Briefing

EU Legislation in Progress

February 2016

European Parliament

Motor vehicles

New approval and market surveillance rules

SUMMARY

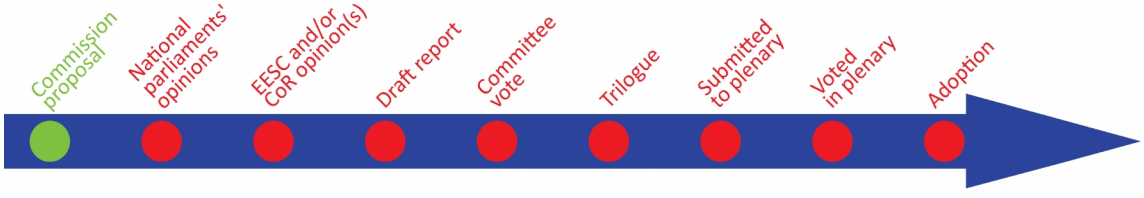
The automotive industry is a major player in the European economy, accounting for 6.4% of gross domestic product and 2.3 million jobs in the European Union (EU). However, it has been facing difficulties as a result of the economic crisis.

In September 2015, the Volkswagen (VW) case highlighted weaknesses in the implementation of type-approval rules for motor vehicles in the European Union, in particular as regards standards on emissions of air pollutants and carbon dioxide.

In 2016, as part of preparations from previous years but also in response to the VW case, the European Commission proposed strengthening the type-approval system for motor vehicles. Its goal is to ensure effective enforcement of rules (including through market surveillance), to strengthen the quality and independence of technical tests and to introduce EU oversight on the type-approval process.

Proposal for a regulation of the European Parliament and of the Council on the approval and market surveillance of motor vehicles and their trailers, and of systems, components and separate technical units intended for such vehicles

Committee responsible:	Internal Market and Consumer Protection (IMCO)	COM(2016) 31 *of* 27.01.2016
Rapporteur:	Daniel Dalton (ECR, United Kingdom)	*procedure ref.*: 2016/0014(COD)
Next steps expected:	Consideration in IMCO Committee	Ordinary legislative procedure



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Introduction

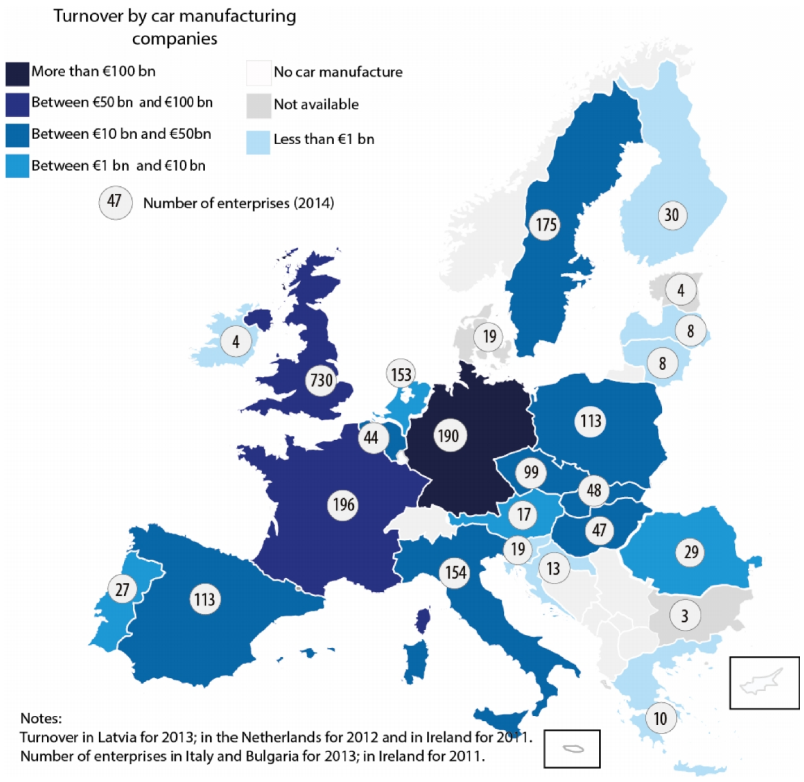
In 2012, the Commission pledged in its CARS 2020 action plan to put forward a proposal to enhance the type-approval framework for motor vehicles, among other things, by including provisions for market surveillance. In September 2015, the Volkswagen (VW) case highlighted weaknesses in the implementation of type-approval rules for motor vehicles in the EU, in particular as regards standards on emissions.

