Press Release

Vibracoustic develops decoupling disc for one of the world's most powerful sedans

Darmstadt, 7 July 2016. Vibracoustic, the world's leading supplier of automotive vibration control technology, has developed a cord-reinforced elastomer coupling, named NRG Disc, for one of the most powerful and fastest mass-produced sedans with all-wheel drive. Jointly developed with BMW, this new coupling offers benefits in terms of durability and weight in comparison to other solutions available today. The coupling's first series application is in the new BMW ALPINA B7 Bi-Turbo.

Sports sedans are usually equipped with rear or all-wheel drive, meaning the engine power has to be transferred to the rear axle by means of a prop shaft, which is subject to very high strain: at speeds of 300 km/h, it rotates around its own axis up to 7,500 times per minute. The torsional vibration occurring in the engine is transferred to the prop shaft via the transmission, where it can cause noise and vibrations as well as damage the drivetrain. Typical symptoms include clunk noises, declutch bumps, and gear rattle noises.

Hardy discs isolate torsional vibration occurring at the prop shaft. They also harmonize the torque ramp-up and compensate for the axial displacement and Cardan angle. Vibracoustic is breaking new ground in the BMW ALPINA B7 Bi-Turbo with the NRG Disc (New Rubber Generation Disc), a cord-reinforced flexible coupling. With 447 kW (608 PS), 800 Nm of torque and a top speed of 310 km/h, the vehicle is currently one of the most powerful and fastest mass-produced sedans with all-wheel drive. Thanks to specific cord packages for drive and overrun direction, the use of different cord types, optimized winding processes and elastomer compounds, Vibracoustic has managed to meet the customer's demanding requirements with the NRG Disc. The disc can absorb maximum torque and, thanks to the specially coordinated components, has a much longer service life. It's also 32 % lighter and much more compact than other series solutions currently available on the market.

Vibracoustic is the leading provider of anti-vibration solutions for the global automotive and commercial vehicle industries. The company was founded as joint venture TrelleborgVibracoustic, and generated sales of approximately 1.9 billion Euros in 2015. Vibracoustic has around 10,000 employees at 43 locations in 19 countries that develop and produce powertrain and chassis components for automotive vibration control. For more information, see www.vibracoustic.com

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