

Independent tests show copy turbos can be 40% down on power.

A series of independent tests carried out by the Millbrook Group in the UK show non-original remanufactured and copy turbos can be as much as 40% down on performance, with higher NOx and CO2 emissions, compared to OE remanufactured units.

The tests compared Garrett's 100% OE spec Original Remanufactured turbochargers with remanufactured and new turbos from three recognised brands, including the best-selling copy units imported into the UK. The results revealed:

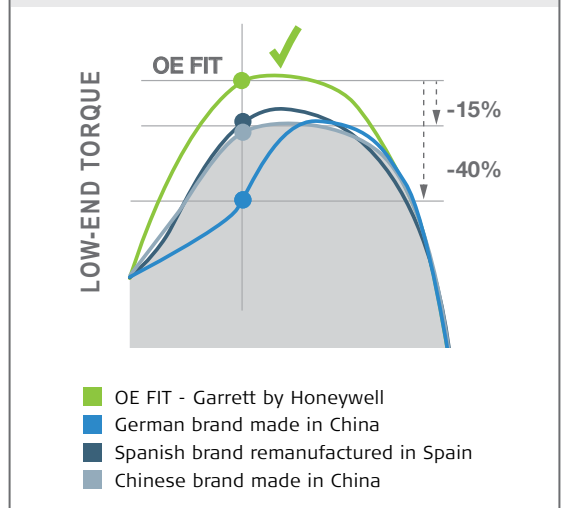
- Low-end torque with the non-OE turbos was 15% - 40% lower than the 100% OE Garrett Original Remanufactured turbo.
- NOx emissions from the non-OE turbos were 8%- 28% higher than the 100% OE turbochargers.
- CO2 emissions from the non-OE turbochargers were nearly 3% greater than the 100% OE turbochargers, increased by 2.0g/km to 4.5g/km.

Non-OE issues

Drivers whose cars are fitted with non-original replacement turbos such as those tested could be frustrated by poor performance, warning lights due to a mismatch with the engine management ECU, or MOT failure because of increased emissions.

The results validate the approach taken by German, Spanish and Italian regulations, which can impose penalties on drivers with cars whose parts don't meet Type Approval regulations. These regulations include turbochargers, because they are critical to environmental targets. As the research confirms, using non-genuine aftermarket parts in a turbo can seriously compromise its performance.

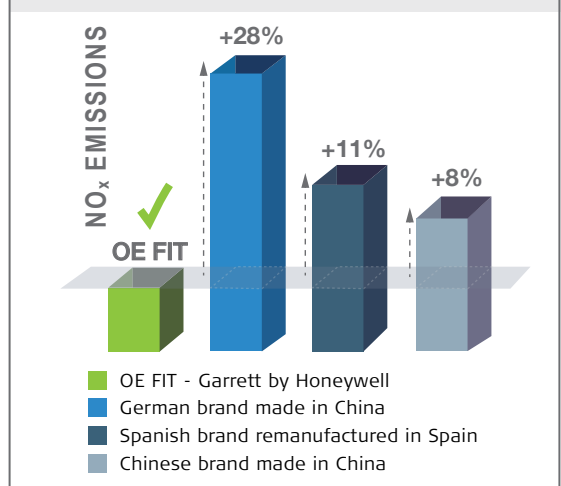
Low-end torque with the non-OE turbos was 15% - 40% lower than the 100% OE Garrett Original Remanufactured.



How were the tests performed?

Millbrook carried out the tests under strictly controlled laboratory conditions. Two Garrett Original Remanufactured turbochargers were compared with non-OE replacements widely sold in the UK: a

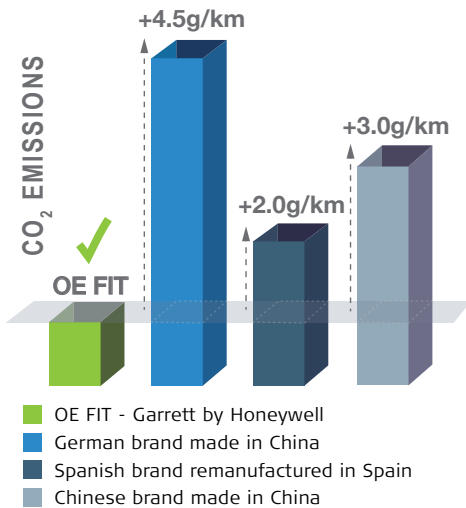
NOx emissions from the non-OE turbos were 8% - 28% higher than the 100% OE turbos.



Spanish brand remanufactured in Spain, and German and Chinese brands, both made in China.

Only the Garrett turbos were remanufactured using entirely OE parts. The other turbos were reverse-engineered using copy parts, which cannot be guaranteed to match the original manufacturer's specifications and tolerances.

CO₂ emissions from the non-OE turbochargers were nearly 3% greater than the 100% OE turbochargers.



Buy peace of mind

"These tests emphatically confirm the drawbacks of using non-OE copy turbos," said Mark Dickinson, Managing Director of

BTN Turbo, the UK's largest independent turbocharger distributors.

"Garrett doesn't supply spare parts for its turbos. So a lot of replacement turbochargers on the market use non-original parts, have been produced in factories without the necessary specialised calibration and testing equipment, or are quite simply counterfeits masquerading as the real thing," Dickinson continued.

"They're attractively priced and that's a temptation for many motorists, especially those on a budget. But as these independent tests show, fitting a non-OE turbo can be a false economy, which the motorist pays for in lower efficiency, high fuel consumption, rectifying engine management faults or an MOT fail."

Two year warranty

BTN Turbo keeps over 18,000 turbos in stock for immediate despatch, all of them 100% OE. All the new turbos they sell come directly from the original manufacturers – Garrett, BorgWarner, Holset, Mitsubishi, IHI, Holset and Schwitzer. Their remanufactured turbos are also 100% OE and direct from the original manufacturers, such as Garrett's Original Remanufactured range. Both new and remanufactured turbos from BTN Turbo are supported by a two year warranty, demonstrating the company's confidence in the turbos they supply.