Investigations into the case are ongoing in several Member States. In December 2015, the Parliament set up a Committee of Inquiry on Emission Measurements (EMIS) to investigate alleged breaches of EU law in relation to emission measurements from vehicles, and failures by EU Member States and the Commission to enforce it. In 2016, the Commission indicated that recent events 'have revealed particular weaknesses and demonstrate the need for a fundamental revision' of the current type-approval rules for motor vehicles.

Context

The automotive industry is a **major player** in the **EU economy**. In 2013, the turnover from motor-vehicle manufacturing accounted for €859 billion, or 6.4% of EU gross domestic product (GDP). It also provided 2.3 million direct jobs (in vehicle manufacturing) and 9.8 million indirect jobs (in manufacturing of related equipment, sale and maintenance, road transport and road construction) in 2012, according to data from the European Automobile Manufacturers Association (ACEA). These jobs accounted for respectively 1% and 4.5% of total employment in the EU.

Figure 1 – Automotive sector turnover in the EU



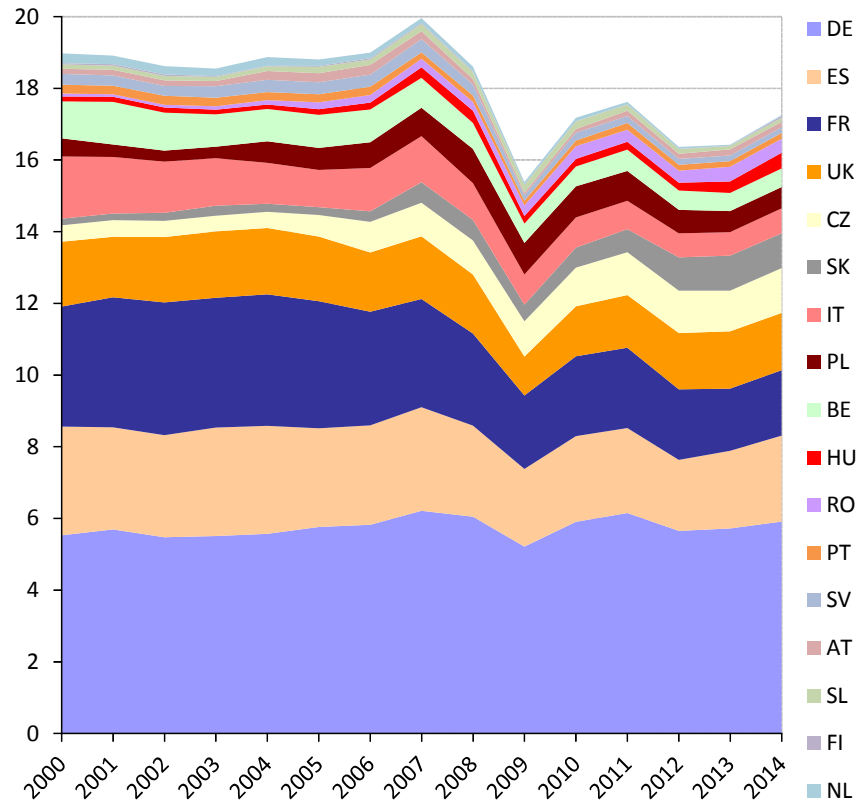
Graphic by EPRS; Data source: Eurostat, 2016.

As shown in Figure 1, the sector is present in almost all Member States, albeit in varying degrees. An estimated 3 000 companies, of which 2 500 are small and medium-sized enterprises (SMEs), are independent suppliers to car manufacturers. They provide about 75% of vehicles' original equipment components and technology.

According to industry figures, 17.2 million motor vehicles (of which 87% are passenger cars) were manufactured in the EU in 2014. Of these, 6 million were exported outside the EU, mainly to the USA, China, Turkey and Russia. The sector is the EU's top investor in research and development, with €41.5 billion invested in 2013.

