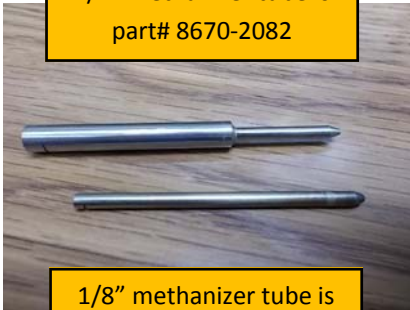


Large Capacity Methanizer Installation

April 2019

Starting May 1, 2019 SRI GCs that have a methanizer equipped FID detector will be supplied with a Large Capacity methanizer which can hold much more of the nickel catalyst than the previous version.

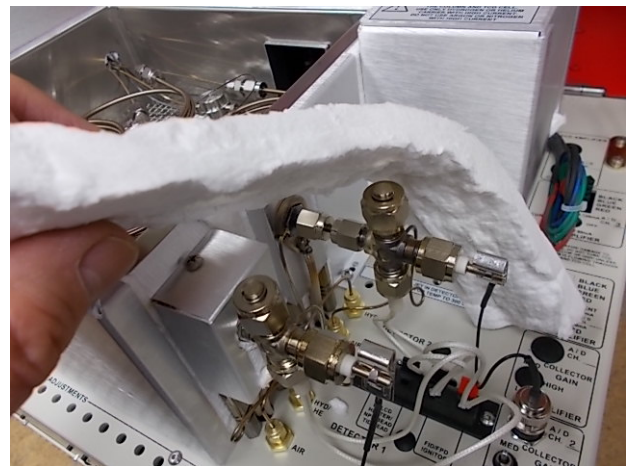
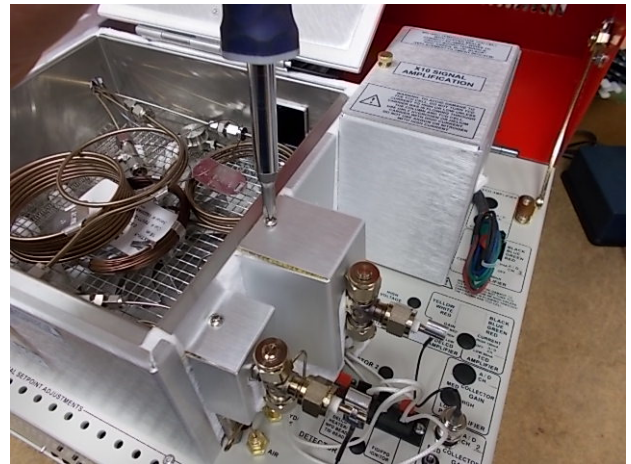
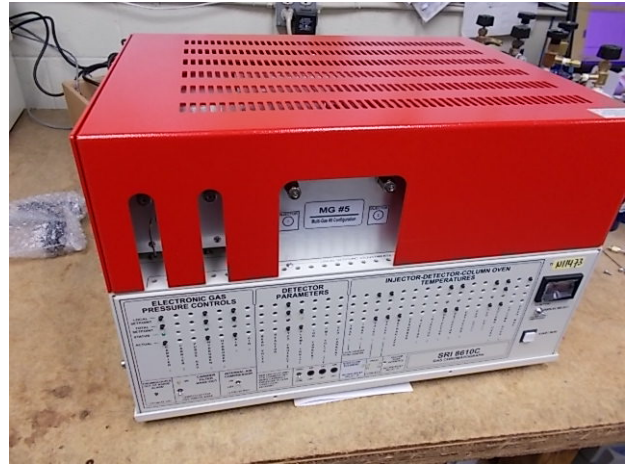
1/4" methanizer tube is
part# 8670-2082



1/8" methanizer tube is
part# 8670-1082

To replace the original 1/8" methanizer with the Large Capacity (LCM) methanizer remove the insulation from the FID methanizer detector.

Save the insulation for later re-install. The insulation is spun borosilicate glass, not asbestos.



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Large Capacity Methanizer Installation

April 2019

Loosen the nut holding the air supply tube to the FID.

Remove the two ignitor wires from the push terminals.

