

T&E response to consultation on complementary provisions to Euro 5/6 and Euro VI

I. Fuel Consumption Meters (FCM) and Gear Shift Indicators (GSI)

We support mandatory fitting of both Fuel Consumption Meters and Gear Shift Indicators in light duty vehicles, and recommend extension to commercial vehicles and buses. In-car devices that support eco-driving will help spreading awareness and assist European drivers fulfilling the potential of eco-driving, in a cost-effective manner. Promoting eco-driving is a no regrets measure. It will save drivers money and is beneficial for the environment as well.

We encourage the Commission to use this opportunity to mandate a “smart” FCM. A smart FCM displays not only the current or average fuel consumption but also indicates how this relates to the fuel consumption when eco-driving. This would serve as a constant reminder of the potential for improvement.

It must however be highlighted that neither GSI nor FCM may be used to weaken existing emission standards for light duty vehicles as they don't reduce emissions on the test cycle, only in the real world. They are hence complementary measures.

The merits of eco-driving

Eco-driving - when properly applied - has the potential to reduce fuel consumption and CO₂ emissions. In general, experts found that changing driving behaviour could result in a 5-25% fuel efficiency increase, depending on the driver. On average the reduction potential lies around 10%.¹

Many European countries have therefore promoted eco-driving. The Netherlands, Germany, Belgium and many others have included its principles in mandatory driver training. Similarly, awareness raising campaigns are organised on a regular basis. Recently, the EU sponsored a European initiative to raise awareness about the potential of eco-driving.²

Unfortunately, the lasting efficiency of eco-driving training is highly dependent on many factors. Even when the principles of eco-driving are known to drivers, there is no guarantee that they will continue to (fully) apply them. Also, the effect of eco-driving training is proven to decrease over time. It was found, that one year after taking the training, the achieved reduction in fuel consumption due to eco-driving is only around 2-3.5%.³

The merit of in-car devices such as GSI, engine revolution counters and FCM is that they can help institutionalising eco-driving. The EU does not have to start from scratch, it has already decided that

¹ Smokers et alia, *review and analysis of the reduction potential and costs of technological and other measures to reduce co2 emissions from passenger cars*, Delft (TNO), 2006, 209.

² The Ecodriven project

³ Ibidem 1.

new cars should be fitted with GSI as from 2012-2014. Since studies show that FCM improve the effectiveness of eco-driving training schemes, it should now extend this obligation to FCM.⁴

The combination of FCM and GSI offers a unique advantage in this respect. On the one hand it advises drivers when to shift gear and serves as a constant reminder of its importance. On the other hand, the results of your driving style have an immediate and visible impact on your fuel consumption. When your fuel consumption is higher than it ought to be, a glimpse on a GSI or engine revolution counter could identify the source of the problem.

Fuel Economy Meters can be fitted to vehicles at very low cost. Most passenger cars are currently fitted with an on board computer with an instantaneous FCM. Apart from smaller cars, most passenger cars also have a dashboard location where fuel consumption can be displayed. Often FCM are already offered as an option. For large cars, FCM are generally standard. Hence, costs are very likely to be limited. The inclusion of FCM should become mandatory for type approval soon.

We recognise that eco-driving is a desirable driving method and we fully support the mandatory fitment of in-car devices that will help fulfil its full potential. However, we want to reiterate that eco-driving **cannot in any manner be seen or be presented as an alternative for the emission standards of Light Duty Vehicles**. Nor should they be considered as 'innovative technologies' for the very simple reason that neither of the technologies is truly new, while the European driver who chooses to eco-drive and save fuel for his own benefit can be neither monitored nor controlled.

FCM and GSI must inform and instruct drivers

FCM and GSI are tools for consumers. Therefore, the information they provide must be accurate and informative but must also be helpful. It should thus indicate ways to improve the performance.

Presently many cars are already fitted with an FCM. However, they are not always visible because the driver has to choose between several different options (radio, fuel consumption, temperature, ...). Often drivers turn of the fuel consumption display in order to access the other options. If the Commission's initiative is to make a real difference in this respect this type of dual mode visors should be avoided in the future.

