

# Fast Mudlogger GC upgrade kit installation Oct 2012

The Fast Mudlogger upgrade kit SRI# 8660-0066 includes the hardware to retrofit an existing mudlogger for faster analysis times. The kit includes:

One SRI tubing cutter

One 1/16" .005 id tube with split restrictor

15mMXT-1 5micron .53mm capillary column

One 1/16" tube with Valco nut and ferrule

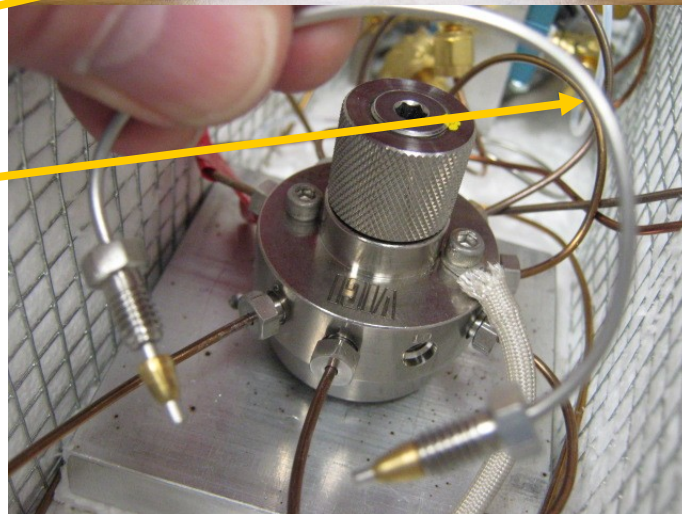
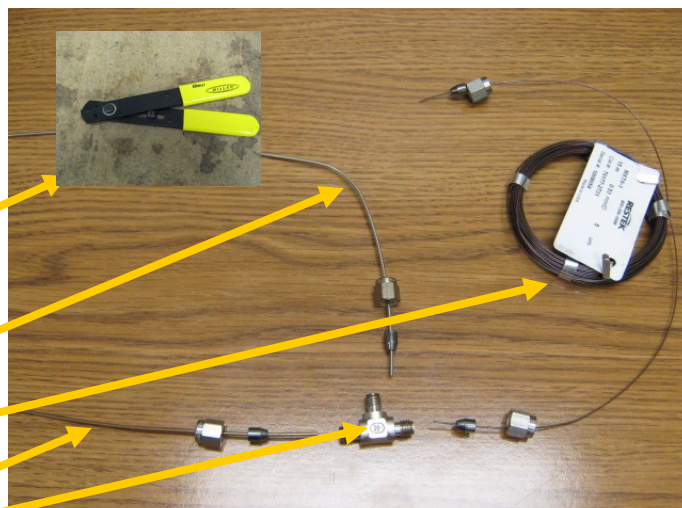
1/8" stainless steel tee fitting

Three nuts and graphite ferrules

One 35ul loop for the gas sampling valve

Install the 35ul loop between ports 3 and 10 on the Valco valve. The port numbers are stamped into the valve body next to each hole.

Put a piece of tape over the end of the tube before sliding it through the oven wall. The tape will keep insulation particles from getting inside the tube.

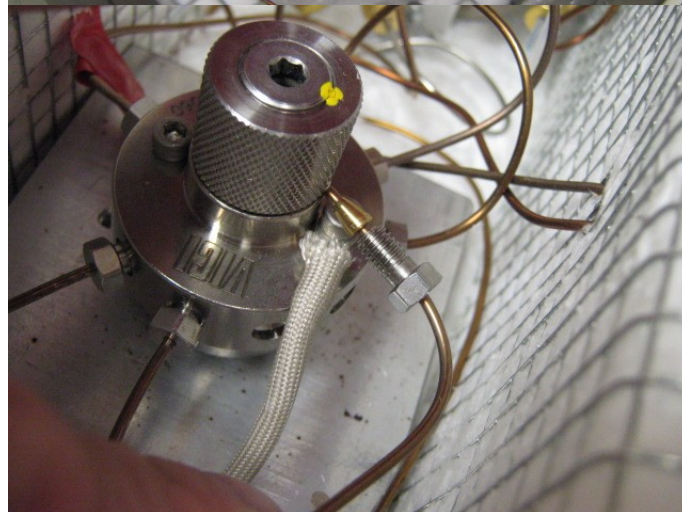
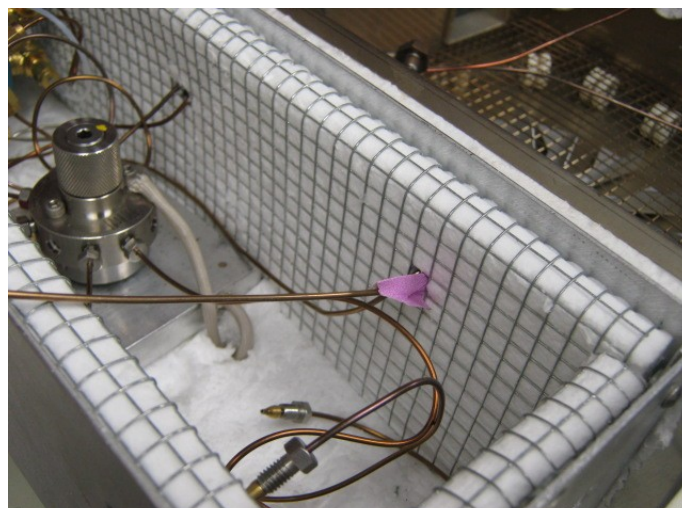


