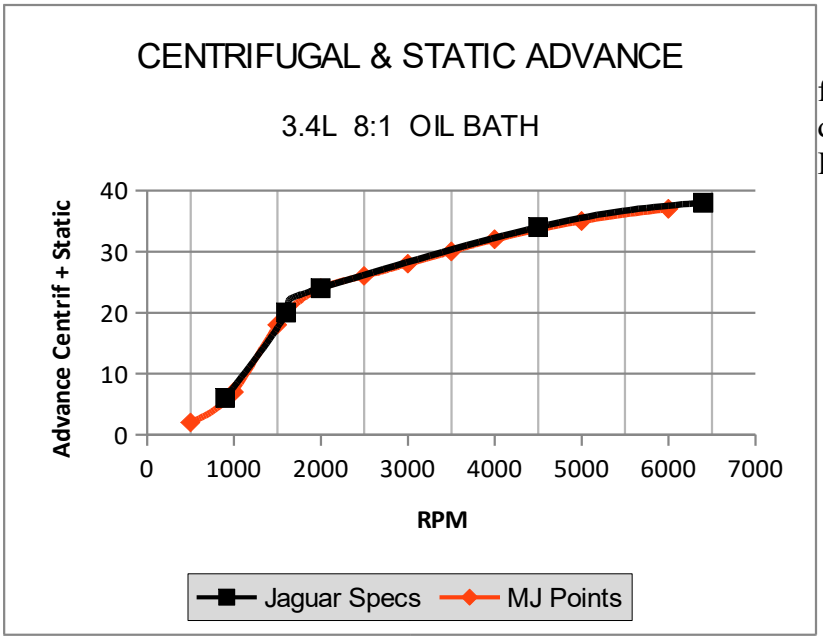
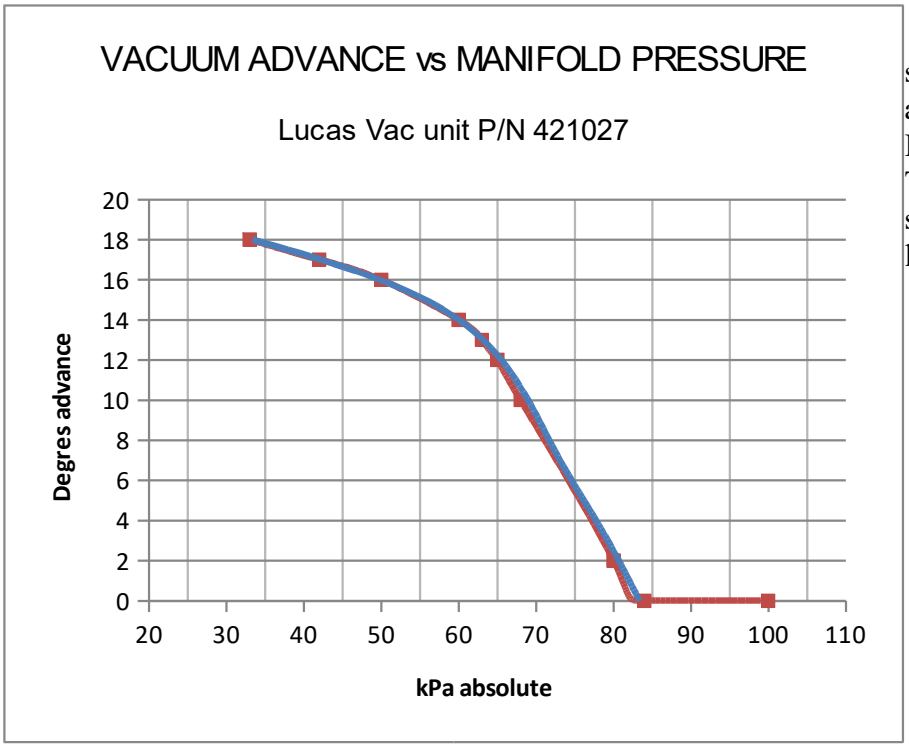
JAGUAR MARK 2 EDIS SETTINGS AND FIRST RUN RESULTS.
BRUCE MURRAY APRIL 2020

I decided to set my ignition map to be the same as that specified by Jaguar for my particular engine, which is a 3.4L 8:1 CR and oil bath cleaner.
Pages P13 and 14 of the shop manual give the necessary values, corrected to crank angle and speed:-
Static Timing 2º
Max Centrifugal advance 36º at 6400
Max Vacuum advance 18º at 20”Hg
Plotting the individual values and doing the units conversion gives these results



The black points are those derived from the shop manual distributor test data and the red points show the values I entered in the MJ ignition map.



For this graph the blue line shows the distributor test data and the red dots show the values I inserted into the MJ map. The points are not evenly spaced since the curve is non-linear.

