



Case Study: Fiat Powertrain Technologies

Eminox partners with FPT to deliver Euro VI emissions from CNG Engine

Fiat Powertrain Technologies (FPT) is one of the largest global manufacturers of specialist commercial drive solutions for trucks, buses, industrial and marine applications.

Eminox started its relationship with FPT in 2010 developing an oxidation catalyst silencer system to deliver Euro V emissions compliance for its specialist CNG 9 engine. The fuel economy benefits of FPT CNG gas engines make them the ideal choice for use on both buses and trucks, conventional pollutant emissions are also greatly reduced making them ideal for urban environments. However, CNG engines do introduce new emissions challenges with the need control methane emissions. As the engines operate at high temperatures of 700-800°C (compared to diesel, which operates at about 550°C) this demands high performance exhaust after treatment that can operate effectively in this environment.

This successful engine and after treatment combination is used by many global bus and truck manufacturers, such as Iveco Bus and Truck, Solaris Bus, Dennis Eagle and Beiqi Foton Motor Co.

Building on the proven success of this high performance system, Eminox has continued its work with FPT to deliver the next generation solution to meet Euro VI.

At every stage from concept to production, Eminox worked in close partnership with FPT's development team to effectively deliver the optimum after treatment solution. As well as integrating with specific engine characteristics and delivering the required emissions levels, the system had to fit a tight space envelope. With an exhaust operating temperature nearly 35% higher than a diesel equivalent, material choice, design and fluid-flow management processes were all important project considerations. Heat, back pressure and noise attenuation were also important design considerations.

The complete systems approach employed by Eminox, taking into account the interrelationships between all components, led to a high performance Euro V solution that was capable of being upgraded to meet Euro VI for use across Europe and in wider global marketplaces.

FPT commented: *"Working with Eminox on the Euro V solution demonstrated their ability to meet the specific demands of a CNG engine together with the ability to ensure they delivered an optimal solution to fit within a tight space envelope. It was a natural step to continue this work to deliver our most advanced CNG engine package."*