TELEDYNE
INSTRUMENTS
Advanced Pollution Instrumentation
A Teledyne Technologies Company
9480 Carroll Park Drive, San Diego, CA 92121-5201
Phone (858) 657-9800 Fax: (858) 657-9818 Toll Free 1800 324-5190
E-mail: api-customerservice@teledyne.com http://www.teledyne-api.com

Service Note

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CLEANING OP-10 DETECTORS ON M300 ANALYZERS

I. SCOPE:

This procedure provides instruction for cleaning the IR detector glass in the API model M300 CO analyzer.

II. BACKGROUND:

It has been discovered that in some instances of "noisy" or "low energy" analyzers, where replacement of the Preamp/Detector would be indicated, cleaning of the window on the detector restores the lost performance.

III. TOOLS:

A. Phillips Head screwdriver
B. Acetone or denatured alcohol
C. Distilled Water
D. Cotton Swab
E. Lint free cloth (optional)

IV. PROCEDURE:

1. Remove power to the analyzer.
2. Remove cover from analyzer.
3. Locate and remove the preamp cover on the top of the bench at the rear of the chassis.
4. Remove the two screws holding the preamp in place.
5. Loosen the screws holding the detector to the bench and slowly lift the preamp and detector out of the bench.
6. Turn the preamp over so you can see the window on the detector, (be careful as the screws in the detector will probably fall out).
7. Take a cotton swab and dip it into the alcohol. (You can use a lint free cloth instead). Press the swab against the inside of the container and squeeze out the excess liquid from the swab (so it isn't dripping). Use the swab to scrub the window with the alcohol.
8. Repeat step 7 using distilled water instead of alcohol.
9. Using another swab, or a lint free cloth, carefully dry the window being sure that there are no bits of cotton or cloth left behind.
10. Assembly is the reverse of removal.
11. Apply power to the analyzer. Wait one hour before continuing.

12. Input zero air to analyzer.
13. Adjust R7 on the Sync-Demod board until COMEAS is between 50000 and 70000 counts, (3000 - 4400 mV).
14. Allow the analyzer to stabilize at zero for 10 minutes. Press CALM-ZERO-ENTR, (AMX use CAL-ZERO-ENTR).
15. Input span gas. Allow 10 minutes for stability and press CALM-SPAN-ENTR, (AMX use CAL-SPAN-ENTR).
16. You can now verify how noisy the analyzer is.