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Feed the tube through the hole in the oven wall.

Attach the other end to port 9 of the valve.

Remove the tape from the tube and slide on the nut and graphite ferrule.



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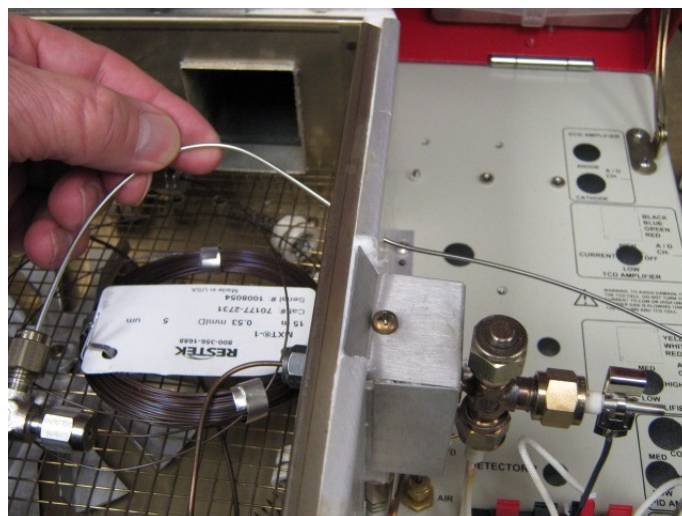
Attach the tube to the “tee” fitting. Connect the column to the tee so the column slides all the way through the tee and into the tube from port 9 or the valve.



This is important because the sample will be split and to get a clean split the column must be inside the tube.

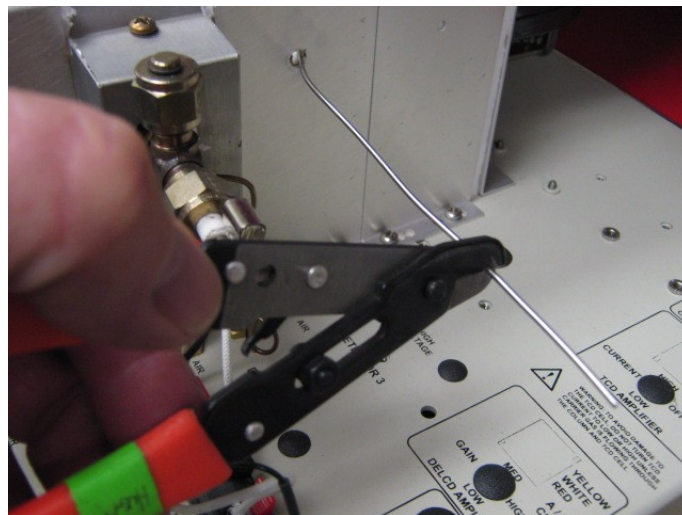
Connect the other end of the column to the pre-existing tube going to port 5 of the valve.

Connect the split vent tube ( the tube with very tiny inside diameter ( .005 inch ) to the middle of the tee. Route the split vent outside the column oven through a hole in the right side. Drill a hole if none exists.



