



EUROPEAN  
COMMISSION

Brussels, 24.4.2025  
SWD(2025) 97 final

**COMMISSION STAFF WORKING DOCUMENT**  
**EXECUTIVE SUMMARY OF THE IMPACT ASSESSMENT REPORT**

*Accompanying the document*

**Proposal for a Directive of the European Parliament and of the Council amending Directive 2014/45/EU on periodic roadworthiness tests for motor vehicles and their trailers, Directive 2014/47/EU on the technical roadside inspection of the roadworthiness of commercial vehicles circulating in the Union, and Directive 1999/37/EC on the registration documents for vehicles**

{COM(2025) 179 final} - {SEC(2025) 119 final} - {SWD(2025) 96 final} -  
{SWD(2025) 98 final} - {SWD(2025) 99 final}

## **A. Need for action**

### ***What is the problem and why is it a problem at EU level?***

This initiative seeks to evaluate and further improve the impact on road safety and environmental performance of vehicles of the three Directives of the Roadworthiness Package (RWP). Despite existing EU legislation, as well as improvements in vehicle technology, including active safety and intelligent driver assistance systems in new vehicles, unsafe vehicles are still present on EU roads, contributing to crashes, either as the main cause or as a contributing factor. Some unsafe vehicles are identified at periodical technical inspection (PTI) or roadside inspection (RSI), i.e. vehicles with major or dangerous deficiencies. Others may not be detected at either because PTI or RSI cannot detect them or because they are not subject to testing. These include vehicles with safety-related tampering and vehicles with incorrectly secured cargo.

The second problem is insufficient control of air pollutant and noise emissions from vehicles. Some of the tests used in today's PTIs are no longer sufficiently sensitive to detect emission failures and the current testing procedures are not fit to meet the EU policy goals as regards air pollution and noise. The measurement of nitrogen oxide emissions (NOx) or particle number (PN) values for new cars are still not covered by the current RWP and there are currently no EU provisions for testing vehicles for manipulation/defect of NOx reduction systems or of diesel particulate filters. Given these shortcomings, the RWP's contribution to reducing the number of high-emitting vehicles has become less relevant. Moreover, the Directives are not effective in enforcing rules in EU cross-border traffic and trade of vehicles.

The RWP Directives were subject to an ex-post evaluation performed 'back-to-back' with the impact assessment. The evaluation concluded that the RWP was only partially successful in achieving its objectives of contributing to increased road safety and helping reducing air pollutant emissions from road transport. Defective vehicles may still not always be detected, as some categories of vehicles are not subject to PTI or RSI in some Member States, or the frequency or scope of the testing is not adapted to their higher safety and environmental risk. The identified weaknesses in the current RWP require the Directives to be adapted, to address not only current needs but also future challenges, such as the testing of advanced driver assistance and automated systems.

Road transport, especially freight, is an international sector, with vehicle approval and inspection regulated at the EU and international (UNECE) level. Therefore, it has by nature a strong cross-border dimension. The identified problems apply across the entire Union and have the same underlying causes.

### ***What should be achieved?***

In line with the European Green Deal and the Sustainable and Smart Mobility Strategy, the initiative will contribute to improving road safety in the EU, sustainable mobility, and facilitating the free movement of persons and goods in the EU. To this end, the specific objectives of the initiative are to: (1) ensure the consistency, objectivity, and quality of roadworthiness testing of today's and tomorrow's vehicles; (2) significantly reduce tampering and improve the detection of vehicles with deficiencies, to allow for the detection of defective/tampered safety and emission (i.e. air pollution and noise emission) control systems, as well as of odometer fraud; and (3) improve electronic storage and exchange of specific vehicle data, therefore addressing the problem of insufficient availability of such data and mutual recognition by enforcing authorities.

### *What is the value added of action at the EU level (subsidiarity)?*

Since road transport and the automotive industry operate cross-border in the internal market and internationally, it is much more efficient and effective to address the issues at the EU level than at the level of Member States. While national practices differ historically, a certain minimum level of harmonisation in vehicle testing and commonly agreed solutions to exchange vehicle data between Member States is more effective than multiple uncoordinated national solutions. With common rules applied to testing modern vehicle technologies (electric vehicles -EVs-, advanced driver assistance systems -ADAS-, and the most recent emission control equipment), Member States will realise economies of scale and testing equipment manufacturers can operate in a more homogenous market.

