



PRESS RELEASE

24 February 2020

SuperTurbo Technologies Inc. appoints Ricardo to support product industrialization

In a collaboration announced today, Ricardo Performance Products will support the first phase of commercial industrialization of the SuperTurbo™ system – a unique planetary traction drive that enables high speed power transfer to and from a turbocharger shaft, offering significant driveability and fuel efficiency benefits for large trucks

The SuperTurbo™ is a step forward from a traditional turbocharger, in that it has a novel mechanical transmission that links the turbo shaft to the engine drive. This enables power transfer to and from the turbo shaft that is not possible with a normal turbocharger. During transient operation, the SuperTurbo will behave like a supercharger and draw mechanical energy to accelerate the turbomachinery for improved engine response. Unlike a traditional supercharger, the SuperTurbo also receives transient power from its turbine. The net effect is both a fast transient response and a more efficient power draw for supercharging. The system also provides efficiency benefits to the engine. During operation at higher engine power levels, the turbine of the SuperTurbo captures any excess energy from the exhaust above that needed to drive the compressor to provide boost pressure to the engine. In this operating condition, the system operates in turbo-compound mode, providing surplus power to the engine crankshaft, thus improving fuel efficiency. The precise control over air flow allows the engine manufacturer to tune and control the optimal combustion

parameters and reduce particulate emissions. Likewise, NOx emission reduction is enhanced through bypass enabled higher aftertreatment temperatures and improved transient and steady state EGR control.



Under the contract announced today, Ricardo will support Colorado-based SuperTurbo Technologies Inc. by providing product industrialization expertise to help in planning the route to commercial manufacture of the SuperTurbo system.

“I would like to thank SuperTurbo Technologies for awarding to Ricardo this contract for the provision of industrialization expertise,” commented Ricardo Performance Products MD Martin Starkey. “Ricardo has extensive experience in this field, notably in the high-quality, low to medium volume manufacture of high-performance products for the motorsports, automotive and commercial vehicles sectors, including the establishment and management of robust global supply chains. We look forward to assisting SuperTurbo Technologies with these crucial steps towards the commercial introduction of this impressive fuel-efficiency and cleaner-air technology.”

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NOTES TO EDITORS:

Ricardo plc is a global, world-class, multi-industry consultancy for engineering, technology, project innovation and strategy. Our people are committed to providing outstanding value through quality engineering solutions focused on high efficiency, low emission, class-leading product innovation and robust strategic implementation. With a century of delivering excellence and value through technology, our client list includes the world's major transportation original equipment manufacturers, supply chain organizations, energy companies, financial institutions and governments. Guided by our corporate values of respect, integrity, creativity & innovation and passion, we enable our customers to achieve sustainable growth and commercial success. Ricardo is listed in the FTSE4Good Index, which identifies global companies that demonstrate strong environmental, social and governance (ESG) practices. For more information, visit www.ricardo.com.

SuperTurbo Technologies Inc. specializes in the design, development and commercialization of SuperTurbos™ for commercial vehicles for on highway and construction markets. Founded in 2009, the Company is headquartered in Loveland, Colorado and is a leader in the application of advanced driven-turbo technology. The SuperTurbo™ allows engine OEMs to control the boost and air flow to the engine enabling optimization of both performance and emissions at all operating points. Other benefits include transient cycle efficiency, Cold Start/Low NOx, engine down-sizing, down-speeding and improved engine braking. For more information, visit: <https://www.superturbo.net/>.

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