

Federal-Mogul Corporation's Powertrain Energy business utilizes its engineering and materials expertise, manufacturing excellence, distribution flexibility and marketing power to supply to our customers valued technology in a wide range of powertrain products. Federal-Mogul is recognized as a market leader in materials technology, application engineering and advanced testing capabilities for pistons in high-performance engines, especially in the light vehicle diesel, heavy-duty and high-end gasoline engine segments. We design and produce nearly all known types of pistons, piston rings, pins, cylinder liners, valve seats and guides and related components using the latest technology in coatings and treatments. Federal-Mogul provides leading-edge technologies and competitive solutions to powertrain customers worldwide.



Pistons

- State-of-the-art technologies, coatings and engineered surfaces for superior performance in light vehicle diesel, gasoline and heavy-duty engines
- Continuous advancement of new technologies enhance latest alloy developments for increased strength and durability
- Optimized gallery locations for maximum cooling potential
- Leading welding technology for lightweight steel pistons in the mid-range diesel market

Monosteel® Diesel Pistons

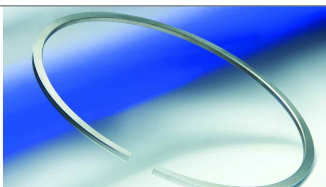
- Innovative technology addresses the increasing thermal, mechanical, abrasive and corrosive challenges placed on heavy-duty diesel engines resulting from emissions regulations
- Winner of the *Automotive News* PACE (Premier Automotive Suppliers' Contributions to Excellence) Award

Aluminum Gasoline Pistons

- Technology created with low friction, low mass and low NVH architectures

Aluminum Light Vehicle Diesel Pistons

- Market leader in Europe for the highest rated light vehicle diesel and mid-range engines



Piston Rings

- World leader in materials and coatings solutions for extended piston ring life
- Unique next-generation plasma and Physical Vapor Deposition ring coating developments
- Advanced analysis techniques and modeling for distortion reduction and improved piston ring sealing
- Goetze Diamond Coating (GDC®) for piston rings, winner of the *Automotive News* PACE Award



Cylinder Liners

- Extensive liner product range offers grey and alloyed, lamellar and vermicular graphite iron, optional surface hardening and solutions for strength, performance and extended life
- Designed for demands of modern gasoline, light vehicle diesel and truck engines, both fully- and semi-machined
- Ultra-thin, slip-fit liner design is a high-pressure, low-weight solution for automotive AI-diesel engine blocks
- AISi-OD-coated hybrid liner achieves best bonding and heat transfer for high-pressure, die-cast gasoline and diesel engines



Valve Seats and Guides

- Global market leader of valve seat inserts and valve guides with worldwide manufacturing capabilities
- Copper infiltrated and dual-layer design ensures protection in the most arduous applications
- European leader for manual transmission synchronizer rings and hubs
- Diesel engine valve guides that outperform cast materials in the dry environments required for reduced emissions