However, the EU's vehicle manufacturing sector has been facing **difficulties** in recent years. Europe has been overtaken by China as the world region with the highest share of motor vehicle production. Sales have been affected by the economic crisis, resulting in structural over-capacity. The number of motor vehicles produced in the EU in 2014 was lower than in 2000 (see Figure 2). Several manufacturers have closed down plants between 2008 and 2013, in addition to undertaking deep internal restructuring. The auto-motive sector also received substantial state aid in the wake of the economic crisis.[1]

Figure 2 –Vehicles manufactured in the EU (2000-2014, million units)



Data source: OICA, 2016.

The automotive sector has to meet certain emission standards – an obligation which has been highlighted in the VW case. Since the early 1990s, the EU has adopted successive 'Euro' **standards on the emission of air pollutants** by motor vehicles. The limits introduced in 1992 as part of these standards have since become increasingly stringent. For instance, the limit for particulate matter (PM) emissions from cars has shrunk from 140 mg/km to 5 mg/km, while the limit for nitrogen oxides (NO_x) has dropped from 970 mg/km to 80 and 60 mg/km (for diesel and petrol cars respectively). While emissions of air pollutants from the EU's transport sector as a whole have been reduced considerably in recent decades, road transport remains a big emitter, accounting for about 40% of NO_X and 12% of primary PM emissions, according to the European Environment Agency (EEA).

The EU has also set **standards on emissions of CO_2** from cars and vans.[2] Greenhouse gas (GHG) emissions from road transport have been decreasing since 2007, in part as a result of improvements in the fuel-consumption efficiency (and hence in CO_2 emissions) of motor vehicles. CO_2 emissions targets were achieved ahead of schedule: the 2015 target for cars in 2013, and the 2017 target for vans in 2014. However, while overall EU GHG emissions have decreased by 23% between the 1990 baseline and 2013, emissions from road transport have increased by 16% over the same period.

Effects of air pollution

Air pollutants can induce adverse effects on health, the environment and the climate. For instance, NO_x are associated with adverse effects on health (especially on the liver, lungs, spleen and blood) and on the environment (in particular acidification and eutrophication). NO_x also contribute to the formation of two major air pollutants, ozone and particulate matter. Particulate matter is associated with harmful effects on health (for instance, cardiovascular and lung diseases, central nervous system and reproductive system disorders, cancer) and the climate (alteration of rainfall patterns). A 2015 report by the EEA estimates that every year in the EU-28, 72 000 premature deaths are attributable to NO_2 and 403 000 to PM. According to the Commission, the total health-related costs of air pollution in the EU are in the range of €330-940 billion a year.

Existing situation

The **overall EU policy** for the automotive sector is set out in the Commission's CARS 2020 action plan presented in 2012. The strategy is built around four broad areas: investing in advanced technologies (research and innovation, lowering emissions of CO_2 and pollutants, alternative fuels); improving market conditions; enhancing competitiveness on global markets; and anticipating change.

The **main legislative act on the EU type-approval system** is the 2007 Framework Directive on type-approval of motor vehicles. The Directive sets procedures for the approval of new vehicles and their trailers (and of systems and components used in these vehicles) with a view to ensuring that safety and environmental requirements are met before such vehicles are placed on the EU market. In order to be approved, a vehicle type must be tested for about 70 requirements set out in legal acts, for instance, with regard to safety (lights, brakes, stability or performance in case of accident, and so forth), environment (for instance, emissions) or specific parts (for example, seats or interior fittings). Many of these requirements are set at international level, in the framework of the United Nations Economic Commission for Europe (UNECE). Although the tests for some of these requirements can be performed by manufacturers themselves or by means of computer modelling, most tests must be carried out by 'technical services' (see below).

Approval of new vehicle types is granted by national type-approval authorities and is valid across the EU, based on the principle of mutual recognition which underpins the whole single market. As most national type-approval authorities do not have in-house testing facilities, they mandate technical services to test conformity with the regulatory requirements. A manufacturer can choose any available technical service to test any of the specific regulatory requirements. It can get partial type-approvals in different Member States, but the overall type-approval must be delivered by one national authority. Specific provisions apply to small series and individual approvals.

