ASTRA POWER STRUGGLES – WHAT WAS THE CAUSE?

VAUXHALL ASTRA 1.6, 56 PLATE; CAM SENSOR FAULT

An interesting case study recently came my way from a local garage. The car in question – a Vauxhall Astra 1.6 on a 56 plate – had been to another garage and was suffering from a cam sensor fault. It was explained to me that the sensor had been changed twice already but the problem still persisted. There was a lack of power to the engine and the engine management light was on too, so I took the vehicle for a test drive to gather some more information.

The symptoms I discovered included a severe lack of power and hesitation and the garage owner (who was also an ex-Vauxhall mechanic) pointed out that the sensors were 'aftermarket' parts which were found to be incorrect.

Technician Andy Horwat has delivered multiple training sessions to young technicians

Scoping the problem

My next course of action was to test the vehicle using my trusty PicoScope, and also to carry out some other tests. From this I found that the cam and crank signal appeared with clean lines, however I wasn't certain at this point that all was as it should be so I carried out a further visual inspection.

It appeared that the cam timing was correct, but after an hour of conducting checks my attention was drawn to the cam sensor itself. I conversed with my friend who was aware of these ecotec engines, which are known to have variables to them. He spoke with the dealer who agreed and a replacement was ordered and fitted. The fault was then cleared and I took it for a test drive.

I noticed that there was an improvement to the performance but the engine was still lacking in power, so the car came back into the workshop for further investigation. The coil spark was as it should be, while the fuel pressure and flow and mass air flow meter was also checked – no issues.

A fuel pressure check resulted in 50 PSI snap excel, with no drop in numbers there. It is important to carry this test out in that order as a faulty fuel pump may produce the right pressure at idle but, when put under load, there could be an extensive drop in pressure (as much as 10 PSI or more).

Now I needed to reconsider the symptoms: the drivability had improved but it wasn't a complete fix as only the engine performance had improved. Over the years many Astra's like this have come into my workshop so I know what to expect in terms of performance.