



**Tenneco Presents All-New Megabond® Cylinder Liners at 2019 IAA Frankfurt**  
***Advanced liner technology enables greater durability, more compact high efficiency engines and easier cylinder block manufacturing***

**SOUTHFIELD, Michigan, June 25, 2019** ... Tenneco's (NYSE:TEN) Powertrain division will present its all-new Megabond® cylinder liner technology at the 2019 IAA Frankfurt (Hall 4.1, Stand C04, September 10 – 13, Press and Trade Days only). Megabond liners provide superior robustness for high performance and durability on engines with cast aluminum cylinder blocks. They offer twice the mechanical bond strength of existing state-of-the-art liners, combined with excellent thermal conductivity, to meet the increased mechanical and thermal loads of tomorrow's high efficiency engines. The new technology is suitable for light vehicle applications of all types: gasoline, diesel and alternative fuels as well as hybridized versions.

“The improved bonding and thermal conductivity provided by Megabond liners enable a broad range of benefits including reduced oil consumption, lower CO<sub>2</sub> emissions, improved NVH and higher engine performance,” said Gian Maria Olivetti, Vice President Global Engineering, Tenneco Powertrain. “But most important of all, Megabond liners support outstanding durability and reliability because they are more resistant to the stresses that can cause debonding or delamination during manufacture or operation.”

Tenneco's Megabond liners use an evolution of the company's proven Hybrid Liner technology which employs an Aluminum/Silicon alloy deposited around a cast iron liner by wire arc spray, prior to casting the aluminum block around it. The unique design creates an exceptionally strong intermetallic bond between the liner and the aluminum block.

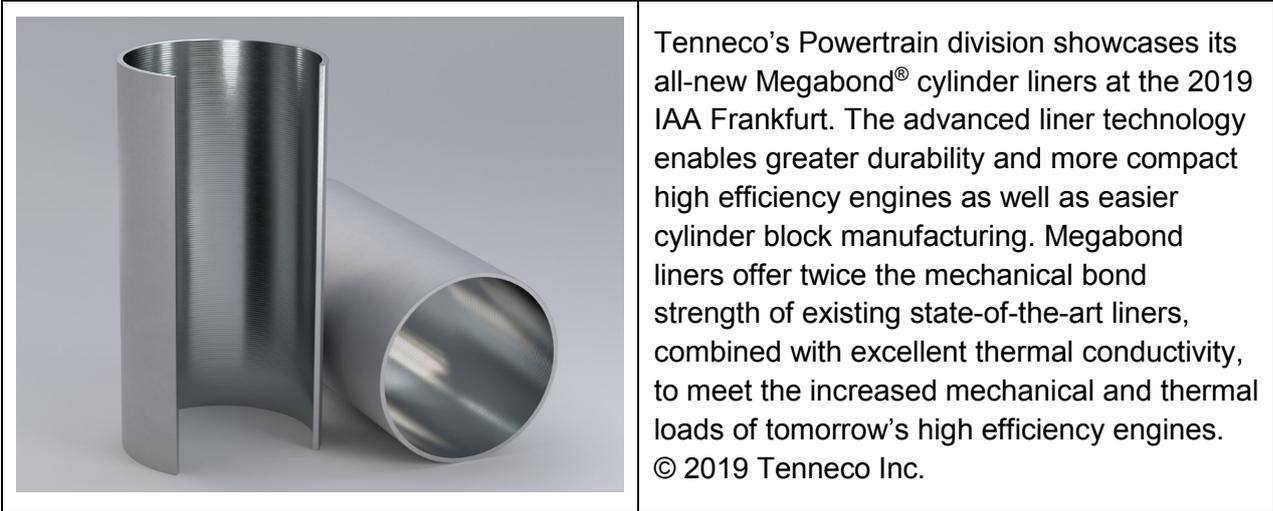
Megabond cylinder liners were initially developed to meet the requirements of next-generation engines with ultra-close bore spacing, which can place severe demands on liner stability and thermal performance but constrain liner thickness, as Volker Scherer, Director, Liners, Tenneco Powertrain, explained. “Many in our industry felt nothing could beat the strength of a mechanical interlock, such as our Aslock-type liner with its spined surface, but the space restriction meant we had to develop a thinner solution. In this respect, Megabond is an enabling technology because it allows our customers to produce more compact engine designs without compromising durability,” he said.

The new technology offers important manufacturing benefits as well because Megabond liners are tolerant of a wider variation in the casting properties of the cylinder block. The improved robustness means the foundry is not limited to such a narrow window in the parameters of the casting process in order to ensure a successful finished product.

“The Megabond liner complements our existing liner technologies, extending the range of solutions available to our customers,” said Scherer. “This means whatever the specific combination of loads, temperatures and engine architecture our customers require, we can deliver an optimum liner specification.”

The new Megabond liner technology was developed at the company’s technical facilities in Friedberg and Burscheid, Germany. Production is planned to commence later this year in Germany and in China.

**IMAGE:**



**About the new Tenneco – the future Powertrain Technology company**

Following Tenneco’s expected separation to form two new, independent companies, an Aftermarket and Ride Performance company (DRiV™) as well as a new Powertrain Technology company, the new Tenneco will be one of the world’s largest pure-play powertrain companies serving OE markets worldwide with engineered solutions addressing fuel economy, power output, and criteria pollution requirements for gasoline, diesel and electrified powertrains. The new Tenneco would have 2018 pro-forma revenues of \$11.4 billion, serving light vehicle, commercial truck, off-highway and industrial markets.

**Safe Harbor**

This release contains forward-looking statements. These forward-looking statements include, among others, statements relating to our plans to separate into two independent public companies. Forward-looking statements are subject to a number of risks and uncertainties that could cause actual results to materially differ from those described in the forward-looking statements, including the possibility that Tenneco may not complete the spin-off of the Aftermarket & Ride Performance business from the Powertrain Technology business (or achieve some or all of the anticipated benefits of such a spin-off); the possibility that the acquisition of Federal-Mogul or the separation may have an adverse impact on existing arrangements with Tenneco, including those related to transition, manufacturing and supply services and tax matters; the ability to retain and hire key personnel and maintain relationships with customers, suppliers or other business partners; the risk that the benefits of the acquisition of Federal-Mogul or the separation, including synergies, may not be fully realized or may take longer to realize than expected; the risk that the acquisition of Federal-Mogul or the separation may not advance Tenneco's business strategy; the risk that Tenneco may experience difficulty integrating all employees or operations; the potential diversion of Tenneco management's attention resulting from the separation; as well as the risk factors and cautionary statements included in Tenneco's periodic and current reports (Forms 10-K, 10-Q and 8-K) filed from time to time with the SEC. Given these risks and uncertainties, investors should not place undue reliance on forward-looking statements as a prediction of actual results. Unless otherwise indicated, the forward-looking statements in this release are made as of the date of this communication, and, except as required by law, Tenneco does not undertake any obligation, and disclaims any obligation, to publicly disclose revisions or updates to any forward-looking statements. Additional information regarding these risk factors and uncertainties is detailed from time to time in the company's SEC filings, including but not limited to its annual report on Form 10-K for the year ended December 31, 2018.

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