

SKF cooperates with Volvo to evaluate industrialization of flywheel systems

SKF's main drivers for developing innovative solutions for the automotive industry are to reduce fuel consumption and CO₂ emissions. The flywheel kinetic energy recovery system (KERS) has high potential to help in this area. Fuel savings can be attained as high as 20%, which in turn enables significant CO₂ reductions. SKF delivers critical components to flywheel systems today and is now entering a project with Volvo Car Corporation and Volvo Group aimed at taking flywheels to mass production.

The project has received a grant of 6.57 million Swedish kronor from the Swedish Energy Agency to develop flywheel technology for kinetic energy recovery for the next generation of Volvo cars. This autumn, Volvo Car Corporation will be among the world's first car makers to test the potential of this flywheel technology in passenger vehicles.

SKF will apply its engineering knowledge to translate the specifications of the system, originally designed with Formula One racing in mind, into an industrialized cost-effective design suitable for mass production.

"We constantly drive our business for innovation in sustainable solutions and to cooperate with our customers is an important part in this development work. As we already supply critical components in KERS today, we have acquired a deep knowledge in this area. We are very happy to be working with Volvo in this project, as it has a significant impact on reducing CO₂," says Edward Holweg, Director, Product & Systems Development, SKF Automotive Division.

KERS, based on a mechanical flywheel, have the potential to be more cost-effective than electric hybrid systems at similar power ratings.

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The KERS, to be implemented in a Volvo car, utilizes a 20 cm diameter carbon fibre flywheel, spinning in a vacuum to reduce friction at speeds of up to 60,000 rpm. The system requirements of low friction, very high speed and reliable operation for the lifetime of the vehicle push bearing, lubrication and sealing technology to its limits.

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SKF is a leading global supplier of bearings, seals, mechatronics, lubrication systems, and services which include technical support, maintenance and reliability services, engineering consulting and training. SKF is represented in more than 130 countries and has 15,000 distributor locations worldwide. Annual sales in 2010 were SEK 61,029 million and the number of employees was 44,742. www.skf.com

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