

August 29, 2022

Nidec Tosok Develops a New Next-generation Electric Oil Pump for Automobiles

Nidec Tosok Corporation (the “Company” or “we”) has announced today that it has developed a second-generation electric oil pump (“EOP”) as explained below.



Nidec Tosok’s new EOP

In addition to sending oil to cool drive motors, EOPs are used increasingly frequently to supply lubricant oil to CVT, A/T, and other transmission components when the car’s engine is stopped. This is due to the rise in the use of no-idling gasoline and other vehicles. Nidec Tosok’s EOPs are commercially available, being installed in E-Axle, the traction motor system that the Nidec Group sells.

This compact, second-generation EOP that Nidec Tosok has newly developed is 50% less in volume and weight than its predecessor, i.e., the first-generation EOPs that are already installed in the Nidec Group’s E-Axle units, becoming a lightest-in-class product in the world. In addition, with its operations guaranteed in a temperature range of -40°C to 105°C, the EOP can be used anywhere it is used.

The prices of automotive EOPs, especially those made in China, are dropping. Nidec Tosok, utilizing the knowhow from the production of the first generation of the pumps, which the Company started mass-producing ahead of its competitors, successfully debuted an EOP that is far cost-competitive than those of others, and is receiving inquiries from China, Europe, and the US. Though scheduled for mass-production in China in April 2023, this EOP is planned to be sold in China, Europe, the US, Japan, and the other parts of the global market as well.

Nidec Tosok remains committed to utilizing its technologies to develop light, thin, short, and small products that are highly efficient and controllable, to provide, at an overwhelming speed, innovative solutions that contribute to the evolution of automobiles.

Main specifications of Nidec Tosok's second-generation EOPs

Main specifications		
Discharge	Pressure x flow rate	0.2MPa x 15L/min.
Environment of usage	Performance-guaranteed temperature	-40°C to 105°C
	Performance-guaranteed temperature oil	-40°C to 130°C *-40°C sensorless drive
Electricity	Performance-guaranteed voltage range	9 to 16V
	Drive current	15A or less
Communication	Method to communicate with an upper-level controller	PWM/LIN/CAN Available for multi-communication
Pump	Pump type & discharge rate	Trochoidal type 3.68 cc/rev
Motor	Motor type & size	Brushless DC motor Φ57 x L16.5mm
Mass		Approx. 700g

For inquiries on the above product, please contact Nidec Tosok Corporation's Sales Division at +81-46-252-3131. Thank you.