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**Federal-Mogul Extends Its Range of Powder Metallurgy Materials  
For Bushings and Guides**

*High-performance materials help improve turbocharger durability  
in demanding downsized engine applications*

Southfield, Michigan, May 6, 2010 ... Federal-Mogul Corporation (NASDAQ:FDML) is extending its materials range for bushings and guides designed specifically for use at the very high temperatures increasingly found in turbochargers and Exhaust Gas Recirculation (EGR) components. Turbocharging is already almost universal on diesel engines and will become even more common in gasoline applications as engineers improve fuel consumption and emissions by designing downsized engines that have higher specific outputs. The new materials will allow Federal-Mogul to produce components that meet the very tough durability targets imposed by the increasingly severe conditions seen in this new generation of downsized, low CO<sub>2</sub> engines.

To achieve enhanced performance characteristics required by its customers, Federal-Mogul is using Powder Metallurgy (PM) techniques in which components are manufactured by sintering a blend of powdered metals. The many advantages of PM pressing and sintering include reduced machining and an ability to precisely tailor the composition of the material to match the performance characteristics required for the component.

“Federal-Mogul is among the first to develop a range of materials specifically for the requirements of the fast-growing automotive turbocharger and high-performance EGR markets,” said Rainer Jueckstock, Federal-Mogul senior vice president of Powertrain Energy.

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“Operating at high temperatures can be a considerable challenge, particularly because at very high temperatures no lubrication can be used to reduce friction or wear between moving parts,” said Dr. Bob Pratt, Federal-Mogul’s sintered products research manager. With the greater application of PM, Dr. Pratt says that Federal-Mogul can now support customers with components that provide long-term durability and high temperature corrosion resistance as engine designers push exhaust gas temperatures up to around 1050°C (1922°F), compared with around 800°C (1472°F) for a typical engine application today.

According to Dr. Pratt, PM also allows Federal-Mogul the ability to develop materials that solve specific customer needs and to manufacture components efficiently in the volumes that best optimize the cost and performance for each application. “PM expertise provides a growing opportunity for the company,” he added.

Federal-Mogul has considerable expertise in PM formulation and processing, with dedicated technical centers in Coventry England (UK) and Waupun, Wisconsin (USA). In addition to turbocharger and EGR components, the technique is used to manufacture high-performance valve seats and guides for many of the world’s leading vehicle manufacturers.

To ensure efficient, consistently high-quality application of the new materials, Federal-Mogul also is developing enhanced manufacturing processes that are optimized for the new compositions. “Every change in composition and part geometry also has an impact on processing and machineability,” Dr. Pratt explained. “To achieve improved tool life, reduced scrap and lower process times, we are working with customers to help them develop improved tools and processes that allow efficient machining of these very hard materials.”

Federal-Mogul’s Valve Seats and Guides Powdered Metal Group manages development and applications engineering projects from networked engineering centers in Europe, China, India and North America. “Materials development is at the heart of solving increasingly challenging problems for our customers,” said Global Research and Development Manager Denis Christopherson.

“It’s a core expertise for Federal-Mogul and one of the reasons we have a growing leadership position in high-value areas of this business.” The Valve Seats and Guides Powdered Metal Group currently supplies more than 65 vehicle and engine manufacturers worldwide, and delivers components to all leading turbocharger manufacturers.

### **About Federal-Mogul**

Federal-Mogul Corporation is a leading global supplier of powertrain and safety technologies, serving the world’s foremost original equipment manufacturers of automotive, light commercial, heavy-duty, agricultural, marine, rail, off-road and industrial vehicles, as well as the worldwide aftermarket. The company’s leading technology and innovation, lean manufacturing expertise, as well as marketing and distribution deliver world-class products, brands and services with quality excellence at a competitive cost. Federal-Mogul is focused on its sustainable global profitable growth strategy, creating value and satisfaction for its customers, shareholders and employees. Federal-Mogul was founded in Detroit in 1899. The company is headquartered in Southfield, Michigan, and employs nearly 41,000 people in 33 countries. Visit the company’s Web site at [www.federalmogul.com](http://www.federalmogul.com).

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Federal-Mogul’s expertise in powder metallurgy allows them to develop new materials that are precisely matched to the increasingly demanding requirements of turbocharger and EGR components for downsized engines



Reducing fuel consumption and CO2 emissions is creating a growing requirement for components that can operate reliably at very high temperatures