

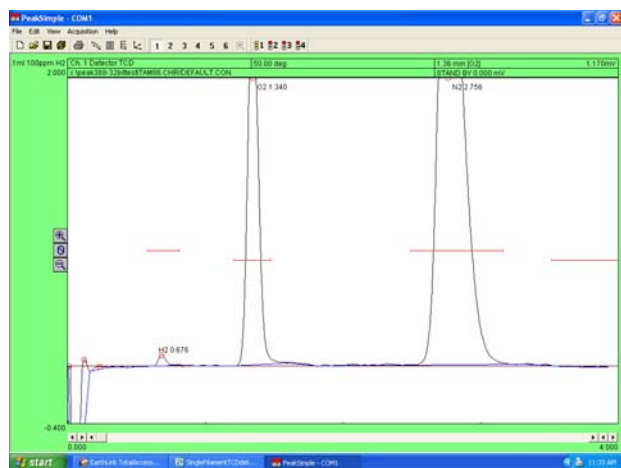
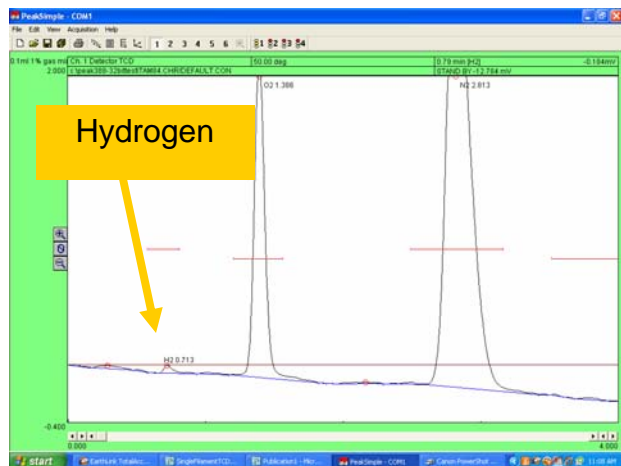
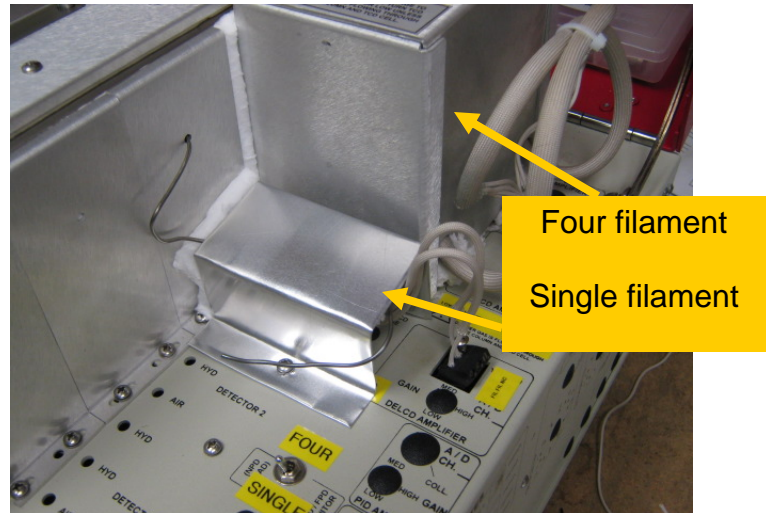
Single filament TCD detector operation

The SRI single filament TCD is mounted on the right side of the GC's column oven. More than one single filament TCD detector may be mounted in this location (up to 6). In the photo, a single filament TCD is mounted alongside a four filament TCD detector.

The single filament TCD detector is always energized. The 50 milli-amp filament current is low enough that no filament damage can occur even with room air in the detector.

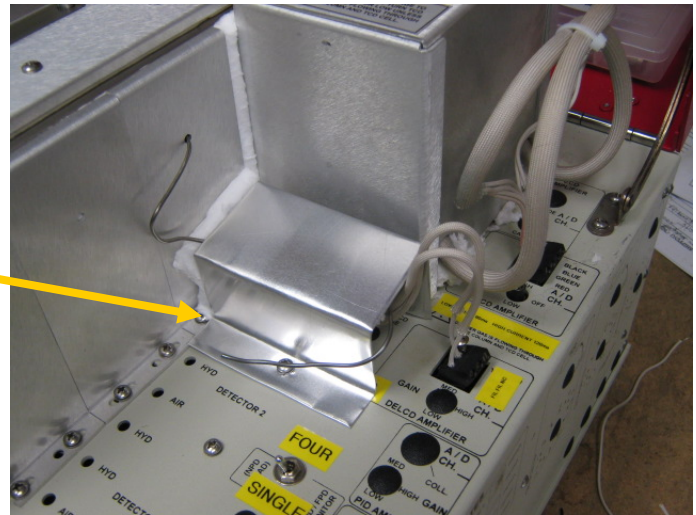
The top chromatogram at right shows 1ml 10ppm hydrogen in room air using argon as carrier gas using the single filament TCD. The lower chromatogram shows the same sample on the 4 filament TCD detector on low (80 milli-amps) filament current.

