



European Federation for
TRANSPORT and ENVIRONMENT

How the motor industry hijacked regulation of vehicle noise And why cars are getting louder as a result

Briefing

August 2009

Noise emissions from motor vehicles are regulated by the World Forum for Harmonisation of Vehicle Regulations (WP.29), a body of the United Nations Economic Commission for Europe (UNECE), based in Geneva. The European Community is a signatory, as well as individual EU Member States, meaning that UNECE vehicle regulations are directly applicable in EU and national law.

Since 2000, WP.29 has had a mission to “*expressly address global issues regarding vehicle safety, environmental pollution, energy and anti-theft.*”, and “*encourages an open and transparent dialogue between government regulators, other technical experts competent in the field of technical requirements for vehicles and the general public, in order to ensure that the best safety and environmental practices are adopted*”¹

This briefing will explain the long history of failure of the UNECE to deliver effective regulation for quieter vehicles and argues for the regulation of vehicle noise to be moved back to the EU level in Brussels where there is appropriate democratic oversight.

UNECE Regulation 51 on Motor Vehicle Noise: Harmonisation of vehicle noise emissions standards

At the international level, the World Forum for Harmonisation of Vehicle Regulations within the UNECE has developed Regulation N°51 on road vehicles sound emissions, which is deemed to be equivalent to EU Directive 70/157/EEC. The Regulation for technical approval of new vehicles and currently sets noise emission limits of 74dB(A) for passenger cars and 80dB(A) for trucks.

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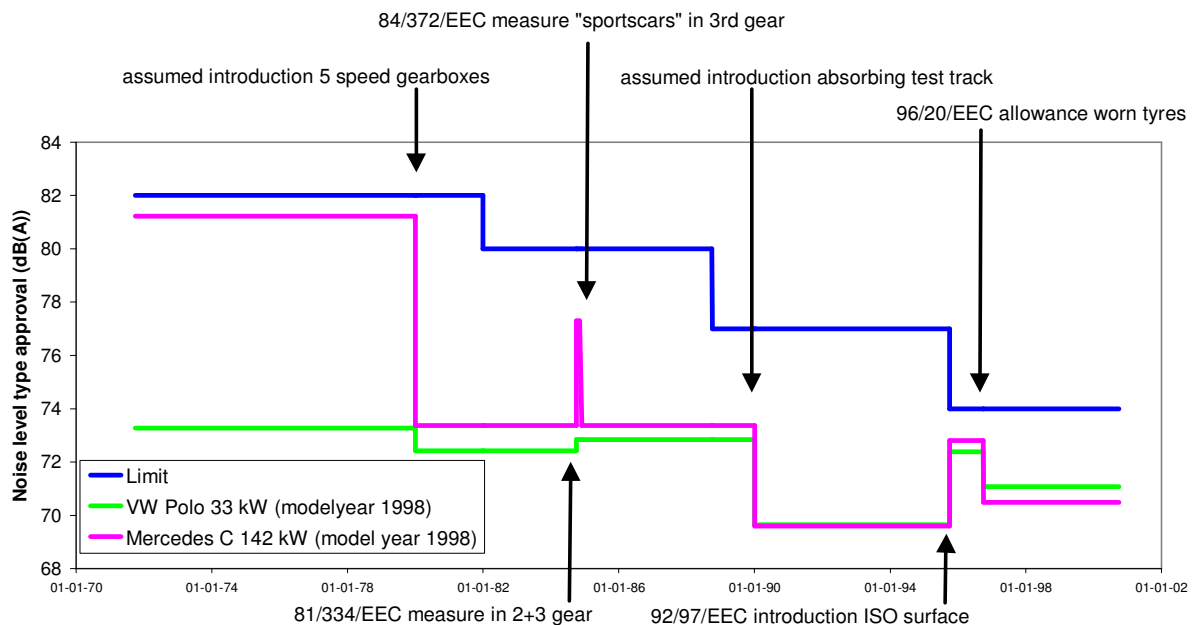
Despite the long history, the track record for effective vehicle noise regulation is astoundingly poor. Nominally, noise limits have decreased since the 1970s by around 8dB. This would be an impressive and very noticeable reduction cutting traffic noise by more than three-quarters, if only it were effective. But in actual fact, cars are about as noisy today as they were when the first regulation came into force nearly 40 years

