

A new turbocharger but boost is still weak

A recent call to the Autobiz Helpline, was about a Renault Traffic 1.6 dCi, fitted with an R9M turbocharged engine. The original issue was a failed turbocharger, which was replaced with an OE unit, but the issue of low boost persisted. Nothing had changed with the poor running. A fault code for low boost was still logged after re-testing. Without a smoke machine, the diagnosis relied on physical checks to the turbo actuator.

No issues were found on the actuator. Input voltage was at system voltage, and a duty cycle on the controlled ground. The vacuum output to the turbocharger was as expected, and the control arm on the turbo moved to the desired boost position. As the turbocharger does not incorporate a position sensor, we could not determine the actual boost arm position. This all proved that the turbocharger was being controlled correctly, but boost pressure was still too low when under load.

The next test was to check the exhaust differential pressure was within limits, and not blocking the exhaust output flow. This was correct, 12 mb on idle and 180mb at wide open throttle.



This part (at arrow) will be missing from your replacement turbocharger and is available as a separate part



Tim Stock

Mass air flow signal was also checked against desired amount. It was slightly lower than expected ,but as boost was also low this would be expected.

The boost pipework was inspected for any signs of oil residue indicating a possible leak. This would be a much faster process with a smoke machine. No obvious leaks were detected. We concluded the turbocharger was faulty, so the dealer was contacted for a replacement under warranty.

This is where the dealers have an issue, they do not supply the turbocharger fitted with a sealing ring. You are required to swap this part from your old unit. But no information on this is sent when ordering the new turbo. Even though they have seen this issue in the past with a replaced turbocharger, no warning is supplied with the replacement part.