

WORLDWIDE HARMONISED LIGHT VEHICLES TEST PROCEDURE (WLTP)

Global test practice revision for emissions, consumptions and toxic waste.



Worldwide Harmonised Light Vehicles Test Procedure (WLTP)

has been created to define a brand new global harmonised standard for determining levels of pollutants, emissions, fuel consumption and electrical range, in light-duty vehicles.

The new WLTP test conditions are based on an approximation of real-world driving conditions, offering clearer and more realistic values. The WLTP enforces much stricter and redefined test conditions and introduces higher speed testing together with a substantially longer test duration (now 30 minutes instead of 20).

In order to obtain more accurate CO₂ emissions, the new test procedure includes both standard equipment and all optional equipment on the vehicle. This produces fuel consumption and CO₂ emission values according to aerodynamics, weight and rolling resistance.

This means that in the case of a specific vehicle configuration, an individual specific value will be indicated rather than a more generic one, as was the case previously.

From September 2018 all manufacturers will be obliged to test in accordance with WLTP for vehicles sold in the EU as well as in Switzerland, Turkey, Norway, Liechtenstein, Israel and Ireland.

Modifications of standardised testing procedures



Emission testing to consider modifications of individual vehicles

Increased cycle distance

Testing at higher speeds

High-powered and realistic driving behaviour

Increased cycle time

When will the WLTP changes take place?

The transition to WLTP will happen in a number of phases:

- WLTP will be applied to all new cars from September 2017 - i.e. vehicle models that are introduced on the market for the first time.
- From 1st September 2018 all cars on sale will be tested to WLTP.
- From 2020 vehicle taxation and CO₂ related policy switches to WLTP CO₂ emission figures.

Why are the new engines tested under WLTP displaying higher CO₂ figures?

Transitional period:

Cars tested under WLTP will also have NEDC equivalent CO₂ and fuel consumption values until 2020. Manufacturers will use the NEDC equivalent CO₂ figure to report against European CO₂ emission targets (which were set against NEDC) for new cars until the complete switch to WLTP.

Correlation methodology:

Outgoing PureTech, THP and BlueHDi engines were tested solely against the "old" industry standard NEDC (New European Driving Cycle).

The new engines have been tested under the WLTP procedure, and therefore are subject to a correlation methodology to convert the WLTP values to NEDC values.

This 'methodology' involves converting the WLTP figures to NEDC. Calculations for this process are carried out using a "correlation tool" and can result in higher NEDC 'correlated' values as a result of the conversion of the more accurate WLTP values.

Will WLTP end the discrepancy between the laboratory and on-road performance of cars?

Due to the fact that driving behaviour, traffic and weather conditions differ so greatly from country to country, there will still be a difference between emissions measured in lab conditions and in the real world. However, as no single real-world emission value exists, only values obtained by standardised laboratory tests allow us to directly compare the emissions and fuel consumption of different car models from different car manufacturers.

WLTP will introduce more realistic testing conditions.

These include:

- More realistic driving behaviour
- A greater range of driving situations (urban, suburban, motorway, main road)
- Longer test distances
- More realistic ambient temperatures, closer to the European average
- Higher average and maximum speeds
- Higher average and maximum drive power
- More dynamic and representative accelerations and decelerations
- Shorter stops
- CO₂ values and fuel consumption specific to each individual vehicle built
- Stricter car set-up and measurement conditions

Because of all these improvements, WLTP will provide a much more accurate basis for calculating a car's fuel consumption and emissions. This will ensure that lab measurements better reflect the on-road performance of every car.