

Troubleshooting 5890 FID Ignition Problems

Flame Won't Light, Flameout

The 5890 FID uses a hydrogen flame to burn organic samples, resulting in increased ionization that is measured as current. Typically, the following conditions are necessary:

- 1) FID temperature is appropriate to the application and at least 20C greater than the final oven temperature. 300C is a preferred minimum, if it does not conflict with the maximum column temperature.
- 2) Detector flows are set to recommended values.
- 3) The ignitor is functional.
- 4) There are no leaks.
- 5) The FID jet is not fouled or plugged.
- 6) The FID jet is properly seated in the base weldment.

The following troubleshooting guidelines can be followed:

- 1) Confirm that the FID ignitor is glowing while the FID is trying to ignite. If not, check the ignitor connection and make sure the ignitor body is screwed tightly into the FID castle assembly. If the ignitor coil is non-functional or corroded, it will have to be repaired/replaced. If you can push the ignitor while holding a lighted match (in labs where this is permitted) above the FID, and the FID lights, the problem is in the ignitor and not the flows or jet.. continue to run samples until the ignitor can be fixed.
- 2) Measure the flows. ([Measuring Flows on the 5890 FID](#))

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3) If the ignitor and flows are correct, the next step is to clean or replace the jet. Cleaning can be accomplished using any very thin wire followed by sonication in a solvent appropriate to the type of samples run on the GC. During troubleshooting, it is always preferable to have an unused jet to rule out jet issues.

Capillary Jet	P/N 19244-80560
Packed Jet	P/N 18710-20119
Wide Bore Packed Jet	P/N 18789-80070 (High Bleed Applications)
High Temp Jet	P/N 19244-80620 (Simulated Distillation)

4) If the suggestions in steps 1 through 3 have not worked, the problem is either application (the flame goes out as the solvent front hits the flame), electronic (the signal is not reading correctly), or the method is not set up correctly. At this point, [Call Agilent](#) for help with in-depth troubleshooting or on-site service.