



HGM-SZ

Single Zone Halogen Monitor

Instructions for Upgrading to an External Charcoal Filter

Instruction: 3015-5717

Revision: 1

Date: April 15, 2013

Overview

During normal operation, the Single Zone Halogen monitor performs a purge cycle during which fresh air is drawn in from the purge line to flush internal components of any residual refrigerants. Purge lines should draw in fresh outside air to perform the purge function. When access to outdoor air is impractical, purge lines may begin indoors, however a charcoal filter must be used on the purge line to ensure that no contaminated air is drawn into the system during purge cycles. The charcoal filter removes refrigerant gas contamination from the purge-air stream during the internal purging process.

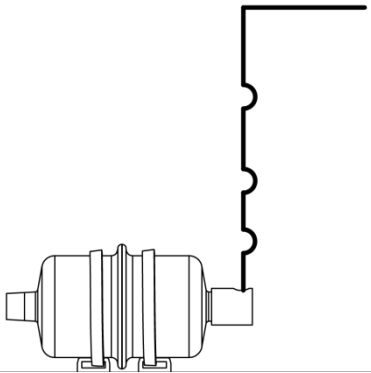
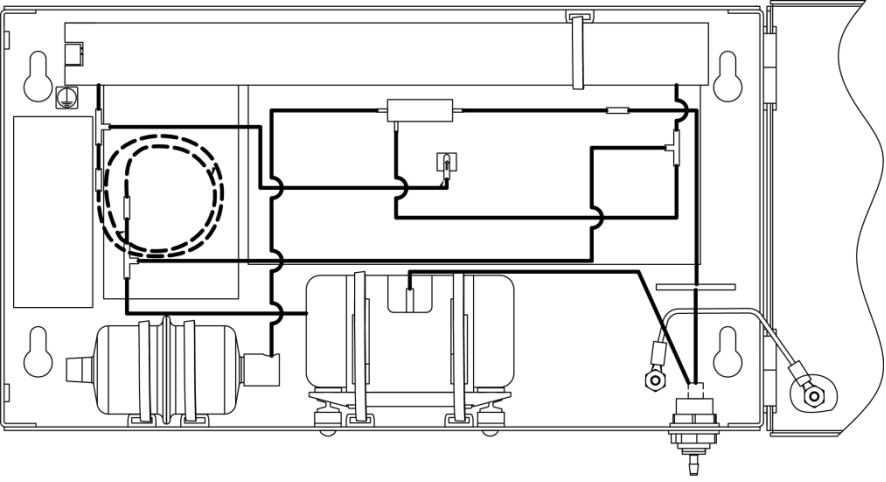

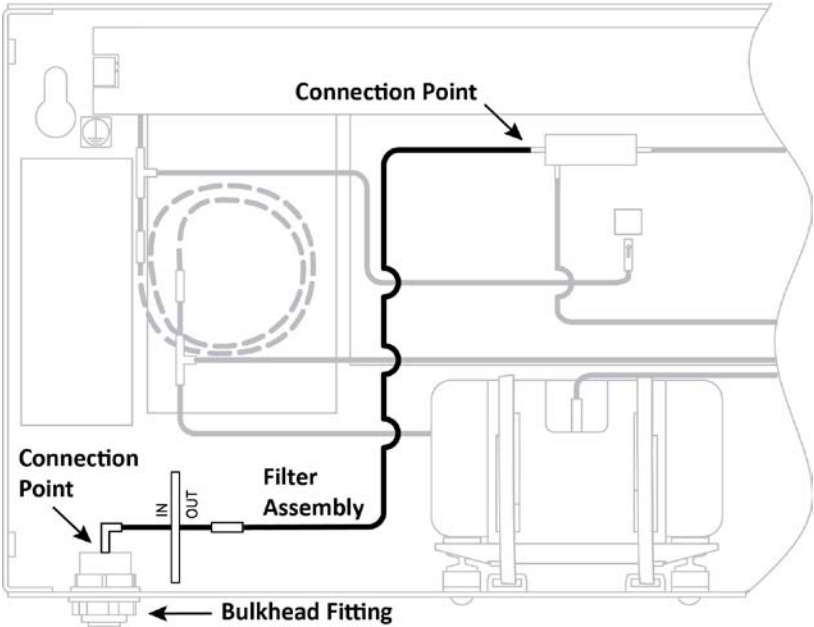
The *external* charcoal filter for the Single Zone monitor is superior to the internal filter used in previous generations of the SZ (which included an *internal* charcoal filter). The replacement kit includes additional components for externally mounting the improved external charcoal filter. The steps required to perform this upgrade are listed below. Note that this upgrade **ONLY** applies to halogen refrigerant monitors (HGM-SZ), and not AGM-SZ (ammonia) or SFM-SZ (SF₆) monitors.

