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Mazda’s Skyactiv-X engine commended

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* Mazda’s Skyactiv-X engine commended in the 2019 What Car? Technology Award category.
* The world’s first commercially available petrol engine with Spark Controlled Compression Ignition.
* Customers benefit via a significant increase in torque, better fuel economy and reduction in CO2.

With a history of powertrain innovation, Mazda has always been a brand willing to challenge convention in the world of engine development. And now with the soon to be launched Skyactiv-X engine recognised in the Technology category at the 2019 What Car? Awards, their latest ground-breaking engine has caught the eye of What Car’s judges.

Set to make its debut in the all-new Mazda3 later this year, Skyactiv-X will become the first production petrol compression ignition engine in the world when it goes on sale. Mazda’s Skyactiv-X engine offers segment redefining performance and efficiency, delivering strong acceleration and torque characteristics to the driver at the same time as low emissions and improved economy.

Mazda already uses high compression ratios in its current range of Skyactiv petrol engines to reduce fuel consumption. The new Skyactiv-X engine takes this to the next stage by increasing the compression ratio even further and igniting fuel by compression as is the norm in diesel engines. However, to overcome the issue of there being a very small operating area in which stable and predictable combustion is achievable, Mazda’s own proprietary combustion method – Spark Controlled Compression Ignition (SPCCI) injects a lean air-fuel mixture, compressing it to just below the level required to achieve compression ignition. Then to ignite the mixture at the right time, a small injection of atomised fuel directly around the spark plug builds a richer core, which when fired creates a pressure wave that runs through the combustion chamber, increasing the compression and temperature to the critical point where the main body of fuel combusts.

By controlling the compression ignition with a spark plug, the issues of knocking and unstable combustion can be avoided, achieving a seamless transition between compression ignition and spark ignition. This means the engine can run more than 80 per cent of time in a very efficient mode. Fuel economy can be improved by up to 30 per cent and CO2 emissions reduced by a corresponding amount thanks to the super lean burn combustion.

Skyactiv-X equals Mazda’s latest Skyactiv-D diesel engine for fuel efficiency. Commenting on this new engine, What Car Editor, Steve Huntingford said: “for many people, a petrol engine that has the potential to deliver the fuel economy of a diesel is the motoring holy grail, and that’s why the judges found Mazda’s Skyactiv-X compression ignition technology so impressive. Electric vehicles might be the end game, but with 85 per cent of cars expected to still use combustion engines of some form until 2030, compression ignition could be vital in lowering emissions and fuel consumption.”

Making its debut in the all-new Mazda3 later this year, Skyactiv-X will offer new levels of torque and performance for a normally aspirated petrol Mazda engine, while at the same time challenge the commonly held belief that petrol engines can’t match the economy of diesels in a wide range of driving scenarios.

Further media information on Skyactiv-X can be found here: <https://www.insidemazda.co.uk/2017/11/07/an-in-depth-look-at-mazdas-skyactiv-x-technology/>

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Further press information is available at [www.mazda-press.co.uk](http://www.mazda-press.co.uk)

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*For further information please contact one of the following:*

Graeme Fudge, PR Director | T: 01322 622 691 | E-mail: [gfudge@mazdaeur.com](mailto:gfudge@mazdaeur.com)

Owen Mildenhall, PR Manager | T: 01322 622 713 | Email: [omildenhall@mazdaeur.com](mailto:omildenhall@mazdaeur.com)

Lois Cavanagh, Press Officer | T: 01322 622 650 | Email: [lcavanagh@mazdaeur.com](mailto:lcavanagh@mazdaeur.com)

Martine Varrall, Press Officer | T: 01322 622 776 | Email: [mvarrall@mazdaeur.com](mailto:mvarrall@mazdaeur.com)

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