

An EU label to promote safe, fuel efficient and quiet tyres

The proposal to label motor vehicle tyres according to their wet grip, fuel efficiency and noise performance should be wholeheartedly welcomed. The labelling scheme will grant consumers access to independently verified information on tyre performance for the first time.

- The most fuel efficient (low rolling resistance) tyres currently on the market can reduce fuel consumption and therefore CO₂ emissions by 10% compared to today's worst performers.
- Quieter tyres can cut road traffic noise by half. Tyre/road contact is the dominant source of road traffic noise, so quieter tyres are especially important to the vast majority of Europeans who live urban areas and near highways.
- Fuel efficient and quiet tyres are proven to be as safe or even safer compared to regular tyres through standard EU wet grip test methods.

The label will go some way to redress the weak EU regulation which includes limit values for wet grip, fuel efficiency and noise emissions (COM(2008) 0316). The painfully slow timetable for this regulation means it will not be fully effective until after 2020 and will merely phase out the worst performing models. If well designed, the label scheme will stimulate faster and more ambitious development of the market towards sustainable tyres and make a vital contribution to cutting CO₂ and noise emissions.

Nevertheless, the European Parliament and Council should further develop the Commission proposal to ensure that the label reaches its target audience so that the label has the best chance of meeting the objectives of reducing fuel consumption, CO₂ and noise from road transport.

This short briefing aims to outline the key changes needed to ensure the effectiveness of this Directive.

Show fuel savings

There is a direct correlation between reduction of rolling resistance and fuel savings. If communicated effectively, the influence of tyres on vehicle fuel economy will generate substantial consumer interest.

The Commission impact assessment estimates total CO₂ savings from fuel efficient tyres at 22 to 58 million tonnes between 2012 and 2020. Corresponding savings on fuel costs (NPV) are between €3.8-€10.4 billion. But even this figure is a very conservative estimate. If the scheme were to drive the market so that all tyres fall into fuel efficiency band C or above, this would shave 5% off the EU's road

transport fuel bill for vans, buses and lorries as well as cars. This 5% equates to an annual saving of around 50Mt CO₂ by 2020 based on current road transport emissions trends.

The European Commission should establish and maintain an official website to explain the label and pictograms. The site should clearly explain each component of the label and the benefits of safer, fuel efficient and quieter tyres for drivers and the environment. The website must provide clear and straightforward information on the labelling scheme for the general public and more detailed technical information for professionals. This explanatory information should be harmonised across the different Member States and languages, which is why the Commission is the appropriate source. The label itself and all technical and promotional literature for tyre buyers must include a clear web address for the website.

A central feature of the website should be a 'Fuel Savings Calculator', which clearly demonstrates the fuel savings drivers can expect when upgrading (or extra fuel cost when downgrading) their tyres, as compared to band C. Versions of the fuel savings calculator should be available for car, van, bus and truck tyres.

Show the label information wherever the price is displayed

Many consumers will have an opportunity to see the tyre and label before purchase, as the majority of tyres (especially C1 car tyres) currently carry **stickers** with information on dimensions, brand, price and bar code.

Nevertheless, in order to take into account that tyre purchasers will not always see the product with the sticker before they make their decision (in contrast to refrigerators, for example), obligations must be included for the distribution and retail chain, so that information presented on the label is also included in other **technical and promotional materials** that the consumer will see before sale, such as brochures, stock lists and retail websites

The labelling information should be repeated on the **invoice**, so that the customer has a record of the grading as a basis for future comparison. The invoice should also include brief explanatory text regarding each parameter. Information from the invoice can also be presented to authorities to demonstrate the use of more sustainable tyres in conjunction with incentive programmes.

National governments should organise communications campaigns to ensure buy-in to the scheme from key stakeholders, for example other government departments,

regional and local administrations, drivers' associations, trade press, consumer organisations and environmental groups who can promote awareness of the scheme.

Improve the wet grip grading

Via inclusion of a wet grip grading, consumers can be assured that there is no trade off between environmental objectives and road safety.

