Turbocharger Reman Specialists

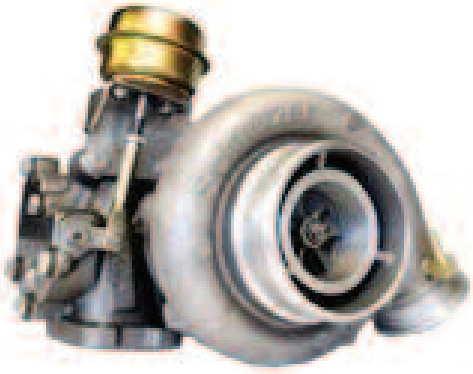
Serving Dealers, Distributors and Professional Installers

Turbochargers For All Engine Applications

Cummins

Detroit Diesel

CAT



We Also Supply Turbos For Other Manufacturers Including:

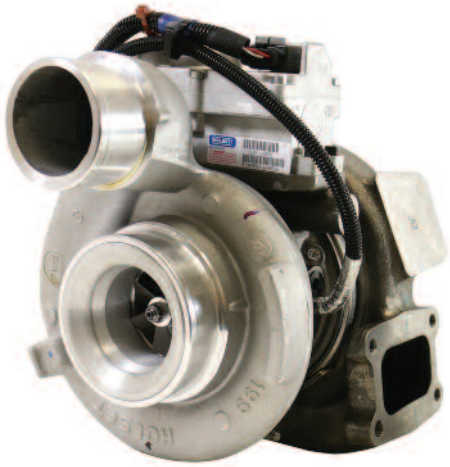
Case • Ford • International • John Deere
Komatsu • Kubota • Mack • MAN • Mitsubishi
Perkins • Volvo • Waukesha ...and Many Others

- Holset and Borg Warner Master Distributors
- No core grading, 100% refund on like-for-like part numbers
- All turbochargers are remanufactured to meet or exceed OEM specifications
- 1 year unlimited mileage/hour warranty
- Large inventory for critical same day shipments
- All units receive computerized balancing and calibration
- Serving the Truck, Bus, Off-Highway and Marine Industries

Cummins Holset Specialists

Turbo Solutions Specializes In Cummins Engine Applications

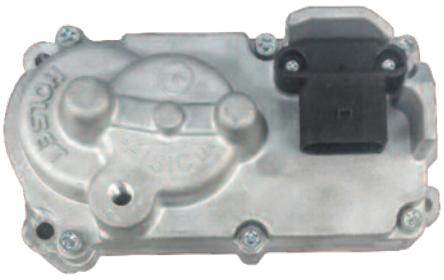
Cummins Holset turbochargers are vertically integrated throughout the industry. Because Cummins Holset makes the most technically advanced turbos in the world, not all remanufacturers can work on Cummins Holset Turbos with electronic actuators. Turbo Solutions' technicians have the expertise and specialized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



HE351VE • #RHL3770973

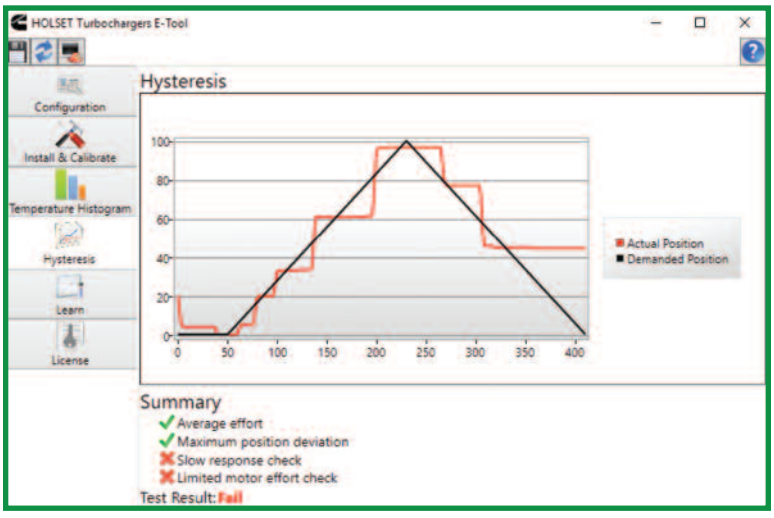
HE431VE • #RHH5350503

HE561VE • #RHH3767615



4034315-VGT Electric Actuator
(The Brain)

Over 600 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.

