

turbo-zone

Insider Turbo knowledge for the garage professional

SUPPORTED BY
Garrett[®]
by Honeywell

**Replacing turbos-
if it's not OE,
why risk it?**



Turbos gain
aviation expertise



Oil know-how
saves turbos



How our tech team
helps you

OE
NEW

When you need to replace the turbo, don't risk it with non-OE.

OE
REMAN

You want the best turbo you can get at the best price.

A non-OE turbo is tempting; almost the same thing for less money.

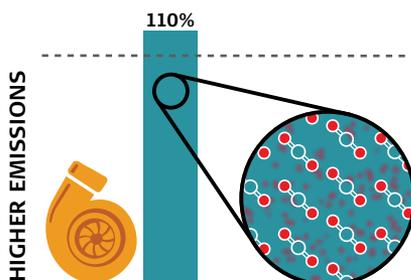
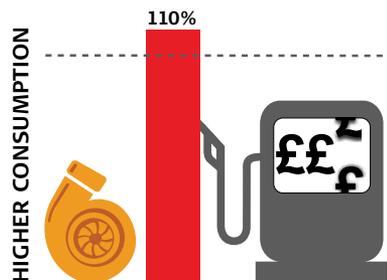
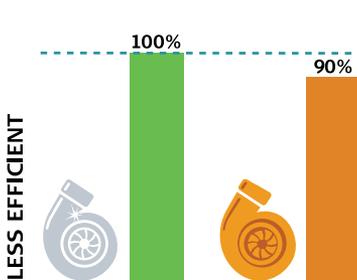
But as a turbocharger spins up to 360,000 rpm, at more than 800°C, almost the same isn't good enough.



Non-OE turbos are less efficient.

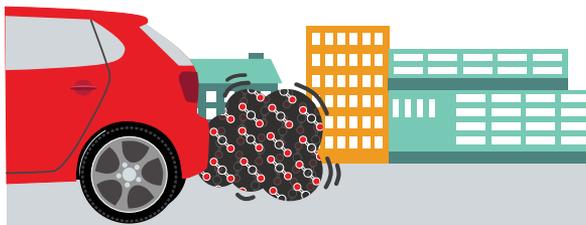
Costing more at the fuel pump.

With higher emissions of CO₂ and NO_x.



A non-OE turbo may not be compatible with the ECU, causing high emissions that might mean MOT failure.

And it could be in conflict from the moment you start the engine.

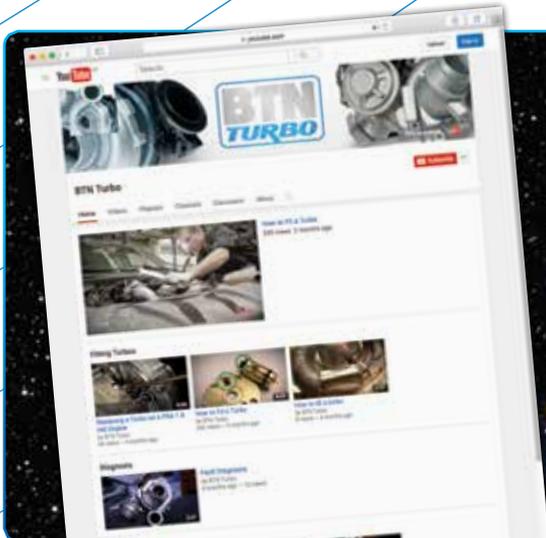


Cheaper non-OE turbos may seem like a good deal. But over two years, the true cost of a non-OE reman turbo can be four times the cost of a new OE or OE reman Garrett turbo from BTN.

Don't risk it. Buy a turbo from BTN, always 100% OE.



BTN Turbo is the only UK supplier of all major turbocharger brands.



Ready to view: all the BTN YouTube videos.

Search for BTN Turbo on the YouTube channels and you'll find all our helpful videos. They range from how a turbo works, to fault diagnosis and advice for specific applications. We've recently added a video showing the exacting process Garrett uses to remanufacture its turbos, plus another film explaining the risks of fitting a non-genuine turbo.

We'll add more videos regularly, so keep watching the BTN Turbo channel on YouTube.

Turbos gain from aviation know-how.

One way to increase turbo efficiency is to allow the impeller to spin faster. However this results in greater stress from cyclical loads. BorgWarner has turned to the aviation industry to find innovative alloys that are strong enough to cope.

