EPA and BorgWarner to Develop Fuel Efficient Technology

- A new technology partnership known as a Cooperative Research and Development Agreement (CRADA) between the U.S. Environmental Protection Agency (EPA) and BorgWarner, Inc. was announced on April 18, 2006. The partnership will evaluate and determine the commercial viability of newly advanced turbochargers, air management, and sensors for use with diesel and high-efficiency gasoline engines.

- The initial efforts of the CRADA calls for EPA and BorgWarner to evaluate the technical and market potential of advanced turbocharger technologies designed to preserve and extend the diesel engine's efficiency, as these engines achieve the next generation of diesel emissions requirements.

- The technical challenge has been to make these high-efficiency engines clean and cost-effective, while maintaining or improving efficiency. These advanced turbocharging technologies are an extremely attractive part of a suite of technologies that enable both diesel and high-efficiency gasoline engines to reduce U.S. dependence on foreign oil and to reduce emission of greenhouse gases.

- Through the partnership, EPA and BorgWarner will evaluate these advanced automotive components that can allow the automotive and trucking industry to utilize EPA's Clean Diesel Combustion (CDC), as well as Homogeneous Charge-Compression Ignition (HCCI) gasoline combustion technologies.

- Broad industry interest in EPA's Clean Diesel Combustion has accelerated the need for more advanced air-boosting systems than are used in today's diesel.

- In order to meet the progressive requirements for advanced turbocharging and boosting systems, BorgWarner and EPA have been working jointly on innovative systems for use with CDC and other clean combustion engine technologies.

- These advanced air management systems provide the technical approaches and hardware necessary for ultra-clean diesel engines and gasoline engines to become as efficient as diesel engines.

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- The advanced enabling technologies, along with CDC and other clean high-efficiency gasoline combustion technologies are being created in EPA's Ann Arbor Laboratory. BorgWarner and EPA will work to quickly evaluate and develop these concepts into commercially viable advanced turbocharger, air management, and sensor hardware.

- Successful commercialization of these advanced components will result in the use of more diesel and high-efficiency gasoline vehicles in the United States –which will:
  - *Reduce emissions*, thereby helping to clean up the environment
  - *Save consumers money at the pump* by reducing fuel consumption
  - *Reduce U.S. dependence on foreign oil*, thereby increasing national security.

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