Questions & Answer

Investigation by the Italian consumer group and BEUC member Altroconsumo into misleading car fuel consumption claims

This is the first time an independent consumer organisation has conducted official fuel consumption tests on the vehicles of car manufacturers. The results further support concerns both in Europe and across the world that car manufacturers are grossly exploiting the loopholes in official testing protocols in order to provide completely unrealistic and misleading fuel consumption claims.

What are the key results and conclusions of the investigation?

- Because of the loop holes in the existing European fuel consumption testing protocol, car manufacturers can easily manipulate the results to provide completely unrealistic fuel consumption claims. Hence, consumers have to pay much more for using their car than what is declared on the fuel consumption labels by the manufacturers.
- Even under the conditions when the loopholes were fully exploited during these independent tests, the fuel consumption and CO_2 emissions values declared by one of the car manufacturers was as much as 50% lower.
- The results demand answers from Volkswagen and Fiat as to how they have achieved such 'impressive' results.
- The results demand the rapid introduction into EU law of a new fuel consumption testing protocol, which is available, and should be operational by 2017.

What did Altroconsumo's investigation explore?

Altroconsumo were concerned that car manufacturers are providing misleading fuel consumption and CO2 emissions claims about their vehicles at the point of sale. Altroconsumo were interested in exploring the use of the official fuel consumption test procedure for new cars in Europe, the New European Driving Cycle (NEDC). They wanted to explore the ways in which car manufacturers might be influencing the test results so as to achieve low fuel consumption and CO2 emission values for their vehicles. In particular they were interested to find out how car manufacturers could exploit the loopholes allowed for under the NEDC.

Altroconsumo were concerned about the NEDC as it was originally developed in the 1970's as a means to test Nitrogen Dioxide emissions in urban area. Although the NEDC has been amended to measure fuel consumption and CO2 emissions, it has not been modified in order to recognise driving behaviour in the modern day and the technological advances made in the automobile sector. There are also several requirements that are unsuitable for the purpose of testing cars in Europe and under the testing procedure there are enormous loopholes that can be exploited by car manufacturers[1]. For instance, car manufacturers can overinflate the tyres to optimise the wheels' rolling resistance;

[1] There are numerous weaknesses with fuel consumption testing. For more information see the resources provided by the International Council for Clean Transportation (ICCT), the Automobile Association (AA), and Transport and Environment (T&E).

using special motor oils; remove all optional extras (e.g. nearside wing mirrors); or put tape over cracks around doors and windows. See the image below for more information.

Which cars were tested?

Two cars were tested:

1) Volkswagen Golf 7 1.6 TDI BM Euro 5b 77 KW 99 CO2
2) Fiat Panda 1.2 51 KW 120 CO2

How were the tests conducted?

Altroconsumo hired a certified car testing laboratory who performed the same tests that car manufacturers are obliged to perform. In order to investigate the effect of the loopholes allowed under the NEDC, Altroconsumo identified a number of different parameters that were tested under different settings. The cars were tested under optimal conditions for both low fuel consumption and high fuel consumption.

What were the results of the investigation?

The declared fuel consumption claims (those published by the car manufacturers) of both vehicles tested are far different to the results achieved during Altroconsumo's tests. Even under test conditions when the fuel consumption[2] of the vehicles was expected to be at its lowest, the differences between the manufacturer's results and Altroconsumo's findings were significantly different:

- The declared fuel consumption and CO_2 emissions of the VW Golf were more than 50% lower than the test results obtained by Altroconsumo.
- The declared fuel consumption and CO_2 emissions of the Fiat Panda were more than 18% lower than the test results obtained by Altroconsumo.

Being that the declared fuel consumption advertised for the VW Golf was 3.8 litres/km and the test results are more than 50% higher, this would equate to approximately an additional 2 litres worth of fuel being used per 100 kilometres. On the basis of a motorist driving 15,000 km per year, those owners of the VW Golf model might have paid up to €509 more per year than what could have been expected from the company's advertisements.

Being that the declared fuel consumption advertised for the Fiat Panda was 5.2 litres/km and the test results are more than 18% higher, this would equate to around 1 additional litre worth of fuel being used per 100 kilometres. On the basis again of a motorist driving 15,000 km per year, those owners of the Fiat Panda model might have paid up to €247 more on their bill per year than what could have been expected from the company's advertisements.

