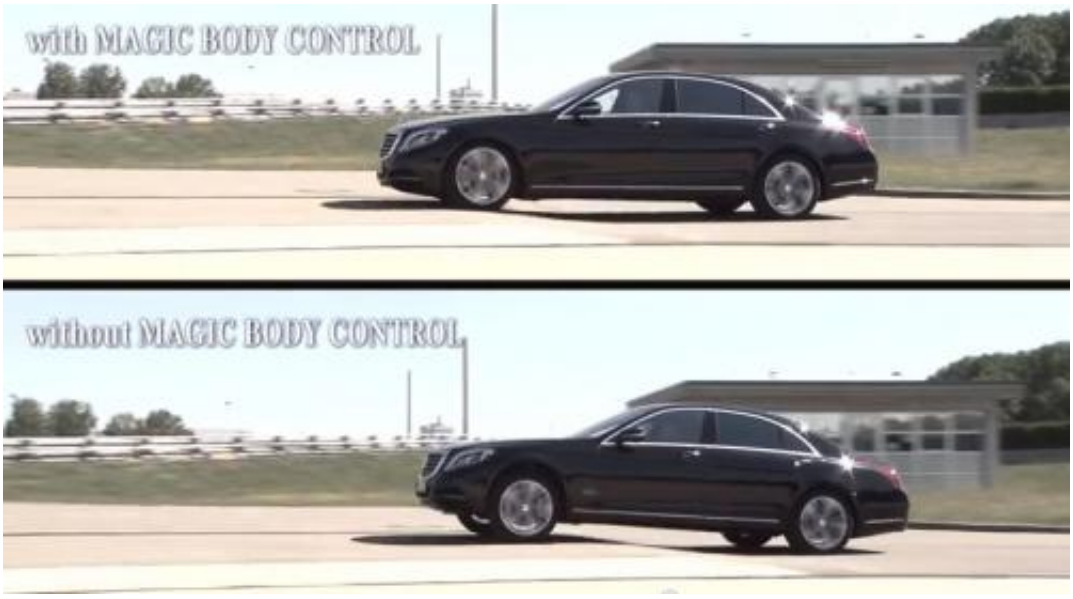
Mercedes-Benz S-Class stability system uses sensors, stereo camera (w/ Video)

September 28 2013, by Nancy Owano



(Phys.org) —This week German automaker Mercedes-Benz put the world on alert to its latest ride control technology in an entertainment-focused ad effort starring chickens, not luxury sedans. The result is that many bloggers are talking a lot about the chickens. The ad promoting the new 2014 S-class cars breaks the auto industry advertising mold, in a move to a viral ad-inducing stare at an animal curiosity. In this instance, the chickens are intended as metaphor for the feature called Magic Ride Control. This involves a stabilized ride that has been compared to a

magic carpet ride. The ad, though, had no signs of royal carriages on wheels racing on empty highways or pulling up to opera houses.

Instead the ad showed elegant white-gloved hands moving live chickens around in disco moves set to a Diana Ross song. Their bodies were made to move about in all directions while their heads (naturally) remained immobile. Reports on the ad this week were sure to detail the reason the chicken's head does not move while the body does, and that is due to the vestibulo-ocular reflex, allowing chickens to keep their skulls stationary, a novel curiosity to the human observer, even as their bodies are lifted and moved around.

The chicken viewing experience is supposed to be a metaphor for the wonders of a technology achievement in a suspension system that promises the driver will experience stability at all times. The wheels take the bumps and contours of the road while the driver and the chassis stay stable.

According to the company, Magic Body Control combines the advantages of the active suspension system Active Body Control (ABC) with the Road Surface Scan function– a stereo camera that scans the road ahead and registers the road surface and its condition.

The system works through sensors, magnetic dampers, and the pair of cameras, located at the top of the windshield, which go to work to scan the road for any imperfections. They locate lumps and bumps and send that data to the suspension system to make sure that people have the best possible ride.

Suspension undergoes adjustments hundreds of times per second to soak up the bumps and potholes. According to reports, the cameras can scan a road's surface 49 feet ahead in real time while moving along, to assess surface conditions.

"The unique aspect of our suspension system is that we now use stereo cameras to scan the road surface in real time, up to fifteen meters ahead of the vehicle," according to the Mercedes spokesman in another promotional video that does not feature any animals. "The function is known as the road surface scan," he said. "The stereo cameras measure the height of obstacles with a precision of three millimeters or better and at speeds of up to a hundred kilometers per hour."

He said the whole idea behind Magic Body Control is to allow drivers to experience "as little of the road surface as they want. This means you glide over the road surface as if you were on a magic carpet. "

Citation: Mercedes-Benz S-Class stability system uses sensors, stereo camera (w/ Video) (2013, September 28) retrieved 16 August 2024 from https://phys.org/news/2013-09-mercedes-benz-s-class-stability-sensors-stereo.html