20-mL capped vial in tray position 1. Make sure the Headspace Sampler is set for 20-mL vials.

9. Place the aluminum leak test vial in tray position 2. Place the end of the vial labeled “G1888” facing up.


Please Refer to Figure 1 and Figure 2, which show the flow paths for all gases used in EPC and MPC headspace installations.
Figure 1: Flow paths for an MPC G1888 to GC installation
Figure 2: Flow paths for an EPC G1888 to GC installation