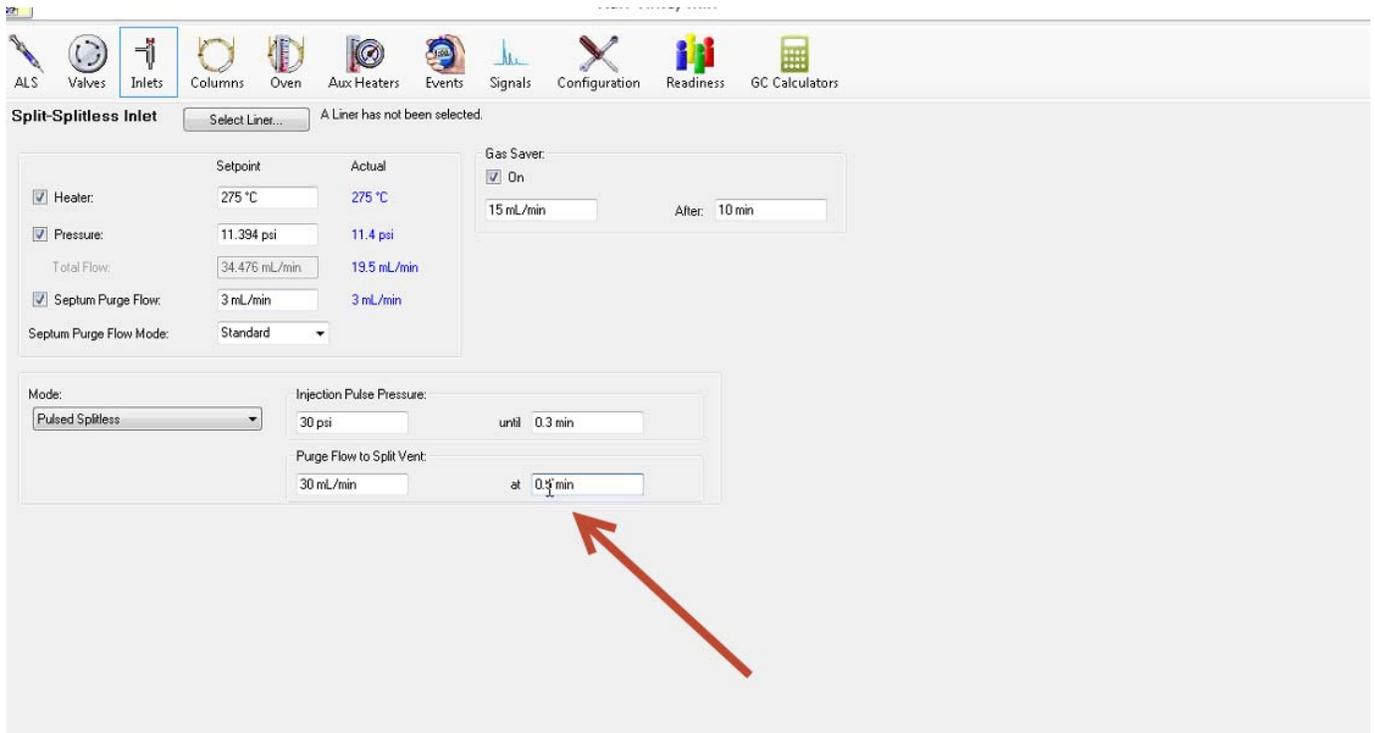


7890B Pressure Pulse Workaround

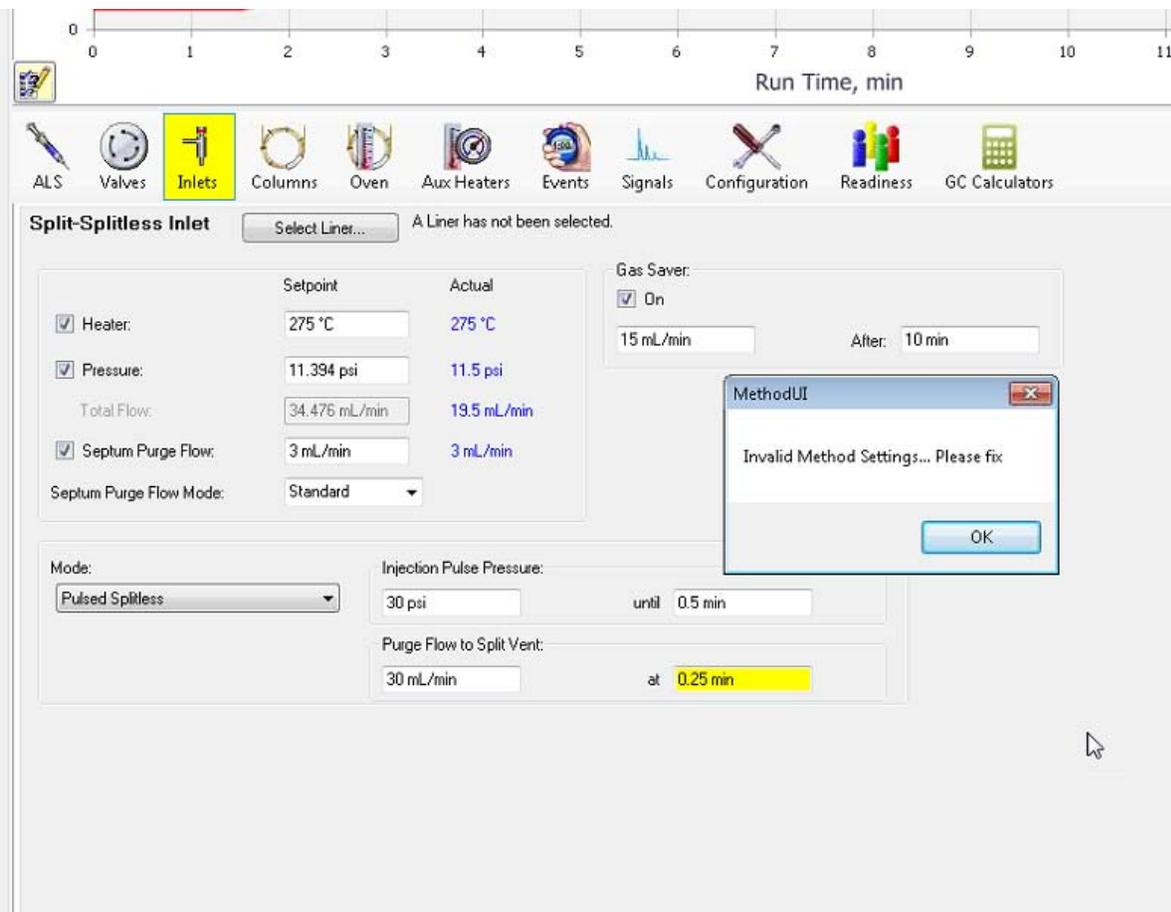
Mass Hunter Acquisition B.07.01 and B.07.02

The 7890B with 5977 combination has, at current, a problem with Split/Splitless purge valve timing when using a pressure pulse. The purge valve cannot be set to open on the split/splitless inlet before the end of a pressure pulse. This is a change from previous instruments and has been raised as a satisfaction issue by several customers. The problem is with the 7890B instrument driver dll and the issue is being reviewed by the factory. We have requested that the 7890B driver .dll be changed to match our prior model GC instruments. The problem exhibits as below.

The customer would like to set the purge time to open the valve before the end of the pressure pulse.

