

**IVECO**

**ZOOM**

FOCUS ON TECHNOLOGY

IVECO  
AFTERMARKET  
SOLUTIONS

**TURBOCHARGER**

BOOST YOUR POWER

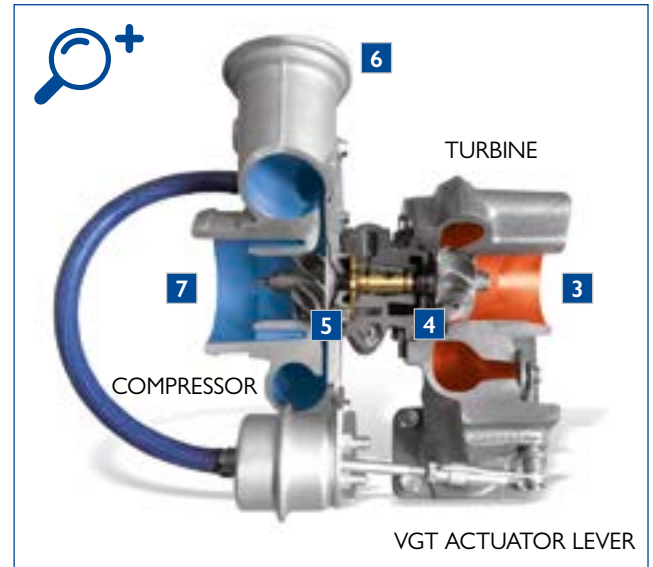
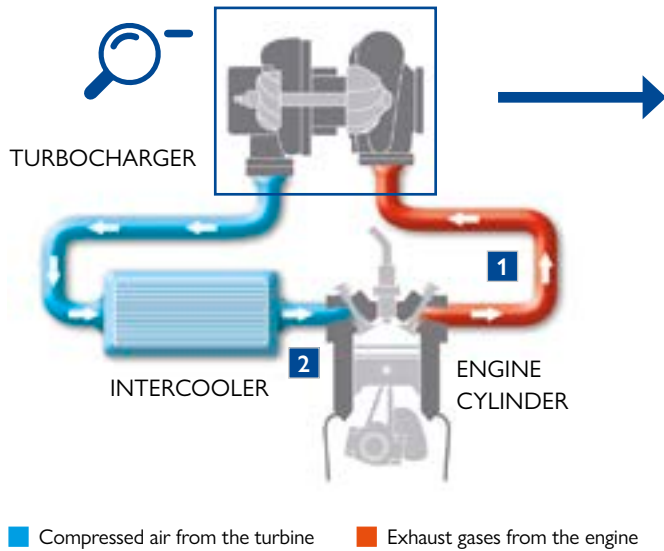


**IVECO** | **Genuine Parts**  
HIGH PERFORMANCE

# HOW IT WORKS

By using the energy from the exhaust gas to compress the fresh air for combusting the fuel, the Turbocharger increases the power of your engine with the same amount of fuel.

To ensure the optimum performance of your engine, it is important to maintain the original conditions of the Turbocharger system.

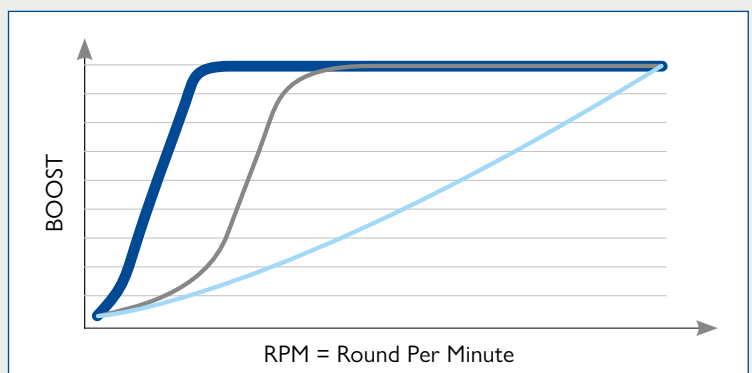


# PERFORMANCE

Genuine IVECO Turbocharger is a sophisticated component, it can work up to 360.000 RPM and with exhaust gas temperature above 900°C.