On the basis of the type-approval process, every vehicle produced is accompanied by a certificate of **conformity** indicating that the vehicle corresponds to an approved type, and Member States must ensure that conformity of production requirements are met (in other words, that production procedures and products match the approved type). Safeguard clauses enable a Member State, upon finding that vehicles, even though they have been approved, present a serious risk to road safety or seriously harm the environment or public health, to ban the sale, import or registration of the vehicle for a maximum of six months. Under the 2001 Directive on general product safety, vehicles may be recalled if there is evidence that they present a danger.

As regards emissions from motor vehicles, requirements are set in the **Euro standards for cars and vans** (2007 Euro 5 and 6 Regulation) and **trucks** (2009 Euro VI Regulation).The Regulations provide for in-service checks by manufacturers and the use of on-board diagnostics (OBD) to ensure that emission limits are complied with. They also require manufacturers to provide repair and maintenance information. Two Commission acts – Regulation 692/2008 for cars and vans, and Regulation 582/2011 for trucks – implement the provisions in detail.

The Framework Directive on type-approval and the Euro 5 and 6/VI Regulations grant **implementing powers** to the Commission under the regulatory procedure with scrutiny, which gives Parliament and Council the power to block implementing acts.

As regards **market surveillance**, general provisions apply.[3] Market surveillance includes reactive measures, where potentially dangerous products are identified as a result of complaints or screening, as well as proactive ones, where focus is placed on a specific product or risk. In cases of non-compliance, market surveillance authorities can adopt measures including compliance assistance (help in defining appropriate remedies), formal warnings and fines, withdrawals, seizures of products, recalls and legal proceedings. Measures can be applied at the production/import stage or at the retail/distribution level. Platforms such as the Rapid Alert System (RAPEX) and the Information and Communication System on Market Surveillance (ICSMS) help make sure unsafe products are taken off the market.

Emission standards: on-road vs type-approval performance

Despite limits on emissions becoming much more stringent (see above), research indicates that on-road emissions are significantly higher than those measured under laboratory conditions. A 2014 study by non-governmental organisation, International Council on Clean Transportation, indicates that real **CO_2 emissions** (and fuel consumption) are on average 38% higher than official emissions measured in laboratory tests during type-approval procedures. It also suggests that the gap between on-road and type-approval has been growing in recent years, from about 8% in 2001. Two studies on **emissions of air pollutants** carried out in 2013 – one for the Dutch Government and another by the Commission's Joint Research Centre – found that on-road NO_x emissions from diesel cars were approximately two to five times higher than their type-approval standards, while petrol vehicles broadly met Euro standards under real driving conditions.

According to an EEA report from 2016, the **gap** between real-world and laboratory test emissions is **mainly due to three factors**: **1) an outdated test procedure**, the 'new European driving cycle' (NEDC),[4] which does not reflect real driving emissions; **2) flexibilities in the current procedure** allowing manufacturers to optimise performance (for example, by reducing vehicle mass, adjusting brakes, over-inflating tyres or using standard values);[5] and **3) in-use factors** depending on the driver (such as driving style) or other aspects (such as temperature).

Changes in test procedures are to be implemented in the coming years. On **CO_2 emissions**, new standards known as the Worldwide Harmonised Light Duty Test Procedure (WLTP) have been developed under the aegis of the UNECE. The Commission proposes to phase in the WLTP in September 2017, with full implementation from September 2018. Regarding **emissions of air pollutants**, the Commission is expected to adopt a regulation introducing Real Driving Emissions (RDE) tests, to be performed with the use of portable measurement systems as of September 2017 for new types of vehicles, and as of September 2019 for all new vehicles.

Although these changes will help narrow the gap between on-road and type-approval emissions, they have been subject to **criticism**. A 2014 study on the **WLTP cycle** suggests that it may not adequately represent real-world driving emissions. The **RDE tests** have been criticised, for instance by environmental NGO ClientEarth, for allowing higher emission limits.[6]

In the 2013 conclusions of the **fitness check of the legal framework for the type-approval of motor vehicles**, the Commission indicated that the legal framework is appropriate and there is no need for a major overhaul. However, it pointed out a few weaknesses: the test cycle and measurement methods may not be fully representative of real-world driving conditions; market surveillance is missing; the recall system lacks clarity; and implementation of technical requirements could be improved by harmonising and enhancing approaches from national type-approval authorities and technical services.

