



**99-017 Rev B
2 May, 2007**

NEW UV LAMP CABLE AND PREAMP WITH POT REPLACEMENT (INSTRUCTIONS)

I. SCOPE:

To guide you through installing the new preamp assy (with the adjustable pot) and new preamp cable into your M100A, M101A and M102A API analyzer.

II. PARTS:

KIT 77

KIT 75 (***) or KIT 74

*** If you get the KIT 75 you will have to remove the old detector from the preamp card and solder to the new preamp card. By getting this kit you assume the responsibility if you destroy the preamp card or detector.

III. TOOLS:

7/16" wrench

9/16" wrench

Phillips head screwdriver

Diagonal cutters

IV. PROCEDURE:

1. Remove power from the analyzer and remove the cover.
2. Cut any tie wraps to facilitate removal of any of the following electrical or pneumatic connections.
3. Remove the electrical connectors from the UV lamp, shutter solenoid, pmt cooler, preamp ribbon connector (on the motherboard J5), UV lamp preamp ribbon cable (from the motherboard J11), ground strap on UV lamp preamp cover.
4. Remove the 1/8" tubing from the top of the sensor assy and the 1/4" tubing from the top of the sensor assy.
5. Remove the three Phillips head screws from the sensor mounting flanges that hold the sensor into the analyzer.
6. Remove the sensor assy from the analyzer.
7. Install the new preamp ribbon cable from the KIT 77, lay the new cable into the analyzer so that it follows where the old cable and so that it does not get pinched when you install the sensor assy back into the analyzer. Connect the end of the ribbon cable that goes to J11 on the motherboard and lay the rest of the cable down so that you can connect the other end of the cable to the UV lamp detector preamp card when you install the sensor assy back into the analyzer.
8. Remove the cover from the UV lamp detector.

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9. Pull gently on the preamp assy so that it comes off of the three standoffs. Make sure that you do not pull so hard that you pull the wires out of the preamp assy or the detector.
10. Turn the preamp assy so that you can remove the two Phillips head screws that are underneath the preamp, which holds the preamp assy to the mounting plate.
11. Remove the preamp, detector and mounting plate from the analyzer.
12. Remove the O-ring from the detector and remove the detector from the rear plate assy.
13. If you ordered the KIT 75 then you are going to need to de-solder the detector from your current preamp assy and solder it to the new detector assy.
14. Slide the detector through the new mounting plate assy in the KIT 77 and install the new O-ring onto the detector.
15. Slide the detector into the hole at the end of the sensor assy and slide the O-ring back into the hole as far as it will go (WITHOUT FORCING IT).
16. Start the two Phillips head screws into the hole and tighten them slowly and evenly.

Note: Once you have the two screws tight do not try to turn or push the detector, you will break it.

17. Snap the new preamp card onto the standoffs and plug the ribbon cable back into the bottom of the preamp card.
18. Install the new cover onto the preamp card and install the two mounting screws. Do not forget to install the grounding strap onto the bottom screw.
19. Install the sensor assy back into the analyzer in the reverse order of removal.

Note: Don't forget to screw the grounding strap to the bottom of the analyzer or the analyzer will be noisy.

20. Leak check the analyzer. If the analyzer leaks then check the detector O-ring to make sure that it is not leaking at the detector.
21. Install the connections at the rear of the analyzer and turn the unit on. Allow it to warm up for a half of an hour before proceeding. If you have installed a new lamp at the same time allow the unit to warm up for 2-3 hours before proceeding.
22. Input your zero air into the unit.
23. Push the test button until you see UV LAMP. Turn the gain pot on the preamp card counter clockwise 35 turns and then clock wise 5 turns.
24. Loosen your lamp and peak the lamp for the highest voltage that you can obtain on the front of the analyzer. When you have the lamp peaked tighten the lamp screws.
25. Turn up on the preamp pot until you get $3500 \text{ mV} \pm 200 \text{ mV}$ on the front panel for UV lamp voltage.
26. Press "SETUP_MORE_DIAG_ENTER_NEXT to LAMP CAL_ENTER_ENTER_EXIT" to the sample menu.
27. Now, follow the Quick cal instructions in the manual (Section 9.1.6), for calibrating the analyzer.
28. If after some period of time the lamp voltage drops from where you have set it you can turn clockwise on the preamp pot and then recalibrate the lamp and then calibrate the analyzer. You will not have to move the lamp (unless the lamp was bumped or moved in shipment).

