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11-004A

11 July, 2011

**T300 AND M300E FAST RESPONSE SAMPLE BYPASS**

**I. PURPOSE:**

This service note provides instruction on installation of a sample bypass to increase the sample flow to the analyzer. **Changing the original configuration of the instrument will void the EPA equivalency certification.**

**II. TOOLS:**

7/16" Wrench  
1/2" Wrench  
9/16" Wrench  
Phillips tip screwdriver  
Flat tip screwdriver  
Tubing cutter

**III. PARTS:**

KIT000330

**IV. PROCEDURE:**

1. Turn the analyzer off and remove the power cord from the rear of the analyzer.
2. Remove the cover from the analyzer and set aside.
3. Locate the internal pump **fig. 2** and disconnect the flow control assembly.
4. Locate FT0000115 Brass Port Connector, FT0000035 Brass 1/4" "T" and Assembly 001760700 from the parts kit.
5. Unscrew the nuts from the "T" and assemble according to **fig. 1** and **1a**. Pay close attention to the front and rear ferrules orientation when assembling the components. To correctly tighten the ferrules, tighten to hand tight then 1 1/4 turn with a wrench on the 1/4" tubing nuts.
6. Install the assembled fittings to the pump where the existing flow control assembly was removed. Install the existing flow control assembly to the opposite end of the brass "T". See **fig. 2**.
7. Disconnect the 1/8" tubing from the sample inlet bulkhead fitting on the inside of the rear panel of the instrument.

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8. Locate FT0000321 1/8" SS Port Connector and FT0000056 SS 1/8" "T" from the parts kit. Assemble the parts as show in **fig. 3**. Pay close attention to the front and rear ferrules orientation when assembling the components. To correctly tighten the ferrules, tighten to hand tight then 3/4 turn with a wrench on the 1/8" tubing nuts.
  9. Install the "T" on the sample bulkhead fitting and connect the existing sample tubing to the "T". See **fig. 4**.
  10. Install the TU0000001 tubing from the parts kit between the sample bypass "T" and the sample bypass flow control assembly. Tighten fittings to hand tight then 3/4 turn with wrench. See **fig. 5**.
  11. Leak check the instrument and fix any leaks.
  12. Reinstall the cover on the analyzer, plug the power cord in and turn the instrument on.
  13. Measure the flow at the sample in on the rear panel, the flow should be 1600cc/min  $\pm$ 10%. Because only 800cc/min goes through the bench, the electronic flow meter will still only read approximately 800cc/min.
  14. Now that the pneumatics are changed inside the analyzer it is recommended that a copy of the new pneumatic diagram is inserted into your manual for future reference. See **fig. 6**.
- NOTE:** Changing the pneumatics will increase the response time to the analyzer; however, it is recommended to test the analyzer and if a faster response time is needed Please call TAPI Customer Service.

Fig. 1.

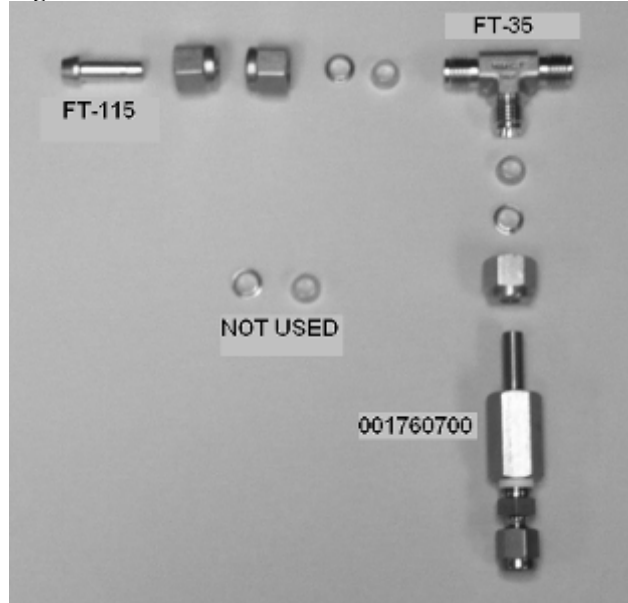
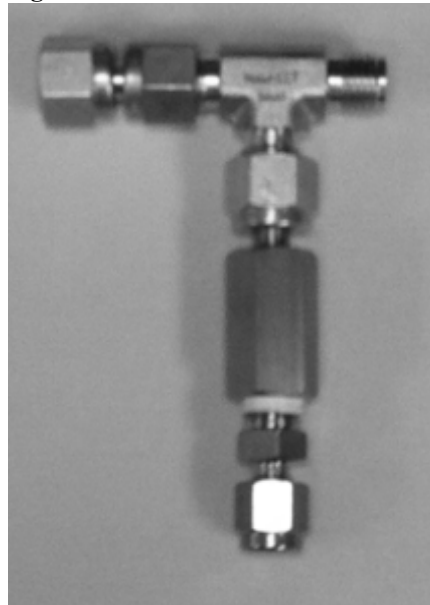


Fig. 1a.



