Cummins Holset Specialists

Turbo Solutions Specializes In Cummins Engine Applications

Cummins Holset turbochargers are vertically integrated throughout the industry. Because Cummins Holset makes the most technically advanced turbos in the world, not all remanufacturers can work on Cummins Holset Turbos with electronic actuators. Turbo Solutions’ technicians have the expertise and specialized tools to remanufacture these and other Holset turbos to meet or exceed OEM specifications.

We Stock The Most Popular Models
300 Series • 400 Series • 500 Series
ISB • ISM • ISL • ISC • ISX

We Use OEM Quality Parts And Components
Over 400 Units In Stock Ready To Ship!

Technology & Testing
Pictured to the left is a screen shot of our Genuine Cummins E-Tool in action, testing VGT Turbocharger Actuators.
This proprietary Tool not only allows us to test but gives us the ability to diagnose common failures.

Offering Genuine Holset NEW and Factory Reman Turbo Chargers as well as Turbo Solutions Remanufactured Turbo Chargers.
## Think your turbo is damaged? Check for these signs

(Viewed from “Cold” side of turbo)
- Excessive oil at compressor outlet
- Damage to compressor wheel

(Viewed from “Hot” side of turbo)
- Unusual noise
- Excessive oil or damage at turbine outlet

### Turbocharger Troubleshooting Matrix for Turbo Diesel Engines

<table>
<thead>
<tr>
<th>Problem Description</th>
<th>Possible Causes</th>
</tr>
</thead>
<tbody>
<tr>
<td>Compressor/ Turbine wheel damaged</td>
<td>• • • •</td>
</tr>
<tr>
<td>Insufficient power/boost</td>
<td>• • • •</td>
</tr>
<tr>
<td>Boost pressure too low</td>
<td>• • • •</td>
</tr>
<tr>
<td>Boost pressure too high</td>
<td>• • • •</td>
</tr>
<tr>
<td>Black smoke</td>
<td>• • • •</td>
</tr>
<tr>
<td>Blue smoke</td>
<td>• • • •</td>
</tr>
<tr>
<td>Turbocharger packing acoustic noise</td>
<td>• • • •</td>
</tr>
<tr>
<td>High oil consumption</td>
<td>• • • •</td>
</tr>
<tr>
<td>Oil leakage at compressor end</td>
<td>• • • •</td>
</tr>
<tr>
<td>Oil leakage at turbine end</td>
<td>• • • •</td>
</tr>
</tbody>
</table>

**Possible Causes**
- Dirty air filter system
- Intake or pressure hose distorted and/or leaking
- Excessive flow resistance in exhaust system 1 leakage upstream of turbine
- Oil feed and/or drain lines clogged, leaking or distorted
- Crankcase ventilation clogged and/or distorted
- Oil cooked or sludge in turbocharger center housing
- Fuel system/injection feed system defective or incorrectly adjusted
- Valve guide, piston rings, engine or cylinder liners worn/increased blow by
- Dirty compressor or clogged intercooler
- Boost pressure control swing valve/poppet valve does not close
- Boost pressure control swing valve/poppet valve does not open
- Pipe or hose assy. to actuator valve defective or ruptured
- Compressor or turbine end sealing rings damaged
- Turbocharger bearing damage
- Foreign object damage to compressor or turbine wheel
- Exhaust gas leak between turbine outlet and exhaust pipe
- Engine air collector/cleaner missing or loose gaskets
- Turbine housing/flap damaged
- Insufficient oil supply to turbocharger
- Turbo variable ring mechanism inoperative or damaged (Variable geometry turbos only)

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**Poplar Applications**

- **Caterpillar C12/15**
  - ACERT-GTA Series
  - Excessive oil at compressor outlet
  - Damage to compressor wheel

- **Caterpillar C7 - S200/300**
  - Cummins ISB - HE351VE
  - Unusual noise
  - Excessive oil or damage at turbine outlet

- **Detroit Series 60 - GTA4508V**
  - Maxxforce DT466-S300

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