T&E therefore recommends that all new cars should be fitted with both a FCM and a GSI. Both the FCM and GSI should be visible at all times.

A fuel consumption meter for all light duty vehicles and commercial vehicles

Reducing fuel bills is as much a priority for business as it is for individual consumers. Especially in times of economic hardship and rising fuel prices it therefore seems appropriate to extend GSI and FCM to all light duty vehicles while mandating FCM for all commercial vehicles and buses.

The fact that professional drivers are supposedly already more aware of fuel consumption should not be a reason to refrain from an extension. On the contrary, if there is more awareness and more willingness to reduce fuel consumption, the potential for eco-driving is bigger.

⁴ Beusen, B., Broekx, S., Denys, T., Beckx, C., Degraeuwe, B., Gijsbers, M. et al. (2009). Using on-board logging devices to study the longer-term impact of an eco-driving course. *Transportation Research Part D: Transport and Environment*, 14 (7), 514-520.

A smart Fuel Consumption Meter

The Commission should use this opportunity to mandate a smart Fuel Consumption Meters. They will inform customers about:

1) Current fuel consumption vs. fuel consumption when eco-driving/optimal fuel consumption (must always be visible)

It is crucial that drivers be informed about their current fuel consumption at all times. This in itself will be an incentive to adhere to the principles of eco-driving and the instructions of the gear shift indicator.

However, many drivers are not aware of the extent to which they exceed optimal fuel consumption. A sample of about 100 drivers who inputted their fuel consumption into a database shows that many of them consistently average 20-30% more than the official fuel consumption values, provided by vehicle manufacturers.⁵

Strictly adhering to the principles of eco-driving could help reducing this gap. We therefore recommend that the Commission mandate Fuel Consumption Meters that not only indicate what the current fuel consumption is but also inform drivers how the current fuel consumption relates to the optimal fuel consumption.

In order not to complicate matters for drivers, displays could for example work with colour patterns, with different colours indicating good fuel consumption, below average and disproportionally high fuel consumption.

Crucially, this will inform people about the extent to which their driving style can be improved. Shifting Gears in a correct manner is essential but by no means the only aspect of eco-driving. Throttle, tyre pressure, use of air-conditioning, extra structures on the roof, strong acceleration, heavy braking etc. can all adversely impact fuel consumption.

It is by pointing out the problem, in casu suboptimal fuel consumption, that people will start looking for solutions. Eco-driving can offer these solutions.

It should also be noted that not all cars have manual gear boxes. While GSI are of little use to them, a smart FCM could make a difference.

2) Average fuel consumption per trip (can be displayed optionally)

A useful tool: it enables drivers to compare their average fuel consumption on similar tracks and informs them about the effects of a different driving style.

⁵ Spritmonitor, a German database, collects fuel consumption data by drivers. A comparison with official fuel consumption data learns that there is a considerable gap between both.
<http://www.spritmonitor.de/>

3) Historical fuel consumption vs. official combined fuel consumption figure (can be displayed optionally)

When indicating the historic average (i.e. average fuel consumption over life time of the vehicle), the display should indicate how this relates to official fuel consumption figures.

The reasoning behind this is similar to 1 (supra). Many drivers are not aware that their driving style results in significantly higher fuel consumption than could be achieved according to car manufacturers.

When drivers consistently exceed the values indicated by the manufacturer, this average will become their standard. A feature informing him that his average is by no means ideal, would serve as a constant reminder that there is room for improvement. In the first place by following GSI instructions but also by applying other aspects of eco-driving.

Also, it would encourage manufacturers to provide customers with realistic and achievable fuel consumption figures.

4) Fuel costs (can be displayed optionally)

Last but not least we would recommend that it should be possible for the driver to switch the unit to be shown to fuel COSTS (instead of consumption) per 100 km. This brings feedback about fuel consumption even closer to what motivates people.

