



**02-023B
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SETTING THE FLOWS IN A DANI TNMH451/462

I. PURPOSE:

To guide you through setting the flows in a dani tnmh 451 and tnmh 462.

II. TOOLS:

Bubble type flow meter with small fitting to go over the chimney of the FID

Stop watch

Calculator

Screw driver

III. PARTS:

None

IV. PROCEDURE:

1. MEASURE THE AIR FLOW (1 bar)

- a. Hook up the burner air to the air inlet. The air must be capable of delivering hydrocarbon free and dry air. The air supply should be capable of pressure between 20 and 30 psi and capable of delivering 3,500 cc/min.
- b. Defeat the pump (turn off the analyzer) so the pump does not run (caution: 220 volts or 115 volts present) by removing the spade lug attached to the pump.
- c. Turn the power on to the analyzer. Assure that the h2 input is not connected (no h2 flow) and set the air pressure to 1 bar.
- d. You should only have burner air flow, no h2 hooked to the rear of the analyzer and the sample pump disconnected.
- e. At the top of the FID (this is the small metal tube sticking out of the top of the fitting on top of the FID), measure and record the air flow.
- f. After measuring and recording the air flow turn off the air flow. There should be no flow through the analyzer now.

2. MEASURE THE H2 FLOW (1 bar)

- a. With the pump still off, attach the h2 line to the h2 input. The h2 must be pure and dry. The h2 supply should be capable of delivering pressure between 20 and 30 psi and capable of delivering 60 cc/min.
- b. You should only have h2 flow no air applied to the rear of the analyzer and the sample pump disconnected.
- c. Allow the h2 to flow by moving the h2 toggle switch (located on the motherboard by the transformer) to the rear position. This will allow h2 to flow without trying to ignite the flame.
- d. Set the Pressure to 1 bar and measure the flow at the top of the FID and record the h2 flow.
- e. After measuring and recording the flow, turn the h2 switch to the forward position and turn off the h2 flow.

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3. MEASURE THE SAMPLE FLOW (.5 bar)
 - a. Turn off the analyzer and reattach the spade lug to the pump. Turn the power to the analyzer back on.
 - b. This time you should only have sample flow, no air or h₂ applied to the rear of analyzer.
 - c. Set the sample flow to .5 bar, measure the flow at the top of the FID and record this flow. If the flow is less than 40 cc/min., increase the pressure until greater than 40 cc/min but less than 60 cc/min is achieved

CAUTION: KEEP THE PRESSURE UNDER .8 BAR.