# Specify only original Garrett® VNT™ turbos-a guarantee of optimum boosting performance



Original Garrett® VNT™ turbosnozzle assembly made from top quality materials. Remanufactured VNT™ turbos-nozzle assembly made from reused components.



## Honeywell Turbo Technologies

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# **Turbo Technologies**



Garrett® turbos are made to meet OEM performance standards.

**Turbo Technologies** 

you down

Choose Garrett® turbos-

a technology that won't let

Garrett® turbos are designed, tested and manufactured in world-class production centers.

The Garrett®
Turbo Advantage



Select Garrett<sup>®</sup> turbos for performance, quality, reliability... and whole-life value.

# With copy turbos, you're paying more for less

Auto manufacturers around the world understand the balance between cost and performance – that's why so many choose Honeywell as their partner for engine boosting.

Every Garrett® turbo is intricately matched to exacting engine requirements in order to optimize power output, reliability, emissions control and fuel efficiency over the lona term.

Research proves that copies of these highly engineered and calibrated units simply don't deliver on performance, on fuel efficiency or on whole-life value.

- + Garrett® turbos deliver 4 times the whole-life value of copies
- + Tests prove that copy turbos deliver less power
- + Tests prove that copy turbos increase fuel consumption...and CO<sub>2</sub>

Don't settle for second best engineering that delivers third rate results!

# With remanufactured VNT™ turbos, you're gambling on your engine reliability

Millions of Garrett® VNT™ turbos operate around the world-they are highly complex units, engineered and calibrated to meet the exacting performance parameters of automotive manufacturers. They deliver optimum performance and ensure high reliability.

Any attempt at remanufacturing, using substitute parts, is fraught with difficulty because of the turbo's technical complexities, leading to potentially serious problems, such as:

+ Conflict with the engine management systems

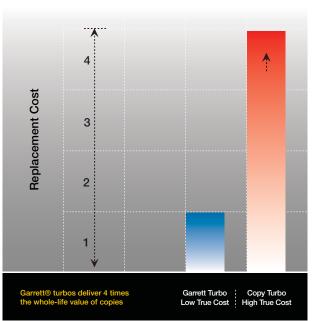
- + Low flow/pressure, causing poor response, poor overall performance and increased emissions
- + Over-rich diesel fuel/air mix, causing excessively high temperatures, damaging both the turbo and the engine
- + High flow/pressure, leading to the over-speeding of the turbo, wheel bursting and damage to turbo and engine
- + Excessive boost pressure, causing physical damage to the engine

So when you need a replacement turbo, make sure you specify original Garrett® VNT.™

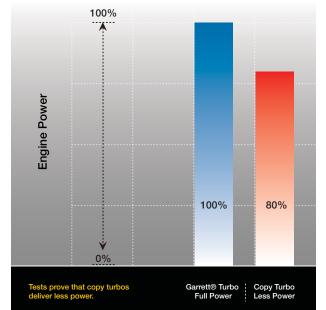
# Original Garrett® turbos versus copy turbos

### Turbo durability and replacement costs

True cost based on two year period



# **Engine power**



From actual test results

### **Vehicle fuel consumption**

From actual test results

