

Installing the Thermo Trace Mount for the Agilent Dual Plasma Burner

Accessory G6600-60618

Purpose

To install the mount for use with the Dual Plasma Burner.

Scope

This procedure describes how to install the mount for use with the Agilent Dual Plasma Burner and Thermo Trace gas chromatograph (GC) instruments.

Safety

Make sure all devices are powered off and unplugged while performing the installation to avoid the possibility of electric shock.

When working with ceramic fiber insulation use gloves and other personal protection to avoid exposure

Materials

- DP Thermo Trace Mount kit
- The Dual Plasma Burner
- Hole punch
- Metal file
- (Optional) Tin snips or sheet metal cutters

Procedure

1. Make sure all devices are powered off (Controller, FID, pump, and GC) and unplugged.
2. Make sure the voltage of the mount matches the voltage of the GC.



3. Check the signal connection.
 - If the Thermo Analog Input Board (Thermo PN 19050153) is used, then the spade lugs from the Generic Signal Cable should be cut and 4-5 mm of insulation should be stripped. Screw connect the wires to the Thermo board as shown in Figure 2. The black wire should be connected to “0” input on the Thermo Board and the red wire should be connected to the “10V” input.
 - The output of the SCD or NCD should be set to 10V on the back of the detector box using a small flat-head screwdriver to change the switch. **(0-1V can be used but may require changing GC or GC software settings; consult the GC manual or other Thermo documentation.)**



Figure 1 The Signal Cable Connection on the GC

4. The Agilent DP burner mount fits into the Thermo Injector/Detector Cassette. It is necessary to remove some sheet metal to ensure a proper fit. To do this, remove the cassette from the GC. Remove any insulation or other GC components that may interfere with the procedure.

WARNING

Use gloves and other personal protection to avoid exposure to insulation fibers.

- Use the hole pattern template from the *Operation and Maintenance Manual* to align cutting tools (see Figure 2 and Figure 3).

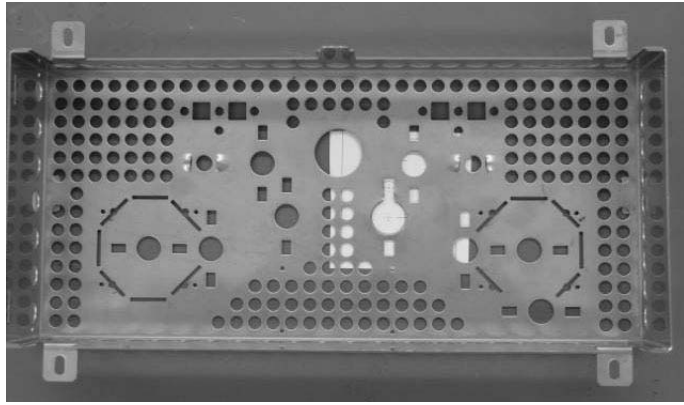


Figure 2 Cutting Template and the Thermo Cassette

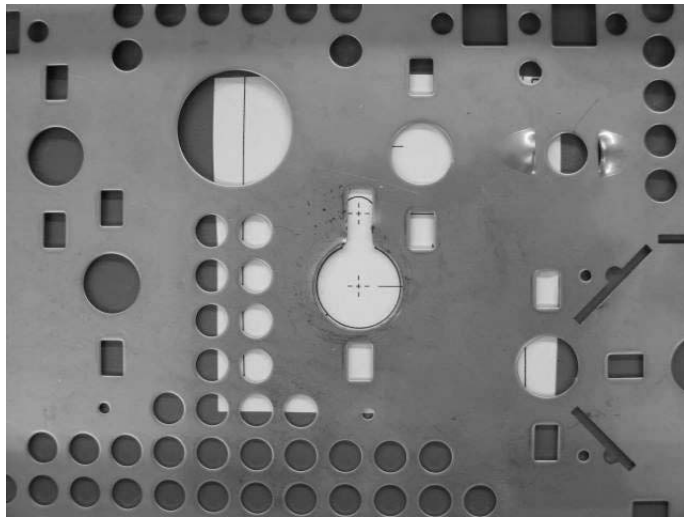


Figure 3 The Cutting Template and the Thermo Cassette (Detail)

- Use hole punch and file to create the proper hole pattern (see Figure 4).

