

NEW MAZDA SKY CONCEPT POWERTRAINS TO DELIVER DRIVING PLEASURE AND ENVIRONMENTAL PERFORMANCE FOR ALL

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[\[1\]](#)

[Mazda SKY G 03](#)

[Low Resolution\(32 kb\) \[2\]](#)

[High Resolution \(337 kb\) \[3\]](#)

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SKY-G and SKY-D engines significantly improve fuel economy and dynamic performance

Mazda is synonymous with powertrain innovation. And now, the company that has engineered the world's only mass produced [rotary engine](#) [4] is at it once again. The Mazda SKY Concept is a development strategy behind a series of next-generation powertrains with global roll-out starting in 2011. The word "sky" reflects Mazda's desire to deliver driving pleasure while helping to ensure blue skies and [clean air](#) [5] for future generations. To achieve this, Mazda engineers have adopted a "sky's the limit" approach, and are embracing unconventional thinking in their pursuit of ultimate powertrain efficiency.

"Improving fuel efficiency and reducing CO2 emissions is not just a goal at Mazda, it's part of our business plan; we will make vehicles that are safer for our environment," said Jim O'Sullivan, president and CEO, Mazda North American Operations. "We will increase our fuel economy globally by 30 percent by 2015 and offer affordable eco-friendly vehicles to all Mazda customers, not to just a limited segment of the market. The SKY Concept powertrains will play a big part in making this happen."

The all-new next-generation SKY Concept powertrains are the product of Mazda's ongoing Sustainable Zoom-Zoom strategy. These technologies are about a year away from launch, and are being developed using unique innovative Mazda engineering spirit. The SKY-G (gasoline-based) and SKY-D (diesel-based) concept engines will deliver the sporty driving experience that Mazda is known for, coupled to superior eco-friendliness. Fuel economy will improve 15 percent on the SKY-G and 20 percent on the SKY-D, with a simultaneous increase in torque.

Another key element of the SKY Concept is the all new SKY-Drive automatic transmission. SKY-Drive is a

unique six-speed automatic transmission that offers driving feel comparable to a dual clutch transmission, while also improving fuel economy by five percent compared to Mazda's current [automatic six-speed transmission](#) [6].

These new eco-friendly products - combined with weight reductions of 100 kg (220 lbs.) on next-generation vehicles, improved aerodynamic design to reduce drag, and the introduction of electric devices like the fuel-saving stop/start system called i-stop (currently available in Japan and Europe) - will help Mazda meet its stated goal of improving the average fuel economy of its global line-up by 30 percent, with a drop in CO2 emissions of 23 percent (compared to 2008) by the year 2015. And because the combination of these developments improves the basic performance of all products in the Mazda line-up, it will make eco-friendliness available to all Mazda customers, not just a select few who buy a niche product.

Celebrating its 40th Anniversary in the United States in 2010, Mazda North American Operations is headquartered in Irvine, Calif. and oversees the sales, marketing, parts and customer service support of Mazda vehicles in the United States, Canada and Mexico through nearly 900 dealers. Operations in Canada are managed by Mazda Canada, Inc., located in Ontario; and in Mexico by Mazda Motor de Mexico in Mexico City.

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Mazda SKY-G (Gasoline) Engine* - The Next-Generation Direct-Injection Engine

- Fun-to-drive
- 15 percent improvement in fuel economy (the 2.0-liter gasoline will be as efficient as today's 2.2-liter diesel)
- 15 percent more torque than current gasoline engines
- Efficiency improvements come from a higher expansion ratio, optimized combustion, intake volume control and lower friction
- Single-nanotechnology catalyst reduces use of precious metals by over 70 percent
- Global roll-out starting in 2011

Mazda SKY-D (Diesel) Engine* - The Next-Generation Clean Diesel Engine

- 20 percent improvement in fuel economy (compared to today's 2.2-liter diesel)
- Boost in both low- and high-end torque compared to current diesel engines
- Efficiency improvements from innovative combustion and low mechanical resistance
- Highly efficient active ceramic diesel particulate filter (DPF) removes the need for after-treatment urea systems
- Global roll-out starting in 2012

Mazda SKY-Drive* - The Next-Generation Six-Speed Automatic Transmission

- Extended lock-up range
- Quicker, lighter, more fun to drive
- Both sporty and smooth. Feels as direct and even faster than a dual clutch transmission
- Five percent improvement in fuel economy
- Matched to SKY-G and SKY-D
- Global roll-out starting in 2011

*These are concept names given to engines and transmission scheduled for introduction from 2011 onward, and not the names of actual products.

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[3] http://www.mazdausamedia.com/files/images/Mazda SKY G_03.jpg

[4]

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[6]

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