### **B. Solutions**

#### *What are the various options to achieve the objectives? Is there a preferred option or not? If not, why?*

Four policy options (PO1a, PO1b, PO2, PO3) have been designed to address the problems. All policy options adapt PTI to EVs and include new test items through the ePTI (including the testing of software integrity of safety- and emission-relevant systems). They also include new emission test methods for both particles and NOx necessary to adapt to more recent emission control technologies and to capture high emitting vehicles, including tampered ones. A roadworthiness test following any significant modification involving e.g., the change of the propulsion system or the emission class is also required in all policy options, as well as digitalisation of the roadworthiness certificate, linking national vehicle registers and extending the set of harmonised vehicle data in those registers. All policy options also introduce a requirement for Member States to record odometer readings in national databases and make those records available to other Member States in the case of re-registration.

In addition to the common measures, **PO1a** is focusing on a more efficient use of vehicle (registration and status) data, including issuing registration certificates in digital format. **PO1b** focuses on more effective technical inspections using remote sensing technology, which allows the identification of potentially high-emitting vehicles that can be either (i) inspected at a subsequent roadside check immediately after being identified or (ii) invited to a roadworthiness centre for an emission test. It would also remove the possibility to exempt motorcycles from PTI, require yearly emission testing of light commercial vehicles and make the inspection of cargo securing mandatory. PO1b also introduces mandatory annual PTIs for vehicles that are 10 years or older. PO1b would facilitate the free movement of people, by requiring that the Member State of registration recognises the PTI certificate issued by another Member State for a period of up to six months, provided that the next PTI is conducted in the Member State of registration.

**PO2** combines most of the measures of PO1a and PO1b. It includes an additional measure on data governance, aiming to define the procedures and the means of access to vehicle technical information (including in-vehicle data). It would also introduce roadside inspections for light commercial vehicles.

**PO3** is the most ambitious policy option, as it goes even further on harmonising the scope and methods of roadworthiness testing and the mutual recognition of PTI certificates. To the measures included in PO2, PO3 adds further extension of scope of PTI to cover all motorcycles without exception and light trailers, and it extends RSI to motorcycles. It also includes a requirement that PTI certificates issued in any other EU Member States are recognised by the Member State of registration without limitations.

PO2 is the preferred option, given it is considered effective in reaching the policy objectives, it presents high efficiency and net benefits and it is coherent with the well-established national policies in the field.

***What are different stakeholders' views? Who supports which option?***

The preferred policy option enjoys the support of the PTI industry (CITA, FSD and others) as well as consumers (FIA), testing equipment (EGEA) and motorcycle manufacturers (ACEM). It is supported also by some Member States, notably those that rely on thousands of smaller roadworthiness testing centres. Regarding access and exchange of information, various respondents (including CITA, EGEA and EReg), underlined the importance of free and easy access to in-vehicle data to enable the proper inspection of vehicles. Stricter cargo securing requirements included in this option are strongly supported by the logistics industry.

**C. Impacts of the preferred options**

***What are the benefits of the preferred option (if any, otherwise main ones)?***

PO2 will contribute to increasing road safety in the EU, with the impact estimated at 6,912 lives saved and 64,885 serious injuries avoided over the 2026-2050 period, relative to the baseline. It will also contribute to sustainable mobility by reducing air pollutant and noise emissions, which will lead to external costs savings, estimated at EUR 83.4 billion (expressed as present value over the 2026-2050 period relative to the baseline). It will contribute to facilitating the free movement of persons and goods in the EU through removal of obstacles to re-registration of vehicles in another Member State and (limited) EU-wide recognition of PTI certificates.

PO2 is expected to bring significant benefits through introducing test methods for the inspection of electric vehicles, improved emission testing (NOx and PN measurement), and the introduction of testing methods for ADAS and other safety systems. The annual testing of vehicles older than 10 years will not only bring large safety and environmental benefits, but it will create thousands of new jobs, especially in Member States where jobs are being lost in the automotive industry. Benefits are also expected due to the introduction of mandatory cargo securing inspections and the data governance measures. New ways of testing, such as plume chasing and remote sensing to screen the pollutant and noise emissions of large numbers of vehicles, will make the detection of high-emitting vehicles significantly more efficient.

PO2 is expected to improve detection and thus lead to fewer defective and tampered vehicles, also through the extension of the RSI to light commercial vehicles. It is expected to lead to a significant reduction in odometer tampering due to an obligation to record odometer readings and to make the records available in the case of re-registration. It should also bring benefits due to the mandatory electronic roadworthiness certificate, the introduction of the vehicle registration document in digital format, access to PTI reports in national databases and the extension of relevant vehicle data included in the national vehicle registers. Total benefits in preferred policy option are estimated at EUR 391.6 billion, expressed as present value over 2026-2050 relative to the baseline.

