



BORGWARNER DEMONSTRATES ITS EXPERTISE
IN AWD TECHNOLOGIES
DURING ARCTIC DRIVE EVENT

*BorgWarner's New AWD Coupling and eAWD System
Improve Traction, Vehicle Stability and Dynamics*

Auburn Hills, Michigan, March 19, 2013 – BorgWarner showcased its latest all-wheel drive (AWD) technologies at a winter drive event in Arjeplog, Sweden, near the Arctic Circle in March 2013. On icy lakes and under frigid conditions, BorgWarner successfully tested its advanced AWD technologies including its Generation 5 (GenV) coupling and electronically driven all-wheel drive (eAWD) system for electric and hybrid vehicles. Currently supplied to two European automakers, BorgWarner's GenV coupling automatically distributes power between the front and rear wheels using a new low-weight, compact design. In addition, BorgWarner's new eAWD system delivers increased vehicle stability and dynamics while improving fuel economy up to 20 percent compared with a mechanical AWD vehicle.

"Our latest advancements in the field of AWD technologies meet today's demands for increased traction and vehicle stability on all terrains with the added benefits of reduced weight and parasitic losses for improved fuel economy," said Dr. Stefan Demmerle, President and General Manager, BorgWarner TorqTransfer Systems. "BorgWarner offers a variety of next generation AWD solutions for virtually any application, including electric and hybrid vehicles."

BorgWarner's GenV AWD coupling features a new light-weight, compact design that reduces vehicle complexity and simplifies integration into the drivetrain. A new electro-hydraulic clutch actuator uses a unique centrifugal overflow valve design to accurately distribute power between the front and rear axles, eliminating the need for an accumulator, solenoid valve and filter. An integrated electronic control unit calculates and delivers pre-

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emptive and immediate response with high torque accuracy. To further reduce parasitic losses and improve fuel economy, a disconnect clutch system also allows the decoupling of the entire secondary driveline when the AWD function is not needed.

BorgWarner's eAWD system combines AWD and hybridization into one compact, robust package for hybrid and electric vehicles. The eAWD system consists of an electric traction motor that provides propulsion torque to the rear wheels through a planetary gear arrangement on each side. To improve lateral dynamics, a smaller second motor geared to the balance shaft enables transverse torque vectoring independent of vehicle speed for increased stability and a more dynamic driving experience.

About BorgWarner

Auburn Hills, Michigan-based BorgWarner Inc. (NYSE: BWA) is a technology leader in highly engineered components and systems for powertrain applications worldwide. Operating manufacturing and technical facilities in 57 locations in 19 countries, the company develops products to improve fuel economy, reduce emissions and enhance performance. Customers include VW/Audi, Ford, Toyota, Renault/Nissan, General Motors, Hyundai/Kia, Daimler, Chrysler, Fiat, BMW, Honda, John Deere, PSA, and MAN. For more information, please visit borgwarner.com.



BorgWarner successfully tested its advanced all-wheel drive technologies including its Generation 5 (GenV) coupling and electronically driven all-wheel drive (eAWD) system at a winter drive event in Arjeplog, Sweden.

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