The current framework has been particularly criticised since September 2015, after it was revealed that Volkswagen had used 'defeat devices'[7] for several years. In 2016, the Commission indicated that 'the mechanisms for ensuring a harmonised implementation and enforcement [of the current legal framework] are not sufficiently robust' and that, as a result of divergences in the interpretation and application of the rules, the Directive's main objectives (that is, achieving an adequate level of safety and environmental performance of motor vehicles) have been undermined.

The changes the proposal would bring

The proposed regulation replaces and repeals the 2007 Framework Directive on type-approval, making its provisions directly applicable (without transposition into national law by Member States). It also amends the Regulations on Euro 5 and 6/VI standards mentioned above. According to the Commission, the proposal aims to 'ensure a robust, transparent, predictable and sustainable regulatory framework that provides a high level of safety and of health and environmental protection.'

Most elements from the current Framework Directive outlined above are carried over in the proposed regulation. However, the proposal introduces **substantial changes**, which can be grouped into three broad areas:

- **Ensuring effective enforcement and market surveillance**. The proposal limits the validity of type-approval certificates to five years without the possibility of prolongation, although the type-approval certificate may be renewed upon application. The proposal requires action from manufacturers, importers and distributors should they consider that vehicles or systems are non-compliant. It obliges manufacturers to cooperate and exchange information with approval and market surveillance authorities, and requires market surveillance authorities to carry out spot-checks on cars in circulation. In addition, the proposal requires type-approval documentation to be made publically available.
- **Strengthening the quality of testing**. The proposal reinforces provisions related to **technical services**. In order to be recognised as technical services under the regulation, bodies need, among other things, to be independent, to document their skills and technical knowledge (and that of their subcontractors), and to be assessed by a team made up of the three national approval authorities and a representative of the Commission. They can be designated as technical services for no longer than five years, and their designation may be revoked. To ensure proper implementation and enforcement across the EU, technical services may no longer receive direct payments from manufacturers: Member States will collect fees from manufacturers on their behalf. The proposal also strengthens requirements related to the independence of **approval authorities**, to be checked by regular peer-reviews from other national approval authorities. It also requires approval

authorities to carry out systematic checks to make sure vehicles produced match the approved type.

- **Introducing EU oversight in the type-approval process**. The proposal sets up a forum for exchange of information on enforcement, made up of national approval and market surveillance authorities, and chaired by the Commission. It provides for exchange of information between national authorities on type-approvals issued or withdrawn as well as on possible restrictive measures taken. The proposal grants the European Commission the power to suspend, restrict or withdraw the designation of technical services; confirm or reverse restrictive measures by national approval authorities; carry out spot checks and initiate remedial actions;[8] and impose administrative fines on manufacturers of up to €30 000 per non-compliant vehicle or system.

In addition, the proposal contains provisions on access to repair and maintenance information currently laid out in the **Euro5-6/VI Regulations** mentioned above.

The proposal confers on the Commission the power to adopt **delegated acts** supplementing or amending non-essential elements of the proposal.[9] Delegated acts may be vetoed by Parliament or Council, which also **have the** right to withdraw these delegated powers at any time. The proposal also confers on the Commission the power to adopt **implementing acts** on other elements contained in the proposal.[10] Implementing acts are adopted by the Commission after approval by the Technical Committee on Motor Vehicles made up of Member State representatives.

According to the Commission, the expected reduction in non-compliant and unsafe automotive products on the EU market would deliver €13 billion of **benefits** a year, and the regulatory level playing field would benefit EU businesses. As regards **risks**, the Commission cautions that the five-year limit set on the designation of technical services could induce a temporary shortage of technical services, resulting in delays in the type-approval process for new products.

The Commission estimates that the **costs of implementing** the proposal would reach €341 million a year. As regards the **impact on the EU budget**, the Commission indicates that implementing the proposal would require €40.1 million (to be covered through reassignment of expenditure) and €27.1 million (to be co-financed by Member States through fees levied) between 2017 and 2020. The total impact on the EU budget would therefore amount to an average of €16.8 million a year.

Preparation of the proposal

In December 2010, the European Commission launched a public consultation on 'enhancing the implementation of the internal market for motor vehicles', which received 40 answers deemed relevant. The Commission contracted out an ex-post evaluation study on the Framework Directive in the first half of 2011.