II. Removing the upper mass limit of the light duty Euro 5/6 regulation

The Commission indicates it wants to “*remove the upper mass limit of the light duty Euro 5/6 regulation for emission purposes*”. This would give manufacturers more flexibility and reduce administrative burden when type approving vehicles *for emission purposes*, close to the mass limit borderline, manufactured on the same platform.

Given the Commission’s ambition to simplify existing legislation the Commission should acknowledge that it is not helpful to have different pieces of legislation referring to vans and trucks which relate to different ways as well as to different thresholds for expressing vehicle weight – e.g. 2,610 kg reference mass and 3.5t gross vehicle weight respectively. Not only do these different definitions and regulatory obligations decrease transparency; they also create room for loopholes.

In that respect, we feel the extra administrative burden which this proposal is aiming to eliminate, seems to a large extent the consequence of such loopholes.

Therefore the Commission should eliminate grey zones and loopholes rather than reward the avoidance of other relevant legislation with extra flexibility.

There are two main reasons why manufacturers situate part of their gamma above the upper mass limit but below the threshold for N1 vehicles.

Light trucks dressed up as vans

On the one hand, vehicle manufacturers want their “vans” to be light enough to be plausible N1 vehicles. If a vehicle exceeds a gross vehicle weight (reference mass + payload) of 3.5 tonne, it is considered a truck. It then has to be fitted with a speed limiter, a tachograph (hence the driver needs to respect rest time regulations) and its driver must be in possession of a special driving license. Last but not least it would be subject to road tolls in the growing number of countries that implement lorry charging.

N1 vehicles are hence far cheaper to drive and easier to sell, mainly as the expense of safety and payment for road use.

Analysis of the TREMOVE database indeed shows that sales of vans increasingly outpace the sales of light trucks (3.5-7.5 tonne). Between 1995 and 2010 the EU fleet of vans grew by 60% while the fleet of light trucks only grew by 25%. In some countries like Germany, the fleet of light trucks actually shrank (by 11% between 1995 and 2010).⁶

Today many vans that have a reference mass of around 2,600-2,800kg are sold as N1 vehicles. That means that theoretically they can only be loaded up to 3,500kg. However, in practice they are very often overloaded. In the UK it was found in 2007 that 55% of vans were exceeding maximum permissible payloads.⁷ Although the ultimate responsibility lies with drivers, the lack of frequent controls and enforcement of weight restrictions, creates a situation in which non-compliance thrives and is the norm rather than the exception.

Vans dressed up as light trucks

On the other hand, regulations setting Euro standards and CO2 limits for light vehicles limit the scope to vehicles below 2,610kg reference mass. This means there is an incentive to classify vehicles just above that weight as requirements for heavy duty vehicles are non-existent (CO2) or more lenient (Euro standards). This loophole would seem to justify eliminating the weight threshold as the Commission is proposing.

Proposal does not solve ‘grey zone’ problem

There is hence a huge ‘grey zone’ of vehicles that can carry much more than 3.5 tonne maximum weight yet are below 2,610kg reference mass. Vehicles over 2 tonnes reference mass will almost always fall in this category as a 2t vehicle can technically easily carry 1.5t of payload.

The proposed solution of the Commission will do nothing to eliminate this problem and will indeed only add to the confusion about what a van is and what a lorry is; in a way it further institutionalises the grey zone.

The Commission should assure that it is as unlikely as possible that vehicles sold as N1 vehicles are loaded over 3.5 tonnes in reality. One robust way of doing this is by levelling the playing field between vans and lorries, by mandating speed limiters, tachographs and special driving licences for

⁶ TREMOVE database, vehicle stock.

⁷ 30% in 2004 and 39% in 2006 < International Freighting Weekly 21st October 2008 (<http://www.freightonrail.org.uk/FactsFigures-safety.htm>)

the former. This should reduce the incentive for exploring grey zones and contribute to the overall integrity of EU legislation.

The Commission should also take steps to clarify and harmonise weight definitions. The current array of different definitions, applicable to different categories and legislations creates the legal vagueness that lies at the basis of loopholes but also causes unnecessary administrative burden for manufacturers.

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