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Fig. 2.

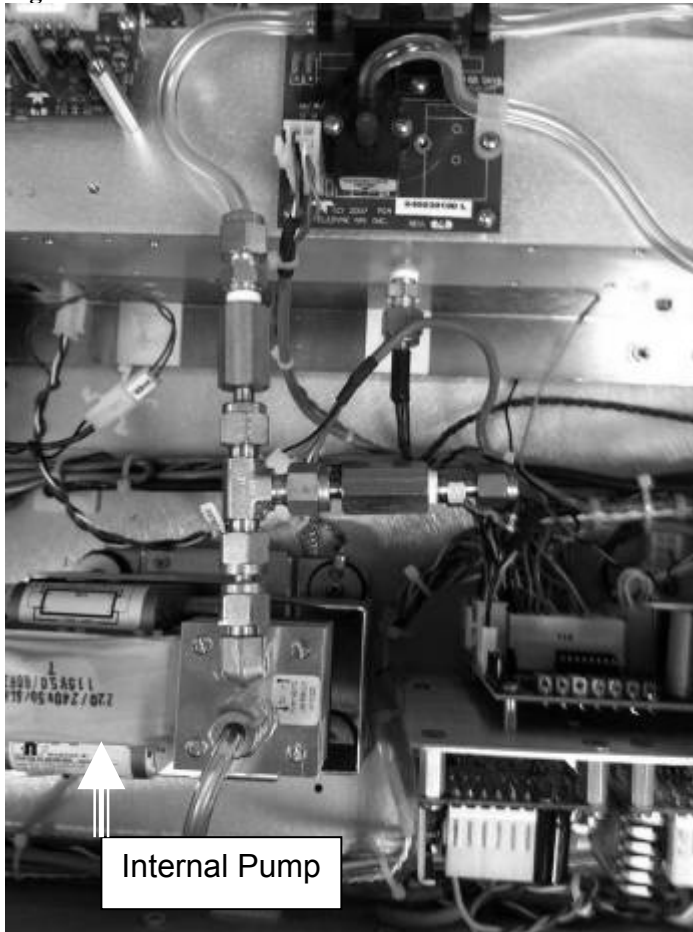
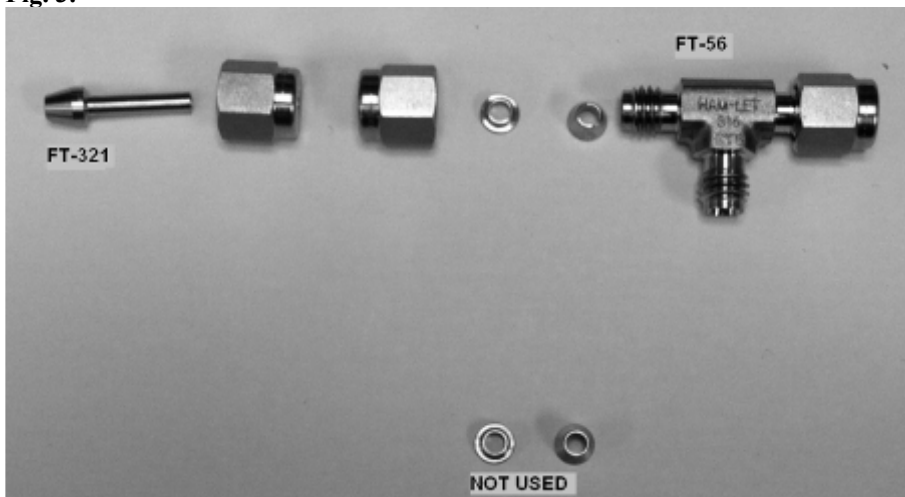


Fig. 3.



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Fig. 4.