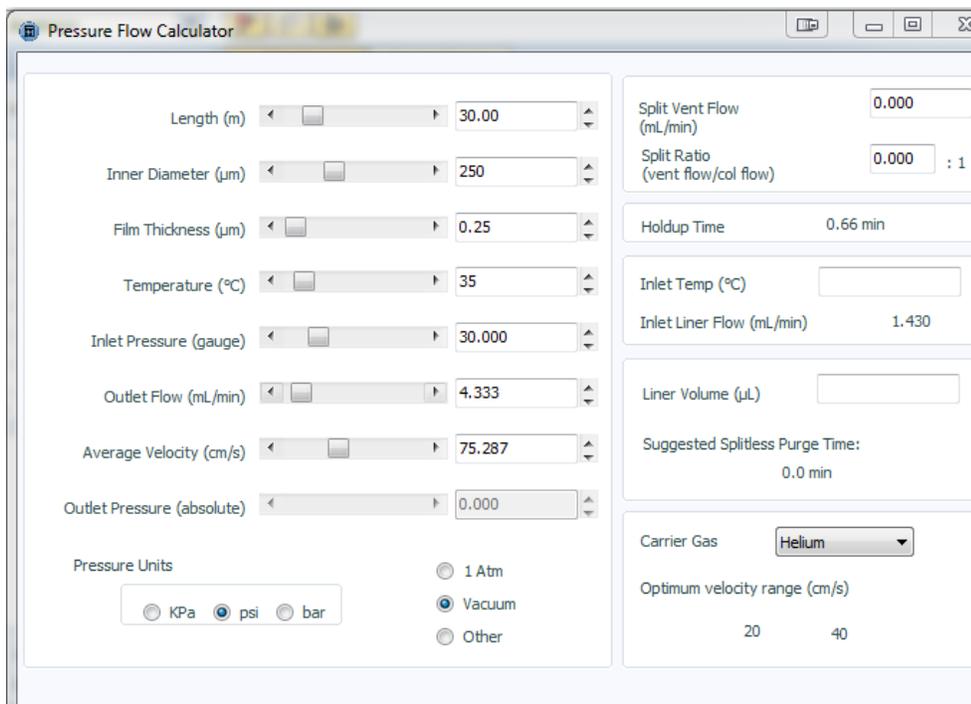


When this is attempted we see as below.

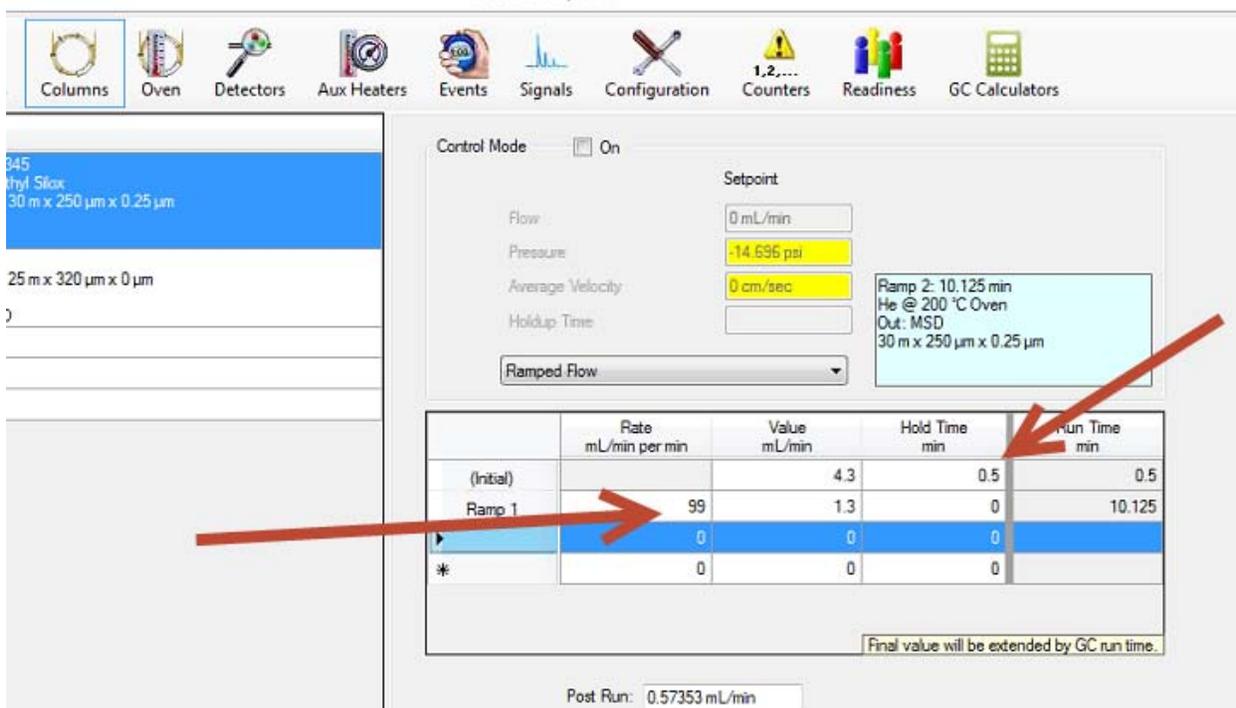


Saying ok to the box doesn't allow one to enter the desired setting.

