



ZOOM-ZOOM

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## Mazda Announces G-Vectoring Control Plus to Improve Vehicle Handling

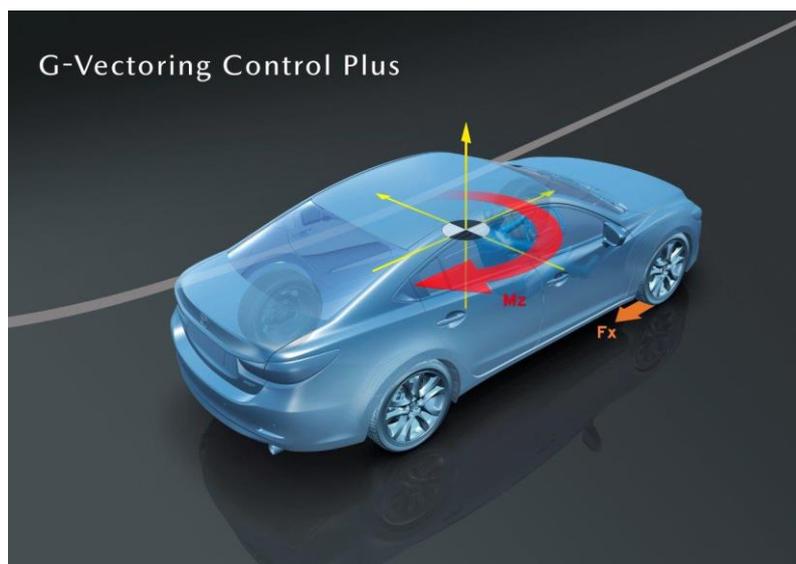
*Available first in the updated Mazda CX-5, for which pre-orders start today*

**HIROSHIMA, Japan**—Mazda Motor Corporation has developed G-Vectoring Control Plus, the second new-generation vehicle dynamics control technology in the SKYACTIV-Vehicle Dynamics series.<sup>1</sup> GVC Plus will be rolled out to all Mazda models, with the updated Mazda CX-5 – pre-orders for which start today at Mazda dealers throughout Japan – the first to get the new technology.

The original G-Vectoring Control, the first technology in the SKYACTIV-Vehicle Dynamics series, was the world's first control system to vary engine torque in response to steering inputs in order to provide integrated control of lateral and longitudinal acceleration forces and optimize the vertical load on each wheel for smooth and efficient vehicle motion.<sup>2</sup>

GVC Plus uses the brakes to add direct yaw moment control for further enhanced handling stability. As the driver steers out of a corner by returning the steering wheel to the center position, GVC Plus applies a light braking force to the outer wheels, providing a stabilizing moment that helps restore the vehicle to straight line running. The system realizes consistently smooth transitions between yaw, roll and pitch even under high cornering forces, improving the vehicle's ability to accurately track sudden steering inputs and crisply exit corners. In addition to improving handling in emergency collision avoidance maneuvers, GVC Plus offers a reassuring feeling of control when changing lanes on the highway and when driving on snow or other slippery road surfaces.

By applying the human-centered development philosophy to all kinds of common driving situations, Mazda will continue to pursue the kind of driving joy that allows both the driver and his or her passengers to feel at one with the car, relax and enjoy the ride. The company aims to create a special bond with customers by adding exuberance to their lives.



G-Vectoring Control Plus in operation (Mz: stabilizing moment; Fx: braking force)

- 1 A series of new-generation vehicle motion control technologies that provide integrated control of the engine, transmission, chassis and body to enhance the car's *Jinba-ittai* feel – a sense of connectedness between car and driver that distinguishes Mazda vehicles.
- 2 As of June 2016 (production models, based on Mazda's research)

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