In 2013, the Commission carried out a fitness check on the current legal framework. It concluded that the legal framework was appropriate and that there was no need for a major overhaul, but pointed out a few weaknesses which could be addressed (see above for details).

A competitiveness-proofing study was carried out in 2013. It concluded that the policy options retained would not have a significant impact on SMEs, thus would not require specific mitigating measures. In addition, the Commission indicates in the proposal that stakeholders were involved in preparations at various levels.[11]

Building on an **impact assessment** study carried out in 2011, the Commission published an impact assessment (executive summary) alongside the proposal. While a first impact assessment had been carried out before the VW case, additional analysis was carried out after September 2015 to reassess the context in the light of weaknesses in the EU type-approval system, in particular as regards emission standards. The final version estimated that the benefits from the reduction of non-compliant and unsafe automotive products on the EU market would outweigh implementation costs by a factor of 38 to 1.

Parliament's starting position

In its resolution of 10 December 2013 on the CARS 2020 action plan, Parliament stressed the importance of maintaining and strengthening the production base in Europe with a view to achieving economic growth and recovery, and indicated that technological innovation is an essential factor in automotive-sector competitiveness. It highlighted the need for harmonisation and improvement of test procedures and expressed support for the development and introduction of a new driving test-cycle and procedures to reflect real driving conditions.

In its Resolution of 5 October 2015 on emission measurements in the automotive sector, Parliament urged the Commission and Member States to quickly restore the confidence of consumers and called for significant strengthening of the current EU type-approval regime, including greater EU oversight, to ensure a level playing field and effective enforcement of the Union's legislation in all Member States. Specifically, Parliament called for enhancing the conformity of production requirements, improving on-road surveillance through periodic technical inspections, and considering the establishment of an EU-level surveillance authority.

In December 2015, the European Parliament set up a Committee of Inquiry on Emission Measurements (EMIS).

Stakeholders' views

According to press reports, the European Automobile Manufacturers Association (ACEA) is now analysing the proposal.

European Consumer Organisation BEUC welcomed the proposal – in particular random tests on cars – as a way to break up the 'cosy relationship between car makers, national authorities and testing services.'

Environmental NGO T&E welcomed the proposal as a way to address some of the weaknesses in the current type-approval system. It welcomed in particular the steps to ensure the independence of technical services and to strengthen market surveillance, as well as the additional powers given to the Commission. However, it criticised as insufficient the measures meant to ensure that national type-approval authorities are robust and independent.

Advisory committees

The **European Economic and Social Committee** is expected to adopt an opinion on the proposal in April 2016.

Council

The Council is expected to hold a presentation and exchange of views on the proposal in March 2016.

National parliaments

The deadline for national parliaments to submit comments on the proposal is 29 March 2016.

Parliamentary analysis

In recent years, Parliament's secretariat has produced a number of publications on the automotive sector from a general perspective: a 2013 briefing on The state of the EU car industry and a 2012 in-depth analysis on The EU automotive sector in a globalised market. A briefing on Market surveillance and product safety was also published in 2013.

More recently, the European Parliamentary Research Service published two short papers on aspects related to emission measurements: Vehicle emission tests: beyond the VW case (October 2015) and Measuring on-road air pollution from cars (January 2016). EPRS is currently undertaking an initial appraisal of the Commission's impact assessment of the proposal.

Legislative process

The Committee for Internal Market and Consumer Protection (IMCO) is expected to consider the proposals in the coming months.

References

Approval and market surveillance of motor vehicles and their trailers, European Parliament, Legislative Observatory (OEIL).

Explaining road transport emissions - A non-technical guide, European Environment Agency, January 2016.

Monitoring CO_2 emissions from new passenger cars and vans in 2014, European Environment Agency, November 2015.

A picture of the EU car industry, EP Library briefing, February 2013.

Endnotes

1 The European Commission states that Member States granted approximately €1.8 billion in state aid to the sector between 2007 and 2014. However, a 2014 analysis suggests that overall public support for the EU automotive sector was higher: although state aid declined in the early 2000s, it reached €1.2 billion in 2009 and was supplemented by 'scrapping schemes' worth €4 billion and loans from the European Investment Bank amounting to €2.8 billion.

