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Amendment of the Exceptional Transport (Exemptions) Decree to facilitate testing and development of autonomous (driverless) vehicles

### **Introduction**

The Minister of Infrastructure and the Environment wishes to create a climate in the Netherlands which will support and encourage the development of autonomous vehicles, also known as 'driverless cars'.

In the minister's view, vehicles which can communicate with each other and with the roadside can make a positive contribution to traffic throughflow, road safety and environmental management. To derive these benefits in the longer term, the minister is taking a number of measures including the amendment of current legislation to permit the testing of driverless vehicles on the public highway, from inner city streets to motorways. A 'General Order in Council' is being drafted for this purpose.

### **Purpose**

The overall intention is to permit the large-scale testing of autonomous vehicles on the public highway, thus allowing experience to be gained in actual traffic situations.

The proposed legislation will allow the Vehicle and Driver Licensing Authority (*Rijksdienst voor het Wegverkeer*, RDW) to permit the use of vehicles which rely on or include innovative, automatic systems to be operated on the public highway. Before granting permission, RDW will conduct a full technical inspection to ensure that such vehicles can be tested safely on the public highway. In some cases, the vehicles concerned will be of entirely new design, with innovative systems or components incorporated at the time of manufacture. In the majority of cases, however, the vehicles will be existing models which have already been approved for use on the roads, in which specific components are installed ('retrofitted') with a view to gaining knowledge and experience in automatic navigation. Suitable test locations will be sought in association with the relevant road management authorities, and all necessary measures will be taken to ensure the safety of other road users.

### **Target groups**

The proposed legislation will address the interests of vehicle manufacturers, product developers, public and private organizations wishing to test vehicles with automatic functions on public roads, and all other parties with an involvement or interest in the development of such vehicles.

### **Effects of the legislation**

*RDW will be authorized to apply certain exemptions*

RDW is the statutory licensing authority for all vehicles (and drivers) on Dutch roads.

The proposed legislation will permit RDW to exempt certain vehicles from the current technical requirements. Rather than applying these standard requirements, RDW will conduct a full assessment and technical inspection of a vehicle in which temporary or innovative automatic functions have been installed, doing so on a case-by-case basis.

Under current legislation, RDW must conduct a new admission procedure for any vehicle with automatic functions which has been subject to a modification of structure or design. This also applies to vehicles which have already been approved, but which have been retrofitted with new components. The current legislation is concerned with permanent modifications; it therefore unduly restricts the testing of innovative and/or new automatic functions which are installed in a vehicle on a temporary basis.

The proposed exemption authority will enable RDW to approve the on-road use of test vehicles with automatic functions on a case-by-case basis. RDW will determine precisely what is to be tested, where, over which period, and under which conditions. By means of a simplified (re-)admission procedure, and in association with the relevant road management authorities, RDW will thus be able to facilitate the desired testing while ensuring the ongoing safety of all road users.

RDW already holds a comparable exemption authority with regard to 'exceptional' transport, i.e. vehicles which exceed the standard permitted dimensions or weight when conveying loads which cannot be dismantled, as well as exemption authority for 'Longer and Heavier Freight Vehicle Combinations'. The most convenient course of action is to extend and expand the existing Exceptional Transport (Exemptions) Decree (*Besluit Ontheffingverlening Exceptionele Transporten*) to include exemptions for vehicles which are to be used to test autonomous functions. The necessary amendment is currently in preparation.

RDW will formalize how it is to apply its exemption authority by means of policy regulations. The procedure under which applications for exemption are to be assessed is outlined below.

#### *Assessment of applications for exemption*

The first step in approving a vehicle for testing on the public highway will be to produce a written assessment in which all relevant factors are described in detail. This will be followed by a physical (technical) inspection and testing on a private site (such as RDW's own test centre in Lelystad). Only then will any testing on the public highway be permitted.

The precise form of the permitted testing will be determined on a case-by-case basis, further to a full risk analysis which examines all safety aspects. Assuming that all results are satisfactory, a temporary exemption to permit on-road testing can be issued. Given the 'bespoke' nature of the procedure and the various possible types of application which may be received, the time required to issue the exemption and the costs payable by the applicant will also be determined on a case-by-case basis. The conditions under which exemptions are granted may also vary. RDW may opt to impose specific requirements and conditions with regard to:

- Insurance
- Test times (e.g. day or night only)
- Vehicle operator's knowledge of and expertise in automatic functions
- Test location/route
- Type or nature of the test
- Interaction in the presence/absence of other road-users
- Monitoring and logging

In determining the precise requirements, RDW will draw upon current and new knowledge with regard to aspects of road safety, liability and cyber-security. The intention is to arrive at an overall assessment framework for all applications, which will then be supplemented by the necessary degree of 'customization'.

Given the innovative nature of autonomous vehicles, a number of the existing technical requirements may not be compatible with the proposed assessment procedure. Other requirements are, however, applicable. For example, the vehicle's road-holding and steering must be comparable to that of a regular vehicle of similar size and weight, and current regulations with regard to electromagnetic compatibility (EMC) will apply unabated.

#### *Selection of locations for testing on public roads*

Part of the procedure involves the selection of a suitable test environment which will meet the applicant's testing requirements. This falls to RDW working in consultation with the road management authorities. Any testing on the public highway will be preceded by an extensive process in which the vehicle is shown to meet all safety requirements. The applicant will be invited to suggest a suitable test location, which will be assessed to determine that all testing can be conducted in a safe and responsible manner. There are no designated public locations or routes in the Netherlands, whereupon the intention is to make 'smart' use of the available infrastructure and facilities. Road management authorities will be involved in determining whether any additional infrastructural measures or facilities must be put in place to ensure safe testing. Such measures may include supervision by road inspectors, monitoring from the traffic control centres, or a detailed consideration of aspects such as road surfaces, markings, signage and road configuration.

The manner in which the test vehicle is to be used will also be taken into account, with specific attention to the safety of other (vulnerable) road users. This aspect will be assessed by both RDW and the road management authorities, based on their respective areas of expertise. External experts, such as those of the Institute for Road Safety Research (SWOV) may also be consulted.

#### **Purpose of this consultation process**

This consultation process is intended to ensure that the proposed legislation is of appropriate quality and effectiveness. It provides relevant information to those parties wishing to test vehicles with automatic functions on the public highway, offering them an opportunity to comment on the draft decree. The Ministry of Infrastructure and the Environment will carefully consider all responses, using the input to improve the legislation wherever possible.

#### **On what aspects are comments invited?**

You may comment on any and all aspects of the proposed legislation.

#### **Publication**

Comments and responses will be published during the course of the consultation process. Only those comments which have been marked 'for publication' by the author will be made available in the public domain. All comments will be moderated before publication to preclude any offensive or otherwise inappropriate content. This may take several days.

#### **The following documents are to be published online:**

- The draft amendment permitting the use of autonomous vehicles on the public highway (General Order in Council, in Dutch)
- Questions further to the Integrated Assessment of Policy (IAK) provisions (in Dutch)
- Written statement by the Minister of Infrastructure and the Environment on the large-scale testing of autonomous vehicles, June 2014 (Parliamentary Proceedings 31 305, no. 210; in Dutch)

#### **Question**

What are your opinions on the proposed legislative amendment?