Contact: Sadayoshi Yokoyama,
Goro Kanemasu
Corporate Communications
DENSO Corporation
Phone : +81-566-25-5594
sadayoshi_yokoyama@denso.co.jp
goro_kanemasu@denso.co.jp

Auto Expo 2012

Development of Next-generation Diesel Technology

- Improving environmental performance by achieving the world's highest pressure and high-precision injection control -

A diesel engine has the principal characteristics of better fuel efficiency, higher output, and 20% lower CO2 emissions than gasoline engines. In India, where diesel-powered vehicles account for about 30 percent, DENSO regards fuel-saving technology for diesel engines as a key technology for vehicles' environmental performance.

Fuel injectors

DENSO was the first company in the world to start commercial production of common rail systems, an epoch-making fuel injection system for diesel engines, in 1995. In a diesel engine, the higher fuel injection pressure of common rail systems allows for a finer fuel atomization spray, which helps reduce the particulate matter (PM) in emissions. Also, precisely controlled, multiple injections during a combustion cycle help reduce harmful emissions, such as nitrogen oxide (NOx).

In 2002, DENSO created a system which can deliver five multiple high-precision injections in one combustion cycle at injection pressures of up to 1,800 bar, which was the world's highest level at that time. Then, in 2008, DENSO launched a 2,000 bar system with nine multiple injections. This system is now being manufactured in Japan, Hungary, Thailand, and China.

Common rail system for India

DENSO is now developing applications considering the required vehicle size, use, and fuel situation in India. The development work is currently being done in Japan, but in the near future, the India Technical Center, which will start operations in 2012, will join development to provide systems that precisely reflect the needs of the Indian market.

- more -

Next-generation technology development

To meet the increasingly stringent and worldwide emissions regulations, DENSO is developing a new, more simplified system where a built-in sensor in each injector measures the injection pressure in real time so as to control the amount and timing of injection for each injector. Moreover, in order to enhance the atomization during fuel injection, DENSO is working to increase the maximum injection pressure from 2,000 bar up to 3,000 bar.

As an advanced supplier of diesel engine management systems ranging from fuel injection to after-treatment, DENSO continues to help create clean diesel vehicles which provide superior environmental performance.

# # #