



02-002C  
2 May, 2007

**Fiber Scrubber Retrofit Instructions for the M400A Analyzer**

**I. PURPOSE:**

To provide instructions on how to install the Fiber Scrubber Retrofit Kit in a TAPI M400A analyzer.

**II. TOOLS:**

Phillips Screwdriver  
Hand Drill  
0.189" Dia. Drill Bit (#12)  
Center Punch  
1:1 Scale Drill Template #03247 (provided in kit)  
Masking Tape

**III. PARTS:**

KIT000083

**IV. PROCEDURE:**

1. Disconnect AC power from instrument and remove cover.
2. Disconnect tubing from existing reference scrubber at reference valve assembly and the Teflon tee above the reference valve.
3. With the cover off of the analyzer, turn it over on a flat work surface so the bottom of the chassis is facing up.
4. Lay the drill template on the chassis in the location shown in Figure 1. Carefully align the existing holes with the circles on the template and tape the template down.
5. Using a Center Punch, dimple the centers of the two new hole locations and remove the template.
6. Drill holes through the chassis at the two new locations. Carefully remove any burrs from the edges of the new holes.
7. Turn the analyzer back over.
8. Install the scrubber as shown in Figure 2. The scrubber should be held to the chassis using two(2) #8-32 screws (provided in the kit) inserted from the bottom of the chassis. Note the orientation of the fittings marked "I" and "O."
9. Connect the tubing to the scrubber and reference valve as shown in Figure 2. Tubing from the fitting marked "I" should be connected to the Teflon tee. Tubing from the fitting marked "O" should be connected to the "NC (Normally Closed)" fitting on the reference valve.
10. Discard existing length of 1/8" tubing from "NO" port on reference valve to Teflon tee and install new length provided in kit (See Figure 2.)
11. Disconnect power connectors from Sample Pump assembly.
12. Install scrubber power cable provided as follows: Insert Male connectors on Scrubber Power Cable into existing power connectors for the Sample Pump. Connect the two female connectors on Scrubber Power Cable to the Sample Pump.

13. This completes the installation. After power up, the M400A should be allowed to run for several hours and then recalibrated at zero and span.

