



# Explore our Technologies

## eTurbocompound

for commercial vehicles

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## CHALLENGES FOR COMMERCIAL TRUCKS

- Better fuel economy
- Lower emissions



## Turbocharged Engine

### Challenges (Standard Setup)

- Even though a turbocharged diesel engine is remarkably efficient, there's still some useful energy to be found in the tailpipe/exhaust
- Under certain conditions there's an excess of energy in the exhaust stream that goes under-utilized

## Turbocharged Engine

### Benefits with eTurbocompound Generator

- Converts wasted exhaust energy to electrical power downstream of the aftertreatment (gives thermal priority to the aftertreatment)
- In certain conditions it can backpressure the engine slightly aiding in driving the EGR to lower emissions
- The machine is oil-free so that it can be mounted far away and low (relative to the engine)

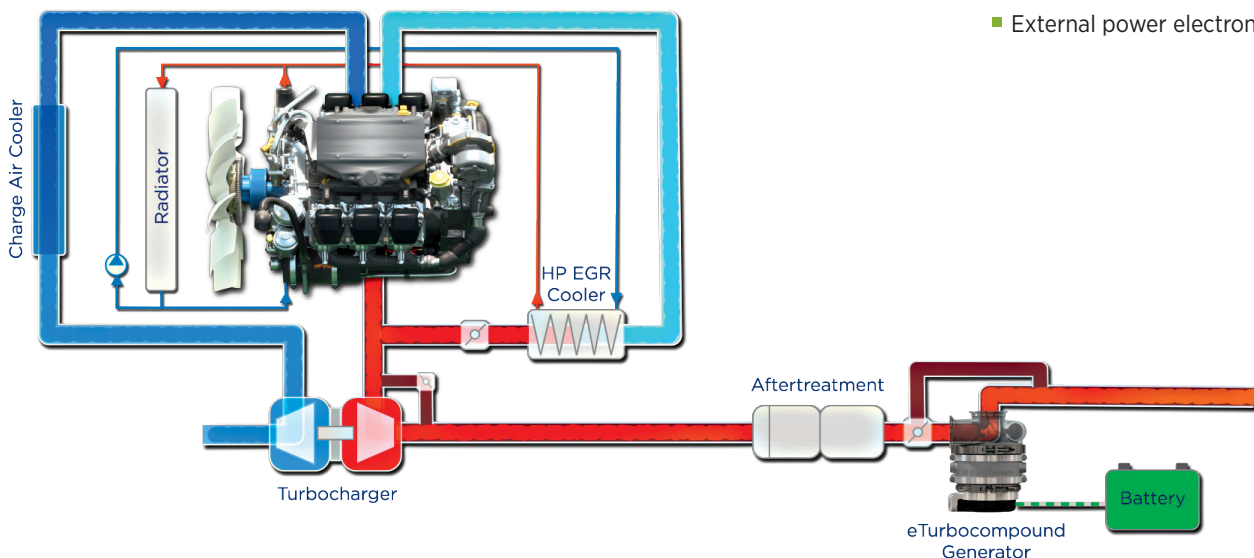
## 48 V eTurbocompound Generator

### How it works

- Converts wasted exhaust energy into electrical energy (excess exhaust pressure and heat drives an electric motor/generator creating 48 V power)
- The downstream mounting position allows the aftertreatment to keep "priority access" to the residual exhaust heat maintaining maximum efficiency in the after-treatment
- The machine can run at a speed that's independent of both engine speed and turbocharger speed, allowing it to be optimized for both best turbine efficiency and best electrical efficiency
- Bypass valve opens when the engine reaches full load and high speed

### Specifications

- 70,000 rpm maximum speed
- 7 kW optimized power output
- 12 kW continuous power output capability
- 16 kW maximum intermittent output capability
- Permanent-magnet generator
- Water cooled, no oil supply needed
- External power electronics



For Additional BorgWarner  
Turbo Systems Information:  
[turbos.borgwarner.com](http://turbos.borgwarner.com)