



08-005A
10 March, 2008

M703E Retrofit for Regulator and Filter Assembly - Bracket Improvement

I. PURPOSE:

The previous bracket enabled the internal pump to vibrate the filters and eventually made the filters crack and leak. Some metal parts rubbed together from the vibrations and made metal shavings. This retrofit is for a different bracket to be installed that retains the filters so they are isolated from the vibration. The new bracket is a flat plate with plastic clamps that retain the filters. If you don't have or will never use the internal pump, this retrofit will not be necessary – but if the unit ever does use the internal pump, the retrofit must be installed.

II. TOOLS:

Open end wrench sets (7/16", 1/2", 9/16")

Phillips screwdrivers

Slot head screwdrivers

III. PARTS:

KIT000266

IV. PROCEDURE:

A. Preliminary

- i. Turn off power to the calibrator and unplug the power cord from the rear panel.
- ii. Remove the top cover.

The following step numbers are referenced in Figures 1, 2, and 3 below.

Step 1 refers to text box and arrow #1 on the drawings.

1. Remove the tubing (both ends) that goes from the bulkhead union on the bracket for the carbon scrubber assembly (057670000) to the internal pump – discard this piece of tubing, nuts and ferrules. (Figure 1).
2. Remove the tubing (both ends) that goes from the union (FT63) on the other end of the carbon scrubber down to the "T" (FT35) of the DFU filter – discard this piece of tubing, nuts, and ferrules.
3. Loosen the nut that attaches the carbon scrubber to the bulkhead union fitting on the bracket and remove the carbon scrubber from the instrument.
4. Remove the nut and disconnect the tubing that attaches the tubing to the lower bulkhead union fitting (FT38) on the bracket for the DFU filter assembly (057660000). This is the tubing that comes from behind the bracket on the regulator.
5. Loosen the nut that attaches the DFU filter to the bulkhead union fitting (FT38) on the bracket and guide the DFU filter out of the bracket – leave the tubing connected that goes back into the instrument towards the O₃ generator.
6. Loosen and remove the ring nut (HW190) of the regulator on the front of the bracket and push the regulator back out of the hole. (Figure 2)

