Fresenius Medical Care
SERVICE BULLETIN
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Equipment: GranuFlo® II

Bulletin: 05-GRN-004 Rev. A

Subject: Software Update

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1.0 PURPOSE

To inform all Field Service and Technical Support personnel of a GranuFlo® II software update to eliminate the possibility of valve chatter during closure resulting from certain pressure and valve combinations.

2.0 SCOPE

Under certain pressure and valve combinations, the process of closing valves may cause the valves to chatter. To eliminate the valve chatter, the software program has been modified to change the process of when valves are closed. Since it is difficult to determine if or when a GranuFlo® II will experience this valve chatter, Fresenius recommends updating the software to version 2.7 or later (P/N 160010).

3.0 PROCEDURE

The process of updating the GranuFlo® II software requires access to the rear of the keypad/display panel. This is achieved by removing the vertical blue shroud on the front of the unit. The following procedure will step you through this process:

Caution: Software chips and circuit boards can be affected by static electricity (ESD). Care must be taken when handling the software chips and circuit boards to prevent damage by ESD. Use appropriate ESD protection when handling electronic components.

1. Unplug the GranuFlo® II from its AC wall outlet.

2. Close the transfer valve (see Figure 1).

3. Locate and remove the four (4) Phillips screws on the left side of the vertical blue shroud and the two (2) Phillips screws at the front bottom edge.

4. On the right side of the vertical blue shroud locate and remove the three (3) Phillip screws attaching the outlet spout/filter assembly bracket. Once removed the bracket/filter assembly can be laid to one side.

5. Now that the filter assembly is out of the way, the remaining three (3) Phillips screws from the right side of the vertical blue shroud can be removed.

Note: Once the shroud has been removed, the outlet spout/filter assembly can be reattached to its original position using one of its screws (see Figure 1).

6. Lift the shroud up slightly and pull it out from its resting place.

7. Since the wiring to the front control panel are still attached, carefully pivot the shroud so it is sitting in reverse to the left of it original position (see Figure 1).