Compared to the four filament TCD the single filament is about the same raw sensitivity, but exhibits more baseline noise and drift. It is however less expensive on initial purchase and much less expensive to maintain since the single filament can be replaced in minutes for under \$100.



Single filament TCD detector operation

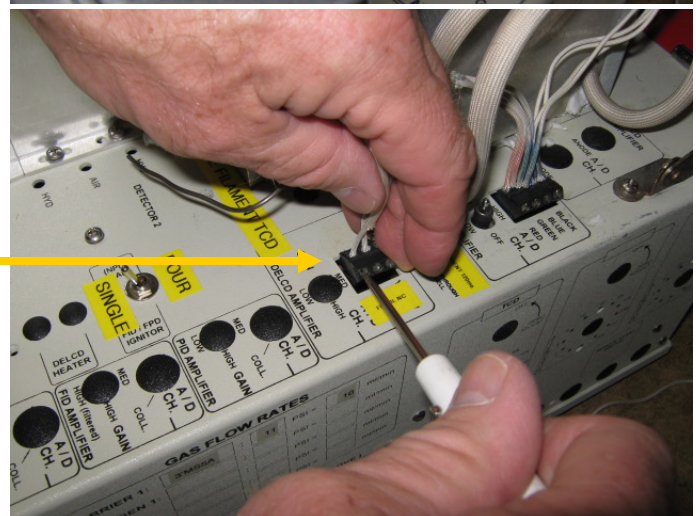
The SRI single filament TCD detector is mounted on the right side of the GC column oven.



To change the filament, remove the aluminum cover and the white spun glass insulation.

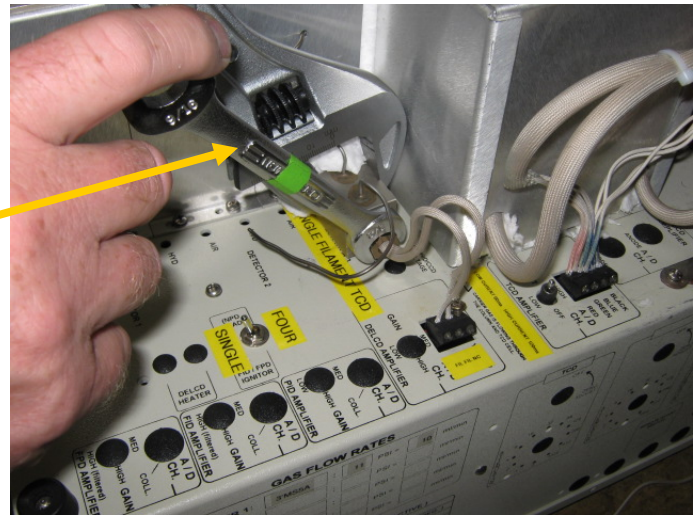


Remove the two filament wires. Hold the terminal block with one hand to avoid overstressing the connections.

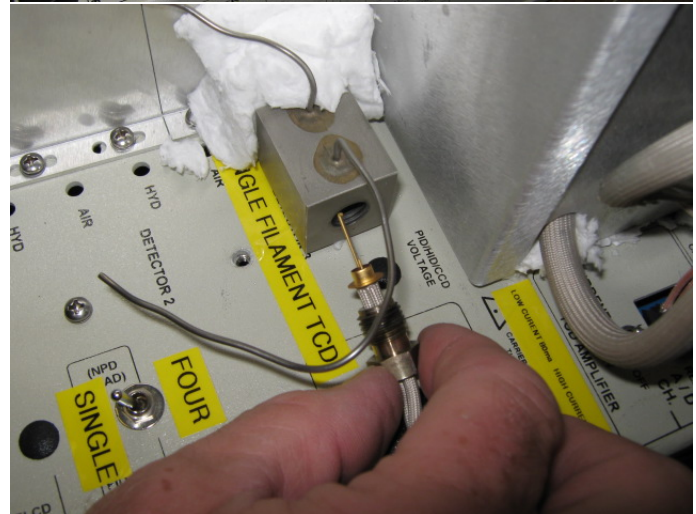


Single filament TCD detector operation

Using TWO wrenches loosen the nut holding the filament in the detector block.



Remove the filament carefully and if the filament is broken remove any debris left inside the detector cell.



Replace with a new filament and copper sealing washer.