Requirements

- Medium sized Phillips' head screwdriver to open the enclosure
- Large flat-head screwdriver to remove the purge air knockout from the enclosure
- Wire cutters to remove cable ties holding the internal filter
- Appropriate mounting hardware (user-supplied) to mount the T-Bolt bracket to the wall beneath the purge air bulkhead fitting and below the SZ enclosure
- Appropriate approval for system maintenance of the gas leak monitoring equipment
- Upgrade kit (P/N 3015-5716):
 - T-Bolt bracket (P/N 3015-2969)
 - External charcoal filter (P/N 3015-3125)
 - 6" of nylon tubing to connect the charcoal filter to the bulkhead fitting (P/N 0304-2742)
 - Bulkhead fitting (P/N 3015-3220)
 - Internal particulate filter assembly which includes filter (P/N 0007-1650), tubing, elbow fitting, and reducer
 - Upgrade instructions (P/N 3015-5717)

Procedure

Step	Description	Image
1.	Get approval from the appropriate building management personnel to shut off the gas leak detection and monitoring equipment and any networked building management controls, alarms, and/or gas leak mitigation equipment.	<p style="text-align: center;">Figure 1: Side and Front Views of Single Zone (SZ) Monitor</p>
2.	Remove power from the Single Zone monitor. Verify that the unit is off.	
3.	Open the Single Zone (SZ) cabinet by unscrewing the two captive screws located on the left side of the enclosure (see Figure 1).	
4.	Swing open the door to provide access to the internal components of the SZ.	

Step	Description	Description
5.	<p>Identify the existing internal charcoal filter and tubing as shown in Figure 2 and Figure 3.</p>  <p>Figure 2. Charcoal Filter and Tubing</p>	 <p>Figure 3: Internal View of Single Zone (SZ) Monitor (Old Internal Filter Intact)</p>
6.	<p>Carefully remove the filter and corresponding tubing (as shown in Figure 4). To remove the filter, use a pair of wire cutters to cut the two cable ties holding the filter in place. Remove and appropriately discard the old charcoal filter, the tubing, and the wire tie remnants.</p>	 <p>Figure 4: Removing the Old Internal Filter</p>
7.	<p>Using a large flat-blade screwdriver, remove the small knockout to the left of the old filter mount. Assemble and install the new bulkhead fitting into the Purge air knockout (with the nut on the inside of the enclosure). See Figure 5.</p>	 <p>Figure 5: Internal View of Upgraded Single Zone (SZ) Monitor</p>
8.	<p>Connect the particulate filter assembly as shown in Figure 5.</p>	
9.	<p>Close the cabinet door and secure the retaining screws.</p>	
10.	<p>Mount the T-Bolt bracket within 6 inches of the Purge Air bulkhead fitting using appropriate mounting hardware that you provide.</p>	
11.	<p>Connect the provided 6" nylon tubing to the Purge Air bulkhead fitting and the "OUTLET" end of the new charcoal filter.</p>	
12.	<p>Secure the charcoal filter into the T-Bolt bracket in order to secure it to the wall beneath the Purge Air port.</p>	
13.	<p>Restore power to the entire system and verify proper operation.</p>	
14.	<p>Replace the external charcoal filter (P/N 3015-3125) about every 12 months, when a zero filter fault (code <0100>) occurs, or after the monitor itself has been exposed to unusually high levels of gas, such as after an evacuation alarm. A yearly maintenance kit (P/N 3015-5529) is also available and contains a complete set of SZ replacement filters.</p>	

