

Bosch Reaches a Milestone in Fuel-Saving Technology

Bosch has produced its five millionth start/stop starter in Hildesheim since production began in 2007.

The reason for this huge success is simple. "Start/stop is a cost-effective way to reduce fuel consumption considerably," says Dr. Ulrich Kirschner, president of the Bosch Starter Motors and Generators division. "We are expecting every second new car in Europe to be fitted with a start/stop system by 2013," Kirschner says. Currently, this is true of one new car in three. Almost all European automakers are now integrating Bosch start/stop technology – into compact cars, premium sedans, and even powerful sports cars.

In the New European Driving Cycle (NEDC), start/stop systems reduce fuel consumption, and thus CO₂ emissions, by up to 5 percent. In heavy urban traffic, especially during peak hours, the potential saving is even greater. And yet start-stop does not reduce comfort in any way, thanks to the wide array of sensor information evaluated by the system. For instance, a battery sensor determines the battery's state of charge. Only if a quick restart is guaranteed will the engine be stopped. Another example is the vehicle's interior temperature. If it is still very cold or too hot, the engine will continue to run so that the occupants' desired temperature is reached quickly. Finally, there is a DC/DC converter for stabilizing the voltage of the electrical system during starts to ensure that the radio, navigation system, or hands-free telephone operate without interruption.

In order to further reduce consumption, and thus CO₂ emissions, Bosch engineers will in future gradually extend engine shutdown-times. This will apply initially to the time when the vehicle is rolling to a halt, and later even to periods when the driver is merely no longer accelerating. "Depending on the type of route, the enhanced start-stop systems can save an additional 10 percent of fuel," Kirschner says.