2 For cars, targets were set for 2015 (130 g/km) and 2021 (95 g/km). For vans, targets were set for 2017 (175 g/km) and 2020 (147g/km).

3 In particular, Directive 2001/95/EC on general product safety, Regulation 765/2008 on accreditation and market surveillance, and Decision 768/2008/EC on the marketing of products. A proposal updating the legal framework regarding the market surveillance of products (2013/0048(COD)) is currently under consideration.

4 The NEDC, introduced in 1970 and updated in 1990, involves a speed pattern with low acceleration, constant speed (totalling 38.8% of the cycle) and idling periods (totalling 20.4% of the cycle) which typically under-load modern engines. Alternative test cycles, such as the Common Artemis Driving Cycles (CADC), are used for modelling actual road transport emissions. Other test cycles are used, for instance, in the USA, Australia and Japan (see comparison).

5 For a detailed overview, see Explaining road transport emissions - A non-technical guide, pp.32-37.

6 The Commission Regulation is expected to establish 'not to exceed' limits for NO_x on the basis of Euro 6 emission limits (80 mg/km) multiplied by a 'conformity factor'. This factor is set at 2.1 from 2017 (that is, allowing 168 mg/km) with a view to gradually reducing the gap between type-approval and on-road emissions, and at 1.5 from 2020 onwards (that is, allowing 120 mg/km) with a view to allowing for measurement errors.

7 Software which identifies the moment when a vehicle is being tested based on several parameters such as speed, engine operation, air pressure, temperature and humidity, and enhances the performance of catalysts during the test in order to temporarily lower NO_x emissions.

[8] The Commission's Joint Research Centre would carry out the operational checks.

[9] The Commission proposes that delegated acts may be adopted regarding the following: 1) criteria for vehicle categorisation, types of vehicle and types of bodywork (Annex II); 2) technical requirements for approval (Annex IV); 3) composition, appointment process, detailed tasks, working methods and rules of procedure of the Forum for exchange of information on enforcement; 4) template for the information document for the purpose of EU type-approval (Annexes I and III); 5) procedures for EU type-approval (Annex V); 6) template for notification of EU type-approvals (Annex XIV); 7) templates for type-approval certificate (Annexes VI,VII and VIII); 8) virtual testing methods (Annex XVI); 9) conformity of production procedures (Annex X); 10) template for certificate of conformity (Annex IX); 11) requirements for parts or equipment that may pose a serious risk to the correct functioning of essential systems; 12) list of parts or equipment that may pose a serious risk to the correct functioning of essential systems (Annex XIII); 13) template for the certificate authorising parts or equipment that may pose a serious risk to the correct functioning of essential systems (Annex XI); 14) integration of the UNECE regulations adopted by the EU; 15) access to vehicle OBD and vehicle repair and maintenance information (Annex XVIII); 16) technical requirements for which a manufacturer may be designated as a technical service (Annex XV); 17) methods for the calculation and collection of administrative fines.

[10] The Commission proposes that implementing acts may be adopted regarding the following: 1) common criteria for appointing, reviewing and assessing the national approval authorities; 2) criteria for setting out the scale, scope and frequency for checks of vehicles in circulation; 3) data to be made public for the purpose of compliance verification testing; 4) fees to be collected by Member States for verification and inspection by the Commission; 5) type-approval exemptions for new technologies and concepts; 6) extension of a provisional EU type-approval to new technologies and concepts; 7) decision on whether a national restrictive measure is justified or not; 8) decision on whether a national restrictive measure on vehicles presenting a risk to safety, human health and the environment is justified or not; 9) adoption of restrictive measures on non-compliant vehicles, systems or components; 10) authorisation on the use, in regular vehicles, of parts or equipment produced for racing vehicles; 11) authorisation of parts or equipment that may pose a serious risk to the correct functioning of essential systems; 12) recall of vehicles, systems or components; 13) suspension of the designation of technical services by Member States; 14) decision on whether a technical service is not responding to a request by an approval authority or the Commission for a legitimate reason; 15) decision to suspend, restrict or withdraw the designation of a technical service; 16) template of the check-list for the assessment of technical services; 17) structure and level of fees levied on technical services by approval authorities.

[11] CARS 21 High level group, Technical committee on motor vehicles, Type-approval authorities expert group, Motor vehicles working group.

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