Transfer valve
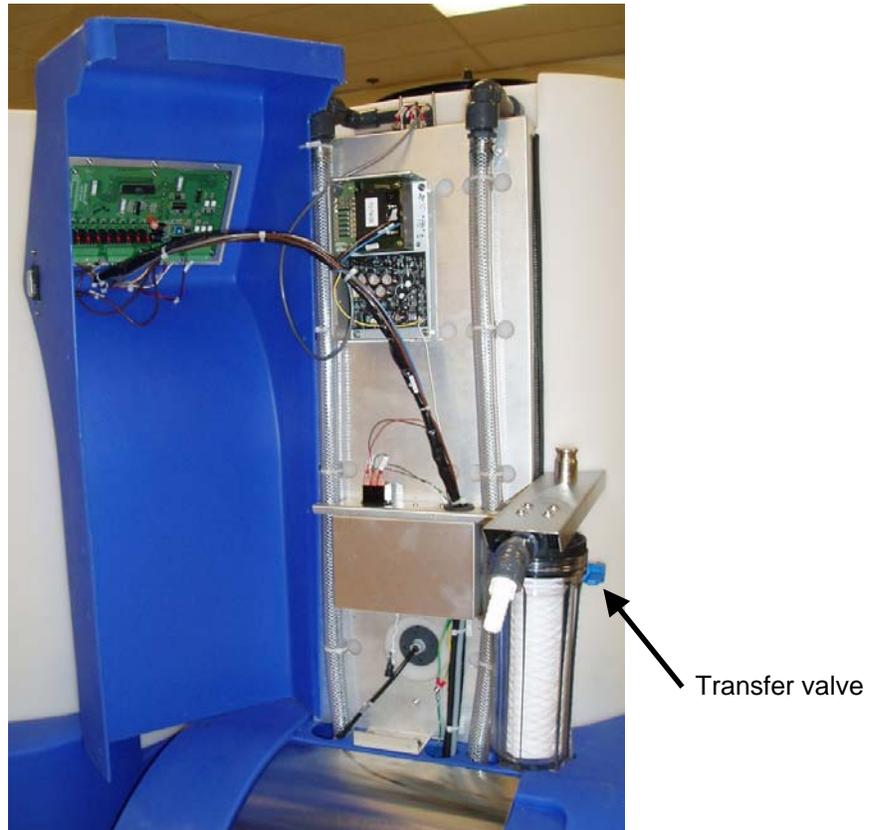
Figure 1

8. Using a single tie-wrap (P/N 368189-03 or equivalent) secure the shroud in place (see Figure 2).

Added temporary support tie-wrap
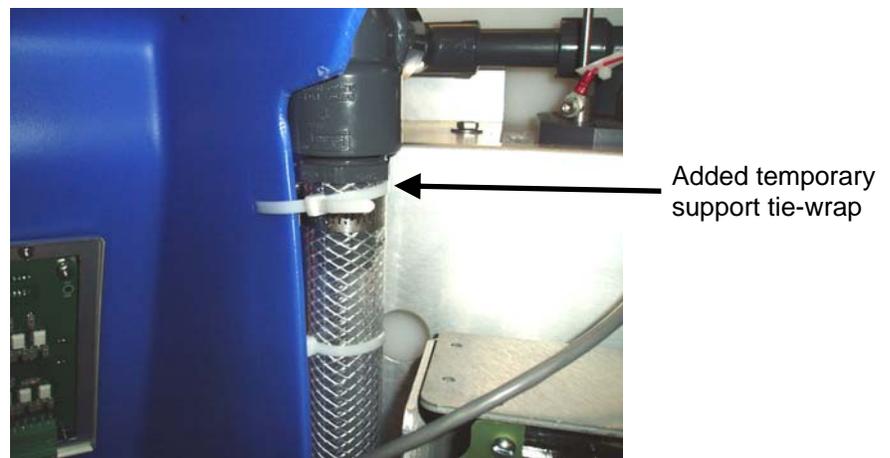
Figure 2

Caution: Make certain the chip removing tool is under the software chip not under the chip socket. Permanent damage to the circuit board can result if the socket is damaged.

9. Using a chip pulling tool, locate and carefully remove the software chip from the controller board. See Figure 3 for location and chip orientation.

Notch in chip matches the silkscreen notch on circuit board.
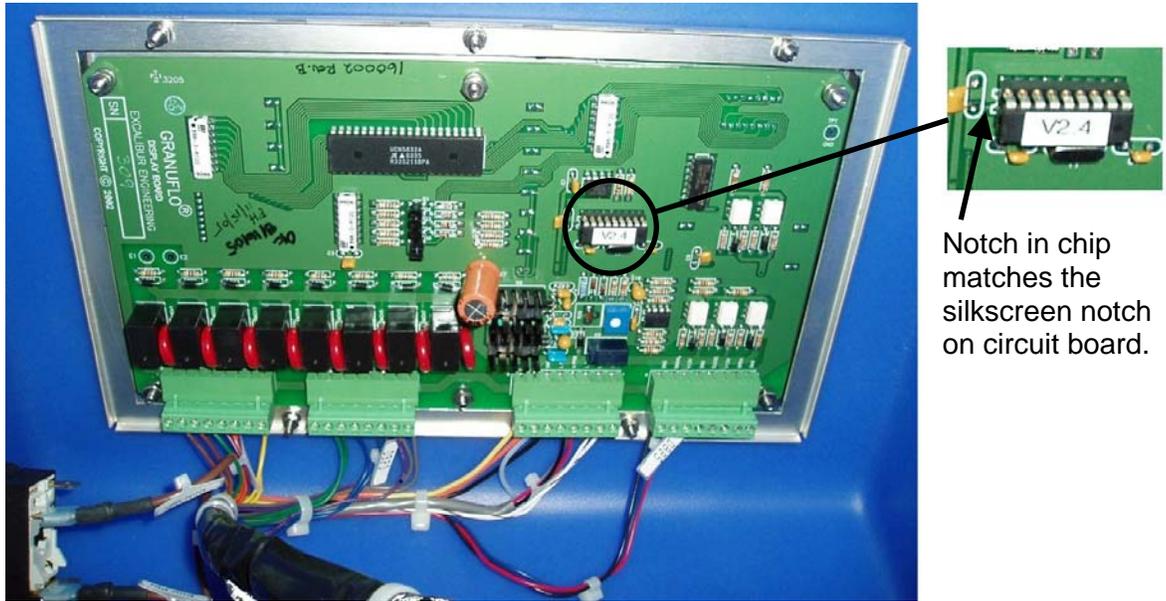
Figure 3

10. Using the notch in the chip as reference (see Figure 3), install the new software chip into the now empty socket on the controller board. When inserting the chip, take care that none of the pins bend or miss their respective socket hole.

11. Once the new software chip has been installed, cut the temporary tie-wrap and reposition the vertical blue shroud into place.

12. Carefully realign the holes in the shroud so they line up with the existing holes in the metal support plate.

Note: If the outlet spout/filter assembly bracket was reattached, it must be removed prior to repositioning the vertical shroud.

13. Once aligned, start threading each of the screws for the shroud and outlet spout/filter assembly *but do not tighten them*. This allows the shroud to be moved to align remaining screw holes.

14. Now that all of the screws have been started, securely tighten the screws.

15. Plug the GranuFlo® II back into its AC wall outlet and power the unit on.

16. Open the transfer valve ball valve.

17. Verify the display shows the new software version of **2.7** then the software CRC of **11E4** in the display.

If there are any questions regarding this bulletin, contact Fresenius Technical Support at 800-227-2572 x7003.