¹ UN (2002) *World Forum for Harmonisation of Vehicle Regulations (WP29) How it works, How to join it*, Published by United National, New York and Geneva.

ago. This is because each tightening of the limit values is accompanied by a change in the test method, which allows vehicles to appear to be quieter than they really are. Aside from the vehicle noise standards, increasing traffic and a trend towards larger, heavier and more powerful vehicles also mean that Europe's roads continue to get louder, which has serious consequences to the health of the vast majority of Europeans who live or work near busy roads.

The diagram below illustrates how the same cars appear to become quieter, when tested under the different test methods approved by the UNECE. The measurement method is changed in advance of every decision on tighter standards. The Mercedes in particular has benefited from the changes in the test methods to appear to stay within stricter targets. Under the different test methods, the same vehicle can be measured as 12dB quieter!

Effect of changes in measuring method (example of 2 vehicles)



Source: UNECE, GRB, informal document GRB-49-07, Feb 2009 :

<http://www.unece.org/trans/doc/2009/wp29grb/ECE-TRANS-WP29-GRB-49-inf07e.ppt>

The GRB is due to deliberate on new, stricter noise standards for new vehicles in the near future. And so, once again, the test method is also being changed. Our concern is clearly that this will again fail to bring any real tightening of the standards, and so allow the worst offenders to keep cheating the test.

New measuring standard to be decided 2009

The Working Party on Noise (GRB) is currently working on an amendment to this regulation through modifications to the test procedure, with a view to better reproducing the sound levels generated by vehicles during normal driving in urban traffic. The current noise test (known as **R51.02**) measures noise emissions in at a

specific speed, in a low gear, at low revs. However, some vehicles (particularly high-powered cars and vans, and sports cars) were found to perform dramatically worse in different gears, at higher speeds and higher revs, ie vehicles are designed to perform quietly under test conditions only.

A new, additional method for '**Additional Sound Emission Provisions**' (ASEP) has been under development since 2005 to test under a broader range of operating conditions, at higher revs. Both methods combined are supposed to enable more effective vehicle noise reduction.

A working group has developed a new ASEP test method, on which a decision is to be made at the next session of GRB on 1-3 Sept 2009. Proposals have been put forward by some delegates, including a joint French-German proposal, as well as by OICA, the global car makers' federation, which is represented by a sound engineer from Porsche at both the ASEP working group, and the GRB.

(See here for a presentation by the OICA representative, on behalf of Porsche: <http://www.unece.org/trans/doc/2006/wp29grb/GRBIG-ASEP-06-03e.pdf> and OICA proposal to the working group: <http://www.unece.org/trans/doc/2007/wp29grb/GRBIG-ASEP-08-003.pdf>)

“The proposal would allow vehicles to actually become more noisy than under the current regulation.”

In 2008, the German transport ministry withdrew support for the Franco-German proposal, without giving justification. That left the OICA proposal by default as the only method on the table for the working group. The OICA proposal would allow vehicles to actually become more noisy than under the current regulation.

An analysis by a representative from the German type-approval authority, TÜV Nord, concluded: *“The OICA method allows vehicles to become more noisy in future compared to the current method.”*²

Consultancy TNO has made the following analysis of the proposed method: *“the present proposal will result in a very undesirable situation: compared to the R51.02 regulation that is currently in use and also is based on an acceleration test, the OICA proposal will result in an extra driveline noise allowance for most vehicles, which can reach up to 10 dB with an average of about 3 dB.”*³

This method could even allow some vehicles to be designed to produce noise over 110dB(A) legally, which is equivalent to the noise of a chainsaw or a low-flying F16 fighter jet, and causes hearing loss.