The net result is the table I used as follows:-

	500	1000	1500	2000	2500	3000	3500	4000	5000	6000
33	2	25	36	42	44	46	48	50	53	55
42	2	24	35	41	43	45	47	49	52	54
50	2	23	34	40	42	44	46	48	51	53
60	2	21	32	38	40	42	44	46	49	51
63	2	20	31	37	39	41	43	45	48	50
65	2	19	30	36	38	40	42	44	47	49
68	2	17	28	34	36	38	40	42	45	47
80	2	9	20	26	28	30	32	34	37	39
84	2	7	18	24	26	28	30	32	35	37
100	2	7	18	24	26	28	30	32	35	37

In order to simulate the vacuum port behavior at idling, I set the 500RPM column at 2º BTDC.

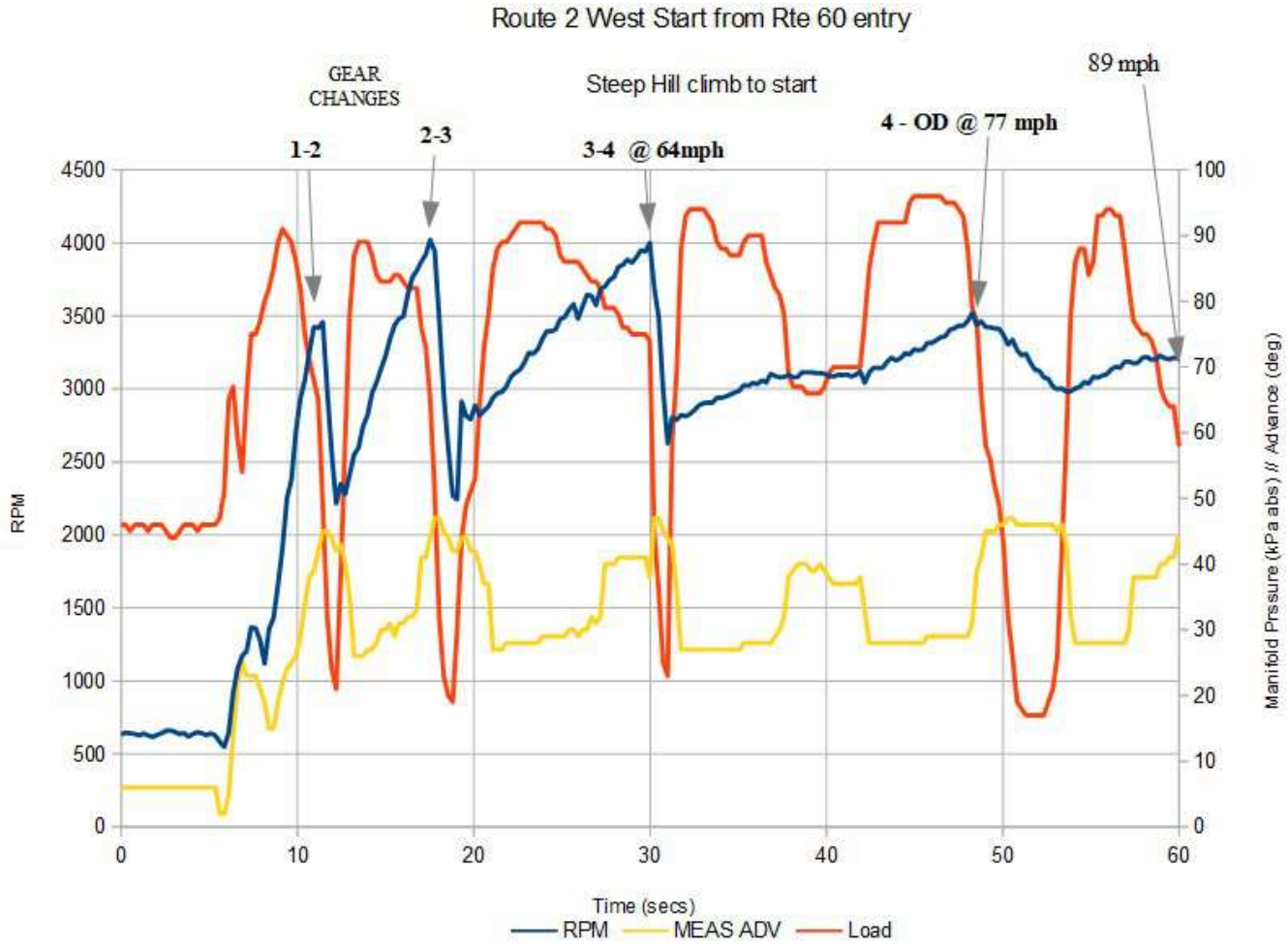
I  I adjusted the idling speed and the mixture for steady even running at 640 RPM.

The advance is 6º since the speed is above 500 RPM and the manifold reading is 46 kPa.

The throttles were synchronized with a UNISYN that can be seen on the fender cover. For this to be done, the carb air intake casting has been removed.

