Jacobs and Tula Sign Cooperation Agreement to Further Support Customers Adopting CDA With Dynamic Skip Fire Technology

Both Truck Powertrain Solutions Help Meet Global Emissions Standards

Jacobs Vehicle Systems and Tula Technology are exploring opportunities to reduce NOx and CO_2 emissions and will equip Jacobs' newest demonstrator truck with both Jacobs' CDA and Tula's diesel DSF technologies for customers to experience firsthand. (Photo: Business Wire)

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BLOOMFIELD, Conn. & SAN JOSE, Calif.--(BUSINESS WIRE)--Jacobs Vehicle Systems and Tula Technology have signed a cooperation agreement to accelerate the development of Jacobs Cylinder Deactivation® (CDA®) valve actuation technology in conjunction with Tula's Dynamic Skip Fire (DSF®)

control algorithms. The agreement builds on two years of research and development collaboration between the two companies to reduce nitrous oxide (NO_x) and carbon dioxide (CO_2) emissions from medium and heavy-duty vehicles, helping to meet ever-tightening environmental regulations.

The agreement between Jacobs Vehicle Systems and Tula Technology builds on two years of research to reduce NOx and CO_2 emissions from medium and heavy-duty vehicles, helping to meet ever-tightening environmental regulations.
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"Jacobs Vehicle Systems and Tula Technology are both great companies with great technologies, and we've been even more effective working together," said John Fuerst, senior vice president of technology and innovation at Tula. "This agreement will advance our capabilities to produce better CDA products and dDSF controls."

Independent laboratory testing has demonstrated that Jacobs CDA hardware and Tula's dDSF achieve greater emission reductions when combined. Low-load cycle performance was estimated with a well-calibrated powertrain simulation tool to accurately capture the low-load system operation and emissions. This system showed as much as a 5% decrease in CO_2 and a 74% reduction in NO_x emissions compared to the baseline technology.

"While CDA and dDSF are available to commercial powertrain manufacturers as separate systems, our experience indicates that integrating the two technologies delivers much greater benefit to today's medium- and heavy-duty engines," said Steve Ernest, vice president of engineering and business development at Jacobs Vehicle Systems. "We have been working with Tula for several years, and this formal agreement solidifies our relationship as we demonstrate the benefits of using CDA and dDSF in tandem. Our efforts will provide the marketplace with sought-after solutions to meet increasingly challenging emissions standards. The synergies created through multiple development projects will offer customers the best possible outcomes for reducing NO_x and CO_2 simultaneously."

The agreement will allow technical development to expand the operating range at which emissions reductions can be achieved when the two technologies are combined. Jacobs and Tula also will explore opportunities for reduced NO_x and CO_2 emissions in off-road vehicles and equip a Class 8 demonstrator truck with both Jacobs' CDA and Tula's diesel DSF technologies for customers to experience firsthand.

About Jacobs Vehicle Systems

Jacobs Vehicle Systems is headquartered in Bloomfield, Conn., where it has a 25,000 square meter design, testing, and manufacturing facility, with support sites in Europe, Japan, and India as well as manufacturing facilities in Suzhou, China, and Brno, Czech Republic. Jake Brake® products are used by heavy and medium-duty diesel engine manufacturers globally. Registered to the ISO 14001 and IATF16949 standards, Jacobs Vehicle Systems is a leading producer of vehicle retarding and valve actuation technologies and can be found at jakebrake.com.

About Tula Technology, Inc.

Silicon Valley-based Tula Technology provides innovative award-winning software controls to optimize propulsion efficiency and emissions across the mobility spectrum, including gasoline-powered, diesel, alternative fuel, hybrid, and electric vehicles. Tula's culture of innovation has resulted in breakthrough technology and a robust global patent portfolio of more than 378 patents issued and pending. Tula Technology is a privately held company backed by Sequoia Capital, Sigma Partners, Khosla Ventures, GM Ventures, BorgWarner and Franklin Templeton. More information is available at www.tulatech.com.

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