No bands should be left empty. This lacks transparency and may undermine the credibility of the scheme for consumers and purchasing professionals.

The European Parliament should remind UNECE of their mandate to improve the wet grip test (R117). In case this procedure is not completed in time, the label should go ahead using the current test method leading to a simple wet grip indicator with three classes (below average / average / above average performance).

Once the accuracy and reliability of the R117 test are significantly improved, we can support a five-band grading scheme as proposed by the Commission, albeit with the empty bands removed to make sure the scheme is seen as transparent and trustworthy by consumers. The wet grip information should be separate from the energy part of the label to avoid confusion.

Improve the fuel efficiency grading and show the measured value

To ensure that the relationship between rolling resistance and fuel savings is clear to consumers, the grading bands must be transparent and logical. An empty D band in the middle of the scale is confusing for consumers. Decreasing bandwidths as proposed by the Commission are neither comprehensible nor relevant for consumers, and do not easily permit explanation of fuel savings. This system would also fail to provide consistent incentives to improve performance throughout the market. And since there will be more tyres and therefore more emissions coming from bands E, F, G (at least at the outset of the scheme) it is vital to give equal incentives to make incremental improvements at the lower end of the market.

To enhance understanding and trust in the scheme and make a clear link to fuel savings, linear band widths of 1kg/t are appropriate, as this can clearly be shown to represent a consistent fuel saving. For example for C1 tyres, each 1kg/t band improvement gives a fuel saving of 1.5% on average, i.e. fuel saving of 7.5% by replacing a band F model with a band A model. For C3 tyres, each 1kg/t improvement, offers a 5% fuel saving.

Market studies show that procurement professionals (fleet managers, public authorities) find it important that the label and all other communications materials include the measured values for the rolling resistance coefficient, as they can make use of this information.

Energy efficiency, RRC in kg/t			
C1 tyres (car)	C2 tyres (van)	C3 tyres (truck)	Class
RRC≤6.5	RRC≤5.5	RRC≤4.0	A
6.6≤RRC≤7.5	5.6≤RRC≤6.5	4.1≤RRC≤5.0	B
7.6≤RRC≤8.5	6.6≤RRC≤7.5	5.1≤RRC≤6.0	C
8.6≤RRC≤9.5	7.6≤RRC≤8.5	6.1≤RRC≤7.0	D
9.6≤RRC≤10.5	8.6≤RRC≤9.5	7.1≤RRC≤8.0	E
10.6≤RRC≤11.5	9.6≤RRC≤10.5	RRC≥8.1	F
RRC≥11.6	RRC≥10.6	Empty	G

Show which tyres are quietest

Energy efficiency labelling alone is insufficient to address the important environmental aspects of tyre use. Noise consistently ranks highly as a major environmental concern of Europeans. Inclusion of noise emissions in the label will show consumers that they can easily contribute to a quieter environment. Noise is measured in the type approval test, so including this information in the label would require negligible additional cost.

Traffic noise is the most widespread environmental health problem in Europe. Over 210million Europeans are at risk from levels of road traffic noise deemed harmful by the World Health Organisation. Every year, 200,000 Europeans suffer from cardiovascular disease brought on by the stress caused by traffic noise; for 50,000 Europeans every year the consequences of traffic noise are fatal.

To put this in perspective, the external costs of road traffic noise, including health costs, exceed the most recent estimates of the costs of air pollution from road transport. (€36billion for noise vs €29bn for air pollution in the EU).

The limit values from the type approval regulation (CCOM(2008)316) will have a negligible effect on overall road noise because it fails to cut tyre noise from lorries, which represent half of road noise costs. Truck noise is particularly important on highways and at night, so must be tackled urgently to reduce noise levels overall. The label must address this deficit.

Tyres which perform well in the type approval test are also found to be quieter on other surfaces common in Europe, likewise for louder models which remain relatively louder on different road surfaces. It goes without saying that, if a car is equipped with quieter tyres, the driver benefits from reduced interior noise levels. The extent of this benefit however depends on the sound insulation of the vehicle. An indicator of relative noise levels will therefore be informative for drivers, and the main benefits will accrue to the majority of the EU population who live in urban areas and/or near major roads.