Remove the BNC plug from the amplifier connection.

Loosen the 1/8" Swagelok nut from the bulkhead fitting.



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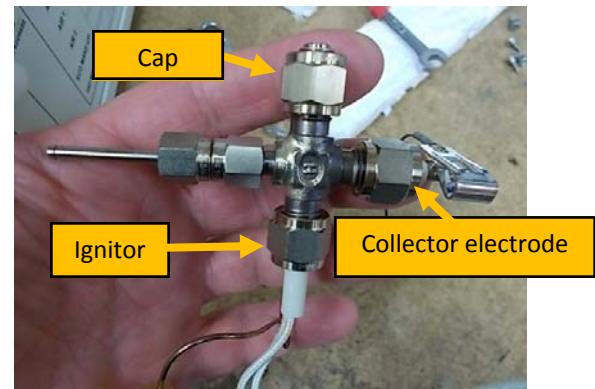
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Large Capacity Methanizer Installation

April 2019

The entire FIDmethanizer looks like this.



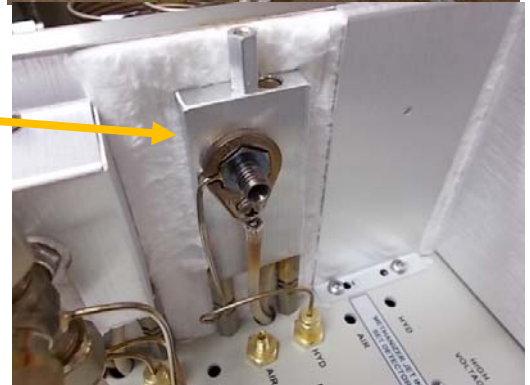
Remove the collector electrode and cap for visibility inside the detector body, but leave the ignitor where it is. Its easy to break the ignitor if you remove and re-install it, so don't remove it.



Remove the 1/8" methanizer jet. The 1/8" Swagelok nuts and ferrules can not be easily removed.



The FID bulkhead looks like this with the FID methanizer removed.



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Large Capacity Methanizer Installation

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Remove the tube connected to the inside of the FID bulkhead. This will usually be the exit of the TCD detector, but could also be a column.

Remove the nut and ferrule from the tube.

The next steps require two hex wrenches, a 1/16" size and a 3/32" size. Its handy to have a long wrench as shown but a shorter one works

Remove the nut connecting the bulkhead to the hydrogen makeup gas flow.



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Large Capacity Methanizer Installation

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Use a Philips screwdriver to remove the thermocouple from the heater block. The thermocouple is crimped into a ring terminal.

Open the bottom of the GC and tilt the GC on its back.

Use the 3/32" hex wrench to remove the two hex head screws and washers holding the heater block. The screws are immediately below the legs on the heater block.

The hex head screws and washers look like this.



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Large Capacity Methanizer Installation

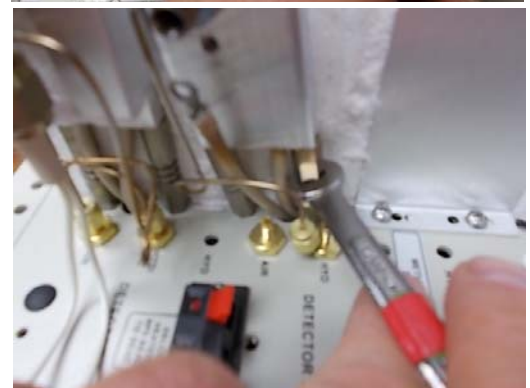
April 2019

Remove the bulkhead retainer.

Tilt the heater block forward a little.

Loosen but don't remove the 1/16" hex setscrew which holds the heater cartridge in the block.

The heater cartridge won't slide out the bottom of the heater block unless the right side leg is removed. Use a 5/16" wrench to loosen and remove the leg.