We Stock The Most Popular Models

300 Series • 400 Series • 500 Series

ISB • ISM • ISL • ISC • ISX

Turbo Solutions Has Been Awarded Platinum Distributor 2017 By Cummins Turbo Technologies For A Year Of Excellent Customer Service Performance.

Top 3 Reasons for Turbocharger Failure

Before You Fit A New Turbocharger, Find Out What Caused The First Unit To Fail Or You Risk The Replacement Failing As Well

- ***Turbochargers are very reliable: Less than 1% of turbochargers fail due to a manufacturing fault with the turbocharger itself.***
- ***95% of turbocharger failures are because of problems with oil starvation, oil contamination or foreign object damage.***

1. Contaminated Oil

- A blocked, damaged or poor quality oil filter.
- High carbon build-up in the engine. This can rapidly contaminate even new oil.
- A malfunctioning oil filter bypass valve.
- Engine wear, leaving swarf deposits in the oil.
- Oil that has degraded due to excessive temperatures or extended service intervals.

2. Oil Leaks at the Compressor End

- Blocked or restricted air intake filter or air intake pipe.
- Air leaks on intake hoses or at the intercooler.
- Leaks in the EGR system.
- Leaks in the exhaust system.
- Any restriction in the oil drain pipe from the turbo to the engine.
- Restriction in the engine breather.

3. Impact Damage

- Items sucked into the air intake because of a damaged, poor quality or missing air filter.
- Damaged hoses allowing small particles to enter the intake.
- Gasket material entering the intake.
- Broken engine components, e.g. injector tips, valves, or fragments of damaged piston.
- Fragments from a previous turbocharger failure.

Identification

Identifying The Right Turbo For Your Engine

Look for the old ID tag on the current turbo and make note of the tag information

ID Tag Location: Seal Plate

ID Tag Location: Compressor Housing

ID Tag Location: Bearing Housing

If you can't find a turbo ID tag, note the Serial Number and Model Number of the engine, as you will need this information for the selection of your replacement turbocharger.

Turbocharger Application Guide

Engine Application For:	Application	New Part Number	Reman Part Number
Caterpillar	3406, 3406B	N178131	RBH178131
	3406B	N178063	RBH178063
	3406C, 3406E	N177148	RBH177148
	3406E	N174260	RBH174260
	3406E, 3456, C16	N175963	RBH175963
	C12	N172743	RGH172743
	C13	N752538-0009	RGH752538-0009
	C13	N743279-5004	RGH743279-5004
	C15	N741154-0011H	RGH741154-0011H
	C15	N741155-0002L	RGH741155-0002L

Engine Application For:	Application	New Part Number	Reman Part Number
Cummins HOLSET® TURBOCHARGERS	88NT400, NTA855	N167050	RHH167050
	ISL	N5454658	RHM5454658
	ISM, M11	N3590044	RHH3590044
	ISM02	N3781163	RHM3781163
	ISX	N3767615	RHH3767615
	ISX	N3767616	RHH3767616
	ISX	N3767618	RH3767618
	ISX	N3768263	RHH3768263
	ISX	N3768264	RHH3768264
	ISX	N5350607	RHH5350607
	ISX	N5350503	RHH5350503
	N14	N172034	RBH172034
	N14 E1, N14 Euro 2	N3537074	RHH3537074
	NTC230-444, NTA400	N167050	RBH167050

