



MEDIA RELEASE

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***MAZDA DEVELOPS HIGHLY EFFICIENT "SKYACTIV-G
1.3" DIRECT-INJECTION GASOLINE ENGINE***

- Mazda's innovative combustion technology significantly improves fuel economy -

Mazda Motor Corporation has announced that the "**SKYACTIV-G 1.3**" direct-injection 1.3-litre gasoline engine will be the first of its next-generation SKYACTIV technology platform to be introduced to the market.

Mazda will unveil the engine at the Automotive Engineering Exposition that will be held from May 18 through 20, 2011, at the Pacifico Yokohama convention center near Tokyo, Japan.

The breakthrough SKYACTIV-G 1.3 achieves a record high compression ratio (for a regular gasoline mass production automobile engine) of 14.0:1 and exhibits high efficiency, especially under high load at low rpm. In order to avoid knocking — an unavoidable issue with conventional high-compression engines — the SKYACTIV-G 1.3 features a number of new technologies, such as piston cavities that are specially designed to support ideal combustion, and multi-hole injectors that enable precise fuel injection control.

Mazda plans to introduce the SKYACTIV-G 1.3 to the Japanese market in the facelifted Mazda Demio (known overseas as the Mazda2) during the first half of 2011. It will be the first ever 1.3-liter direct-injection gasoline engine to be equipped in a compact car manufactured in Japan. Combined with Mazda's unique idling stop system, i-stop, and a continuously variable transmission (CVT), SKYACTIV-G 1.3 will achieve fuel economy of 30km/L under Japan's 10-15 mode test cycle.

Mazda has applied for over 130 patents in relation to the engine (as of the end of February, 2011).

"While developed primarily for the Japanese market, this announcement is significant in heralding the beginning of the SKYACTIV deployment," adds Andrew Clearwater, Managing Director of Mazda New Zealand. "Since first communicating our goals under the Sustainable Zoom-Zoom vision, the response to the SKYACTIV framework as an enabler has been incredible and we are looking forward to sharing this technology with our customers as it is progressively rolled-out", continues Clearwater.

SKYACTIV TECHNOLOGY is the umbrella term for Mazda's range of next-generation technologies — including gasoline and diesel engines, transmissions, and a new body and chassis — that significantly improve vehicle driving dynamics as well as environmental and safety performance. The SKYACTIV-G 1.3 that is equipped in the facelifted Mazda Demio adopts all of Mazda's SKYACTIV engine technologies except for the exhaust manifold. It also features other new components that are exclusive to the Demio, such as a cooled EGR* system.

Under its Sustainable Zoom-Zoom vision, Mazda aims to deliver outstanding driving pleasure as well as environmental and safety performance, and is committed to increasing its global fleet fuel economy by 30 percent by 2015, compared with the 2008 level.

* EGR: Exhaust Gas Recirculation

Main features of the SKYACTIV-G 1.3 engine

- Highly efficient automobile gasoline engine and the world's first to achieve a compression ratio of 14.0:1
- Multi-hole injectors enable precise fuel injection control for ideal combustion
- Mazda's first dual sequential valve timing system (dual S-VT with electronically-operated intake) in combination with the high compression ratio achieves an unconventional Miller cycle (extremely delayed closure of intake valves) that improves efficiency
- Compact combustion chambers have a longer stroke for better efficiency
- Piston cavities are specially designed to support ideal combustion
- 30 percent less mechanical friction, due to a narrower crankshaft, new roller followers and low-tension piston rings that also reduce oil consumption
- Various countermeasures to prevent knocking, including a cooled EGR system
- An updated version of Mazda's innovative idling stop system, i-stop, improves fuel economy by eight percent. It operates with a higher frequency, requires less fuel to restart, and achieves a smoother restart
- A lightweight and highly rigid aluminum alloy engine block

Major specifications of the SKYACTIV-G 1.3

Inline four-cylinder 1.3-liter direct-injection engine (with i-stop)	
Engine displacement:	1.298L
Bore and stroke:	71.0mm x 82.0mm
Compression ratio:	14.0:1
Maximum output (net):	62kW@5,400rpm (84ps@5,400rpm)
Maximum torque (net):	112Nm@4,000rpm

For more information please contact:

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