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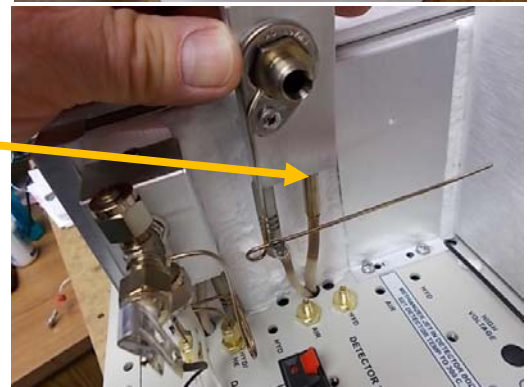
April 2019

The old heater block and 1/8" bulkhead look like this with the leg removed.

The new 1/4" bulkhead, heater block and large capacity methanizer jet look like this.

Remove the right side leg so you can slide the heater cartridge into the hole.

This shows the heater cartridge part way into the hole.



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Large Capacity Methanizer Installation

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Tighten the setscrew holding the cartridge heater. The setscrew should be snug but not extremely tight.

Replace the right side leg and then tighten the two hex head screws which hold the heater block legs from underneath, inside the GC.

Replace the thermo-couple and tighten securely. If the ring terminal to which the thermocouple is crimped looks broken or corroded, replace it with a new type K thermo-couple from SRI. Its important to get a good temperature reading.

Connect the hydrogen makeup supply tube to the 1/16" brass bulkhead fitting immediately below. Curve the tube as shown and use a 1/16" Swagelok nut and ferrules to make the connection. Do not overtighten the nut. You may have to use a 2nd wrench to hold the bulkhead fitting from turning as you tighten the nut.



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Large Capacity Methanizer Installation

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Connect the TCD outlet to the inside of the 1/4" bulkhead fitting with a 1/4 to 1/16 reducing ferrule. The tube should protrude about 1/4" past the end of the ferrule.

If preferred, you can also use a Swagelok adapter with metal ferrules.

If it was removed during the installation of the block, connect the methanizer jet to the bulkhead fitting. In some cases the ferrules will already be seized on the 1/4" tubing. Be sure to tighten the nut snug but not overtight.

It should look like this with just a little bit of the 1/4" tubing sticking out past the nut.



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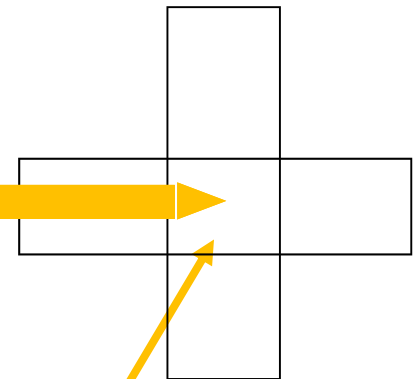
Large Capacity Methanizer Installation

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Use a 1/8" Swagelok nut and ferrules to connect the jet to the FID "cross" fitting.

Its hard to see in the photo looking down into the "cross" fitting, but the tip of the jet should be positioned in the exact center of the "cross".

Be careful as you tighten the nuts and ferrules that the jet does not move as you tighten the nut.



Tip of jet in exact middle of FID detector "cross" fitting



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Large Capacity Methanizer Installation

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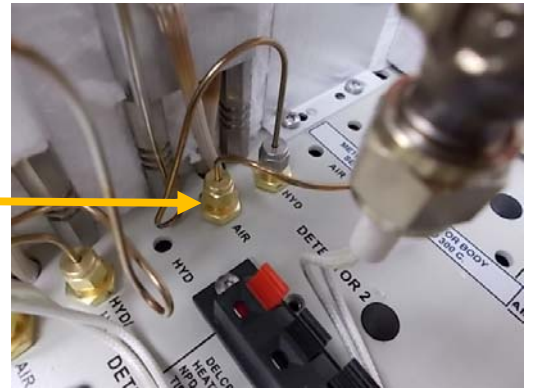
Re-connect the combustion air tube to the air bulkhead. Don't overtighten the nut.

Also re-connect the ignitor wires, collector electrode and cap.

It should look like this.

Replace the small insulation pad.

Remove the aluminum standoff from the old heater block.



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Large Capacity Methanizer Installation

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Attach the standoff to the new heater block.

Place the larger insulation pad over the heater block as shown. Spread the aluminum cover slightly as you slide it down into place.

Secure the aluminum cover with the screw.



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