Their latest impellers are made from recently developed aluminium-lithium alloys 2055 and 2099, and are also subjected to an advanced shot peening process for greater resistance to corrosion.

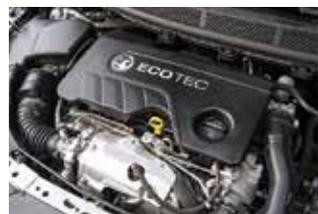
These complex alloys and processes will only be available in turbos manufactured by BorgWarner. Inferior copy turbos won't be able to match the performance or extended service life, so don't risk it – make sure the replacement turbo you buy is a genuine 100% OE BorgWarner unit, supplied by BTN.



Turbocharged cars dominate COTY awards.

With all the performance, economy and emission benefits offered by turbos, it's no surprise that the 2016 Geneva Motor Show's Car Of The Year is turbocharged. The Brit-built Vauxhall Astra won the main award, offering

three or four cylinder turbo petrol engines from 1.0 to 1.6 litres, and a choice of 1.6 turbodiesels ranging from 95hp to a sporty 160hp twin-turbo.



Six out of seven

Of the cars nominated for the 2016 Geneva COTY award, six of the seven are turbocharged, including the Audi A4, which in 3.0 litre TDI 218 Sport guise was also voted What Car's 2016 Car Of The Year.



Oil education saves engines and turbo

There's a valuable opportunity for independent workshops to increase customers' trust and business by communicating the benefits of regular oil changes.

Recent research has shown some drivers risk damaging their engines, and turbos, by taking a cavalier attitude to oil changes. 20% only checked their oil when the warning light came on; nearly 10% hadn't changed their oil in two years. Shockingly, 1 in 3 cars are running low on oil, and nothing is more harmful to the engine or turbo than a lack of oil.

The report also showed that independent workshops had 68% of the oil change market, including around a third of vehicles under four years old. With fresh, clean and correct grade oil being essential to the survival of turbochargers, there's good reason to educate customers about regular changes using quality oil.

Comma provides technical bulletins and training as part of their Professional Partner Programme, available to technicians. The information could help you target customers all year round, helping to ensure the health of their engines, and their turbos. Sign up now at www.CommaOil.com/ppp, enter the BTN Turbo voucher code **BTN1KPPP** and you'll receive 1,000 points on registration.



Emission laws insist on OE-standard turbos.

Turbochargers play an important role in helping vehicles meet strict emissions and energy efficiency targets. As a result, the German and Spanish governments have introduced penalties for cars with replacement turbos that don't meet OE standards.

Drivers can be fined, receive points and be banned from driving the vehicle. Any replacement turbo must be OE or match OE specifications – difficult to be sure of if it's a copy turbo. So the simple, safe solution is to fit OE. All turbos supplied by BTN, new and remanufactured, are 100% OE, so there's no need to take any risks.



Could Garrett win F1 and Le Mans this year?

As a turbocharging pioneer, Garrett is highly regarded by the world's top motorsport teams. So it's perfectly possible that Garrett turbos could power the 2016 F1 Championship and Le Mans winners.

Garrett turbo technology is at the heart of Ferrari's SF16-H F1 car, which has scored podium finishes in almost every race so far, establishing the team as front runners.

Porsche's 2015 Le Mans and World Endurance Championship winner featured a Garrett turbo, and this year Garrett will help generate almost 500hp of the 919 hybrid's 900hp total output.

Could it be world titles for Garrett, Ferrari and Porsche in 2016? Watch this space!



Our turbocharged tech team are here to help you.

Choosing BTN Turbo means you benefit from a turbo that's 100% OE with a two year warranty. You can also tap into the extensive knowledge of our turbo experts.

If you have an issue with a turbo, our advice is to phone us before you remove it. This gives our specialists the chance to run through the symptoms. Their years of experience can help remotely diagnose the problem.

For example, a workshop had already fitted two non-genuine reconditioned turbos to a vehicle, and both suffered from a lack of boost power. Our expert explained over the phone that this particular engine can suffer carbon build-up on the turbo's variable vanes, restricting movement. He'd also found that recon turbos for this model couldn't produce full boost because of poor calibration. The technician fitted a 100% OE turbo supplied by BTN, and the engine was restored to full performance.

