



Dana Bolsters Efficient Drivetrain Solutions for Load Haul Dumpers, Underground Mining Trucks

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Robust New Systems Improve Performance, Durability, Safety

LAS VEGAS, Sept. 26, 2016 /PRNewswire/ -- Today at MINExpo 2016, Dana Incorporated (NYSE: DAN) unveiled two new drivetrain systems for small- and medium-sized load haul dumpers (LHDs) and articulated trucks used in underground mining operations. These offerings improve precision and efficiency, facilitating the loading and hauling of material in higher capacities. In addition, new connectivity features enhance safety and simplify maintenance.

These new solutions include a Spicer® 20D planetary rigid non-steering axle, a long-drop version of the Spicer TE14 hydrodynamic transmission paired with a Spicer C3000 torque converter, and two new axles for small-sized underground mining vehicles.

Each of these new axles are designed to accommodate Dana's optional Spicer® Smart Suite™ technology, a platform of fully integrated, connected-vehicle features that converts operating data from the drivetrain into actionable insights. Machine-learning algorithms built into the software optimize productivity by measuring performance, forecasting maintenance issues, and enabling more precise maneuvering in tight, subterranean work areas. Ultimately, packages featuring Spicer Smart Suite technology will extend to additional Spicer drivetrain products.

"As mining companies navigate cyclic challenges, they are seeking new innovations to deliver superior productivity within a smaller design envelope while maintaining the essential durability that is required to operate underground," said Aziz Aghili, president of Dana Off-Highway Drivetrain Technologies. "As a long-time supplier to the mining industry, Dana understands this delicate balance, and these drivetrain packages deliver optimized solutions for the most common mining vehicles on the market."

Spicer 20D Axle for Mid-Sized Underground Mining Trucks and LHDs

Currently undergoing verification testing, with pre-production testing by manufacturers to begin in the first quarter of 2017, the Spicer 20D axle delivers 25 to 40 percent more load capacity over previous models. This axle supports LHDs with bucket capacities from 9 to 11 tonnes (10 to 12 tons) and mining trucks with payloads from 20 to 33 tonnes (22 to 36 tons).

With a design proven to withstand the most severe environments while limiting efficiency losses, the Spicer 20D axle also offers up to 35 percent more brake power to ensure reliability under full load conditions on all operating grades.

Spicer TE14 Transmission and C3000 Torque Converter

The Spicer TE14 transmission for mining features improved shifting along with more precise maneuvering and simpler maintenance. Currently in pre-production testing, this transmission has been designed for a wide range of medium-sized mining vehicles.

Electronic-controlled proportional valves enable the use of best-in-class controls to support a smarter driveline. These include safety inhibits, diagnostics, system monitoring, load- and speed-based automatic shifting, shift overlap control, electronic modulation, and automatic throttle up. Higher engine power and more efficient clutches also enable increased productivity.

The TE14 transmission has been paired with the new remote-mounted Spicer C3000 torque converter, which has been updated with additional capacity to maximize the performance of larger engines and pumps in high-energy duty cycles.

Spicer 182 and 183 Axles for Small-Sized Underground Mining Trucks and LHDs

Now available, the Spicer 182 and Spicer 183 planetary rigid non-steering axles offer an enhanced braking system for controlled operating conditions on uneven surfaces, along with better mechanical efficiency to reduce losses in the drivetrain. Compatible with a range of powershift transmissions, these new axles support LHDs with up to 4 tonnes (4.5 tons) bucket capacity and small mining trucks with payload up to 14 tonnes (15.5 tons).

Dana's wide range of advanced drivetrain technologies for the mining industry will be showcased at MINExpo 2016 in the South Hall of the Las Vegas Convention Center in booth number 28921. To learn more, visit www.dana.com/offhighway.

About Dana Incorporated

Dana is a world leader in the supply of highly engineered drivetrain, sealing, and thermal-management technologies that improve the efficiency and performance of vehicles with both conventional and alternative-energy powertrains. Serving three primary markets – passenger vehicle, commercial truck, and off-highway equipment – Dana provides the world's original-equipment manufacturers and the aftermarket with local product and service support through a network of nearly 100 engineering, manufacturing, and distribution facilities. Founded in 1904 and based in Maumee, Ohio, the company employs more than 23,000 people in 25 countries on six continents. In 2015, Dana generated sales of nearly \$6.1 billion. *Forbes* Magazine has again selected Dana as one of America's 100 Most Trustworthy Companies. For more information, please visit dana.com.

To view the original version on PR Newswire, visit: <http://www.prnewswire.com/news-releases/dana-bolsters-efficient-drivetrain-solutions-for-load-haul-dumpers-underground-mining-trucks-300333884.html>

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