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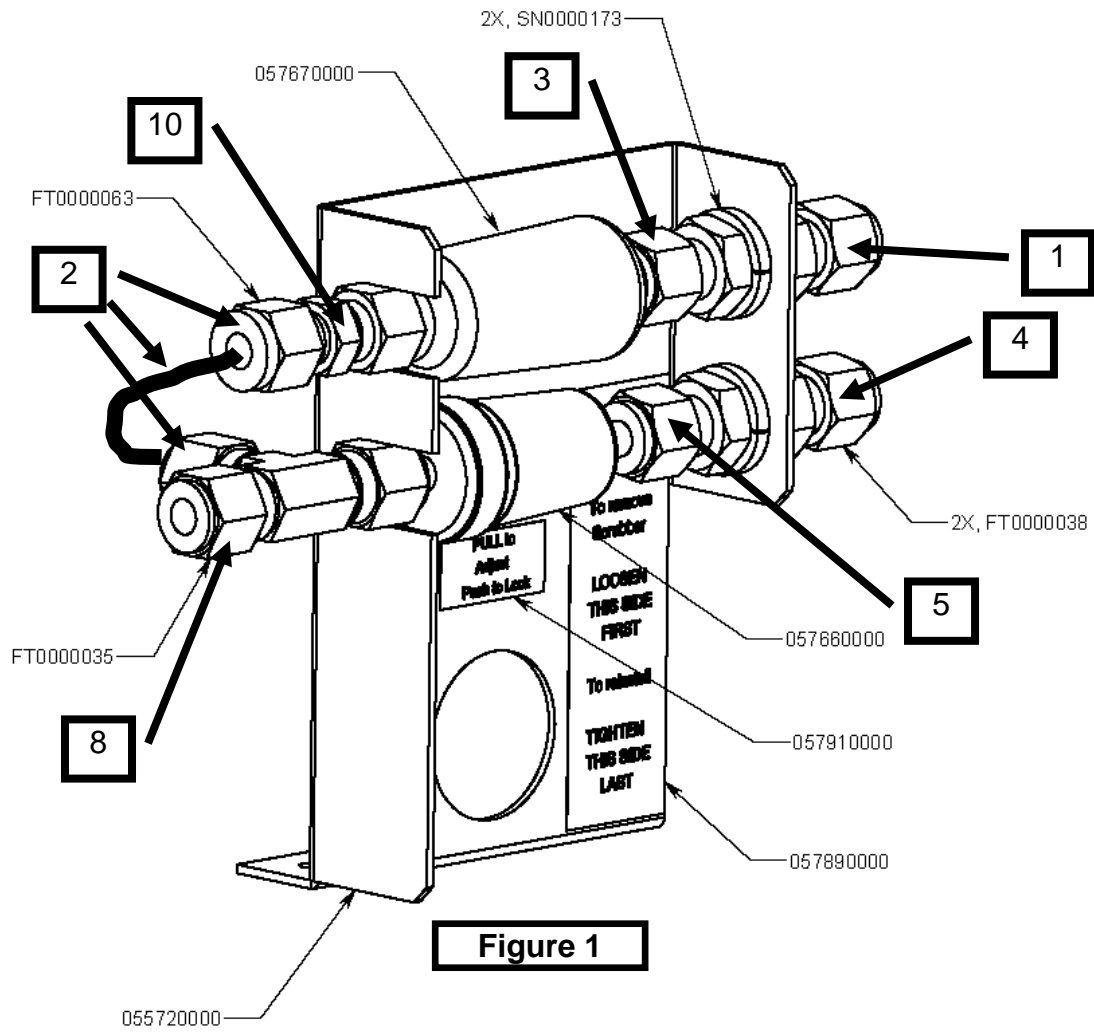
7. Remove the screws that hold the bracket to the chassis and remove the bracket from the instrument. (Figure 2)
8. Loosen but do not remove the tubing on the "T" of the DFU filter. Rotate the "T" so that it faces up vertically and retighten. (Figures 1 and 3)
9. Install port connector (FT115) into the top of the "T". (Figure 3)
10. Remove the union from the carbon scrubber by loosening the nut that attaches the union to the carbon scrubber. Install the 90 degree elbow (FT107) in its place. (Figures 1 and 3)
11. Install the bottom of the elbow (with carbon scrubber attached) onto the top of the port connector (FT115) and tighten all nuts so that the DFU and carbon scrubber are aligned over-under each other. (Figure 3)
12. Install a new brass union onto the free end of the DFU filter.
13. Install a new brass union onto the free end of the carbon scrubber.
14. Work the new bracket down into the area; guide the regulator into the hole.
15. Install and tighten the regulator nut to the bracket.
16. Install the new bracket to the chassis by tightening the captive screws.
17. Push the two filters into their holding clips HW0000443.
18. Install the tubing that comes from behind on the regulator onto the new union just installed onto the DFU filter.
19. Install supplied tubing p/n: 062210000 TUBING, RETRO REG BRKT M703 from the pump to the carbon scrubber.
20. Perform a leak check on the calibrator.

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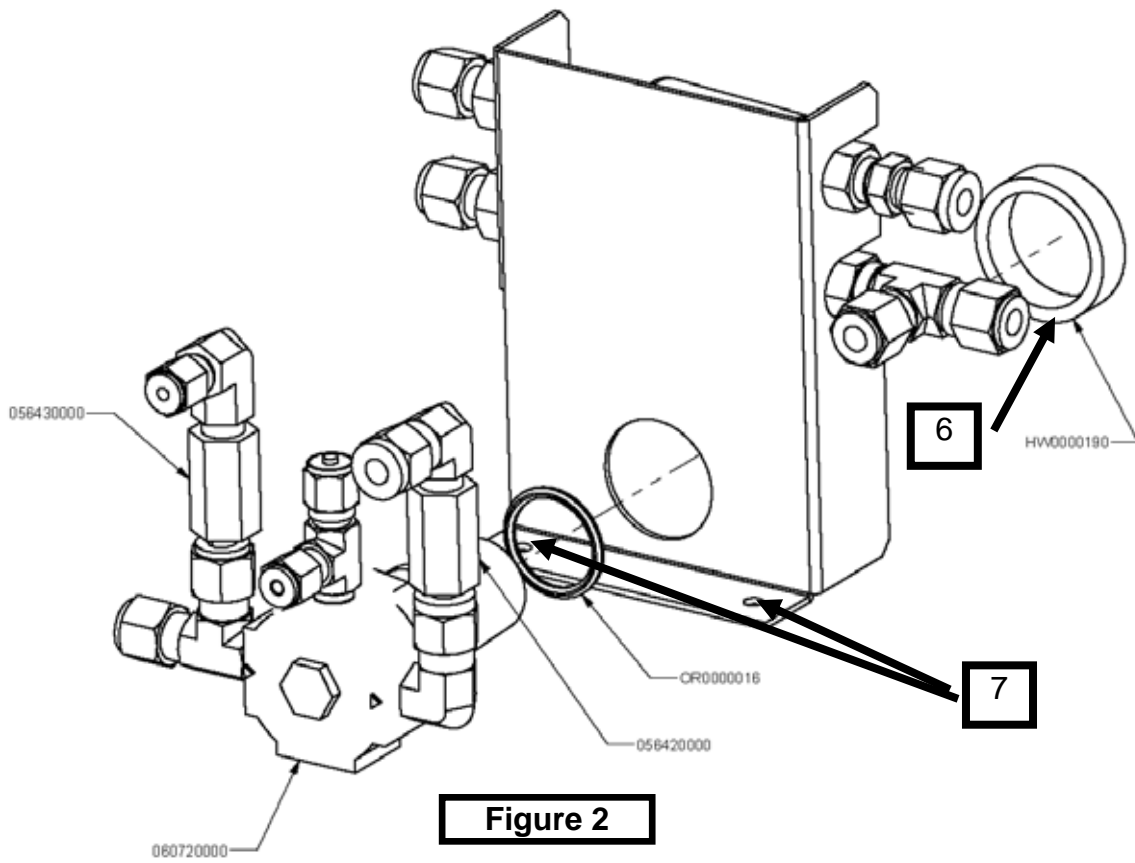