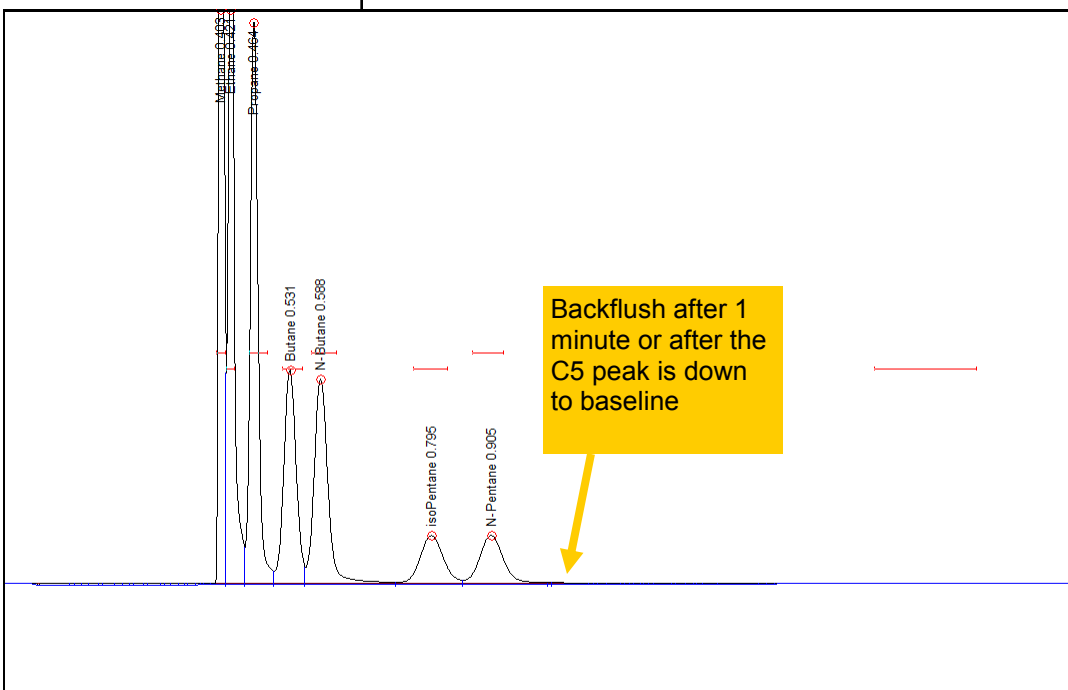
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Cut the tube as necessary to keep the methane peak on scale. ( 70% methane ) The shorter the split tube the greater the split ratio. Use the SRI tubing cutter to easily snip the tube. If the split tube is too long, the methane peak will go offscale ( more than 5000 millivolts ) and the separation of methane and ethane will not be close to the baseline. You may have to make several injections to get the length correct.



Set the column head pressure to 10 psi. Adjust as necessary depending on whether you are using helium or hydrogen carrier.

Set the A/D board sample rate to 10 hz or higher. The control for this is in the Edit/Overall box for Peak-Simple versions 3.93 and later. Earlier versions set the sample rate in the Details screen for each channel.

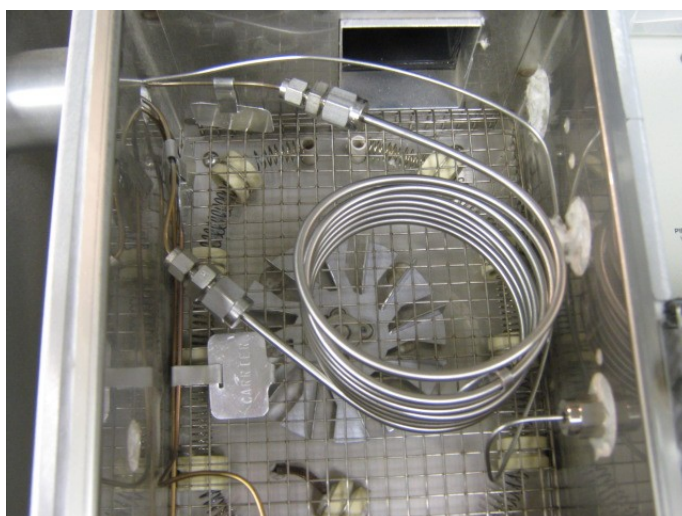


The resulting chromatogram should look like the one above.

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As of 2012, SRI recommends using a 6-foot n-Octane on Res-Sil C packed column (product number 8600-PO8B) for fast mudlogging analysis. The column can be obtained from SRI Instruments for \$409.00 as of Oct. 2012. Check [www.srigc.com](http://www.srigc.com) for current pricing.

At right the column is shown installed in the oven. The 6-foot n-Octane packed column provides for better separation of methane and ethane than the MXT-1 capillary column. Analysis for either column remains under one minute. The maximum temperature of the n-Octane packed column should not exceed 150 C.



Shown at right is a sample of natural gas run at a constant oven temperature of 70 C. Notice the separation between the methane and ethane peaks.

