



Borgwarner's Engine Timing Systems Drive GM's Small Ecotec Engines in South America and South Korea

- *Low-noise, low-weight and low-friction engine timing systems improve engine efficiency and fuel economy*
- *Latest inverted-tooth silent timing chains technology to attend downsized engines*

Auburn Hills, Michigan, 1st June, 2017 – BorgWarner supplies the complete engine timing system - including silent timing chains, guides, hydraulic tensioners, sprockets and oil pump chains - for a variety of General Motors' (GM's) 1.0- to 1.5-liter Ecotec engines built in South America and South Korea to power the Chevrolet Spark, Cruze and Malibu. Designed to reduce mass, friction and noise, BorgWarner's engine timing systems deliver greater durability, engine efficiency and fuel economy.

“Like GM's Ecotec engines, BorgWarner's engine timing systems are designed to improve fuel economy by increasing efficiency and reducing mass while providing refinements such as low noise and high durability,” said Joel Wiegert, President and General Manager, BorgWarner Morse Systems. “Our engineers worked closely with GM to rigorously test and validate nine engine variants with two timing drive layouts and two oil pump drive layouts. With BorgWarner's broad global footprint, we are pleased to provide localized production for this important global engine platform.”

Downsized engines require low-friction, high wear-resistant solutions. For GM's small Ecotec engines, BorgWarner supplies its latest inverted-tooth silent timing chains featuring curved link backs designed to reduce friction between the chain, arms and guides. Advanced manufacturing processes - such as hard-coated pin technology, super finish apertures and high-quality finishes for rounded chain link profiles - improve chain efficiency, performance and durability.

BorgWarner's compact hydraulic tensioners balance chain tension and optimize control over the entire engine operating range for improved robustness, increased engine efficiency and

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lower noise, vibration and harshness. Compact hydraulic tensioners offer low mass, dynamic response and high wear resistance in a small, cost-effective package. BorgWarner's sprockets, arms and guides are engineered with specialized materials to reduce mass and package size for improved fuel economy and reduced emissions.

Sobre BorgWarner

BorgWarner Inc. (NYSE: BWA) is a global product leader in clean and efficient technology solutions for combustion, hybrid and electric vehicles. With manufacturing and technical facilities in 62 locations in 17 countries, the company employs approximately 27,000 worldwide. For more information, please visit borgwarner.com



BorgWarner supplies the complete timing system for a variety of GM's 1.0- to 1.5-liter Ecotec engines for South America and South Korea, delivering greater durability, engine efficiency and fuel economy.

Media contact:

Tatiane Zambão

Phone: +55 11 3183-0487

Email: mediacontact.sa@borgwarner.com