29. While you are running a new lamp don't be alarmed if the lamp voltage increases some before it begins to decrease, and stabilize out. Lamps vary in "burn in" periods, from 1 week to 4 weeks. After 4 weeks lamps typically decrease in output.

If you have questions regarding this procedure or any API equipment, please contact an API Customer Service representative at:

Phone: (619) 657-9800

Email: customerservice@advpol.com

Fax: (619) 657-9816

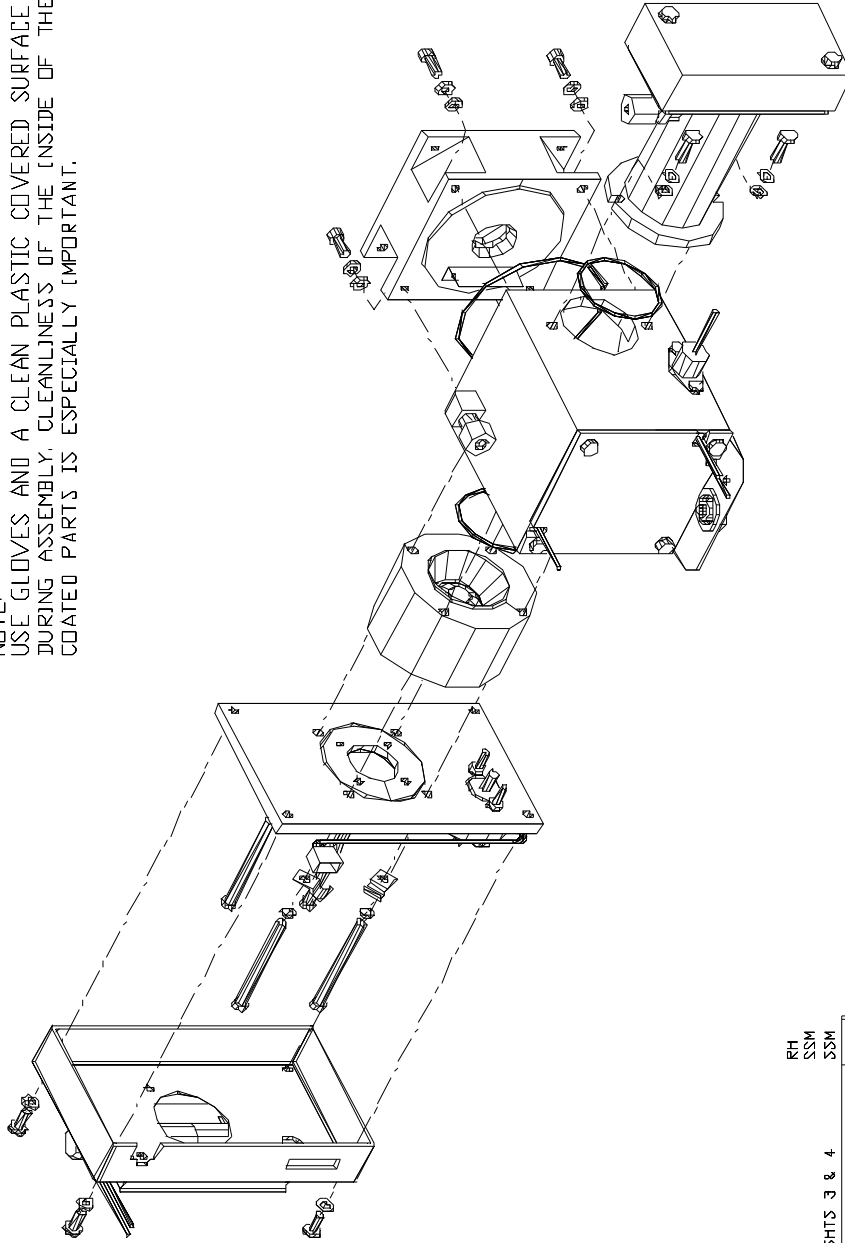
WWW: <http://www.advpol.com>


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NOTE:
 USE GLOVES AND A CLEAN PLASTIC COVERED SURFACE
 DURING ASSEMBLY. CLEANLINESS OF THE INSIDE OF THE TFE
 COATED PARTS IS ESPECIALLY IMPORTANT.