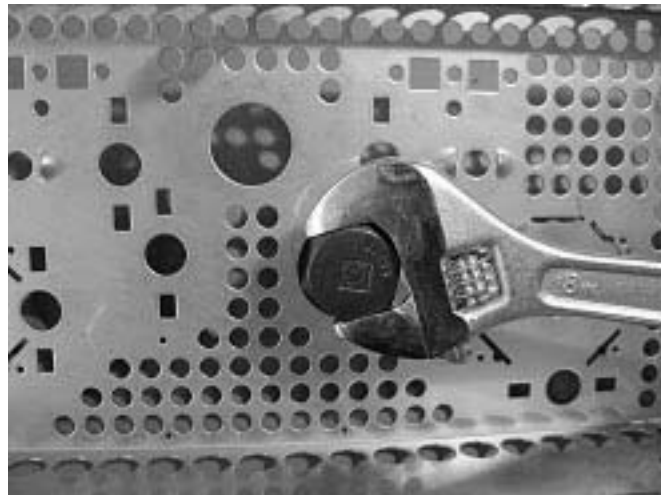


Figure 4 Using a Hole Punch to Modify the Sheet Metal

- Replace the GC components that will be used, including the DP mount, into the cassette. Note that not all insulation will be used
- Figure 5 illustrates the proper completed mounting of the burner.

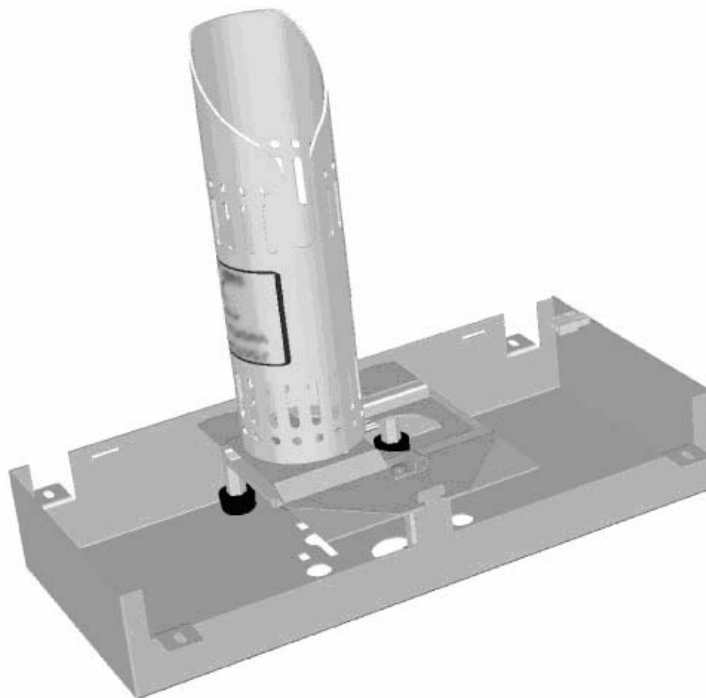


Figure 5 Illustration of Burner Mounted with FID Adapter (Rear View)

5. Connect the DP burner heated block to the GC.
 - The Thermo GC has a number of heated zones from which to choose. Make sure that the RTD sensor and heater correspond to the same zone. The RTD sensor connection is made inside the cover on the right-hand side of the GC (see Figure 6).