It should be a matter of great concern to the public at large that the car industry's worst offenders on noise are effectively being allowed to write their own regulation, and are doing so in order to make the regulation even less stringent. Sound engineers are already found to bend the rules, but this new method is so generous that they can simply ignore the standards and make cars as loud as jets if they want.

² Presentation by Heinz Steven, TÜV Nord, to ASEP group; November 2008: <http://www.unece.org/trans/doc/2009/wp29grb/GRBIG-ASEP-13-008.pdf>

³ UNECE, GRB, Informal document no. GRB-49-07, February 2009 : <http://www.unece.org/trans/doc/2009/wp29grb/ECE-TRANS-WP29-GRB-49-inf07e.ppt>

The result is that vehicles will get much louder and cause even more widespread damage to public health. Over 200 million Europeans (44% of EU citizens) are already subjected to road noise levels which are harmful to health. The mandate of the WP29 is to improve environmental performance, and this directly contradicts that goal.

This example illustrates why such decisions, which are ultimately political decisions relating to health and environmental quality, must be taken in open and transparent fora to protect the public interest. Decisions relating to pollutant and noise emissions and relevant test methods must be taken out of these obscure UNECE working groups, and brought into the sphere of proper public debate with democratic oversight at EU level.

General background to UNECE Regulations

The United Nations Economic Commission for Europe (UNECE) sets product standards for vehicles under Working Party 29: World Forum for Harmonisation of Vehicle Regulations. WP29 is supported by several technical working parties (*groupes rapporteurs*), which largely consist of technical experts specialized in particular fields:

- GRPE: Working Party on Pollution and Energy
- GRSG: Working Party on General Safety Provisions
- GRRF: Working Party on Brakes and Running Gear
- GRE: Working Party on Lighting and Light Signalling
- GRSP: Working Party on Passive Safety
- **GRB: Working Party on Noise** – which meets twice per year in Geneva and has been supported by the work of several “informal working groups”

The working parties make recommendations, including test procedures and limit values, which are passed up to WP.29, and further up to the committee on the 1958 Agreement, where recommendations are put to vote.

The working parties consist of national delegations and non-governmental organisations from industry, standardisation bodies (eg. ISO) and other stakeholders. T&E gained NGO special consultative status in 2006. Technical experts on the working parties are expected to give recommendations on the basis of technical expertise rather than national preferences or commercial interests. However, national delegations often include automotive industry employees (eg. A Ferrari representative is part of the Italian delegation, Saab for Sweden), and experts from test houses and type-approval authorities. Test house and type-approval experts (privatised or semi-privatised in most countries) in practice often support the position of their customers, the automotive industry, especially those from car producing countries.

WP29 works according to the principles of the ‘1958 Agreement’, which provides procedures for establishing uniform standards regarding new motor vehicles and equipment and for reciprocal acceptance of approvals for vehicle parts, systems and equipment issued under Regulations issued under this agreement.

There are 38 contracting parties to the 1958 Agreement, of which 33 are European UNECE member countries. The others are: the European Community, Japan, Australia, South Africa and New Zealand. 114 UNECE Regulations are annexed to the Agreement. Voting takes place in committees on the Agreements. It is worth

noting that the EC represents 27 votes for the Member States, and therefore has a de facto decisive majority.

Around 30 “NGOs” are accredited to participate in the activities of WP.29, of which the overwhelming majority are automotive industry lobby groups:

OICA – International Organisation of Motor Vehicle Manufacturers

IMMA – International Motorcycle Manufacturers Association

CLEPA – European Association of Automotive Suppliers

ETRTO – European Tyre and Rim Manufacturers Association

CONCAWE – Oil companies European Organisation for Environment, Health and Safety

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