

Rough Dilemma

Kia Rio 1.5L A5D 2000 - 2005

Paul Beck from Berwick Auto Electrical recently had some issues diagnosing a Kia Rio that was running rough.

The Rio had previously been worked on elsewhere, but they had not been able to diagnose or repair it.

The only clue they had was that it kept logging a camshaft position sensor code. After some testing, they could find no definite problems. They replaced both the cam and crank sensors, but this made no difference. They then went through all of the items that they could logically somehow relate to the problem. This included valve timing, ignition coils and Siemens ECM.

Eventually they removed the gearbox and flywheel. They bought a second hand flywheel for comparison and found that the tone wheel for the CKP sensor was in the wrong position. It was about 50 degrees out! ✓

Timing mark on the flywheel & tone wheel aligned



Notes:

- The Rio A5D CKP Sensor is a hall-effect sensor that provides a 0 to 5 volt output.
- The tone wheel has 58 teeth that are 6 degrees apart, with two teeth missing to indicate that the engine is approaching TDC.
- The flywheel is located in position on the crankshaft by a locating dowel.
- Do not allow crankshaft to turn backwards, as the belt could skip a tooth and lose correct valve timing.



The car came in with this flywheel. Shown with white paint, the timing marks on the flywheel & tone wheel are about 50 degrees apart.



How it should have looked. Marks are aligned here. Notice the position of the missing teeth, compared to the original.

Photos: Paul Beck