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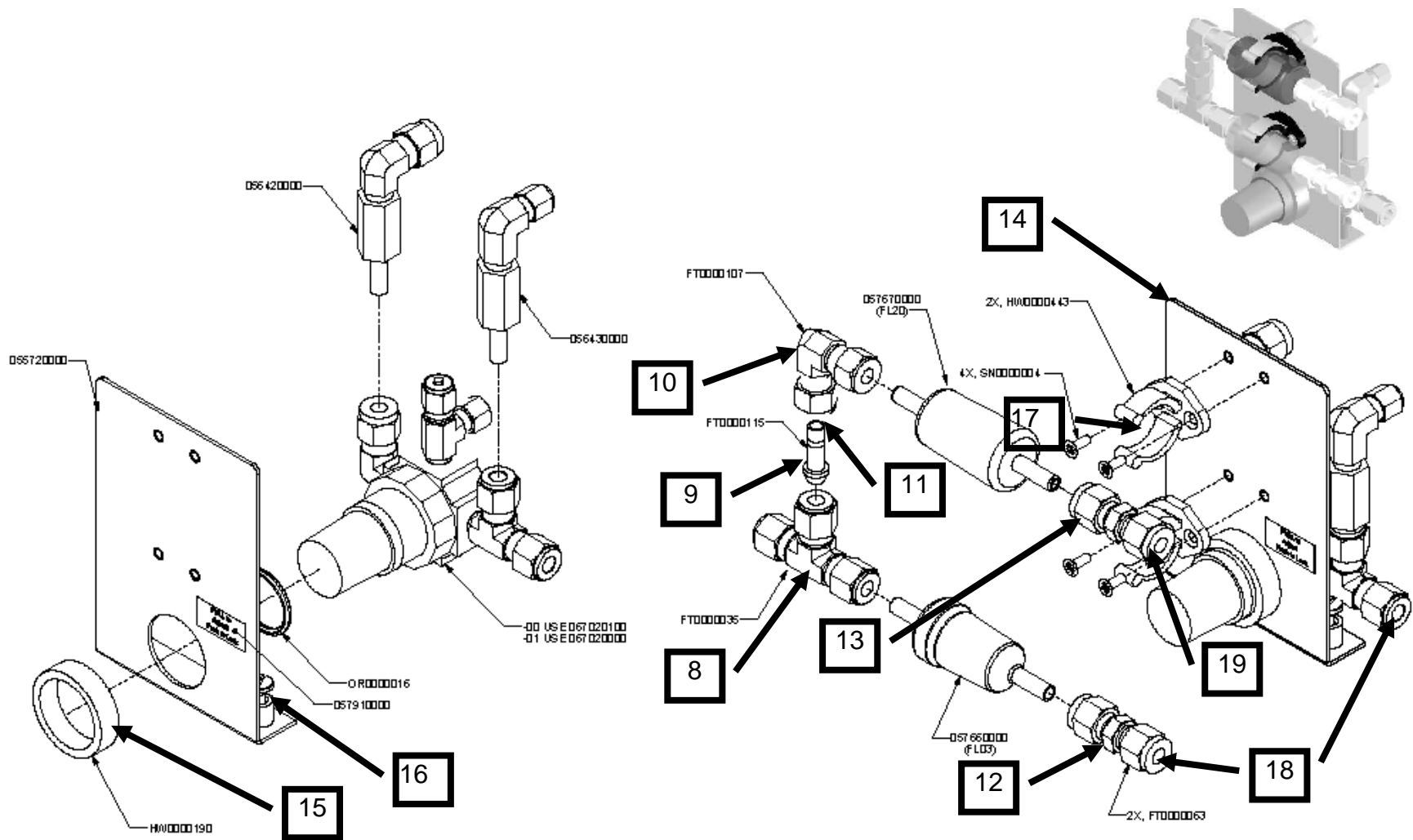