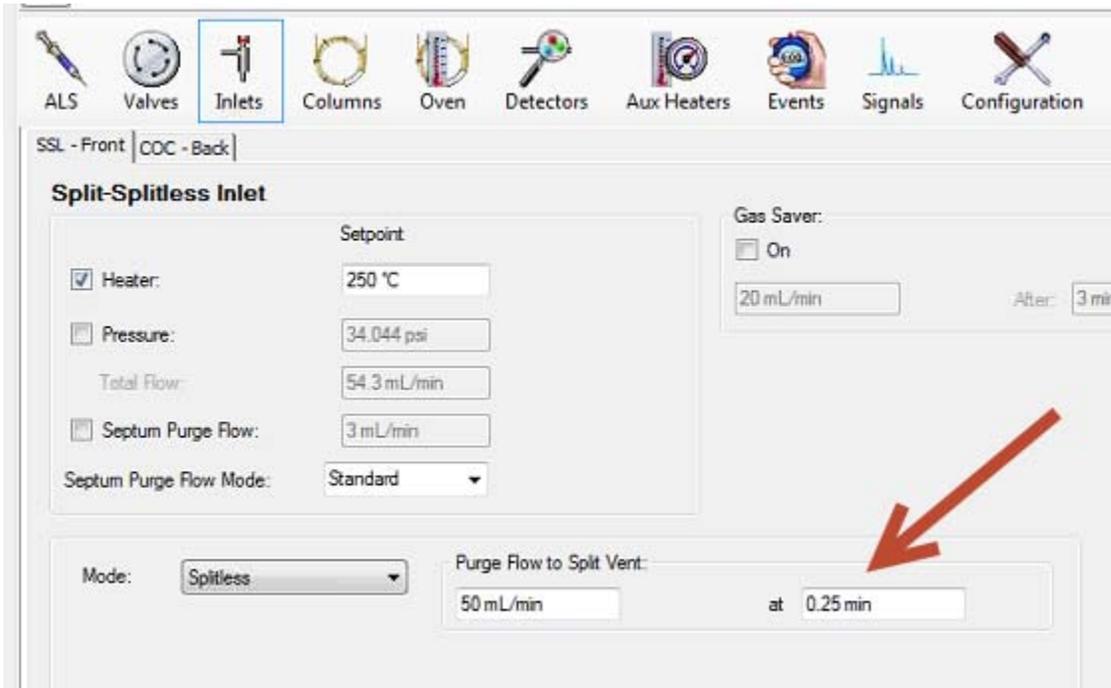
In the case of this customer, the inability to do this causes problems with late eluters in his application and exhibits less than ideal peak shape and baseline. The work around is to create a ramped flow method that mimics the pressure pulse. To do this you need to use the Pressure Flow Calculator (available on Agilent's web) to determine what the flow would be at the start of the run. Using the 30 PSI above with the customers column and pressure entered we see that we need to start our flow at 4.3 ml/min. See calculator below.



Next we need to edit the method and go to the columns tab and make entries as below. For this example I have entered the flow as 4.3 (corresponding pressure is 30psi) which I will hold for 0.5 minutes for my pressure pulse. At 0.5 minutes the flow will return to normal column flow.



Next we need to set the purge flow and time as desired, in this case 0.25 minutes and save the method.



This will enable the customer to work around the pressure pulse issue.

IMPORTANT:

It should be noted that another method with normal flow should be loaded prior to running the sequence. At sequence completion the instrument will revert to normal flow and pressure rather than the pressure pulse method with higher flow.