***What are the costs of the preferred option (if any, otherwise main ones)?***

Total costs of the preferred policy option (PO2) are projected to be EUR 65.9 billion, expressed as present value over 2026-2050 relative to the baseline. Of these, the largest share of costs are administrative costs for other businesses (i.e. vehicle owners) linked to additional periodic technical

inspections and cooperating on roadside inspections with the public authorities (representing around 39% of the total costs in PO2), followed by adjustment costs for PTI centres (for equipment, training, and additional inspectors to perform the inspections), representing around 35% of the total costs in PO2. Administrative costs for national public administrations mainly relate to the setup of the database for odometer readings and the operation of the system (3.6% of the total costs in PO2). Administrative costs for citizens, on the other hand, are estimated at 21% of the total costs in the preferred policy option and are driven by the mandatory yearly testing of vehicles older than 10 years, the introduction of roadside inspections for motorcycles, and the additional emission tests for vehicles that are found to be high emitters. Other costs represent a relatively small share of the total costs.

### ***What are the impacts on SMEs and competitiveness?***

There will be additional costs for SME inspection centres due to adaptation to electric and hybrid vehicles, inclusion of ePTI to check compliance with General Safety Regulation, mandatory PN and NOx testing, additional emission tests for light commercial vehicles and motorcycle noise testing. These additional costs relate to training for inspectors and the acquisition of necessary equipment. However, additional equipment costs mean additional revenues for garage equipment manufacturers, many of whom are also SMEs. At the same time, PTI operators will be able to recover any increase in costs through the PTI fees, thereby maintaining their profit levels while also gaining new revenue sources. It will be primarily SMEs that will benefit from the 19,000 to 20,000 new jobs to be created thanks to more frequent and more sophisticated testing. While large PTI operators may be able to benefit more than smaller ones, all of them should in principle gain. Finally, a more effective enforcement of the roadworthiness framework will ensure fairer competition, reducing the opportunities for gaining price advantage on the basis of lower vehicle standards, and avoidance of the required maintenance of vehicles.

### ***Will there be significant impacts on national budgets and administrations?***

The preferred policy option is expected to lead to one-off and recurrent administrative costs for the Member States authorities, estimated at EUR 2.39 billion, expressed as present value over 2026-2050. These costs will be driven by the measure addressing odometer fraud, where a system for the recording of odometer readings of vehicles at garages and other repair stations will have to be developed. Expressed as present value over 2026-2050, total one-off and recurrent administrative costs due to this measure are estimated at EUR 2.12 billion. In addition, the roadside testing of vans will generate recurrent administrative costs (i.e. labour costs for the additional inspections), estimated at EUR 107.5 million expressed as present value over 2026-2050 relative to the baseline.

Total adjustment costs for the preferred policy option are estimated at EUR 207.2 million, expressed as present value over 2026-2050 relative to the baseline, of which EUR 29.7 million are one-off costs. The most significant additional adjustment costs for authorities arise due to the introduction of remote sensing, and the option to use plume chasing to measure NOx emissions from trucks, as well as the installation of noise cameras. This involves one-off costs for the purchase of the necessary equipment, the setting up of the corresponding IT infrastructure and related training of inspectors, as well as recurrent costs for the maintenance of the equipment and data management, and labour costs for the inspectors performing the plume chasing. The total adjustment costs due to this measure over 2026-2050 are estimated at EUR 192.9 million, expressed as present value relative to the baseline.

The initiative is also expected to bring cost savings for national administrations, which arise from the introduction of the roadworthiness certificate in electronic format, the interlinking of national vehicle registers and from issuing digital registration certificates. The savings are expected to be significant, reaching EUR 5.23 billion, expressed as present value over the period 2026-2050.

### ***Proportionality***

The preferred policy option is considered proportionate to what is necessary to reach the overall policy objectives. The scope of the option is limited to what can best be achieved at the EU level (in terms of harmonisation of methods and scope of testing, as well as in finding common solutions to ensure efficient sharing and access to the necessary vehicle data). Although some of the measures are associated with significant costs, the benefits largely outweigh the costs.

### **D. Follow up**

#### ***When will the policy be reviewed?***

Five years after the revised legislation will have been applied, the Commission shall carry out an evaluation of the RWP to verify to what extent the objectives of the initiative have been reached and provide its main findings on implementation in the report to the Council and the European Parliament. The report shall, where necessary, be accompanied by appropriate recommendations.