On another occasion, after a workshop fitted a new BTN-supplied turbo to a BMW, the owner



experienced a whistling noise on acceleration. BTN's expert suspected a simple air leak. He visited the workshop and found a slight gap between the air box pipe and the turbo compressor housing. Correct refitting cured the problem, without the turbo being removed.

If we receive a turbo for inspection, we strip and examine it in minute detail, and produce a report including several photos. This highlights what caused the damage, so it can be rectified before fitting the replacement.

Our turbo experts help make your life easier and protect your hard-earned goodwill. They're only a phone call away on 01895 466 663.

CRITICAL INSTRUCTIONS

Application: Citroen/Peugeot 2.0HDI

Part Number:
756047-50055
756047-0005E

WHEN FITTING THIS TURBO, IT IS CRITICAL THE FOLLOWING INSTRUCTIONS ARE ADHERED TO:

- To stop water ingress into the actuator/position sensor, it is essential that the following checks are carried out:

- Inspect turbo control solenoid valve (Part Number 1618C9) for correct operation, and signs of water ingress - replace as required.
- Inspect condition and connections of vacuum pipework between control solenoid valve and turbocharger - replace as required.
- Ensure soundproof scuttle trim is secured correctly.



Important: The turbocharger warranty does not cover damage caused by external elements including water penetration into the actuator.

Any questions regarding the above should be directed to the supplier of this unit before commencing any work



(S194) 1st 002 March 2015 - 10/00033

Our Critical Instructions help you avoid known issues.

CRITICAL INSTRUCTIONS

Application: Mercedes Sprinter

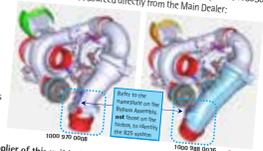
Part Number:
10009880036/
10009880036E
10009880074/
10009880074E

WHEN FITTING THIS TURBO, IT IS CRITICAL THE FOLLOWING INSTRUCTIONS ARE ADHERED TO:

- Pipes and supports required when replacing turbo

When replacing a 10009880008/10009880008E (in production between September 2008 and December 2010, fitted up to engine: 30468350) with a 10009880036/10009880074, additional components are required which need to be sourced directly from the Main Dealer:

Charge air pipe A 906 528 5082 or -5182*
Coolant pipe A 906 501 1482
Support A 651 096 2940
Screw (3x) N 910143 006001
*The -5182 if vehicle has optional equipment codes H06, N03 or H04



This is due to a geometrical difference between the two products and without the additional products, the replacement turbo will not be able to be fitted.

Any questions regarding the above should be directed to the supplier of this unit before commencing any work

(D292) 001 November 2014 - 04 Approved Ref 10/00044



Garrett
by Honeywell

BorgWarner

MITSUBISHI
TURBOCHARGERS

IHI

HOLSET
TURBOCHARGERS

turbo
Schwitzer

BTN
TURBO

Sales Team 01895 466666 Technical Helpline 01895 466663

why risk it?



Garrett®
by Honeywell

A cheap turbo could save your customer £200 today, but cost YOU £700 tomorrow AND you could lose a loyal customer.

With a Genuine Garrett® remanufactured turbo, you get original quality replacement components and world-class assembly, guaranteeing performance and reliability. With a cheap non OE specified turbo, you risk poor quality components, engine damage, incorrect calibration and failure to meet emissions. **WHY RISK IT?**

Ask your factor for a Genuine Garrett® remanufactured turbo available exclusively from BTN Turbo, the Master Distributors in the UK for Garrett by Honeywell turbochargers - btnturbo.com

What's the true cost of installing a cheap turbo? Learn more:
Garrett.honeywell.com/WhyRiskIt

* Example used is for illustrative purposes only

© 2015 Honeywell International Inc. All rights reserved.



The turbocharger people

BTN Turbo is the world's largest independent turbo supplier. Over 18,000 OE turbos in stock, new first fit or remanufactured by the original manufacturer. All with 2 year warranty.

Contact your local factor for a BTN Turbo or call us to find your local stockist.

BTN Turbo Limited,
BTN House, Zodiac Park,
High Road, Cowley,
Uxbridge, UB8 2GU

T: 01895 466666
F: 01895 466667
E: sales@btnturbo.com
W: www.btnturbo.com

