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For Immediate Release

Cummins Components Reveals Concept Innovation for a Low CO₂, Low NOx Future

West Yorkshire (U.K.) - Cummins Inc. (NYSE: CMI) announced its latest solutions, for diesel engines, to meet the future needs of the commercial vehicle industry. Ahead of IAA Commercial Vehicle Show 2018, Hannover, Cummins Components have previewed key aspects of its new concept technology designed to achieve cleaner air through the minimisation of NOx, PM and CO₂.

While the business is broadening its portfolio of products to include alternative fuels, downsized engines and electrification, diesel remains a core focus. The investment made in R&D for diesel is reaping rewards with Cummins teams consistently working to achieve cleaner air and meet increasingly stringent emissions regulations.

The company showcased its revolutionary concept of an integrated turbocharger and aftertreatment system. Engineering expertise across Cummins Turbo Technologies and Cummins Emission Solutions has been combined to deliver new air and thermal management architectures in this single system. Representing the future vision for cleaner engine technology, the revolutionary concept integrated system consists of a Holset Fixed Geometry turbocharger with an integrated rotary turbine control (RTC) and a Close Coupled Unit with a Selective Catalytic Reduction catalyst.

“It is an exciting time to be in the power industry. Customers are demanding power options that deliver greater efficiency, reliability and flexibility, with reduced emissions,” said Tracy Embree, President of Cummins Components. “As engine manufacturers race to meet the demand for new power solutions, we are seeing new concept systems and innovations shaking up the industry and we’re proud to be at the forefront of these developments.”

Embree added, “At Cummins we are addressing this shift in the market by expanding our portfolio of products to reflect the needs of the future. In order to meet challenging new environmental regulations, we have adapted engine technology, resulting in diesel engines that are cleaner and more efficient. At IAA we will reveal the new technology that we believe will future-proof diesel engines for the next generation.”
Diesel fuel is the most energy dense liquid fuel available and advances in engines, emissions control technology and cleaner diesel fuels have led to some remarkable environmental gains. The ongoing research and development on the integrated system looks at innovative ways for achieving optimised heat management and increased fuel economy. In turn, it works to deliver an increase in overall engine performance while providing Cummins customers a saving in costs by an increase in efficiency.

The integrated RTC enables exhaust gases to bypass the turbine stage and enter the Close Coupled Unit after the gas has been injected with urea by the new Cummins UL4 injector. This immediate conversion enables exhaust gases to be 70°C hotter than when it reaches the SCR catalyst in traditional aftertreatment systems.

When combined with the Single Module™, which alone reduced emissions by 97 percent over the previous generation of products, the integrated system has the potential to assist in meeting future lower NOx and GHG limits, as well as providing additional benefits for cold start and urban driving emissions reduction. The conceptual system is one method which demonstrates Cummins’ continuous investment in research and development in anticipation of future legislative limits.

To commemorate marking the 20th anniversary of Holset VGT™, Cummins Turbo Technologies also previewed its most premium Variable Geometry Turbocharger to date – the seventh generation Holset VGT™.

Predicted to save the customer fuel and achieve greater turbo efficiency, when compared to its predecessor, the advanced seventh generation Holset VGT™ demonstrates improvements to the turbine stage efficiency through advancements made to its patented nozzle and shroud design, making it the most efficient Holset VGT™ yet.

The business also highlighted the ongoing investment in R&D for 2021-2024+ legislations, which focuses on developments around pulse optimisation, air-handling valves, oil seal improvements and electrified turbochargers.

In addition to the integrated system and preview of the seventh generation Holset VGT™, Cummins is unveiling a number of other components at the IAA Commercial Vehicles show which showcase the expertise and research being undertaken by the Cummins engineering teams to support legislation changes over the next 10 years.

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Notes to Editors

About Cummins Components.
Part of the Cummins Components Business, which is made up of Cummins Emission Solutions, Cummins Filtration, Cummins Fuel Systems and Cummins Turbo Technologies. The Components Business make up part of Cummins Inc., the world’s largest independent maker of diesel engines and related products, Cummins Turbo Technologies is a global engineering leader in turbocharger technology across a range of applications worldwide.

About Cummins Inc.
Cummins Inc., a global power leader, is a corporation of complementary business segments that design, manufacture, distribute and service a broad portfolio of power solutions. The company’s products range from diesel and natural gas engines to hybrid and electric platforms, as well as related technologies, including battery systems, fuel systems, controls, air handling, filtration, emission solutions and electrical power generation systems. Headquartered in Columbus, Indiana (U.S.A.), since its founding in 1919, Cummins currently employs approximately 58,600 people committed to powering a more prosperous world. Cummins serves customers in about 190 countries and territories through a network of some 500 company-owned and independent distributor locations and approximately 7,500 dealer locations. Cummins earned about $1 billion on sales of $20.4 billion in 2017. Press releases can be found on the Web at www.cummins.com. Follow Cummins on Twitter at www.twitter.com/cummins and on YouTube at www.youtube.com/cumminsinc.