



Ford is on a Mission to Make Cars Quieter with a New ‘Whisper Strategy’

Where once drivers had to shout to make themselves heard above certain speeds, modern day cars are comparative oases of calm where conversations and music are clearly audible, even at low volumes.

Ford’s “Whisper Strategy” delivers lots of small noise improvements around the vehicle that add up to a big difference, helping make journeys more comfortable and less tiring for drivers and passengers.

Whisper strategy

For the new Kuga SUV, Ford examined noise-generating elements from the suspension to the door seals to help find ways to optimise interior refinement.

Adding perforations to Kuga Vignale leather seat bolsters reduced the total area of flat surfaces inside the cabin, helping absorb rather than reflect noise.

Aerodynamically-tuned sound shields are added underneath the body of the vehicle that help limit road and wind noise entering from outside.

Ford engineers spent two years testing more than 70 different tyres over surfaces from smooth Tarmac to rough concrete and cobbles, in wet and dry conditions and at a range of speeds to find the exact specification that kept road noise to a minimum while still delivering high levels of comfort and grip.

And channels behind the exterior panels that allow hidden wiring and components to pass from one area to another are smaller and narrower to limit airflow inside the body.

“Our ‘whisper strategy’ is designed to make journeys as quiet as they can possibly be – from absorbing sound through perforated seats to testing that involves listening carefully to the different sound patterns created by dozens of different tyres.”

Glen Goold, Ford Kuga chief programme engineer

Electric refinement

The ability to drive without a petrol or diesel engine enables quieter journeys. The Kuga Plug-In Hybrid combines a petrol engine, electric motor and generator, and 14.4 kWh lithium-ion battery for zero-emission pure-electric driving capability.

Using the EV Now selectable drive mode switches off the petrol engine and powers the vehicle using battery and electric motor alone, achieving interior road noise levels of just 52 dB(A) in controlled tests – equivalent to gentle rainfall.

The Kuga Plug-In Hybrid Vignale also features Active Noise Cancellation technology. The system works just like popular noise-cancelling headphones – detecting unwanted low-frequency cabin

sounds through strategically-placed microphones and counteracting them with an opposing soundwave from the B&O Sound System.

A generational divide

A test* carried out by Ford showed that occupants in the new Ford Kuga Plug-In Hybrid experience interior noise levels that are just one quarter of those experienced by their grandparents in a 1966 Ford Anglia.

Most people perceive one sound to be twice as loud as another one when approximately 10 decibels higher.

Peak internal noise at approximately 50 km/h (30 mph) measured in 3rd gear (for manual models):

Vehicle	Max decibels dB(A)
1966 Ford Anglia	89 (89.4)
1970 Ford Cortina	81 (80.9)
1977 Ford Granada	83 (82.5)
1982 Ford Cortina	79 (78.5)
2000 Ford Mondeo	77 (77.3)
2020 Ford Kuga Plug-In Hybrid	69 (69.3)

“We had a clear vision for the Kuga from the very beginning – an approachable and sleek exterior design and an interior that provides a sanctuary space. The result is an SUV that connects with your life in a positive way.”

Amko Leenarts, director, Design,
Ford of Europe

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*Ford conducted an unofficial test to compare the maximum noise levels experienced in differing generations of vehicles from inside the cabin. The results may not reflect those of official tests in controlled environments or laboratory conditions using calibrated machinery.

Kuga Plug-In Hybrid delivers from 1.2 l/100 km fuel efficiency and CO₂ emissions from 26 g/km NEDC (from 1.4 l/100 km and 32 g/km WLTP) with pure-electric driving range of 72 km NEDC (56 km WLTP).

The declared fuel/energy consumptions, CO₂-emissions and electric range are determined according to the technical requirements and specifications of the European Regulations (EC) 715/2007 and (EU) 2017/1151 as last amended. Light Duty Vehicle type-approved using the World Harmonised Light Vehicle Test Procedure (WLTP) will have fuel/energy consumption and CO₂-emission information for New European Drive Cycle (NEDC) and WLTP. WLTP will fully replace the NEDC latest by the end of the year 2020. The applied standard test procedures enable comparison between different vehicle types and different manufacturers. During NEDC phase-out, WLTP fuel consumption and CO₂ emissions are being correlated back to NEDC. There will be some variance to the previous fuel economy and emissions as some elements of the tests have altered, so the same car might have different fuel consumption and CO₂ emissions.

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Ford in Belgium & Luxemburg

Ford Belgium distributes Ford vehicles and Ford original parts in Belgium & Luxemburg, since 1922. Ford Lommel Proving Ground is the lead test facility for validation of all Ford models in Europe, with approximately 390 employees.

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