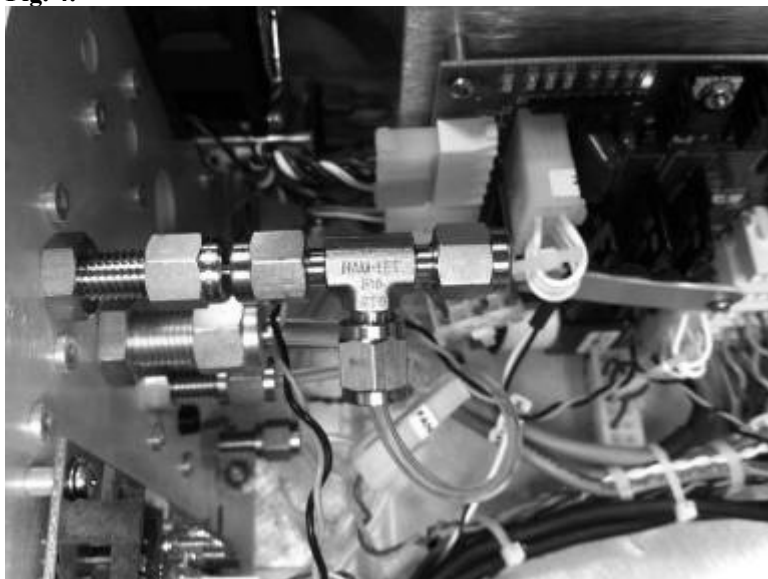
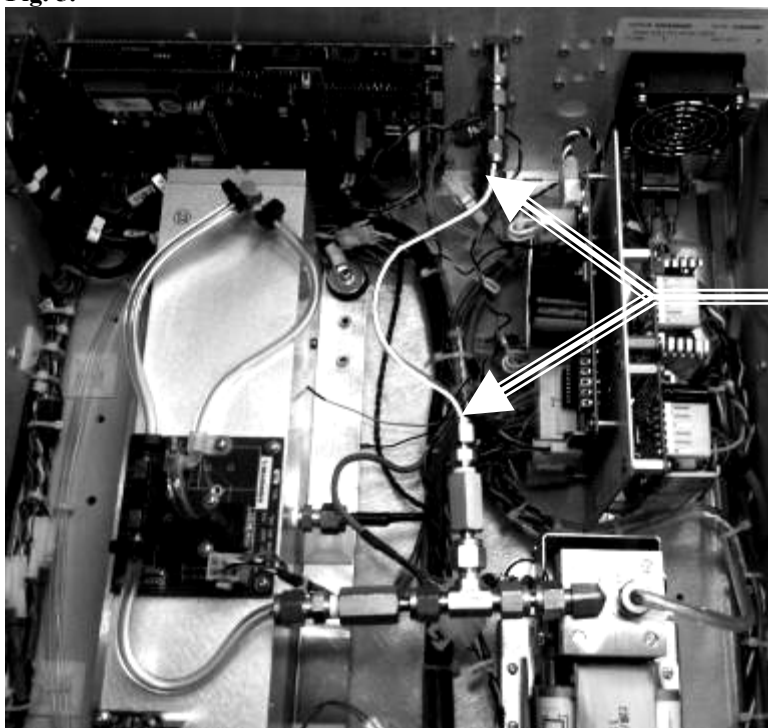


Fig. 5.



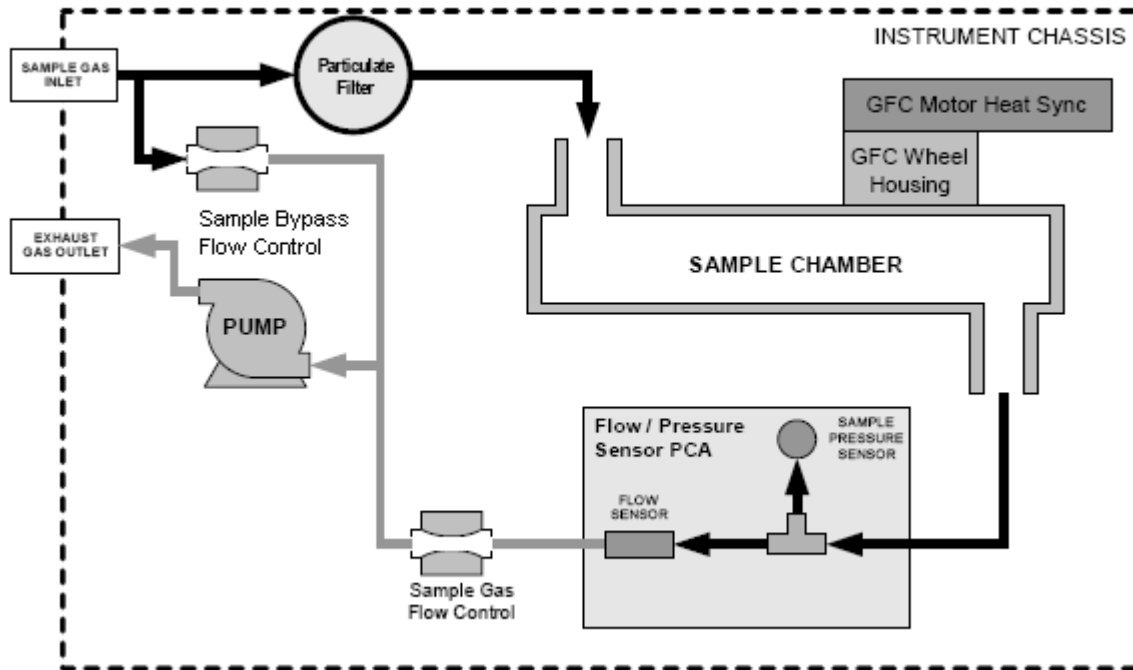
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Fig. 6.



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