



03-002B
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REPLACEMENT OF FLASH MEMORY IN E SERIES ANALYZER

I. PURPOSE:

To provide instructions on how to determine if the flash memory needs to be replaced, & how to replace the flash memory in a Teledyne API E series analyzer. When an E series analyzer is turned on the CPU will check the flash memory to determine if it is installed & if it is formatted. If the flash is installed & formatted properly the CPU will start the firmware for the analyzer. If it is not formatted properly it will attempt to format the flash. If you see a message "FORMATTING FLASH" or "FLASH FORMAT INVALID" the flash chip should be replaced. Follow the direction in this service note on how to replace the flash memory in your instrument.

II. TOOLS:

Scribe
Static ground strap

III. PARTS:

042900100 Flash memory chip

IV. PROCEDURE:

1. From the front panel of the analyzer, push SETUP-MORE-VARS-929-ENTER & then NEXT all the way to the last VAR which is FACTORY OPTION, write down the factory option number & EXIT all the way back out to the sample menu. If you don't know what your range is, push SETUP-RANGE-SET & write down the range, then push EXIT & MODE & write down the range mode. Push EXIT back out to the sample menu.
2. Turn the analyzer off & unplug the power from the rear of the analyzer. Remove the cover from the analyzer

NOTE: IN THE NEXT STEP IT IS VERY IMPORTANT TO FOLLOW GOOD STATIC HANDLING PROCEDURES. YOU CAN DAMAGE THE CHIP THAT YOU ARE REPLACING WITH STATIC ELECTRICITY IF YOU DON'T GROUND YOURSELF WHILE YOU ARE HANDLING THE CHIP.

3. Using a scribe, remove the Flash memory chip from the socket U2 on the CPU assembly. U2 is located in the upper right hand corner of the machine directly under the 10 Pin CN3 connector. When removing the flash chip use caution to pull up one corner a little @ a time. pry up a little & then goto the other corner & pry up a little & then back to the first corner & then back to the second corner until you get the chip out. don't try to get it out by lifting only one corner, you might bend the pins in the socket and the new Flash might not fit into the socket correctly
4. when you have the chip out, inspect the pins & make sure that they are all straight so that when you install the new memory chip, it will go in straight & connect properly.

5. inspect the socket & see that 3 corners are sharp & one is cut off to make the chip go in only one way. Inspect the chip & put the chip into the socket with the cutout in the right place.
6. turn the machine on & allow it to boot up. when it boots up you will notice that one of the messages you are going to see is “checking flash status” you are also going to see “starting instrument code W/Flash”. This is normal. If you see any messages like “formatting flash” or “Flash format invalid”. There is something wrong. This should not happen. If it does contact the customer service department.
7. push SETUP-MORE-VARS-929-ENTER-NEXT all the way to the end where the FACTORY OPTION is. Push EDIT & change this factory option to the number that you wrote down in step 1 of the note. Go into the RANGE menu & change the SET & MODE back to what you had it set to.