Frequently Asked Questions:

Implementing the new CO_2 emissions and fuel consumption test for cars and vans - the WLTP and the correlation procedure

1. The testing of fuel consumption and CO_2 emissions of cars and vans is changing – why?

Fuel consumption and CO_2 emissions of cars and vans have been tested in the laboratory using a test procedure that was developed in the 1970'ies – the New European Test Cycle (NEDC). This test procedure is outdated and no longer adequately reflects the driving conditions and technologies found in vehicles of today. This has led to an increasing discrepancy between the fuel consumption values determined in the laboratory and those experienced by drivers on the road.

In order to address this, a new test procedure the Worldwide Harmonised Light Vehicle Test Procedure (WLTP) has been developed within the United Nations Economic Commission for Europe (UNECE) with strong support from the European Commission. The WLTP will provide more stringent and realistic test conditions, thus ensuring that fuel consumption values will better reflect what drivers experience in the real world.

2. When is the WLTP being implemented?

The WLTP Regulation was adopted by the Commission on 1 June 2017. It will become mandatory in three steps:

- New types of cars and lighter vans (N1 class I) from 1 September 2017
- All new cars and lighter vans from 1 September 2018
- New types of heavier vans (N1 class II and III) from 1 September 2018
- All heavier vans (N1 class II and III) from 1 September 2019

This means that by 1 September 2019 vehicle manufacturers will have to ensure that all light duty vehicles that are placed on the market have been tested under the new test procedure.

WLTP Regulation:

http://eur-lex.europa.eu/legal-content/EN/TXT/?qid=1503903223214&uri=CELEX:32017R1151

3. Why is fuel consumption and CO_2 emissions tested in a laboratory and not by way of real on-the-road tests?

The WLTP – just as the NEDC – is a procedure for testing CO_2 emissions and fuel consumption in laboratory conditions.

A vehicle's fuel consumption is strongly influenced by a number of external factors such as the driving style of the driver, the outdoor temperature, the level of humidity in the air, the wind conditions, the road surface and gradient to mention a few.

The purpose of the emissions test is to determine values that can be used to define the performance of a vehicle in a generic way as a basis for comparison of different vehicles for the purpose of consumer information as well as for other regulatory purposes, such as the EU CO_2 emission standards and, at national level, for CO_2 taxation. In order for those values to be comparable between different manufacturers, the test results must be verifiable and reproducible. This can only be achieved in laboratory conditions where external factors, such as those mentioned above, can be controlled.

4. What is the change going to mean for consumers?

It is expected that for the majority of vehicles, CO_2 emissions and fuel consumption values will be higher as a result of the WLTP test.

For vehicles that are type approved on the WLTP starting from 1 September 2017, CO_2 and fuel consumption data will be provided both in accordance with the new WLTP test procedure as well as with the old NEDC test procedure. NEDC CO_2 and fuel consumption values will continue to be indicated until 2020 inclusive in the certificate of conformity that a manufacturer issues when a new vehicle is placed on the market.

One of the key objectives of the introduction of WLTP as new official test procedure is to provide consumers with more representative fuel consumption and CO_2 emission values. This is why the Commission encourages Member States to use WLTP values for consumer information as early as possible while minimising the risk of confusion among consumers if confronted with different values based on NEDC or WLTP.

For that purpose the Commission adopted on 31 May 2017 a Recommendation (http://eur-lex.europa.eu/legal-content/EN/TXT/?uri=uriserv:OJ.L_.2017.142.01.0100.01.ENG) according to which Member States are recommended to use only WLTP CO_2 and fuel consumption values for consumer information (e.g. on the labels in showrooms or in promotional material) as of 1 January 2019, when all new cars (except for end-of-series vehicles) will be type-approved under WLTP.

5. Will the WLTP close the discrepancy between laboratory and real-world CO_2 and fuel consumption values?

The CO_2 emissions and fuel consumption values based on WLTP will reduce the discrepancy between laboratory test values and real-world values experienced by consumers on the road, but they will not close the gap completely. A certain gap will remain due to individual differences in driving behaviour, ambient temperatures, road characteristics (see above under question 3). The WLTP values will however be more representative of real-world values, i.e. they should be closer to what drivers experience on the road, and most importantly, they will be comparable for different vehicles and manufacturers.

6. What is the change going to mean for the CO_2 emission standards for cars and vans?

The CO_2 emission fleet targets for cars and vans (cars: 130g CO_2/km in 2015 and 95g CO_2/km in 2021, vans: 175g CO_2/km 2017 and 147g CO_2/km in 2020) have been set based on the emissions measured in accordance with the NEDC. Manufacturers' compliance with those targets will continue to be assessed on the basis of NEDC values until 2020 inclusive.

This means that for vehicles that are now type approved in accordance with the WLTP, the Commission has put in place a procedure to correlate the WLTP CO_2 values into the corresponding NEDC values. A specific simulation tool (the CO2MPAS tool), has been developed by the Commission's Joint Research Centre to provide the correlation results. Once all vehicles are type

approved in accordance with WLTP, i.e. from 2021 onwards, CO_2 targets will be expressed in WLTP values and compliance will be checked using WLTP values only.

It is expected that CO_2 emissions will be higher on the WLTP as compared to those measured on the NEDC. The WLTP CO_2 targets will however be correlated so as to ensure that the stringency of those targets is comparable to the targets expressed in NEDC values.

Correlation Regulations:

Cars:
Correlation procedure: http://eur-lex.europa.eu/legal-content/EN/TXT/?uri=CELEX:32017R1153
Target translation: http://eur-lex.europa.eu/legal-content/EN/TXT/?uri=CELEX:32017R1502

Vans:
Correlation procedure: http://eur-lex.europa.eu/legal-content/EN/TXT/?uri=CELEX:32017R115
Target translation: http://eur-lex.europa.eu/legal-content/EN/TXT/?uri=CELEX:32017R1499

CO2MPAS correlation tool: https://co2mpas.io/

Will CO_2 taxation change as a result of the introduction of the WLTP?

It is for Member States to decide when and how to adjust national car taxation schemes. If taxation schemes are linked to the vehicles' CO_2 emissions and/or national consumer information schemes, it appears preferable that the switch to WLTP based taxation takes place at the same time as the change in consumer information. The Commission recommends that WLTP values should start to be used for consumer purposes from 1 January 2019.

It should be noted that the introduction of WLTP does not necessarily result in higher car taxes, if the adjustment of national car taxation schemes takes account of the expected increase in CO_2 emissions under WLTP.