

HOLSET

# Holset power. Take charge.



## Not all turbos are created equal

The precision of Holset<sup>®</sup> Turbocharger technology rivals that of today's most advanced jet engines. Spinning at thousands of revolutions per minute, any part that's off by as little as a fraction of a millimeter can potentially affect performance.

Metals with even the smallest microstructure differences can lead to premature failure. Actuators that depend on low-quality circuit boards risk short circuits – and then compound the problem with inaccurate servicing information.

The decision to replace an original equipment (OE) turbo with a non-genuine or will-fit turbo may save a few bucks initially but will likely cost you thousands of dollars in Total Cost of Ownership (TCO) down the road.

To prove this, Holset performed analytical testing, pitting Genuine Holset Turbochargers against their non-genuine counterparts.

Testing included material examinations, parts chemistry analysis and detailed visual inspections on a mid-range B-Series turbocharger and an ISB6.7 VGT<sup>™</sup> actuator. The following results demonstrate why you should choose a Genuine Holset Turbocharger.

## The right turbocharger brings you:



Holset's investment in technology ensures your customers are provided with the exacting turbo specifications designed for their engines.



## Hidden dangers

There can be unseen dangers potentially lurking inside of every non-genuine turbocharger that run the risk of damaging virtually every major part.



#### NON-GENUINE VGT ACTUATORS

- Re-used circuit board in poor condition
- Outdated software and hardware
- Poor rework with excessive debris
- Inaccurate electronic data and settings

#### **POTENTIAL RISKS**

- Short circuiting and mechanical seizure
- Liquid intrusion
- Incorrect turbo faults
- Inaccurate information for servicing

#### NON-GENUINE HX35 TURBINE WHEEL

- Lower nickel content
- Lower tensile and yield strength
  at extreme temperatures

#### **POTENTIAL RISKS**

- Less resistance to high
  exhaust temperature
- Compromised durability
  and reliability

#### NON-GENUINE HX35 BEARING HOUSING

- 30% lower tensile strength
- Higher carbon content

#### **POTENTIAL RISKS**

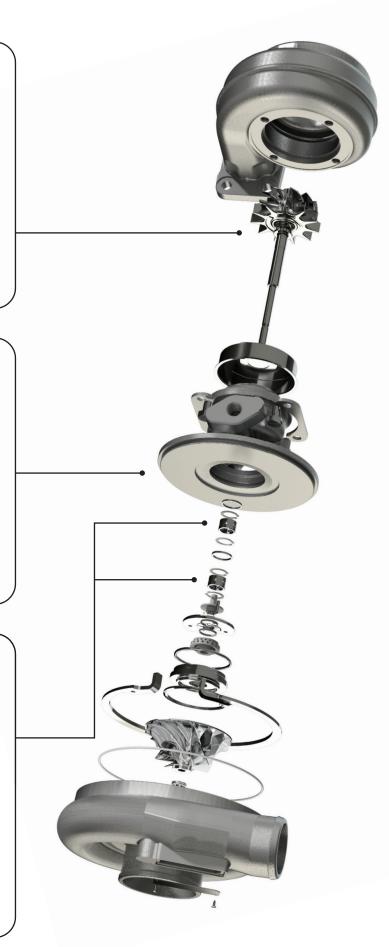
- Oil leakage, contamination and pressure drop due to fractured bearing housing
- Safety concerns

#### NON-GENUINE HX35 JOURNAL BEARINGS

Different metal alloy used

#### **POTENTIAL RISKS**

- Does not allow room for variation or wear on the shaft due to shaft roughness and misalignment
- Reduced conformability to absorb and discard contaminant particles found in dirty oil
- Increased wear of the bearings



### Take charge of your investment

Turbochargers are very durable machines. However, they have precise internal tolerances and operate with incredible speeds that require a diligent level of care.

Holset turbochargers, manufactured by Cummins, have been innovating and producing turbochargers for over 60 years. Our expertise is why we are one of the top choices for Original Equipment Manufacturers (OEM) globally.

For reliable power, fuel economy, performance and prolonged engine life that's backed by the strength of a global distribution network, trust Holset. Take charge of your total cost of ownership with Genuine Holset Turbochargers.

For more information about Genuine Holset Turbochargers and parts and to find your local authorized Holset distributor, visit <u>Holset.com</u>.



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