>
> Hello all,
>
> upon power on, both fuses on the back of the 8552B IF section burn out.
> Once replaced, everything works fine. It happened twice in the last few
> days, never seen before in many years.
>
> Thought it's time for some preventive maintenance, possibly the low
> voltage PSU section on the mainframe. I was wondering if anybody is
> aware of some known point of failure that may produce this defect.
>
> Thank you
> Paolo
>

Paulo:

In my 141T this problem was caused by the gas regulator V1 not firing immediatly allowing the 100 Volt reference to increase significantly. This reference voltage change caused the -12.6 Volt rail to become more negative and operate the over voltage protector circuits in the 8552B blowing these two fuses. The problem is intermittent because the gas regulator only fails to ignite occasionally.

My solution was to replace the gas regulator V1 with two Zener diodes in series, a 1N4754A (39V) and a 1N4755A (43V). In order to bias these diodes correctly, R21 was changed from 5K6 to 3K3 Ohms. I also installed a 100 uF 100V electrolytic capacitor in parallel with the two Zener diodes to bypass the noise generated.

After this was done, the 100 Volt supply was readjusted per the manual.

I haven't had any more fuse failures since I made this change and operation and performance of the rest of the instrument seems normal.

Al