[2] The percentage differences between settings that expected high fuel consumption and those expecting low fuel consumption were very similar for both the CO_2 exhaust emissions and for fuel consumption, since the amount of CO_2 emissions correlates with the amount of fuel that is consumed by a car.

What are the consequences of misleading fuel consumption claims?

- Prospective car buyers are frustrated with car manufacturer's advertising fuel economy performances that cannot be replicated in the real world and are paying far more on fuel costs than they would otherwise expect to do so.
- Progressive car manufacturers who are designing the most fuel efficient vehicles are losing out as other suppliers give the allusion of delivering better fuel economy performances.
- Not being able to know the real carbon emission reductions from the automobile sector makes a shambles of understanding the performance of the car industry to cut its carbon footprint and that of European countries themselves. Hence, it undermines EU climate targets.
- In many European countries the CO_2 emissions values of different cars influence the tax band that those cars are under. If the values are not correct for new cars, this means it is impossible to know whether nor not the different tax bands are rewarding the most fuel efficient cars, as is their intent.
- Achieving the potential of measures designed to make cars more fuel efficient (and in turn cutting Greenhouse-Gas (GHG) emissions and improving the Europe's energy security) is being diminished as prospective car buyers are more likely to distrust the claims made by manufacturers and in turn buy a car based on other criteria.
- Prospective car buyers across Europe are not only suffering from misleading fuel consumption claims but also inadequate labelling. The much needed changes in EU law for the testing protocol should also go hand in hand with amendments to the EU's car CO_2 labelling Directive. This update should ensure, amongst other things, having cars rated on their absolute emissions so as to avoid the scenario of having big SUV's being categorised as equals with small fuel efficient cars.

How can official fuel consumption testing be improved in Europe?

There needs to be a better and harmonised testing standard than the NEDC. Fortunately, a new testing protocol, the Worldwide harmonized Light vehicles Test Procedure (WLTP), has been adopted by the United Nations Economic Commission for Europe (UNECE) in March 2014. The WLTP is expected to close many of the loopholes currently exploited by car manufacturers and better simulate real driving conditions, with more modern and realistic driving scenarios[3]. The WLTP must now be introduced into EU legislation as swiftly as possible so this new test can be applied to type approval cars by 2017.

Although there are many positive aspects about the WLTP, loopholes still do exist. For instance, without in-service conformity tests there will inevitably be fuel consumption differences in type approval vehicles and production vehicles and there will remain to be some testing flexibilities that car manufacturers can manipulate for their own benefit.

In order to better safeguard against car manufacturers manipulating the test results, further safeguards are needed and a European wide authority must be established so as

[3] For more information see the following resources provided by the ICCT:
http://www.theicct.org/sites/default/files/publications/ICCT_LabToRoad_20130527.pdf

to ensure oversight of the testing procedures. In addition, and in order to tackle the reliability of the tests, the new protocol must ensure that in-use vehicles are also tested.

Fuel consumption testing – what is required of European car manufacturers?

As a result of EU legislation adopted in 1999, car manufacturers are required to disclose the fuel economy and CO_2 emissions of all new cars. The EU Directive 1999/94/EC requires that this information must be displayed on a label attached to the windscreen of all new passenger cars at the point of sale, on posters and other promotional material, and in specific printed guides which have to be published to provide consumers with relevant information on all car brands and models.

A car manufacturer measures a new car's fuel consumption and CO_2 emissions performance under conditions that have been agreed at the European level. Testing follows the NEDC.

Is there any evidence in Europe and globally that car manufacturers are producing misleading fuel consumption claims?

There is a growing body of evidence in Europe that suggests car manufacturers are producing misleading car fuel consumption claims and evidence that the gap between car manufacturer claims and real world results is getting wider[4]. There have also been actual cases of car manufacturers in parts of the world outside of Europe being caught red handed in promoting misleading claims about fuel consumption and CO_2 emissions. For instance, in the US Hyundai and Kia (2012) and Ford (2014) were forced into correcting misleading fuel efficiency values for some of their cars and recently in South Korea it was reported in August 2014 that Hyundai was forced into issuing an apology for inflating the fuel economy of a specific model and offered to pay up to 56 billion won ($54.3 million) to settle a law suit against the company.

[4] For more information see the following resources provided by the ICCT and T&E:
http://www.theicct.org/sites/default/files/publications/ICCT_LabToRoad_20130527.pdf
http://www.transportenvironment.org/sites/te/files/publications/Real%20World%20Fuel%20Consumption%20v15_final.pdf