



Bulk CO<sub>2</sub> Systems

# Technical Service Bulletin

**Component Change**

TSB-BEV-1009

**Date:** April 6, 2017

**Subject:** New design Fill Box/Assemblies and updated vent line connections (Update to TSB-BEV-1006). (Updated from January 31, 2017 release)

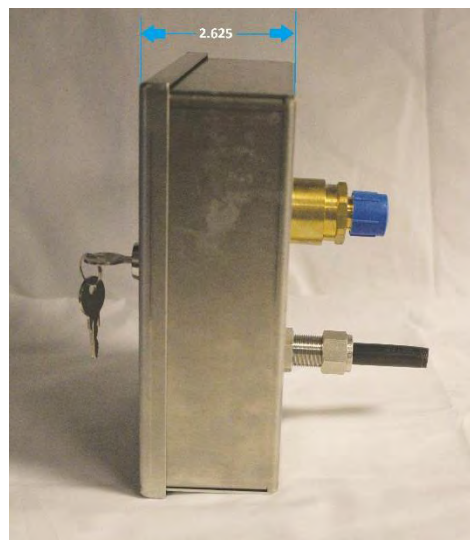
**Products Affected:** All new Chart Beverage System CO<sub>2</sub> fill boxes and existing fill boxes where new style vent lines are installed. This change adds a compression style fitting to attach the vent line to the fill box instead of a barb fitting. New style Chart vent lines require a compression fitting to be used instead of barb fittings.

**Description:** The stainless steel fill box is a major component of a stationary bulk CO<sub>2</sub> fill and vent circuit. It includes the liquid CO<sub>2</sub> fill fitting and vent line termination fitting which safely vents excess CO<sub>2</sub> gas outdoors. National and International Fire codes require materials used in vent and fill lines be able to withstand exposure to -109°F temperatures. The new vent and fill lines meet this requirement. However, the new vent line must use a compression fitting for factory approved attachment to the vent discharge on the fill box. Barb style fittings cannot be used with this vent line.

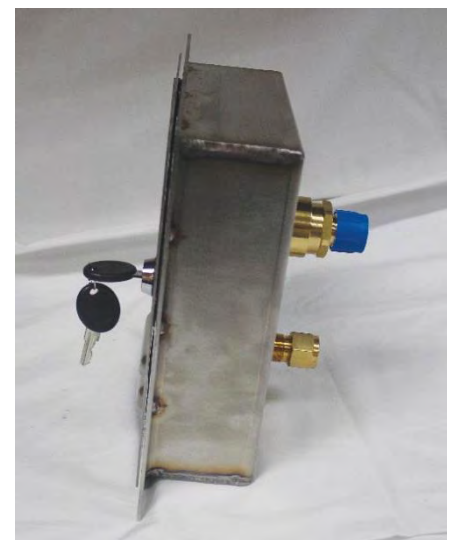
The fill box design has changed to accommodate bulkhead style compression fittings so that the vent hose (See table (1) for vent hose kit part numbers) can be securely connected. The fill box depth dimension has changed slightly to accommodate these new bulkhead compression fittings. The pass through feature of the bulkhead fitting allows the vent line to be visible from inside the fill box, thus confirming discharge of the vent line outside the building.



*Old Surface Mount*



*New Surface Mount*



*New Flush Mount*



*New Flush Mount*



*New Surface Mount*

The fill boxes come in two sizes accommodating either a 1/2" bulkhead compression fitting for Carbo-Max® 1000 Bulk CO<sub>2</sub> System or a 3/8" bulkhead compression fitting for all other tanks.

Fill Boxes Assemblies		
21093945	Flush Mount Fill Box with 3/8" Bulkhead	All other tanks
21093946	Surface Mount Fill Box with 3/8" Bulkhead	
21090731	Flush Mount Fill Box with 1/2" Bulkhead	Carbo-Max 1000
21090730	Surface Mount Fill Box with 1/2" Bulkhead	

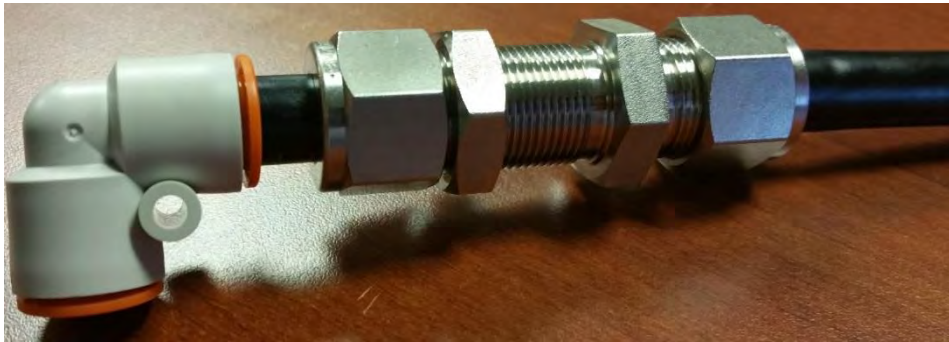
Table (1)

The fill boxes incorporate a removable fitting plate that can be swapped out for a different size depending on the size of fitting needed at that time.



Fitting Plates	
21087010	3/8" Plate
21087012	1/2" Plate

The bulkhead compression fittings incorporate a double Swagelok® ODT connector that acts as a fail-safe for the vent tube. With these bulkhead compression fittings the vent tube is passed through the entire bulkhead and extends an inch or two where a push to connect elbow is attached to direct the venting gas to the bottom of the fill box and away from the service tech. Verification of vent tube connection is as easy as opening the fill box and verifying that the vent tube can be seen extending out of the bulkhead compression fitting.



*Bulkhead fitting assembly*

*3/8" Bulkhead (PN 20966036)*

*3/8" Push To Connect Elbow (PN 20966612)*



*Bulkheads and Compression Elbow*

*1/2" Bulkhead (PN 20966033)*

*1/2" Push To Connect Elbow (PN 20970110)*

In some cases the vent & fill lines passing through an exterior wall may need to be enclosed in conduit. If a conduit is used to enclose the vent and fill lines you can easily source a 3 inch diameter PVC pipe, 4 inch to 3 inch PVC reducer, and a standard 4 inch PVC flange from plumbing supply stores. The flange mounts directly onto the back of the flush mount fill box.



*Conduit*



*Flange Mount*

<b>Vent Hose Kits</b>	
<b>Chart P/N</b>	<b>Description</b>
20956973	1/2 Kit Fill/Vent 5'
20956974	1/2 Kit Fill/Vent 10'
20956975	1/2 Kit Fill/Vent 15'
20956976	1/2 Kit Fill/Vent 25'
20956977	1/2 Kit Fill/Vent 30'
20956978	1/2 Kit Fill/Vent 50'
20956754	Fill Hose 5'
20956946	Fill Hose 10'
20956772	Fill Hose 15'
20956945	Fill Hose 25'
20956947	Fill Hose 30'
20956771	Fill Hose 50'
20956979	3/8 Kit Fill/Vent 5'
20956980	3/8 Kit Fill/Vent 10'
20956981	3/8 Kit Fill/Vent 15'
20956982	3/8 Kit Fill/Vent 25'
20956983	3/8 Kit Fill/Vent 30'
20956984	3/8 Kit Fill/Vent 50'

**Contact:** If you have concerns or questions relative to this action, please contact your Chart Technical Service Representative at 1-800-247-4446. Thank you for depending on Chart for high product quality and service.