Explore our Technologies
eTurbocompound
for commercial vehicles
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