

NCT emissions failure on a Ford Ka



An air leak in the exhaust flexible pipe was distorting the emissions

This 2010 Ford Ka had just failed the NCT with a Lambda reading outside of the accepted parameters. Presented with the NCT failure, the owner asked me to replace the lambda sensor causing the issue.

I had to explain to him that the Lambda reading outside the parameters was not indicating a failed sensor, but was indicating that the fuel to air ratio mixture was incorrect.

While this can be due to the reading given from the O2 sensor to the ECU, this is very often not the case.

After inspecting this Ka, I could confirm that the problem was actually that the lambda reading was high at 1.09 (acceptable levels are 0.97 – 1.03, with the ideal reading as being 1.0). A reading of 1.0 would indicate the perfect mixture of 14.7 parts air to one part fuel.

The high reading on this Ka was indicating a weak mixture being measured at the exhaust, but this was not due to fuelling issues, but something much simpler. The exhaust had a small leak that was allowing air to enter the exhaust. When the mixture was measured, it was distorting the Lambda sensor reading due to the extra air.

The solution to this was a new exhaust pipe. After being fitted, the almost perfect lambda reading of 0.99 was measured.