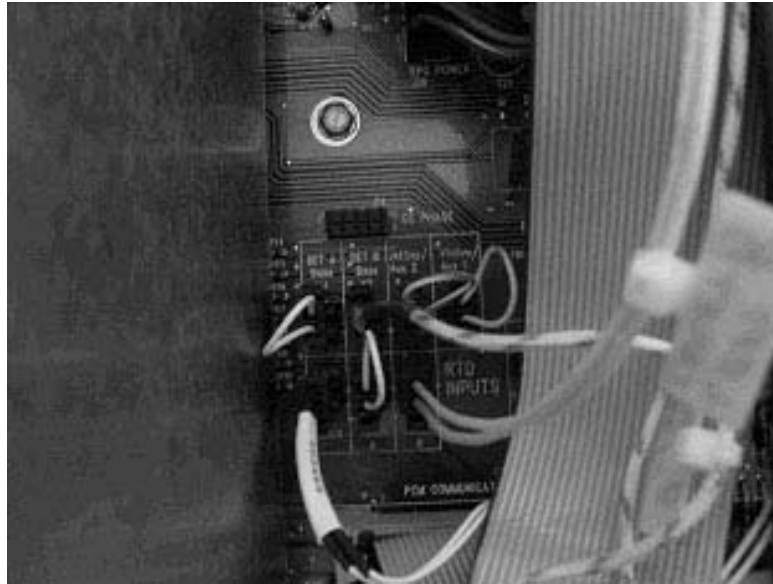


Figure 6 Establishing the Electrical Connection

- The heater connections are made inside the back of the GC. The screw type connectors can be removed from the board for connecting the heater wires. **For the PIN pattern, refer to the template located above the connector in the GC.** Refer to Figure 7 and Figure 8.

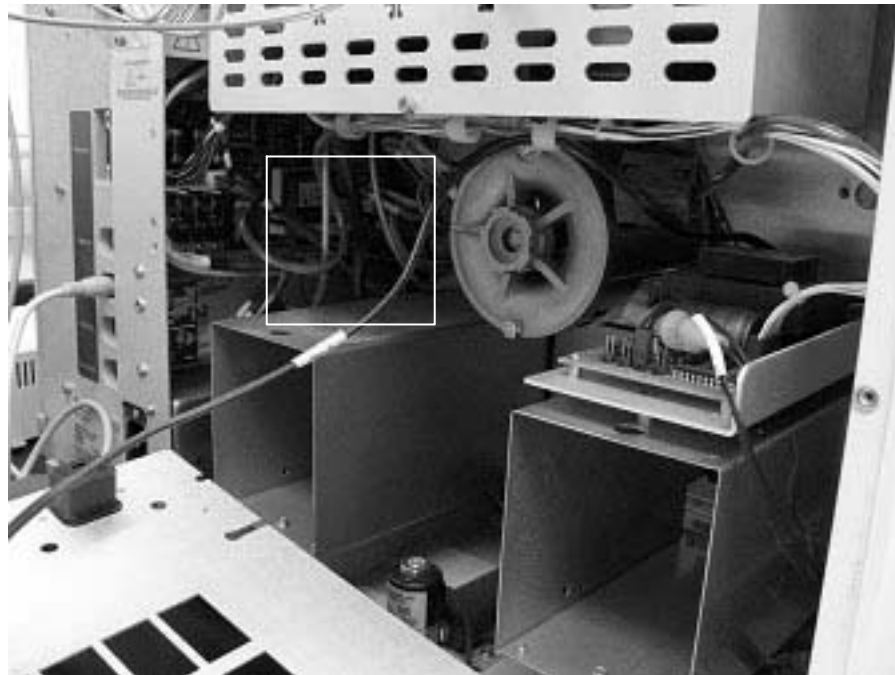


Figure 7 Interior Rear View of GC (Detail Area Indicated)



Figure 8 Interior Rear View of GC (Detail)

6. Temperature Control

- The GC controls the temperature of the base of the burner mount. Typically this temperature will be set to the upper column temperature for the direct mount (for example 250°C) or 125-150°C when the FID adapter is used.
- The detector/heater circuit may need to be configured in the software and/or GC hardware. Configuring the SCD/NCD as “Other-X PDD” has been used successfully.
- After the burner mount is connected and the GC/software is configured correctly, verify that the burner mount heats correctly. If there is a fault, verify that the heater/sensor wires are correctly connected and not shorted. It may be necessary for additional support from the GC manufacturer.

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