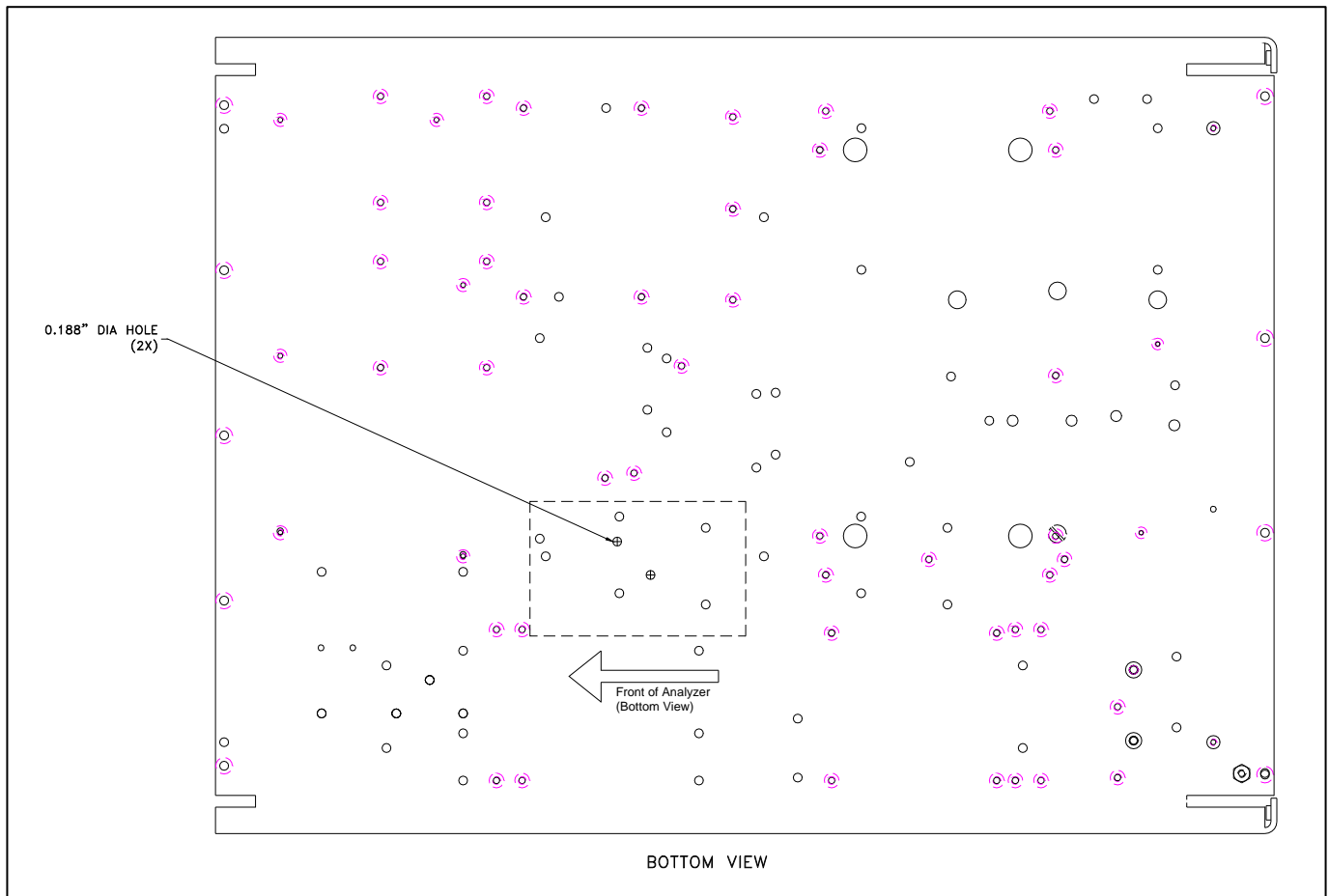


Figure 1

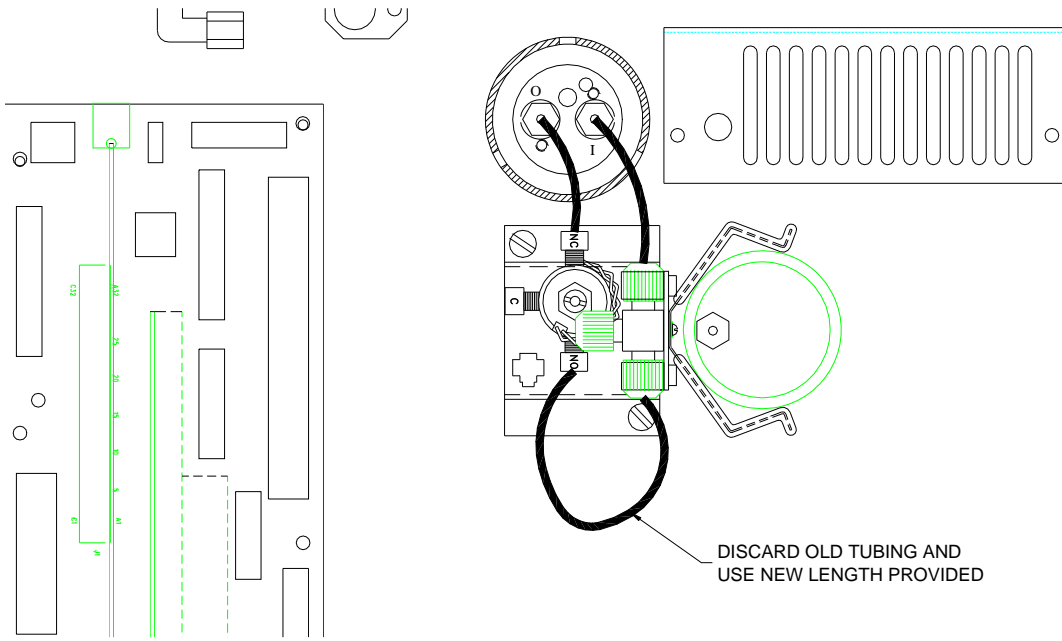
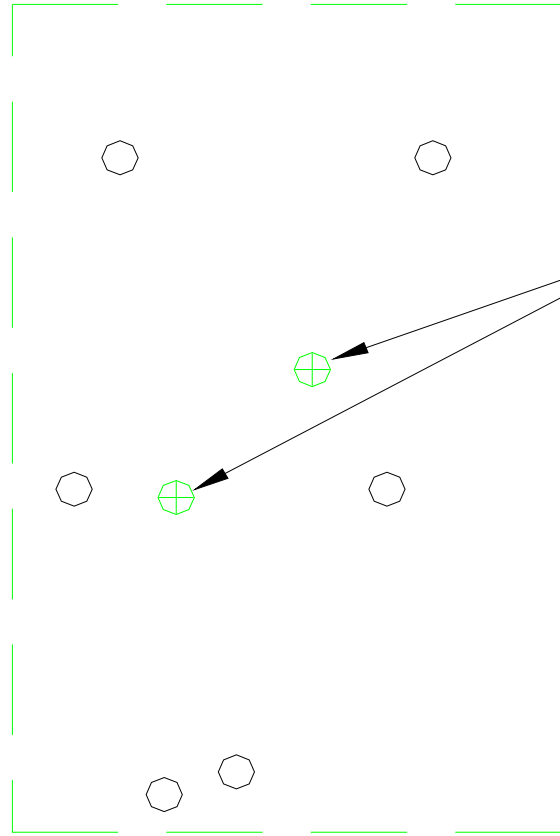


Figure 2

**Drill Template**  
**Print 1:1 Scale**  
**Do Not Photo-Copy**

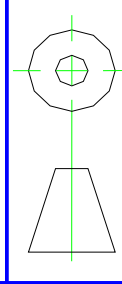
REV	DESCRIPTION	DATE	APPROVED
A	INITIAL RELEASE	10/11/99	RH



**NEW HOLES  
(2 PLACES)**

**Front of Analyzer  
(Bottom View)**

The information herein is the property of API and is submitted in strictest confidence for reference only. Unauthorized use by anyone for any other purposes is prohibited. This document or any information contained in it may not be duplicated with proper authorization.



**THIRD ANGLE PROJECTION**

UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES		CONTRACT: NA	
TOLERANCES ARE:	DECIMALS ±.03	APPROVALS	DATE
FRACTIONS ± 1/32	ANGULAR ±0° - 30'	DRAWN	KL
DO NOT SCALE DRAWING	TREATMENT NA	CHECK	CCB
	FINISH	ISSUED	
	SIMILAR TO		
PART DASH NO	NEXT FINAL	NEXT ASSY	USED ON
	QTY RECD PER ASSY	APPLICATION	
<b>ADVANCED POLLUTION INSTRUMENTATION, INC.</b> SAN DIEGO, CA		<b>TITLE</b> DRILL TEMPLATE, M400A	
<b>SIZE</b> A 1JZF4		<b>CAGE CODE NO./DWG. NO.</b> 03247	
<b>SCALE</b> 1 OF 1		<b>SHEET</b> 1 OF 1	