

July 1, 2025

Company Name: NHK Spring Co., Ltd.
Securities Code: 5991 (TSE Prime Market)

NHK Spring Begins Delivery of Ultra-High-Speed Motors for Super Sports Cars Adopted in IHI's Electrically Assisted Turbocharger (IHI Is the First Domestic Manufacturer to Commercialize an Electric Turbocharger)

NHK Spring Co., Ltd. (Head office: Yokohama, Japan; President: Kazuhisa Uemura) has received an order for its new ultra-high-speed motor from IHI Corporation (Head office: Koto-ku, Tokyo, Japan; President: Hiroshi Ide) and has commenced the delivery thereof. This motor is a core component of the electrically assisted turbocharger that IHI was the first to commercialize in Japan, and it is installed in super sports cars.

Despite its compact size compared to general drive motors for vehicles, this ultra-high-speed motor achieves a maximum rotational speed several times higher than such motors. To realize this product, it was essential to not only have a high speed but also to be efficient in terms of space and to have a heat-dissipating structure capable of handling sudden high electrical currents. NHK Spring proposed an optimal design to meet these requirements and established a manufacturing process, leading to the successful order.

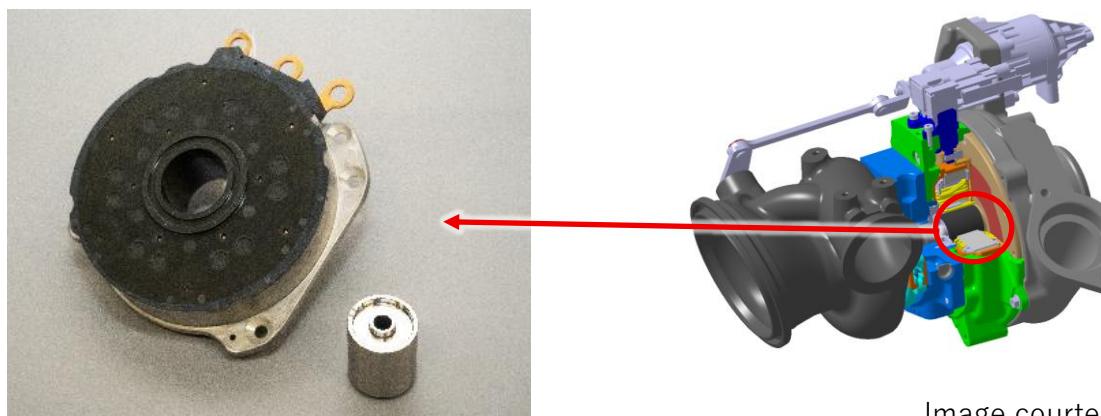


Image courtesy of IHI

Ultra-High-Speed Motor (Rotor, Stator) and Electrically Assisted Turbocharger

<About the Ultra-High-Speed Motor>

This motor, small enough to fit in both hands, is positioned in the narrow space between the turbine and compressor within the electrically assisted turbocharger.*1 It rotates at high speed the moment the driver presses the accelerator, instantly increasing boost pressure and contributing to powerful acceleration without turbo lag. It not only drives the motor but also regenerates energy.

<Future Electrification Strategy>

Placing motor cores and metal substrates at the core of our electrification strategy, we aim to further enhance our product and technological offerings in the field of electric vehicles and their components, thereby contributing to the broader advancement of an electrified society.

*1 What Is an Electrically Assisted Turbocharger?

A turbocharger is a component that improves engine power and environmental performance by using the engine's exhaust energy to rotate a turbine to achieve a boost. An electrically assisted turbocharger uses a high-speed electric motor to compensate for turbo lag, which is the time it takes for the boost to begin after the turbine starts rotating due to the exhaust flow. This allows for a quicker response to the throttle compared to conventional turbochargers. It can also generate electricity using excess exhaust energy.

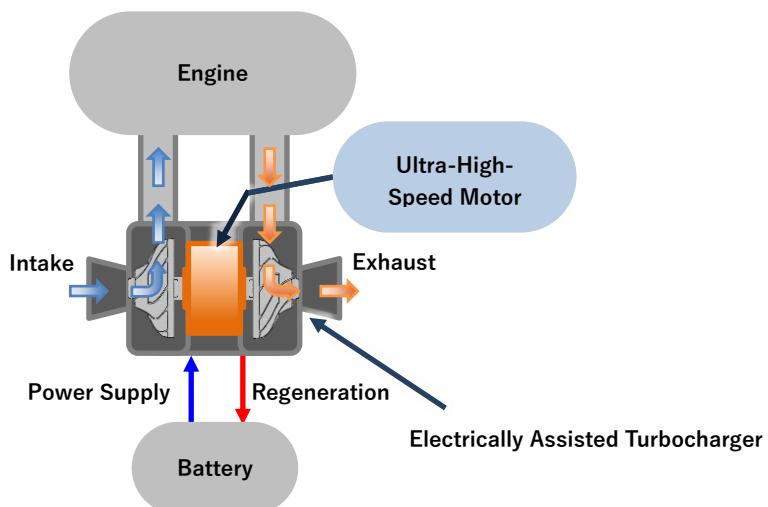


Diagram: Electrically Assisted Turbocharger and Ultra-High-Speed Motor

【Contact for inquiries regarding this announcement】

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