Figure 3

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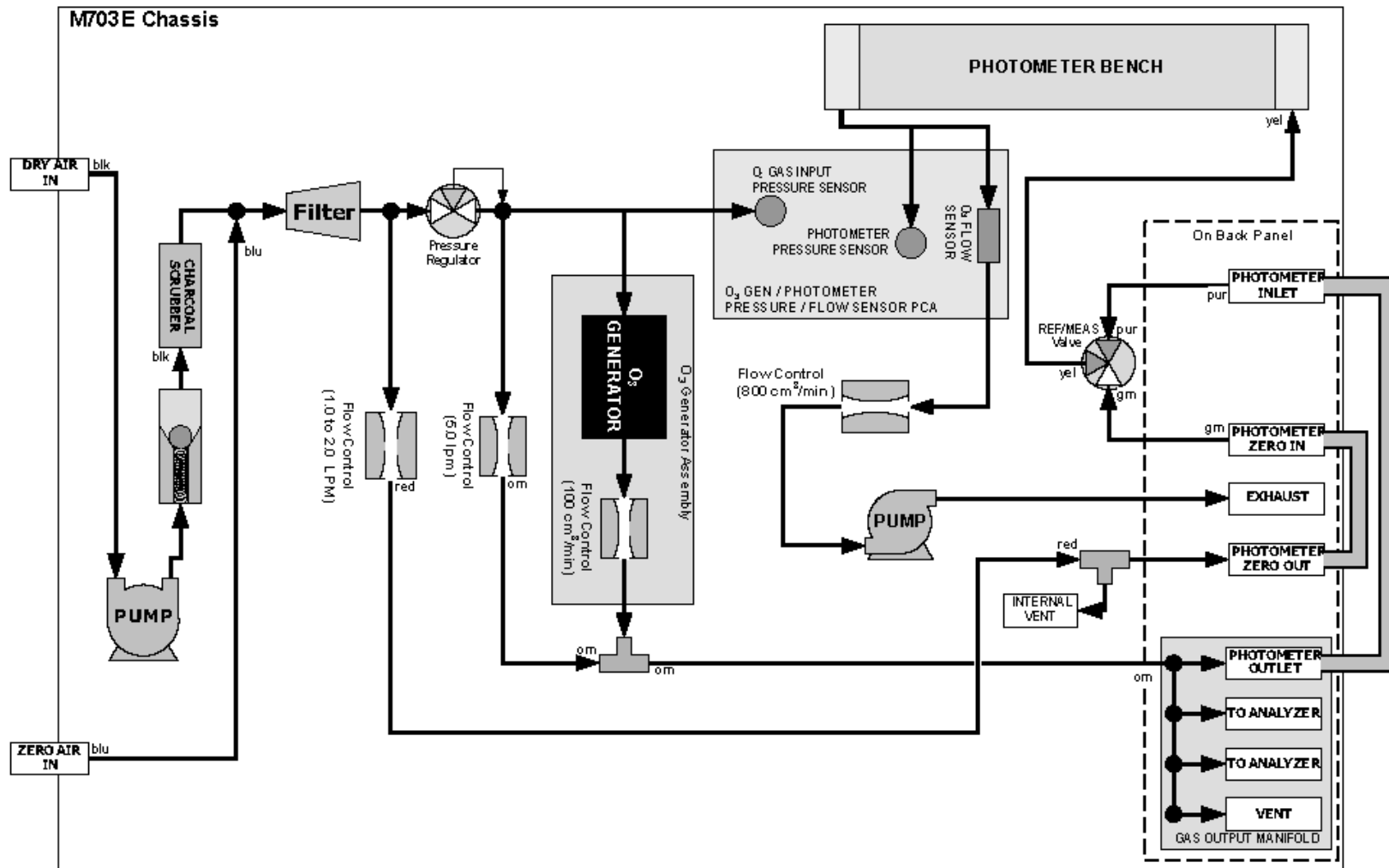


Figure 4 M703E Pneumatic Diagram

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