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## MCB Dual and Single Tank Bicarb Systems – Improvement Kits

### Background

Improvements have been made on the MCB line of Bicarb Mix and Delivery Systems. The following list details the features and benefits and provides the part numbers for retrofitting installed units. The upgrades are available for several different models, whether current or discontinued, and in either the 50- and 100-gallon configurations all of which are noted accordingly under each section.

### 1.0 Mix Timer

If over-mixing is a concern on the MCB Dual Tank systems, there is a conversion kit that replaces an existing junction box, which is located in the back of the unit. This new junction box is equipped with a timer function that will eliminate the possibility of over-mixing. Once installed, the mix pump will automatic shut-off after 10-minutes of mixing. This timer feature is built into the junction box and will not be visible on the main controller.

This addresses potential concerns and allows these systems to be more in compliance with the CMS Interpretive Guidelines, specially tag number V234 which states, *“There must be a system to prevent over mixing of bicarbonate. This could include a timer integrated into the mixing system for automatic cut-off, or a policy to require staff to monitor the mixer and cut it off immediately when the time period for mixing is completed. Use of over mixed bicarbonate concentrate can result in a low calcium level in the dialysate and a concomitant drop in patients’ serum calcium levels.”* This improvement is strongly recommended.

**Description:** Kit, MCB Dual Tank, Mix Timer, Junction Box      **Part Number:** 3027020

**Available for the following Models:** MCB212, MCB205, MCB210 built after 12/1998. Contact Tech Support if you have an earlier model or a MCB214 model. Not currently available on the Single Tank MCB200 or MCB202 models.

### 2.0 Return Line

To eliminate concerns about splashing and off-gassing that could result in the loss of CO<sup>2</sup> from the solution, there is now an upgrade kit. The current piping consists of a short piece of PVC, but once the kit is installed the pipe will continue down closer to the bottom of the tank. The concern comes from AAMI RD52:2004 5.4.4.3 which states, *“Loss of CO<sup>2</sup> results in an increase in pH and favors the formation of carbonate that can lead to precipitation of calcium and magnesium carbonate in the fluid pathways of the dialysis machine following dialysate proportioning.”* There have been no reported cases of this ever occurring with these mixers. This upgrade kit is designed to remove that potential issue. This improvement is strongly recommended.

**Description:** Kit, MCB Return Line Extender, 50/100      **Part Number:** 3027096

**Available for the following Models:** MCB212, MCB205, MCB210, MCB214, MCB202CD.

### 3.0 System Blocks

We have developed a riser kit that contains several polyethylene blocks that allows the MCB Dual Tank System to be raised off the ground approximately 4 inches. This is designed to address concerns about the drain connections being too low to the floor. It is available as an accessory for new or existing units.

**Description:** Kit, MCB Dual Tank Bicarb Risers      **Part Number:** 3027027

**Available for the following Models:** MCB212, MCB205, MCB210, MCB214.

## **4.0 Tank Lids**

There have been issues with the current ¼ hinged flip-up tank lid, specifically leaking and spraying during rinse procedures. We are now offering a replacement one-piece, fully bolt-down cover that incorporates a tight sealed hinged lid similar to the one used on the SDS units. This new polyethylene cover will now be vented with a small capsule style air filter. This improvement is strongly recommended.

**Description:** Kit, MCB Tank Cover w/Hinged Lid and Vent Filter **Part Number:** 3027015

**Note:** Only 1 lid is included per kit. 2 kits will be required for Dual Tank systems.

**Available for the following Models:** MCB212, MCB205, MCB210, MCB214, MCB200, MCB202.

## **5.0 Filter Housing**

All Dual Tank models have a 1-micron filter on the system which is installed between the mix tank and the distribution tank. This filter is designed to capture any loose debris or unmixed powder before being transferred to the Distribution Tank. Since there are no governing rules dictating this design, we have decided to eliminate it on future systems and make available a kit with instructions on how to correctly remove it from an existing unit. This is not a mandatory change, rather an acceptable system design adjustment.

**Description:** Kit, MCB Dual Tank Filter Hsg Assy Removal **Part Number:** 3027024

**Available For the Following Models:** MCB212, MCB205, MCB210. Contact Tech Support if you have a MCB214 model.

## **6.0 Sample Valves**

We have developed a new sampling valve kit for the Dual Tank Systems. The current location of the sampling valve(s) is a challenge to access. The new kit provides all of the parts and instructions on installing a ball valve into the side of each tank and plugging any existing testing ports. This improvement is strongly recommended.

**Description:** Kit, MCB Dual Tank Sample Valves **Part Number:** 3027003

**Available For the Following Models:** MCB212, MCB205, MCB210, MCB214.

## **7.0 Valve Locking Pin**

We have developed a locking pin for the Dual Tank Bicarb Systems. This is primarily designed for Valve V4. This allows the ball valve to be secured in place during normal operation, thus eliminating the possibility the valve is accidentally open or not placed in the fully closed position. This kit only works with the full-handled valve, not the older "arrow-shaped" handled ball valves.

**Description:** Kit, MCB Locking Handle **Part Number:** 3027293

**Available For the Following Models:** MCB212, MCB205. Other Dual Tank models if the full-handled ball valve has been installed.

## **8.0 Drain Check Valves**

The older MCB Dual Tank Bicarb Systems had one common drain for both the Mix and Distribution Tank. There is the slight possibility of one tank back-filling into another if the drain valve on the opposite tank is in the open position. This kit includes (2) check valves, various parts, and instructions on how to install these on the single drain line. The latest systems are built with a separate drain line for each of the tanks, making this kit unnecessary.

**Description:** Kit, MCB Check Valve, Common Drain

**Part Number:** 3027373

**Available For the Following Models:** MCB212, MCB205, MCB210, MCB214. Verify the drain line(s) on the unit to confirm if this kit is necessary.