

Frequency for Cleaning Bicarbonate Mixing Units		TSB 2016001
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**TECHNICAL SERVICE BULLETIN**

**OVERVIEW:**

Bicarbonate mixing units require periodic cleaning to remove bicarbonate and mineral deposit build-up on internal surfaces, as well as the flow-switch, and pump. The frequency at which this cleaning is performed is dependent upon the type of tank level sensors used and how often the bicarb tanks are rinsed.

If **float sensors** are used, which are mechanical in nature, then cleaning must be performed **weekly** for optimum performance. Since these have moving parts that come in contact with the bicarbonate solution, their proper operation can be affected by bicarbonate and mineral build-up which could hinder movement in the hinged area. Float sensors were used in bicarbs prior to February 2010.



**Float Sensors**  
Different models utilized: short white or long black

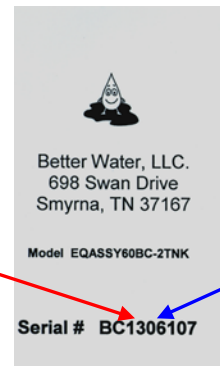
If **proximity sensors** are used, which are not mechanical but use electronic signals to sense water levels, then cleaning must be performed **monthly** if adequate tank rinsing procedures are employed. This type of sensor is less sensitive to bicarbonate and mineral build-up since they don't have moving parts. Proximity sensors have been in use since February 2010.



**Proximity Sensor**

**SENSOR DETERMINATION BASED ON SERIAL NUMBER**

Besides physically looking inside a bicarb's tanks to determine which sensor it has, the serial number can be used to determine this as well since proximity sensors have been in use since February 2010. Adhered to each bicarb is a label which contains the bicarb's serial number. The first four numbers in the serial number denote the year and month the device was manufactured. So for example a bicarb whose serial number is 1306107 was manufactured in 2013 in the month of June.



"13" - Year      "06" - Month

**RECOMMENDATIONS:**

**1. Rinsing procedures...**

... At minimum at the end of the dialysis day if the bicarb has been used to mix bicarbonate solution, the tanks should be rinsed. If the bicarbonate solution was distributed via the distribution loop, then it should be rinsed as well.

... Optimally tanks should be rinsed after each batch of bicarbonate is mixed and emptied, especially if many batches are mixed within a single day.

**2. Recommended cleaning solutions:**

- Vinegar containing 5% acetic acid, with a dilution ratio of 1 gallon of vinegar for every 10 gallons of dialysis water.
- Citric Acid, following its manufacturer's instructions for dilution ratios and use.
- 1% Peracetic Acid solution, following its manufacturer's instructions for use.

**Bicarbs may require more cleaning which is ultimately the responsibility of the Medical Director.**