TELEDYNE
INSTRUMENTS
Advanced Pollution Instrumentation

A Teledyne Technologies Company

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Service Note

10-013
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CPU AND MOTHERBOARD REPLACEMENT

I. PURPOSE:
To give instructions on how to install an ICOP CPU and Main board in to an "E" series analyzers.

II. TOOLS:
Phillips Screwdriver

III. PARTS:
KIT000319 KIT, RETROFIT STD CONFIG, ICOP CPU W/MB

CAUTION!

**ELECTROSTATIC
SENSITIVE
DEVICE**

**DO NOT OPEN OR HANDLE
EXCEPT AT A
STATIC-FREE WORK STATION**

The electronics used in T-API analyzers are sensitive to Electrostatic Discharge (ESD). When working on any T-API device, please ensure that you are properly grounded prior to handling or touching any electronic circuitry in the analyzers! For more information on how to protect sensitive components from ESD during handling, please contact T-API customer service and ask for the ESD Service note number 03-022A.

IV. INSTALLATION PROCEDURE

1. Prior to turning OFF and removing the CPU you will need to record your FACTORY OPTIONS located in the VARS menu using the 929 Password.
2. Turn the instrument off and unplug the power cord.

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3. Remove the cover of the instrument.
4. On the rear panel remove all of the connectors attached to the motherboard.
5. Remove the 4 screws on the motherboard and the 4 screws on the CPU board and remove the CPU, motherboard and any existing cables that connect the two from the instrument. The CPU and Main board will not be used.
6. Remove the main board and the new CPU from the KIT and attach the CPU to the main board if not already attached.
7. Ensure that the CPU is seated properly.
8. Remove the cable labeled 062490000 (if not already attached, otherwise skip to step 11)from the KIT and attach the P12 connector to the motherboard at J12.
9. Attach the COM1 connector to the ICOP CPU at the COM1/RS232 location as shown in FIGURE 1.
10. Attach the COM2 connector to the ICOP CPU at COM2/RS232 location as shown in FIGURE 1.
11. The RS485 Connector is not used.
12. Install the motherboard and CPU with the attached cable to the rear panel.
13. Install and tighten the screws that were removed in step 4.
14. Reconnect all of the electrical connectors that were removed from the previous main board.

FIGURE 1

15. Once all of the connections have been made, close the rear panel and tighten the two screws (one on each side).
16. The analyzer is now setup with the new ICOP CPU and main board.
17. As this is a new CPU you will need to redo all of your calibrations (flow, pressure, analog output and Zero/Span).

If there are any questions regarding this service note please contact a Teledyne API Customer Service Representative at api-customerservice@teledyne.com or (858)657-9800.