Engine Application For:	Application	New Part Number	Reman Part Number
Volvo	D12	N3599996	RHH3599996
	MD11	N3791473	RHM3791473
	MD11, MD13	N3773446	RHM3773446
	MD13	N2838746	RHM2838746

Part Numbers And Logos Are Property of Their Respective Companies And Only Intended For Reference Purposes

Turbocharger Application Guide

Engine Application For:	Application	New Part Number	Reman Part Number
Detroit Diesel	60, S60	N167735	RBH167735
	60, S60	N167736	RBH167736
	60, S60	N169011	RBH169011
	60	N169012	RBH169012
	60	N171701	RBH171701
	60	N171702	RBH171702
	60	N172743	RBH172743
	14L	N758160-0006	RGH758160-0006
	14L	N758160-0007	RGH758160-0007
	14L	N758204-5006	RGH758204-5006
	14L	N758204-9007	RGH758204-9007
	15L	N5352845	RHH5352845

Engine Application For:	Application	New Part Number	Reman Part Number
International	DT466	N179077	RBH179077
	DT466	N179078	RBH179078
	DT466	N179079	RBH179079
	MaxxForce DT	N179030	RBH179030
	MaxxForce DT	N179032	RBH179032
	MaxxForce DT	N179035	RBH179035
	MaxxForce 7	N12639880001	RBH12639880001
	MaxxForce 7	N12639880002	RBH12639880002
	MaxxForce 7	N12639880003	RBH12639880003

Engine Application For:	Application	New Part Number	Reman Part Number
Mack	AC460P	N177593	RBH177593
	E7 12L	N174826	RBH174826
	E7 12L-300/350 HP	N174833	RBH174833
	E7 12L-400/450 HP	N174828	RBH174828
	EM7 E7-350/400	N174832	RBH174832
	MD11	N3776805	RHM3776805

Part Numbers And Logos Are Property of Their Respective Companies And Only Intended For Reference Purposes

Supplier Highlights Summary

Ordering Instructions/Identification

- The ID tag is located on your current turbo. If you cannot find the turbo ID tag, please provide your engine serial number or vehicle VIN number.
- **Authorized distributors utilize Turbo Key for fast, accurate identification.**

TurboKey™

Availability

- Same day shipping on most units.
- 24 hour turnaround on Custom Units (R&R).
- Flat rate ground and air freight charges.

Quality

- Turbos are completely cleaned and remanufactured to original specifications.
- All turbochargers are balanced and calibrated using the latest high speed, state of the art equipment available.

BorgWarner
MASTER DISTRIBUTOR

Packaging

- A Turbo Solutions branded ID tag is affixed to each unit specifying the part and serial number.
- All units are shipped with the following:
  - Gasket Kit
  - Installation Guide / Instructions
  - Warranty Information
  - Core Return Tag

HOLSET®
TURBOCHARGERS
For Cummins Engines
MASTER DISTRIBUTOR

Garrett®
by Honeywell

Warranty

- There is a One-Year unlimited mileage warranty on all Turbo Solutions remanufactured turbochargers.
- Standard coverage includes all defective material and workmanship, subject to limitations and exclusions.
- The warranty period begins on the date of invoice.

Core Return Policy

- No Hassle 100% core return. We do not grade cores.
- Core must be same part number as unit purchased.
- Core must be fully assembled and must be accompanied by core return tag.

Turbocharger Troubleshooting Matrix For Turbo Diesel Engines

POSSIBLE CAUSES / PROBLEM DESCRIPTION	Compressor/ Turbine wheel damaged	Insufficient power/boost pressure too low	Boost pressure too high	Black smoke	Blue smoke	Turbocharger generates acoustic noise	High oil consumption	Oil leakage at compressor end	Oil leakage at turbine end
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 coked 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 inoperable or damaged (Variable geometry turbos only)		●	●	●					

Turbo SOLUTIONS

Authorized Distributor

5/18-13068