Inclusion of the measured decibel level in the label is useful for commercial and public procurement experts. However, most consumers will need additional information, as well as the dB value, to make an informed choice. The noise level must be demonstrated to consumers in the context of the best-worst range, so that relative performance is readily identifiable and understandable.

We therefore advocate a simple colour scheme for the noise section of the label:

Tyre noise classes			
Colour code	C1 tyres (car)	C2 tyres (van)	C3 tyres (truck)
Green	≤68dB	≤69dB	≤70dB
Yellow	68<dB≤70	69<dB≤72	70<dB≤73
Red	>70dB	>72dB	>73dB

A green background to indicate ‘low noise’ models 3dB below the limit value is appropriate as this represents a halving of the sound pressure and therefore a substantial and notable reduction across the fleet on a busy road (equivalent to halving the traffic). The green label will demonstrate the availability of quieter models, be a potential basis for communications campaigns, and useful for public procurement standards. Red will demonstrate models which are loudest.

Speed up progress with incentives

2012 is an appropriate date for entry into force of the labelling requirements, as this connects to the obligations and test procedures of the type approval regulation.

Manufacturers, suppliers and distributors should also be encouraged to voluntarily present the labelling information on wet grip, fuel efficiency and noise emissions before the date of entry into force. This should also include presentation of the information for models already held in stocks by means of stock lists, brochures, catalogues and websites. To this end, Member States should be permitted to introduce (fiscal) incentives before 2012 in order to stimulate progress.

Enforcement: mark the values on sidewalls and introduce spot checks

To ensure effective enforcement by national authorities, sidewall moulding of the measured values offers a safeguard that the values in the grading are directly attributable to the tyre, and the attached label. The sidewall information will be available to retailers and purchaser in case the sticker is missing. There would be a negligible additional cost involved to mould the measured values on to the sidewall (€13 per mould according to European Commission, this cost is then spread over a production run using the mould).

Current legislation already requires moulds to be updated very regularly as sidewall moulding of the date of production is required by law. There is no reason why additional information cannot be added in the same way. Tyres produced for sale in the USA already have far more information moulded onto the sidewall than European models, so moulding space is not an obstacle.

The responsible national authority should be obliged by the Directive to undertake a given number of spot checks

every year (proportional to tyre sales), to ensure that the self-declaration of manufacturers is accurate. The Directive should ensure that sanctions for non-compliance are dissuasive.

Regularly review and improve test procedures and include all tyres

Regular review periods must be specified to ensure that the scheme continues to drive innovation towards safer, fuel efficient and quieter tyres. In the medium term, tyre testing procedures must be updated to remove measurement tolerances and better reflect real life situations.

The Commission should be obliged to examine the case for inclusion of retreaded tyres. Retreaded tyres offer environmental benefits in terms of waste reduction and a saving of up to 80% of raw materials and energy compared to new tyre production. Retreaded models already represent 50-70% of the market for C3 tyres in Europe. Bringing retreaded tyres into the new EU labelling scheme could show consumers that these models can perform as well as brand new tyres.

Further information

Sandberg, U. (VTI) (2008): [Consumer label for tyres in Europe](#) (available from T&E website)

DVL Smith Ltd (2009): [The labeling of tyres with respect to fuel efficiency and other essential parameters](#) (available from T&E website)

T&E (2008): Can you hear us? Why it is finally time for the EU to tackle the problem of noise from road and trail traffic www.transportenvironment.org/Pages/transport-noise

Video on tyre noise reduction and testing: www.youtube.com/watch?v=h7n8Su8Fv9o

Position papers on tyre noise and rolling resistance: www.transportenvironment.org/Publications/prep_hand_ou t/lid:475

www.transportenvironment.org/Publications/prep_hand_ou t/lid:476

www.tyrenoise.info

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