

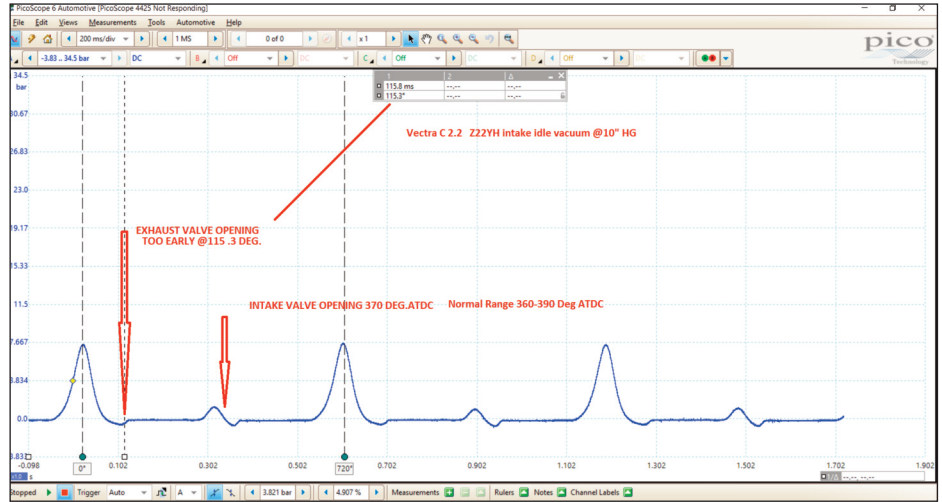
Hard Starting / Running Opel Vectra C 2.2 Petrol

An Opel Vectra C 2.2litre with the high pressure petrol engine (Z22YH) was at a garage with a running fault.

The helpline was called to help diagnose the high pressure fuel system. The garage had replaced the low pressure in-tank pump and the fuel pump relay. Then they replaced the high pressure pump. Still no cure. Then the pressure sensor was replaced, and when that didn't solve the problem, they went onto replacing the fuel pressure control solenoid. They were still convinced that a high pressure fuel fault was causing poor starting and running.

Not once had the two technicians checked the live data. They suspected a fuel problem because when they disconnected the pressure sensor, the vehicle started better.

A data check of all desired and actual fuel



In-cylinder pressure showed the exhaust valve was opening too early because the chain had jumped

pressure readings proved that there were no issues with the fuel system. The engine had a slight uneven idle, so it was back to basics, where a vacuum check revealed 10" Hg at idle.

Using a Picoscope in-cylinder pressure transducer revealed the issue was an over

advanced exhaust timing. The timing chain had jumped, there was a valve event at 115 degrees after TDC, instead of the usual 180 degrees.

The technicians had never seen this type of diagnostic process, and started to make enquiries for training on Picoscope.