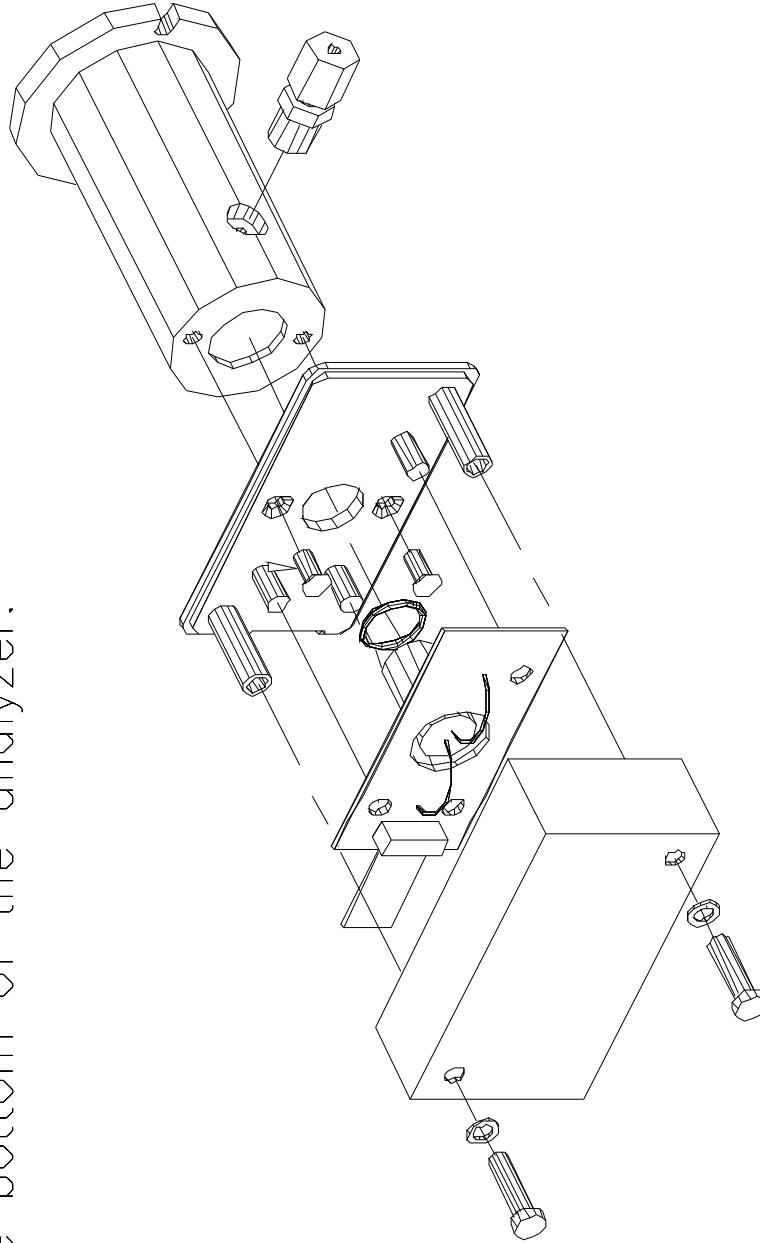
9/24/98	J: ADDED NOTE	RM
11/20/97	G: ADDED MIDJAH SENSOR	SSM
8/28/97	F: CHG SHT 2 AND ADDED SHTS 3 & 4	SSM
9/22/94	A: INITIAL RELEASE	KL
		BY
 ADVANCED POLLUTION INSTRUMENTATION INC. SAN DIEGO, CA.		
APPROVALS	DATE	
JIRAYN JJH	9/94	
CHECKED		
APPROVED		
DWG NOT SCALE DRAWING	SIZE B	REVISION D
	DRAWING NO. 013E4	SHEET 1 OF 3
	SCALE 1/E	

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NOTE:
 this drawing is turned on its side to
 fit the page better. the cable points
 to the bottom of the analyzer.



TOLERANCES X ± XX ± XXX ±		APPROVALS DRAWN J JH CHECKED APPROVED		DATE 8/94		ADVANCED POLLUTION INSTRUMENTATION INC. SAN DIEGO, CA.	
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9/24/98	B: ADDED NOTE	RH					
9/13/94	A: INITIAL RELEASE	KL					
DATE	DESCRIPTION OF CHANGE	BY					