## COMPARISON OF DIFFERENT TYPES OF TURBOCHARGERS

**EVOLUTION:  
VARIABLE GEOMETRY  
TURBOCHARGER (VGT)**  
THE VGT INCREASES  
ENGINE PERFORMANCE  
ALSO AT LOW SPEED



■ Variable Geometry Turbocharger

■ Turbocharger Standard

■ Atmo

# WHY YOU SHOULD CHOOSE A GENUINE IVECO TURBOCHARGER:

## A TURBOCHARGER DESIGNED FOR YOUR VEHICLE

Turbochargers are high technology products, designed, calibrated and tested to meet the criteria of very precise performances requested by IVECO engines. They are highly reliable and offer optimal performance.

Engine performance directly depends on:

- High quality of turbo response
- Optimal fuel / air mix

## RISKS OF NOT CHOOSING GENUINE IVECO TURBOCHARGERS:

- Low flow of exhaust / low pressure with consequent low in response and poor overall performance, as well as high emissions
- Conflict with engine management systems
- Fuel / air mixture too rich, excessive temperatures and damaging to the turbo and engine
- High flow of exhaust / low pressure, with consequent overspeed of the turbo leading to a risk of explosion of the turbine wheel and damage the turbo and engine
- Overheating and consequent damaging of the engine

## SAVINGS

Genuine IVECO Turbochargers ensure long life, low fuel consumption, low emissions, best performance which will bring cost savings in long term.



With the IVECO GENUINE TURBOCHARGER



With another non genuine TURBOCHARGER

## BENEFITS OF MAINTAINING THE TURBOCHARGER SYSTEM:







As the engine ages, the combination of the variable turbine and the associated electronic control will adjust its characteristic to ensure the original performance and emission levels are maintained over a longer period:

- Improves fuel efficiency by up to 5%
- Reduces emissions by assisting exhaust gas recirculation (EGR) process
- Enables to meet CO<sub>2</sub> emission targets
- Recovers pumping losses

However, if the Turbocharger system is not well maintained this adjustment cannot take place and fuel consumption will increase. Ensuring the Turbocharger system is performing correctly will save you money.

# TURBOCHARGER SYSTEM: MAINTENANCE ADVICE

The Turbocharger is designed to last for the service life of the engine, however, monitoring of the whole system is recommended during periodic checks that should be made during every engine service.

|   | ADVICE  | BENEFIT  |
|---|---|--|
|    | Ensure good condition of fuel injection system  | Reduce the risk of turbo damage from high exhaust gas temperatures caused by poor condition of fuel injection system |
|    | Replace with correct engine Oil and genuine Oil Filter at manufacturers recommendation        | Increase the life of the Turbo by reducing the risk of too high temperature caused by a blockage in oil supply       |
|    | Check all connecting hoses for condition, ensuring no splits                                  | Ensuring the correct air compression will help to maintain Turbo performance   |
|    | Check actuator operation and replace with Genuine Parts if needed                             | Ensure the correct functionality of Wastegate to avoid risk of overspeed and Turbo failure                           |
|    | Check the intercooler and all associated parts; and replace with Genuine Parts when necessary | As intercooler work in association with Turbochargers, this will prevent consequential or combination damage         |
|  | Replace blow-by filter according to maintenance schedule                                      | Prevent any oil contamination from substandard blow-by filter that may lead to premature damage of the Turbocharger  |

## HOW TO AVOID A NEW FAILURE:

Often a defective Turbocharger is the consequence of some other engine defects which cannot be solved just by replacing the Turbocharger.

To avoid a repeat failure, from the new Turbocharger, it is important to find out what damaged your old Turbocharger.

Most of the problems with Turbocharger systems can be associated to the following causes:

|   |  |
|---|--|
| INADEQUATE LUBRICATION  | Oil leak / starvation account for more than 90% of turbo failures!   |
| OIL CONTAMINATION   | Dirty oil leads to score marks on shaft and damages the bearing system   |
| FOREIGN OBJECTS   | Foreign bodies may enter through a defective air filter, or split pipe and damage the turbine or compressor wheels   |
| CHECK ACTUATOR OPERATION AND REPLACE WITH GENUINE PARTS IF NEEDED | Wastegate will not function correctly if actuator is in poor condition   |
| OVERSPEED AND EXCESSIVE TEMPERATURE                               | Maintenance problems, engine malfunction, use of non-genuine components can lead the Turbocharger to work beyond the rotating and temperature parameter it has been designed for |