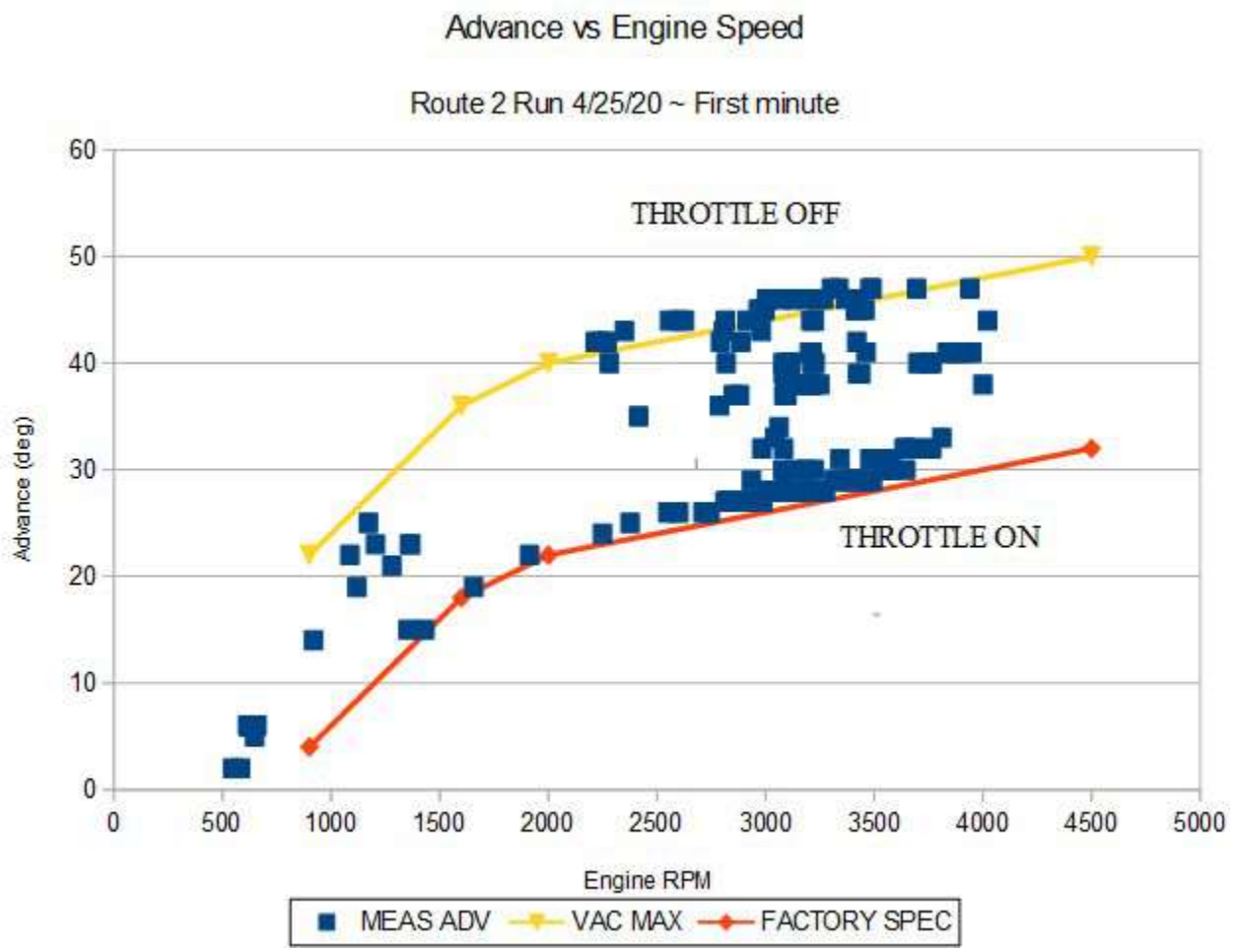
DATA RECORDING ON THE ROAD

I did a road run on a favorite hill and recorded a couple of minutes worth.
This is the result of the first minute data from a standing start. This was a brisk start but not at the maximum I could have done. There was other traffic.
There was no audible pinging from the engine and the run was very smooth and well behaved.



In case anyone is wondering about the speeds quoted in the graph, my car runs a standard 4 speed O/D and also a 3.54:1 rear axle ratio. The transmission and overdrive came from a 420G.

Since the above recordings are quite complicated to follow, I plotted the RPM to advance points over the same period to make sure I was within the programmed MJ map.



The red line is the pure centrifugal advance and the yellow is simply the max. vacuum advance on top of the centrifugal.

Looks pretty good.

FUTURE PLANS

Initially I was planning on making some test runs to measure acceleration with various advance settings, but I think the simpler way is to get the car on a dyno and make adjustments there. In all likelihood, there probably is not much to be gained since the factory knew more about the engine that I ever will. However there is the fact that fuel octane rating may play in to the mix.